



## MEETING AGENDA

### TUALATIN PLANNING COMMISSION

March 21, 2019; 6:30 p.m.  
JUANITA POHL CENTER  
8513 SW TUALATIN RD  
TUALATIN, OR 97062

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1. **CALL TO ORDER & ROLL CALL**  
Members: Bill Beers (Chair), Alan Aplin, Travis Stout, Mona St. Clair, Janelle Thompson, Naomi George  
Staff: Steve Koper, Planning Manager;
2. **ANNOUNCEMENTS/PLANNING COMMISSION COMMUNICATION**
  - A. Introduction of new Planning Commissioner Naomi George
  - B. Recognition of outgoing Planning Commissioner Kenneth Ball
3. **COMMUNICATION FROM THE PUBLIC (ITEMS NOT ON THE AGENDA)**  
Limited to 3 minutes
4. **ACTION ITEMS**
  - A. Election of a Chair and Vice Chair to represent the Tualatin Planning Commission
  - B. Basalt Creek Comprehensive Plan Update (File Nos. PTA 19-0001 and PMA 19-0001)
  - C. 2018 Annual Report of the Tualatin Planning Commission
5. **APPROVAL OF MINUTES**
  - A. Approval of November 15, 2019 TPC Minutes.
6. **FUTURE ACTION ITEMS**
7. **COMMUNICATION FROM CITY STAFF**
8. **ADJOURNMENT**



# STAFF REPORT

## CITY OF TUALATIN

**TO:** Tualatin Planning Commissioners

**FROM:** Lynette Sanford, Office Coordinator

**DATE:** 03/21/2019

**SUBJECT:** Introduction of new Planning Commissioner Naomi George

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**ISSUE BEFORE TPC:**

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**Attachments:**



# STAFF REPORT

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## CITY OF TUALATIN

**TO:** Tualatin Planning Commissioners

**FROM:** Lynette Sanford, Office Coordinator

**DATE:** 03/21/2019

**SUBJECT:** Election of a Chair and Vice Chair to represent the Tualatin Planning Commission

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**ISSUE BEFORE TPC:**

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**Attachments:**



# STAFF REPORT

## CITY OF TUALATIN

**TO:** Tualatin Planning Commissioners

**FROM:** Steve Koper, Planning Manager  
Aquilla Hurd-Ravich, Community Development Director

**DATE:** 03/21/2019

**SUBJECT:** Basalt Creek Comprehensive Plan Update (File Nos. PTA 19-0001 and PMA 19-0001)

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### **ISSUE BEFORE TPC:**

The Planning Commission is asked to consider a recommendation to the Tualatin City Council on a Plan Text Amendment and Plan Map Amendment to update the City of Tualatin Comprehensive Plan and Development Code to apply to the Basalt Creek Planning Area. Application of the Comprehensive Plan and Development Code to an individual property would occur after approval of a property-owner submitted annexation petition.

### **RECOMMENDATION:**

Staff respectfully requests that the Planning Commission forward a recommendation of approval to the City Council of the proposed amendments (PTA 19-0001 and PMA 19-0001).

### **EXECUTIVE SUMMARY:**

#### **Background**

- The Basalt Creek Planning Area was brought into the Portland Metropolitan Urban Growth Boundary in 2004.
- Metro Code Title 11 requires a city to adopt a concept plan – which is a long-range plan that identifies lands for residential and employment uses and the transportation and other public facilities necessary to support the mix of uses - for an area brought into the Urban Growth Boundary as an interim step until a city amends its adopted comprehensive plan and applies it to that area.
- The Basalt Creek Concept Plan was adopted for the Basalt Creek Planning Area by the Tualatin City Council in August of 2018, and was the result of a joint planning effort for the area between the City of Tualatin and the City of Wilsonville.
- Tualatin is responsible for comprehensive planning in the portion of the Basalt Creek Planning Area south of its existing City limit (Helenius Road and Norwood Street) extending to Basalt Creek Parkway further to the south, I-5 to the east, and 124<sup>th</sup> Avenue to the west.

#### **Public Involvement**

- Compliance with Oregon Statewide Planning Goal 1 (Public Involvement) is addressed

below.

- The Basalt Creek Concept Plan required a very different approach than most concept plans because Tualatin and Wilsonville participated in a joint planning effort, resulting in more public outreach than would have occurred had a single city planned for the area. A public involvement plan was used to guide outreach strategies and events throughout the planning process. Community workshops, visioning workshops, open houses, stakeholder interviews/ focus groups, and surveys were used to gain public opinion on the Plan. Joint Planning Commission and Council meetings and meetings were held, all open to the public.
- A public open house was also held by Tualatin on January 22, 2019 to provide an introduction to the future planning steps that would implement the Basalt Creek Concept Plan.
- Throughout the planning process, periodic updates were posted in the City newsletter and on the City webpage. Finally, the Tualatin Planning Commission received frequent briefings and the Tualatin City Council received memoranda and work session briefings from project staff.

## **Proposal**

- The subject proposal is a Plan Text Amendment (PTA 19-0001) and Plan Map Amendment (PMA 19-0001), which are legislative amendments.
- The proposed amendments would update the Tualatin Comprehensive Plan and Development Code consistent with the adopted Basalt Creek Concept Plan.
- The proposed amendments would also allow for future application of the Tualatin Comprehensive Plan and Development Code to properties located within the Tualatin portion of the Basalt Creek Planning Area.
- The proposed amendments would update Chapters 4, 7, 9, Figures 11-1, 11 -2, 11-3, 11-4, 11-5, 11-6, and Maps 9-1, 9-2, 9-4, 9-5, 12-1, and 13-1, of the Tualatin Comprehensive Plan. Map 9-1 is the Community Plan Map (“Zoning Map”).
- The proposed amendments would update Chapters 51, 62, and 75, Figure 73-3, and Maps 72- 1, 72-2, 72-3, and 74-1 of the Tualatin Development Code
- The proposed amendments would update the Tualatin Transportation System Plan.

## **Zoning Designations**

- The Tualatin portion of the Basalt Creek Planning Area is generally located north of Basalt Creek Parkway, south of Helenius Road and Norwood Road, east of 124th Avenue, and west of I-5. As shown on the Community Plan Map (Map 9-1, Exhibit 11), the Basalt Creek Planning Area would include a mix of residential zones at various densities, a small neighborhood commercial node, and employment lands, consistent with the Basalt Creek Concept Plan. As shown on the Neighborhood Planning Areas Map (Map 9-2, Exhibit 11), the Basalt Creek Planning Area will be designated as “Area 16.” Application of the zoning designations to an individual property would occur after approval of a property-owner submitted annexation petition.
- Low Density Residential (RL): An area with the RL (Low Density Residential) Planning District is proposed west of Boones Ferry Road in the approximate area of the Basalt Creek Canyon. An area with the RL Zone is also planned north of Tonquin Loop, south of Helenius Road, west of Grahams Ferry Road and east of 124th Avenue. This land will develop either in the traditional single-family subdivision pattern, or, through the conditional use process in clustered housing patterns.
- Medium Low Density Residential (RML): An area with the RML (Medium Low Density Residential) Zone is proposed south of Norwood Road, east of Boones Ferry Road, and

west of I-5. An additional area of RML Zone is also planned east of Grahams Ferry Road a between the two above described areas of RL Zone. These areas lends themselves to a slightly higher density than traditional single-family due to the excellent transportation access and the close relationship to the employment centers. The use of the RML District in this area provides for the needed higher densities with a District that will allow development that is similar in character and density to the RL lands.

- High Density Residential (RH): An area with the RH (High Density Residential) Zone is proposed north of Greenhill Road and east of Boones Ferry Road. This land lends itself to a higher density due to the excellent transportation access and the close relationship to the employment centers. The use of the RH District in this area provides for the needed higher densities.
- Neighborhood Commercial (CN): A small area with the CN (Neighborhood Commercial) Zone is proposed north of Greenhill Road and east of Boones Ferry Road. This CN District is intended to provide locations for commercial uses within close proximity to residential areas, to provide opportunities to serve the needs of residents for convenience shopping and services. This area lends itself to the CN District due to the excellent transportation access and the close proximity to abutting residential areas of medium to higher densities.
- Manufacturing Park (MP): The balance of the Basalt Creek Planning Area is proposed to be designated in the MP (Manufacturing Park) Zone. The MP District is intended to be conducive to the development and protection of modern, large-scale specialized manufacturing and related uses and research facilities. This area is located north of Basalt Creek Parkway, south of Tonquin Loop, east of 124th Avenue, and west of Basalt Creek Canyon and an area of RML Zone.

### **Transportation System Plan (TSP) Update**

- The proposed amendments would update the Tualatin TSP (Exhibit 9) to include the Basalt Creek Planning Area and to apply roadway functional classifications (Figure 11-1, Exhibit 10) consistent with the Basalt Creek Concept Plan and the Basalt Creek Transportation Refinement Plan. Staff notes that due to the adoption of an updated Regional Transportation Functional Plan (RTFP) by Metro in December of 2018, supplemental transportation analysis has been included (Exhibit 5), demonstrating that the TSP update, as proposed, continues to be compliant with OAR Chapter 660 Division 12 (Transportation Planning Rule), the Oregon Highway Plan, and applicable sections of the Metro Regional Transportation Functional Plan, and is adequate to support future property development in the Basalt Creek Planning Area consistent with the proposed zoning designations.
- The proposed amendments would also update the following Figures (Exhibit 10): 11-2 – Metro Regional Street Design System, 11-3 – Local Street Plan, 11-4 – Bicycle and Pedestrian System, 11-5 – Transit Plan, 11-6 – Freight Routes, and 73-3 – Parking Maximum Map, consistent with the Basalt Creek Concept Plan and compliant with OAR Chapter 660 Division 12 (Transportation Planning Rule), the Oregon Highway Plan, and applicable sections of the Metro Regional Transportation Functional Plan

### **Comprehensive Plan Text Amendments**

- In support of the proposed amendments, and implementation of the proposed zoning designations and transportation system, amendments to the Tualatin Comprehensive Plan text are proposed.
- Chapter 4 (Community Growth): Section 4.065 (Requirements) is updated to include a reference to the adoption of the proposed amendments.
- Chapter 7 (Manufacturing Planning Districts): Section 7.010 (Background) is updated to

include a reference to the 2004 Urban Growth Boundary Expansion and the Basalt Creek Planning Area.

- Chapter 9 (Plan Map): Adds a new Section (9.046 – Area 16 Basalt Creek Planning Area) to include a description of the Basalt Creek Planning Area and the applicable zoning designations within the area.

### **Development Code Text Amendments**

- In support of the proposed amendments, and implementation of the proposed zoning designations and transportation system, amendments to the Tualatin Development Code are proposed.
- Chapter 51 (Neighborhood Commercial (CN) Zone): Section 51.110 (District Size and Location Standards) is updated consistent with the size and location of the CN zone identified in the Basalt Creek Concept Plan.
- Chapter 62 (Manufacturing Park (MP) Zone): Table 62-2 (Development Standards in the MP Zone) is updated to apply within the Basalt Creek Planning Area.
- Chapter 75 (Access Management): Section 75.140 (Existing Streets Access Standards) is updated to apply to streets within the Basalt Creek Planning Area.

### **Public Utility Infrastructure**

- As illustrated within the Water Plan and Sanitary Sewer Plan (Maps 12-1 and 13-1, Exhibit 11), public utilities will be extended south of the existing city limit to serve the Basalt Creek Planning Area. Because no storm water system currently exists in the area aside from existing conveyance adjacent to the street system, a new conveyance system will need to be installed along the new roadways. In addition, site development runoff will need to be treated and detained, if necessary, before being discharged to the public drainage systems consistent with Clean Water Services standards.

### **Natural Resources**

- The proposed amendments would apply the Tualatin Development Code within the Basalt Creek Planning Area upon adoption and annexation of any property to Tualatin. Metro Regional Functional Plan Title 3 and 13 conservation areas will be administered and protected by Clean Water Services. 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. Although no areas of floodplain or regulatory floodway are mapped by the Federal Emergency Management Agency (FEMA) in the Basalt Creek Planning Area, Tualatin Development Code Chapter 70 (Floodplain Development) would be applicable to individual properties, upon annexation to Tualatin.

### **School Capacity**

- The Basalt Creek Planning Area is served by the Sherwood School District. Future school capacity to serve future residential development was analyzed as part of the Basalt Creek Concept Plan. The proposed amendments are consistent with the residential zoning districts identified in the concept plan. Notice of the proposed amendments was also provided to the Sherwood School District.

### **Parks Master Plan**

- The City adopted an updated Parks Master Plan in November of 2018, which will guide the development of future recreation areas and open space within the Basalt Creek Planning Area.



## Agency and Interested Person Comments

- Notice of the proposed amendments was provided to the Oregon Department of Land Conservation and Development (DLCD), the required 35 days prior to the City Council public hearing. Notice was also sent to Metro and other affected agencies. Notices complying with Oregon Ballot Measure 56 were mailed to property owners within the Tualatin portion of the Basalt Creek Planning Area.

## OUTCOMES OF DECISION:

A recommendation of approval of the proposed amendments (PTA-19-0001 and PMA-19-0001) to the City Council would support:

- Updating the Tualatin Comprehensive Plan and Development Code consistent with the adopted Basalt Creek Concept Plan.
- Amendments to:
  - Chapters 4, 7, 9, Figures 11-1, 11 -2, 11-3, 11-4, 11-5, 11-6, and Maps 9-1, 9-2, 9-4, 9-5, 12-1, and 13-1, of the Tualatin Comprehensive Plan.
  - Chapters 51, 62, and 75, Figure 73-3, and Maps 72- 1, 72-2, 72-3, and 74-1 of the Tualatin Development Code.
  - The Tualatin Transportation System Plan.
- Future application of the City Comprehensive Plan and Development Code to individual properties within the Basalt Creek Planning Area, after approval of a property-owner initiated annexation.
- Future urban development within the Basalt Creek Planning Area, after annexation to the City of Tualatin.

## ALTERNATIVES TO RECOMMENDATION:

The Planning Commission may alternatively:

- Recommend approval of the proposed amendements (PTA 19-0001 and PMA 19-0001) to the City Council with further amendments.
- Continue the consideration of the proposed amendments (PTA-19-0001 and PMA-19-0001) to a later date.
- Recommend denial of the proposed amendments (PTA 19-0001 and PMA 19-0001) to the City Council.

## FINANCIAL IMPLICATIONS:

N/A

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**Attachments:**    [Basalt Creek Comprehensive Plan Update Presentation](#)  
                          [Exhibit 1 - Analysis and Findings](#)  
                          [Exhibit 2 - Basalt Creek Concept Plan](#)  
                          [Exhibit 3 - Basalt Creek Concept Plan Technical Appendixes](#)  
                          [Exhibit 4 - Metro Ordinance No. 04-1040b](#)  
                          [Exhibit 5 - Supplemental Transportation Analysis](#)  
                          [Exhibit 6 - Tualatin Basin Plan Compliance Letter](#)  
                          [Exhibit 7 - Amended Tualatin Comprehensive Plan Text](#)  
                          [Exhibit 8 - Amended Tualatin Development Code Text](#)

Exhibit 9 - Amended Tualatin Transportation System Plan

Exhibit 10 - Amended Figures

Exhibit 11 - Amended Maps

Exhibit 12 - Measure 56 Notice and Affidavit of Mailing

Exhibit 13 - Posted Notice and Affidavit of Posting

# **Basalt Creek Comprehensive Plan Update**

**PTA 19-0001/PMA 19-0001**

Tualatin Planning Commission  
March 21, 2019



# Tonight's Presentation

- **Overview of Comprehensive Plan Update process**
- **Project history**
- **Public engagement**
- **Background on the Basalt Creek Planning Area and Concept Plan**
- **What is the Comprehensive Plan and why update it?**
- **What other updates are proposed?**
- **Implementation process/next steps**
- **Recommendation and Q&A**

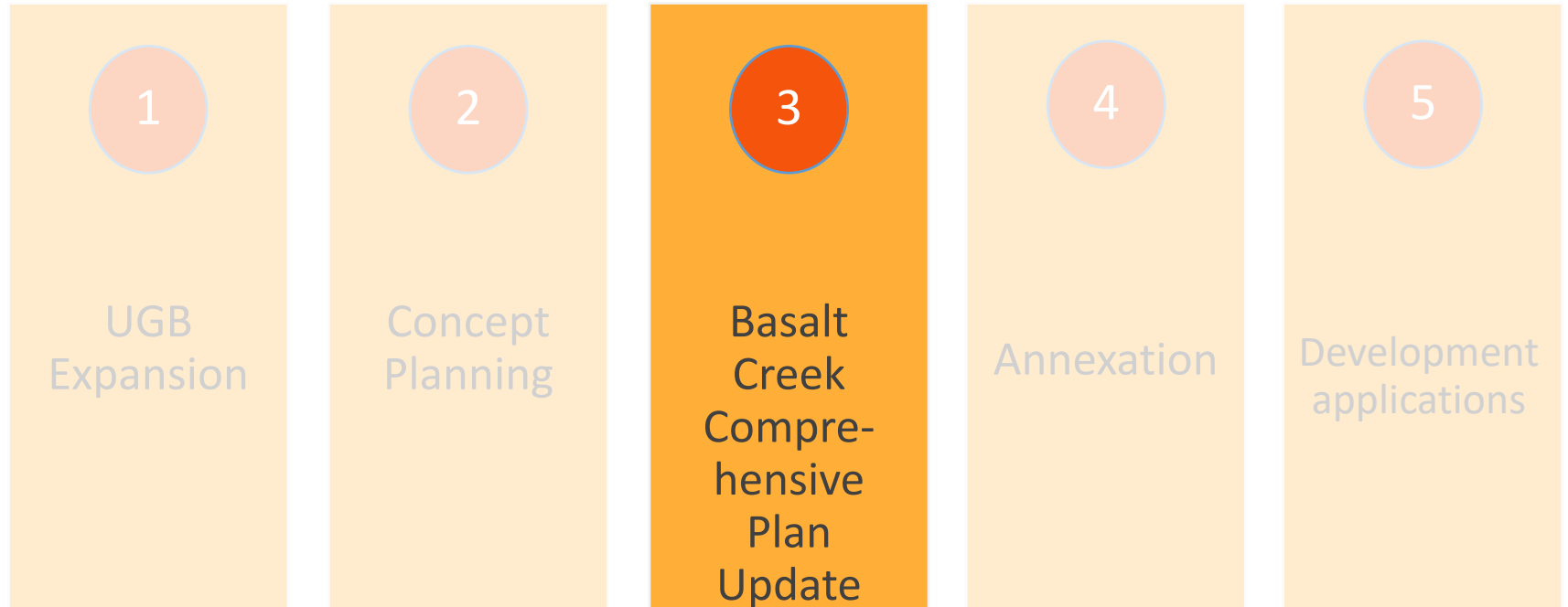
Basalt Creek Comprehensive Plan Update Overview



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**TUALATIN** OREGON

# Overview

## Five Steps for City Expansion



Basalt Creek Comprehensive Plan Update



# Project History

- **2004:** The Basalt Creek Planning Area was added to the Urban Growth Boundary.



- **2011:** An Intergovernmental Agreement was made to begin concept planning jointly by Tualatin and Wilsonville.



- **2013:** Tualatin and Wilsonville began concept planning the Basalt Creek Planning Area.



- **August 2018:** Tualatin City Council adopted the Basalt Creek Concept Plan.

# Public Engagement



Focus  
Groups  
2014



Design  
Work-  
shop  
2014



Open  
House  
2016



Open  
House  
2019<sup>+</sup>

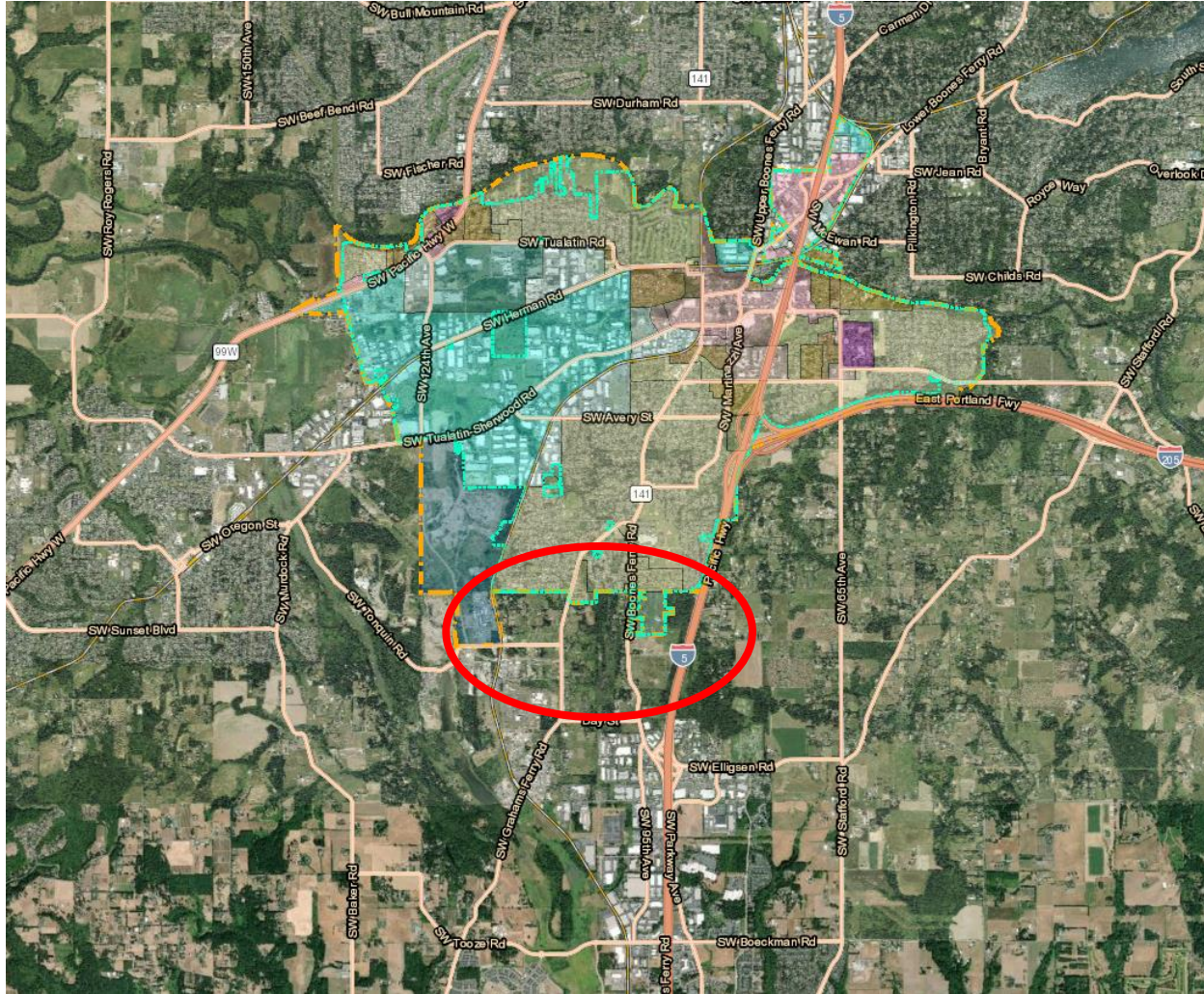
Basalt Creek Comprehensive Plan Update Overview



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<sup>+</sup>Photo Credit: Ray Pitz, News Editor for  
the Beaverton, Tigard and Tualatin  
Times

# Basalt Creek Planning Area



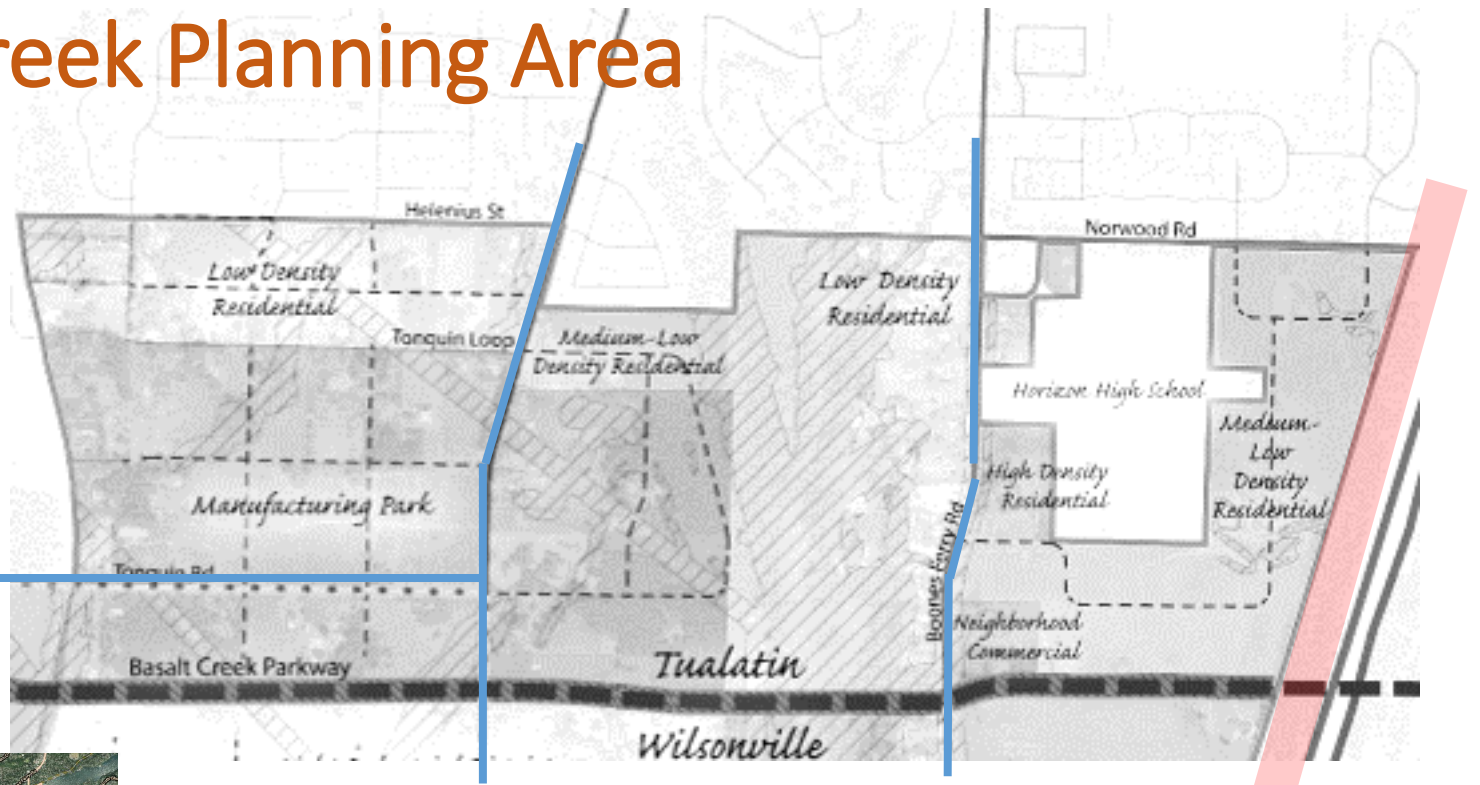
Basalt Creek Comprehensive Plan Update



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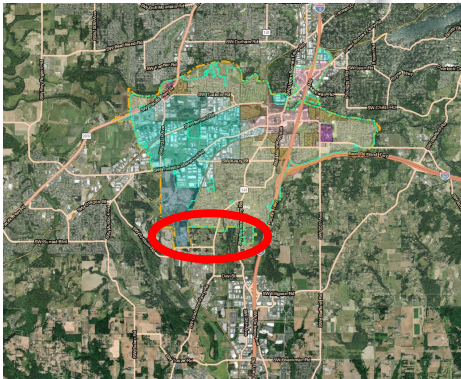
# Basalt Creek Planning Area



Tonquin Road

Grahams Ferry Road

Boones Ferry Road

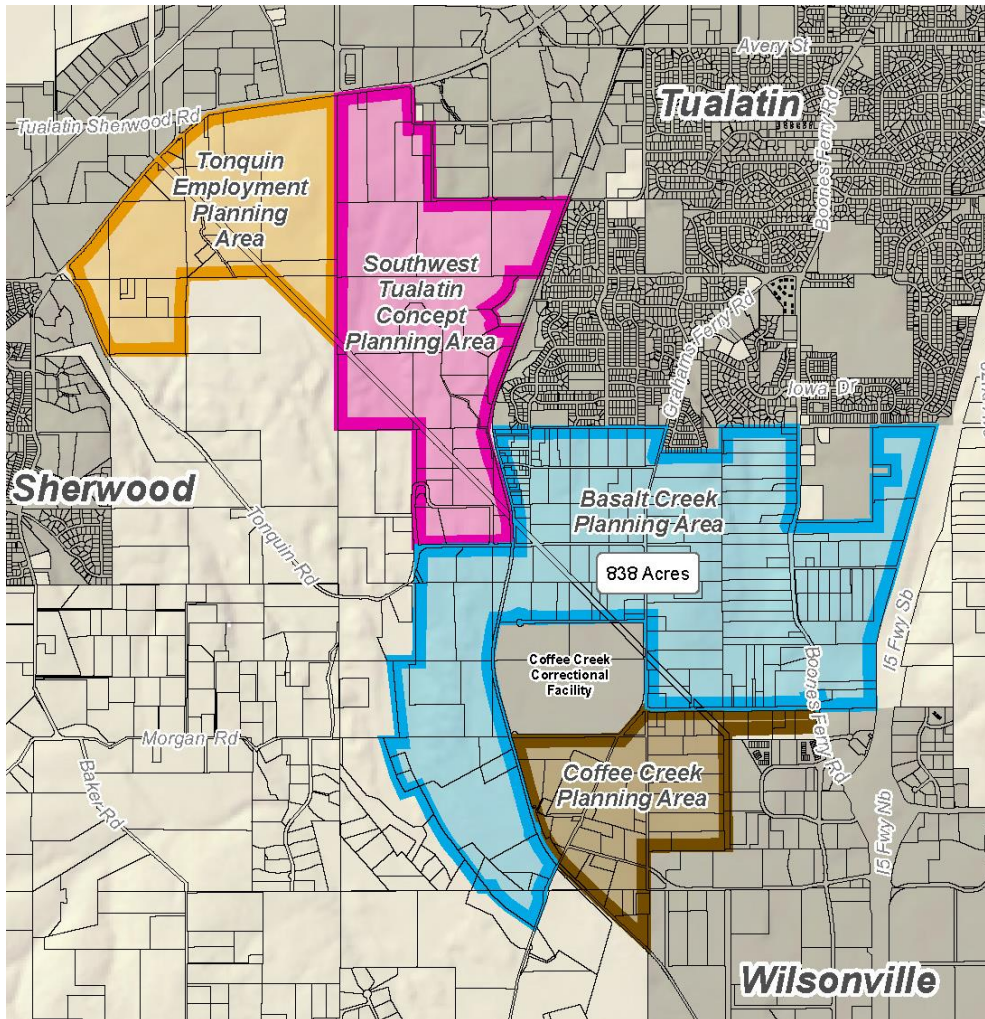


Basalt Creek Comprehensive Plan



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# What is a Concept Plan?



- Identifies a combination of land uses and densities.
- Identifies and the future transportation system and other public infrastructure.
- Required by Metro as a “first step” before urban development.

# What is the Comprehensive Plan?

- The guiding document for land development in Tualatin
- Shows compliance with Oregon Statewide Planning Goals, Oregon Administrative Rules, and Metro Code
- Contains community goals and policies
- Updates are proposed consistent with the Basalt Creek Concept Plan

# What is the Basalt Creek Comprehensive Plan Update?



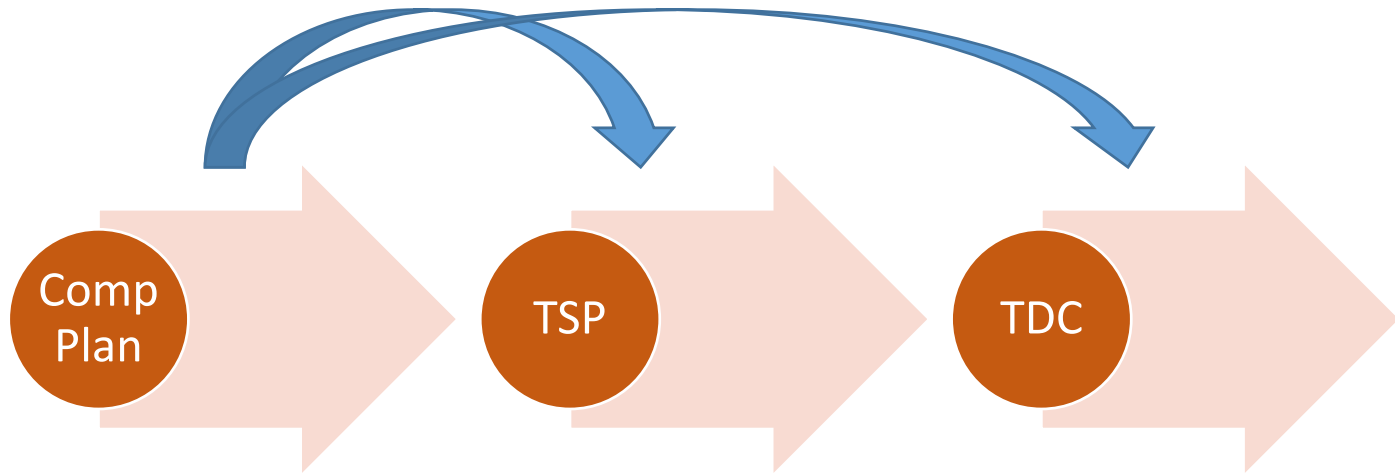
Updates to the Comprehensive Plan Text, Figures and Maps

Updates to the Development Code Text, Figures and Maps

Updates to the Transportation System Plan Text and Figures

# What is the Relationship?

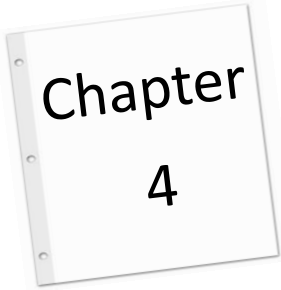
- Comprehensive Plan is the “Guiding Document”
- The Transportation System Plan (TSP) is incorporated into the Comprehensive Plan
- The Tualatin Development Code (TDC) implements the Comprehensive Plan



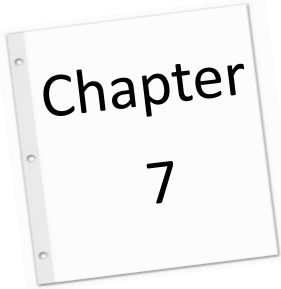
Basalt Creek Comprehensive Plan Update Overview



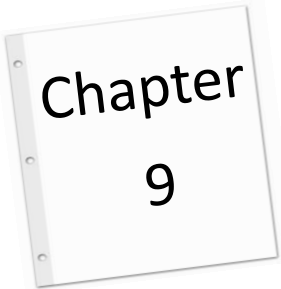
# What has changed? – Comprehensive Plan

Chapter  
4

- Community Growth
  - Adds history, similar to previous concept plans

Chapter  
7

- Manufacturing Planning Zones
  - Adds background, similar to previous concept plans

Chapter  
9

- Plan Map
  - Adds the Basalt Creek Planning Area (“Area 16”)
  - Describes location and type of zoning designations

Basalt Creek Comprehensive Plan Update Overview

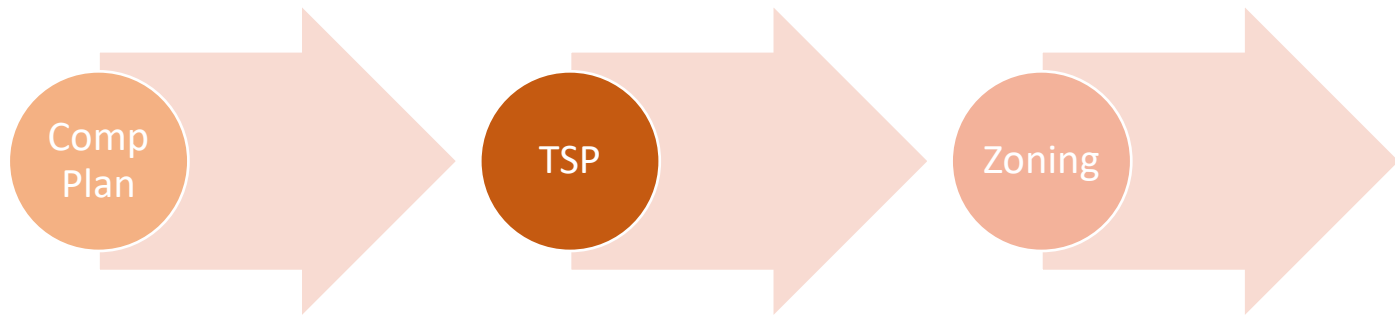


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# What is the Transportation System Plan (TSP)?

- Incorporated into the Comprehensive Plan
- Shows compliance with Oregon Statewide Planning Goals, Oregon Administrative Rules, and Metro Code
- Identifies the existing transportation system and future improvements necessary to support development in Tualatin consistent with adopted zoning designations.



Basalt Creek Comprehensive Plan Update Overview



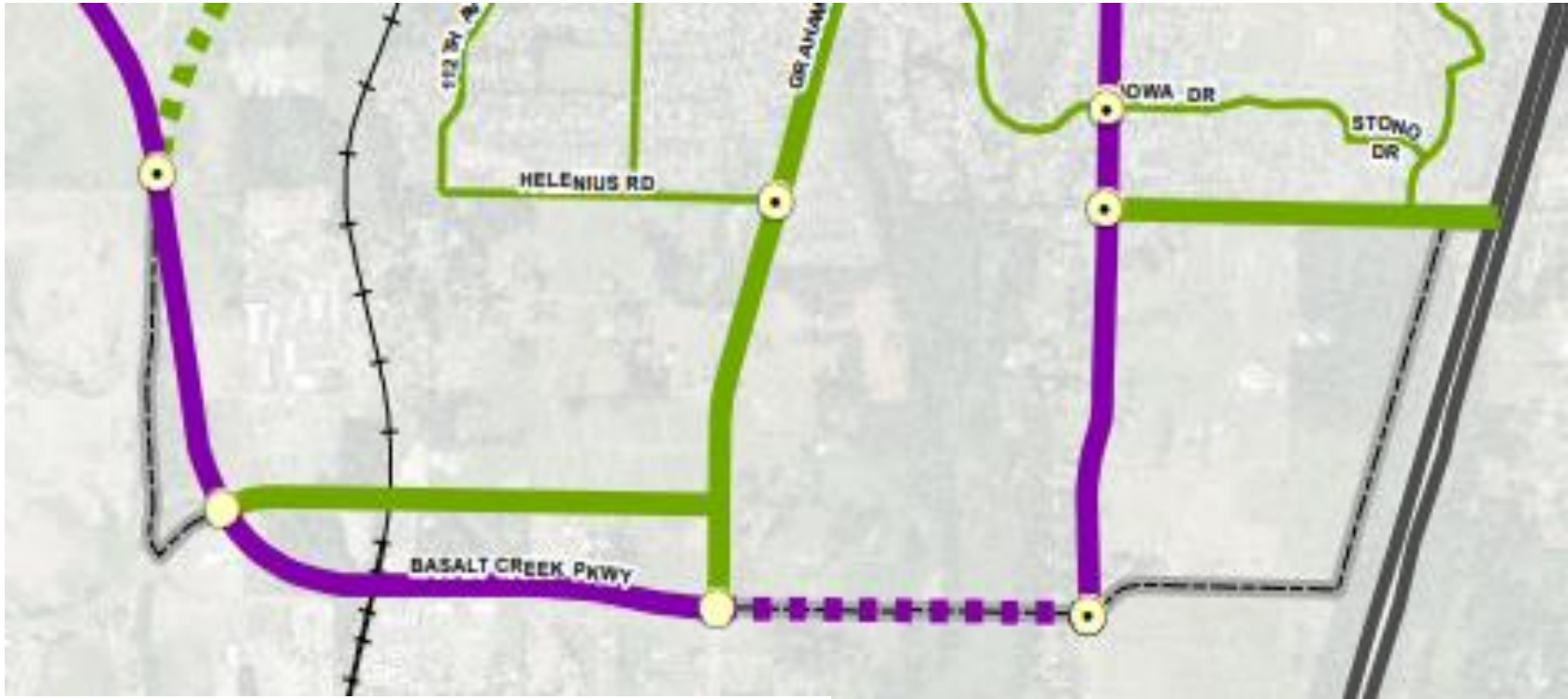
# What has changed? – Transportation System Plan

- The proposed updates expand the Transportation System Plan to include the Basalt Creek Planning Area and to apply roadway functional classifications consistent with the Basalt Creek Concept Plan and the Basalt Creek Transportation Refinement Plan.
- The transportation analysis shows that the proposed transportation system is adequate to support future property development in the Basalt Creek Planning Area consistent with the proposed zoning designations, and is compliant with State and Regional rules.





# Functional Classification Plan (Figure 11-1)



- Principal Arterials
- Major Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Commercial/Industrial Connector
- ■ ■ Future Major Arterial
- ■ ■ Future Major Collector
- ■ ■ Future Minor Collector
- ■ ■ Future Commercial/Industrial Connector
- Existing Traffic Signal
- Proposed Traffic Signal

# Bike and Pedestrian Plan (Figure 11-4)



- Roads with Bike Lanes and Sidewalks  
(Arterials and Collectors)
- Roads with Sidewalks  
(Arterials, Collectors, and Connectors)
- Shared Roadway
- Bike Boulevards
- Multi-Use Path
- Planned Multi-Use Path
- Pedestrian Path
- Planned Pedestrian Path
- Planning Area Boundary

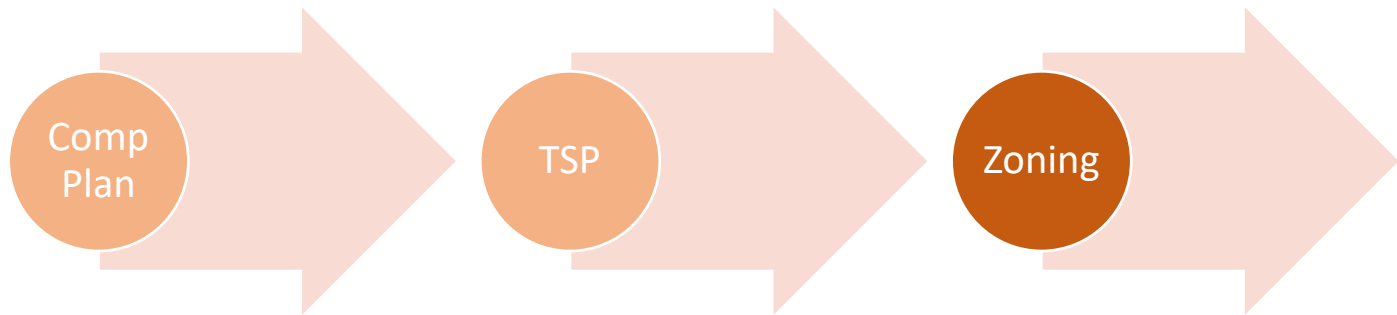
Basalt Creek Comprehensive Plan Update Overview



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# What is the Development Code?

- Also known as the Zoning Code
- Implements the *Comprehensive Plan*
- Updates would apply land use regulations within the Basalt Creek Planning Area, upon annexation of individual properties
- Consistent with the Basalt Creek Concept Plan



Basalt Creek Comprehensive Plan Update Overview



# What has changed? – Development Code

- Neighborhood Commercial (CN) Zone
  - Updates development standards to be consistent with the area of CN identified in the Basalt Creek Concept Plan
- Manufacturing Park (MP) Zone
  - Updates development standards to be applicable within the Basalt Creek Planning Area
- Access Management
  - Updates to include streets within the Basalt Creek Planning Area

Chapter  
51

Chapter  
62

Chapter  
75

Basalt Creek Comprehensive Plan Update Overview



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# Community Plan Map (Map 9-1)



Residential	Manufacturing	Institutional
RL Low Density (1-6.4)	ML Light	IN Institutional
RML Medium-Low Density (7-10)	MG General	
RMH Medium-High Density (11-15)	MP Park	
RH High Density (16-25)	MBP Manufacturing Business Park	
RH/HR High Density/High Rise (26-30)	Planning Area Boundary	
	City of Tualatin	
Commercial		
CO Office	CR Recreational	
CC Central	CO/MR Mid-Rise Office	
CG General	MC Medical	
CN Neighborhood		

Basalt Creek Comprehensive Plan Update Overview

# Water (Map 12-1) and Sewer (Map 13-1)

Water



Sewer



Basalt Creek Comprehensive Plan Update Overview



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# Implementation Process/ Next Steps

- **City Implementation Process:**

- **March 4, 2019:** Application made by City. Notices sent to property owners and interested parties. Written comment period begins.
- **March 21, 2019:** Tualatin Planning Commission meeting to review proposal and make a recommendation to the City Council.
- **April 8, 2019:** City Council consideration of the Planning Commission's recommendation on the proposal. The City Council may also consider an Ordinance adopting Basalt Creek Comprehensive Plan Update.

- **Property Owner Next Steps:**

- **Spring/Summer 2019:** Basalt Creek planning process complete. Property owners may submit annexation petitions.
- **Late 2019:** Recently annexed property owners may be able to submit land use applications for review.



# Conclusion

- The Findings and Analysis (Exhibit 1) show compliance with the criteria applicable to the proposed amendments.
- Staff respectfully requests that the Planning Commission forward a recommendation of the amendments, as proposed, to the City Council.
- Questions?





## Basalt Creek Comprehensive Plan Update (File Nos. PTA 19-0001 and PMA 19-0001): ANALYSIS AND FINDINGS

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### Section A. Introduction

#### Applicable Criteria

Applicable Statewide Planning Goals; Divisions 7, 9 and 12 of the Oregon Administrative Rules; the Oregon Highway Plan; Titles 1, 3, 4, 7, 8, 11, 12, 13, and 14 of Metro Chapter 3.07 (Urban Growth Management Functional Plan) and Titles, 1, 3, 4, 5, and 6 of the Metro Chapter 3.08 (Regional Transportation Functional Plan, including applicable conditions from "Exhibit F" of Metro Ordinance No. 04-1040B; applicable Goals and Policies from the City of Tualatin Comprehensive Plan; applicable Sections of the City of Tualatin Development Code, including Section 33.070 (Plan Amendments).

#### Background

- The Basalt Creek Planning Area was brought into the Portland Metropolitan Urban Growth Boundary in 2004.
- Metro Code Title 11 requires a city to adopt a concept plan – which is a long-range plan that identifies lands for residential and employment uses and the transportation and other public facilities necessary to support the mix of uses - for an area brought into the Urban Growth Boundary as an interim step until a city amends its adopted comprehensive plan and applies it to that area.
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#### Public Involvement

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- The proposed amendments would update the Tualatin Transportation System Plan.

### **Zoning Designations**

- The Tualatin portion of the Basalt Creek Planning Area is generally located north of Basalt Creek Parkway, south of Helenius Road and Norwood Road, east of 124th Avenue, and west of I-5. As shown on the Community Plan Map (Map 9-1, Exhibit 11), the Basalt Creek Planning Area would include a mix of residential zones at various densities, a small neighborhood commercial node, and employment lands, consistent with the Basalt Creek Concept Plan. As shown on the Neighborhood Planning Areas Map (Map 9-2, Exhibit 11), the Basalt Creek Planning Area will be designated as “Area 16.” Application of the zoning designations to an individual property would occur after approval of a property-owner submitted annexation petition.
- Low Density Residential (RL): An area with the RL (Low Density Residential) Planning District is proposed west of Boones Ferry Road in the approximate area of the Basalt Creek Canyon. An area with the RL Zone is also planned north of Tonquin Loop, south

of Helenius Road, west of Grahams Ferry Road and east of 124th Avenue. This land will develop either in the traditional single-family subdivision pattern, or, through the conditional use process in clustered housing patterns.

- Medium Low Density Residential (RML): An area with the RML (Medium Low Density Residential) Zone is proposed south of Norwood Road, east of Boones Ferry Road, and west of I-5. An additional area of RML Zone is also planned east of Grahams Ferry Road a between the two above described areas of RL Zone. These areas lends themselves to a slightly higher density than traditional single-family due to the excellent transportation access and the close relationship to the employment centers. The use of the RML District in this area provides for the needed higher densities with a District that will allow development that is similar in character and density to the RL lands.
- High Density Residential (RH): An area with the RH (High Density Residential) Zone is proposed north of Greenhill Road and east of Boones Ferry Road. This land lends itself to a higher density due to the excellent transportation access and the close relationship to the employment centers. The use of the RH District in this area provides for the needed higher densities.
- Neighborhood Commercial (CN): A small area with the CN (Neighborhood Commercial) Zone is proposed north of Greenhill Road and east of Boones Ferry Road. This CN District is intended to provide locations for commercial uses within close proximity to residential areas, to provide opportunities to serve the needs of residents for convenience shopping and services. This area lends itself to the CN District due to the excellent transportation access and the close proximity to abutting residential areas of medium to higher densities.
- Manufacturing Park (MP): The balance of the Basalt Creek Planning Area is proposed to be designated in the MP (Manufacturing Park) Zone. The MP District is intended to be conducive to the development and protection of modern, large-scale specialized manufacturing and related uses and research facilities. This area is located north of Basalt Creek Parkway, south of Tonquin Loop, east of 124th Avenue, and west of Basalt Creek Canyon and an area of RML Zone.

### **Transportation System Plan (TSP) Update**

- The proposed amendments would update the Tualatin TSP (Exhibit 9) to include the Basalt Creek Planning Area and to apply roadway functional classifications (Figure 11-1, Exhibit 10) consistent with the Basalt Creek Concept Plan and the Basalt Creek Transportation Refinement Plan. Staff notes that due to the adoption of an updated Regional Transportation Functional Plan (RTFP) by Metro in December of 2018, supplemental transportation analysis has been included (Exhibit 5), demonstrating that the TSP update, as proposed, continues to be compliant with OAR Chapter 660 Division 12 (Transportation Planning Rule), the Oregon Highway Plan, and applicable sections of the Metro Regional Transportation Functional Plan, and is adequate to support future property development in the Basalt Creek Planning Area consistent with the proposed zoning designations.
- The proposed amendments would also update the following Figures (Exhibit 10): 11-2 – Metro Regional Street Design System, 11-3 – Local Street Plan, 11-4 – Bicycle and

Pedestrian System, 11-5 – Transit Plan, 11-6 – Freight Routes, and 73-3 – Parking Maximum Map, consistent with the Basalt Creek Concept Plan and compliant with OAR Chapter 660 Division 12 (Transportation Planning Rule), the Oregon Highway Plan, and applicable sections of the Metro Regional Transportation Functional Plan

### **Comprehensive Plan Text Amendments**

- In support of the proposed amendments, and implementation of the proposed zoning designations and transportation system, amendments to the Tualatin Comprehensive Plan text are proposed.
- Chapter 4 (Community Growth): Section 4.065 (Requirements) is updated to include a reference to the adoption of the proposed amendments.
- Chapter 7 (Manufacturing Planning Districts): Section 7.010 (Background) is updated to include a reference to the 2004 Urban Growth Boundary Expansion and the Basalt Creek Planning Area.
- Chapter 9 (Plan Map): Adds a new Section (9.046 – Area 16 Basalt Creek Planning Area) to include a description of the Basalt Creek Planning Area and the applicable zoning designations within the area.

### **Development Code Text Amendments**

- In support of the proposed amendments, and implementation of the proposed zoning designations and transportation system, amendments to the Tualatin Development Code are proposed.
- Chapter 51 (Neighborhood Commercial (CN) Zone): Section 51.110 (District Size and Location Standards) is updated consistent with the size and location of the CN zone identified in the Basalt Creek Concept Plan.
- Chapter 62 (Manufacturing Park (MP) Zone): Table 62-2 (Development Standards in the MP Zone) is updated to apply within the Basalt Creek Planning Area.
- Chapter 75 (Access Management): Section 75.140 (Existing Streets Access Standards) is updated to apply to streets within the Basalt Creek Planning Area.

### **Public Utility Infrastructure**

- As illustrated within the Water Plan and Sanitary Sewer Plan (Maps 12-1 and 13-1, Exhibit 11), public utilities will be extended south of the existing city limit to serve the Basalt Creek Planning Area. Because no storm water system currently exists in the area aside from existing conveyance adjacent to the street system, a new conveyance system will need to be installed along the new roadways. In addition, site development runoff will need to be treated and detained, if necessary, before being discharged to the public drainage systems consistent with Clean Water Services standards.

### **Natural Resources**

- The proposed amendments would apply the Tualatin Development Code within the Basalt Creek Planning Area upon adoption and annexation of any property to Tualatin. Metro Regional Functional Plan Title 3 and 13 conservation areas will be administered and protected by Clean Water Services. 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. Although no areas of floodplain or regulatory floodway are mapped by the Federal Emergency Management Agency (FEMA) in the Basalt Creek Planning Area, Tualatin Development Code Chapter 70 (Floodplain Development) would be applicable to individual properties, upon annexation to Tualatin.

### **School Capacity**

- The Basalt Creek Planning Area is served by the Sherwood School District. Future school capacity to serve future residential development was analyzed as part of the Basalt Creek Concept Plan. The proposed amendments are consistent with the residential zoning districts identified in the concept plan. Notice of the proposed amendments was also provided to the Sherwood School District.

### **Parks Master Plan**

- The City adopted an updated Parks Master Plan in November of 2018, which will guide the development of future recreation areas and open space within the Basalt Creek Planning Area.

### **Agency and Interested Person Comments**

- Notice of the proposed amendments was provided to the Oregon Department of Land Conservation and Development (DLCD), the required 35 days prior to the City Council public hearing. Notice was also sent to Metro and other affected agencies. Notices complying with Oregon Ballot Measure 56 were mailed to property owners within the Tualatin portion of the Basalt Creek Planning Area.

### **Exhibits**

#### **Background Documents**

2. Basalt Creek Concept Plan
3. Basalt Creek Concept Plan Appendixes
4. Metro Ordinance No. 04-1040B, including "Exhibit F" (Conditions of Approval)
5. Supplemental Transportation Analysis
6. City of Tualatin Title 13 and Tualatin Basin Plan Compliance Review Letter, dated December 5, 2006

#### **Proposed Amendments**

7. Comprehensive Plan Text Amendments (Chapters 4, 7, and 9)
8. Tualatin Development Code Text Amendments (Chapters 51, 62, and 75)
9. Tualatin Transportation System Plan Amendments
10. Amended Figures: 11-1 – Functional Classification and Traffic Signal Plan; 11-2 – Metro Regional Street Design System; 11-3 – Local Street Plan; 11-4 – Bicycle and Pedestrian System; 11-5 – Transit Plan; 11-6 – Freight Routes; and 73-3 – Parking Maximum Map
11. Amended Maps: 9-1 – City of Tualatin Community Plan Map; 9-2 – Neighborhood Planning Areas Map; 9-4 – Design Type Boundaries; 9-5 – Commercial Setback; 12-1 –

Water Plan; 13-1 – Sewer Plan; 72-1 –Natural Resources Protection Overlay District (NRPO) and Greenway Locations; 72-2 – Greenway Development Plan; 72-3 – Significant Natural Resources; and 74-1 –Street Tree Plantings

**Notices**

- 12. Oregon Ballot Measure 56 Notice and Affidavit of Mailing
- 13. Posted Notice and Affidavit of Posting

**Section B: Oregon Statewide Planning Goals**

**The following Oregon Statewide Planning Goals are applicable to the proposed amendments:**

**Goal 1 – Citizen Involvement**

**To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan, which included extensive citizen involvement. The Basalt Creek Concept Plan Appendixes (Exhibit 3) include a detailed Public Involvement Plan that identifies the specific outreach that was conducted, which included: a community workshop, an open house, and periodic updates posted in the City newsletter and webpage. Relative to the proposed amendments, notice was mailed to property owners on March 4, 2019 (Exhibit 12), notice will be published in the Tualatin Times newspaper on March 21, 2019, and notice was posted in two public places on March 11, 2019 (Exhibit 13). Finally, the Tualatin Planning Commission will hold a public meeting on March 21, 2019, and the City Council will hold a public hearing on the proposed amendments on April 8, 2019. The proposed amendments conform to Goal 1.

**Goal 2 – Land Use Planning**

**To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.**

**Finding:**

The proposed amendments contain comprehensive plan provisions and development regulations and specific planning district designations for future urban development of the Basalt Creek Concept Plan and also designate street classifications. The proposed amendments conform to Goal 2.

**Goal 5 – Open Spaces, Scenic and Historic Areas and Natural Resources**

**To protect natural resources and conserve scenic and historic areas and open spaces.**

**Finding:**

The City previously adopted an ordinance relating to water quality, flood plain management, and erosion control, to comply with Metro’s Urban Growth Management Functional Plan (UGMFP) Title 3 and by extension, parts of Goal 5. The amendments were made to refer to Clean Water Services regulations, which had been found by Metro to be consistent with Title 3, thus bringing Tualatin into conformance with Title 3 as well. Compliance with Title 13 is satisfied by Tualatin’s participation in the Tualatin Basin Plan (Exhibit 6) and previously adopted amendments to the Comprehensive Plan and Development Code. The TDC will apply to the Basalt Creek area upon adoption and annexation of any property to Tualatin. The conservation areas will be administered and protected by Clean Water Services. 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. The proposed amendments conform to Goal 5.

**Goal 6 – Air, Water and Land Resource Quality**

**To maintain and improve the quality of the air, water and land resources of the state.**

**Finding:**

Air, water and land resource quality have been considered in development of the proposed amendments and appropriate measures are incorporated in the Comprehensive Plan and Development Code, to ensure that state and federal regulations will be met, largely through the application of building permit requirements. The proposed amendments conform to Goal 6.

**Goal 7 – Areas Subject to Natural Disasters and Hazards**

**To protect people and property from natural hazards.**

**Finding:**

Future development in the Basalt Creek area will be required to conform to the Comprehensive Plan and Development Code, which includes compliance with environmental regulations in the Tualatin Development Code (TDC) to protect people and property from natural hazards. The proposed amendments conform to Goal 7.

**Goal 8 – Recreation Needs**

**To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.**

**Finding:**

Parks will be developed as envisioned in the Parks Master Plan. Specific to the Basalt Creek area, the Parks Master Plan identified a need of a roughly five acre park site, though a specific location was not identified. Further, the Comprehensive Plan and Development Code include policies and regulations which support park and recreation planning in the Basalt Creek area. Lastly, public parks and usable open space are permitted uses in the Low Density Residential

(RL), Medium Low Density Residential (RML), and High Density Residential (RH) zoning districts. The proposed amendments conform to Goal 8.

### **Goal 9 – Economy of the State**

**To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.**

#### **Finding:**

Metro is the regional governmental organization tasked with balancing the needs of the region in regards to land uses, which by extension, address a variety of economic factors such as health, welfare and prosperity. In 2004 Metro adopted Ordinance No. 04-1040B (Exhibit 4), intended to increase the Portland metropolitan urban growth boundary to accommodate growth in industrial employment. That expansion included 1,940 acres of land for industrial purposes, including the area now known as the Basalt Creek Planning Area. The Basalt Creek Concept Plan addressed concept planning for employment areas. The proposed amendments implement the concept plan and apply the City's Comprehensive Plan and Development Code to the planning area. The proposed amendments conform to Goal 9.

### **Goal 10 - Housing**

**This goal specifies that each city must plan for and accommodate needed housing types, such as multifamily and manufactured housing.**

#### **Finding:**

Statewide Planning Goal 10 requires each city to inventory its buildable residential lands, project future needs for such lands, and plan and zone enough buildable land to meet those needs. In addition, the goal requires planning for needed housing types, such as multi-family housing. Additional findings addressing Goal 10 are found below under Oregon Administrative Rules Chapter 660, Division 7. The proposed amendments would accommodate a mix of residential uses at varying densities in the Basalt Creek Planning Area. 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. 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 Road is intended for high density housing. The remainder of the land east and south of Horizon School is planned for medium-low density residential. In total 575 new households are anticipated. The proposed amendments conform to Goal 10.

### **Goal 11 - Public Facilities and Services**

**To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.**



**Finding:**

The proposed amendments include updates to the City’s Water Plan and Sanitary Sewer Plan (Exhibit 11). With respect to sewer and storm drainage facilities, properties within the Plan will need to be annexed into the Clean Water Services (CWS) service area prior to receiving service. For public services, the area will be served by the City of Tualatin Police Department when annexed. Until annexation, the area will be served by Washington County Sheriff’s Department. Fire Service is currently provided by Tualatin Valley Fire & Rescue and, upon annexation, TVF&R will continue to serve the area. The proposed amendments conform to Goal 11.

**Goal 12 – Transportation**

**To provide and encourage a safe, convenient and economic transportation system.**

**Finding:**

Goal 12 requires the provision and encouragement of a safe, convenient, multimodal and economic transportation system. The Comprehensive Plan and Transportation System Plan (TSP) describes the transportation system necessary to accommodate the transportation needs of the City. Implementing measures are contained in the Tualatin Development Code and Public Works Construction Code. The proposed amendments improve consistency with other adopted planning efforts. The amendments are consistent with the City’s acknowledged policies and strategies for the provision of transportation facilities and services as required by Goal 12 the Transportation Planning Rule (TPR), the findings for which are found under Oregon Administrative Rules Chapter 660, Division 12. The proposed amendments are consistent with the acknowledged policies and strategies for the provision of transportation facilities and services as required by Goal 12, the TPR, the Oregon Highway Plan (OHP) and the Regional Transportation Functional Plan (RTFP). The proposed amendments conform to Goal 12.

**Goal 13: Energy Conservation**

**To conserve energy.**

**Finding:**

Provisions to comply with Goal 13 were included in the existing, adopted and DLCD acknowledged Comprehensive Plan and Development Code. The amendments proposed to the plan would not eliminate or alter the existing energy conservation provisions of the Code, and all code provisions would apply within the Basalt Creek Planning Area upon property annexation. All streets within the area are planned to have bike lanes and sidewalks, and there are several pedestrian trails proposed as well, which will contribute to energy efficiency. Inclusion of a small commercial node within the area promotes shorter vehicle trips and encourages walking. Transit lines currently operate along the high density housing proposed to further encourage reduced vehicle trips. Coordinated design and development allows for maximized use of transportation systems and public facilities in the area, thereby further increasing energy efficiency. The proposed amendments conform to Goal 13.

**Goal 14: Urbanization**

**To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities.**

**Finding:**

Metro, as part of Ordinance 04-1040B, evaluated and determined that additional land was necessary in the Portland region for industrial development and included the Basalt Creek Planning Area in the UGB. The proposed amendments would apply the Comprehensive Plan and proposed planning district designations and development regulations to the properties within the planning area. This allows a transition from rural to urban land uses by applying land use/zoning designations to properties upon annexation. These provisions will accommodate urban population and employment inside the UGB, while providing compatibility and consistency with abutting planning district designations. Efficient use of land and development of healthful, safe, aesthetic surroundings and conditions will best be ensured with the proposed amendments. The proposed amendments conform to Goal 14.

**Section C: Oregon Administrative Rules**

**The following Oregon Administrative Rules (OAR) are applicable to the proposed amendments:**

**OAR Chapter 660, Division 7 (Metropolitan Housing)  
660-007-0015  
Clear and Objective Approval Standards Required**

**(1) Except as provided in section (2) of this rule, a local government may adopt and apply only clear and objective standards, conditions and procedures regulating the development of needed housing on buildable land. The standards, conditions and procedures may not have the effect, either in themselves or cumulatively, of discouraging needed housing through unreasonable cost or delay.**

**(2) In addition to an approval process for needed housing based on clear and objective standards, conditions and procedures as provided in section (1) of this rule, a local government may adopt and apply an optional alternative approval process for applications and permits for residential development based on approval criteria regulating, in whole or in part, appearance or aesthetics that are not clear and objective if:**

**(a) The applicant retains the option of proceeding under the approval process that meets the requirements of section (1);**

**(b) The approval criteria for the alternative approval process comply with applicable statewide land use planning goals and rules; and**

**(c) The approval criteria for the alternative approval process authorize a density at or above the density level authorized in the zone under the approval process provided in section (1) of this rule.**

**(3) Subject to section (1), this rule does not infringe on a local government’s prerogative to:**

- (a) Set approval standards under which a particular housing type is permitted outright;**
- (b) Impose special conditions upon approval of a specific development proposal; or**
- (c) Establish approval procedures.**

**Finding:**

As reflected in the TDC, the City provides for clear and objective standards for housing development through the partition, subdivision, and Architectural Review processes, including a fee schedule based on the cost to the City for accepting and processing land use applications. These processes, fees and clear and objective standards do not discourage needed housing through unreasonable cost or delay. The proposed amendments are consistent with these requirements.

**660-007-0018**

**Specific Plan Designations Required**

**(1) Plan designations that allow or require residential uses shall be assigned to all buildable land. Such designations may allow nonresidential uses as well as residential uses. Such designations may be considered to be "residential plan designations" for the purposes of this division. The plan designations assigned to buildable land shall be specific so as to accommodate the varying housing types and densities identified in OAR 660-007-0030 through 660-007-0037.**

**(2) A local government may defer the assignment of specific residential plan designations only when the following conditions have been met:**

- (a) Uncertainties concerning the funding, location and timing of public facilities have been identified in the local comprehensive plan;**
- (b) The decision not to assign specific residential plan designations is specifically related to identified public facilities constraints and is so justified in the plan; and**
- (c) The plan includes a time-specific strategy for resolution of identified public facilities uncertainties and a policy commitment to assign specific residential plan designations when identified public facilities uncertainties are resolved.**

**Finding:**

In the proposed Comprehensive Plan Map Amendments, all buildable land within the Basalt Creek area is assigned a plan designation, providing varying housing types and densities, increasing housing choice. The proposed amendments are consistent with these requirements.

**660-007-0020**

**The Rezoning Process**

**A local government may defer rezoning of land within the urban growth boundary to maximum planned residential density provided that the process for future rezoning is reasonably justified:**

- (1) The plan must contain a justification for the rezoning process and policies which explain how this process will be used to provide for needed housing.**
- (2) Standards and procedures governing the process for future rezoning shall be based on the rezoning justification and policy statement, and must be clear and objective.**

**Finding:**

All land within the Basalt Creek area is assigned a comprehensive plan/zoning designation on the Community Plan Map (Map 9-1, Exhibit 11). No deferral is required. The proposed amendments are consistent with these requirements.

**660-007-0022**

**Restrictions on Housing Tenure**

**Any local government that restricts the construction of either rental or owner occupied housing on or after its first periodic review shall either justify such restriction by an analysis of housing need according to tenure or otherwise demonstrate that such restrictions comply with ORS 197.303(1)(a) and 197.307(3).**

**Finding:**

The City of Tualatin has no restrictions on the construction of rental or owner occupied housing. The proposed amendments are consistent with these requirements.

**660-007-0030**

**New Construction Mix**

- (1) Jurisdictions other than small developed cities must either designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing or justify an alternative percentage based on changing circumstances. Factors to be considered in justifying an alternate percentage shall include, but need not be limited to:
  - (a) Metro forecasts of dwelling units by type;**
  - (b) Changes in household structure, size, or composition by age;**
  - (c) Changes in economic factors impacting demand for single family versus multiple family units; and**
  - (d) Changes in price ranges and rent levels relative to income levels.****
- (2) The considerations listed in section (1) of this rule refer to county-level data within the UGB and data on the specific jurisdiction.**

**Finding:**

All Tualatin residential districts provide the opportunity for attached or multifamily housing. The proposed residential zoning districts include a mix of low, medium, and high densities (Map 9-

1, Exhibit 11). Therefore, the proposed zoning districts provide the opportunity for at least 50 percent of new residential units to be attached single family or multiple family housing. The proposed amendments are consistent with these requirements.

**660-007-0033  
 Consideration of Other Housing Types**

**Each local government shall consider the needs for manufactured housing and government assisted housing within the Portland Metropolitan UGB in arriving at an allocation of housing types.**

**Finding:**

Although the RML and RH zoning districts do not allow detached single family dwellings, including manufactured housing, application of the RL zoning district would allow for all types of detached single family dwellings, including manufactured housing. The proposed amendments are consistent with these requirements.

**660-007-0035  
 Minimum Residential Density Allocation for New Construction**

**The following standards shall apply to those jurisdictions which provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing:**

[...]

**(2) Clackamas and Washington Counties, and the cities of Forest Grove, Gladstone, Milwaukie, Oregon City, Troutdale, Tualatin, West Linn and Wilsonville must provide for an overall density of eight or more dwelling units per net buildable acre.**

[...]

**Finding:**

As shown below in Table 1, the overall residential density of Tualatin is estimated to be 8.7 dwelling units per net buildable acre, including the Basalt Creek area as seen on page 30 of the adopted concept plan. This exceeds the minimum required density of eight or more dwelling units per net buildable acre. The proposed amendments are consistent with these requirements.

<b>Table 1 - Tualatin Buildable Land Inventory</b>						
	<b>RL</b>	<b>RML</b>	<b>RMH</b>	<b>RH</b>	<b>RH/HR</b>	<b>Total</b>
Buildable Acres	1195.23	188.33	118.04	78.87	0.6	1581.07
Basalt Creek Area Buildable Acres	3.6	59.83	-	24.83	-	88.26
Total Buildable Acres						
<i>Maximum Density Allowed</i>	<i>6.4</i>	<i>10</i>	<i>15</i>	<i>25</i>	<i>30</i>	
Total Dwelling Units Allowed	7672.51	2481.60	1770.6	2592.50	18	14535.21
<b><i>Dwelling Units / Acre</i></b>						<b>8.7</b>

**660-007-0037**

**Alternate Minimum Residential Density Allocation for New Construction**

The density standards in OAR 660-007-0035 shall not apply to a jurisdiction which justifies an alternative new construction mix under the provisions of OAR 660-007-0030. The following standards shall apply to these jurisdictions:

- (1) The jurisdiction must provide for the average density of detached single family housing to be equal to or greater than the density of detached single family housing provided for in the plan at the time of original LCDC acknowledgment.
- (2) The jurisdiction must provide for the average density of multiple family housing to be equal to or greater than the density of multiple family housing provided for in the plan at the time of original LCDC acknowledgment.
- (3) A jurisdiction which justifies an alternative new construction mix must also evaluate whether the factors in OAR 660-007-0030 support increases in the density of either detached single family or multiple family housing or both. If the evaluation supports increases in density, then necessary amendments to residential plan and zone designations must be made.

**Finding:**

The proposed Comprehensive Plan amendments accommodate the density standards in OAR 660-007-0035. The proposed amendments are consistent with these requirements.

**660-007-0045**

**Computation of Buildable Lands**

- (1) The local buildable lands inventory must document the amount of buildable land in each residential plan designation.
- (2) The Buildable Land Inventory (BLI): The mix and density standards of OAR 660-007-0030, 660-007-0035 and 660-007-0037 apply to land in a buildable land inventory required by OAR 660-007-0010, as modified herein. Except as provided below, the buildable land inventory at each jurisdiction's choice shall either be based on land in a residential plan/zone designation within the jurisdiction at the time of periodic review or based on the jurisdiction BLI at the time of acknowledgment as updated. Each jurisdiction must include in its computations all plan and/or zone changes involving residential land which that jurisdiction made since acknowledgment. A jurisdiction need not include plan and/or zone changes made by another jurisdiction before annexation to a city. The adjustment of the BLI at the time of acknowledgment shall:
  - (a) Include changes in zoning ordinances or zoning designations on residential planned land if allowed densities are changed;
  - (b) Include changes in planning or zoning designations either to or from residential use. A city shall include changes to annexed or incorporated land if the city changed type or density or the plan/zone designation after annexation or incorporation;
  - (c) The county and one or more cities affected by annexations or incorporations may consolidate buildable land inventories. A single calculation of mix and density may be

prepared. Jurisdictions which consolidate their buildable lands inventories shall conduct their periodic review simultaneously;

(d) A new density standard shall be calculated when annexation, incorporation or consolidation results in mixing two or more density standards (OAR 660-007-0035). The calculation shall be made as follows:

(A)(i)  $\text{BLI Acres} \times 6 \text{ Units/Acre} = \text{Num. of Units}$ ;

(ii)  $\text{BLI Acres} \times 8 \text{ Units/Acre} = \text{Num. of Units}$ ;

(iii)  $\text{BLI Acres} \times 10 \text{ Units/Acre} = \text{Num. of Units}$ ;

(iv)  $\text{Total Acres (TA)} - \text{Total Units (TU)}$ .

(B)  $\text{Total units divided by Total Acres} = \text{New Density Standard}$ ;

(C) Example:

(i) Cities A and B have 100 acres and a 6-unit-per-acre standard:  $(100 \times 6 = 600 \text{ units})$ ; City B has 300 acres and a 10-unit-per-acre standard:  $(300 \times 10 = 3000 \text{ units})$ ; County has 200 acres and an 8-unit-per-acre standard:  $(200 \times 08 = 1600 \text{ units})$ ; Total acres = 600 — Total Units = 5200.

(ii)  $5200 \text{ units divided by } 600 \text{ acres} = 8.66 \text{ units per acre standard}$ .

(3) Mix and Density Calculation: The housing units allowed by the plan/zone designations at periodic review, except as modified by section (2) of this rule, shall be used to calculate the mix and density. The number of units allowed by the plan/zone designations at the time of development shall be used for developed residential land.

**Finding:**

The City has recently begun the process of updating its buildable lands inventory for the entire City. For the Basalt Creek area, buildable land has been identified consistent with the requirements of Metro Title 11. The city's buildable lands methodology and definitions were coordinated with those developed during the Basalt Creek Concept Plan, so that the resultant calculations and net density conclusions would be substantially consistent. The proposed amendments are consistent with these requirements.

**660-007-0050  
Regional Coordination**

(1) At each periodic review of the Metro UGB, Metro shall review the findings for the UGB. They shall determine whether the buildable land within the UGB satisfies housing needs by type and density for the region's long-range population and housing projections.

(2) Metro shall ensure that needed housing is provided for on a regional basis through coordinated comprehensive plans.

**Finding:**

These criteria define Metro responsibilities. The proposed amendments are consistent with these requirements.

**OAR Chapter 660, Division 9 (Economic Development)**

**660-009-0010**  
**Application**

**(1) This division applies to comprehensive plans for areas within urban growth boundaries. This division does not require or restrict planning for industrial and other employment uses outside urban growth boundaries. Cities and counties subject to this division must adopt plan and ordinance amendments necessary to comply with this division.**

**(2) Comprehensive plans and land use regulations must be reviewed and amended as necessary to comply with this division as amended at the time of each periodic review of the plan pursuant to ORS 197.712(3). Jurisdictions that have received a periodic review notice from the Department (pursuant to OAR 660-025-0050) prior to the effective date of amendments to this division must comply with such amendments at their next periodic review unless otherwise directed by the Commission.**

**(3) Cities and counties may rely on their existing plans to meet the requirements of this division if they conclude:**

**(a) There are not significant changes in economic development opportunities (e.g., a need for sites not presently provided for in the plan) based on a review of new information about national, state, regional, county and local trends; and**

**(b) That existing inventories, policies, and implementing measures meet the requirements in OAR 660-009-0015 to 660-009-0030.**

**(4) For a post-acknowledgement plan amendment under OAR chapter 660, division 18, that changes the plan designation of land in excess of two acres within an existing urban growth boundary from an industrial use designation to a non-industrial use designation, or another employment use designation to any other use designation, a city or county must address all applicable planning requirements, and:**

**(a) Demonstrate that the proposed amendment is consistent with its most recent economic opportunities analysis and the parts of its acknowledged comprehensive plan which address the requirements of this division; or**

**(b) Amend its comprehensive plan to incorporate the proposed amendment, consistent with the requirements of this division; or**

**(c) Adopt a combination of the above, consistent with the requirements of this division.**

**(5) The effort necessary to comply with OAR 660-009-0015 through 660-009-0030 will vary depending upon the size of the jurisdiction, the detail of previous economic development planning efforts, and the extent of new information on national, state, regional, county, and local economic trends. A jurisdiction's planning effort is adequate if it uses the best available or readily collectable information to respond to the requirements of this division.**

**(6) The amendments to this division are effective January 1, 2007. A city or county may voluntarily follow adopted amendments to this division prior to the effective date of the adopted amendments.**

**Finding:**



The provisions of this rule that relate to a change to a Comprehensive Plan designation of land in excess of two acres (subsection "4", above) do not relate to the subject request due to the fact that the proposed changes are from Washington County FD-20 zoning district(s) to City of Tualatin zoning districts. The proposed amendments are consistent with these requirements.

## **660-009-0015 Economic Opportunities Analysis**

**Cities and counties must review and, as necessary, amend their comprehensive plans to provide economic opportunities analyses containing the information described in sections (1) to (4) of this rule. This analysis will compare the demand for land for industrial and other employment uses to the existing supply of such land.**

**(1) Review of National, State, Regional, County and Local Trends. The economic opportunities analysis must identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area based on information about national, state, regional, county or local trends. This review of trends is the principal basis for estimating future industrial and other employment uses as described in section (4) of this rule. A use or category of use could reasonably be expected to expand or locate in the planning area if the area possesses the appropriate locational factors for the use or category of use. Cities and counties are strongly encouraged to analyze trends and establish employment projections in a geographic area larger than the planning area and to determine the percentage of employment growth reasonably expected to be captured for the planning area based on the assessment of community economic development potential pursuant to section (4) of this rule.**

**(2) Identification of Required Site Types. The economic opportunities analysis must identify the number of sites by type reasonably expected to be needed to accommodate the expected employment growth based on the site characteristics typical of expected uses. Cities and counties are encouraged to examine existing firms in the planning area to identify the types of sites that may be needed for expansion. Industrial or other employment uses with compatible site characteristics may be grouped together into common site categories.**

**(3) Inventory of Industrial and Other Employment Lands. Comprehensive plans for all areas within urban growth boundaries must include an inventory of vacant and developed lands within the planning area designated for industrial or other employment use.**

**(a) For sites inventoried under this section, plans must provide the following information:**

**(A) The description, including site characteristics, of vacant or developed sites within each plan or zoning district;**

**(B) A description of any development constraints or infrastructure needs that affect the buildable area of sites in the inventory; and**

**(C) For cities and counties within a Metropolitan Planning Organization, the inventory must also include the approximate total acreage and percentage of sites within each plan or zoning district that comprise the short-term supply of land.**

**(b) When comparing current land supply to the projected demand, cities and counties may inventory contiguous lots or parcels together that are within a discrete plan or zoning district.**

**(c) Cities and counties that adopt objectives or policies providing for prime industrial land pursuant to OAR 660-009-0020(6) and 660-009-0025(8) must identify and inventory any vacant or developed prime industrial land according to section (3)(a) of this rule.**

**(4) Assessment of Community Economic Development Potential. The economic opportunities analysis must estimate the types and amounts of industrial and other employment uses likely to occur in the planning area. The estimate must be based on information generated in response to sections (1) to (3) of this rule and must consider the planning area's economic advantages and disadvantages. Relevant economic advantages and disadvantages to be considered may include but are not limited to:**

**(a) Location, size and buying power of markets;**

**(b) Availability of transportation facilities for access and freight mobility;**

**(c) Public facilities and public services;**

**(d) Labor market factors;**

**(e) Access to suppliers and utilities;**

**(f) Necessary support services;**

**(g) Limits on development due to federal and state environmental protection laws; and**

**(h) Educational and technical training programs.**

**(5) Cities and counties are strongly encouraged to assess community economic development potential through a visioning or some other public input based process in conjunction with state agencies. Cities and counties are strongly encouraged to use the assessment of community economic development potential to form the community economic development objectives pursuant to OAR 660-009-0020(1)(a).**

**Finding:**

The proposed Comprehensive Plan amendments involve the application of the Manufacturing Park (MP) zoning district, consistent with the Basalt Creek Concept Plan, which was inclusive of extensive citizen involvement and coordination with state agencies. The planning efforts and analysis that went into the Basalt Creek Concept Plan are based on the Metro 2040 Growth Concept Plan, and together are inclusive of the provisions of this administrative rule. The location and type of employment related designation have been planned in response to economic opportunities as identified by the City from a local perspective and are consistent with broader scale planning Basalt Creek Concept Plan. The proposed amendments are consistent with these requirements.

**660-009-0020**

**Industrial and Other Employment Development Policies**

**(1) Comprehensive plans subject to this division must include policies stating the economic development objectives for the planning area. These policies must be based on the community economic opportunities analysis prepared pursuant to OAR 660-009-0015 and must provide the following:**

**(a) Community Economic Development Objectives.** The plan must state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community. Policy objectives may identify the level of short-term supply of land the planning area needs. Cities and counties are strongly encouraged to select a competitive short-term supply of land as a policy objective.

**(b) Commitment to Provide a Competitive Short-Term Supply.** Cities and counties within a Metropolitan Planning Organization must adopt a policy stating that a competitive short-term supply of land as a community economic development objective for the industrial and other employment uses selected through the economic opportunities analysis pursuant to OAR 660-009-0015.

**(c) Commitment to Provide Adequate Sites and Facilities.** The plan must include policies committing the city or county to designate an adequate number of sites of suitable sizes, types and locations. The plan must also include policies, through public facilities planning and transportation system planning, to provide necessary public facilities and transportation facilities for the planning area.

**(2) Plans for cities and counties within a Metropolitan Planning Organization or that adopt policies relating to the short-term supply of land, must include detailed strategies for preparing the total land supply for development and for replacing the short-term supply of land as it is developed. These policies must describe dates, events or both, that trigger local review of the short-term supply of land.**

**(3) Plans may include policies to maintain existing categories or levels of industrial and other employment uses including maintaining downtowns or central business districts.**

**(4) Plan policies may emphasize the expansion of and increased productivity from existing industries and firms as a means to facilitate local economic development.**

**(5) Cities and counties are strongly encouraged to adopt plan policies that include brownfield redevelopment strategies for retaining land in industrial use and for qualifying them as part of the local short-term supply of land.**

**(6) Cities and counties are strongly encouraged to adopt plan policies pertaining to prime industrial land pursuant to OAR 660-009-0025(8).**

**(7) Cities and counties are strongly encouraged to adopt plan policies that include additional approaches to implement this division including, but not limited to:**

**(a) Tax incentives and disincentives;**

**(b) Land use controls and ordinances;**

**(c) Preferential tax assessments;**

**(d) Capital improvement programming;**

**(e) Property acquisition techniques;**

**(f) Public/private partnerships; and**

**(g) Intergovernmental agreements.**

**Finding:**

The proposed Comprehensive Plan Map/Zoning Map amendment will add approximately 92 net buildable acres of employment and industrial lands, which demonstrates a commitment to provide a competitive short-term supply of employment land. The planning efforts and analysis that went into the Basalt Creek Concept Plan are based on the Metro 2040 Growth Concept Plan, and together are inclusive of the provisions of this administrative rule. The proposed amendments are consistent with these requirements.

**660-009-0025**

**Designation of Lands for Industrial and Other Employment Uses**

**Cities and counties must adopt measures adequate to implement policies adopted pursuant to OAR 660-009-0020. Appropriate implementing measures include amendments to plan and zone map designations, land use regulations, public facility plans, and transportation system plans.**

**(1) Identification of Needed Sites.** The plan must identify the approximate number, acreage and site characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies. Plans do not need to provide a different type of site for each industrial or other employment use. Compatible uses with similar site characteristics may be combined into broad site categories. Several broad site categories will provide for industrial and other employment uses likely to occur in most planning areas. Cities and counties may also designate mixed-use zones to meet multiple needs in a given location.

**(2) Total Land Supply.** Plans must designate serviceable land suitable to meet the site needs identified in section (1) of this rule. Except as provided for in section (5) of this rule, the total acreage of land designated must at least equal the total projected land needs for each industrial or other employment use category identified in the plan during the 20-year planning period.

**(3) Short-Term Supply of Land.** Plans for cities and counties within a Metropolitan Planning Organization or cities and counties that adopt policies relating to the short-term supply of land must designate suitable land to respond to economic development opportunities as they arise. Cities and counties may maintain the short-term supply of land according to the strategies adopted pursuant to OAR 660-009-0020(2).

**(a)** Except as provided for in subsections (b) and (c), cities and counties subject to this section must provide at least 25 percent of the total land supply within the urban growth boundary designated for industrial and other employment uses as short-term supply.

**(b)** Affected cities and counties that are unable to achieve the target in subsection (a) above may set an alternative target based on their economic opportunities analysis.

**(c)** A planning area with 10 percent or more of the total land supply enrolled in Oregon's industrial site certification program pursuant to ORS 284.565 satisfies the requirements of this section.

**(4)** If cities and counties are required to prepare a public facility plan or transportation system plan by OAR chapter 660, division 011 or division 012, the city or county must

**complete subsections (a) to (c) of this section at the time of periodic review. Requirements of this rule apply only to city and county decisions made at the time of periodic review. Subsequent implementation of or amendments to the comprehensive plan or the public facility plan that change the supply of serviceable land are not subject to the requirements of this section. Cities and counties must:**

**(a) Identify serviceable industrial and other employment sites. The affected city or county in consultation with the local service provider, if applicable, must make decisions about whether a site is serviceable. Cities and counties are encouraged to develop specific criteria for deciding whether or not a site is serviceable. Cities and counties are strongly encouraged to also consider whether or not extension of facilities is reasonably likely to occur considering the size and type of uses likely to occur and the cost or distance of facility extension;**

**(b) Estimate the amount of serviceable industrial and other employment land likely to be needed during the planning period for the public facilities plan. Appropriate techniques for estimating land needs include but are not limited to the following:**

**(A) Projections or forecasts based on development trends in the area over previous years; and**

**(B) Deriving a proportionate share of the anticipated 20-year need specified in the comprehensive plan.**

**(c) Review and, if necessary, amend the comprehensive plan and the public facilities plan to maintain a short-term supply of land. Amendments to implement this requirement include but are not limited to the following:**

**(A) Changes to the public facilities plan to add or reschedule projects to make more land serviceable;**

**(B) Amendments to the comprehensive plan that redesignate additional serviceable land for industrial or other employment use; and**

**(C) Reconsideration of the planning area's economic development objectives and amendment of plan objectives and policies based on public facility limitations.**

**(d) If a city or county is unable to meet the requirements of this section, it must identify the specific steps needed to provide expanded public facilities at the earliest possible time.**

**(5) Institutional Uses. Cities and counties are not required to designate institutional uses on privately owned land when implementing section (2) of this rule. Cities and counties may designate land in an industrial or other employment land category to compensate for any institutional land demand that is not designated under this section.**

**(6) Compatibility. Cities and counties are strongly encouraged to manage encroachment and intrusion of uses incompatible with industrial and other employment uses.**

**Strategies for managing encroachment and intrusion of incompatible uses include, but are not limited to, transition areas around uses having negative impacts on surrounding areas, design criteria, district designation, and limiting non-essential uses within districts.**

**(7) Availability. Cities and counties may consider land availability when designating the short-term supply of land. Available land is vacant or developed land likely to be on the**

**market for sale or lease at prices consistent with the local real estate market. Methods for determining lack of availability include, but are not limited to:**

**(a) Bona fide offers for purchase or purchase options in excess of real market value have been rejected in the last 24 months;**

**(b) A site is listed for sale at more than 150 percent of real market values;**

**(c) An owner has not made timely response to inquiries from local or state economic development officials; or**

**(d) Sites in an industrial or other employment land category lack diversity of ownership within a planning area when a single owner or entity controls more than 51 percent of those sites.**

**(8) Uses with Special Siting Characteristics. Cities and counties that adopt objectives or policies providing for uses with special site needs must adopt policies and land use regulations providing for those special site needs. Special site needs include, but are not limited to large acreage sites, special site configurations, direct access to transportation facilities, prime industrial lands, sensitivity to adjacent land uses, or coastal shoreland sites designated as suited for water-dependent use under Goal 17.**

**Policies and land use regulations for these uses must:**

**(a) Identify sites suitable for the proposed use;**

**(b) Protect sites suitable for the proposed use by limiting land divisions and permissible uses and activities that interfere with development of the site for the intended use; and**

**(c) Where necessary, protect a site for the intended use by including measures that either prevent or appropriately restrict incompatible uses on adjacent and nearby lands.**

**Finding:**

The proposed Comprehensive Plan amendments involve the industrial and employment zoning district (MP) that is consistent with the designations shown in the Basalt Creek Concept Plan. The planning efforts and analysis that went into the Basalt Creek Concept Plan are based on the Metro 2040 Growth Concept Plan, and together are inclusive of the provisions of this administrative rule. In addition, a TSP Update by the City covers transportation planning for the greater subject area, the City's water and sewer plans detail the provision or planned provision of necessary sanitary/storm sewer and domestic water infrastructure to service future development. The proposed amendments are consistent with these requirements.

**660-009-0030**

**Multi-Jurisdiction Coordination**

**(1) Cities and counties are strongly encouraged to coordinate when implementing OAR 660-009-0015 to 660-009-0025.**

**(2) Jurisdictions that coordinate under this rule may:**

**(a) Conduct a single coordinated economic opportunities analysis; and**

**(b) Designate lands among the coordinating jurisdictions in a mutually agreed proportion.**

**Finding:**

The Basalt Creek Concept Plan and the resulting zoning designations involved a large degree of coordination between the cities of Tualatin and Wilsonville. The proposed Comprehensive Plan amendments are consistent with the Basalt Creek Concept Plan. The proposed amendments are consistent with these requirements.

**OAR Chapter 660, Division 12 (Transportation Planning)**

**660-012-0010**

**Transportation Planning**

**(1) As described in this division, transportation planning shall be divided into two phases: transportation system planning and transportation project development.**

**Transportation system planning establishes land use controls and a network of facilities and services to meet overall transportation needs. Transportation project development implements the TSP by determining the precise location, alignment, and preliminary design of improvements included in the TSP.**

**(2) It is not the purpose of this division to cause duplication of or to supplant existing applicable transportation plans and programs. Where all or part of an acknowledged comprehensive plan, TSP either of the local government or appropriate special district, capital improvement program, regional functional plan, or similar plan or combination of plans meets all or some of the requirements of this division, those plans or programs may be incorporated by reference into the TSP required by this division. Only those referenced portions of such documents shall be considered to be a part of the TSP and shall be subject to the administrative procedures of this division and ORS Chapter 197.**

**(3) It is not the purpose of this division to limit adoption or enforcement of measures to provide convenient bicycle and pedestrian circulation or convenient access to transit that are otherwise consistent with the requirements of this division.**

**Finding:**

The proposed Plan Text Amendment would update the Transportation System Plan (TSP) consistent with all applicable provisions of Division 12. The previously adopted TSP is consistent with 660-012-0010. As provided under this subsection, project development will be addressed separately at the appropriate time. The proposed amendments are consistent with these requirements.

**660-012-0015**

**Preparation and Coordination of Transportation System Plans**

**(1) ODOT shall prepare, adopt and amend a state TSP in accordance with ORS 184.618, its program for state agency coordination certified under ORS 197.180, and OAR 660-012-0030, 660-012-0035, 660-012-0050, 660-012-0065 and 660-012-0070. The state TSP shall identify a system of transportation facilities and services adequate to meet identified state transportation needs:**

**(a) The state TSP shall include the state transportation policy plan, modal systems plans and transportation facility plans as set forth in OAR chapter 731, division 15;**

**(b) State transportation project plans shall be compatible with acknowledged comprehensive plans as provided for in OAR chapter 731, division 15. Disagreements between ODOT and affected local governments shall be resolved in the manner established in that division.**

**(2) MPOs and counties shall prepare and amend regional TSPs in compliance with this division. MPOs shall prepare regional TSPs for facilities of regional significance within their jurisdiction. Counties shall prepare regional TSPs for all other areas and facilities:**

**(a) Regional TSPs shall establish a system of transportation facilities and services adequate to meet identified regional transportation needs and shall be consistent with adopted elements of the state TSP;**

**(b) Where elements of the state TSP have not been adopted, the MPO or county shall coordinate the preparation of the regional TSP with ODOT to assure that state transportation needs are accommodated;**

**(c) Regional TSPs prepared by MPOs other than metropolitan service districts shall be adopted by the counties and cities within the jurisdiction of the MPO. Metropolitan service districts shall adopt a regional TSP for areas within their jurisdiction;**

**(d) Regional TSPs prepared by counties shall be adopted by the county.**

**(3) Cities and counties shall prepare, adopt and amend local TSPs for lands within their planning jurisdiction in compliance with this division:**

**(a) Local TSPs shall establish a system of transportation facilities and services adequate to meet identified local transportation needs and shall be consistent with regional TSPs and adopted elements of the state TSP;**

**(b) Where the regional TSP or elements of the state TSP have not been adopted, the city or county shall coordinate the preparation of the local TSP with the regional transportation planning body and ODOT to assure that regional and state transportation needs are accommodated.**

**(4) Cities and counties shall adopt regional and local TSPs required by this division as part of their comprehensive plans. Transportation financing programs required by OAR 660-012-0040 may be adopted as a supporting document to the comprehensive plan.**

**(5) The preparation of TSPs shall be coordinated with affected state and federal agencies, local governments, special districts, and private providers of transportation services.**

**(6) Mass transit, transportation, airport and port districts shall participate in the development of TSPs for those transportation facilities and services they provide. These districts shall prepare and adopt plans for transportation facilities and services they provide. Such plans shall be consistent with and adequate to carry out relevant portions of applicable regional and local TSPs. Cooperative agreements executed under ORS 197.185(2) shall include the requirement that mass transit, transportation, airport and port districts adopt a plan consistent with the requirements of this section.**

**(7) Where conflicts are identified between proposed regional TSPs and acknowledged comprehensive plans, representatives of affected local governments shall meet to discuss means to resolve the conflicts. These may include:**

**(a) Changing the draft TSP to eliminate the conflicts; or**

**(b) Amending acknowledged comprehensive plan provision to eliminate the conflicts;**



**(c) For MPOs which are not metropolitan service districts, if conflicts persist between regional TSPs and acknowledged comprehensive plans after efforts to achieve compatibility, an affected local government may petition the Commission to resolve the dispute.**

**Finding:**

The proposed amendments comply with all of the applicable requirements for preparation, coordination and adoption of TSPs required under this section of the TPR.

- The TSP and amendments are incorporated as part of City's Comprehensive Plan.
- As described above, the preparation of proposed amendments followed the process in place for the development of the TSP and was closely coordinated with affected government agencies and service providers.
- OAR 660-012-0015 also requires that regional TSPs, such as Metro's RTP, be coordinated with state transportation plans and policies, such as those found in the Oregon Highway Plan (OHP). Both ODOT and Metro assisted in the development of the plans incorporated into the TSP. The proposed amendments are consistent with these requirements.

**660-012-0016**

**Coordination with Federally-Required Regional Transportation Plans in Metropolitan Areas**

**(1) In metropolitan areas, local governments shall prepare, adopt, amend and update transportation system plans required by this division in coordination with regional transportation plans (RTPs) prepared by MPOs required by federal law. Insofar as possible, regional transportation system plans for metropolitan areas shall be accomplished through a single coordinated process that complies with the applicable requirements of federal law and this division. Nothing in this rule is intended to make adoption or amendment of a regional transportation plan by a metropolitan planning organization a land use decision under Oregon law.**

**(2) When an MPO adopts or amends a regional transportation plan that relates to compliance with this division, the affected local governments shall review the adopted plan or amendment and either:**

**(a) Make a finding that the proposed regional transportation plan amendment or update is consistent with the applicable provisions of adopted regional and local transportation system plan and comprehensive plan and compliant with applicable provisions of this division; or**

**(b) Adopt amendments to the relevant regional or local transportation system plan that make the regional transportation plan and the applicable transportation system plans consistent with one another and compliant with applicable provisions of this division. Necessary plan amendments or updates shall be prepared and adopted in coordination with the federally-required plan update or amendment. Such amendments shall be initiated no later than 30 days from the adoption of the RTP amendment or update and shall be adopted no later than one year from the adoption of the RTP amendment or update or according to a work plan approved by the commission. A plan amendment is**

**"initiated" for purposes of this subsection where the affected local government files a post-acknowledgement plan amendment notice with the department as provided in OAR chapter 660, division 18.**

**(c) In the Portland Metropolitan area, compliance with this section shall be accomplished by Metro through adoption of required findings or an amendment to the regional transportation system plan.**

**(3) Adoption or amendment of a regional transportation plan relates to compliance with this division for purposes of section (2) if it does one or more of the following:**

**(a) Changes plan policies;**

**(b) Adds or deletes a project from the list of planned transportation facilities, services or improvements or from the financially-constrained project list required by federal law;**

**(c) Modifies the general location of a planned transportation facility or improvement;**

**(d) Changes the functional classification of a transportation facility; or**

**(e) Changes the planning period or adopts or modifies the population or employment forecast or allocation upon which the plan is based.**

**(4) The following amendments to a regional transportation plan do not relate to compliance with this division for purposes of section (2):**

**(a) Adoption of an air quality conformity determination;**

**(b) Changes to a federal revenue projection;**

**(c) Changes to estimated cost of a planned transportation project; or**

**(d) Deletion of a project from the list of planned projects where the project has been constructed or completed.**

**(5) Adoption or amendment of a regional transportation plan that extends the planning period beyond that specified in the applicable acknowledged comprehensive plan or regional transportation system plan is consistent with the requirements of this rule where the following conditions are met:**

**(a) The future year population forecast is consistent with those issued or adopted under ORS 195.033 or 195.036;**

**(b) Land needed to accommodate future urban density population and employment and other urban uses is identified in a manner consistent with Goal 14 and relevant rules;**

**(c) Urban density population and employment are allocated to designated centers and other identified areas to provide for implementation of the metropolitan area's integrated land use and transportation plan or strategy; and**

**(d) Urban density population and employment or other urban uses are allocated to areas outside of an acknowledged urban growth boundary only where:**

**(A) The allocation is done in conjunction with consideration by local governments of possible urban growth boundary amendments consistent with Goal 14 and relevant rules, and**

**(B) The RTP clearly identifies the proposed UGB amendments and any related projects as illustrative and subject to further review and approval by the affected local governments.**

**Finding:**

As discussed elsewhere in these findings, the proposed amendments are consistent with the Regional Transportation Functional Plan (RTFP). The proposed amendments are consistent with these requirements.

**660-012-0020**

**Elements of Transportation System Plans**

**(1) A TSP shall establish a coordinated network of transportation facilities adequate to serve state, regional and local transportation needs.**

**(2) The TSP shall include the following elements:**

**(a) A determination of transportation needs as provided in OAR 660-012-0030;**

**(b) A road plan for a system of arterials and collectors and standards for the layout of local streets and other important non-collector street connections. Functional classifications of roads in regional and local TSP's shall be consistent with functional classifications of roads in state and regional TSP's and shall provide for continuity between adjacent jurisdictions. The standards for the layout of local streets shall provide for safe and convenient bike and pedestrian circulation necessary to carry out OAR 660-012-0045(3)(b). New connections to arterials and state highways shall be consistent with designated access management categories. The intent of this requirement is to provide guidance on the spacing of future extensions and connections along existing and future streets which are needed to provide reasonably direct routes for bicycle and pedestrian travel. The standards for the layout of local streets shall address:**

**(A) Extensions of existing streets;**

**(B) Connections to existing or planned streets, including arterials and collectors; and**

**(C) Connections to neighborhood destinations.**

**(c) A public transportation plan which:**

**(A) Describes public transportation services for the transportation disadvantaged and identifies service inadequacies;**

**(B) Describes intercity bus and passenger rail service and identifies the location of terminals;**

**(C) For areas within an urban growth boundary which have public transit service, identifies existing and planned transit trunk routes, exclusive transit ways, terminals and major transfer stations, major transit stops, and park-and-ride stations. Designation of stop or station locations may allow for minor adjustments in the location of stops to provide for efficient transit or traffic operation or to provide convenient pedestrian access to adjacent or nearby uses.**

**(D) For areas within an urban area containing a population greater than 25,000 persons, not currently served by transit, evaluates the feasibility of developing a public transit system at buildout. Where a transit system is determined to be feasible, the plan shall meet the requirements of paragraph (2)(c)(C) of this rule.**

**(d) A bicycle and pedestrian plan for a network of bicycle and pedestrian routes throughout the planning area. The network and list of facility improvements shall be consistent with the requirements of ORS 366.514;**

**(e) An air, rail, water and pipeline transportation plan which identifies where public use airports, mainline and branchline railroads and railroad facilities, port facilities, and major regional pipelines and terminals are located or planned within the planning area. For airports, the planning area shall include all areas within airport imaginary surfaces and other areas covered by state or federal regulations;**

**(f) For areas within an urban area containing a population greater than 25,000 persons a plan for transportation system management and demand management;**

**(g) A parking plan in MPO areas as provided in OAR 660-012-0045(5)(c);**

**(h) Policies and land use regulations for implementing the TSP as provided in OAR 660-012-0045;**

**(i) For areas within an urban growth boundary containing a population greater than 2500 persons, a transportation financing program as provided in OAR 660-012-0040.**

**(3) Each element identified in subsections (2)(b)–(d) of this rule shall contain:**

**(a) An inventory and general assessment of existing and committed transportation facilities and services by function, type, capacity and condition:**

**(A) The transportation capacity analysis shall include information on:**

**(i) The capacities of existing and committed facilities;**

**(ii) The degree to which those capacities have been reached or surpassed on existing facilities; and**

**(iii) The assumptions upon which these capacities are based.**

**(B) For state and regional facilities, the transportation capacity analysis shall be consistent with standards of facility performance considered acceptable by the affected state or regional transportation agency;**

**(C) The transportation facility condition analysis shall describe the general physical and operational condition of each transportation facility (e.g., very good, good, fair, poor, very poor).**

**(b) A system of planned transportation facilities, services and major improvements. The system shall include a description of the type or functional classification of planned facilities and services and their planned capacities and performance standards;**

**(c) A description of the location of planned facilities, services and major improvements, establishing the general corridor within which the facilities, services or improvements may be sited. This shall include a map showing the general location of proposed transportation improvements, a description of facility parameters such as minimum and maximum road right of way width and the number and size of lanes, and any other additional description that is appropriate;**

**(d) Identification of the provider of each transportation facility or service.**

**Finding:**

The proposed update to the TSP, together with the previously adopted and acknowledged comprehensive plan, includes all of the elements required by the TPR, and the proposed amendments are consistent with OAR-660-012-0020. The proposed amendments modify the TSP and Concept Plan, including updates to:

- Figure 1 Functional Classification (Functional Classification Plan), TSP;
- Figure 11-1: Functional Classification and Traffic Signal Plan;

- Figure 11-2: Metro Regional Street Design System;
- Figure 11-3: Local Street Plan;
- Figure 11-4: Bicycle and Pedestrian System;
- Figure 11-5: Transit Plan;
- Figure 11-6: Freight Routes;
- TDC Chapter 75, which implements access management restrictions of the TSP.

Further, the proposed amendments are consistent with the provisions described in 660-012-0020.

- The amendments to the TSP are consistent with Metro's Regional Transportation Plan (RTP).
- TDC Chapter 75 includes minimum block spacing standards consistent with the intent of -0020.
- The TSP amendments include maximum local street spacing standards.
- The TSP includes all the public transit services described in 660-012-0020(2)(c)(A)-(C).

The proposed amendments are consistent with these requirements.

#### **660-012-0025**

##### **Complying with the Goals in Preparing Transportation System Plans; Refinement Plans**

**(1) Except as provided in section (3) of this rule, adoption of a TSP shall constitute the land use decision regarding the need for transportation facilities, services and major improvements and their function, mode, and general location.**

**(2) Findings of compliance with applicable statewide planning goals and acknowledged comprehensive plan policies and land use regulations shall be developed in conjunction with the adoption of the TSP.**

**(3) A local government or MPO may defer decisions regarding function, general location and mode of a refinement plan if findings are adopted that:**

**(a) Identify the transportation need for which decisions regarding function, general location or mode are being deferred;**

**(b) Demonstrate why information required to make final determinations regarding function, general location, or mode cannot reasonably be made available within the time allowed for preparation of the TSP;**

**(c) Explain how deferral does not invalidate the assumptions upon which the TSP is based or preclude implementation of the remainder of the TSP;**

**(d) Describe the nature of the findings which will be needed to resolve issues deferred to a refinement plan; and**

**(e) Set a deadline for adoption of a refinement plan prior to initiation of the periodic review following adoption of the TSP.**

**(4) Where a Corridor Environmental Impact Statement (EIS) is prepared pursuant to the requirements of the National Environmental Policy Act of 1969, the development of the refinement plan shall be coordinated with the preparation of the Corridor EIS. The refinement plan shall be adopted prior to the issuance of the Final EIS.**

**Finding:**

The proposed amendments comply with the applicable provisions of Section 660-012-0025 of the TPR as demonstrated by the following facts:

- The proposed amendments update the need, mode, function, and general location for several transportation facilities, consistent with OAR 660-012-0025(1).
- The findings contained herein satisfy the requirement of OAR 660-12-0025(2) and have been adopted in conjunction with proposed amendments.
- The proposed amendments do not include any refinement planning nor an Environmental Impact Statement; OAR 660-12-0025(3) – (4) therefore does not apply.

The proposed amendments are consistent with these requirements.

**660-012-0030**

**Determination of Transportation Needs**

**(1) The TSP shall identify transportation needs relevant to the planning area and the scale of the transportation network being planned including:**

- (a) State, regional, and local transportation needs;**
- (b) Needs of the transportation disadvantaged;**
- (c) Needs for movement of goods and services to support industrial and commercial development planned for pursuant to OAR chapter 660, division 9 and Goal 9 (Economic Development).**

**(2) Counties or MPO's preparing regional TSP's shall rely on the analysis of state transportation needs in adopted elements of the state TSP. Local governments preparing local TSP's shall rely on the analyses of state and regional transportation needs in adopted elements of the state TSP and adopted regional TSP's.**

**(3) Within urban growth boundaries, the determination of local and regional transportation needs shall be based upon:**

- (a) Population and employment forecasts and distributions that are consistent with the acknowledged comprehensive plan, including those policies that implement Goal 14. Forecasts and distributions shall be for 20 years and, if desired, for longer periods; and**
- (b) Measures adopted pursuant to OAR 660-012-0045 to encourage reduced reliance on the automobile.**

**(4) In MPO areas, calculation of local and regional transportation needs also shall be based upon accomplishment of the requirement in OAR 660-012-0035(4) to reduce reliance on the automobile.**

**Finding:**

The proposed amendments identified transportation needs as required by OAR 660-012-0030.

- The proposed amendments are based on a needs analysis from the adopted Basalt Creek Transportation Refinement plan. The proposed amendments make adjustments consistent with the OHP and Metro's RTP; and findings of compliance with the OHP and RTFP are included herein.
- The needs analyses included in Basalt Creek Refinement plan was based upon population and employment forecasts developed by Metro with local government participation. These same regional forecasts have been used to inform the RTP and to

implement Metro's 2040 designations, which are part of the City's adopted and acknowledged Comprehensive Plan.

- Additional needs analysis were conducted as part of the consideration of the proposed amendments, this analysis included an assessment of the land use assumptions in Metro's RTP as well as an assessment of build out conditions beyond the RTP assumed land use.
- The proposed amendments are consistent with the requirements for vehicle miles traveled (VMT) reduction set forth in OAR 660-012-0035(4) and referenced by OAR 660-012-0030(4). Appropriate findings are provided herein under OAR 660-012-0035. The proposed amendments are based on the same analysis developed for Basalt Creek Refinement plan and therefore is consistent with OAR 660-012-0030.

The proposed amendments are consistent with these requirements.

### **660-012-0035**

#### **Evaluation and Selection of Transportation System Alternatives**

**(1) The TSP shall be based upon evaluation of potential impacts of system alternatives that can reasonably be expected to meet the identified transportation needs in a safe manner and at a reasonable cost with available technology. The following shall be evaluated as components of system alternatives:**

- (a) Improvements to existing facilities or services;**
- (b) New facilities and services, including different modes or combinations of modes that could reasonably meet identified transportation needs;**
- (c) Transportation system management measures;**
- (d) Demand management measures; and**
- (e) A no-build system alternative required by the National Environmental Policy Act of 1969 or other laws.**

**(2) Local governments in MPO areas of larger than 1,000,000 population shall, and other governments may also, evaluate alternative land use designations, densities, and design standards to meet local and regional transportation needs. Local governments preparing such a strategy shall consider:**

- (a) Increasing residential densities and establishing minimum residential densities within one quarter mile of transit lines, major regional employment areas, and major regional retail shopping areas;**
- (b) Increasing allowed densities in new commercial office and retail developments in designated community centers;**
- (c) Designating lands for neighborhood shopping centers within convenient walking and cycling distance of residential areas; and**
- (d) Designating land uses to provide a better balance between jobs and housing considering:**

- (A) The total number of jobs and total of number of housing units expected in the area or subarea;**
- (B) The availability of affordable housing in the area or subarea; and**
- (C) Provision of housing opportunities in close proximity to employment areas.**

**(3) The following standards shall be used to evaluate and select alternatives:**

- (a) The transportation system shall support urban and rural development by providing types and levels of transportation facilities and services appropriate to serve the land uses identified in the acknowledged comprehensive plan;**
- (b) The transportation system shall be consistent with state and federal standards for protection of air, land and water quality including the State Implementation Plan under the Federal Clean Air Act and the State Water Quality Management Plan;**
- (c) The transportation system shall minimize adverse economic, social, environmental and energy consequences;**
- (d) The transportation system shall minimize conflicts and facilitate connections between modes of transportation; and**
- (e) The transportation system shall avoid principal reliance on any one mode of transportation by increasing transportation choices to reduce principal reliance on the automobile. In MPO areas this shall be accomplished by selecting transportation alternatives which meet the requirements in section (4) of this rule.**
- (4) In MPO areas, regional and local TSPs shall be designed to achieve adopted standards for increasing transportation choices and reducing reliance on the automobile. Adopted standards are intended as means of measuring progress of metropolitan areas towards developing and implementing transportation systems and land use plans that increase transportation choices and reduce reliance on the automobile. It is anticipated that metropolitan areas will accomplish reduced reliance by changing land use patterns and transportation systems so that walking, cycling, and use of transit are highly convenient and so that, on balance, people need to and are likely to drive less than they do today.**
- (5) MPO areas shall adopt standards to demonstrate progress towards increasing transportation choices and reducing automobile reliance as provided for in this rule:**
  - (a) The commission shall approve standards by order upon demonstration by the metropolitan area that:**
    - (A) Achieving the standard will result in a reduction in reliance on automobiles;**
    - (B) Achieving the standard will accomplish a significant increase in the availability or convenience of alternative modes of transportation;**
    - (C) Achieving the standard is likely to result in a significant increase in the share of trips made by alternative modes, including walking, bicycling, ridesharing and transit;**
    - (D) VMT per capita is unlikely to increase by more than five percent; and**
    - (E) The standard is measurable and reasonably related to achieving the goal of increasing transportation choices and reducing reliance on the automobile as described in OAR 660-012-0000.**
  - (b) In reviewing proposed standards for compliance with subsection (a), the commission shall give credit to regional and local plans, programs, and actions implemented since 1990 that have already contributed to achieving the objectives specified in paragraphs (A)–(E) above;**
  - (c) If a plan using a standard, approved pursuant to this rule, is expected to result in an increase in VMT per capita, then the cities and counties in the metropolitan area shall prepare and adopt an integrated land use and transportation plan including the elements listed in paragraphs (A)–(E) below. Such a plan shall be prepared in**



coordination with the MPO and shall be adopted within three years of the approval of the standard.

(A) Changes to land use plan designations, densities, and design standards listed in subsections (2)(a)–(d);

(B) A transportation demand management plan that includes significant new transportation demand management measures;

(C) A public transit plan that includes a significant expansion in transit service;

(D) Policies to review and manage major roadway improvements to ensure that their effects are consistent with achieving the adopted strategy for reduced reliance on the automobile, including policies that provide for the following:

(i) An assessment of whether improvements would result in development or travel that is inconsistent with what is expected in the plan;

(ii) Consideration of alternative measures to meet transportation needs;

(iii) Adoption of measures to limit possible unintended effects on travel and land use patterns including access management, limitations on subsequent plan amendments, phasing of improvements, etc.; and

(iv) For purposes of this section a "major roadway expansion" includes new arterial roads or streets and highways, the addition of travel lanes, and construction of interchanges to a limited access highway

(E) Plan and ordinance provisions that meet all other applicable requirements of this division.

(d) Standards may include but are not limited to:

(A) Modal share of alternative modes, including walking, bicycling, and transit trips;

(B) Vehicle hours of travel per capita;

(C) Vehicle trips per capita;

(D) Measures of accessibility by alternative modes (i.e. walking, bicycling and transit);  
or

(E) The Oregon Benchmark for a reduction in peak hour commuting by single occupant vehicles.

(e) Metropolitan areas shall adopt TSP policies to evaluate progress towards achieving the standard or standards adopted and approved pursuant to this rule. Such evaluation shall occur at regular intervals corresponding with federally-required updates of the regional transportation plan. This shall include monitoring and reporting of VMT per capita.

(6) A metropolitan area may also accomplish compliance with requirements of subsection (3)(e), sections (4) and (5) by demonstrating to the commission that adopted plans and measures are likely to achieve a five percent reduction in VMT per capita over the 20-year planning period. The commission shall consider and act on metropolitan area requests under this section by order. A metropolitan area that receives approval under this section shall adopt interim benchmarks for VMT reduction and shall evaluate progress in achieving VMT reduction at each update of the regional transportation system plan.

(7) Regional and local TSPs shall include benchmarks to assure satisfactory progress towards meeting the approved standard or standards adopted pursuant to this rule at

**regular intervals over the planning period. MPOs and local governments shall evaluate progress in meeting benchmarks at each update of the regional transportation plan. Where benchmarks are not met, the relevant TSP shall be amended to include new or additional efforts adequate to meet the requirements of this rule.**

**(8) The commission shall, at regular intervals, evaluate the results of efforts to achieve the reduction in VMT and the effectiveness of approved plans and standards in achieving the objective of increasing transportation choices and reducing reliance on the automobile.**

**(9) Where existing and committed transportation facilities and services have adequate capacity to support the land uses in the acknowledged comprehensive plan, the local government shall not be required to evaluate alternatives as provided in this rule.**

**(10) Transportation uses or improvements listed in OAR 660-012-0065(3)(d) to (g) and (o) and located in an urban fringe may be included in a TSP only if the improvement project identified in the Transportation System Plan as described in section (12) of this rule, will not significantly reduce peak hour travel time for the route as determined pursuant to section (11) of this rule, or the jurisdiction determines that the following alternatives can not reasonably satisfy the purpose of the improvement project:**

**(a) Improvements to transportation facilities and services within the urban growth boundary;**

**(b) Transportation system management measures that do not significantly increase capacity; or**

**(c) Transportation demand management measures. The jurisdiction needs only to consider alternatives that are safe and effective, consistent with applicable standards and that can be implemented at a reasonable cost using available technology.**

**(11) An improvement project significantly reduces peak hour travel time when, based on recent data, the time to travel the route is reduced more than 15 percent during weekday peak hour conditions over the length of the route located within the urban fringe. For purposes of measuring travel time, a route shall be identified by the predominant traffic flows in the project area.**

**(12) A "transportation improvement project" described in section (10) of this rule:**

**(a) Is intended to solve all of the reasonably foreseeable transportation problems within a general geographic location, within the planning period; and**

**(b) Has utility as an independent transportation project.**

**Finding:**

The City has an acknowledged TSP consistent with the Transportation Planning Rule provisions of 660-012-0035. The proposed amendments make adjustments to the TSP in order to plan for the provision of a transportation system to serve the Basalt Creek urban growth boundary expansion area.

- The Basalt Creek Transportation Refinement Plan, adopted in 2012, identified a combination of improvements to existing facilities and construction of new facilities necessary to provide a system of multimodal infrastructure to serve the Basalt Creek urban growth boundary expansion area.

- The Basalt Creek Transportation Refinement Plan considered no-build and multimodal opportunities as well as transportation system management and demand management solutions. The Basalt Creek Transportation Refinement Plan identified solutions to minimize the adverse impacts of transportation improvements and conflicts between modes of transportation. The Basalt Creek Transportation Refinement Plan includes several trail and other multimodal facilities to facilitate connections between modes and reduce reliance on any one mode of transportation.
- The Metro regional government established the Basalt Creek urban growth boundary expansion area in 2004 in order to provide an appropriate balance of land uses within the Metro Urban Growth Boundary.
- The 2018 RTP included the Basalt Creek Area and associated transportation improvements. Therefore, the proposed amendments are consistent with the regional planning requirements of OAR 660-012-0035.
- The evaluation included consideration of the components set forth in OAR 660-012-0035 and therefore is consistent with the requirements of OAR 660-012-0035.

The proposed amendments are consistent with these requirements.

#### **660-012-0040**

##### **Transportation Financing Program**

**(1) For areas within an urban growth boundary containing a population greater than 2,500 persons, the TSP shall include a transportation financing program.**

**(2) A transportation financing program shall include the items listed in (a)–(d):**

**(a) A list of planned transportation facilities and major improvements;**

**(b) A general estimate of the timing for planned transportation facilities and major improvements;**

**(c) A determination of rough cost estimates for the transportation facilities and major improvements identified in the TSP; and**

**(d) In metropolitan areas, policies to guide selection of transportation facility and improvement projects for funding in the short-term to meet the standards and benchmarks established pursuant to 0035(4)–(6). Such policies shall consider, and shall include among the priorities, facilities and improvements that support mixed-use, pedestrian friendly development and increased use of alternative modes.**

**(3) The determination of rough cost estimates is intended to provide an estimate of the fiscal requirements to support the land uses in the acknowledged comprehensive plan and allow jurisdictions to assess the adequacy of existing and possible alternative funding mechanisms. In addition to including rough cost estimates for each transportation facility and major improvement, the transportation financing plan shall include a discussion of the facility provider’s existing funding mechanisms and the ability of these and possible new mechanisms to fund the development of each transportation facility and major improvement. These funding mechanisms may also be described in terms of general guidelines or local policies.**

**(4) Anticipated timing and financing provisions in the transportation financing program are not considered land use decisions as specified in ORS 197.712(2)(e) and, therefore, cannot be the basis of appeal under 197.610(1) and (2) or 197.835(4).**

**(5) The transportation financing program shall provide for phasing of major improvements to encourage infill and redevelopment of urban lands prior to facilities and improvements which would cause premature development of urbanizable lands or conversion of rural lands to urban uses.**

**Finding:**

Transportation infrastructure funding is reasonably assured and the proposed amendments fully implement all of the applicable provisions of OAR 660-012-0040 as detailed in the following findings of fact:

- The proposed amendments include a list of planned transportation facilities including the estimated timing and rough cost estimates, as documented in the adopted Basalt Creek Transportation Refinement Plan.
- The regional transportation facilities identified in the proposed amendments have been included in the 2018 financially constrained Regional Transportation Plan as required by OAR 660-012-0040(2).
- Therefore, the proposed amendments are considered to be financially constrained and consistent with the applicable provisions of OAR 660-012-0040.

The proposed amendments are consistent with these requirements.

**660-012-0045**

**Implementation of the Transportation System Plan**

**(1) Each local government shall amend its land use regulations to implement the TSP.**

**(a) The following transportation facilities, services and improvements need not be subject to land use regulations except as necessary to implement the TSP and, under ordinary circumstances do not have a significant impact on land use:**

**(A) Operation, maintenance, and repair of existing transportation facilities identified in the TSP, such as road, bicycle, pedestrian, port, airport and rail facilities, and major regional pipelines and terminals;**

**(B) Dedication of right-of-way, authorization of construction and the construction of facilities and improvements, where the improvements are consistent with clear and objective dimensional standards;**

**(C) Uses permitted outright under ORS 215.213(1)(j)–(m) and 215.283(1)(h)–(k), consistent with the provisions of OAR 660-012-0065; and**

**(D) Changes in the frequency of transit, rail and airport services.**

**(b) To the extent, if any, that a transportation facility, service or improvement concerns the application of a comprehensive plan provision or land use regulation, it may be allowed without further land use review if it is permitted outright or if it is subject to standards that do not require interpretation or the exercise of factual, policy or legal judgment;**

**(c) In the event that a transportation facility, service or improvement is determined to have a significant impact on land use or to concern the application of a comprehensive plan or land use regulation and to be subject to standards that require interpretation or the exercise of factual, policy or legal judgment, the local government shall provide a review and approval process that is consistent with OAR 660-012-0050. To facilitate**

**implementation of the TSP, each local government shall amend its land use regulations to provide for consolidated review of land use decisions required to permit a transportation project.**

**(2) Local governments shall adopt land use or subdivision ordinance regulations, consistent with applicable federal and state requirements, to protect transportation facilities, corridors and sites for their identified functions. Such regulations shall include:**

- (a) Access control measures, for example, driveway and public road spacing, median control and signal spacing standards, which are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities;**
- (b) Standards to protect future operation of roads, transitways and major transit corridors;**
- (c) Measures to protect public use airports by controlling land uses within airport noise corridors and imaginary surfaces, and by limiting physical hazards to air navigation;**
- (d) A process for coordinated review of future land use decisions affecting transportation facilities, corridors or sites;**
- (e) A process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities, corridors or sites;**
- (f) Regulations to provide notice to public agencies providing transportation facilities and services, MPOs, and ODOT of:
  - (A) Land use applications that require public hearings;**
  - (B) Subdivision and partition applications;**
  - (C) Other applications which affect private access to roads; and**
  - (D) Other applications within airport noise corridors and imaginary surfaces which affect airport operations; and****
- (g) Regulations assuring that amendments to land use designations, densities, and design standards are consistent with the functions, capacities and performance standards of facilities identified in the TSP.**

**(3) Local governments shall adopt land use or subdivision regulations for urban areas and rural communities as set forth below. The purposes of this section are to provide for safe and convenient pedestrian, bicycle and vehicular circulation consistent with access management standards and the function of affected streets, to ensure that new development provides on-site streets and accessways that provide reasonably direct routes for pedestrian and bicycle travel in areas where pedestrian and bicycle travel is likely if connections are provided, and which avoids wherever possible levels of automobile traffic which might interfere with or discourage pedestrian or bicycle travel.**

- (a) Bicycle parking facilities as part of new multi-family residential developments of four units or more, new retail, office and institutional developments, and all transit transfer stations and park-and-ride lots;**
- (b) On-site facilities shall be provided which accommodate safe and convenient pedestrian and bicycle access from within new subdivisions, multi-family developments, planned developments, shopping centers, and commercial districts to adjacent residential areas and transit stops, and to neighborhood activity centers within**

**one-half mile of the development. Single-family residential developments shall generally include streets and accessways. Pedestrian circulation through parking lots should generally be provided in the form of accessways.**

**(A) "Neighborhood activity centers" includes, but is not limited to, existing or planned schools, parks, shopping areas, transit stops or employment centers;**

**(B) Bikeways shall be required along arterials and major collectors. Sidewalks shall be required along arterials, collectors and most local streets in urban areas, except that sidewalks are not required along controlled access roadways, such as freeways;**

**(C) Cul-de-sacs and other dead-end streets may be used as part of a development plan, consistent with the purposes set forth in this section;**

**(D) Local governments shall establish their own standards or criteria for providing streets and accessways consistent with the purposes of this section. Such measures may include but are not limited to: standards for spacing of streets or accessways; and standards for excessive out-of-direction travel;**

**(E) Streets and accessways need not be required where one or more of the following conditions exist:**

**(i) Physical or topographic conditions make a street or accessway connection impracticable. Such conditions include but are not limited to freeways, railroads, steep slopes, wetlands or other bodies of water where a connection could not reasonably be provided;**

**(ii) Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or**

**(iii) Where streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995, which preclude a required street or accessway connection.**

**(c) Where off-site road improvements are otherwise required as a condition of development approval, they shall include facilities accommodating convenient pedestrian and bicycle travel, including bicycle ways along arterials and major collectors;**

**(d) For purposes of subsection (b) "safe and convenient" means bicycle and pedestrian routes, facilities and improvements which:**

**(A) Are reasonably free from hazards, particularly types or levels of automobile traffic which would interfere with or discourage pedestrian or cycle travel for short trips;**

**(B) Provide a reasonably direct route of travel between destinations such as between a transit stop and a store; and**

**(C) Meet travel needs of cyclists and pedestrians considering destination and length of trip; and considering that the optimum trip length of pedestrians is generally 1/4 to 1/2 mile.**

**(e) Internal pedestrian circulation within new office parks and commercial developments shall be provided through clustering of buildings, construction of accessways, walkways and similar techniques.**

**(4) To support transit in urban areas containing a population greater than 25,000, where the area is already served by a public transit system or where a determination has been**

made that a public transit system is feasible, local governments shall adopt land use and subdivision regulations as provided in (a)–(g) below:

(a) Transit routes and transit facilities shall be designed to support transit use through provision of bus stops, pullouts and shelters, optimum road geometrics, on-road parking restrictions and similar facilities, as appropriate;

(b) New retail, office and institutional buildings at or near major transit stops shall provide for convenient pedestrian access to transit through the measures listed in paragraphs (A) and (B) below.

(A) Walkways shall be provided connecting building entrances and streets adjoining the site;

(B) Pedestrian connections to adjoining properties shall be provided except where such a connection is impracticable as provided for in OAR 660-012-0045(3)(b)(E). Pedestrian connections shall connect the on site circulation system to existing or proposed streets, walkways, and driveways that abut the property. Where adjacent properties are undeveloped or have potential for redevelopment, streets, accessways and walkways on site shall be laid out or stubbed to allow for extension to the adjoining property;

(C) In addition to paragraphs (A) and (B) above, on sites at major transit stops provide the following:

(i) Either locate buildings within 20 feet of the transit stop, a transit street or an intersecting street or provide a pedestrian plaza at the transit stop or a street intersection;

(ii) A reasonably direct pedestrian connection between the transit stop and building entrances on the site;

(iii) A transit passenger landing pad accessible to disabled persons;

(iv) An easement or dedication for a passenger shelter if requested by the transit provider; and

(v) Lighting at the transit stop.

(c) Local governments may implement (4)(b)(A) and (B) above through the designation of pedestrian districts and adoption of appropriate implementing measures regulating development within pedestrian districts. Pedestrian districts must comply with the requirement of (4)(b)(C) above;

(d) Designated employee parking areas in new developments shall provide preferential parking for carpools and vanpools;

(e) Existing development shall be allowed to redevelop a portion of existing parking areas for transit-oriented uses, including bus stops and pullouts, bus shelters, park and ride stations, transit-oriented developments, and similar facilities, where appropriate;

(f) Road systems for new development shall be provided that can be adequately served by transit, including provision of pedestrian access to existing and identified future transit routes. This shall include, where appropriate, separate accessways to minimize travel distances;

(g) Along existing or planned transit routes, designation of types and densities of land uses adequate to support transit.

(5) In MPO areas, local governments shall adopt land use and subdivision regulations to reduce reliance on the automobile which:

- (a) Allow transit-oriented developments (TODs) on lands along transit routes;**
- (b) Implements a demand management program to meet the measurable standards set in the TSP in response to OAR 660-012-0035(4);**
- (c) Implements a parking plan which:**
  - (A) Achieves a 10 percent reduction in the number of parking spaces per capita in the MPO area over the planning period. This may be accomplished through a combination of restrictions on development of new parking spaces and requirements that existing parking spaces be redeveloped to other uses;**
  - (B) Aids in achieving the measurable standards set in the TSP in response to OAR 660-012-0035(4);**
  - (C) Includes land use and subdivision regulations setting minimum and maximum parking requirements in appropriate locations, such as downtowns, designated regional or community centers, and transit oriented-developments; and**
  - (D) Is consistent with demand management programs, transit-oriented development requirements and planned transit service.**
- (d) As an alternative to (c) above, local governments in an MPO may instead revise ordinance requirements for parking as follows:**
  - (A) Reduce minimum off-street parking requirements for all non-residential uses from 1990 levels;**
  - (B) Allow provision of on-street parking, long-term lease parking, and shared parking to meet minimum off-street parking requirements;**
  - (C) Establish off-street parking maximums in appropriate locations, such as downtowns, designated regional or community centers, and transit-oriented developments;**
  - (D) Exempt structured parking and on-street parking from parking maximums;**
  - (E) Require that parking lots over 3 acres in size provide street-like features along major driveways (including curbs, sidewalks, and street trees or planting strips); and**
  - (F) Provide for designation of residential parking districts.**
- (e) Require all major industrial, institutional, retail and office developments to provide either a transit stop on site or connection to a transit stop along a transit trunk route when the transit operator requires such an improvement.**
- (6) In developing a bicycle and pedestrian circulation plan as required by OAR 660-012-0020(2)(d), local governments shall identify improvements to facilitate bicycle and pedestrian trips to meet local travel needs in developed areas. Appropriate improvements should provide for more direct, convenient and safer bicycle or pedestrian travel within and between residential areas and neighborhood activity centers (i.e., schools, shopping, transit stops). Specific measures include, for example, constructing walkways between cul-de-sacs and adjacent roads, providing walkways between buildings, and providing direct access between adjacent uses.**
- (7) Local governments shall establish standards for local streets and accessways that minimize pavement width and total right-of-way consistent with the operational needs of the facility. The intent of this requirement is that local governments consider and reduce excessive standards for local streets and accessways in order to reduce the cost of construction, provide for more efficient use of urban land, provide for**



**emergency vehicle access while discouraging inappropriate traffic volumes and speeds, and which accommodate convenient pedestrian and bicycle circulation. Notwithstanding section (1) or (3) of this rule, local street standards adopted to meet this requirement need not be adopted as land use regulations.**

**Finding:**

The City has an adopted and acknowledged TSP. The proposed amendments, together with previously adopted and acknowledged ordinances fully implements all of the applicable provisions of OAR 660-012-0045.

- TDC Chapter 74 provides a process for coordinated review of land use decisions affecting transportation facilities, corridors, and sites as well as public notice.
- The TDC which is acknowledged to be consistent with the requirements of OAR 660-012-0050, provides a consolidated review process for land-use decisions regarding permitting of transportation projects.
- TDC Chapter 74 provide for review and protection of roadway safety, infrastructure and operations.
- Local street connectivity standards, as well as the requirements for safe and convenient pedestrian, bicycle and vehicular circulation, have been adopted by Tualatin. The TSP includes a Transportation Demand Management (TDM) Plan in Section 11.690 of the Comprehensive Plan.

The proposed amendments are consistent with these requirements.

**660-012-0050**

**Transportation Project Development**

**(1) For projects identified by ODOT pursuant to OAR chapter 731, division 15, project development shall occur in the manner set forth in that division.**

**(2) Regional TSPs shall provide for coordinated project development among affected local governments. The process shall include:**

**(a) Designation of a lead agency to prepare and coordinate project development;**

**(b) A process for citizen involvement, including public notice and hearing, if project development involves land use decision-making. The process shall include notice to affected transportation facility and service providers, MPOs, and ODOT;**

**(c) A process for developing and adopting findings of compliance with applicable statewide planning goals, if any. This shall include a process to allow amendments to acknowledged comprehensive plans where such amendments are necessary to accommodate the project; and**

**(d) A process for developing and adopting findings of compliance with applicable acknowledged comprehensive plan policies and land use regulations of individual local governments, if any. This shall include a process to allow amendments to acknowledged comprehensive plans or land use regulations where such amendments are necessary to accommodate the project.**

**(3) Project development addresses how a transportation facility or improvement authorized in a TSP is designed and constructed. This may or may not require land use decision-making. The focus of project development is project implementation, e.g.**

**alignment, preliminary design and mitigation of impacts. During project development, projects authorized in an acknowledged TSP shall not be subject to further justification with regard to their need, mode, function, or general location. For purposes of this section, a project is authorized in a TSP where the TSP makes decisions about transportation need, mode, function and general location for the facility or improvement as required by this division.**

**(a) Project development does not involve land use decision-making to the extent that it involves transportation facilities, services or improvements identified in OAR 660-012-0045(1)(a); the application of uniform road improvement design standards and other uniformly accepted engineering design standards and practices that are applied during project implementation; procedures and standards for right-of-way acquisition as set forth in the Oregon Revised Statutes; or the application of local, state or federal rules and regulations that are not a part of the local government's land use regulations.**

**(b) Project development involves land use decision-making to the extent that issues of compliance with applicable requirements requiring interpretation or the exercise of policy or legal discretion or judgment remain outstanding at the project development phase. These requirements may include, but are not limited to, regulations protecting or regulating development within floodways and other hazard areas, identified Goal 5 resource areas, estuarine and coastal shoreland areas, and the Willamette River Greenway, and local regulations establishing land use standards or processes for selecting specific alignments. They also may include transportation improvements required to comply with ORS 215.296 or 660-012-0065(5). When project development involves land use decision-making, all unresolved issues of compliance with applicable acknowledged comprehensive plan policies and land use regulations shall be addressed and findings of compliance adopted prior to project approval.**

**(c) To the extent compliance with local requirements has already been determined during transportation system planning, including adoption of a refinement plan, affected local governments may rely on and reference the earlier findings of compliance with applicable standards.**

**(4) Except as provided in section (1) of this rule, where an Environmental Impact Statement (EIS) is prepared pursuant to the National Environmental Policy Act of 1969, project development shall be coordinated with the preparation of the EIS. All unresolved issues of compliance with applicable acknowledged comprehensive plan policies and land use regulations shall be addressed and findings of compliance adopted prior to issuance of the Final EIS.**

**(5) If a local government decides not to build a project authorized by the TSP, it must evaluate whether the needs that the project would serve could otherwise be satisfied in a manner consistent with the TSP. If identified needs cannot be met consistent with the TSP, the local government shall initiate a plan amendment to change the TSP or the comprehensive plan to assure that there is an adequate transportation system to meet transportation needs.**

**(6) Transportation project development may be done concurrently with preparation of the TSP or a refinement plan.**

**Finding:**

The City has an adopted and acknowledged TSP, consistent with the Transportation Planning Rule provisions of 660-012-0050. The proposed amendments, together with previously adopted and acknowledged ordinances, fully implements all of the applicable provisions of OAR 660-012-0050.

- The 2018 RTP provides for coordination of project development.
- The TSP addresses the type of and function of transportation improvement and the City of Tualatin public works permit process is consistent with all the requirements of section OAR 660-012-0050.

The proposed amendments are consistent with these requirements.

**660-012-0055**

**Timing of Adoption and Update of Transportation System Plans; Exemptions**

**(1) MPOs shall complete regional TSPs for their planning areas by May 8, 1996. For those areas within a MPO, cities and counties shall adopt local TSPs and implementing measures within one year following completion of the regional TSP:**

**(a) If by May 8, 2000, a Metropolitan Planning Organization (MPO) has not adopted a regional transportation system plan that meets the VMT reduction standard in OAR 660-012-0035 and the metropolitan area does not have an approved alternative standard established pursuant to OAR 660-012-0035, then the cities and counties within the metropolitan area shall prepare and adopt an integrated land use and transportation plan as outlined in OAR 660-012-0035. Such a plan shall be prepared in coordination with the MPO and shall be adopted within three years;**

**(b) When an area is designated as an MPO or is added to an existing MPO, the affected local governments shall, within one year of adoption of the regional transportation plan, adopt a regional TSP in compliance with applicable requirements of this division and amend local transportation system plans to be consistent with the regional TSP.**

**(c) Local governments in metropolitan areas may request and the commission may by order grant an extension for completing an integrated land use and transportation plan required by this division. Local governments requesting an extension shall set forth a schedule for completion of outstanding work needed to complete an integrated land use and transportation plan as set forth in OAR 660-012-0035. This shall include, as appropriate:**

**(A) Adoption of a long-term land use and transportation vision for the region;**

**(B) Identification of centers and other land use designations intended to implement the vision;**

**(C) Adoption of housing and employment allocations to centers and land use designations; and**

**(D) Adoption of implementing plans and zoning for designated centers and other land use designations.**

**(d) Local governments within metropolitan areas that are not in compliance with the requirements of this division to adopt or implement a standard to increase transportation choices or have not completed an integrated land use and transportation plan as required by this division shall review plan and land use regulation amendments**

and adopt findings that demonstrate that the proposed amendment supports implementation of the region's adopted vision, strategy, policies or plans to increase transportation choices and reduce reliance on the automobile.

(2) A plan or land use regulation amendment supports implementation of an adopted regional strategy, policy or plan for purposes of this section if it achieves the following as applicable:

(a) Implements the strategy or plan through adoption of specific plans or zoning that authorizes uses or densities that achieve desired land use patterns;

(b) Allows uses in designated centers or neighborhoods that accomplish the adopted regional vision, strategy, plan or policies; and

(c) Allows uses outside designated centers or neighborhood that either support or do not detract from implementation of desired development within nearby centers.

(3) For areas outside an MPO, cities and counties shall complete and adopt regional and local TSPs and implementing measures by May 8, 1997.

(4) By November 8, 1993, affected cities and counties shall, for non-MPO urban areas of 25,000 or more, adopt land use and subdivision ordinances or amendments required by OAR 660-012-0045(3), (4)(a)–(f) and (5)(d). By May 8, 1994 affected cities and counties within MPO areas shall adopt land use and subdivision ordinances or amendments required by 660-012-0045(3), (4)(a)–(e) and (5)(e). Affected cities and counties which do not have acknowledged ordinances addressing the requirements of this section by the deadlines listed above shall apply 660-012-0045(3), (4)(a)–(g) and (5)(e) directly to all land use decisions and all limited land use decisions.

(5)(a) Affected cities and counties that either:

(A) Have acknowledged plans and land use regulations that comply with this rule as of May 8, 1995, may continue to apply those acknowledged plans and land use regulations; or

(B) Have plan and land use regulations adopted to comply with this rule as of April 12, 1995, may continue to apply the provisions of this rule as they existed as of April 12, 1995, and may continue to pursue acknowledgment of the adopted plans and land use regulations under those same rule provisions provided such adopted plans and land use regulations are acknowledged by April 12, 1996. Affected cities and counties that qualify and make this election under this paragraph shall update their plans and land use regulations to comply with the 1995 amendments to OAR 660-012-0045 as part of their transportation system plans.

(b) Affected cities and counties that do not have acknowledged plans and land use regulations as provided in subsection (a) of this section, shall apply relevant sections of this rule to land use decisions and limited land use decisions until land use regulations complying with this amended rule have been adopted.

(6) Cities and counties shall update their TSPs and implementing measures as necessary to comply with this division at each periodic review subsequent to initial compliance with this division. Local governments within metropolitan areas shall amend local transportation system plans to be consistent with an adopted regional transportation system plan within one year of the adoption of an updated regional

transportation system plan or by a date specified in the adopted regional transportation system plan.

(7) The director may grant a whole or partial exemption from the requirements of this division to cities under 10,000 population and counties under 25,000 population, and for areas within a county within an urban growth boundary that contains a population less than 10,000. Eligible jurisdictions may request that the director approve an exemption from all or part of the requirements in this division. Exemptions shall be for a period determined by the director or until the jurisdiction's next periodic review, whichever is shorter.

(a) The director's decision to approve an exemption shall be based upon the following factors:

(A) Whether the existing and committed transportation system is generally adequate to meet likely transportation needs;

(B) Whether the new development or population growth is anticipated in the planning area over the next five years;

(C) Whether major new transportation facilities are proposed which would affect the planning areas;

(D) Whether deferral of planning requirements would conflict with accommodating state or regional transportation needs; and

(E) Consultation with the Oregon Department of Transportation on the need for transportation planning in the area, including measures needed to protect existing transportation facilities.

(b) The director's decision to grant an exemption under this section is appealable to the commission as provided in OAR 660-002-0020 (Delegation of Authority Rule)

(8) Portions of TSPs and implementing measures adopted as part of comprehensive plans prior to the responsible jurisdiction's periodic review shall be reviewed pursuant to OAR chapter 660, division 18, Post Acknowledgment Procedures.

**Finding:**

The proposed amendments, together with previously adopted and acknowledged ordinances, is consistent with the applicable provisions of OAR 660-012-0055. The proposed amendments are consistent with these requirements.

**660-012-0060**

**Plan and Land Use Regulation Amendments**

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

**(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.**

**(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;**

**(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or**

**(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.**

**(2) If a local government determines that there would be a significant effect, then the local government must ensure that allowed land uses are consistent with the identified function, capacity, and performance standards of the facility measured at the end of the planning period identified in the adopted TSP through one or a combination of the remedies listed in (a) through (e) below, unless the amendment meets the balancing test in subsection (2)(e) of this section or qualifies for partial mitigation in section (11) of this rule. A local government using subsection (2)(e), section (3), section (10) or section (11) to approve an amendment recognizes that additional motor vehicle traffic congestion may result and that other facility providers would not be expected to provide additional capacity for motor vehicles in response to this congestion.**

**(a) Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.**

**(b) Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of this division; such amendments shall include a funding plan or mechanism consistent with section (4) or include an amendment to the transportation finance plan so that the facility, improvement, or service will be provided by the end of the planning period.**

**(c) Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.**

**(d) Providing other measures as a condition of development or through a development agreement or similar funding method, including, but not limited to, transportation system management measures or minor transportation improvements. Local governments shall, as part of the amendment, specify when measures or improvements provided pursuant to this subsection will be provided.**

**(e) Providing improvements that would benefit modes other than the significantly affected mode, improvements to facilities other than the significantly affected facility, or improvements at other locations, if:**

**(A) The provider of the significantly affected facility provides a written statement that the system-wide benefits are sufficient to balance the significant effect, even though the improvements would not result in consistency for all performance standards;**

**(B) The providers of facilities being improved at other locations provide written statements of approval; and**

**(C) The local jurisdictions where facilities are being improved provide written statements of approval.**

**(3) Notwithstanding sections (1) and (2) of this rule, a local government may approve an amendment that would significantly affect an existing transportation facility without assuring that the allowed land uses are consistent with the function, capacity and performance standards of the facility where:**

**(a) In the absence of the amendment, planned transportation facilities, improvements and services as set forth in section (4) of this rule would not be adequate to achieve consistency with the identified function, capacity or performance standard for that facility by the end of the planning period identified in the adopted TSP;**

**(b) Development resulting from the amendment will, at a minimum, mitigate the impacts of the amendment in a manner that avoids further degradation to the performance of the facility by the time of the development through one or a combination of transportation improvements or measures;**

**(c) The amendment does not involve property located in an interchange area as defined in paragraph (4)(d)(C); and**

**(d) For affected state highways, ODOT provides a written statement that the proposed funding and timing for the identified mitigation improvements or measures are, at a minimum, sufficient to avoid further degradation to the performance of the affected state highway. However, if a local government provides the appropriate ODOT regional office with written notice of a proposed amendment in a manner that provides ODOT reasonable opportunity to submit a written statement into the record of the local government proceeding, and ODOT does not provide a written statement, then the local government may proceed with applying subsections (a) through (c) of this section.**

**(4) Determinations under sections (1)–(3) of this rule shall be coordinated with affected transportation facility and service providers and other affected local governments.**

**(a) In determining whether an amendment has a significant effect on an existing or planned transportation facility under subsection (1)(c) of this rule, local governments shall rely on existing transportation facilities and services and on the planned transportation facilities, improvements and services set forth in subsections (b) and (c) below.**

**(b) Outside of interstate interchange areas, the following are considered planned facilities, improvements and services:**

**(A) Transportation facilities, improvements or services that are funded for construction or implementation in the Statewide Transportation Improvement Program or a locally or regionally adopted transportation improvement program or capital improvement plan or program of a transportation service provider.**

**(B) Transportation facilities, improvements or services that are authorized in a local transportation system plan and for which a funding plan or mechanism is in place or**

approved. These include, but are not limited to, transportation facilities, improvements or services for which: transportation systems development charge revenues are being collected; a local improvement district or reimbursement district has been established or will be established prior to development; a development agreement has been adopted; or conditions of approval to fund the improvement have been adopted.

(C) Transportation facilities, improvements or services in a metropolitan planning organization (MPO) area that are part of the area's federally-approved, financially constrained regional transportation system plan.

(D) Improvements to state highways that are included as planned improvements in a regional or local transportation system plan or comprehensive plan when ODOT provides a written statement that the improvements are reasonably likely to be provided by the end of the planning period.

(E) Improvements to regional and local roads, streets or other transportation facilities or services that are included as planned improvements in a regional or local transportation system plan or comprehensive plan when the local government(s) or transportation service provider(s) responsible for the facility, improvement or service provides a written statement that the facility, improvement or service is reasonably likely to be provided by the end of the planning period.

(c) Within interstate interchange areas, the improvements included in (b)(A)–(C) are considered planned facilities, improvements and services, except where:

(A) ODOT provides a written statement that the proposed funding and timing of mitigation measures are sufficient to avoid a significant adverse impact on the Interstate Highway system, then local governments may also rely on the improvements identified in paragraphs (b)(D) and (E) of this section; or

(B) There is an adopted interchange area management plan, then local governments may also rely on the improvements identified in that plan and which are also identified in paragraphs (b)(D) and (E) of this section.

(d) As used in this section and section (3):

(A) Planned interchange means new interchanges and relocation of existing interchanges that are authorized in an adopted transportation system plan or comprehensive plan;

(B) Interstate highway means Interstates 5, 82, 84, 105, 205 and 405; and

(C) Interstate interchange area means:

(i) Property within one-quarter mile of the ramp terminal intersection of an existing or planned interchange on an Interstate Highway; or

(ii) The interchange area as defined in the Interchange Area Management Plan adopted as an amendment to the Oregon Highway Plan.

(e) For purposes of this section, a written statement provided pursuant to paragraphs (b)(D), (b)(E) or (c)(A) provided by ODOT, a local government or transportation facility provider, as appropriate, shall be conclusive in determining whether a transportation facility, improvement or service is a planned transportation facility, improvement or service. In the absence of a written statement, a local government can only rely upon planned transportation facilities, improvements and services identified in paragraphs



**(b)(A)–(C) to determine whether there is a significant effect that requires application of the remedies in section (2).**

**(5) The presence of a transportation facility or improvement shall not be a basis for an exception to allow residential, commercial, institutional or industrial development on rural lands under this division or OAR 660-004-0022 and 660-004-0028.**

**(6) In determining whether proposed land uses would affect or be consistent with planned transportation facilities as provided in sections (1) and (2), local governments shall give full credit for potential reduction in vehicle trips for uses located in mixed-use, pedestrian-friendly centers, and neighborhoods as provided in subsections (a)–(d) below;**

**(a) Absent adopted local standards or detailed information about the vehicle trip reduction benefits of mixed-use, pedestrian-friendly development, local governments shall assume that uses located within a mixed-use, pedestrian-friendly center, or neighborhood, will generate 10% fewer daily and peak hour trips than are specified in available published estimates, such as those provided by the Institute of Transportation Engineers (ITE) Trip Generation Manual that do not specifically account for the effects of mixed-use, pedestrian-friendly development. The 10% reduction allowed for by this section shall be available only if uses which rely solely on auto trips, such as gas stations, car washes, storage facilities, and motels are prohibited;**

**(b) Local governments shall use detailed or local information about the trip reduction benefits of mixed-use, pedestrian-friendly development where such information is available and presented to the local government. Local governments may, based on such information, allow reductions greater than the 10% reduction required in subsection (a) above;**

**(c) Where a local government assumes or estimates lower vehicle trip generation as provided in subsection (a) or (b) above, it shall assure through conditions of approval, site plans, or approval standards that subsequent development approvals support the development of a mixed-use, pedestrian-friendly center or neighborhood and provide for on-site bike and pedestrian connectivity and access to transit as provided for in OAR 660-012-0045(3) and (4). The provision of on-site bike and pedestrian connectivity and access to transit may be accomplished through application of acknowledged ordinance provisions which comply with 660-012-0045(3) and (4) or through conditions of approval or findings adopted with the plan amendment that assure compliance with these rule requirements at the time of development approval; and**

**(d) The purpose of this section is to provide an incentive for the designation and implementation of pedestrian-friendly, mixed-use centers and neighborhoods by lowering the regulatory barriers to plan amendments which accomplish this type of development. The actual trip reduction benefits of mixed-use, pedestrian-friendly development will vary from case to case and may be somewhat higher or lower than presumed pursuant to subsection (a) above. The Commission concludes that this assumption is warranted given general information about the expected effects of mixed-use, pedestrian-friendly development and its intent to encourage changes to plans and development patterns. Nothing in this section is intended to affect the application of provisions in local plans or ordinances which provide for the calculation or assessment**

of systems development charges or in preparing conformity determinations required under the federal Clean Air Act.

(7) Amendments to acknowledged comprehensive plans and land use regulations which meet all of the criteria listed in subsections (a)–(c) below shall include an amendment to the comprehensive plan, transportation system plan the adoption of a local street plan, access management plan, future street plan or other binding local transportation plan to provide for on-site alignment of streets or accessways with existing and planned arterial, collector, and local streets surrounding the site as necessary to implement the requirements in OAR 660-012-0020(2)(b) and 660-012-0045(3):

(a) The plan or land use regulation amendment results in designation of two or more acres of land for commercial use;

(b) The local government has not adopted a TSP or local street plan which complies with OAR 660-012-0020(2)(b) or, in the Portland Metropolitan Area, has not complied with Metro's requirement for street connectivity as contained in Title 6, Section 3 of the Urban Growth Management Functional Plan; and

(c) The proposed amendment would significantly affect a transportation facility as provided in section (1).

(8) A "mixed-use, pedestrian-friendly center or neighborhood" for the purposes of this rule, means:

(a) Any one of the following:

(A) An existing central business district or downtown;

(B) An area designated as a central city, regional center, town center or main street in the Portland Metro 2040 Regional Growth Concept;

(C) An area designated in an acknowledged comprehensive plan as a transit oriented development or a pedestrian district; or

(D) An area designated as a special transportation area as provided for in the Oregon Highway Plan.

(b) An area other than those listed in subsection (a) above which includes or is planned to include the following characteristics:

(A) A concentration of a variety of land uses in a well-defined area, including the following:

(i) Medium to high density residential development (12 or more units per acre);

(ii) Offices or office buildings;

(iii) Retail stores and services;

(iv) Restaurants; and

(v) Public open space or private open space which is available for public use, such as a park or plaza.

(B) Generally include civic or cultural uses;

(C) A core commercial area where multi-story buildings are permitted;

(D) Buildings and building entrances oriented to streets;

(E) Street connections and crossings that make the center safe and conveniently accessible from adjacent areas;

(F) A network of streets and, where appropriate, accessways and major driveways that make it attractive and highly convenient for people to walk between uses within the

**center or neighborhood, including streets and major driveways within the center with wide sidewalks and other features, including pedestrian-oriented street crossings, street trees, pedestrian-scale lighting and on-street parking;**

**(G) One or more transit stops (in urban areas with fixed route transit service); and**

**(H) Limit or do not allow low-intensity or land extensive uses, such as most industrial uses, automobile sales and services, and drive-through services.**

**(9) Notwithstanding section (1) of this rule, a local government may find that an amendment to a zoning map does not significantly affect an existing or planned transportation facility if all of the following requirements are met.**

**(a) The proposed zoning is consistent with the existing comprehensive plan map designation and the amendment does not change the comprehensive plan map;**

**(b) The local government has an acknowledged TSP and the proposed zoning is consistent with the TSP; and**

**(c) The area subject to the zoning map amendment was not exempted from this rule at the time of an urban growth boundary amendment as permitted in OAR 660-024-0020(1)(d), or the area was exempted from this rule but the local government has a subsequently acknowledged TSP amendment that accounted for urbanization of the area.**

**(10) Notwithstanding sections (1) and (2) of this rule, a local government may amend a functional plan, a comprehensive plan or a land use regulation without applying performance standards related to motor vehicle traffic congestion (e.g. volume to capacity ratio or V/C), delay or travel time if the amendment meets the requirements of subsection (a) of this section. This section does not exempt a proposed amendment from other transportation performance standards or policies that may apply including, but not limited to, safety for all modes, network connectivity for all modes (e.g. sidewalks, bicycle lanes) and accessibility for freight vehicles of a size and frequency required by the development.**

**(a) A proposed amendment qualifies for this section if it:**

**(A) Is a map or text amendment affecting only land entirely within a multimodal mixed-use area (MMA); and**

**(B) Is consistent with the definition of an MMA and consistent with the function of the MMA as described in the findings designating the MMA.**

**(b) For the purpose of this rule, “multimodal mixed-use area” or “MMA” means an area:**

**(A) With a boundary adopted by a local government as provided in subsection (d) or (e) of this section and that has been acknowledged;**

**(B) Entirely within an urban growth boundary;**

**(C) With adopted plans and development regulations that allow the uses listed in paragraphs (8)(b)(A) through (C) of this rule and that require new development to be consistent with the characteristics listed in paragraphs (8)(b)(D) through (H) of this rule;**

**(D) With land use regulations that do not require the provision of off-street parking, or regulations that require lower levels of off-street parking than required in other areas and allow flexibility to meet the parking requirements (e.g. count on-street parking, allow long-term leases, allow shared parking); and**

**(E) Located in one or more of the categories below:**

- (i) At least one-quarter mile from any ramp terminal intersection of existing or planned interchanges;**
- (ii) Within the area of an adopted Interchange Area Management Plan (IAMP) and consistent with the IAMP; or**
- (iii) Within one-quarter mile of a ramp terminal intersection of an existing or planned interchange if the mainline facility provider has provided written concurrence with the MMA designation as provided in subsection (c) of this section.**
- (c) When a mainline facility provider reviews an MMA designation as provided in subparagraph (b)(E)(iii) of this section, the provider must consider the factors listed in paragraph (A) of this subsection.**
  - (A) The potential for operational or safety effects to the interchange area and the mainline highway, specifically considering:**
    - (i) Whether the interchange area has a crash rate that is higher than the statewide crash rate for similar facilities;**
    - (ii) Whether the interchange area is in the top ten percent of locations identified by the safety priority index system (SPIS) developed by ODOT; and**
    - (iii) Whether existing or potential future traffic queues on the interchange exit ramps extend onto the mainline highway or the portion of the ramp needed to safely accommodate deceleration.**
  - (B) If there are operational or safety effects as described in paragraph (A) of this subsection, the effects may be addressed by an agreement between the local government and the facility provider regarding traffic management plans favoring traffic movements away from the interchange, particularly those facilitating clearing traffic queues on the interchange exit ramps.**
  - (d) A local government may designate an MMA by adopting an amendment to the comprehensive plan or land use regulations to delineate the boundary following an existing zone, multiple existing zones, an urban renewal area, other existing boundary, or establishing a new boundary. The designation must be accompanied by findings showing how the area meets the definition of an MMA. Designation of an MMA is not subject to the requirements in sections (1) and (2) of this rule.**
  - (e) A local government may designate an MMA on an area where comprehensive plan map designations or land use regulations do not meet the definition, if all of the other elements meet the definition, by concurrently adopting comprehensive plan or land use regulation amendments necessary to meet the definition. Such amendments are not subject to performance standards related to motor vehicle traffic congestion, delay or travel time.**
- (11) A local government may approve an amendment with partial mitigation as provided in section (2) of this rule if the amendment complies with subsection (a) of this section, the amendment meets the balancing test in subsection (b) of this section, and the local government coordinates as provided in subsection (c) of this section.**
  - (a) The amendment must meet paragraphs (A) and (B) of this subsection or meet paragraph (D) of this subsection.**
    - (A) Create direct benefits in terms of industrial or traded-sector jobs created or retained by limiting uses to industrial or traded-sector industries.**

**(B) Not allow retail uses, except limited retail incidental to industrial or traded sector development, not to exceed five percent of the net developable area.**

**(C) For the purpose of this section:**

**(i) “Industrial” means employment activities generating income from the production, handling or distribution of goods including, but not limited to, manufacturing, assembly, fabrication, processing, storage, logistics, warehousing, importation, distribution and transshipment and research and development.**

**(ii) “Traded-sector” means industries in which member firms sell their goods or services into markets for which national or international competition exists.**

**(D) Notwithstanding paragraphs (A) and (B) of this subsection, an amendment complies with subsection (a) if all of the following conditions are met:**

**(i) The amendment is within a city with a population less than 10,000 and outside of a Metropolitan Planning Organization.**

**(ii) The amendment would provide land for “Other Employment Use” or “Prime Industrial Land” as those terms are defined in OAR 660-009-0005.**

**(iii) The amendment is located outside of the Willamette Valley as defined in ORS 215.010.**

**(E) The provisions of paragraph (D) of this subsection are repealed on January 1, 2017.**

**(b) A local government may accept partial mitigation only if the local government determines that the benefits outweigh the negative effects on local transportation facilities and the local government receives from the provider of any transportation facility that would be significantly affected written concurrence that the benefits outweigh the negative effects on their transportation facilities. If the amendment significantly affects a state highway, then ODOT must coordinate with the Oregon Business Development Department regarding the economic and job creation benefits of the proposed amendment as defined in subsection (a) of this section. The requirement to obtain concurrence from a provider is satisfied if the local government provides notice as required by subsection (c) of this section and the provider does not respond in writing (either concurring or non-concurring) within forty-five days.**

**(c) A local government that proposes to use this section must coordinate with Oregon Business Development Department, Department of Land Conservation and Development, area commission on transportation, metropolitan planning organization, and transportation providers and local governments directly impacted by the proposal to allow opportunities for comments on whether the proposed amendment meets the definition of economic development, how it would affect transportation facilities and the adequacy of proposed mitigation. Informal consultation is encouraged throughout the process starting with pre-application meetings. Coordination has the meaning given in ORS 197.015 and Goal 2 and must include notice at least 45 days before the first evidentiary hearing. Notice must include the following:**

**(A) Proposed amendment.**

**(B) Proposed mitigating actions from section (2) of this rule.**

**(C) Analysis and projections of the extent to which the proposed amendment in combination with proposed mitigating actions would fall short of being consistent with the function, capacity, and performance standards of transportation facilities.**

**(D) Findings showing how the proposed amendment meets the requirements of subsection (a) of this section.**

**(E) Findings showing that the benefits of the proposed amendment outweigh the negative effects on transportation facilities.**

**Finding:**

The proposed amendments, together with previously adopted and acknowledged ordinances, fully implements all of the applicable provisions of OAR 660-012-0060 as detailed in the following findings of fact:

- The proposed amendments respond to urbanization of the Basalt Creek area as described in the Basalt Creek concept plan. This urbanization is anticipated to have a significant effect on transportation facilities in the area.
- The Basalt Creek Transportation Refinement Plan, developed in 2013, served as a guide for the development of the Basalt Creek concept plan.
- The transportation impacts of the proposed amendments are consistent with the anticipated transportation impacts identified by the Basalt Creek Transportation Refinement Plan, developed in 2013.
- The proposed amendments do not change the existing or anticipated level-of-service or level-of-service standard for any facility.
- The proposed amendments adopt transportation facilities to support the proposed urban land uses as discussed in -0060(2)(b).
- As discussed under -0040 above, the transportation facilities identified in the proposed amendments are considered to be financially feasible and are included in the 2018 financially constrained Regional Transportation Plan.
- The improvements identified in these TSP amendments are adequate to address the additional demand on the transportation system created by the Basalt Creek Concept Plan.
- The process of coordinated TSP amendments with land use planning is consistent with all of the requirements of OAR 660-012-0060.

The proposed amendments are consistent with these requirements.

**660-012-0065**

**Transportation Improvements on Rural Lands**

**(1) This rule identifies transportation facilities, services and improvements which may be permitted on rural lands consistent with Goals 3, 4, 11, and 14 without a goal exception.**

**(2) For the purposes of this rule, the following definitions apply:**

**(a) "Access Roads" means low volume public roads that principally provide access to property or as specified in an acknowledged comprehensive plan;**

**(b) "Collectors" means public roads that provide access to property and that collect and distribute traffic between access roads and arterials or as specified in an acknowledged comprehensive plan;**

- (c) "Arterials" means state highways and other public roads that principally provide service to through traffic between cities and towns, state highways and major destinations or as specified in an acknowledged comprehensive plan;**
- (d) "Accessory Transportation Improvements" means transportation improvements that are incidental to a land use to provide safe and efficient access to the use;**
- (e) "Channelization" means the separation or regulation of conflicting traffic movements into definite paths of travel by traffic islands or pavement markings to facilitate the safe and orderly movement of both vehicles and pedestrians. Examples include, but are not limited to, left turn refuges, right turn refuges including the construction of islands at intersections to separate traffic, and raised medians at driveways or intersections to permit only right turns. "Channelization" does not include continuous median turn lanes;**
- (f) "Realignment" means rebuilding an existing roadway on a new alignment where the new centerline shifts outside the existing right of way, and where the existing road surface is either removed, maintained as an access road or maintained as a connection between the realigned roadway and a road that intersects the original alignment. The realignment shall maintain the function of the existing road segment being realigned as specified in the acknowledged comprehensive plan;**
- (g) "New Road" means a public road or road segment that is not a realignment of an existing road or road segment.**
- (3) The following transportation improvements are consistent with Goals 3, 4, 11, and 14 subject to the requirements of this rule:**
  - (a) Accessory transportation improvements for a use that is allowed or conditionally allowed by ORS 215.213, 215.283 or OAR chapter 660, division 6 (Forest Lands);**
  - (b) Transportation improvements that are allowed or conditionally allowed by ORS 215.213, 215.283 or OAR chapter 660, division 6 (Forest Lands);**
  - (c) Channelization not otherwise allowed under subsections (a) or (b) of this section;**
  - (d) Realignment of roads not otherwise allowed under subsection (a) or (b) of this section;**
  - (e) Replacement of an intersection with an interchange;**
  - (f) Continuous median turn lane;**
  - (g) New access roads and collectors within a built or committed exception area, or in other areas where the function of the road is to reduce local access to or local traffic on a state highway. These roads shall be limited to two travel lanes. Private access and intersections shall be limited to rural needs or to provide adequate emergency access.**
  - (h) Bikeways, footpaths and recreation trails not otherwise allowed as a modification or part of an existing road;**
  - (i) Park and ride lots;**
  - (j) Railroad mainlines and branchlines;**
  - (k) Pipelines;**
  - (l) Navigation channels;**
  - (m) Replacement of docks and other facilities without significantly increasing the capacity of those facilities;**

**(n) Expansions or alterations of public use airports that do not permit service to a larger class of airplanes; and**

**(o) Transportation facilities, services and improvements other than those listed in this rule that serve local travel needs. The travel capacity and performance standards of facilities and improvements serving local travel needs shall be limited to that necessary to support rural land uses identified in the acknowledged comprehensive plan or to provide adequate emergency access.**

**(4) Accessory transportation improvements required as a condition of development listed in subsection (3)(a) of this rule shall be subject to the same procedures, standards and requirements applicable to the use to which they are accessory.**

**(5) For transportation uses or improvements listed in subsections (3)(d) to (g) and (o) of this rule within an exclusive farm use (EFU) or forest zone, a jurisdiction shall, in addition to demonstrating compliance with the requirements of ORS 215.296:**

**(a) Identify reasonable build design alternatives, such as alternative alignments, that are safe and can be constructed at a reasonable cost, not considering raw land costs, with available technology. The jurisdiction need not consider alternatives that are inconsistent with applicable standards or not approved by a registered professional engineer;**

**(b) Assess the effects of the identified alternatives on farm and forest practices, considering impacts to farm and forest lands, structures and facilities, considering the effects of traffic on the movement of farm and forest vehicles and equipment and considering the effects of access to parcels created on farm and forest lands; and**

**(c) Select from the identified alternatives, the one, or combination of identified alternatives that has the least impact on lands in the immediate vicinity devoted to farm or forest use.**

**(6) Notwithstanding any other provision of this division, if a jurisdiction has not met the deadline for TSP adoption set forth in OAR 660-012-0055, or any extension thereof, a transportation improvement that is listed in section (5) of this rule and that will significantly reduce peak hour travel time as provided in OAR 660-012-0035(10) may be allowed in the urban fringe only if the jurisdiction applies either:**

**(a) The criteria applicable to a “reasons” exception provided in Goal 2 and OAR 660, division 4; or**

**(b) The evaluation and selection criteria set forth in OAR 660-012-0035.**

**Finding:**

The proposed amendments do not propose any new roadways, services or improvements on lands located outside of the UGB. These requirements are not applicable.

**660-012-0070**

**Exceptions for Transportation Improvements on Rural Land**

**(1) Transportation facilities and improvements which do not meet the requirements of OAR 660-012-0065 require an exception to be sited on rural lands.**

**(a) A local government approving a proposed exception shall adopt as part of its comprehensive plan findings of fact and a statement of reasons that demonstrate that**



**the standards in this rule have been met. A local government denying a proposed exception shall adopt findings of fact and a statement of reasons explaining why the standards in this rule have not been met. However, findings and reasons denying a proposed exception need not be incorporated into the local comprehensive plan.**

**(b) The facts and reasons relied upon to approve or deny a proposed exception shall be supported by substantial evidence in the record of the local exceptions proceeding.**

**(2) When an exception to Goals 3, 4, 11, or 14 is required to locate a transportation improvement on rural lands, the exception shall be taken pursuant to ORS 197.732(1)(c), Goal 2, and this division. The exceptions standards in OAR chapter 660, division 4 and OAR chapter 660, division 14 shall not apply. Exceptions adopted pursuant to this division shall be deemed to fulfill the requirements for goal exceptions required under ORS 197.732(1)(c) and Goal 2.**

**(3) An exception shall, at a minimum, decide need, mode, function and general location for the proposed facility or improvement:**

**(a) The general location shall be specified as a corridor within which the proposed facility or improvement is to be located, including the outer limits of the proposed location. Specific sites or areas within the corridor may be excluded from the exception to avoid or lessen likely adverse impacts. Where detailed design level information is available, the exception may be specified as a specific alignment;**

**(b) The size, design and capacity of the proposed facility or improvement shall be described generally, but in sufficient detail to allow a general understanding of the likely impacts of the proposed facility or improvement and to justify the amount of land for the proposed transportation facility. Measures limiting the size, design or capacity may be specified in the description of the proposed use in order to simplify the analysis of the effects of the proposed use;**

**(c) The adopted exception shall include a process and standards to guide selection of the precise design and location within the corridor and consistent with the general description of the proposed facility or improvement. For example, where a general location or corridor crosses a river, the exception would specify that a bridge crossing would be built but would defer to project development decisions about precise location and design of the bridge within the selected corridor subject to requirements to minimize impacts on riparian vegetation, habitat values, etc.;**

**(d) Land use regulations implementing the exception may include standards for specific mitigation measures to offset unavoidable environmental, economic, social or energy impacts of the proposed facility or improvement or to assure compatibility with adjacent uses.**

**(4) To address Goal 2, Part II(c)(1) the exception shall provide reasons justifying why the state policy in the applicable goals should not apply. Further, the exception shall demonstrate that there is a transportation need identified consistent with the requirements of OAR 660-012-0030 which cannot reasonably be accommodated through one or a combination of the following measures not requiring an exception:**

**(a) Alternative modes of transportation;**

**(b) Traffic management measures; and**

**(c) Improvements to existing transportation facilities.**

**(5) To address Goal 2, Part II(c)(2) the exception shall demonstrate that non-exception locations cannot reasonably accommodate the proposed transportation improvement or facility. The exception shall set forth the facts and assumptions used as the basis for determining why the use requires a location on resource land subject to Goals 3 or 4.**

**(6) To determine the reasonableness of alternatives to an exception under sections (4) and (5) of this rule, cost, operational feasibility, economic dislocation and other relevant factors shall be addressed. The thresholds chosen to judge whether an alternative method or location cannot reasonably accommodate the proposed transportation need or facility must be justified in the exception.**

**(a) In addressing sections (4) and (5) of this rule, the exception shall identify and address alternative methods and locations that are potentially reasonable to accommodate the identified transportation need.**

**(b) Detailed evaluation of such alternatives is not required when an alternative does not meet an identified threshold.**

**(c) Detailed evaluation of specific alternative methods or locations identified by parties during the local exceptions proceedings is not required unless the parties can specifically describe with supporting facts why such methods or locations can more reasonably accommodate the identified transportation need, taking into consideration the identified thresholds.**

**(7) To address Goal 2, Part II(c)(3), the exception shall:**

**(a) Compare the long-term economic, social, environmental and energy consequences of the proposed location and other alternative locations requiring exceptions. The exception shall describe the characteristics of each alternative location considered by the jurisdiction for which an exception might be taken, the typical advantages and disadvantages of using the location for the proposed transportation facility or improvement, and the typical positive and negative consequences resulting from the transportation facility or improvement at the proposed location with measures designed to reduce adverse impacts;**

**(b) Determine whether the net adverse impacts associated with the proposed exception site, with mitigation measures designed to reduce adverse impacts, are significantly more adverse than the net impacts from other locations which would also require an exception. A proposed exception location would fail to meet this requirement only if the affected local government concludes that the impacts associated with it are significantly more adverse than the other identified exception sites. The exception shall include the reasons why the consequences of the needed transportation facility or improvement at the proposed exception location are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed location. Where the proposed goal exception location is on resource lands subject to Goals 3 or 4, the exception shall include the facts used to determine which resource land is least productive; the ability to sustain resource uses near the proposed use; and the long-term economic impact on the general area caused by irreversible removal of the land from the resource base; and**

**(c) The evaluation of the consequences of general locations or corridors need not be site-specific, but may be generalized consistent with the requirements of section (3) of**

**this rule. Detailed evaluation of specific alternative locations identified by parties during the local exceptions proceeding is not required unless such locations are specifically described with facts to support the assertion that the locations have significantly fewer net adverse economic, social, environmental and energy impacts than the proposed exception location.**

**(8) To address Goal 2, Part II(c)(4), the exception shall:**

**(a) Describe the adverse effects that the proposed transportation improvement is likely to have on the surrounding rural lands and land uses, including increased traffic and pressure for nonfarm or highway oriented development on areas made more accessible by the transportation improvement;**

**(b) Demonstrate how the proposed transportation improvement is compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts. Compatible is not intended as an absolute term meaning no interference or adverse impacts of any type with adjacent uses; and**

**(c) Adopt as part of the exception, facility design and land use measures which minimize accessibility of rural lands from the proposed transportation facility or improvement and support continued rural use of surrounding lands.**

**(9)(a) Exceptions taken pursuant to this rule shall indicate on a map or otherwise the locations of the proposed transportation facility or improvement and of alternatives identified under subsection (4)(c), sections (5) and (7) of this rule.**

**(b) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.**

**(10) An exception taken pursuant to this rule does not authorize uses other than the transportation facilities or improvements justified in the exception.**

**(a) Modifications to unconstructed transportation facilities or improvements authorized in an exception shall not require a new exception if the modification is located entirely within the corridor approved in the exception.**

**(b) Modifications to constructed transportation facilities authorized in an exception shall require a new exception, unless the modification is permitted without an exception under OAR 660-012-0065(3)(b)–(f). For purposes of this rule, minor transportation improvements made to a transportation facility or improvement authorized in an exception shall not be considered a modification to a transportation facility or improvement and shall not require a new exception.**

**(c) Notwithstanding subsections (a) and (b) of this section, the following modifications to transportation facilities or improvements authorized in an exception shall require new goal exceptions:**

**(A) New intersections or new interchanges on limited access highways or expressways, excluding replacement of an existing intersection with an interchange.**

**(B) New approach roads located within the influence area of an interchange.**

**(C) Modifications that change the functional classification of the transportation facility.**

**(D) Modifications that materially reduce the effectiveness of facility design measures or land use measures adopted pursuant to subsection (8)(c) of this rule to minimize accessibility to rural lands or support continued rural use of surrounding rural lands,**

**unless the area subject to the modification has subsequently been relocated inside an urban growth boundary.**

**Finding:**

This subsection is not applicable to the proposed amendments, as no rural transportation improvements have been identified in this ordinance. The proposed amendments updated the previously adopted TSP. The amendments are consistent with the City's acknowledged policies and strategies for the provision of transportation facilities and services as required by Goal 12 (the TPR, implemented via OAR Chapter 660, Division 12). The proposed amendments comply with all of the applicable requirements of OAR 660, Division 12. Only those provisions of Division 12 that require specific findings are summarized and addressed herein. Plan compliance with Goal 12 is maintained with the proposed amendments. The proposed amendments are consistent with these requirements.

**Section D: Oregon Highway Plan**

**The following goals and policies of the Oregon Highway Plan (OHP) are applicable to the proposed amendments:**

**Policy 1A: State Highway Classification System**

**Finding:**

The proposed amendments would update the City's Functional Classification map. No new functional classifications are introduced and no changes inconsistent with State Highway Classifications have been made. The proposed amendments are consistent with the OHP.

**Policy 1B: Land Use and Transportation**

**Finding:**

The proposed amendments respond to urbanization of the Basalt Creek area as described in the Basalt Creek concept plan. The proposed amendments address mobility standards consistent with State Highway mobility standards.

The Basalt Creek area was added to the Portland Metro urban growth boundary in 2004. The area provides housing and employment lands to serve the continued growth of the region. The Basalt Creek Transportation Refinement Plan was developed in coordination with ODOT. The Transportation Refinement Planning proactively addressed the transportation system necessary to serve the urban growth area. The Transportation Refinement Plan:

- Provides for access management on State and Local facilities.
- Included updates to City and County transportation system plans.
- Was developed in partnership with the Metropolitan Planning Organization for the Portland area (Metro).
- Considered the anticipated development of the Basalt Creek area as well as other growth throughout the region.

- Considered the need for Special Transportation Areas, Urban Business Areas, and Commercial Centers but none were identified.

The Basalt Creek concept plan provides for compact urban development within the Basalt Creek urban growth area and includes provisions for:

- an interconnected local roadway network
- transit, bicycle and pedestrian facilities
- design orientation of buildings that accommodate multimodal transportation options
- parking provisions

The Basalt Creek Transportation Refinement Plan was developed through a coordinated process that identified regional facilities to protect the operations and functions of the state highway system and identified local roadways necessary to serve and interconnect the Basalt Creek Planning Area. The planning effort served to provide for the general location of new transportation facilities. The proposed amendments provide a coordinated land use and transportation system consistent with the OHP Policy 1B.

### **Policy 1C: State Highway Freight System**

#### **Finding:**

The proposed amendments update the Freight System Element of the TSP, including a revised roadway freight map (Figure 11-6, Exhibit 10). The proposed amendments are consistent with the OHP.

### **Policy 1D: Scenic Byways**

#### **Finding:**

No Oregon Scenic Byways are located with the Basalt Creek urban growth boundary expansion area. The proposed amendments are consistent with the OHP.

### **Policy 1F: Highway Mobility Standards**

#### **Finding:**

The proposed amendments identify the roadway system Functional Classification and Lane Numbers maps adequate to meet anticipated travel needs. This evaluation included all ODOT and other facilities within area and assessed the system performance based on the applicable mobility standards, including OHP mobility targets and standards, as well as the Regional Transportation Functional Plan interim mobility deficiency thresholds and operating standards.

No deficiency locations were identified in this analysis. As urban growth occurs in the Basalt Creek Planning Area over time, additional monitoring of system performance is anticipated. The proposed amendments are consistent with the OHP.

### **Policy 1G: Major Improvements**

**Finding:**

The proposed amendments provide for identified transportation improvements. These roadway improvements will be developed by the appropriate agencies (City, County and/or State). The City roadway improvements are governed by City of Tualatin public works permit process as discussed under TPR section -0050 above. These regulations provide an improvement process consistent with the requirements of the OHP. The proposed amendments do not change these requirements. The City of Tualatin TSP addresses the type of and function of transportation improvement and the public works permit process is consistent with the requirements of this section. The proposed amendments are consistent with the OHP.

**Policy 2G: Rail and Highway Compatibility**

**Finding:**

The City TSP encourages the safe, efficient operation of railroad facilities. The proposed amendments does not change these requirements or propose any new rail crossings. The proposed amendments are consistent with the OHP.

**Policy 3A: Classification and Spacing Standards**

**Finding:**

The proposed amendments propose control access spacing standard along certain arterials and other state routes. The proposed amendments make no changes to the requirements associated with interim access locations. The proposed amendments are consistent with the OHP.

**Policy 3B: Medians**

**Finding:**

The proposed amendments do not identify any median locations or treatments. TDC Chapter 75 and the TSP describe median treatments and traffic operations and calming that apply throughout the Basalt Creek planning area. These standards control the design and placement of medians on roadways. City road standards identify median treatments consistent with the OHP. The proposed amendments are consistent with the OHP.

**Policy 3C: Interchange Access Management Areas**

**Finding:**

The proposed amendments do not make any changes to the previously adopted plan for any interchange area. The proposed amendments are consistent with the OHP.

**Policy 3D: Deviations**

**Finding:**

The proposed amendments do not make any requests for deviations to state highway standards. The proposed amendments are consistent with the OHP.

**Policy 4A: Efficiency of Freight Movement**

**Finding:**

The proposed amendments identify an appropriate roadway freight system plan for the Basalt Creek urban growth boundary expansion area consistent with State Highway Freight System designations. The proposed amendments are consistent with the OHP.

**Policy 4D: Transportation Demand Management**

**Finding:**

The previously adopted and acknowledged TSP, adopted a TDM policy and system element that is consistent with the requirements of the OHP. The proposed amendments do not change these elements of the TSP. The proposed amendments are consistent with the OHP.

**Section E: Metro Code**

**The following Chapters and Titles of Metro Code are applicable to the proposed amendments:**

**Chapter 3.07, Urban Growth Management Functional Plan**

**Title 1 – Requirements for Housing and Employment Accommodation**

**This section of the Functional Plan facilitates efficient use of land within the Urban Growth Boundary (UGB). Each city and county has determined its capacity for providing housing and employment which serves as their baseline and if a city or county chooses to reduce capacity in one location, it must transfer that capacity to another location. Cities and counties must report changes in capacity annually to Metro.**

**Finding:**

PTA-19-0001 and the companion PMA-19-0001 will apply manufacturing park, residential, and commercial areas to the City. The requirements of Title 1 pertain to reductions in residential uses. As the proposed amendment will be implementing the Basalt Creek Concept Plan land use plan and growing residential, this Title does not apply. The proposed amendments are consistent with Title 1.

**Title 3 – Water Quality and Flood Management**

**This section of the Functional Plan acts to protect beneficial water uses and functions. Additionally, this section addresses mitigation of the impact of flooding of developed areas.**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan. As discussed previously, compliance with Title 3 is administered in Tualatin by Clean Water Services. Future development in Tualatin will be comply with Clean Water Services’ Design and Construction Standards & Service Provider Letters (SPLs) requirements. Sensitive areas such as vegetated corridors surrounding streams and wetland habitat are identified, protected and maintained by Clean Water Services. The Basalt Creek Planning Area does not have any areas presently mapped as floodplain or regulatory floodway by the Federal Emergency Management Agency (FEMA), though the requirements of TDC Chapter 70 would be applicable upon annexation to Tualatin. The proposed amendments are consistent with Title 3.

**Title 4 – Industrial and Other Employment Areas**

**Title 4 of the Metro Plan establishes a regional framework for economic organization. Key industrial areas are identified by Metro to capitalize on a more regional perspective. The Title calls for clustering of industrial areas.**

**Finding:**

The Basalt Creek area was identified in 2004 as a key industrial area by Metro and added to the UGB’s of Wilsonville and Tualatin with the intent of growing the industrial areas that already exist in this part of the region. This designation also capitalized on the proximity of the area to key transportation corridors, specifically Highway 99W and I-5. The area was labeled as Industrial by Metro, however it is important to note that the areas was not deemed a Regionally Significant Industrial Area (RSIA). The proposed amendments would apply the Manufacturing Park (MP) zoning designation to a portion of the Basalt Creek Planning Area, This zoning designation is considered to be “industrial” by Metro Standards and will allow for approximately 92.95 net buildable acres of future development. The proposed amendments are consistent with Title 4.

**Title 7 – Housing Choice**

**This voluntary section of the functional plan will ensure that all cities and counties in the region are providing opportunities for affordable housing for households of all income levels.**

**Finding:**

Title 7 is generally applicable to a City government, calling for programs and incentives for housing choices. A range of housing afforded within the plan area does work to implement the intent of the Title. Though housing designations are included in the Basalt Creek Concept Plan, this Title is generally not applicable.

**Title 8 – Compliance Procedures**

**Finding:**

Title 8 sets forth Metro’s procedures for determining compliance with the Urban Growth Management Functional Plan (UGMFP). Included in this title are steps local jurisdictions must



take to ensure that Metro has the opportunity to review amendments to comprehensive plans. Title 8 requires jurisdictions to submit notice to Metro at least 35 days prior to the first evidentiary hearing for a proposed amendment to a comprehensive plan. Consistent with Title 8, staff sent a copy of the proposed amendments to Metro on March 4, 2019, 35 days prior to the first evidentiary hearing. The proposed amendments are consistent with Title 8.

## **Title 11 – Planning for New Urban Areas**

### **3.07.1105 Purpose and Intent**

**The Regional Framework Plan calls for long-range planning to ensure that areas brought into the UGB are urbanized efficiently and become or contribute to mixed-use, walkable, transit-friendly communities. It is the purpose of Title 11 to guide such long range planning for urban reserves and areas added to the UGB. It is also the purpose of Title 11 to provide interim protection for areas added to the UGB until city or county amendments to land use regulations to allow urbanization become applicable to the areas.**

#### **Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan. Included in the Basalt Creek Concept Plan Appendixes (Exhibit 3) are a detailed analysis of the plans consistency with the Metro Urban Growth Management Functional Plan. Land within the Basalt Creek Planning Area the Metro UGB in 2004. The proposed amendments would apply the Tualatin Comprehensive Plan and Development Code to properties within the area, upon annexation to Tualatin. As discussed below, interim protection for the Basalt Creek Planning Area, until annexation to Tualatin, will be implemented by Washington County. The proposed amendments are consistent with Title 11.

### **3.07.1120 Planning for Areas Added to the UGB.**

**A. The county or city responsible for comprehensive planning of an area, as specified by the intergovernmental agreement adopted pursuant to section 3.07.1110(c)(7) or the ordinance that added the area to the UGB, shall adopt comprehensive plan provisions and land use regulations for the area to address the requirements of subsection (c) by the date specified by the ordinance or by section 3.07.1455(b)(4) of this chapter.**

#### **Finding:**

The City signed an intergovernmental agreement (IGA) with Metro in 2011 for concept planning. The Basalt Creek Concept Plan was adopted by the Tualatin City Council in August of 2018. The proposed amendments would complete the “comprehensive planning” identified above. This criterion is met.

**B. If the concept plan developed for the area pursuant to section 3.07.1110 assigns planning responsibility to more than one city or county, the responsible local governments shall provide for concurrent consideration and adoption of proposed comprehensive plan provisions unless the ordinance adding the area to the UGB**

**provides otherwise.**

**Finding:**

The Basalt Creek Concept Plan covered areas within two different Cities, Tualatin and Wilsonville. This was done to assure master planning for the area. Though the concept plan covers both areas, each City is responsible, as specified through the IGA's with Metro and the County, to complete its own planning process, including adopting its own Comprehensive and zoning (development code) amendments to implement the portion of the concept plan within their respective jurisdictions. This criterion is met.

**C. Comprehensive plan provisions for the area shall include:**

- 1. Specific plan designation boundaries derived from and generally consistent with the boundaries of design type designations assigned by the Metro Council in the ordinance adding the area to the UGB;**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan. Proposed zoning designations include; Neighborhood Commercial, High Density Residential, Medium Density Residential, Low Density Residential, and Manufacturing Park. The proposed areas are generally consistent with the boundaries of design type designations. This criterion is met.

- 2. Provision for annexation to a city and to any necessary service districts prior to, or simultaneously with, application of city land use regulations intended to comply with this subsection;**

**Finding:**

The proposed amendments would provide for application of city land use regulations simultaneous to annexation to a city and to any necessary service districts. This criterion is met.

- 3. Provisions that ensure zoned capacity for the number and types of housing units, if any, specified by the Metro Council pursuant to Metro Code 3.01.040(b)(2);**

- 4. Provision for affordable housing consistent with Title 7 of the Urban Growth Management Functional Plan if the comprehensive plan authorizes housing in any part of the area;**

**Finding:**

Housing was not specifically required by Metro at the time of expansion of the UGB in the Basalt Creek Planning area in 2004. However, the implementing Metro Ordinance, No. 14-1040b allowed some residential to be included in the planning area. A mixture of housing types and densities are proposed in the Basalt Creek Concept Plan including

High Density Housing. This criterion is met.

**5. Provision for the amount of land and improvements needed, if any, for public school facilities sufficient to serve the area added to the UGB in coordination with affected school districts. This requirement includes consideration of any school facility plan prepared in accordance with ORS 195.110;**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan, which included the opportunity for public school facility planning in accordance with ORS 195.110 by the school district for the Basalt Creek Planning Area, the Sherwood School District. This criterion is met.

**6. Provision for the amount of land and improvements needed, if any, for public park facilities sufficient to serve the area added to the UGB in coordination with affected park providers;**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan, which did not quantify the specific need or locations for park facilities. The facilities for provision of and parks will be determined and funded as development occurs in the area and will be based on level of service standards, consistent with the Tualatin Parks Master Plan. This criterion is met.

**7. A conceptual street plan that identifies internal street connections and connections to adjacent urban areas to improve local access and improve the integrity of the regional street system. For areas that allow residential or mixed-use development, the plan shall meet the standards for street connections in the Regional Transportation Functional Plan;**

**Finding:**

The proposed amendments include a conceptual street plan that identifies internal street connections and connections to adjacent urban areas to improve local access and improve the integrity of the regional street system (Figure 11-3, Exhibit 10) consistent with the standards for street connections in the Regional Transportation Functional Plan. This criterion is met.

**8. Provision for the financing of local and state public facilities and services; and**

**Finding:**

The proposed amendments would allow for the application of the Tualatin Comprehensive Plan, Development Code, and Transportation System Plan to the Basalt Creek Planning Area upon annexation of individual properties, which include

applicable provisions for the financing of local and state public facilities and services. This criterion is met.

**9. A strategy for protection of the capacity and function of state highway interchanges, including existing and planned interchanges and planned improvements to interchanges.**

**Finding:**

Findings regarding the transportation system, including applicable protections of the capacity and function of state highway interchanges, including existing and planned interchanges and planned improvements to interchanges are addressed above under OAR Chapter 660 Division 12 and the OHP. This criterion is met.

**Title 12 – Protection of Residential Neighborhoods**

**The purpose of this title is to protect the region’s existing residential neighborhoods from air and water pollution, noise and crime, and to provide adequate levels of public services.**

**Finding:**

The proposed amendments would allow for the application of the Tualatin Comprehensive Plan, and Development Code to the Basalt Creek Planning Area upon annexation of individual properties, which include applicable regulatory protections for existing residential neighborhoods from air and water pollution, noise and crime, and ensure provision of adequate levels of public services. The proposed amendments are consistent with Title 12.

**Title 13 – Nature in Neighborhoods**

**The purpose of this title is to conserve, protect and restore a continuous ecologically viable streamside corridor system that is integrated with upland wildlife habitat and the surrounding urban landscape.**

**Finding:**

Compliance with Title 13 is satisfied by Tualatin’s participation in the Tualatin Basin Plan and previously adopted amendments to the Comprehensive Plan and Development Code. The TDC will apply to the Basalt Creek area upon adoption and annexation of any property to Tualatin. The conservation areas will be administered and protected by Clean Water Services. 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. The proposed amendments are consistent with Title 13.

**Chapter 3.08, Regional Transportation Functional Plan**

**Finding:**

The proposed amendments include an update to the City’s Transportation System Plan (TSP). The current Tualatin TSP, as well as the proposed amendments, are consistent with the Regional Transportation Plan (RTP), the Regional Active Transportation Plan (RATP), and Title 2 “Development and Update of Transportation System Plans” of the Regional Transportation Functional Plan (RTFP) Sections 210, 220, and 230. The proposed TSP update includes proposed updates to the roadway and active transportation system. The transportation system designations adopted in the proposed amendments are consistent with the designations identified in Metro’s 2018 RTP. As described in the Goal 12 findings above, the proposed updated TSP and associated updates to Figures 11-1 through 11-6 of the Comprehensive Plan continue to provide a system of transportation facilities and services adequate to meet identified transportation needs consistent with the RTP. The proposed amendments comply with the requirements of the RTFP.

**Title 1, Transportation System Design**

**3.08.110 Street System Design**

**A. To ensure that new street construction and re-construction projects are designed to improve safety, support adjacent land use and balance the needs of all users, including bicyclists, transit vehicles, motorists, freight delivery vehicles and pedestrians of all ages and abilities, city and county street design regulations shall allow implementation of:**

- 1. Complete street designs as set forth in Creating Livable Streets: Street Design Guidelines for 2040 (2nd Edition, 2002), or similar resources consistent with regional street design policies;**
- 2. Green street designs as set forth in Green Streets: Innovative Solutions for Stormwater and Street Crossings (2002) and Trees for Green Streets: An Illustrated Guide (2002) or similar resources consistent with federal regulations for stream protection; and**
- 3. Transit-supportive street designs that facilitate existing and planned transit service pursuant subsection 3.08.120B.**

**B. City and county local street design regulations shall allow implementation of:**

- 1. Pavement widths of less than 28 feet from curb-face to curb-face;**
- 2. Sidewalk widths that include at least five feet of pedestrian through zones;**
- 3. Landscaped pedestrian buffer strips, or paved furnishing zones of at least five feet, that include street trees;**
- 4. Traffic calming devices, such as speed bumps and cushions, woonerfs and chicanes, to discourage traffic infiltration and excessive speeds;**
- 5. Short and direct right-of-way routes and shared-use paths to connect residences with commercial services, parks, schools, hospitals, institutions, transit corridors, regional trails and other neighborhood activity centers; and**
- 6. Opportunities to extend streets in an incremental fashion, including posted notification on streets to be extended.**

**C. To improve connectivity of the region’s arterial system and support walking, bicycling and access to transit, each city and county shall incorporate into its TSP, to the extent practicable, a network of major arterial streets at one-mile spacing and minor arterial streets or collector streets at half-mile spacing considering the following:**

- 1. Existing topography;**
- 2. Rail lines;**
- 3. Freeways;**
- 4. Pre-existing development;**
- 5. Leases, easements or covenants in place prior to May 1, 1995; and**
- 6. The requirements of Titles 3 and 13 of the Urban Growth Management Functional Plan (UGMFP).**
- 7. Arterial design concepts in Table 2.6 and Figure 2.11 of the RTP.**
- 8. Best practices and designs as set forth in Green Streets: Innovative Solutions for Stormwater, Street Crossings (2002) and Trees for Green Streets: An Illustrated Guide (2002), Creating Livable Streets: Street Design Guidelines for 2040 (2nd Edition, 2002), and state or locally-adopted plans and best practices for protecting natural resources and natural areas.**

**D. To improve local access and circulation, and preserve capacity on the region’s arterial system, each city and county shall incorporate into its TSP a conceptual map of new streets for all contiguous areas of vacant and re-developable lots and parcels of five or more acres that are zoned to allow residential or mixed-use development. The map shall identify street connections to adjacent areas to promote a logical, direct and connected system of streets and should demonstrate opportunities to extend and connect new streets to existing streets, provide direct public right-of-way routes and limit closed-end street designs consistent with subsection E.**

**E. If proposed residential or mixed-use development of five or more acres involves construction of a new street, the city and county regulations shall require the applicant to provide a site plan that:**

- 1. Is consistent with the conceptual new streets map required by subsection D;**
- 2. Provides full street connections with spacing of no more than 530 feet between connections, except if prevented by barriers such as topography, rail lines, freeways, pre-existing development, leases, easements or covenants that existed prior to May 1, 1995, or by requirements of Titles 3 and 13 of the UGMFP;**
- 3. If streets must cross water features protected pursuant to Title 3 UGMFP, provides a crossing every 800 to 1,200 feet unless habitat quality or the length of the crossing prevents a full street connection;**
- 4. If full street connection is prevented, provides bicycle and pedestrian accessways on public easements or rights-of-way spaced such that accessways are not more than 330 feet apart, unless not possible for the reasons set forth in paragraph 3;**
- 5. Provides for bike and pedestrian accessways that cross water features protected pursuant to Title 3 of the UGMFP at an average of 530 feet between accessways unless habitat quality or the length of the crossing prevents a connection;**
- 6. If full street connection over water features protected pursuant to Title 3 of the UGMFP cannot be constructed in centers as defined in Title 6 of the UGMFP or Main**

**Streets shown on the 2040 Growth Concept Map, or if spacing of full street connections exceeds 1,200 feet, provides bike and pedestrian crossings at an average of 530 feet between accessways unless habitat quality or the length of the crossing prevents a connection;**

**7. Limits cul-de-sac designs or other closed-end street designs to circumstances in which barriers prevent full street extensions and limits the length of such streets to 200 feet and the number of dwellings along the street to no more than 25; and**

**8. Provides street cross-sections showing dimensions of right-of-way improvements and posted or expected speed limits.**

**F. For redevelopment of contiguous lots and parcels less than five acres in size that require construction of new streets, cities and counties shall establish their own standards for local street connectivity, consistent with subsection E.**

**G. To protect the capacity, function and safe operation of existing and planned state highway interchanges or planned improvements to interchanges, cities and counties shall, to the extent feasible, restrict driveway and street access in the vicinity of interchange ramp terminals, consistent with Oregon Highway Plan Access Management Standards, and accommodate local circulation on the local system to improve safety and minimize congestion and conflicts in the interchange area. Public street connections, consistent with regional street design and spacing standards in this section, shall be encouraged and shall supercede this access restriction, though such access may be limited to right-in/right-out or other appropriate configuration in the vicinity of interchange ramp terminals. Multimodal street design features including pedestrian crossings and on-street parking shall be allowed where appropriate.**

### **3.08.120 Transit System Design**

**A. City and county TSPs or other appropriate regulations shall include investments, policies, standards and criteria to provide pedestrian and bicycle connections to all existing transit stops and major transit stops designated in Figure 2.15 of the RTP.**

**B. City and county TSPs shall include a transit plan, and implementing land use regulations, with the following elements to leverage the region's investment in transit and improve access to the transit system:**

**1. A transit system map consistent with the transit functional classifications shown in Figure 2.15 of the RTP that shows the locations of major transit stops, transit centers, high capacity transit stations, regional bicycle transit facilities, inter-city bus and rail passenger terminals designated in the RTP, transit-priority treatments such as signals, regional bicycle transit facilities, park-and-ride facilities, and bicycle and pedestrian routes, consistent with sections 3.08.130 and 3.08.140, between essential destinations and transit stops.**

**2. The following site design standards for new retail, office, multi-family and institutional buildings located near or at major transit stops shown in Figure 2.15 in the RTP:**

**a. Provide reasonably direct pedestrian connections between transit stops and building entrances and between building entrances and streets adjoining transit stops;**

**b. Provide safe, direct and logical pedestrian crossings at all transit stops where practicable;**

**c. At major transit stops, require the following:**

**i. Locate buildings within 20 feet of the transit stop, a transit street or an intersecting street, or a pedestrian plaza at the stop or a street intersection;**

**ii. Transit passenger landing pads accessible to disabled persons to transit agency standards;**

**iii. An easement or dedication for a passenger shelter and an underground utility connection to a major transit stop if requested by the public transit provider; and**

**iv. Lighting to transit agency standards at the major transit stop.**

**v. Intersection and mid-block traffic management improvements as needed and practicable to enable marked crossings at major transit stops.**

**C. Providers of public transit service shall consider and document the needs of youth, seniors, people with disabilities and environmental justice populations, including minorities and low-income families, when planning levels of service, transit facilities and hours of operation.**

### **3.08.130 Pedestrian System Design**

**A. City and county TSPs shall include a pedestrian plan, with implementing land use regulations, for an interconnected network of pedestrian routes within and through the city or county. The plan shall include:**

**1. An inventory of existing facilities that identifies gaps and deficiencies in the pedestrian system;**

**2. An evaluation of needs for pedestrian access to transit and essential destinations for all mobility levels, including direct, comfortable and safe pedestrian routes.**

**3. A list of improvements to the pedestrian system that will help the city or county achieve the regional Non-SOV modal targets in Table 3.08-1 and other targets established pursuant to section 3.08.230;**

**4. Provision for sidewalks along arterials, collectors and most local streets, except that sidewalks are not required along controlled roadways, such as freeways; and**

**5. Provision for safe crossings of streets and controlled pedestrian crossings on major arterials.**

**B. As an alternative to implementing section 3.08.120(B)(2), a city or county may establish pedestrian districts in its comprehensive plan or land use regulations with the following elements:**

**1. A connected street and pedestrian network for the district;**

**2. An inventory of existing facilities, gaps and deficiencies in the network of pedestrian routes;**

**3. Interconnection of pedestrian, transit and bicycle systems;**

**4. Parking management strategies;**

**5. Access management strategies;**

**6. Sidewalk and accessway location and width;**

**7. Landscaped or paved pedestrian buffer strip location and width;**



- 8. Street tree location and spacing;**
  - 9. Pedestrian street crossing and intersection design;**
  - 10. Street lighting and furniture for pedestrians; and**
  - 11. A mix of types and densities of land uses that will support a high level of pedestrian activity.**
- C. City and county land use regulations shall require new development to provide on-site streets and accessways that offer reasonably direct routes for pedestrian travel.**

#### **3.08.140 Bicycle System Design**

- A. City and county TSPs shall include a bicycle plan, with implementing land use regulations, for an interconnected network of bicycle routes within and through the city or county. The plan shall include:**
- 1. An inventory of existing facilities that identifies gaps and deficiencies in the bicycle system;**
  - 2. An evaluation of needs for bicycle access to transit and essential destinations, including direct, comfortable and safe bicycle routes and secure bicycle parking, considering TriMet Bicycle Parking Guidelines.**
  - 3. A list of improvements to the bicycle system that will help the city or county achieve the regional Non-SOV modal targets in Table 3.08-1 and other targets established pursuant to section 3.08.230;**
  - 4. Provision for bikeways along arterials, collectors and local streets, and bicycle parking in centers, at major transit stops shown in Figure 2.15 in the RTP, park-and-ride lots and associated with institutional uses; and**
  - 5. Provision for safe crossing of streets and controlled bicycle crossings on major arterials.**

#### **3.08.150 Freight System Design**

- A. City and county TSPs shall include a freight plan, with implementing land use regulations, for an interconnected system of freight networks within and through the city or county. The plan shall include:**
- 1. An inventory of existing facilities that identifies gaps and deficiencies in the freight system;**
  - 2. An evaluation of freight access to freight intermodal facilities, employment and industrial areas and commercial districts; and**
  - 3. A list of improvements to the freight system that will help the city or county increase reliability of freight movement, reduce freight delay and achieve the targets established pursuant to section 3.08.230.**

#### **3.08.160 Transportation System Management and Operations**

**A. City and county TSPs shall include transportation system management and operations (TSMO) plans to improve the performance of existing transportation infrastructure within or through the city or county. A TSMO plan shall include:**

- 1. An inventory and evaluation of existing local and regional TSMO infrastructure, strategies and programs that identifies gaps and opportunities to expand infrastructure, strategies and programs;**
- 2. A list of projects and strategies, consistent with the Regional TSMO Plan, based upon consideration of the following functional areas:**
  - a. Multimodal traffic management investments, such as signal timing, access management, arterial performance monitoring and active traffic management;**
  - b. Traveler information investments, such as forecasted traffic conditions and carpool matching;**
  - c. Traffic incident management investments, such as incident response programs; and**
  - d. Transportation demand management investments, such as individualized marketing programs, rideshare programs and employer transportation programs.**

**Finding:**

The Tualatin Development Code, Comprehensive Plan, associated maps and figures, TSP, and the Public Works Construction Standards, provide street improvement standards consistent with all the requirements of Title 1. The Tualatin TSP was previously updated in 2014, at which time it was deemed to be in conformance with all the requirements of Title 1. The proposed amendments and associated TSP Update adjusts the facilities within the Basalt Creek urban growth expansion area to include a plan for systems consistent with the requirements of this section, and therefore is consistent with Title 1.

**Title 2, Development and Update of Transportation System Plans**

**3.08.210 Transportation Needs**

**A. Each city and county shall update its TSP to incorporate regional and state transportation needs identified in the 2035 RTP and its own transportation needs. The determination of local transportation needs shall be based upon:**

- 1. System gaps and deficiencies identified in the inventories and analysis of transportation systems pursuant to Title 1;**
- 2. Identification of facilities that exceed the Deficiency Thresholds and Operating Standards in Table 3.08-2 or the alternative thresholds and standards established pursuant to section 3.08.230;**
- 3. Consideration and documentation of the needs of youth, seniors, people with disabilities and environmental justice populations within the city or county, including minorities and low-income families.**

**B. A city or county determination of transportation needs must be consistent with the following elements of the RTP:**

- 1. The population and employment forecast and planning period of the RTP, except that a city or county may use an alternative forecast for the city or county, coordinated with**

**Metro, to account for changes to comprehensive plan or land use regulations adopted after adoption of the RTP;**

**2. System maps and functional classifications for street design, motor vehicles, transit, bicycles, pedestrians and freight in Chapter 2 of the RTP; and**

**3. Regional non-SOV modal targets in Table 3.08-1 and the Deficiency Thresholds and Operating Standards in Table 3.08-2.**

**C. When determining its transportation needs under this section, a city or county shall consider the regional needs identified in the mobility corridor strategies in Chapter 4 of the RTP.**

**Finding:**

The proposed amendments, as well as previously adopted and acknowledged ordinances, are consistent with the provisions. Specifically:

- The proposed TSP updates are consistent with the mobility principles identified in the 2018 RTP.
- The proposed TSP updates are consistent with the needs identified in the mobility corridor #3 Tigard to Wilsonville.

**3.08.220 Transportation Solutions**

**A. Each city and county shall consider the following strategies, in the order listed, to meet the transportation needs determined pursuant to section 3.08.210 and performance targets and standards pursuant to section 3.08.230. The city or county shall explain its choice of one or more of the strategies and why other strategies were not chosen:**

**1. TSMO strategies, including localized TDM, safety, operational and access management improvements;**

**2. Transit, bicycle and pedestrian system improvements;**

**3. Traffic-calming designs and devices;**

**4. Land use strategies in OAR 660-012-0035(2) to help achieve the thresholds and standards in Tables 3.08-1 and 3.08-2 or alternative thresholds and standards established pursuant to section 3.08.230;**

**5. Connectivity improvements to provide parallel arterials, collectors or local streets that include pedestrian and bicycle facilities, consistent with the connectivity standards in section 3.08.110 and design classifications in Table 2.6 of the RTP, in order to provide alternative routes and encourage walking, biking and access to transit; and**

**6. Motor vehicle capacity improvements, consistent with the RTP Arterial and Throughway Design and Network Concepts in Table 2.6 and section 2.5.2 of the RTP, only upon a demonstration that other strategies in this subsection are not appropriate or cannot adequately address identified transportation needs.**

**B. A city or county shall coordinate its consideration of the strategies in subsection A with the owner of the transportation facility affected by the strategy. Facility design is subject to the approval of the facility owner.**

**C. If analysis under subsection 3.08.210A indicates a new regional or state need that has not been identified in the RTP, the city or county may propose one of the following actions:**

- 1. Propose a project at the time of Metro review of the TSP to be incorporated into the RTP during the next RTP update; or**
- 2. Propose an amendment to the RTP for needs and projects if the amendment is necessary prior to the next RTP update.**

**Finding:**

The proposed TSP update, as well as previously adopted and acknowledged ordinances, are consistent with these provisions. Specifically:

- The previously adopted TSP identifies coordination strategies consistent with the RTFP and identifies a process consistent with the RTFP for consideration of motor vehicle capacity improvements with the RTP and the OHP policy 1G.
- The Basalt Creek Transportation Refinement Plan considered the steps identified in the RTFP as necessary prior to adding motor vehicle capacity and recommended the major system improvements identified in the proposed TSP update.
- The projects identified in the proposed TSP update are consistent with the projects listed in the 2018 RTP.

Therefore, the proposed TSP update are consistent with the requirements of this section of the RTFP.

**3.08.230 Performance Targets and Standards**

**A. Each city and county shall demonstrate that solutions adopted pursuant to section 3.08.220 will achieve progress toward the targets and standards in Tables 3.08-1, and 3.08-2 and measures in subsection D, or toward alternative targets and standards adopted by the city or county pursuant to subsections B and, C. The city or county shall include the regional targets and standards or its alternatives in its TSP.**

**B. A city or county may adopt alternative targets or standards in place of the regional targets and standards prescribed in subsection A upon a demonstration that the alternative targets or standards:**

- 1. Are no lower than the modal targets in Table 3.08-1 and no lower than the ratios in Table 3.08-2;**
- 2. Will not result in a need for motor vehicle capacity improvements that go beyond the planned arterial and throughway network defined in Figure 2.12 of the RTP and that are not recommended in, or are inconsistent with, the RTP; and**
- 3. Will not increase SOV travel to a degree inconsistent with the non-SOV modal targets in Table 3.08-1.**

**C. If the city or county adopts mobility standards for state highways different from those in Table 3.08-2, it shall demonstrate that the standards have been approved by the Oregon Transportation Commission.**

**D. Each city and county shall also include performance measures for safety, vehicle miles traveled per capita, freight reliability, congestion, and walking, bicycling and transit mode shares to evaluate and monitor performance of the TSP.**

**E. To demonstrate progress toward achievement of performance targets in Tables 3.08-1 and 3.08-2 and to improve performance of state highways within its jurisdiction as much as feasible and avoid their further degradation, the city or county shall adopt the following:**

- 1. Parking minimum and maximum ratios in Centers and Station Communities consistent with subsection 3.08.410A;**
- 2. Designs for street, transit, bicycle, freight and pedestrian systems consistent with Title 1; and**
- 3. TSMO projects and strategies consistent with section 3.08.160; and**
- 4. Land use actions pursuant to OAR 660-012-0035(2).**

**Finding:**

The proposed TSP update as well as previously adopted and acknowledged ordinances, is consistent with all of the provisions. Specifically:

- The previously adopted TSP identified interim performance targets and standards consistent with the RTFP. The City has not adopted alternative targets, and has not applied mobility standards different from those identified in the RTFP.
- The Basalt Creek Transportation Refinement Plan identified and calculated system performance measures consistent with the requirements of the RTFP. These measures were utilized to inform the planning processes necessary to develop the proposed TSP Update.
- City of Tualatin chapter 73C of the Tualatin Development Code has parking standards consistent with all the requirements of this section. The existing TSP was deemed to be in compliance with parking minimums and maximums consistent with the RTFP.
- The City of Tualatin Public Works Construction Code provide for a transportation system design consistent with the requirements of the RTFP.
- The previously adopted TSP provided for the management and operation of the transportation system consistent with the requirements of the RTFP.
- As described in the technical documents (see project file), the analysis for the development of the proposed TSP Update was based on the population and employment forecasts documented 2018 RTP and consistent with OAR 660-012-0035(2).

**Title 3** This section pertains to the general location and size of transportation facilities.

**Finding:**

The proposed amendments update the planned size of a transportation facility consistent with the requirements of the RTFP.

**Title 4** This section pertains to parking management and standards.

**Finding:**

The previously adopted TSP includes provisions for parking minimums and maximums consistent with the RTFP.

- TDC Chapter 73C has parking standards consistent with all the requirements of this section.

**Title 5** This section pertains to amendment of the Comprehensive Plan and the TSP.

**Finding:**

The proposed amendments were developed based on the policy framework identified in the TSP and the projects identified are consistent with the projects identified in the 2018 RTP. As described previously in these findings, this process is consistent with all of the requirements of the RTFP.

**Title 6** This section pertains to requirements associated with amendments to the City TSP.

**Finding:**

The adoption of the proposed TSP Update and associated Technical Appendices complied with the RTFP requirement for an update of the TSP. The proposed amendments make no amendments that would be inconsistent with the RTFP.

**Metro Ordinance No. 04-1040B Conditions on Addition of Land to UGB**

When the Basalt Creek Planning Area was added to the Metro Urban Growth Boundary (UGB), certain conditions were imposed on the land as contained in Metro Ordinance No. 04-1040B (known as “Exhibit F”, and attached to these findings as Exhibit 4). This section addresses the Conditions on Addition of Land to the Urban Growth Boundary (UGB) contained in this ordinance.

**Metro Ordinance No. 04-1040B**

**Conditions on Addition of Land to the UGB (“Exhibit F”)**

**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.**

**Finding:**

The Basalt Creek Concept Plan was formally adopted by Tualatin in August of 2018. The proposed amendments are consistent with the concept plan and would apply the Tualatin

Comprehensive Plan and Development Code within the Basalt Creek Planning Area. Condition “A” is met.

**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.**

**Finding:**

The proposed amendments would apply 2040 Growth Concept design types, except as otherwise noted. Condition “B” is met.

**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.**

**Finding:**

The proposed amendments would apply to properties within the Basalt Creek Planning Area upon their annexation. Until annexation to Tualatin, Washington County is the agency responsible for planning for the properties within the area, which all presently have an “FD-20” zoning designation applied. 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. Condition “C” is met.

**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.**

**Finding:**

The Basalt Creek Planning Area is presently within the UGB, having been brought into the UGB in 2004 by Metro. Condition “D” is met.

**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.**

**Finding:**

The Basalt Creek Planning Area is within the UGB and completely surrounded by lands also located within the UGB, therefore, Condition “E” no longer applies.

**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.**

**Finding:**

The proposed amendments would apply the Industrial Area (IA) Design Type to areas with a Manufacturing Park zoning designation, as shown on Map 9-4 (Exhibit 11). To summarize, the proposed amendments are fully consistent within Title 4 of the UGMFP. Condition “F” is met.

**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 country’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.**

**Finding:**

Compliance with Goal 5 (and by extension Title 3) is addressed above under the findings for Goal 5. Condition “G” is met.

**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.**

**Finding:**

Compliance with the TPR is addressed above under the findings for OAR Chapter 660 Division 12. Condition “H” is met.

**II. SPECIFIC CONDITIONS FOR PARTICULAR AREAS**

**D. 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.**

**Finding:**

The proposed amendments do not directly include Title 11 planning. Condition “D” does not apply.

**Section F: Tualatin Comprehensive Plan**

**The following Chapters of the Tualatin Comprehensive Plan are applicable to the proposed amendments:**

**Chapter 4. Community Growth**

**Section 4.050. General Growth Objectives**

**(1) Provide a plan that will accommodate a population range of 22,000 to 29,000 people.**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan and envision future growth consistent with local and regional needs. The Certified Population for Tualatin in 2017, the most recently available figure, was 26,960. The Basalt Creek Planning Area is projected to result in the creation of 575 new households at full build-out. This objective is met.

**(4) Provide a plan that will create an environment for the orderly and efficient transition from rural to urban land uses.**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan, which included provisions for orderly and efficient transition from rural to urban land uses. This

objective is met.

**(6) Arrange the various land uses so as to minimize land use conflicts and maximize the use of public facilities as growth occurs.**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan and include the application of zoning designations, and land uses, consistent with the above requirements as well as the need for efficient extension of public facilities to support resulting growth. This objective is met.

**(7) Prepare a balanced plan meeting, as closely as possible, the specific objectives and assumptions of each individual plan element.**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan and are intended to appropriately balance all applicable plan objectives or policies, thereby meeting the objective. This objective is met.

**(9) Prepare a plan providing a variety of living and working environments.  
(10) Encourage the highest quality physical design for future development.**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan and include the application of zoning designations consistent with the above requirements. These objectives are met.

**(11) Coordinate development plans with regional, state, and federal agencies to assure consistency with statutes, rules, and standards concerning air, noise, water quality, and solid waste. Cooperate with the U.S. Fish and Wildlife service to minimize adverse impacts to the Tualatin River National wildlife Refuge from development in adjacent area of Tualatin.**

**Finding:**

The proposed amendments would apply the Tualatin Comprehensive Plan and Development Code to the Basalt Creek Planning Area. The existing regulatory framework in Tualatin provides for the above described coordination and cooperation, which would apply to an individual property upon annexation to Tualatin. This objective is met.

**(12) Adopt measures protecting life and property from natural hazards such as flooding, high groundwater, weak foundation soils and steep slopes.**

**Finding:**

The proposed amendments would apply the Tualatin Comprehensive Plan and Development Code to the Basalt Creek Planning Area. The existing regulatory framework in Tualatin provides protections for life and property from natural hazards such as flooding, high groundwater, weak foundation soils and steep slopes, which would apply to an individual property upon annexation to Tualatin. This objective is met.

**(16) Encourage energy conservation by arranging land uses in a manner compatible with public transportation objectives.**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan, which analyzed the transportation needs of the area, in conjunction with the transportation requirements provided by the Metro UGB expansion. The resulting analysis, the Basalt Creek Transportation Refinement Plan effort, analyzed future transportation conditions and evaluated alternative strategies for phased investments that support regional and local needs. The transportation study acted as the backbone for the proposed land use designations and locations to match them with the proposed transportation system to create energy efficiency. This objective is met.

**(17) Maintain for as long a period as possible a physical separation of non-urban land around the City so as to maintain its physical and emotional identity within urban areas of the region.**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan. Non-urban land is generally separated from the urban areas by geography and/or public roads. As noted above, Metro is responsible for determining the specific location of the Metro Urban Growth Boundary, which also provides a separation between urban and rural areas. This objective is met.

**(21) Territories to be annexed shall be in the Metro Urban Growth Boundary.**

**Finding:**

The Basalt Creek Planning Area, and any territory that would be annexed to Tualatin in the future from this area, is within the Metro Urban Growth Boundary. This objective is met.

**Chapter 5. Residential Planning Growth  
Section 5.030 General Objectives**

**(1) Provide for the housing needs of existing and future City residents.**

**Finding:**

The proposed amendments, consistent with the Basalt Creek Concept Plan, would

apply three different residential zoning designations, Low Density Residential (RL), Medium-Low Density Residential (RML) and High Density Residential (RH), to 24.83, 59.83, and 3.36 buildable acres respectively, for a total of 88.02 buildable acres. The proposed residential areas will help to provide for the housing needs of existing and future City residents. This objective is met.

**(2) Provide housing opportunities for residents with varied income levels and tastes that are esthetically and functionally compatible with the existing community housing stock.**

**Finding:**

The proposed amendments are consistent with the residential designations in the Basalt Creek Concept Plan, and include both low and high density housing. The higher density housing is intended to provide more affordable housing options, while the low and low-medium levels provide a greater variety of lot sizes and densities to meet this objective. Applicable development standards found in the Tualatin Development Code would apply at the time of future development within the Basalt Creek Planning Area. This objective is met.

**(4) Locate higher density development where it is convenient to the City's commercial core, near schools, adjacent to arterial and collector streets and, as much as possible, in areas with existing multi-family housing and provide residential opportunities in selected commercial areas through the Mixed Use Commercial Overlay District.**

**Finding:**

The proposed amendments would designate 3.36 acres of buildable land as High Density adjacent to the Horizon High School and Boone's Ferry Road, an arterial street, as well as the proposed area of Neighborhood Commercial within the Basalt Creek Planning Area. This objective is met.

**(6) Provide areas that will accommodate small-lot subdivisions.**

**Finding:**

The proposed amendments include proposed zoning designations (Low Density (RL) and Medium-Low Density (RML)) which allow for small-lot subdivisions. This objective is met.

**(11) Require that all residential development adjacent to Expressways be buffered from the noise of such Expressways through the use of soundproofing devices such as walls, berms or distance. Density transfer to accommodate the-se techniques is acceptable.**

**Finding:**

The proposed amendments would apply the Tualatin Comprehensive Plan and Development Code to properties within the Basalt Creek Planning Area upon annexation. Applicable regulations would apply to individual properties at the time of development. This objective is met.

**(13) Provide truck routes for industrial traffic that provide for efficient movement of goods while protecting the quality of residential areas.**

**Finding:**

The proposed amendments include all truck routes that were analyzed and include in the Basalt Creek Concept Plan. This objective is met.

**(14) Protect residential, commercial, and sensitive industrial uses from the adverse environmental impacts of adjacent industrial use.**

**Finding:**

The proposed zoning designations are consistent with the Basalt Creek Concept Plan, which designed the location of said designations to protect residential, commercial, and sensitive industrial uses from the adverse environmental impacts of adjacent industrial use. This objective is met.

**(17) Protect wooded areas identified on the Natural Features Map found in the Technical Memorandum by requiring their preservation in a natural state, by integrating the major trees in-to the design of the parking lots, buildings, or landscaping areas of multi-family complexes and non- residential uses, or in low density areas through the small lot, common wall, or condominium conditional use. If it is necessary to remove a portion or all of the trees, the replacement landscape features shall be subject to approval through the Architectural Review process, except for conventional single family subdivisions.**

**Finding:**

The above referenced Technical Memorandum does not include the Basalt Creek Planning Area. Compliance with Title 13 of Metro Code, which includes protection wooded areas as habitat that requires protection, is met through application of Clean Water Services (CWS) rules and regulations. This objective is met.

**Chapter 06: Commercial Planning Districts**

**Section 6.030 Objectives.**

**The following are general objectives used to guide the development of this Plan:**

- (1) Encourage commercial development.**
- (3) Provide shopping opportunities for surrounding communities.**

**Finding:**

In an effort to serve the commercial need of the future residential areas in the Basalt Creek Planning Area, 2.89 buildable acres of land is proposed to be designated with the Neighborhood Commercial zoning designation. This objective is met.

**(2) Provide increased employment opportunities.**

**Finding:**

The proposed area of Neighborhood Commercial zoning designation is not intended to be the significant job generating use in the Plan Area, however, the 2.89 acres is intended to provide an estimated 33 full time jobs. This objective is met.

**(4) Locate and design commercial areas to minimize traffic congestion and maximize access.**

**Finding:**

The proposed area of Neighborhood Commercial zoning designation is located at the intersection Boones Ferry Road and Basalt Creek Parkway, within walking distance of future residential neighborhoods and uses the existing arterial roadway system to help minimize traffic congestion and maximize access. This objective is met.

**Chapter 7. Manufacturing Planning Districts**

**Section 7.030. Objectives**

**(1) Encourage new industrial development.**

**Finding:**

The proposed amendments would apply the Manufacturing Park zoning designation to approximately 92.95 buildable acres in the Basalt Creek Planning Area, which would encourage new industrial development and increase the City's industrial lands inventory. This objective is met.

**(2) Provide increased local employment opportunity, moving from 12 percent local employment to 25 percent, while at the same time making the City, and in particular the Western Industrial District, a major regional employment center.**

**Finding:**

The proposed amendments would designate approximately 92.95 buildable acres of land with the Manufacturing Park (MP) zoning designation, which will increase local employment opportunity and assist in moving the City towards the local employment objective while enhancing the industrial land base of Tualatin. This objective is met.

**(3) Improve the financial capability of the City, through an increase in the tax base and the use of creative financing tools.**

**Finding:**

The proposed amendments would enable the City to continue to grow the opportunity for future land development. Future development will increase the revenue generated through taxes to support local government services. This objective is met.

**(9) Construct a north/south major arterial street between Tualatin-Sherwood Road and SW Tonquin Road in the 124<sup>th</sup> Avenue alignment to serve the industrial area.**

**Finding:**

SW 124<sup>th</sup> avenue has been constructed between Tualatin-Sherwood Road and SW Tonquin Road, and will be available to serve the industrial use within the Basalt Creek Planning Area. The proposed amendments would update applicable Comprehensive Plan and Development Code provisions consistent with this objective. This objective is met.

**(12) Protect residential, commercial, and sensitive industrial uses from the adverse environmental impacts of industrial use.**

**Finding:**

The proposed amendments establish specific planning designations. In addition, all industrial development in Tualatin is required to comply with the provisions of TDC Chapter 63 (Industrial Uses and Utilities and Manufacturing Zones - Environmental Regulations) that helps protect residential, commercial, and sensitive industrial uses from the adverse environmental impacts of industrial use. This objective is met.

**Chapter 9. Plan Map**

**Finding:**

The proposed amendments would add a new planning area, known as Planning Area 16. This would become a new subsection 9.046. The proposed new text summarizes the land uses proposed, consistent with the Basalt Creek Concept Plan. The proposed amendments apply the specific planning designations within the area and on Community Plan Map 9-1. This objective is met.

**Chapter 11. Transportation**

**Section 11.610. Transportation Goals and Objectives**

**(2) Goal 1: Mobility and access**

**Maintain and enhance the transportation system to reduce travel times, provide travel-time reliability, provide a functional and smooth transportation system, and promote access for all users.**

**Objectives:**

**Finding:**

The proposed amendments would implement the approved Basalt Creek Concept Plan. The Concept plan included transportation improvements identified by the Basalt Creek Transportation Refinement Plan. These include streets, pedestrian and bicycle facilities, and other forms of transportation, for the Basalt Creek Planning Area that link to the existing system serving the City. This objective is met.

**(3) Goal 2: Safety, improve safety for all users, all modes, all ages, and all abilities within the City of Tualatin.**

**Finding:**

The Basalt Creek Transportation Refinement Plan included detailed crash analysis to assure high risk areas were addressed in the design of the transportation network in Basalt Creek. The streets were designed to provide safe passage for all users, including emergency personnel. All roads, bike paths, and pedestrian paths included in the Basalt Creek Concept Plan have been reflected in the proposed amendments. This objective is met.

**(4) Goal 3: Vibrant Community. Allow for a variety of alternative transportation choices for citizens of and visitors to Tualatin to support a high quality of life and community livability.**

**Finding:**

The proposed amendments identify a transportation system, including streets, pedestrian and bicycle facilities. This objective is met.

**(5) Goal 4: Equity. Consider the distribution of benefits and impacts from potential transportation options, and work towards fair access to transportation facilities for all users, all ages, and all abilities.**

**Finding:**

The proposed amendments reflect and implement the approved concept plan. The Basalt Creek Concept Plan included many elements intended to be equitable, including a High Density Residential area intended to provide more affordable housing, close to shopping, jobs and transit. This objective is met.

**(6) Goal 5: Economy. Support local employment, local businesses, and a prosperous community while recognizing Tualatin's role in the regional economy.**

**Finding:**

The Basalt Creek Planning Area was identified as a good location for a job center based on its location next to I-5 and existing industrial development. The traffic analysis completed for the Basalt Creek Concept Plan was created in conjunction with the 2035 Regional Transportation Plan (RTP) prepared by Metro. The improvements identified in the 2035 RTP would be expected to accommodate estimated growth in the area. The



proposed changes to Tualatin’s Transportation System Plan (TSP) are consistent with the 2035 RTP. This objective is met.

**(7) Goal 6: Health/Environment. Provide active transportation options to improve the health of citizens in Tualatin. Ensure that transportation does not adversely affect public health or the environment.**

**Finding:**

The proposed amendments identify a transportation system, including streets, pedestrian and bicycle facilities. All street swill have sidewalks and bike lanes. Additionally, the plan helps implement the Tonquin Ice Age Regional Trail System. This objective is met.

**(8) Goal 7: Ability to Be Implemented. Promote potential options that are able to be implemented because they have community and political support and are likely to be funded.**

**Finding:**

The proposed amendments would implement the Basalt Creek Concept Plan, which included several opportunities to include public participation including outreach events, surveys and open houses. The Basalt Creek Transportation Refinement Plan was created in cooperation with Metro, ODOT, Tri-Met, Washington County, and other surrounding organizations and jurisdictions to resolve regional and statewide transportation issues that impact Tualatin. Chapter 3 of the TSP identifies the variety of funding sources available at the City, County, Region, and State level and their applicability to specific project types. This objective is met.

**Chapter 12. Water Service**

**Section 12.020. Water Service Policies**

**12.020 City of Tualatin water service policies are to:**

**(1) Plan and construct a City water system that protects the public health, provides cost-effective water service, meets the demands of users, addresses regulatory requirements and supports the land uses designated in the Tualatin Community Plan.**

**Finding:**

The proposed amendments identify a water system to serve future development in the Basalt Creek Concept Plan. Because there currently are no public water lines located in the area, the routing of pipes has been modified to follow the proposed new roadways. Once development assumptions have been specified, more specific estimates of future infrastructure needs will be made. The proposed water system has been designed to protect the public health while providing cost effective water service, meeting the demands of users, addressing regulatory requirements, and supporting future residential, industrial and commercial uses within the area. This objective is met.

**(2) Require developers to aid in improving the water system by constructing facilities to serve new development and extend lines to adjacent properties.**

**Finding:**

The proposed amendments identify improvements necessary in the water system to support development. Developers will be responsible for providing utility connections to trunk line systems. Costs are identified to allow private development funding of improvements. This objective is met.

**Chapter 13. Sewer Service**

**Section 13.015. Sanitary Sewer System Objectives**

**(1) Plan and construct a City sewer system that protects the public health, protects the water quality of creeks, ponds, wetlands and the Tualatin River, provides cost-effective sewer service, meets the demands of users, addresses regulatory requirements and supports the land uses designated in the Tualatin Community Plan.**

**Finding:**

The proposed amendments identify a sanitary system to serve future development in the Basalt Creek Planning Area. Because no sanitary system of adequate size currently exists within or near the area, development in the area will need to connect to one eight gravity sewer mains that exist near the north planning area boundary and one force main currently used for Victoria Woods. The Basalt Creek Planning Area is not yet served by Clean Water Services (CWS). 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 proposed sanitary sewer system has been designed to protect the public health and water quality of creeks, ponds, wetlands, and the Tualatin River, while providing cost effective sanitary sewer service, meeting the demands of users, addressing regulatory requirements, and supporting future residential, industrial and commercial uses within the area. This objective is met.

**(2) Provide a City sanitary sewer system in cooperation with Clean Water Services (CWS). The City is responsible for the collection system's smaller lines and the 65th Avenue pump station and CWS is responsible for the larger lines, pump stations and treatment facilities.**

**Finding:**

The proposed amendments identify a sanitary sewer system with lines that serve the Basalt Creek Concept Plan that will be under the City's jurisdiction. The system was designed and will be operated in accordance with Clean Water Services (CWS) requirements. This objective is met.

**(5) Require developers to aid in improving the sewer system by constructing facilities to serve new development as well as adjacent properties.**

**Finding:**

The proposed amendments identify improvements necessary in the sanitary sewer system to support development. Developers will be responsible for providing utility connections to trunk line systems. This objective is met.

**Chapter 14. Drainage Plan and Surface Water Management**

**Section 14.040 Objectives.**

**14.040 The objectives of the Tualatin Drainage Plan and Surface Water Management regulations are:**

**(1) Provide a plan for routing surface drainage through the City, utilizing the natural drainages where possible. Update the plan as needed with drainage studies of problem areas and to respond to changes in the drainage pattern caused by urban development.**

**Finding:**

The proposed amendments identify a plan for routing surface drainage from future development in the Basalt Creek Planning Area. 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. Because no storm water system currently exists in the area besides street capacity, a new conveyance system will need to be installed along the new roadways. In addition, site development runoff will need to be treated and detained, if necessary, before being discharged to the public drainage systems. The proposed storm water system has been designed to meet peak flows and runoff volumes, and to meet CWS standards. This objective is met.

**(2) Coordinate the City's Drainage Plan and Storm Water Management regulations with the City's Floodplain District, Wetland Protection District and Natural Resource Protection Overlay District regulations and with the plans of USA and other regional, state, and federal agencies to achieve consistency among the plans.**

**Finding:**

The proposed amendments were developed in coordination with participating agencies in the Basalt Creek Concept Plan and took into account floodplain, wetlands and natural resource protection programs. The concept planning work for the Basalt Creek Concept Plan identified natural areas that are proposed to be included in the City's Natural Resources Protection Overlay (NRPO) (Chapter 72). This objective is met.

**(4) Identify and solve existing problems in the drainage system and plan for construction of drainage system improvements that support future development.**

**Finding:**

The proposed amendments plan for construction of drainage system improvements that support future development in the Basalt Creek Concept Plan. This objective is met.

**(15) Comply with Metro's Urban Growth Management Functional Plan, Title 3.**

**Finding:**

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. The Basalt Creek Concept Plan was developed factoring in Metro Title 3 requirements, which are discussed in more detail later in this Analysis and Findings (see discussion under Criterion G. Metro's Urban Growth Management Functional Plan. This objective is met.

**Chapter 15. Parks and Recreation**

**Section 15.020 Objectives**

[...]

**(2) Provide a high quality park and recreation system to offset the environmental impact of large areas of commercial and industrial development.**

**(3) Create a park and recreation system that provides diverse recreation opportunity**

**Finding:**

There are currently no parks in the Basalt Creek Planning Area. The proposed land use plan came directly from the adopted Concept Plan. All parks within the Basalt Creek area will be consistent with the Park Master Plan. Parks are a permitted use in all of the residential districts and will be implemented as they develop, consistent with any requirements of the Park Master Plan. Therefore, while the proposed amendments do not directly reflect new park areas, parks planning will be done as identified through the Parks Master Plan. These objectives are met.

**Section 15.110. Wetlands and Natural Areas Plan Objectives**

**(1) Identify and protect significant natural resources that promote a healthy environment and natural landscape that improves livability.**

**(2) Protect significant natural resources and provide fish and wildlife habitat, scenic values, water quality improvements, stormwater management benefits, and flood control.**

**(3) Protect significant natural resources that provide recreational and educational opportunities.**

**Finding:**

The City previously adopted an ordinance relating to water quality, flood plain management, and erosion control, to comply with Metro’s Urban Growth Management Functional Plan (UGMFP) Title 3. The amendments were made to refer to Clean Water Services regulations, which had been found by Metro to be consistent with Title 3, thus bringing Tualatin into conformance with Title 3 as well. Compliance with Title 13 is satisfied by Tualatin’s participation in the Tualatin Basin Plan and previously adopted amendments to the Comprehensive Plan and Development Code. The TDC will apply to the Basalt Creek area upon adoption and annexation of any property to Tualatin. The conservation areas will be administered and protected by Clean Water Services. 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. These objectives are met.

**(4) Balance natural resource protection and growth and development needs.**

**Finding:**

The PTA and PMA are implementing the Basalt Creek Concept Plan. The plan was created by first understanding the constraints of the area. These included easements, natural features, wetlands and steep slopes to name a few. The transportation needs were then addressed because this area will be connecting several key transportation routes including playing a role in connecting I-5 and 99W. Once constraints and transportation were addressed, the land uses were designed. This approach assured that the needs of the environment, transportation, jobs, housing and open space were all balanced. In addition, future industrial development in the MBP Planning District will be required to comply with the environmental regulations of TDC Chapter 63, which apply to all industrial planning districts. This objective is met.

**(6) Allow public facilities such as sewer, storm water, water and public streets and passive recreation facilities to be located in significant natural resource areas provided they are constructed to minimize impacts and with appropriate restoration and mitigation of the resource.**

**Finding:**

In the event that public facilities identified in the proposed amendments cannot avoid natural resource areas, mitigation for these impacts will be addressed at the time physical development is proposed. This objective is met.

**Section G. Tualatin Development Code**

**The following Chapter of the Tualatin Comprehensive Plan are applicable to the proposed amendments:**

**Chapter 33 – Applications and Approval Criteria**  
**Section 33.070 – Plan Amendments.**

**(1) Purpose.** To provide processes for the review of proposed amendments to the Zone Standards of the Tualatin Development Code and to the Text or the Plan Map of the Tualatin Community Plan.

**(2) Applicability.** Quasi-judicial amendments may be initiated by the City Council, the City staff, or by a property owner or person authorized in writing by the property owner. Legislative amendments may only be initiated by the City Council.

**Finding:**

The proposed amendments are legislative in nature and have been initiated by the City Staff. This criterion is met.

**(3) Procedure type.**

[...]

**(b) Map or text amendment applications which are legislative in nature are subject to Type IV-B Review in accordance with TDC Chapter 32.**

**Finding:**

The proposed amendments are legislative in nature and have been processed consistent with the Type IV-B requirements of TDC Chapter 32. This criterion is met.

**(4) Specific Submittal Requirements.** An application for a plan map or text amendment must comply with the general submittal requirements in TDC 32.140 (Application Submittal).

**Finding:**

The proposed amendments comply with the applicable requirements of TDC 32.140. This criterion is met.

**(5) Approval Criteria.**

**(a) Granting the amendment is in the public interest.**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan, which was adopted by the Tualatin City Council in August of 2018. The proposed amendments are a necessary step before urban development can occur within the Basalt Creek Planning Area, consistent with the area's inclusion in the Metro UBG. Statewide Planning Goal 2 requires all parcels in each city and county to be designated with a planning district. The proposed amendment will apply the Neighborhood Commercial (NC), Manufacturing Park (MP), Low Density Residential (LDR), Medium-Low Density Residential (MLDR) and High-Density (HDR) zoning designations within the Basalt Creek Planning Area, after future annexation of territory to Tualatin. The amendments to the TSP demonstrate compliance with the public interest

through compliance with the Oregon Transportation Planning Rule (TPR) and the Regional Transportation Plan (RTP), as implemented through the requirements of the Regional Transportation Functional Plan (RTFP). The proposed amendments are in the public interest. This criterion is met.

**(b) The public interest is best protected by granting the amendment at this time.**

**Finding:**

The proposed amendments would update the Tualatin Comprehensive Plan, Development Code, and TSP, to be applicable to the Basalt Creek Planning Area, upon annexation of an individual property to Tualatin. The TSP updates are required to ensure all streets within the Basalt Creek Concept Plan are fully incorporated into the City transportation network, and to assure compliance with the State Transportation Planning Rule (TPR) requirements as outlined in OAR Chapter 660 Division 12, which demonstrates that the existing and planned street network can accommodate the proposed zoning designations. The public interest is best protected by granting the amendments and updates at this time. This criterion is met.

**(c) The proposed amendment is in conformity with the applicable objectives of the Tualatin Community Plan.**

**Finding:**

The applicable objectives of the Tualatin Community Plan, as contained in the Tualatin Development Code (TDC) (Chapters 1-30 of the code are the Community Plan), have been considered, and are discussed below. This criterion is met.

**(d) The following factors were consciously considered:**

**(i) The various characteristics of the areas in the City;**

**Finding:**

The proposed amendments are implementing the approved Basalt Creek Concept Plan. The plan area is located at the south end of the city with residential uses adjacent to the north, the Horizon High School to the north east, the Southwest Tualatin Plan area to the west and the City of Wilsonville to the south. The plan was designed in conjunction with the City of Wilsonville to assure the area transitioned between the two Cities. To the north, the plan features residential uses to help transition the existing residential development. Buffers are proposed between the plans proposed residential areas and the planned business park areas to help assure compatibility. Buffers are also proposed between residential uses and the proposed Basalt Creek Parkway. The private Horizon High school is surrounded by residential uses, with proposed neighborhood commercial nearby. The Business Park uses will have to comply with the requirements of district (zone) which include will essentially require any new development to feature lushly landscaped park-like settings, intended to foster a campus-like environment. These design features along with the preservation of the natural areas through NRPO's will help assure the characteristics of the area. This criterion is met.

**(ii) The suitability of the areas for particular land uses and improvements in the areas;**

**Finding:**

The Concept Plan explains that in 2004, 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 Basalt Creek Planning Area, to provide some housing and as a buffer for existing residential neighborhoods in Tualatin. All improvements required to implement the land uses are also reflected in the proposed amendments. This criterion is met.

**(iii) Trends in land improvement and development;**

**Finding:**

The trend for development in the Basalt Creek Concept Plan is for industrial and residential development as evidenced by existing uses in the area. In addition, the majority of the area has been designated Industrial by Metro, though the Ordinance makes some allowance for residential as well. Some Neighborhood Commercial has been included to assure adequate commercial services are available to the new residential population as well as the employment uses proposed. The proposed amendments would apply land uses and street plans for the area, consistent with trends in land improvement and development in the area. This criterion is met.

**(iv) Property values;**

**Finding:**

Prior to 2004, the land in the Basalt Creek Concept Plan was outside of the UGB and regulated by Washington County. Currently the properties within the UGB expansion feature an FD-20, Future Development 20-acre minimum lot size, designation. By inclusion of the study area into the UGB and, subsequently, into Tualatin’s Urban Planning Area the value of property has likely increased. The area can now be developed to urban densities consistent with the Planning District (zoning/land use) designations and receive urban services, thus increasing property value. The overall industrial land market, however, will determine the final property value. This criterion is met.



**(v) The needs of economic enterprises and the future development of the area; needed right-of-way and access for and to particular sites in the area;**

**Finding:**

The Metro analysis associated with Ordinance No. 04-1040B looked at the economic needs of the entire Metro area with respect to land that should be added to the urban growth boundary (UGB). The conclusion of the analyses was to add land for industrial purposes, within the Basalt Creek Concept Plan. At the local level, the proposed amendments would apply the Manufacturing Park (MP) zoning designation to approximately 92.95 net buildable acres of future development. The other land uses, while economic engines in their own right, such as the three residential designations and the Neighborhood Commercial, are intended to play a support role as well. This criterion is met.

**(vi) Natural resources of the City and the protection and conservation of said resources;**

**Finding:**

As discussed previously, the natural resources are identified and protected through applicable regulations of the TDC, and protection and conservation of said resources is implemented by Clean Water Services. This criterion is met.

**(vii) Prospective requirements for the development of natural resources in the City;**

**Finding:**

No development of natural resources is proposed as part of the proposed amendments. This criterion is not applicable.

**(viii) The public need for healthful, safe, esthetic surroundings and conditions; and**

**Finding:**

The proposed amendments satisfy the public need for healthful, safe, esthetic surroundings and conditions by applying land use designations to the Basalt Creek Planning Area, to ensure compatibility with adjoining lands, implement transportation improvements, prescribe required infrastructure to serve the area and address environmental protection requirements. Further, Oregon Statewide Planning Goal 2 requires all parcels in each city and county to be designated with a planning district. Therefore, the public need for healthful, safe, aesthetic surroundings and conditions will best be served by granting the amendments at this time. This criterion is met.

**(ix) Proof of change in a neighborhood or area, or a mistake in the Plan Text or Plan Map for the property under consideration are additional relevant factors to consider.**

**Finding:**

The change that has occurred is the expansion of the UGB pursuant to Metro Ordinance No. 04-1040b to include the Basalt Creek Planning Area. The proposed amendments are timely and necessary to apply urban planning designations to establish the type of development that may occur in the future. This criterion is met.

**(e) If the amendment involves residential uses, then the appropriate school district or districts must be able to reasonably accommodate additional residential capacity by means determined by any affected school district.**

**Finding:**

The proposed amendments are consistent with the Basalt Creek Concept Plan, which included school planning by the affected school district for the Basalt Creek Planning Area, the Sherwood School district. Further, notice of the proposed amendments has been sent to the Sherwood School District, providing an opportunity to comment directly on the proposed amendments. This criterion is met.

**(f) Granting the amendment is consistent with the applicable State of Oregon Planning Goals and applicable Oregon Administrative Rules, including compliance with the Transportation Planning Rule TPR (OAR 660-012-0060).**

**Finding:**

Compliance with the TPR is addressed above under the findings for OAR Chapter 660 Division 12. This criterion is met.

**(g) Granting the amendment is consistent with the Metropolitan Service District's Urban Growth Management Functional Plan.**

**Finding:**

Compliance with the Urban Growth Management Functional plan is addressed above under Section D (Metro Code). This criterion is met.

**(h) Granting the amendment is consistent with Level of Service F for the p.m. peak hour and E for the one-half hour before and after the p.m. peak hour for the Town Center 2040 Design Type (TDC Map 9-4), and E/E for the rest of the 2040 Design Types in the City's planning area.**

**Finding:**

The Basalt Creek Transportation Refinement Plan analyzed planned transportation infrastructure to determine the effectiveness of the identified infrastructure projects. Based on the criteria above, Level of Service E/E would apply to the Basalt Creek Concept Plan. As demonstrated in Table 20 of the Refinement Plan, assuming all identified transportation infrastructure projects are constructed and land uses are built out (by the year 2035), all intersections will meet the standard listed above. The TSP makes all required street classification updates in the Basalt Creek area to accommodate the plan at the required traffic levels. This criterion is met.

**(i) Granting the amendment is consistent with the objectives and policies regarding potable water, sanitary sewer, and surface water management pursuant to TDC 12.020, water management issues are adequately addressed during development or redevelopment anticipated to follow the granting of a plan amendment.**

[...]

**Finding:**

The analysis of Chapter 12, Water Services is provided above in response to Criteria 3 of this section. The proposed amendments identify a water system to serve future development in the Basalt Creek Planning Area. Because there currently are no public water lines located in the area, the routing of pipes has been modified to follow the proposed new roadways. Once development assumptions have been specified, more specific estimates of future infrastructure needs will be made. The proposed water system has been designed to protect the public health while providing cost effective water service, meeting the demands of users, addressing regulatory requirements, and supporting future residential, industrial and commercial uses within the area. This criterion is met.



July 2, 2018 FINAL

(Adopted August 13, 2018 by City of Tualatin and August 6, 2018 by City of Wilsonville)

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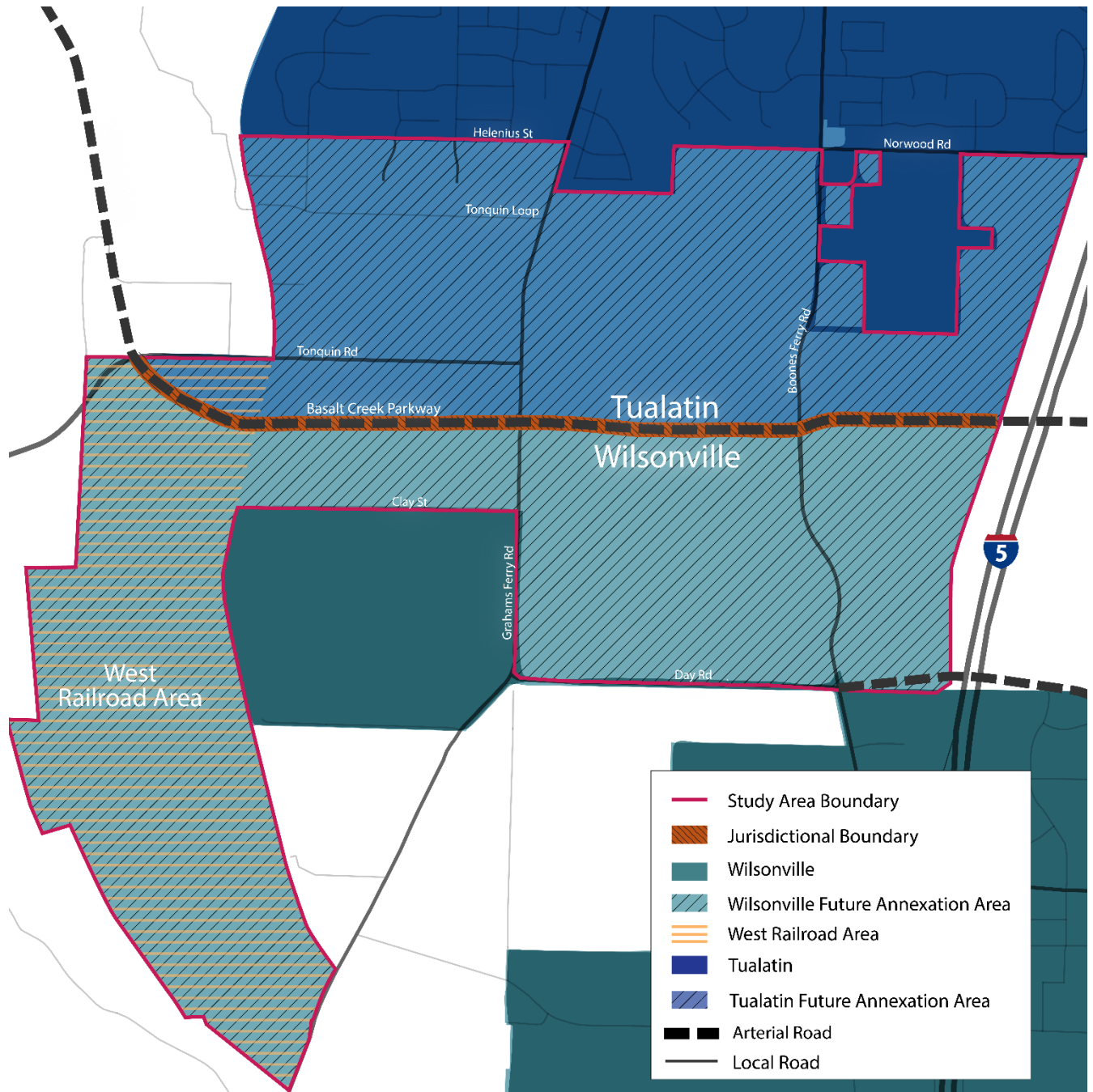
Appendix K: Acknowledgements

# 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 124<sup>th</sup> 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

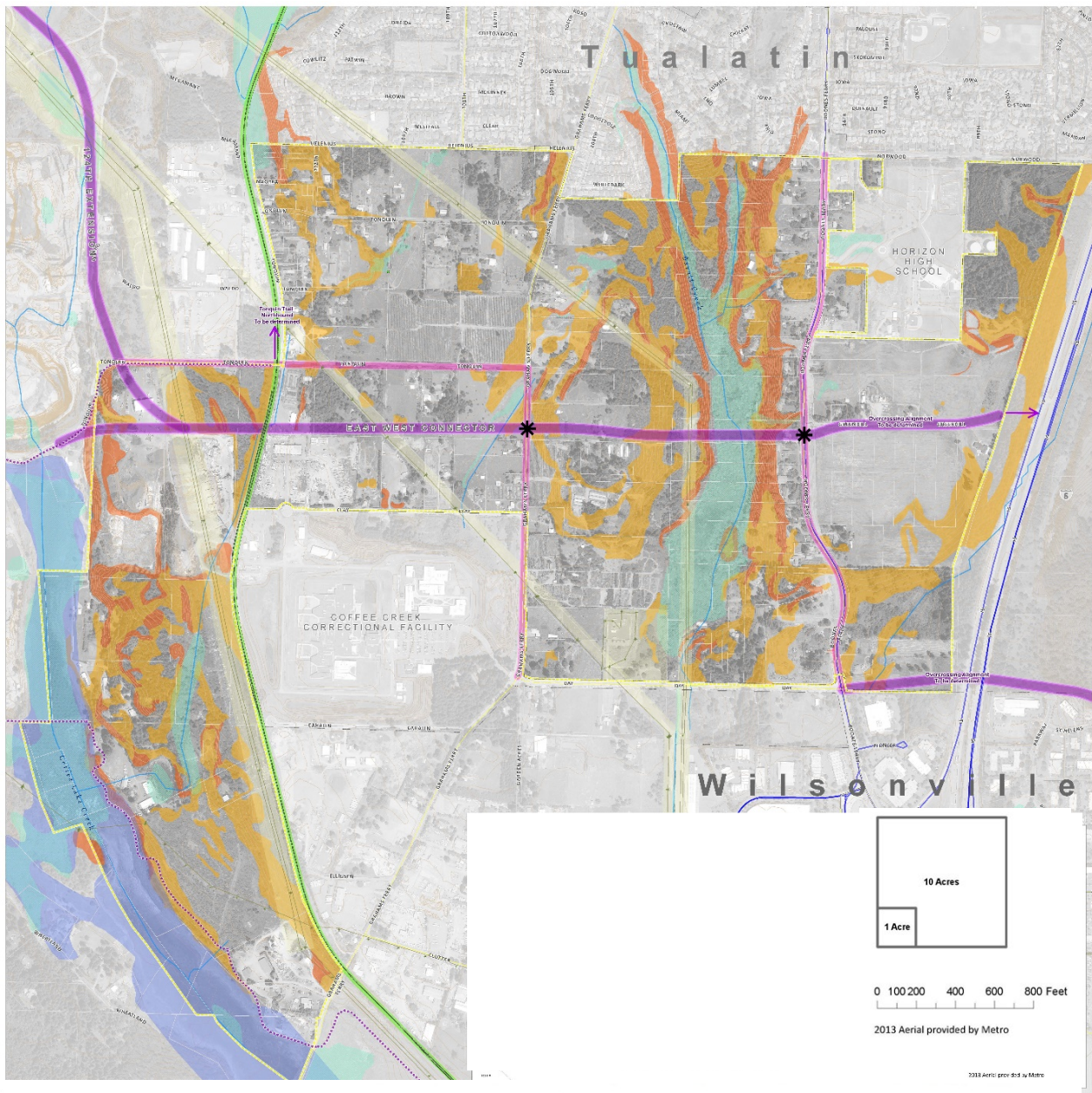
A Public Involvement Plan, developed by the PMT, was used to guide outreach strategies and events throughout the planning process (Appendix B).

## 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

- City Limits (Source: RLIS 2014)
- Planning Area (Source: Cities of Tualatin and Wilsonville)
- Taxlots (Source: RLIS 2014)
- PGE Transmission Poles (Source: City of Wilsonville)
- PGE Transmission Lines (Source: City of Wilsonville)
- Railroads (Source: RLIS 2014)
- Proposed Ice Age Tonquin Trail
- WES Commuter Line (Source: RLIS 2014)
- Bicycle Routes (Source: RLIS 2014)
- Bus Lines (Source: RLIS 2014 and Metro)
- Future Roadway Improvements (Source: DKS Associates)
- Approx. Alignment of Future Major Roadways (Source: DKS Associates)
- East West Connector Access Point
- 5 Foot Contours (Source: RLIS 2014)
- Stream (Source: RLIS 2014)
- Wetland (Source: Fregonese Associates and RLIS)
- FEMA 100 Year Flood Areas Updated by Metro (Source: RLIS 2014)
- Slopes (Source: Fregonese Associates)**
- 10% and above (generally unsuitable for industrial development)
- 25% and above (unsuitable for any development)
- PGE and BPA Easements and Property (Source: PGE and BPA)

## 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 95<sup>th</sup> 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.

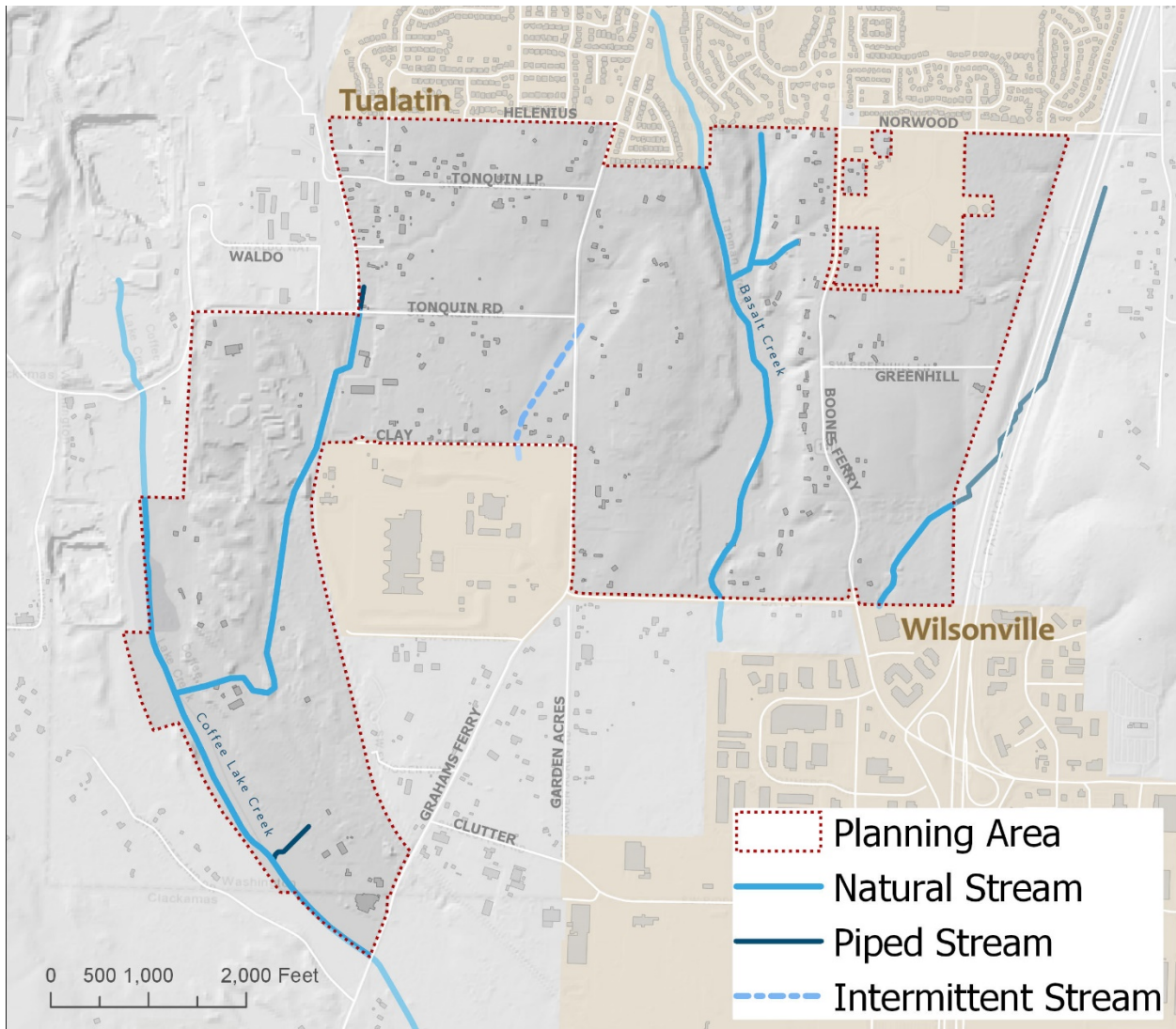
### *Natural Resources*

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*

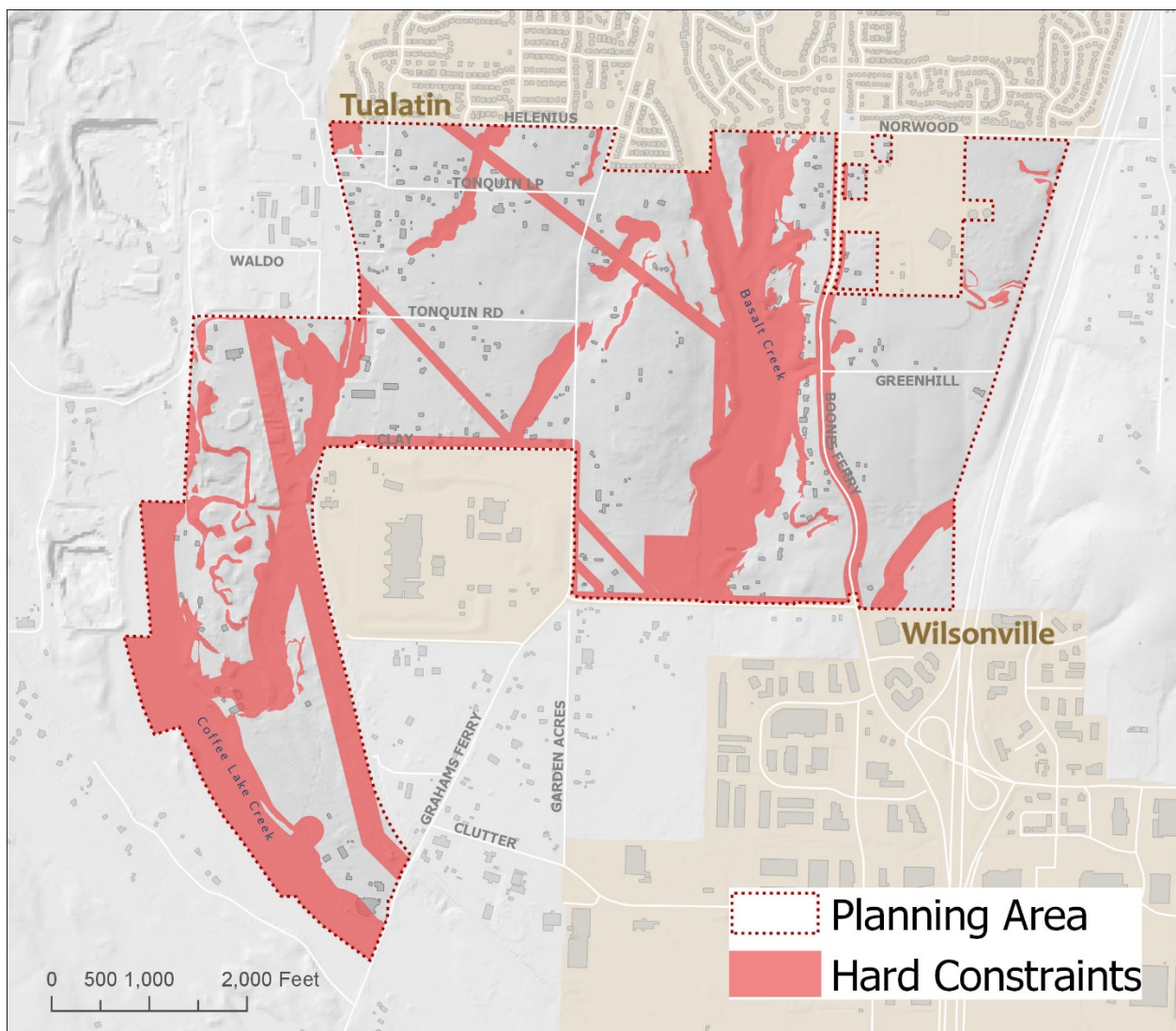
A buildable lands assessment for the Basalt Creek Planning Area (see Appendix F) screened out parcels where there is limited or no development potential to identify the places where development is most suitable given the environmental and regulatory context. There is a range of factors that influence 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.



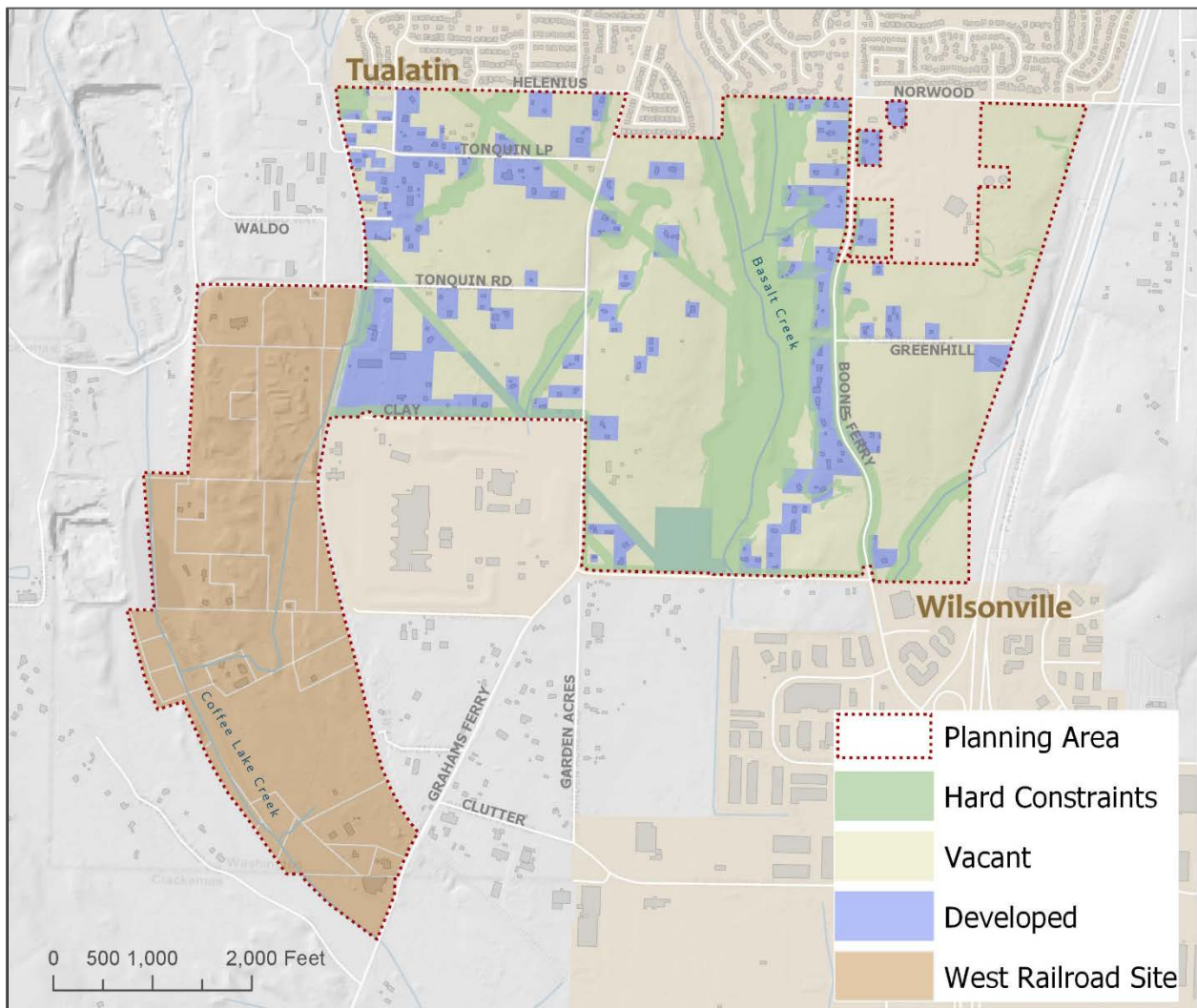


The goal is to classify every parcel within the Planning Area into one of the categories described below:

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
<b>Total Land Supply</b>	<b>847</b>	

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.



## 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 124<sup>th</sup> 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

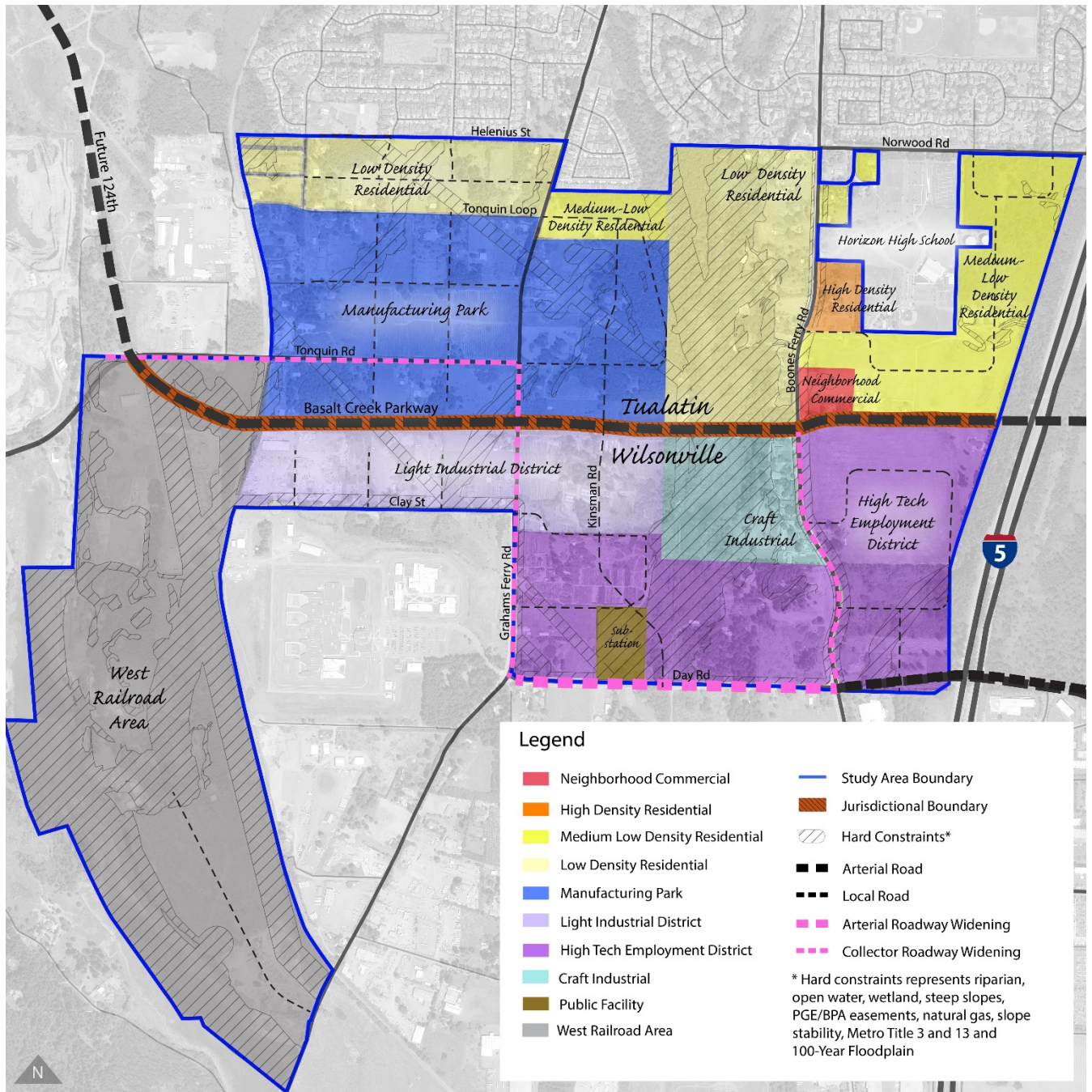
The Basalt Creek Concept Plan guides development within the Planning Area over the next twenty years. It identifies preferred land uses across the area and coordinates future land use, transportation and infrastructure investments between Tualatin, Wilsonville, and Washington County. The partnership 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	-	-	-	-
	<b>Tualatin Subtotal</b>	<b>194.23</b>	<b>575</b>			<b>1,929</b>
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	-	-	-	-
	<b>Wilsonville Subtotal</b>	<b>136.64</b>	<b>6</b>			<b>2,524</b>
<b>Total</b>		<b>330.87</b>	<b>581</b>		<b>4,453</b>	

### 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.

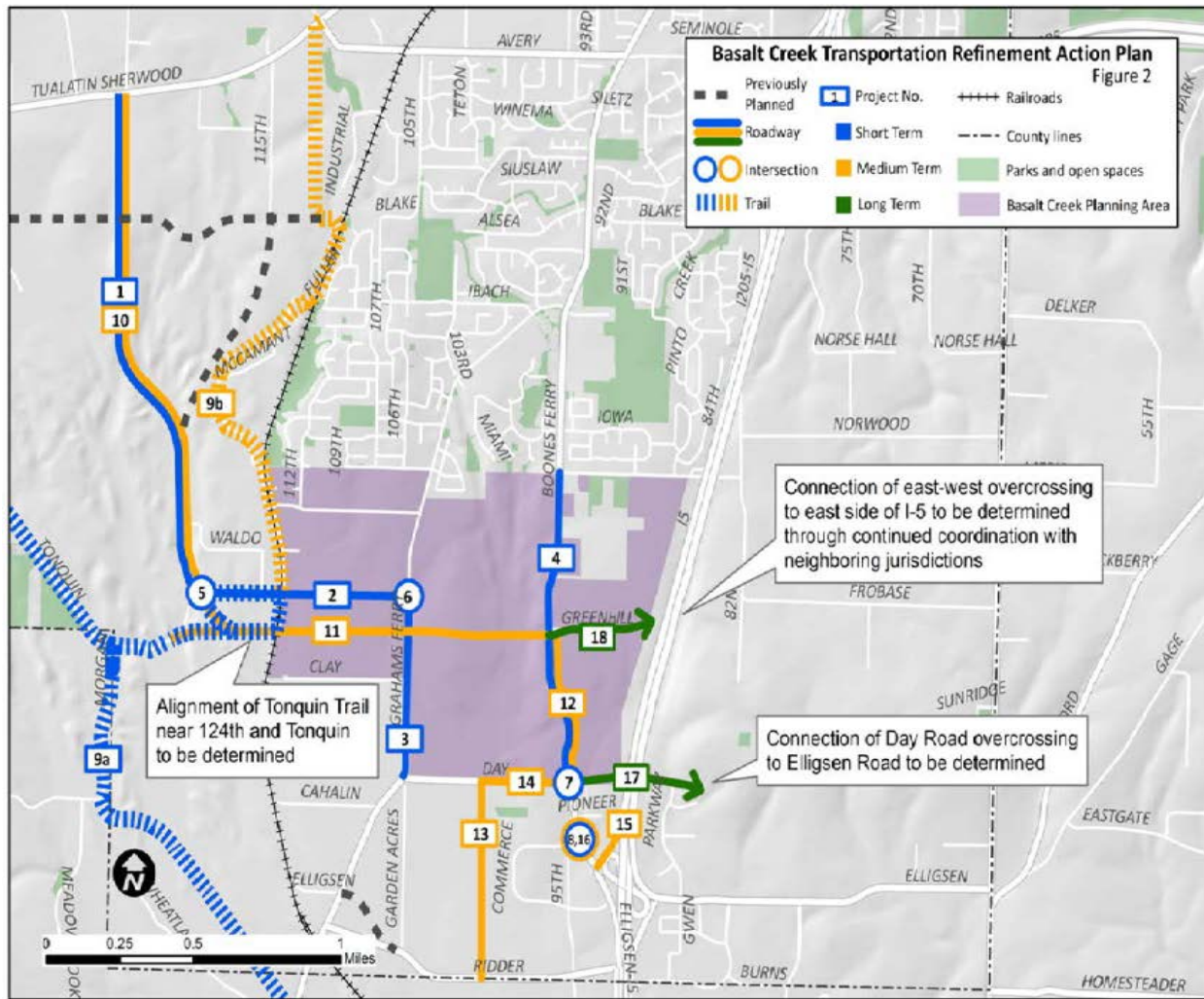
*Table 4 2014 RTP Projects Assumed for 2035 Forecasting*

Project Number	Project and Description	TRP Time Period	In Place by 2035?
10736	124 <sup>th</sup> 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 <sup>th</sup> 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 <sup>th</sup> 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	<b>No</b>

Source: <http://www.oregonmetro.gov/regional-transportation-plan>



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

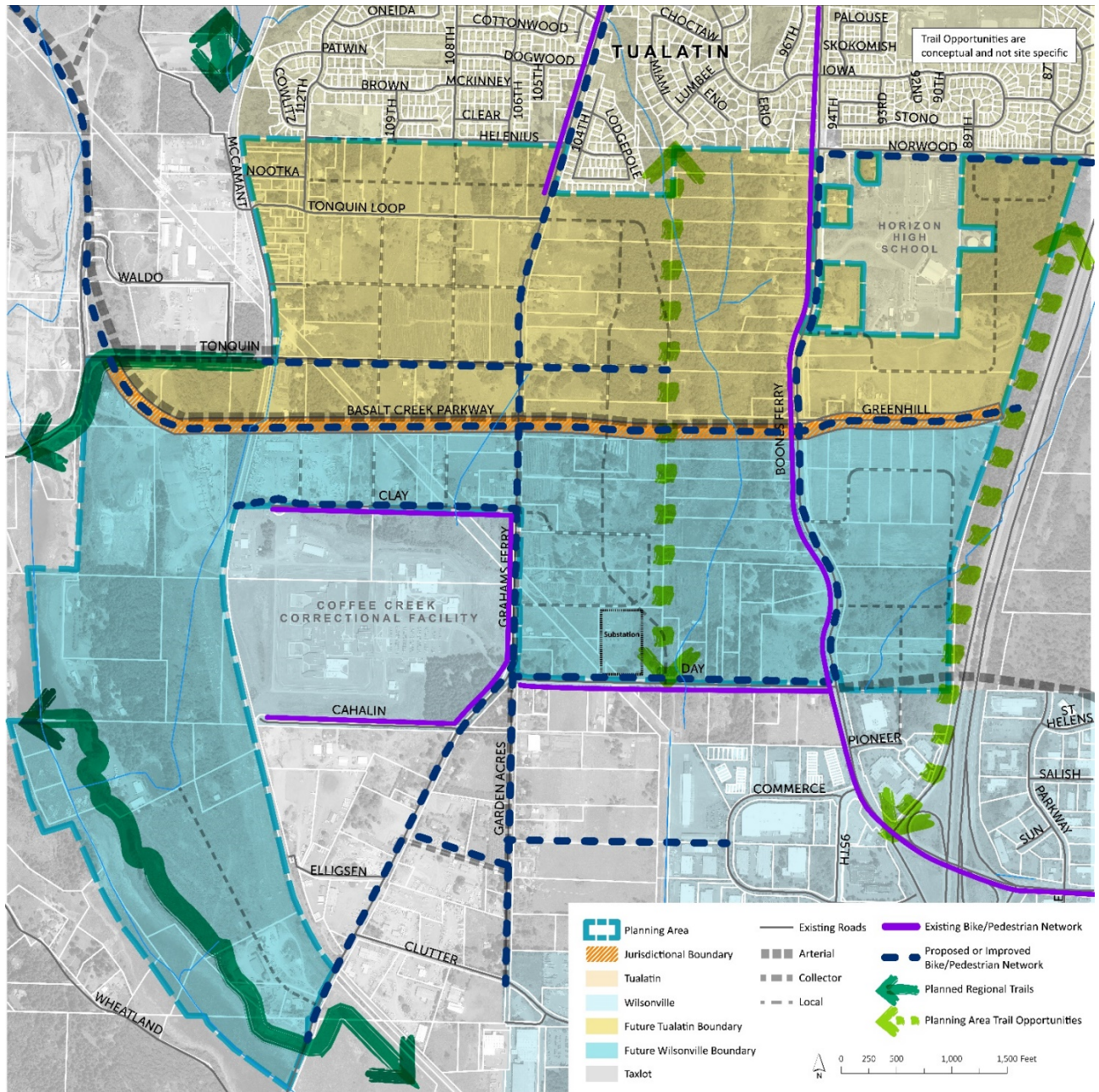
Jurisdiction	Land Use Designation	Trips	Trips per Acre
Tualatin	High Density Residential	42	12.52
	Medium-Low Density Residential	236	3.94
	Low Density Residential	85	3.41
	Neighborhood Commercial	24	8.26
	Manufacturing Park	725	7.80
	Tualatin Subtotal/Average	1,111	5.72
Wilsonville	Craft Industrial	16	12.95
	Light Industrial District	218	6.17
	High Tech Employment District	717	7.59
	Wilsonville Subtotal/Average	951	6.96
Planning Area	<b>Planning Area Average</b>		<b>6.23</b>
	<b>Total Trips</b>	<b>2,062</b>	

### 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.

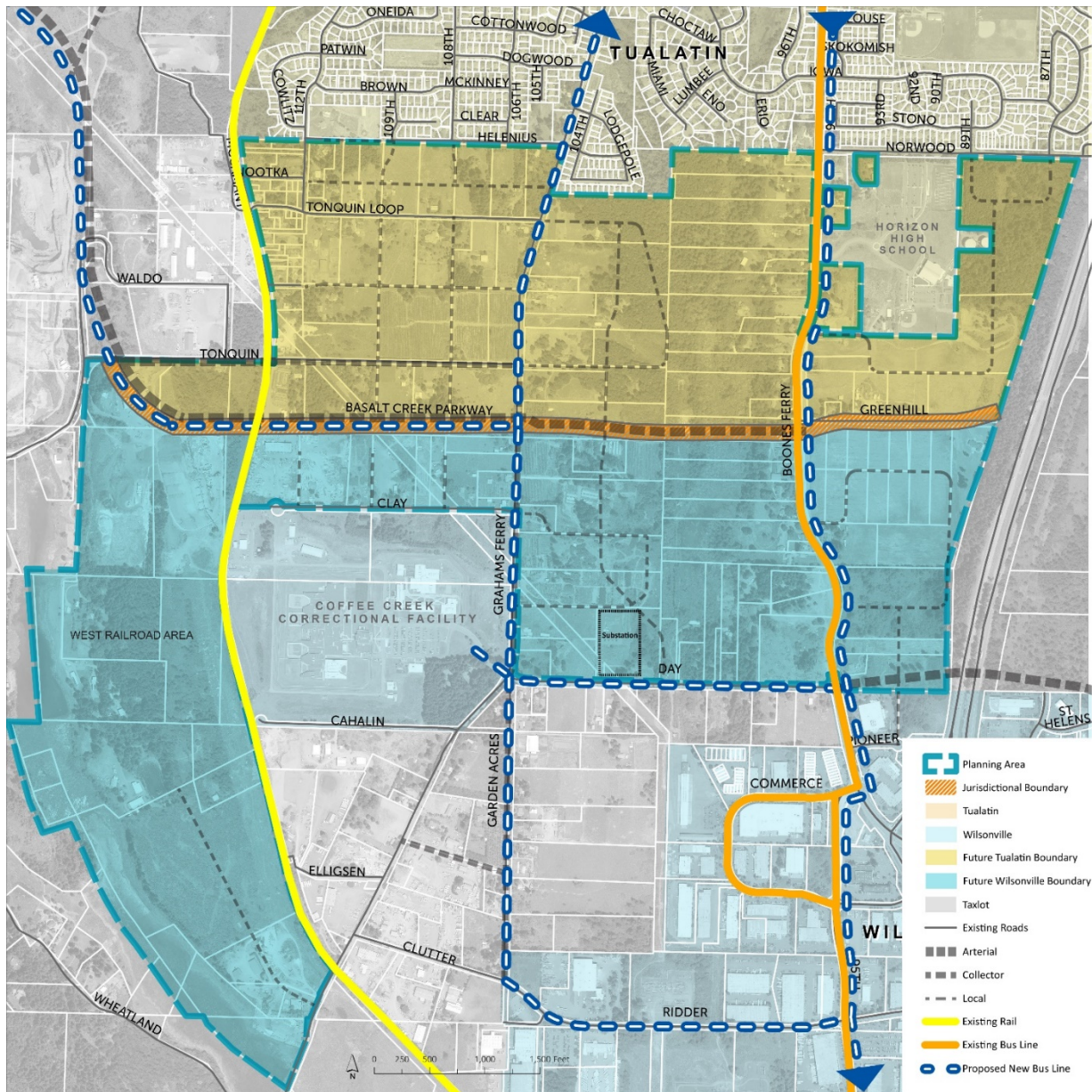
Currently, Basalt Creek Canyon is a barrier to east/west movement through the Planning Area. A north/south connection to the west of the Canyon would further improve the network and make connections to east/west roads that run north and south of the Canyon. The Basalt Creek Canyon Ridge Trail opportunity 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

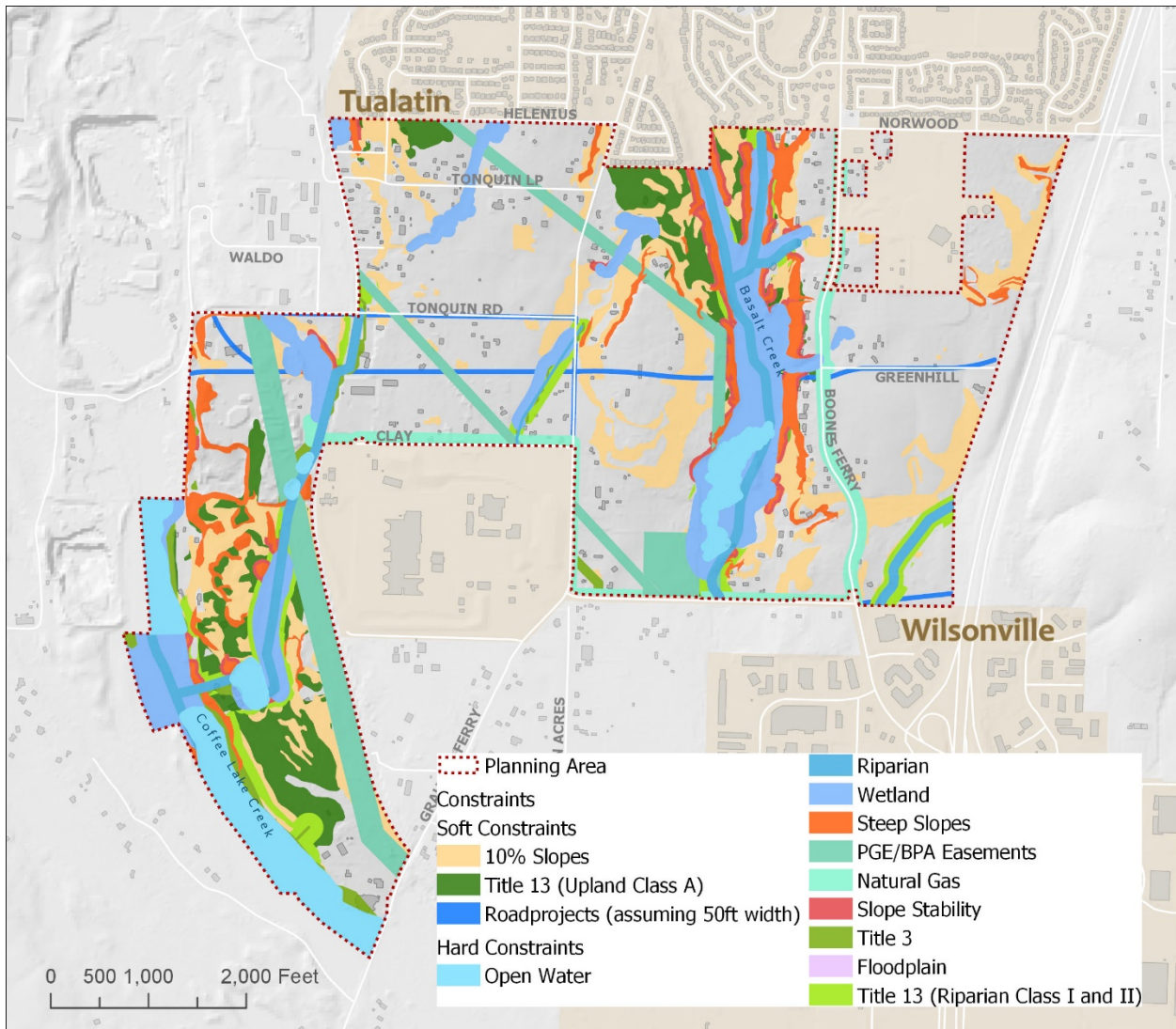
The future vitality of the Basalt Creek Planning Area hinges on development that efficiently locates job growth on the land most suited for it, while preserving and capitalizing on the natural and cultural resources in the area. The identification of environmentally sensitive lands followed the regulatory 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	52	Area within 150 ft. of streams, river, lakes, or wetlands

Areas	that are not considered regionally significant natural resources but could have some adverse impacts
-------	--

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



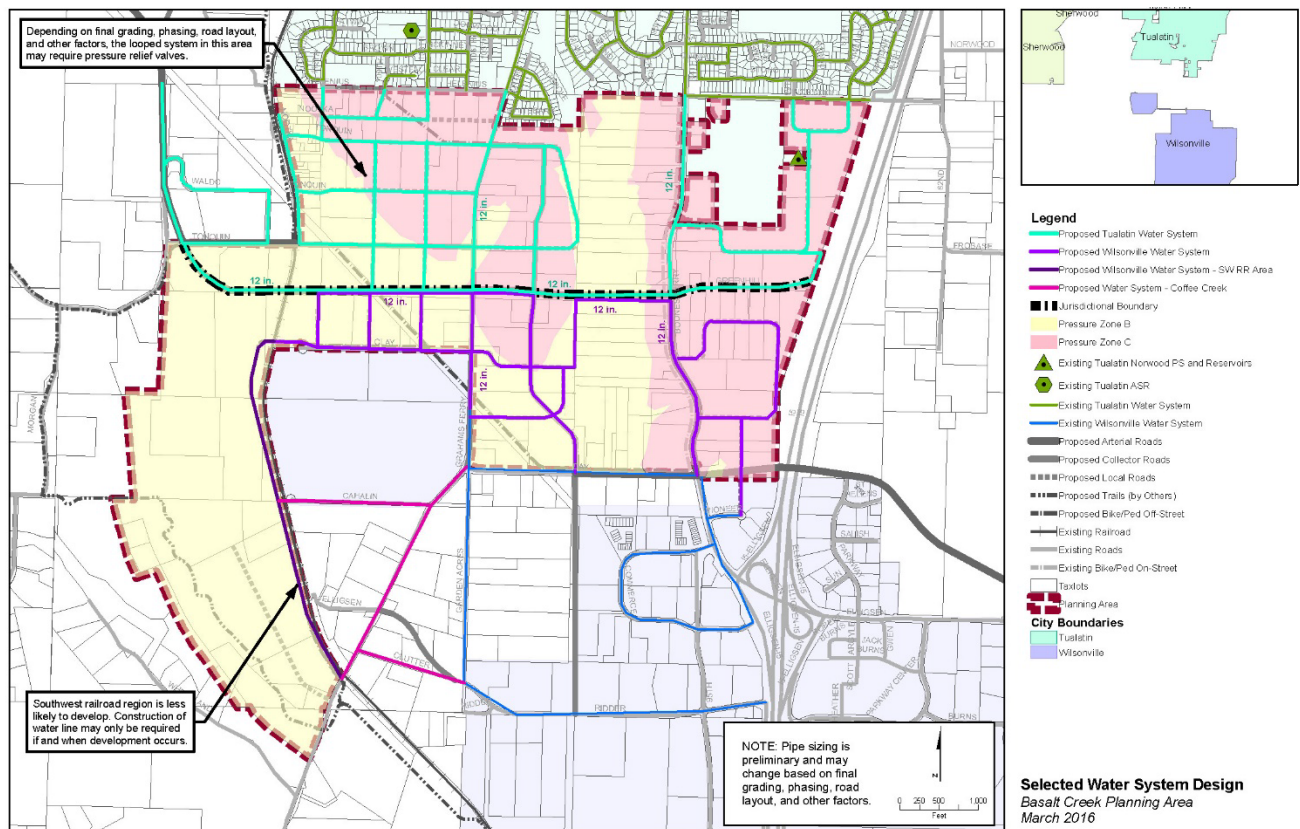
## Infrastructure

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.

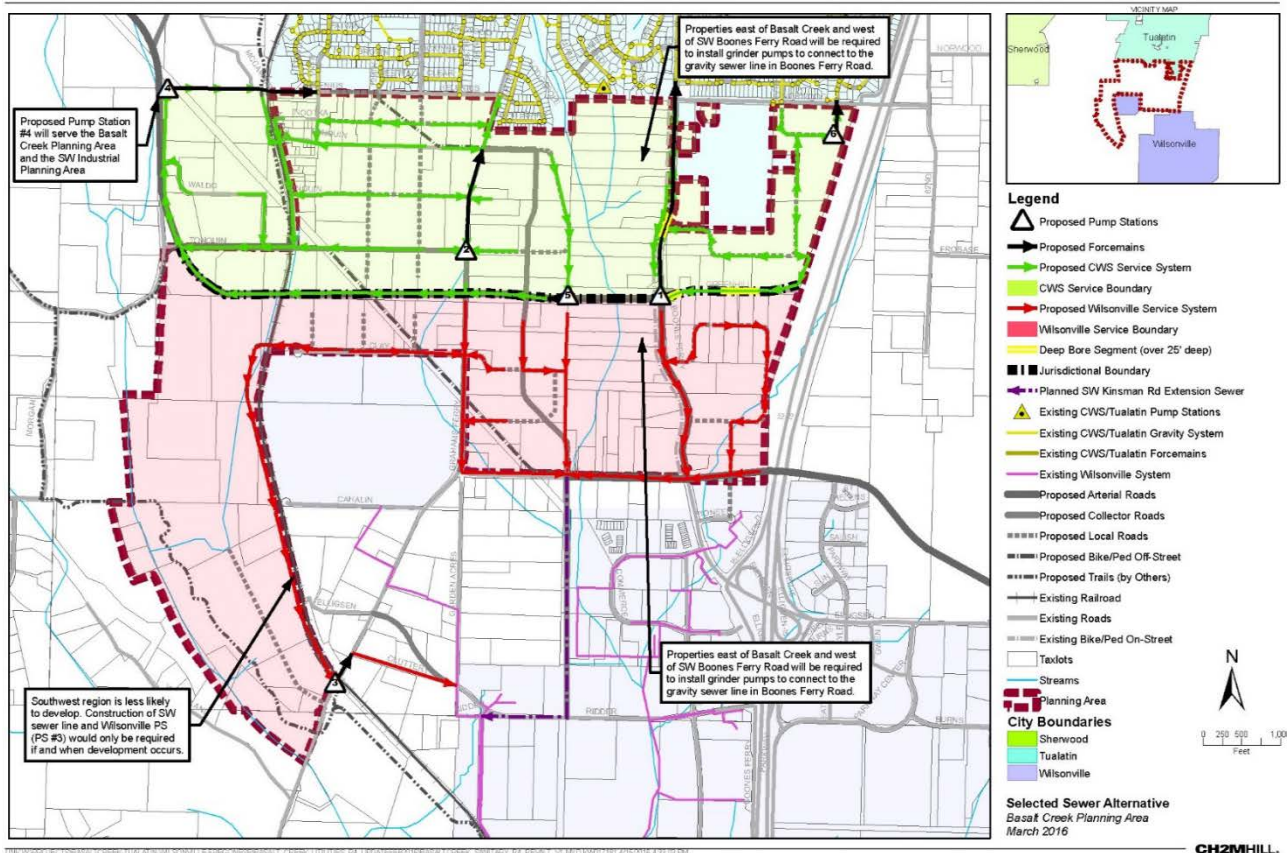
The Coffee Creek water system is shown outside of the Basalt Creek Planning Area (east of the railroad, west of SW Grahams Ferry Road, and south of SW Clay Road) to illustrate Wilsonville’s water system and how to connect services to the West Railroad Area. That portion of the system would be installed 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

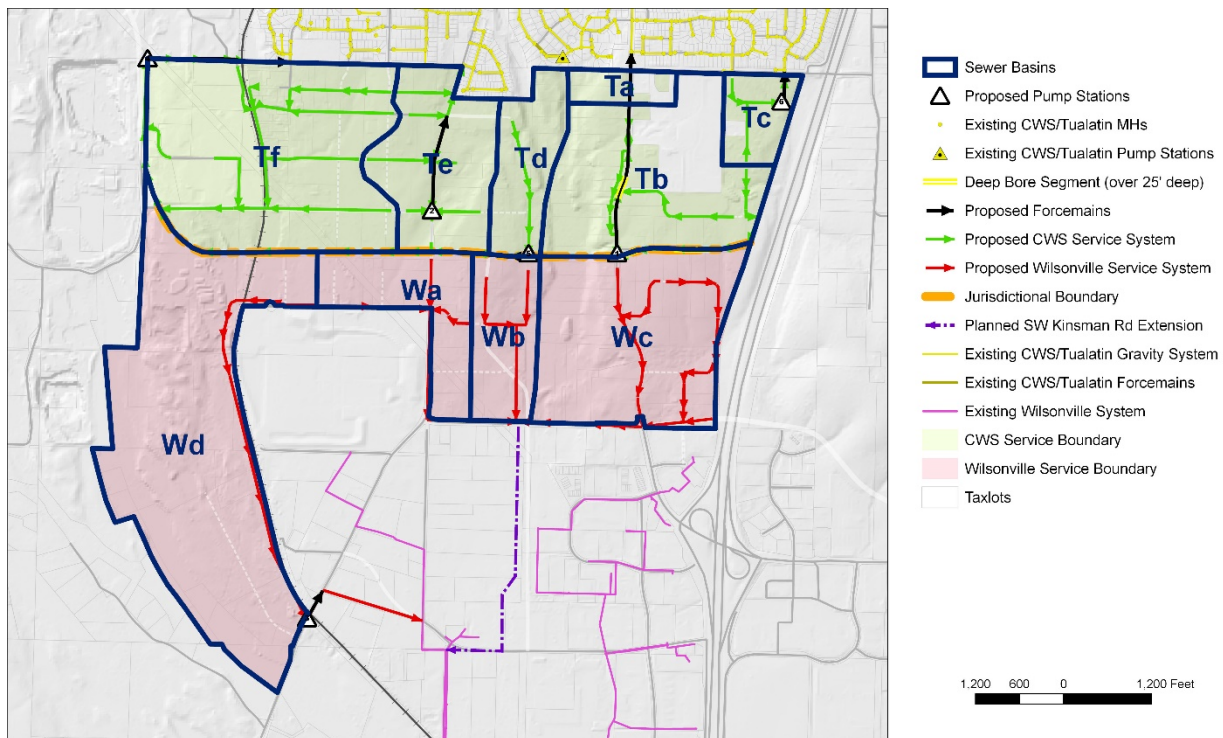
determine what design standards are relevant to creating appropriate transitions between residential and employment uses, and the City of Wilsonville will want to consider the application of its Industrial Form-based Code to help create a uniquely attractive business community.

#### 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.



# BASALT CREEK CONCEPT PLAN

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



# Existing Conditions Report

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Basalt Creek Planning Area

October 2014





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# I. Introduction

In the Metro region, areas brought into the Urban Growth Boundary are required to have a land use and transportation Concept Plan. The intent of the Concept Plan is to provide a roadmap for the development of the area consistent with state, regional and local land use planning laws. This Existing Conditions report is the first step in the development of the Concept Plan for the Basalt Creek planning area. It includes detailed information on the existing landscape, regulatory, infrastructure, social and economic conditions within and relevant to the planning area.

The information presented in this Report provides the foundation from which to understand development capacity within the planning area, and the regulatory context in which development will occur. Here, analysis paints a quantitative picture of future growth potential, and identifies both opportunities and constraints for development of the area, using the regulatory framework as a guide.

This Report will inform land use and transportation decisions related to the Basalt Creek planning area, and provide the basis for the Concept Plan. The report is organized into eight sections (including introduction):

## II. Local and Regional Planning Context

Summarizes regional and local plans that influence the planning area. These plans also include regulatory requirements related to land development and provide an explanation of the area’s regional role, as well as the constraints guiding the location of future development.

## III. Natural and Historic Resources

Summarizes the natural and environmental features of the area and identifies historic or cultural resources within the planning area. This section provides a context for how environmental features might shape development in the planning area as both amenities and constraints.

## IV. Public Facilities

Summarizes school, fire, library, park and police resources within or adjacent to the planning area. This information will inform decisions about additional resources that may be needed within the planning area to support projected growth.

## V. Commercial, Industrial and Residential Real Estate Markets

Analyzes the existing markets for employment and residential development relevant to the planning area. This section provides a foundation for understanding future real estate demand to inform the development of a land use plan that can accommodate projected growth and promote economic development.

## VI. Infrastructure

Provides a detailed assessment of water, sewer and stormwater infrastructure capacity relevant to the planning area. This information provides a foundation for developing an infrastructure plan that is integrated with the existing system and provides efficient and cost effective solutions to serve the area.

## VII. Transportation

This section describes information on projects planned and under development within the planning area and provides an overview of the transportation planning that has been completed to date. This section describes the transportation framework from which to build the local network as part of the Concept Plan.

## VIII. Land Capacity Analysis

The land capacity analysis is a quantitative and spatial analysis of the planning area that implements the regulatory framework and identifies infrastructure and transportation constraints. This analysis provides the canvas on which to paint the Concept Plan.

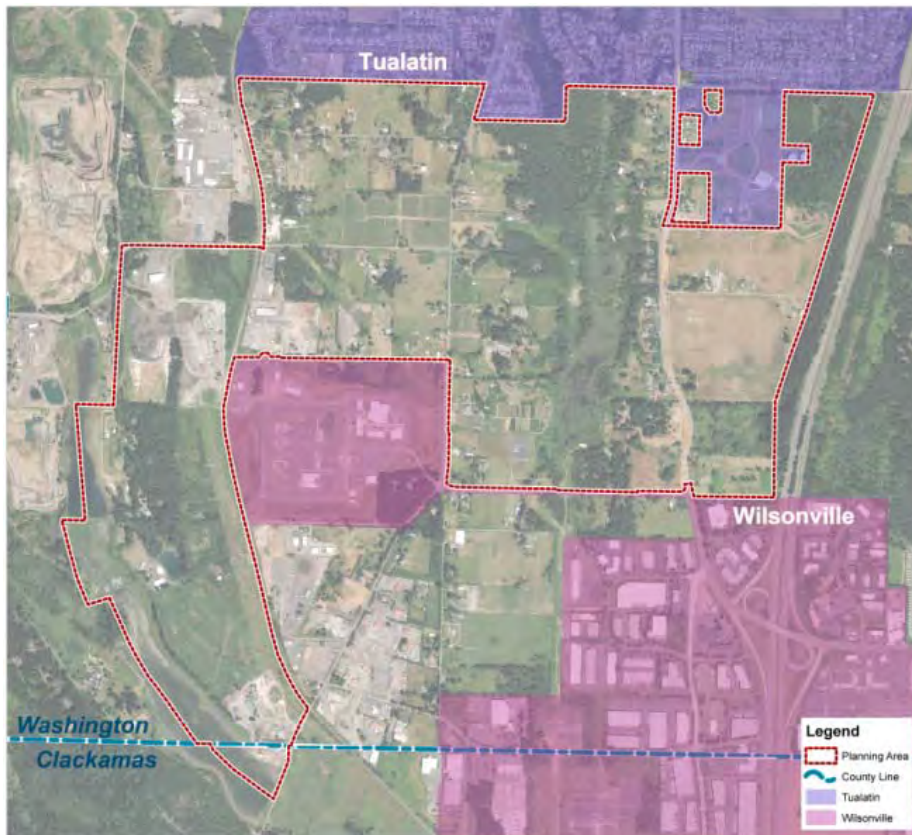


Figure 1 Basalt Creek planning area, City of Wilsonville and City of Tualatin boundaries. Source: Fregonese Associates 2014.



## Planning Area Boundaries

The Basalt Creek planning area consists of 847 acres between the cities of Tualatin (to the north) and Wilsonville (to the south). It is primarily within Washington County, with a very small portion in the southwest corner located in Clackamas County (Figure 1).

The planning area is irregularly shaped, with a “finger” that extends southward from the western side. Generally referred to as the West Railroad area, this portion is divided from the rest of the study area by the Portland and Western Railroad (PNWR) and the Coffee Creek Correctional Facility. The majority of the Basalt Creek planning area is generally bounded by Norwood and Helenius Roads to the north, 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 southern residential communities in Tualatin and Horizon High School are not included in the study area. However, three large noncontiguous parcels in the area around Horizon High School are included in the planning area, as they are privately owned (Figure 2).

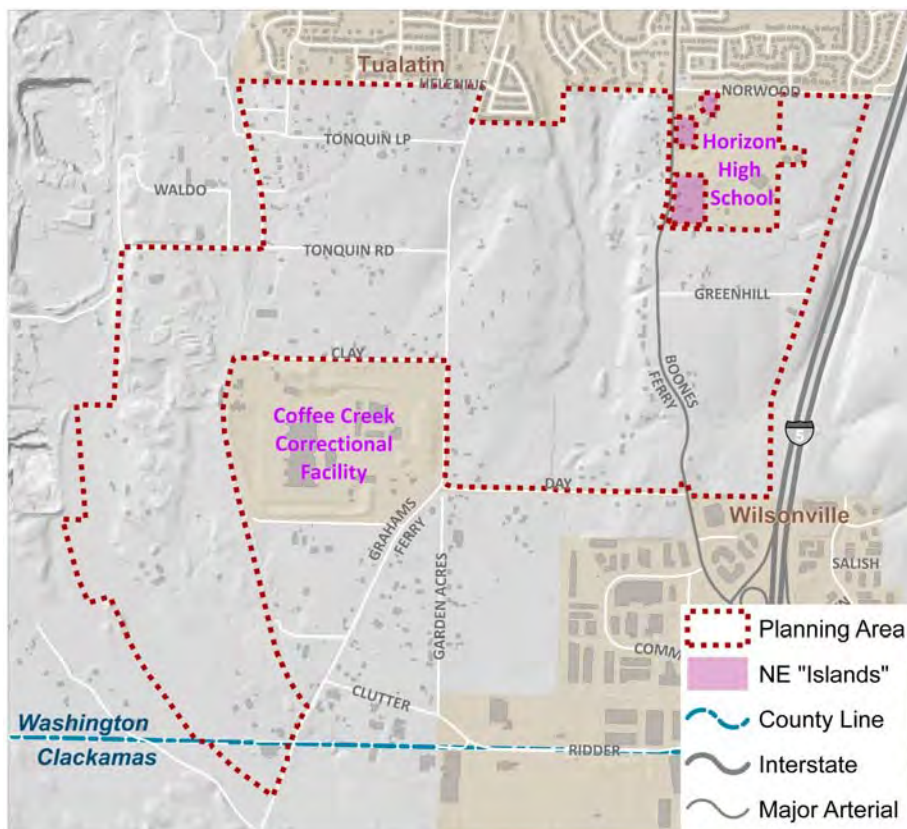


Figure 2 Planning area “islands,” Coffee Creek Correctional Facility and Horizon High School campus. Source: Fregonese Associates 2014.

# II. Local & Regional Planning Context

## Current Zoning

The majority of the Basalt Creek planning area falls within Washington County and is zoned as Future Development 20-Acre District (FD20). This interim designation was applied to the area following inclusion in the UGB (2004), through Washington County Ordinance No. 671 (2007). This designation will apply until the final Concept Plan is approved and Comprehensive Plan designations for the Basalt Creek area are adopted by each jurisdiction. The FD20 zoning designation is intended to encourage retention of existing land uses until these steps are complete. FD20 restricts subdivision of existing parcels into tax lots smaller than 20 acres.<sup>1</sup>

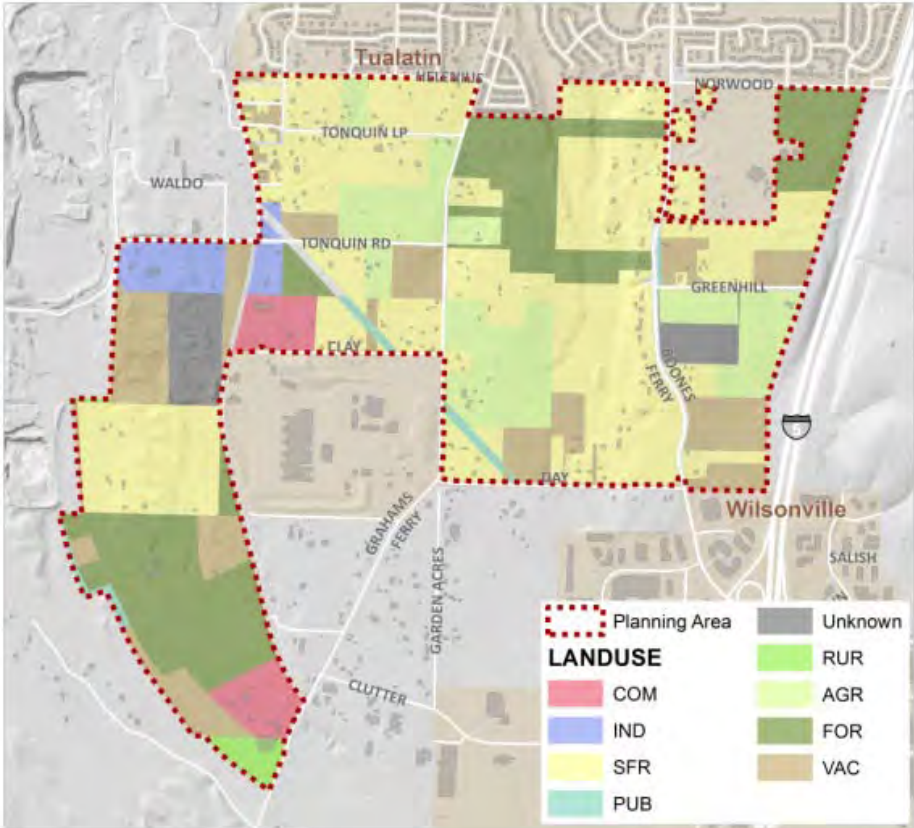


Figure 3 Existing land use in the Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014.

Each jurisdiction (Tualatin and Wilsonville) has a property owner-initiated annexation process, so changes to current zoning will happen at the time of annexation, on a parcel-by-parcel basis. A very small area (7.8 acres), in the southwest corner of the planning area falls within unincorporated Clackamas County (Figure 1), and is zoned as Rural Residential Farm Forest 5-Acre District (RRFF5).

<sup>1</sup> For a full description of allowed and prohibited uses in the FD-20 zone see the Washington County Community Development Code Section 308.

## Existing Land Uses

The primary existing land uses in Basalt Creek are rural agriculture, industrial and some rural residential consisting of low-density single-family housing (Figure 3). There are substantial areas of agricultural uses, including nurseries (such as Chick-a-Dee Gardens Nursery), landscaping supply (Pro Gro, in the furthest southwest corner of the planning area) and blueberry farms, among others. Existing industrial land users include gravel quarries and cement manufacturing (Knife River Corporation) in the northwest corner (Figure 4).

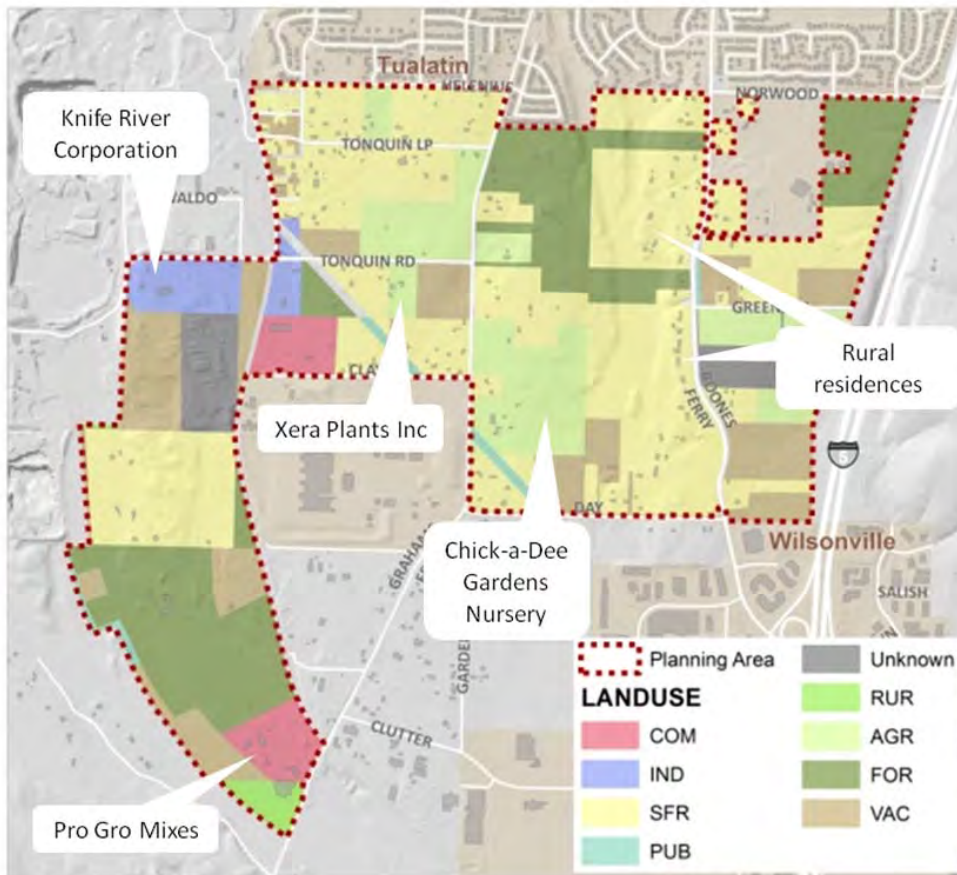


Figure 4 Locations of major businesses and residential areas in the Basalt Creek planning area. Source: Fregonese Associates, RLIS, Google Maps 2014.

Currently, 239 people live in the area in 90 single-family housing units, and 258 employees work in the area (Figure 5). The existing housing in the Basalt Creek area is detached single-family on large lots. Several single family homes are located on the eastern edge of the Basalt Creek ravine along Boones Ferry Road.

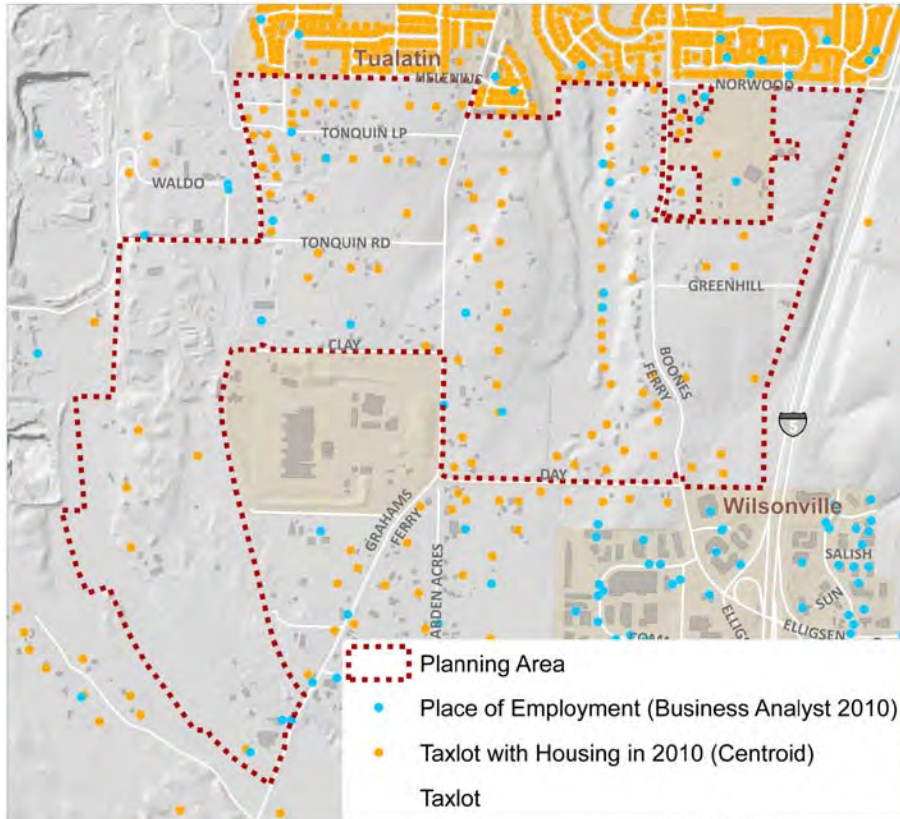


Figure 5 Existing Housing Units and Employment in the Basalt Creek planning area Source: Fregonese Associates, ESRI Business Analyst 2014.

## Adjacent Land Uses

The planning area is bounded to the north by Tualatin residential neighborhoods, to the south by commercial and industrial uses, I-5 to the east, and to the west by Coffee Lake Creek, wetland habitat, and rural and industrial lands (Figure 6).

The southernmost residential neighborhoods of Tualatin, including recently-built subdivisions such as Victoria Gardens, are located to the north. These neighborhoods are comprised primarily of high-quality, detached, single-family homes. Also to the north is the 30-acre campus of Horizon High School. The campus is bordered on three of its sides by the planning area (Figure 7). To the west, the planning area is bordered by unincorporated portions of Washington County (within the Southwest Tualatin Concept Plan area) and active quarries--including the Knife River Corporation quarry and asphalt plant, which falls partially in the planning area along Western Railroad. 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 (though not yet fully annexed). Most of this land is undeveloped or vacant.

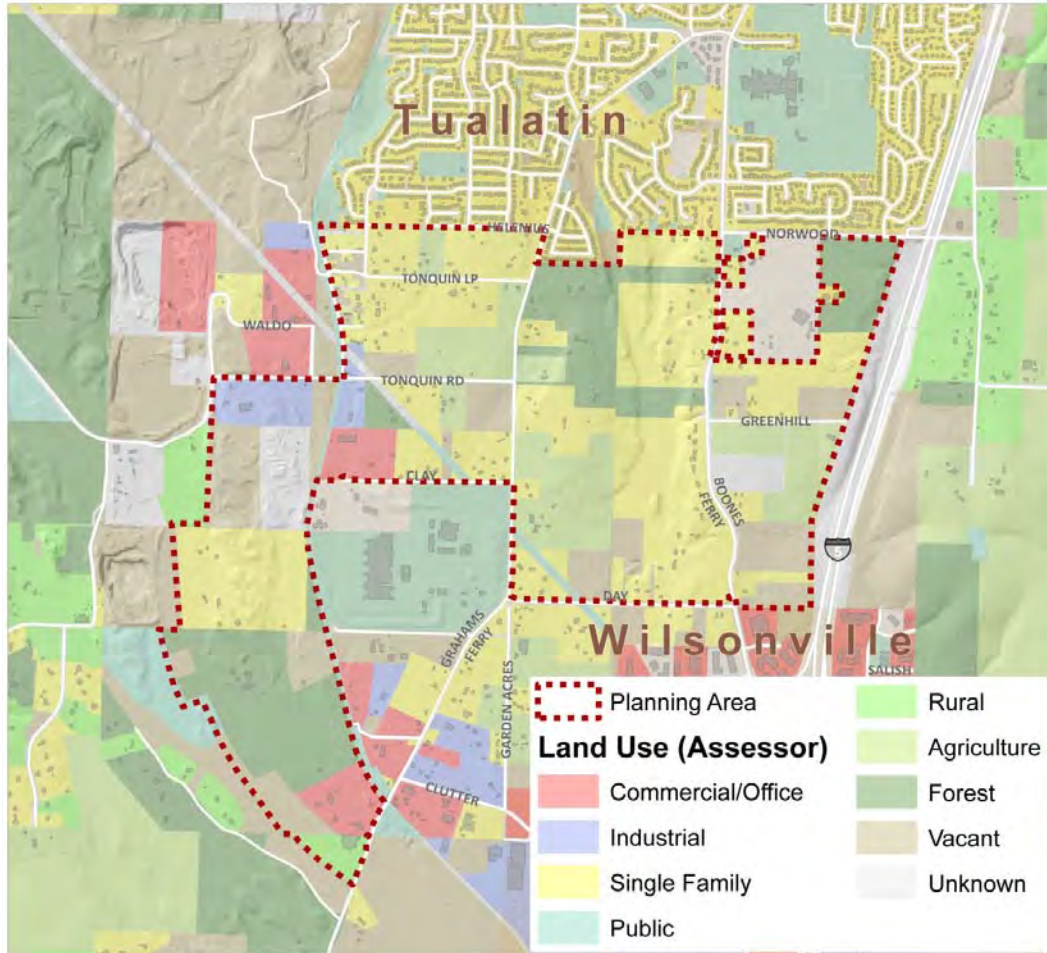


Figure 6 Land Uses Adjacent to Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014.

South of the planning area are commercial, office and industrial uses located within the City of Wilsonville. Also adjacent to the southern border of the planning area is Coffee Creek Correctional Facility (Figure 8). This is a state-owned correctional facility with 1,250 female inmates, and a fluctuating small 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.<sup>2</sup>

South of the Correctional Facility, also abutting the planning area, along the south side of Day Road, is the Coffee Creek planning area, for which the City adopted a Master Plan for industrial development. Figure 9 shows the Basalt Creek planning area and its geographic relationship to the Coffee Creek, Southwest Tualatin and Tonquin Employment planning areas. Figure 9 also shows existing commercial and industrial and employment areas.

<sup>2</sup> Reynolds, Vicki. Public Information Officer for Coffee Creek Correctional Facility. Personal communication, July 2<sup>nd</sup>, 2014.



Figure 7 Aerial image of the Horizon High School Campus (30 acres), just outside of the planning area. Source: Fregonese Associates 2014.

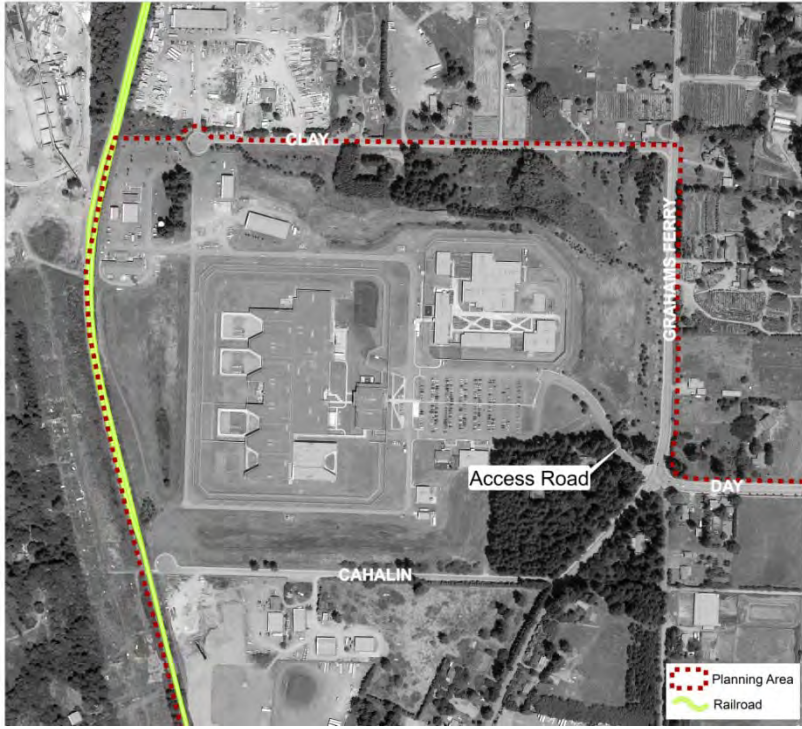


Figure 8 Aerial image of Coffee Creek Correctional Facility (108 acres). Source: Fregonese Associates 2014.

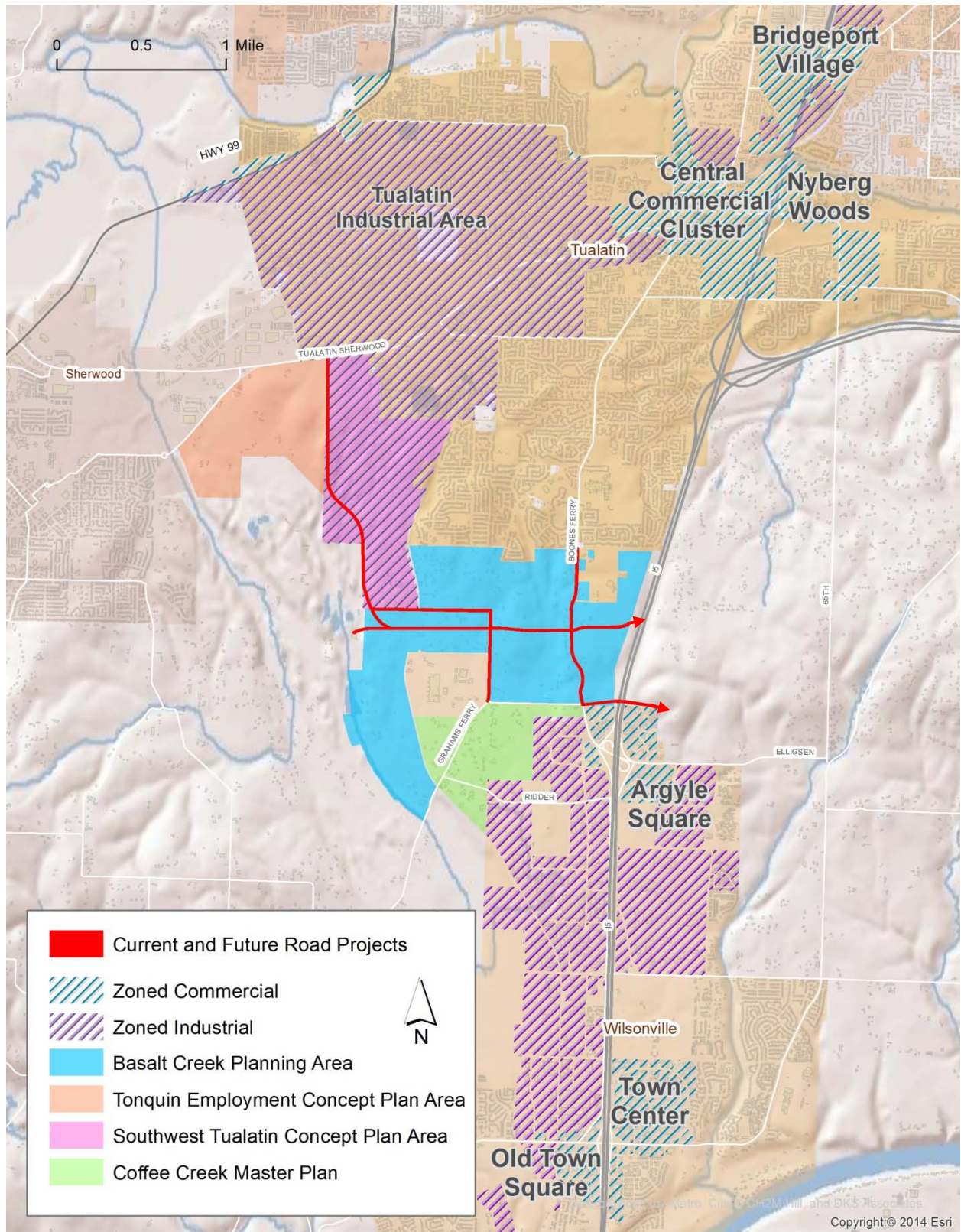


Figure 9 Planning and employment areas near the Basalt Creek planning area. Source: Fregonese Associates, Cities of Tualatin and Wilsonville 2014.

## Regional Plans and Regulatory Requirements

The 25 cities and three counties within the Portland Metropolitan Area share a single Urban Growth Boundary (UGB), administered by the Metro Regional Government. As required by state law, Metro assesses its Urban Growth Boundary every five years to determine whether it includes sufficient land to accommodate 20 years of development for residential, commercial, and industrial uses. In 2002 Metro passed Ordinance No. 02-696B, expanding the UGB by over 20,000 acres to accommodate forecasted increases in housing and jobs through the year 2022. This brought land around Damascus, Oregon City, Tualatin, Wilsonville, Beaverton and Hillsboro into the UGB.

In reviewing the 2002 expansion ordinance, the Land Conservation and Development Commission (LCDC) found that “the Council added capacity to the UGB but did not add sufficient capacity to accommodate the full need for land for industrial use.” In 2003 the LCDC ordered the Metro Council to add capacity to the UGB for the unmet portion of industrial land needs. Metro evaluated land adjacent to the UGB to determine which land would be most suitable for industrial employment. In 2004 the Council released an appendix to the 2002 Urban Growth Report that included an Employment Land Need Analysis for the years 2002-2022, in addition to an Industrial Land Alternative Analysis Study. These studies were used to identify additional industrial lands to be included in the 2004 ordinance.

Criteria used by the Council to determine suitability of land for industrial uses included soil classification (with a preference for lowest suitability farmlands), earthquake hazard, slope steepness, and parcel size (with a preference for larger parcel size). Among those lands deemed suitable, further factors to identify Industrial Areas and Regionally Significant Industrial Areas included: distribution (area serves to support industrial land for major regional transportation facilities), service (availability and access to specialized utilities), access (within two miles of I5, I-205, I-84, State Route 224), proximity (located within close proximity of existing like uses) and primary use (predominately industrial uses).<sup>3</sup>

Two areas of land identified in the 2004 ordinance as good candidates for industrial development now comprise the Basalt Creek planning area. In Ordinance 04-1040B, these two areas are referred to as the Coffee Creek (partial) and Tualatin study areas. The main section of the Basalt Creek area (identified in the 2004 ordinance as the Tualatin study area) was identified as suitable for industrial development due to its proximity to the I-5 corridor, and to an existing industrial area (in Wilsonville). In addition, portions of the area are relatively flat. The ordinance notes that, due to these characteristics, “...the Tualatin study area is most suitable for warehousing and distribution, among other industrial uses.”<sup>4</sup>

At the time of the Ordinance’s adoption, two major concerns were identified that resulted in additional conditions being placed upon the planning area: First, residents expressed concerns about compatibility between Tualatin’s southern neighborhoods and the proposed industrial uses in the planning area. Secondly, the cities of Tualatin and Wilsonville desired to preserve the opportunity to choose an

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<sup>3</sup> A detailed description of the methodology used for identifying Industrial Land can be found in Exhibits D and E to Ordinance No. 04-1040B, an Industrial Land Alternative Analysis Study (a 2004 addendum to Metro’s 2002 Urban Growth Report).

<sup>4</sup> Metro Ordinance No. 04-1040B Exhibit G P17



alignment for the I-5/99W connector as the southern portion of the alignment passes through the Tualatin study area. In response to these concerns the Metro Council extended the deadline for Title 11 planning. The revised deadline called for Title 11 Concept Planning to occur within two years following the final alignment for the I-5/99W connector or within seven years, whichever was shorter.<sup>5</sup>

It is further stated in the 2004 ordinance (in response to the community concerns about transitions from residential to industrial lands) that so long as the South Alignment of the connector falls close to the one shown on the 2040 growth concept map it will serve as a buffer between the residential development to the north and industrial development to the south. Within the Ordinance a special section dedicated to specific conditions for particular areas states that “If the selected right of way for the connector follows the approximate course of the ‘South Alignment’ as shown in the Regional 2040 Growth Concept map...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.’ The ordinance further states, “The government 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.”<sup>6</sup>

As defined in the Metro Regional Framework Plan, a designation of “outer neighborhood” describes areas outlying cities that are primarily residential, relatively further from employment and shopping areas than other residential areas, and have larger lot sizes and lower population densities than inner neighborhoods.<sup>7</sup>

The Metro Regional Framework Plan describes the industrial designation 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.”<sup>8</sup>

As stated in the 2004 Ordinance, the planning timeline for the Basalt Creek area was extended to allow for the planning of the I-5/99W Connector. 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 Basalt Creek Transportation Refinement Plan (TRP) established the specific alignment for this arterial (now referred

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<sup>5</sup> Metro Ordinance No. 04-1040B Exhibit F P2. The relative complexity of planning for this area (due to its equidistance from two cities, and the regional infrastructure improvements being considered in and around Basalt Creek) led Metro to grant an extension for compliance, moving the deadline from 2012 to September 2016 (through a Urban Growth Management Functional Plan compliance request).

<sup>6</sup> Metro Ordinance No. 04-1040B P3

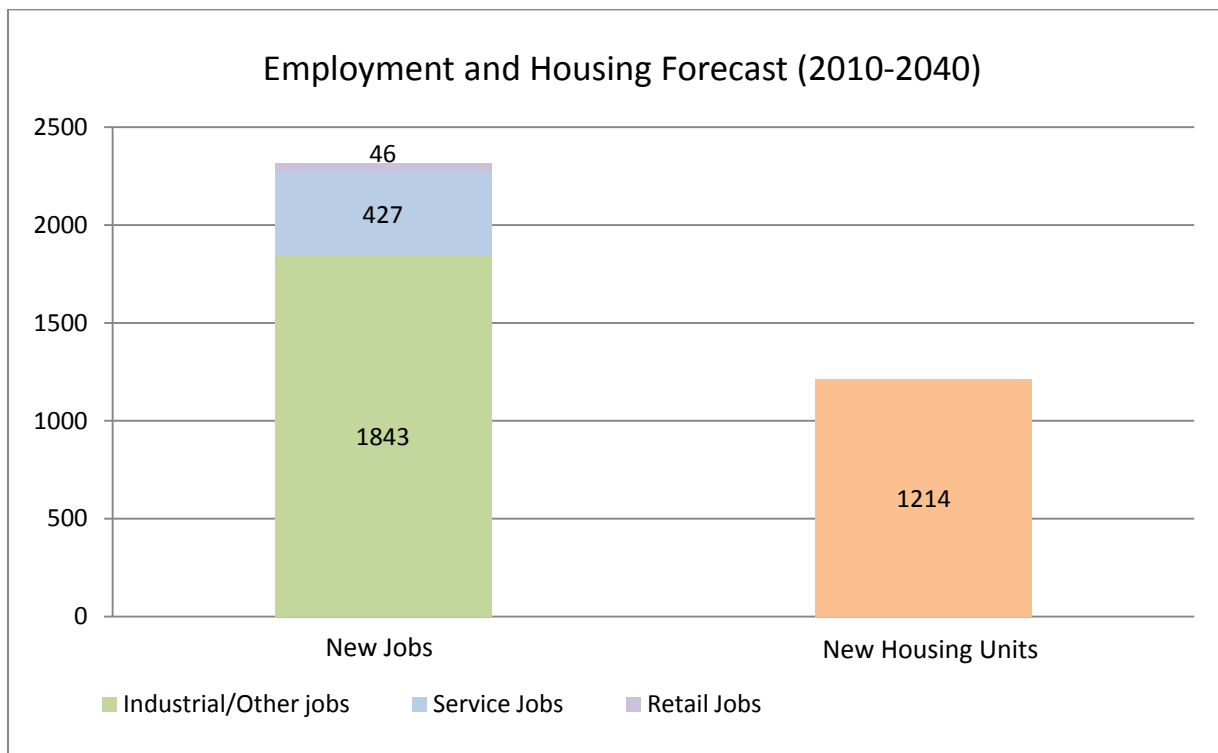
<sup>7</sup> Metro Regional Framework Plan Appendix G-J Glossary P369

<sup>8</sup> Metro Regional Framework Plan Appendix G-J Glossary P366

to as the East-West Connector). The TRP was completed in 2013 and several priority projects were adopted in the 2010 Regional Transportation Plan.<sup>9</sup>

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. Table 1 summarizes the most recent forecast estimate (the Gamma Version) for the Basalt Creek planning area at the Transportation Analysis Zone (TAZ) level. An older forecast (the Beta Version), upon which the Basalt Creek Transportation Refinement Plan (TRP) was based, projected somewhat higher employment levels by 2035. Both forecasts will be used in concept planning for the Basalt Creek area, with the forecasts serving as “sideboards,” representing the high and low ends of the range of households and jobs the area may need to accommodate. The geographical units used for the forecasts are called Transportation Analysis Zones (TAZs). The boundaries and identification numbers of TAZs changed between the Beta (older) and Gamma (newer) forecast, and are both depicted on the map in Figure 10.

Table 1 Employment and Housing Forecast 2010-2035. Source: Metro 2014.



<sup>9</sup> An update to the Regional Transportation Plan (RTP) was published July 18<sup>th</sup>, 2014. Because the analysis for this report was completed before that date, 2014 RTP updates are not considered here. The updated Regional Transportation Plan can be accessed here: <http://www.oregonmetro.gov/regional-transportation-plan>

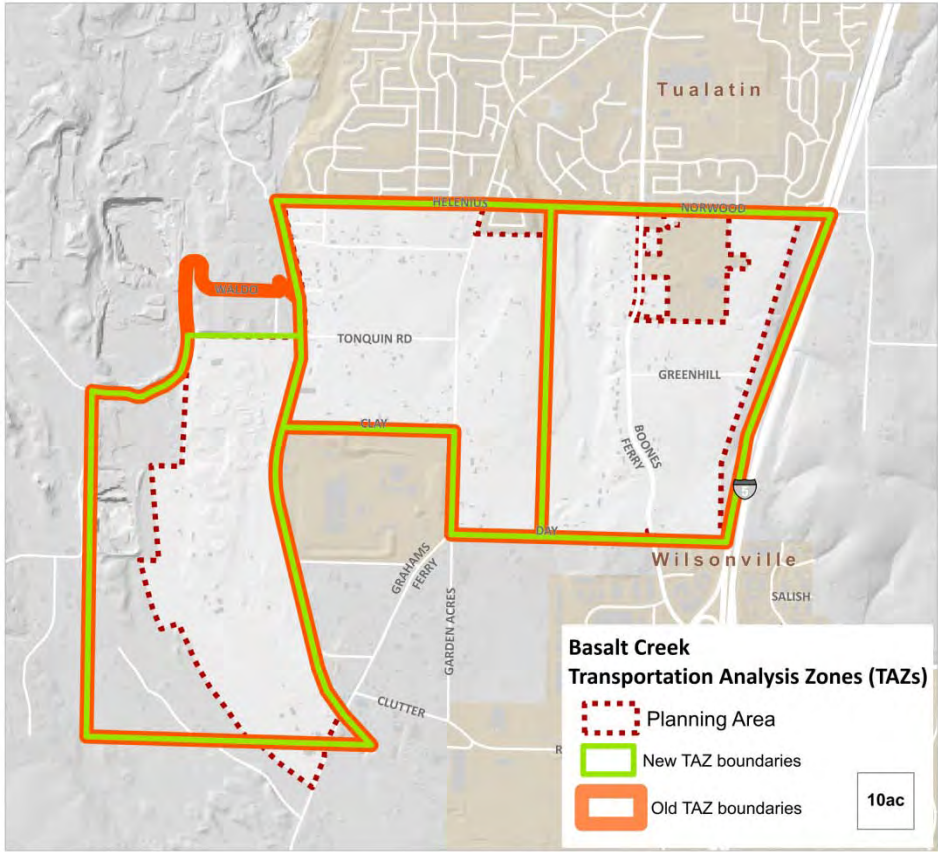


Figure 10 Transportation Analysis Zones (TAZs) covering the Basalt Creek planning area Source: Fregonese Associates, RLIS 2014.

Local Plans

The following section provides a brief summary of local plans, focused on identifying the policies and goals relevant to the Basalt Creek planning area. Within these plans are goals and policies for transportation, land use planning and economic development. These will be used to guide the development of the concept plan and comprehensive plan recommendations.

Joint Plans

Basalt Creek Transportation Refinement Plan (2013)

This plan was a joint effort between the Cities of Tualatin and Wilsonville, Washington County, and Metro. The primary purpose of the Refinement Plan is to establish a major transportation connection from Tualatin-Sherwood Rd to I-5 in North Wilsonville through the Basalt Creek planning area. This connection was identified as a regional transportation priority in order to connect and provide access to existing and future hubs of industrial land uses.

Through the Refinement Plan process, an alignment was established for what is, for now, being referred to as the East-West Connector (Project 11, Figure 11). It is intended to be a new major arterial with five

lanes and vehicle access limited to three intersections – 124<sup>th</sup> Avenue (anticipating a southward extension of 124<sup>th</sup> to Tonquin Road in the near future, see Projects 1 and 10 in Figure 11), Graham’s Ferry Road and Boones Ferry Road. Tonquin Road (Project 2 in Figure 11) will be improved but left as a parallel three-lane property-access road.

While the primary focus of the Refinement Plan was establishing the alignment of the aforementioned East-West Connector, it includes recommendations for an additional 17 transportation investments broken into short, medium, and long term phases. These include improvements to Grahams Ferry Road, Boones Ferry Road, and Day Road to adequately meet the need for improved regional freight mobility.

Improvements to the section of Boones Ferry Road between Norwood and Day Roads have already been completed. This new roadway includes bike lanes and sidewalks. These projects combined with the East-West Connector provide the foundation for a robust transportation network and ensure the Elligsen Road interchange will function at a high level. The project to extend 124<sup>th</sup> Avenue is in the design phase, with an estimated completion date of December 2016.

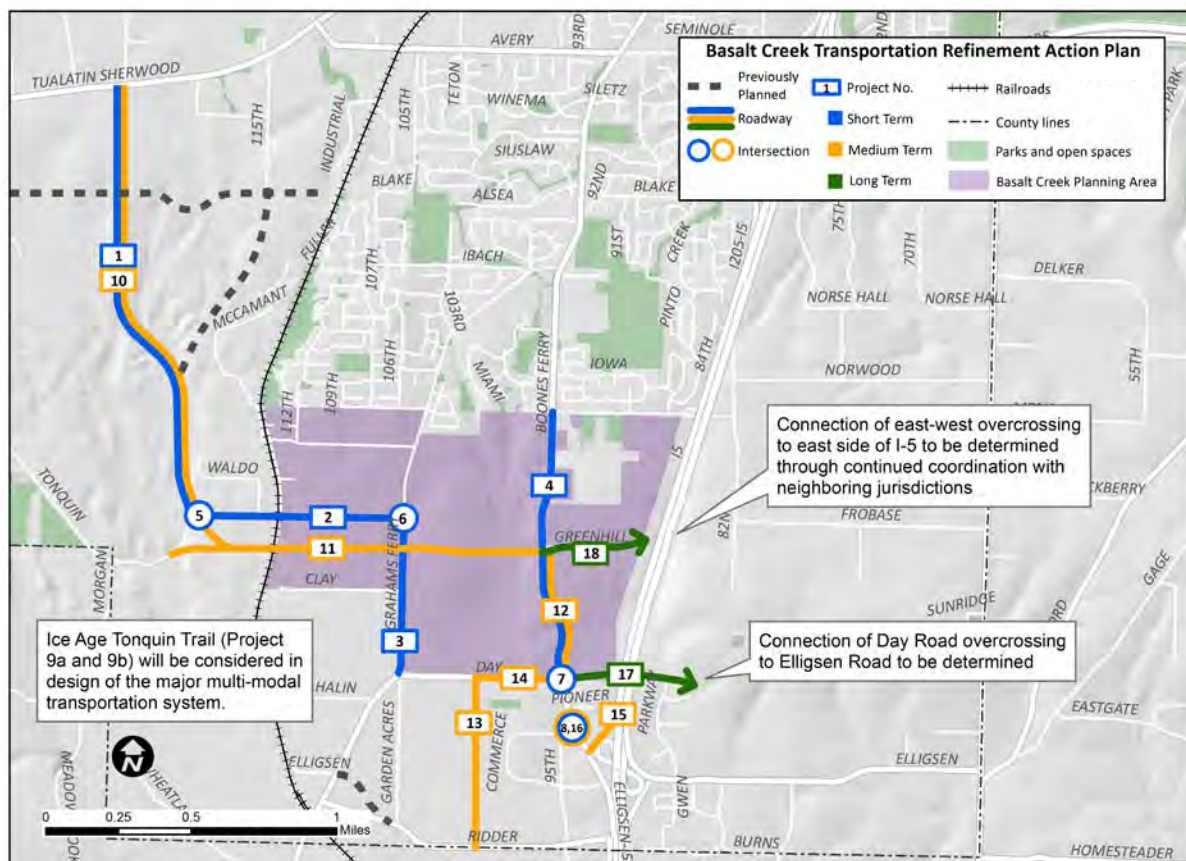


Figure 11 Projects identified in the Basalt Creek Transportation Refinement Plan (TRP).

## Wilsonville

### Transportation System Plan (2013)

The TSP integrates goals to reduce vehicle collision rates, decrease VMT (vehicle miles travelled) per capita, and minimize vehicle delays for truck trips per capita. Other objectives include significantly increasing connectivity for walking and biking trips. Policy 27 of the plan states an intention to “upgrade and/or complete the street network on the west side of I-5, including Coffee Creek and Basalt Creek areas, to serve the warehousing, distribution, and other industrial uses located there.” The TSP proposes widening of Grahams Ferry Road if called for by the Basalt Creek Transportation Refinement Plan.

### Economic Development Strategy (2012)

This document was an update to a 2007 Economic Opportunities Analysis. The Strategy was produced to guide City investments and regulations as well as supporting efforts from the private sector. The resulting recommendations are long-term strategies oriented toward deliberative, balanced, efficient and fair economic development. These include: prioritizing land use and infrastructure planning, balancing economic development with quality of life, and treating all businesses fairly (whether they are new or established). The Strategy reviews factors impacting the Wilsonville economy, which will also have a substantial impact on economic development in the Basalt Creek planning area. Some of these include: regional and interstate accessibility; vacant land base; a balance between the number of jobs and available housing units, and local industry clusters. Actions from the Strategy include workforce development, promoting infill development and redevelopment, and streamlining the development code and permitting process, among others.

### Parks & Recreation Master Plan (2007)

The goal of the Parks and Recreation Master Plan is to promote “active and passive recreation opportunities in a safe, accessible, and comprehensive system of facilities, parks, trails and open spaces to support the recreational interests of citizens of all ages.” The plan calls for implementation of the Ice Age Tonquin Trail Master Plan in partnership with Metro, the Cities of Sherwood and Tualatin, and Washington County.

### Water System Master Plan Update (2012)

This update of the 2002 Water System Plan encompasses Wilsonville’s network of water pipelines, storage tanks, valves and hydrants. Its objective is to assure that good quality public facilities and services are available with adequate (but not excessive) capacity to meet community needs, serving all urban development within the incorporated City limits. In anticipation of future development, industrial demand estimates were increased by 25% to reflect potential redevelopment, infill, and higher-use water customers within existing structures. The planning process resulted in the creation and utilization of a “highly accurate and dynamic hydraulic model” of the water system that can be used to quickly investigate potential system impacts from new users. The plan does not specifically address the Basalt Creek planning area, though it includes the adjacent area on the south side of Day Road.

### Stormwater Master Plan (2012)

This plan aims to implement a stormwater program that supports quality of life and meets regulatory requirements. It includes cross section illustrations of streetscape improvements recommended to mitigate stormwater issues. Stormwater patterns in the Basalt Creek planning area will impact stormwater management in Wilsonville, as Basalt Creek discharges into the Coffee Lake Creek wetlands west of the railroad, approximately midway between SW Freeman Drive and SW Boeckman Road. This plan notes that Basalt Creek overtops its banks during moderate storm events, flooding the parking lot along the western side of the Commerce Circle Business Park. Construction of a wetland for stormwater detention is a proposed flooding mitigation measure. The recommended location is at the crossing of Day Road over Basalt Creek, to provide temporary storage for increased runoff from future industrial development north of Day Road and decrease flooding around Commerce Circle.

### *Tualatin*

### Tualatin Tomorrow Vision and Strategic Action Plan (2014)

This Plan puts forth a vision for Tualatin in 2030. The plan includes an I-5/99W Connector to separate long-haul and regional commercial–industrial and commuter traffic from local traffic on Tualatin-Sherwood Road. Strategy TTC13 is to increase regional transit linkages (bus and rail, for example) with the cities of Sherwood, Lake Oswego, and Portland.

### City Council Goals (2013-2015, updated Feb. 2014)

Basalt Creek is specifically mentioned in Goal #8 of this City Council goals document, which is to “expand opportunities for vibrant parks and recreational facilities including greenway trails and bike/pedestrian trails.” Sub-goal 8.4 is to “plan and preserve natural resources through the Basalt Creek Concept Plan,” with the Community Development and Community Services Departments identified as playing leading roles in achieving this goal. Other goals include: a connected, informed and engaged citizenry, enhanced transportation options, and an expanded tax base strengthened through smart, balanced growth.

### Transportation System Plan Update (2014)

This update to the 2001 TSP includes seven project goals: access and mobility, safety, vibrant community, equity, economy, health and the environment, and feasible implementation. It includes recommendations to serve the varying needs of transit riders, bicyclists, pedestrians, freight traffic, and drivers. The Basalt Creek area was included within the Tualatin planning area boundary and thus is considered in this plan’s recommendations. The plan includes findings from the Basalt Creek Transportation Refinement Plan and includes the widening of Boones Ferry Road south of Norwood (now complete), the southward extension of 124<sup>th</sup> Avenue, and the upgrade of Grahams Ferry Road from a minor to major collector. It proposes looking for a potential shared use park-and-ride location in south Tualatin to expand transit access for residents of that area, which would also be useful for future residents of the northern part of the Basalt Creek planning area.

The TSP also includes adding more bus pullouts along Boones Ferry Road, possibly extending into the Basalt Creek planning area. The bike/pedestrian map indicates the addition of a multiuse path across the northern portion of the Basalt Creek planning area. WES service enhancements are also explored, including the possibility of extending the line south of Wilsonville, adding more frequent service, and construction of an additional WES station in the south of Tualatin (near the Basalt Creek planning area). The TSP also discusses possible expansion of the Tualatin Shuttle program.

#### [Linking Tualatin Market Study \(2012\)](#)

As part of the Linking Tualatin project a market study was prepared that outlines current and anticipated market conditions impacting viable development forms in the north part of the City. It covers housing, retail, office and industrial/flex space market conditions and demand projections. This study should be considered in planning for Basalt Creek because it is in the same general market area. This study also lists viable near-to-mid-term development forms,, which may also be appropriate for Basalt Creek. Key conclusions of the study include:

- The Primary Market Area (City of Tualatin) can expect continued growth in residential, retail, office and industrial uses
- The lower rents achievable in a suburban setting will limit some of the development types that the market is likely to bring into the area.
- Significant increases in density can be achieved without greatly raising construction costs.

#### [Economic Development Strategic Plan](#)

This plan describes a high-level strategy to direct local economic development efforts in the City of Tualatin. It recognizes priorities for infrastructure development and quality of life addressed by other master plans, in addition to identifying important industry clusters. The Plan recommends approaches to retain and expand existing businesses as well as attract new businesses. The five target industry clusters identified include: advanced manufacturing; health care and related businesses; corporate and business services; food processing, distribution and wholesale; wood, paper, printing and related businesses.

#### [Water Master Plan \(2013\)](#)

The Water Master Plan was a comprehensive analysis of the City of Tualatin’s water system. The plan covers Tualatin’s network of water pipelines, storage tanks, valves and hydrants. Its purpose is to identify system deficiencies, determine future water distribution system supply requirements, and recommend water system facility improvements that correct existing deficiencies and provide future system expansion. The Plan did not anticipate the Basalt Creek planning area, as concept planning and determination of the city limit boundary had not been complete. At the time of its writing, it was expected that the Water Master Plan would be updated in the future to include Basalt Creek.

### Sanitary Sewer Master Plan (2014)

The 2014 Sanitary Sewer Master Plan is currently on hold until completion of the Basalt Creek planning process. It will provide a comprehensive analysis of the city's sanitary sewer system, including Tualatin's network of gravity & force main lines and pump stations. Its purpose is to identify system deficiencies, determine future collection system requirements, and recommend sanitary sewer system facility improvements that correct existing deficiencies and provide future system expansion.

## Area Plans

### *Coffee Creek Master Plan (2007)*

The Coffee Creek planning area is comprised of 216 acres to the south of the Basalt Creek area. It has been designated by Metro as a Regionally Significant Industrial Area (RSIA) and includes strict limits on the amount and size of retail, service, residential and office uses allowed to be developed there. Forecasts in the Plan suggest that between 1,736 and 1,890 jobs could be added to the area between 2006 and 2026, with over 90% identified as industrial.

No parcels in the planning area have been annexed yet; Wilsonville's process is property-owner initiated and the area has seen little development since the Plan's adoption. The City has identified form-based code as a tool to streamline the development process and is creating a Form Based Code (FBC) and pattern book to apply to the Coffee Creek area.<sup>10</sup> More information about how new infrastructure in the Coffee Creek and Basalt Creek planning areas might be coordinated, see Section V: Infrastructure.

### *Southwest Tualatin Concept Plan (2010)*

The Southwest Tualatin Concept Plan (SWCP) is a guide for the industrial development of a 614-acre area (448 net buildable acres) located outside the city south of SW Tualatin-Sherwood Road and generally between SW 115th and 124th Avenues. The Southwest Tualatin area is adjacent to and directly west of the Basalt Creek planning area, and is adjacent to/east of the Tonquin Employment Area. It extends south to Tonquin Road and is located in the vicinity of the Tigard Sand and Gravel quarry. A portion of the area was designated a Regionally Significant Industrial Area (RSIA) by Metro in 2004, with the assumption that it would be developed with a mix of light industrial and high-tech uses in a campus-like setting. The Concept Plan estimates that 3,500 new jobs will be located in the area by the year 2035 (2010 forecast).<sup>11</sup>

Currently there is no water or sewer infrastructure in this planning area. However, the City of Tualatin Water and Sewer Master Plans both include the Concept Plan area in the hydraulic modeling and capital improvement project (CIP) identification. Recommended improvements include:

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<sup>10</sup> City of Wilsonville Community Development Department webpage: <http://www.ci.wilsonville.or.us/594/Light-Industrial-Form-Based-Code>. Retrieved August 21st, 2014.

<sup>11</sup> This number is slightly smaller than the result from Metro's model, which forecast in 2005 that 3,735 new jobs would be added to the area by 2035.



## Water

- A new Level A reservoir (CIP Project R-1) and pipeline projects (P-6 and P-16)
- 13,000 linear feet of 16-inch-diameter pipe to provide a looped water supply

## Sewer

- A new 24-inch pipeline located in Tualatin-Sherwood Road, extending from the Concept Plan area/URA easterly to SW Avery Street;
- Increase existing 12- to 21-inch pipe to 18-inch and 36-inch pipeline extending from near the SW Tualatin Sherwood Road/SW Avery Street intersection to the existing Bluff/Cipole Trunk
- Upsize existing trunk line pipe diameters.

## Stormwater

- New conveyance system along roadways
- Facility(ies) to treat and detain (if necessary) site development runoff

The sequencing of infrastructure construction will be coordinated with the timing of development in the area, as well as with the Basalt Creek planning area.

### *Tonquin Employment Area Concept Plan (2010)*

This planning area is comprised of 300 acres designated industrial land northwest of (but not adjacent to) the Basalt Creek planning area. It is bounded on its eastern edge by the future 124<sup>th</sup> Avenue extension. It was added to the UGB in 2004 and will be annexed to the City of Sherwood on a case-by-case, property owner-initiated basis. Creation of an Employment Industrial Zone is proposed to implement this plan. The regional employment forecast projects the addition of 2,290 more jobs during the next 20 years, 83% being industrial and 17% a mix of retail, commercial, services and office.

# III. Natural and Historic Resources

The purpose of this section is to describe the natural and historic resources in the planning area, as well as the regulatory framework through which they may be protected, conserved or mitigated for.

## Natural Features

The Basalt Creek planning area is named for the creek flowing north to south through the area, eventually draining into the Willamette River. Basalt Creek has alternatively been known as Seeley's Creek and Tappin Creek. The area primarily drains into the Willamette River; a small area in the northeast corner drains into the Tualatin River.

The general character of the area's landscape was shaped by the Glacial Lake Missoula Ice Age floods, a series of cataclysmic floods that formed the Columbia River Gorge and the Willamette Valley during the last Ice Age. Remains from the Ice Age floods that can be seen in and around the Basalt Creek planning area include glacial erratic, scablands, kolk ponds, flood channels and ripple marks. Today, the area has been described as being "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."<sup>12</sup>

In 2009, federal legislation was passed to create the National Park Service's Ice Age Flood National Geologic Trail in order to bring the dramatic story of the Ice Age Floods to the public's attention. The Trail is intended to be a network of marked touring routes extending across parts of Montana, Idaho, Washington and Oregon, with several special interpretive centers located across the region. This federal legislation will help bring funding and tourism to local trails that will be a part of the region-wide Ice Age Trail network. 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 several-mile section traversing the Basalt Creek planning area (Figure 12).

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<sup>12</sup> Ice Age Tonquin Master Plan, 2012 P24:  
[http://www.oregonmetro.gov/sites/default/files/tonquin\\_trail\\_master\\_plan.pdf](http://www.oregonmetro.gov/sites/default/files/tonquin_trail_master_plan.pdf)

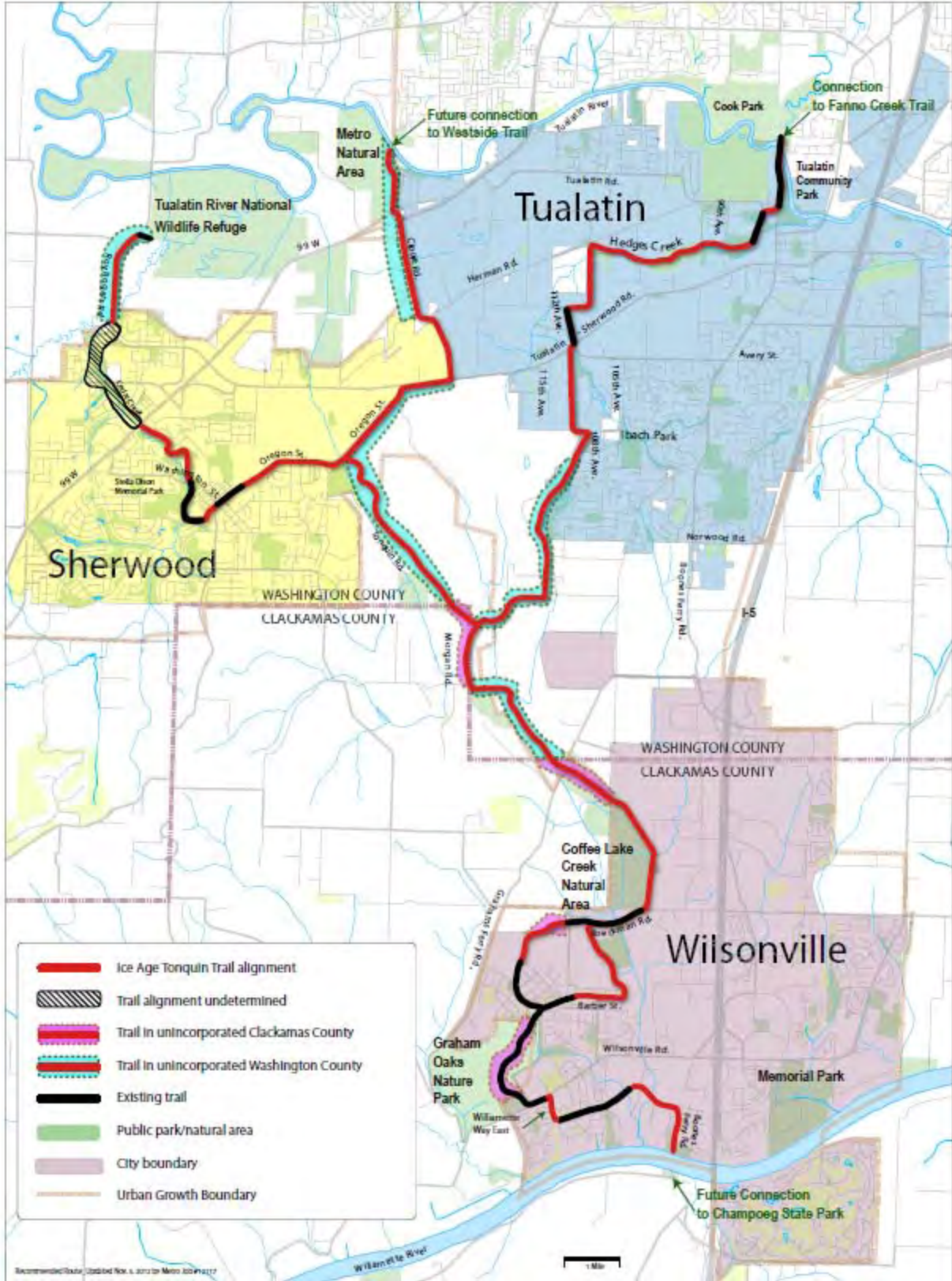


Figure 12 Proposed Trail Alignment from Metro’s Ice Age Tonquin Trail Master Plan, 2013.

## Groundwater Hydrology

The Basalt Creek planning area falls primarily in the Middle Willamette Sub Basin, with a very small section in the northeast corner falling in the Tualatin Sub Basin (Figure 13). Within the Middle Willamette Sub Basin, the planning area is predominately in the Abernethy Creek Watershed (the small portion in the Tualatin Sub Basin is in the Fanno Creek Watershed). Abernethy Creek flows for approximately 16 miles through the hills east and north of Oregon City, joining the Willamette River from the east. The total drainage area of Abernethy Creek is 30 square miles.<sup>13</sup>

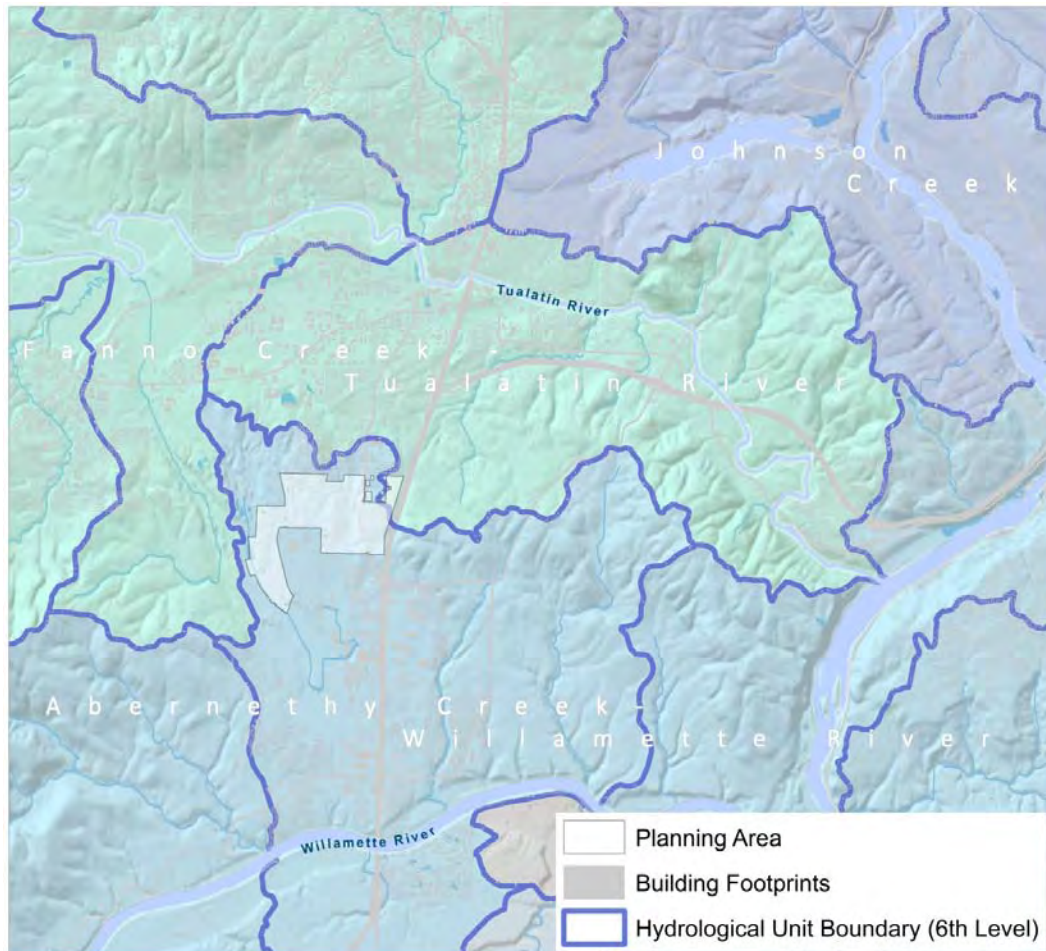


Figure 13 Basalt Creek planning area in the context of the Middle Willamette and Tualatin River Watersheds. Source: Fregonese Associates, RLIS 2014.

## Soils

Hydrologic soils are assigned a letter designation of A, B, C or D, based on the rate of water transmission through the soil, or how well the soil drains. Class A soils have the best infiltration and drainage. Class B soils will infiltrate water into the soil somewhat quickly and drain marginally well. They have a lower

<sup>13</sup> Flood Insurance Study for Clackamas County, Oregon, Vol. 1 (2008)  
<http://oregonriskmap.com/index.php/mappingtools/all-downloads/pdf/37-clackamas-co-fis-vol1/file>

runoff potential. Class C soil infiltrates fairly poorly and drains poorly. Class D soils infiltrate water into the soil very slowly and have correspondingly high runoff potential. There is no Class A soil in the planning area (Figure 14). Well-drained soils comprise 85% of the area and 13% of the area is comprised of poorly draining soils. The remaining 1.7% is split between moderately well- and somewhat-poorly drained soils.

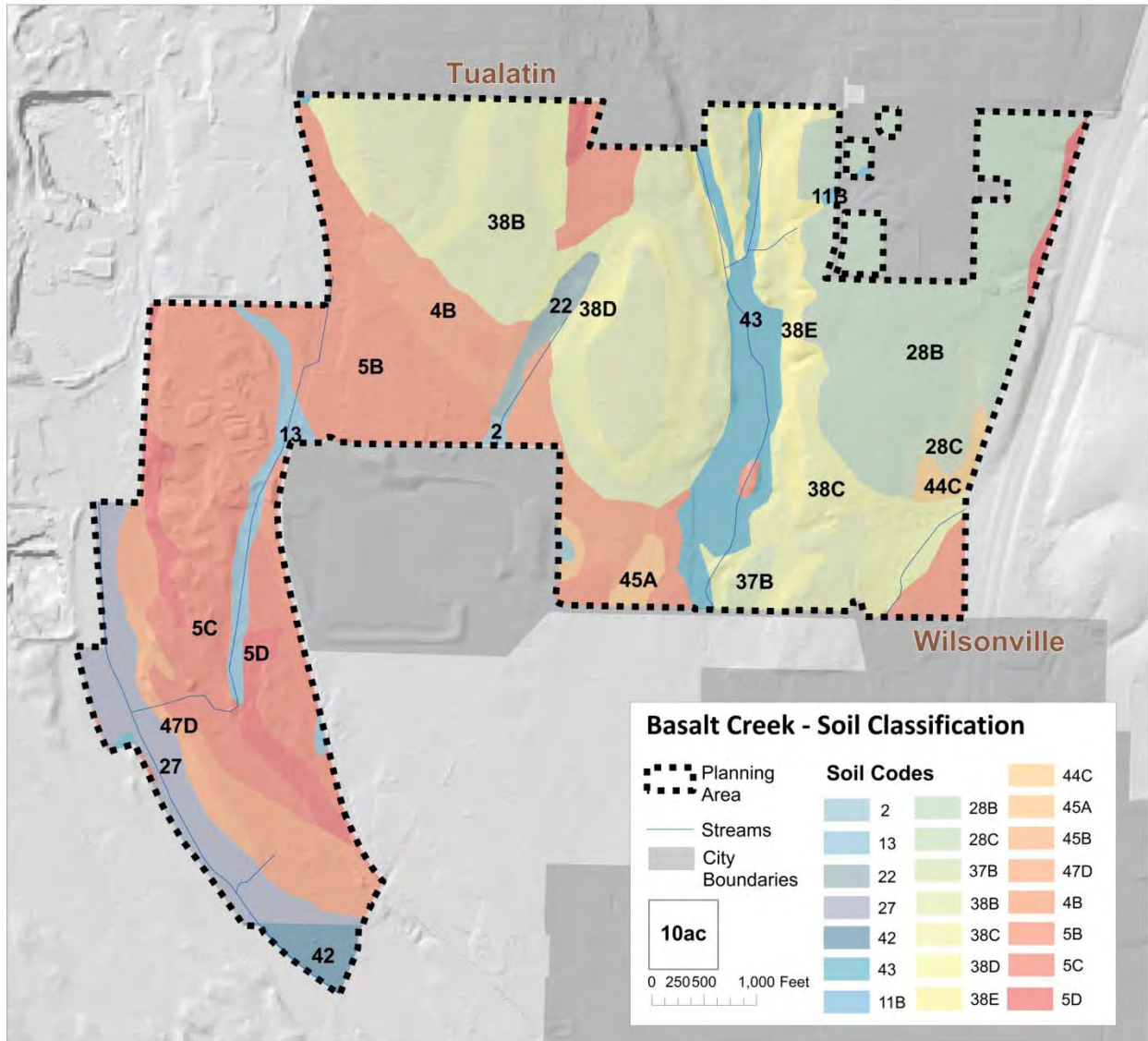






















Figure 14 Hydrologic Classification of Soils in the Basalt Creek planning area. Source: Fregonese Associates, USDA Soil Survey 2014.

**Table 2** Descriptions of Hydrologic Soil Classifications from Figure 14. Source: USDA Soil Survey 2014.

Map Symbol	Soil Code	Soil Description	Acres	% of Planning Area	Drainage
	2	Amity silt loam	1.9	0.2%	Somewhat poorly drained
	13	Cove silty clay loam	15.2	1.8%	Poorly drained
	22	Huberly silt loam	8.2	1.0%	Poorly drained
	42	Humaquepts, ponded	7.5	0.9%	Poorly drained
	43	Wapato silty clay loam	41	4.8%	Poorly drained
	11B	Cornelius and Kinton silt loams, 2 to 7 percent slopes	0.9	0.1%	Moderately well-drained
	28B	Laurelwood silt loam, 3 to 7 percent slopes	109	12.9%	Well-drained
	28C	Laurelwood silt loam, 7 to 12 percent slopes	10.4	1.2%	Well-drained
	37B	Quatama loam, 3 to 7 percent slopes	4	0.5%	Moderately well-drained
	38B	Saum silt loam, 2 to 7 percent slopes	131.5	15.5%	Well-drained
	38C	Saum silt loam, 7 to 12 percent slopes	102.7	12.1%	Well-drained
	38D	Saum silt loam, 12 to 20 percent slopes	12.1	1.4%	Well-drained
	38E	Saum silt loam, 20 to 30 percent slopes	30.1	3.6%	Well-drained
	44C	Willamette silt loam, 7 to 12 percent slopes	5.7	0.7%	Well-drained
	45A	Woodburn silt loam, 0 to 3 percent slopes	7.2	0.9%	Moderately well-drained
	47D	Xerochrepts-Rock outcrop complex	10.3	1.2%	Well-drained
	4B	Briedwell silt loam, 0 to 7 percent slopes	50.2	5.9%	Well-drained
	5B	Briedwell stony silt loam, 0 to 7 percent slopes	148.7	17.6%	Well-drained
	5C	Briedwell stony silt loam, 7 to 12 percent slopes	55.1	6.5%	Well-drained
	5D	Briedwell stony silt loam, 12 to 20 percent slopes	25.9	3.1%	Well-drained
	<b>Subtotals</b>		<b>839.4</b>	<b>99.1%</b>	

## Streams and Wetlands

There are two main streams running through the planning area – Basalt Creek (also known as Seeley’s Creek or Tappin Creek) and an unnamed, intermittent creek to the west. Coffee Lake Creek forms the western boundary of the planning area (Figure 15).

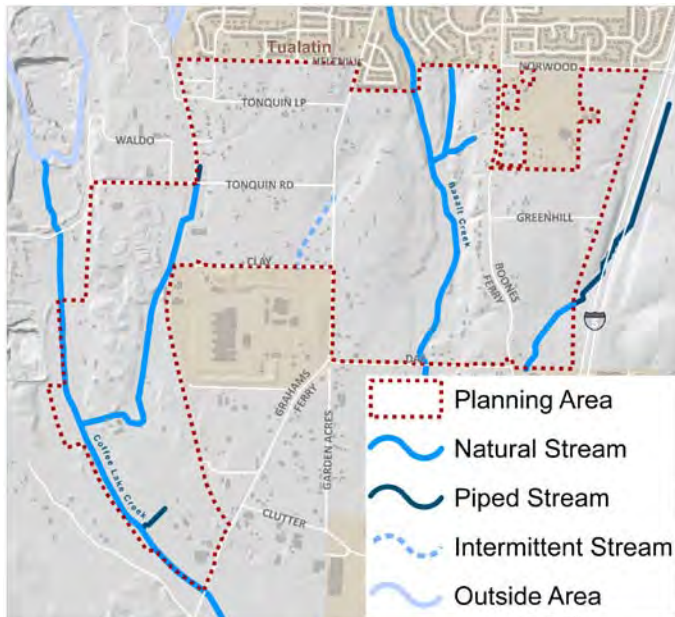


Figure 15 Natural, Underground and Intermittent Streams in Basalt Creek planning area. Source: Fregonese Associates, RLIS, City of Wilsonville field survey 2014.

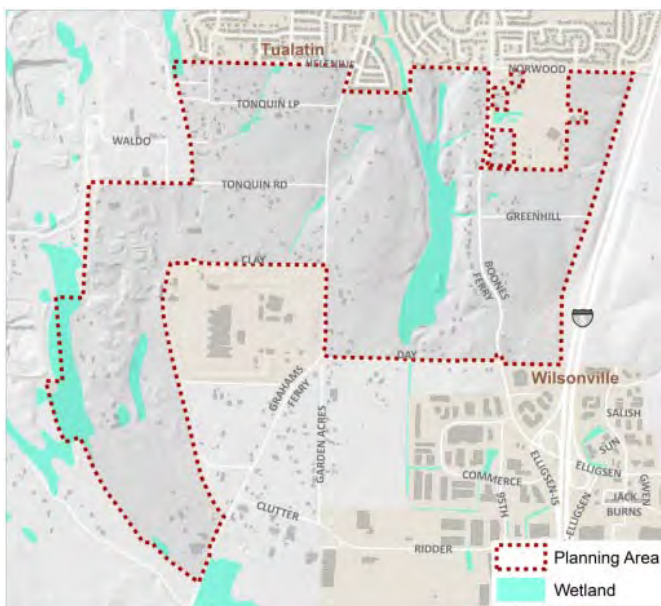


Figure 16 Wetlands in Basalt Creek planning area. Source: Fregonese Associates, RLIS, City of Wilsonville field survey 2014.

Through a combination of RLIS data and field work by the City of Wilsonville it has been determined that there are 11,478 feet of natural streams, 8,157 feet of underground streams and 1,402 feet of intermittent streams in the planning area.<sup>14</sup> In the plan area there are 69 acres of wetlands (8% of the planning area (Figure 16), including 49 acres of open water.

### Floodplain

On the western border of the planning area (Figure 17) there are 53 acres of land (6% of the area) around Coffee Lake Creek that are within the 1% annual chance flood event area, as designated by the Federal Emergency Management Agency (FEMA) in a 2005 revision of the Washington County Flood Insurance Study (FIS).<sup>15</sup> The small portion of the planning area within Clackamas County is unaffected by the 1% annual chance flood event area, as identified in the Clackamas County FIS (2008).<sup>16</sup>

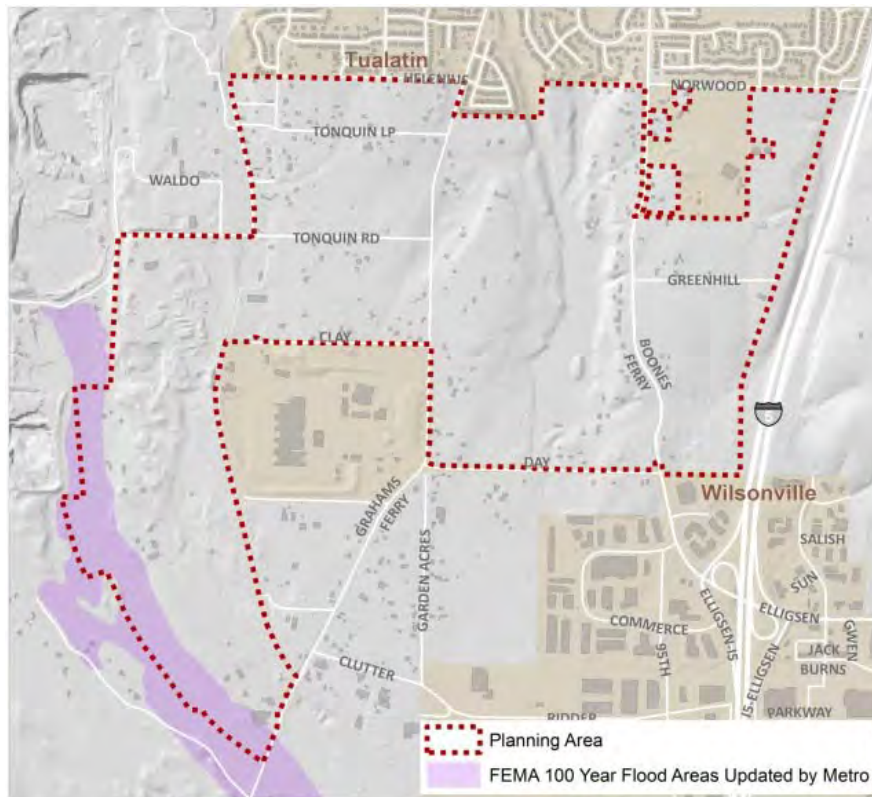


Figure 17 FEMA 1% annual chance flood event area in the Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014, FEMA 2007.

<sup>14</sup> Data sources: RLIS, Wetland Delineation Report for proposed Boones Ferry widening, additional wetlands digitized by FA based on 2013 and 2012 (leaf free) aerials.

<sup>15</sup> In 2005 the original 1980 FIS study was revised to incorporate new floodplain data for Ash Creek, Fanno Creek and Summer Creek in the unincorporated areas of Washington County in response to the largest flood event to occur since 1980, the November 1996 flood along Fanno Creek. Source:

<http://www.oregonriskmap.com/index.php/mappingtools/all-downloads/pdf/174-washington-co-fis-2005-part1/file>

<sup>16</sup> FIS for Clackamas County, Oregon, 2008.



## Regulatory Framework for Conserving Natural Resources

### *Oregon Land Use Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces*

The purpose of Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. It directs local governments to adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. In the Metro region Titles 3 and 13 of Metro's Urban Growth Management Functional Plan provides a regional framework for local governments to implement Goal 5.

### *Metro Title 3: Water Quality, Flood Management and Fish and Wildlife Conservation*

Metro's Title 3 requires local jurisdictions to limit or mitigate the impact of development activities on Water Quality and Flood Management Areas which include wetlands and riparian areas. In 2001 Metro conducted a regional inventory of wetlands and riparian areas protected by Title 3.

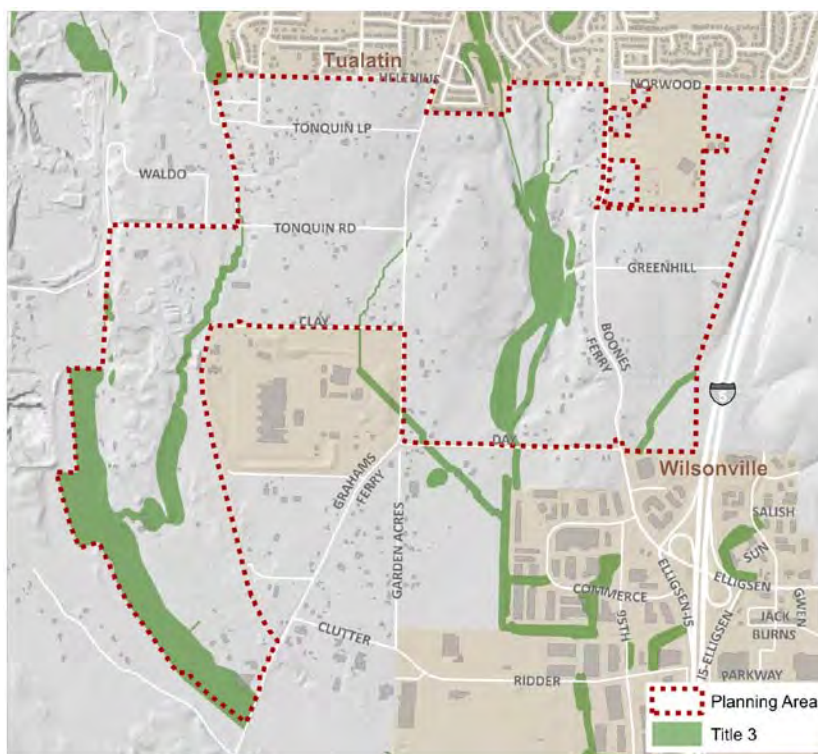


Figure 18 Title 3 lands (116 acres; 14% of total area) in Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014.

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 (Figure 18). These lands are restricted for development and buffered by a vegetated corridor (the width of which is determined by factors described in the Natural Resources section of this document). Any development within the vegetated

corridor must be mitigated by environmental restoration and/or stormwater retention and water quality measures, as determined by the performance standards described in Metro’s Title 3. 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 so existing local standards from each City would likely apply upon annexation of a planning area property into either Wilsonville or Tualatin.

*Metro Title 13 – Nature in Neighborhoods*

Title 13 is a policy requiring local jurisdictions to protect and encouraging them to restore a continuous ecologically viable streamside corridor system integrated with upland wildlife habitat and the urban landscape. In 2001 Metro conducted a regional habitat inventory and identified the location and health of fish and wildlife habitat based on different sets of criteria for waterside, riparian and upland habitat. These areas were named Habitat Conservation Areas (HCAs).

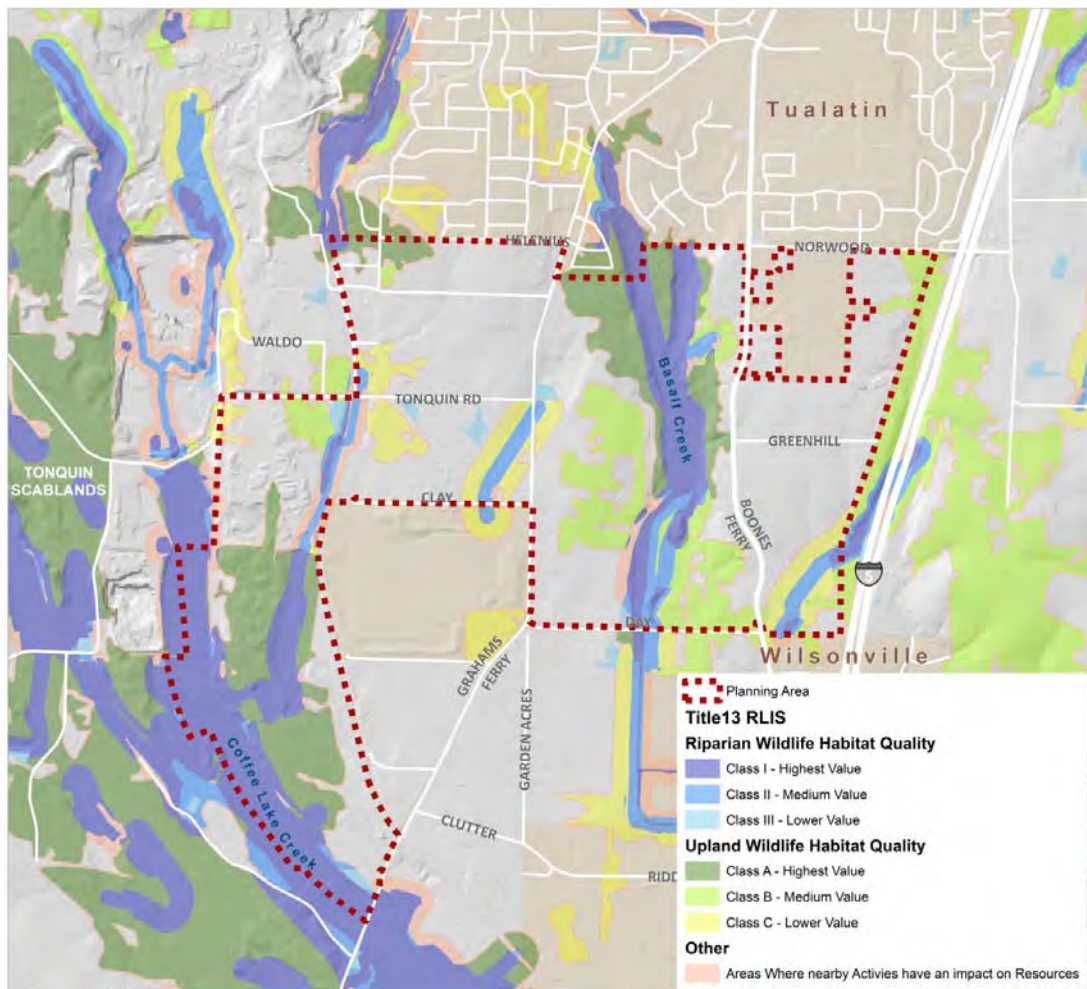


Figure 19 Title 13 lands in the Basalt Creek planning area (431 acres total, 51% of total area).<sup>17</sup> Source: Fregonese Associates, RLIS 2014.

<sup>17</sup> Note that most of these lands, other than Classes I and II of Riparian Habitat, can still accommodate some level of development.

Development is not restricted in HCAs on land that was brought into the UGB before December 28, 2005<sup>18</sup>. However, it is strongly encouraged that HCAs are taken into consideration during the concept planning process. Development in areas designated as protected under Title 13 in the Basalt Creek area is generally discouraged. If development does take place incorporation of low impact design and mitigation strategies to maintain the functionality of these important ecological areas will be important.

In the planning area there are 130 acres designated as Riparian Wildlife Habitat Class I, 31 acres designated as Class II, and 7 acres Class III. In addition, 103 acres are designated as Upland Wildlife Habitat Class A, 72 acres are Class B, and 37 acres are Class C (Figure 19). Designated impact areas comprise 52 acres.

*Washington County Comprehensive Plan – Rural/Natural Resource Element*

No land within the planning area is identified by the Washington County Comprehensive Plan as a Significant Natural Resource. The nearest Significant Natural Resource area is comprised of the Tonquin Scablands, to the west of Coffee Lake Creek.

*Clean Water Services Design & Construction Standards (2007)*

Clean Water Services (CWS) is the regional agency that manages stormwater in the urban areas of the Tualatin River Watershed, including the entire City of Tualatin. CWS holds a regional National Pollutant Discharge Elimination System (NPDES) storm water permit. *Chapter 3: Sensitive Areas and Vegetated Corridors* describes the methodology used by CWS to determine mitigation requirements in sensitive areas such as vegetated corridors surrounding streams and wetland habitat.

**Table 3** Vegetated Corridor Widths Adjacent to the Sensitive Area Where Activity is Not Redevelopment. Source: Clean Water Services Design and Construction Standards, Chapter 3.

Sensitive Area Type	Width: Slope < 25%	Width: Slope ≥ 25%
<b>Existing or created wetlands:</b>		
< 0.5 acres and isolated	25 ft	Variable from 25-200 ft
< 0.5 acres and isolated	50 ft	Variable from 50-200 ft
≥ 0.5 acres	50 ft	Variable from 50-200 ft
Natural lakes, ponds, and in-stream impoundments	50 ft	Variable from 50-200 ft
<b>Springs:</b>		
Intermittent flow	0	15 ft.
Perennial flow	50 ft.	Variable from 50-200 ft
<b>Intermittent Streams draining:</b>		
< 10 acres	0	0
≥ 10 to < 50 acres	15 ft	Variable from 50-200 ft
≥ 50 to < 100 acres	25 ft	Variable from 50-200 ft
≥ 100 acres	50 ft	Variable from 50-200 ft
<b>Perennial Streams:</b>		
Other than Tualatin River	50 ft	Variable from 50-200 ft
Tualatin River	125 ft	Variable from 50-200 ft

<sup>18</sup> Metro Title 13: Nature in Neighborhoods 2007, S3.07 P85.

These standards exceed the level of conservation required by Metro’s Title 3 (Table 3). Permitted development must comply with CWS’s Design and Construction Standards & Service Provider Letters (SPLs) for impacts to vegetated corridors.

*City of Wilsonville – Significant Resource Overlay Zone (SROZ)*

Within the City of Wilsonville, the Significant Resource Overlay Zone (SROZ) includes floodplains, wetlands, and riparian corridors around significant resources and upland habitat, as well as vegetated corridors around areas designated as Significant Resources. Impact areas are generally considered to be the areas within 25 feet of a Significant Resource area. Development is allowed in portions of the SROZ (i.e. upland forests), but can only be permitted through review of a Significant Resource Impact Report (SRIR). An SRIR is a report that delineates specific resource boundaries and analyzes the impacts of development within mapped significant resource areas.<sup>19</sup> A table comparing these methodologies can be found in Section VIII: *Land Capacity Analysis*.

Table 4 Metro Water Quality Resource Area Slope Calculations. Source: Metro 2014.

Protected Water Feature Type	Slope Adjacent to Protected Water Feature	Starting Point for Measurements from Water Feature	Width of Vegetated Corridor (Setback)
Primary Protected Water Features	< 25%	Edge of bankful flow or 2-year storm level; Delineated edge of Title 3 wetland	50 ft
Primary Protected Water Features	≥ 25% for 150 ft or more	Edge of bankful flow or 2-year storm level; Delineated edge of Title 3 wetland	200 ft
Primary Protected Water Features	≥ 25% for less than 150 ft	Edge of bankful flow or 2-year storm level; Delineated edge of Title 3 wetland	Distance from starting point of measurement to top of ravine (break in ≥ 25% slope), plus 50 ft
Secondary Protected Water Features	< 25%	Edge of bankful flow or 2-year storm level; Delineated edge of Title 3 wetland	15 ft
Secondary Protected Water Features	≥ 25%	Edge of bankful flow or 2-year storm level; Delineated edge of Title 3 wetland	50 ft

<sup>19</sup> Full requirements for an SRIR can be found in Section 4.139.05 of the Wilsonville Zoning Code (pp. B-133 - 138). Section 4.139 also outlines mitigation standards for development encroaching on an Impact Area or Significant Resource Overlay Zone as well as development activities that would trigger a Class I or II Administrative Review Process, in addition to a list of special provisions.

## Cultural and Historic Resources

In addition to the unique geologic history of the Basalt Creek area, community members have identified the old Carlon Schoolhouse (Figure 20) as being historically significant. Off Grahams Ferry Road, behind Chick-a-Dee Nursery and not far from Day Road, the structure has often been overlooked as an important historic school that was used in the late 1800s, up until just before the first Tualatin schools. In 1939, the Carlon School District consolidated with Tualatin. It is still in good condition, maintained through a foundation.<sup>20</sup>



Figure 20: The Carlon Schoolhouse. Source: Martinazzi, Loyce. Tualatin Life Newspaper August 19, 2014.

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<sup>20</sup> Addington, Yvonne, Board Member of Tualatin Historical Society. Email communication, August 19<sup>th</sup>, 2014.

# IV. Public Facilities

## Schools

The study area falls within the Sherwood School District (88J), which has an estimated enrollment of 5,158 and includes four elementary schools, two middle schools, Sherwood High School, and Sherwood Charter School (Figure 21).

The planning area is near Tualatin High School, one of two high schools in the Tigard Tualatin School District. The district 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 a 1,000 students in the future.<sup>21</sup>

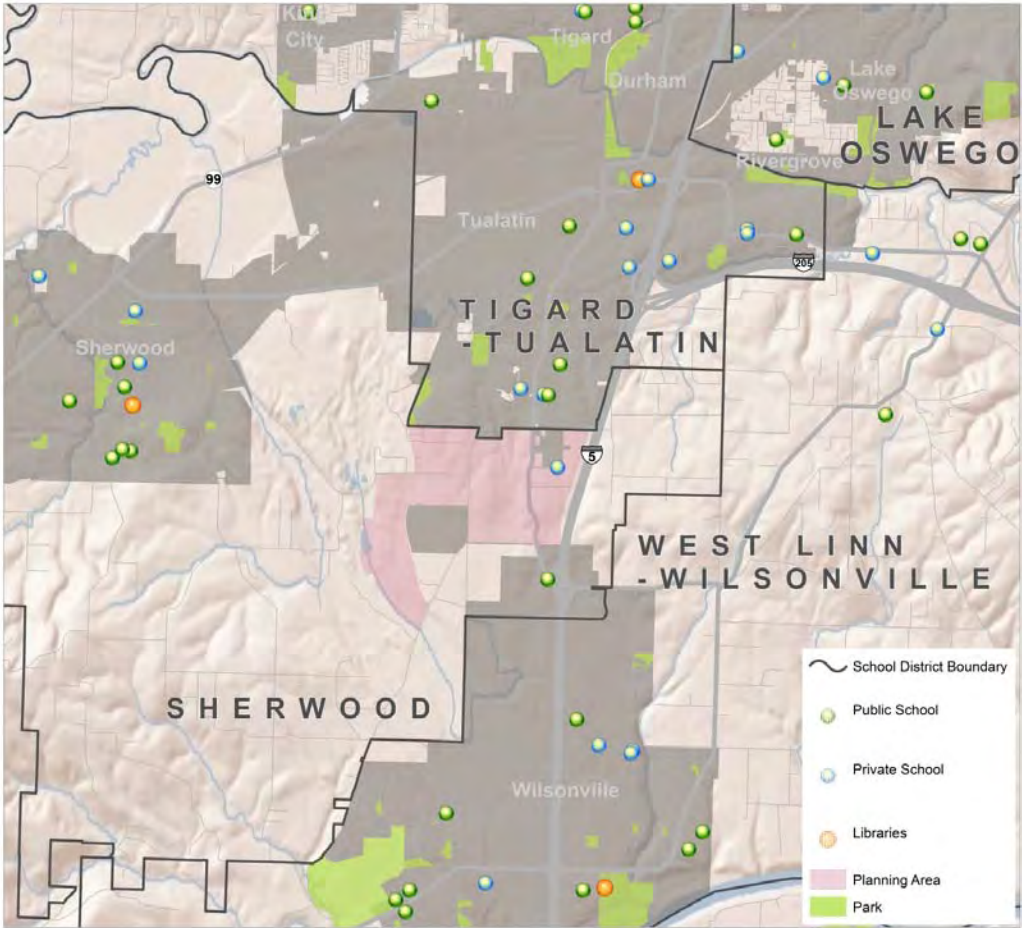


Figure 21 Schools, libraries and parks near the Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014.

<sup>21</sup> Levasa, Roger. Director of Development for Horizon Church. Personal communication July 31<sup>st</sup>, 2014.

## Parks

Wilsonville Parks owns and maintains 16 different public parks. City of Tualatin Parks and Recreation owns and maintains 9 different parks (Figure 21).

## Libraries

There are three libraries in the general vicinity of the planning area (Figure 21): the Tualatin Public Library located at 18878 SW Martinazzi Avenue, serving 24,420 residents, the Wilsonville Public Library located at 8200 SW Wilsonville Road, and the Sherwood Public Library at 22560 SW Pine Street, which serves 17,579 residents.

## Fire

There are three Tualatin Valley Fire & Rescue (TVF&R) stations in general proximity of the Basalt Creek area (Stations 33, 34, 52). The TVF&R training center is just west of the planning area boundary (Figure 22).

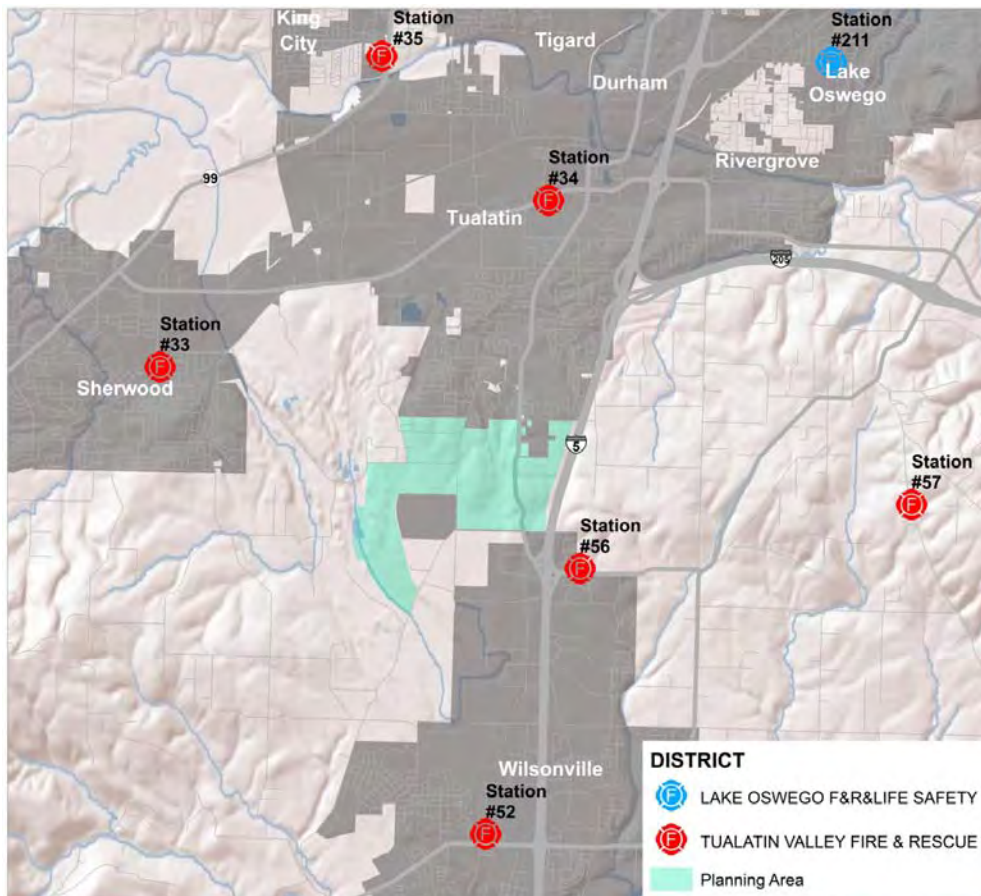


Figure 22 Fire station locations and service area boundaries near the Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014.

## Police

Currently the Washington County Sheriff's Office provides law enforcement services in the Basalt Creek planning area. The Washington County Sheriff's Department and Jail are located about twenty miles from the planning area, in downtown Hillsboro.

Wilsonville contracts with the Clackamas County Sheriff's Office to provide law enforcement services to the City. The contract makes certain special services available to the City as well, including its detectives division, hazardous materials team, special investigations unit and traffic team. It also provides the city with a dedicated chief of police, school resource officer, and detective, in addition to 15 deputies. The Clackamas County Jail facility is located about 20 miles east of Wilsonville, in Oregon City.

The Tualatin Police serve the area inside the city's limits. The police department consists of 38 sworn officers and an additional 8.5 professional staff members providing administrative support.<sup>22</sup> The department includes a detective unit, police services unit, school resource unit, Honor Guard (volunteer-based), park rangers, police reserves and a traffic team. The Tualatin Police Department does not have a facility to hold prisoners, and utilizes the Washington County Jail in Hillsboro.

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<sup>22</sup> Tualatin Police Department Website: <http://www.tualatinoregon.gov/police/police-services-unit> retrieved July 31st, 2014.



# V. Commercial, Industrial & Residential Real Estate Markets

The purpose of this section is to provide a picture of existing real estate market conditions and the outlook for office, residential, and retail development in Basalt Creek and adjacent areas.



Figure 23 Photo of planning area: Grahams Ferry Road, looking north into the Basalt Creek planning area. Source: Leland Consulting Group 2014.

## Industrial and Office Market

Basalt Creek is located near the center of one of the region’s largest clusters of employment land, which includes existing developed areas in the cities of Tualatin, Wilsonville, and Sherwood, as well as the planned future employment areas of Southwest Tualatin, Tonquin, and Coffee Creek). A market area was defined for this report so results can be compared with future analysis (Figure 24). The market area includes the cities of Tualatin, Wilsonville, and Sherwood, as well as some surrounding areas.

The Metro Regional Government projects rapid employment growth of 2.3% annually for the market area through 2035—about 40% faster than the employment growth in the overall region (1.7 %). This pattern indicates that ongoing business expansion and job creation is expected for these three cities, comprising a large portion of the southwestern metropolitan area.

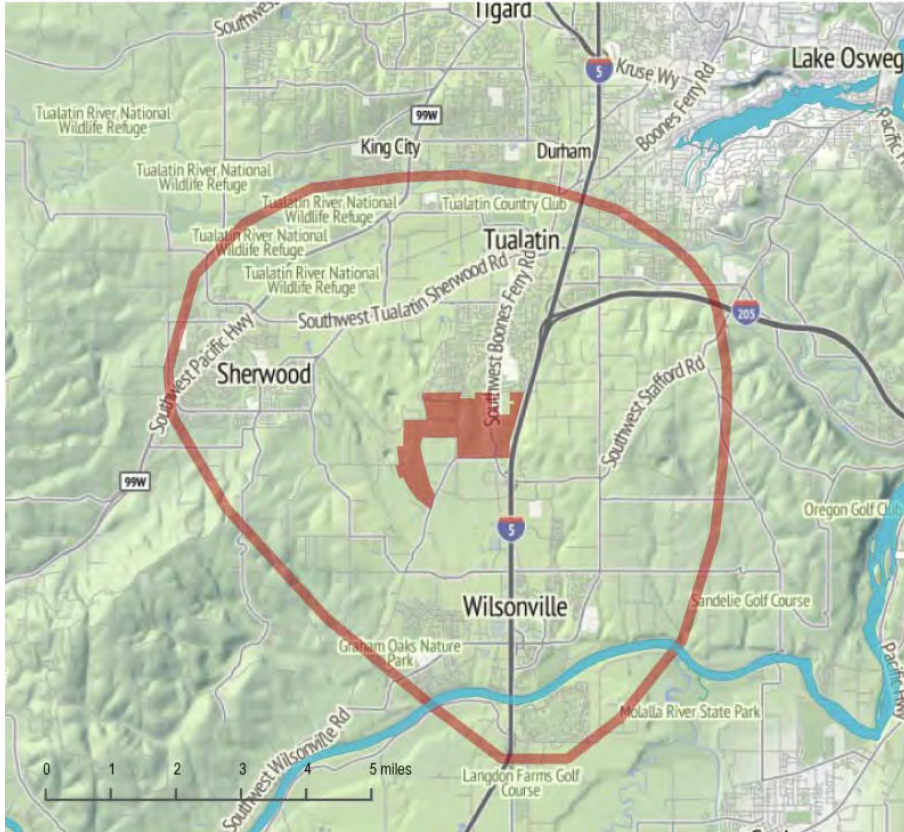


Figure 24 Market Analysis Area for the Basalt Creek area. Source: Leland Consulting Group, 2014.

Tualatin and Wilsonville have independently identified a series of industry clusters in which the two cities are already highly competitive, and in which they expect future significant business and job growth. 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. Leading organizations within these clusters include Lam Research, Legacy Meridian Park Medical Center, the Oregon Institute of Technology, Mentor Graphics, and Xerox Corporation. Businesses in these categories would be well-suited to locate in the Basalt Creek planning area.

Both Tualatin and Wilsonville have seen significant industrial and office development during the past three decades. Development peaked during the 1990's and has slowed following the recession; however, industrial development in particular is expected to resume and accelerate in coming years due to a desire to “onshore” jobs (bring employment back from overseas), shorten supply chains, and take advantage of lower domestic costs in some industries. Between 1980 and 2014, the cities of Tualatin and Wilsonville saw on average over 400,000 square feet of industrial and office building development annually, and 56.6 acres of industrial and office land development annually. The amount of industrial development (including warehousing, production, flexible office/industrial space, etc.) in both cities is significantly larger (more than seven times) than the amount of office development. This general dynamic is expected to persist for the foreseeable future.

Building types vary significantly within the market area: some industrial facilities contain more than 200,000 square feet of building area, while many other small office and industrial flex spaces are less than 20,000 square feet in size. The floor area ratio (FAR) of most buildings, however, generally falls within the range of 0.2 to 0.4, which generally indicates one- to three-story buildings with large areas for parking and/or freight movement. A small number of office buildings have higher FARs up to about 1.0, which indicates more dense buildings and some structured parking.

Going forward, employment development in the Basalt Creek area will benefit from a number of competitive advantages. These include its direct access to I-5, superior to other employment areas in the region; access to I-205, Highway 217, arterial roads, and transit service; a growing and educated workforce; and established and expanding industry clusters.

## Housing Market

Basalt Creek's location is also an asset for residential development for housing: the planning area is immediately south of several South Tualatin residential neighborhoods, which contain attractive parks, street trees, and schools. The market area's current demographics are encouraging for new housing development. When compared to the Portland Metropolitan Area overall, this market area has a higher percentage of family households, larger households, higher household and per capita incomes, residents with college degrees, and residents who work in white collar jobs.

## Retail/Commercial Market

There are already several major regional and sub-regional retail nodes located to the north and south of the planning area—at Bridgeport Village, central Tualatin, and in Wilsonville. Thus any commercial space built in Basalt Creek will most likely serve primarily local residents and employees. These larger centers are located at I-5 interchanges. Retail in the Basalt Creek area would not have this same advantage. Whereas regional retail is anchored by fashion, consumer electronics, entertainment, and furniture/household goods, neighborhood retail is typically anchored by grocery stores, pharmacies and restaurants, and supplemented by other local goods and services.

## Industrial and Office Market Conditions

### *Regional Employment Context*

As discussed in *Section I: Local and Regional Planning Context*, Basalt Creek is contiguous with a number of other employment and industrial areas in the southwestern part of the Portland Metropolitan Region, including those in the cities of Tualatin, Wilsonville, and Sherwood. Viewed together, these areas comprise one of the largest industrial and employment clusters in the region, comparable in size to the agglomeration in northern Hillsboro (though smaller than the employment lands near Portland International Airport).

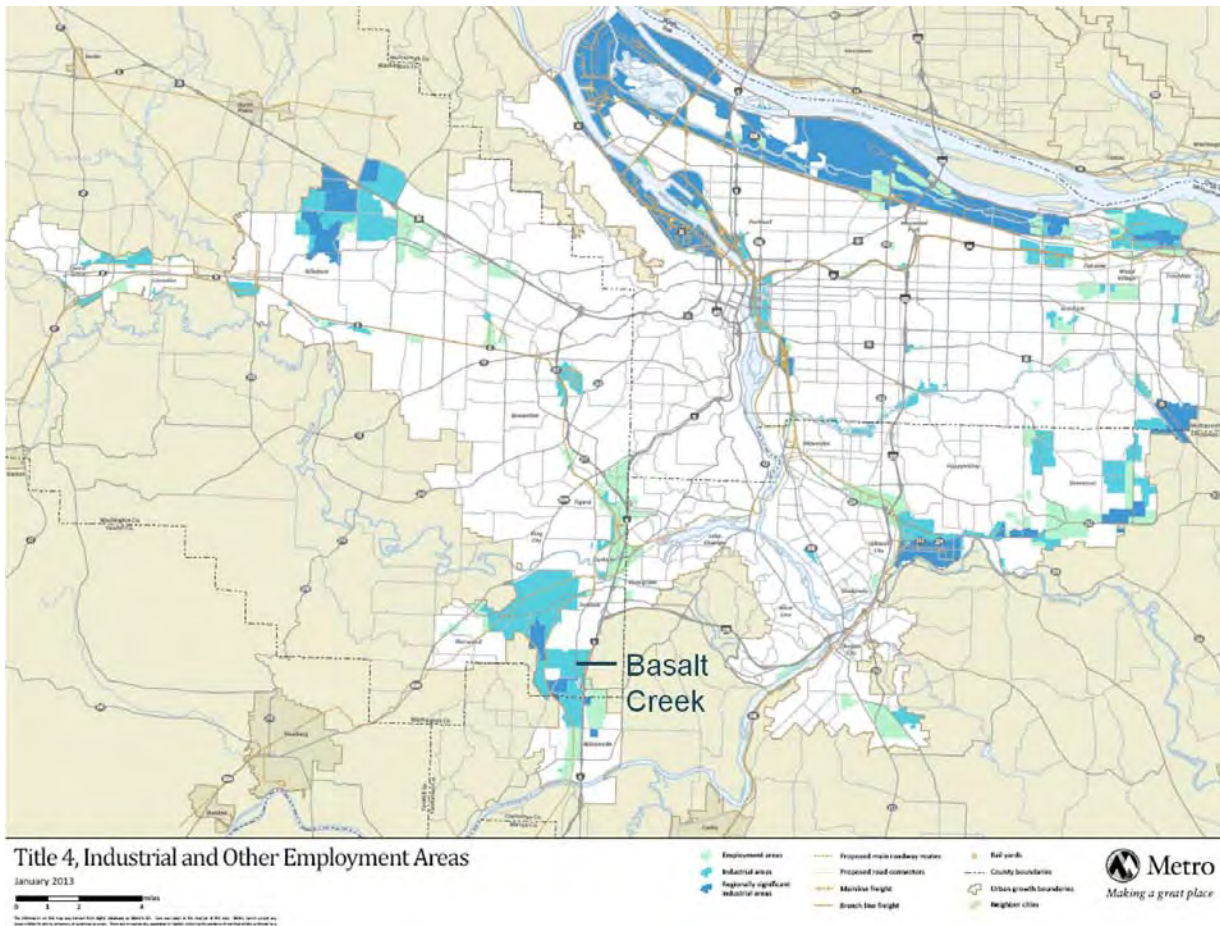


Figure 25 Title 4 Industrial and Other Employment Areas in Portland Metro Area. Source: Metro 2014.

A major feature and competitive advantage of this “Southwest Metro” employment cluster in general--and the Basalt Creek area in particular--is its immediate access to I-5, the west coast’s most important transportation route (Figure 25). Via I-5, the Basalt Creek area is closely connected to downtown Portland, numerous Willamette Valley communities, and major metropolitan areas in Washington and California. Interstate-205 and Highway 217 are also close by and easily accessible from the area. These freeway connections are a major benefit for industrial users (for whom distribution is an important site selection factor) and office-based businesses (which require access for their clients, suppliers, workforce, and collaborators).

*Industrial and Office Development, 1980 to 2014*

Figure 26 and Figure 27 below show the pace of industrial and office development in the cities of Tualatin and Wilsonville beginning in 1980. The vertical columns represent the building area (square feet) of development within each of the two cities in a given year, while the dashed line is a longer-term trend line, showing a five-year rolling average of built area for both cities combined. These historical

development trends are one data set that shapes expectations for future employment development in both cities and the Basalt Creek planning area.

Since 1980, both cities have seen considerably more industrial development than office development. Over this 34-year period, an average of 340,000 square feet of industrial space and 67,000 square feet of office space has been built in the two cities combined. Thus, the amount of industrial development has been about five times as great as office development.

### Industrial Development, Tualatin and Wilsonville, 1980 - 2014

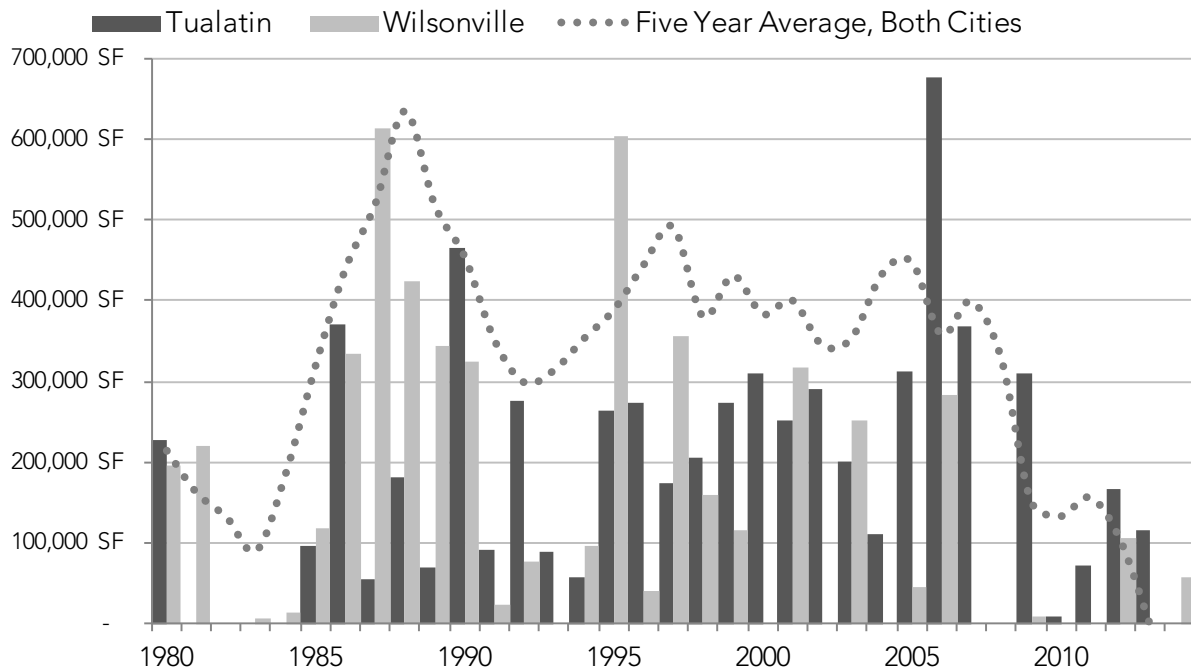


Figure 26 Industrial Development, Tualatin and Wilsonville, 1980 to 2014. Source: CoStar, Leland Consulting Group, 2014.

## Office Development, Tualatin and Wilsonville, 1980 - 2014

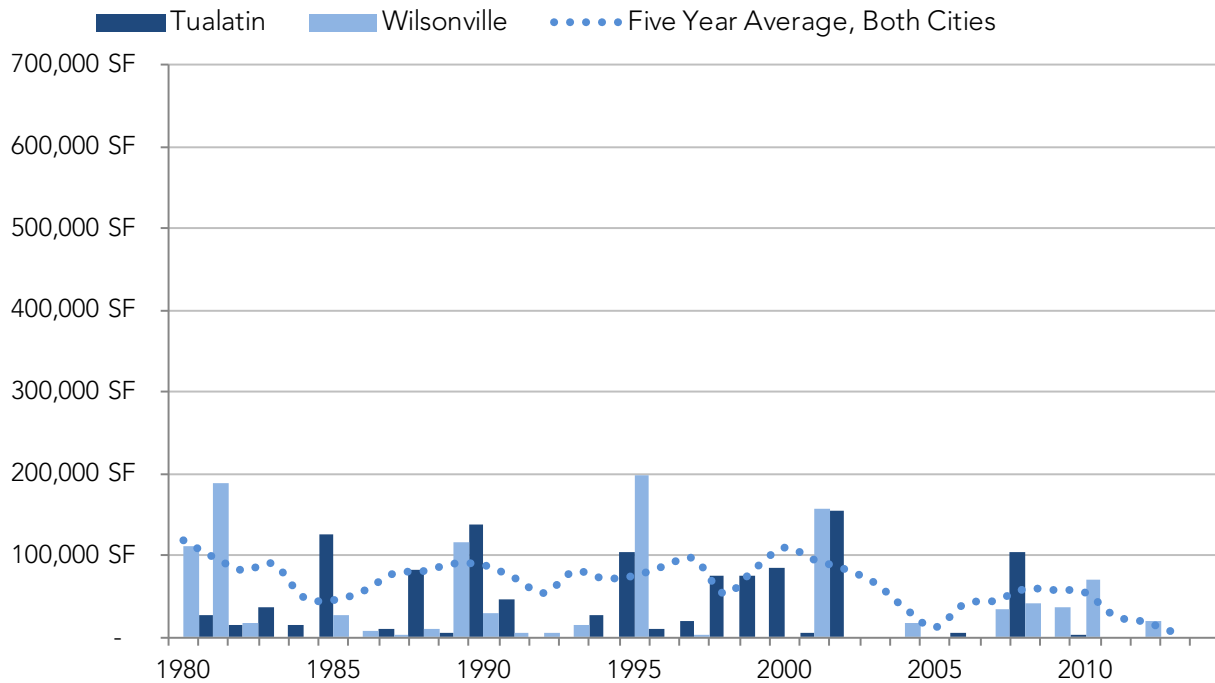


Figure 27 Office Development, Tualatin and Wilsonville, 1980 to 2014. Source: CoStar, Leland Consulting Group, 2014.

The past decade has been a slow period for both industrial and office development. The recession slowed industrial development beginning in 2008, particularly in Wilsonville. The pace of recent industrial development has been about half of development during the 1990s and early 2000s—considered to be a time of robust activity for industrial developers (see Figure 26). Office development has also slowed, although this trend began in 2003, before the recession. Office development in the past decade has also taken place at about half the pace of office development in the 1990s (Figure 27). Clearly, both industrial and office development go through significant peaks and troughs. By focusing on the five-year rolling-average trend line, however, a somewhat more consistent pattern of development can be seen.

### *Employment Building and Site Attributes*

Table 5 shows some key attributes of industrial and office development in Tualatin and Wilsonville. From looking at these attributes, it can be determined that:

- On average, 43.1 acres of industrial land and 13.6 acres of office land per year have been developed in both cities combined. Wilsonville has seen about 25 acres of employment land development per year, 16.3 acres of industrial land, and 8.3 acres of office land. Tualatin has seen about 32 acres of employment land development per year, 26.8 acres of industrial land, and 5.3 acres of office land. Employment land in Basalt Creek is likely to develop more slowly than this pace because there is less

developable land in the study area than the cities as a whole. However, development in Tualatin and Wilsonville can be used to gauge the rate of employment land development in Basalt Creek.

- Average industrial building sites (9.1 and 6.5 acres in Tualatin and Wilsonville respectively) tend to be larger than office building sites. Industrial buildings also tend to be larger than office buildings. Floor area ratios (FAR) are helpful to understanding the physical form of buildings on their sites. Most industrial buildings have a FAR of 0.2 to 0.4. Most office buildings have FARs between 0.3 and 0.5; however, there are some newer office buildings in Tualatin that feature structured parking and FARs up to 1.0. These FARs are consistent with Metro’s analysis and future projections.

**Table 5** Attributes of Industrial and Office Development in Tualatin and Wilsonville. Source: CoStar, Leland Consulting Group 2014. SF: Square feet; FAR: Floor area ratio, the ratio of a building’s size in square feet (or gross building area) to the size of the piece of land upon which it is built.

	Industrial			Office		
	Tualatin	Wilsonville	Total	Tualatin	Wilsonville	Total
<b>Total Area (SF)</b>	10,470,000	8,390,000	18,860,000	1,260,000	1,250,000	2,510,000
<b>Av. Annual Development, 1980 - 2014</b>						
<i>Square Feet</i>	186,960	150,980	337,940	34,632	32,985	67,617
<i>Acres</i>	26.8	16.3	43.1	5.3	8.3	13.6
<b>Building Averages, 2000 - 2014</b>						
<i>Square Feet</i>	60,224	80,000	-	31,807	35,000	-
<i>Acres</i>	9.1	6.5	-	4.2	2.0	-
<b>Typical Floor Area Ratios (FAR)</b>	0.2 to 0.4	0.2 to 0.4	-	0.4 to 1.0	0.3 to 0.5	-

It is of note that, while the averages shown here are useful for high-level planning purposes, both industrial and office buildings vary considerably in size, scale, and purpose. For example, the industrial building category includes flex buildings, which can often be divided into 5,000 square foot tenant spaces and feature significant amounts of office and showroom space. The industrial category also includes distribution and warehouse buildings, which can be hundreds of thousands of square feet in size. Sample industrial and office buildings are pictured below in Figures Figure 28, Figure 29 and Figure 30.

*Typical Industrial Buildings: Office/Distribution and Flex*

The first building pictured below (Figure 28) is located in the Wilsonville Business Center west of I-5 and contains a mix of office space (left foreground) and warehouse/distribution space, where freight trucks are parked. The second building pictured below (Figure 29) is a typical flex industrial building located in the Tualatin Industrial Center, which features high ceiling heights, freight loading, and small, flexible spaces that can serve as a combination of office, showroom, and/or industrial.



Figure 28 Example of typical building with a mix of office space and warehouse/distribution space.



Figure 29 Example of typical flex industrial building, located in Tualatin.

*Headquarters Office Building (Mentor Graphics)*

The Mentor Graphics building (Figure 30) is located east of I-5 between the Elligsen Road and Wilsonville Road interchanges. Despite its size and height, the FAR of the building is similar to other buildings in the area because of its extensive campus, landscaped areas, and surface parking.



Figure 30 Mentor Graphics Headquarters Office Building in Wilsonville.



Office Development Outlook

Office development—nationally and regionally—is not expected to bounce back from the recession with the same resiliency as industrial space. Office development in the short- and long-term faces several challenges. In the short-term, the Portland region’s employment levels have just recovered in 2014 to their pre-recession (2008) levels. While office vacancies are far lower than several years ago, there is not yet market pressure for new development. As Table 6 shows, the region is expected to add just 288,000 square feet of office in 2014, or 0.6% of the total regional inventory of nearly 47 million square feet. Tualatin’s current vacancy rate of 20.5% suggests a soft market, though that space will be occupied in the long term. The market is expected to improve as the region and nation continue to recover from the recession, and businesses grow and add jobs. However, office development is not expected to return to levels seen in the 1990s without a major upturn in the economy.

Table 6 Current Office Market Summary, Portland Metro Region. Source: CoStar, Leland 2014.

Market	Existing Inventory		Vacancy %	YTD Net Absorption	Under Const. & Complete YTD	Class A Rates
	# Blds	Total RBA				
Portland CBD	374	26,309,983	10.0%	(36,157)	288,000	\$25.58
Lake Oswego/West Linn	142	1,144,080	8.5%	13,170	0	\$25.50
North Beaverton	151	3,246,113	6.7%	37,420	0	\$26.33
Sunset Corridor/Hillsboro	359	10,374,721	6.2%	111,442	0	\$21.53
Tigard	226	3,313,116	10.4%	35,859	0	\$24.27
Tualatin	68	1,263,266	20.5%	10,099	0	\$22.28
Wilsonville	59	1,252,446	7.1%	9,476	0	\$20.50
<b>Totals</b>	<b>1,379</b>	<b>46,903,725</b>		<b>181,309</b>	<b>288,000</b>	

Tualatin and Wilsonville’s Economic Positioning and Goals

The Cities of Tualatin and Wilsonville are proactively pursuing economic development in order to provide high paying jobs for their residents, strengthen their tax bases, offer quality public services, and enable general prosperity in the communities. The two Cities’ main economic development plans relevant to Basalt Creek are shown in Table 7 below.

Table 7 Relevant Economic Development Plans. Source: Cities of Tualatin and Wilsonville.

Tualatin	Wilsonville
<ul style="list-style-type: none"> <li>• Economic Development Strategic Plan (2014)</li> <li>• Industry Cluster Analysis (2014)</li> <li>• Linking Tualatin Market Study (2012)</li> <li>• Southwest Tualatin Concept Plan (2010)</li> </ul>	<ul style="list-style-type: none"> <li>• Economic Development Strategy (2012)</li> <li>• Coffee Creek Master Plan (2007)</li> </ul>

## Target Industry Clusters

Tualatin and Wilsonville have both identified a series of targeted industry clusters. According to Tualatin's Industry Cluster Analysis, a cluster is an agglomeration of similar and related businesses and industries that are mutually supportive, regionally competitive, attract capital investment, encourage entrepreneurship, and create jobs. For example, 57% of Tualatin's jobs fall within its five key industry clusters, which also provide wages that are on average 70% (\$35,000) higher than those in all other industries.

Clusters reflect a community's strengths and competitive advantages, suggest which sectors of the economy are most likely to generate jobs in the future, and provide policy makers with guidance about the types of land, buildings, infrastructure improvements, and other actions needed to grow jobs in the future.<sup>23</sup>

Both Tualatin and Wilsonville have determined that they excel in the following three industry clusters<sup>24</sup>:

### *Advanced Manufacturing (and related activities)*

This cluster is a significant driver of both cities' economies. It is Tualatin's largest cluster, accounting for 22% of jobs in the city. It accounts for a significant portion of Wilsonville's economy; computer and electronic product manufacturing was Wilsonville's largest industry sector as of 2012, and includes several of the city's largest employers such as Xerox, TE Connectivity, and Rockwell Collins.

The Oregon Institute of Technology (OIT), now educating students in the engineering, technology, management, and health sciences fields from its Wilsonville campus, is an important anchor institution for the Southwest Metro economy. The Cities are looking for ways to capitalize on OIT's presence and to strengthen partnerships between the school and private businesses.

Growth in this cluster will result in ongoing demand for industrial land and buildings in Basalt Creek and other areas. Freeway access, freight mobility, and access to a skilled workforce will be important to this cluster's continued success.

### *Corporate and Professional Services*

This cluster accounts for 12% of Tualatin's jobs, and was the second-largest industry sector in Wilsonville as of 2012. Major employers include: Portland General Electric (PGE) and Express Employment Professionals in Tualatin, and Mentor Graphics in Wilsonville. Growth in this cluster will result in ongoing demand for office land and buildings in Basalt Creek and other areas. A variety of locational factors tend to be important to corporate and professional service firms, including: a

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<sup>23</sup> Wilsonville's EOA uses the term industry "sectors." The terms cluster and sector are used interchangeably here

<sup>24</sup> The economic figures included below are drawn from the Cities' economic development plans.

skilled workforce, available land or office space, transportation connections, and nearby restaurants and commercial services.

### *Health Care and Medical-Related.*

This cluster is important in both cities: it is the third-largest in Tualatin and fourth largest in Wilsonville. Tualatin's health care cluster is anchored by Legacy Meridian Park Medical Center (among Tualatin's largest employers), and also includes associated industries such as clinics, laboratories, physician offices, and assisted living centers. Wilsonville's largest health care-related employers (as of completion of the 2012 Economic Development Strategy) were Infinity Rehab and Avamere, both ambulatory (outpatient) service providers. Wages in this cluster are well above average.

Because of the diversity of health care businesses, firms in this cluster can operate in health care-specific zones (such as Tualatin's Medical Center zone), or general employment zones (such as Wilsonville's Planned Development Industrial zone). In some cases, health care firms that serve smaller, more localized populations can locate in retail/commercial zones.

In addition to the three clusters described above that have been identified as targets for both cities, Tualatin and Wilsonville have also identified these industry clusters:

### *Other Industrial Clusters.*

Both Cities have identified additional industrial target clusters that could locate in the Basalt Creek area. Tualatin has identified two other industry clusters likely to generate demand for industrial land and buildings: food processing and distribution, and wood, paper, printing, and related industrial activities. Wilsonville identified a number of other industrial business types: light manufacturing and warehouse/showroom operations; specialty contractors and construction firms; sustainable product manufacturing and distribution; miscellaneous manufacturing; and wholesale trade.

Growth in these clusters will result in ongoing demand for industrial land and buildings in Basalt Creek and other areas. Freeway access, freight mobility, and access to a skilled workforce will be important to these clusters' ongoing success.

### *Other Professional and Commercial Services.*

Wilsonville's 2012 Economic Development Strategy also identifies creative services (such as transportation logistics, legal services, management consulting, and accounting) as a target cluster. Similar to corporate and professional services, growth in this cluster should result in demand for office land and buildings in Basalt Creek and other areas.



Figure 31 Lam Research Facility, Tualatin. Photo credit: Tualatin Chamber.

## Sub-Regional Context

Transportation is fundamentally important to these employment areas, and transportation connectivity has the potential to make a whole that is greater than the sum of its parts by enabling firms to trade goods and services easily. I-5 is the most important single transportation corridor. The 124<sup>th</sup> Avenue Extension and East-West Connector will also be very important in knitting the employment areas together. Regional connectivity will be challenged due to the limited access nature of the East-West Connector. This large agglomeration of employment areas has the potential to create economic momentum, and also the potential to be a source of competition for the Basalt Creek area. This is because the areas can project a powerful combined brand, while also competing for individual employers who are looking for sites.

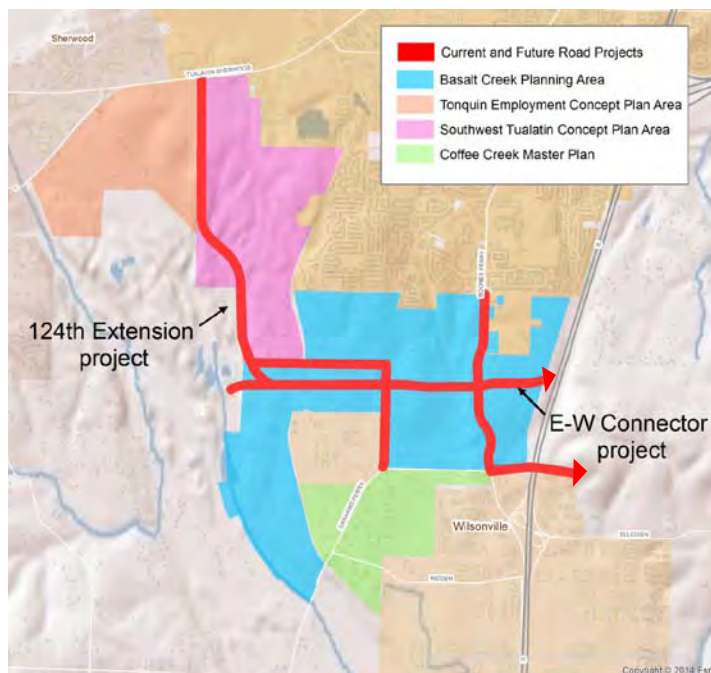


Figure 32 Major TRP road projects in relationship to the Basalt Creek planning area and planned areas nearby Source: Fregonese Associates 2014.

## Established Employment Areas

The Tualatin and Wilsonville employment areas have capacity for additional businesses and jobs. To the west of I-5, Wilsonville's employment area tends to contain more industrial, manufacturing, distribution, and flex businesses and buildings; to the east of I-5, a larger share of businesses are office-based professional service firms, such as Mentor Graphics and Xerox Corporation. However, the zoning is the same (Planned Development Industrial) throughout the entire Wilsonville employment area.

## Planned Employment Areas

Southwest Tualatin, Tonquin Employment Area, and Coffee Creek are planned employment areas located within the UGB that have yet to be served by infrastructure or see new private development. Annexation and development in the areas are property-owner initiated. The following summarizes the current activity in each of the planning areas.

- The Southwest Tualatin concept plan area: Most of the area remains an active quarry; the City expects this use to continue for an indeterminate period.
- The Coffee Creek industrial area: No development or annexation has taken place in Coffee Creek since the adoption of the master plan; land assemblage challenges, and lack of City services and a financing plan to build those services are the primary obstacles to development here.
- The Tonquin employment area is a 300-gross-acre area located in the City of Sherwood. It is planned for light industrial development with a small amount of ancillary retail/commercial services.

## Employment Strengths and Challenges

Basalt Creek's primary strengths/competitive advantages and challenges vis-à-vis industrial and office development are as follows:

### *Strengths and Competitive Advantages*

- Tualatin and Wilsonville's established and successful industry clusters in advanced manufacturing, professional services, and a variety of other industrial and office-based employment categories. Large contiguous cluster of existing and planned employment areas.
- Excellent access to I-5, as well as I-205 and Highway 217. Additional transportation strengths include existing and planned arterial roads, and local and regional transit service provided by TriMet, WES Commuter Rail, and SMART.
- Educated workforce
- Market success of recent industrial, office, and retail developments

## Challenges

- Vision and regulation. This Concept Plan and subsequent Comprehensive Plan and zoning amendments need to be in place prior to development.
- Planning, financing, and construction of new infrastructure. This is because roads, water, sanitary sewer, and other infrastructure for urban expansion areas are expensive. Cities are often focused on maintaining and improving existing infrastructure and therefore do not budget to make extensive extensions. Developers of individual sites typically cannot afford to build out a comprehensive set of infrastructure to serve multiple properties.
- Lot sizes and property aggregation. There is a mix of large and small lots throughout the Basalt Creek area. The time and cost required to secure properties from multiple parties in order to aggregate developable industrial or office properties of adequate size can be a significant deterrent to developers.
- Natural features including wetlands and slopes. Basalt Creek and its surrounding slopes and wetland areas run north-south through the planning area, dividing it into east and west sections.
- The market for new office development continues to be slow. However, the planning area will not be ready for private development for several years, which may allow enough time for this market to recover.

## Housing Market Analysis

### *Demographic Context*

The City of Tualatin, compared to the Portland Metropolitan Statistical Area (MSA), has a higher percentage of family households (two or more related people), larger average households, higher household incomes, and higher per capita incomes. A larger share of residents has college degrees (42.3%) and is employed in white collar jobs (67.5%) compared to the region. Tables Table 8, Table 9 and Table 10 provide additional perspective on the demographics of the subject cities compared to the Portland MSA.

Wilsonville, compared to the Portland MSA, has a higher percentage of family households and smaller households--likely because the city has a higher share of young households (in the 25-34 age category) and seniors, Baby Boomers, and retirees. Each age group has different housing preferences. Wilsonville also has a larger share of residents with college degrees (39.3%) and white collar jobs (70.1%).<sup>25</sup>

While the Basalt Creek market area includes both Tualatin and Wilsonville, its demographics are generally more similar to those in Tualatin. When compared to the Portland MSA, the market area has a

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<sup>25</sup> Data shows information about *jobs held by residents of the given geographical areas*, not the jobs within those areas

higher percentage of family households, larger households, higher household and per capita incomes, more residents with college degrees, and more residents who work in white collar jobs. In general, these demographics are favorable to housing development in the Basalt Creek area; they also reflect the types of residents most likely to locate in the planning area.

**Table 8** Demographic Summary of the Basalt Creek planning area. Source: ESRI Business Analyst, Leland Consulting Group. 2014 Data except where noted.

	Tualatin	Wilsonville	Basalt Creek
<b>Comparison to Portland MSA:</b>	<ul style="list-style-type: none"> <li>• More families</li> <li>• Larger HHs</li> <li>• Higher HH Income</li> <li>• Higher PC Income</li> <li>• More college degrees</li> <li>• More white collar emp.</li> </ul>	<ul style="list-style-type: none"> <li>• Fewer families</li> <li>• Smaller HHs</li> <li>• More Gen Y</li> <li>• More Boomers</li> <li>• More low-income HHs</li> <li>• More college degrees</li> <li>• More white collar emp.</li> </ul>	<ul style="list-style-type: none"> <li>• More families</li> <li>• Larger HHs</li> <li>• Higher HH incomes</li> <li>• Higher PC incomes</li> <li>• More college degrees</li> <li>• More white collar emp.</li> </ul>

**Table 9** Demographic Summary of the Basalt Creek planning area (Continued). Source: ESRI Business Analyst, Leland Consulting Group. 2014 Data except where noted.

Demographic Attribute	Tualatin	Wilsonville	Basalt Creek	Portland MSA
<b>Population</b>	26,520	21,235	73,786	2,296,285
<b>Number of Households</b>	10,170	8,638	28,121	896,982
<b>Family Households (2010 Census)</b>	68%	59%	68%	64%
<b>Household Size (Average)</b>	2.60	2.32	2.57	2.52
<b>Household by Size (2010 Census)</b>				
1 and 2 person	57%	68%	58%	61%
3 and 4 person	33%	25%	32%	29%
5 + person	10%	7%	10%	10%
<b>Median Household Income</b>	\$64,324	\$59,812	\$70,256	\$57,441
<b>Per Capita Income</b>	\$32,672	\$31,995	\$33,336	\$30,135
<b>Population By Age</b>				
0 to 24	35%	31%	34%	32%
25 - 34	14%	16%	13%	15%
35 - 44	15%	14%	15%	14%
45 to 54	14%	13%	14%	14%
55 to 64	13%	11%	12%	13%
65 +	9%	15%	11%	13%
<b>Median Age</b>	35.7	37.0	36.6	37.5

Key:  Low  High

**Table 10** Demographic Summary of the Basalt Creek planning area (Continued). Source: ESRI, Leland Consulting Group. 2014 data except where noted.

Demographic Attribute	City of Tualatin	City of Wilsonville	Basalt Creek Market Area	Portland MSA
<b>Education and Employment</b>				
Less than High School	9.7%	8.0%	8.0%	9.4%
High School or Equivalent	16.5%	20.4%	18.2%	22.1%
Associate's or some college	31.5%	32.3%	32.5%	34.2%
Bachelor's or Advanced Degree	42.3%	39.3%	41.3%	34.3%
<b>Occupation</b>				
"White Collar"	67.5%	70.1%	69.3%	63.1%
"Blue Collar"	11.3%	14.1%	13.5%	19.5%
<b>Housing</b>				
Median Home Value	\$331,190	\$349,927	\$337,289	\$275,516
<b>Housing Tenure</b>				
Owner Occupied Housing Units	51.9%	43.4%	55.0%	56.2%
Renter Occupied Housing Units	42.6%	50.5%	39.8%	37.7%

Key: Low High

Finally, the South Tualatin residential neighborhoods immediately to the north of Basalt Creek reflect many of the demographic attributes typical of Tualatin’s population. The neighborhoods—including low volume local roads, street trees, parks, and schools—create a positive environment for residential development within the Basalt Creek area, particularly along the northern edge.

## Recent Housing Development

Table 11 below shows the recent residential permitting trends in the cities of Tualatin and Wilsonville, and in Villebois, a master-planned community in Wilsonville. Villebois is shown here because: it is the largest master planned community (482 acres) that has been developed recently in the Southwest Metro area; it is a defined area that has been planned to include a range of housing, parks, and commercial services; due to its success in the marketplace in recent years, housing absorption has been relatively rapid (adjusting for the recession), and many houses sell for a premium when compared to the competition in other areas. Naturally, recent housing built in these areas provides one benchmark from which to estimate future demand.

As Table 11 shows, the housing types that have been permitted and built in these areas correlate closely to the types of people and households who live there; the housing types also likely reflect zoning and other regulatory and market forces. Recent housing permitted in Tualatin is composed largely of large- and medium-lot single-family housing. No small lot single-family housing (lots smaller than 4,000 square feet) or attached single-family housing has been permitted since 2004. About 20% of the recently permitted housing in Tualatin is multifamily—market rate and affordable apartments, condominiums,



and senior housing. Very little existing multifamily housing is located in the neighborhoods immediately north of Basalt Creek; most of Tualatin’s multifamily housing is clustered further north near downtown Tualatin, between Tualatin-Sherwood Road and Avery Street, and the Bridgeport Village area. The majority were built prior to 2000, although the 367-unit Eddyline at Bridgeport (under construction) is a notable exception. Historically, this multifamily share is relatively typical; multifamily has comprised about 20% of total housing in many communities during the past five decades.

Wilsonville’s housing is more diverse and features a significantly higher percentage of small lot single-family and multifamily housing, and much less large- and medium-lot single-family housing. Again, this is likely to due to market, demographic, and regulatory reasons. The broad housing mix reflects the presence and growth of the four “S groups” in Wilsonville: seniors, singles, single-parent households, and starter households. The large multifamily share (66%) is partially due to the large number of new 20- and 30-something households recently formed, which will slow in coming years. Villebois’ housing mix is similar to that in Wilsonville overall. However, during the time period surveyed (2000 to 2012) a larger percentage of small-lot single-family homes, townhouses and duplexes were built in Villebois, along with a smaller percentage of multifamily housing. Villebois’ developers and National Association of Realtors (NAR) surveys show that most American households, Baby Boomers included, prefer single-family homes over multifamily homes, but that they are quite open to smaller lot and home sizes, especially when the surrounding neighborhood is attractive and walkable.

**Table 11** Residential Development in Tualatin and Wilsonville by Housing Type. Sources: HUD; City of Wilsonville, New Home Trends, Leland Consulting Group. Due to data availability, Table 12 shows housing built in Tualatin between 2004 and 2014; and permits issued in Wilsonville between 2000 and 2012.

Housing Type	Tualatin	Wilsonville	Villebois
	Recent Permits	Recent Permits	Recent Permits
Large Lot Single Family	44%	9%	8%
Medium Lot Single Family	36%	10%	8%
Small Lot Single Family	0%	12%	35%
Attached Single Family	0%	2%	6%
Multifamily	20%	66%	43%
<b>Total</b>	100%	100%	100%

## Retail/Commercial Market Analysis

In addition to new residents and employees that may locate in the Basalt Creek area, the residents of the Tualatin neighborhoods located immediately to the north are important sources of support for retail. Residents spend more of their retail dollars locally than employees or passersby, and therefore are generally a more important source of demand for retail goods and services. Approximately 4,000

households live in the area between Norwood Road and Tualatin-Sherwood Road. These households already have other places to shop, particularly on and near Tualatin-Sherwood Road. However, based on existing traffic counts and interviews with residents and developers, it is clear that some of these residents are already accustomed to driving south through the Basalt Creek area to access I-5 or other destinations.

Retailers also look at traffic counts as an important demand indicator, since retail relies on pass-by traffic for support. Boones Ferry Road carries average daily traffic (ADT) of about 15,000 in 2014<sup>26</sup>, which is high enough to suggest that it will be a good retail location in the future. Traffic counts on Grahams Ferry Road are below 6,000 ADT, and therefore it is likely to be a less desirable retail location. Traffic counts such as these likely reflect trips being made by residents and employees of the Southwest Metro area and beyond. The 124<sup>th</sup> Avenue Extension, which will be built to the western edge of the study area, and the planned East-West Connector Road that will run across the study area, are also important transportation arterials along which retail will seek to locate. A prime location for retail may be at the intersection of Boones Ferry Road and the East-West Connector Road.

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<sup>26</sup> Source: ESRI Business Analyst, 2014

# VI. Infrastructure

The objective of this section is to identify existing stormwater, wastewater conveyance and treatment, and potable water infrastructure that could be used to provide services for the Basalt Creek planning area. Existing jurisdictions and service agreements are also described, in addition to discussion of important areas of special consideration in and near existing receiving waters.

## Policy Guidance on Infrastructure

The discussion in this section is framed by the Cities' desire to have a better understanding of how provision of services such as wastewater collection and treatment and potable water distribution serving Basalt Creek can function in the most efficient and economical manner.

Specifically the Cities are interested in determining, from a technical standpoint, if wastewater can be conveyed and treated more efficiently and cost-effectively by relying on gravity or if pump stations are more appropriate. This should consider improvement costs related to the collection systems (such as incremental pipe capacity needs in both cities; pump station construction, long term operations and maintenance costs; and treatment capacity needs at both treatment plants). Should pump stations be less desirable from a technical standpoint, what are non-technical issues that would need to be resolved? Part of answering this question is to identify where specific areas of Basalt Creek naturally drain and whether it makes sense from a technical point of view for wastewater to cross jurisdiction boundaries. This evaluation raises a policy question for the City of Wilsonville of whether or not they are willing to collect and treat wastewater that could be generated by land outside of their City supposing the service lines and jurisdictional lines are not the same.

Additionally, the Cities desire to evaluate and determine if there are efficiencies for the water system if the source of water is from the Willamette River. Another topic to explore is if it is a good idea to interconnect the two systems. The Cities are asking if it makes more sense to provide water services to Basalt Creek from the south rather than from the City of Tualatin's existing system. This exploration presents another policy question for the City of Tualatin about accepting water from the Willamette River.

## Stormwater Infrastructure

Existing stormwater infrastructure within the Basalt Creek planning area consists of roadside drainage ditches and culverts. Culverts in the planning area are under the jurisdiction of Washington County and range from 12 to 30 inches, as shown in Figure 33. It is assumed that the existing culverts may not have capacity for future urban conditions and will need to be upsized to provide adequate capacity for runoff from new impervious areas, unless onsite detention or infiltration is required. Roadway drainage for SW Boones Ferry Road was recently transferred from the jurisdiction of Oregon Department of Transportation (ODOT) to that of Washington County, but the County does not yet have the

geographical information system (GIS) data available. Culverts to the south of the planning area are part of the City of Wilsonville stormwater system.

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.

Existing stormwater drainage basins based on existing topography and infrastructure are also shown in Figure 33, along with Oregon State Planning Goal 5, Significant Resource Areas near receiving waters. As can be seen in Figure 33, large portions of the planning area are Significant Resource Areas. The City of Tualatin has jurisdiction over the stormwater conveyance system to the north of the planning area.

The City of Tualatin is a co-permittee of Clean Water Services (CWS) watershed-based National Pollutant Discharge Elimination System (NPDES) permit, which includes the municipal separate storm sewer system (MS4) stormwater discharge permit. The City of Tualatin owns and operates the stormwater system within the city.

The City of Wilsonville owns and operates the public stormwater conveyance system to the south of the planning area. The City of Wilsonville is an NPDES MS4 co-permittee with Clackamas County and twelve other cities and service districts within the County (Permit Number 101348).

The City of Wilsonville's 2012 Stormwater Master Plan identifies a capital improvement project to restore a portion of the Basalt Creek channel to increase capacity to accommodate impacts caused by a reverse grade south of Day Road near the Commerce Circle area. The project is programmed for mid-term (6 to 10 years) implementation in the July 2014 Prioritized Stormwater Capital Improvement Plan (July 2014 Prioritized Project list). The master plan also identifies a regional detention facility to serve an area that includes the Basalt Creek planning area. This project is identified in the July 2014 Prioritized Project List as a long-term project (10 to 20 years).

Locations where stormwater runoff from the Basalt Creek plan area could connect to existing stormwater infrastructure in the future are shown in Figure 33 and summarized in Table 12. Should these locations be considered to receive stormwater discharge from the Basalt Creek plan area, the downstream conveyance system will need to be evaluated for capacity and condition.

## Wastewater Infrastructure

Currently, no sewer service is provided to the planning area. Existing homes are, therefore, assumed to be using individually permitted and managed septic systems, but a public records request has not been made to confirm this assumption for each property in the planning area.

### Wastewater Collection and Conveyance

Wastewater conveyance to the north of the planning area is under the jurisdiction of the City of Tualatin, who maintains a service agreement with CWS for wastewater collection and treatment at the Durham Advanced Wastewater Treatment Facility located at 16060 SW 85th Avenue in Tigard, a straight line distance of approximately 2.5 miles north of the Basalt Creek planning area. The City owns the

wastewater conveyance system (up to 18-inch diameter) within the City, while CWS owns larger pipes, pump stations, force mains, and treatment facilities.

Eight gravity mains exist near the north planning area boundary and could provide connection points for wastewater from the Basalt Creek plan area into the Tualatin collection system. The 200 gpm Victoria Woods Pump Station and associated force main are also located just to the north of the planning area boundary, west of the southern end of SW Eno Place. From these connection points, wastewater flows by gravity toward the treatment plant, crossing the Tualatin River via the Lower Tualatin Pump Station in Tualatin Community Park and associated force main. Pumping would be required to lift flows from the planning area into the existing gravity system.

Wastewater conveyance to the south of the planning area is under jurisdiction of the City of Wilsonville. Wastewater from the City of Wilsonville is conveyed to and treated at the Wilsonville Wastewater Treatment Plant located at 9275 SW Tauchman Street, approximately 3.2 miles south of the planning area.

The City of Wilsonville's Coffee Creek Industrial Area Plan identifies a new sanitary main line to be constructed in a future segment of Kinsman Road between Ridder and Day Roads. 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. Three existing possible connection points into the Wilsonville collection system were also identified. From these connection points, wastewater flows by gravity to the Wilsonville Wastewater Treatment Plant. The ongoing Sanitary Sewer Collection System Master Plan project has analyzed a range of flows from the planning area to identify trunk capacity, pipe size, and improvements needed to accept flow from the planning area. Connection Point 10 at Pioneer Road in Commerce Circle would require a lift station to deliver flow from the planning area into the Wilsonville system.

A brief description and location of the eight potential points of connection to the Tualatin conveyance system and three existing potential points of connection to the Wilsonville conveyance systems are shown in Figure 34 and summarized in Table 13. Wilsonville's planned sanitary main line in Kinsman Road is also shown in Figure 34.

#### Consideration of the Basalt Creek Planning Area in Sanitary Sewer Master Plans

The *Tualatin Sanitary Sewer Master Plan Update* has been put on hold until the Basalt Creek planning process is complete. The City of Wilsonville is in the process of updating its Sanitary Sewer Collection Systems Master Plan (MSA, 2014) and is including Basalt Creek as a contributing area. The resulting updated master plans will identify improvements needed to increase the capacity of each system to convey flow from the Basalt Creek planning area.

Clean Water Services conducted a system capacity evaluation to accept flows from the Basalt Creek planning area and the SW Concept Plan Area in addition to flows from the City of Tualatin (CH2M HILL, 2012). This study assumed that flow contributions would be routed to the Sherwood trunk line (located north of Tualatin-Sherwood Road) rather than through local service lines. A lift station would be required to convey flow from the Basalt Creek area to the Sherwood trunk line. The distribution of flow

to each of the cities and where connections need to be made will be determined as part of the Basalt Creek Concept Plan.

### Wastewater Treatment

The nearest treatment facility to the north of the planning area is the CWS Durham Advanced Wastewater Treatment Facility (AWTF). This facility currently receives about 22.6 million gallons per day (mgd) in dry weather flow (CWS, 2013). Future flow projections, updated in 2011, did not include any areas outside of the existing Durham AWTF service area (CH2M HILL, 2011). Therefore, treatment of Basalt Creek wastewater flows at the Durham facility will require review of the plant capacity and analysis of impacts to level of service within the existing service area. In addition, expansion of the service district area to include the Basalt Creek planning area (or any portions thereof) needs to be evaluated.

The nearest treatment facility to the south of the planning area is the City of Wilsonville Wastewater Treatment Plant (WWTP). This facility was recently expanded to an average dry weather flow capacity of 4 mgd, with flow projections and design bases of improvements accounting for an ultimate buildout capacity of 7 mgd. The current 4 mgd is capacity designed to accommodate growth within the current city limits, and the 7 mgd buildout capacity is designed to accommodate additional growth areas outside the city limits. Expansion to 7 mgd can be achieved by adding a third primary clarifier and adding a membrane bioreactor to the aeration basins. Approximately half (300 acres) of the Basalt Creek planning area (identified as the “North Wilsonville” area in the technical assessments) was accounted for in the year 2030 buildout capacity assessment (7 mgd). Early development of the Basalt Creek planning area, in conjunction with other planned developments will require review of the timing of the next WWTP expansion phase.

### Potable Water Infrastructure

The delivery of potable water to customers is impacted by many factors. Of the many requirements, pressure and flow are two that are closely tied and impact all water infrastructure decisions. Residential water service typically has a minimum pressure of 30 pounds per square inch (psi) and a maximum dictated by plumbing code of 80 psi. The pressure in a gravity fed system similar to the Wilsonville and Tualatin systems is constantly fluctuating based on the demand on the system at any given time. As demand goes up, reservoir levels go down, causing pressure in the system to be reduced. When demand reduces, water is placed/pumped back into the reservoirs, bringing the system pressure back. Storage requirements on a system are driven by customer demand and fire flow requirements because these reservoirs are not only providing system pressure, but also emergency storage.

In order to evaluate how the Basalt Creek area will be served with water, the existing City of Wilsonville and City of Tualatin Water Master Plans were reviewed. Below is a summary of the information gathered from those reports, and how that might impact water service to the Basalt Creek planning area.

### City of Tualatin

The City of Tualatin water system currently provides drinking water to approximately 26,000 people, through 6,700 residential, commercial, industrial and municipal connections. The system consists of four hydraulically connected pressure zones that include five steel storage reservoirs with a combined storage capacity of 13 MG. A sixth storage reservoir with an additional 1.0 MG capacity (in level C) is anticipated to be online in fall 2015. The water supply is purchased wholesale from the Portland Water Bureau with a maximum available capacity of 10.8 mgd. The current (2013) MDD is 9.5 mgd, providing approximately 1.3 mgd of excess capacity at this time. Projected MDD in 2039, without the Basalt Creek planning area, is 14.2 mgd. Table 14 shows the City's existing pressure zones.

### City of Wilsonville

The City of Wilsonville's water system currently provides drinking water to approximately 21,000 people. The system consists of three hydraulically connected services areas (A, B, and C) supplied by three steel storage reservoirs and a small underground concrete reservoir (Charbonneau) with a capacity of 7.6 million gallons (MG). Table 15 shows the capacity and hydraulic grade of each of the pressure zones.

The water supply source is the Willamette River Water Treatment Plant jointly owned by the City of Wilsonville and the Tualatin Valley Water District (TVWD). The plant has a current rated capacity of 15 mgd, but the buildings and piping and some of the unit processes were designed for an ultimate supply capacity of 70 mgd, with Wilsonville owning 20 mgd and TVWD owning 50 mgd of that capacity. The plant was designed for on-site expansion. TVWD sold 5.0 mgd of treated water capacity to the City of Sherwood in 2006. Based on Wilsonville's 2012 Water Master Plan, projected (2020) maximum day demands (MDDs) for the plant is 14.9 mgd, which includes the 5.0 mgd delivery to Sherwood, plus a 0.75 mgd allowance for new industrial users.

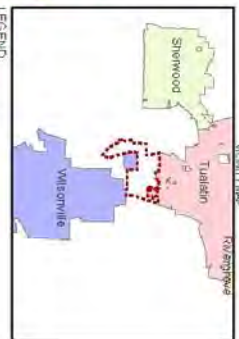
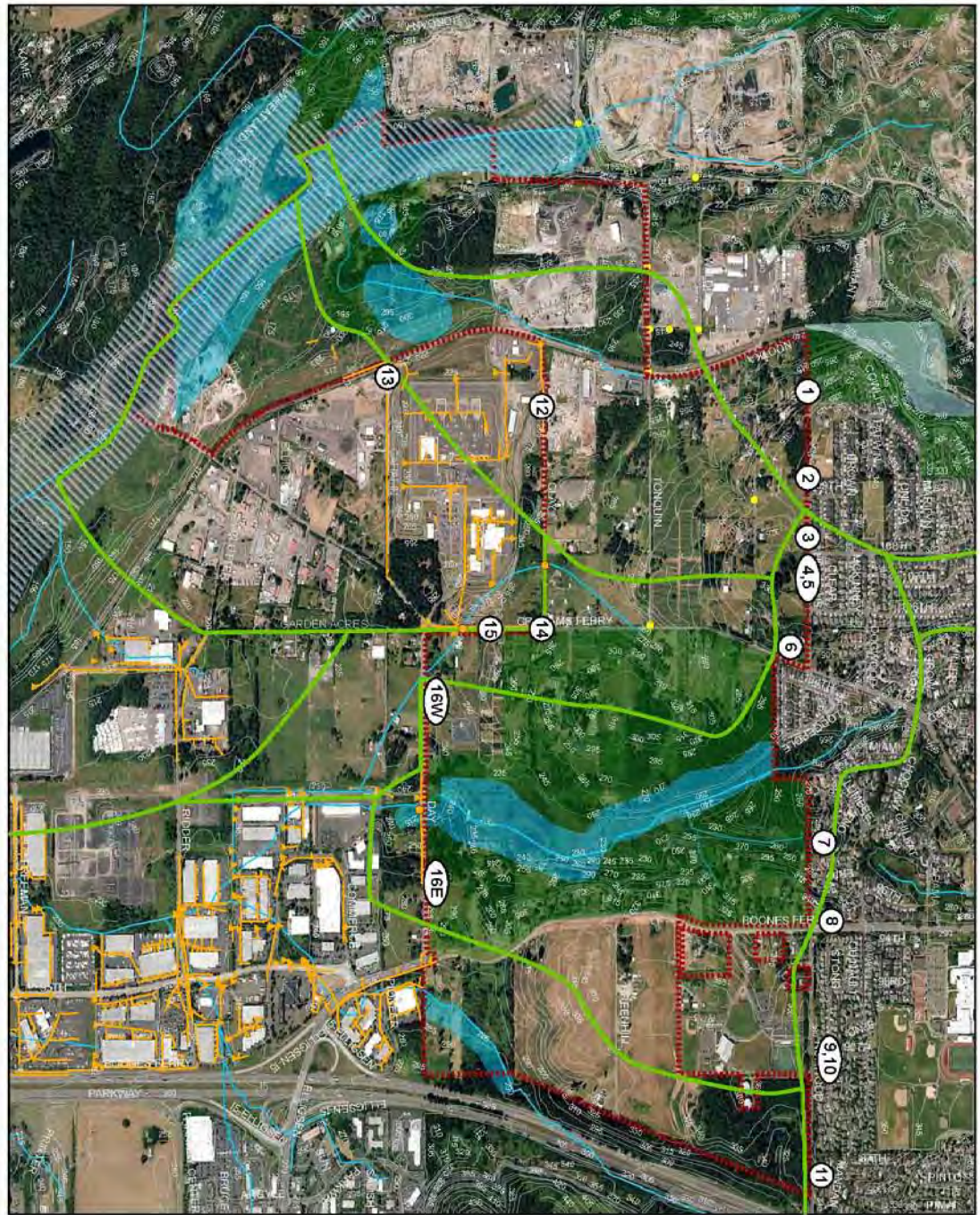
### Basalt Creek Planning Area

The Basalt Creek planning area currently has no municipal water infrastructure in place. The area topography ranges from approximately 250 feet above mean sea level (msl) to a maximum elevation of 350 feet msl. Based on the topography, the Basalt Creek planning area could be served from the south through The City of Wilsonville's distribution system (Pressure Zones B and C) or from the north through the City of Tualatin's distribution system from Pressure Zone B and C. Lower elevations of the Basalt Creek planning area (below elevation 285) can be adequately served by Wilsonville's Pressure Zone B through existing 15-inch and 18-inch distribution lines that are adjacent to the area. A political factor in determining service boundaries is Tualatin's requirement for a public vote before switching to water supply from the Willamette River; the City currently receives its potable water primarily from the Bull Run reservoir near Mount Hood. A vote would only be required if Willamette River water was used to serve a part of Basalt Creek that ended up within Tualatin's jurisdiction.

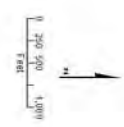
Tualatin's and Wilsonville's Pressure Zone C reservoirs are located adjacent to each other on the East Side of I-5. The I-5 pipe crossings that connect to these reservoirs are in different locations. Analysis

needs to be completed to determine if the existing pipe configurations from each of these reservoirs provide adequate pressures to serve the higher elevations of Basalt Creek with emergency water demands. To provide for the additional flow to these higher elevations, it may be necessary to add booster pumping capacity within each City's water system. The City of Wilsonville master plan identifies a future I-5 crossing for their Zone C reservoir as well as a future Pressure Zone D reservoir that would address pressure needs to the higher elevations. Figure 35 identifies the potential pressure zones and existing adjacent infrastructure.





- LEGEND**
- Planning Area
  - No Resource
  - Water Area and Wetland
  - Wildlife Habitat
  - Water Area/Wetland & FW Habitat
  - Significant Natural Area
  - 100-year Floodplain
  - Washington County Culverts
  - Wilsonville Culverts
  - Wilsonville Stormwater Outlets
  - Wilsonville Stormwater System
  - CONTOUR\_SFT
  - Stream channels
  - Delineated Drainage Basin
  - X Potential Point of Connection to Existing System (see Table 1)



**FIGURE 1**  
Existing Stormwater Infrastructure  
and Drainage Area  
Basalt Creek Planning Area  
**CH2MHILL.**

Figure 33 Existing Stormwater Infrastructure and Drainage Area near the Basalt Creek planning area  
Source: CH2M Hill, 2014

**Table 12** Potential Points of Connection to Existing Stormwater Facilities for the Basalt Creek planning area. Source: CH2M Hill 2014.

Map ID	Description	Location	Outlet	
1	12-inch PVC	112 <sup>th</sup> Ave.	Outfall at SW Cowlitz Dr. to Kolk Pond, approximately 900 feet from planning area.	
2	12-inch PVC	109 <sup>th</sup> Ave. and in Helenius Rd. to the east of	Detention facility at SW Helenius Rd. between 109 <sup>th</sup> Ave. and SW 108 <sup>th</sup> Ave.	
3	12-inch PVC	108 <sup>th</sup> Ave.	Connection Points 3 through 6 all outlet to Basalt Creek, which runs through the eastern portion of the planning area. The outfall is located west of Lodgepole Rd. Basalt Creek runs south through the planning area, then through piped and natural channels for approximately 3 miles to the confluence with Coffee Lake Creek, which then flows another 1.5 miles through natural and straightened channels to the Willamette River. Basalt Creek forms a part of the City of Wilsonville's stormwater drainage system.	
4	12-inch PVC	106 <sup>th</sup> Ave.		
5	12-inch PVC	Helenius Rd., east of 106 <sup>th</sup> Ave.		
6	12-inch PVC	Grahams Ferry Rd. at Whitebark Ln. and at Helenius St.		
7	Detention and/or water quality facilities	South of Eno Pl. and Erio Pl.		Both facilities outlet to Basalt Creek.
8	15-inch ADS	Boones Ferry Rd. at Stono Dr.		Connection Points 8 through 10 ultimately outfall to a natural watercourse approximately 0.5 mile to the north of the planning area near Columbia Dr. and Chehalis St. in Tualatin. This watercourse then flows north for approximately 2.5 miles through natural and piped conveyance to the Tualatin River.
9	15-inch CSP	Stono Dr. between Boones Ferry Rd. and 89 <sup>th</sup> Pl.		
10	18-inch CSP	89 <sup>th</sup> Pl.		
11	12-inch CSP	Mandan Dr.	Outfalls at the Chieftain/Dakota Greenway outfall to a natural watercourse, which then flows 2.6 miles northeast to the Tualatin River.	
12	12-inch capped lateral (N)	Clay Rd.	Capped lateral connects to 12-inch main line in Clay Rd., which connects to private 12-inch line. This system outlets to a tributary of Coffee Lake Creek.	
13	42-inch pipe	Cahalin Rd. south of Coffee Creek Correctional Facility	Outlets to a tributary to Coffee Lake Creek, 3.4 miles upstream of the Willamette River (via natural and straightened reaches).	
14	12-inch capped laterals (N and E)	Intersection of Grahams Ferry Rd. and Clay Rd.	Two capped laterals connected to 12-inch main line in Grahams Ferry Road. Outlets to Basalt Creek tributary crossing north of Day Rd.	
15	12-inch capped laterals (E)	Grahams Ferry Rd. between Clay Rd. and Day Rd.	Two capped laterals connected to main line in Grahams Ferry Rd, connected to 12-inch main line, which outlets to Basalt Creek tributary	

Map ID	Description	Location	Outlet
16E and 16W	12-inch and 15-inch pipe	Day Rd, east of Grahams Ferry Rd.	crossing north of Day Rd. 12-inch pipe connects curb inlets east and west of Basalt Creek culverts to 15-inch main line, which outlets to detention/water quality facility west of the Basalt Creek culverts, then connects to open and piped Basalt Creek channel to join Coffee Lake Creek after approximately 2 miles, which then flows an additional approximately 1.75 miles to the Willamette River.

ADS = Advanced Drainage Systems; CSP = corrugated steel pipe; PVC = polyvinyl chloride.

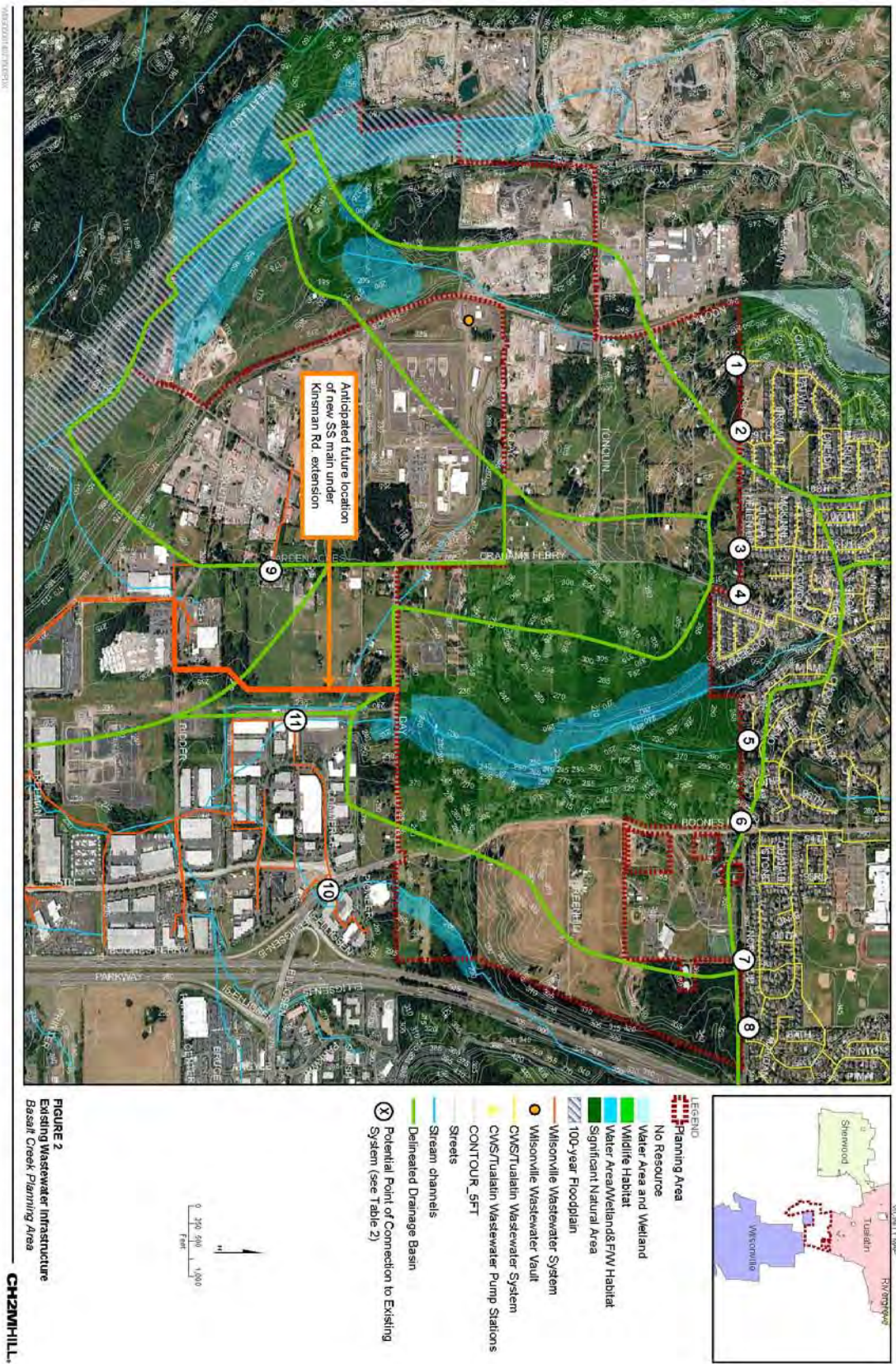


Figure 34 Map of Existing Wastewater Infrastructure near the Basalt Creek planning area. Source: CH2M Hill 2014.

**Table 13** Potential Points of Connection to Existing Wastewater Systems for the Basalt Creek planning area. Source: CH2M Hill 2014.

Map ID	Facility Description	Location
1	10-inch gravity main	112 <sup>th</sup> Ave.
2	8-inch gravity main	109 <sup>th</sup> Ave.
3	8-inch gravity main	106 <sup>th</sup> Ave.
4	8-inch gravity main	Grahams Ferry Rd. @SW Helenius Rd
5	Victoria Woods Pump Station	Eno Pl.
6	8-inch gravity main	Boones Ferry Rd.
7	8-inch gravity main	Southwest of the intersection of Norwood Ave. and 89 <sup>th</sup> Ave.
8	8-inch gravity main	Vermillion Dr.
9	18-inch gravity main	Garden Acres Rd.
10	8-inch gravity main	Boones Ferry Rd. at Pioneer Court (Commerce Circle area)
11	12-inch gravity main	West of Commerce Circle

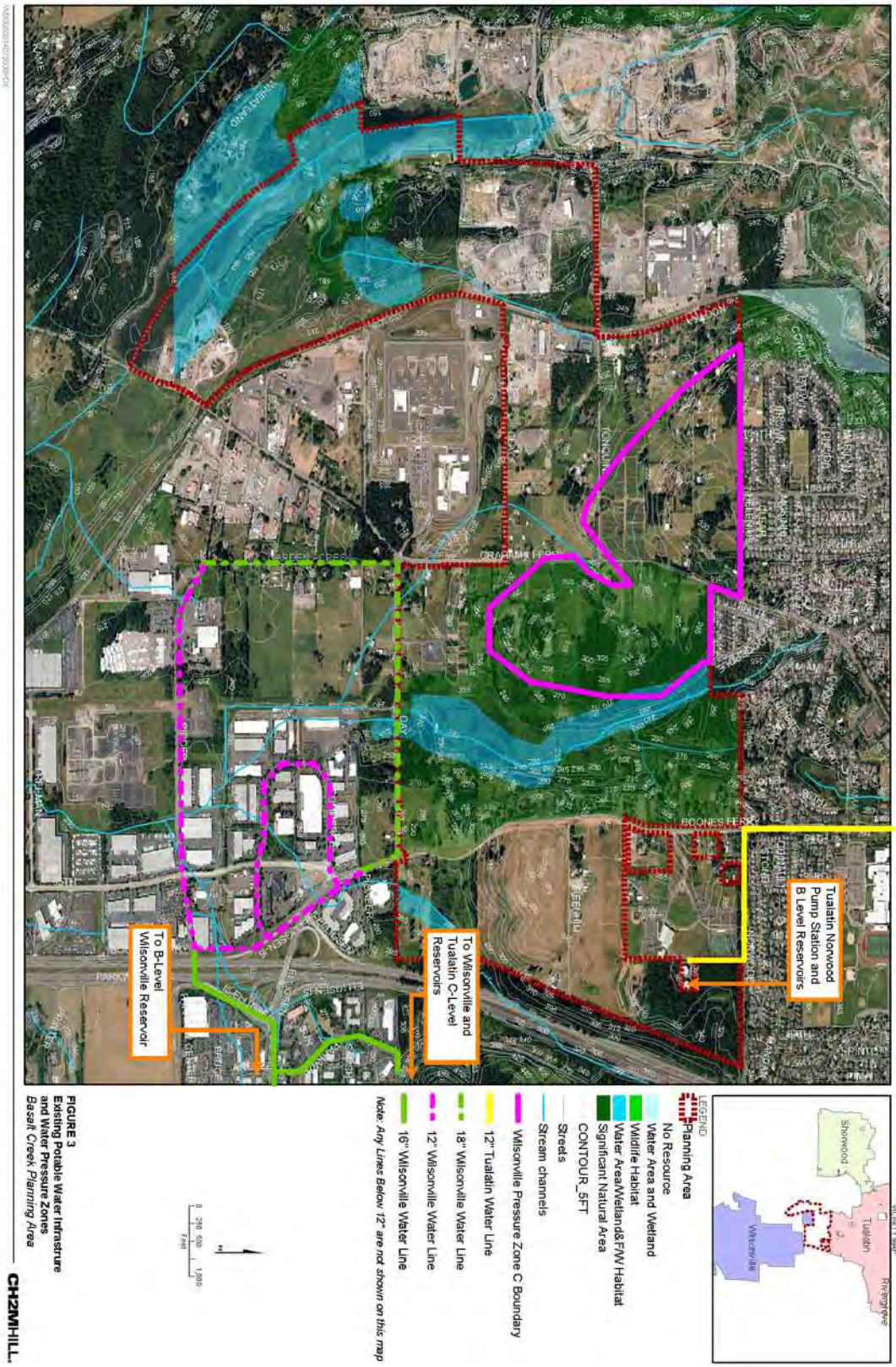


Figure 35 Map of existing potable water infrastructure and water pressure zones in and near Basalt Creek planning area. Source: CH2M Hill 2014.

Table 14 City of Tualatin Water System—Existing Pressure Zones. Source: CH2M Hill 2014.

Pressure Zone	Maximum/Minimum Hydraulic Grade Line (feet mean sea level)	Storage Volume (million gallons)
A	295	7.2
B	399	5.0
C	506	1.8
Bridgeport	360	-

Table 15 City of Wilsonville Water System—Existing Pressure Zones. Source: CH2M Hill 2014.

Pressure Zone	Static Hydraulic Grade Line (feet mean sea level)	Storage Volume (million gallons)
A	320	0.6
B	400	5
C	506	2

# VII. Transportation

This section documents the existing transportation system and presents the planned transportation system developed as part of the Basalt Creek Transportation Refinement Plan (TRP). The purpose of the TRP was to identify a major transportation connection between 99W and I-5, in furtherance of the I-5/99W Connector Studies which call for additional east-west traffic alternatives. The plan provides 18 transportation investments broken into short, medium and long term phases, all of which are critical to ensuring that the transportation network functions at acceptable levels over time. The key element is the East-West Connector to 124<sup>th</sup> Avenue extension. This section discusses the pedestrian and bicycle existing and planned facilities, the current transit system and planned improvements to transit, and details the motor vehicle conditions for base year (2010) and future year (2035) conditions based on the Basalt Creek TRP.

## Motor Vehicle System

This section documents base year and future year motor vehicle demand, presents intersection operations, and describes the planned improvements for the motor vehicle system.

### *Motor Vehicle Demand*

Existing a.m. and p.m. peak hour (2010) motor vehicle volumes in the Basalt Creek planning area were collected for the Basalt Creek Transportation Refinement Plan, the SW 124<sup>th</sup> Avenue Extension Study, the Tualatin TSP, and the Wilsonville TSP. The 2010 volumes, along with percentage of truck traffic, are displayed in Figure 36. These plans applied the Metro Regional travel demand model to estimate 2035 future year p.m. peak hour motor vehicle volumes. The resulting 2035 volumes are displayed in Figure 37.

The Basalt Creek Transportation Refinement Plan applied the Metro regional travel demand model (2009 RTP), which provides estimates of both existing year (2005) and future year (2035) p.m. peak hour trips entering and exiting Transportation Analysis Zones (TAZs). TAZs divide the Portland Metro region into areas that represent sources of vehicle trips within the area, based on a combination of the roadway network, land use information, the Urban Growth Boundary (UGB), zoning, and comprehensive plan designations. Because the demand model covers both TAZs within and around the Basalt Creek planning area, the 2035 model volumes account for both local and regional growth.



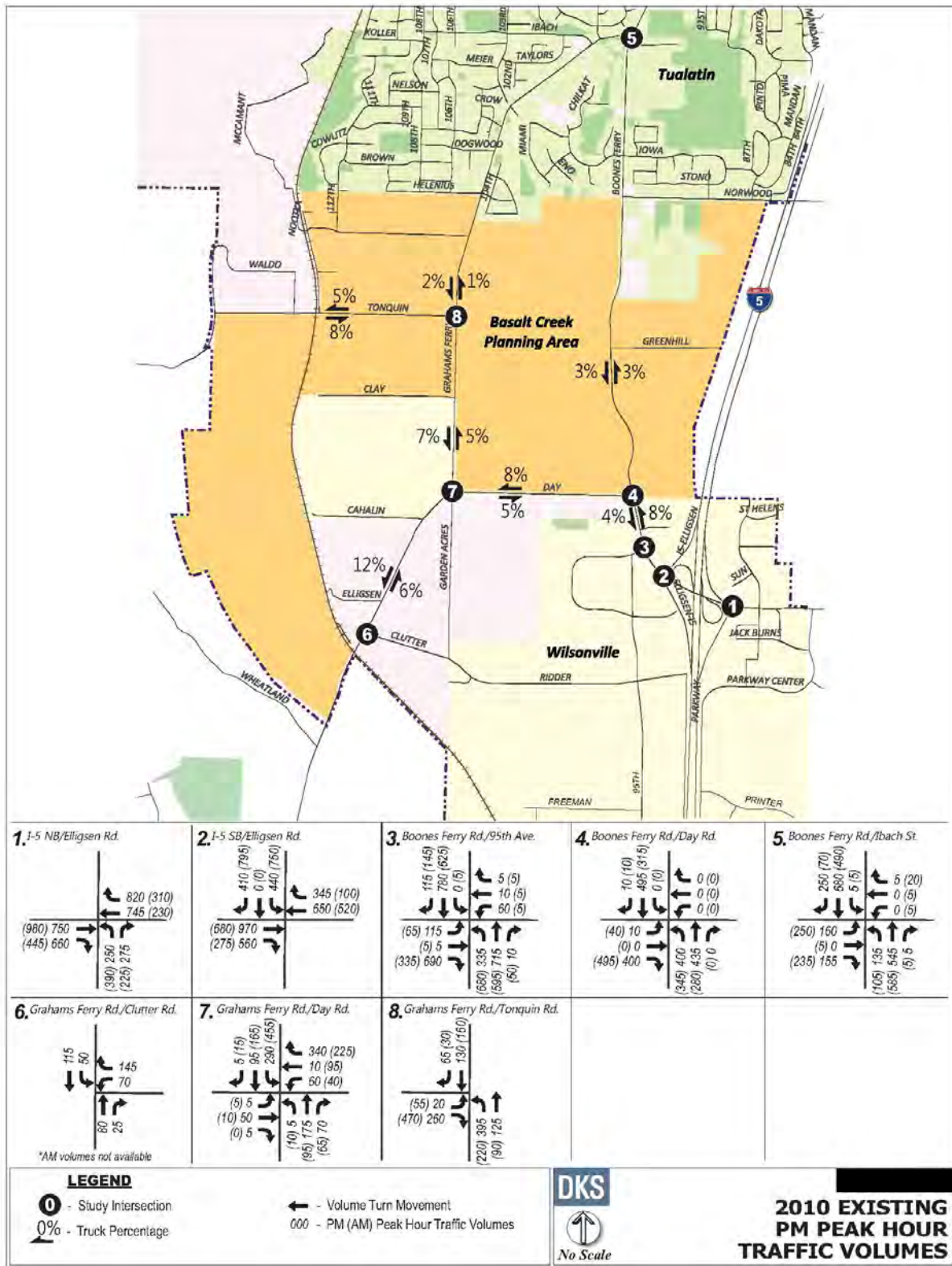


Figure 36 2010 Existing PM Hour Traffic Volumes by intersection in planning area. Source: DKS Associates 2014.

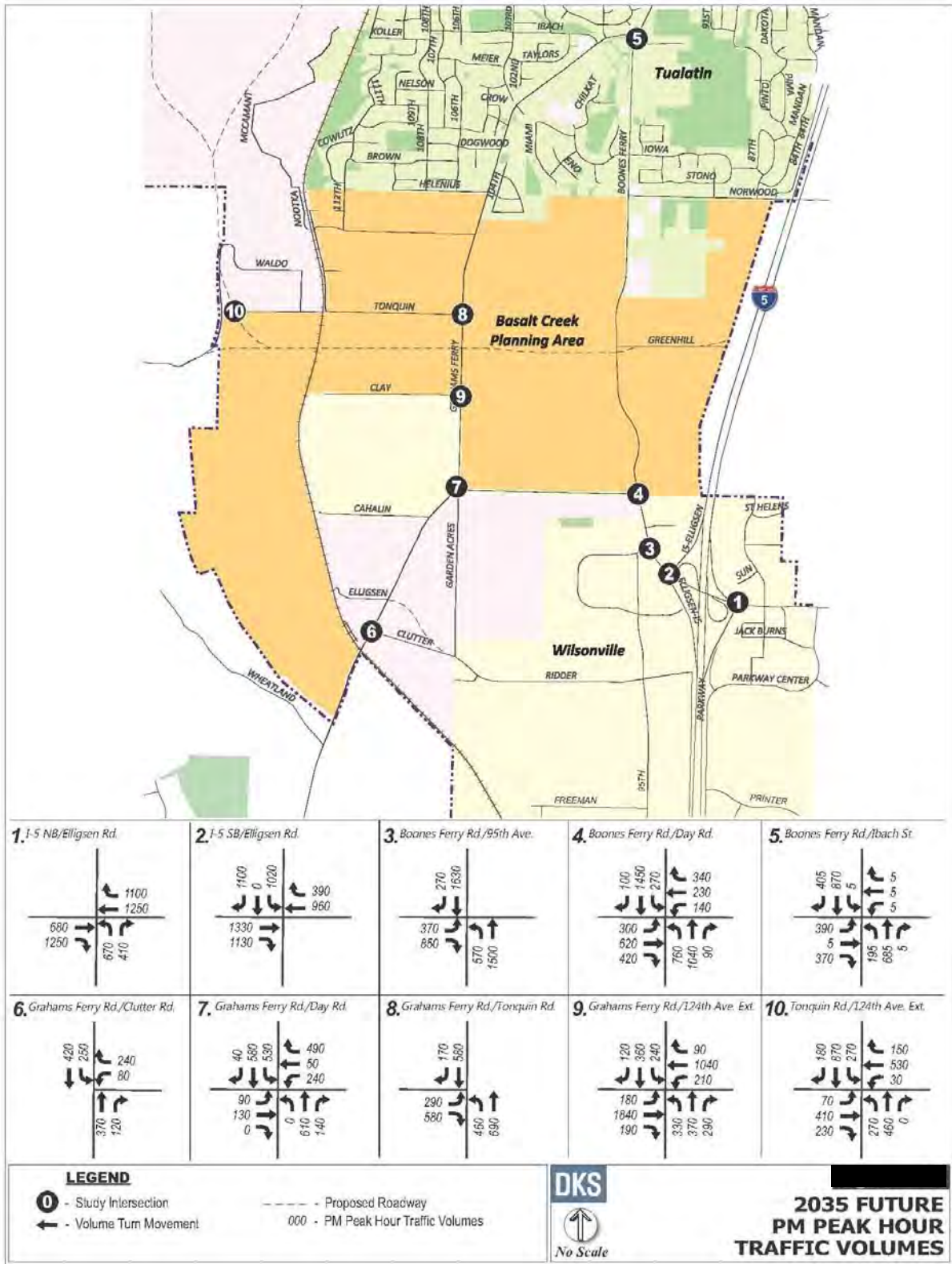


Figure 37 2035 Future PM Hour Traffic Volumes by intersection planning area. Source: DKS Associates 2014.

As shown in Figure 38, the Basalt Creek planning area is made up of three TAZs. Table 16 provides model trip p.m. peak hour estimates for each of the three TAZs. Between 2005 and 2035, the planning area is expected to generate an additional 2,255 trips—a 460% increase from the 2005 estimate of 490 trips.

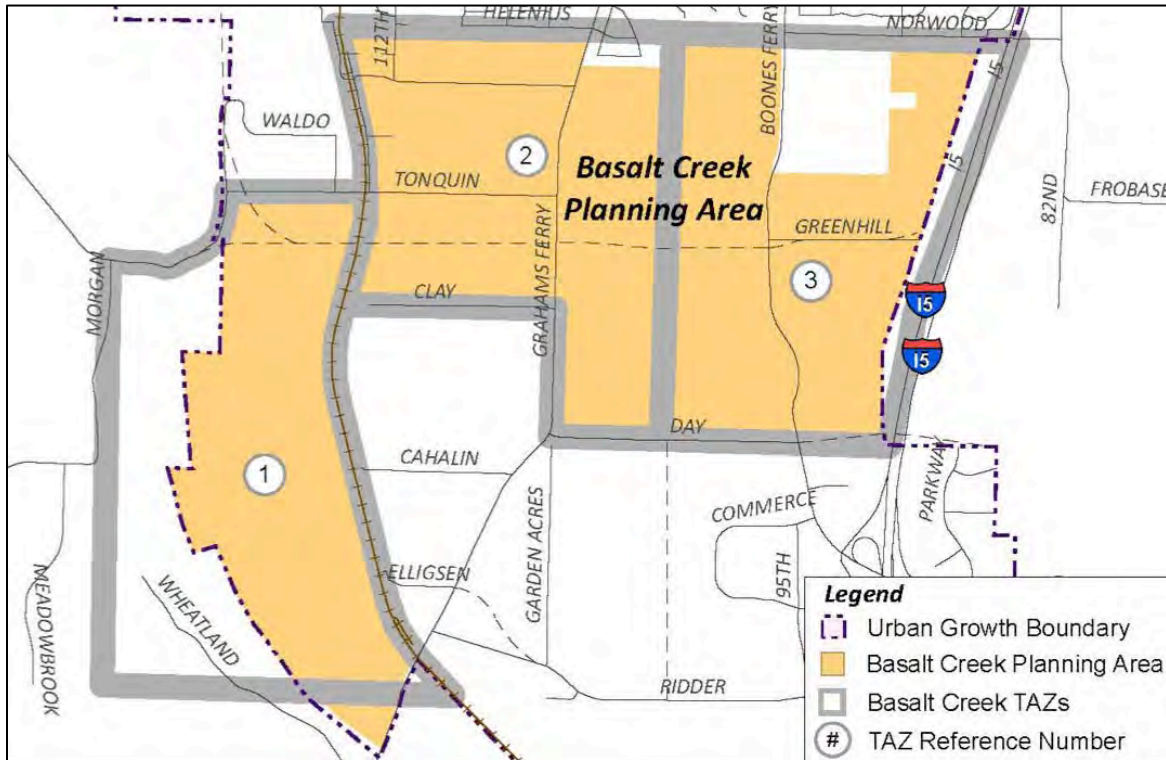


Figure 38 Basalt Creek planning area TAZ Structure. Source: DKS Associates 2014

Table 16 Basalt Creek planning area Estimated PM Peak Hour Trips<sup>27</sup>. Source: DKS, Metro.

TAZ	2005			2035		
	Entering	Exiting	Total	Entering	Exiting	Total
1	99	267	366	308	559	867
2	50	32	82	528	416	944
3	27	15	42	506	428	934
<b>Total</b>	<b>176</b>	<b>314</b>	<b>490</b>	<b>1,342</b>	<b>1,403</b>	<b>2,745</b>

<sup>27</sup> Within Metro’s regional model, TAZs 1-3 are represented by regional TAZs 1019, 1013, and 1014, respectively.

The growth between the 2005 and 2035 model volumes was interpolated to represent model growth for the smaller 2010-to-2035 time increment. This interpolated growth was added to the base year (2010) traffic volumes shown in Figure 36, resulting in the forecast 2035 volumes shown in Figure 37.

## Motor Vehicle Operations

Based on the volumes shown in Figure 36 and Figure 37, previous planning studies have documented motor vehicle conditions near the Basalt Creek planning area for existing conditions and for the future planning horizon year 2035. The 2035 motor vehicle conditions assume that the 18 projects in the Basalt Creek Transportation Refinement Plan’s Action Plan, shown in Table 18 and Figure 39, will be constructed by 2035.<sup>28</sup> The resulting 2010 and 2035 p.m. peak hour intersection operations are shown in Table 17.

Table 17 P.M. Peak Hour Motor Vehicle Operations. Source: DKS Associates, Metro 2014.

Intersection	Jurisdiction	Mobility Target	Existing Year (2010)		Future Year (2035)	
			PM LOS	PM V/C	PM LOS	PM V/C
I-5 NB/Elligsen Rd <sup>A</sup>	ODOT	0.85	A	0.55	B	0.82
I-5 SB/Elligsen Rd <sup>A</sup>	ODOT	0.85	C	0.60	C	<b>0.89</b>
Boones Ferry Rd/95th Ave <sup>A</sup>	Washington County	0.99	C	0.84	C	0.87
Boones Ferry Rd/Day Rd <sup>A</sup>	Washington County	0.99	C	0.64	E	0.99
Boones Ferry Rd/Ibach St* <sup>B</sup>	Washington County	0.99	B	0.70	D	0.98
Grahams Ferry Rd/Clutter Rd* <sup>C</sup>	Washington County	0.99	A/B	0.31	A/F	<b>&gt;1.50</b>
Grahams Ferry Rd/Day Rd <sup>A</sup>	Wilsonville	D	B	0.55	D	0.95
Grahams Ferry Rd/East-West Arterial <sup>A</sup>	Washington County	0.99	-	-	E	<b>1.00</b>
Grahams Ferry Rd/Tonquin Rd <sup>A</sup>	Washington County	0.99	A/B	0.44	C	0.88
124th Ave/Tonquin Rd <sup>D</sup>	Washington County	0.99	-	-	F	<b>&gt;1.50</b>

**Bolded and Red** indicates intersection does not meet mobility targets

Worst mainline LOS/worst side street LOS reported for unsignalized intersections

\*Existing year is 2011 for these intersections

<sup>A</sup> Operations from: Basalt Creek Transportation Refinement Plan, November 2012.

<sup>B</sup> Operations from: Tualatin Transportation System Plan, February 2013.

<sup>C</sup> Operations from: Wilsonville Transportation System Plan, June 2013.

<sup>D</sup> Operations from: SW 124<sup>th</sup> Ave Extension Traffic Impact Analysis Hybrid Scenario Report, January 2013.

<sup>28</sup> Not all 18 projects may be included in the 2014 financially constrained RTP project list.

As shown in the above table, five of the ten study intersections are expected to operate worse than the accepted level of mobility in the 2035 p.m. peak hour.<sup>29</sup> While the mobility target shown for the I-5 ramps is 0.85, it may be increased to 0.90 if it can be shown with at least 95 percent probability that queues will not spillback onto the mainline or to the portion of the ramp needed for safe deceleration. Therefore, it is possible that the I-5NB/Elligsen Road intersection may meet the mobility target if queuing is not an issue. Further study is needed for a higher level of certainty.

It is important to note that the forecasting for Basalt Creek Transportation Refinement, 124th Avenue Analysis, and the two city TSPs was performed using earlier versions of the regional travel demand model that assumed more intense development in Basalt Creek and other adjacent areas. The regional model has since been updated (with Metro's "Gamma" model version, for the 2014 Regional Transportation Plan). While the new model was not used for the analysis summarized in this report, it is significant that the overall trip numbers for the planning area are lower due to a decreased forecast for housing units and retail jobs (which produce far more trips than industrial or other commercial employment). This decreased trip forecast (Table 18), in combination with a concept plan that will strategically consider appropriate land uses, multimodal transit networks, local road connections and existing plans for road expansions, will likely mitigate some of the operational deficiencies shown in Table 17.

**Table 18** Comparing Housing and Employment Forecasts for 2025 in the Basalt Creek planning area.  
Source: Metro 2014.

	New Households	New Retail Employment	New Service Employment	Other New Employment	Total New Employment
Forecast used in Basalt Creek TRP (Beta Version)	1386	467	581	1514	2562
New Forecast (Gamma Version)	1214	46	427	1843	2316
Change between Beta and Gamma forecasts	-172	-421	-154	+329	-246

The 124<sup>th</sup> Avenue extension is planned to be a five lane roadway; however, the operations shown for the 124<sup>th</sup> Avenue/Tonquin Road intersection assume 124<sup>th</sup> Avenue as a three lane facility. As a five lane facility, it is possible that the intersection may meet the mobility target.

At the time of the Basalt Creek Transportation Refinement Plan, the 2035 operational analysis assumed that the East-West Connector (i.e., 124<sup>th</sup> Avenue south of Tonquin Road) would be located north of Tonquin. However, the arterial is currently planned to be located south of Tonquin. Therefore, operations in Table 17 may vary—especially the Grahams Ferry Road/East-West Connector and Grahams Ferry Road/Tonquin Road intersections—assuming the south alignment of the arterial.

<sup>29</sup> Operational issues may also exist in the a.m. peak hour for one or more of the study intersections. Morning peak hour analysis was not available for this study.

## Basalt Creek Transportation Refinement Plan Projects

The Basalt Creek Transportation Refinement effort included a recommendation for phased investments to support regional and local transportation needs through 2035. The resulting Action Plan includes the projects shown in Table 18 and Figure 39. Analysis showed that the entire set of projects would be needed to support the local and regional growth reflected in the adopted 2035 RTP model (discussed earlier), and all projects on the list are included in the assumed network on which the operations results shown in Table 17 were based.

The Action Plan project list represents the transportation framework needed to accommodate the RTP's future growth assumptions. However, this framework is different from a list of "reasonably likely" projects (i.e., projects from a financially constrained plan) that would inform a Transportation Planning Rule analysis that would support changes to comprehensive plan/zoning designations. Table 18 includes information on whether each project is identified in the Federal RTP (i.e., reasonably likely) or whether the project was from the State RTP or another source (i.e., not reasonably likely).

Major capacity improvements beyond those listed in Table 18 are not anticipated. Therefore, the trips generated in the study area, as shown in Table 16, are considered "sideboards" for the Basalt Creek planning area, meaning that trip generation lower than these totals should allow the Action Plan network to operate acceptably in 2035. Within this framework, the East-West Connector is a special case requiring further discussion.

### East-West Connector Considerations

While the East-West Connector project is not part of the federal financially constrained project list in the adopted RTP, the first phase of this facility has been fast-tracked and funding has been identified for construction between 124<sup>th</sup> Avenue/Tonquin Road and Grahams Ferry Road and is recommended to be included in the 2014 financially constrained RTP list. Therefore, this section (part of Washington County's 124<sup>th</sup> Avenue Extension project) can be considered "reasonably likely" for TPR purposes.

Partner agencies on the Basalt Creek Transportation Refinement Plan identified key characteristics that should be included in the East-West Connector in order to support development. These included:

- Design for 45 mph and posted speed limit of 45 mph
- Access spacing of one-half mile to one mile

This means the only accesses provided within the study area would occur at the Grahams Ferry Road and Boones Ferry Road intersections. Additional roadway or pedestrian/bicycle crossings between the north and south sides of the facility would need to be grade-separated.

Table 19 Basalt Creek Refinement Action Plan

ID	Project	Short-Term	Medium-Term	Long-Term	Cost (\$2012)	Previously Planned?
1	124 <sup>th</sup> Avenue Extension (Tualatin-Sherwood Road to Tonquin Road): Construct three lane road extension with bike lanes and sidewalks	x			\$20,000,000	Federal RTP
2	Tonquin Road (124 <sup>th</sup> Avenue to Grahams Ferry Road): Widen to three lanes with bike lanes and sidewalks, grade separate at railroad, improve geometry at Grahams Ferry Road <sup>1</sup>	x			\$10,500,000	Federal RTP
3	Grahams Ferry Road (Tonquin Road to Day Road): Widen to three lanes with bike lanes and sidewalks	x			\$5,400,000	Federal RTP
4	Boones Ferry Road (Norwood Road to Day Road): Widen to three lanes with bicycle and pedestrian improvements	x			\$10,800,000	In design
5	124 <sup>th</sup> Avenue/Tonquin Road Intersection: Signal (may include Tonquin Trail crossing)	x			_ <sup>2</sup>	-
6	Grahams Ferry Road/Tonquin Road Intersection: Signal	x			\$500,000	Federal RTP
7	Boones Ferry Road/Day Road Intersection: Add second southbound through approach lane	x			_ <sup>3</sup>	-
8	Boones Ferry Road/95 <sup>th</sup> Avenue Intersection: Construct dual left-turn and right-turn lanes; improve signal synchronization, access management and sight distance	x			\$2,500,000	Federal RTP
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 <sup>4</sup>	Federal RTP
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 <sup>4</sup>	Federal RTP
10	124 <sup>th</sup> Avenue Extension (Tualatin-Sherwood Road to Tonquin Road): Widen from three to five lanes with bike lanes and sidewalks		x		\$14,000,000	Federal RTP
11	East-West Arterial (124 <sup>th</sup> Avenue to Boones Ferry Road): Construct 5 lane roadway with railroad and creek crossings, integrate segment of Tonquin Trail <sup>5</sup>		x		\$57,900,000	State RTP
12	Boones Ferry Road (East-West Arterial to Day Road): Widen to five lanes with bike lanes and sidewalks		x		\$1,100,000	State RTP
13	Kinsman Road Extension (Ridder Road to Day Street): Construct three lane road extension with bike lanes and sidewalks		x		\$10,400,000	Federal RTP
14	Day Road (Kinsman Road to Boones Ferry Road): Widen to five lanes with bike lanes and sidewalks		x		\$5,800,000	Similar to RTP project
15	I-5 Southbound off-ramp at Boones Ferry Road/Elligsen Road: construct second right turn lane		x		\$500,000	No
16	Boones Ferry Road/95 <sup>th</sup> Avenue Intersection: Access management		x		_ <sup>6</sup>	-
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 <sup>7</sup>	State RTP
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	State RTP
<b>TOTAL</b>		<b>\$59M</b>	<b>\$97M</b>	<b>\$72-82M</b>	<b>\$228-238M</b>	

<sup>1</sup> Grade separation for Tonquin Road is optional. An at-grade crossing would reduce cost by around \$2,000,000

<sup>2</sup> Cost included in Project 1

<sup>3</sup> Coordinate with Project 4. Cost of approach lane included in estimate for Project 12

<sup>4</sup> Tonquin Trail cost estimated by Metro as part of trail planning effort

<sup>5</sup> 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

<sup>6</sup> Project details to be determined by further coordination between City of Wilsonville and ODOT. Cost expected to be minimal

<sup>7</sup> 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

\* Time frames may shift with updates to the RTP

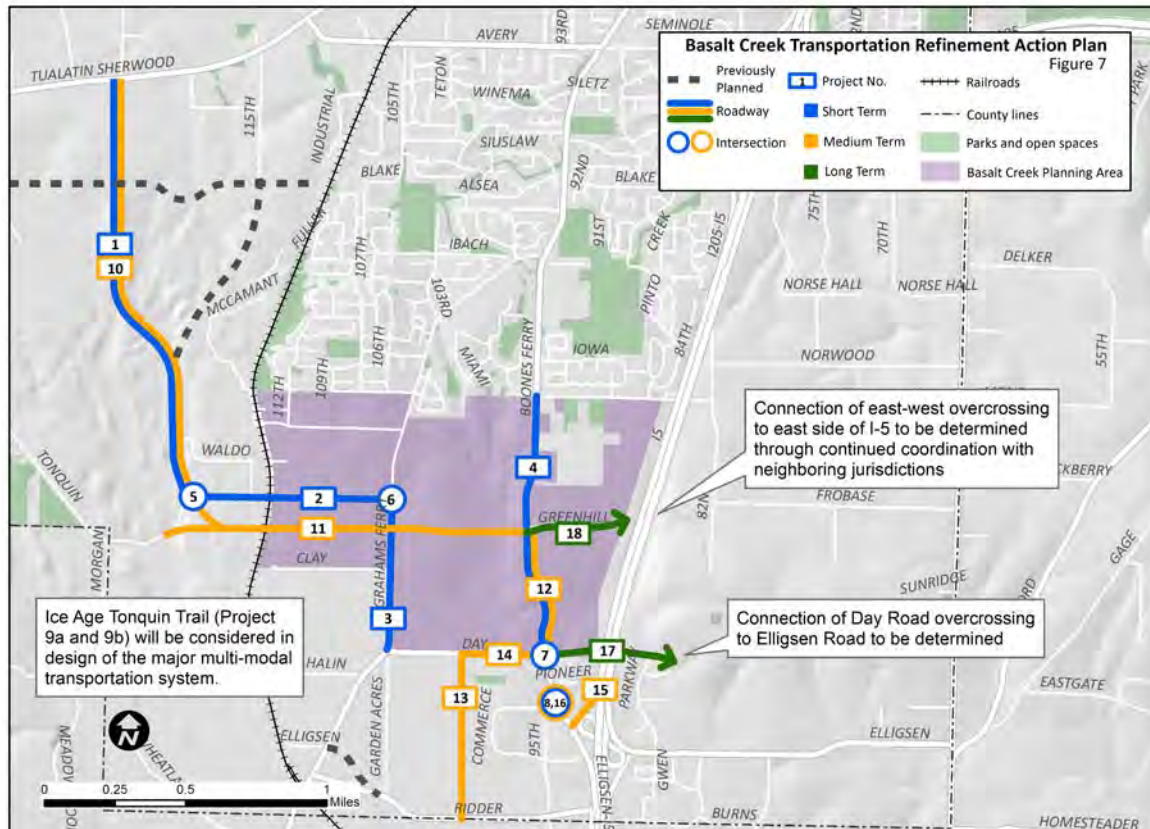


Figure 39 Basalt Creek Transportation Refinement Plan (TRP)

## Pedestrian and Bicycle System

The Basalt Creek planning area is primarily served today by Tonquin Road, Grahams Ferry Road, and Boones Ferry Road. However, except for Boones Ferry Road, as shown in Figure 41 and Figure 42, these roads generally do not provide adequate pedestrian and bicycle connections to the Basalt Creek planning area.

While there are adopted design standards and several planned projects that address deficiencies in the existing pedestrian and bicycle system, there are a few rural roads in the Basalt Creek planning area without planned pedestrian and bicycle improvements, including:

- 112<sup>th</sup> Avenue south of Brown Street
- Clay Street



- Grahams Ferry Road north of Tonquin Road
- Tonquin Loop

As the area develops, these rural roads should be improved to meet urban standards.

## Transit System

TriMet currently runs a bus route on Boones Ferry Road through the Basalt Creek planning area (Route 96). This route connects north Wilsonville (at Commerce Circle), Tualatin, and downtown Portland with frequent commuter service during the weekdays. As shown in Figure 39, the route runs along Boones Ferry Road with stops spaced approximately ¼ mile through the Basalt Creek planning area. Weekend transit service, however, is not provided in the planning area.

South Metro Area Regional Transit (SMART) runs transit service to Commerce Circle via Route 2X (Barbur Boulevard Transit Center to SMART Central with a stop at the Tualatin Park & Ride and Route 5 (Commerce Circle to SMART Central). Route 2X runs limited service to Commerce Circle Monday through Friday; Route 5 runs with frequent service Monday through Friday.

TriMet’s WES commuter rail service runs along the rail tracks through the planning area, connecting Wilsonville to Beaverton. While it stops in Wilsonville and Tualatin, it currently does not stop in the planning area.

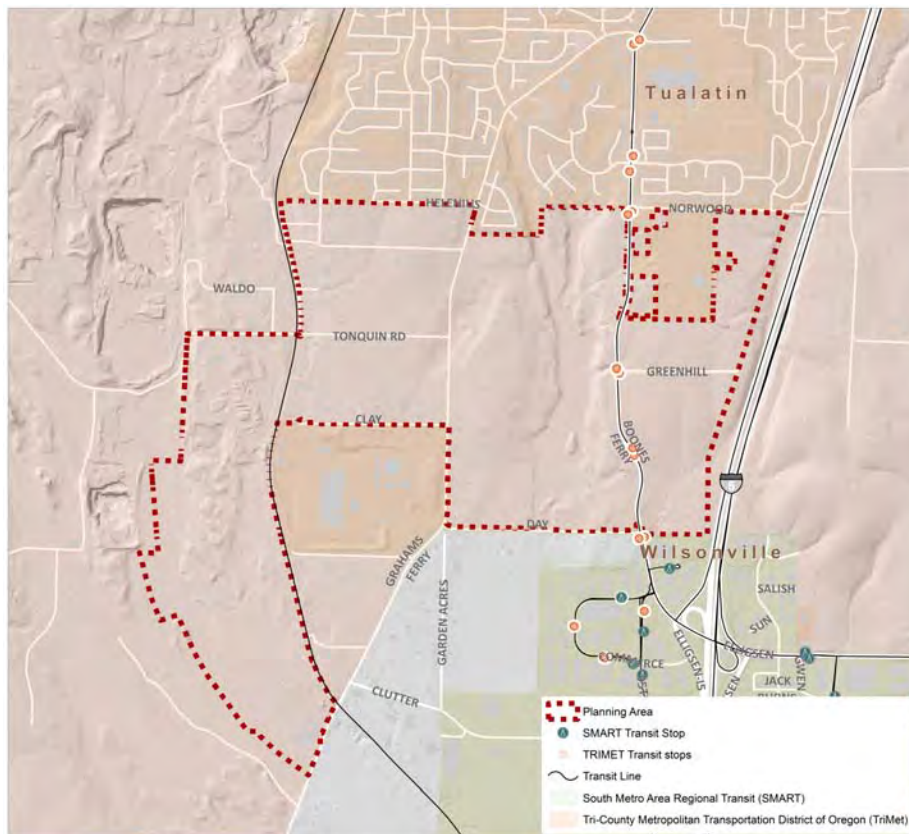


Figure 40 Transit service boundaries for TriMet and SMART in and around Basalt Creek area

Overall, the combined TriMet/SMART transit system meets the needs of the typical commuter—outside of typical commute hours, however, transit service in the Basalt Creek plan area is nonexistent. Two projects have been identified to enhance the transit system adjacent to the Basalt Creek planning area. These projects are from the Tualatin Transportation System Plan, which did not plan for projects in the planning area, and are estimated with a medium-term planning horizon (i.e., five to ten years):

- Look for potential park-and-ride locations south of Bridgeport Village.
- Add bus pullouts on SW Boones Ferry Road at existing bus stops where possible

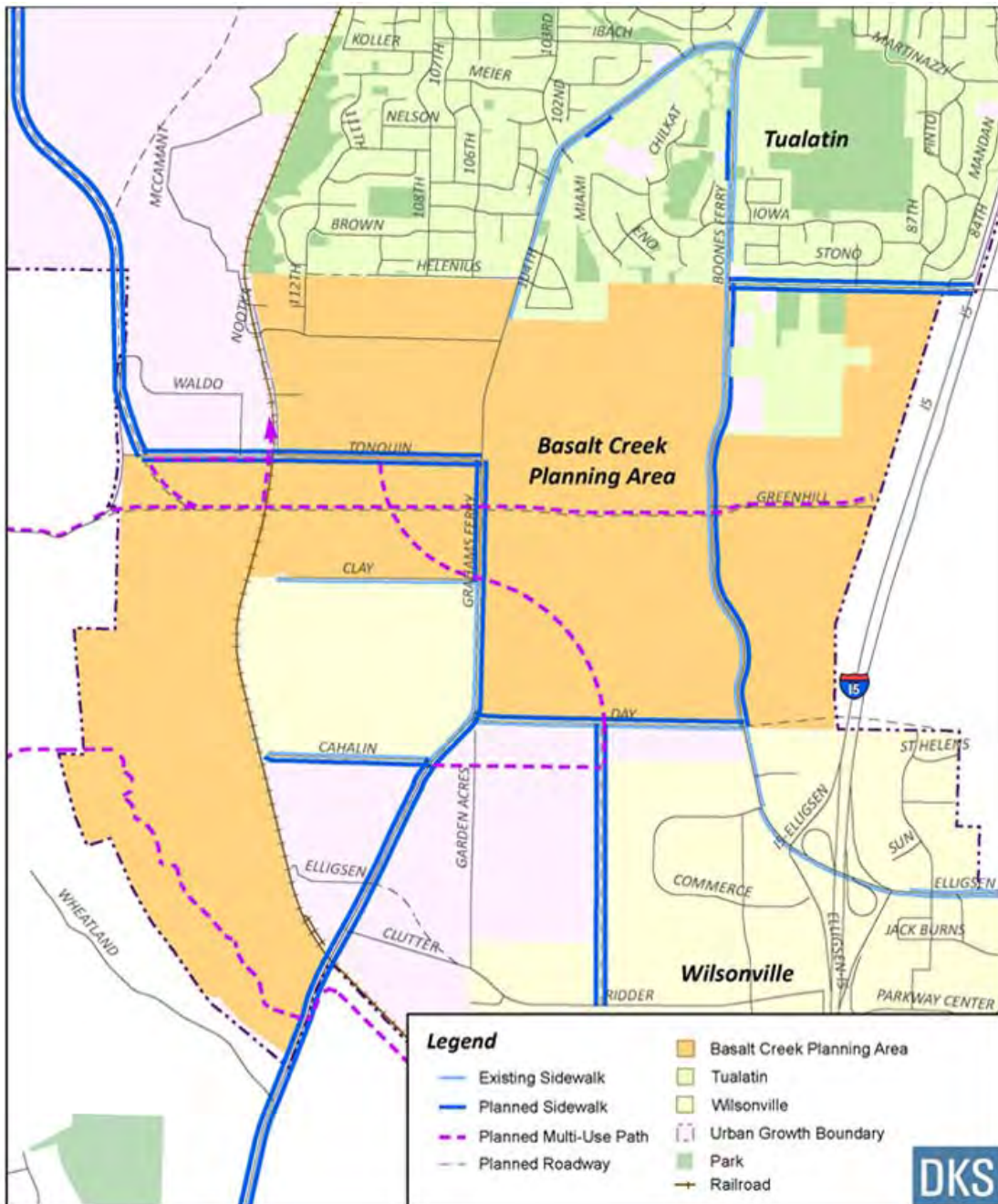


Figure 41 Existing Pedestrian system in Basalt Creek planning area. Source: DKS Associates 2014

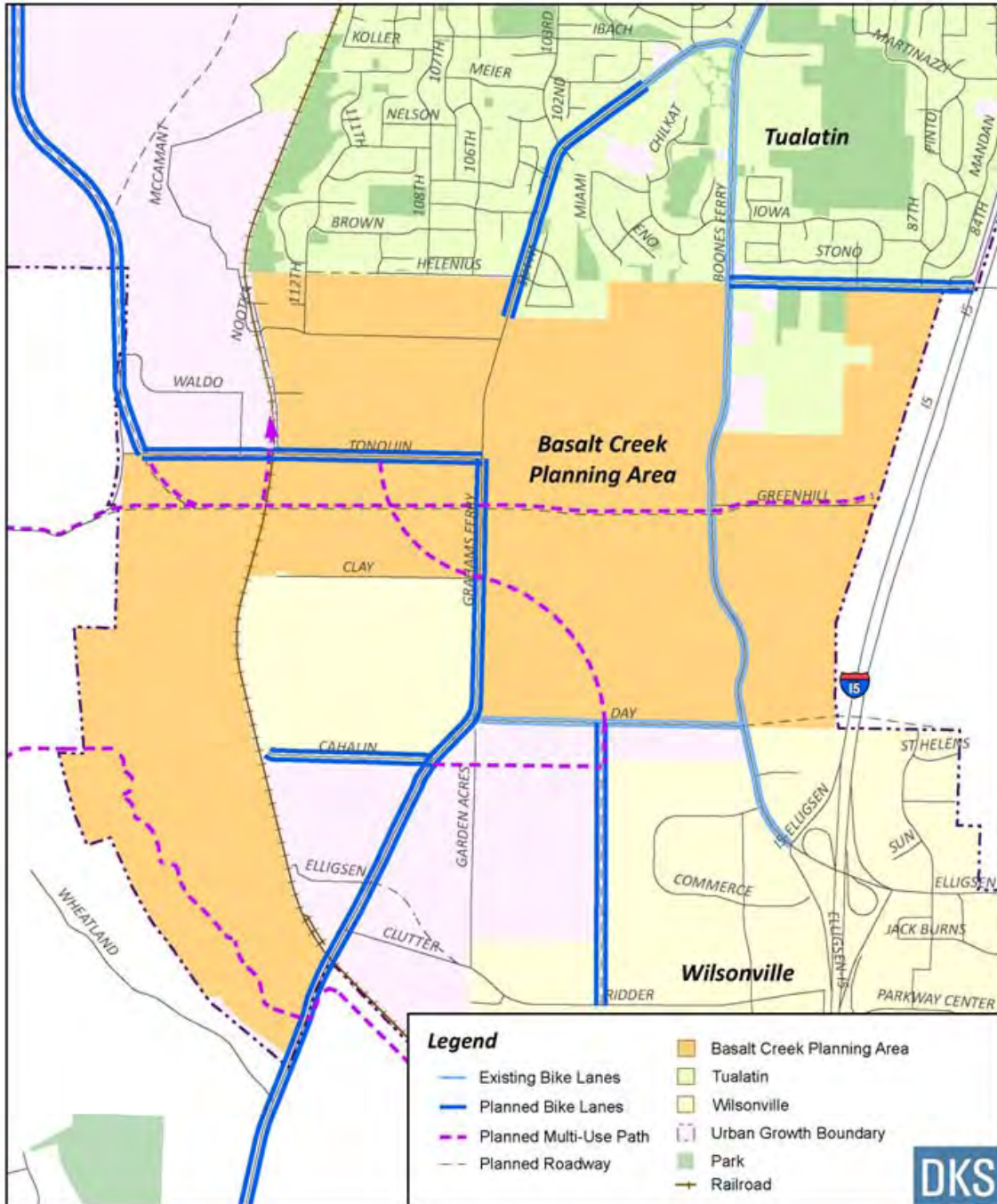


Figure 42 Existing bicycle system in Basalt Creek planning area. Source: DKS Associates 2014

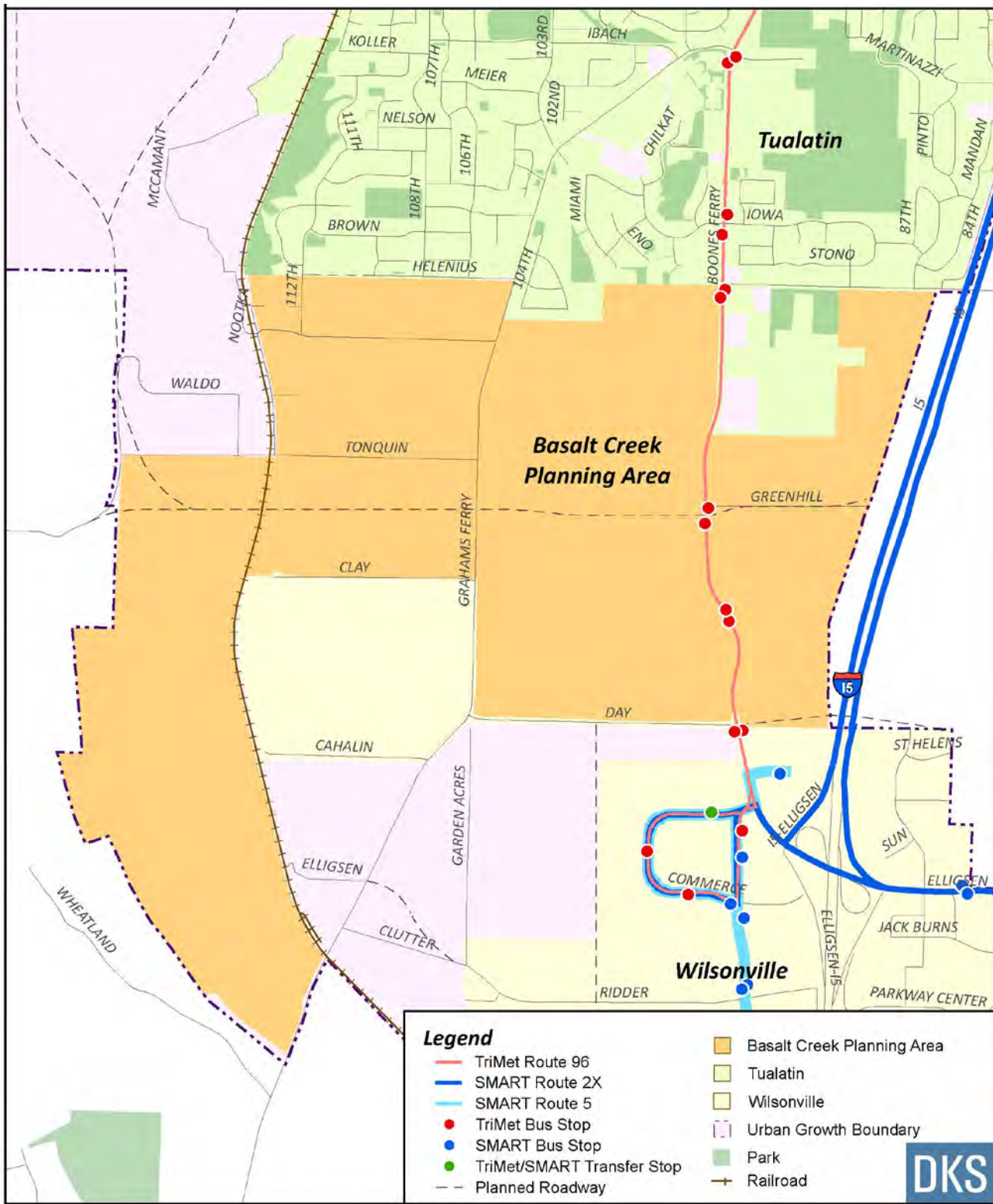


Figure 43 Existing transit system in Basalt Creek planning area. Source: DKS Associates 2014

# VIII. Land Capacity Analysis

The bulk of this section describes the methods and data sources used to perform the land capacity analysis for the Basalt Creek planning area. The results of the analysis are presented toward the end of the section.

## Methodology

The land capacity analysis is an estimate of the development potential within the planning area to provide a realistic estimate of where and how much land can be developed. The analysis is twofold: an assessment of “buildable lands” – areas that are suitable for development given the physical and regulatory constraints on the land, and two, an assessment of the land supply within the planning area. Land supply is an assessment at the parcel level that identifies areas that are not constrained and are either vacant or redevelopable.

## Buildable Lands

The buildable lands assessment focuses primarily on identifying places where there is limited or no development potential. These areas are screened out from the analysis to identify the places where development is most suitable given the environmental and regulatory context. There are a range of factors that influence development potential within the planning area, but they can be generally divided into two categories: hard and soft constraints. Hard constraints are either physical or legal requirements that prohibit new development. These areas will be fully excluded from the analysis with the assumption that no new development will occur in them. Soft constraints are also based on physical or legal requirements but do allow for some development, and provide guidance for assigning appropriate land uses and intensities. The analysis of constraints for the purpose of assessing land capacity focused primarily on environmental and manmade constraints. A conservative approach is taken in this analysis toward development in and around environmental constraints to emphasize preservation of natural resources.

## Hard Constraints

State, regional and local laws provide a range of protections for environmental features and habitat. This analysis provides a framework that meets:

- Oregon Statewide Planning Goal 5
- Metro Regional Functional Plan Requirements (Titles 3 and 13)
- Clean Water Services (CWS) Regulations
- City of Wilsonville Significant Resource Overlay Zone (SROZ) Development Code

Since local regulations are compliant with state and regional land use requirements, and in some cases go above and beyond what is required, this analysis uses the CWS and Wilsonville SROZ requirements as

the foundation for determining constraints. For the purpose of this analysis, where methodologies differ the approach that offers more protection is taken into account. The major differences between CWS and Wilsonville’s SROZ requirements are summarized in Table 20 below. The chief difference between the two is that Wilsonville differentiates for size and location of wetland and includes more drainage area classes.

Table 20 Comparing methodologies<sup>30</sup> for buffering natural resources between Clean Water Services and Metro’s Title 3/City of Wilsonville. Source: Fregonese Associates, Clean Water Services, City of Wilsonville and Metro 2014.

### COMPARING BUFFERING METHODOLOGIES

WATER FEATURE	CWS	SROZ and Title 3
Primary Water Feature	50 ft	50 ft
Primary Water Feature -- With steep slope	Up to 200 ft	Up to 200 ft
Secondary Water Feature	15 ft/25 ft/50 ft	15 ft
Secondary Water Feature -- With steep slope	Up to 200 ft	50 ft
Slope Stability	Top of ravine plus 35 ft	

It should be noted that when actual development takes place, a more detailed and site-specific analysis will be undertaken and will include application of local regulations. The analysis in this report provides a detailed but high-level assessment of buildable lands for the purpose of creating the concept plan.

Hard constraints are split into two major categories: environmental and manmade. Basic environmental constraints are summarized below:

- 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)

Unless otherwise noted all of the constraints described above are fully excluded from the land being considered for development in this analysis.

<sup>30</sup> For definitions of features, please refer to CWS’s Design and Construction Standards - Chapter3, City of Wilsonville’s Significant Resource Overlay Zone (SROZ) Ordinance, and Metro’s Urban Growth Management Functional Plan

The following describes the environmental hard constraints methods and findings in more detail. Maps showing the environmental constraints (open water, wetlands, streams, floodplains, and Title 3 and 13 areas) can be found in *Section III: Natural and Historic Resources*.

### *Open water*

All areas of open water in the planning area were digitized by Fregonese Associates based on 2013 and 2012 leaf-off aerials.<sup>31</sup> Forty-nine (49) acres of open water (which includes a 50-foot buffer surrounding water features) were excluded from the analysis.

### *Streams*

Three categories of streams were defined for the analysis and include:

- Natural streams (18,845 feet)
- Underground streams (789 feet)
- Intermittent streams (1,402 feet)

Stream categories determined by visual survey of 2013 and 2012 leaf-off aerials and intermittent stream and through field checks conducted by the City of Wilsonville. For the constraints analysis the following buffers were applied:

- Natural streams (50 foot buffer)
- Intermittent streams (15 foot buffer)

Underground streams were not considered in the analysis. A total of 31 acres of streams and associated buffers were excluded from the analysis.

### *Wetlands*

Wetlands were identified using RLIS, the Wetland Delineation Report for Proposed Boones Ferry Widening, and additional wetlands digitized by Fregonese Associates based on 2013 and 2012 (leaf-off) aerials. For the constraints analysis the following wetland buffers were applied:

- Wetlands (50-foot buffer)
- Isolated wetland and smaller than a half acre (25-foot buffer)

A total of 69 acres of wetlands and buffer areas were excluded from the analysis.

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<sup>31</sup> Leaf-off aerials are aerial photos taken during a season (usually winter) when there is a lack of foliage on deciduous tree and shrub species, and ground features (including water bodies) can be seen more distinctly.



## Floodplains

Areas identified by FEMA as being within the 1% annual chance flood event area were constrained by 50% for the analysis, resulting in a total of 53 acres of land within the 100 year floodplain.

## Title 3-Designated Land

Title 3 is a regulatory designation used by Metro to protect riparian resources such as streams, wetlands and floodplains. Title 3 restricts development within these areas to protect natural resources as well as life and property threatened by flooding. There are 116 acres of Title 3 land within the planning area.

## Steep Slopes

Steep slopes were analyzed using RLIS data and digitized slopes by Fregonese Associates using a 3-foot digital elevation model (DEM) provided by Metro (Figure 44). Using RLIS, only 41 acres of steep slopes were identified. The 3-foot DEM provides additional accuracy and added nine additional acres of steep slopes, for a total of 50 acres of slopes. The analysis includes non-isolated slopes, greater than half an acre, natural and or along a riparian area. These areas are excluded from the analysis.



Figure 44 Map showing classification of slopes by steepness in the Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014.

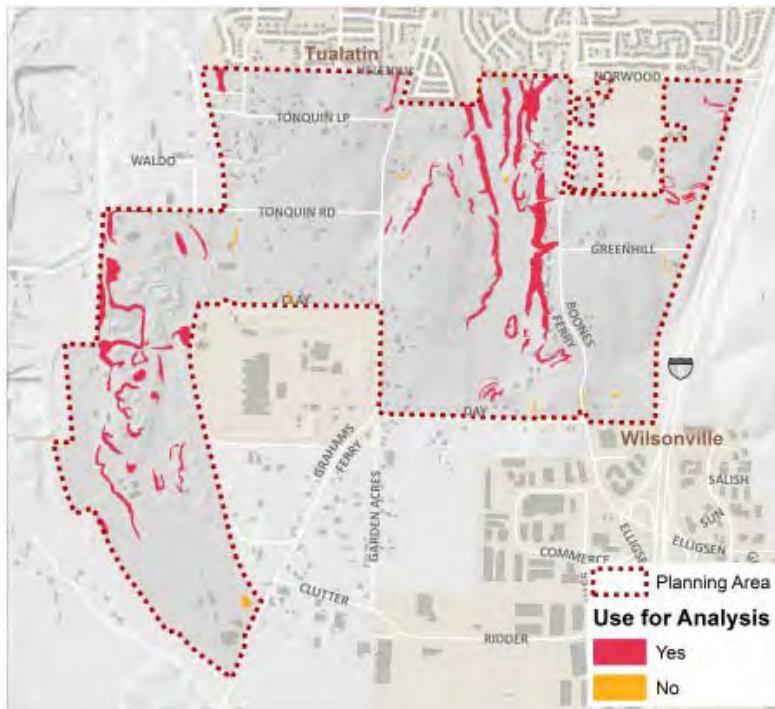


Figure 45 Slopes over 25% in the Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014.

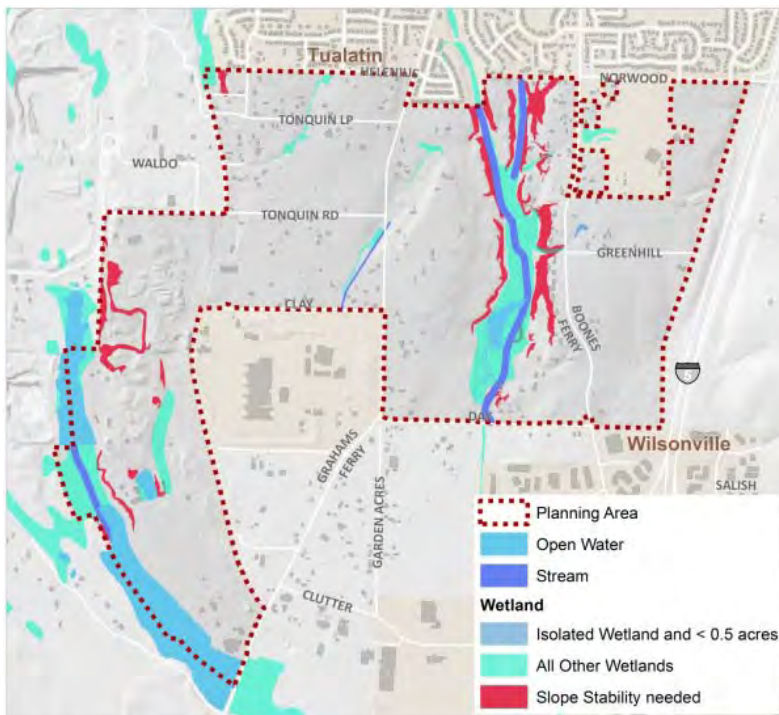


Figure 46 Slope stability in the Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014.

## *Slope Stability*

Clean Water Services has a requirement for slope stability within vegetated corridors. CWS requires an additional 35 feet for steep slopes within a vegetated corridor from top of ravine. This affects streams, open water and wetlands. The slope stability is in effect for a distance of up to 200 feet. This removes an additional area of 11 acres from the analysis (Figure 46).

## *Manmade Constraints*

Basic manmade constraints include:

- Easements
  - BPA easements
  - PGE easements and substation
  - Natural Gas Pipeline
- Roads
  - Existing
  - Future/planned roads and expansions included in the Basalt Creek Transportation Refinement Plan

All of the manmade constraints are fully excluded from the buildable lands. The following describes the methodology and findings for the manmade constraints:

- Almost 16,000 feet of transmission lines crossing the area
- Two Easements:
  - BPA: 42.3 acres
  - PGE: 18.0 acres plus 4.1 acres substation
- Two Natural Gas lines:
  - 25.7 acres
- For constraints analysis:
  - Remove from buildable land

## *Roads*

There are four major road projects:

- East-West Connector (6,460 feet)
- 124<sup>th</sup> Ave. Extension (890 feet)
- Boones Ferry Road (4,860 feet)
- Two 2035 I-5 Overcrossings (approx. 4,000 feet)

Soft constraints:

- Inverse buffering of tax lots along the alignments by 10-foot increments to accommodate for projects

Additional road projects:

- 11,512 feet

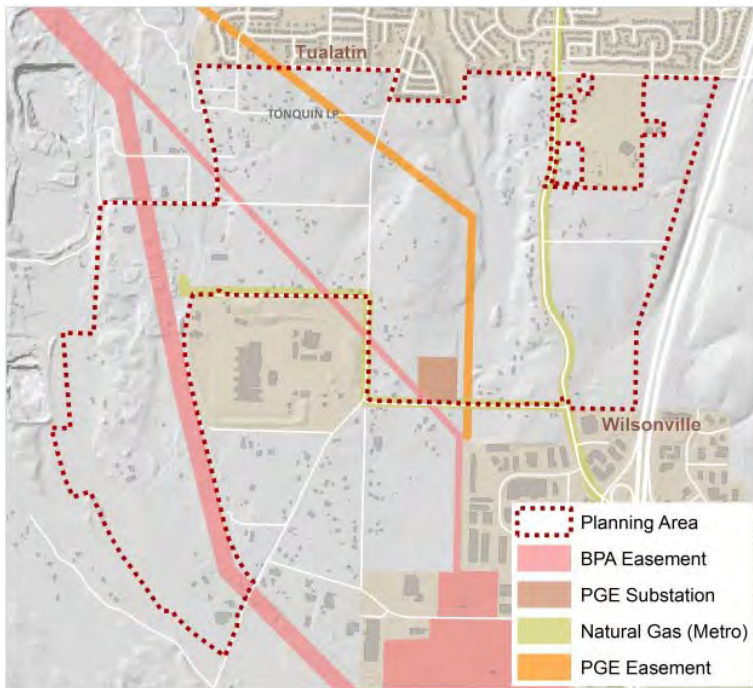


Figure 47 Infrastructure constraints in the Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014

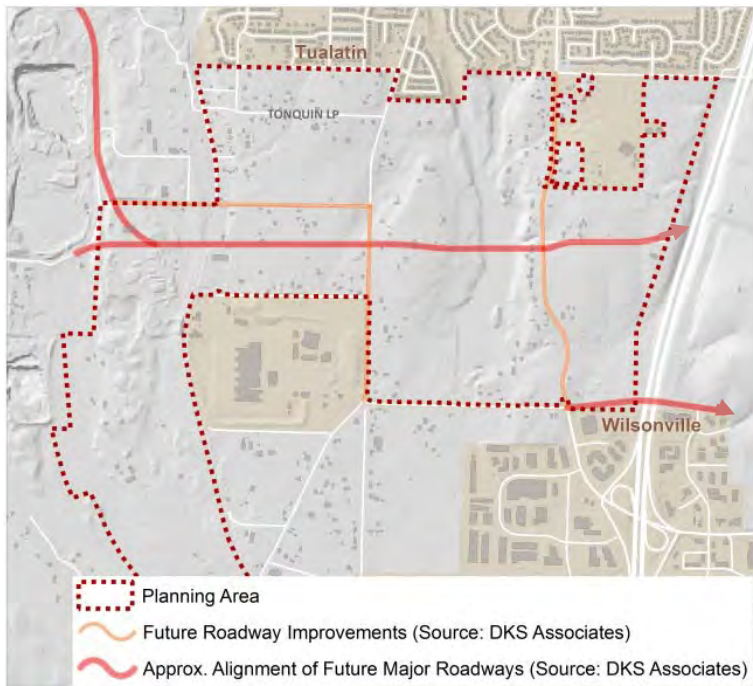


Figure 48 Road constraints in the Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014

## Soft Constraints

Soft constraints provide guidance for determining suitability for different land uses in areas that are environmentally constrained. Two key soft constraints are included in the analysis: Slopes greater than 10% (as a constraint for industrial suitability) and Title 13 protections of upland habitat

### Title 13 – Designated Land

Title 13 refers to Nature in Neighborhoods. It was adopted by Metro in 2007 as an enhancement to Title 3. Title 13 encourages the protection of habitat and conservation efforts. For our analysis we restricted development within the Riparian Class I and II. There are 431 acres of Title 13-designated land in the planning area. For the constraints analysis, the developable acreage was reduced by 20%. Title 13 is considered a soft constraint, as it is a policy guidance designation but not regulatory.

### Constraints Summary

Overall 35% (297 acres) of the total land area within the Basalt Creek planning area is constrained.

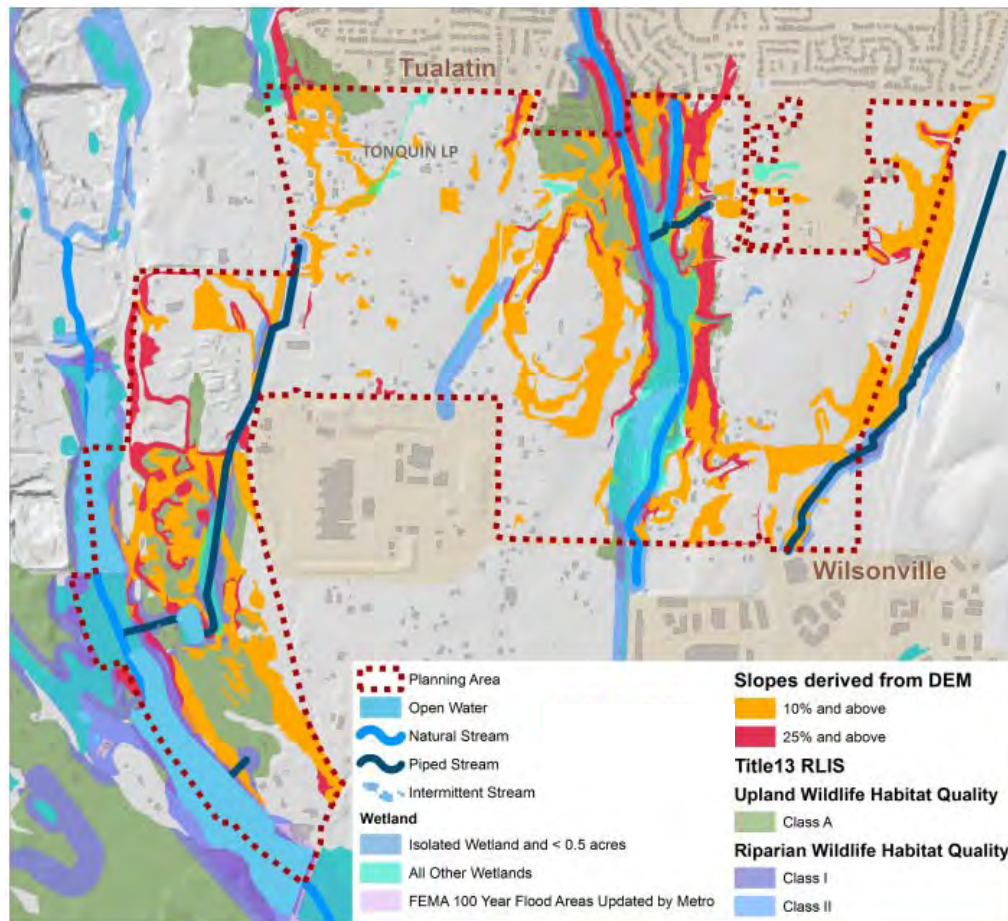


Figure 49 Map of development constraints (excluding roads) in the Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014

Figure 50 below illustrates the land area that is either fully or partially constrained based on the methodology described above.

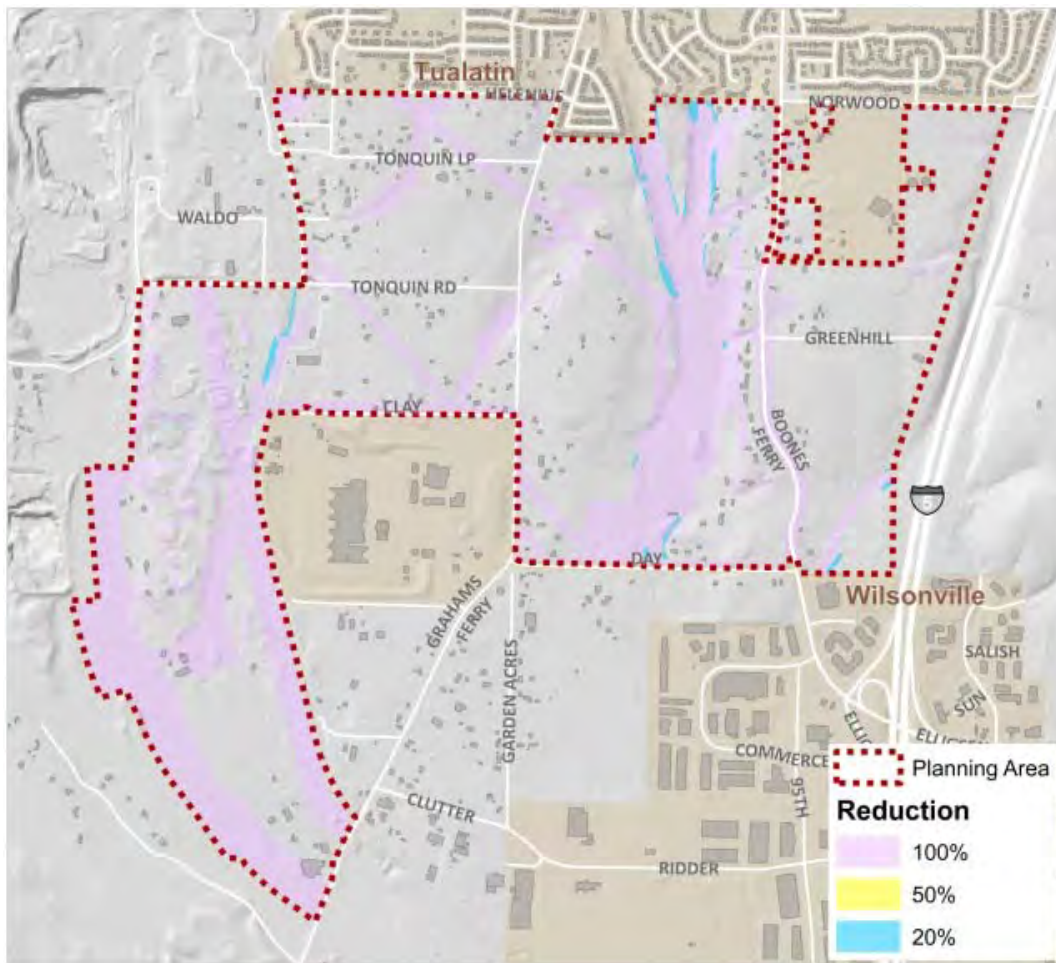


Figure 50 Map of all constrained area (hard constraints) in the Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014

## Land Supply

The second step in the buildable lands analysis examines the potential for new development or redevelopment of existing uses within the planning area. While much of the land within the planning area is vacant, there are existing businesses, homes and other uses within the area that are considered. This part of the analysis brings together the buildable lands analysis with an assessment of developable land within the planning area to provide an estimate of land supply available for development. This analysis is conducted at the tax lot level because land uses are tied to property lines.

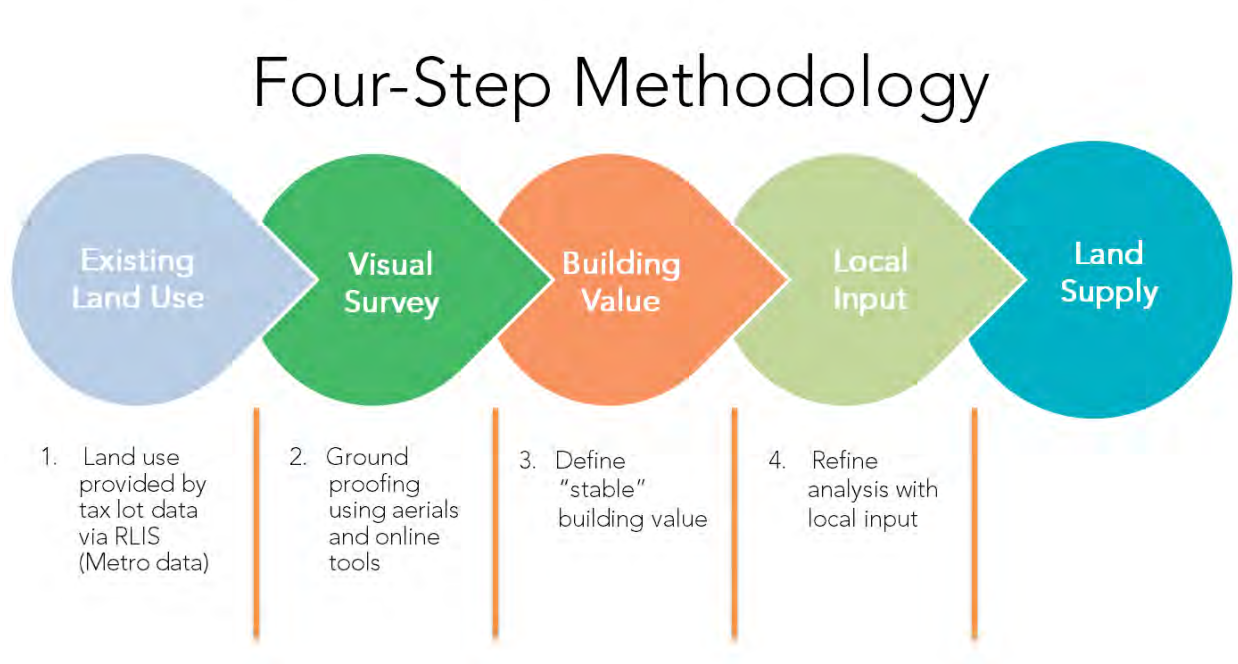
The outcome of this analysis is to classify every parcel within the planning area into one of the three categories described below:

- Vacant Land – Land ready to build, no major structure on site
- Redevelopable Land – Land with existing uses but have redevelopment potential
- Stable Land – Land and structures on it will not change in the future

The land supply analysis is then combined with the buildable lands to create a geographically referenced database of land capacity within the planning area.

The land supply analysis is based on four major steps (Figure 51):

- Existing Land Use – Land use provided by tax lot data via RLIS
- Visual Survey – Ground proofing via aerials and online tools
- Building Value – Define “stable” and redevelopment potential via building value
- Local Input – Refine analysis with local input



**Figure 51** Graphic illustration of four-step methodology for analyzing land supply. Source: Fregonese Associates 2014.

## Existing Land Use

In this step parcels are categorized into either developed or vacant land. Step one is based on existing land use using tax lot data provided by RLIS. Parcels that are considered developed are classified in RLIS as:

- Commercial
- Industrial
- Public
- Residential

Parcels that are considered vacant are classified in RLIS as:

- Rural
- Forest
- Agriculture
- Unknown
- Vacant

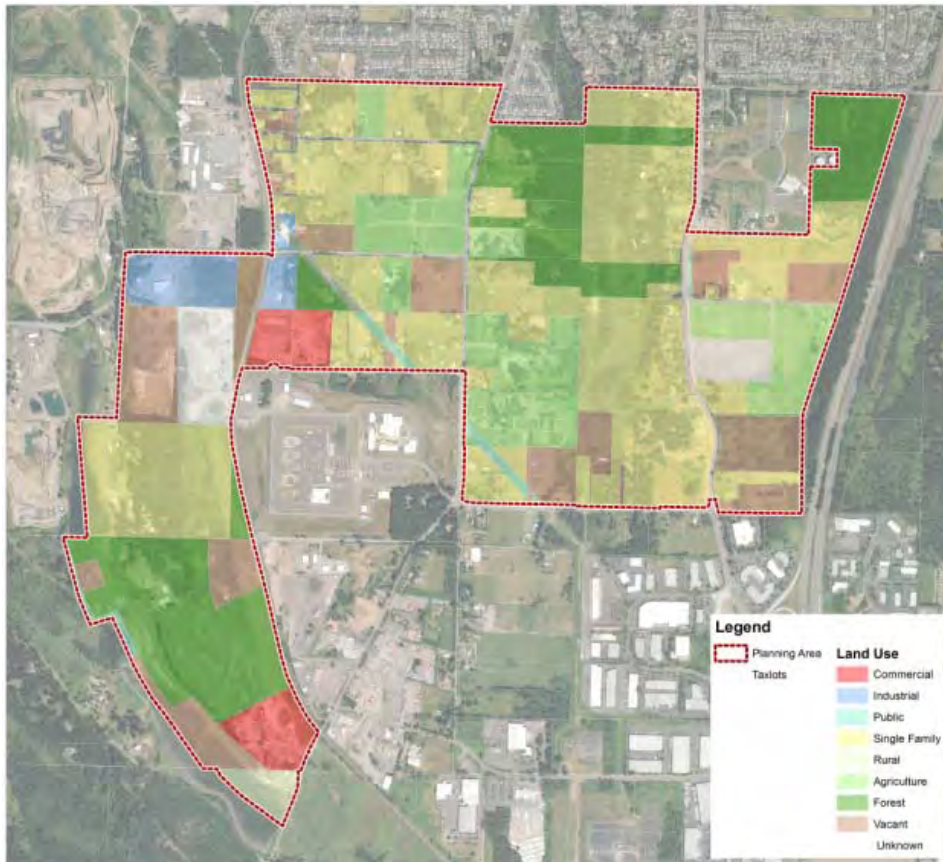


Figure 52 Map of existing land uses inside Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014



Visual Survey

In step two Fregonese Associates used a visual survey, other data resources and online tools to confirm and refine tax-lot-based classification of developed and vacant land. First, the vacant and developed land inventory (RLIS March 2014) was utilized to further refine the tax-lot-based analysis. The vacant and developable lands inventory is not limited to the tax lot lines and uses a “cookie cutter approach” around buildings to adjust for large amount of “unused” land on a development lot that may have an existing structure. Using this dataset as a guide in parallel with aerial photography, Google Map Street View, and Bing Map Bird’s Eye the parcel dataset was refined.

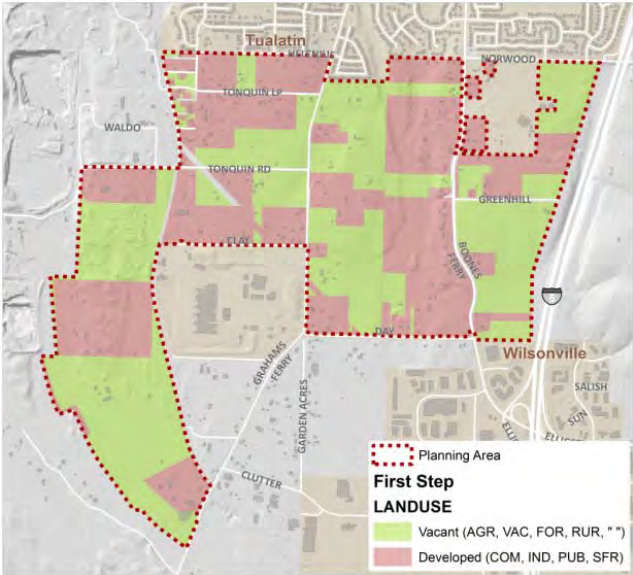


Figure 53 Vacant and Developed land as identified by Metro data. Source: Fregonese Associates, RLIS 2014

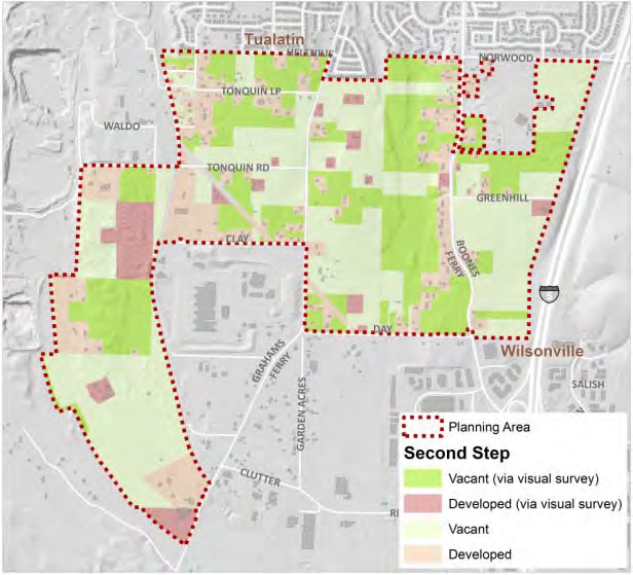


Figure 54 Map of Vacant and Developed land identified via visual survey in Basalt Creek planning area. Source: Fregonese Associates, RLIS 2014

## Building Value

Once vacant and developed lands were identified an assessment of redevelopment potential was conducted. This step analyzes developed parcels classified under steps 1 and 2 and subdivides them into two categories: redevelopable or stable. Redevelopable means there is an existing use that will likely redevelop over the planning period and can thus be considered as part of the land capacity. Tax lots defined as stable are where no changes in existing land use are expected, so no additional growth in households and employment are expected. Tax lots classified as stable are fully excluded from the buildable lands.

First, tax lots with non-commercial structures on developed land were classified as stable. This captures residential uses in the planning area. The average building value (\$125,474) was then used to create a break point for building value to estimate redevelopment potential. Tax lots with a building value of \$150,000 or more were included in the analysis as “stable” the remainder are classified as redevelopable. This cutoff point was based on a combination of average building value and input from local property owners about their interest in redeveloping.<sup>32</sup>

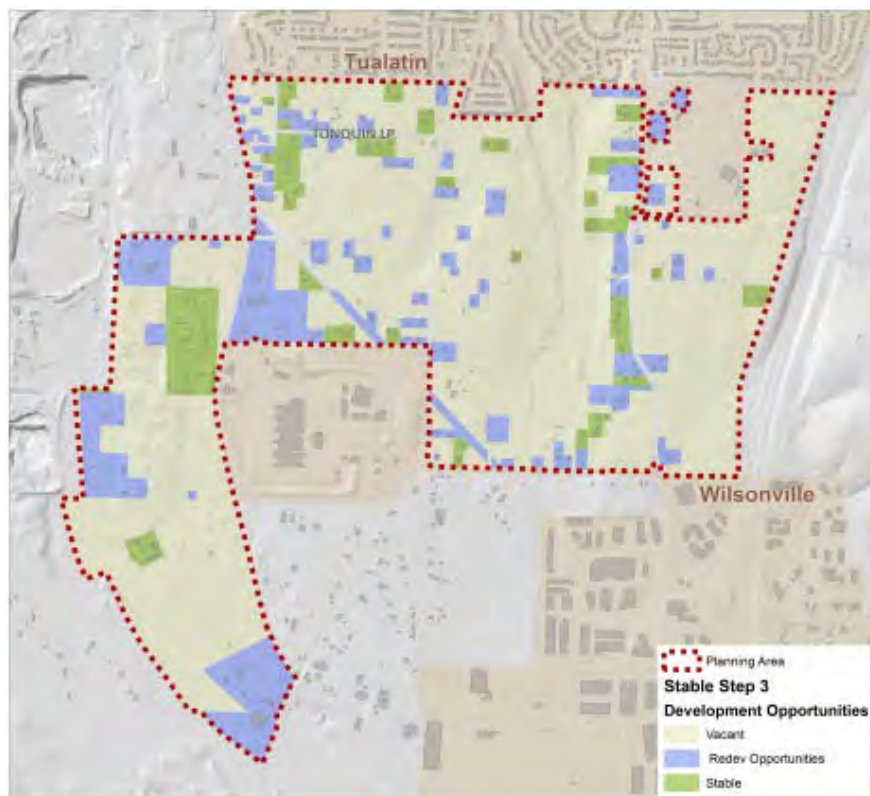
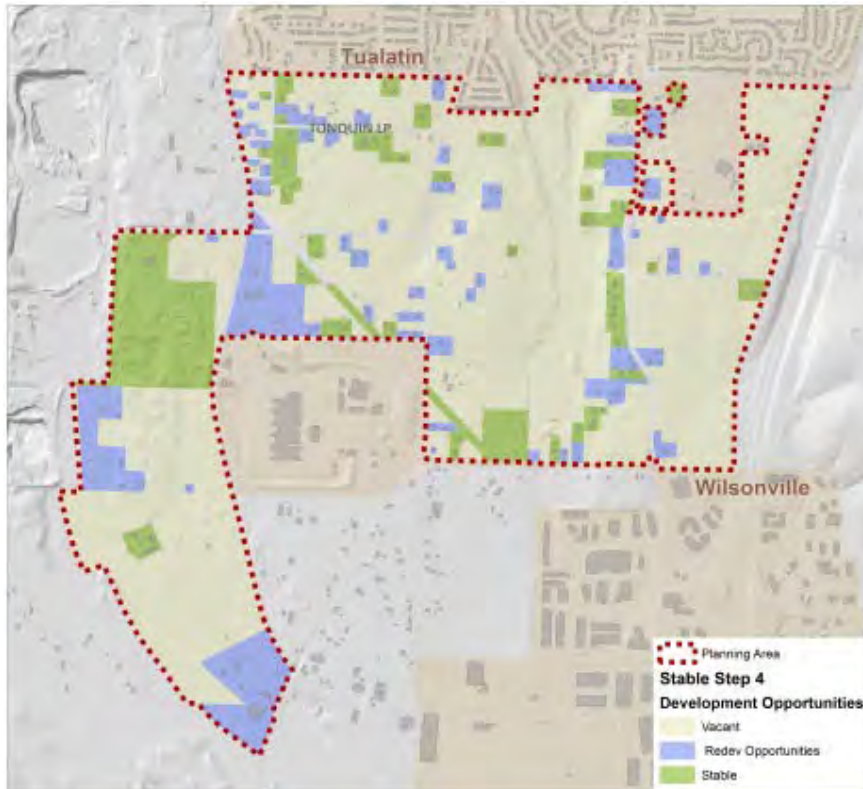


Figure 55 Vacant, Stable and Redevelopable Land in the Basalt Creek planning area, as identified by combining Metro data and visual survey data. Source: Fregonese Associates, RLIS 2014.

<sup>32</sup> Raising the cutoff from \$125,000 to \$150,000 makes an assumption that most properties will redevelop as they have been developed previously under rural circumstances. There are a reasonable number of properties in the third and fourth quantiles of property values that are stable, but not as many as are likely to redevelop.

## Local Input

The final step refines the stable and redevelopable tax lot inventory using information gathered through the planning process. A number of stakeholder interviews and focus groups were held with property owners in the planning area. Input gathered from these meetings was used to refine the assumptions from steps 1-3.



**Figure 56** Final Map of Vacant, Stable and Redevelopable Land in the Basalt Creek planning area, as identified by combining Metro data, visual survey data, and local input from property owners. Source: Fregonese Associates, RLIS, local property owner input 2014.

## Land Supply Findings

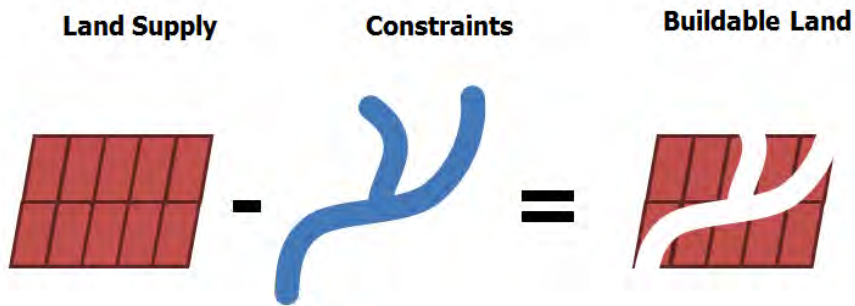
Through the process described above 43 tax lots within the planning area are defined as stable. Absent any constraints the land supply for the planning area includes:

- 596 acres of vacant land
- 117 acres of land with redevelopment potential
- 109 acres of stable land

The remaining acreage is covered by roads.

## Land Capacity

The final step in determining the land capacity for the planning area brings together the buildable lands and the land supply analysis to provide a robust estimate of land development capacity within the planning area.



**The land capacity estimate for the planning area is 391 acres.** This land capacity analysis will form the foundation for determining land use suitability and creating the development alternatives in the next phase of the project.

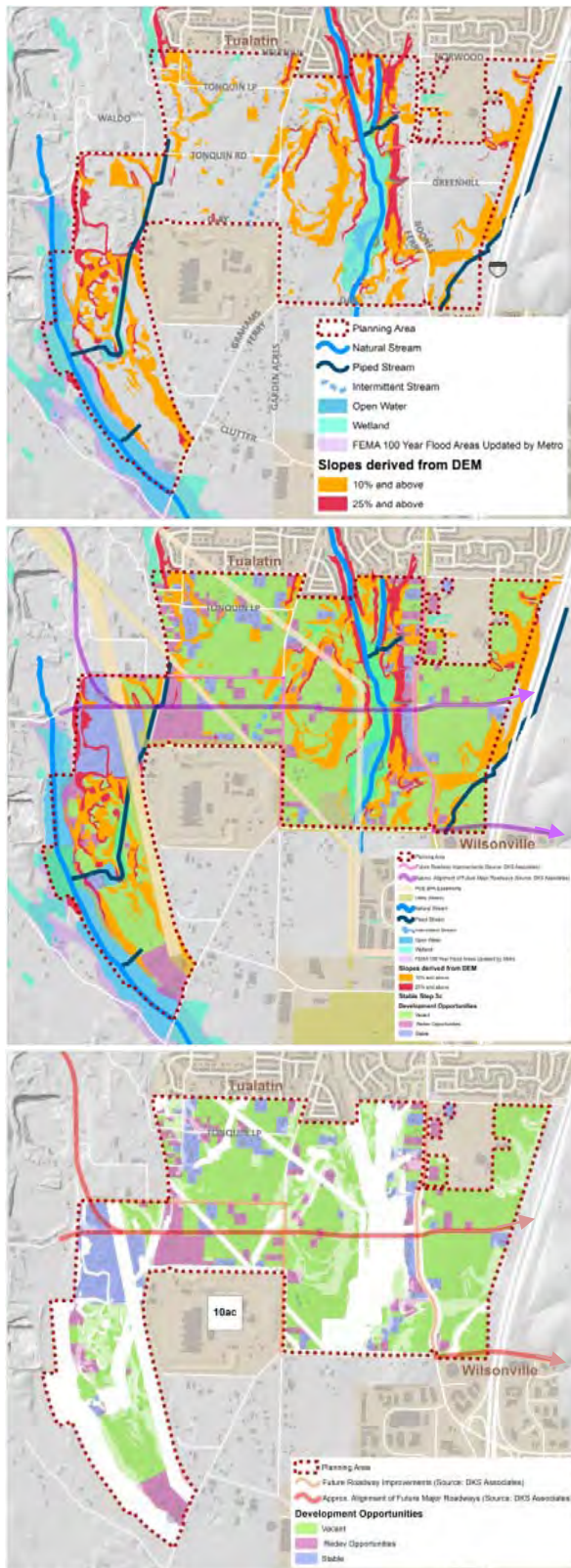


Figure 57 Sequence of maps illustrating the data and steps used to determine the total acreage of developable land in the Basalt Creek planning area. Source: Fregonese Associates 2014.

**Public Involvement Plan**  
**Basalt Creek Concept Plan**  
**April 2014**

## OVERVIEW

This document outlines the Public Involvement Plan for the Basalt Creek Concept Plan and includes in detail the outreach, education and communication services that the project team, comprised of the Fregonese Associates Team (FA Team) and staff from Tualatin and Wilsonville, will use to engage the public and stakeholders in development of the Concept Plan. The FA team will work closely with cities of Tualatin and Wilsonville Project Management Team (PMT) to coordinate and develop a transparent planning process based on the best available data, including meaningful public engagement strategies to prioritize critical issues. The FA Team will communicate clear and realistic growth scenarios and ultimately develop consensus around an achievable preferred land use strategy.

This memo is organized around four **major tasks**:

- I. Engagement Materials
- II. Targeted Stakeholder Outreach
- III. Public Events and Online Surveys
- IV. Informational Updates & Announcements

Within each of the major tasks, **task deliverables** from the detailed scope of work are included and outlined in detail. For each **task deliverable**, the Public Involvement Strategy includes the following information:

- **Description and Purpose**  
Describes the purpose of the deliverable to provide context for the activity and its relationship to the overall project
- **Materials**  
Each task deliverable may contain one or more than one set of materials, which will be identified in this section
- **Roles**  
Anticipated roles are identified for the PMT and FA Team within each task

### Roles and Responsibilities Framework

- The **Fregonese Associates Team** (FA Team) refers to the prime project consultant, Fregonese Associates, and includes the sub-consultants CH2M Hill (CH2M), Leland Consulting Group (LCG),

and DKS Associates (DKS), collectively referred to in this document as the FA Team. As the prime consultant, Fregonese Associates staff will lead the consultant team, working as the point of contact for the PMT, identifying methods and analysis approach, developing the outreach strategy, and managing the project timeline based on the agreed-upon work program.

- **Project Management Team (PMT)** consists of the project managers from the Cities of Tualatin and Wilsonville. The project managers from each city will make decisions as a team and communicate with the FA Team as one decision-making entity. To streamline the revision process throughout the project, the FA Team requests that all feedback is consolidated through the PMT. Once established, the agreed-upon deadlines for review must be met to keep the project on schedule. The PMT will manage the process of keeping staff from their respective individual cities informed during plan development. The PMT will also coordinate information distributed to the community. Any information distributed publicly for the Basalt Creek Concept Plan will be reviewed in advance by the PMT.
- The **Agency Review Team (ART)** is tasked with the primary role of advising staff members of both cities about regulatory and planning compliance. Input gathered from the ART will be included in regular staff updates to the Planning Commissions and City Councils. Involvement in this group will be required for some key agencies that need to approve or agree with the concept plan, while other agencies will be invited to participate in the planning process when their advice is needed on specific issues. The ART will include members from the following organizations:
  - Essential Agencies
    - Metro
    - ODOT
    - Tualatin Valley Fire & Rescue
    - Washington County
    - Bonneville Power Administration
  - Invited Agencies
    - City of Sherwood
    - City of Tualatin (Departments other than Community Development/Planning)
    - City of Wilsonville (Departments other than Community Development/Planning)
    - Clackamas County
    - Clean Water Services
    - Northwest Natural
    - Portland General Electric
    - Sherwood School District
    - SMART
    - Tigard/Tualatin School District
    - Tri-Met
    - Wilsonville/West-Linn School District

Major agreements will be discussed at meetings, but some elements or decisions for moving forward with technical work may be made outside of team meetings. As appropriate, the ART

will be consulted with and informed. As requested, additional staff from each agency will be copied on communications for meetings, review of materials, and general coordination.

- **Joint Council** refers to Council Meetings involving Councils from both the City of Tualatin and the City of Wilsonville. The Tualatin and Wilsonville City Councils will be the ultimate decision-making body for the final Basalt Creek Concept Plan. Both City Councils are tasked with approving the guiding principles, selecting the preferred land use scenario (which will also include the provision of public services), identifying future jurisdictional boundaries, and approving the Final Basalt Creek Concept Plan.
- The **Tualatin City Council** and the **Wilsonville City Council** will convene independently to review and discuss issues that require greater input from their respective City Councils. Specifically, measures, ordinances, and resolutions to amend the individual Cities' Codes will be needed to implement the final plan. The Tualatin City Council and the Wilsonville City Council will receive regular briefings from their respective staff throughout the planning process.
- The role of the **Tualatin Planning Commission** and the role of the **Wilsonville Planning Commission** will be to consider input gathered through community engagement and from the ART and make recommendations to their respective City Councils. In addition, they will serve in their advisory capacity to respectively amend the Tualatin Community Plan Map and the Wilsonville Development Code and Comprehensive Plan to implement the final Basalt Creek Concept Plan.

## Revision Process

For all deliverables there will generally be two rounds of review and document editing, with approximately one week for each round (one week for the PMT to review an initial draft, and another week for the consultant to make revisions and submit to PMT for final comments and edits). This timeframe, however, is general. The exact timeframe for the revision process of each deliverable will be determined on a case-by-case basis according to the level of complexity and lead time necessitated by respective public meeting laws of each City. For example, materials for use at Individual and Joint Council meetings must be submitted to city recorders' offices at least one week in advance of the meeting date. In some cases, the PMT may need more than one week to submit comments to the consultant, as they will be coordinating and consolidating comments between the Cities of Wilsonville and Tualatin.

## Public Involvement Strategy Goals

The Cities of Tualatin and Wilsonville are committed to public involvement that:

- Provides early and ongoing opportunities for stakeholders to raise issues and concerns
- Facilitates equitable and constructive communication between the public and project team
- Empowers residents to become involved with the project
- Encourages participation with other planning efforts in both cities
- Provides the public with balanced and objective information to help them understand the problem, alternatives, opportunities and solutions



- Offers alternative accommodations to encourage participation of all stakeholders regardless of race, ethnicity, age, disability, income, or primary language
- Builds on existing communication networks and resources of both cities

## Types of Involvement

The following categories can be used to group public participation activities by depth of engagement. A table below organizes these activities by stakeholder group, while the “Communication Methods” section presents the same information, organized by milestones. It is important to note that many outreach activities can achieve multiple levels of engagement, depending on the activity objective, design, and contextual factors.

### Informing

This level of participation will focus on educating and informing all interested parties (even those who are just peripherally interested) about the project background, status updates, public events and participation opportunities and major milestones and decision points. The level of technical detail about a given topic will be tailored to be audience-appropriate. For example, the level of detail about environmental constraints analysis methodology will be greater at an ART meeting than at a public open house, because ART members are staff or regulating and enforcing agencies. However, more detailed information will often be made available to the public should a reasonable request for it be made. Informing is the most broadly used level of engagement in many cases because it is a precursor to higher levels of engagement and must reach a large number of stakeholders.

### Consultation

Consultation with stakeholders entails asking them to provide input on the goals, alternatives and plan. This level of engagement is critical for identifying major issues and concerns among particular stakeholder groups as well as the general public. Different opportunities for providing input will be designed to be appropriate for a range of stakeholders. In essence, this level involves “checking in” with stakeholders to say, “did we get it right?” Surveys and open houses can achieve this level of engagement, among others.

### Participation

Participation requires that stakeholders are helping to define and shape project goals, evaluating options and alternatives, and possibly helping to shape recommendations to be included in the plan. Public meetings, workshops, or work sessions can achieve this level of engagement.

### Collaboration

Stakeholders help to craft alternatives in collaborative engagement activities. It involves a high level of project detail and usually long-term commitment to reviewing background documents. Technical experts as well as elected officials and decision-makers are commonly leaned upon to perform these duties, though citizen advisory committees and stakeholder group representatives may also contribute substantial efforts. The audience for this level of engagement includes stakeholders who have a higher

level of interest in the project and those who will be interested and impacted by the outcomes of the project.

### **Partnership**

The most engaged level of participation, partnership entails shared responsibility for developing and implementing solutions, as well as decision-making authority. This level of engagement frequently occurs at the institutional level, with public agencies and elected bodies, as well as private-sector representatives, cooperating to agree upon and apply solutions to realize the best possible outcomes for the public interest. The City Councils of Tualatin and Wilsonville will have the final decision making authority for the project. Informed by the input from the public workshop and staff, the City Councils will review information and make their recommendations.

### **Communication Methods**

The project team will utilize online and print communication methods to inform stakeholders about public events and opportunities to participate in the development of the plan. The following list identifies public activities and the expected communication methods which will be used to advertise these activities and events.

Council meetings for either City:

- Community calendars for individual cities
- Basalt Creek project website

Public workshop and open house announcements, including online surveys:

- Community Calendars for both Cities
- City of Tualatin and City of Wilsonville Facebook pages
- Basalt Creek Twitter feed
- Basalt Creek project website
- Press releases to local media

Release of draft plan document for review:

- City of Tualatin and City of Wilsonville Facebook pages
- Basalt Creek Twitter feed
- Basalt Creek project website
- Press releases to local media

Release of final plan document for review:

- City of Tualatin and City of Wilsonville Facebook pages
- Basalt Creek Twitter feed
- Basalt Creek project website
- Press releases to local media

STAKEHOLDER GROUP	OUTREACH ACTIVITY	PROJECT TOPICS	PARTICIPATION LEVEL				
			Partner	Collaborate	Involve	Consult	Inform
<b>Property Owners</b>	1. Focus group	Project background, Existing conditions, Guiding principles, Alternative scenarios			X		X
	2. One-on-one interviews	Project background, Existing conditions, Guiding principles, Alternative Scenarios				X	X
	3. Online Survey	Project background, Existing conditions, Guiding principles, Alternative Scenarios				X	X
<b>Business Owners</b>	1. One-on-one interviews	Project background, Existing conditions, Guiding principles, Alternative Scenarios				X	
	2. Online Survey	Project background, Existing conditions, Guiding principles, Alternative Scenarios				X	X
<b>Developers</b>	1. Focus group	Project background, Existing Conditions, Development opportunities & barriers				X	X
<b>Residents</b>	1. One-on-one interviews	Existing conditions, Guiding principles, Alternative Scenarios				X	X
	2. Online Survey	Project background, Existing conditions, Guiding principles, Alternative Scenarios				X	X
<b>General Public</b>	1. Project website	Project background, Project Calendar, Project FAQ, Public event announcements/reminders, Online survey link, Comment form					X
	2. Posted flyers	Workshop & open house announcements/reminders					X
	3. Email	Project updates, Public event announcements/reminders, Online survey link, Link to comment form, Results of public events, results of Elected Officials and Agency decision points, Link to Concept Plan draft, Link to final Concept Plan					X
	4. Facebook/Twitter	Link to project website, Brief project updates, Link to Online Survey, Link to online comment form, Public event announcements/reminders, Results of open houses & Workshops, Results of elected officials' and public agency decision points, Link to draft Concept Plan, Link to final Concept Plan					X
	5. Newsletters	Project background, Project updates, Public event announcements/reminders, Results of public events, Results of Elected officials and public agency decision points					X
	6. Online Survey	Project background, Existing conditions, Guiding principles, Alternative Scenarios				X	
	7. Online Comment form	All				X	
<b>Informed Public</b>	1. Open House	Alternative scenarios, Draft preferred scenario		X			
	2. Workshop	Project background, Existing conditions, Guiding principles, Alternative scenarios		X			
	3. Draft Review	Draft preferred scenario		X			
	4. Public Hearings	Final preferred scenario, Jurisdictional boundary			X		
<b>Hard-to-reach Groups</b>	1. Phone calls	Project background, Public event announcements/reminders					X
	2. Mailers	Project background, Public event announcements/reminders					X
	3. Multi-lingual materials	Project background, Public event announcements/reminders					X
<b>Elected Officials</b>	1. Informational briefings	Project updates, Public feedback, Major milestones (existing conditions, draft and preferred scenarios), Preparation for decision points					X
	2. Work sessions	Concept plan discussion, Jurisdictional boundary discussion		X			
	3. Draft review	Jurisdictional boundary, Final concept plan		X			
	4. Plan acceptance	Jurisdictional boundary, Final concept plan	X				
<b>Non-profits, schools, religious and advocacy groups</b>	1. Email	Project updates, Public event announcements/reminders, Online survey link, Link to comment form, Results of public events, results of Elected Officials and Agency decision points, Link to Concept Plan draft, Link to final Concept Plan					X
	2. One-on-one interview	Existing conditions, Guiding principles, Alternative scenarios				X	
	3. Open House	Alternative scenarios, Draft preferred scenario			X		
	4. Workshop	Project background, Existing conditions, Guiding principles, Alternative scenarios			X		
<b>Media</b>	1. Press releases	Project updates, Public event announcements/reminders, Online survey link, Link to comment form, Results of public events, results of Elected Officials and Agency decision points, Link to Concept Plan draft, Link to final Concept Plan					X

# I. OUTREACH MATERIALS

## Deliverables

1. General Milestone Calendar
2. Project Branding (Logo)
3. Stakeholder Contact List
4. Periodic Email Updates
5. Press Releases
6. Newsletter Articles
7. Materials for Project Website
8. Social Media

## 1. General Milestone Calendar

### Description and Purpose

A milestone calendar will be created to communicate an overview of the project process and timeline to the general public, key stakeholders and decision makers. The General Milestone Calendar will be an attractive, easy-to-understand flow diagram communicating the timing and sequence of major project milestones, public engagement opportunities and decision points. This graphic will be utilized in print, online and in presentations.

The purpose of a general milestone calendar is to:

- a) Facilitate public understanding of the general flow and sequencing of project tasks
- b) Alert the public, key stakeholders and decision makers in advance of critical junctures where their input is needed, including but not limited to:
  - a. Public meetings and events
  - b. Review/comment periods for draft concepts and documents
- c) Communicate updates in the timing or sequencing of key milestones

### Materials

*Key dates to show on the General Milestone Calendar will include but not be limited to the following:*

- ART meetings
- Joint Council Meetings
- Planning Commission Meetings
- Development of Guiding Principles
- Existing Conditions Report
- Public Workshop
- Development of Alternative Scenarios
- Public Open House

- Development of Final Plan
- Plan Acceptance Decision
- Availability of draft jurisdictional boundary memo for public review (review/comment period)

## Roles

### Project Management Team

- Review and provide feedback on General Milestone Calendar
- Distribute the final General Milestone Calendar to agency leads and other decision makers

### FA Team

- Design the Draft General Milestone Calendar
- Integrate comments and feedback
- Deliver final Calendar (electronic format) to the PMT and upload to project webpage

## 2. Project Branding

### Description & Purpose

The FA Team will develop a project logo which will be used on all outreach materials, reports and the website to create and reinforce the project identity. The purpose of branding is to establish a recognizable identity for the project. The FA Team will provide web and print-ready formats of the final logo to the PMT. File formats will include JPEG, Adobe Illustrator and PNG.

### Materials

A project logo and associated graphics will include attractive, easy-to-understand visual elements that reinforce agreed-upon guiding principles and project priorities.

## Roles

### PMT

- Provide feedback on the project logo

### FA Team

- Design project logo
- Distribute a web- and print-ready version of the logo for use by the PMT; upload and incorporate into project website
- Incorporate the project logo in PowerPoint presentations, outreach materials, reports and the project website materials

## 3. Interested Persons Contact List

### Description & Purpose

The FA Team will collaborate with the City of Tualatin and City of Wilsonville to effectively utilize the existing contact list of interested persons. Stakeholders on the contact list will receive periodic email updates corresponding to major project milestones, including notices of public events. The stakeholder contact list will be managed by the City of Tualatin and used to send project update messages via email.

### Materials

The master contact list will include names, email addresses, phone numbers, and addresses of stakeholders. This contact list should also track stakeholder types (i.e. property owner, business owner, resident) and organizational affiliations. The contact list can be used to track additional stakeholder information, such as identifying interview candidates, focus group members, or workshop attendees.

The contact list should include but not be limited to the following:

- Property Owners and Neighbors
- Other residents and tenants
- Tualatin Community Representatives (CIOs)
- Wilsonville Community Representatives
- Tualatin Business Representatives
- Wilsonville Business Representatives
- Westside Economic Alliance Representatives
- Horizon School Representatives
- Agency Review Team
- Stakeholder Interviewees

### Roles

#### PMT

- Collect new contact information from stakeholders by providing and collecting sign-in sheets at the public workshop and open house
- Manage and update master email distribution list
- Reach out to community groups to request permission to add their members to the outreach contact list
- Protect the addresses and privacy of individuals on the contact list
- Provide the FA Team with existing project email distribution lists. May necessitate merging of lists between organizations

#### FA Team

- Protect the addresses and privacy of individuals on the contact list
- Provide PMT with access to contact information collected through online surveys

## 4. Email Updates

### Description & Purpose

The purpose of on-going communications via email (using the Interested Persons contact list described above) is to highlight positive momentum toward achieving community goals. Email updates will be sent to the email distribution list described above to communicate project milestones and to notify stakeholders of the public workshop, open house, online surveys, online public draft documents, etc, as needed.

### Materials

General project updates may include, but not be limited to the following information:

- Status of the project in relation to the General Milestone Calendar
- Upcoming opportunities for public engagement
- Links to results and images from recent outreach activities
- Links to the online surveys
- Links to the project webpage
- Public availability of draft or final documents
- Outcomes of Joint Council meetings or major decision points
- Contact information for project management

### Roles

#### PMT

- Establish a PMT strategy for review of email content
- Review and approve a template for email updates
- Review and approve content for email updates
- Establish a project email address and contact for email blasts

#### FA Team

- Prepare an email template in Mailchimp (or similar service) to manage messaging to email distribution list
- Prepare content for email updates in consultation with the PMT
- Send email blasts prior to public meetings and at key milestones, once content is approved by PMT

## 5. Press Releases

### Description & Purpose

Project press releases will be issued jointly by the City of Tualatin and the City of Wilsonville on project-branded letterhead to reach local and regional media contacts at key milestones. The City of Tualatin, City of Wilsonville and the FA Team will jointly prepare and review press releases prior to issuing them.

Each City will send the releases to their local media contacts and they will also be shared with regional media contacts via the FlashAlert Newswire ([www.flashalert.net](http://www.flashalert.net)). Press releases will also be shared via the project's Twitter account, each City's Facebook page, and each City's website. Each press release will have two contacts—one from the City of Tualatin and the other from the City of Wilsonville. The FA Team will post the press releases on the project website.

## Materials

Press releases will be posted on each City's websites, Facebook pages, project-specific Twitter feed, and on the Basalt Creek project website.

## Roles

### PMT

- Draft press releases at key project milestones
- Review, edit and approve content
- Issue press releases to local and regional media contacts
- Post press releases to project Twitter feed, City Facebook pages, City websites, and the project website.
- The project contacts for each City will respond to media inquiries in a timely manner and report back to the PMT
- Media coverage will be shared on the project-specific Twitter feed

### FA Team

- In coordination with the PMT, draft and edit press releases and post press releases and media coverage to project website

## 6. Newsletter Articles

### Description & Purpose

Both the City of Tualatin and the City of Wilsonville have monthly newsletters that are mailed to their residents. Each City will be independently responsible for drafting and running articles in their newsletter at key milestones throughout the project. These articles may be based on the project press releases, but also may include information about upcoming meetings and other related content.

## Materials

Newsletter articles will be run in each City's newsletter at key milestones throughout the project.

## Roles

### PMT

- Draft articles at key milestones based on press releases or other content
- Review, edit and approve articles
- Run and distribute articles in each City's monthly newsletter and on the project website



## FA Team

- In coordination with the PMT draft and edit articles and post to project website

## 7. Materials for Project Website

### Description & Purpose

The existing project website will be utilized to provide project information such as background, objectives, milestones, and key engagement opportunities, as well as a venue to post draft and final documents for public review.

The overarching goals of the project website are distributing information to the public and key stakeholders and gathering their feedback at decision making points. The website should include the following:

- Project background and timeline
- Updates on milestones and key decision points
- Announcements of public involvement opportunities
- Results of outreach efforts
- Downloadable PDFs of website content and other engagement materials including project background and timeline, event announcements, etc.
- Links to the project's Facebook page and Twitter feed, as well as other relevant projects such as the SW Tualatin Concept Plan, Coffee Creek, 124<sup>th</sup>, Boones Ferry Road, etc.

### Materials

The FA Team will update, manage and provide text and images for website updates to the PMT corresponding to key milestones and decision points, public involvement opportunities, and draft and final documents as identified in this Public Involvement Plan. These updates will be tracked on a detailed (internal) Project Team Timeline and coordinated on an as needed basis.

### Roles

#### PMT

- Review, edit and approve website content
- Provide and host website URL
- Prepare and update a FAQ about the project

#### FA Team

- Provide initial review of the website structure and content and implement any changes or additions with PMT oversight
- Establish an RSS feed on the project website
- Provide draft and finalized content updates including PDFs, text and graphics to the PMT for approval

- Coordinate email blasts and website updates
- Manage and upload new materials for the website that are included as part of the Public Involvement Plan

## 8. Social Media

### Description & Purpose

Facebook page and Twitter feeds will provide another means for stakeholders to stay connected with the project progress. The Cities of Tualatin and Wilsonville will utilize their existing Facebook pages and Twitter feeds to provide Basalt Creek Plan updates and links to the Basalt Creek webpage including notices of public events and when new material is posted to the Basalt Creek project website. Posts will be added throughout the project at major milestones and as there are noteworthy updates to report. The City of Wilsonville will also develop a twitter feed specific to the Basalt Creek project which will help further advance public information and guide interested parties to the Basalt Creek Website.

### Materials

Facebook and Twitter content posted to City sites and a Basalt Creek specific Twitter feed.

### Roles

#### PMT

- Create brief, periodic Facebook and Twitter posts
- Review, edit and approve content
- Post content to Facebook and Twitter
- Content for updates will be generated by the PMT in collaboration with the FA Team.

#### FA Team

- In coordination with the PMT generate content and provide advice for Facebook and Twitter posts

## II. TARGETED STAKEHOLDER OUTREACH

### Task Deliverables

1. Interviews
2. Stakeholder Groups
3. Agency Review Team (ART)
4. Planning Commission Briefings
5. Individual Council Information Sessions
6. Joint Council Decision Information Sessions

# 1. Interviews

## Description & Purpose

The purpose of stakeholder interviews is to gain a better understanding of stakeholder goals and interests. These meetings will serve to highlight key issues of concern within the planning area, and other issues that relate to development and implementation of a project vision for the concept plan. These interviews will likely take place within the first six months of the project.

The FA Team will interview a selection of four community members, property, and business owners and other stakeholders identified by the PMT, selected from the following community groups:

- Property and business owners in Basalt Creek
- Community representatives from both Cities
- Residents of Basalt Creek
- Business owners/ representatives from both cities
- Westside Economic Alliance
- Horizon Church

## Materials

Materials will include an interview guide with general interview questions and topic areas for discussion.

## Roles

### PMT

- Identify interview candidates
- Make initial contact with interview candidates, assess willingness to participate
- Identify priority questions and topic areas to discuss with interviewees
- Help identify and secure locations for interviews

### FA Team

- Identify interview candidates in partnership with the PMT
- Review list of interview candidates with PMT
- Lead and facilitate the stakeholder interview discussions
- Create and print maps to guide interview conversations
- Keep a written record of interview conversations
- Provide notes of interview findings to the PMT

# 2. Focus Group Meetings

## Description & Purpose

Focus group meetings will be conducted with 6-7 participants and will be based on an open discussion format facilitated by the FA Team. These meetings will serve to highlight key issues of concern within the planning area, and other issues that relate to development and implementation of a project vision

for the concept plan. These meetings should take place within the first six months of the project. The FA Team proposes to conduct two focus groups meetings, one with developers and one with key property owners. Focus group member candidates will be identified through collaborative efforts between the FA Team and the PMT.

### Focus Group #1: Developer Roundtable

The Developer Roundtable is a forum which will be used to gather valuable information related to general and specific development opportunities and barriers in Basalt Creek. Involving developers at the local and regional level will help characterize and contextualize development potential and constraints in the area.

### Focus Group #2: Property Owner Meeting

The Property Owner Meeting is a stakeholder meeting for a small group with 6-7 property owners from the area (preferably a mix of both commercial and residential property owners). This meeting will provide a forum to learn about property owner priorities, concerns and suggestions for the future of Basalt Creek.

## Materials

A short presentation will be made to both groups on the overall project. Materials will include a facilitator's guide including questions and topic areas for discussion.

## Roles

### PMT

- Identify stakeholder group candidates
- Work with the FA Team to expand and revise list
- Make initial contact with candidates, assess willingness to participate
- Identify priority questions and topic areas to discuss
- Identify and reserve meeting locations
- Track responses and confirm attendance of invitees

### FA Team

- Identify stakeholder group candidates, advise on developers to include
- Work with the PMT to expand and revise list
- Develop a facilitators guide
- Lead and facilitate the stakeholder group discussions
- Create and print maps to guide conversations
- Keep a written record of group discussions
- Provide meeting notes to PMT

### 3. Agency Review Team (ART)

#### Description & Purpose

An Agency Review Team (ART) will be formed to guide the development of the Concept Plan. The primary role of the ART is to advise the project team about regulatory and planning compliance. The ART will consist of representatives from regulatory agencies identified in the “Roles and Responsibilities Framework” section at the beginning of this document. They will meet preceding major project milestones to provide technical input for Concept Plan development.

#### Materials

For all ART meetings:

- Meeting agenda
- Materials/documents for review
- PowerPoint presentations
- Presentation technology (projector, screen, etc.)

#### Roles

##### ART members

- Provide guidance to project team on specific technical questions and issues
- Act as liaisons to their own agencies
- Review and provide feedback on draft concept plan

##### PMT

- Identify and invite individuals to join the ART
- Distribute meeting agenda and meeting materials to ART members prior to meetings
- Keep the official written record of meetings including attendees, notes, comments, outcomes and next steps
- Write and distribute meeting summaries to ART members
- Provide space and printed materials for meetings
- Provide periodic updates on feedback from the ART to the Planning Commission and City Councils

##### FA Team

- Create meeting agendas
- Facilitate meeting discussions, which may include short presentations
- Create meeting materials to support agenda
- Provide PMT with FA team notes to support the development of the official written record

## 4. Planning Commission Briefings

### Description & Purpose

Planning Commission Briefings are intended to provide project updates to the Cities individual Planning Commissions prior to major decision points to identify any issues and gather feedback from the Commissions. These briefings will include, at a minimum:

- Project Updates
- Concept Plan Discussion
- Jurisdictional Boundary Discussion
- Concept Plan Acceptance

Briefings to the Planning Commissions will take place prior to Individual Council briefings. The Planning Commission engagement is important to set the stage for future comprehensive plan amendments and other planning actions that will happen within each jurisdiction as a result of the concept plan acceptance.

### Materials

Meeting agendas will be developed to focus on gathering feedback and information from the Planning Commissions including:

1. Jurisdictional Boundaries Recommendation
2. Draft Preferred Scenario
3. Draft Concept Plan

### Roles

#### PMT

- Schedule briefings
- Create meeting agendas
- Keep written record of meetings and provide FA Team with meeting notes

#### FA Team

- Provide feedback on meeting agenda

## 5. Individual Council Information Briefings

### Description & Purpose

Individual Council briefings are intended to provide project updates at key points throughout the planning process. Briefings will include:

- Project updates
- Discussions about major milestones (Existing Conditions, draft and preferred scenarios)
- Identification of Council concerns and gathering feedback to inform the concept planning process

- Preparation of Council members for upcoming Joint Council decisions points

The FA Team assumes that PMT staff will brief their Councils as the project progresses. Individual Council update sessions with the FA Team will focus on building the capacity of each Council to make informed decisions when Joint Council action is required. The staff of each City will present materials to the Individual Councils.

## Materials

Meeting agendas will mirror major project elements that require a more detailed level of understanding among the Councils. Detailed briefings will allow Councils to validate project direction and provide guidance to the PMT and FA Team. Following are the suggested meeting topics for the FA Team to present to each Council for their input:

1. Draft Existing Conditions
2. Draft Alternative Scenarios
3. Draft Preferred Scenarios

## Roles

### PMT

- Schedule informational briefings (3 presentations to each Council with FA present; 6 meetings total)
- Keep written record of meetings and provide FA Team with meeting notes

### FA Team

- Attend meetings and present to Councils (or provide materials for PMT staff to present)
- Provide PowerPoint presentation or other written materials in advance, consistent with the individual cities' requirements

## 6. Joint Council Decision Information Sessions

### Description & Purpose

The Joint Council meetings will include informational presentations, facilitated discussions, and action regarding key decision points. There are four key decision points:

- Adoption of Guiding Principles and Review of Existing Conditions
- Decision on a Preferred Scenario
- Decision on Jurisdictional Boundaries
- Approval of Concept Plan

These meetings will be critical for Joint Council decision-making. The FA Team will collaborate with the PMT to determine which content to present. The FA Team will develop presentations to illustrate the evolution of the project process and provide key data and information critical to relevant decision

points. The Individual Council briefings will be coordinated with Joint Council meetings to deliver information in an efficient manner conducive to informed and effective decision-making.

In addition to meetings focused on the four key decision points, the FA Team will participate and lead a discussion with the Joint Council to elicit feedback for the development of the final concept plan and jurisdictional boundaries. These meetings will serve as informative discussion sessions to guide concept plan development, as well as a decision on a jurisdictional boundary. These sessions will cover:

- Alternative scenarios. The FA Team will present findings from the alternative scenarios, organized by relationship to Guiding Principles. The FA Team will facilitate a discussion of alternatives and solicit feedback. This feedback will be used to craft a preferred scenario oriented toward adoption by the Joint Council.
- Draft Preferred Scenario. The FA Team will present the draft preferred scenario. The Joint Council will have the opportunity to provide feedback on the direction of the preferred scenario. This will build on previous efforts to ensure key issues and concerns related to the concept plan are addressed.

The FA Team will collaborate with the PMT to determine the most effective methods for gathering Joint Council feedback. Methods may include instant polling questions and/or facilitated discussions.

## Materials

For each Joint Council meeting:

- Meeting agenda
- PowerPoint presentation
- Background documents
- Key discussion questions and instant polling (if used)

## Roles

### PMT

- Schedule Joint Council meetings (up to 6)
- Keep a written record of the meetings and provide FA Team with meeting notes

### FA Team

- Draft and revise presentations for meetings
- Present key materials and facilitate discussions, as needed
- Integrate Joint Council feedback into preferred scenario and subsequent revisions



## V. PUBLIC EVENTS & ONLINE SURVEYS

### Deliverables

1. Public Workshop
2. Public Open House
3. Online Surveys

### 1. Public Workshop

#### Description & Purpose

The FA Team will work with the PMT to design and run a public workshop that will inform the creation of a range of scenarios. We will understand stakeholder priorities through instant polling and a mapping exercise. The workshop will also inform stakeholders about the project objectives and background (through the brief presentation at the outset). Subsequent activities will be aimed at eliciting feedback about the community's vision for the Basalt Creek area. This feedback will help clarify priorities for the concept plan and inform the development of alternative scenarios.

#### Workshop Format

##### Group Presentation

The meeting will start with a brief PowerPoint Presentation from the PMT and the FA Team. The presentation will cover the planning process from start to finish, and include a description of project goals, activities and guiding principles. A project timeline with key public involvement dates will be shared with participants.

##### Instant Polling

The group presentation will transition into a set of 10 – 20 instant polling questions, which will ask stakeholders to respond to multiple choice questions about their priorities for the project. The polling results will be collected using clickers – remote devices that send instant polling results to the computer of the presenter. The tallied results can be shown immediately on the screen for all the audience to see. The FA Team will work with the PMT to develop the instant polling questions.

Example questions may include:

- Of these listed ideas, which is the most important for the future of Basalt Creek?
- Which is the least important?

To what extent do you agree or disagree with the following statements? (Scale of 1-5)

- Conservation is the top priority
- Economic development is the top priority
- Balance between conservation and development is the top priority

## Mapping Exercise

The FA Team will utilize a custom map-based exercise to gather information on community aspirations for future land uses, multimodal transportation network, employment, parks and open spaces. Following the group presentation and instant polling exercise participants will divide into small groups to perform a collaborative mapping exercise. Each group will be facilitated by a FA Team/PMT member, with assistance from other project team staff. Participants will work together in small groups using maps and icons representing future development and transportation investments. The FA Team will use the Envision Tomorrow (ET) suite of planning tools to digitize and analyze maps and comments from the public workshop to uncover themes and unique solutions to guide the scenario development and the development of a final concept plan and vision for the planning area.

## Materials

- PowerPoint presentation, including project background, objectives and timeline
- Instant Polling questions – responding to suggested guiding principles, prioritizing future policies and actions for Basalt Creek area
- Basemap – Basalt Creek project area chipsets for mapping activity
- Additional materials on boards in the meeting room as defined by FA Team and PMT
- Event flyer
- Event email announcement
- Agenda
- Sign in sheet
- Instant polling clickers and TurningPoint software
- Facilitator instructions
- Scissors, markers, and pens

## Roles

### PMT

- Identify and reserve a venue for the workshop
- Advertise workshop; print and distribute flyers announcing workshop
- Review workshop materials (workshop flyer and email announcement, agenda, presentation, instant polling questions, maps, chips)
- Assist and organize volunteers to serve as facilitators for the event
- Provide light refreshments

### FA Team

- Produce agenda for workshop
- Produce marketing materials to advertise public open house approximately one month in advance of the event. Materials include email announcements, project website announcements, announcement flyer or postcard.
- Prepare workshop agenda

- Develop and revise presentation, including instant polling questions
- Present at workshop
- Facilitate workshop activities, including instant polling and mapping exercise

## 2. Public Open House

### Description & Purpose

The public open house will provide participants with a comprehensive look at how each of the alternative scenarios performs, as measured against the project's evaluative criteria and guiding principles. General performance categories include transportation, housing choice, employment and infrastructure. In the brief Summary Presentation the FA Team will describe the project's public outreach and stakeholder engagement process and how public feedback was used to inform the development of the alternative scenarios.

The presentation will also briefly cover project background and objectives followed by a presentation of the alternative scenarios, accompanied by descriptions of how they each performed in different evaluative areas and indicators. The presentation will be followed by instant polling questions to understand people's preferences for different elements of each scenario, and the degree to which they support or do not support alternatives in the context of performance measures.

The FA Team will process and analyze results of the open house. Results will be communicated at ART meetings and informational Council meetings, as well as through email and website updates. Results will also be integrated into the Summary Presentation to be delivered at ART and Joint Council meetings.

### Materials

- PowerPoint Presentation, including a brief description of the project background, description of each scenario and its outcomes relative to project guiding principles and projected impacts on transportation, housing choice, employment and infrastructure indicators.
- Instant Polling questions – responding questions about support or lack of support for different elements of different scenarios (the results of which will feed into the development of the preferred scenario)
- Event flyer
- Event email announcement
- Agenda
- Sign in sheet
- Instant Polling clickers & TurningPoint software

### Roles

#### PMT

- Discuss open house approach
- Identify and secure location for open house

- Review open house content
- Provide staff to assist at open house
- Provide light refreshments
- Provide open house related updates to the Planning Commission and City Council
- Integrate workshop results into Summary Presentation on public outreach

#### FA Team

- Produce agenda for public open house
- Produce maps and other print materials for one public open house
- Produce marketing materials to advertise public open house approximately one month in advance of the event. Materials include email announcements, project website announcements, announcement flyer or postcard.
- Provide summaries of feedback (instant polling) from the open house event in PowerPoint

### 3. Online Surveys

#### Description & Purpose

The purpose of the online surveys will be to electronically replicate the engagement opportunity of the public workshops and in-person outreach events in order to engage a broader group of stakeholders. To the extent possible, the online survey will follow the presentation and include instant polling questions from the public workshop and open house. The online format will allow participants to click through the presentation at their own pace, and then to answer the same instant polling questions asked at the workshop and open house.

The analysis of the survey results will be integrated with the feedback from the public workshop and other outreach opportunities, and used as a guide both to develop scenarios and then to select or create a preferred scenario.

The online surveys will be designed to be user-friendly and straightforward. Each survey will be open for approximately two weeks following the public events. The FA Team will process and analyze results of the survey. Survey results will be communicated at ART meetings and informational Council meetings, as well as through email and website updates.

#### Materials

The FA Team will develop, conduct, and analyze the results from two online surveys. Links to the online surveys will be distributed to the stakeholder contact list via email as well as posted on the project website. Materials will include an online version of the workshop presentation, a survey posted to the project website, and a summary of survey results in PowerPoint presentation slide format.

## Roles

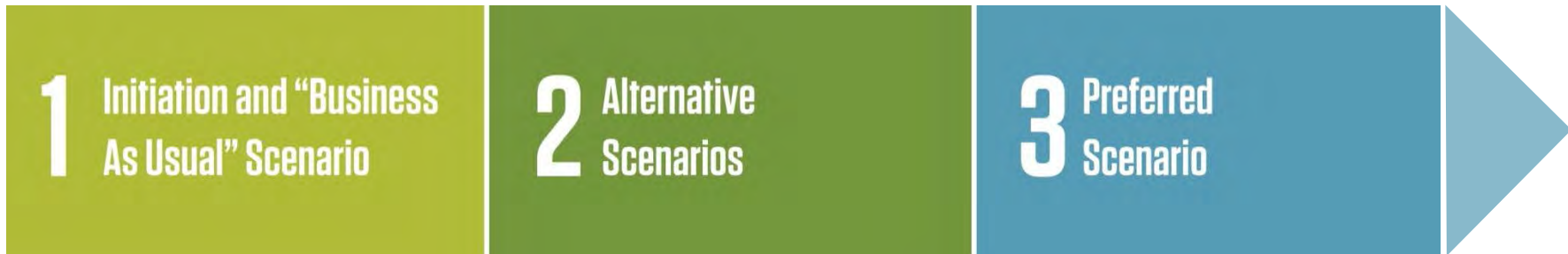
### PMT

- Provide a list of initial ideas for survey content
- Review, edit and approve website content

### FA Team

- Draft survey
- Incorporate edits from PMT
- Convert the survey into an online format and include on the project website
- Email survey link to stakeholder contact list
- Collect survey results
- Organize survey results into a summary
- Provide survey results summary to City Staff and present results to the ART; staff will present at individual Council sessions

# Scenario Planning Overview



*“Where are we headed currently?”*

*“What are the possibilities?”*

*“Where do we want to go?”*

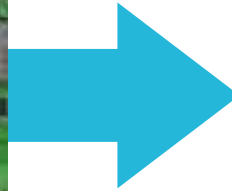
# The Present



Where we are today

## Understand Existing Conditions

# The Present



# The Future



Planning the future

## The Traditional Approach





Imagine where you want to go  
The Scenario Approach

A



B



C



D



# The Scenario Approach

# Scenarios are Crash Test Dummies

- We can test a variety of different ideas to see how each performs



# Scenario Process

- Develop Guiding Principles
- Analysis: Metro Forecast, Constraints, Land Suitability
- Seek Public Input: Design Workshop
- Create Base Case Scenario
- Create Scenario Alternatives (iteratively)
- Evaluate and Communicate
- Select Preferred Alternative

# Testing Scenarios and Choosing a Preferred Scenario

- Create and evaluate several scenarios
- Present scenarios and evaluation results to public and decision makers
- Determine jurisdictional boundary between two cities
- Select preferred scenario to inform final land use concept for the Basalt Creek Concept Plan

# Why create Guiding Principles?

- Represent **collective interests** and goals for planning area
- Provide **framework** for gathering input
- Help to develop **evaluation criteria** (indicators)

# Basalt Creek Guiding Principles

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

# Scenarios help us explore big questions...

- 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?

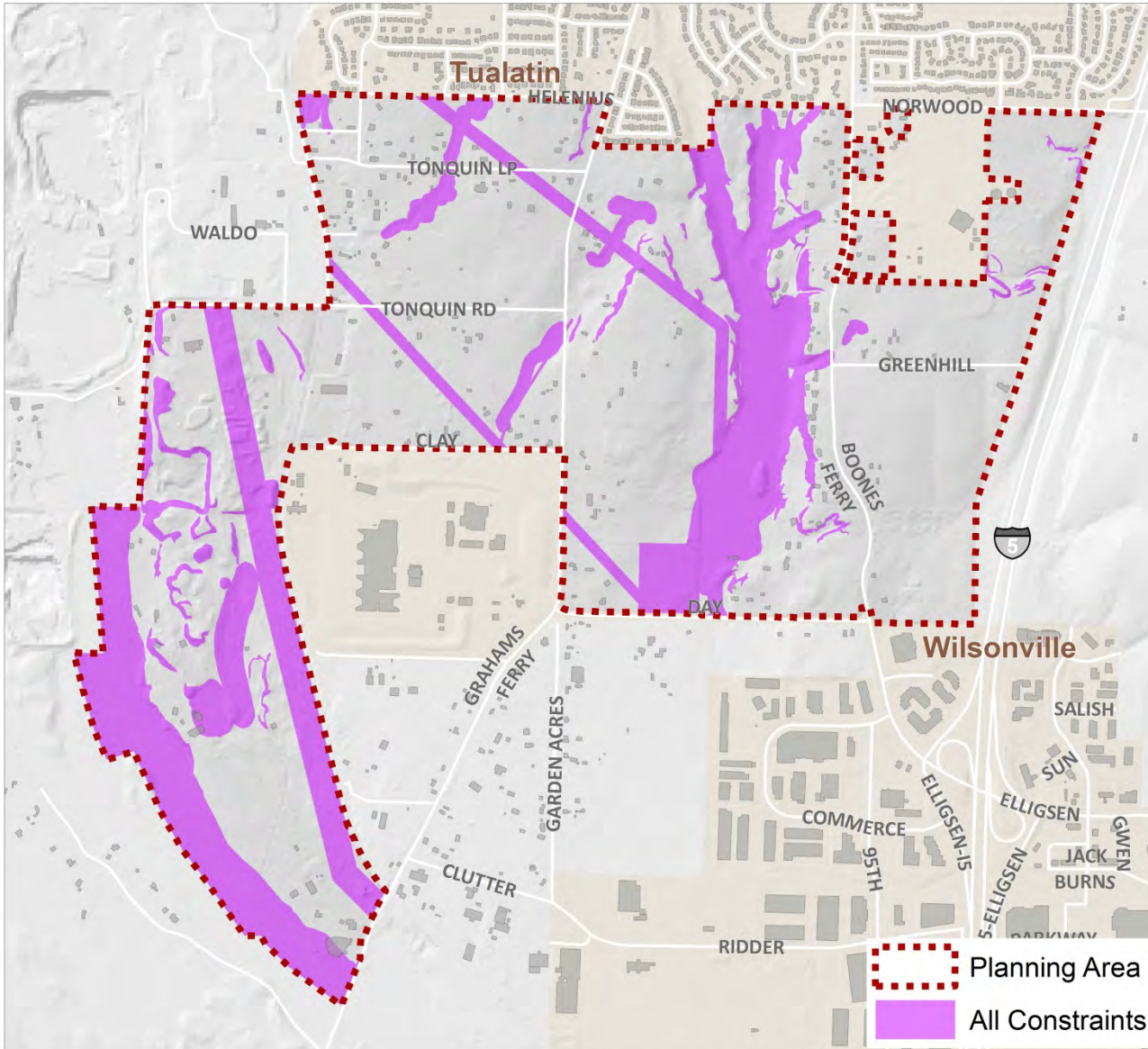


# Constraints

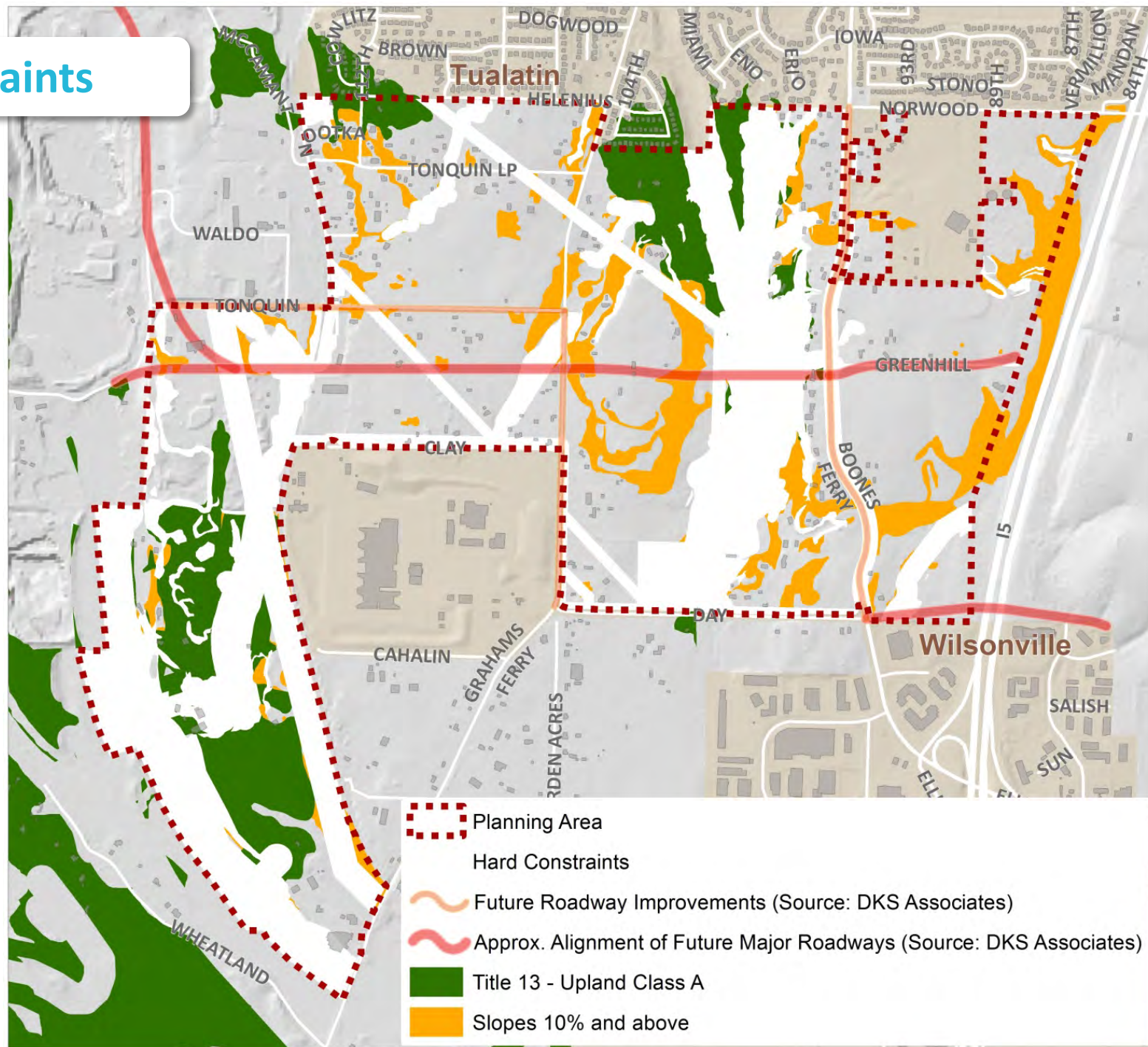
- Hard constraints are areas where development is not feasible because of policy or physical condition.
- Soft constraints are areas where development intensity may be reduced because of policy or physical conditions.

# All Hard Constraints

- **234** acres constrained
- Study area total is **847** acres
- **28%** constrained



# Soft Constraints



# Land Supply

## Vacant Land



Ready to build, no major structure on site

## Redevelopable Land



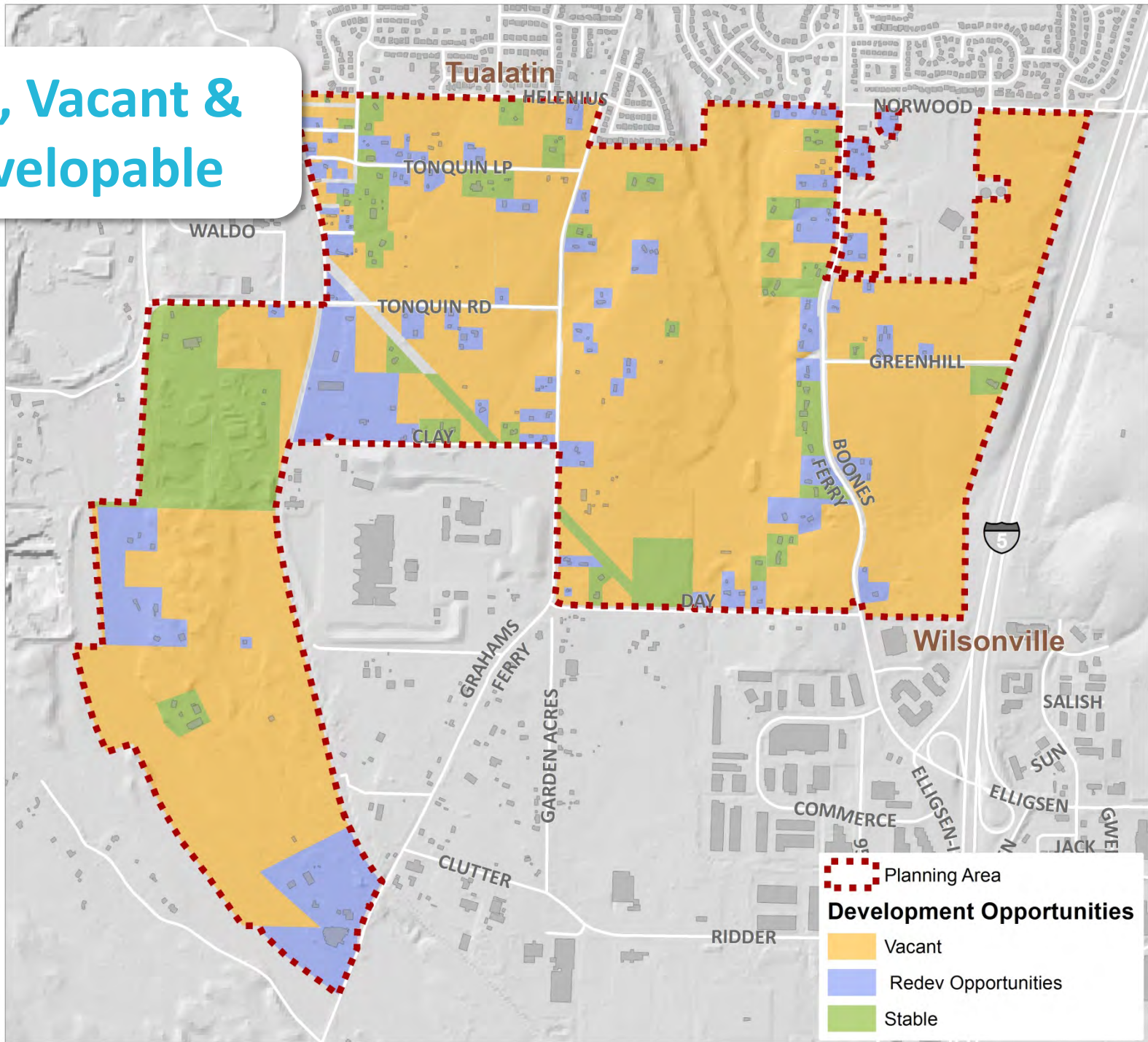
Some redevelopment potential (expansion of current use or change in use)

## Stable Land

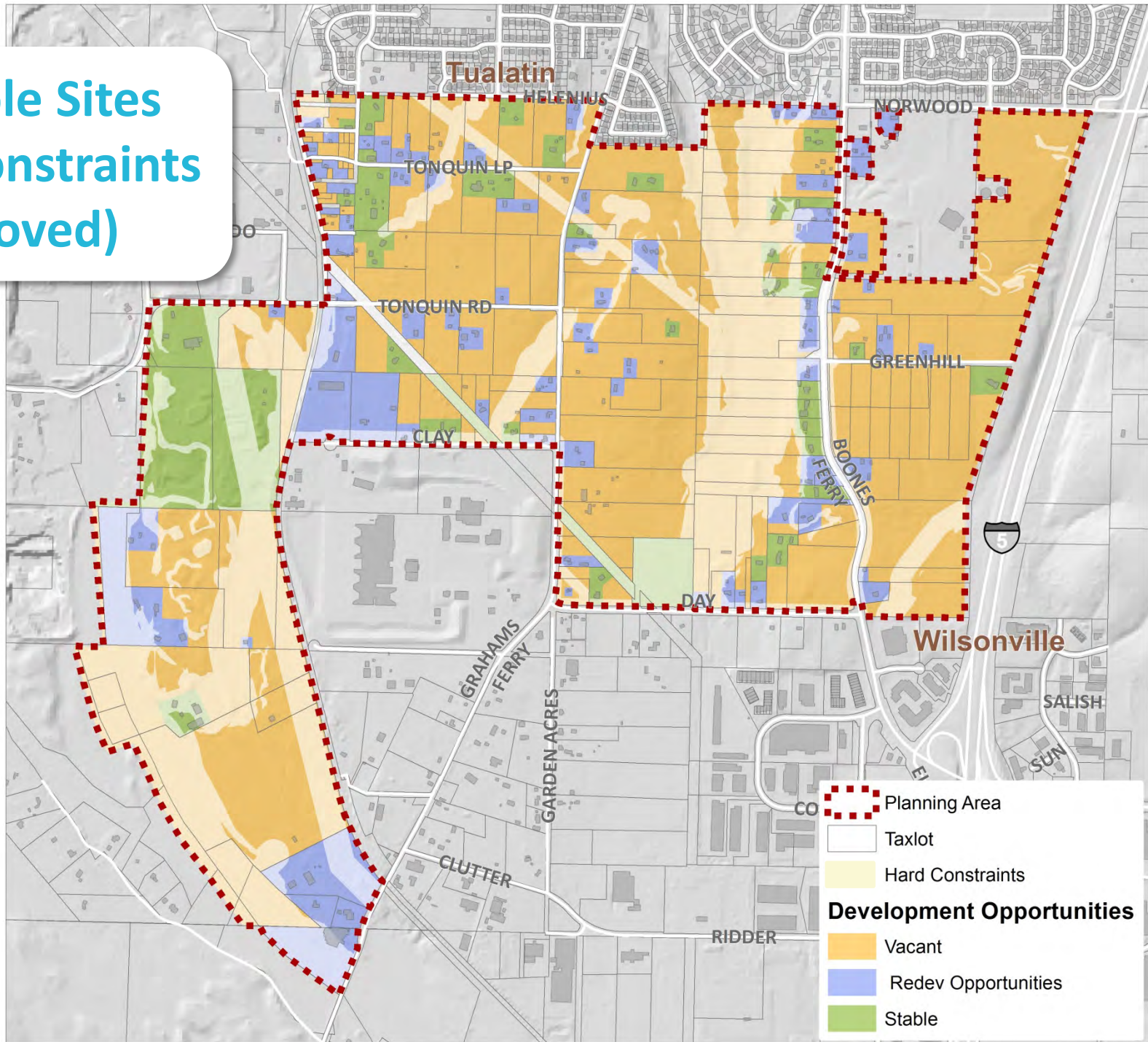


Structures on land, will not change uses in the near future

# Stable, Vacant & Redevelopable

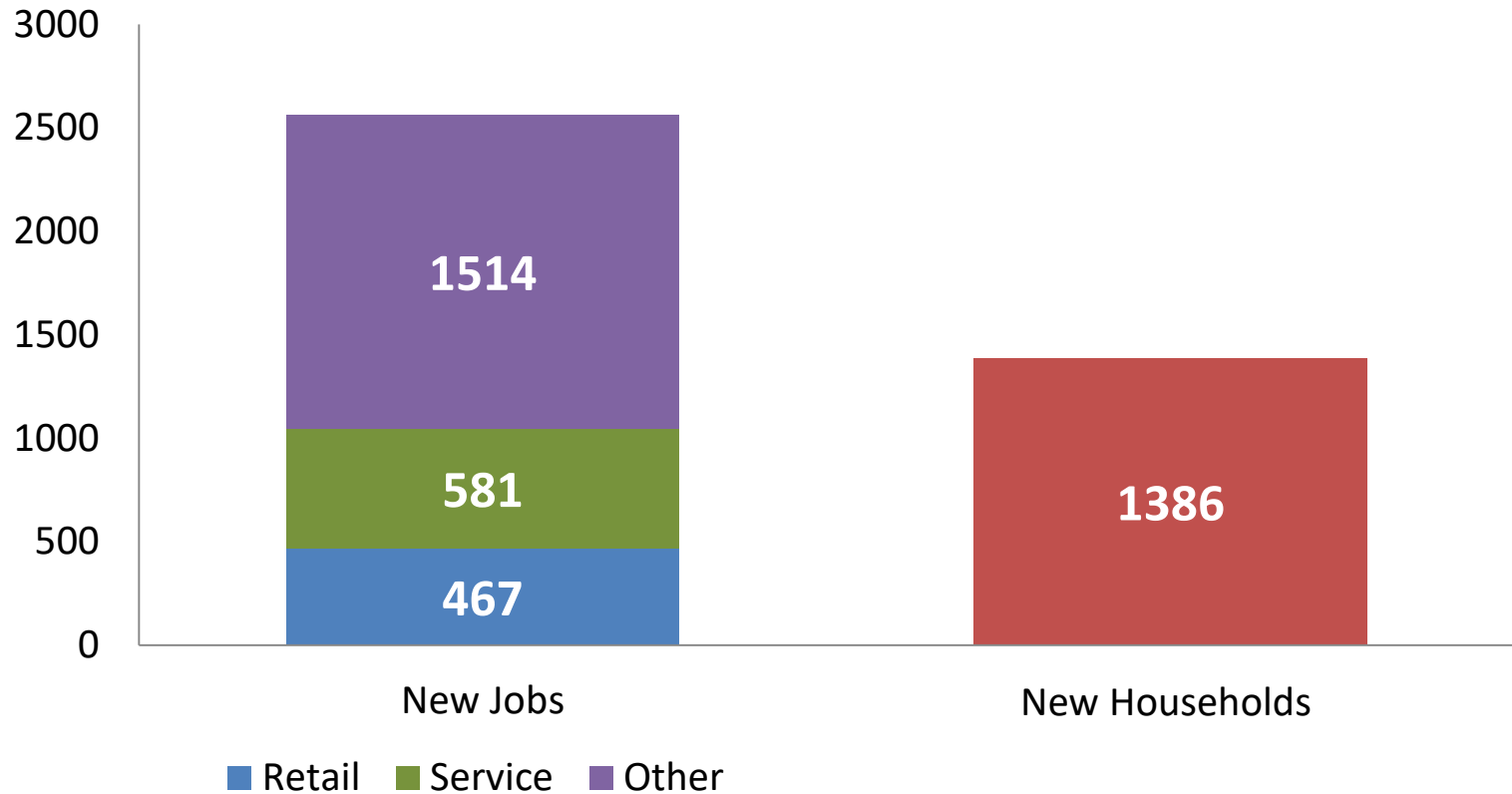


# Suitable Sites (hard constraints removed)



# Metro Forecast for Basalt Creek

## 2035 Forecast (based on 2005)



# Public Input at Design Workshop

- Community input helps guide scenario development and design process
- April 2014





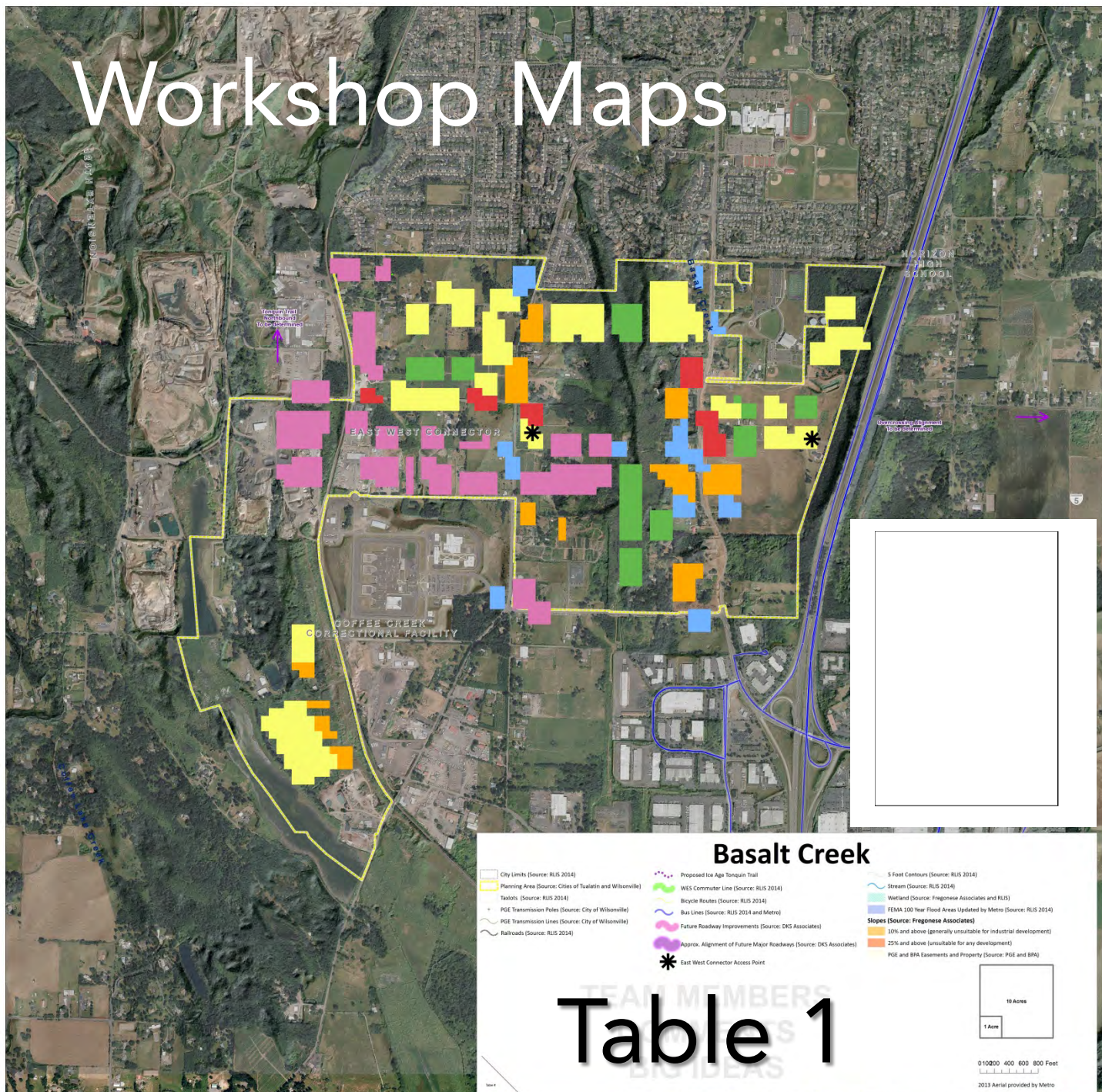
# Workshop Maps

**Goals**

- Housing/schools close together
- Public amenities around wetlands
- Housing where there is transportation and other existing infrastructure
- Transit options that allow people to make trips without their cars
- Make the wetlands a source of pride and natural beauty (visual focal point/vistas)

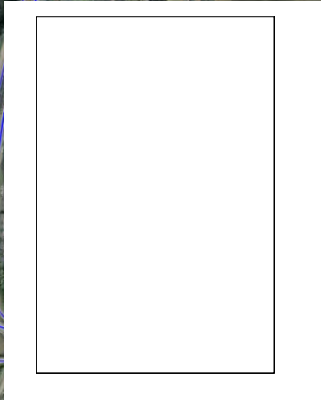
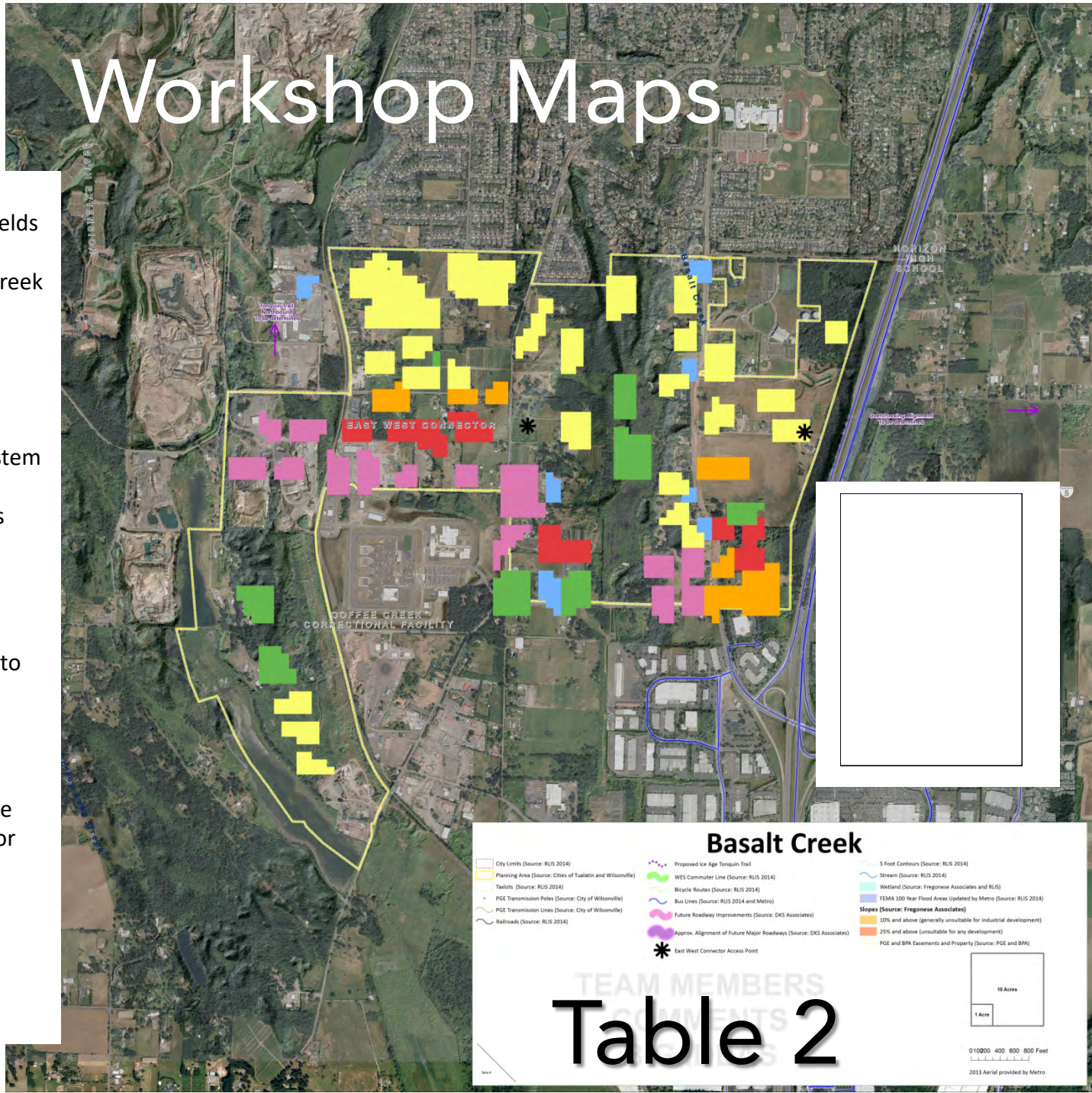
**Comments**

- Civic entertainment use – public theater?
- Seems like E-W Connector will determine how land uses are arranged
- Couth the nursery along Graham’s Ferry be encouraged to develop as a unique attraction?
- This is an opportunity do something different – provide public amenities that make the community proud.



# Table 1

# Workshop Maps



## Basalt Creek

- City Limits (Source: RLS 2014)
- Planning Area (Source: Cities of Tualatin and Wilsonville)
- Taxlots (Source: RLS 2014)
- PG&E Transmission Poles (Source: City of Wilsonville)
- PG&E Transmission Lines (Source: City of Wilsonville)
- Railroads (Source: RLS 2014)
- Proposed Ice Age Tomquin Trail
- WES Commuter Line (Source: RLS 2014)
- Bicycle Routes (Source: RLS 2014)
- Bus Lines (Source: RLS 2014 and Metro)
- Future Roadway Improvements (Source: DKS Associates)
- Approx. Alignment of Future Major Roadways (Source: DKS Associates)
- East West Connector Access Point
- 5 Foot Contours (Source: RLS 2014)
- Stream (Source: RLS 2014)
- Wetland (Source: Froggese Associates and RLS)
- FEMA 100 Year Flood Areas Updated by Metro (Source: RLS 2014)
- Slopes (Source: Froggese Associates)
  - 10% and above (generally unsuitable for industrial development)
  - 25% and above (unsuitable for any development)
- PG&E and BPA Assessments and Property (Source: PG&E and BPA)



0 1000 200 400 600 800 Feet  
2013 Aerial provided by Metro

# Table 2

### Goals

- Increase recreation, more sports fields (plenty of them in Tualatin)
- Parks/natural area around Basalt Creek - preservation – West Railroad
- Concern around runoff into Basalt Creek
- Joint rec center
- Housing in Tualatin
- Incorporation into regional trail system along Basalt Creek
- Concern about widening of Boones Ferry for peds and bikes
- Location of EW/Boone’s Ferry
- Water/sewer lines
- EW Connector at Boone’s Ferry
- Smoother transition from industrial to housing
- Stop at WES –Trans
- Recreation (shared facilities)
- Natural area protection
- Housing –not everything need to be industrial south of the EW Connector

### Big Ideas

- Connect to WES
- Smooth transition between uses
- Brew Pubs
- Crosswalks across Boone’s Ferry

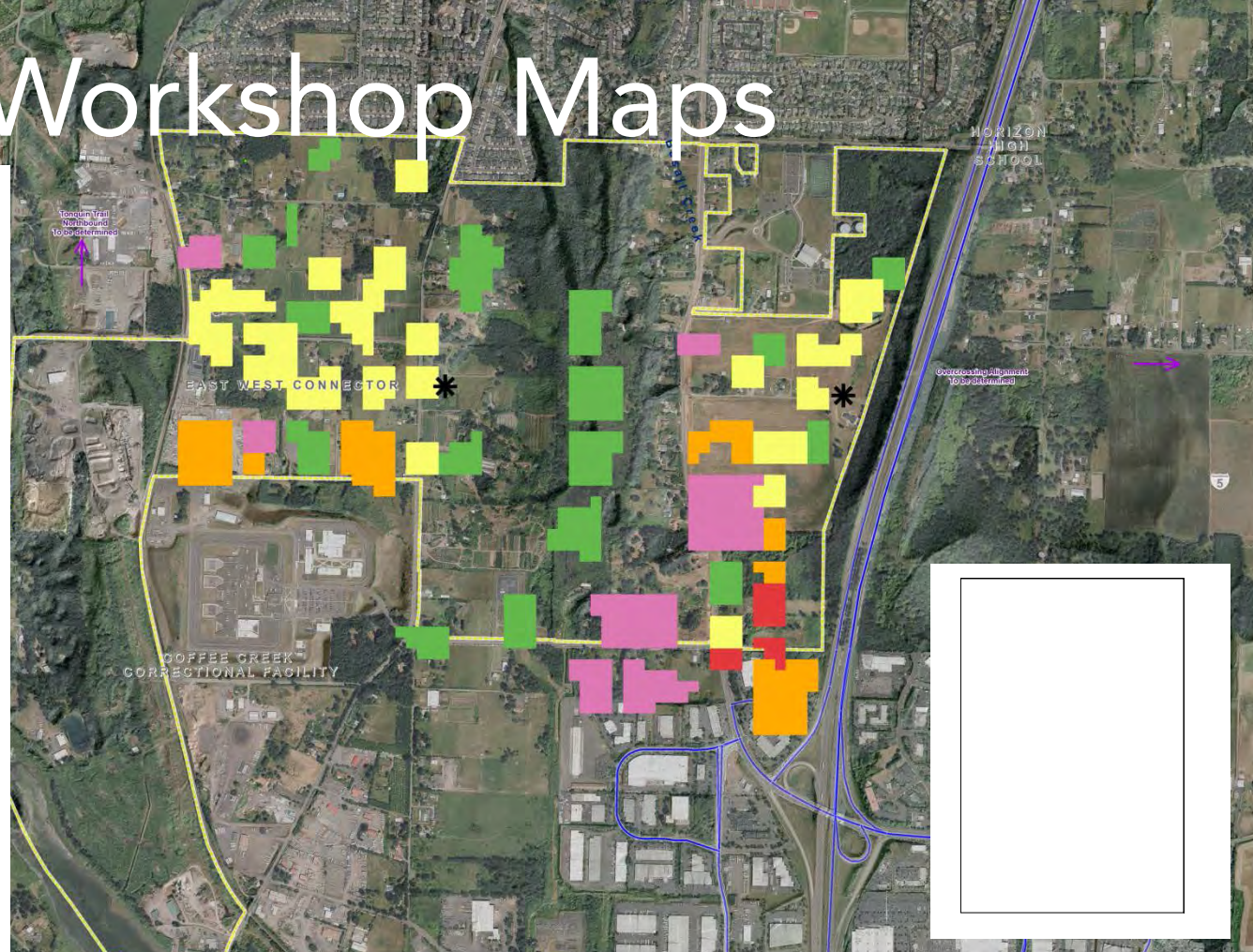
# Workshop Maps

## Goals

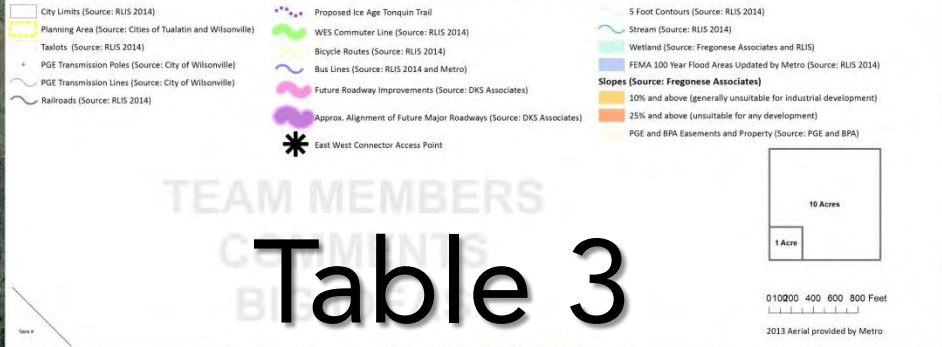
- Residential development
- Diverse housing mix (more than just single family)
- Celebrate natural features
- Interconnected trans network
- Integrate other regional plans
- Well laid out mix of land uses
- Integrated trail and greenways (multimodal connections)

## Comments

- Bike/ped access from Tualatin to Wilsonville- in nature
- Employment center near I-5 (east of I-5)
- Buffering between residential and industrial (transitional)
- Trails on power line easements
- Small lot SF and apartments – what is the market?
- Mixed use housing
- Where to put hi-density housing
- Prevent noise pollution from industry
- Center?
- Sherwood school district
- Housing where kids can walk to school
- Hi-density, assisted living near overpass
- Retail and industrial toward the south (jobs and light industrial)



## Basalt Creek



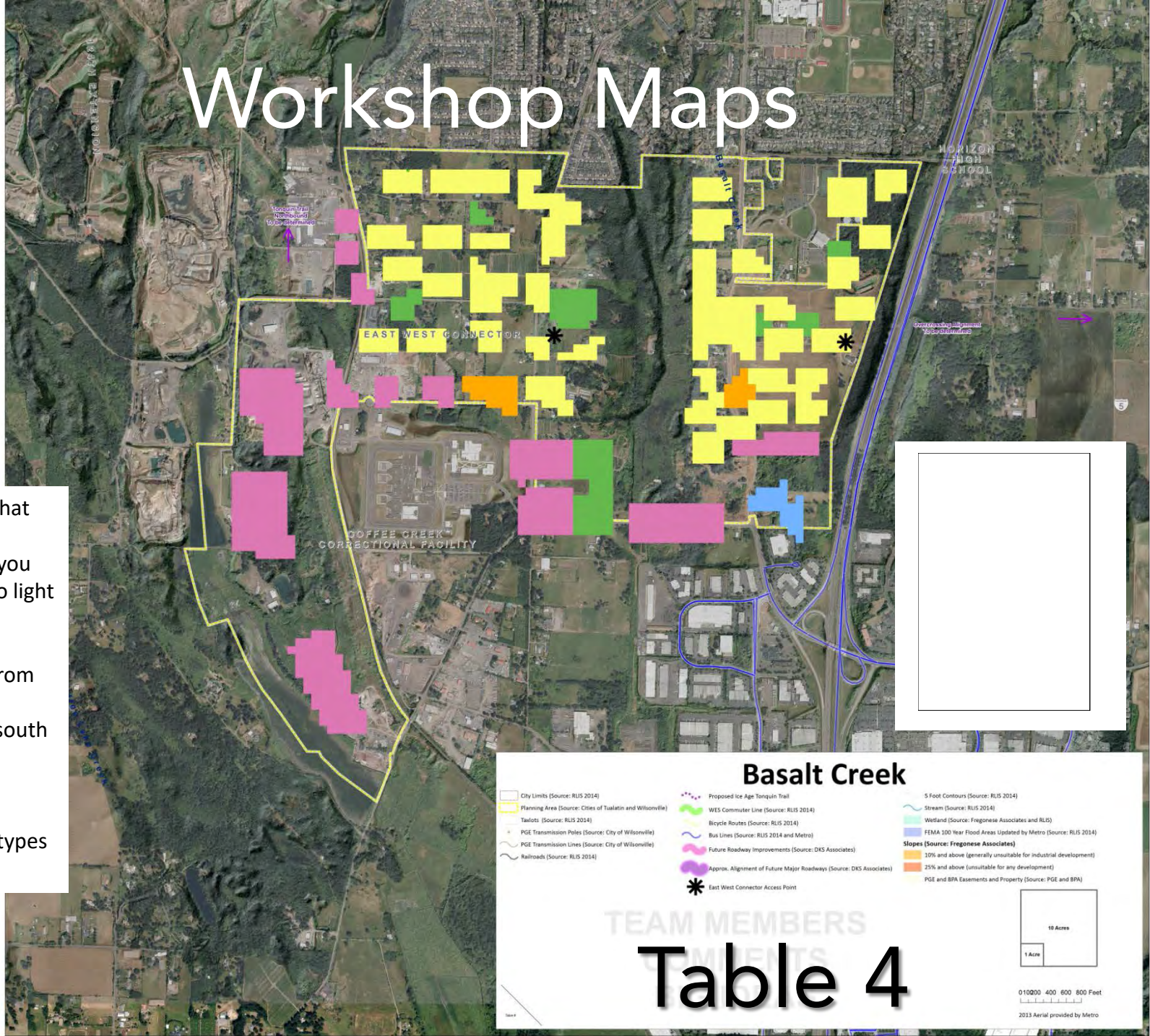
TEAM MEMBERS  
COMMENTS  
BIBLIOGRAPHY

# Table 3



# Workshop Maps

- Residential at north that transitions to higher density/mixed use as you go south, eventually to light manufacturing.
- Access to small commercial services from residential areas.
- Places of worship at south end
- Sports complex and parks/open spaces
- Transitions between types of uses.

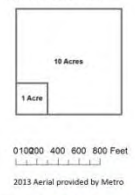


## Basalt Creek

- City Limits (Source: RUS 2014)
- Planning Area (Source: Cities of Tualatin and Wilsonville)
- Taxlots (Source: RUS 2014)
- PGE Transmission Poles (Source: City of Wilsonville)
- PGE Transmission Lines (Source: City of Wilsonville)
- Railroads (Source: RUS 2014)
- Proposed Ice Age Tongue Trail
- WES Commuter Line (Source: RUS 2014)
- Bicycle Routes (Source: RUS 2014)
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- Stream (Source: RUS 2014)
- Wetland (Source: Fregonesse Associates and RUS)
- FEMA 100 Year Flood Areas Updated by Metro (Source: RUS 2014)
- Slopes (Source: Fregonesse Associates)
  - 10% and above (generally unsuitable for industrial development)
  - 25% and above (unsuitable for any development)
  - PGE and BPA Easements and Property (Source: PGE and BPA)

TEAM MEMBERS

# Table 4



2013 Aerial provided by Metro

# Workshop Maps

## Goals

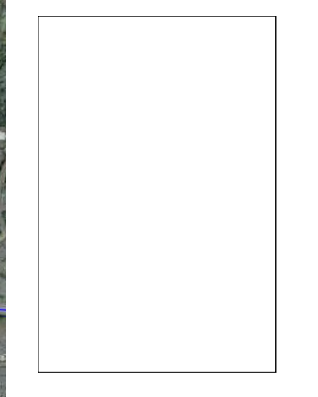
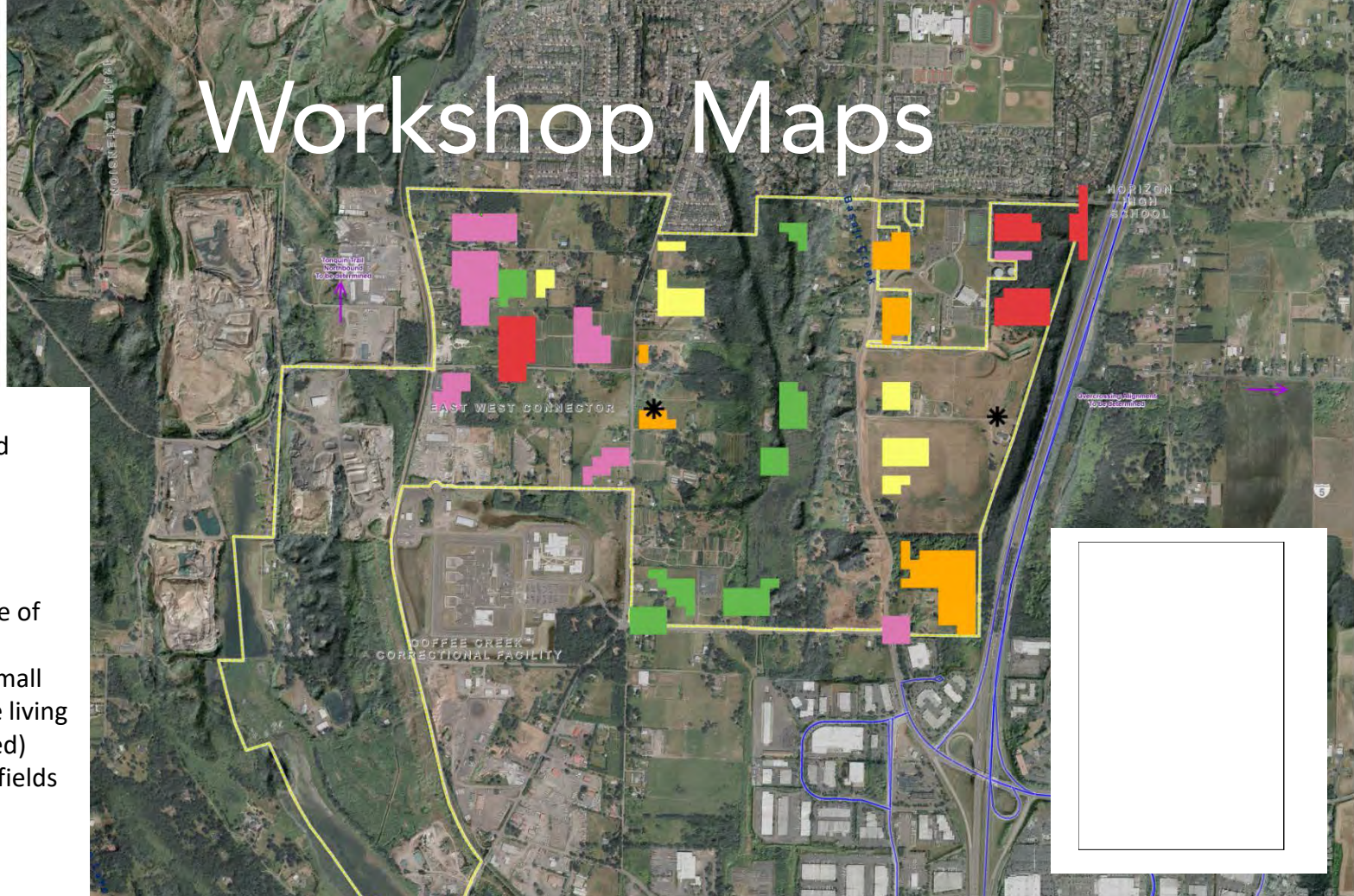
- Maintain neighborhood continuity

## Comments

- Not great for industrial warehouse land because of transportation access
- No big box, but need small scale grocery for people living in the area (Haggen-sized)
- Big demand for sports fields

## Big Ideas

- WES Station
- Natural area on Basalt Creek (like Tryon Creek)
- Sports Complex
- Clean green industrial flex as buffer to residential



TEAM MEMBERS  
COMMENTS  
**Table 5**

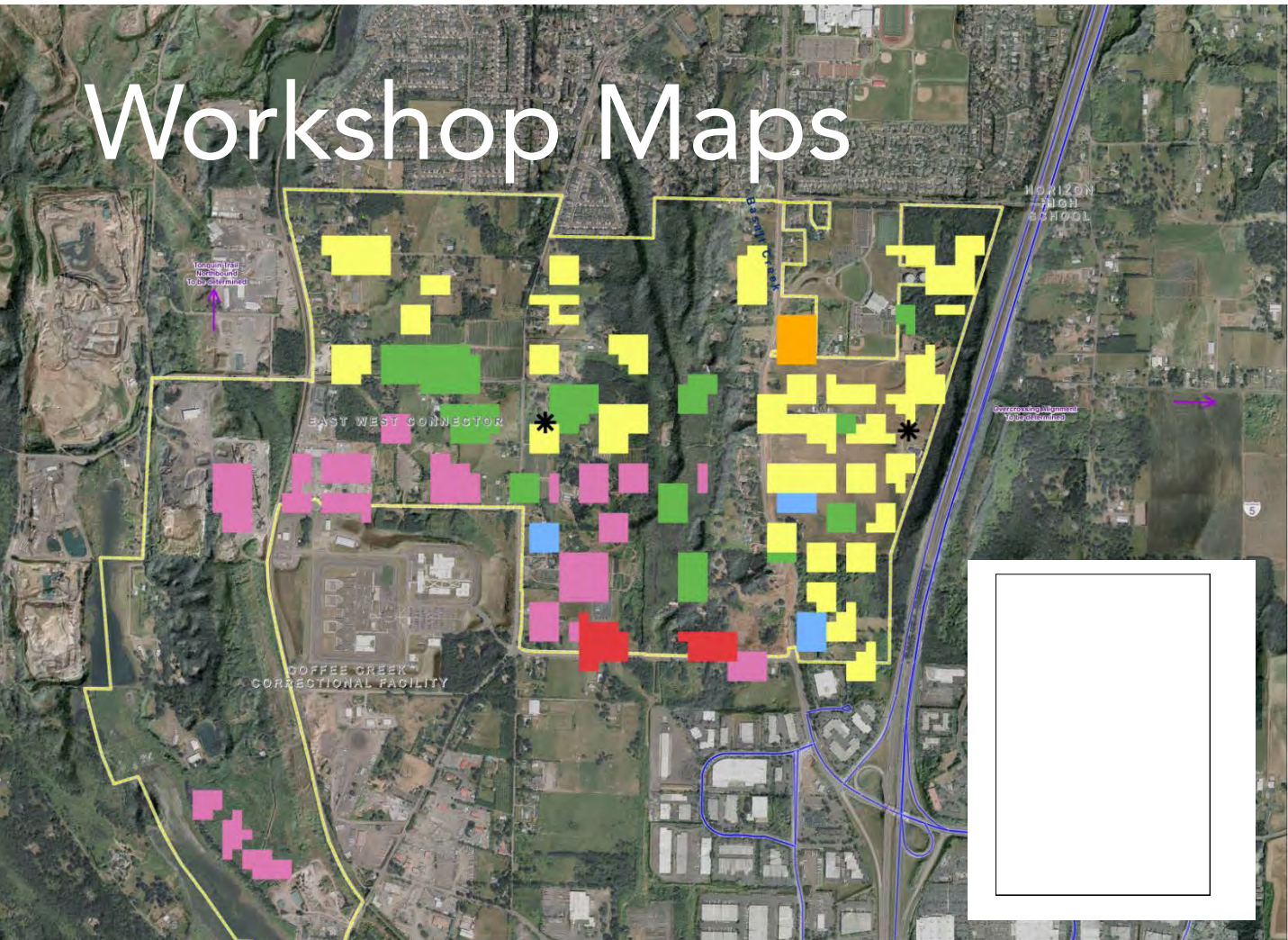
# Workshop Maps

**Goals**

- Get people to live near their work!
- Offer more opportunities/options for sports field
- Connect neighborhood amenities/green spaces (i.e. walking/bike trails)
- Small parks in residential areas
- Maintain rural setting/provide safety/comfort

**Our Ideas:**

- Clustering of apartments/retail/parks
- Definitive boundaries – buffer zone (greenbelt)
- Trails, bike paths
- Neighborhood parks with multiple uses
- WES Station
- Easy access to freeway
- Community parks and gardens
- Assisted living centers
- Retail near intersection
- Industrial area down south
- G.F/E-R to ferry all residential
- Retail opportunity in front of school



**Basalt Creek**

<ul style="list-style-type: none"> <li>City Limits (Source: RLIS 2014)</li> <li>Planning Area (Source: Cities of Tualatin and Wilsonville)</li> <li>Taxlots (Source: RLIS 2014)</li> <li>PGE Transmission Poles (Source: City of Wilsonville)</li> <li>PGE Transmission Lines (Source: City of Wilsonville)</li> <li>Railroads (Source: RLIS 2014)</li> </ul>	<ul style="list-style-type: none"> <li>Proposed Ice Age Tonguin Trail</li> <li>WES Commuter Line (Source: RLIS 2014)</li> <li>Bicycle Routes (Source: RLIS 2014)</li> <li>Bus Lines (Source: RLIS 2014 and Metro)</li> <li>Future Roadway Improvements (Source: DKS Associates)</li> <li>Approx. Alignment of Future Major Roadways (Source: DKS Associates)</li> <li>* East West Connector Access Point</li> </ul>	<ul style="list-style-type: none"> <li>5 Foot Contours (Source: RLIS 2014)</li> <li>Stream (Source: RLIS 2014)</li> <li>Wetland (Source: Fregonesse Associates and RLIS)</li> <li>FEMA 100 Year Flood Areas Updated by Metro (Source: RLIS 2014)</li> <li><b>Slopes (Source: Fregonesse Associates)</b></li> <li>10% and above (generally unsuitable for industrial development)</li> <li>25% and above (unsuitable for any development)</li> <li>PGE and BPA Easements and Property (Source: PGE and BPA)</li> </ul>
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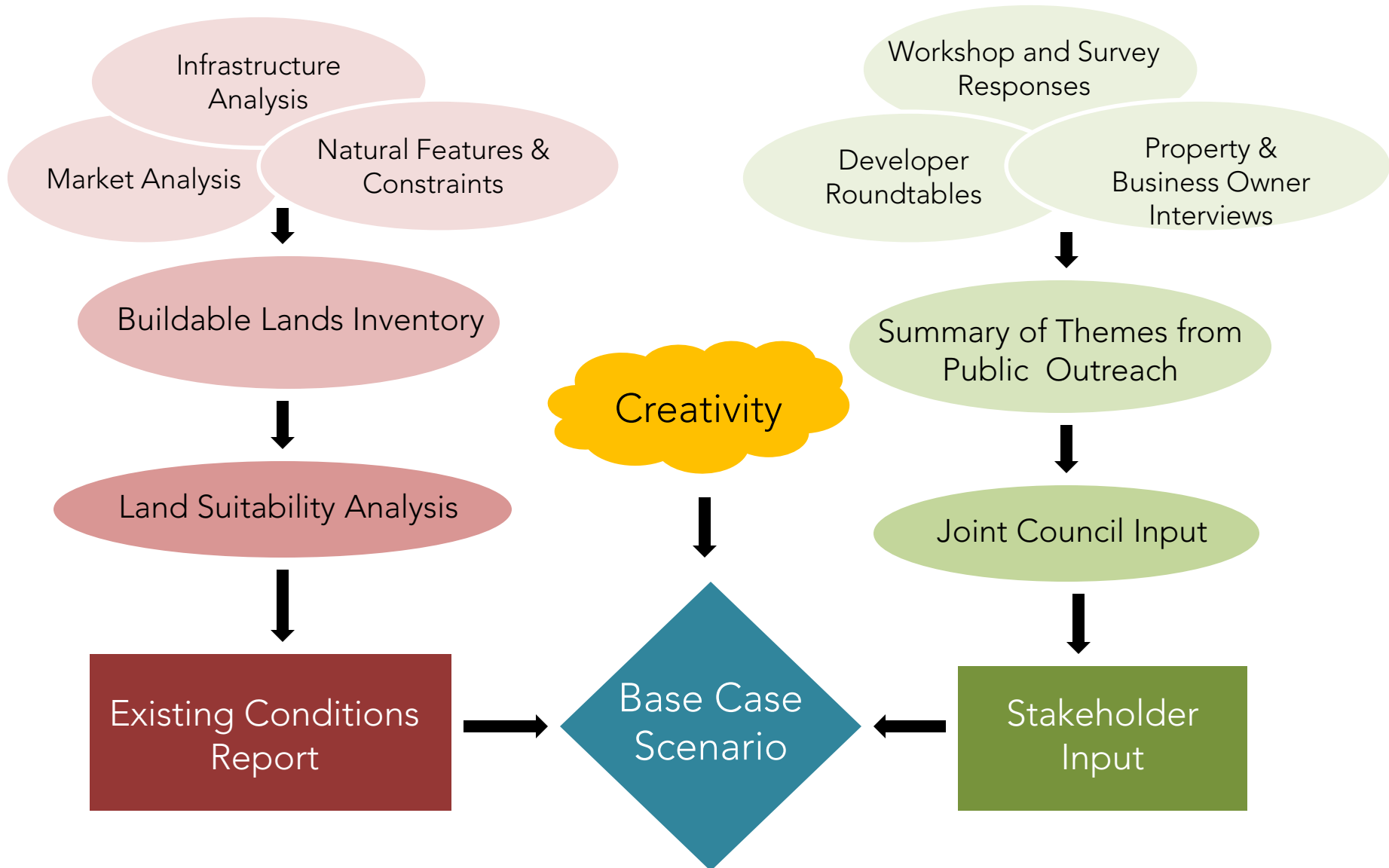
10 Acres  
1 Acre

0 100 200 300 400 500 600 800 Feet

2013 Aerial provided by Metro

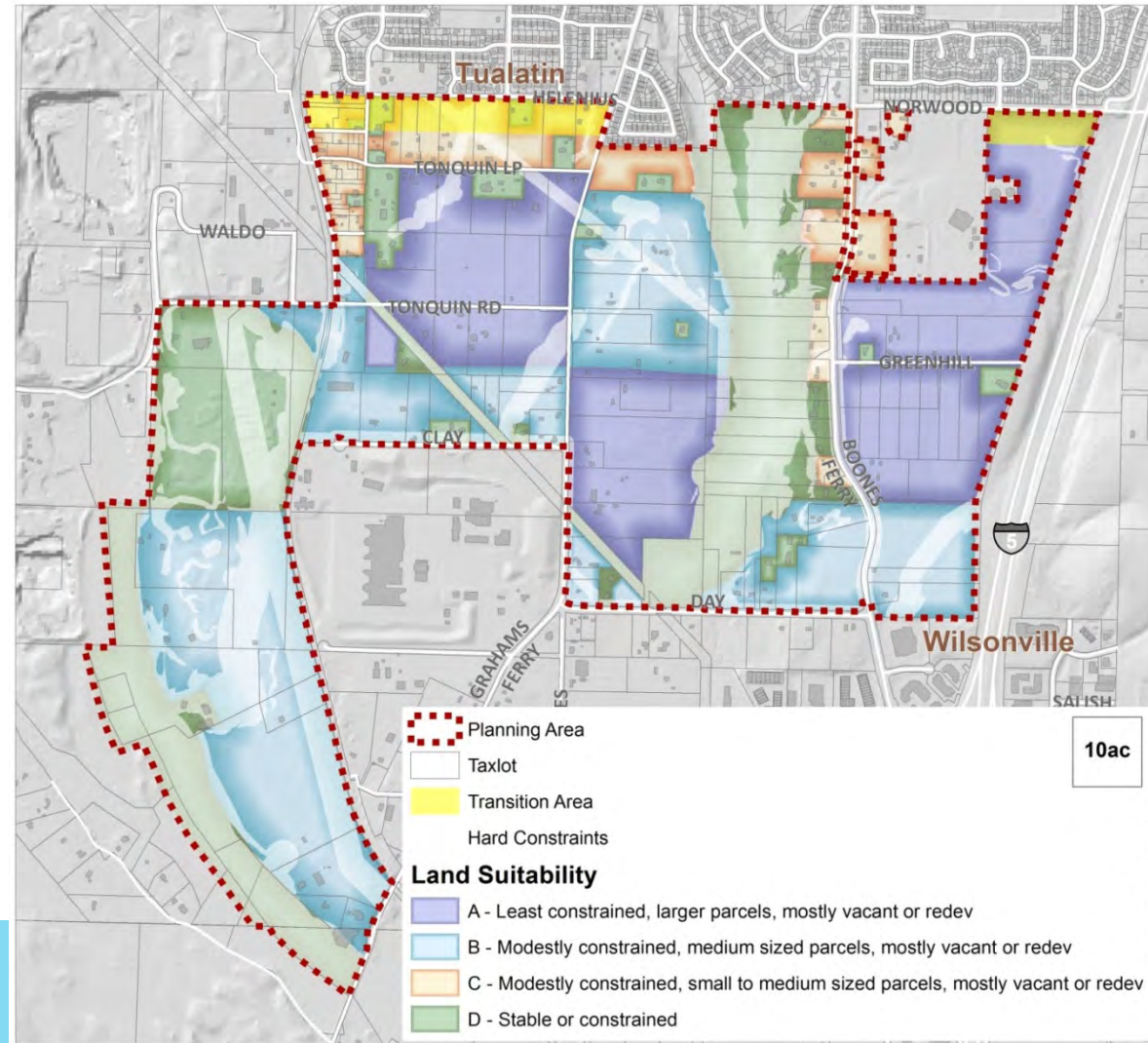
TEAM MEMBERS  
**Table 6**

# Building the Base Case Scenario



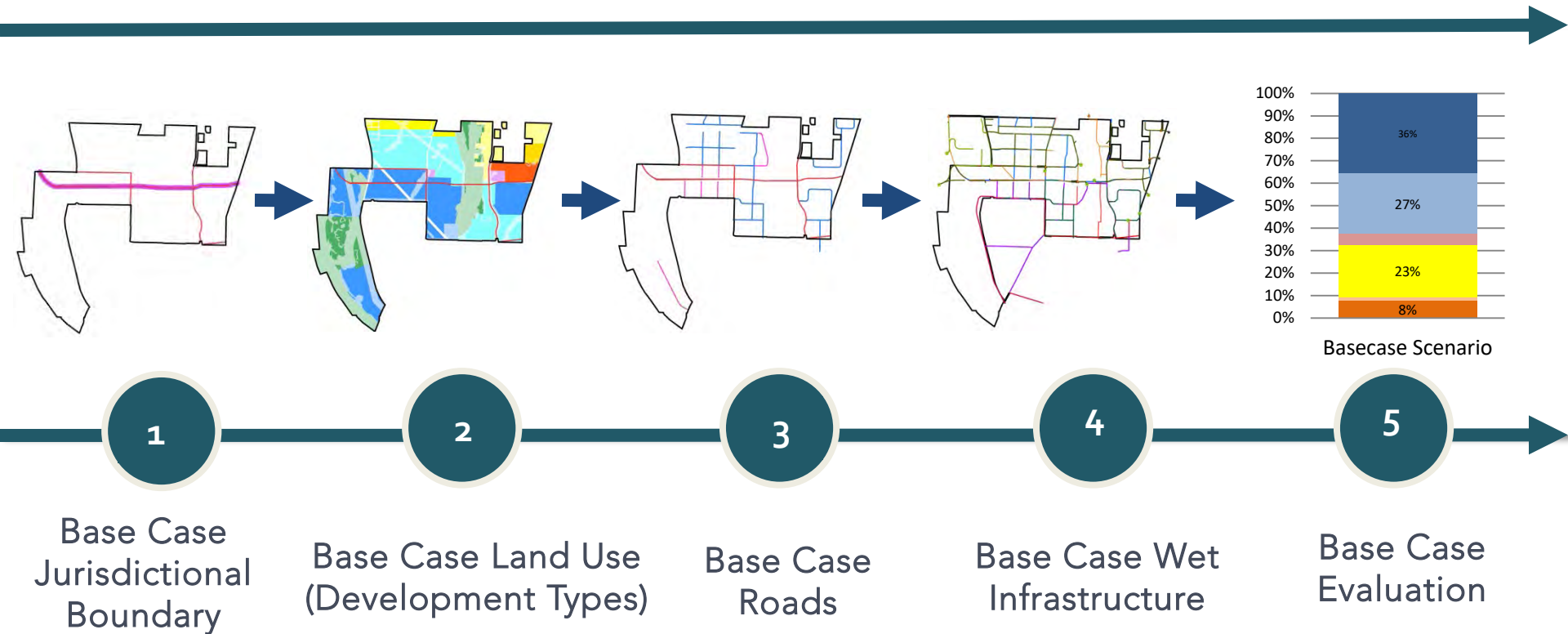
# Building the Base Case Land Suitability Analysis

Suitability Category	Vacant Acres
A	197
B	144
C	38
D	12

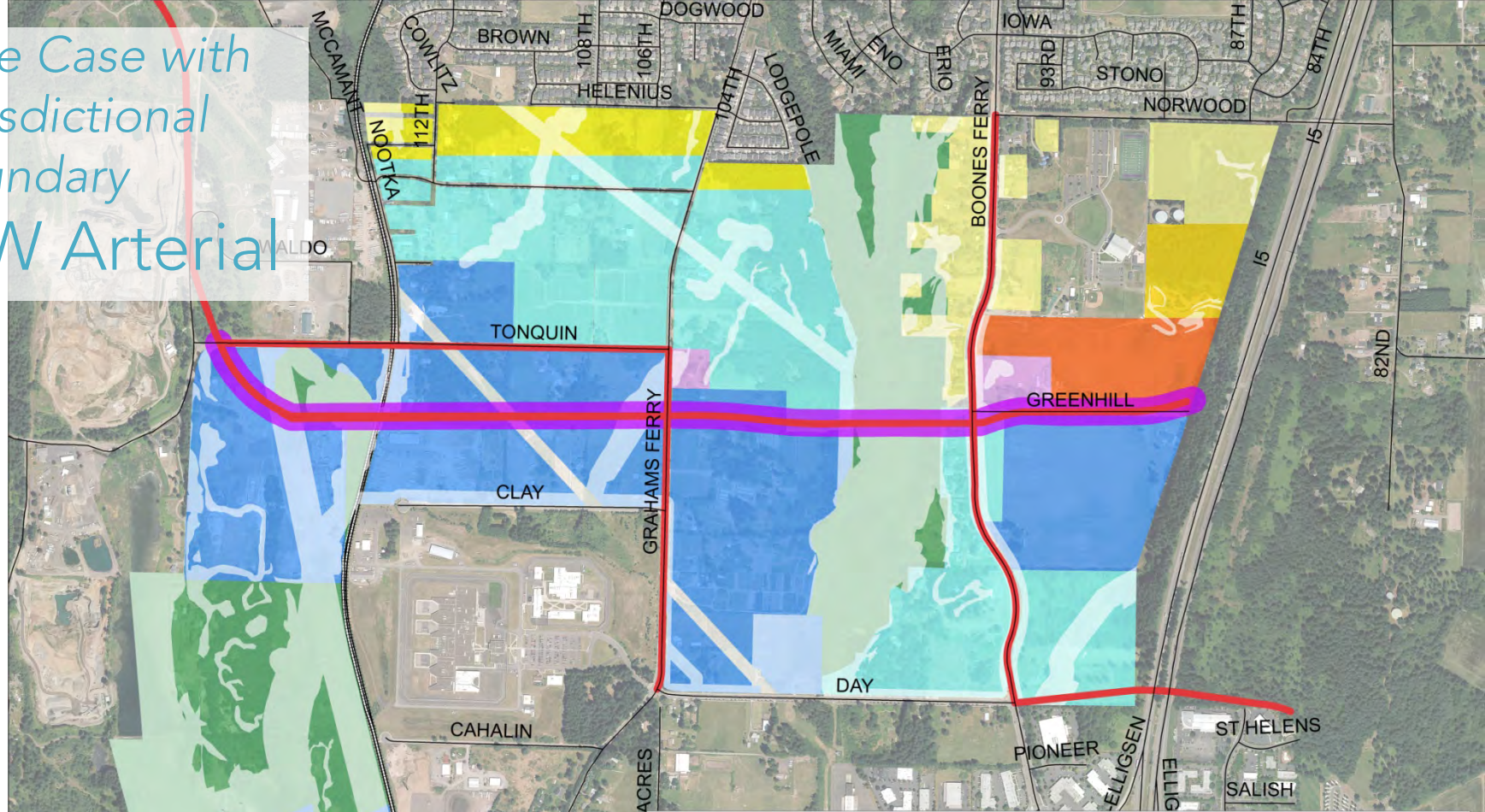




# Building the Base Case Scenario Development



Base Case with  
Jurisdictional  
Boundary  
E-W Arterial



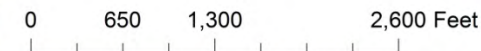
### Basalt Creek Base Case Scenario

**Legend**

- Planned Future Roads
- Basecase Local Access Roads
- Basecase Local Connector Roads
- Basecase Jurisdictional Boundary
- Existing Streets
- Railroad

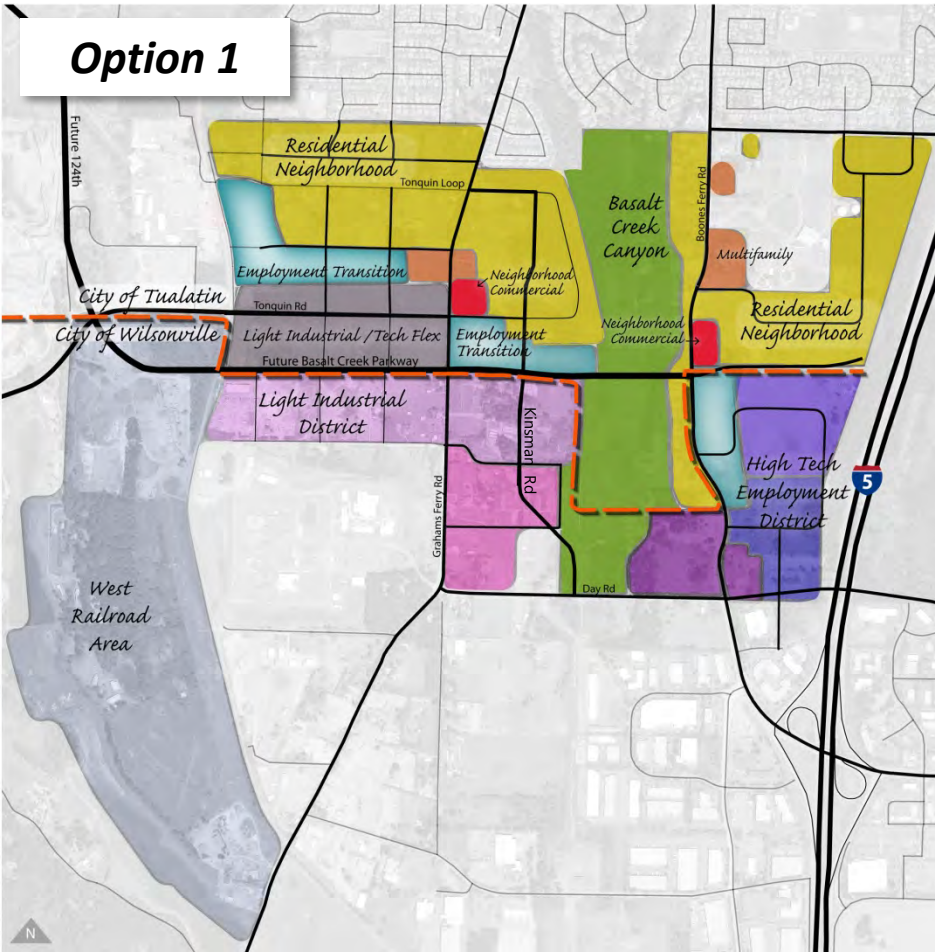
**Development Type**

- Neighborhood Commercial
- Suburban Multifamily
- Compact Neighborhood
- Suburban Residential
- Conventional Single Family
- Office Park/Flex
- Light Industrial and Warehousing
- Undeveloped Natural Area

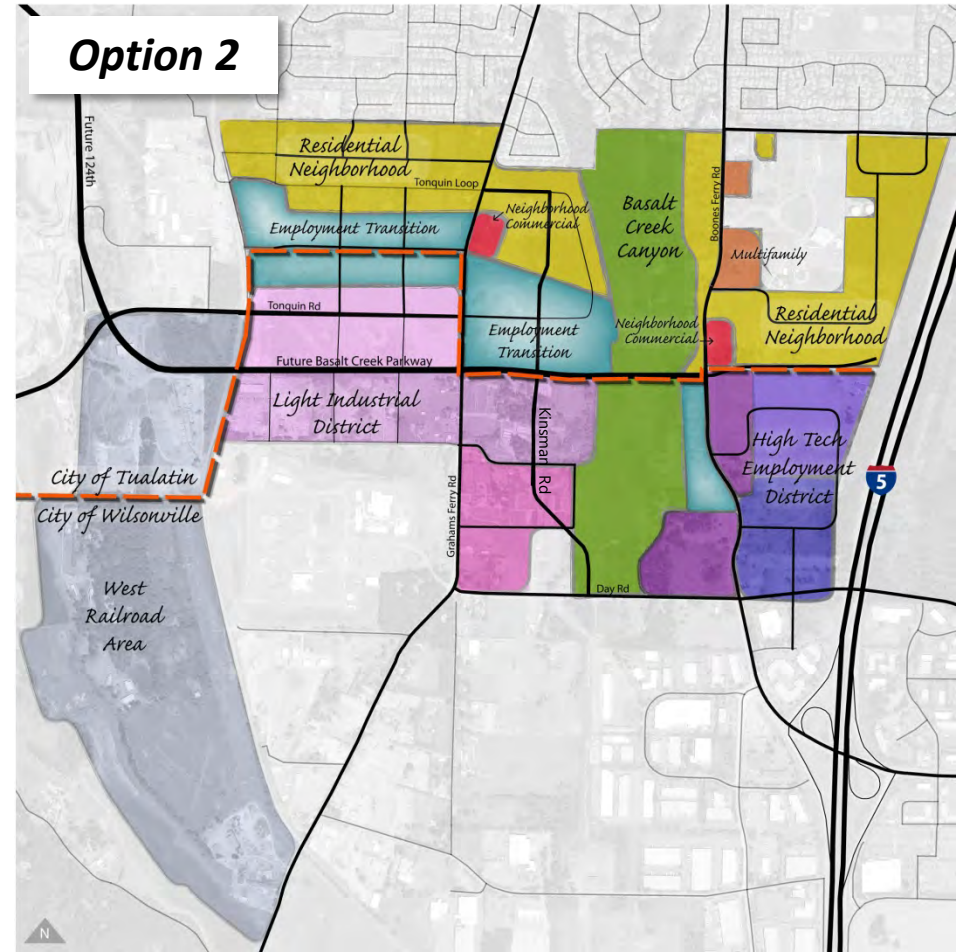


# Initial Scenarios 1 & 2

**Option 1**



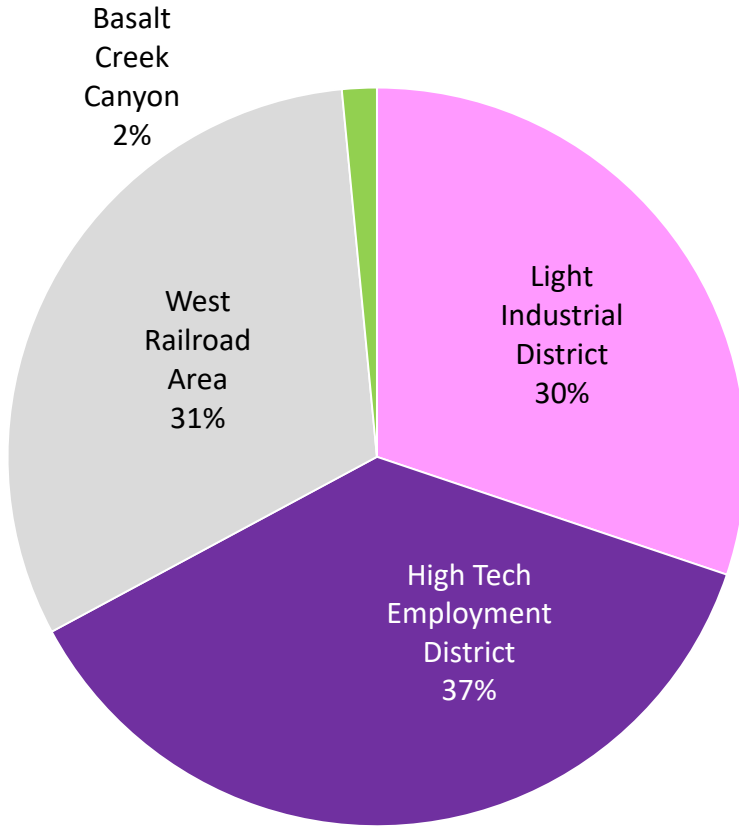
**Option 2**



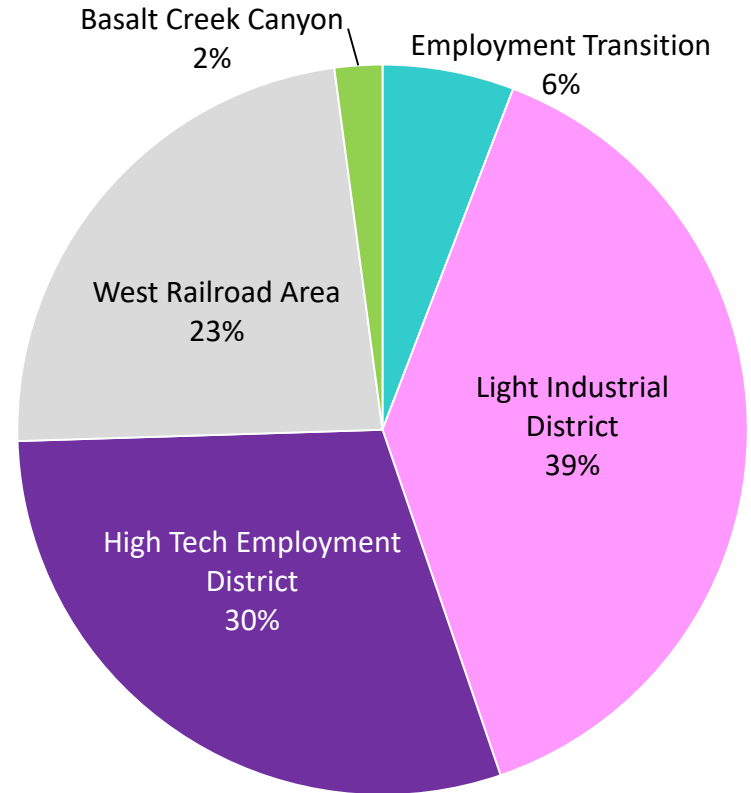
# Indicators | Wilsonville Land Use Mix

\* % of developable acres

## Boundary Option 1



## Boundary Option 2

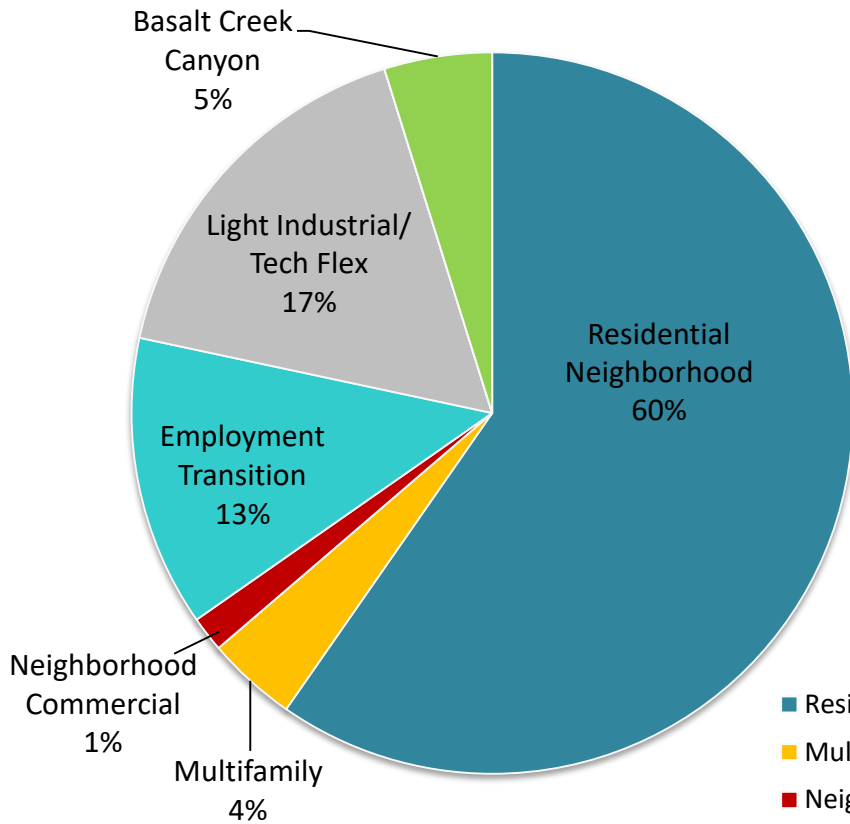


- Employment Transition
- High Tech Employment District
- Basalt Creek Canyon
- Light Industrial District
- West Railroad Area

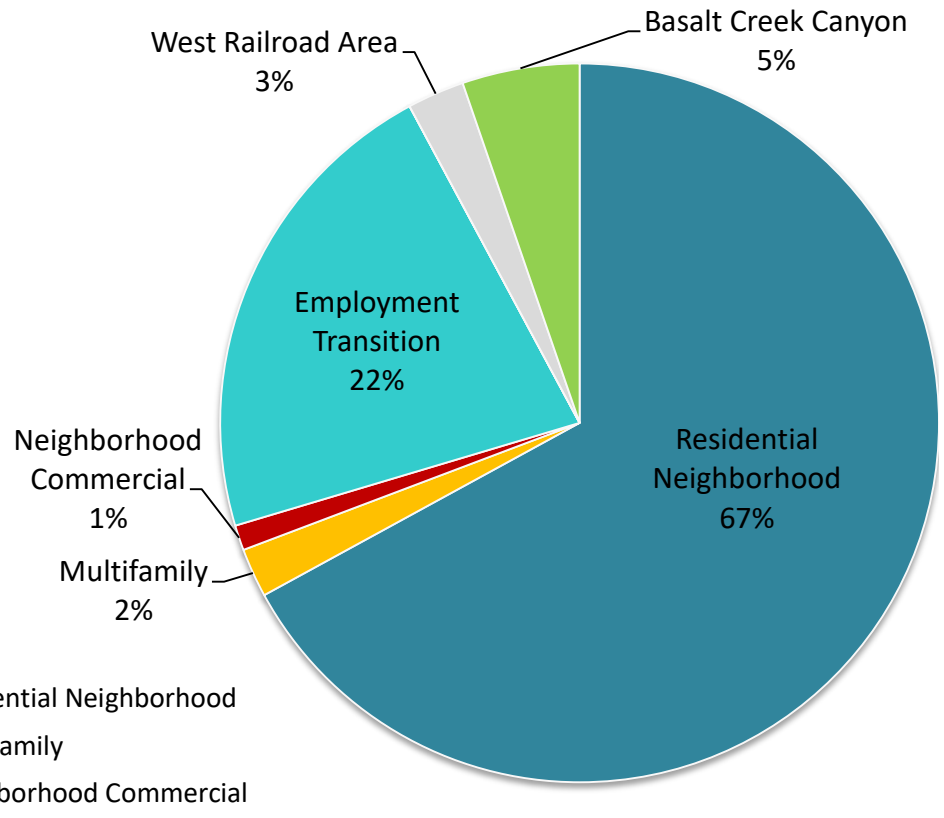
# Indicators | Tualatin Land Use Mix

\* % of developable acres

## Boundary Option 1

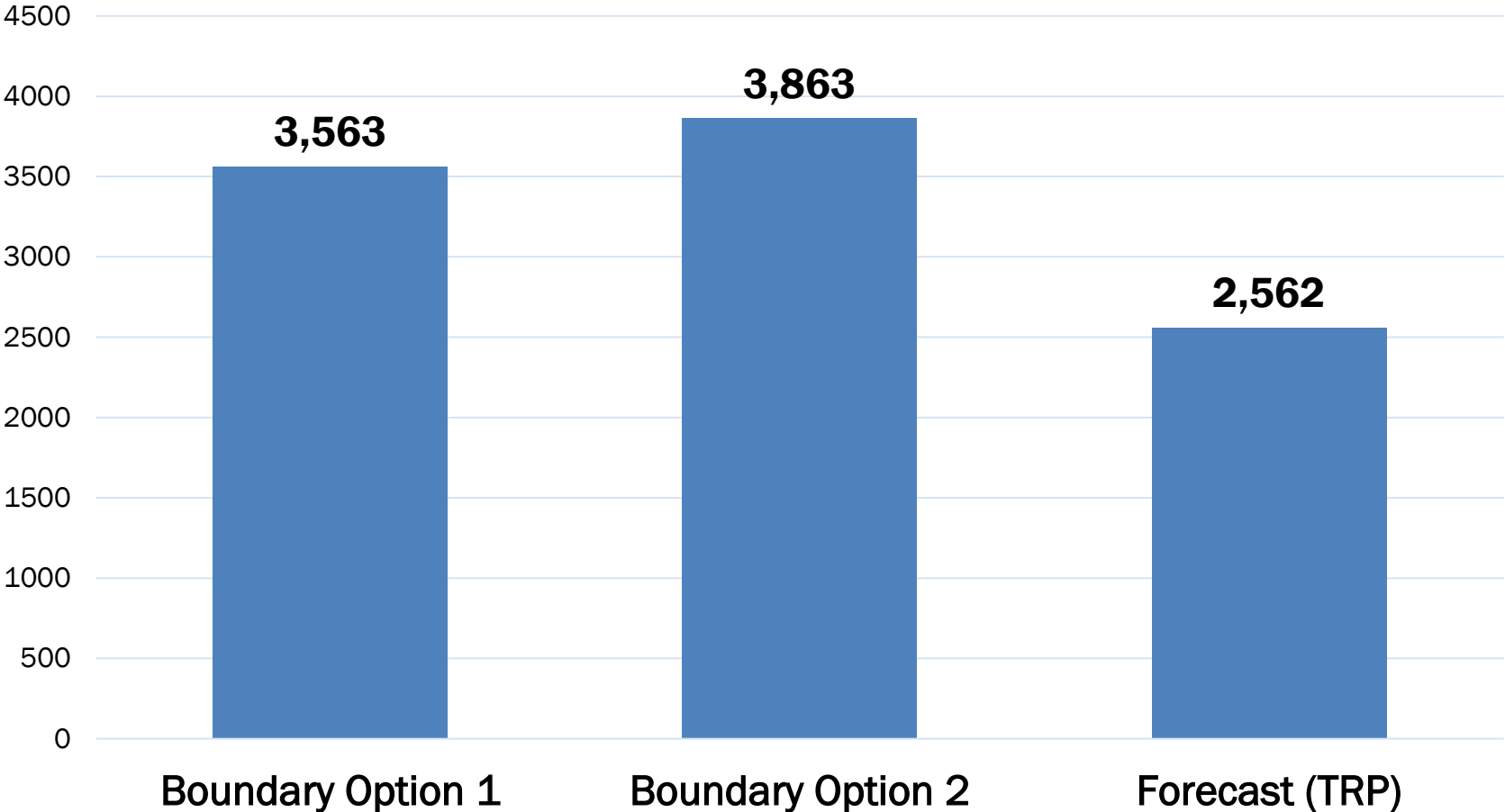


## Boundary Option 2

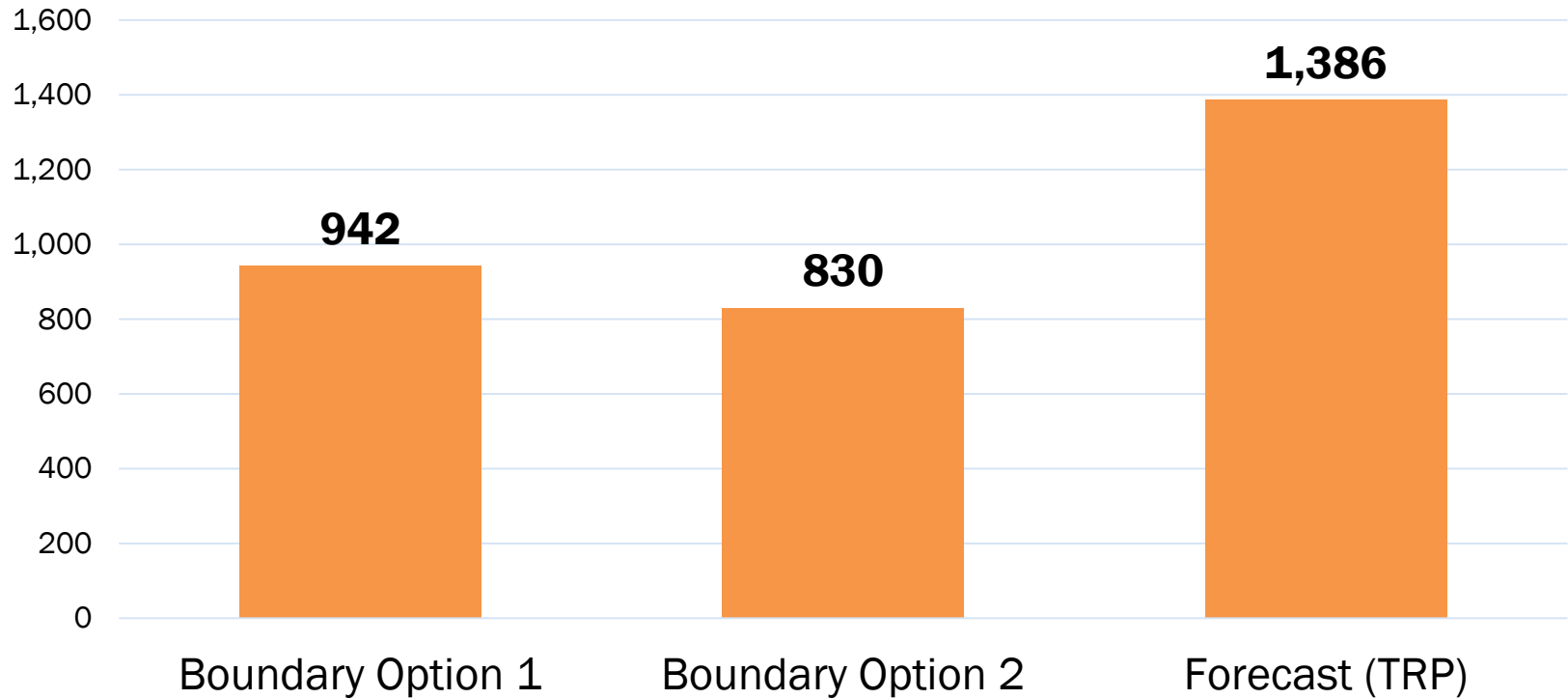


- Residential Neighborhood
- Multifamily
- Neighborhood Commercial
- Employment Transition
- Light Industrial/Tech Flex
- West Railroad Area
- Basalt Creek Canyon

# Indicators | Number of Jobs



# Indicators | Households



# Land Use Scenario Objectives

- A scenario designed around an implementable infrastructure plan
- Design principles focused on creating development forms reflective of the two cities
- Examine other boundary options that do not rely on the east west connector. Explore service agreements.
- Jurisdictional equity
- More residential for Tualatin in the north
- Consider creative solutions for transitions from employment to housing

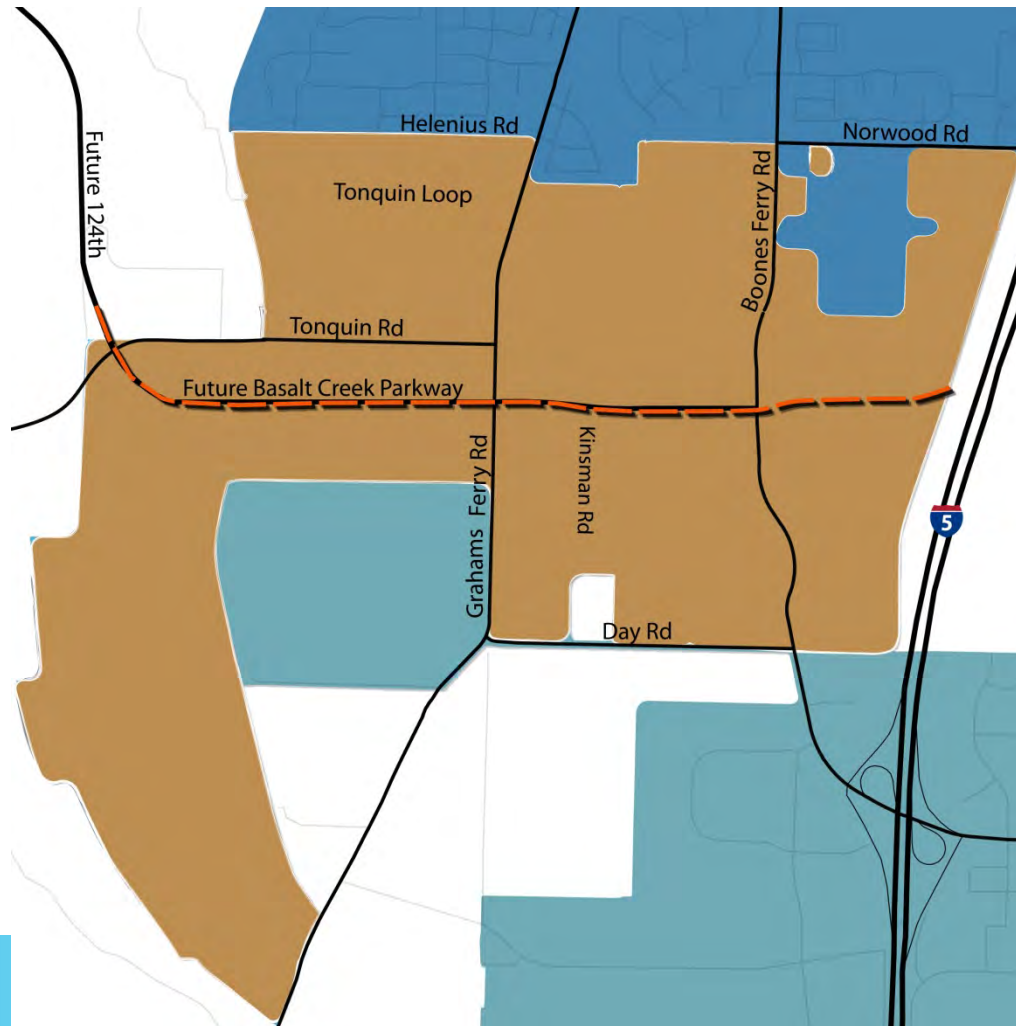


# Initial Scenario Summary

- Scenario 1 and 2 meet all regional goals and constraints
- Both provide:
  - high-quality employment and housing opportunities,
  - innovative and appropriate transition areas between residential and employment uses,
  - responsiveness to the real estate market,
  - robust and efficient infrastructure systems, and
  - development that generally “pays its way.”

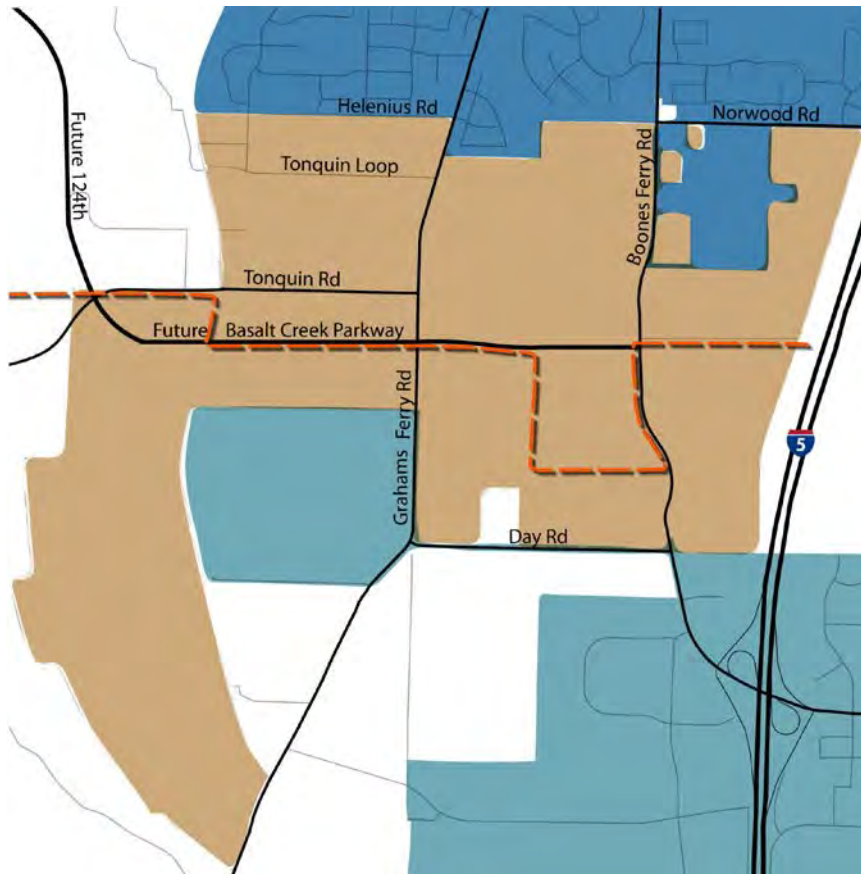
# Base Case Boundary Option

December 2, 2014 Joint Council Meeting

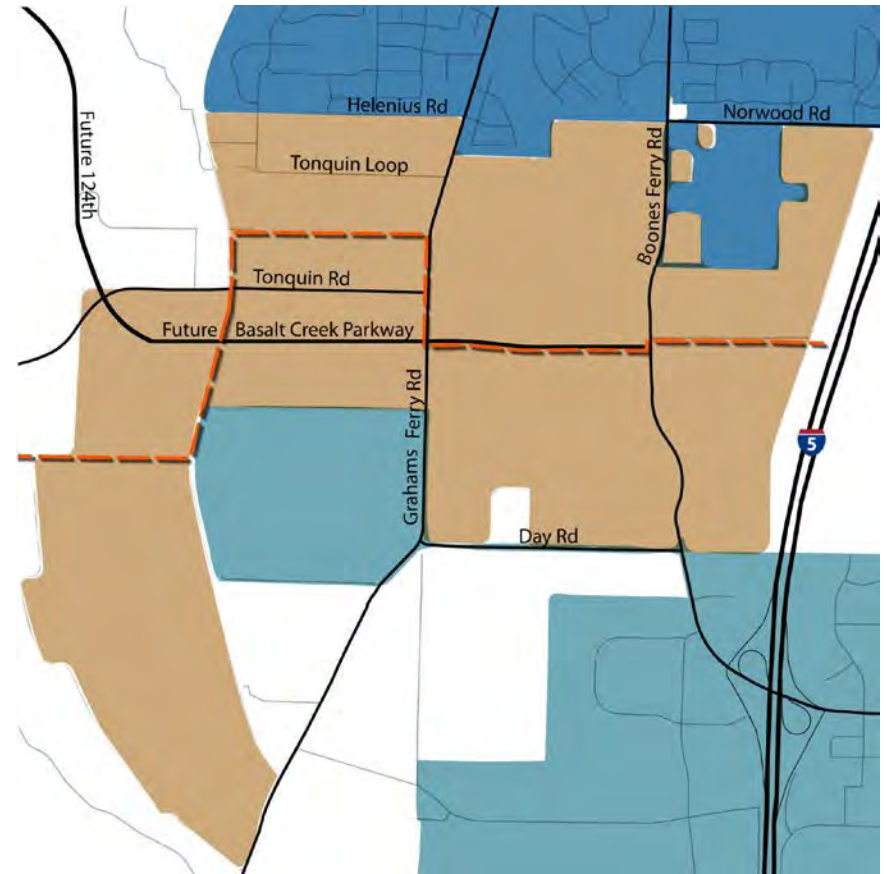


# Boundary Options 1 and 2

June 17, 2015 Joint Council Meeting



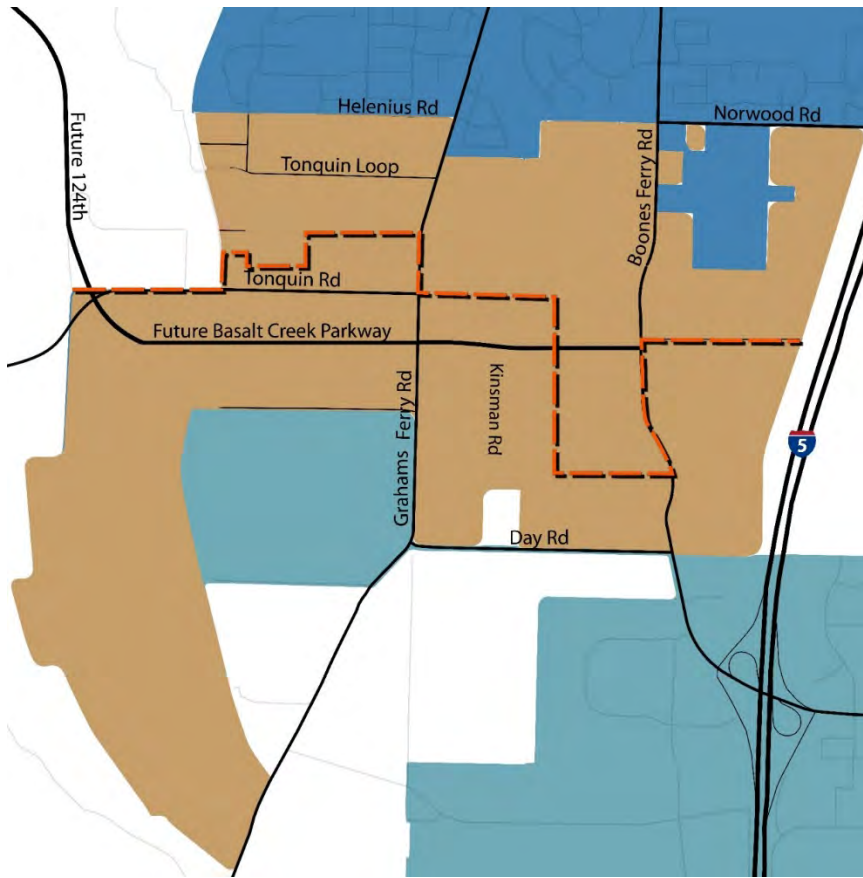
Boundary Option 1



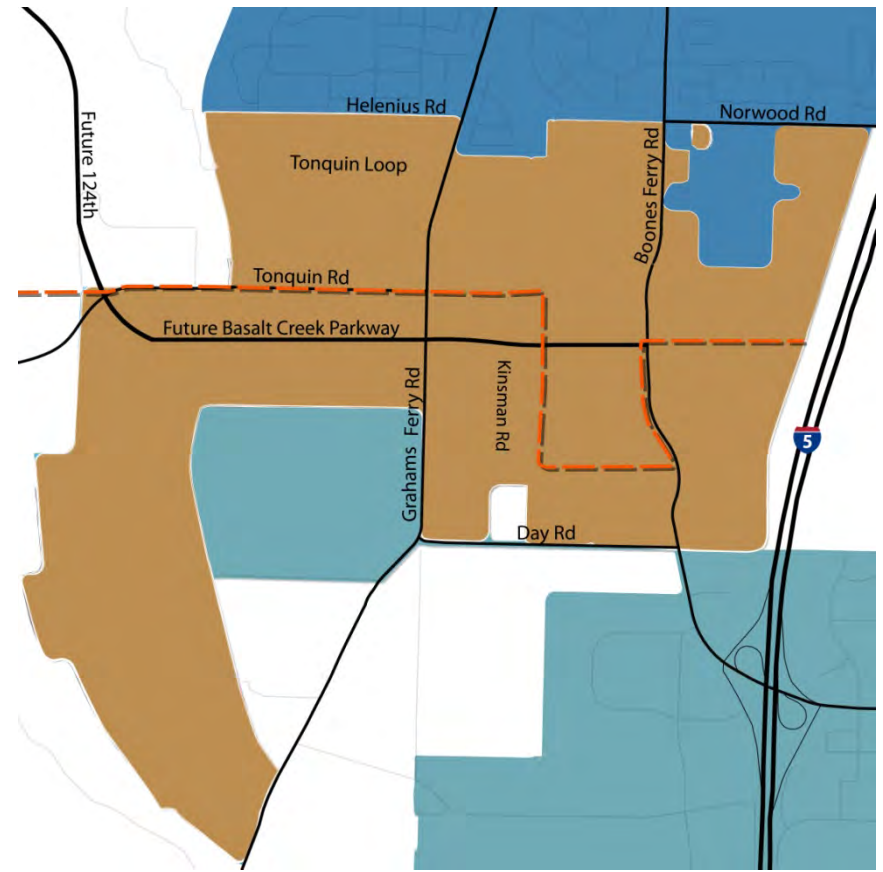
Boundary Option 2

# Boundary Options 3 and 4

## August 2015 Individual Work Sessions

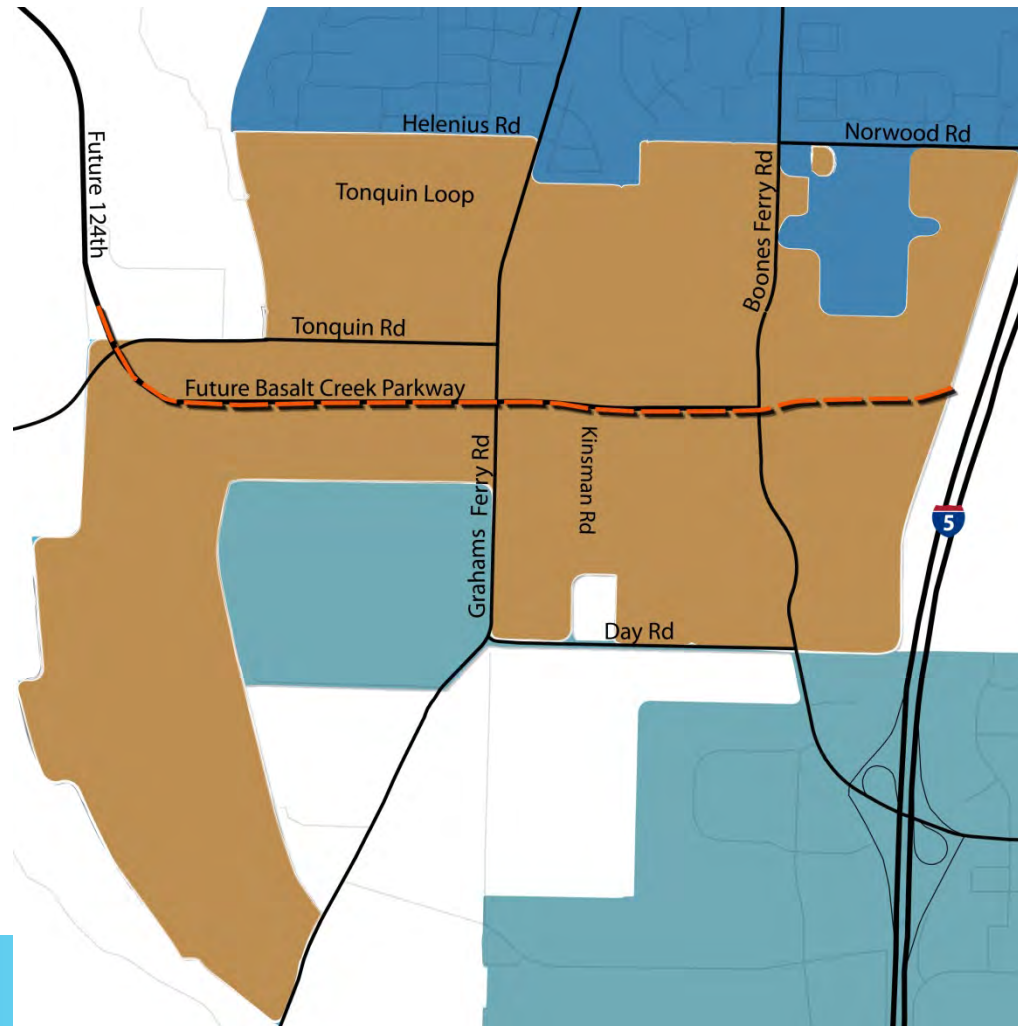


Boundary Option 3

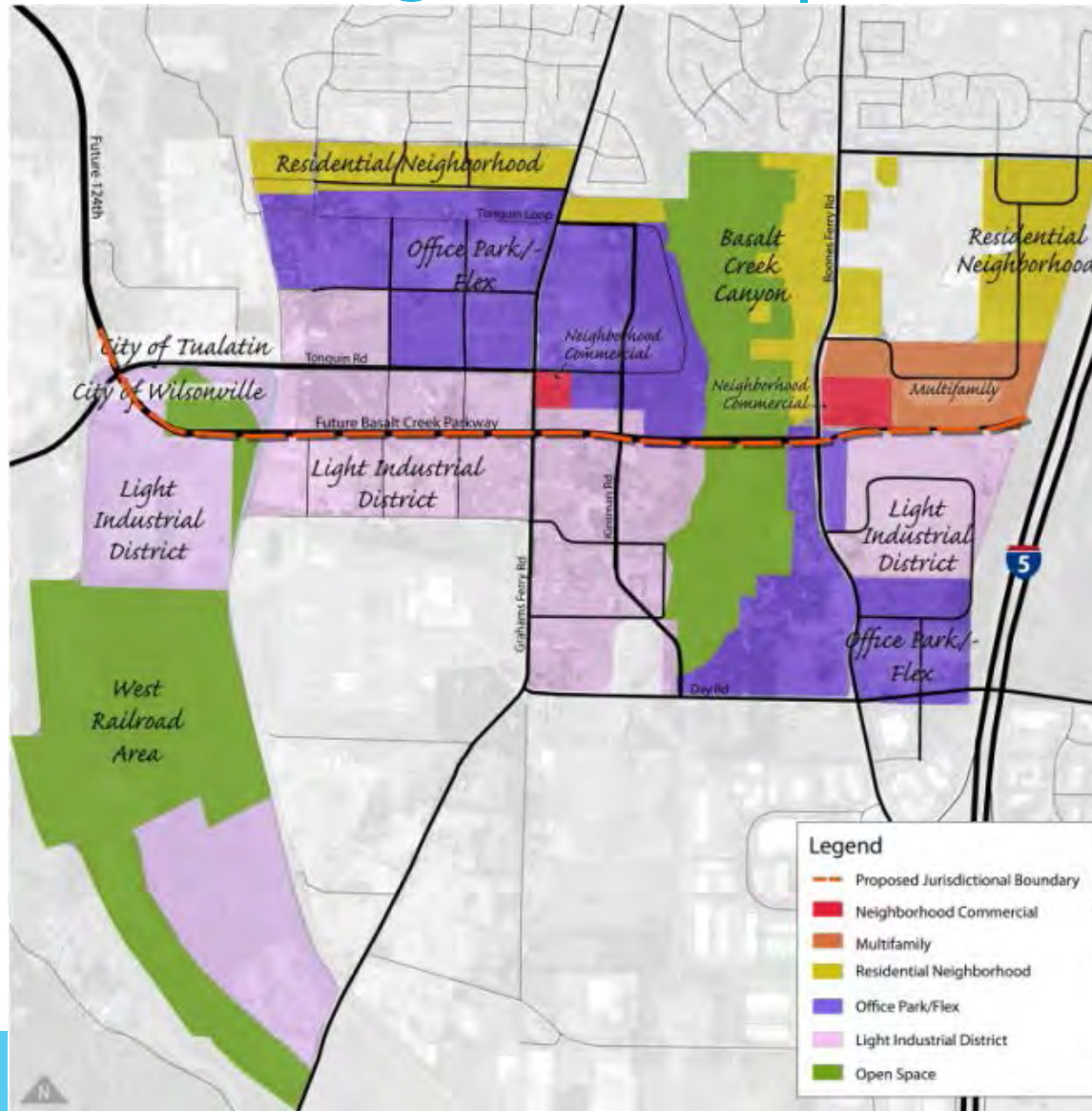


Boundary Option 4

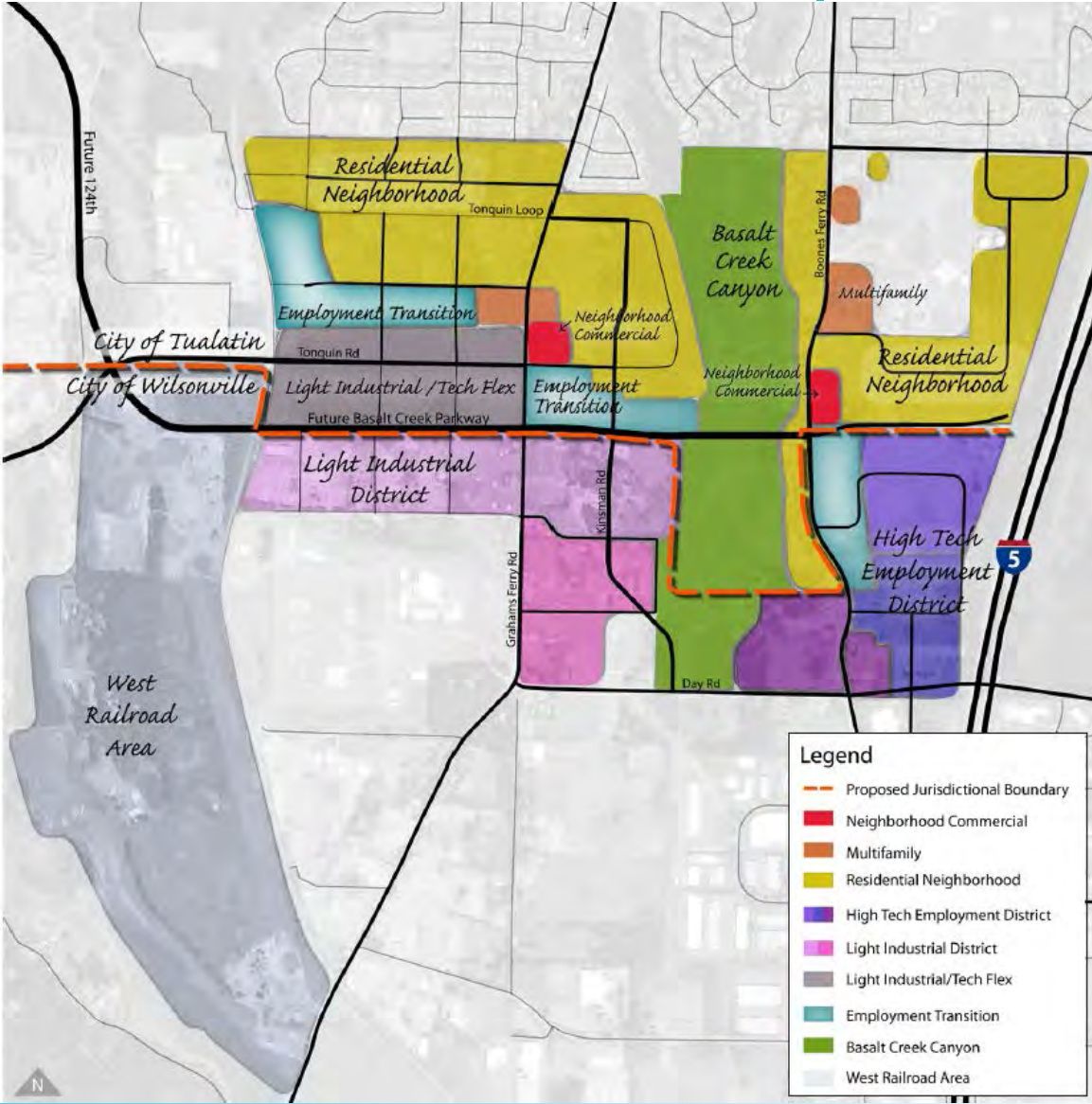
# Final Jurisdictional Boundary follows the Basalt Creek Parkway



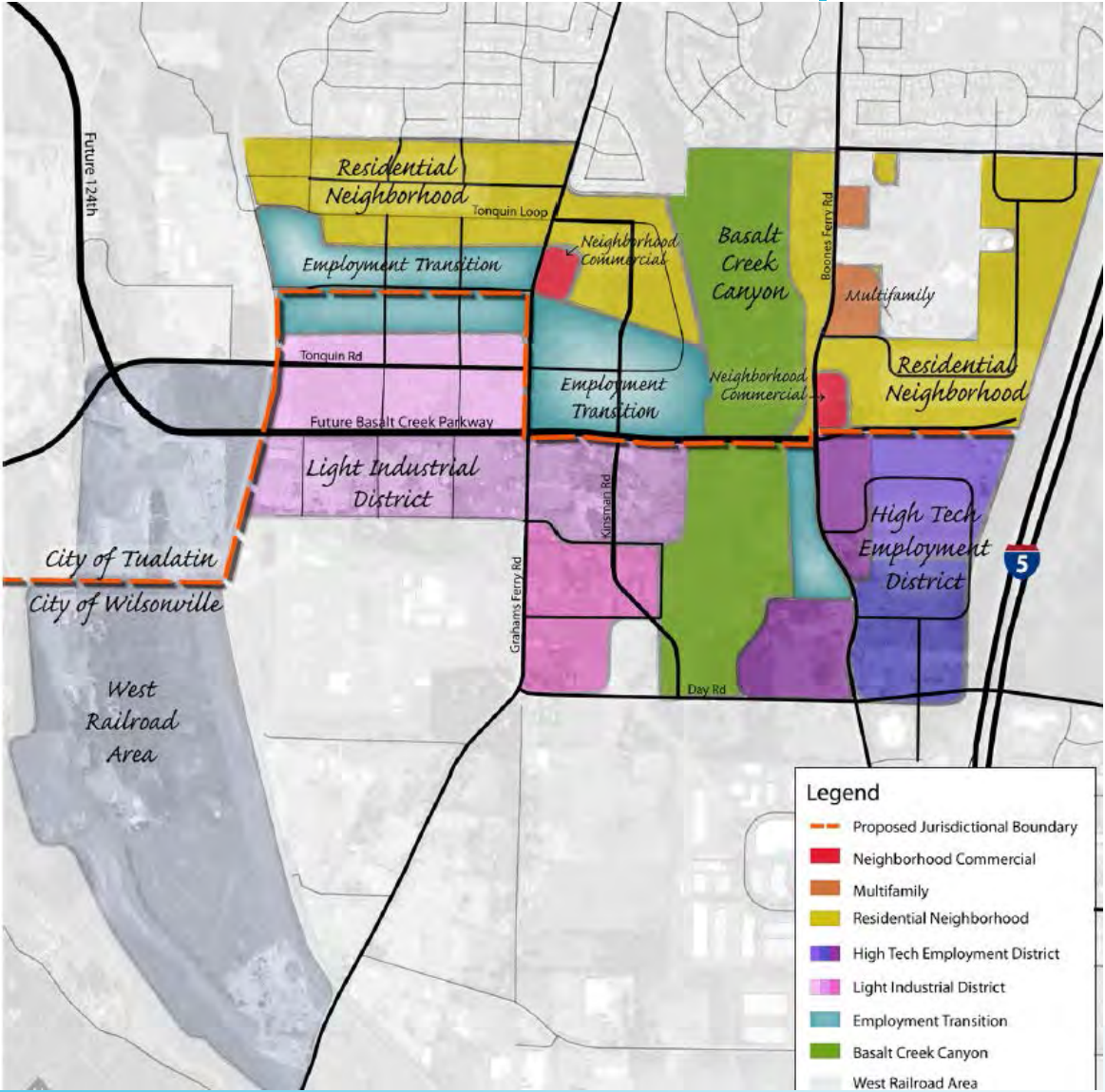
# Scenario Progression | Base Case



# Scenario Progression | Option 1

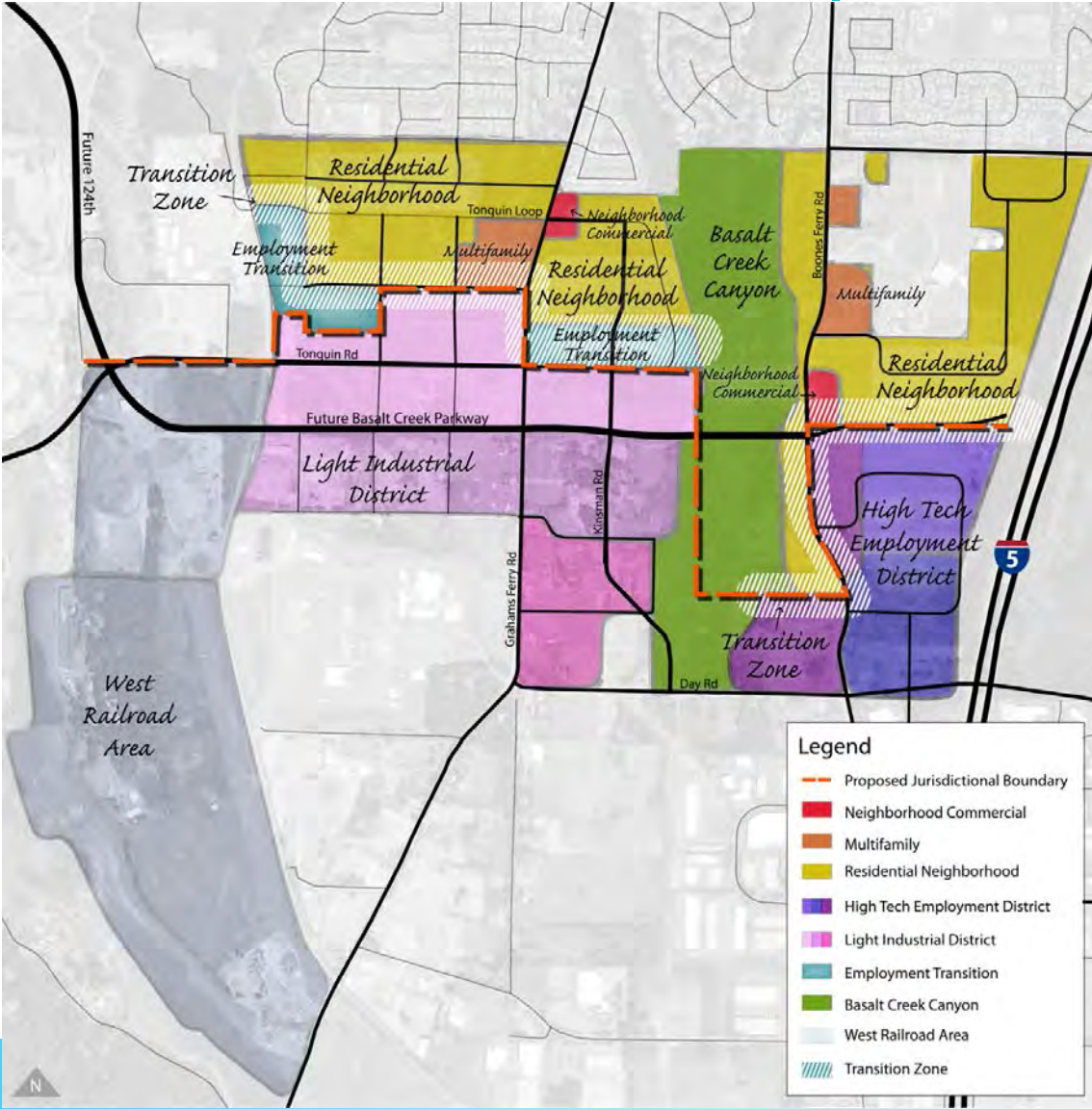


# Scenario Progression | Option 2

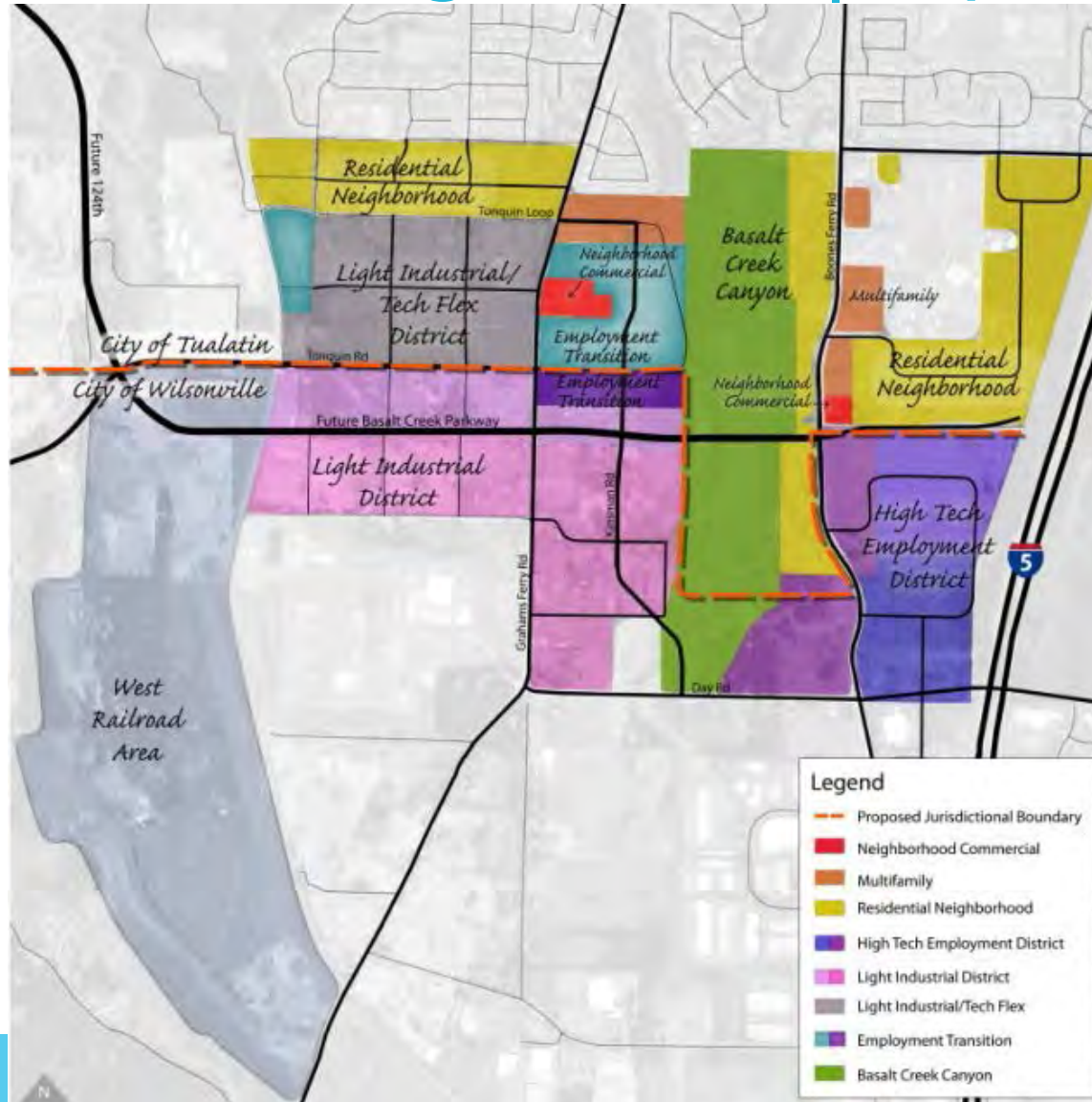




# Scenario Progression | Option 3

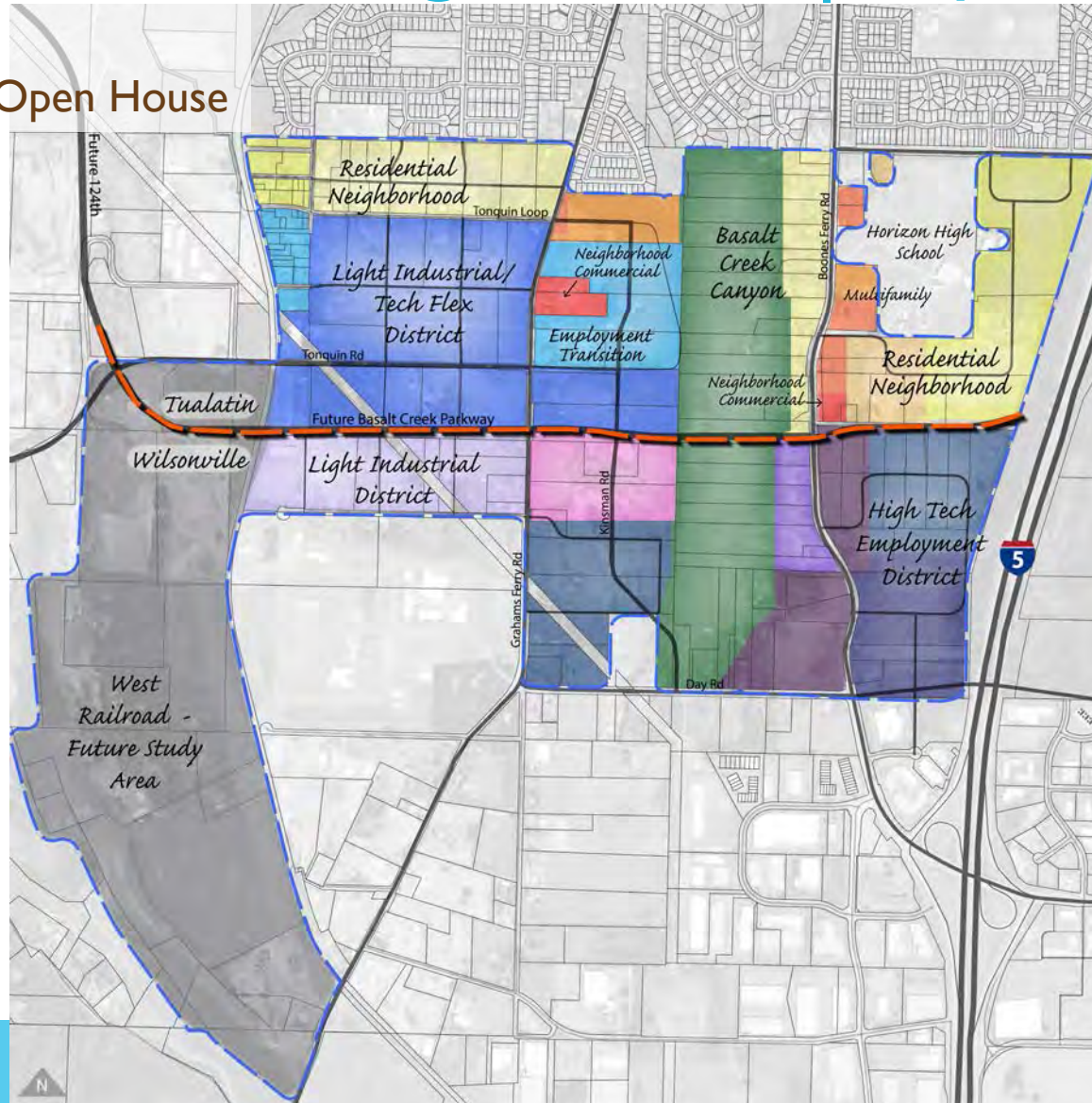


# Scenario Progression | Option 4

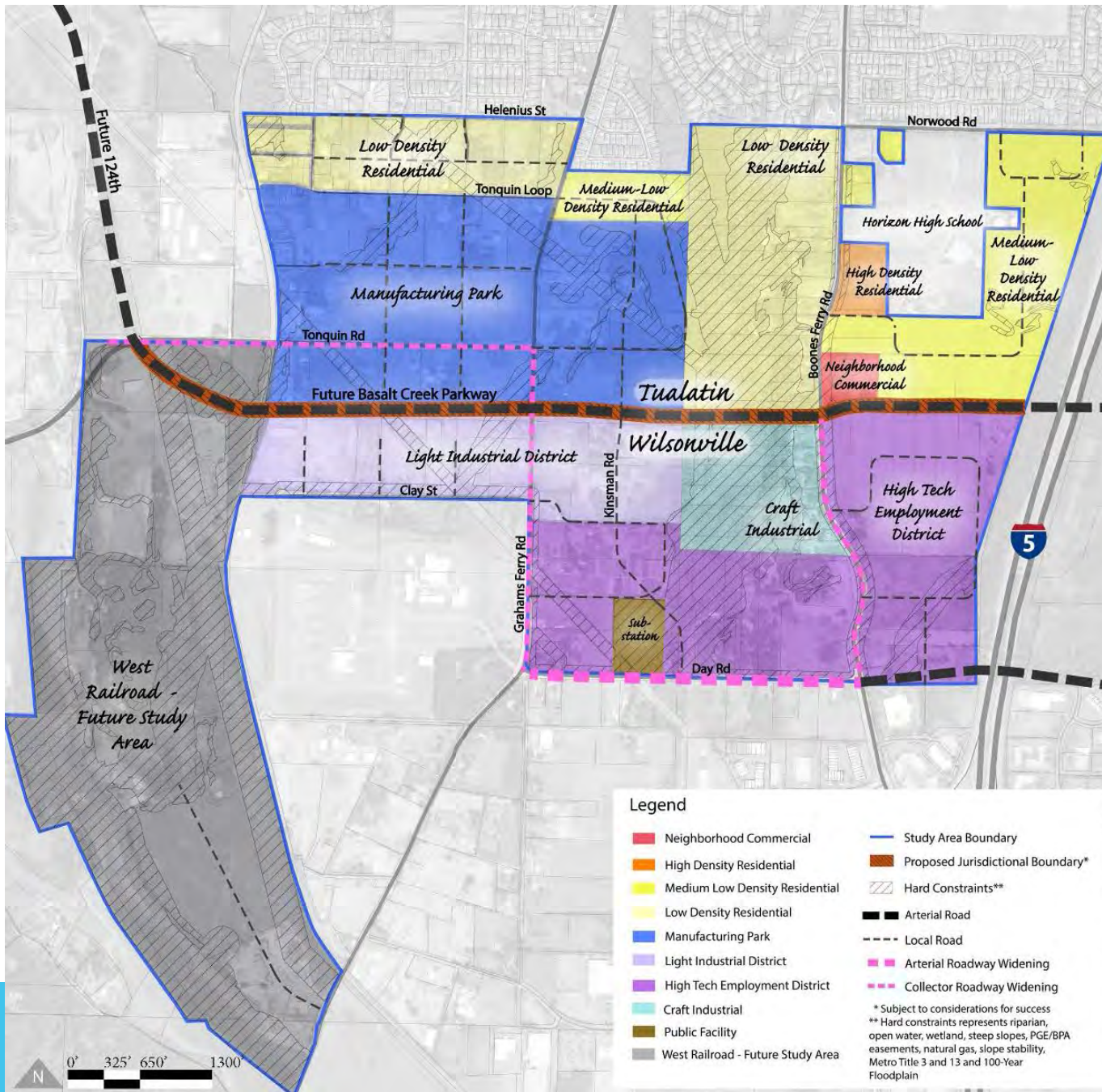


# Scenario Progression | Option 5

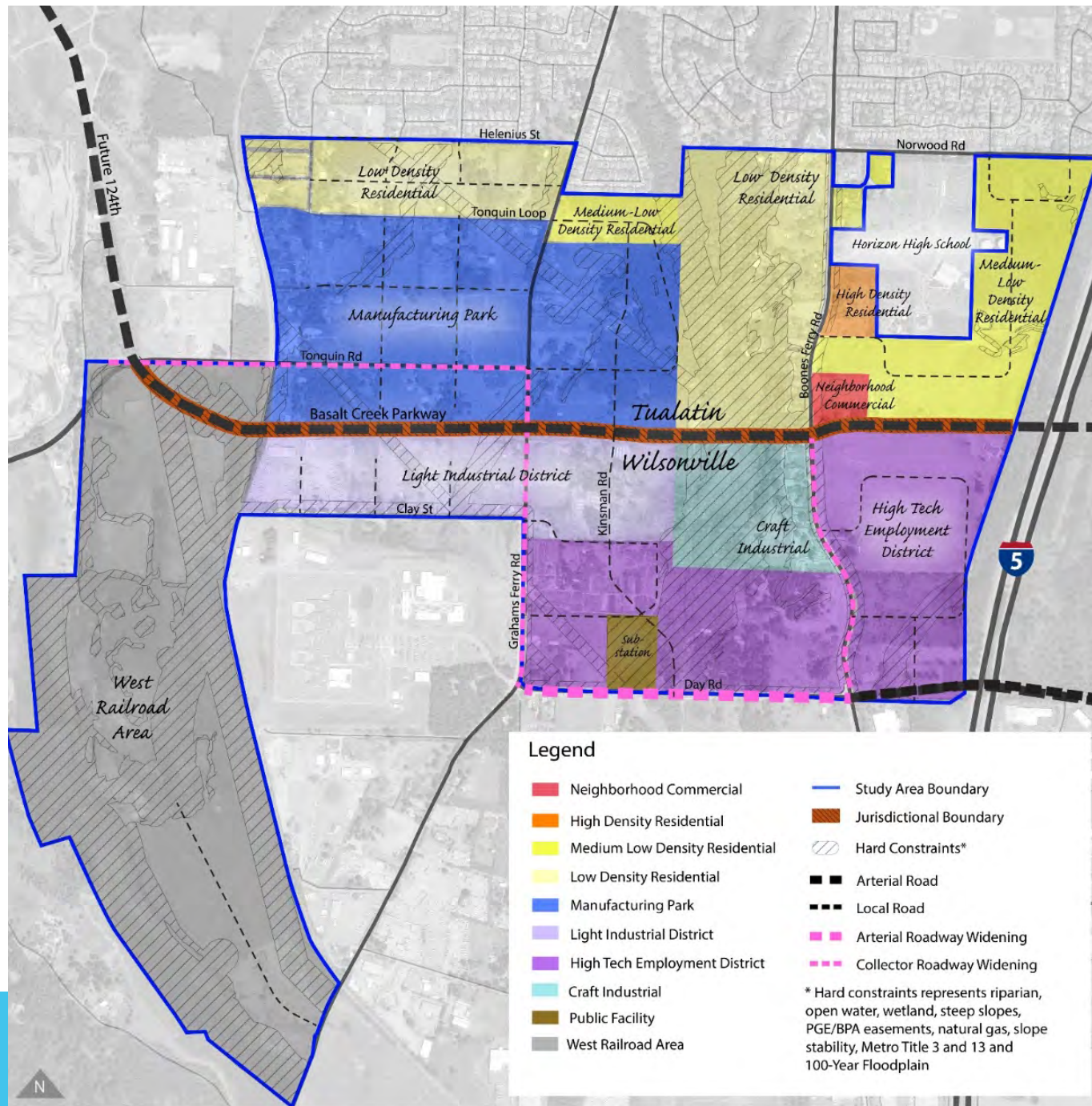
Option 5  
April 2016 Open House



# Preferred Land Use Concept | Sept 2016



# Concept Plan Map April 2018



### Legend

<span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span> Neighborhood Commercial	<span style="display:inline-block; width:15px; border-bottom:2px solid blue;"></span> Study Area Boundary
<span style="display:inline-block; width:15px; height:15px; background-color:orange; border:1px solid black;"></span> High Density Residential	<span style="display:inline-block; width:15px; border-bottom:2px dashed orange;"></span> Jurisdictional Boundary
<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> Medium Low Density Residential	<span style="display:inline-block; width:15px; height:15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, gray 2px, gray 4px); border:1px solid black;"></span> Hard Constraints*
<span style="display:inline-block; width:15px; height:15px; background-color:lightyellow; border:1px solid black;"></span> Low Density Residential	<span style="display:inline-block; width:15px; height:15px; background-color:gray; border:1px solid black;"></span> Arterial Road
<span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span> Manufacturing Park	<span style="display:inline-block; width:15px; height:15px; background-color:gray; border:1px dashed black;"></span> Local Road
<span style="display:inline-block; width:15px; height:15px; background-color:lightpurple; border:1px solid black;"></span> Light Industrial District	<span style="display:inline-block; width:15px; height:15px; border-bottom:2px dashed pink;"></span> Arterial Roadway Widening
<span style="display:inline-block; width:15px; height:15px; background-color:purple; border:1px solid black;"></span> High Tech Employment District	<span style="display:inline-block; width:15px; height:15px; border-bottom:2px dashed magenta;"></span> Collector Roadway Widening
<span style="display:inline-block; width:15px; height:15px; background-color:teal; border:1px solid black;"></span> Craft Industrial	
<span style="display:inline-block; width:15px; height:15px; background-color:brown; border:1px solid black;"></span> Public Facility	
<span style="display:inline-block; width:15px; height:15px; background-color:gray; border:1px solid black;"></span> West Railroad Area	

\* Hard constraints represents riparian, open water, wetland, steep slopes, PGE/BPA easements, natural gas, slope stability, Metro Title 3 and 13 and 100-Year Floodplain

Boundary Option 1	Acreage	Housing Units	Households	Jobs	Retail	Office	Industrial	Warehousing	Trips	HH Trips	Retail Trips	Office Trips	Industrial Trips	Warehousing Trips
<b>Tualatin</b>														
Garden Apartments 2-story (T)	3	68	64	-	-	-	-	-	40	40	-	-	-	-
Townhomes (T)	6	58	55	-	-	-	-	-	34	34	-	-	-	-
Small Lot Single Family (T)	10	87	80	-	-	-	-	-	50	50	-	-	-	-
Small and Medium Lot Single Family (T)	59	401	369	-	-	-	-	-	232	232	-	-	-	-
Large Lot Single Family (T)	50	292	268	-	-	-	-	-	169	169	-	-	-	-
Small Pad Retail (T)	3	-	-	36	36	-	-	-	26	-	26	-	-	-
Light Industrial / Tech Flex (T)	34	-	-	689	24	132	533	-	263	-	17	49	197	-
Employment Transition (T)	26	-	-	773	-	773	-	-	286	-	-	286	-	-
Light Industrial / Tech Flex - Low Density (T)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Space	10	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Tualatin Total</b>	<b>201</b>	<b>906</b>	<b>836</b>	<b>1,498</b>	<b>60</b>	<b>905</b>	<b>533</b>	<b>-</b>	<b>1,102</b>	<b>526</b>	<b>43</b>	<b>335</b>	<b>197</b>	<b>-</b>
<b>Wilsonville</b>														
Live-Work (W)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Employment Transition (W)	7	36	34	154	37	48	67	2	92	21	27	18	25	1
Single User Manufacturing (W)	21	-	-	253	3	160	63	27	95	-	2	59	23	10
Single User Warehousing (W)	27	-	-	317	8	110	-	199	120	-	5	41	-	74
High Tech Single User (W)	15	-	-	532	5	234	293	-	199	-	4	87	108	-
Multi User Manufacturing Small Tenants (W)	19	-	-	316	4	59	218	36	119	-	3	22	80	13
Multi User Manufacturing Large Tenants (W)	38	-	-	282	9	13	-	260	107	-	7	5	-	96
Employment Low - Area of Special Concern (W)	59	-	-	119	4	6	-	110	46	-	3	2	-	41
Open Space	3	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Wilsonville Total</b>	<b>188</b>	<b>36</b>	<b>34</b>	<b>1,973</b>	<b>69</b>	<b>630</b>	<b>641</b>	<b>633</b>	<b>776</b>	<b>21</b>	<b>50</b>	<b>233</b>	<b>237</b>	<b>234</b>
<b>Total All</b>	<b>389</b>	<b>942</b>	<b>870</b>	<b>3,471</b>	<b>129</b>	<b>1,535</b>	<b>1,174</b>	<b>633</b>	<b>1,878</b>	<b>548</b>	<b>94</b>	<b>568</b>	<b>434</b>	<b>234</b>

Boundary Option 2	Housing				Commercial				Trips		Retail	Office	Industrial	Warehousing
	Acreage	Units	Households	Jobs	Retail	Office	Industrial	Warehousing	Trips	HH Trips	Trips	Trips	Trips	Trips
<b>Tualatin</b>														
Garden Apartments 2-story (T)	3	68	64	-	-	-	-	-	40	40	-	-	-	-
Townhomes (T)	2	17	16	-	-	-	-	-	10	10	-	-	-	-
Small Lot Single Family (T)	10	89	82	-	-	-	-	-	52	52	-	-	-	-
Small and Medium Lot Single Family (T)	43	292	269	-	-	-	-	-	169	169	-	-	-	-
Large Lot Single Family (T)	49	289	266	-	-	-	-	-	167	167	-	-	-	-
Small Pad Retail (T)	2	-	-	20	20	-	-	-	14	-	14	-	-	-
Light Industrial / Tech Flex (T)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Employment Transition (T)	34	-	-	993	-	993	-	-	368	-	-	368	-	-
Light Industrial / Tech Flex - Low Density (T)	4	1	1	29	1	6	23	-	12	1	1	2	8	-
Open Space	8	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Tualatin Total</b>	<b>155</b>	<b>756</b>	<b>697</b>	<b>1,043</b>	<b>21</b>	<b>999</b>	<b>23</b>	<b>-</b>	<b>833</b>	<b>439</b>	<b>15</b>	<b>370</b>	<b>8</b>	<b>-</b>
<b>Wilsonville</b>														
Live-Work (W)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Employment Transition (W)	13.4	68.66	64.54	291.70	70.80	90.33	127.04	3.53	174.07	40.66	51.68	33.42	47.01	1.30
Single User Manufacturing (W)	22.3	-	-	274.19	3.03	173.42	68.69	29.05	102.54	-	2.21	64.17	25.42	10.75
Single User Warehousing (W)	50.1	-	-	585.09	13.89	203.71	-	367.50	221.48	-	10.14	75.37	-	135.97
High Tech Single User (W)	21.3	-	-	766.61	6.98	337.62	422.02	-	286.16	-	5.09	124.92	156.15	-
Multi User Manufacturing Small Tenants (W)	30.6	-	-	503.04	6.39	93.78	345.83	57.03	188.43	-	4.67	34.70	127.96	21.10
Multi User Manufacturing Large Tenants (W)	37.7	-	-	282.12	8.93	13.09	-	260.10	107.60	-	6.52	4.84	-	96.24
Employment Low - Area of Special Concern (W)	55.1	-	-	111	4	5	-	103	42	-	3	2	-	38
Open Space	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Wilsonville Total</b>	<b>235</b>	<b>69</b>	<b>65</b>	<b>2,814</b>	<b>114</b>	<b>917</b>	<b>964</b>	<b>820</b>	<b>1,123</b>	<b>41</b>	<b>83</b>	<b>339</b>	<b>357</b>	<b>303</b>
<b>Total All</b>	<b>390</b>	<b>825</b>	<b>762</b>	<b>3,857</b>	<b>134</b>	<b>1,916</b>	<b>986</b>	<b>820</b>	<b>1,955</b>	<b>480</b>	<b>98</b>	<b>709</b>	<b>365</b>	<b>303</b>

Boundary Option 3	Housing													
	Acreage	Units	Households	Jobs	Retail	Office	Industrial	Warehousing	Trips	HH Trips	Retail Trips	Office Trips	Industrial Trips	Warehousing Trips
<b>Tualatin</b>														
Garden Apartments 2-story (T)	6	124	117	-	-	-	-	-	74	74	-	-	-	-
Townhomes (T)	5	46	43	-	-	-	-	-	27	27	-	-	-	-
Small Lot Single Family (T)	10	89	82	-	-	-	-	-	52	52	-	-	-	-
Small and Medium Lot Single Family (T)	56	382	352	-	-	-	-	-	222	222	-	-	-	-
Large Lot Single Family (T)	38	223	205	-	-	-	-	-	129	129	-	-	-	-
Small Pad Retail (T)	3	-	-	35	35	-	-	-	25	-	25	-	-	-
Light Industrial / Tech Flex (T)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Employment Transition (T)	12	-	-	365	-	365	-	-	135	-	-	135	-	-
Light Industrial / Tech Flex - Low Density (T)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Space	13	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Tualatin Total</b>	<b>144</b>	<b>865</b>	<b>799</b>	<b>400</b>	<b>35</b>	<b>365</b>	<b>-</b>	<b>-</b>	<b>664</b>	<b>503</b>	<b>25</b>	<b>135</b>	<b>-</b>	<b>-</b>
<b>Wilsonville</b>														
Live-Work (W)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Employment Transition (W)	16	84	79	357	87	111	156	4	213	50	63	41	58	2
Single User Manufacturing (W)	22	-	-	274	3	173	69	29	103	-	2	64	25	11
Single User Warehousing (W)	50	-	-	585	14	204	-	367	221	-	10	75	-	136
High Tech Single User (W)	22	-	-	792	7	349	436	-	296	-	5	129	161	-
Multi User Manufacturing Small Tenants (W)	40	-	-	663	8	124	456	75	249	-	6	46	169	28
Multi User Manufacturing Large Tenants (W)	33	-	-	250	8	12	-	230	95	-	6	4	-	85
Employment Low - Area of Special Concern (W)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Space	3	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Wilsonville Total</b>	<b>187</b>	<b>84</b>	<b>79</b>	<b>2,922</b>	<b>127</b>	<b>972</b>	<b>1,117</b>	<b>706</b>	<b>1,177</b>	<b>50</b>	<b>93</b>	<b>360</b>	<b>413</b>	<b>261</b>
<b>Total All</b>	<b>331</b>	<b>949</b>	<b>878</b>	<b>3,322</b>	<b>162</b>	<b>1,337</b>	<b>1,117</b>	<b>706</b>	<b>1,841</b>	<b>553</b>	<b>118</b>	<b>495</b>	<b>413</b>	<b>261</b>



Boundary Option 4	Housing				Retail				Trips	HH Trips	Retail Trips	Office Trips	Industrial Trips	Warehousing Trips
	Acreage	Units	Households	Jobs	Retail	Office	Industrial	Warehousing						
<b>Tualatin</b>														
Garden Apartments 2-story (T)	4	84	79	-	-	-	-	-	50	50	-	-	-	-
Townhomes (T)	9	79	74	-	-	-	-	-	47	47	-	-	-	-
Small Lot Single Family (T)	10	89	82	-	-	-	-	-	52	52	-	-	-	-
Small and Medium Lot Single Family (T)	46	312	287	-	-	-	-	-	181	181	-	-	-	-
Large Lot Single Family (T)	23	135	124	-	-	-	-	-	78	78	-	-	-	-
Small Pad Retail (T)	1	-	-	17	17	-	-	-	12	-	12	-	-	-
Light Industrial / Tech Flex (T)	41	-	-	846	29	162	655	-	323	-	21	60	242	-
Employment Transition (T)	20	-	-	600	-	600	-	-	222	-	-	222	-	-
Light Industrial / Tech Flex - Low Density (T)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Space	13	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Tualatin Total</b>	<b>168</b>	<b>699</b>	<b>647</b>	<b>1,463</b>	<b>45</b>	<b>763</b>	<b>655</b>	<b>-</b>	<b>965</b>	<b>407</b>	<b>33</b>	<b>282</b>	<b>242</b>	<b>-</b>
<b>Wilsonville</b>														
Live-Work (W)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Employment Transition (W)	7.6	39.05	36.70	165.89	40.26	51.37	72.25	2.00	99.00	23.12	29.39	19.01	26.73	0.74
Single User Manufacturing (W)	22.3	-	-	274.19	3.03	173.42	68.69	29.05	102.54	-	2.21	64.17	25.42	10.75
Single User Warehousing (W)	50.0	-	-	584.80	13.88	203.61	-	367.32	221.37	-	10.13	75.33	-	135.91
High Tech Single User (W)	22.1	-	-	792.27	7.21	348.92	436.15	-	295.74	-	5.26	129.10	161.37	-
Multi User Manufacturing Small Tenants (W)	24.8	-	-	407.55	5.18	75.98	280.18	46.21	152.66	-	3.78	28.11	103.67	17.10
Multi User Manufacturing Large Tenants (W)	33.4	-	-	249.98	7.91	11.60	-	230.47	95.34	-	5.77	4.29	-	85.27
Employment Low - Area of Special Concern (W)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Open Space	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Wilsonville Total</b>	<b>163</b>	<b>39</b>	<b>37</b>	<b>2,475</b>	<b>77</b>	<b>865</b>	<b>857</b>	<b>675</b>	<b>967</b>	<b>23</b>	<b>57</b>	<b>320</b>	<b>317</b>	<b>250</b>
<b>Total All</b>	<b>331</b>	<b>738</b>	<b>683</b>	<b>3,937</b>	<b>123</b>	<b>1,627</b>	<b>1,512</b>	<b>675</b>	<b>1,932</b>	<b>431</b>	<b>90</b>	<b>602</b>	<b>559</b>	<b>250</b>

Boundary Option 5		Housing Units/Gross Acre	Housing Units	Households/Gross Acre	Households	Jobs/Gross Acre	Jobs	Retail Percentage	Retail	Office Percentage	Office	Industrial Percentage	Industrial	Warehousing Percentage	Warehousing	Trips per Acre		HH Trips	Retail Trips	Office Trips	Industrial Trips	Warehousing Trips
<b>Tualatin</b>																						
Garden Apartments 2-story (T)	4	21.13	84	19.87	79	-	-	0%	-	0%	-	0%	-	0%	-	50	12.52	50	-	-	-	-
Townhomes (T)	9	9.16	79	8.61	74	-	-	0%	-	0%	-	0%	-	0%	-	47	5.43	47	-	-	-	-
Small Lot Single Family (T)	10	8.92	89	8.21	82	-	-	0%	-	0%	-	0%	-	0%	-	52	5.17	52	-	-	-	-
Small and Medium Lot Single Family (T)	46	6.80	312	6.25	287	-	-	0%	-	0%	-	0%	-	0%	-	181	3.94	181	-	-	-	-
Large Lot Single Family (T)	22	5.88	128	5.41	118	-	-	0%	-	0%	-	0%	-	0%	-	74	3.41	74	-	-	-	-
Small Pad Retail (T)	1	-	-	-	-	11.31	17	100%	17	0%	-	0%	-	0%	-	12	8.26	-	12	-	-	-
Light Industrial / Tech Flex (T)	72	-	-	-	-	20.41	1,468	3%	50	19%	282	77%	1,136	0%	-	561	7.80	-	37	104	420	-
Employment Transition (T)	20	-	-	-	-	29.47	600	0%	-	100%	600	0%	-	0%	-	222	10.90	-	-	222	-	-
Light Industrial / Tech Flex - Low Density (T)	-	-	-	-	-	7	-	3%	-	20%	-	77%	-	0%	-	-	-	-	-	-	-	-
Open Space	10	-	-	-	-	-	-	0%	-	0%	-	0%	-	0%	-	-	-	-	-	-	-	-
<b>Tualatin Total</b>	<b>194</b>		<b>692</b>		<b>640</b>		<b>2,085</b>		<b>67</b>		<b>882</b>		<b>1,136</b>		<b>-</b>	<b>1,199</b>	<b>6.17</b>	<b>403</b>	<b>49</b>	<b>326</b>	<b>420</b>	<b>-</b>
<b>Wilsonville</b>																						
Live-Work (W)	-	15	-	14	-	15	-	100%	-	0%	-	0%	-	0%	-	-	-	-	-	-	-	-
Employment Transition (W)	1	5	6	5	6	22	27	24%	6.59	31%	8	44%	12	1%	0	16	12.95	4	5	3	4	0
Single User Manufacturing (W)	22	-	-	-	-	12	274	1%	3.03	63%	173	25%	69	11%	29	103	4.59	-	2	64	25	11
Single User Warehousing (W)	50	-	-	-	-	12	585	2%	13.88	35%	204	0%	-	63%	367	221	4.42	-	10	75	-	136
High Tech Single User (W)	22	-	-	-	-	36	792	1%	7.21	44%	349	55%	436	0%	-	296	13.40	-	5	129	161	-
Multi User Manufacturing Small Tenants (W)	14	-	-	-	-	16	222	1%	2.83	19%	41	69%	153	11%	25	83	6.17	-	2	15	57	9
Multi User Manufacturing Large Tenants (W)	22	-	-	-	-	7	163	3%	5.17	5%	8	0%	-	92%	151	62	2.86	-	4	3	-	56
Employment Low - Area of Special Concern (W)	-	-	-	-	-	2	-	3%	-	5%	-	0%	-	92%	-	-	-	-	-	-	-	-
Open Space	6	-	-	-	-	-	-	0%	-	0%	-	0%	-	0%	-	-	-	-	-	-	-	-
<b>Wilsonville Total</b>	<b>137</b>		<b>6</b>		<b>6</b>		<b>2,064</b>		<b>39</b>		<b>783</b>		<b>669</b>		<b>572</b>	<b>781</b>	<b>5.72</b>	<b>4</b>	<b>28</b>	<b>290</b>	<b>248</b>	<b>212</b>
<b>Total All</b>	<b>331</b>		<b>698</b>		<b>646</b>		<b>4,149</b>		<b>106</b>		<b>1,665</b>		<b>1,805</b>		<b>572</b>	<b>1,980</b>	<b>5.98</b>	<b>407</b>	<b>77</b>	<b>616</b>	<b>668</b>	<b>212</b>

Land Use Concept	Acreage	Housing Units/Gross Acre	Housing Units	Households/Gross Acre	Households	Jobs/Gross Acre	Jobs	Retail Percentage	Retail	Office Percentage	Office	Industrial Percentage	Industrial	Warehousing Percentage	Warehousing	Trips	Trips per Acre	HH Trips	Retail Trips	Office Trips	Industrial Trips	Warehousing Trips
<b>Tualatin</b>																						
High Density Residential	3.36	21.13	71	19.87	67	-	-	0%	-	0%	-	0%	-	0%	-	42	12.52	42	-	-	-	-
Medium-Low Density Residential	59.83	6.80	407	6.25	374	-	-	0%	-	0%	-	0%	-	0%	-	236	3.94	236	-	-	-	-
Low Density Residential	24.83	5.88	146	5.41	134	-	-	0%	-	0%	-	0%	-	0%	-	85	3.41	85	-	-	-	-
Neighborhood Commercial	2.89	-	-	-	-	11.31	33	100%	32.66	0%	-	0%	-	0%	-	24	8.26	-	24	-	-	-
Manufacturing Park	92.95	-	-	-	-	20.41	1,897	3%	65	19%	364	77%	1,468	0%	-	725	7.80	-	47	135	543	-
Open Space	10.37	-	-	-	-	-	-	0%	-	0%	-	0%	-	0%	-	-	-	-	-	-	-	-
<b>Tualatin Total</b>	<b>194.23</b>		<b>624</b>		<b>575</b>		<b>1,929</b>		<b>98</b>		<b>364</b>		<b>1,468</b>		<b>-</b>	<b>1,111</b>	<b>5.72</b>	<b>362.4</b>	<b>71.2</b>	<b>134.8</b>	<b>543.0</b>	<b>-</b>
<b>Wilsonville</b>																						
Craft Industrial	1.25	5	6	5	6	21.70	27	24%	6.59	31%	8	44%	12	1%	0	16	12.95	4	5	3	4	0
Light Industrial District	35.30	-	-	-	-	16.46	581	1%	7.39	19%	108	69%	400	11%	66	218	6.17	-	5	40	148	24
High Tech Employment District	94.47	-	-	-	-	20.28	1,916	1%	24.01	45%	870	38%	733	15%	289	717	7.59	-	18	322	271	107
Open Space	5.62	-	-	-	-	-	-	0%	-	0%	-	0%	-	0%	-	-	-	-	-	-	-	-
<b>Wilsonville Total</b>	<b>136.64</b>		<b>6</b>		<b>6</b>		<b>2,524</b>		<b>38</b>		<b>987</b>		<b>1,144</b>		<b>356</b>	<b>951</b>	<b>6.96</b>	<b>3.8</b>	<b>27.7</b>	<b>365.1</b>	<b>423.3</b>	<b>131.5</b>
<b>Total All</b>	<b>331</b>		<b>630</b>		<b>581</b>		<b>4,453</b>		<b>136</b>		<b>1,351</b>		<b>2,611</b>		<b>356</b>	<b>2,062</b>	<b>6.23</b>	<b>366.2</b>	<b>99.0</b>	<b>499.9</b>	<b>966.2</b>	<b>131.5</b>

## Metro Title 11 Compliance Memorandum

In response to a shortfall in industrial land, a 2004 study<sup>1</sup> identified good candidates for industrial development by looking at soil classification, earthquake hazard, slope steepness, and parcel size; distribution to regional transportation, necessary services, accessibility; and proximity to existing like uses.

Two areas of land identified in Metro Ordinance No. 04-1040B as good candidates for industrial development now comprise the Basalt Creek planning area. The main section of the Basalt Creek area (referred to in the 2004 ordinance as the Tualatin study area) was identified as suitable for industrial development due to relatively flat parcels and its proximity to the I-5 corridor and to an existing industrial area in Wilsonville. The ordinance states “...the Tualatin study area is most suitable for warehousing and distribution, among other industrial uses.”

### 3.07.1120 Planning for Areas Added to the UGB

- A. The county or city responsible for comprehensive planning of an area, as specified by the intergovernmental agreement adopted pursuant to section 3.07.1110(c)(7) or the ordinance that added the area to the UGB, shall adopt comprehensive plan provisions and land use regulations for the area to address the requirements of subsection (c) by the date specified by the ordinance or by section 3.07.1455(b)(4) of this chapter.
- B. If the concept plan developed for the area pursuant to section 3.07.1110 assigns planning responsibility to more than one city or county, the responsible local governments shall provide for concurrent consideration 3.07 - 60 (Updated on 01/06/16) and adoption of proposed comprehensive plan provisions unless the ordinance adding the area to the UGB provides otherwise.
- C. Comprehensive plan provisions for the area shall include:
  - 1. Specific plan designation boundaries derived from and generally consistent with the boundaries of design type designations assigned by the Metro Council in the ordinance adding the area to the UGB;

#### Findings:

In 2004, Metro identified the Basalt Creek 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 Ordinance 4-1040B to annex the area into the existing Urban Growth Boundary (UGB), to ensure sufficient regional supply of land for employment growth over the next twenty years.

In 2011 four jurisdictions entered into an Intergovernmental Agreement for the purposes of jointly planning the Basalt Creek Concept Plan area. The Cities of

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<sup>1</sup> As documented in the Existing Conditions Report Appendix A to the Basalt Creek Concept Plan, the study referenced is an Industrial Land Alternative Analysis Study (a 2004 addendum to Metro’s 2002 Urban Growth Report).

Tualatin and Wilsonville, Washington County and Metro all signed the agreement and reaffirmed this commitment when the IGA was reinstated in September of 2016. The reinstatement and the original IGA are included in this document as Attachment A.

The original IGA in 2011 identified that the partner agencies would consider both Basalt Creek and the West Railroad area as single concept plan called the Basalt Creek Planning Area. The Cities and the County agreed to work together to complete integrated land use and transportation system concept planning to assure carefully planned development in the Basalt Creek Planning Area that will be a benefit to the County, Cities and their residents.

Basalt Creek planning area is located near one of the region's largest clusters of employment land, including existing developed areas in Tualatin, Wilsonville, and Sherwood and planned future employment areas of Southwest Tualatin, Tonquin Employment Area, and Coffee Creek. Viewed together, these areas comprise one of the largest industrial and employment clusters in the region.

In the most recent Metro forecast for the area (Gamma Version provided at TAZ level), 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). Details regarding forecast can be found in Appendix A starting on page 17. The Buildable Lands Analysis (see Appendix E) influenced the most appropriate locations for employment-based land uses within the planning area. See Section *Basalt Creek Concept Plan* beginning on page 7

Basalt Creek Concept Plan land use designations are consistent with Ordinance 4-1040B. The area is mapped and identified as an "Industrial Area" in Metro's Title 4 Code. The majority of the acreage in the Basalt Creek Planning Area is designated for employment use by the Concept Plan. The land use designations provide for a range of industrial development types including manufacturing, warehouse, and office uses. See a Figure 8 *Basalt Creek Land Use Concept Map* in the plan document. Further description of the land uses continues under *Jurisdictional Boundary, Land Use and Development* on page 29.

While the major purpose of the area is to provide land for employment opportunities, the Basalt Creek Concept Plan also includes some residential areas to the north and northeast of the proposed jurisdictional boundary, which will be in the City of Tualatin following adoption. 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 limiting traffic congestion.

The mix of housing types proposed was designed to coordinate with existing adjacent residential neighborhoods. The mix includes low, medium-low and high-density housing, which provides the opportunity for a range of different housing types, tenure and prices. See Table 3 *Summary of Development Types Identified for Basalt Creek Planning Area by Jurisdiction* for a breakdown of buildable acreage and density by land use designation in the plan document.

It is not necessary for this designation to be removed from the residential land already identified in the northern portion of the of the Basalt Creek area upon adoption of the Concept Plan. Ordinance 4-1040B allowed for land north of the “South Alignment” of the connector right of way to be designated Outer Neighborhood.

Conclusion: Basalt Creek Concept Plan fulfills this requirement.

2. Provision for annexation to a city and to any necessary service districts prior to, or simultaneously with, application of city land use regulations intended to comply with this subsection;

Findings: Basalt Creek Concept Plan establishes a new jurisdictional boundary between Tualatin and Wilsonville in order to determine which parts of the planning area can be annexed into and served by each city in the future. Both cities comprehensive plans require annexation prior to or simultaneous with a development application. The Basalt Creek Concept Plan includes a provision that this area is added to existing urban services agreements. Ensuring service provision is also a requirement of City of Wilsonville code and a component of the Urban Planning Area Agreements each City has with Washington County. City of Tualatin’s development code (Section 31.067) currently calls out an annexation procedure ‘to be used in conjunction with Metro Code 3.08 and Oregon Revised Statutes for annexing territory to the City Limits.’ See the *Implementation and Phasing Strategy* section starting on page 52 of the plan document.

Conclusion: Basalt Creek Concept Plan fulfills this requirement.

3. Provisions that ensure zoned capacity for the number and types of housing units, if any, specified by the Metro Council pursuant to section 3.07.1455(b)(2) of this chapter;

Findings: The Basalt Creek Concept Planning Area was brought into the UGB as industrial land, and housing was allowed specifically to address concerns for necessary buffering of adjacent uses. Metro Council has not specified number and

types of housing units or average density per net developable acres. See section *Basalt Creek Concept Plan* beginning on page 7.

The Basalt Creek Concept Plan balances land use types and densities to meet obligations for providing regional employment capacity (Metro Gamma forecast) while limiting negative impacts on congestion and traffic levels (trip caps). In addition, the scenarios vetted by the Project Management Team (PMT) and each City Council sought efficient provision of services, fully analyzing the transportation, infrastructure, park, natural resource, and land use implications of various development patterns to form the basis for the Concept Plan. See *Scenario Testing and Concept Plan Development* starting on page 13 in the plan document.

Conclusion: Basalt Creek Concept Plan fulfills this requirement.

4. Provision for affordable housing consistent with Title 7 of this chapter if the comprehensive plan authorizes housing in any part of the area.

Findings: The Basalt Creek Concept Planning Area was brought into the UGB as industrial land, which allows housing specifically to address concerns for necessary buffering of adjacent uses.

The final and preferred land use scenario includes a mix of low, medium-low and high-density housing projected to produce 575 households in Tualatin and 6 live/work units in Wilsonville, which provides the opportunity for a range of different housing types, tenure and prices to meet the needs of the city, county and region. See Table 3 *Summary of Development Types identified for Basalt Creek Planning Area by Jurisdiction* for a breakdown of households by land use designation, associated densities, and acreages.

Preliminary strategies to achieve a diverse range of housing types including affordable housing include, but are not limited to: private and non-profit partnerships, waivers, subsidies, grant funding , update and streamline zoning code ( i.e. additional flexibility with accessory dwelling units, allow smaller lots, density bonuses, reduce parking requirements) programs to lower the cost of development, additional funding sources to pay for infrastructure, programs that decrease operational costs, programs that provide financial assistance to homeowners and renters. These strategies will be reviewed during Tualatin’s comprehensive planning update.

Conclusion: Basalt Creek Concept Plan fulfills this requirement.

5. Provision for the amount of land and improvements needed, if any, for public school facilities sufficient to serve the area added to the UGB in coordination with affected school districts. This requirement includes consideration of any school facility plan prepared in accordance with ORS 195.110;

Findings: Existing schools are expected to accommodate future student population and no new facilities are planned within the area. Capacity determinations will need to be made as development progresses. The facilities for provision of schools 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. Basalt Creek 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>).

The Basalt Creek Concept Plan was coordinated with local school districts. The Sherwood and Tigard-Tualatin school districts participated in the Agency Review Team to provide input to the concept plan. The school district will calculate the need for new schools based upon demographic and density estimates for future development in the Basalt Creek Area according to operational standards related to the number of students allowed per school. The final development scenario estimates 581 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.

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. See subsection *Schools* under section *Civic Uses* beginning on page 40 in the plan document for a discussion of school facility considerations. Also, see Attachment B for written confirmation from both school districts.

Conclusion: Basalt Creek Concept Plan fulfills this requirement.



6. Provision for the amount of land and improvements needed, if any, for public park facilities sufficient to serve the area added to the UGB in coordination with affected park providers.

Findings:

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 the new parkland, open spaces, natural areas and trails in the planning area into existing regional networks.

The planning area provides an interesting opportunity for different types of parks, given the variety of 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.

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. Cities will determine and adopt funding methods for acquisition, capital and operating costs for parklands in the Basalt Creek Area, including the use of their current SDCs for parks.

Both cities are currently going through a Park and Recreation Master Plan update. This update has considered the Basalt Creek area in the types of services and facilities that will be needed to serve residents and business in this area. See subsection *Parks and Open Space* under section *Civic Uses* beginning on page 41 of the plan document.

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 in Tualatin is needed to serve residents and businesses in the planning area. The facilities for provision of 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. A discussion of Scenario Planning is located in the section *Scenario Testing and Concept Plan Development* on page 13 of the plan document.

The Basalt Creek Concept Plan also identifies opportunities for bike and pedestrian connections in conjunction with the planned development pattern. Additional bike/pedestrian facilities will be integrated into new and updated road projects in accordance with State, County and City standards, respectively, and opportunities for additional active transportation connects are identified in the Concept Plan (e.g. across the future Basalt Creek Parkway, to the Ice Age Tonquin Trail, and potentially, along the western edge of the Basalt Creek Canyon). Map is included under Bicycle and Pedestrian Framework (Figure 10). A discussion of the *Bicycle and Pedestrian Framework* begins on page 36 of the plan document.

Conclusion: Basalt Creek Concept Plan fulfills this requirement.

7. A conceptual street plan that identifies internal street connections and connections to adjacent urban areas to improve local access and improve the integrity of the regional street system. For areas that allow residential or mixed-use development, the plan shall meet the standards for street connections in the Regional Transportation Functional Plan; Findings: Major new roads and improvements will be constructed as laid out in the 2013 Basalt Creek Transportation Refinement Plan (TRP) for the area, which is also coordinated with the Metro Regional Transportation Plan and integrated into the Concept Plan's Roadway Framework map. Basalt Creek Parkway, currently under construction, will be a major east-west arterial, with limited access, creating a new connection between I-5 and 99W and the employment areas in the South County Industrial Area. Further roadway improvements—such as adding capacity to north-south collectors, widening Day Road, 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. See the *Transportation* section beginning on page 32 of the plan document for more discussion.

Each city will amend TSPs to accommodate the future transportation system outlined in the Basalt Creek Transportation Refinement Plan and described in the Basalt Creek Concept Plan, Figure 9 on page 35.

Conclusion: Basalt Creek Concept Plan fulfills this requirement.

8. Provision for the financing of local and state public facilities and services; and 3.07 - 61 (Updated on 01/06/16)

Findings: Prior to annexation into a city of any of the land in the planning area, a cooperative funding strategy needs to be agreed upon between the City of Wilsonville, the City of Tualatin, and Washington County in order to build out the transportation network as set forth in the 2013 Basalt Creek TRP. The Concept Plan acknowledges this, and it will be a component of the amended UPAs. See *Key Transportation Solutions* on page 32 of the plan document.

The Cities acknowledge that significant improvements will be needed to the existing and future transportation network in the Basalt Creek Concept Plan area. To achieve the vision established by the Cities and Washington County in the 2013 Basalt Creek (TRP), Tualatin and Wilsonville will coordinate with Washington County to prioritize projects and identify funding strategies. The Cities acknowledge that success of the Basalt Creek Concept Plan area depends on being served by an adequate transportation system as identified in the TRP.

Sewer and water infrastructure systems can be financed in several ways. Typically, the developer is expected to finance the extension of services and each City has a method of reimbursing the developer for installing infrastructure when other development hooks in if they choose to elect this option. Each City may decide to participate in financing, for example, by providing for the formation of a Local Improvement District or another type of funding mechanism. See section *Implementation and Phasing Strategy* beginning on page 52 of the plan document for a discussion of financing options.

Public stormwater systems are typically accommodated for in the public right-of-way and costs are included with a road project or other right-of-way development. Stormwater systems outside of the public right-of-way are assumed to be part of private development costs and are not estimated as a part of this plan. See section *Stormwater Drainage* on page 51 of the plan document.

Conclusion: Basalt Creek Concept Plan fulfills this requirement.

9. A strategy for protection of the capacity and function of state highway interchanges, including existing and planned interchanges and planned improvements to interchanges.

Findings: The Basalt Creek Concept Plan includes considerations to maintain the integrity of the transportation network in this employment area. The Basalt Creek Concept Plan includes land uses designed to result in trips consistent with those modeled and used to establish the Basalt Creek TRP. Thus, local trip generation should not exceed capacity and thus, maintain the integrity of the network outlined in the TRP. The Cities will also work cooperatively to evaluate future regional

transportation projects and decisions, beyond those identified in the TRP, which could direct additional traffic to the Basalt Creek Concept Plan Area. These projects will be evaluated to ensure that system capacity and adequate regional funding is available for needed improvements to mitigate additional regional traffic.

See Basalt Creek Concept Plan Transportation Technical Analysis and Solutions Memo (Appendix G) Table 2: Network Alternative Intersection Operations (2035 PM Peak Hour).

Conclusion: Basalt Creek Concept Plan fulfills this requirement.

- D. The county or city responsible for comprehensive planning of an area shall submit to Metro a determination of the residential capacity of any area zoned to allow dwelling units, using a method consistent with a Goal 14 analysis, within 30 days after adoption of new land use regulations for the area.

Findings: The land use scenarios developed through the Concept Plan provided dwelling unit projections; residential zoning and capacity analysis will occur as part of each city's adoption of comprehensive plan amendments.

Conclusion: Basalt Creek Concept Plan meets this requirement.

*(Ordinance 98-772B, Sec. 2. Ordinance 99-818A, Sec. 3. Ordinance 01-929A, Sec. 8. Ordinance 02-964, Sec. 5. Ordinance 05-1077C, Sec. 6. Ordinance 05-1089A, Sec. 2. Ordinance 07-1137A, Sec. 3. Ordinance 10-1238A, Sec. 5. Ordinance 11-1252A, Sec. 1. Ordinance 15-1357.)*

### **3.07.1130 Interim Protection of Areas Added to the UGB**

Until land use regulations that comply with section 3.07.1120 become applicable to the area, the city or county responsible for planning the area added to the UGB shall not adopt or approve:

- A. A land use regulation or zoning map amendment that allows higher residential density in the area than allowed by regulations in effect at the time of addition of the area to the UGB;
- B. A land use regulation or zoning map amendment that allows commercial or industrial uses not allowed under regulations in effect at the time of addition of the area to UGB;
- C. A land division or partition that would result in creation of a lot or parcel less than 20 acres in size, except for public facilities and services as defined in section 3.07.1010 of this chapter, or for a new public school;

Findings: When the land was added to the UGB, Washington County designated the land as FD-20 (Future Development 20 Acres) which is their "holding" zone. See Appendix A Existing Conditions Report page 10 for a discussion on the current zoning of the area.

- D. In an area designated by the Metro Council in the ordinance adding the area to the UGB as Regionally Significant Industrial Area:
1. A commercial use that is not accessory to industrial uses in the area; and

2. A school, a church, a park or any other institutional or community service use intended to serve people who do not work or reside in the area.  
*(Ordinance No. 98—772B, Sec. 2. Amended by Ordinance No. 99—818A, Sec. 3, Ordinance No. 10—1238A, Sec. 5; and Ordinance NO. 11—1252A, Sec. 1).*

Attachments

Attachment A – Reinstated IGA between partner agencies

Attachment B – Correspondence from Tigard- Tualatin School and Sherwood School District (not yet received 7/18/18 from Sherwood School District)



*Memorandum*

**Date:** Oct. 4, 2016  
**To:** Metro, City of Wilsonville, & City of Tualatin  
**From:** Kris Brannan, Management Analyst  
**RE:** IGA CA 16-1110 Basalt Creek

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Enclosed you will find a fully executed copy of the Reinstated IGA for the Basalt Creek planning area.

If you have any questions please let me know. My phone number is (503) 846-3694. My email address is: [kris\\_brannan@co.washington.or.us](mailto:kris_brannan@co.washington.or.us)

Thank you.

**Kris Brannan | Management Analyst**  
Washington County Department of Land Use & Transportation  
Planning and Development Services | Long Range Planning  
155 N First Avenue, Suite 350, MS 14 | Hillsboro, OR 97124  
503-846-3694 direct | 503-846-4412 fax  
[kris\\_brannan@co.washington.or.us](mailto:kris_brannan@co.washington.or.us) | [www.co.washington.or.us/lut](http://www.co.washington.or.us/lut)

**REINSTATEMENT OF CONTRACT NO. BCC 11-0470**  
**ADDENDUM NO. 2.0**

The INTERGOVERNMENTAL AGREEMENT BETWEEN METRO, WASHINGTON COUNTY, AND THE CITIES OF TUALATIN AND WILSONVILLE FOR CONCEPT PLANNING THE URBAN GROWTH BOUNDARY EXPANSION AREAS KNOWN AS THE "BASALT CREEK" AND "WEST RAILROAD" PLANNING AREAS, identified as Contract No. BCC 11-0470, is hereby reinstated by the parties pursuant to Washington County Purchasing Rule 10-180.

The contract is hereby amended by the parties, this amendment modifies the original contract number being BCC 11-0470.

The IGA is reinstated and amended as follows:

Original language is represented with the strikethrough and new language is underlined.

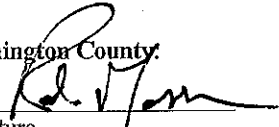
On page 6 of 10, Section D, paragraph 5 (paragraph before Attachments list) which states:

This IGA shall become effective upon full execution by all parties. The effective date of this IGA shall be the last date of signature on the attached signature pages. This IGA shall be in effect until the CITIES and COUNTY amend their respective UPAA's and incorporate the Basalt Creek Concept Plan into each CITIES respective comprehensive plans or until ~~5 years following the execution of this IGA, whichever occurs earlier~~ three years from the effective date of this Addendum 2.0, whichever occurs earlier.

Effective Date of Amendment: 9/1/2016 or upon last date of signature.


All other terms and conditions of the original IGA shall remain in full force and effect.

Washington County:

  
Signature  
9/28/16  
Date

Rob Massar  
Printed Name  
Asst. County Administrator  
Title

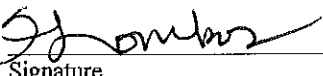
Metro:

  
Signature  
9/27/16  
Date

Elissa Gentler  
Printed Name  
Planning Director  
Title

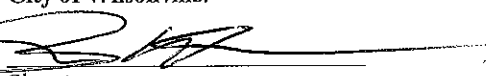
Scott Robinson  
Deputy Chief Operating Officer

City of Tualatin:

  
Signature  
9/12/16  
Date

Sheryl Lombos  
Printed Name  
City Manager  
Title

City of Wilsonville:

  
Signature  
9/21/16  
Date

Bryan Cosgrove  
Printed Name  
City manager  
Title

**INTERGOVERNMENTAL AGREEMENT  
BETWEEN METRO, WASHINGTON COUNTY, AND THE CITIES OF TUALATIN AND  
WILSONVILLE FOR CONCEPT PLANNING THE URBAN GROWTH BOUNDARY  
EXPANSION AREAS KNOWN AS THE "BASALT CREEK" AND "WEST  
RAILROAD" PLANNING AREAS**

This Intergovernmental Agreement (IGA) is entered into by the following parties: METRO, the Portland area metropolitan service district; WASHINGTON COUNTY, a political subdivision in the State of Oregon, hereinafter referred to as "COUNTY"; and the CITY OF TUALATIN and CITY OF WILSONVILLE, incorporated municipalities of the State of Oregon, hereinafter referred to as "CITIES".

Whereas, in 2004 METRO's Council added two areas known as the Basalt Creek and West Railroad Planning Areas, located generally between the CITIES, to the Urban Growth Boundary (UGB) for industrial uses, via Metro Ordinance No. 04-1040B; and

Whereas, METRO conditioned that these UGB expansion areas undergo Title 11 concept planning as defined in Metro Code Chapter 3.07, cited as the Urban Growth Management Functional Plan ("UGMFP"), and that the concept planning be in accordance with Exhibit F of Metro Ordinance 04-1040B; and

Whereas, on June 10, 2010 the METRO Council adopted its 2035 Regional Transportation Plan ("2035 RTP") via Metro Ordinance 10-1241B, with a Project List including an extension of SW 124<sup>th</sup> Avenue (Project #10736) south of SW Tualatin-Sherwood Road and several projects related to the proposed I-5 to Hwy 99W Connector Project Alternative 7 "Southern Arterial", which is planned as a continuous east-west roadway between I-5 and Hwy 99W passing through the subject UGB expansion areas; and

Whereas, in recognition of the immediate needs of the region, the parties of this IGA support the extension of SW 124<sup>th</sup> Avenue from Tualatin-Sherwood Road to the vicinity of Tonquin Road, and ultimately to Boones Ferry Road via an east-west alignment yet to be determined through the planning efforts initiated pursuant to this IGA; and

Whereas, METRO has allocated \$365,000 of Construction Excise Tax funding to CITIES to pay for Concept Planning in the subject area; and

Whereas, COUNTY and CITIES have agreed to consider both areas in a single concept planning effort, and to refer to the two subject UGB expansion areas generally as the "Basalt Creek Planning Area;" and

Whereas, COUNTY currently has primary planning responsibility in the subject area; and



Whereas, COUNTY and CITIES wish to work together to complete integrated land use and transportation system concept planning to assure carefully planned development in the Basalt Creek Planning Area that will be of benefit to COUNTY, CITIES, and their residents; and

Whereas, Oregon Statewide Planning Goal 1 requires public involvement and Goal 2 requires intergovernmental coordination, this IGA is intended to indicate to private property owners in the area, METRO, the State of Oregon, and all other interested parties the cooperative nature of the planning effort being undertaken by the CITIES and COUNTY for the Basalt Creek Planning Area; and

Whereas, COUNTY and the CITIES anticipate amending existing Urban Planning Area Agreements (UPAAs) between the CITIES and the COUNTY to reflect the future limits of each city and to establish requirements for transfer of planning authority to the respective city.

Now, therefore, COUNTY, the CITIES, and METRO agree as follows:

**A. Subject Land Area**

1. The Basalt Creek Planning Area subject to this IGA is depicted on Exhibit 1.

**B. Agency Roles and Responsibilities**

1. COUNTY will:
  - a. Allow CITIES to jointly take the lead in managing concept planning of the Basalt Creek Planning Area, in coordination with COUNTY, METRO, and the Oregon Department of Transportation ("ODOT"), recognizing that the CITIES will complete the concept planning in compliance with Title 11 of the UGMFP and the CITIES will ultimately be responsible for providing urban level services and governance to the area. The foregoing statement does not create or imply any obligation on the part of the CITIES under this agreement to fund right-of-way acquisition or to construct the I-5/99W "Southern Arterial."
  - b. Retain planning authority for the Basalt Creek Planning Area until such authority is transferred to the CITIES, pursuant to the terms of UPAAs with each city, as amended pursuant to Section D of this IGA.
  - c. In coordination with the parties to this IGA and ODOT, provide funding, establish a scope of work, retain a consultant, and provide project management services for planning of the major roadway system in the Basalt Creek Planning Area, including preliminary project development for the SW 124<sup>th</sup> Avenue extension project from Tualatin-Sherwood Road to SW Boones Ferry Road, whether following existing right-of-way alignments

or new right-of-way alignments, which may include portions of an east-west arterial that is consistent with the future "Southern Arterial" elements outlined in the 2035 RTP.

It is acknowledged that the RTP requires compliance with specific conditions before the construction of the "Southern Arterial." Consistency with the "Southern Arterial" elements of the RTP can be assured only when the conditions related to the "Southern Arterial" have been fully addressed. However, due to the immediate needs of the region in the interim period, the RTP allows the extension of SW 124<sup>th</sup> Avenue, as described in the paragraph above, to be completed with minimal extra conditions.

In an effort to provide timely answers to the property owners in the Basalt Creek Planning Area, a sufficient amount of this study must be complete within six (6) months following the effective date of this IGA in order to allow the Cities to begin concept planning. Accordingly, this task is budgeted to last for up to six (6) months. As part of the transportation planning effort, COUNTY will address the following in coordination with the CITIES, METRO and ODOT:

- i. The conditions related to the 'Southern Arterial' in the METRO 2035 RTP (as described in Exhibits 2, 3, and 4), as applicable;
  - ii. Strategies for maintaining freight access to and freight mobility within the planning area;
  - iii. Potential I-5/Elligsen Road interchange improvements, including a split-diamond interchange option;
  - iv. Potential I-5 overcrossing north of Elligsen Road interchange; without a direct connection to I-5, which does not preclude arterial options on the east side of I-5; and
  - v. Potential roadway connections directly to I-5, subject to satisfaction of applicable 2035 RTP conditions.
- d. Consider acquisition of right-of-way and/or construction of portions of the SW 124<sup>th</sup> Avenue extension project improvements as described in Paragraph B.1.c. above, subject to availability of funding.
- e. In order to preserve the ability for a future potential roadway connection, consider acquisition of right-of-way for a potential future east-west arterial roadway connection between SW Boones Ferry Road and I-5, subject to availability of funding. It is acknowledged that no new east-west roadway may be constructed between SW Boones Ferry Road and I-5 until applicable RTP "Southern Arterial" conditions have been satisfied.
- f. In coordination with CITIES, consider potential funding and/or construction of permanent or interim improvements to the existing roadway network in

and adjacent to the planning area prior to funding and/or construction of the “Southern Arterial.”

2. CITIES will:

- a. Assume primary project management responsibly for concept planning of the Basalt Creek Planning Area, in coordination with COUNTY and METRO, effective as of the date of execution of this IGA. Concept planning shall conform to Metro UGMFP Title 11 requirements in effect when the subject planning areas were added to the Urban Growth Boundary.
- b. Mutually agree upon a future city limit boundary through the concept planning process.
- c. Incorporate into the final Basalt Creek Concept Plan and any city comprehensive plans, transportation plans and/or implementing regulation amendments those major transportation facilities identified by COUNTY, in collaboration with METRO, CITIES, and ODOT, pursuant to B.1. above. CITIES shall incorporate into their amended plans and regulations reasonable measures to identify and assist in the protection of the approved major transportation facility corridors from development encroachment in order to implement the final Basalt Creek Concept Plan as agreed upon by the parties to this IGA. The parties to this IGA acknowledge that such reasonable protection measures are subject to constitutional limitations on property takings, and are not intended to require the CITIES to in any way violate constitutional property protections or to incur a financial obligation to purchase right-of-way to preserve the identified transportation corridors. It is acknowledged by the parties to this IGA that construction of some new roadway facilities may be subject to the conditions set forth in the RTP relative to the proposed I-5 to 99W Connector Project Alternative 7 Southern Arterial (refer to Exhibits 2, 3, and 4).

3. METRO will:

- a. Provide CET funding to CITIES for concept planning activities in the subject planning area.
- b. Participate in ongoing concept and transportation planning efforts with COUNTY and CITIES as warranted.

**C. Coordination of Concept Planning Activities**

1. COUNTY and CITIES shall:

- a. Engage in a facilitated concept plan partnering and scoping session following the execution of this IGA.

- b. Provide all parties to this IGA and ODOT with appropriate opportunities for participation, review and comment on the proposed concept planning efforts. The following procedures shall be followed by the CITIES and the COUNTY to notify and involve the other parties in the process to prepare the concept plan:
  - i. COUNTY and the CITIES shall transmit notice of meetings related to the concept plan to all parties to this IGA at least one week prior to the scheduled meeting. This includes any technical advisory committee meetings, open houses, Planning Commission or Planning Advisory Committee meetings, City Council or Board of Commissioner meetings and similar meetings, etc.
  - ii. The CITIES or COUNTY shall notify the other parties no less than forty-five (45) days prior to the initial public hearing for proposed comprehensive plan, transportation plan or implementing regulation amendments.
  - iii. The CITIES shall transmit draft documents to COUNTY for its review and comment before finalizing. COUNTY shall have ten (10) business days after receipt to submit comments in writing. Lack of response shall be considered "no objection" to the drafts.
  - iv. The CITIES shall respond to the comments made by COUNTY either by a) revising the draft document, or b) by letter to COUNTY explaining why the comments are not addressed in the documents.
  - v. Comments from the COUNTY shall be given consideration as part of the public record on the concept plan.
2. COUNTY shall provide the CITIES with notice of development actions requiring notice within the Concept Plan area, according to the following procedures:
  - a. The COUNTY shall send by first class mail or as an attachment to electronic mail a copy of the public hearing notice which identifies the proposed development action to the other agency, at the earliest opportunity, but no less than ten (10) business days prior to the date of the scheduled public hearing. The failure of the CITIES to receive a notice shall not invalidate an action if a good faith attempt was made by the COUNTY to notify the CITIES.
  - b. The CITIES receiving the notice may respond at their discretion.
3. In addition to the above, COUNTY shall make reasonable efforts to provide the CITIES with copies of pre-application conference notes regarding potential

development applications within the subject planning area, as well as encouraging all potential development applicants to contact the CITIES for additional information on the concept planning efforts.

**D. Urban Planning Area Agreements (UPAAs)**

1. Both the CITIES have UPAAs with COUNTY that will have to be amended upon adoption of the final Basalt Creek Concept Plan, as agreed upon by the parties to this IGA.
2. The CITIES and COUNTY agree that the amended UPAAs will reflect which areas within the Basalt Creek Planning Area will be governed by which city, as determined through the concept planning process, and that the respective areas will be under the CITIES respective jurisdictions, and not the COUNTY, as the areas urbanize.
3. The amended UPAAs will specify conditions to be met prior to COUNTY transfer of planning authority to each of the CITIES, such as adoption of comprehensive plans, transportation plans and/or implementing regulation amendments by each of the CITIES necessary to implement the final Basalt Creek Concept Plan, as agreed upon by the parties to this IGA.
4. It is recognized that COUNTY adopts annual land use and transportation work programs, and this concept planning effort will require coordination to fit within the work program of COUNTY.

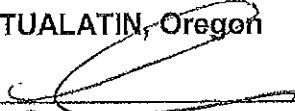
This IGA shall become effective upon full execution by all parties. The effective date of this IGA shall be the last date of signature on the attached signature pages. This IGA shall be in effect until the CITIES and COUNTY amend their respective UPAAs and incorporate the Basalt Creek Concept Plan into each CITIES respective comprehensive plans or until 5 years following the execution of this IGA, whichever occurs earlier.

**Attachments:**


- Exhibit 1 – Plan Areas Map
- Exhibit 2 – Excerpt from Regional Transportation Plan
- Exhibit 3 – Regional Transportation Plan Appendix 3.3 (1-5/99W Conditions)
- Exhibit 4 – Excerpt from Regional Transportation Plan Project List

*(Four separate signature pages follow)*

CITY OF TUALATIN, Oregon

By:   
Lou Ogden  
Mayor

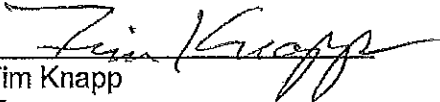
Date: 6-13-2011

ATTEST:  
By: 

APPROVED AS TO LEGAL FORM

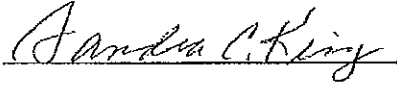
  
Brenda K. Braden  
CITY ATTORNEY

**CITY OF WILSONVILLE, Oregon**

By:   
Tim Knapp  
Mayor

Date: June 8, 2011

ATTEST:

By: 

**WASHINGTON COUNTY**

By: *Roy R. Rogers*  
Andy Duyck  
Chair, Board of County Commissioners

Date: 6-21-11

ATTEST:

By: \_\_\_\_\_

APPROVED WASHINGTON COUNTY  
BOARD OF COMMISSIONERS

MINUTE ORDER # 11-131

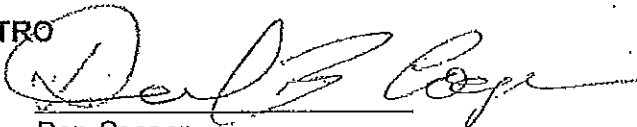
DATE 6/17/11

BY *Barbara Hejmanek*  
CLERK OF THE BOARD



METRO

By:

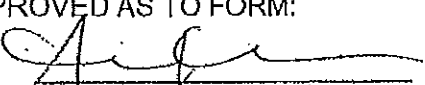
  
\_\_\_\_\_  
Dan Cooper  
Acting Chief Operating Officer

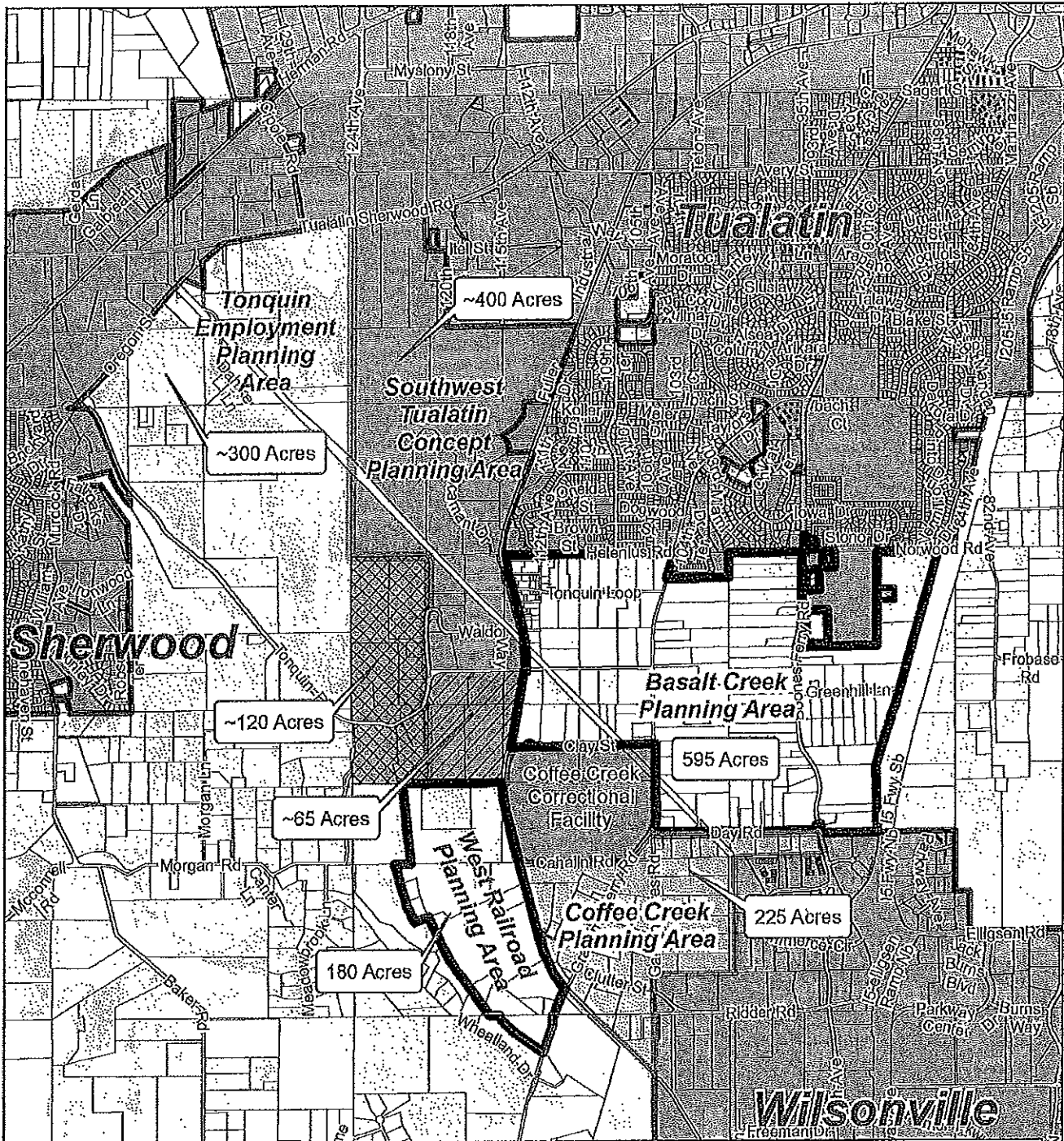
Date:

7/7/11







APPROVED AS TO FORM:



By:

  
\_\_\_\_\_  
Alison Keane Campbell  
Acting Metro Attorney



**The Cities of Wilsonville and Tualatin**  
**Areas Currently In UGB**

	Proposed Tualatin/Wilsonville Joint Planning Area		Tualatin UGB Expansion Request
	Wilsonville Planning Area		City Limit
	Tualatin Planning Area		UGB
	Added to Southwest Tualatin Concept Planning Area		

  
 May 2010  
  
 0 0.5 Mile

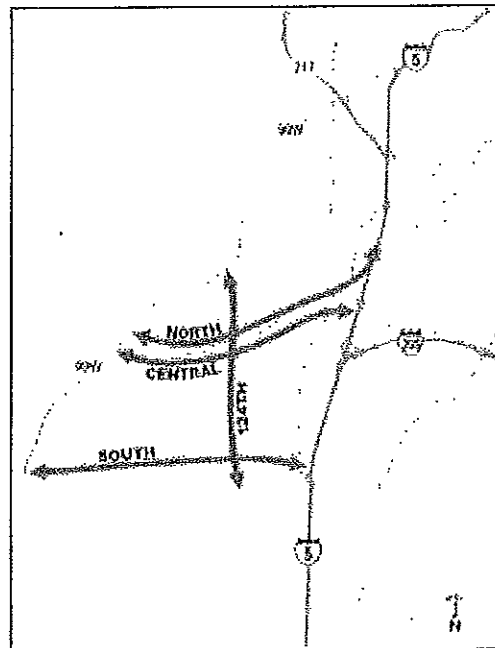


RTP. However, there was unanimous agreement on some aspects of the Connector that could be reflected in the RTP:

- Identify projects for inclusion in the RTP with minimal extra conditions, particularly the extension of SW 124th from SW Tualatin Sherwood Road to the I-5/North Wilsonville Interchange,
- Identify conditions to be met before a new Southern Arterial is implemented to ensure integration with surrounding land use and transportation plans, particularly an I-5 South Corridor Study,
- Determine an incremental phasing plan to ensure the projects with the most benefit that can reasonably be built within the 20-year horizon be included in the RTP Financially Constrained list.

The recommendations for the I-5/99W Corridor Study proposed for inclusion in the RTP are based upon the conclusions reached by the Project Steering Committee (PSC) as follows:

- The 3 options consisting of a new limited access expressway from I-5 to OR 99W (2 alignments north of Sherwood and 1 alignment south of Sherwood) were unacceptable due to high impact on the natural and built environment, the need for extensive improvements to I-5, high cost and concern about the potential for induced growth to Yamhill County, and
- The option focused on expanding Tualatin-Sherwood Road was unacceptable due to the very large size it would need to be and the resulting impacts on the Tualatin and Sherwood Town Centers.
- The alternative recommended is based upon the principle that it is preferable to spread the traffic across three smaller arterials rather than one large expressway. The analysis concluded this approach could effectively serve the traffic demand, would provide better service to urban land uses in the Tualatin/Sherwood area, especially industrial lands, and could be built incrementally based upon need to serve growth and revenue



*The I-5/99W Corridor Study recommended a variety of transportation investments to improve the area's road, transit, bicycle, pedestrian and trail networks and to distribute traffic across a network of three arterials so that no single route would function as a de facto through "connector." The RTP places additional conditions on the "Three Arterial" recommendation and implementation.*

availability. The overall concept is structured around a Northern, Central and Southern arterial providing east-west access between OR 99W and I-5 with an extension of SW 124th providing north-south connectivity (see diagram).

The City of Wilsonville was and continues to raise objections to the Southern Arterial component throughout this process. The City is very concerned about growing I-5 congestion and the City's dependence on effective access to the two I-5 interchanges. The City is concerned that the Southern Arterial connecting into the I-5/North Wilsonville interchange will significantly increase traffic and impair that access.

When the PSC considered the recommendation, the Clackamas County Commission representative introduced a series of amendments to the conditions to ensure that the Southern Arterial would be examined in greater detail to:

- evaluate alignment options and their environmental impact;
- integrate the proposal with the concept plan and transportation system plan for the newly expanded UGB area and any new Urban Reserves that are designated in the area;
- address any requirements that may result from adoption of an exception to Goal 14 (if needed) for an urban facility outside the UGB;
- integrate the proposal with a Tigard to Wilsonville Corridor Study (Corridor #3) to ensure these east-west arterials and I-5 itself could effectively function together; and
- determine the most appropriate approach to connecting the Southern Arterial to I-5, including options for an interchange at the I-5/North Wilsonville interchange or consideration of extending the Southern Arterial across I-5 to Stafford Road east of I-5, thereby providing better access to I-205.

The Project Steering Committee acknowledged many significant issues to be addressed before the Southern Arterial can proceed to construction, and approved the proposed conditions unanimously. The detailed conditions can be found in Appendix 3.3.

Typically, there is a need to transition from a "planning" level of detail to a "project" level of detail which involves better definition of alignments and designs and consideration of impacts on the natural and built environment and how to mitigate those impacts. These conditions proposed by the Project Steering Committee add in the need to integrate the recommendation with land use planning for recent UGB expansion areas and potential Urban Reserves (still to be defined) and the importance of integrating the overall system for the area with an I-5 corridor strategy.

The RTP places additional conditions on the "Three Arterial" recommendation and implementation, as reflected below:

### Short-term phasing strategy (2008-2017)

- Identify replacement solutions for the Tualatin Road project recommended by the I-5/Connector study as part of the next Tualatin TSP update. This project was removed from the RTP based on community concerns and lack of support by the Tualatin City Council. The two-lane connection from the Tualatin Road/Herman road intersection to I-5 at Lower Boones Ferry Road was not intended to serve through traffic, but rather to provide access to the surrounding industrial area and neighborhoods. The planning work will consider alternative alignments and designs across the Tualatin River and I-5 near the I-5/Lower Boones Ferry Road interchange to mitigate impacts. If Tualatin (through their TSP update) does not identify project(s) to adequately address the capacity/connectivity issues identified in this area, then the RTP will be amended to direct the Corridor Refinement Plan effort for corridors #2, 3 and 20 to address this need in that planning effort. The need would go unaddressed until completion of that corridor refinement plan, or the next RTP update.
- Begin construction of the Tonquin Trail (RTP Projects #10092 and #10854).
- Upgrade existing streets to two lanes with turn lanes, traffic signal timing, bike lanes and sidewalks, including Herman Road, Tualatin-Sherwood Road, 95th Avenue (RTP Projects #10715, #10718, #10852).
- Add southbound auxiliary lane from I-205 to I-5/Elligsen Road and northbound auxiliary lane from I-5/Elligsen Road to I-205 interchange. (RTP Projects #10872 and #11177)
- Conduct more detailed project planning and begin construction of a two-lane extension of SW 124th Avenue (RTP Project #10736: 124th Avenue) from Tualatin-Sherwood Road to I-5/North Wilsonville interchange to support its operation as an industrial access route. The planning work will further consider potential impacts on the existing development and the natural environment. It will also include more detailed definition of the design and alignment to mitigate impacts and to integrate with land use and transportation plans for the area.
- Conduct more detailed planning to meet all of the conditions placed on new Southern Arterial project, including:
  1. Conduct the I-5 South Corridor Refinement Plan (includes I-5 from Portland to Tigard, I-5 from Tigard to Wilsonville, and OR 99W from I-5 through Tigard and Sherwood) and land use planning for areas recently added to the urban growth boundary and any land designated as urban reserves. These planning efforts will include opportunities for further public participation and input.
  2. Conduct more detailed project planning on potential Southern Arterial impacts on existing development and the natural environment to develop more detailed definition of the design and alignment to mitigate impacts and coordinate with land use and transportation plans for the area, including integration with land use plans for UGB expansion areas and Urban Reserves, conducting the I-5 South Corridor Refinement Plan, including Mobility Corridors 2, 3 and 20, and resolution of access between I-5 and southern arterial with no negative

impacts to I-5 and I-205 beyond the forecast No-Build condition, addressing NEPA to determine the preferred alignment and addressing any conditions associated with land use goal exception for the southern arterial. This planning effort will include opportunities for further public participation and input.

Tualatin-Sherwood Road is sized in the recommended alternative based upon the expectation there will be a Southern Arterial and will fail due to insufficient capacity without a Southern Arterial and further expansion is incompatible with the plans for the Tualatin and Sherwood Town Centers. If the Southern Arterial is dropped through future studies, there is a major unresolved issue addressing east-west travel through this area. The RTP will need to be amended to direct the Corridor Refinement Plan effort for corridors #2, 3 and 20 to address this need. The need would go unaddressed until completion of that corridor refinement plan, or the next RTP update.

#### **Medhum-term phasing strategy (2018-2025)**

- Widen existing streets to four lanes with turn lanes, traffic signal timing, bike lanes and sidewalks, including Tualatin-Sherwood Road, Roy Rogers Road, Boones Ferry Road and Herman Road (RTP Projects #10568, #10700, #10708, #10732 and #10735)
- Program right-of-way acquisition for the Southern Arterial project in the 2018 - 2025 time period to allow time to conduct the I-5 South refinement plan and land use plans for designated urban reserves in the area.

#### **Longer-term phasing strategy (2026-2035)**

- Construct the Southern Arterial connection to I-5 or other surface arterials in the vicinity of the I-5/North Wilsonville Interchange when all the project conditions are met.

### **6.4 CONGESTION MANAGEMENT PROCESS**

A key change from SAFETEA-LU was an updated requirement for a CMP for metropolitan planning organizations (MPOs) in Transportation Management Areas (TMAs - urban areas with over 200,000 in population). This change is intended to build on the previous requirement of a congestion management system (CMS), placing a greater emphasis on management and operations and enhancing the linkage between the CMP and the long-range regional transportation plan (RTP) through an objectives driven, performance-based approach.

A CMP is a systematic approach for managing congestion that provides information on transportation system performance. It recommends a range of strategies to minimize congestion and enhance the mobility of people and goods. These multimodal strategies include, but are not limited to, operational improvements, travel demand management, policy approaches, and additions to capacity. The region's CMP will advance the goals of the 2035 RTP and strengthen the connection between the RTP and the Metropolitan Transportation Improvement Program (MTIP). A "Roadmap" of the region's CMP can be found in Appendix 4.4.

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.

2035 RTP Project List  
 Basalt Creek Planting Area  
 City-County-Metro IGA  
 Exhibit 4  
 Page 1 of 1

Micro Project ID	Nominating Agency	Facility Owner/Operator	Project/Program Name	Project Start Location (Identify starting points of project)	Project End Location (Identify terminus of project)	Local Functional Classification	Project Purpose	Description	Estimated Cost (\$2007)	Estimated Cost (Y055)	Time Period	Federal FC Project	2040 Land Use	Mobility Corridor or Community Building?	HCT Priority as Assigned by Metro Council	Priority Mode	Scenario Mode(s)	Project located in Council V?	Project located in Goal 5 Programs?	
1058	Washington Co.		I-559W Southern Arterial ROW	Hwy. 59W	I-5	Arterial	Provide congestion relief.	Increases right-of-way width, all project conditions are being integrated with land use plans for UGB expansion to I-5 South Corridor Refinement Plan, including Mobility Corridors 2, 3, and 20 and resolution of access between I-5 and southern arterial with no negative impacts to I-5 and I-205 beyond the forecasted No-Build condition, addressing NEPA to determine the preferred alignment and addressing any conditions associated with land use goal exception for southern arterial.	\$ 90,000,000	\$ 133,221,986	2008-2017		Industrial area	CB		Roundabout	Freight	Yes		
1075	Tuolumne	Tuolumne	124th Ave	Tuolumne	Tuolumne	Minor Arterial	Economic development and freight movement.	Construct new street from Tuolumne-Shorewood to Tuolumne Rd - 5 lanes.	\$ 82,500,000	\$ 122,120,154	2008-2017	x	Industrial Area	CB		Roundabout	Freight		Yes	
1133	Washington Co.		I-559W Southern Arterial Improvements	Hwy. 59W	124th Ave. Extension	Arterial	Provide congestion relief.	Construct the I-5 to 2.3 lane arterial phases of the Southern Arterial from OR55W to the SW 124th Ave. Extension when all project conditions are met including integration with land use plans for UGB expansion areas and Urban Reserves, Conducting the I-5 South Corridor Refinement Plan, including Mobility Corridors 2, 3, and 20 and resolution of access between I-5 and I-205 beyond the forecasted No-Build condition, addressing NEPA to determine the preferred alignment and addressing any conditions associated with land use goal exception for southern arterial.	\$ 130,000,000	\$ 263,356,147	2018-2025		Industrial area	MC		Roundabout	Freight			
1134	Washington Co.		I-559W Southern Arterial Improvements	Hwy. 59W	I-5	Arterial	Provide congestion relief.	Expand to 4-5 lanes to serve growth in the area after improvements to Tuolumne-Shorewood Rd. and an improved connection from SW Tuolumne Rd. to the I-5/Lower Boones Ferry Rd. interchange and when all project conditions are met including integration with land use plans for UGB expansion areas and Urban Reserves, Conducting the I-5 South Corridor Refinement Plan, including Mobility Corridors 2, 3, and 20 and resolution of access between I-5 and I-205 beyond the forecasted No-Build condition, addressing NEPA to determine the preferred alignment and addressing any conditions associated with land use goal exception for southern arterial.	\$ 80,000,000	\$ 239,895,266	2026-2035		Industrial area	MC		Roundabout	Freight			
1134Z	Washington Co.		I-559W Connector Southern Arterial-I-5 Interchange	Hwy. 59W @ I-5		Arterial	Improve access to and from the I-5 to I-5 Arterial and I-5	Connect the Southern Arterial to I-5 or other surface arterials in the vicinity of the N. Wilsonville Interchange when all project conditions are met including integration with land use plans for UGB expansion areas and Urban Reserves, Conducting the I-5 South Corridor Refinement Plan, including Mobility Corridors 2, 3, and 20 and resolution of access between I-5 and I-205 beyond the forecasted No-Build condition, addressing NEPA to determine the preferred alignment and addressing any conditions associated with land use goal exception for southern arterial.	\$ 90,000,000	\$ 149,895,168	2028-2035		2040 Corridor	MC		Roundabout	Throughway	Yes		



# STAFF REPORT

## CITY OF TUALATIN

APPROVED BY TUALATIN CITY COUNCIL  
Date 6-13-11  
Recording Secretary [Signature]

**TO:** Honorable Mayor and Members of the City Council

**THROUGH:** Sherilyn Lombos, City Manager

**FROM:** Ben Bryant, Management Intern  
Alice Rouyer, Community Development Director

**DATE:** 06/13/2011

**SUBJECT:** Resolution Authorizing an Intergovernmental Agreement for Concept Planning the Basalt Creek Area

---

### ISSUE BEFORE THE COUNCIL:

At the City Council Meeting on April 25, 2011, staff presented a draft Intergovernmental Agreement (IGA) between Metro, Washington County, the City of Tualatin, and the City of Wilsonville regarding the Basalt Creek Concept Plan. Since that meeting, City staff has collaborated with the other parties to fine-tune the IGA attached to this report. The resolution, also attached, would authorize the Mayor to sign this agreement.

### RECOMMENDATION:

Staff recommends that the City Council approve the attached resolution, authorizing the Mayor to sign the proposed Intergovernmental Agreement with Metro, Washington County, and the City of Wilsonville.

### EXECUTIVE SUMMARY:

#### Purpose of Agreement

- Gain Washington County's support for having the two cities complete a concept plan for the Basalt Creek area, which is outside of the land covered by Tualatin's current Urban Planning Area Agreement;
- Outline Washington County's commitment to complete a plan for the major roadway system through the Basalt Creek area;
- Outline a commitment from Washington County to inform and coordinate with Tualatin and Wilsonville on any development applications in the Basalt Creek planning area prior to annexation; and
- Delineate responsibilities of the respective parties of this agreement.

#### Importance of the Agreement

In an effort to refine the projects listed in the Regional Transportation Plan (RTP), Washington County has agreed to conduct a transportation analysis in the Basalt Creek planning area. Work will not commence on this study until all parties have signed the attached agreement.

#### Collaboration

The IGA that is before the Council for consideration is the product of in-depth discussion and collaboration between staff members at the cities of Tualatin and Wilsonville, Washington County, and Metro. This collaboration was necessary to ensure that the planning process meets regional desires and



RESOLUTION NO. 5041-11

A RESOLUTION AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT WITH METRO, WASHINGTON COUNTY AND THE CITIES OF TUALATIN AND WILSONVILLE FOR CONCEPT PLANNING THE URBAN GROWTH BOUNDARY EXPANSION AREA (BASALT CREEK / WEST RAILROAD PLANNING AREA)

WHEREAS in 2004 the Metro Council added an area located generally between the CITIES to the Urban Growth Boundary (UGB) for residential and industrial uses in Metro Ordinance No. 04-1040B; and

WHEREAS the CITIES have agreed to refer to the area generally as the "Basalt Creek Planning Area"; and

WHEREAS concept planning has never been completed for these properties; and

WHEREAS the CITIES and the COUNTY wish to work together to complete transportation and concept planning for this area to assure carefully planned development in the Basalt Creek/West Railroad Planning Area Planning Area that will be of benefit to both CITIES, The COUNTY and their residents.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TUALATIN, OREGON, that:

Section 1. The City Council authorizes the Mayor to sign an Intergovernmental Agreement substantially similar to the attached agreement entitled "INTERGOVERNMENTAL AGREEMENT BETWEEN METRO, WASHINGTON COUNTY, AND THE CITIES OF TUALATIN AND WILSONVILLE FOR CONCEPT PLANNING THE URBAN GROWTH BOUNDARY EXPANSION AREAS KNOWN AS THE 'BASALT CREEK' AND 'WEST RAILROAD' PLANNING AREAS"

Section 2. This Resolution is effective upon adoption.

INTRODUCED AND ADOPTED this 13<sup>th</sup> day of June, 2011.

CITY OF TUALATIN, Oregon

By \_\_\_\_\_

Mayor

ATTEST:

By \_\_\_\_\_

City Recorder

**From:** [David Moore](#)  
**To:** [Aquilla Hurd-Ravich](#)  
**Subject:** Re: Basalt Creek Concept Plan  
**Date:** Tuesday, July 03, 2018 3:32:56 PM

---

Hi Aquilla,

As discussed, TTSD has no plans for new facilities in or near the Basalt Creek area.

David

David Moore, CFO  
Tigard-Tualatin School District  
503-431-4016

On Mon, Jul 2, 2018 at 1:33 PM, Aquilla Hurd-Ravich <[AHURD-RAVICH@tualatin.gov](mailto:AHURD-RAVICH@tualatin.gov)> wrote:

Hello David,

It has been quite some time since we last connected on the Basalt Creek Concept Plan, a joint effort between City of Wilsonville and City of Tualatin. We are very near the end of the planning process and getting ready for adoption by both City Councils. Based on the land uses assigned in the concept plan the area will produce approximately 581 households. We have drafted the findings below to address Metro's code requirements for concept plans. One of which requires us to address school facilities. The last time we talked about school facilities for these new households was at a 2016 meeting with multiple agencies, and at that time we understood that the Sherwood School District did not have any plans to locate a new facility in the Basalt Creek area.

While we understand the Basalt Creek Concept Planning Area is in the Sherwood School District we included Tigard-Tualatin School District due to the proximity of the area to Tualatin High School. In order to address Metro's code requirements we need a written response confirming the Tigard-Tualatin School District has no plans to locate a new facility in the planning area or if there are plans to locate a school there we should discuss.

### 3.07.1120 Planning for Areas Added to the UGB

(C) (5). Provision for the amount of land and improvements needed, if any, for public school facilities sufficient to serve the area added to the UGB in coordination with affected school districts. This requirement includes consideration of any school facility plan prepared in accordance with ORS 195.110;

**Findings:** Existing schools are expected to accommodate future student population and no new facilities are planned within the area. Capacity determinations will need to be made as development progresses. Basalt Creek 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>).

The Basalt Creek Concept Plan was coordinated with local school districts. The Sherwood and Tigard-Tualatin school districts participated in the Agency Review Team to provide support and concurrence with the concept plan. The school district will calculate the need for new schools based upon demographic and density estimates for future development in the Basalt Creek Area according to operational standards related to the number of students allowed per school. The final development scenario estimates 581 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.

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.**

This is such a long email that I will give you a call to follow up with any questions you may have.

Thank you,

**Aquilla Hurd-Ravich**

Community Development Director

City of Tualatin | Community Development Department

503.691.3018 | [www.tualatinoregon.gov](http://www.tualatinoregon.gov)

*Please note my new office phone number*





**From:** [Phil Johanson](#)  
**To:** [Aquila Hurd-Ravich](#)  
**Cc:** [rfragliano@sherwood.k12.or.us](mailto:rfragliano@sherwood.k12.or.us); [Karen Perl Fox](#); [Jim Rose](#)  
**Subject:** Re: Basalt Creek Concept Plan  
**Date:** Friday, July 20, 2018 9:37:32 AM

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Dear Acquilla,

The Sherwood School District has followed the development of the Basalt Creek Concept plan. We understand that the draft plan provides for approximately 581 households.

We have been asked whether the Sherwood School District has plans to site new facilities in the planning area to address expected student growth. We are monitoring projected student growth. However, the Sherwood School District presently does not have plans to locate school facilities within the planning area.

Sincerely,

Phil Johanson



On Mon, Jul 2, 2018 at 1:29 PM, Aquilla Hurd-Ravich <[AHURD-RAVICH@tualatin.gov](mailto:AHURD-RAVICH@tualatin.gov)> wrote:

Hello Phil and Rob,

It has been quite some time since we last connected on the Basalt Creek Concept Plan, a joint effort between City of Wilsonville and City of Tualatin. We are very near the end of the planning process and getting ready for adoption by both City Councils. Based on the land uses assigned in the concept plan the area will produce approximately 581 households. We have drafted the findings below to address Metro's code requirements for concept plans. One of which requires us to address school facilities. The last time we talked about school facilities for these new households was at a 2016 meeting with multiple agencies, and at that time we understood that the Sherwood School District did not have any plans to locate a new facility in the Basalt Creek area.

We need a written response confirming the Sherwood School District has no plans to locate a new facility in the planning area or if there are plans to locate a school there we should discuss. Also, if you are able to comment about how new students may be served that would be helpful. We included language from your website which describes the purpose of the bond measure passed in 2016. Given that Basalt Creek Concept Plan is in the Sherwood School District it seems that the bond measure could be one measure to accommodate new students.

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This is such a long email that I will give both of you a call to follow up with any questions you may have.

Thank you,

**Aquilla Hurd-Ravich**

Community Development Director

City of Tualatin | Community Development Department

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*Please note my new office phone number*

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MEMORANDUM

## **Basalt Creek: Guiding Principles and Evaluation Criteria**

TO: Basalt Creek Project Management Team (Cities of Tualatin and Wilsonville)

FROM: Leila Aman, Project Lead, Fregonese Associates

DATE: December 29, 2014

RE: Guiding Principles and Evaluation Criteria for the Basalt Creek Concept Plan

### **Purpose of Guiding Principles**

Guiding Principles are intended to represent the collective interests and goals for the Basalt Creek planning area. The guiding principles provide a framework for gathering input and developing transparent and meaningful measures that can help inform the decision making process.

### **Purpose of Scenario Indicators**

Indicators are the outputs of evaluation criteria which are created near the beginning of the scenario planning process. They generally reflect the guiding principles as well as previously adopted community goals. Indicators may also be related to new or emerging community goals or issues: such as transit access, housing costs, or air quality.

The indicators will be used during the development and evaluation of the scenarios within Envision Tomorrow to communicate the benefits, impacts and tradeoffs of different policy choices and investments. Using Envision Tomorrow, alternative scenarios are tested and refined, and then compared and evaluated based on their indicator performance. Indicators enable Envision Tomorrow users to tie the scenario results to the community values and guiding principles.

In practice, this approach not only allows the public to visualize their region's future, final plans created using our scenario planning process will come with a dashboard of indicators so policymakers can monitor their progress and make adjustments along the way, in concert with established guiding principles and long-term vision.

### **Guiding Principles**

#### **Qualitative Guiding Principles**

##### **1. Maintain and complement the Cities' unique identities**

The cities of Wilsonville and Tualatin each have unique qualities that draw people to live and work there. Those qualities should be maintained and enhanced by development in the Basalt Creek planning area.

## **2. Capitalize on the area's unique assets and natural location**

Development in the planning area should preserve and leverage the natural beauty of Basalt Creek by protecting key natural resources and sensitive areas while minimizing the negative impacts of new development. Recreation opportunities should be made accessible in the area through the creation of new open spaces and trails and integrating them with existing regional networks.

## **3. Explore creative approaches to integrate jobs and housing**

Long distances between centers of employment and residential neighborhoods can cause long travel times, congestion and pollution. Planning for the Basalt Creek area should consider a range of methods (and the feasibility of those methods) for integrating residential and employment land uses to create more high quality living and working environments.

## **4. Create a uniquely attractive business community unmatched in the metropolitan region**

Planning for the Basalt Creek area should capitalize on its unique assets - the location of the planning area near the center of one of the region's largest clusters of employment land, projections for rapid employment growth in the local market, and superior access to major transportation routes (I-5, I-205 and Highway 217) – to facilitate development of high quality employment facilities and opportunities that will benefit both the local and regional economies.

## **5. Ensure appropriate transitions between land uses**

While integration of housing and employment can enrich a community, there remains a need for physical separation between uses that might negatively impact one another. Land uses should be arranged within the study area to minimize these impacts, such as excessive noise, traffic, nighttime light, or air pollution. Use of buffers to mitigate auditory, aesthetic, and safety impacts may include swaths of vegetated land, sound walls, or commercial development (among others).

### **Quantitative Guiding Principles**

*Associated measures from Envision Tomorrow and other quantitative analysis that will be conducted as part of the concept planning process are described.*

## **6. Meet regional responsibility for jobs and housing**

### **Population and employment forecast performance**

Using output from the Envision Tomorrow scenario modeling tool added jobs and housing units will be compared back to the regional forecast estimate (from Metro's Gamma model) for jobs and households within the planning area.

## **7. Design cohesive and efficient transportation and utility systems**

### **Evaluation of Wet Infrastructure**

Aggregate water and sewer requirements will be developed for each of the three (3) alternatives. A comparison will be provided indicating required capacity and potential infrastructure elements based on each alternative land use plan and the existing systems inventory.

### **Performance of transportation systems**

Motor vehicle transportation system for each of three alternatives will be evaluated including the development of future year 2035 PM peak hour volumes using a focus-area travel demand model. Intersection operation analysis (level of service and v/c ratios) based on the forecasted 2035 PM volumes will be conducted using Synchro.

### **Internal water consumption and Landscaping water consumption**

Water consumption has a major impact both financially and environmentally. Water bills can make up a large proportion of household or business utility costs, and excessive water consumption can put a strain on water supplies and infrastructure, especially in regions with water scarcity. Anticipated domestic and irrigation water consumption by residential households and commercial or industrial businesses will be estimated based on existing usage patterns within Tualatin and Wilsonville.

## **8. Maximize assessed property value**

### **Building value and local revenue**

Adding new housing and employment space to a community brings additional tax revenue that can be used for new infrastructure and services to support new and existing residents and businesses. Different scenarios can produce different amounts of tax revenue (property tax, sales tax and transportation impact fee (TIF)) due to the differing values of particular building types and locations. .

## 9. Incorporate natural resource areas and provide recreational opportunities as community amenities and assets

### *Percent of Natural Area Protected within the planning area*

*Types of natural areas to be considered for protection from development include:*

- *Wetlands and Floodplains*
- *Metro Title 3 Lands*
- *Metro Title 13 Lands*

*Some development may occur in these areas. However, the proportion of total development planned for non-environmentally sensitive areas should be maximized in order to preserve habitat, ecosystem services, open space, and recreation opportunities in the planning area.*

*Environmentally sensitive lands are identified and described in the Basalt Creek Existing Conditions Report.*

### *Total jobs allocated to prime flat industrial lands within the planning area*

*The largest proportion possible of new jobs forecasted for the planning area should be allocated to lands identified as suitable for industrial and/or office development, one factor of which is the absence of sensitive environmental features and constraints.*

*Land suitable for industrial and/or office development is identified and described in the Basalt Creek Existing Conditions Report.*

### *Acres of impervious surface*

*Impervious surface can have a negative impact on the health of a region's waterways. Instead of soaking in and filtering through the soil, rainwater runs off impervious surfaces, washing many polluting substances such as pesticides and oils into streams and other aqueous habitats. Increasing impervious surface runoff also increases the volume of runoff, and the speed which the water is delivered to streams, resulting in higher peak flows.*

## 10 Considerations for Success

In addition to the Guiding Principles, the Joint Council also identified ten key elements for successful implementation of the Basalt Creek Concept Plan:

1. **Sewer.** Each City will serve its own jurisdiction area independently, to the extent reasonably possible, with the understanding that future agreements may be needed to address potential cooperative areas.
2. **Stormwater.** Each City will serve its own jurisdiction area independently, to the extent reasonably possible, consistent with the respective National Pollutant Discharge Elimination System (NPDES) stormwater permits, with the understanding that future agreements may be needed to address potential cooperative areas.
3. **Metro Title 4 Land.** The Basalt Creek Concept Planning Area is currently mapped and identified as an “Industrial Area” in Metro’s Title 4 Code, which allows both housing and employment designations. The Cities agree to implement the land uses identified in the Basalt Creek Concept Plan.
4. **Transportation Funding.** The Cities acknowledge significant improvements will be needed to the existing and future transportation network as identified in the 2013 Basalt Creek Transportation Refinement Plan (TRP). In order to implement the TRP, Tualatin and Wilsonville will coordinate with Washington County to prioritize projects and funding strategies.
5. **Future Regional Transportation Projects in the Basalt Creek Area.** The Cities will coordinate with Washington County and Metro to evaluate future regional transportation projects and decisions, beyond those identified in the TRP that affect its planned system capacity.
6. **Trips.** Proposed development will be reviewed by each City for impacts to the transportation system and consistency with the Concept Plan trip targets to achieve transportation system goals for the area.
7. **Basalt Creek Parkway and I-5 Crossings.** The Cities acknowledge the Basalt Creek Parkway and I-5 crossings identified in the TRP are critical to successful implementation of the Basalt Creek Planning Area. The Cities will seek to coordinate timely regional investments in these crossings to implement the Basalt Creek Concept Plan.
8. **North-South Local Street (Kinsman Road).** Kinsman Road is planned as a local route both north and south of the jurisdictional boundary that will not connect to the Basalt Creek Parkway.
9. **Basalt Creek Canyon.** The Cities recognize the natural resource value of the Basalt Creek Canyon. Each city will comply with Metro Titles 3 and 13. The Cities also recognize the benefits of locating north/south trails near the Basalt Creek Canyon and bicycle connections that would connect the cities and other trail systems and be an asset for both residents and employees in the area.
10. **Public Transportation.** Robust transit services are critical to supporting the land uses envisioned in the Basalt Creek Planning Area. The Cities agree to coordinate efforts on how SMART and TriMet can best provide service throughout the area.



# Buildable Lands Summary

Presented August 2014

# Buildable Land

Buildable Lands =

Land Supply – Constraints (Environmental & Policy)

Land Supply

Constraints

Buildable Land



# Analysis/Methodology

- Separate hard and soft constraints
  - Hard constraints will be excluded from the buildable land analysis
  - Soft constraints limit and guide development and were partially excluded from the buildable land analysis
- Parcels categorized into:
  - Vacant
  - Stable (residential use with higher building value)
  - Redev (site has redevelopment potential and/or is non-residential)

# Basalt Creek

## Environmental Hard Constraints:

- Mix of Clean Water Services, Title 3 and basic constraints
- Basic environmental constraints are:
  - Open Water
  - Streams
  - Wetlands
  - Steep Slopes (25% and greater)
  - Slope Stability
  - Title 3
  - Floodplains (50% land reduction)
  - Title 13 (20% land reduction)

# Basalt Creek

## Manmade Hard Constraints:

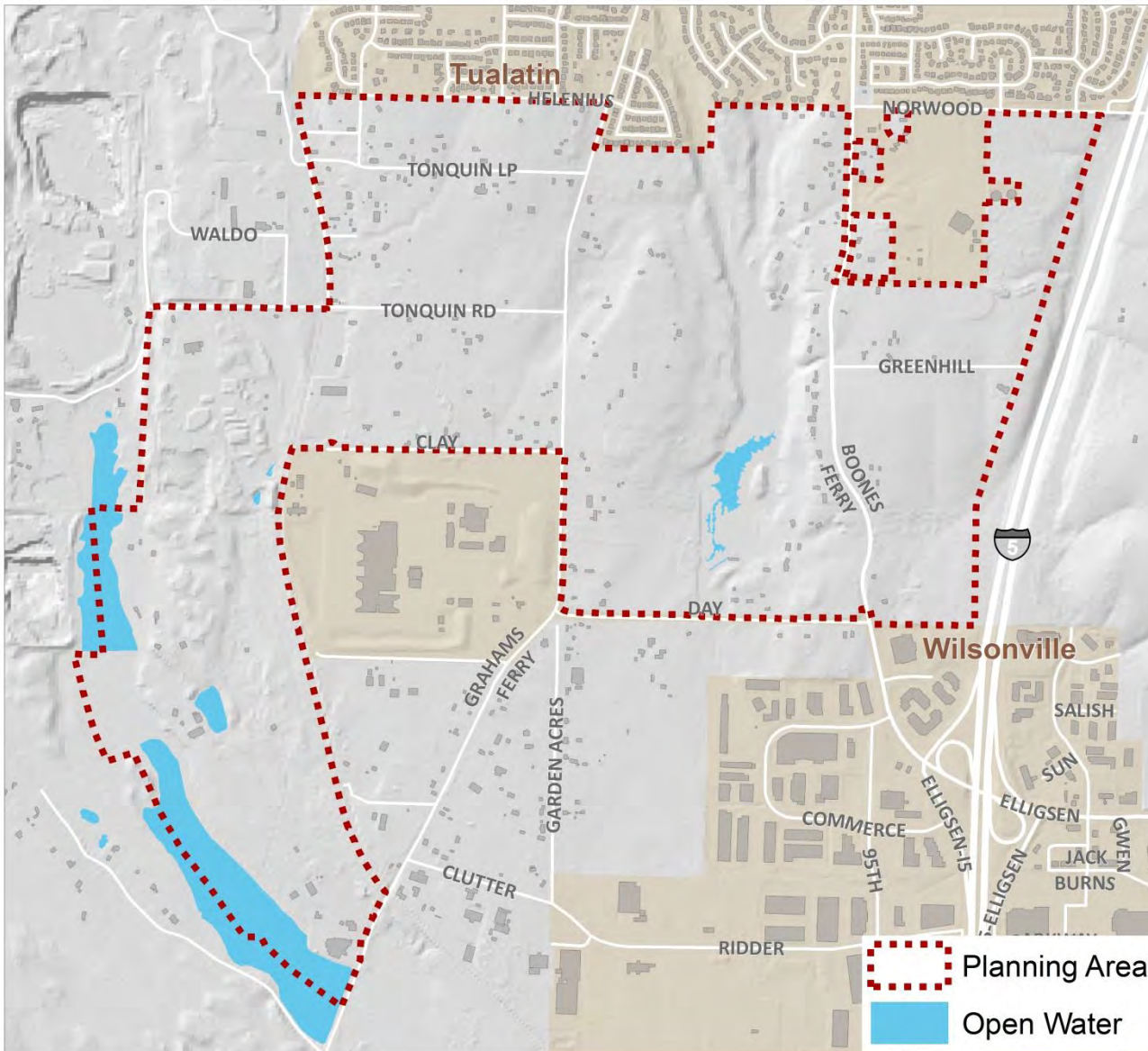
- Easements
  - BPA easements
  - PGE easements and substation
  - Natural Gas Pipeline

# Basalt Creek

## Soft constraints:

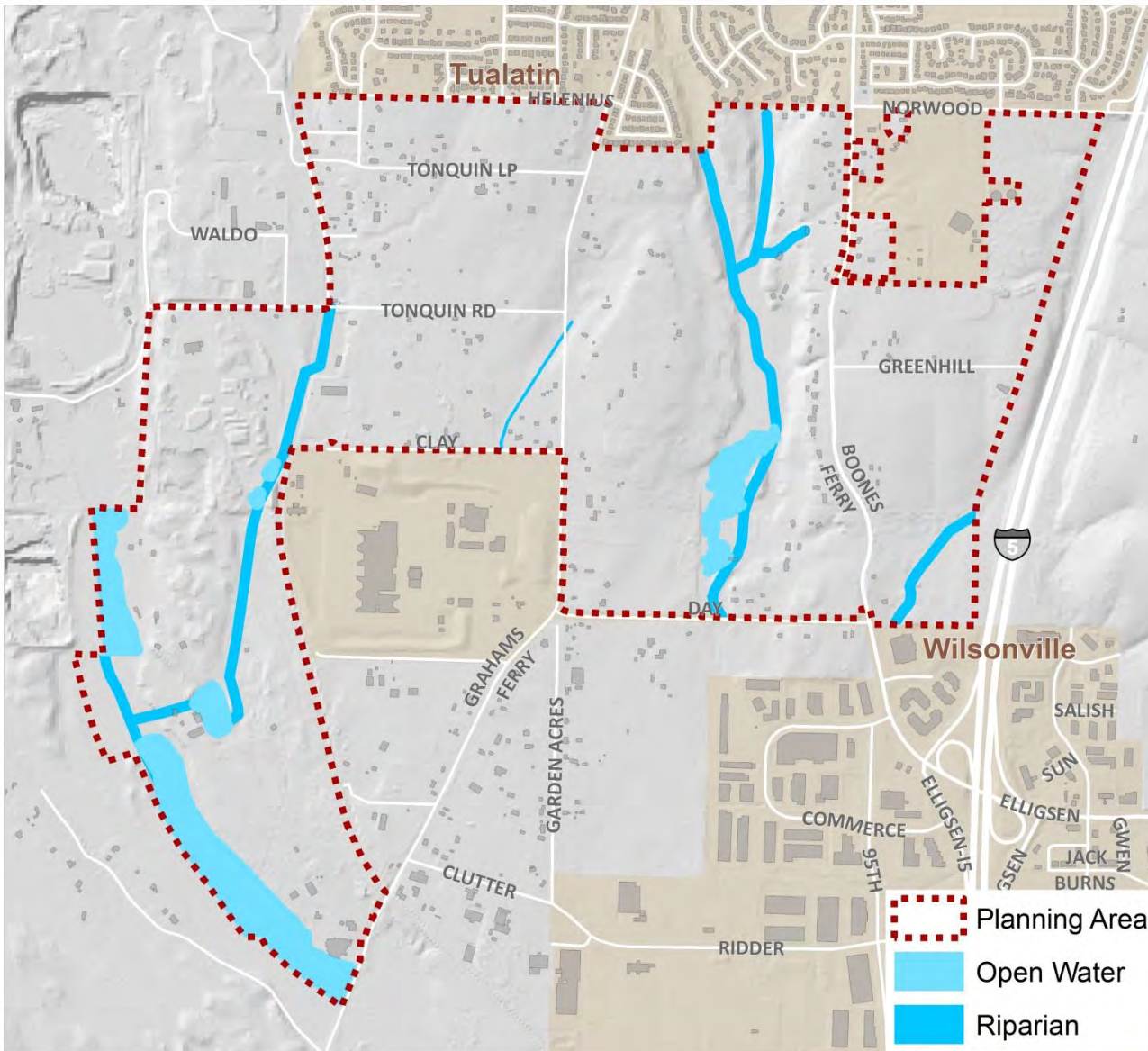
- **Title 13**
  - In addition to hard constraints, development in Title 13 land should be avoided where possible
- **Road projects**
  - East West Connection
  - Boones Ferry Road Widening
  - 2035 Overcrossing
- **Others**
  - 10%+ slopes regarding industrial development

# Open Water



- **49** acres constrained
- Two sources:
  - Digitized by Fregonese Associates based on 2013 and 2012 (leaf free) aerials.
  - David Evans and Associates – 75% engineering files 124<sup>th</sup> Extension
- For constraints analysis:
  - Open water - **50ft** buffer

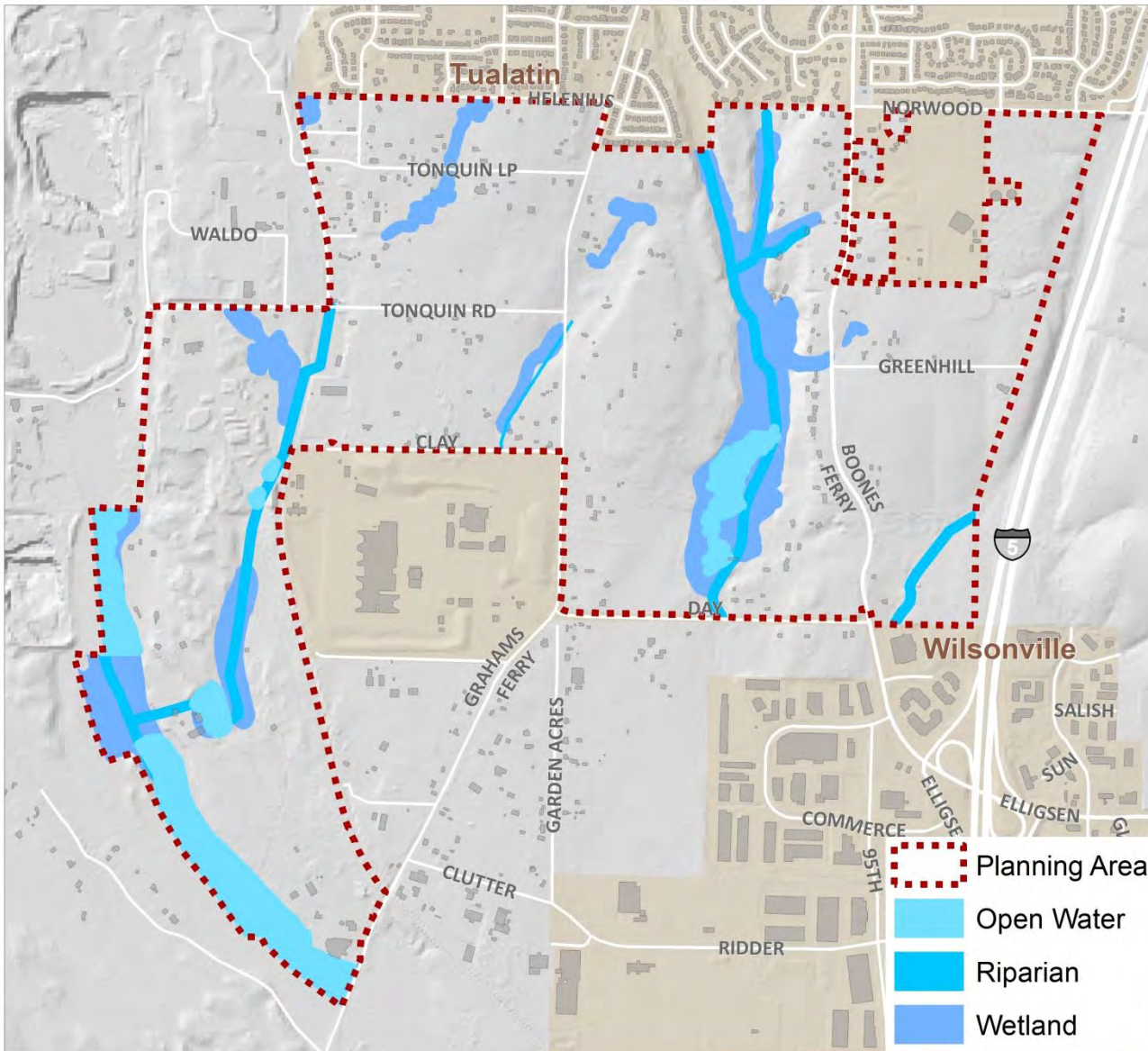
# Streams - Riparian



- 31 acres constrained
- Three categories of streams:
  - Natural stream – 18,845 feet
  - Underground stream – 789 feet
  - Intermittent stream – 1,402 feet
- Stream categories determined:
  - by visual survey of 2013 and 2012 (leaf free) aerials and intermittent stream through comment by Kerry Rappold, City of Wilsonville
  - Fieldstudy performed by City of Wilsonville
- For constraints analysis:
  - Natural stream - 50ft buffer
  - Intermittent stream - 15ft buffer

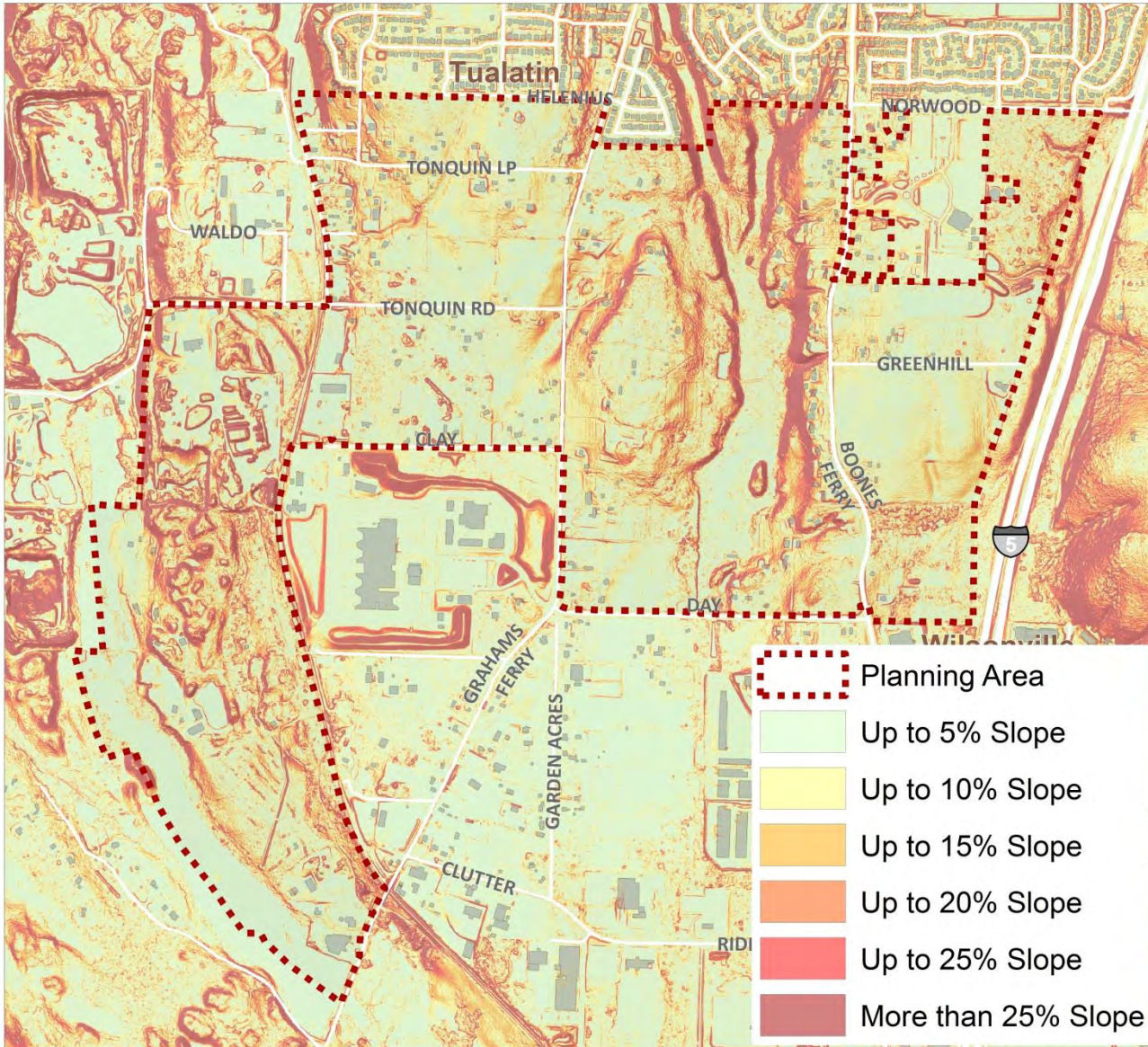


# Wetlands



- **70 acres**
- Sources are:
  - RLIS
  - Wetland Delineation Report for Proposed Boones Ferry Widening
  - David Evans and Associates – 75% engineering files 124<sup>th</sup> Extension
  - additional wetlands digitized by Fregonese Associates based on 2013 and 2012 (leaf free) aerials.
- For constraints analysis:
  - Wetlands - **50ft** buffer
  - Isolated wetland and smaller than a half acre – **25ft** buffer

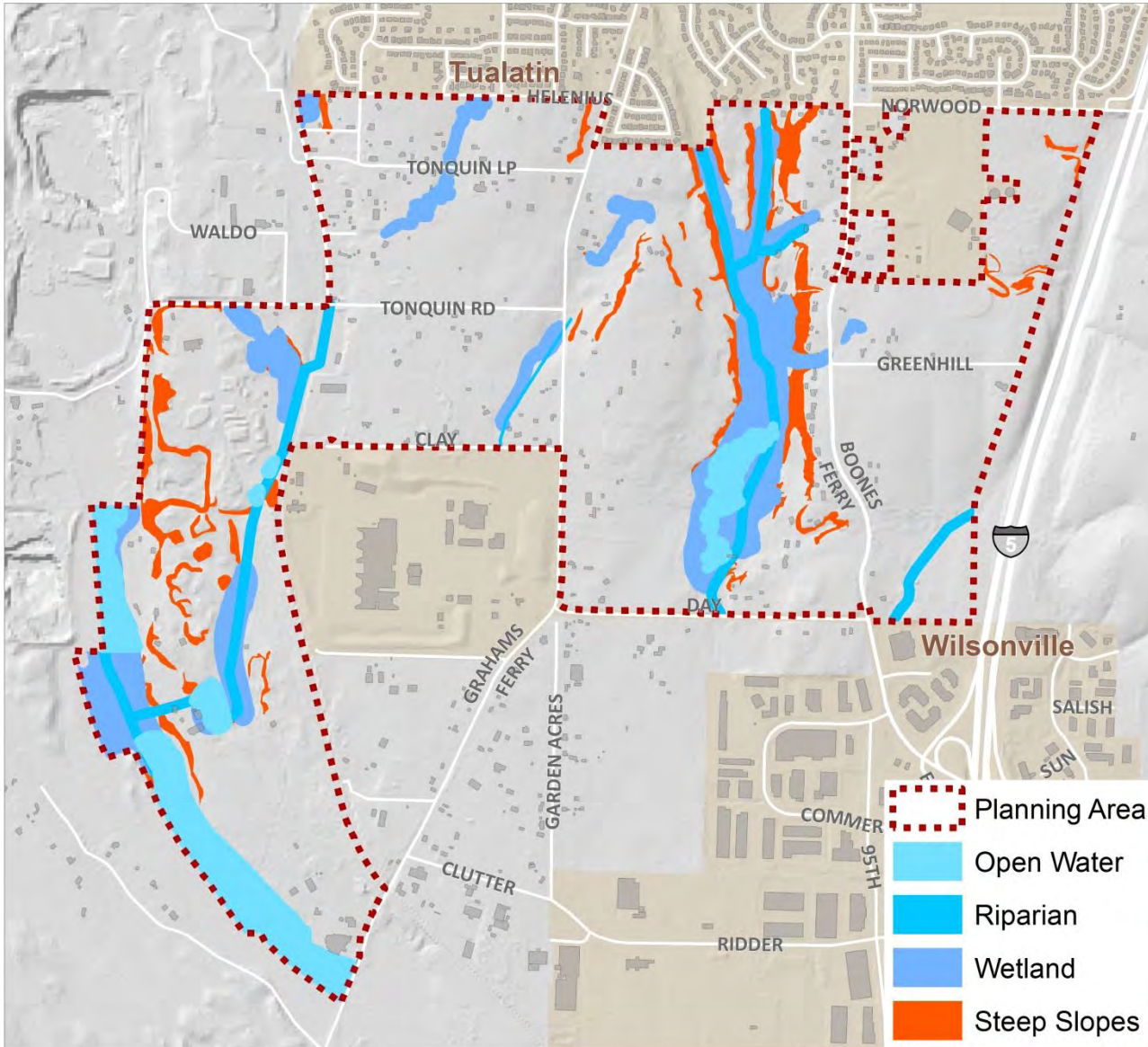
# Steep Slopes



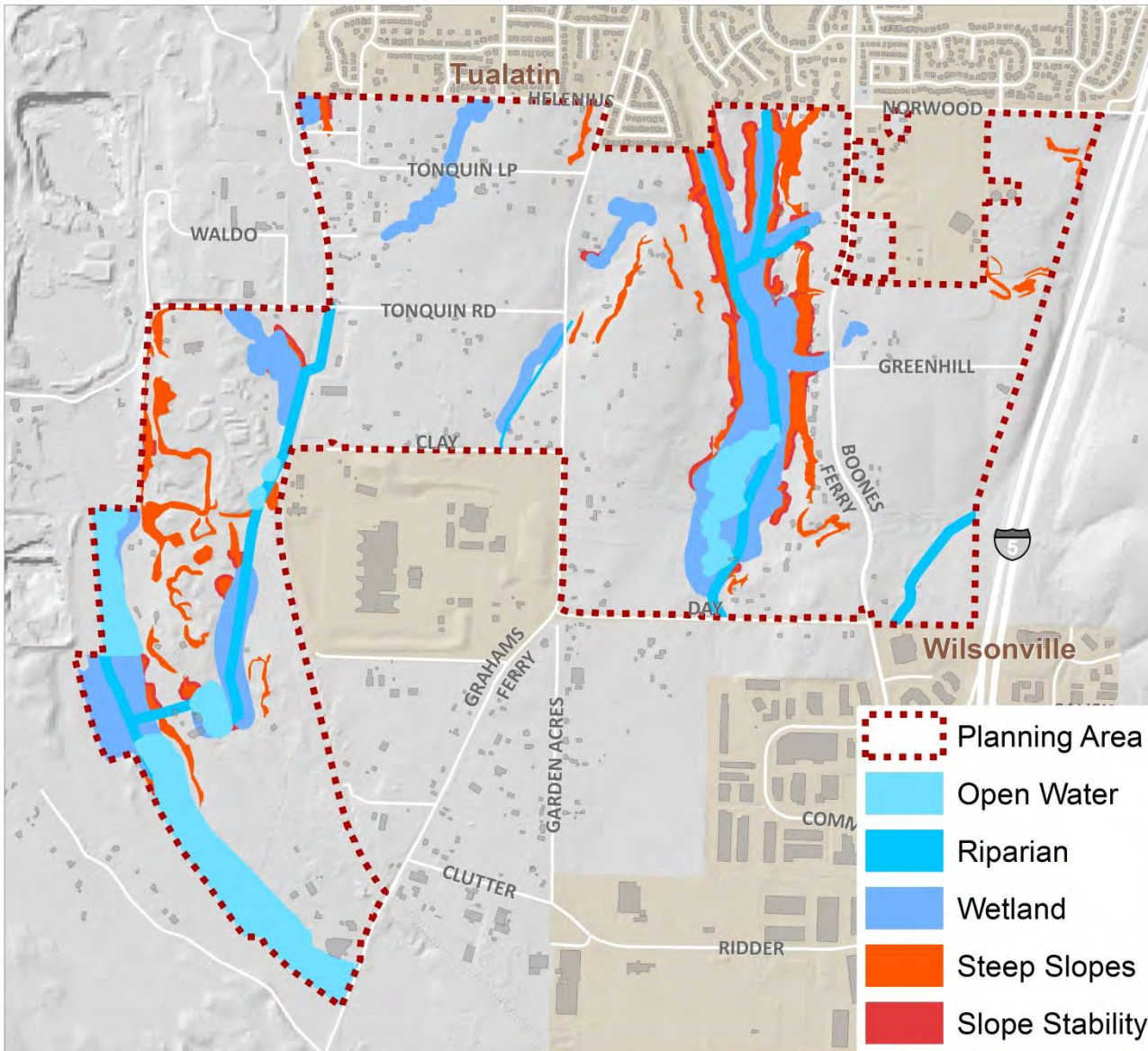
- For constraints analysis:
  - Using slopes from 3ft DEM
  - Non-isolated slopes, greater than half an acre, natural and or along a riparian area

# Steep Slopes

- **40** additional acres constrained for steep slopes (25% and above)

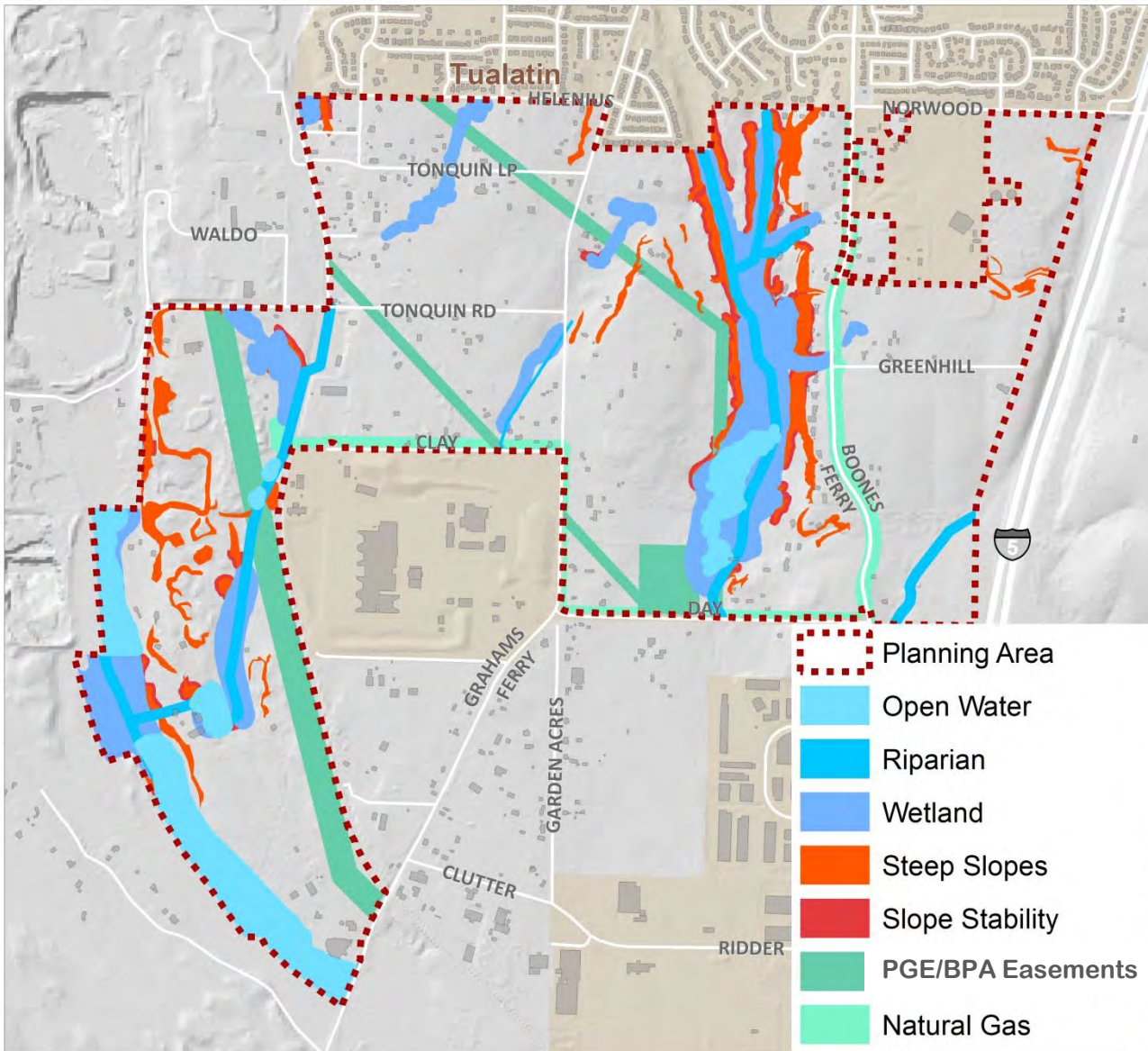


# Slope Stability



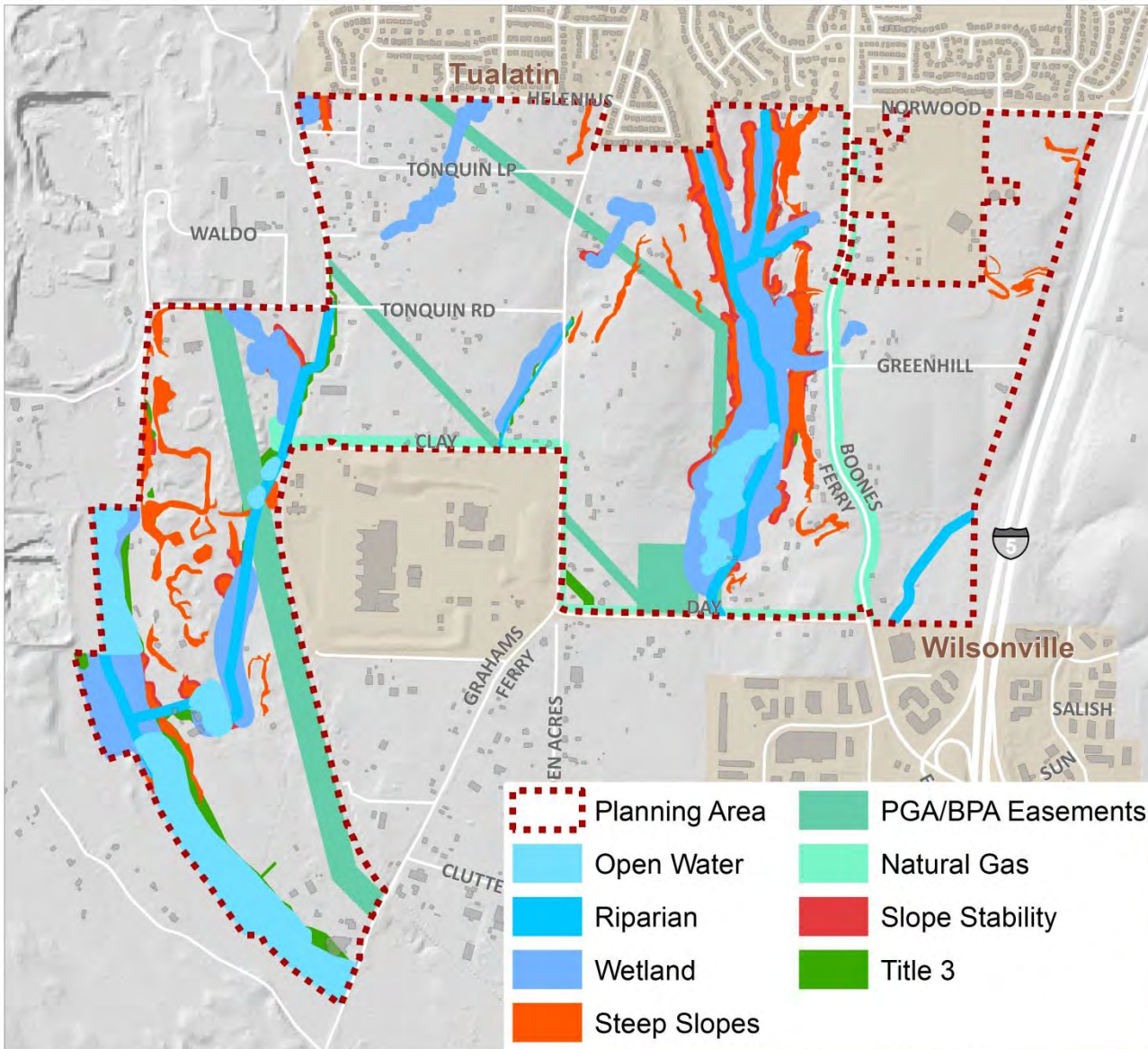
- **11** additional acres constrained as buffer to steep slopes
- Buffer needed for up to 200 feet from vegetated corridor
- CWS request an additional 35ft for steep slopes within vegetated corridor
- Measured from top of bank/break in 25% slope

# Utilities



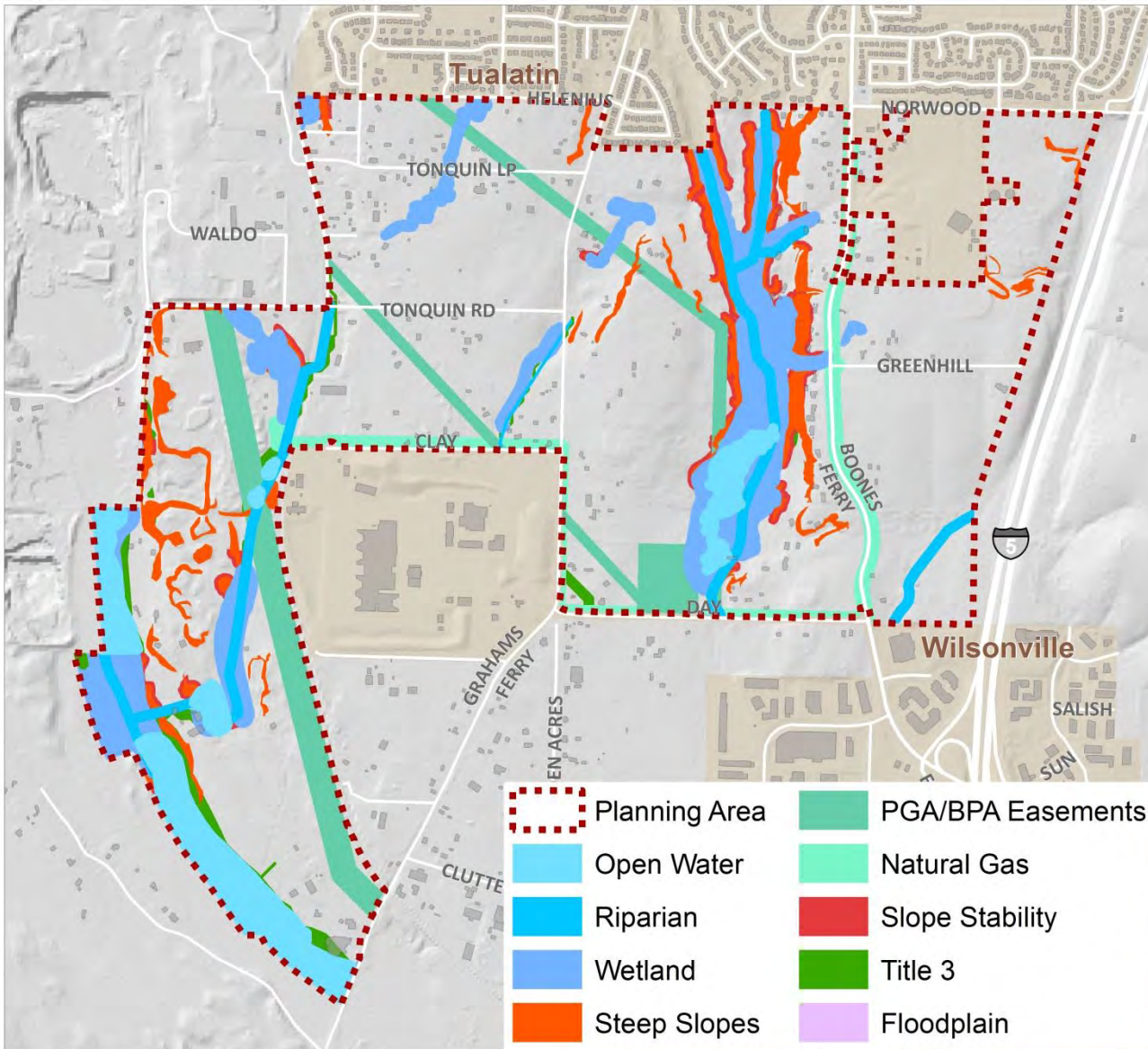
- **84** additional acres constrained
- Almost 16,000 feet of transmission lines crossing the area
- 2 easements:
  - BPA 42.3 acres
  - PGE 18.0 acres plus 4.1 acres substation
- 2 natural gas lines:
  - 25.7 acres
- For constraints analysis:
  - Remove from buildable land

# Title 3 (Metro)



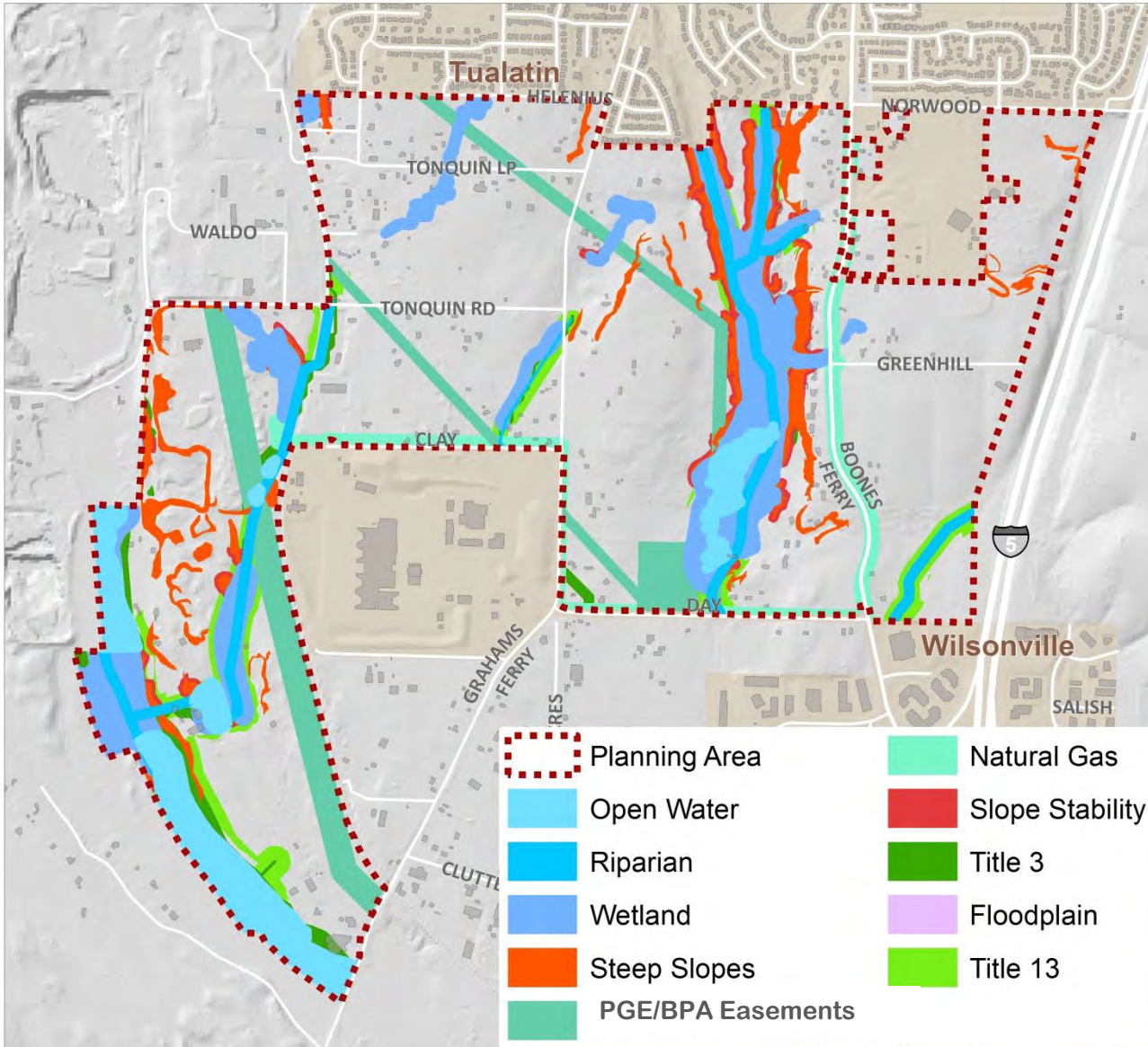
- In addition to the above analysis, Title 3 adds **8** acres of land that was not previously constrained

# Floodplains



- For constraints analysis:
  - 50% of land in floodplains is removed
- Results in only **0.01** additional acres of previously unconstrained land

# Title 13

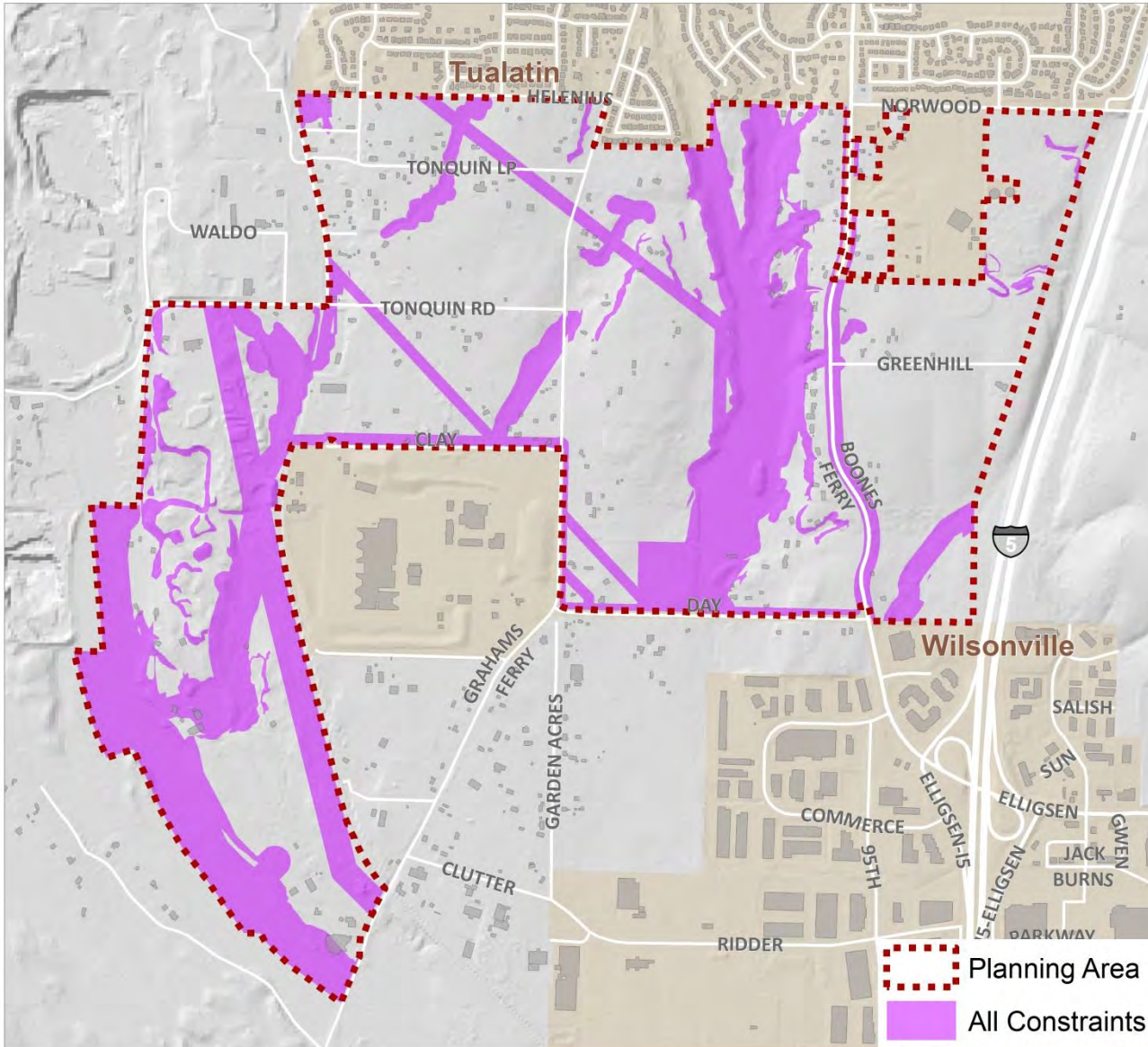


- Based on METRO requirement to set aside 20% of land for protection in Riparian Class I and II, 4 additional acres are constrained



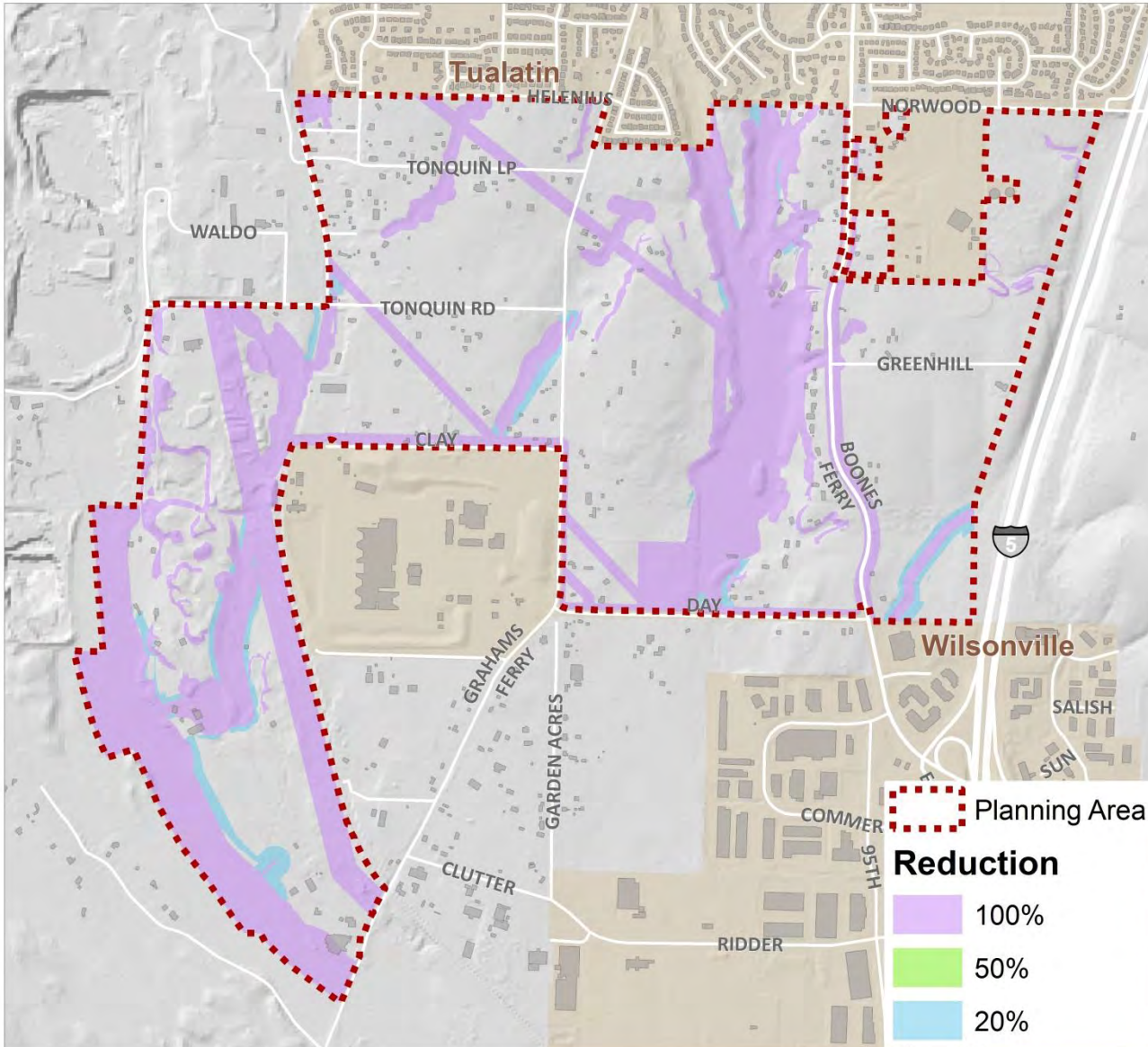
# All Constraints

- A total of **296** acres are constrained
- Study area total is **847** acres
- **35%** of the Basalt Creek area is constrained



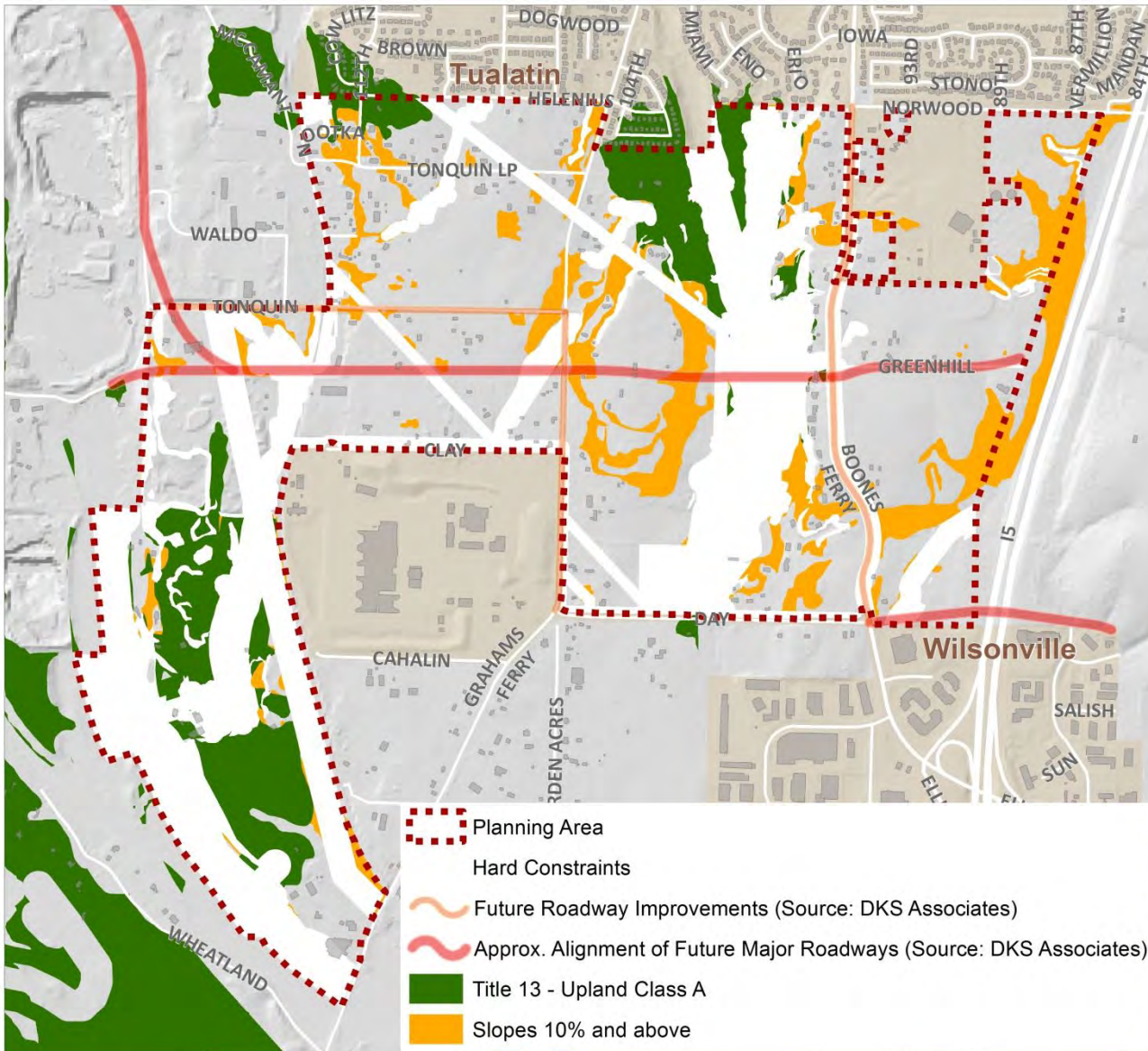
# All Constraints

- **35%** of the Basalt Creek area is constrained



# Soft Constraints

- 10% slopes and greater
- Title 13 Upland Class A
- Various road projects
- These soft constraints are a consideration when planning development but no land was removed from buildable lands based on these categories



# Land Supply

- Three elements:
  - Vacant Land – Land ready to build, no major structure on site
  - Redev Land – Land with some redevelopment potential
  - Stable Land – Land and structures on it will not change in the future

**Vacant Land**



**Redev Land**



**Stable Land**



# Four-Step Methodology

Existing  
Land Use

Visual  
Survey

Building  
Value

Local  
Input

Land  
Supply

1. Land use provided by tax lot data via RLIS (Metro data)

2. Ground proofing using aerials and online tools

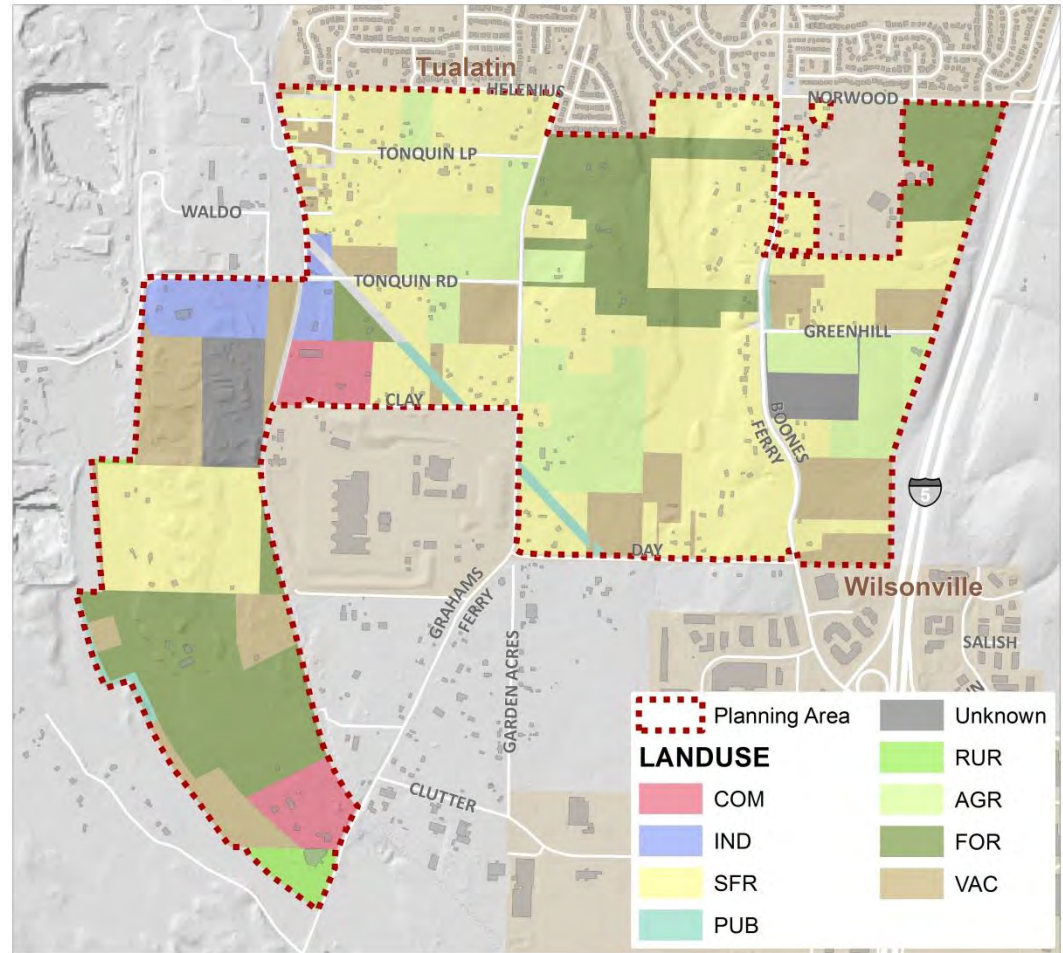
3. Define "stable" building value

4. Refine analysis with local input

# Land Use

## 1. Step

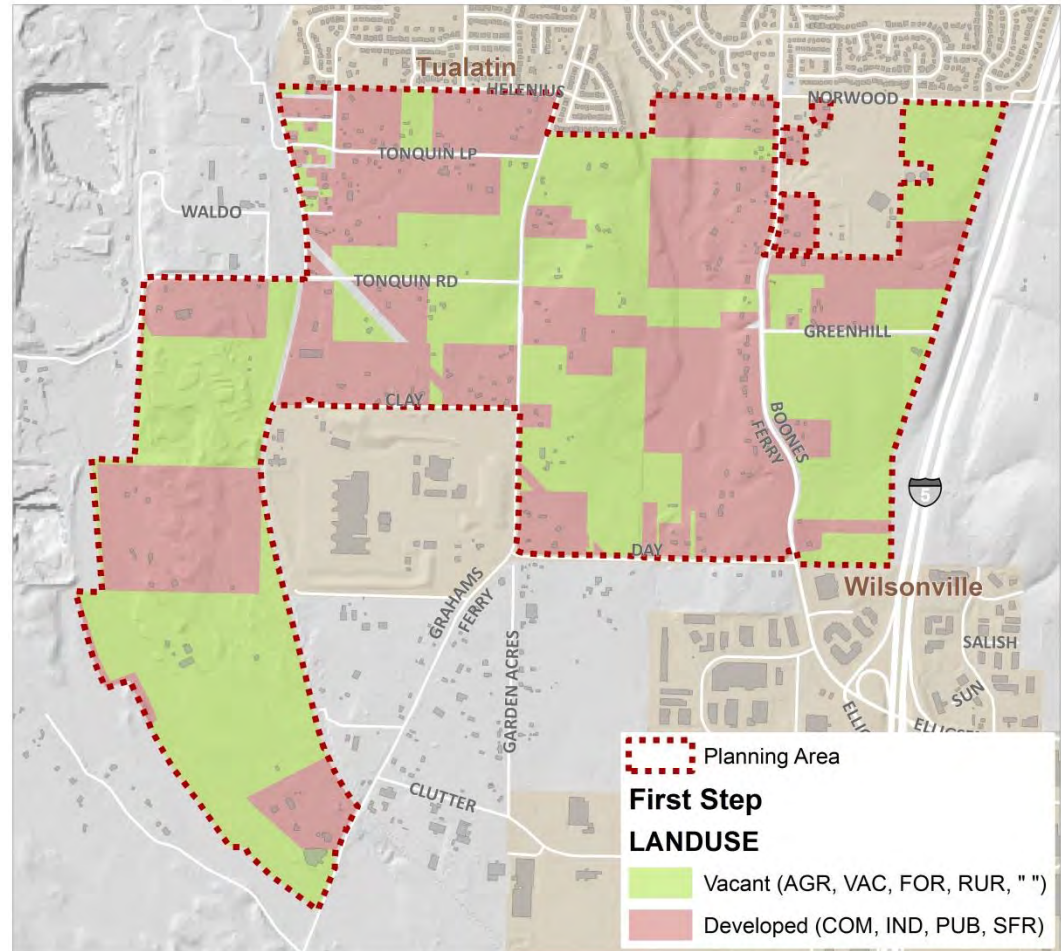
- Assumptions on development via existing land use in taxlot file (RLIS March 2014)
  - Developed is:
    - Commercial
    - Industrial
    - Public
    - Residential
  - Vacant is:
    - Rural
    - Forest
    - Agriculture
    - Unknown
    - Vacant



# Land Use

## 1. Step

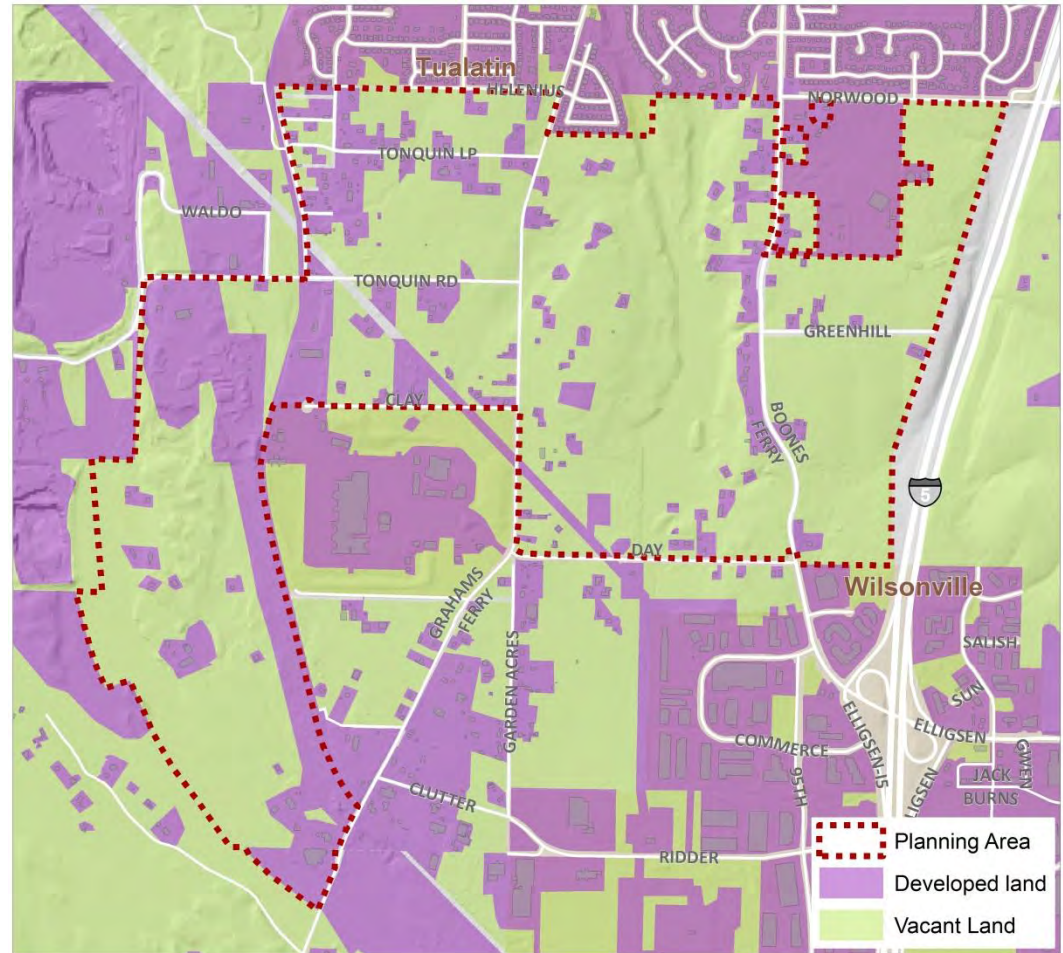
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  - Vacant is:
    - Rural
    - Forest
    - Agriculture
    - Unknown
    - Vacant



# Visual Survey

## 2. Step

- Vacant and developed land (RLIS March 2014)
  - Does not limit itself to taxlots
  - Uses “Cookie Cutter” around buildings





# Visual Survey

## 2. Step

- Adjust for large amount of partially vacant or “unused” land
  - Uses “Cookie Cutter” around buildings
    - Split to allow for backyard
    - Split, where lot becomes “natural”
  - Via visual survey of aerial, Google Map Street View, and Bing Map Bird’s Eye
  - Use RLIS coverage as guide



Split lot



Split lot

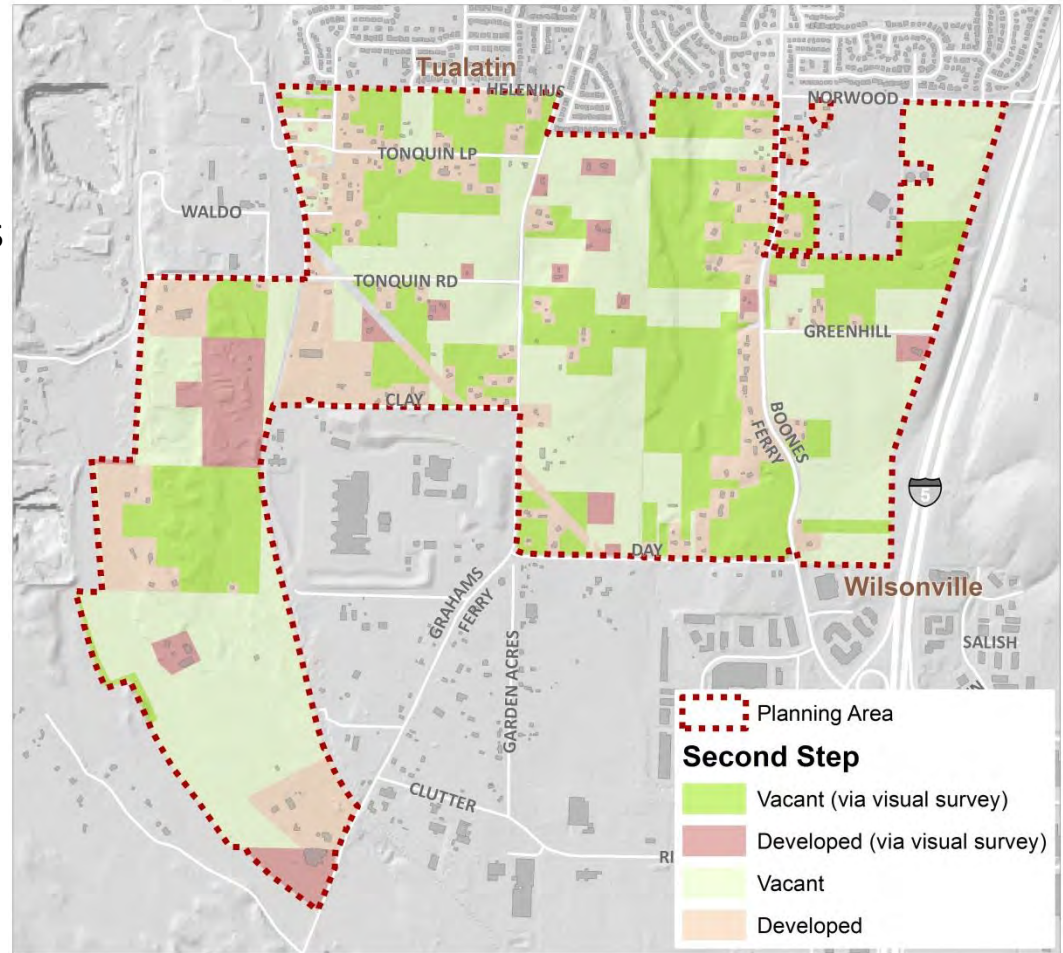


From vacant to developed

# Visual Survey

## 2. Step

- This map shows additional developed land based on visual survey that was first identified as vacant based on the land use



# Building Value

## 3. Step

- What is “Stable”:
  - No changes to the taxlot are expected
    - No growth
    - No additional employment
    - No additional housing unit
    - Minor improvements to property but not much more



Newer Single Family Home

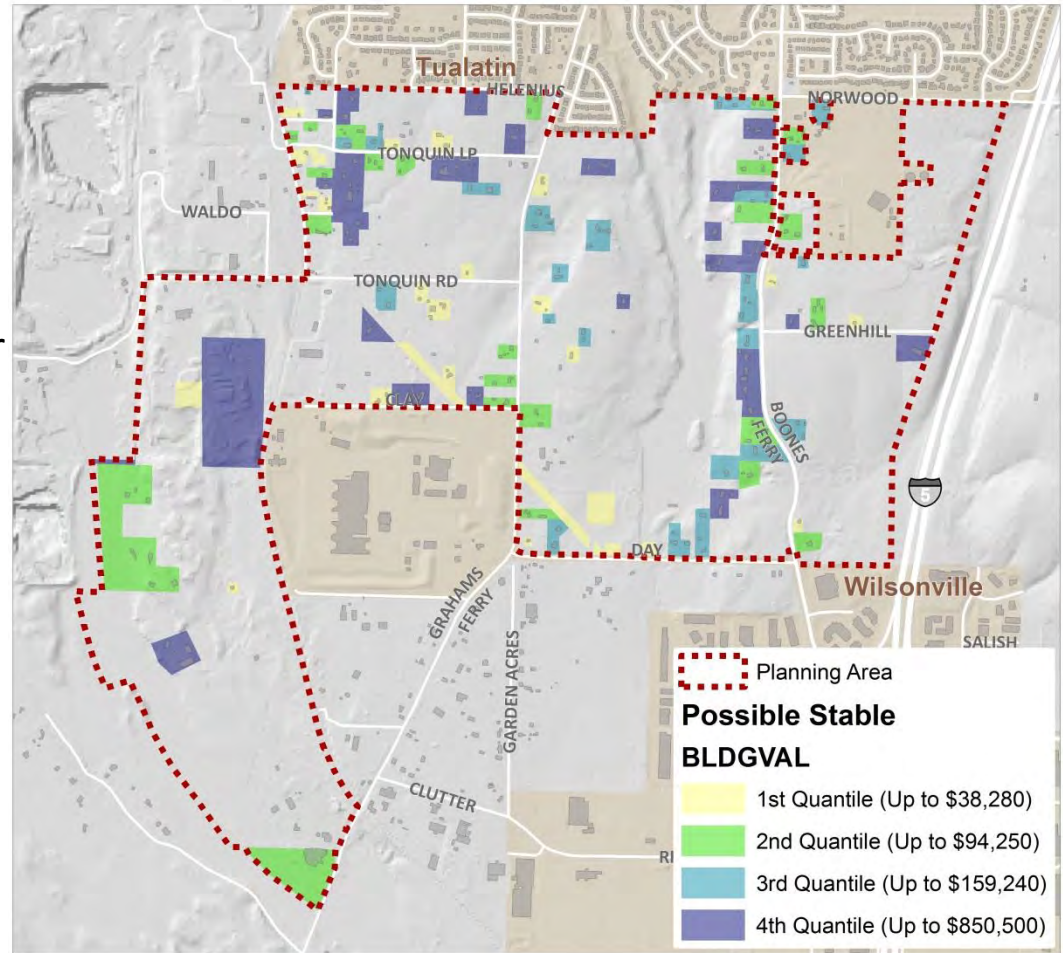


Older Single Family Home

# Building Value

## 3. Step

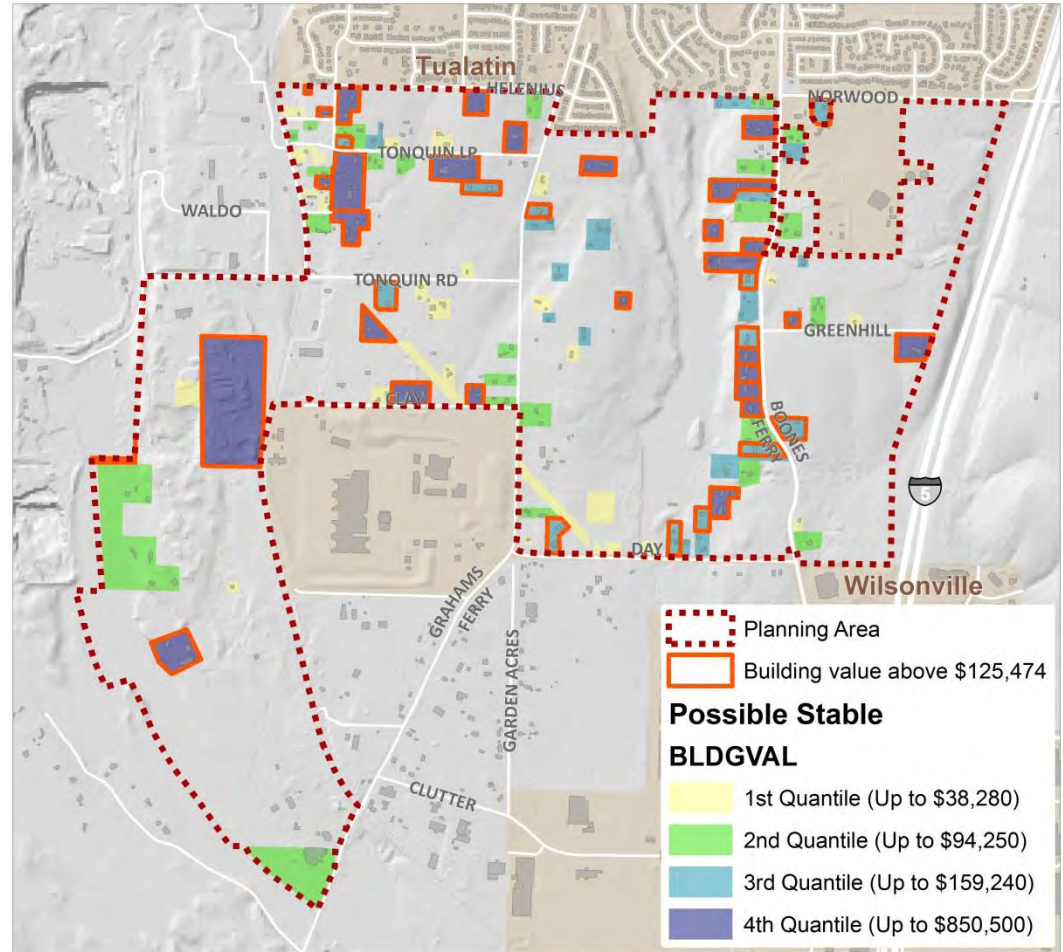
- Select only residential
  - Exclude COM and IND land uses which are considered more likely to redevelop no matter the building value
- Quantiles:
  - In which range falls a specific building?
  - 50% of building values are below \$95,000



# Building Value

## 3. Step

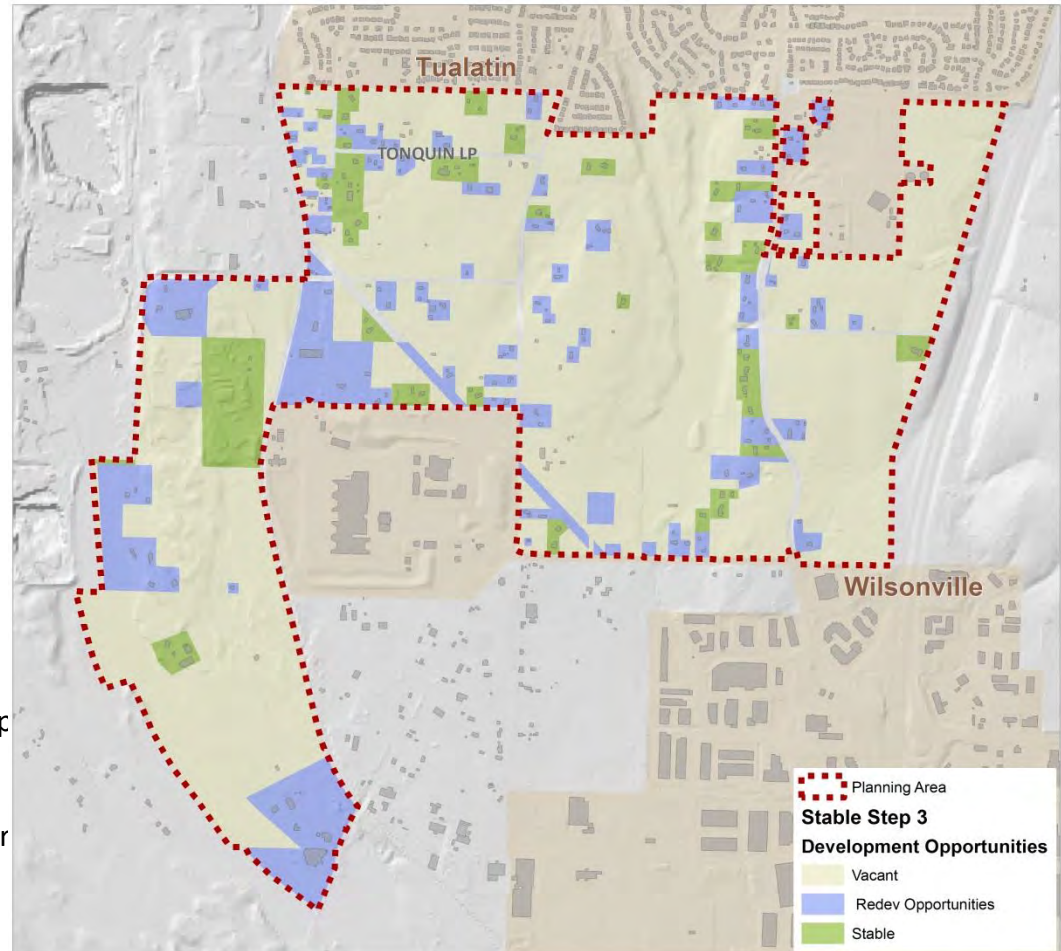
- Assuming higher building values will be stable
  - Average building value is **\$125,474**



# Building Value

## 3. Step

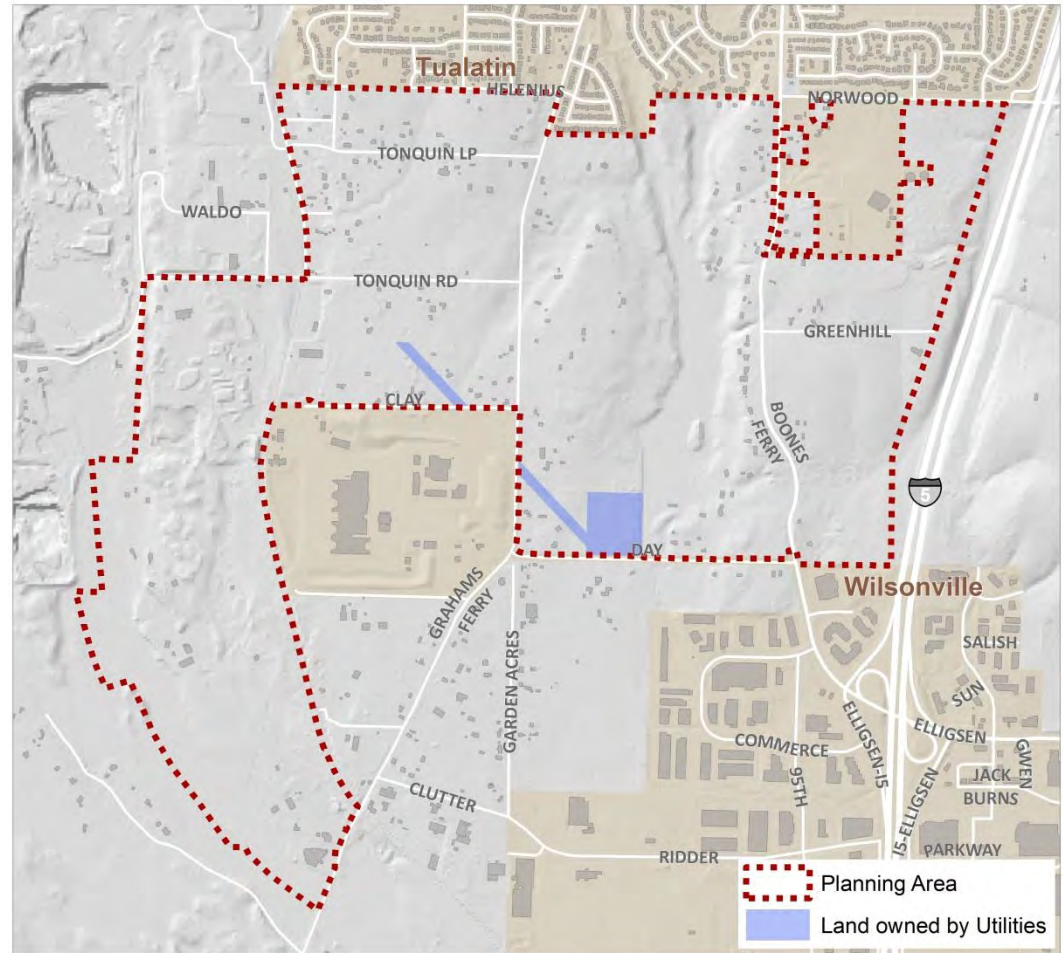
- Introduced “stable”
  - Non commercial buildings only
  - On developed land
- Assuming higher building values will be stable
  - Average building value is \$125,474
  - Set limit to **\$150,000**, based on owner input
    - Existing rural development are more likely to redevelop under/with an urban footprint
    - Know of site that the owner would like to redevelop (current building value is about \$145,000)
- **34** sites identified as stable



# Local Input

## 4. Step

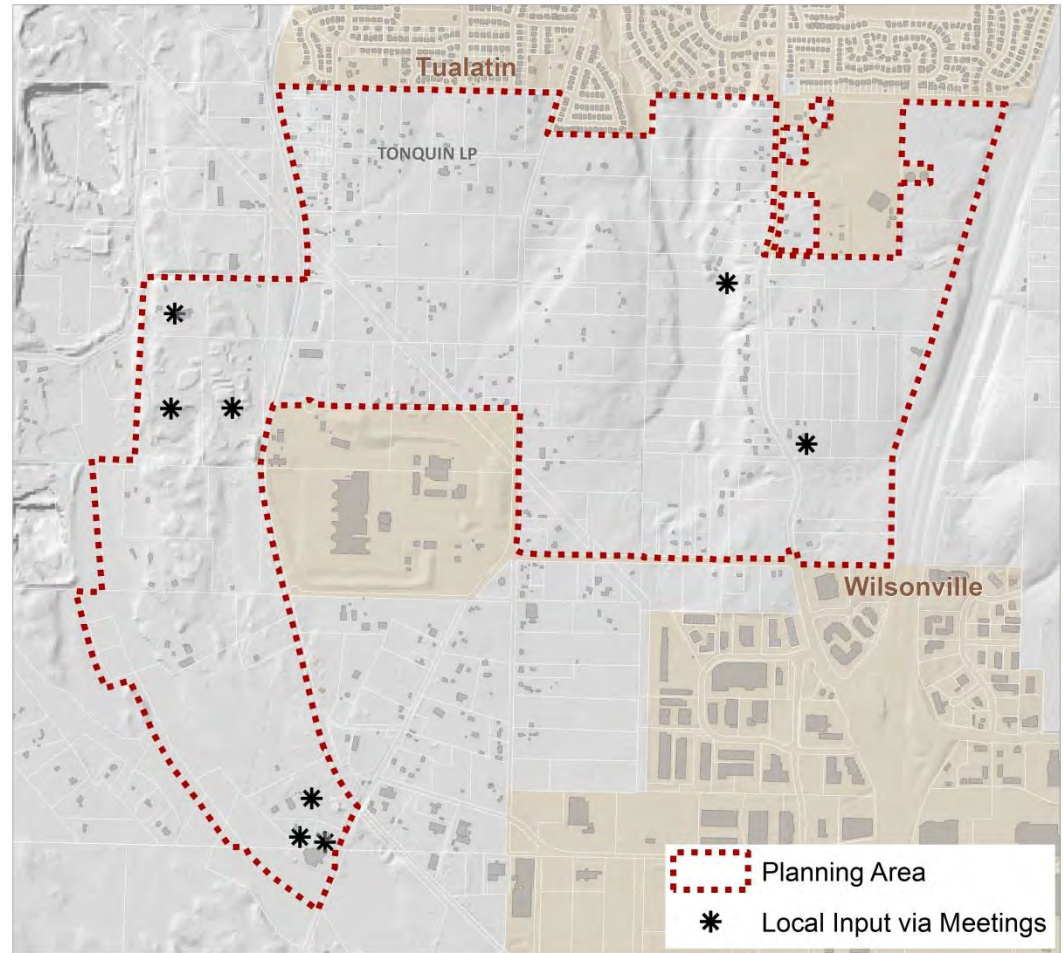
- Utilities
  - PGE sub station
  - BPA Properties



# Local Input

## 4. Step

- Local Input
  - Stakeholder meetings
  - Focus group meetings

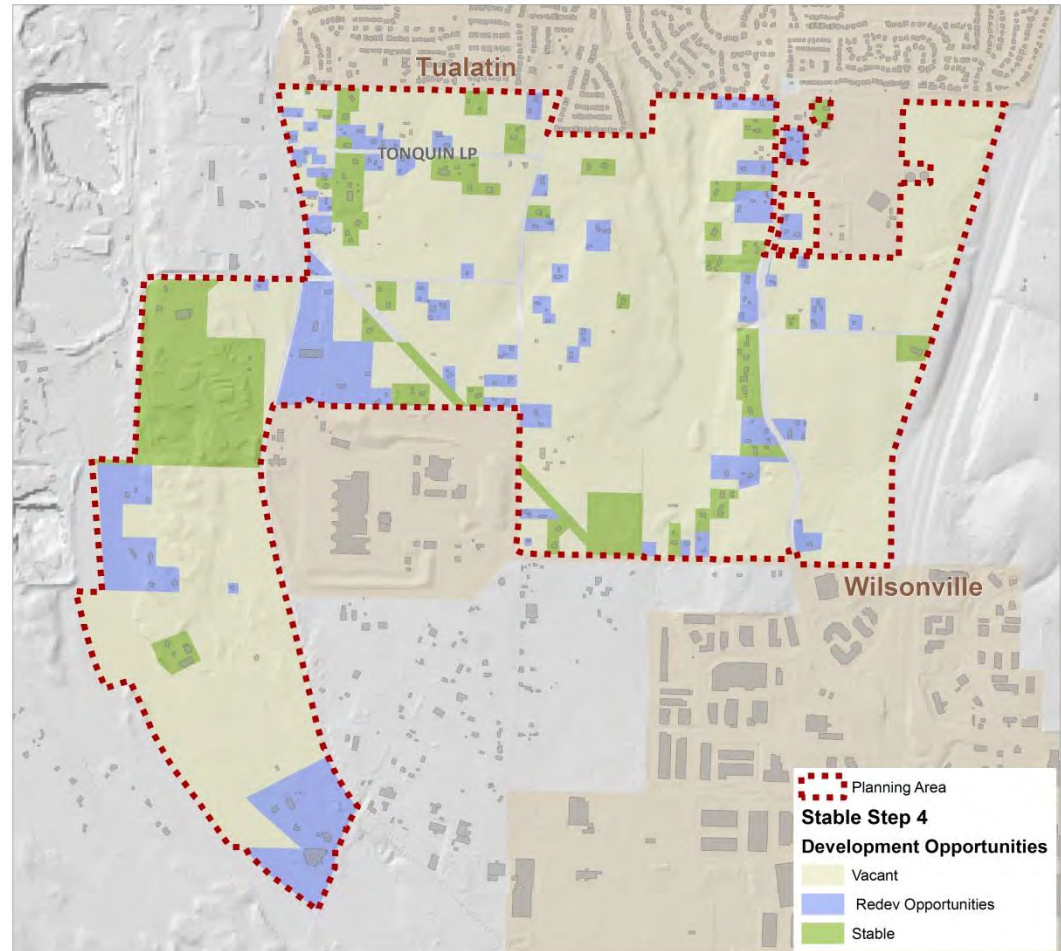




# Local Input

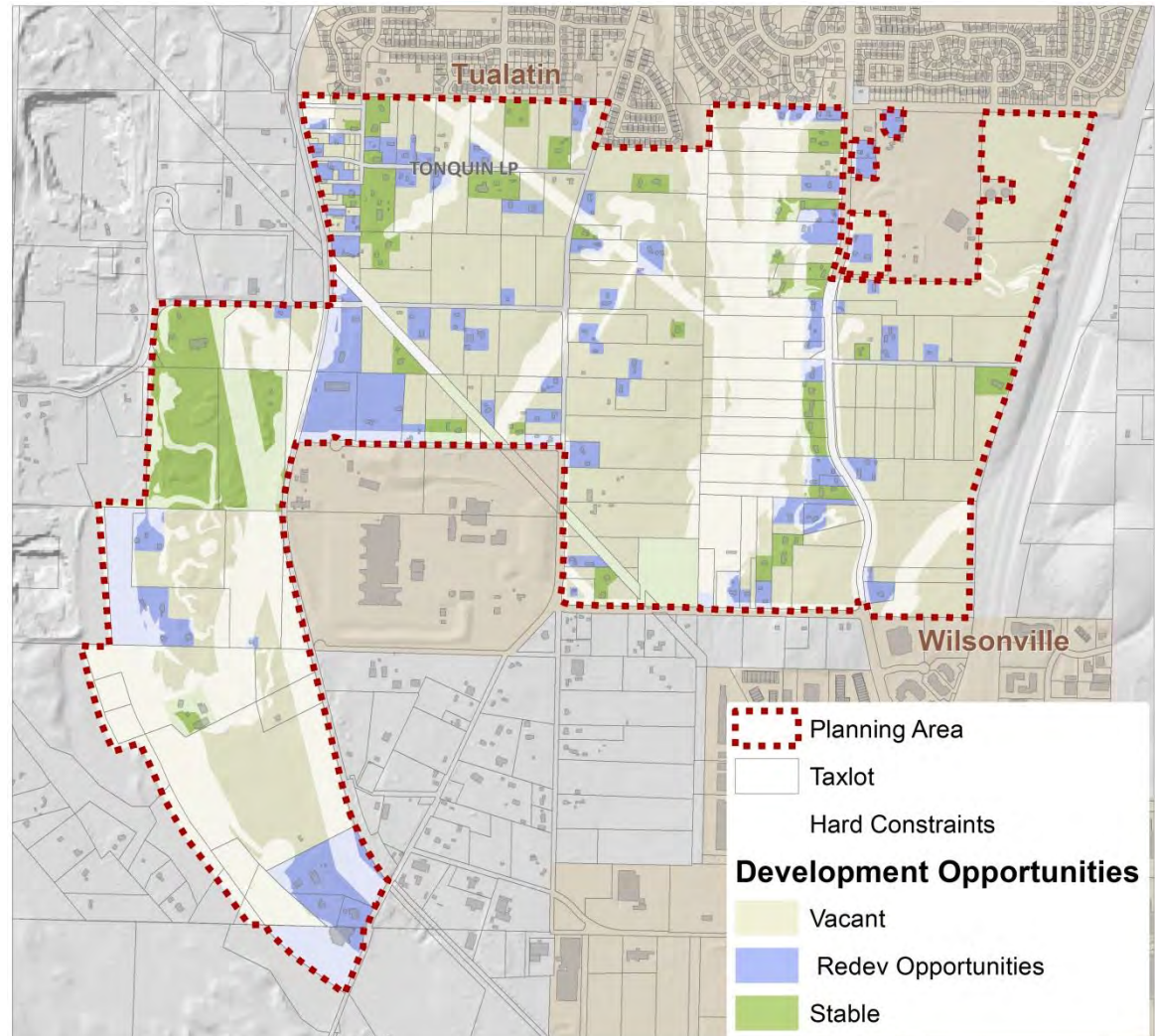
## 4. Step

- **43** sites identified as stable, based on:
  - Building value
  - Local Input
- **596** acres are vacant
- **117** acres are available for redevelopment



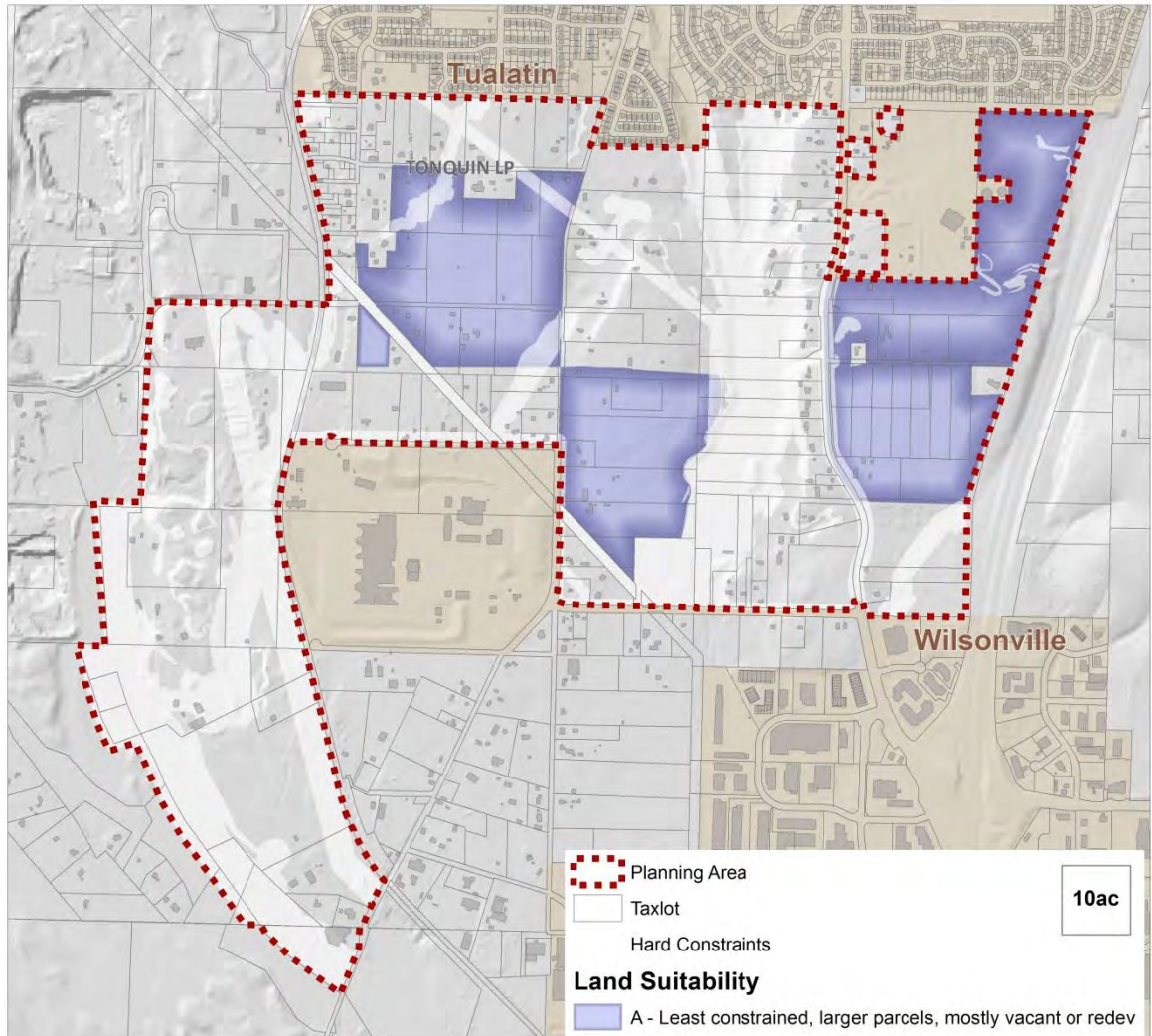
# Suitable Sites

- Multiple Sites vary by:
  - Taxlot size
  - Amount of constraints
  - Vacancy and redevelopment opportunities



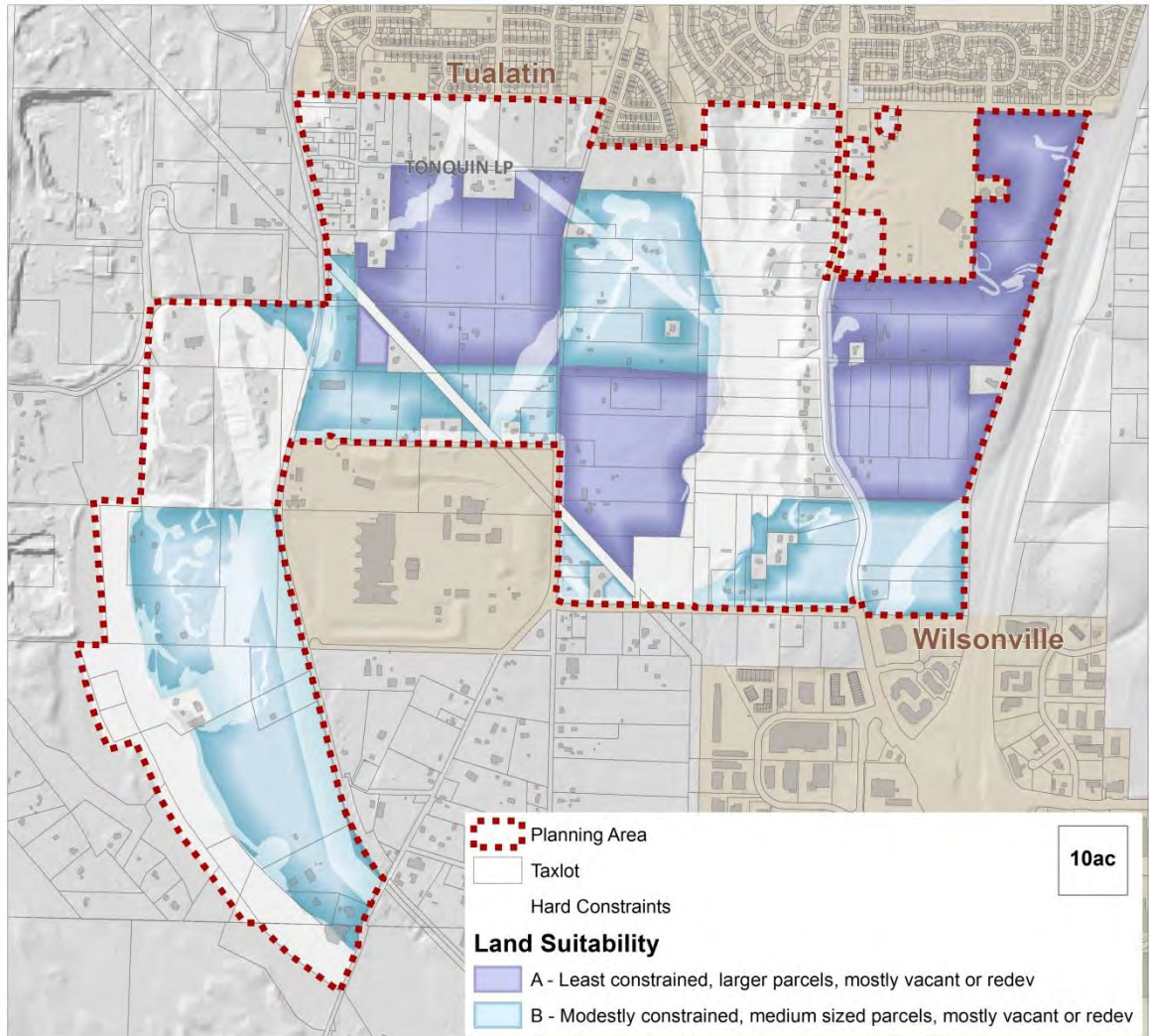
# Suitable Sites

- Suitability A:
  - Larger parcels
  - Least constrained
  - Mostly vacant, might have redevelopment opportunities
  - 214 buildable acres (does not exclude built road network, etc.)



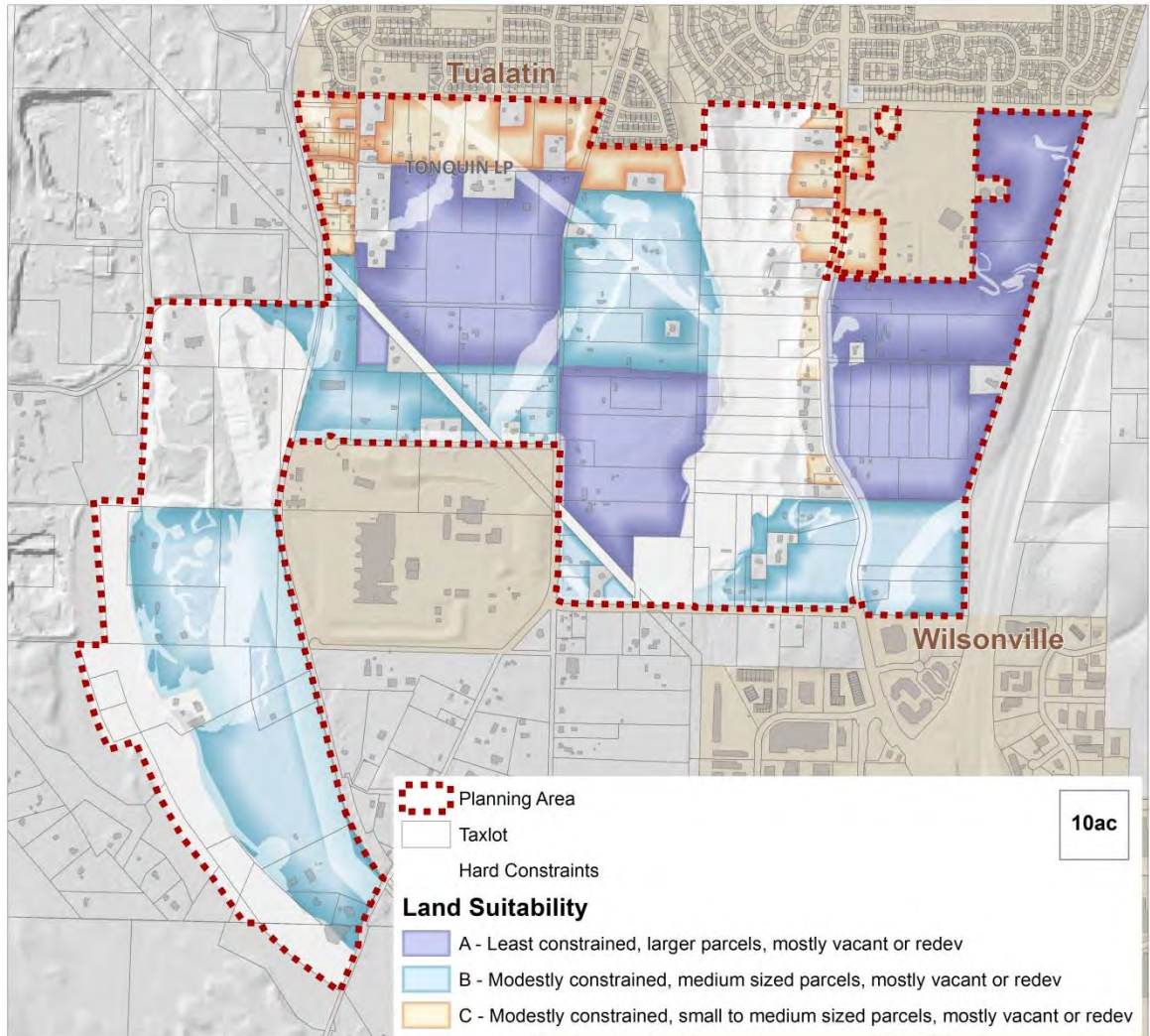
# Suitable Sites

- Suitability B:
  - Medium sized parcels
  - Modestly constrained
  - Mostly vacant, might have redevelopment opportunities
  - 193 buildable acres (does not exclude built road network, etc.)



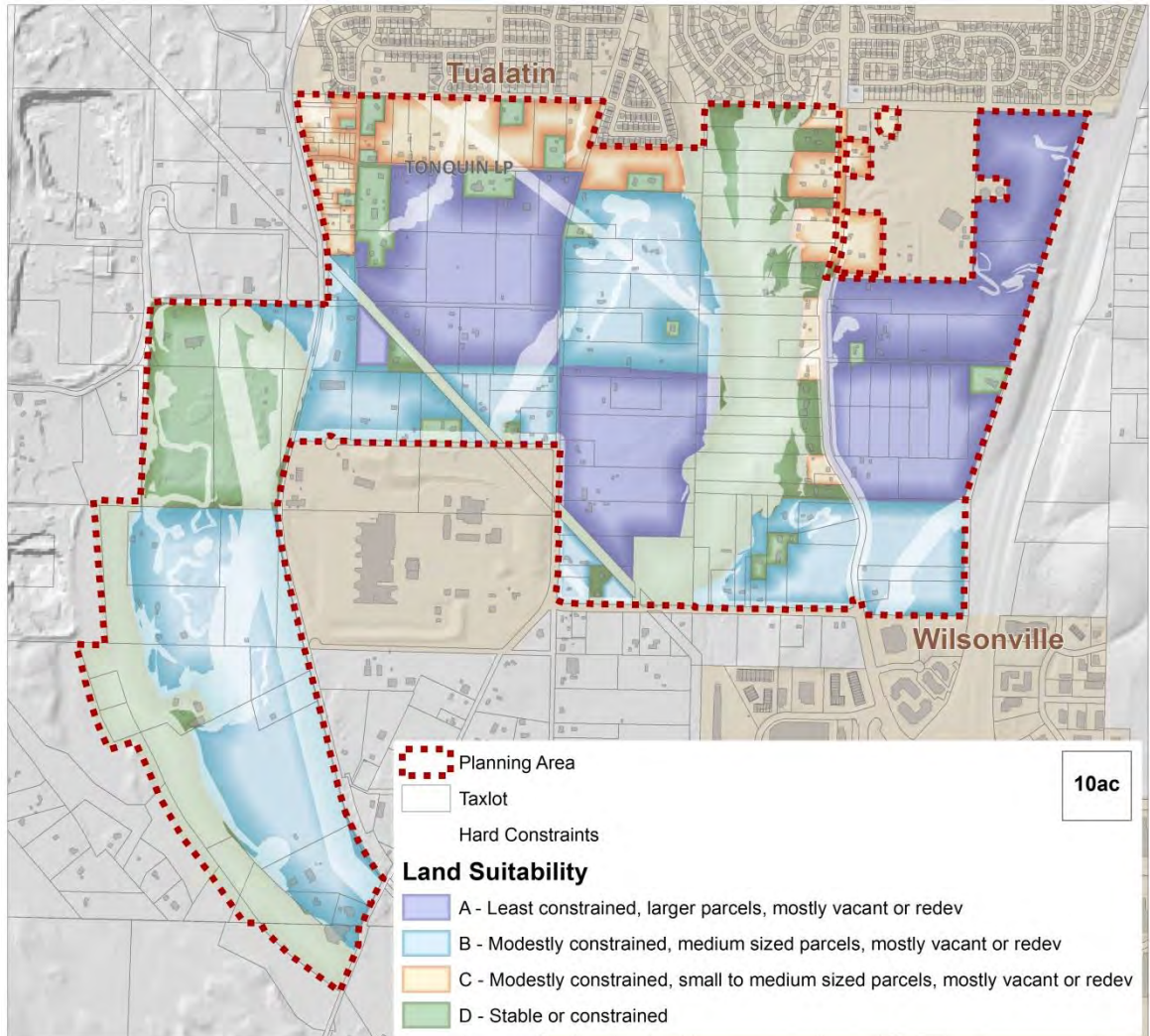
# Suitable Sites

- Suitability C:
  - Small to medium sized parcels
  - Modestly constrained
  - Mostly vacant, might have redevelopment opportunities
  - 64 buildable acres (does not exclude built road network, etc.)



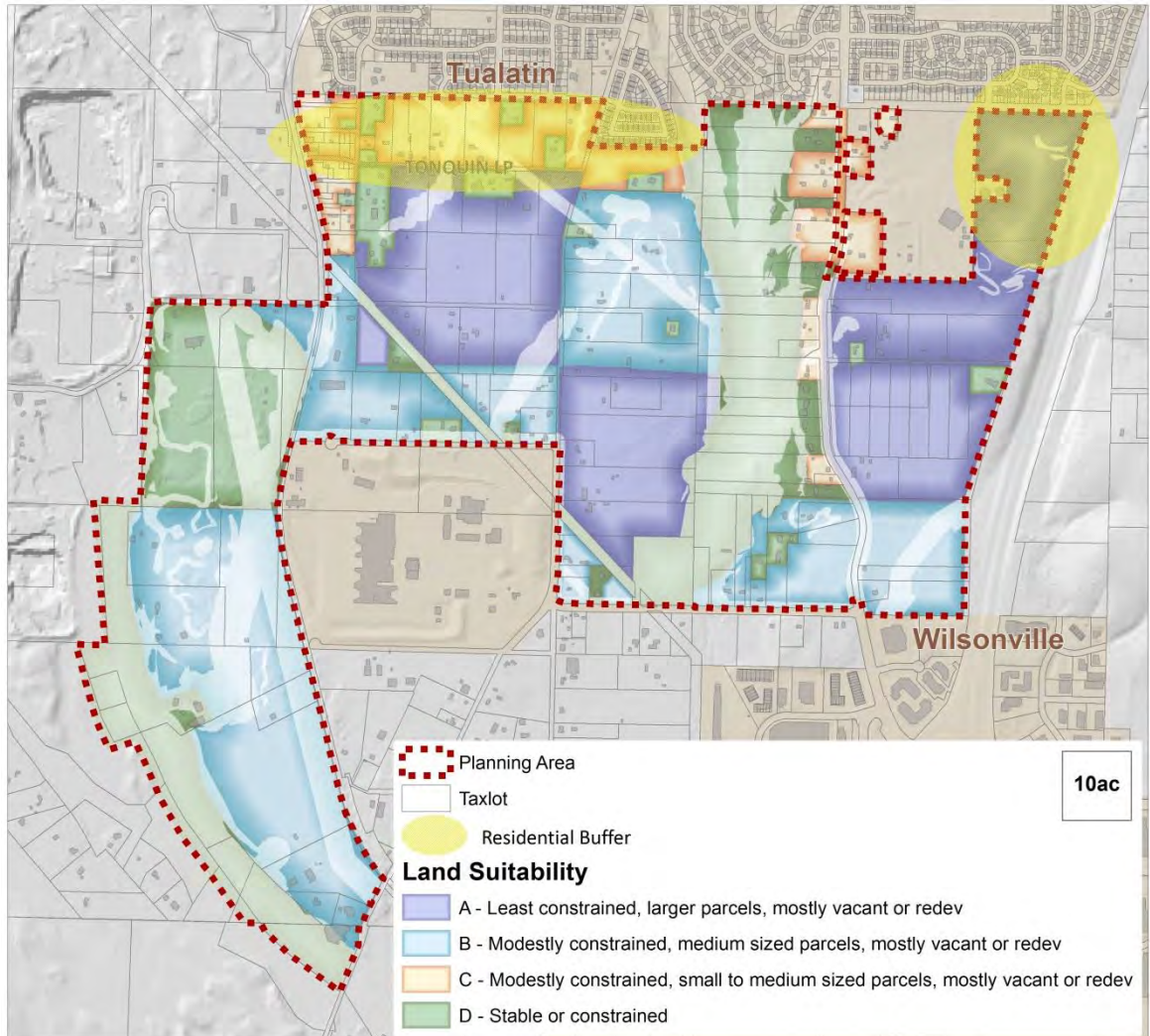
# Suitable Sites

- Suitability D:
  - Stable or mostly constrained
  - 82 “buildable” acres (does not exclude built road network, etc.)



# Suitable Sites – Residential Buffer

- Residential Buffer:
  - 63 buildable acres (does not exclude built road network, etc.)



# Buildable Land à la Envision\*

Site	Constrained Acres	Vacant Acres	Redev Acres
Suitability A	15	197	12
Suitability B	79	144	47
Suitability C	12	38	20
Suitability D	136	12	1

\*based on parcel file (excludes roadways and stable parcels)





## BASALT CREEK CONCEPT PLAN



# MARKET ANALYSIS DRAFT

PREPARED FOR



PREPARED BY



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## Executive Summary

Located between Tualatin’s residential neighborhoods to the north and Wilsonville’s employment center to the south, Basalt Creek is currently a relatively rural area that is positioned for significant change and urbanization due to its prime location within the growing Portland metropolitan region. Leland Consulting Group (LCG) has prepared this market analysis as one component of the Basalt Creek Concept Plan. Its purpose is to provide Basalt Creek stakeholders with information regarding the outlook for industrial, office, residential, and retail development in Basalt Creek and adjacent areas, and to inform the Concept Plan as this process moves forward. This executive summary condenses the key points of the analysis; details are explained in the body of the report. The key findings and recommendations of this market analysis are:

**Industrial and Office Market.** Basalt Creek is located near the center of one of the region’s largest clusters of employment land, which includes existing developed areas in the cities of Tualatin, Wilsonville, and Sherwood, as well as the planned future employment areas of Southwest Tualatin, Tonquin, and Coffee Creek. A market area—including the cities of Tualatin, Wilsonville, and Sherwood and some surrounding areas—was defined for this market analysis in order to provide a baseline to estimate future subregional employment and population growth.

The Metro regional government projects rapid employment growth of 2.3 percent annually for the market area through 2035, about 40 percent faster than the employment growth in the region (1.7 percent), indicating that ongoing business expansion and job creation is expected for these three cities in the southwestern metropolitan area.



Tualatin and Wilsonville have independently identified a series of industry clusters in which the two cities are already highly competitive, and in which they expect future significant business and job growth. 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. Leading organizations within these clusters include Lam Research, Legacy Meridian Park Medical Center, the Oregon Institute of Technology, Mentor Graphics, and Xerox Corporation. Businesses in these categories are well suited to locate at Basalt Creek.

Both Tualatin and Wilsonville have seen significant industrial and office development during the past three decades. Development peaked during the 1990s and has slowed following the recession; however, industrial development in particular is expected to resume and accelerate in coming years due to a desire to “onshore,” shorten supply chains, and take advantage of lower domestic costs in some industries. Between 1980 and 2014, the cities of Tualatin and Wilsonville saw on average over 400,000 square feet of industrial and office building development annually, and 56.6 acres of industrial and office land development annually. The amount of industrial development in both cities is significantly larger (more than seven times) than the amount of office development, and this general dynamic is expected to persist for the foreseeable future.

Building types vary significantly within the market area: some industrial facilities contain more than 200,000 square feet of building area, while many other small office and industrial flex spaces are less than 20,000 square feet in size. The floor area ratio (FAR) of most buildings, however, generally falls within the range of 0.2 to 0.4, which generally indicates one to three-story buildings with large areas for parking and/or freight movement. A small number of office buildings have higher FARs to about 1.0, which indicates more dense buildings and some structured parking.

Going forward, employment development in Basalt Creek will benefit from a number of competitive advantages. These include its direct access to I-5, superior to other employment areas in the region; access to I-205, Highway 217, arterial roads, and transit; a growing and educated workforce; and established and expanding industry clusters.

Based on past industrial and office development, and future growth projections, LCG absorption projects employment land at Basalt Creek to develop at a rate of eight to 10 net acres per year. However, the pace of build out will depend on economic conditions, the availability of employment land in other nearby areas, infrastructure such as roads and sewer, and other factors. Building and site sizes should vary widely, and FARs will remain consistent with those seen in the past.

**Housing Market.** Significant population growth is anticipated for Tualatin, Wilsonville, and the Portland metropolitan region over the next two decades. Metro's gamma population model shows that Tualatin and Wilsonville will add 1,170 and 3,649 households respectively between 2010 and 2035. Metro projects that the market area will add about 10,900 households during this time period, an increase of 39 percent. These population increases will result in demand for housing at Basalt Creek through 2035, assuming that the area can compete effectively with other potential residential locations.

Basalt Creek's location is also a positive: the study area is immediately south of several South Tualatin residential neighborhoods, which contain attractive parks, street trees, and schools. It should be noted, however, that Basalt Creek is located in the Sherwood School District rather than the Tigard-Tualatin School District, and therefore school-age children will head west rather than north for school. The market area's current demographics are encouraging for new housing development. When compared to the Portland metropolitan area, the market area has a higher percentage of family households, larger households, higher household and per capita incomes, more residents with college degrees, and more residents who work in white collar jobs.

However, housing demand is expected to shift somewhat in the future because of decreasing housing sizes, an aging population, the popularity of walkable communities, and other factors. By combining current and future housing demand indicators, this market analysis provides three different housing development scenarios, all of which assume a mix of single-family detached, single-family attached, and multifamily housing. Housing diversity and flexibility (the opportunity to adjust the housing mix) is important to developers in any large area, since they need to be able to build for many different household types, and respond to changing market conditions. This report does not propose a specific number of households in the study area, since residents and decision makers have yet to define precisely which areas will be set aside for residential development.

**Retail/Commercial Market.** The likely amount and location of retail in Basalt Creek will need to be revisited later in the concept planning process, after more specific programs for employment and residential development are established. It is often said that “retail follows rooftops” and jobs, and without more confidence about the number of homes and jobs that will be in the area, it is difficult to project retail demand.

With that said, some generalizations can be made. Because there are several major regional and subregional retail nodes located to the north and south of the study area—at Bridgeport Village, central Tualatin, and in Wilsonville—any commercial space built in Basalt Creek is most likely to primarily serve local residents and employees. These larger centers are located at I-5 interchanges, whereas retail at Basalt Creek would be further from interchanges. Whereas regional retail is anchored by fashion, consumer electronics, entertainment, and furniture/household goods, neighborhood retail is typically anchored by grocery stores, pharmacies, and restaurants, supplemented by other local goods and services.

Retail is likely to be located at key intersections on either Boones Ferry or Grahams Ferry Roads, the major north-south arterials in Basalt Creek, and potentially along the planned East-West connector, which will also carry considerable traffic and afford high visibility to retailers.

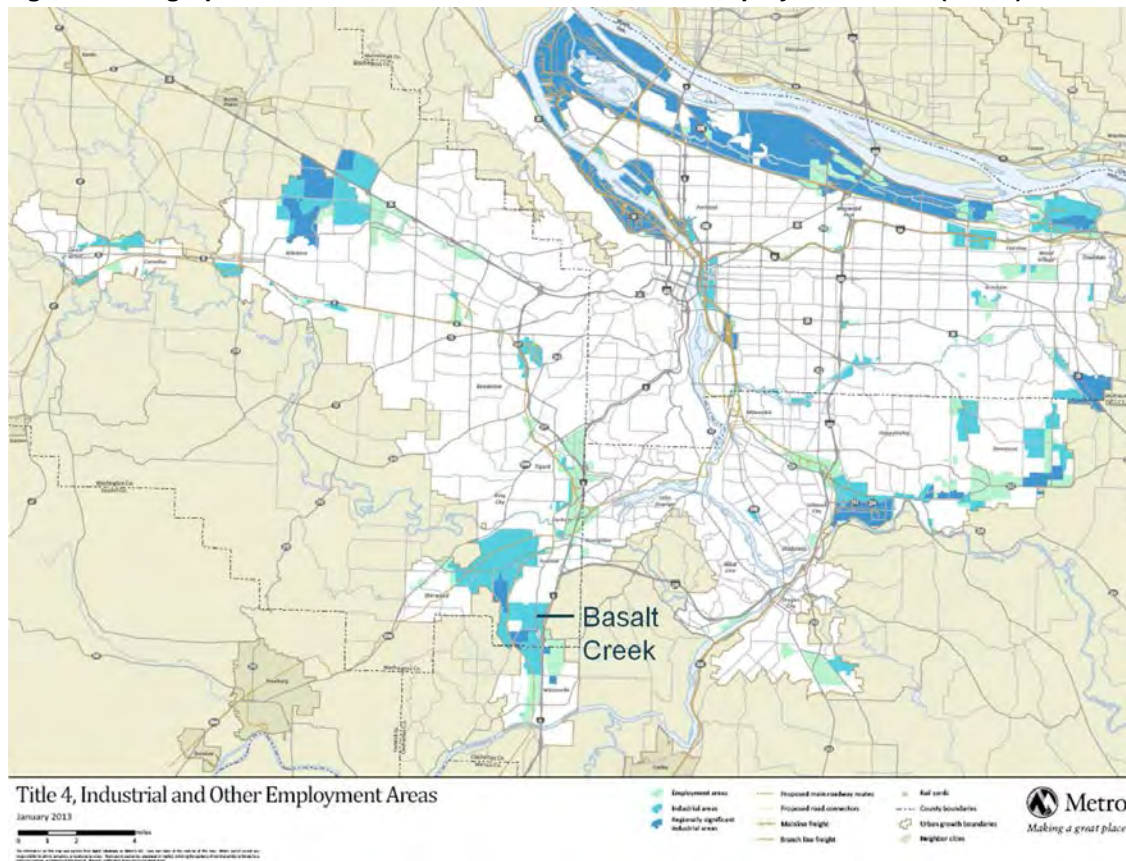
# Industrial and Office Market Analysis

## Regional Employment Context

As shown in Figure 1, Basalt Creek is contiguous with a number of other employment and industrial areas in the southwestern part of the Portland metropolitan region, including areas in the cities of Tualatin, Wilsonville, and Sherwood. Viewed together, these areas comprise one of the largest industrial and employment clusters in the region, comparable in size to the agglomeration in northern Hillsboro, though smaller than the employment lands near PDX Airport.

A major feature and competitive advantage of this “Southwestern Metro” employment cluster in general, and Basalt Creek in particular, is its immediate access to I-5, the West Coast’s most important transportation route. Via I-5, Basalt Creek is closely connected to downtown Portland, numerous Willamette Valley communities, and major metropolitan areas in Washington and California. I-205 and Highway 217 are also close by and easily accessible. These freeway connections are a major benefit for industrial—for whom distribution is an important site selection factor—and office-based businesses—which require access for their clients, suppliers, workforce, and collaborators.

**Figure 1. Geographic Context: Title 4 Industrial and Other Employment Areas (Metro)**



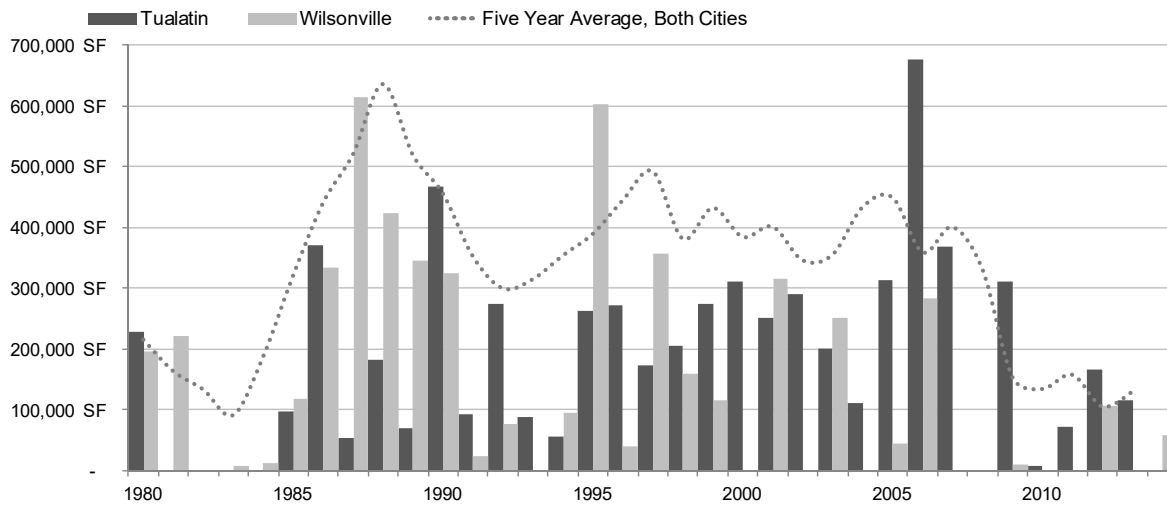
Source: Metro.

## Industrial and Office Development, 1980 to 2014

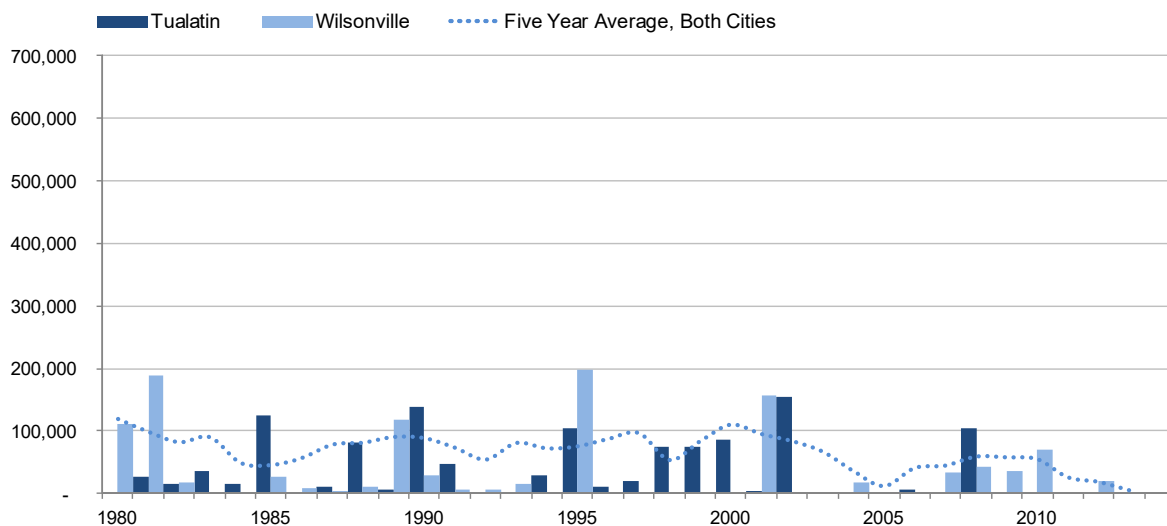
The figures below show the pace of industrial and office development in the cities of Tualatin and Wilsonville, beginning in 1980. The bars represent the building area (square feet) of development within each of the two cities in a given year, while the dashed line is a longer-term trend line, showing a five-year rolling average of built area for both cities combined. These historical development trends are one data set that shapes expectations for future employment development in both cities and Basalt Creek.

Since 1980, both cities have seen considerably more industrial development than office development. Over this 34-year period, an average of 340,000 square feet of industrial space and 67,000 square feet of office space has been built in the two cities combined. Thus, the amount of industrial development has been about five times as great as office development.

**Figure 2. Industrial Development, Tualatin and Wilsonville, 1980 to 2014**



**Figure 3. Office Development, Tualatin and Wilsonville, 1980 to 2014**



Source, both figures: CoStar, Leland Consulting Group.

The past decade has been a slow period for both industrial and office development. The recession slowed industrial development beginning in 2008, particularly in Wilsonville. The pace of recent industrial development has been about half of development during the 1990s and early 2000s—considered to be a time of robust activity for industrial developers. Office development has also slowed, although this trend began in 2003, before the recession. Office development in the past decade has also taken place at about half the pace of office development in the 1990s.

Clearly, both industrial and office development go through significant peaks and troughs. By focusing on the five-year rolling-average trend line, however, a somewhat more consistent pattern of development can be seen.

### Employment Building and Site Attributes

Table 1 below shows some key attributes of industrial and office development in Tualatin and Wilsonville.

- On average, 43.1 acres of industrial land and 13.6 acres of office land per year have been developed in both cities combined. Wilsonville has seen about 25 acres of employment land development per year, 16.3 acres of industrial land, and 8.3 acres of office land, which provides a good benchmark for total demand in Wilsonville, including Basalt Creek, going forward.
- Average industrial building sites (9.1 and 6.5 acres in Tualatin and Wilsonville respectively) tend to be larger than office building sites. Industrial buildings also tend to be larger than office buildings.
- Floor area ratios (FAR) are helpful to understanding the physical form of buildings on their sites. Most industrial buildings have a FAR of 0.2 to 0.4. Most office buildings have FARs between 0.3 and 0.5; however, there are some newer office buildings in Tualatin that feature structured parking and FARs up to 1.0. These FARs are consistent with Metro’s analysis and future projections.

**Table 1. Attributes of Industrial and Office Development in Tualatin and Wilsonville**

	Industrial			Office		
	Tualatin	Wilsonville	Total	Tualatin	Wilsonville	Total
Total Area (SF)	10,470,000	8,390,000	18,860,000	1,260,000	1,250,000	2,510,000
Av. Annual Development, 1980 - 2014						
Annual Building Development (SF)	186,960	150,980	337,940	34,632	32,985	67,617
Annual Land Development (Acres)	26.8	16.3	43.1	5.3	8.3	13.6
Building Averages, 2000 - 2014						
Average Building Size (SF)	60,224	80,000	-	31,807	35,000	-
Average Site Size (Acres)	9.1	6.5	-	4.2	2.0	-
Typical Floor Area Ratios (FAR)	0.2 to 0.4	0.2 to 0.4	-	0.4 to 1.0	0.3 to 0.5	-

Source: CoStar, Leland Consulting Group. SF: Square feet; FAR: Floor area ratio, the ratio of a building’s size in square feet (or gross building area) to the size of the piece of land upon which it is built.

Note that, while the averages shown here are useful for high-level planning purposes, both industrial and office buildings vary considerably in size, scale, and purpose. For example, the industrial building category includes flex buildings, which can often be divided into 5,000 square foot tenant spaces and feature significant amounts of office and showroom space. The industrial category also includes



distribution and warehouse buildings, which can be hundreds of thousands of square feet in size. Sample industrial and office buildings are pictured below in Figure 4 and Figure 5.

**Figure 4. Typical Industrial Buildings: Office/Distribution and Flex**

The first building pictured below is located in the Wilsonville Business Center west of I-5 and contains a mix of office space (left foreground) and warehouse/distribution space, where freight trucks are parked. The second building pictured below is a typical flex industrial building located in the Tualatin Industrial Center, which features high ceiling heights, freight loading, and small, flexible spaces that can serve as a combination of office, showroom, and/or industrial.



**Figure 5. Headquarters Office Building (Mentor Graphics)**

The Mentor Graphics building is located east of I-5 between the Elligsen Road and Wilsonville Road interchanges. Despite its size and height, the FAR of the building is similar to other buildings in the area because of its extensive campus, landscaped areas, and surface parking.



## Employment Outlook

Table 2 below shows Metro’s gamma employment forecast for the 2010 to 2035 time period. Key aspects of this forecast that are relevant to Basalt Creek are:

- Employment in the Basalt Creek market area is expected to grow at 2.3 percent annually between 2010 and 2035, about 40 percent faster than the three-county metro area rate (1.7 percent). Employment in all three cities within the market area is expected to grow relatively rapidly—at a higher annual rate than their populations, and a higher rate than regional population growth (see Table 6 for population growth projections).
- Tualatin and Wilsonville are expected add 12,267 and 10,346 jobs respectively over the 25-year Metro forecast period. In total, the market area is expected to add 36,786 jobs, an increase of 78 percent over the 47,005 jobs currently in the market area.
- This significant growth can be expected to drive consistent demand for employment land and buildings, including industrial, office, and commercial space, both in Basalt Creek and in other employment areas in the market area over the 2010 to 2035 time period.

**Table 2. Metro Employment Forecast, 2010 to 2035**

Jurisdiction	Employment			
	2010	2035	Change	CAGR
City of Tualatin	22,972	35,239	12,267	1.7%
City of Wilsonville	17,073	27,419	10,346	1.9%
City of Sherwood	4,216	9,252	5,036	3.2%
<b>Basalt Creek Market Area</b>	<b>47,005</b>	<b>83,791</b>	<b>36,786</b>	<b>2.3%</b>
Clackamas County	137,946	210,444	72,498	1.7%
Multnomah County	419,164	597,331	178,167	1.4%
Washington County	232,019	382,812	150,793	2.0%
<b>Three County Total</b>	<b>789,129</b>	<b>1,190,587</b>	<b>401,458</b>	<b>1.7%</b>

Source: MetroScope Gamma Forecasts, Published Feb 07, 2013, <http://www.oregonmetro.gov/regional-2035-forecast-distribution>.

**Figure 6. Projected Employment Growth (2010-2035)**

Source: Metro Gamma Forecast; Leland Consulting Group.

Table 3 shows Metro’s analysis of past and future employment growth in the Metropolitan Statistical Area (MSA), completed for the Draft 2014 Urban Growth Report. This data shows employment changes for a larger area—the seven-county MSA—than the three-county data above.

**Table 3. Employment: Past Growth and Future Projections, Seven-County MSA**

Time Period	Annual Growth Rate
1960 - 1980	3.74%
1980 - 2000	2.60%
2000 - 2020	1.17%
2020 - 2040	1.24%

Source: Metro, *Mid Range projection, Draft 2014 Urban Growth Report, Appendix 1a.*

A key take away from this data is that while employment in the region will continue to grow, it will grow more slowly during the build out period for Basalt Creek (likely largely during the 2020 to 2040 time period) than during the most rapid periods of employment growth (1960 to 2000). Based on this projection and conversations with area brokers, LCG projects that employment land absorption during Basalt Creek’s build out period should be faster than 2000 to 2014 (which includes the recession and its aftermath), but slower than during the rapid growth period of 1980 to 2000, and the 1990s in particular.

## Industrial Development Outlook

Private sector analysis of the demand for industrial space is consistent with Metro’s projections in that most observers expect a resurgence of demand as the economy recovers from the recession. Nationwide, industrial development is anticipated to accelerate due to increased long-term demand for industrial properties from firms whose businesses involve research and development, advanced manufacturing, general manufacturing, and warehousing. While private sector development forecasts are often focused on a short to medium-term (e.g., one to five years) time frame, rather than the long-term (20-year) time frame for this plan, the dynamics described below are significant and are supportive of industrial development at Basalt Creek. According to the Urban Land Institute’s 2014 *Emerging Trends in Real Estate*:

**Industrial.** Industrial real estate will get a boost in 2014 as the U.S. economy continues to improve and as retailers and manufacturers have made the shortening of the supply chain their top priority for the foreseeable future. Warehousing stands out as the strongest prospect in both investment and development in 2014—not only among industrial subsectors and niche markets, but across all types of subsectors and niche markets... Warehousing is a clear favorite when survey respondents recommended action... The strength of warehousing reflects the expanding influence of e-commerce distribution networks...

**The Return of Manufacturing.** “Manufacturing is coming back to the U.S., and it’s coming back faster than we thought. Back in 2011, no one thought we would see anything until 2015. Now, we are seeing dozens of companies moving back to the U.S. because the economics are shifting,” says a labor economist. “A key driver of this trend is that labor costs in China are rising, with wages increasing by about 15 to 20 percent a year and the steady appreciation of the Chinese yuan against the dollar. Manufacturers are seeing very long supply chains, and there are increasing concerns about intellectual property.”

Portland's industrial market is heating up in response to these trends. In late 2013 and early 2014, a number of new industrial projects have been announced totaling about 1.5 million square feet; one is the 800,000-square-foot PDX Logistics Center (18.3-acre building) to be built near PDX Airport. A speculative investment of this magnitude shows significant confidence in the Portland market. Eight additional major projects are reportedly in the planning pipeline. Industrial brokers at Kidder Matthews report an "industrial land shortage" and that the "greatest demand is seen in the I-5 corridor," a submarket that includes Wilsonville and Tualatin.

## Office Development Outlook

Office development nationally and regionally is not expected to bounce back with the same resiliency as industrial space. Office development in the short and long term faces several challenges. In the short term, the Portland region's employment levels have only just recovered this year to their 2008 pre-recession levels. While office vacancies are far lower than they were several years ago, there is not yet pressure for new development. As Table 4 shows, the region is expected to add just 288,000 square feet of office in 2014, or 0.6 percent of the total regional inventory of nearly 47 million square feet. Tualatin's current vacancy rate of 20.5 percent suggests a soft market, though that space will be occupied in the long term.

**Table 4. Current Office Market Summary, Portland Metro Region**

Market	Existing Inventory		Vacancy %	YTD Net Absorption	Under Const. & Complete YTD	Class A Rates
	# Blds	Total RBA				
Portland CBD	374	26,309,983	10.0%	(36,157)	288,000	\$25.58
Lake Oswego/West Linn	142	1,144,080	8.5%	13,170	0	\$25.50
North Beaverton	151	3,246,113	6.7%	37,420	0	\$26.33
Sunset Corridor/Hillsboro	359	10,374,721	6.2%	111,442	0	\$21.53
Tigard	226	3,313,116	10.4%	35,859	0	\$24.27
Tualatin	68	1,263,266	20.5%	10,099	0	\$22.28
Wilsonville	59	1,252,446	7.1%	9,476	0	\$20.50
<b>Totals</b>	<b>1,379</b>	<b>46,903,725</b>		<b>181,309</b>	<b>288,000</b>	

Source: CoStar, Leland Consulting Group.

Of more concern for new office development at Basalt Creek are several long-term trends. Companies are becoming much more efficient than ever before with their office space, and thus, requiring less of it. Greater efficiencies are being achieved through smaller dedicated desk spaces; employees who work out of the office on the road, from home, or other locations; and less storage for fewer paper files. In addition, companies have gotten more reluctant to take on long-term obligations such as expanded leases. These trends are expected to continue, and in some cases accelerate in the future, and therefore, demand for office space as a function of total employment is likely to be less in the future.

In conclusion, in the near and potentially long term, office development is likely to be slower than industrial development throughout the Portland region. As shown in Figure 2 and 4, much more industrial development than office development has taken place in Tualatin and Wilsonville in recent decades, and LCG expects this trend to continue at Basalt Creek.

## Tualatin and Wilsonville’s Economic Positioning and Goals

The Cities of Tualatin and Wilsonville are proactively pursuing economic development in order to provide high paying jobs for their residents, strengthen their tax bases, offer quality public services, and enable general prosperity in the communities. The two Cities’ main economic development plans relevant to Basalt Creek are shown below.

**Table 5. Relevant Economic Development Plans**

Tualatin	Wilsonville
<ul style="list-style-type: none"> <li>• Economic Development Strategic Plan (2014)</li> <li>• Industry Cluster Analysis (2014)</li> <li>• Southwest Tualatin Concept Plan (2010)</li> </ul>	<ul style="list-style-type: none"> <li>• Economic Opportunities Analysis (EOA) Update (Final Draft, 2012)</li> <li>• Coffee Creek Master Plan (2007)</li> </ul>

### Target Industry Clusters

Tualatin and Wilsonville have both identified a series of targeted industry clusters. According to Tualatin’s Industry Cluster Analysis, a cluster is an agglomeration of similar and related businesses and industries that are mutually supportive, regionally competitive, attract capital investment, encourage entrepreneurship, and create jobs. For example, 57 percent of Tualatin’s jobs fall within its five key industry clusters, which also provide wages that are on average 70 percent (\$35,000) higher than those in all other industries.

Clusters reflect the community’s strengths and competitive advantages, suggest which sectors of the economy are most likely to generate jobs in the future, and provide policy makers with guidance about the types of land, buildings, infrastructure improvements, and other actions needed to grow jobs in the future. (Wilsonville’s EOA uses the term industry “sectors.” The terms cluster and sector are used interchangeably here.)

Both Tualatin and Wilsonville have determined that they excel in the following three industry clusters. The economic figures included below are drawn from the Cities’ economic development plans.

- **Advanced Manufacturing and Related.** This cluster is a significant driver of both cities’ economies. It is Tualatin’s largest cluster, accounting for 22 percent of jobs in the city. It accounts for a significant portion of Wilsonville’s economy; computer and electronic product manufacturing was Wilsonville’s largest industry sector as of 2012, and includes several of the city’s largest employers such as Xerox, TE Connectivity, and Rockwell Collins.

The Oregon Institute of Technology (OIT), now educating students in the engineering, technology, management, and health sciences fields from its Wilsonville campus, is an important anchor institution for the southwest metro economy. The Cities are looking for ways to capitalize on OIT’s presence and to strengthen partnerships between the school and private business.

Growth in this cluster will result in ongoing demand for industrial land and buildings in Basalt Creek and other areas. Freeway access, freight mobility, and access to a skilled workforce will be important to this cluster’s ongoing success.

- **Corporate and Professional Services.** This cluster accounts for 12 percent of Tualatin's jobs, and was the second largest industry sector in Wilsonville as of 2012. Major employers include Portland General Electric and Express Employment Professionals in Tualatin, and Mentor Graphics in Wilsonville. Growth in this cluster will result in ongoing demand for office land and buildings in Basalt Creek and other areas. A variety of locational factors tend to be important to corporate and professional service firms, including skilled workforce, available land or office space, transportation connections, and nearby restaurants and commercial services.
- **Health Care and Medical Related.** This cluster is important in both cities: it is the third largest in Tualatin and fourth largest in Wilsonville. Tualatin's health care cluster is anchored by Legacy Meridian Park Medical Center, among Tualatin's largest employers, and also includes associated industries such as clinics, laboratories, physician offices, and assisted living centers. Wilsonville's largest health care employers as of completion of the EOA were Infinity Rehab and Avamere, both ambulatory (outpatient) service providers. Wages in this cluster are well above average.

Because of the diversity of health care businesses, firms in this cluster can operate in health care-specific zones (such as Tualatin's Medical Commercial zone), or general employment zones (such as Wilsonville's Planned Development Industrial zone). In some cases, health care firms that serve smaller, more localized populations can locate in retail/commercial zones.

In addition to the three clusters described above that have been identified as targets for both cities, Tualatin and Wilsonville have also identified these industry clusters:

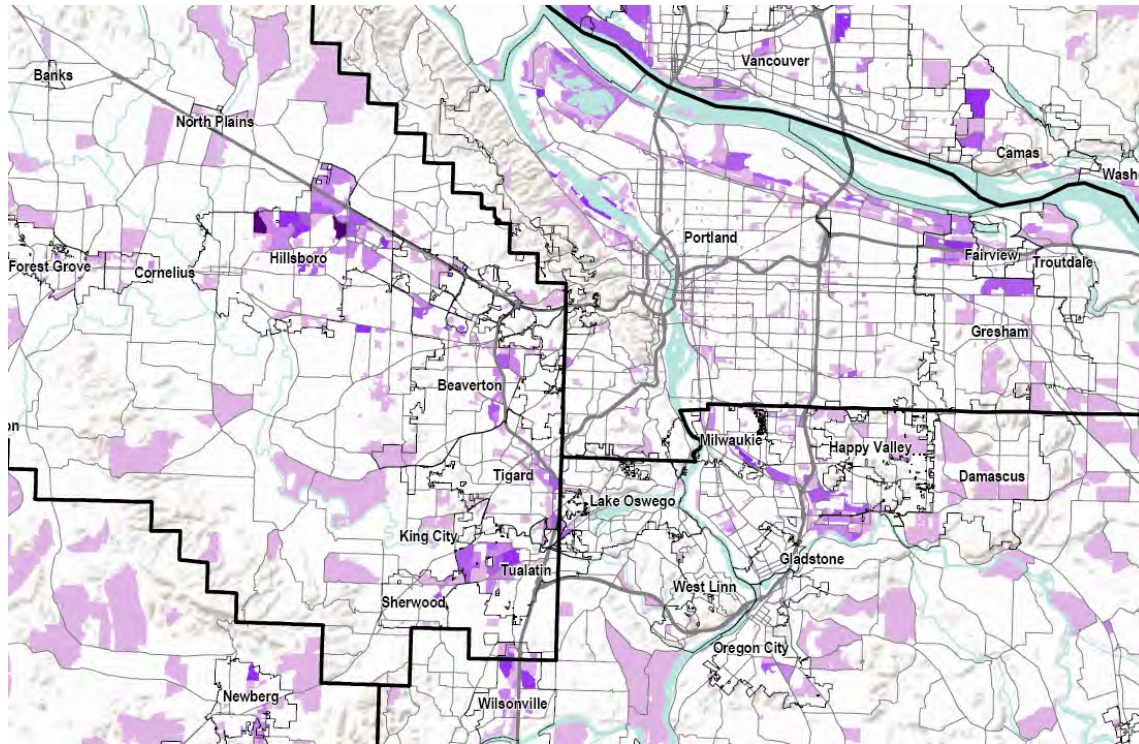
- **Other Industrial Clusters.** Both Cities have identified additional industrial target clusters that could locate in Basalt Creek. Tualatin has identified two other industry clusters likely to generate demand for industrial land and buildings: Food Processing and Distribution, and Wood, Paper, Printing, and Related. Wilsonville identified a number of other industrial business types: Light Manufacturing and Warehouse/Showroom Operations; Specialty Contractors and Construction Firms; Sustainable Product Manufacturing and Distribution; Miscellaneous Manufacturing, and Wholesale Trade.

Growth in these clusters will result in ongoing demand for industrial land and buildings in Basalt Creek and other areas. Freeway access, freight mobility, and access to a skilled workforce will be important to these clusters' ongoing success.

- **Other Professional and Commercial Services.** Wilsonville's EOA also identifies Creative Services (such as transportation logistics, legal services, management consulting, and accounting) as a target cluster. Similar to Corporate and Professional Services, growth in this cluster should result in demand for office land and buildings in Basalt Creek and other areas.
- **Other Clusters.** Some clusters may or may not be a good fit for inclusion at Basalt Creek, depending on the Concept Plan. An example is Tourism and Recreation, which was identified by Wilsonville.



**Figure 7. Number of Manufacturing Employees**



Source: Institute for Metropolitan Studies, Portland State University.

**Figure 8. Lam Research Facility, Tualatin**

The semiconductor equipment manufacturer is the city's largest private employer, and a leader in the city's advanced manufacturing cluster.



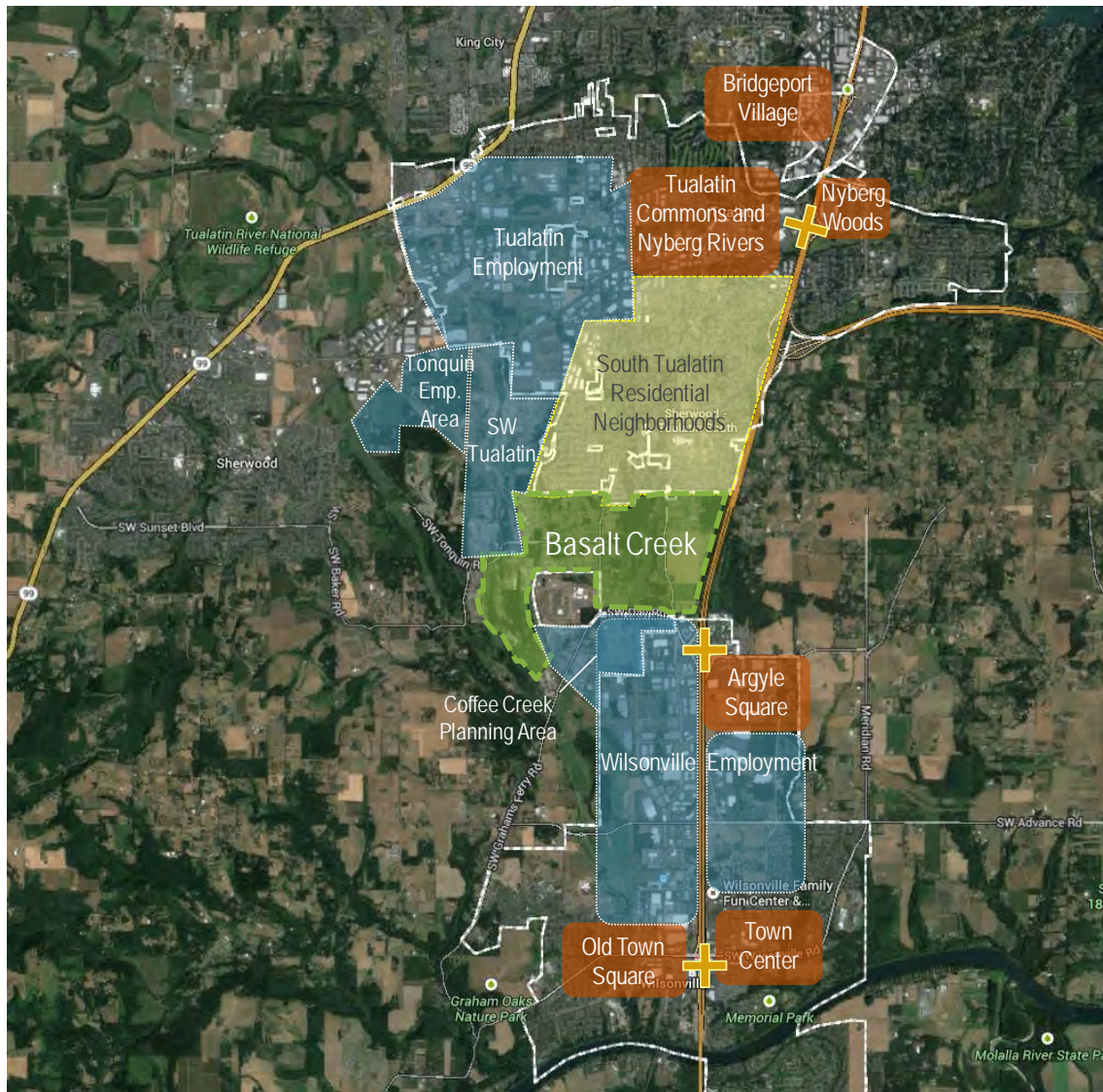
Photo credit: Tualatin Chamber.

## Subregional Context

Figure 9 below shows the Basalt Creek study area and the key employment, commercial, and residential areas nearby, along with three I-5 freeway interchanges. This map shows that Basalt Creek is located at the heart of a large, contiguous series of employment areas, which will provide Tualatin and Wilsonville with the land area to build on and expand their advanced manufacturing, corporate services, and other key industry clusters.

Transportation is fundamentally important to these employment areas, and transportation connectivity has the potential to make a whole that is greater than the sum of its parts by enabling firms to trade goods and services easily. I-5 is the most important single transportation corridor. The 124<sup>th</sup> Avenue Extension and East-West Connector will also be very important in knitting the employment areas together. This large agglomeration of employment areas creates momentum, and will also be a source of competition for Basalt Creek.

**Figure 9. Basalt Creek Geographic Context**



Source: Leland Consulting Group. **Note: Employment, commercial, and residential area boundaries are approximate.**

**Established Employment Areas.** The Tualatin and Wilsonville employment areas are developed areas that have capacity to continue to add businesses and jobs. To the west of I-5, Wilsonville's employment area tends to contain more industrial, manufacturing, distribution, and flex businesses and buildings; to the east of I-5, a larger share of businesses are office-based professional service firms, such as Mentor Graphics and Xerox Corporation. However, the zoning is the same (Planned Development Industrial) throughout the entire Wilsonville employment area.

The City of Wilsonville is currently at work developing a Light Industrial Form Based Code (FBC) intended to streamline approval of light industrial and office employment, while at the same time ensuring high-quality urban design. The FBC will apply to the Coffee Creek industrial area, but could also apply to Basalt Creek Creek and other areas.

**Planned Employment Areas.** Southwest Tualatin, Tonquin, and Coffee Creek are planned employment areas located within the UGB that have yet to be served by infrastructure or see new private development. Annexation and development in the areas are property owner initiated.

- The Southwest Tualatin Concept Plan Area is approximately 614 gross acres and is planned for a mix of light industrial, high tech, and campus employment users. Most of the area remains an active quarry; the City expects this use to continue for an indeterminate period.
- The Coffee Creek industrial area is a 225-gross-acre area that was master planned by the City of Wilsonville in 2007. It is adjacent to Basalt Creek on the south side of Day Road. In addition to industrial development throughout the area, the City's vision includes the development of an office corridor on Day Road (the dividing line between the Coffee Creek and Basalt Creek areas). No development or annexation has taken place in Coffee Creek since the adoption of the master plan; land assemblage challenges, and lack of City services and financing plan to build those services are the primary obstacles to development here.
- The Tonquin employment area is a 300-gross-acre area located in the City of Sherwood. It is planned for light industrial development with a small amount of ancillary retail/commercial services.

## Employment Strengths and Challenges

Basalt Creek's primary strengths/competitive advantages and challenges vis-à-vis the industrial and office development are as follows:

### Strengths and Competitive Advantages

- Tualatin and Wilsonville's established and successful industry clusters in advanced manufacturing, professional services, and a variety of other industrial and office-based employment categories. Large contiguous cluster of existing and planned employment areas.
- Long-term growth projections for employment and population in the southwest Portland metro area.
- Excellent access to I-5, as well as I-205 and Highway 217. Additional transportation strengths include existing and planned arterial roads, and local and regional transit service provided by TriMet, WES Commuter Rail, and SMART.
- Educated workforce.

- Market success of recent industrial, office, and retail developments.

### Challenges

- Vision and regulation: This Concept Plan, and subsequent Comprehensive Plan and zoning amendments, need to be in place prior to development.
- Planning, financing, and construction of new infrastructure.
- Lot sizes and property aggregation. There is a mix of large and small lots throughout Basalt Creek. The time and cost required to secure properties from multiple parties in order to aggregate developable industrial or office properties of adequate size can be a significant deterrent to developers.
- Natural features including wetlands and slopes. Basalt Creek and its surrounding slopes and wetland areas run north-south through the study area and divide the area into east and west sections.
- The market for new office development continues to be slow. However, the study area will not be ready for private development for several years, which may allow enough time for this market to recover.

## Absorption and Build Out

Employment development—including industrial and office land development—is expected to take place in Basalt Creek at a pace of about eight to 10 buildable acres annually, assuming zoning is in place and urban infrastructure (roads, sanitary sewer, and water) are available. The pace of development will depend on economic conditions at the time of development, the location of transportation and other improvements, and the number of other nearby employment areas also available for development, among other factors. This represents a 30 to 40 percent capture rate of Wilsonville’s annual average of 25 acres of employment land development (see Table 1) and is reasonable given that employment development can also be expected to take place at Coffee Creek and “infill” within existing urbanized parts of the city. The projection is also consistent with the estimates provided by developers interviewed for this project. If development at Coffee Creek and on infill sites is highly constrained, then development at Basalt Creek could accelerate.

Buildings in Basalt Creek are expected to range widely in terms of site and building sizes. However, the FARs for most buildings should fall between 0.2 and 0.4 FARs and be surface parked. Higher density buildings with some structured parking may be feasible at special locations, or in later years after the market has matured.

# Housing Market Analysis

## Demographic Context

Table 6 summarizes Metro's 2010 to 2035 gamma projections of household growth for the cities of Tualatin and Wilsonville, and other geographies relevant to Basalt Creek. Some key take aways are:

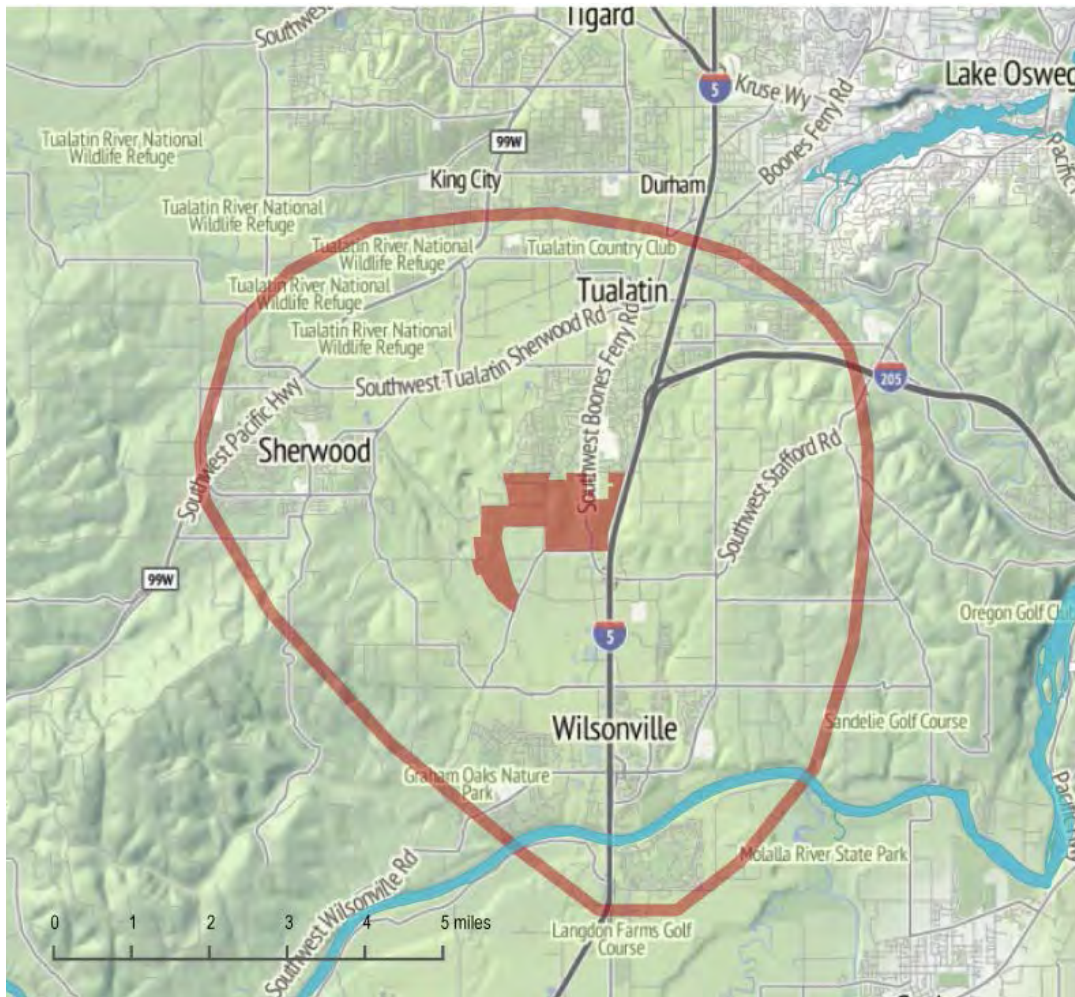
- The number of households in the three-county Metro area is expected to grow relatively quickly, at a 1.5 percent Compound Annual Growth Rate (CAGR), between 2010 and 2035, and thus add more than 11,000 households per year.
- Metro forecasts that Tualatin and Wilsonville will grow throughout the forecast period, with the number of households in Wilsonville projected to grow at a faster rate (1.5 percent) than Tualatin (0.4 percent). According to Metro, in 2010, Tualatin's average household size (2.61 persons) was slightly larger than Wilsonville's average (2.48 persons). Metro projects this difference will essentially remain through 2035, though Tualatin's household size will decrease somewhat (to 2.55 persons).
- The Basalt Creek market area (see Figure 10) was also defined in order to evaluate demographic trends that cross city and county boundaries. The market area includes the cities of Tualatin, Wilsonville, and Sherwood, as well as some surrounding areas. This market area is the area from which new residents of Basalt Creek are most likely to come, based on Leland Consulting Group's market research.
- The consistent projected household growth in the region, market area, and subject cities suggest that there will be demand for new homes within the market area generally and Basalt Creek specifically through 2035, assuming that Basalt Creek is effectively planned and made available for development.

**Table 6. Demographic Forecasts for Market Area and and Metro Region**

Jurisdiction	Households			
	2010	2035	Change	CAGR
City of Tualatin	10,000	11,170	1,170	0.4%
City of Wilsonville	7,859	11,508	3,649	1.5%
City of Sherwood	6,316	7,269	953	0.6%
<b>Basalt Creek Market Area</b>	<b>27,825</b>	<b>38,704</b>	<b>10,879</b>	<b>1.3%</b>
Clackamas County	146,324	208,437	62,113	1.4%
Multnomah County	304,649	442,546	137,897	1.5%
Washington County	202,647	289,592	86,945	1.4%
<b>Three County Total</b>	<b>653,620</b>	<b>940,575</b>	<b>286,955</b>	<b>1.5%</b>

Source: MetroScope Gamma Forecasts, Published Feb 07, 2013, <http://www.oregonmetro.gov/regional-2035-forecast-distribution>.

Figure 10. Basalt Creek Market Area



Source: Fregonese Associates, Leland Consulting Group.

Table 7 below and Table 8 on the following page provide additional perspective on the demographics of the subject cities when compared to the Portland MSA.

The City of Tualatin, when compared to the Portland MSA, has a higher percentage of family households (two or more related people), larger average households, higher household incomes, and higher capita incomes. A larger share of residents have college degrees (43 percent) and are employed in white collar jobs (67.4 percent) compared to the region.

Wilsonville, when compared to the Portland MSA, has a higher percentage of family households and smaller households. This is likely because the city has a higher share of young households (in the 25 to 34 age category) and seniors, Baby Boomers, and retirees (65+ category). Each of these age groups has different housing preferences. Like Tualatin, Wilsonville has a larger share of residents with college degrees (43 percent) and white collar jobs (67.4 percent) than the region. (The data below shows information about *jobs held by residents of the given geographical areas*, not the jobs within those areas.)

**Table 7. Demographic Summary**

Key: Low High 2014 data except where noted.

Demographic Attribute	City of Tualatin	City of Wilsonville	Basalt Creek Market Area	Portland MSA
Comparison to Portland MSA:	More families Larger HHs Higher HH Incomes Higher PC Incomes More college degrees More white collar emp.	Fewer families Smaller HHs More Gen Y More Boomers More low-income HHs More college degrees More white collar emp.	More families Larger HHs Higher HH incomes Higher PC incomes More college degrees More white collar emp.	
Population	26,520	21,235	73,786	2,296,285
Number of Households	10,170	8,638	28,121	896,982
Family Households (2010 Census)	68%	59%	68%	64%
Household Size (Average)	2.60	2.32	2.57	2.52
Household by Size (2010 Census)				
1 and 2 person households	57%	68%	58%	61%
3 and 4 person households	33%	25%	32%	29%
5 + person households	10%	7%	10%	10%
Median Household Income	\$64,324	\$59,812	\$70,256	\$57,441
Per Capita Income	\$32,672	\$31,995	\$33,336	\$30,135
Population By Age				
0 to 24	35%	31%	34%	32%
25 - 34	14%	16%	13%	15%
35 - 44	15%	14%	15%	14%
45 to 54	14%	13%	14%	14%
55 to 64	13%	11%	12%	13%
65 +	9%	15%	11%	13%
Median Age	35.7	37.0	36.6	37.5

Source: ESRI Business Analyst, Leland Consulting Group.

The Basalt Creek market area is similar to Tualatin in many ways. When compared to the Portland MSA, the market area has a higher percentage of family households, larger households, higher household and per capita incomes, more residents with college degrees, and more residents who work in white collar jobs.

**Table 8. Demographic Summary (Continued)**

Key: Low High 2014 data except where noted.

Demographic Attribute	City of Tualatin	City of Wilsonville	SW Metro Market Area	Portland MSA
<b>Education and Employment</b>				
Less than High School	9.7%	8.0%	8.0%	9.4%
High School or Equivalent	16.5%	20.4%	18.2%	22.1%
Associate's or some college	31.5%	32.3%	32.5%	34.2%
Bachelor's or Advanced Degree	42.3%	39.3%	41.3%	34.3%
<b>Occupation</b>				
"White Collar"	67.5%	70.1%	69.3%	63.1%
"Blue Collar"	11.3%	14.1%	13.5%	19.5%
<b>Housing</b>				
Median Home Value	\$331,190	\$349,927	\$337,289	\$275,516
<b>Housing Tenure</b>				
Owner Occupied Housing Units	51.9%	43.4%	55.0%	56.2%
Renter Occupied Housing Units	42.6%	50.5%	39.8%	37.7%

Source: ESRI, Leland Consulting Group. 2013 data except where noted.

In general, these demographics are favorable to housing development in Basalt Creek; they also reflect the types of residents most likely to locate in Basalt Creek.

Finally, the South Tualatin residential neighborhoods immediately to the north of Basalt Creek reflect many of the demographic attributes typical of Tualatin's population. The neighborhoods—including roads, street trees, parks, and schools—create a positive environment for residential development within Basalt Creek, particularly along the northern edge. It should be noted, however, that Basalt Creek is located in the Sherwood School District, not the Tigard-Tualatin School District, and therefore, school age children in Basalt Creek would need to travel west to Sherwood, rather than north, for classes.



## Regional and National Demographic Trends Affecting Housing

It is important to note that over the coming decades the metropolitan region's demographics are expected to become more like Wilsonville's demographics today, and somewhat less like Tualatin. Table 9 compares the age group split in the cities of Tualatin and Wilsonville today with Washington County's demographics in 2010 and projected demographics in 2035. The biggest change is that older households are expected to comprise a larger share of the total population, with a smaller share in the 35 to 64 age category. Household sizes are also expected to decrease. Washington County is used here as a proxy for the age groups and household types most likely to live in the Basalt Creek market area in coming years, and because Metro and the State of Oregon both produce long-range estimates for the County.

**Table 9. Demographic Comparison of Subject Cities in 2013 and Washington County 2035 Projection**

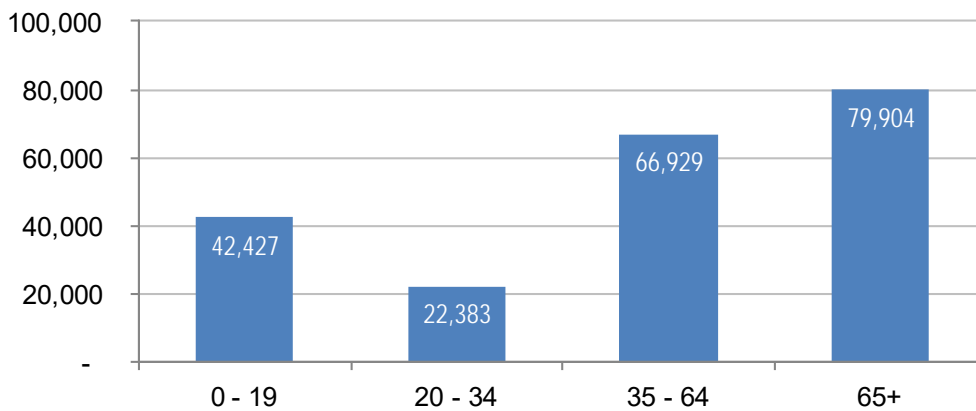
Age Group	City of Tualatin 2013	Washington County 2010	City of Wilsonville 2013	Washington County 2035
0 - 19	35%	34%	31%	30%
20 - 34	15%	15%	17%	14%
35 - 64	42%	40%	38%	38%
65+	8%	10%	15%	19%
Total	100%	100%	100%	100%

Source: Office of Economic Analysis, State of Oregon; ESRI Business Analyst, Leland Consulting Group.

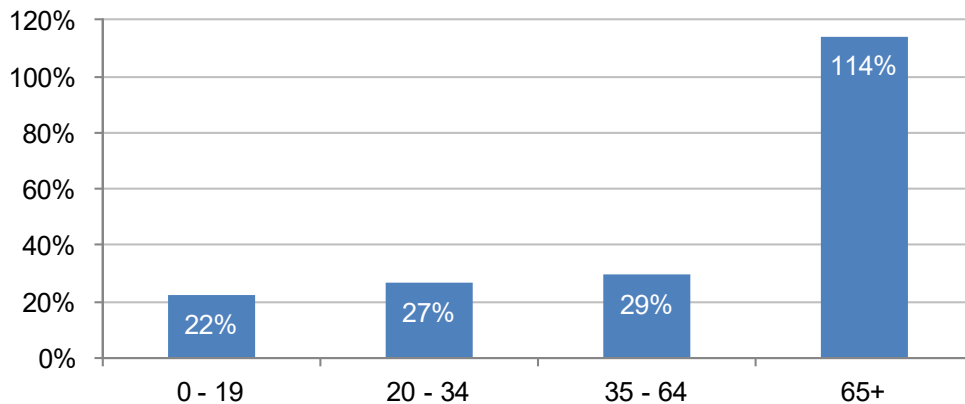
The figures below further emphasize the demographic trend that is referred to as the aging of the Baby Boomers or the “silver tsunami,” which is expected to have a significant impact on housing demand. As Baby Boomers, those born between 1946 and 1964, retire and begin to consider selling their homes and relocating, they are expected to have a major impact on housing markets. Many will be selling medium and large size single-family homes and looking for smaller homes with lower maintenance and upkeep, and the freedom to “lock and leave” home to visit family and friends, and vacation elsewhere. Many will also keep their homes.

Figure 11 highlights several points. The population of all age categories is growing between 2015 and 2035—the period during which Basalt Creek is expected to build out—and there should be demand for housing that meets the needs of all of these groups. The 65+ population will grow the most. The effect of this growth will be even more pronounced since these are relatively small households and thus more housing units are needed to serve the same population. The population of the 35 to 64 age category, and their children, under 19, will also grow significantly. This group is likely to re-occupy many of the single-family homes now in the market area, and new homes in Basalt Creek. The size of the 20 to 34 age group is not expected to increase much. This is because Generation Y / Millennials, now in their 20s and early 30s, is a large age cohort, and the age cohort behind them is expected to be smaller. Generation Y is driving the apartment boom now taking place in urban and mixed-use areas throughout the metro region.

**Figure 11. Net Population Change by Age Group, 2015 to 2035, Washington County**



**Figure 12. Percent Population Increase by Age Group, 2015 to 2035, Washington County, Oregon**



Source: Office of Economic Analysis, State of Oregon; Leland Consulting Group.

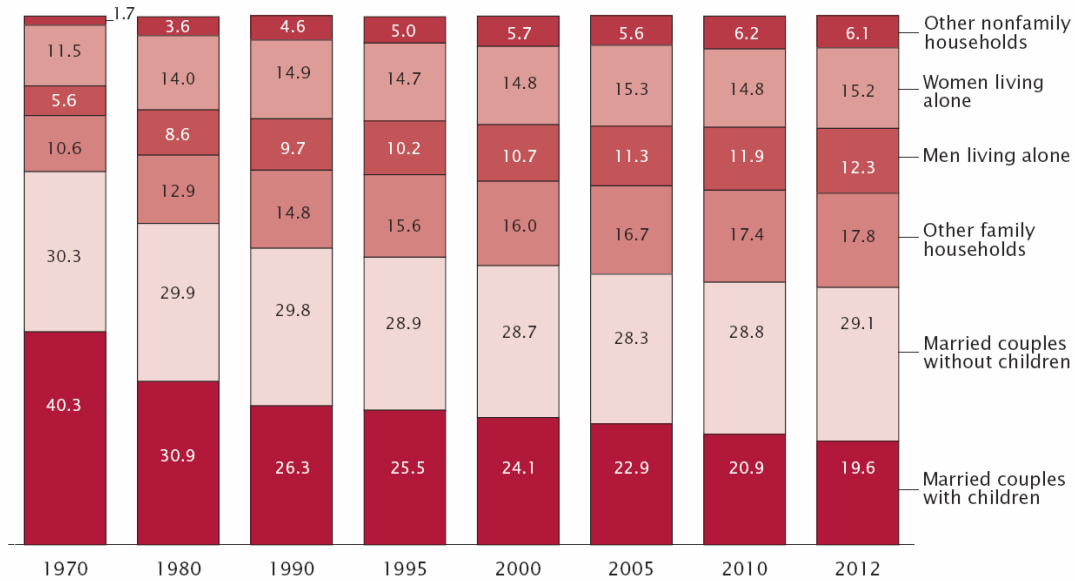
Figure 12 shows that, as a percentage of the current population, the growth in the 65+ age group will be far greater than growth in the other age groups. While the numerical increase (shown in Figure 11) is only slightly greater than the increase in other population groups, the percent increase is far greater. Therefore, our perception of this change, and its impact—on housing, health care, and other parts of society—is likely to be greater.

Some urban planners have identified four demographic groups that have seen the highest rate of growth in recent decades and are expected to continue growing in the coming decades. These are the “four S groups:”

- Seniors
- Singles
- Single-parent households
- Starter households

The growth in these groups nationwide is shown in Figure 13 below, along with the significant decrease in married couples with children as a share of all households. This strongly suggests that future housing demand, and the housing mix in residential neighborhoods, will continue to shift from single-family homes to a broader mix of housing types.

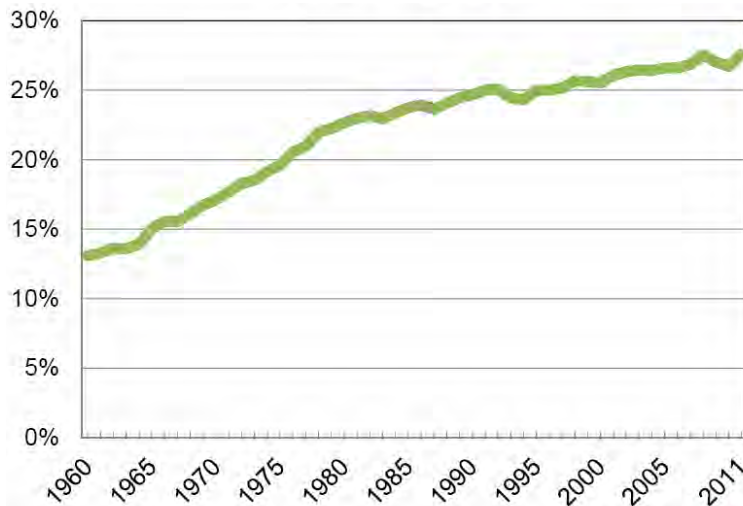
**Figure 13. Households by Type, United States**



Source: US Census Bureau.

Figure 14 shows the growth in the percent of households nationwide with one person. The share of one-person households doubled between 1960 and 2011. Two-person households are also making up a larger share of the national and regional population. Sixty percent of households in the market area, and 68 percent of Wilsonville’s households, are one or two-person households. These households are the core drivers of demand for housing types such as small lot single-family homes, attached single-family homes (townhouses and duplexes), and multifamily housing (apartments, condominiums, and senior housing).

**Figure 14. Percent of Households with One Person, United States**



Source: US Census Bureau.

## Community Preferences

Of course, real estate and home buying is all about “location, location, location”—in other words, the community, city, or neighborhood in which a given home is located. Since 2004, the National Association of Realtors (NAR) has conducted a nationwide poll to better understand what Americans are looking for in their future homes and communities. This is the most robust, widely-applicable survey instrument available to suggest how housing demand is evolving. One important focus of this poll is testing Americans’ interest in the features of what are variously called “walkable communities,” “complete communities,” or “traditional neighborhood development.” Such communities tend to be pedestrian friendly—parks, schools, shops and businesses are located within walking distance of homes—and contain a range of different housing types where households of different ages and sizes can live (single-family homes, townhouses, and multifamily housing).

Figure 15 shows how people responded when asked, “Do you think there is too much, too little, or the right amount of each of the following in the area close to where you live?” Respondents most often felt that there are too few features such as safe routes for walking and biking, public transit, a diversity of housing, and shops and restaurants within an easy walk.

**Figure 15. Which Neighborhood Amenities are in Demand?**

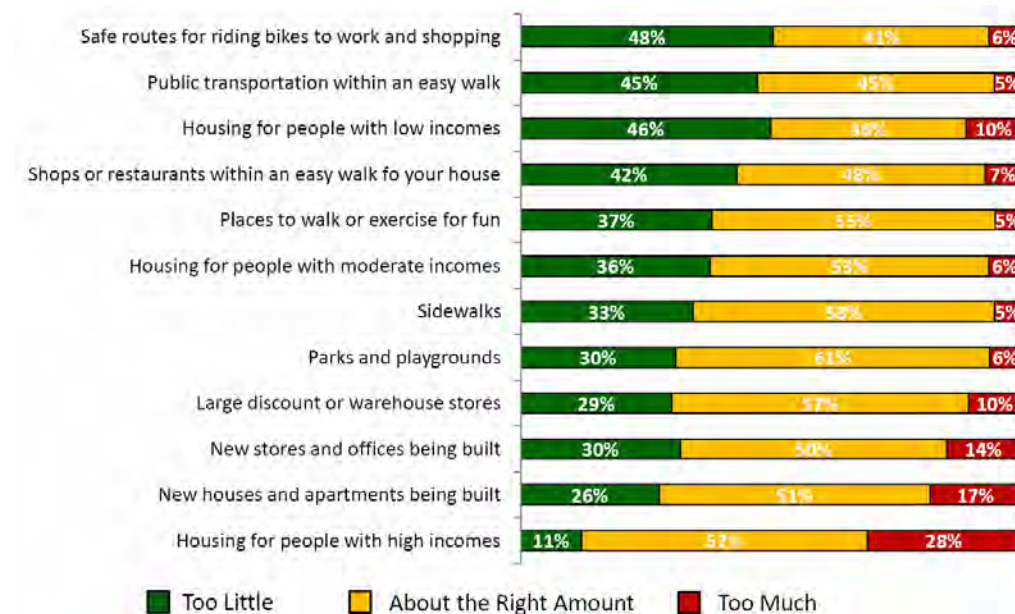


Figure 16 shows how people responded when asked to select the house where they would prefer to live when provided with two community options. By nearly a two-to-one margin, Americans prefer a neighborhood where they can walk to stores and businesses. The preference is significantly more pronounced among those who recently purchased a home or are currently in the market.

**Figure 16. Community Preferences**



Source, both figures: National Community Preference Survey, National Association of Realtors, October 2013.

## Housing Types

Table 10 and the images that follow show categories of housing that are used to estimate demand in the Basalt Creek area. While there are many different categories and subcategories of housing, these five housing types are representative of the vast majority of housing being built now and in the recent past in the Portland metropolitan region, and in the market area in particular. The net density (number of housing units that can be accommodated on buildable land) of various housing types will vary depending on conditions such as slope, wetlands and environmental constraints, property ownership, streetscape features such as sidewalks and parking strips, and other factors; the net densities shown below are based on the average density of numerous built and planned projects.

**Table 10. Housing Types**

Housing Type	Lot Size			Net Density
	Low	Average	High	
Large Lot Single Family	6,000	<b>7,500</b>	8,500	6.0
Medium Lot Single Family	4,000	<b>5,000</b>	6,000	7.5
Small Lot Single Family	2,500	<b>3,500</b>	4,000	11.0
Attached Single Family: Townhomes and Duplexes	1,000	<b>2,250</b>	2,500	16.0
Multifamily: Apts, Condos, and Senior Housing	NA	<b>NA</b>	NA	25.0

Large Lot Single-Family



Medium Lot Single-Family



Small Lot Single-Family



Single-Family Attached



Multifamily



## Recent Housing Development

Table 11 shows the recent residential permitting trends in the cities of Tualatin and Wilsonville, and in Villebois, a master planned community in Wilsonville. Villebois is shown here because: it is the largest master planned community (482 acres) that has been developed recently in the Southwest Metro area; it is a defined area that has been planned to include a range of housing, parks, and commercial services; and due to its success in the marketplace in recent years, housing absorption has been relatively rapid (adjusting for the recession), and many houses sell for a premium when compared to the competition in other areas. Naturally, recent housing built in these areas provides one benchmark from which to estimate future demand.

As Table 11 shows, the housing types that have been permitted and built in these areas correlate closely to the types of people and households who live there; the housing types also likely reflect zoning and other regulatory and market forces. Recent housing permitted in Tualatin is composed largely of large and medium lot single-family housing. No small lot single-family housing (lots smaller than 4,000 square feet) or attached single-family housing has been permitted since 2004. About 20 percent of the recently permitted housing in Tualatin is multifamily—market rate and affordable apartments, condominiums, and senior housing. Very little existing multifamily housing is located in the neighborhoods immediately north of Basalt Creek; most of Tualatin’s multifamily housing is clustered further north near the Tualatin Town Center, Tualatin-Sherwood Road, and Bridgeport Village. The majority were built prior to 2000, although the 367-unit Eddyline at Bridgeport, completed in 2013, is a notable exception. Historically, this multifamily share is relatively typical; multifamily has comprised about 20 percent of total housing in many communities during the past five decades.

Wilsonville’s housing is more diverse and features a significantly higher percentage of small lot single-family and multifamily housing, and much less large and medium lot single-family housing. Again, this is likely to be due to market, demographic, and regulatory reasons. The broad housing mix reflects the presence and growth of the four S groups in Wilsonville: seniors, singles, single-parent households, and starter households. The large multifamily share (66 percent) is partially due to the large number of new 20 and 30-something households recently formed, which will slow in coming years. Villebois’ housing mix is similar to that in Wilsonville overall; however, during the time period surveyed (2000 to 2012) a larger percentage of small lot single-family homes, townhouses and duplexes were built in Villebois, along with a smaller percentage of multifamily housing. Villebois’ developers and NAR surveys show that most American households, Baby Boomers included, prefer single-family homes over multifamily homes, but that they are quite open to smaller lot and homes sizes, especially when the surrounding neighborhood is attractive and walkable.

**Table 11. Residential Development in Tualatin and Wilsonville by Housing Type**

Housing Type	Tualatin	Wilsonville	Villebois
	Recent Permits	Recent Permits	Recent Permits
Large Lot Single Family	44%	9%	8%
Medium Lot Single Family	36%	10%	8%
Small Lot Single Family	0%	12%	35%
Attached Single Family	0%	2%	6%
Multifamily	20%	66%	43%
<b>Total</b>	100%	100%	100%

Sources: HUD; City of Wilsonville, *New Home Trends*, Leland Consulting Group. Due to data availability, Table 11 shows housing built in Tualatin between 2004 and 2014; and permits issued in Wilsonville between 2000 and 2012.

## Basalt Creek Housing Scenarios

Table 12 shows the residential development scenarios developed by Leland Consulting Group for Basalt Creek. Rather than a single recommendation, these scenarios represent a continuum of options for the area. Typically, there is no single residential land use program that is “correct” in the marketplace, especially because of the significant growth in all households projected to occur in the market area. Rather, public policy, community aspirations, the vision of developers and land owners, and the type of multidisciplinary planning now taking place in this Concept Plan can help to shape the type of community expected, and the proper housing markets to pursue. An average net density (across all housing products) for each scenario is shown below. The density of each product type is shown in Table 10 on page 29.

Scenario 1 can be thought of as reflecting the “status quo”—a housing mix similar to what has been built in Tualatin between 2004 and 2014. This is used as a status quo benchmark since Tualatin’s residential neighborhoods are in closest proximity to Basalt Creek. Eighty percent of the homes in this scenario are either large lot or medium lot single-family homes. While these homes are likely to appeal to families with children and many smaller households, this scenario may have an undersupply of small lot and attached single-family homes which will appeal to the growth in 65+ households and one and two-person households. There is less housing diversity in this scenario than other scenarios, and the predominance of large lot homes is likely to make it more challenging to create the type of walkable neighborhoods that 60 percent of those polled by the National Association of Realtors prefer.

Scenario 2 largely relies on the housing preferences expressed in the 2013 Realtors Survey. The one exception is that the 20 percent multifamily share was maintained from Scenario 1 to reflect historical multifamily construction patterns in Tualatin and Wilsonville. This scenario reflects the demand for small lot single-family, attached single-family, and multifamily expressed in the survey, and also greater share of these products in Wilsonville. Nonetheless, 75 percent of the housing remains single-family detached housing. The average density is just under 10 dwelling units per net buildable acre. This scenario contains a broader diversity of housing products and will be more suitable for a walkable community than Scenario 1.

**Table 12. Residential Development Scenarios**

	Scenario 1	Scenario 2	Scenario 3
<b>Percent of Units by Type</b>			
Large Lot Single Family	44%	10%	5%
Medium Lot Single Family	36%	41%	23%
Small Lot Single Family	0%	24%	43%
Attached Single Family	0%	5%	9%
Multifamily	20%	20%	20%
Total	100%	100%	100%
<b>Net Density</b>	7.7	9.6	10.9

Source: Leland Consulting Group.

Scenario 3 is similar to Scenario 2 but attempts to make several adjustments for changing housing demand. First, more demand is shifted to towards small lot single-family homes in response to stated preferences for such homes when they are located in a neighborhood where businesses and other amenities are located in close walking distance. Second, slightly higher demand for attached housing (duplexes, clustered cottage homes, and townhouses) is assumed because of the significant increase in 65+ aged households, and because of preferences for smaller homes in walkable communities. The multifamily share remains the same. Seventy percent of all housing remains single-family detached housing.



## Retail Market Analysis

Retail, commercial services, and commercial office space (e.g., medical and dental offices) may be feasible in Basalt Creek. However, the market for these goods and services cannot be determined without first establishing one or more land use alternatives for employment, housing, and other uses in Basalt Creek. Nearby residents and employees generate the main demand for retail and since the amount and location of these are unknown at this time, the amount and location of retail cannot be determined.

Despite these significant unknowns, the following observations can be made about retail in Basalt Creek.

### Market

In addition to new residents and employees that may locate in Basalt Creek, the residents of the Tualatin neighborhoods located immediately to the north are an important source of support for retail. Residents spend more of their retail dollars locally than employees or passersby, and therefore are generally a more important source of demand for retail goods and services. Approximately 4,000 households live in the area between Norwood Road and Tualatin-Sherwood Road. These households already have other places to shop, particularly on and near Tualatin-Sherwood Road. However, based on existing traffic counts and interviews with residents and developers, it is clear that some of these residents are already accustomed to driving south through Basalt Creek to access I-5 or other destinations.

Retailers also look at traffic counts as an important demand indicator, since retail relies on passby traffic for support. Boones Ferry Road carries average daily traffic (ADT) of about 15,000 today according to ESRI Business Analyst, which is high enough to suggest that it will be a good retail location in the future. Traffic counts on Grahams Ferry Road are below 6,000 ADT, and therefore it is likely to be a less desirable retail location. Traffic counts such as these likely reflect trips being made by residents and employees of the Southwest metro area and beyond. The 124<sup>th</sup> Avenue Extension, now being built to the western edge of the study area, and the planned East-West Connector Road that will run across the study area are also important transportation arterials along which retail will seek to locate. A prime location for retail may be at the intersection of Boones Ferry Road and the East-West Connector Road.

These demand factors should be taken into account along with housing and employment projections for the study area in order to estimate the total amount of supportable retail.

## Types of Retail Centers

Retail in Basalt Creek is likely to be built in the formats shown in Table 13: corner store, convenience centers, and/or neighborhood centers. These types of retail generally serve residents and employees within a one-half mile to three-mile radius, and are usually located on arterial roads such as Boones Ferry and Grahams Ferry Roads.

Neighborhood centers are typically anchored by a grocery store and usually include five to 15 smaller in-line tenants which may include pharmacy, food/restaurant, bakery, beauty, technology, financial services, and other tenants. Convenience centers and corner stores are smaller retail nodes that serve their immediate surroundings; they may be anchored by a convenience store (e.g., 7 Eleven) or simply include four to 10 tenants similar to those listed above.

Larger retail formats, such as community centers, regional shopping malls, and lifestyle centers, typically require immediate access to and visibility from a major freeway interchange or other major transportation infrastructure (e.g., high-capacity transit in downtown Portland); a large existing population base; and minimal immediate competition. There is already a series of established major retail clusters located around the freeway interchanges to the north and south. These clusters serve subregional and/or regional shoppers who sometimes travel a half hour or more to shop there. Each has very good access to and visibility from I-5. It is highly unlikely that retail at Basalt Creek could effectively compete against these centers for a share of the regional retail market, because the competition is well established and its freeway access is generally superior.

**Table 13. Types of Retail Centers**

Retail Center Type	Gross Retail Area	Dwellings Necessary To Support	Average Trade Area	Anchor Tenants
Corner Store	1,500 - 3,000	1,000	Neighborhood	Corner store
Convenience Center	10,000 - 30,000	2,000	1 mile radius	Specialty food or pharmacy
Neighborhood Center	60,000 - 90,000	6 - 8,000	2 mile radius	Supermarket and pharmacy
Community Center	100,000 - 400,000	20,000+	5 mile radius	Junior department store

Sources: Urban Land Institute, Leland Consulting Group.

## Timing

“Retail follows rooftops.” In other words, in most cases, residential (and employment) development come first, and then retail follows, simply because retail needs local shoppers in order to survive. Any retail space in Basalt Creek is likely to be built following significant residential and employment development. Details will depend on the concept plan prepared for the study area.



720 SW Washington St.  
Suite 500  
Portland, OR 97205  
503.243.3500  
www.dksassociates.com

# MEMORANDUM

**DATE:** June 17, 2016

**TO:** Basalt Creek Concept Plan Project Team

**FROM:** Ray Delahanty, AICP

**SUBJECT:** Basalt Creek Concept Plan Transportation Analysis and Solutions P#14044-000-005

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This memorandum presents the forecast approach, future transportation analysis, and recommended solutions for the Basalt Creek Concept Plan.

## FORECASTING

This section documents the assumptions and methodology used for developing traffic forecasts for the Basalt Creek Concept Plan. The process outlined below was used to forecast traffic volumes for the operational analysis of the land use and transportation network alternatives. Key assumptions of the methodology, including regional land use, hour of analysis, and baseline infrastructure, are outlined in the sections that follow. The key assumptions are:

- Use current Gamma model regional land use (household and employment) assumptions
- Use PM peak hour without the “peak-spreading” for the analysis hour
- Assume all Basalt Creek area projects from the Basalt Creek Transportation Refinement Plan (BCTRP) except for the East-West I-5 Overcrossing

### ***Regional Land Use***

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. While the Basalt Creek Transportation Refinement Plan (BCTRP) used Metro’s 2008 RTP (Regional Transportation Plan) model for forecasting, the Concept Plan analysis uses the Gamma model land use, which was also used for the recently adopted 2014 Regional Transportation Plan (RTP).

### ***Analysis Hour***

Metro’s PM peak hour model relies on an underlying demand matrix (trip table) that determines the origins and destinations for all trips within the model. The Gamma model allows for two different potential PM peak hour demand matrices:

- A standard (non-peak-spread) matrix, which reflects the full PM peak hour demand.



- A “Peak-Spread” matrix, which assumes that some potential peak hour trips will move to other hours (e.g., traveling in the 4-5 PM hour rather than the 5-6 PM hour), meaning there is less demand on the system overall.

For this project, the standard (non-peak-spread) matrix was used for forecasting. This approach is also consistent with the Washington County 2035 TSP.

**Transportation Projects**

Forecasting results depend partly on the projects that are assumed for the Basalt Creek area, as well those assumed for adjacent areas. Since this is a 2035 forecast, Washington County’s latest 2035 Gamma model was used. This model’s transportation network includes projects considered likely to be in place by 2035.

For the Basalt Creek area, we reviewed both the BCTRP and the newly released project list for the Metro 2014 RTP, which lists projects reasonably likely to be funded by 2040. Table 1, below, shows potential capacity-related projects from the RTP list and indicates which projects we are assuming to be in place by 2035.

**Table 1: 2014 RTP Projects Assumed for 2035 Forecasting**

Project Number	Project and Description	RTP Time Period	In Place by 2035?
10736	124 <sup>th</sup> 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
10853	Kinsman Rd. Extension (Ridder Rd. to Day St.) – new three-lane roadway extension	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 <sup>th</sup> 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 <sup>th</sup> 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>

Two projects, the Day Road Overcrossing and the East-West Overcrossing, are anticipated to be in place in the 2033-2040 time frame. For our 2035 forecasting effort, all projects in Table 1 are assumed to be in place by 2035 **except for the East-West Arterial Overcrossing**. This project was assumed to be the last one needed for the BCTRP (after the Day Road Overcrossing), and a portion of the project is outside the Urban Growth Boundary.



Therefore we assume the project is not considered likely to be part of the network by 2035, and is not included in the 2035 network assumptions.

### ***Additional Note on Kinsman Road Extension***

Subsequent to much of the Concept Plan's baseline forecasting, the City of Wilsonville removed project 10853, the Kinsman Road Extension between Ridder Road and Day Road, from its Transportation System Plan (TSP)'s list of likely funded projects. The City will instead develop Garden Acres Road between Ridder Road and Day Road as a north-south collector roadway in the area. These changes are reflected in the forecasting for the recommended network.

## **FINDINGS**

This section presents results of motor vehicle operations analysis for the Concept Plan's preferred land use alternative and associated trip generation characteristics. Two roadway network options were analyzed and compared to a previous network alternative.

### **Roadway Network**

The planned roadway network includes the facilities shown in Table 1, except for the East-West Arterial Overcrossing and the Kinsman Road Extension. Previous Concept Plan network alternatives included a new collector roadway aligned to the north of the Kinsman Road Extension. This collector roadway connected from SW Day Road to SW Tonquin Loop Road, parallel to SW Grahams Ferry Road. This roadway was referred to as North Kinsman Extension, and was intended to create a full collector connection from SW Ridder Road to SW Tonquin Loop Road. Subsequently, SW Kinsman Road between SW Ridder Road and SW Day Road was dropped from the Wilsonville TSP's list of likely funded projects, making the North Kinsman Extension a less useful collector-level connection.

The roadway network also includes local streets needed to provide access and circulation to existing development and developable parcels. The planned network is shown in the figures on the following page. Two options were analyzed to address the North Kinsman extension and compare to the previous analysis, which assumed SW Kinsman Road as a collector from SW Ridder Road to SW Tonquin Loop Road (see Figure 1):

- **North Kinsman as Local Connection.** This option retains North Kinsman as a facility connecting SW Tonquin Loop Road to SW Day Road, but classifies it as a local street. This means the SW Kinsman Road/SW Day Road intersection is stop-controlled, and not signalized as it was under the BCTRP. This option is shown in Figure 2.
- **North Kinsman without Grade-Separated Crossing of Basalt Creek Parkway.** This option retains parts of the North Kinsman facility in order to provide access and circulation, but does not provide a complete north-south connection with grade separation across the Basalt Creek Parkway. This option is shown in Figure 3.

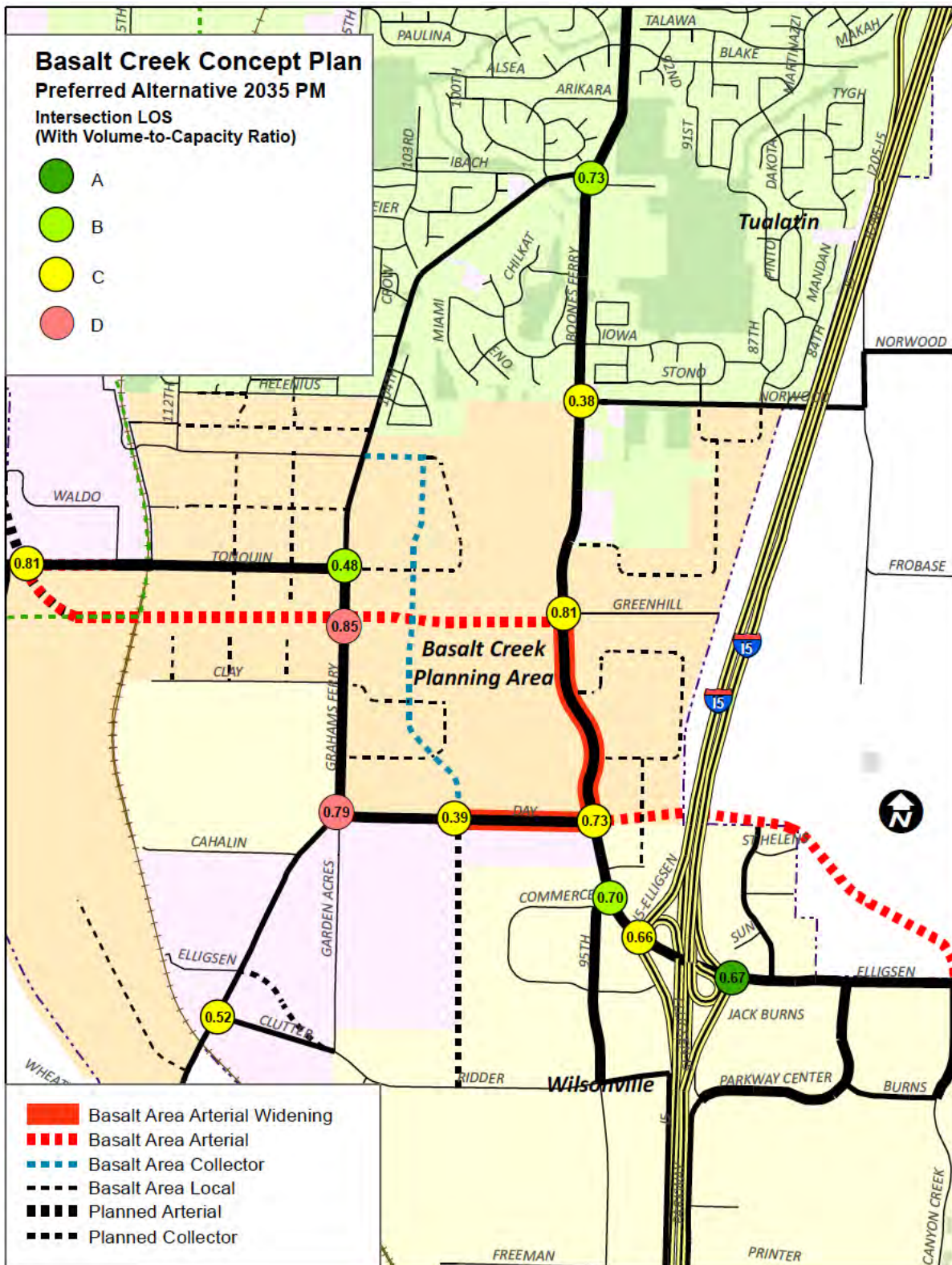


Figure 1: Concept Plan Network with Full Kinsman Road Extension

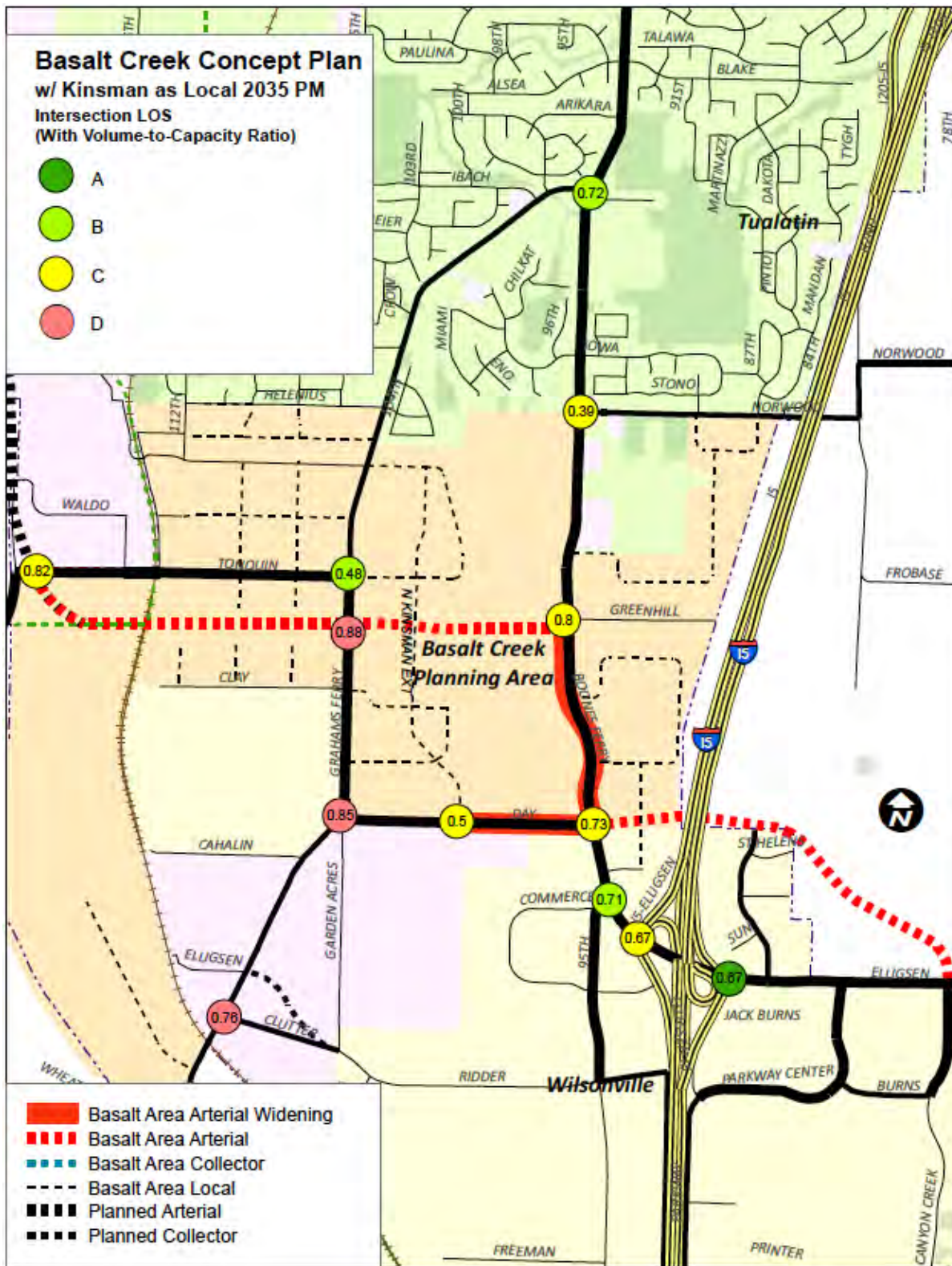


Figure 2: Concept Plan Network with Kinsman Road as Local Connection







## Motor Vehicle Operations

Intersection turning movement volumes for the two network options were developed for the 2035 PM peak hour based on the approach described in the Forecasting section above. Results, with a comparison to the previous alternative with a full Kinsman collector are shown in Table 2 below.

**Table 2: Network Alternative Intersection Operations (2035 PM Peak Hour)**

Intersection	Jurisdiction	Mobility Target	Full Kinsman Collector (Tonquin Loop to Ridder)		Kinsman as Local		No Kinsman Crossing	
			PM LOS	PM V/C	PM LOS	PM V/C	PM LOS	PM V/C
I-5 NB/Elligsen Rd	ODOT	0.85	A	0.67	A	0.67	A	0.67
I-5 SB/Elligsen Rd	ODOT	0.85	C	0.66	C	0.67	C	0.66
Boones Ferry Rd/95th Ave	Washington County	0.99	B	0.70	B	0.71	B	0.72
Boones Ferry Rd/Day Rd	Washington County	0.99	C	0.73	C	0.73	C	0.75
Boones Ferry Rd/Basalt Creek Parkway	Washington County	0.99	C	0.81	C	0.80	D	0.84
Boones Ferry Rd/Ibach St	Washington County	0.99	B	0.73	B	0.72	B	0.72
Boones Ferry Rd/Norwood Rd	Washington County	0.99	A/C	0.38	A/C	0.39	A/C	0.39
Grahams Ferry Rd/Clutter Rd	Washington County	0.99	A/C	0.52	A/D	0.76	A/D	0.78
Grahams Ferry Rd/Day Rd	Wilsonville	D	D	0.79	D	0.85	C	0.86
Grahams Ferry Rd/Basalt Creek Parkway	Washington County	0.99	D	0.85	D	0.88	D	0.86
Grahams Ferry Rd/Tonquin Rd	Washington County	0.99	B	0.48	B	0.48	B	0.48
124th Ave/Tonquin Rd	Washington County	0.99	C	0.81	C	0.82	C	0.80
Kinsman Rd/Day Rd	Wilsonville	D	C	0.39	A/C	0.50	A/C	0.44

Worst mainline LOS/worst side street LOS reported for unsignalized intersections

As shown in the above table, all intersections meet future mobility standards under both Kinsman options as well as the full Kinsman Collector alternative. The removal of Kinsman Road between SW Ridder Road and SW Day Road has the most impact at SW Grahams Ferry Road/SW Clutter Road and SW Grahams Ferry Road/SW Day Road. These two intersections experience increased traffic volumes as drivers that might have used the Kinsman Extension use SW Grahams Ferry Road south of SW Day Road instead.



Differences between the two North Kinsman Road options are minor, as the North Kinsman extension primarily serves as access to properties between Grahams Ferry Road and the Basalt Creek, and serves very little through traffic when the overcrossing is in place. The largest difference in operations is at SW Boones Ferry Road/Basalt Creek Parkway, where the option with no North Kinsman overcrossing experiences slightly higher volumes. Without the overcrossing in place, more vehicles are expected to travel north on SW Boones Ferry Road and then west on the Basalt Creek Parkway rather than accessing the Basalt Creek Parkway via SW Day Road and SW Grahams Ferry Road.

### **Active Transportation**

While all network options analyzed above perform acceptably in terms of intersection capacity, connections for modes other than the motor vehicle are an important consideration. If a North Kinsman overcrossing of the Basalt Creek Parkway is not built, a connection for people biking and walking in the area east of SW Grahams Ferry Road should still be provided. A multi-use path along the west edge of the Basalt Creek, passing underneath the Basalt Creek Parkway, would provide this needed connection.

# Basalt Creek Utility Infrastructure Concept Plan

PREPARED FOR: Fregonese Associates  
PREPARED BY: Kelli Barton/CH2M  
DATE: May 27, 2016  
PROJECT NUMBER: 491811  
REVISION NO.: Revision 1: September 22, 2016  
Revision 2: June 25, 2018  
Revision 3: July 18, 2018  
APPROVED BY: Mark Anderson/CH2M

## Introduction

The conceptual sanitary sewer, water, and stormwater systems were updated based on the selected jurisdictional boundary that follows the proposed East-West connector. This memorandum describes the conceptual system designs, provides conceptual cost estimates for the sanitary sewer and water systems and funding strategies, and discusses development phasing. Conceptual level sizing and design were completed for cost estimating purposes. Modeling and detailed design were not completed as part of this work and detailed pipe sizes, slopes, flows, and updated cost estimates will be completed during the design phase. Conceptual level cost estimates are preliminary for comparison of alternatives and have a +100%/-50% accuracy. The Tualatin service area includes the Southwest Tualatin area west of the railroad (Tonquin Loop) and north of SW Tonquin Rd that is outside of the Basalt Creek planning boundary.

## Overview of Conceptual Utility Designs

### Sanitary Sewer System

The sanitary sewer conceptual design for the Basalt Creek planning area is shown in Figure 1. The Clean Water Services (CWS) and Wilsonville service basins are based on the proposed jurisdictional boundary. This design requires five pump stations to serve the Clean Water Services (CWS) service area and one pump station to serve the Wilsonville service area, and the sewers generally flow to the south and west, following the slope of the existing ground. The sanitary system uses gravity as much as possible, follows existing and proposed roadways and trails, and was designed to avoid streams and natural areas.

The conceptual sewer system connects to the existing CWS/Tualatin system at SW 112<sup>th</sup> 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 at SW Day Road and the planned extension of SW Kinsman Road, and at SW Garden Acres Road and SW Cutter Road.

The area immediately west of Basalt Creek, north of the jurisdictional boundary is shown as being served with a pump station to the CWS/Tualatin system, but could also be served by gravity to Wilsonville. If the gravity option is selected, it would require an intergovernmental agreement between

the cities. In the area just west of Boones Ferry Road and east of Basalt Creek in both Tualatin and Wilsonville service boundaries, residents will be required to install grinder pumps to connect to the proposed gravity systems. The southwest railroad section (west of the railroad and south of SW Tonquin Road) has a lower potential to develop due to several constraints including slope, geology, wetlands, habitat, and existing uses. The sanitary system and pump station to serve this area have been included as a separate column in the cost estimate but would only be required if and when development occurs.

There are three areas that will require boring or very deep excavations greater than 25 feet deep, which are highlighted in yellow in Figure 1. There are a few other areas that require excavations around 20-25 feet.

### Design Assumptions and Principles

The following design assumptions were made for the conceptual sanitary system design. Local laterals and service connections have not been included in the concept layout.

- Minimum sewer depth = 10 feet
- Maximum sewer depth = 25 feet
- Minimum pipe slope = 0.004 (for an 8-inch diameter pipe)
- Minimum sanitary pipe slopes from Clean Water Services Design and Construction Standards:

<b>Minimum Sanitary Pipe Slopes</b>	
<b>Pipe Diameter (inches)</b>	<b>Minimum Slope</b>
6	0.006
8	0.004
10	0.0028
12	0.0022
15	0.0015
18	0.0012

The sanitary system design followed these guiding principles for the layout:

- Use gravity as much as possible
- Follow existing or proposed roadways
- Follow property lines or tax lot boundaries when not possible to follow roads
- Follow land use boundaries (not serving Undeveloped Natural Area land use areas)
- Avoid streams and significant natural areas

### Flow Calculations

Loading estimates were calculated using the Land Use Scenario 5. Peak flows were calculated for each connection point into the existing Tualatin and Wilsonville systems. Dry weather flows were calculated separately for residential areas and commercial/industrial areas, according to the equations below.

$$\text{Peak Dry Weather Flow (DWF)} = \text{Residential EDU} * 2.4 \frac{\text{people}}{\text{EDU}} * 80 \frac{\text{gal}}{\text{person} * \text{day}} * 1.6 \text{ peak factor}$$

$$\text{Peak Dry Weather Flow (DWF)} = \frac{\text{Comm./Ind. Area (sq. ft.)}}{1000 \frac{\text{sq. ft.}}{\text{person}}} * 40 \frac{\text{gal}}{\text{person} * \text{day}} * 1.2 \text{ peak factor}$$

Wet weather flows were calculated based on the developable areas, not including the areas designated as “Open Space” land use, based on the Land Use Scenario 5 areas provided by Fregonese Associates. The wet weather flows were calculated using the following equation. An inflow and infiltration rate of 2,500 gallons per acre per day (gpad) is a conservative estimate within the range listed in the CWS

Sanitary Sewer Master Plan (2009) and the maximum value computed in the Wilsonville Wastewater Master Plan (2014).

$$Wet\ Weather\ Flow\ (WWF) = Developed\ Area\ (ac.) * 2,500 \frac{gal}{ac.*\ day}$$

The total peak flow was calculated by adding the wet and dry weather flows together, as follows.

$$Peak\ Sewer\ Flow = Dry\ Weather\ Flow\ (DWF) + Wet\ Weather\ Flow\ (WWF)$$

The estimated sewer flows at the connection points to the existing system are summarized in Table 1.

**Table 1.**  
*Estimated Sewer Flows at Connections to the Existing Systems*

Connection Point	Estimated Sewer Flow (gal/d)
112th and Helenius (Tualatin)	375,800
Grahams Ferry and Helenius (Tualatin)	166,400
Boones Ferry near Norwood (Tualatin)	202,200
Norwood and Vermillion (Tualatin)	107,600
Kinsman Road Extension Sewer (Wilsonville)	357,700
Garden Acres and Clutter (SW RR Area, Wilsonville)	600

### Cost Estimate and Preliminary Sizing

The cost estimate for the sewer system is provided in Table 4. Project costs include pipe costs, rock excavation, pump station capital costs, pump station operations and maintenance costs for 30 years, engineering/legal/admin fees (25%), and contingency (30%). Upgrades to the existing downstream systems are not included in the cost estimates.

Pipe installation costs were gathered from the Tualatin Sewer Master Plan (2002) and escalated to 2016 dollars. The construction costs are based on pipe diameter and average depth of bury, and include the costs of manholes and service laterals. An average diameter of 8 inches was used for pipes in the Wilsonville service system and diameters of 8 inches (approximately 34,000 linear feet) and 10 inches (approximately 2,200 linear feet, located along the northwestern edge of the proposed system) were used for pipes in the Clean Water Services (CWS) service system, based on the preliminary sizing completed at the downstream connection points. All force mains were assumed to be 6 inches in diameter.

The rock excavation cost was calculated based on information from geotechnical investigations and the estimated depth of trench. Based on the boring summary map and geotechnical data available, the Basalt Creek planning area was divided into regions where we expect to require rock excavation for 50%, 20% or 10% of the pipe installations. In order to quantify the amount of pipe that will require rock excavation, a percentage of the pipe length was assumed to require rock excavation based on the region the pipe is located in. Figure 3 (attached) outlines the regions that fall into the three categories. The regions were determined based on the depth to rock (from boring information), approximate depth of bury for pipes, and amount of data in the area. Areas with shallow depths to rock, greatly varying depths to rock, and/or that have a lack of data are assumed to have 50% of the pipe length requiring rock excavation. The area circled in the northeast is where the depths varied for different sewer layout alternatives. For this region, if the average depth of the pipe is deep (>20 feet), it was assumed that 40% of the pipe length required rock excavation and if average depth of the pipe is shallow (<20 feet), it was assumed that 20% of pipe length required rock excavation.

To estimate the linear footage of rock excavation required, the length of each pipe was multiplied by the percentage denoted by the region it is in. Unit costs for rock excavation were developed for two trench depths (15 feet and 20 feet) and the price for the depth closest to the average depth of bury for each pipe were applied to the rock excavation length for that pipe. The unit costs for rock excavation were \$30/LF for a 15-foot deep trench and \$90/LF for a 25-foot deep trench. The cost of rock excavation was added to the pipe unit costs.

A few segments of pipe require very deep sewers (shown in yellow on Figure 1) and will be installed by boring. The cost of boring was estimated at \$500 per linear foot and includes the cost of pipe.

Table 2 provides an estimate of the length of pipe requiring a shallow (<20 feet) or deep (>20 feet) trench, as used in the rock excavation cost estimate, as well as the total length of pipe. The estimated length of excavation was calculated using a percentage of the total length of each stick of pipe (10%, 20%, or 50%) based on location, as description above.

**Table 2.**  
*Summary of Estimated Excavation Lengths*

		Tualatin Service Area	Wilsonville Service Area
Shallow (<20 feet) Excavation	Estimated Length of Excavation (feet)	11,672	7,152
	Total Length of Pipe (feet)	38,190	23,430
Deep (>20 feet) Excavation	Estimated Length of Excavation (feet)	1,531	1,093
	Total Length of Pipe (feet)	4,776	2,274

### Existing System Improvements

Upgrades to the existing downstream systems may be required to accommodate the anticipated flows from the Basalt Creek planning area. These upgrades have not been included in the conceptual design and cost estimate.

**NOTE TO EDITOR:** CH2M is working on updating the Tualatin Master Plan to reflect the Basalt Creek concept plan and these results could be incorporated later.

### Water System

The conceptual drinking water systems are shown in Figure 2 and are divided by the jurisdictional boundary. Each system is a looped system, which requires water lines for each city located along the proposed east-west arterial road.

The Basalt Creek planning area has the potential to be served for drinking water supply from either Tualatin or Wilsonville. The existing service zones (levels B and C) from both communities would provide the necessary hydraulic pressure to provide service within the planning area. The Tualatin pressure zones that will be used to serve the Basalt Creek are Zones B (ground elevations 192 feet to 306 feet) and C (ground elevations 260 feet to 360 feet). A majority of the service area can be served by Pressure Zone B, but a small portion will require Pressure Zone C. The reservoirs intended to service this area are the newly constructed C-2 (1-MG) Reservoir, the Norwood Reservoirs B-1 (2.2-MG) and B-2 (2.8-MG). In addition to the B level storage reservoirs, the Portland Supply Main using a control valve would also serve pressure zone B. In order to provide service to the pressure zone C areas in the planning area, Wilsonville has identified a need to install a booster pump station. The booster pump station is one of the CIP projects listed in the 2012 Wilsonville Water Master Plan and has been included in the cost estimate for drinking water for Wilsonville.

The southwest railroad section (west of the railroad and south of SW Tonquin Road) has a lower potential for development. Service lines in this area would only need to be constructed if and when development occurs. The Coffee Creek 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). This portion of the system would be installed and funded by the Coffee Creek development.

**Flow Calculations**

Water demand estimates were calculated using Land Use Scenario 5. Peak flows were calculated for the proposed Tualatin and Wilsonville service areas. Peak flows were calculated separately for residential areas and commercial/industrial areas, according to the equations below.

Residential water demand of 80 gallons/person/day is consistent with Wilsonville’s Water Master Plan (2012) and 90 gallons/person/day is consistent with Tualatin’s Water Master Plan (2013).

Industrial/commercial water demand of 1,000 gallons/acre/day is consistent with Wilsonville’s and Tualatin’s master plans.

$$Peak\ Residential\ Flow = Residential\ EDU * 2.4 \frac{people}{EDU} * 80\ or\ 90 \frac{gal}{person * day} * 2.2\ peak\ factor$$

$$Peak\ Commercial/Industrial\ Flow = Comm./Ind.\ Land\ Area\ (ac) * 1000 \frac{gal}{ac * day} * 2.2\ peak\ factor$$

Flow estimates for the final layout are provided below.

**Table 3.**  
*Estimated Water Demand*

	<b>Tualatin</b>	<b>Wilsonville</b>	<b>Both</b>
Peak Daily Demand (gal/d)	573,019	290,734	863,753
Average Annual Demand (gal/d)	260,463	132,152	392,645

**Cost Estimate and Preliminary Sizing**

The cost estimate for drinking water is based on construction costs for installing pipes. Construction costs for drinking water pipe construction were gathered from the Tualatin Water Master Plan (January 2013) and escalated to 2016 dollars. The pipe installation costs are based on pipe diameter, and do not include rock excavation or excessive dewatering. For drinking water, a pipe diameter of 12 inches was used for water lines along SW Grahams Ferry Road, SW Boones Ferry Road, and the proposed East-West connector. An average diameter of 8 inches was used for the remaining pipes. Preliminary pipe sizing was completed for cost estimating purposes, but further analysis is needed to confirm fire flow requirements in industrial areas. Drinking water pipes are shallower than sanitary sewer pipes, so rock excavation costs were estimated at 3% of the pipe installation cost. The conceptual cost estimate for the water system is provided in Table 2.

**Stormwater System**

The conceptual stormwater system design includes the layout for stormwater pipes in the public right-of-way and does not include private stormwater system designs. Stormwater detention and treatment will occur at local facilities and no regional facilities are planned for the area. All flows that outlet within each city will be guided by their respective protocols, design standards, and/or discharge permits. At locations where the City of Tualatin’s pipe system connects to the City of Wilsonville’s pipe system, the upstream stormwater discharged into Wilsonville’s system shall meet or exceed Wilsonville’s stormwater management requirements.

## Cost Estimate

Public stormwater costs are included in the road network cost estimate. Stormwater systems outside of the public right-of-way are paid for by the developer, and developer costs for the stormwater systems have not been estimated.

## Funding Strategies

The utility improvements will be funded by a combination of public and private entities. The cities of Tualatin and Wilsonville, with support from district entities, such as Clean Water Services and Metro, will fund public utility improvements and private developers/land owners will generally pay for utilities on private properties and certain enabling projects to allow for development to occur. The City of Tualatin and the City of Wilsonville will be responsible for the publicly-funded water and storm system improvements in their respective jurisdictions. For the sanitary sewer system, the City of Wilsonville will fund all public improvements in their jurisdiction, and the City of Tualatin will fund public gravity pipelines, while pump stations and forcemains are paid for by the service provider, Clean Water Services. There are opportunities for shared funding and partnering agreements for specific projects.

Cost estimates were developed for the conceptual sanitary sewer and water systems. The cost estimates summarize the anticipated costs for the cities, Clean Water Services, and private developers. For both systems, the cost for pipes that are 8 inches in diameter and smaller are paid for by the developer. Pipes that are greater than 8 inches in diameter have a cost share between the city and the developer, where the developer pays for the equivalent of installing 8-inch pipes and the city pays for the difference between the cost for the design pipe size and the cost for an 8-inch pipe. For the sanitary sewer system in the CWS/Tualatin jurisdiction, pump station and force main costs are paid for by the service provider, Clean Water Services (CWS), and pump station capital costs are SDC creditable (pump station operations and maintenance costs are not SDC creditable). For the sanitary sewer system in Wilsonville, pump station and forcemain costs are paid for by the city. City, service provider, and developer costs for the sanitary system are summarized in Table 4 and city and developer costs for the drinking water systems are summarized in Table 5. The southwest railroad (SW RR) area has a lower potential to develop and the costs for this area have been included as a separate column since they would only be required if and when development occurs.

**Table 4.**  
*Cost Estimate Summary for Conceptual Sewer System*

Item	Tualatin/CWS Service Area			Wilsonville Service Area		Wilsonville SW RR Area	
	Tualatin	CWS	Developer	Wilsonville	Developer	Wilsonville	Developer
Pipe Costs (8")			\$8,033,000		\$3,443,000		\$1,818,000
Pipe Costs (Upsize 8" to 10")	\$34,000						
Force Mains (6")		\$1,523,000				\$55,000	
Rock Excavation		\$66,000	\$422,000		\$161,000	\$6,000	\$145,000
Pump Station Capital Cost		\$2,638,000				\$678,000	
<b>Total Construction Costs</b>	<b>\$34,000</b>	<b>\$4,227,000</b>	<b>\$8,455,000</b>	<b>\$0</b>	<b>\$3,605,000</b>	<b>\$740,000</b>	<b>\$1,963,000</b>
Pump Station O&M Cost (30 years)*		\$5,599,000				\$1,120,000	
<b>Subtotal</b>	<b>\$34,000</b>	<b>\$9,826,000</b>	<b>\$8,455,000</b>	<b>\$0</b>	<b>\$3,605,000</b>	<b>\$1,860,000</b>	<b>\$1,963,000</b>



**Table 4.**  
*Cost Estimate Summary for Conceptual Sewer System*

Item	Tualatin/CWS Service Area			Wilsonville Service Area		Wilsonville SW RR Area	
	Tualatin	CWS	Developer	Wilsonville	Developer	Wilsonville	Developer
Engineering/Admin /Legal (25%)	\$9,000	\$2,457,000	\$2,114,000	\$0	\$901,000	\$465,000	\$491,000
Contingency (30%)	\$10,000	\$2,948,000	\$2,536,000	\$0	\$1,081,000	\$558,000	\$589,000
<b>TOTAL</b>	<b>\$53,000</b>	<b>\$15,231,000</b>	<b>\$13,105,000</b>	<b>\$0</b>	<b>\$5,588,000</b>	<b>\$2,883,000</b>	<b>\$3,043,000</b>

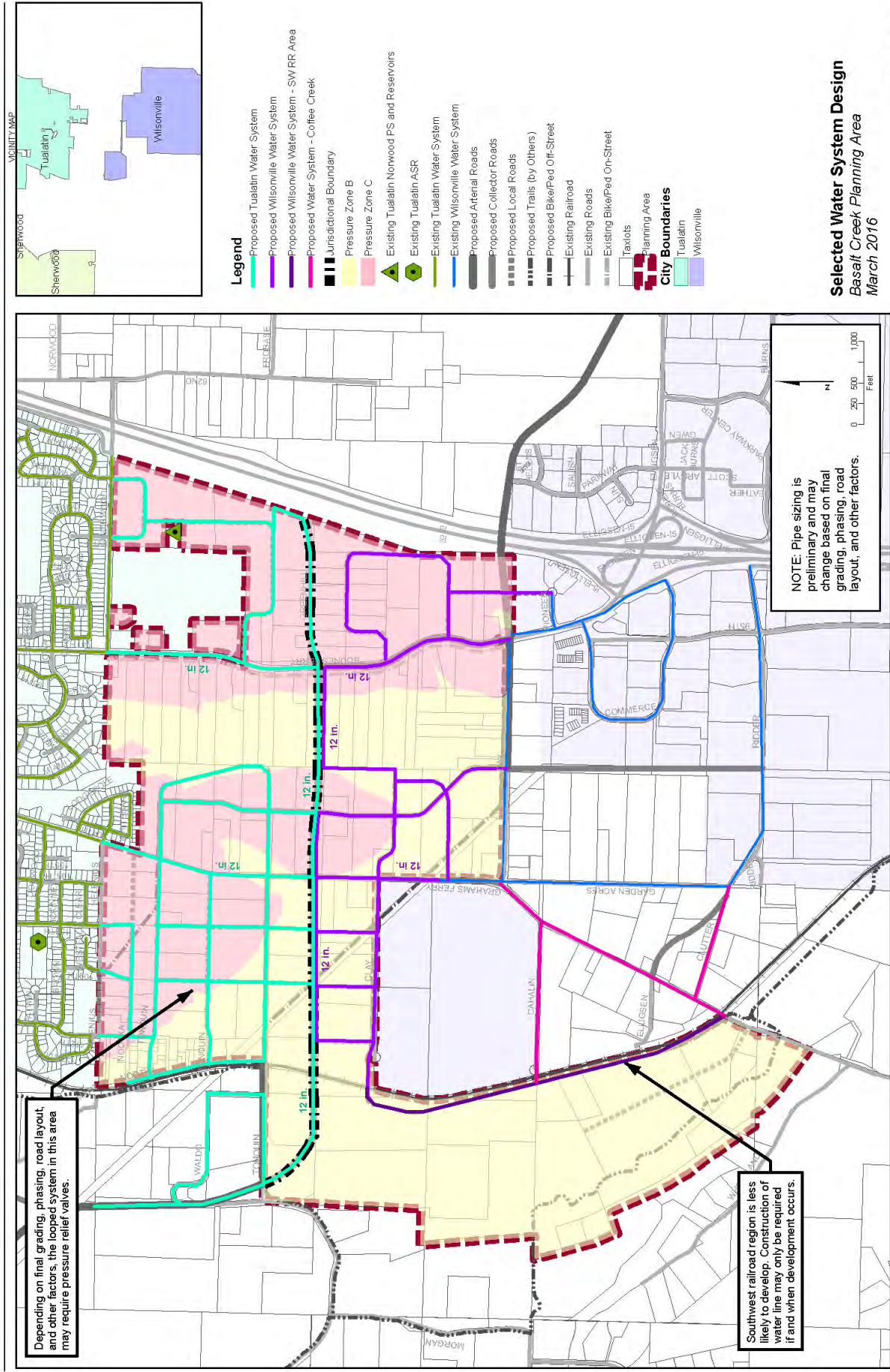
\*Pump Station O&M costs are not SDC creditable

**Table 5.**  
*Cost Estimate Summary for Conceptual Water System*

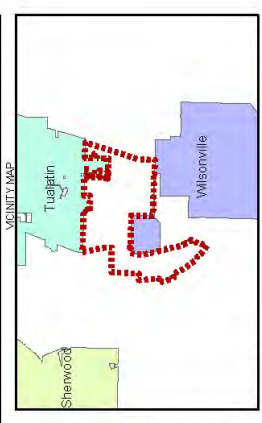
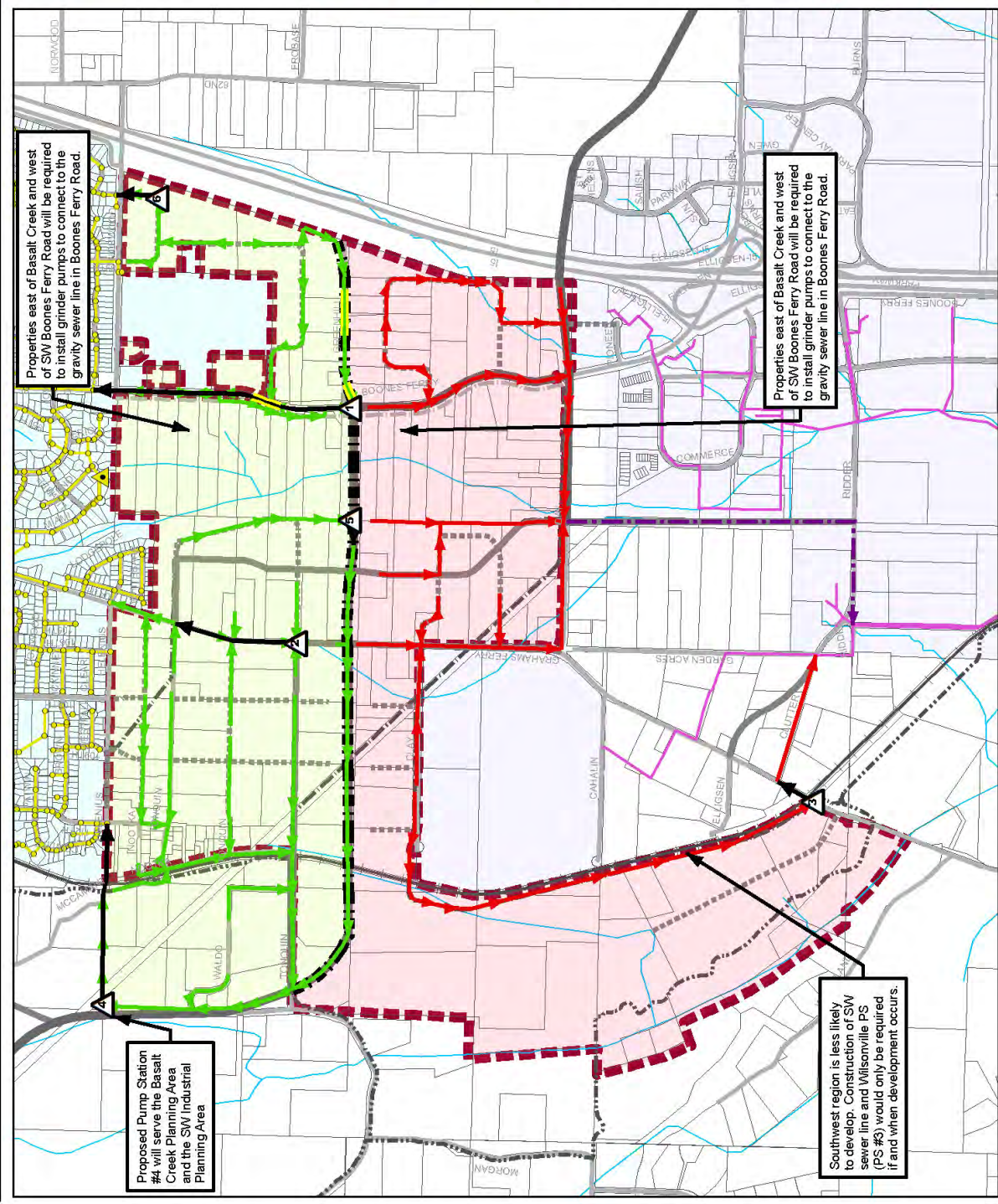
Item	Tualatin Service Area		Wilsonville Service Area		Wilsonville SW RR Area	
	Tualatin	Developer	Wilsonville	Developer	Wilsonville	Developer
Pipe Cost (8")		\$5,228,000		\$2,666,000		\$521,000
Pipe Cost (Upsize 8" to 12")	\$871,000		\$421,000			
Rock Excavation (3%)		\$157,000		\$80,000		\$16,000
<b>Total Construction Cost</b>	<b>\$871,000</b>	<b>\$5,385,000</b>	<b>\$421,000</b>	<b>\$2,746,000</b>	<b>\$0</b>	<b>\$537,000</b>
Engineering/Admin/Legal (25%)	\$218,000	\$1,346,000	\$105,000	\$687,000	\$0	\$134,000
Contingency (30%)	\$261,000	\$1,66,000	\$126,000	\$824,000	\$0	\$161,000
<b>Total Project Cost</b>	<b>\$1,351,000</b>	<b>\$8,347,000</b>	<b>\$652,000</b>	<b>\$4,257,000</b>	<b>\$0</b>	<b>\$832,000</b>
Wilsonville Booster PS			\$609,000			
<b>TOTAL</b>	<b>\$1,351,000</b>	<b>\$8,347,000</b>	<b>\$1,261,000</b>	<b>\$4,257,000</b>	<b>\$0</b>	<b>\$832,000</b>

## Development Phasing

Utility improvements will be made as properties are annexed into 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 cities 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. Some enabling projects may be required to be constructed prior to development to connect properties to existing systems. For example, the sanitary sewer pump station in the northeast corner of the planning area may be required in order for development in that sewer basin to occur.



**Selected Water System Design**  
 Basalt Creek Planning Area  
 March 2016



- Legend**
- Proposed Pump Stations
  - Proposed Forcemains
  - Proposed CWS Service System
  - CWS Service Boundary
  - Proposed Wilsonville Service System
  - Wilsonville Service Boundary
  - Deep Bore Segment (over 25' deep)
  - Jurisdictional Boundary
  - Planned SW Kinsman Rd Extension Sewer
  - Existing CWS/Tualatin Pump Stations
  - Existing CWS/Tualatin Gravity System
  - Existing CWS/Tualatin Forcemains
  - Existing Wilsonville System
  - Proposed Arterial Roads
  - Proposed Collector Roads
  - Proposed Local Roads
  - Proposed Bike/Ped Off-Street
  - Proposed Trails (by Others)
  - Existing Railroad
  - Existing Roads
  - Existing Bike/Ped On-Street
  - Taxlots
  - Streams
  - Planning Area
  - City Boundaries**
  - Sherwood
  - Tualatin
  - Wilsonville



**Selected Sewer Alternative**  
**Basalt Creek Planning Area**  
 March 2016

# 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.<sup>1</sup> 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

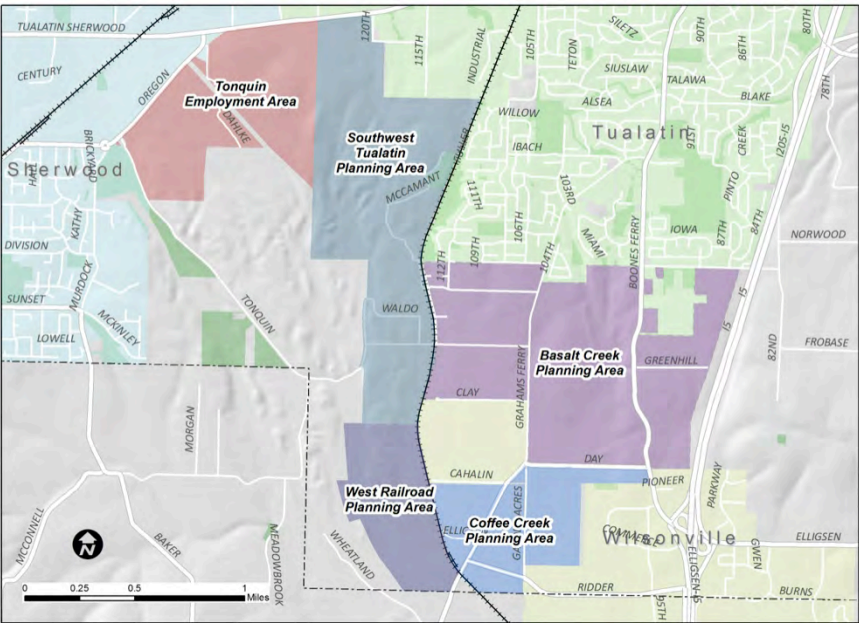


Figure 1: Basalt Creek Planning Area Location

<sup>1</sup> 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 124<sup>th</sup> Avenue Extension and the I-5/Elligsen interchange in a manner that does not preclude the future Southern Arterial west of SW 124<sup>th</sup>.
- The **2035 Regional Transportation Plan (RTP)** calls for detailed project planning and near-term construction of an extension of SW 124<sup>th</sup> 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 124<sup>th</sup> 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 124<sup>th</sup> 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 124<sup>th</sup> 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 124<sup>th</sup> 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 <sup>th</sup> 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 <sup>th</sup> Avenue to Grahams Ferry Road): Widen to three lanes with bike lanes and sidewalks, grade separate at railroad, improve geometry at Grahams Ferry Road <sup>1</sup>	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 <sup>th</sup> Avenue/Tonquin Road Intersection: Signal (may include Tonquin Trail crossing)	x			. <sup>2</sup>
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			. <sup>3</sup>
8	Boones Ferry Road/95 <sup>th</sup> 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 <sup>4</sup>
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 <sup>4</sup>
10	124 <sup>th</sup> 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 <sup>th</sup> Avenue to Boones Ferry Road): Construct 5 lane roadway with railroad and creek crossings, integrate segment of Tonquin Trail <sup>5</sup>		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 <sup>th</sup> Avenue Intersection: Access management		x		. <sup>6</sup>
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 <sup>7</sup>
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
<b>TOTAL</b>		<b>\$59M</b>	<b>\$97M</b>	<b>\$72-82M</b>	<b>\$228-238M</b>

<sup>1</sup> Grade separation for Tonquin Road is optional. An at-grade crossing would reduce cost by around \$2,000,000

<sup>2</sup> Cost included in Project 1

<sup>3</sup> Coordinate with Project 4. Cost of approach lane included in estimate for Project 12

<sup>4</sup> Tonquin Trail cost estimated by Metro as part of trail planning effort

<sup>5</sup> 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

<sup>6</sup> Project details to be determined by further coordination between City of Wilsonville and ODOT. Cost expected to be minimal

<sup>7</sup> 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 <sup>th</sup> 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 <sup>th</sup> /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 <sup>1</sup>	15,17,18	2026-2035	\$50,000,000

<sup>1</sup> 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 124<sup>th</sup> 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 (95<sup>th</sup>/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 124<sup>th</sup> 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-21<sup>2</sup> 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.

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<sup>2</sup> 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)

# Basalt Creek Concept Plan: Acknowledgements

## Joint Council

### **Tualatin City Council**

Mayor Lou Ogden  
Council President Monique Beikman  
Councilor Wade Brooskby  
Councilor Frank Bubenik  
Councilor Joelle Davis  
Councilor Nancy Grimes  
Councilor Ed Truax  
Councilor Jeff DeHaan  
Councilor Robert Kellogg  
Councilor Paul Morrison

### **Wilsonville City Council**

Mayor Tim Knapp  
Council President Scott Star  
Councilor Julie Fitzgerald  
Councilor Susie Stevens  
Councilor Charlotte Lehan  
Councilor Kristin Akervall

## Project Management Team

### **City of Tualatin**

Alice Cannon,  
Assistant City Manager

Aquilla Hurd-Ravich,  
Planning Manager

Jeff Fuchs,  
Public Works Director & City Engineer

Karen Perl Fox,  
Senior Long Range Planner

Cindy Hahn,  
Associate Planner

Kaaren Hoffman,  
City Engineer

Dayna Webb,  
Project Engineer

### **City of Wilsonville**

Nancy Kraushaar,  
Community Development Director

Chris Neamtzu,  
Planning Director

Miranda Bateschell,  
Planning Manager

Steve Adams,  
Engineering Manager

Katie Mangle,  
Senior Planner

### **Consultants**

John Fregonese,  
Fregonese Associates

Leila Aman,  
Fregonese Associates

Nadine Appenbrink,  
Fregonese Associates

## **Consultant Team**

### **Fregonese Associates (Project Management, Land Use)**

John Fregonese,  
President

Leila Aman,  
Principal

Nadine Appenbrink,  
Project Manager

Erica Smith,  
Urban Planner

Violet Brown,  
Urban Planner

### **CH2M Hill (Infrastructure)**

Darren Hippenstiel, PE

James McGrath

Kelli Walters,  
Water Resources Engineer

Mark Anderson,  
Senior Water Resources Engineer

### **Leland Consulting Group (Market Analysis)**

Brian Vanneman,  
Principal

Chris Zahas,  
Managing Principal

Matthew Craigie,  
Associate

### **DKS Associates (Transportation)**

Chris Maciejewski,  
Principal

Ray Delahanty,  
Project Manager

## **Agency Review Team**

### **Bonneville Power Administration**

Jim Clark

### **City of Sherwood**

Brad Kilby

Julia Hajduk

### **Clean Water Services**

Andy Braun

Carrie Pak

### **Metro**

Brian Harper

### **Northwest Natural**

Andrew Young

Brian Kelley

Brenda Hartzog

### **ODOT**

Timothy Wilson

### **Portland General Electric**

Tod Shattuck

Jennifer Stephens

Mark Fryburg

### **Sherwood School District**

Rob Fagliano

Phil Johansen

### **SMART**

Stephan Lashbrook

### **Tigard/Tualatin School District**

Ernie Brown

David Moore

### **TriMet**

Tom Mills

### **City of Tualatin Community Services/ Parks and Recreation**

Paul Hennon

Rich Mueller

Ross Hoover

### **Tualatin Valley Fire and Rescue**

Brian Sherrard

### **Tualatin Valley Water District**

Todd Perimon

Todd Heidgerken

### **Washington County**

Chris Deffebach

Renus Kelfkens

Russell Knoebel

Karen Savage

### **Wilsonville/West Linn School District**

Tim Woodley

### **City of Wilsonville Natural Resources**

Kerry Rappold



**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 "InnerOuter 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.

**Basalt Creek Supplemental Transportation Analysis**

January 2019

Page 1 of 7

The purpose of this document is to demonstrate that the solutions identified in the 2012 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 2012 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 Area. The Basalt Creek Transportation Refinement Plan set the stage for concept planning and comprehensive plan development for the Basalt Creek 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 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. 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 planning area.

The following tables document the land use assumptions for the Basalt Creek Area.

Land Use in the 2010 Regional Transportation Plan travel demand forecast  
(Land Use in the 2012 Basalt Creek Transportation Refinement Plan Technical Report)

<b>Zone Number</b>	<b>2005 Households</b>	<b>2035 Households</b>	<b>2005 Total Employment</b>	<b>2035 Total Employment</b>
1013	94	706	52	896
1014	54	645	16	938
<b>Total</b>	<b>148</b>	<b>1,351</b>	<b>68</b>	<b>1,834</b>

Land Use in the 2018 Regional Transportation Plan travel demand forecast

<b>Zone Number</b>	<b>2015 Households</b>	<b>2040 Households</b>	<b>2015 Total Employment</b>	<b>2040 Total Employment</b>
980	45	0	79	1,447
981	107	646	167	1,447
<b>Total</b>	<b>152</b>	<b>646</b>	<b>246</b>	<b>2,894</b>

Buildout of the Basalt Creek Concept Plan

<b>Zone Number</b>	<b>2015 Households</b>	<b>2040 Households</b>	<b>2015 Total Employment</b>	<b>2040 Total Employment</b>
980	45		79	2,227
981	107	581	167	2,227
<b>Total</b>	<b>152</b>	<b>581</b>	<b>246</b>	<b>4,453</b>

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 area**

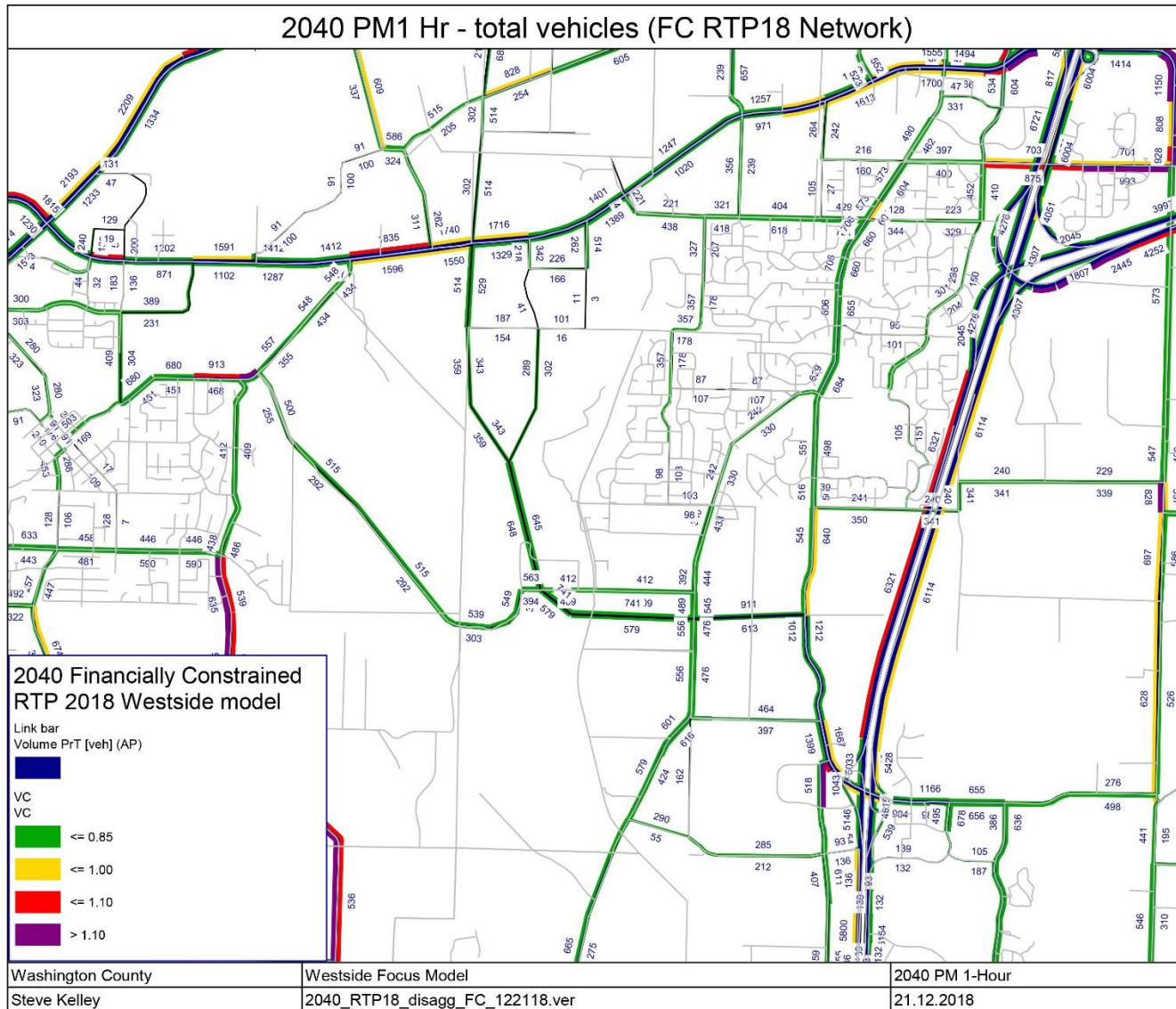
Nominating Agency	2018 RTP ID	Project Name	Start Location	End Location	Description	Estimated Cost (2016 Dollars)	Time Period	Financially Constrained	RTP Investment Category	Primary Purpose
Washington County	10568	Tualatin-Sherwood Rd Improvements	Langer Farms Pkwy	Teton Ave	Widen from three to five lanes 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 area (Continued)**

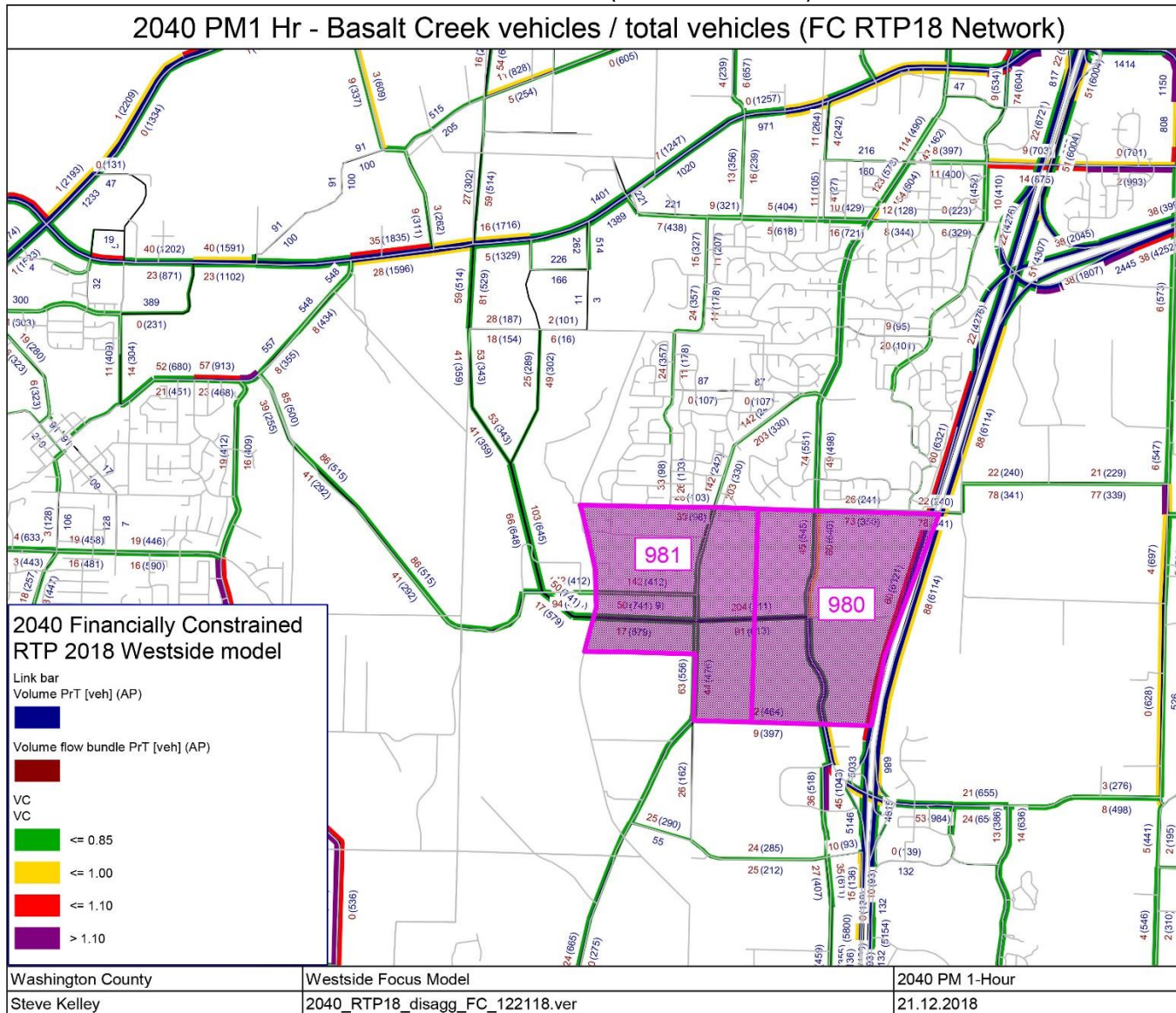
Nominating Agency	2018 RTP ID	Project Name	Start Location	End Location	Description	Estimated Cost (2016 Dollars)	Time Period	Financially Constrained	RTP Investment Category	Primary Purpose
Tualatin	11417	Blake Street Extension	115th Ave	124th Ave	Extend Blake Street to create an east-west connection 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 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.



**METRO**

December 5, 2006

Doug Rux  
Community Development Director  
City of Tualatin  
18880 SW Martinazzi Avenue  
Tualatin, OR 97062-7092

**RE: CITY OF TUALATIN TITLE 13 AND TUALATIN BASIN PLAN COMPLIANCE REVIEW**

Dear Mr. Rux:

I have had the pleasure of working with Jim Jacks, former Special Projects Manager, on the City's efforts to comply with the Tualatin Basin Program and Metro's Title 13. Until his recent departure to take a new job, Jim served on the Tualatin Basin Natural Resources Steering Committee for many years and contributed to the formulation of the Tualatin Basin Program. He was very helpful to me in explaining the City's amendments to its plan and codes to implement portions of the Tualatin Basin Program. Although the City Council has already taken final action on the proposed code amendments, we ask that the City consider the points raised in this letter and take appropriate action in the future to address them.

Thank you for transmitting to Metro the City of Tualatin's proposed changes to its development code and comprehensive plan to comply with Title 13 of the Metro Urban Growth Management Functional Plan, Metro Code 3.07.1310 through .1370 ("UGMFP"). Tualatin is seeking to comply with Title 13 via "Option 5" (Metro Code 3.07.1330(B)(5)), by complying with the "Tualatin Basin Program." Our comments are based on our review of the City's two September 14, 2006 compliance memoranda, and September 7, 2006 draft code amendments. Please advise us if these are not the most recent versions of the review documents or if we are missing other necessary documents.

This letter serves as Metro's compliance review under Title 8 (Metro Code 3.07.820(A)). I note that compliance with Title 13 pursuant to Option 5 requires Tualatin to undertake certain non-regulatory steps, including some ongoing responsibilities, that do not require amendments to Tualatin's comprehensive plan and land use regulations. This compliance review by Metro is a review only of whether the amendments Tualatin is proposing are consistent with the UGMFP, and is not a review of whether Tualatin has complied, or will comply, with the other requirements of Option 5 and the Tualatin Basin Program.

#### **Applicable Requirements for Compliance**

There are essentially four substantive elements of Option 5 compliance that could require amendments to comprehensive plan and land use regulations. In order to comply with Title 13 under Option 5, Tualatin must:

- "[F]acilitate and encourage the use of habitat-friendly development practices, where technically feasible and appropriate, in all areas identified as Class I and II riparian habitat areas on the Metro Regionally Significant Fish and Wildlife Habitat Inventory Map." Metro Code 3.07.1330(B)(5)(d) (see also, step 2 of the Tualatin Basin Program implementation steps, applicable via Metro Code 3.07.1330(B)(5)(a), which requires Tualatin to adopt Low Impact-Development guidelines "to reduce environmental impacts of new development and removing barriers to their utilization.") In addition, Metro Code 3.07.1330(E) requires Beaverton to remove

barriers to the use of habitat-friendly development practices in all regionally significant habitats. Metro provides examples of such habitat-friendly practices in Table 3.07-13c of Title 13;

- “[A]llow for the reduction of the density and capacity requirements of Title 1 of the [UGMFP]” for all properties within Metro’s habitat inventory. Metro Code 3.07.1330(B)(5)(e) and 3.07.1330(H). Such allowance may be provided only for properties within the Metro urban growth boundary on January 1, 2002, require the protection of the habitat via a public dedication or restrictive covenant, and only allow for the density/capacity reduction in proportion to the amount of habitat permanently protected on the property;
- Provide both a simple and a detailed process for property owners to verify the location of inventoried habitat on their property. Metro Code 3.07.1330(G); and
- Adopt protection provisions consistent with Title 13 applicable to upland wildlife habitat areas within territory added to the Metro UGB in the future. Metro Code 3.07.1330(B)(5)(f). (A jurisdiction is not required to adopt such provisions at this time, it may instead choose to address this requirement at the time that new areas are brought into the UGB and concept planning and local zoning is applied.)

In addition to these substantive requirements, Tualatin must, first, also ensure that provisions it adopts provide property owners with clear and objective compliance standards, Metro Code 3.07.1330(C), and may also provide discretionary compliance standards, Metro Code 3.07.1330(D). Second, Tualatin must have made its proposed amendments available for public review at least 45 days prior to a public hearing regarding those amendments. Metro Code 3.07.1330(F).

### **Summary of Comments**

We first want to commend Tualatin on its thorough efforts in complying with Title 13. The City’s proposed amendments are responsive to Metro’s expectations and will result in better protection of our region’s wildlife habitats. Despite these commendable efforts, we understand that Title 13 has many complex requirements, and so this letter includes Metro’s comments to ensure the City fully complies with all aspects of Title 13. We also include a number of suggestions to improve the clarity of the proposed amendments. This section provides only a summary of our comments, a more detailed discussion of each comment is found in the following sections.

#### *Required for Compliance*

- The City must ensure that its density waiver is voluntary, applicable to all six habitat types contained in Metro’s Regionally Significant Fish and Wildlife Habitat Inventory Map, and applicable only to properties located inside the UGB as of January 1, 2002;
- The definition of “Fish and Wildlife Habitat Area” (FWHA) (or some equivalent) must be clarified to ensure that it includes all six regionally significant habitats in Metro’s Significant Fish and Wildlife Habitat Inventory Map. The City must then demonstrate that its proposed code changes, using whatever habitat definitions it deems necessary, do in fact facilitate and encourage HFDPs and remove barriers to Low Impact Development practices;
- The City must clearly demonstrate that it has provided a “simple” verification process in addition to the detailed approach to locate boundaries of Metro’s Regionally Significant Fish and Wildlife Habitat on a property specific basis.

#### *Suggestions*

- Amend code to allow flexibility in building height, provided that the height increase results in an offsetting reduction in impervious surface or other beneficial outcome for habitat;
- Amend code to create a mechanism, if one does not already exist, to allow and encourage landowners to shift required landscaping from one part of their property to areas adjacent to a habitat area;

- Modify the City's proposed provisions prohibiting the spillage of light into FWHA to clarify that it only encourages, not prohibits, landowners to do so. One suggestion is to insert the qualifying phrase "where practical and feasible" into the City's language that otherwise prohibits the shining of light into habitat areas;
- Continue to work with CWS to ensure the timely development of effective stormwater facility design standards, including those for open drainage systems, and to make the appropriate future code changes to encourage landowners to take advantage of the new design standards;
- Amend City's code to affirmatively state its encouragement for certain HFDPs involving stream crossings and stormwater facilities (see more detailed comments below), instead of relying only on compliance with Title 3 and CWS standards to comply with Title 13.

## Detailed Comments

### *Density Waiver*

Metro Code Section 3.07.1330(B)(5)(e) requires that each city or county adopt a waiver process from the density requirements of Title 1 of the UGMFP for all properties in Metro's Regionally Significant Fish and Wildlife Habitat Inventory Map. This waiver can only apply to properties that were within the UGB before January 1, 2002.

*Issue #1: The City's existing density reduction provision, through its Net Acreage definition, is not broad enough to allow density waivers for all six habitat types contained in Metro's Regionally Significant Fish and Wildlife Habitat Inventory Map, as required by Title 13.*

As best can be determined, the City proposes to meet the density waiver requirement by reference to its existing language of Net Acreage, which excludes from development rights-of-way and tracts, as well as habitats protected under CWS requirements. No changes to this definition are proposed. The City explains that the current application of the Net Acreage definition already allows landowners to avoid meeting minimum density requirements and so does not penalize landowners for having protected habitats on their property. It appears, however, that the scope of the allowed density reduction under the Net Acreage definition falls short of Title 13's requirement that the density waiver apply to all regionally significant fish and wildlife habitats (e.g., Class I, II, and III riparian, and Class A, B, and C upland).

Compliance Recommendation: The City must ensure that, regardless of the methodology used to comply with the density waiver requirement of Metro Code Section 3.07.1330(B)(5)(e), the density waiver is applicable to all six regionally significant habitats (see next two issues for complete recommendation).

*Issue #2: The City's proposed scheme makes the density waiver option a mandatory requirement, whereas Title 13 specifies that the waiver is intended to a voluntary option for landowners.*

*Issue #3: The City's proposed scheme fails to limit application of the density waiver to only properties inside the urban growth boundary on January 1, 2002.*

Metro Code Section 3.07.1330(B)(5)(e) requires that each jurisdiction allow landowners to apply for a density waiver as a voluntary option to protect regionally significant habitat. Thus, the density waiver is not intended to be a mandatory density restriction in a landowner's property right. In fact, making the density waiver a mandatory requirement is a prohibition on development that clearly goes beyond the intent of Title 13 and would need to be justified by a separate Goal 5 ESEE analysis and decision.

In addition, Metro Code Sections 3.07.1330(B)(5)(e) and 3.07.1330(H)(1)(a) state that the density waiver applies only to properties that were located inside the UGB on January 1, 2002. The City has not included this limitation in its proposed code changes.

**Compliance Recommendation:** The City must provide a density waiver option that is voluntary and applies to all six of Metro's regionally significant habitats. We recommend the City add language to its Net Acreage definition that states, in effect:

"A landowner of property with regionally significant habitat, as shown on Metro's Regionally Significant Fish and Wildlife Habitat Inventory Map [the City should incorporate Metro's Inventory Map by reference], and which is habitat not already excluded under this definition, may request a density waiver to protect such habitat, provided that the habitat has been verified by local process as regionally significant. This density waiver option applies only to properties located within the UGB before January 1, 2002."

As an alternative to integrating the density waiver into the Net Acreage definition, the City could add an entirely separate code section that specifies how landowners can obtain a density waiver.

### **Definition of Fish and Wildlife Habitat Area**

*Issue: The City's proposed definition of "Fish and Wildlife Habitat Area" does not clearly demonstrate that it includes all six regionally significant habitat areas in Metro's Inventory Map.*

Tualatin proposes to add to its code a new habitat category called "Fish and Wildlife Habitat Area" (FWHA). This term is defined as "an area in the Natural Resources Protection Overlay District, Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan, or in the Clean Water Services Vegetated Corridor." The City then applies Title 13's required HFDPs and Low Impact Development practices to properties that contain FWHA. It is not clear, however, whether the proposed definition of FWHA includes all of the six regionally significant habitat areas in Metro's Regionally Significant Fish and Wildlife Habitat Inventory Map, as required by Title 13, because the definition refers to habitat maps and resources that are different from Metro's Habitat Inventory Map. Our best estimate is that the definition includes most, but not all, the habitats in Metro's Regionally Significant Fish and Wildlife Habitat Inventory. Thus, in order to better determine compliance with requirements of Title 13 and the Tualatin Basin Program, Metro needs to know the exact extent of overlap between FWHA and Metro's Regionally Significant Fish and Wildlife Habitat Inventory Map.

**Compliance Recommendation:** The City must ensure that its definition of FWHA (or some other equivalent habitat category) includes all six classes of Metro's regionally significant fish and wildlife habitats.

### **Verification Process**

Metro Code Section 3.07.1330(G) requires that each jurisdiction provide landowners a "reasonable, timely, and equitable process" to verify the specific location of "habitat areas" (i.e., all six habitat types on the RSFWH Inventory Map or functional equivalent). This is called the "simple" verification process and requires only a minimal expenditure of time and money in cases where the habitat boundary is uncontested or easily resolved. Metro Section 3.07.1340(D) also requires a detailed map verification process for Habitat Conservation Areas ("HCA"), which include Class I and II riparian habitats and Class A and B upland habitats. This detailed process requires expert opinion and more technical supporting data in cases where the habitat boundary is complex or controversial.

*Issue: The City has not clearly demonstrated that it has provided a detailed verification process and a simple verification process for identifying the boundaries of regionally significant fish and wildlife habitat.*

Because the City has not adopted Metro's Regionally Significant Fish and Wildlife Habitat Inventory Map, and because it is unclear how the City's proposed FWHA relates to the Inventory Map (as discussed

above), Metro is unable to determine whether the City has a verification process that complies with Metro Code Sections 3.07.1330(G) and 3.07.1340(D). Although our review indicates that most of the six regionally significant habitats are likely included in the City's definition of FWHA, and that the City appears to have an existing verification process for many of the habitats included in FWHA, we still are not certain that all of Title 13's verification requirements are being met.

It should be noted that Title 13 does allow jurisdictions to rely on existing local habitat maps and verification processes, but compliance is dependent on Metro making a finding that these existing local provisions "substantially comply" with Title 13's requirements. This City appears to be taking this alternative approach. However, the City has not clearly demonstrated how its existing habitat maps include all the acreage that comprises regionally significant fish and wildlife habitat.

Compliance Recommendation: The City must clearly demonstrate that it is providing both a "simple" and more detailed verification process to identify the boundaries of regionally significant fish and wildlife habitat. Enclosed is draft code language from the City of Tigard providing a "simple" as well as detailed verification process. Metro recommends that Tualatin adopt similar provisions. Alternatively, Tualatin can comply by adopting the basic and detailed verification processes contained in Metro's Model Ordinance.

### ***Suggestions on HFDP and LID***

Title 13 requires cities and counties to "facilitate and encourage" the use of habitat-friendly development practices ("HFDP") (Metro Code 3.07.1330(B)(5)(d)), and to "remove barriers" to the use of these HFDPs (Metro Code 3.07.1330(E)). Metro provides examples of such habitat-friendly practices in Table 3.07-13c of Title 13. In addition, step 2 of the Tualatin Basin Program implementation requires Tualatin to adopt Low Impact-Development ("LID") guidelines to reduce the environmental impacts of new development and to remove barriers to the use of these LIDs.

With this in mind, the below comments do not raise "compliance" issues per se, but are intended to pose questions or make suggestions to improve the likely effectiveness of the proposed credit program.

*Flexibility for Building Height:* No code changes are proposed by the City to provide increased flexibility for building height. The City's rationale is that since the presumable intent would be to protect habitat by reducing development (i.e., reducing building height), that it seems counterproductive to allow increased height as a way to protect wildlife habitats. This rationale misses the intent of this HFDP which is to allow increased height in exchange for, for example, a decreased building footprint, thereby reducing impervious surface. This basic rationale is provided in the Tualatin Basin Implementation Report as well.

Recommendation: We recommend that the City amend its code to allow flexibility in building height, provided that the height increase results in an offsetting reduction in impervious surface or other beneficial outcome for habitat.

*Locating landscaping adjacent to habitat areas:* No code changes are proposed by the City to encourage this HFDP. While the City's current landscaping standards may allow for this practice, it does not appear that there is any explicit encouragement to do so.

Recommendation: We recommend that the City amend its code to create a mechanism, if one does not already exist, to allow and encourage landowners to shift required landscaping from one part of their property to areas adjacent to a habitat area.

*Re-direct outdoor lighting away from habitat areas:* Metro's intent with this HFDP is for localities to encourage landowners to avoid shining their outdoor lights, which can disturb wildlife, into habitat areas. The City, however, is proposing to prohibit the shining of light into FWHA. This prohibition is a restriction of land use that goes beyond Title 13's intent to use only non-regulatory measures to encourage HFDPs.



Recommendation: We recommend that the City modify its proposed provisions prohibiting the spillage of light into FWHA to say that it only encourages landowners to do so. One suggestion is to insert the qualifying phrase "where practical and feasible" into the City's language that currently prohibits the shining of light into habitat areas.

*Use of multi-functional open drainage systems:* The City addresses this HFDP by delaying action until CWS and the City develop new design standards for open drainage systems and similar stormwater facilities. While Metro recognizes the benefit of deferring to CWSs expertise to develop a comprehensive stormwater design manual that can be used by jurisdictions throughout the Tualatin Basin, we do expect the City to take future action to amend its code to incorporate the CWS standards that will encouraging these HFDPs.

Recommendation: We encourage the City to continue to work with CWS to ensure the timely development of effective stormwater facility design standards, including those for open drainage systems, and to make the appropriate future code changes to encourage landowners to take advantage of the design standards.

*Stream crossings and detention ponds:* We also note that for a number of HFDPs — such as minimizing stream crossings, encouraging perpendicular crossings, using habitat sensitive bridge and culvert designs, use of detention ponds, and allowance of narrow road widths through stream corridors — the City does not propose any code changes. Instead, the City states that its code is silent on such practices, but does not prohibit them, and mostly relies on its adoption of Metro's Title 3 and CWS requirements to meet Title 13's "encourage and facilitate" requirement.

Recommendation: We recommend that the City amend its code to affirmatively support these HFDPs. Doing so would leave no doubt that the City is encouraging and facilitating these HFDPs.

Please do not hesitate to contact me if you having any questions regarding our comments.

Sincerely,



Paul Ketcham  
Principal Regional Planner

Cc: Councilor Carl Hosticka, District 3  
Michael Jordan, Chief Operating Officer  
Christina Deffebach, Long Range Planning Manager  
Paul Garrahan, Metro Attorney  
Amanda Punton, DLCD Natural Resource Specialist  
Steve Kelley, Senior Planner, Washington County

Enclosure

## TDC Chapter 04: Community Growth

### Section 4.010 Background.

(1) It is the purpose of this chapter to portray the reasons for Tualatin's rapid economic growth; to generally define the need and proportion of specific types of land use; to define public service and natural environmental constraints to development; to describe specific growth assumptions and objectives; and to define a specific growth boundary for the City. Overall, this chapter provides a guide to how much land the City needs in what proportion, where, why and how fast.

(2) The process used to answer these questions revolves around the data developed in the Technical Memoranda. The available market data was analyzed to determine how much land for each use would be required by the year 2000 and this demand balanced against specific assumptions of land use density and proportion. At the same time, this demand was compared to natural development constraints such as agricultural soil suitability, flood plains and weak foundation soils, and to public service constraints such as the ease of serving particular parcels of land with water, sewer and road services. Also reviewed was the distribution and relationship of specific land uses to the growth assumptions and objectives described in this chapter and TDC Chapters [5](#), [6](#), [7](#) and [8](#). The analysis and balancing of all these factors, after review and revision by the citizen advisory committees, resulted in the Plan Map contained in [TDC Chapter 9](#).

### Section 4.020 The Demand for Land.

(1) Population movement to the suburbs was very strong during the 1960's and early 1970's, especially in the Tualatin area. During the period between 1960 to 1975, the average annual growth rate here was 50.2 percent, compared to 7.6 percent in the surrounding areas. Tualatin's rapid growth is attributable to several major factors:

- (a) Moratoriums and restrictive growth policies in surrounding, larger jurisdictions;
- (b) Availability of land for development in a rural area at less than normal market rates;
- (c) A build-up of industry and a need for housing; and
- (d) A municipal attitude supporting development. Though land prices are now reaching market level, the other factors are still very much in effect. In addition, new industries, the popularity of Westside living, availability of large parcels of land, and other factors further reinforce the desirability of Tualatin for development. This resulting great demand for new residential, commercial and industrial land is causing a rapid transition from rural to urban land uses in Tualatin today.

(2) Specific information regarding projected community growth was developed in the Technical Memoranda. The Memoranda made two population projections, one based on market growth and another based on an adopted growth policy. The projections show the City's expected population growth, under the two assumptions, to the year 2000 and are

shown on [Table 4-1](#) and [Figure 4-1](#). The first assumption uses a growth policy of 7.8 percent population growth annually, while the second assumption uses the economic land market to determine the expected growth within the Tualatin area.

(3) It should be noted that the City's growth will exceed the market growth predicted for 1980 based on the City's current rate of residential building permits issued. The City's December 1978 population is estimated to be 6,000 people. It should also be noted that interest groups such as the Oregon Homebuilders Association and the 1000 Friends of Oregon may oppose any type of growth restrictions on the basis of the effect of those restrictions on housing costs. The Land Conservation and Development Commission has also expressed extreme interest in any move by the City toward adoption of growth controls.

(4) Tualatin, Washington County, and regional population growth relates directly to the demand for residential, commercial and industrial land within the City's planning area. Residential land demand, in average terms, is dependent on assumed housing densities as well as population growth. Housing densities are discussed in [TDC Chapter 5](#). Commercial and industrial land needs are less dependent on density assumptions and were estimated in the Technical Memoranda as follows:

(a) Demand for commercial land:  
 Growth policy - 17.2 acres in year 2000  
 Market growth - 30.4 acres in year 2000

(b) Demand for industrial land:  
 9 to 11 acres per year  
 210 to 250 total acres in year 2000

(c) If the demand for the three major land use types is compared to the existing land available (see [Table 3-3](#)), it becomes apparent that there is sufficient land for commercial and industrial uses, but insufficient land for residential uses within the City limits.

**Table 4-1**  
**Projected Growth Assumptions**

		GROWTH POLICY		MARKET TREND		
Year	Number	Average Annual Percent Growth	Average Annual Population Growth	Number	Average Annual Percent Growth	Average Annual Population Growth
1970	750	-	-	750	-	-
1975	3,241	55.4%	415	3,241	55.4%	415

1980	4,760	7.8%	253	6,390	16.2%	525
1985	7,000	7.8%	373	10,990	12.0%	767
1990	10,280	7.8%	547	16,270	8.0%	880
1995	15,100	7.8%	803	22,615	6.5%	1,058
2000	22,180	7.8%	1,180	28,721	4.5%	1,018

**Section 4.030 Buildable Lands - Development Constraints.**

(1) This section describes those areas of the planning area vacant and available for new development that are easily served by public services and are not adversely affected by natural hazards. This information is depicted on the Buildable Lands - Development Constraints Map, which summarizes the following overlays that were developed for the Phase I - Technical Memoranda Buildable Land Inventory.

- (a) Slopes Analysis
- (b) Water Areas and Wetlands
- (c) Existing Land Use
- (d) Water Service Areas
- (e) Sewer Service Areas

Table 4-2 of this Plan describes the actual acreage figures derived from the Buildable Land Inventory.

(2) One development constraint not easily portrayed graphically is traffic congestion. The Tualatin area will likely be dependent upon the automobile as its major form of transportation in the year 2000. A traffic analysis of various growth alternatives was conducted as a part of the planning process, and the analysis indicated that the City could not accommodate all the traffic generated by full development of the planning area, particularly in the Nyberg Street Corridor connecting to the interstate freeways.

**Table 4-2  
Buildable Land Inventory**

Item	Approximate Acreage		
	Within City	Outside City Within Study Area	Total

A. Present Urbanized Land	1,027.08	431.98	1,459.06
B. Non-Urbanized Land	1,214.02	2,3471.31	3,555.33
C. Total Acreage	2,241.10	2,773.29	5,014.39
D. Non-buildable Land			
1. Areas with slopes greater than 20%	47.54	123.99	171.53
2. Areas in 100-year flood plain	221.20	146.28	367.48
3. Areas in wetlands (not included above)	80.29	56.51	136.80
4. Areas not served without sewer line extensions in excess of 10,000 feet (not included in above)	.00	721.77	721.77
5. Areas not served without water main extension of 5,2000 feet (not included in above)	.00	417.04	417.04
6. Soils - does not apply	-	-	-
7. Geology - does not apply	-	-	-
8. Elevation - does not apply	-	-	-
9. Public Lands - included in 40% non-residential land	-	-	-
10. Private Institutional Lands - included in 40% non-residential land	-	-	-
11. Other Private Lands - included in 40% non-residential land	-	-	-

12. Passed-Over Land - does not apply	-	-	-
13. Zoning - does not apply	-	-	-
<b>Total</b>	349.03	1,465.59	1,814.62
E. Buildable Land (B minus D)	864.99	875.72	1,740.71
F. Assumed Land for Non-Residential Purposes @ 40% (.40 times E)	345.99	350.29	696.28
G. Buildable Land for Residential Purposes (E minus F)	519.00	525.43	1,044.43

#### **Section 4.040 General Growth Assumptions.**

To begin the composition of a planning map, certain assumptions must be made, based on available data. The following are the general growth assumptions used to develop this Plan, based on the data generated in the Phase I - Technical Memoranda:

- (1) The approximate proportion of residential land to commercial and industrial land should be 60 percent residential and 40 percent commercial and industrial.
- (2) A portion of buildable land within the City will be unavailable for development (i.e., not available for sale). In 1985, 25 percent of the land will not be available for development because of owners' holdings, but this is estimated to decrease to 10 per-cent by the year 2000.
- (3) A portion of the planning area will not be available for development because of natural hazards such as flooding and the need to preserve natural areas such as wetlands, river and streambanks.
- (4) A portion of the planning area will not be available for development because of the need to provide corridors for roads and utilities.
- (5) Traffic congestion and the ease of providing water and sewer services will constrain the amount and direction of growth within the planning area.
- (6) There is a need for land in the planning area to provide for a population in the year 2000 of between 22,000 and 29,000 people, depending on the adoption of a controlled growth program and future density assumptions made in subsequent Plan revisions. Adoption of a controlled growth program will be difficult to achieve because of interest groups and state agency opposition.
- (7) There will be a solution to Tualatin's flood problem that will create additional buildable land at an indefinite time before the year 2000.

(8) Existing land use will necessarily be a strong locational influence on the land use map to avoid future land use conflicts.

(9) There is no need to expand the City's area to provide additional land for new commercial and industrial development.

(10) The amount and location of additional residential development will be based on the objectives and density assumptions described by [TDC Chapter 5](#).

#### **Section 4.050 General Growth Objectives.**

The following are general objectives used as a guide to formulate the Plan. The objectives are positive statements to de-scribe the Plan's intent to:

(1) Provide a plan that will accommodate a population range of 22,000 to 29,000 people.

(2) Cooperate with the Metropolitan Service District to reach regional consensus on population growth projections within the Tualatin area.

(3) Conform to Metropolitan Service District (Metro) procedures for initiating amendments to the Metro Urban Growth Boundary.

(4) Provide a plan that will create an environment for the orderly and efficient transition from rural to urban land uses.

(5) Convert agricultural land only if needed for urban uses.

(6) Arrange the various land uses so as to minimize land use conflicts and maximize the use of public facilities as growth occurs.

(7) Prepare a balanced plan meeting, as closely as possible, the specific objectives and assumptions of each individual plan element.

(8) Define the urban growth boundary.

(9) Prepare a plan providing a variety of living and working environments.

(10) Encourage the highest quality physical design for future development.

(11) Coordinate development plans with regional, state, and federal agencies to as-sure consistency with statutes, rules, and standards concerning air, noise, water quality, and solid waste. Cooperate with the U.S. Fish and Wildlife Service to minimize adverse impacts to the Tualatin River National Wildlife Refuge from development in adjacent areas of Tualatin.

(12) Adopt measures protecting life and property from natural hazards such as flooding, high groundwater, weak foundation soils and steep slopes.

(13) Develop regulations to control sedimentation of creeks and streams caused by erosion during development of property.

(14) Develop a separate growth program that controls the rate of community growth and is acceptable to the Land Conservation and Development Commission.

(15) Arrange the various land uses in a manner that is energy efficient.

(16) Encourage energy conservation by arranging land uses in a manner compatible with public transportation objectives.

(17) Maintain for as long a period as possible a physical separation of non-urban land around the City so as to maintain its physical and emotional identity within urban areas of the region.

(18) Fully develop the industrial area located in Washington County west of the City only when adequate transportation facilities are available and the area has been annexed to the City and served with water and sewer services.

(19) Cooperate with Washington County to study the methods available for providing transportation, water and sewer service to the industrial area west of the City, designating this area as a special study area.

(20) Initiate annexation of property within the Urban Growth Boundary planned for residential development only when petitioned to do so by owners of the affected property, including cases involving unincorporated "islands" of property surrounded by land annexed previously.

(21) Territories to be annexed shall be in the Metro Urban Growth Boundary.

(22) Address [Metro's Urban Growth Management Functional Plan, Title 13](#), Nature in Neighborhoods, through the conservation, protection and restoration of fish and wildlife habitat, including Metro's Regionally Significant Fish and Wildlife Habitat, through the Tualatin Basin Natural Resource Coordinating Committee and the Tualatin Basin Program.

(a) Support and implement the elements of the Tualatin Basin Program to:

(i) Develop and adopt local policies and regulations to implement the provisions of the Tualatin Basin Program.

(ii) Adopt low impact development (LID) provisions to reduce environmental impacts of new development and remove barriers to their utilization.

(iii) Coordinate with Clean Water Services (CWS) to implement their Healthy Streams Action Plan and other programs such as their Stormwater Management Plan and Design and Construction Standards.

(iv) Coordinate with CWS, Metro and others to develop and support the funding, voluntary and educational components of the Tualatin Basin Program.



(v) Coordinate with CWS, Metro and others to develop and support the monitoring and adaptive management components of the Tualatin Basin Program.

(b) Continue active participation in the Tualatin Basin Natural Resources Coordinating Committee and the Steering Committee to support and implement the Tualatin Basin Program.

(c) Coordinate with CWS and Metro to update Metro's Regionally Significant Fish and Wildlife Habitat Inventory Map. Changes to the Inventory Map will be on-going as on-site inventories are conducted as part of private and public construction projects.

(d) Support and implement provisions allowing public access to planned public facilities. [Ord. 610-83, 11/15/83; Ord. 937-95, §2, 1/9/95; Ord. 1146-03, 7/28/03; Ord. 1224-06, 11/13/06]

#### **Section 4.060 Urban Growth Boundary.**

(1) A long-range growth boundary is necessary to predict the amount and location of urban land needed in the future. The establishment of this boundary provides a framework for the orderly conversion of rural land to urban uses. The growth boundary establishes the City's intent to annex and provide urban services to specific properties over a specific period of time. Thus, the growth boundary establishes the basis of a City annexation policy and provides landowners with some assurance as to the City's intent for the future uses of their land.

(2) This boundary was first established through a cooperative intergovernmental process established by the Columbia Region Association of Governments in 1976. The boundary is a line establishing the limits of urban and agricultural use within the metropolitan Portland area.

(3) The Urban Growth Boundary is defined by applying the following criteria to the data developed by the Phase I - Technical Memoranda.

(a) Land needed to accommodate urban growth to the year 2000 using the assumption of this Plan:

(i) Urban land needs criteria.

(b) Agricultural land as defined by Statewide Goal 3 must conform to one of the following categories:

(i) Land developed for nonagricultural purposes.

(ii) Land irrevocably committed to nonfarm use.

(iii) Land justified under exception procedures of Statewide Goal 2.

(c) Urban Growth Boundary feature determinants are as follows and shall be used whenever possible:

- (i) Creeks with narrow flood plains, due to their barrier effect and definability.
- (ii) The edge of a wide flood plain, due to its limiting effect on urban land use. This criterion may be unsuitable if the flood plain is in agricultural use.
- (iii) Railroad tracks, due to their barrier effect, especially where road or highway crossings are involved.
- (iv) Power lines or easements due to their definability.
- (v) Roads due to their definability and barrier effect, but unsuitable with respect to service provision.
- (vi) Rear property lines, due to their definability and service provision.

#### **Section 4.065 Requirements.**

(1) Metro Code Urban Growth Management Functional Plan (MUGMFP) Section 3.07.1120 requires the City to adopt comprehensive plan provisions and land use regulations for areas added to the Urban Growth Boundary (UGB) that are identified as the responsibility of the City. The adopted plan provisions and regulations are to address the requirements of Section 3.07.1120(c).

(2) In December, 2002 (Metro Ordinances No. 02-969B & 02-990A (and June, 2004 (Metro No. 04-1040B) Metro expanded the UGB to include 382 acres of land in the southwestern corner of Tualatin. Of this area, 302 acres were designated as Regionally Significant Industrial Area (RSIA) and the remaining acreage was designated as Industrial. Specific conditions were placed by Metro relating to compliance with MUGMFP Titles 3, 4, & 11, lot sizes, and commercial restrictions. The Southwest Tualatin Concept Plan (SWCP) area was accepted by the City in October, 2010, encompassed the 382 acres added to the UGB in 2002 and 2004, a 50 acre property within the Tualatin Planning Area, 117 acres identified in Metro’s 2010 Urban Re-serve process as the “Knife River Area” and 66 acres south of Tonquin Road east of the railroad brought into the UGB in 2004.

(3) In March 2011, Plan Amendments implementing the SWCP for the 431 acre Southwest and Regionally Significant Industrial Area portion of the SWCP Area were approved by the City Council. The amendments were not applied to the 117.5 acre “Urban Reserve” designated by Metro and the 65.5 acre “Basalt Creek” area to be considered in the Basalt Creek Concept Plan.

(4) In April 2019, Plan Amendments implementing the Basalt Creek Concept Plan were adopted by the City Council. The Concept plan included a 330-acre buildable area south of Tualatin (the entire Concept Plan is 330 buildable acres, 194.23 buildable acres of which are within the Tualatin UGB).

**Section 4.070 Urban Reserve Plans.**

(1) The Metropolitan Service District (Metro) Code requires the Urban Reserve Plans for Urban Reserve Areas to be adopted as a component of the comprehensive plan of the city to which the Urban Reserve Area will be annexed.

(2) The Urban Reserve Plan for Urban Reserve Area 43 (SE corner of Grahams Ferry Road and Helenius Road; 23000 Block of Grahams Ferry Road; 2S1 35CB, Tax Lot 100) prepared by Matrix Development and dated October 27, 1998, is incorporated as a separate document into the Tualatin Development Code. Although the Urban Reserve Plan was developed in 1998 to meet the Metro Code requirements for Urban Reserve Plans and it was known the property was considered a site for residential development, the specific type of development was not known. Development of the property need not be in conformance with the Urban Reserve Plan. The property can be used for any of the permitted out-right or conditional uses allowed in the planning district applied to it. Once annexed to the City of Tualatin, development of the property shall be in conformance with the applicable City standards, and other applicable standards, for the type of development proposed. [Ord. 1051-00 §1, 3/13/00]

## TDC Chapter 07: Manufacturing Planning Districts

### Section 7.010 Background.

(1) Tualatin's relationship to road and rail access has provided a favorable environment for industrial development. The City's industrial area is bisected by two rail-roads, the Burlington Northern and the Southern Pacific, and is served by the Interstate 5 Freeway which, in turn, provides access to the Interstate 205 Freeway and the State Highway 217 Expressway. These transportation facilities provide good multi-mode access to the whole of the Portland Metropolitan Area, the Willamette Valley, and to national markets. Because the area has good access to the transportation system, large areas of land have been zoned for industrial use, both in the City and west of the City in Washington County.

(2) Most of the existing industrial land use in the Tualatin area is located between or adjacent to the Burlington Northern and Southern Pacific rail lines. Smaller pockets of industrial land occur immediately north of downtown Tualatin and in the vicinity of the Lower Boones Ferry Road/Interstate 5 Freeway interchange. The amount of land zoned for industrial use is substantial. The amount actually used is small. Data developed in the Phase I - Technical Memoranda, together with supplementary information developed by the City's economic consultants, indicate that the Portland region annually absorbs 240 acres and Tualatin can be expected to utilize 9 to 15 acres of industrial land per year. There are 1,975 acres of industrially zoned land within the Tualatin Study Area, and 304 acres are currently being used. The City contains 650 acres of industrially zoned land, with 577 of those acres now vacant. While some of Tualatin's industrially zoned land is poorly drained or has weak foundation soils, the majority of the industrially zoned land is either buildable or can be made buildable. Subtracting existing industrial uses and the worst-drained areas, the City has approximately 450 acres of vacant industrial land within its City limits. While this industrial land supply exceeds that needed to meet the City's needs for the year 2000, few land parcels that were originally planned for industrial use were converted to other uses in the Plan. This was because industries that owned the land were committed to future development of their particular sites, and because most of the area is impacted by existing scattered industrial development. Additionally, the City wishes to maximize industrial development within the City to produce revenue for public amenities in the City. A surplus of additional industrial land will help to maintain Tualatin's competitiveness in the industrial land market.

(3) The existing scattered distribution of industrial uses is a problem because it restricts choice of land use alternatives and makes it expensive to provide appropriate urban services such as public water and sewer service and fire protection. Consequently, this Plan emphasizes the short-term concentration of industrial development within the City limits.

(4) Industrial development in Washington County will affect Tualatin's industrial future. This area west of the City now contains scattered industrial development without public water or sewer services and minimum fire protection. While current County zoning allows only uses that have a mini-mum capital equipment investment and are not labor-

intensive, the amount of industrially zoned land exceeds 1,000 acres, and the aggregate effect on traffic could impact the development of industrial land within the City. This is because most traffic traveling to and from this outlying industrial area must pass through the City's Nyberg Street/Tualatin-Sherwood Road corridor to reach the region's freeway system. As stated in the Transportation Plan, additional transportation access must be developed to minimize the effect of industrial development west of Tualatin. The proposed I-5/Norwood Road interchange would help to alleviate a portion of this problem. Additionally, it is anticipated that, because land values for land without standard urban public services are approximately 1/2 those values inside the City, there will be pressure to develop inexpensive County land before land in the City. More industrial growth west of the City could eventually place the City's roadway system at capacity before it has developed its proportionate share of industrial land, thus making it difficult to develop the remainder of the City's industrial land. In other words, the continued availability of inexpensive County industrial land could place City industrial land at a competitive disadvantage in the industrial land marketplace.

(5) Despite the problems described above, it is expected that lower-intensity industrial growth will continue to occur in Washington County west of the City, and that there will be increasing pressure to convert this land to full industrial development. Consequently, this area is eventually expected to become a part of the City of Tualatin, if the problems of transportation access can be solved. Consequently, it is an objective of this Plan to study methods of eventually accommodating, within the City, the industrial growth that is expected to occur in this area.

(6) Specific problems related to the development of land inside the City include poor drainage, poor north/south roadway access, lack of sewer and water services, and noise and other environmental problems. The central portion of the industrial area between Herman and Tualatin/Sherwood Roads is poorly drained and contains the Hedges Creek Marsh, the largest wetland area in Washington County. The Plan proposes the preservation of a portion of this approximately 80-acre natural area and anticipates the definition of an area surrounding the Marsh in which industrial development would be allowed. Currently, industrial traffic in Tualatin's central industrial area must travel long distances through downtown or on Cipole Road to travel from southern to northern industrial areas. As many local industries utilize each others' services, it is inconvenient and uneconomic to continue this arrangement of roadways. Consequently, the Transportation Plan proposes a new north-south roadway through the central industrial area in the 102nd - 104th corridor. Lack of sewer services in the northwestern portion of the City's main industrial area also has been a handicap to industrial development. Two newly formed local improvement districts, one for new roadway, sewer and water improvements in the 102nd - 104th corridor, and one for a major interceptor sewer paralleling Tualatin and Herman Roads, have been implemented to solve the major utility and traffic circulation problems in the industrial area. Industrial noise and odors have already begun to affect adjacent residential areas. One of the objectives of this Plan element and other elements is to develop specific and enforceable design standards that minimize future environmental conflicts between industrial, commercial and residential land uses.

(7) One of the most efficient methods of minimizing industrial impacts on commercial and residential uses is to restrict the types and location of uses that are allowed in the City's industrial districts. The types of industrial uses contemplated by the Plan eliminate those uses which are considered most obnoxious, such as creosote treatment of products, manufacture of harmful chemicals, forge plants, and auto wrecking. Uses that are allowed will be in the medium-to-light intensity range, although they will be specifically referred to as "light" and "general" for ease of understanding. The light industrial uses are arranged in the Plan to be adjacent to residential areas to minimize environmental conflicts as much as possible. Because industrial processes change rapidly due to new technology, it is also intended that some industrial uses proposed in the general use category may be appropriate in a lighter use area, if properly designed to mitigate adverse environmental impacts.

(8) While most of Tualatin's industrial land is located between Tualatin Road and Avery Street in the western portion of the City, there are small amounts of industrial land located in the northern portion of the City and lying on either side of the Lower Boones Ferry Road/ Interstate 5 Freeway interchange. The Plan has maintained, as industrial use, those areas that are now committed to industrial development. However, some land previously zoned industrial has been converted to a commercial designation because of the residential character of the area and proximity to the freeway. The industrial land in this area is designated on the Plan as light industrial because of the area's proximity to commercial and residential areas.

(9) In December 2002 METRO expanded the Urban Growth Boundary adding land west of Cipole Road and south of the north right-of-way line of SW Pacific High-way for industrial development to assist in meeting the overall regional need for a 20-year supply of industrial land.

(10) In December 2002 and June 2004 Metro expanded the Urban Growth Boundary to include 382 acres of land south of SW Tualatin Sherwood Road in the area east of a future 124th Avenue. 302 acres of this area were designated by Metro as Regionally Significant Industrial Area (RSIA) and the remaining acreage was designated Industrial. The area was addressed in the Southwest Tualatin Concept Plan and was accepted by the City in October 2010. [Ord. 1191-05; 6/27/05; Ord. 1321-11 §5, 4/25/11]

(11) In 2004, METRO expanded the Urban Growth Boundary to include the Basalt Creek Planning Area. The portion of this area within the City Urban Planning Area is generally south of SW Norwood Road and SW Helenius Street, east of 124<sup>th</sup> Avenue, west of I-5, and north of Basalt Creek Parkway. This area was addressed in the Basalt Creek Concept Plan and was accepted by the City in August 2018.

### **Section 7.015 Manufacturing Planning Area Overview.**

This section describes the history and nature of the Manufacturing Planning Area.

(1) The Industrial Planning Area is located in the southeastern portion of Washington County and immediately west of the developed portion of the City of Tualatin. It is within

the Urban Growth Boundary and was annexed to Tualatin in November, 1982, except for a few individual parcels.

(2) The Industrial Planning Area is served by Pacific Highway (Highway 99W) as a direct route to Portland. It also is tied directly by Tualatin-Sherwood Road, and indirectly by Tualatin Road and Herman Road, to Interstate 5 with direct ties to the east via Interstate 205. It is crossed by Southern Pacific and Burlington Northern railroad lines.

(3) The area lies in the relatively flat lowlands of the Tualatin Valley, with farmland scattered throughout. Although the area is currently rural and suburban in nature, increasing pressure for development is occurring. This is noted by the construction of several new industrial uses within the planning area during the last 10 years and the rapid growth of industrial use in the western portions of the City.

(4) The first settlement in the area was established in the mid-1800's. By the 1850's, all the land along the Tualatin River bank had been claimed and settlement began in earnest. The Technical Memoranda of The Tualatin Development Code provides a more detailed history of the City and its surrounding area.

(5) The Industrial Planning Area encompasses approximately 1,096 acres. Coupled with the industrial land that was already in the western portion of the City, the total Western Industrial District has 1,775 acres of land.

(6) The Tualatin area has experienced tremendous growth in the last decade. Population increased rapidly due to several factors, including land availability and buildup of employment opportunities through industrial development.

(7) The economy of the planning area is tied directly to that of Washington County and the Portland metropolitan area. At this time only 12 percent of Tualatin residents work in the City, while approximately 75 percent of the employees within the community live outside. Again, the City has determined that it is a community goal to expand as a regional employment center, increasing its percentage of total jobs in the region, and at the same time, providing additional residential and commercial opportunities so that more people can both live and work in Tualatin. [Ord. 592-83, §29, 6/13/83. Ord. 1026-99, §6, 8/9/99]

### **Section 7.016 Planning Context.**

This section describes the legal and political context for the planning work leading to the adoption of the Industrial Planning Area Plan Amendment.

(1) Introduction. The preparation of the West Tualatin Industrial Planning Area Plan Amendment is not an isolated planning effort. There are many other policies on the local, regional and state level that provide the framework for this planning effort.

(2) Local Plans. Of primary importance is the City's comprehensive plan, the Tualatin Community Plan. This plan amendment must be set in a direction that complies with and helps to implement the goals, policies and objectives of that document. Since the plan was adopted on October 22, 1979, the City has continued to experience a high rate of growth

and has maintained an aggressive posture toward economic development. The addition of these industrial lands to the City is a direct result of the Goals and Objectives of the Plan. This amendment is designed to continue the advances that the Plan charted and the City has followed.

(3) Regional Plans.

(a) The Industrial Planning Area and the entire City are part of the Metropolitan Service District (METRO), a regional government with jurisdiction for the urban portion of the tri-county metropolitan area. METRO is authorized by state law (ORS 197) to: 1) establish regional planning goals; 2) develop various functional plans for the district concerning housing, transportation, solid waste, drainage, and other region-wide issues; and 3) ensure that member jurisdictions conform to any regional planning elements which have been adopted by the METRO Council.

(b) METRO is responsible, specifically, for regional transportation planning and for defining and maintaining a regional Urban Growth Boundary (UGB). The UGB essentially delineates urban lands from rural and natural resource lands. Designed to include those lands needed to accommodate growth to the year 2000, the UGB must be respected and supported by METRO counties and cities in order for their comprehensive plans to achieve compliance with LCDC Goal 14 - Urbanization. The UGB forms the southwest boundary of the Industrial Planning Area.

(c) Another regional planning effort that helps define this plan amendment is the work of Washington County embodied in the Comprehensive Framework Plan. This plan "allocates" the growth anticipated within the County to various geographic areas. This growth, in terms of both resident population and employment, was "assigned" on the basis of land availability, opportunities for economic development, transportation and utility availability, and other locational factors. The City will use these allocations as one of the bases for developing this plan amendment.

(d) In order to require and maintain effective coordination between Washington County and its various cities, including Tualatin, Urban Planning Area Agreements (UPAAs) have been drawn up. These identify areas of mutual planning interest and establish procedures allowing the cities and the County to exchange information and comments on development and to coordinate planning for development in these areas.

(4) Statewide Planning Goals. Finally, at the State level, are the Statewide Planning Goals and Guidelines adopted by the Land Conservation and Development Commission (LCDC). The comprehensive plans of all cities and counties in the state must be directed towards meeting the goals. This amendment will address each of these goals as appropriate. However, it is not organized goal by goal, rather, it follows the format of the existing Community Plan and will deal with each goal in that framework. The Goals include:



- (a) Citizen Involvement
- (b) Land Use Planning
- (c) Agricultural Lands
- (d) Forest Lands
- (e) Open Spaces, Scenic and Historic Areas, and Natural Resources
- (f) Air, Land and Water Resources Quality
- (g) Areas Subject to Natural Disasters and Hazards
- (h) Recreation
- (i) Economy of the State
- (j) Housing
- (k) Public Facilities & Services
- (l) Transportation
- (m) Energy Conservation
- (n) Urbanization [Ord. 592-83, §30, 6/13/83]

**Section 7.017 Planning Concept for the Manufacturing Planning Area.**

This section describes the general intentions or concept for the Manufacturing Planning Area Plan:

(1) Land Use Pattern.

(a) Washington County has been working for many years in determining appropriate locations and configurations for various land uses throughout the County. The basic concept decisions have involved the major delineation between rural and urban land uses, and the appropriate locations for the various urban uses. These concepts, which are included in the Comprehensive Framework Plan, are based on professional analysis and input from a series of public hearings held in the fall of 1981. The conclusions for the basic concept all indicated that industrial development was and continues to be the most appropriate land use for the study area.

(b) With the annexation of the Industrial Planning Area to the City of Tualatin, the responsibility for determining this planning concept has shifted from the County to the City. However, Tualatin has determined that the County's basic analysis and conclusions are sound, and will continue to support and plan for future industrial use in this area. This is recognized as being totally in compliance with the City's goal of

becoming a major employment center, and forms a natural extension of the existing industrial areas bordering the western edge of the former City limits.

(2) Housing and Employment Allocations

(a) Allocations of new housing units and employment opportunities in terms of residential, commercial and industrial acreage have been made for each community planning area within the entire METRO UGB by METRO with the cooperation of each local government. This distribution of potential growth is necessary to show how future growth can be made compatible with the development concept and consistent with state, regional, and local plans and regulations.

(b) These area allocations together reflect the total County's share of the regional growth estimated for the year 2000 and beyond. For the existing unincorporated area of the County within the UGB (i.e., all land inside the UGB but outside the City limits of all cities in the county) approximately 90,000 additional people, 39,500 new homes, and 38,800 new jobs are expected by the year 2000. This allocation applies to the incorporated study area as it was prepared prior to the annexation.

(c) The Tualatin Development Code contains population projections that formed a basis of that planning effort and are also used in this process.

Those projections indicated that, if market trends are followed, the City of Tualatin will have a population of 28,721 by the year 2000, or an increase of 22,331 from the year 1980. This indicates that the City, meaning all lands within the total planning area, will absorb 24.8% of the growth that is projected for the unincorporated portions of the County within the UGB.

(d) The growth allocations are basically intended to be a planning tool that assures that the projected growth is accommodated in a manner that provides for adequate housing, public facilities and services and employment opportunities, "spreading" the need to absorb this growth fairly throughout the metropolitan area. Every jurisdiction has a legal responsibility to allocate enough land to meet the projected needs. Each community is to designate land in various use categories to accommodate the acreage totals assigned to it by METRO for a variety of housing densities and employment opportunities.

(e) In order to help assure that the rapidly changing needs for housing options were being met, the LCDC adopted an administrative rule setting certain "standards" for planning for new housing within the Portland metropolitan area, (known as the Metro Housing Rule). The City must provide the opportunity for a new residential construction mix of 50% detached units to 50% attached units. In addition, the housing rule established an average residential density target for new construction of at least 8 units per net buildable [acre].

(f) The County draft of the plan for the study area included an allocation of 8,372 new employees. This is distributed mostly at a density of five employees per acre. The City finds that this density projection is extremely low based on the

current pattern in the area which is approximately 15 employees per acre. With the acreage available, the transportation and utility facilities available, and the very supportive attitude of the City, industrial land uses are anticipated that will generate three or more times the number of employees within the industrial planning area within the planning period.

(g) Therefore, the City recognizes the employment allocations of the County, but, finding them too small, will not be bound by them in planning for the industrial area or in encouraging and fostering economic development. [Ord. 592-83, §31, 6/13/83; Ord. 1026-99, §7, 8/9/99]

### **Section 7.020 Assumptions.**

The following are general assumptions used to formulate the Plan:

- (1) The City can be expected to use a minimum of 25 acres of industrial land annually.
- (2) Traffic access and sewer and water service problems associated with the Western Industrial District will be remedied as the area is developed. [Ord. 592-83, §32, 6/13/83]

### **Section 7.030 Objectives.**

The following are general objectives used to guide development of the Plan and that should guide implementation of the Plan's recommendations:

- (1) Encourage new industrial development.
- (2) Provide increased local employment opportunity, moving from 12 percent local employment to 25 percent, while at the same time making the City, and in particular the Western Industrial District, a major regional employment center.
- (3) Improve the financial capability of the City, through an increase in the tax base and the use of creative financing tools.
- (4) Preserve and protect, with limited exceptions, the City's existing industrial land.
- (5) Cooperate with Washington County, METRO, and the State of Oregon to study the methods available for providing transportation, water, and sewer services to the Western Industrial District.
- (6) Fully develop the Western Industrial District and the Southwest Tualatin Concept Plan Area (SWCP), providing full transportation, sewer, and water services prior to or as development occurs.
- (7) Improve traffic access to the Western Industrial District and SWCP area from the Interstate 5 freeway and State Highway 99W through regional improvements identified in the 2035 Regional Transportation Plan.
- (8) Cooperate with the Department of Environmental Quality and METRO to meet applicable air quality standards by 1987.

- (9) Construct a north/south major arterial street between Tualatin Road and Tualatin-Sherwood Road and SW Tonquin Road in the 124th Avenue alignment to serve the industrial area.
- (10) Rebuild the Tualatin Road/Pacific Highway intersection to allow for substantially greater traffic flows.
- (11) Provide truck routes for industrial traffic that provide for efficient movement of goods while protecting the quality of residential areas.
- (12) Protect residential, commercial, and sensitive industrial uses from the adverse environmental impacts of industrial use.
- (13) Protect adjacent land uses from noise impacts by adopting industrial noise standards.
- (14) Continue to protect the Hedges Creek Wetland and Tonquin Scablands from adverse impacts of adjacent development.
- (15) Continue to administer specific and enforceable architectural and landscape design standards for industrial development.
- (16) Encourage industrial firms to use co-generation as a means to utilize waste heat from industrial processes and consider solar access when designing industrial facilities.
- (17) Protect wooded areas identified on the Natural Features Map found in the Technical Memorandum by requiring their preservation in a natural state or by integrating the major trees into the design of the parking lots, buildings, or more formal landscaping areas of an industrial development. If it is necessary to remove a portion or all of the trees, the replacement landscape features shall be subject to approval through the Architectural Review process. [Ord. 592-83, 6/13/83; Ord. 1212-06, 6/26/06; Ord. 1321-11 §6, 04/25/11]

#### **Section 7.040 Manufacturing Planning District Objectives.**

This section describes the purpose of each manufacturing planning district.

- (1) Manufacturing Park Planning District (MP).
  - (a) The purpose of this district is to provide an environment exclusively for and conducive to the development and protection of modern, large-scale specialized manufacturing and related uses and research facilities. Such permitted uses shall not cause objectionable noise, smoke, odor, dust, noxious gases, vibration, glare, heat, fire hazard or other wastes emanating from the property. The district is to provide for an esthetically attractive working environment with park or campus-like grounds, attractive buildings, ample employee parking and other amenities appropriate to an employee oriented activity.
  - (b) It also is to protect existing and future sites for such uses by maintaining large lot configurations and limiting uses to those that are of a nature to not conflict with other industrial uses or surrounding residential areas.

(c) It also is intended to provide for a limited amount of commercial uses designed for the employees of the primary uses and to provide for a limited amount of retail selling of products manufactured, assembled, packaged or wholesaled on the site provided the retail sale area, including the showroom area, is no more than 5% of the gross floor area of the building not to exceed 1,500 square feet.

(2) Light Manufacturing Planning District (ML).

(a) Suitable for warehousing, wholesaling and light manufacturing processes that are not hazardous and that do not create undue amounts of noise, dust, odor, vibration, or smoke. Also suitable, with appropriate restrictions, are the retail sale of products not allowed for sale in General Commercial areas, subject to the Special Commercial Setback from arterial streets and Commercial Services Overlay as generally illustrated in [Map 9-5](#) and specifically set forth in [TDC 60.035](#), and office commercial uses where any portion of a legally created lot is within 60 feet of a CO Planning District boundary. Also suitable is the retail sale of products manufactured, assembled, packaged or wholesaled on the site provided the retail sale area, including the showroom area, is no more than 5% of the gross floor area of the building not to exceed 1,500 square feet. Also suitable for the retail sale of home improvement materials and supplies provided it is not greater than 60,000 square feet of gross floor area per building or business and subject to the Special Commercial Setback from arterial streets as generally illustrated in [Map 9-5](#) and specifically set forth in [TDC 60.035](#). Rail access and screened open storage allowed in these areas will conform to defined architectural, landscape and environmental design standards.

(b) The following uses within the Light Manufacturing District shall comply with the following size limits established by Metro. Retail sale, retail service and professional service uses shall be no greater than 5,000 square feet of sales or service area per outlet, or not greater than 20,000 square feet of sales or service area for multiple outlets in a single building or in multiple buildings that are part of the same development project, with the following exceptions.

(i) Application of the Industrial Business Park Overlay District ([TDC Chapter 69](#)).

(ii) The retail sale of products manufactured, assembled, packaged or wholesaled on the site is allowed provided the retail sale area, including the showroom area, is no more than 5% of the gross floor area of the building not to exceed 1,500 square feet.

(iii) Within the Special Commercial Setback from arterial streets ([TDC 60.035](#)) the retail sale of home improvement materials and supplies is allowed provided it is not greater than 60,000 square feet of gross floor area per building or business and subject to the Special Commercial Setback from arterial streets as generally illustrated in [Map 9-5](#) and specifically set forth in [TDC 60.035](#). Rail Access and screened open storage allowed in these areas

will conform to defined architectural, landscape and environmental design standards.

(c) The purpose of this district is to provide sites for manufacturing uses that are more compatible with adjacent commercial and residential uses and would serve to buffer heavy manufacturing uses. The purpose is also to allow the retail sale of products manufactured, assembled, packaged or wholesaled on the site provided the retail sale area, including the showroom area, is no more than 5% of the gross floor area of the building not to exceed 1,500 square feet. Certain heavier manufacturing uses may be allowed as conditional uses.

(d) In accordance with the Industrial Business Park Overlay District, [TDC Chapter 69](#), selected office and retail uses are allowed to provide services to businesses and employees. The purpose is also to allow certain commercial service uses in the Commercial Services Overlay shown in the specific areas illustrated on [Map 9-5](#) and selected commercial uses subject to distance restrictions from residential areas and subject to the Special Commercial Setback from arterial streets as generally illustrated in [Map 9-5](#) and specifically set forth in [TDC 60.035](#).

(3) General Manufacturing Planning District (MG).

(a) Suitable for light manufacturing uses and also for a wide range of heavier manufacturing and processing activities. Such areas could be expected to be more unsightly and to have more adverse environmental effects. Rail access and screened open storage would be allowed in this area, conforming to defined architectural, landscape and environmental design standards. Also suitable is the retail sale of products manufactured, assembled, packaged or wholesaled on the site provided the retail sale area, including the showroom area, is no more than 5% of the gross floor area of the building not to exceed 1,500 square feet. Also suitable for the retail sale of home improvement materials and supplies provided it is not greater than 60,000 square feet of gross floor area per building or business and subject to the Special Commercial Setback from arterial streets as generally illustrated in [Map 9-5](#) and specifically set forth in [TDC 61.035](#).

(b) The following uses within the General Manufacturing District shall comply with the following size limits established by Metro. Retail sale, retail service and professional service uses shall be no greater than 5,000 square feet of sales or service area per outlet, or not greater than 20,000 square feet of sales or service area for multiple outlets in a single building or in multiple buildings that are part of the same development project, with the following exceptions.

(i) Application of the Industrial Business Park Overlay District ([TDC Chapter 69](#)).

(ii) The retail sale of products manufactured, assembled, packaged or wholesaled on the site provided the retail sale area, including the showroom area, shall be no more than 5% of the gross floor area of the building not to exceed 1,500 square feet.

(iii) Within the Special Setbacks for Commercial Uses Area ([TDC 61.035](#)) the retail sale of home improvement materials and supplies is allowed provided it is not greater than 60,000 square feet of gross floor area per building or business and subject to the Special Commercial Setback from arterial streets as generally illustrated in [Map 9-5](#) and specifically set forth in [TDC 61.035](#).

(c) In accordance with the Industrial Business Park Overlay District, [TDC Chapter 69](#), selected office and retail uses are allowed to provide services to businesses and employees. The purpose is also to allow certain commercial service uses in the Commercial Services Overlay shown in the specific areas illustrated on [Map 9-5](#) and allow selected commercial uses subject to distance restrictions from residential areas and subject to the Special Commercial Setback from arterial streets as generally illustrated in [Map 9-5](#) and specifically set forth in [TDC 61.035](#).

(d) The heaviest manufacturing uses that are environmentally adverse or pose a hazard to life and safety will not be allowed.

(4) Manufacturing Business Park Planning District (MBP).

(a) The purpose of the MBP Planning District is to provide an environment for industrial development consistent with the Southwest Tualatin Concept Plan (accepted by the City in October 2010) and as a Metro-designated Regionally Significant Industrial Area (RSIA) consistent with Metro's Urban Growth Boundary expansion decisions of 2002 and 2004.

(b) The MBP Planning District will be a mix of light industrial and high-tech uses in a corporate campus setting, consistent with MBP Planning District development standards. The RSIA-designated area requires at least one 100-acre parcel and one 50-acre parcel for large industrial users. The remainder of the area is likely to include light industrial uses with some limited, local-serving commercial services.

(c) The district is intended to provide for an esthetically attractive working environment with campus-like grounds, attractive buildings, ample employee parking and other amenities appropriate to an employee oriented activity. It also is intended to protect existing and future sites for such uses by maintaining large lot configurations, a cohesive planned-development design and limiting uses to those that are of a nature that will not conflict with other industrial uses or nearby residential areas of the City. [Ord. 592-83 §34, 6/13/83; Ord. 942-95, 3/27/95; Ord. 1003-98, 4/27/98; Ord. 1026-99, 8/9/99; Ord. 1046-00, 2/14/00; Ord. 1133-03, 3/24/03; Ord. 1212-06; 6/26/06; Ord. 1321-11 §7, 4/25/11]

# TDC Chapter 09: Plan Map

## Section 9.010 Background.

This Plan section includes the Plan Map, ([Map 9-1](#)) classification of planning district boundaries, and brief descriptions of the land uses in each Plan area. The Plan Map is a synthesis of the objectives contained in each Plan element that can be portrayed graphically in map form. The Map is based on an analysis of data contained in the Phase I - Technical Memoranda, Northwest Tualatin Concept Plan 2005 and an analysis of Plan objectives and the Statewide Planning Goals of the Land Conservation and Development Commission. [Ord. 635-84, §4, 6/11/84; Ord. 1191-05, 6/27/05]

## Section 9.020 Planning District Boundaries.

The boundaries between planning districts, as portrayed on the Plan Map, are intended to follow property lines (or extensions thereof), roadways, or natural features such as creeks. Where such definition was not possible, the Map is drawn to scale and district boundaries can be determined by using this scale. It should be noted that property lines shown on the Plan Map were derived from County Assessor's Maps and are therefore relatively accurate. Consequently, the planning districts shown on the Plan shall be considered zoning districts, as normally termed. This eliminates the need for two sets of maps and simplifies the understanding of what land uses may be allowed on an individual property.

## Section 9.025 Tualatin Design Type Boundaries.

(1) [Map 9-4](#), Tualatin Design Type Boundaries, shows the City's final location of the Metropolitan Service District's Growth Concept Design Types. Metro adopted the general location of the Design Types as part of adopting the Urban Growth Management Functional Plan (UGMFP) (Metro Code, Chapter 3.07). The UGMFP, Title 1, says, "For each of the following 2040 Growth Concept design types, city and county comprehensive plans shall be amended to include the boundaries of each area, determined by the city or county consistent with the general locations shown on the 2040 Growth Concept Map: " [Map 9-4](#) shows the location of the applicable Design Types consistent with the general locations shown on the 2040 Growth Concept Map. The boundaries are intended to follow the Planning District Boundaries, property lines, rights-of-way centerlines and water features.

(2) Rural Reserves and Green Corridors. The City recognizes that green corridors, as described in the 2040 Growth Concept, are critical to interurban connectivity. If the City, at some future date, annexes an area that includes a green corridor, it will be the City's policy to do the following:

(a) Allow access, in a controlled manner, to the green corridor to maintain the function, capacity and level of service of the transportation facility and to enhance safety and minimize development pressures on rural reserve areas; and

(b) Provide appropriate vegetative screening and buffering of adjacent development and limit signage in such a way as to maintain the rural character of the green corridor. [Ord. 1026-99, §9, 8/9/99]

## Section 9.030 Area Descriptions.

To clarify the Plan Map, the Map has been divided into 14 plan areas, and the following describes, in narrative form, the permitted uses for each plan area. All Plan Areas with the exception of those



comprising commercial and industrial lands, provide the framework for neighborhood organizations. It was with this in mind that the plan areas were drawn. Each area, with the exception stated above, was viewed as a potential neighborhood unit, having its own area of interest, comprising a population of 3,000 to 5,000 persons and served, as much as possible, by common facilities such as schools or parks. [Ord. 635-84, §5, 6/11/84]

#### **Section 9.031 Area 1.**

This portion of the Plan comprises the City's central area and is described in the City's adopted Central Urban Renewal Plan. The Central Urban Renewal Plan is a separate plan, but considered an element of this Plan. This Plan has been drafted to minimize any land use conflicts between uses on the periphery of the Central Urban Renewal Area. [Map 9-3](#), "Central Tualatin Urban Renewal Area Planning Districts," shows the Central Urban Renewal boundary, the Core Area Parking District boundary, land use blocks within the Central Urban Renewal Area, minimum lot sizes for blocks within the Central Urban Renewal Area, and the designation of which blocks require a Master Plan to be submitted for development. [Ord. 694-86, §1, 5/27/86; Ord. 1109-02, 4/22/02]

#### **Section 9.032 Area 2.**

Located directly south of the Urban Renewal Area and west of the Interstate 5 Freeway (I-5), this area comprises most of the City's residential land west of I-5 and north of Avery Street. Being close to downtown, the area has a higher proportion of multi-family dwellings than other areas, with the northern and eastern portions of the area comprising medium-low, medium-high and high density multi-family residential development. The southern portion of the area is predominantly low density residential. The Tualatin Elementary School is located in the center of the area at the intersection of Boones Ferry Road and Sagert Streets. The northeasterly portion of the area includes large-scale commercial uses that are included in the Schnitzer Investment Corporation Planned Unit Development (PUD). The commercial uses in this section of the PUD are proposed to include primarily headquarters office space for major firms and supporting commercial services such as restaurants. The western side of this area is bordered by a Light Industrial Plan designation, while a portion of the area's northern boundary is bordered by the Burlington Northern Railway tracks and mixed industrial and commercial designations.

#### **Section 9.033 Area 3.**

This area is characterized by low density residential development. Part of the City's greenway loop system traverses the area. A new neighborhood park is pro-posed for this area. The area's northwestern corner is bordered by a Light Manufacturing Planning District, while the western and southwestern boundaries are bordered by land outside the Urban Growth Boundary.

#### **Section 9.034 Area 4.**

This area lies south of Avery Street, between the Interstate 5 Freeway and Boones Ferry Road. The predominant land use is low density residential. A new elementary school located east of Boones Ferry Road, between Blake and Ibach Streets, is currently being constructed and will serve students from the south Tualatin area. A large greenway loop passes through this area to connect with the remainder of the loop in Area 3. The area is bordered on the east by the Interstate 5 Freeway and on the south by land outside the Urban Growth Boundary.

#### **Section 9.035 Area 5.**

Located east of the Interstate 5 Freeway, this area is primarily designated for low density residential uses, but contains substantial multi-family and commercial use north of Sagert Street and west of SW 65th Avenue. Meridian Park Hospital is located in this area on the northeast corner of SW 65th

Avenue and Borland Road. Commercial land uses are located along the Interstate 5 Freeway, and on Nyberg Street from I-5 to SW 65th Avenue. A major greenway loop surrounds a majority of the area's perimeter, including a greenway shown along the Tualatin River frontage. A new neighborhood park is proposed. The eastern and southern boundaries of this area are adjacent to land outside the Urban Growth Boundary.

#### **Section 9.036 Area 6.**

Encompassing the northwestern quadrant of the City, this area's land uses are predominantly low density residential. An area designated medium-low density residential paralleling SW 108th Avenue is shown as appropriate for mobile residential unit parks. A greenway extends along the Tualatin River, and a new neighborhood park is proposed. Lands north of Hazelbrook Road are within the 100-year and 10-year flood plain area and thus have restricted development potential.

#### **Section 9.037 Area 7.**

This area comprises the majority of the City's industrial land. The edges of this area are designated light industrial where the area abuts residential use. The central portion of this area is designated heavy industrial and surrounds a portion of the Hedges Creek Marsh, which is proposed for preservation. The eastern portion abuts the Urban Renewal Area.

#### **Section 9.038 Area 8.**

This area includes the portion of the City and study area located north of the Tualatin River. Interstate 5 bisects the area and crosses SW Lower Boones Ferry Road at one of the City's two interchanges. The area is characterized by mixed land uses, with commercial and industrial uses being the predominant types of development. Automobile-oriented uses such as motels, restaurants and automobile service stations are concentrated adjacent to the interchange, together with some commercial office buildings. Industrial uses are located further away from the interchange. Except for two mobile home parks, a duplex subdivision (Pipers Run) and mixed residential uses in the Mixed Use Commercial Overlay District on the Durham Quarry Site in the Durham Quarry Area, no new residential development is planned for Area 8. The Plan proposes additional general commercial and light manufacturing uses south of Jean Road, and general commercial, light manufacturing and heavy manufacturing uses north of Jean Road. [Ord. 849-91, §7, 11/25/91; Ord. 1062.00, §4, 12/11/00; Ord. 1062-00, 1/03/01]

#### **Section 9.039 Area 9 Leveton Industrial Area.**

The Leveton area is marked by a great diversity of land uses and opportunities. Much of the frontage along Highway 99W has been developed for many years. The largest single undeveloped parcel within the Industrial Planning Area, and, at 217 acres, one of the largest in the entire Portland metropolitan region, is here. There is a great deal of vacant land available in a variety of acreage. The area includes approximately 522 acres of land of which approximately 33 are developed. In 2002 an additional 23 acres were added to the area. A detailed discussion of the existing land uses, and planning issues and considerations is given in the Technical Memorandum and Northwest Tualatin Concept Plan 2005. There are three sub-areas in this area. Each has a different character and is described separately below:

- (1) The Highway 99W Frontage - This area is marked by industrial uses as listed in the planning district standards and includes the Quarry Sector subarea and Northwest Tualatin Concept Plan 2005 area. It is important to recognize the character of these properties as industrial, but to assure that the land use does not conflict with or discourage development on nearby properties. The properties are designated General Manufacturing (MG) and Light

Manufacturing (ML) on the plan map. The right-of-way area of Highway 99W west of Cipole Road is not developable and is designated as General Manufacturing (CG) on the plan map.

(2) Herman Road Frontage - This area is largely undeveloped with industrial activities. The General Manufacturing (MG) Planning District is assigned here since this area is well separated from the residential areas. The MG designation will give the area maximum flexibility for development.

(3) Leveton Property - The Leveton property presents unique planning opportunities that must be protected in order to assure the greatest benefit to the community from development of the property. Neither the ML nor the MG planning districts are appropriate for the property as they include uses that are not compatible with a campus industrial setting. Also, the ML and MG districts have development standards that neither encourage nor mandate the campus environment. It is clear that a special district needs to be created for this property. This plan amendment includes the creation of the Manufacturing Park (MP) Planning District and applies it to the Leveton property as a way to encourage a campus industrial environment. [Ord. 592-83, §35, 6/13/83. Ord. 1023-99, §1, 6/28/99; Ord. 1191-05, 6/27/05]

#### **Section 9.040 Area 10 Walgraeve Industrial Area.**

The Walgraeve area has excellent development potential. This is described in detail in the Technical Memorandum. It contains a very high percentage of large lots of over 10 acres and is largely undeveloped. It contains approximately 380 acres with approximately 86 acres developed. Some of the largest industrial users within the community are in this area. The General Manufacturing (MG) Planning District is to be used in this area, as it reflects many of the existing land uses and gives maximum development flexibility. There are no residential areas adjacent to the Walgraeve area. [Ord. 592-83, §36, 6/13/83].

#### **Section 9.041 Area 11 Koch Industrial Area.**

The Koch Industrial Area has some of the most intense industrial development of the Industrial Planning Area, and at the same time, some of the most significant land in natural states. A detailed analysis of the area is given in the Technical Memorandum. The area is oriented on a north/south basis generally lying between the Burlington Northern Railroad on the east and the Metro UGB on the west. There are approximately 198 acres of which 54 are developed. The Tri-County Industrial Park, which straddles the rail line, makes up all of the developed property. There are two major sub-areas that are described below:

(1) The northern half of the property will probably continue to develop in a pattern similar to that found within the industrial park. With proper street and utility improvements, this will form a solid land use foundation for the total industrial planning area. On the western side of the railroad tracks, the existing development has taken place under the provisions of the more intensive County zoning designation. Since the vacant properties in this area are buffered from the residential area, the General Manufacturing (MG) Planning District is used. On the eastern side of the tracks, the Light Manufacturing (ML) Planning District is applied, reflecting the existing land uses and the immediate proximity to residential areas.

(2) In March 2011, the industrial land located south of SW Blake Street was re-moved from the Area 11 Koch Industrial Area and added to the Area 15 Southwest Manufacturing Business Park Area in accordance with the Southwest Tualatin Concept Plan accepted in October 2010. [Ord. 592-83, §37, 6/13/83; Ord. 1321-11 §8, 4/25/11]

### **Section 9.042 Area 12 Roamer's Rest.**

This planning area has two distinct portions, the residential area to the west and the commercial area to the east.

(1) The residential area is identified as an ideal and critical location for higher density housing. The flat land, relationship to the river, proximity to major employment centers, and excellent transportation access all lend themselves to a higher density development pattern. As it is necessary for the City to create the opportunity to develop a city-wide average, on vacant, buildable land, of at least eight dwelling units per acre and with a 50:50 ratio of attached to detached units, these properties are critical in meeting this goal. Their higher density pattern offsets lower density patterns for vacant lands in other parts of the community. [Table 9-1](#) shows how the three Residential Planning Areas from the 1983 plan amendment work with the existing density pattern of the City to reach the standards. A "density gradient" approach is used in the Roamer's Rest area, with RML used on the west adjacent to the agricultural lands, RMH in the center portion, and RH in the west adjacent to the commercial area. This pattern allows for a transition from light to intense land uses on the north side of the Highway. Mobile homes are allowed in this RML area.

(2) It has been documented else-where in this Plan that the commercial portion of the Roamer's Rest Planning Area is an important community resource. It is important to protect it and encourage its continued use as an area that provides commercial activities relating to the Tualatin River and the Highway. The Commercial Recreation (CR) Planning District is used in this area. [Ord. 592-83, §38, 6/13/83].

### **Section 9.043 Area 13 Hazelbrook Planning Area.**

The Hazelbrook area has three main components: the higher density residential area, the single family area, and the commercial facilities.

(1) The higher density residential area is located along the north side of Tualatin Road extending from the commercial area at the highway intersection to approximately the east end of the manufacturing park area to the south. This area is designated for higher residential densities due to its proximity to the major employment center and its excellent transportation access. A density gradient approach is used with the RMH and RML Planning Districts in order to provide for a transition from the commercial uses to the single family areas. This area works well to help meet the City's overall housing objectives, as can be seen in [\[Table 9-1\]](#).

(2) North and east of the higher density development is a large area slated for the RL district. Much of the land north of Hazelbrook Road is in the 100-year floodplain. Development will be limited due to this physical limitation and the regulations of the City's Floodplain District. Along and south of the road, however, the lands will be available for low density residential development involving traditional single family subdivisions, and, through the conditional use process, clustered housing styles.

(3) A Neighborhood Commercial node is planned for the northeast corner of 115th Avenue and Tualatin Road. This two acre parcel is ideally suited for this type of convenience commercial use. It is on the intersection of an arterial and a collector. It has a relatively square shape and flat topography. Most importantly, it is located at the center of the proposed higher density area and immediately across from a major employment center. [Ord. 592-83, §39, 6/13/83]

### **Section 9.044 Area 14 Graham's Ferry Planning Area.**

The Graham's Ferry area contains three basic components: the higher density area around the Norwood/Boones Ferry intersection, the higher density area on the east side of SW Grahams Ferry Road at SW Helenius Road, and the lower density residential balance of the area.

(1) An area with the RML Planning District is planned north of the Norwood Expressway in the vicinity of Boones Ferry Road and on the east side of SW Grahams Ferry Road at SW Helenius Road. This land lends itself to a slightly higher density than traditional single-family due to the excellent transportation access and the close relationship to the employment centers in Wilsonville. It is the determination of this Plan that it is appropriate to "spread" the higher density areas throughout the community, rather than concentrating them, such as in the Roamer's Rest and Hazelbrook Planning Areas. The use of the RML District in this area provides for the needed higher densities with a District that will allow development that is similar in character and density to the RL lands.

(2) The Tonquin Scablands area has three special provisions. First is the Wet-land Protection District. It prohibits building in the defined wetland area and provides a setback from that area. Second is the Greenway and Riverbank Protection (GRP) District. It covers the steep cliff immediately east of the wetlands. The GRP District will allow residential density transfer to developable portions of an affected property. The third provision impacting the Scablands involves the various steep sided channels between 108th Avenue and Boones Ferry Road. It is the policy of this Plan to protect these areas on a case by case basis as development occurs by prohibiting building within the channels and allowing residential density transfer to other portions of the affected properties.

(3) The balance of the Graham's Ferry Planning Area is designated in the Residential Low Density (RL) Planning District. This land will develop either in the traditional single-family subdivision pattern, or, through the conditional use process, in mobile homes or clustered housing patterns. [Ord. 592-83, §40, 6/13/83; Ord. 1051-00 §2. 3/13/00]

### **Section 9.045 Area 15 Southwest Manufacturing Business Park Planning Area.**

The Southwest Manufacturing Business Park Planning Area is 4431 acres of land for industrial development located in the Tonquin quarry areas west of the Portland & Western Railroad, south of SW Blake Street as far west as a future SW 124th Avenue extension and south to Tonquin Road and includes the land north of SW Blake Street and west of SW 120th Avenue to SW 124th Avenue, extending north to SW Tualatin-Sherwood Road (Shown on [Map 9-2](#)). The are was established and is consistent with the Southwest Tualatin Concept Plan (accepted by the City in October, 2010) and as a Metro-designated Regionally Significant Industrial Area (RSIA) consistent with Metro's Urban Growth Boundary expansion decisions of December 2002 and June 2004.

The SWCP area will be designated as the Manufacturing Business Park (MBP) Planning District and will be a mix of light industrial and high-technology uses in a corporate campus setting, consistent with MBP Planning District development standards. There are three major sub-areas which are described below:

(1) The 302 acre RSIA-designated are (Shown on [Map 9-5](#)) requires development as Industrial consistent with Metro Urban Growth Management Functional Plan (MUGMFP) Title IV and must provide at least one 100-acre parcel and one 50-acre parcel for large industrial users within the RSIA.

(2) The properties in the SWCP are located north of SW Blake to SW Tualatin-Sherwood Road will include light industrial uses consistent with the MBP Planning District with some limited, local-serving commercial services in a specific area on both the east and west sides of SW 120th Avenue south of SW Itel Street.

(3) The 50 acre Tigard Sand & Gravel property located south of SW Blake Street already within the Tualatin's Planning Area. [Ord. 1321-11, §9, 4/25/11]

#### **Section 9.046 Area 16 Basalt Creek Planning Area.**

The Basalt Creek Planning Area is generally located north of Basalt Creek Parkway, south of Helenius Road and Norwood Road, east of 124<sup>th</sup> Avenue, and west of I-5. The Basalt Creek Planning Area includes a mix of residential zones at various densities, a small neighborhood commercial node, and employment lands, as further described below.

(1) An area with the RL (Low Density Residential) Zone Planning District is planned west of Boones Ferry Road in the approximate area of the Basalt Creek Canyon. An area with the RL Zone is also planned north of Tonquin Loop, south of Helenius Road, west of Grahams Ferry Road and east of 124<sup>th</sup> Avenue. This land will develop either in the traditional single-family subdivision pattern, or, through the conditional use process in clustered housing patterns.

(2) An area with the RML (Medium Low Density Residential) Zone is planned south of Norwood Road, east of Boones Ferry Road, and west of I-5. An additional area of RML Zone is also planned east of Grahams Ferry Road a between the two above described areas of RL Zone. These areas lends themselves to a slightly higher density than traditional single-family due to the excellent transportation access and the close relationship to the employment centers. The use of the RML District in this area provides for the needed higher densities with a District that will allow development that is similar in character and density to the RL lands.

(3) An area with the RH (High Density Residential) Zone is planned north of Greenhill Road and east of Boones Ferry Road. This land lends itself to a higher density due to the excellent transportation access and the close relationship to the employment centers. The use of the RH District in this area provides for the needed higher densities.

(4) A small area with the CN (Neighborhood Commercial) Zone is planned north of Greenhill Road and east of Boones Ferry Road. This CN District is intended to provide locations for commercial uses within close proximity to residential areas, to provide opportunities to serve the needs of residents for convenience shopping and services. This area lends itself to the CN District due to the excellent transportation access and the close proximity to abutting residential areas of medium to higher densities.

(5) The balance of the Basalt Creek Planning Area is designated in the MP (Manufacturing Park) Zone. The MP District is intended to be conducive to the development and protection of modern, large-scale specialized manufacturing and related uses and research facilities. This area is located north of Basalt Creek Parkway, south of Tonquin Loop, east of 124<sup>th</sup> Avenue, and west of Basalt Creek Canyon and an area of RML Zone.

**Table 9-1**  
**Residential Densities in the Roamer's Rest, Hazelbrook,**  
**and Graham's Ferry Planning Areas**

<b>Area and District</b>	<b>Net Acres</b>	<b>Dwelling Units Per Acre</b>	<b>Dwelling Units</b>	<b>Attached to Detached Ratio</b>
Roamer's Rest				
RML	16.35	10	163	100:0
RMH	8.87	15	133	100:0
RH	13.74	25	340	100:0
Subtotal	38.96	16.32	636	100:0
Hazelbrook				
RL	66.11	5	330	0:100
RML	11.68	10	116	100:0
RMH	19.54	15	293	100:0
Subtotal	97.33	7.59	739	55:45
Graham's Ferry				
RL	201.69	5	1,008	0:100
RML	42.24	10	421	100:0
Subtotal	243.93	5.88	1,429	29:71
Total of Planning Area	380.22	7.37	2,804	52:48
Total of Existing City	283.80	8.95	2,539	62:38
<b>Grand Total - Planning Area and City</b>	664.02	8.05	5,343	57:43

## TDC Chapter 51: Neighborhood Commercial (CN) Zone

**Section 51.100 – Purpose.** The purpose of this district is to provide locations for commercial uses within close proximity to residential areas, to provide opportunities to serve the needs of residents for convenience shopping and services. The primary uses are intended to include professional offices, services, and retail oriented to the day-to-day needs of adjacent neighborhoods. Neighborhood commercial uses are intended to be pedestrian oriented and should serve to reduce automobile trips and energy consumption. The purpose is also to assure that development is of a scale and design that is compatible with the residential environment and is an enhancement to neighborhood areas. It is not the purpose of this district to allow for large scale commercial facilities, such as large grocery or department stores, which are more appropriately located within the downtown area.

### Section 51.110 – District Size and Location Standards.

~~(1) **District Size.** The aggregate area of a CN district, consisting of one or more lots or a portion of a single lot, must not exceed 2 acres.~~

~~(2) **District Location.** The boundaries of a CN district must be separated from public middle-school property by not less than 300 feet. The boundaries of a CN District must be separated from public high school property and all other CN, CC, and CG districts by at least 1,320 feet.~~

~~(3) **Street Frontage.** At least one-fourth of the total street frontage of the CN District area must be on an Arterial or Major Collector street.~~

### Section 51.200 – Use Categories.

~~(4) **Use Categories.** Table 51-1 lists use categories Permitted Outright (P) or Conditionally Permitted (C) in the CN zone. Use categories may also be designated as Limited (L) and subject to the limitations listed in Table 51-1 and restrictions identified in TDC 51.210. Limitations may restrict the specific type of use, location, size, or other characteristics of the use category. Use categories which are not listed are prohibited within the zone, except for uses which are found by the City Manager or appointee to be of a similar character and to meet the purpose of this zone, as provided in TDC 31.070.~~

~~(2) **Overlay Zones.** Additional uses may be allowed in a particular overlay zone. See the overlay zone Chapters for additional uses.~~

**Table 51-1  
Use Categories in the CN Zone**

USE CATEGORY	STATUS	LIMITATIONS AND CODE REFERENCES
<b>RESIDENTIAL USE CATEGORIES</b>		



Household Living	P (L)	Permitted uses limited to one (1) dwelling unit for each business located on the lot.
<b>COMMERCIAL USE CATEGORIES</b>		
Retail Sales and Services	P (L)	<p>Permitted uses limited to:</p> <ul style="list-style-type: none"> <li>General merchandise or variety stores;                             <ul style="list-style-type: none"> <li>o Food stores, subject to TDC 51.210(1);</li> </ul> </li> <li>Drug store and pharmacy;</li> <li>Laundry and dry cleaning, subject to TDC 51.210(2);</li> <li>Beauty and barber shops;</li> <li>Shoe repair; and</li> <li>Child day care center, subject to TDC 34.100.</li> </ul> <p>All commercial uses subject to floor area limitation, see TDC 51.210(3).</p>
<b>INSTITUTIONAL USE CATEGORIES</b>		
Community Services	P(L)	Permitted uses limited to a community center, community recreation facility, or community aquatic center, when open to the general public and operated by a non-profit community organization.
<b>INFRASTRUCTURE AND UTILITIES USE CATEGORIES</b>		
Greenways and Natural Areas	P	--
Transportation Facilities	P	--

**Section 51.210 – Additional Limitations on Uses.**

(1) **Food Stores.** Food stores must not exceed 4,000 square feet of gross floor area.

(2) **Laundry and dry cleaning.** Laundry and dry cleaning establishments must be exclusively for the cleaning of clothing and materials of the resident population and must not involve laundry or cleaning of commercial, industrial, or institutional clothing and materials.

(3) **Commercial Floor Area Limit.** A nonresidential occupant must not occupy more than 10,000 square feet of any building or combination of buildings within a single CN District area.

**Section 51.300 – Development Standards.** Development standards in the CN zone are listed in Table 51-2. Additional standards may apply to some uses and situations, see TDC 51.310.

**Table 51-2  
Development Standards in the CN Zone**

<b>STANDARD</b>	<b>REQUIREMENT</b>	<b>LIMITATIONS AND CODE REFERENCES</b>
<b>MINIMUM LOT SIZE</b>		
All Uses	20,000 square feet	--
<b>MINIMUM LOT WIDTH</b>		
Minimum Average Lot Width	100 feet	When lot has frontage on public street, minimum lot width is 100 feet.
Minimum Lot Width at the Building Line	100 feet	--
Infrastructure and Utilities Uses	--	As determined through the Subdivision, Partition, or Lot Line Adjustment process
<b>MINIMUM SETBACKS</b>		
Front	20 feet	
Side and Rear	0 – 15 feet	As determined through Architectural Review Process.

Corner Lots	0 – 10 feet along each frontage	Must be a sufficient distance to provide adequate sight distance for vehicular and pedestrian traffic at an intersection, as determined through the Architectural Review process.
Parking and Vehicle Circulation Areas	5 feet	Except as approved through Architectural Review process.
Fences	5 feet	From public right-of-way.
<b>MAXIMUM LOT COVERAGE</b>		
All Uses	75%	Includes both building and parking areas. All land not covered by buildings or parking must be landscaped.
<b>MAXIMUM STRUCTURE HEIGHT</b>		
All Uses	25 feet	In addition to meeting the maximum height limit, where a property line or alley separates CN land from land in a residential district, a building must not be greater than 20 feet in height at the setback line; and a building or structure must not extend above a plane beginning at 20 feet in height above that setback line and extending inward and upward at a slope of 45 degrees.

**Section 51.310 – Additional Development Standards.**

(1) **Building and Driveway Orientation.** All commercial uses in CN District must be oriented and have primary driveway access to an Arterial or Major Collector street. No more than one driveway may access Minor Collector, Local Residential, or Cul-De-Sac street.

(2) **Building Design.** All commercial buildings must be of a general residential character, including the following design elements:

(a) **Facade Design.** All building facades must be of wood or brick and, if painted, must be in muted, earth tone colors.

(b) **Roof Forms.** All roofs must be compatible with the surrounding residential area as determined through the Architectural Review process.

**(3) Setback Reduction for Developments Adjacent to Greenways and Natural Areas.** To preserve natural areas and habitat for fish and wildlife, the decision-authority may provide a front yard setback reduction for developments that are adjacent to Greenways or Natural Areas that dedicate land for conservation or public recreational purposes, in accordance with the following standards.

**(a) Setback Reduction.** All permitted uses may be allowed a reduction of up to 35% of the front yard setbacks, as determined through the Architectural Review process, if as a result the buildings are farther away from fish and wildlife habitat areas.

**(b) Location of Greenway or Natural Area Lot.** A portion of the parcel must be located in one of the following conservation or protection areas:

- (i) Natural Resource Protection Overlay (NRPO) District (TDC Chapter 72);
- (ii) Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan; or
- (iii) Clean Water Services Vegetated Corridor.

**(c) Ownership of Greenway or Natural Area Lot.** The ownership of each Greenway or Natural Area Lot must be one of the following:

- (i) Dedicated to the City at the City's option;
- (ii) Dedicated in a manner approved by the City to a non-profit conservation organization; or
- (iii) Retained in private ownership.

**(d) Ownership Considerations.** The decision-making authority must consider, but not limited to, the following factors when determining the appropriate ownership of the Greenway or Natural Area Lot:

- (i) Does the Park and Recreation Master Plan designate the lot for a greenway, pedestrian or bike path, public park, recreation, overlook or interpretive facility, or other public facility;
- (ii) Does the lot include one or more designated Heritage Trees, or one or more significant trees;
- (iii) Does the lot provide a significant view or esthetic element, or does it include a unique or intrinsically valuable element;
- (iv) Does the lot connect publicly owned or publicly accessible properties;
- (v) Does the lot abut an existing park, greenway, natural area or other public facility;
- (vi) Does the lot provide a public benefit or serve a public need;
- (vii) Does the lot contain environmental hazards;

Chapter 51 – Neighborhood Commercial Zone

(viii) Geologic stability of the lot; and

(ix) Future maintenance costs for the lot.

[Ord. 1414-18, 12/10/18]

## TDC Chapter 62: Manufacturing Park (MP) Zone

**Section 62.100 – Purpose.** The purpose of this district is to provide an environment exclusively for and conducive to the development and protection of modern, large-scale specialized manufacturing and related uses and research facilities. Such permitted uses must not cause objectionable noise, smoke, odor, dust, noxious gases, vibration, glare, heat, fire hazard or other wastes emanating from the property. The district is to provide for an aesthetically attractive working environment with park or campus like grounds, attractive buildings, ample employee parking and other amenities appropriate to an employee oriented activity. The purpose is also to protect existing and future sites for such uses by maintaining large lot configurations or a cohesive planned development design and limiting uses to those that are of a nature so as to not conflict with other industrial uses or surrounding residential areas. The purpose is also to allow a limited amount of commercial uses and services and other support uses.

**Section 62.200 - Use Categories.**

(1) **Use Categories.** Table 62-1 lists use categories Permitted Outright (P) or Conditionally Permitted (C) in the MP zone. Use categories may also be designated as Limited (L) and subject to the limitations listed in Table 62-1 and restrictions identified in TDC 62.210. Limitations may restrict the specific type of use, location, size, or other characteristics of the use category. Use categories which are not listed are prohibited within the zone, except for uses which are found by the City Manager or appointee to be of a similar character and to meet the purpose of this zone, as provided in TDC 31.070.

(2) **Overlay Zones.** Additional uses may be allowed in a particular overlay zone. See the overlay zone Chapters for additional uses.

**Table 62-1  
Use Categories in the MP Zone**

USE CATEGORY	STATUS	LIMITATIONS AND CODE REFERENCES
<b>RESIDENTIAL USE CATEGORIES</b>		
Household Living	C (L)	Conditional uses limited to a caretaker residence when necessary for security purposes.
<b>COMMERCIAL USE CATEGORIES</b>		
Commercial Parking	P	--
Commercial Recreation	P (L)	Permitted uses limited to a health or fitness facility as a limited use subject to TDC 62.210(4).
Eating and Drinking Establishments	P (L)	Permitted uses limited to a restaurant or deli as a limited use and subject to TDC 62.210(4).
Marijuana Facilities	P (L)	Subject to TDC Chapter 80.
Office	P (L)	Permitted uses limited, see TDC 62.210(2).
Other Educational and Vocational Services	P (L)	Permitted uses limited to: o

USE CATEGORY	STATUS	LIMITATIONS AND CODE REFERENCES
		<p>Correspondence, trade, or vocational school as a limited use subject to TDC 62.210(4);</p> <ul style="list-style-type: none"> <li>o</li> </ul> <p>Job training or related services as a limited use subject to TDC 62.210(4).</p>
Retail Sales and Services	P (L)	<p>Permitted uses limited to:</p> <ul style="list-style-type: none"> <li>o</li> </ul> <p>Sale of goods produced on-site subject to TDC 62.210(1);</p> <ul style="list-style-type: none"> <li>o</li> </ul> <p>Child day care center, subject to TDC 34.200;</p> <ul style="list-style-type: none"> <li>o</li> </ul> <p>Food or convenience store, mailing operations, reproduction or photocopying services, bank, and medical services as limited uses subject to TDC 62.210(2).</p>
<b>INDUSTRIAL USE CATEGORIES</b>		
Light Manufacturing	P (L)	<p>Permitted uses limited to:</p> <ul style="list-style-type: none"> <li>o</li> </ul> <p>Manufacture or assembly of electronic or optical instruments, equipment, devices; musical instruments; toys; and sporting goods.</p> <ul style="list-style-type: none"> <li>o</li> </ul> <p>Production of textiles or apparel;</p> <ul style="list-style-type: none"> <li>o</li> </ul> <p>Printing, publishing, and lithography shops; and</p> <ul style="list-style-type: none"> <li>o</li> </ul> <p>Research and development laboratories.</p> <p>Primary processing of organic materials, such as tanning of leather, is prohibited.</p>

USE CATEGORY	STATUS	LIMITATIONS AND CODE REFERENCES
<b>INFRASTRUCTURE AND UTILITIES USE CATEGORIES</b>		
Basic Utilities	P	--
Greenways and Natural Areas	P	--
Public Safety Facilities	C (L)	Conditional uses limited to a fire station.
Transportation Facilities	P	--
Wireless Communication Facility	P (L)	Subject to maximum height and minimum setback standards defined by TDC Chapter 73F.

**Section 62.210 – Additional Limitations on Uses.**

(1) **Sale of Goods Produced On-Site.** The retail sale of goods produced on-site is permitted, provided that the retail sale area, including the showroom area, is no greater than 5 percent of the gross floor area of the building and does not exceed 1,500 square feet.

(2) **Offices.** Office uses are permitted as specified below.

(a) **Permitted Uses.** The following are permitted uses:

- (i) Offices for chemical and physical sciences, engineering, cartography, or other research functions;
- (ii) Shared service facilities (as defined by TDC 31.060); and
- (iii) Corporate, regional, or district headquarter offices if:
  - (A) the headquarters is for a permitted use in this Code;
  - (B) the offices occupy at least 20,000 square feet; and
  - (C) manufacturing is not conducted, unless the manufacturing is a permitted use in the MP zone.

(b) **Accessory Uses to an Industrial Use.** Office uses accessory to a permitted industrial use are permitted.

(c) **Limited Uses.** Offices located on the same site as a permitted industrial use may be permitted, subject to TDC 62.210(4).

(3) **Size Limitation on Commercial Uses.** Permitted or conditional commercial uses, as specified in Table 62-1, are subject to the following size limitations:

(a) **Employment Areas or Corridors.** Commercial uses on land designated Employment Area (EA) or Corridor (CO) Design Type on Map 9-4 must not exceed 60,000 square feet of gross floor area per building or business.

(b) **Industrial Areas.** Commercial uses on land designated as an Industrial Area Design Type on Map 9-4 must not exceed 5,000 square feet for any individual use or a total of 20,000 square feet of all commercial uses on the site. Commercial uses permitted in the Limited Commercial Setback are exempt from this requirement.

(4) **Limited Commercial Uses.** Commercial uses permitted as limited uses, as specified in Table 62-1, must be located on the same site as a permitted industrial use. The site must be used primarily for industrial purposes and the commercial use is subject to the following



limitations. The office, retail, and service uses may be located in a stand-alone building or combined in a building with other permitted uses.

(a) **Offices.** Office uses must not exceed 25 percent of the total gross floor area of all buildings on the site.

(b) **Retail Sales and Services, Eating and Drinking Establishments, or Educational Services.** Permitted uses in these categories, as specified in Table 61-1, are subject to the following additional standards:

(i) **Maximum Size.** The use must not exceed 5,000 square feet for any individual use or a total of 20,000 square feet of all retail or service uses on the site.

(ii) **Spacing Standard.** Uses must not be located within 80 feet from any Residential Planning District and from the right-of-way of SW Tualatin-Sherwood Road.

(iii) **Access Standard.** If located in a standalone building, the uses must not have direct access onto any arterial or collector street.

(5) **Outdoor Uses.** All uses must be conducted wholly within a completely enclosed building, except as provided by this section.

(a) **Permitted Uses.** Off-street parking and loading, utility facilities, wireless communication facilities, and outdoor storage occupying less than ten (10) percent of the total site area, are permitted outright as outdoor uses.

(b) **Conditional Uses.** A conditional use permit is required for outdoor storage activity or mechanical equipment when proposed to occupy more than ten (10) percent of the total lot area when part of and necessary for the operation of any permitted use.

**Section 62.300 – Development Standards.** Development standards in the MP zone are listed in Table 62-2. Additional standards may apply to some uses and situations, see TDC 62.310.

**Table 62-2  
Development Standards in the MP Zone**

STANDARD	REQUIREMENT	LIMITATIONS AND CODE REFERENCES
<b>LOT SIZE</b>		
Minimum Lot Size North of SW Leveton Drive	40 acres	Minimum lot size and dimensions for conditional uses are set by City Council to accommodate the proposed use. Lots or remnant areas created by the location of public streets may be less than 40 acres if necessary to create a logical, safe network of streets in the district.
Minimum Lot Size South of SW Leveton Drive, <a href="#">and south of Tonquin Loop</a>	5 acres	
<b>LOT DIMENSIONS</b>		

STANDARD	REQUIREMENT	LIMITATIONS AND CODE REFERENCES
Minimum Lot Width	250 feet	Measured at the building line. When lot has frontage on public street, minimum lot width at the street is 250 feet. When lot has frontage on cul-de-sac street, minimum lot width at the street is 50 feet.
Infrastructure and Utilities Uses	--	As determined through the Subdivision, Partition, or Lot Line Adjustment process
Flag Lots	--	Must be sufficient to comply with minimum access requirements of TDC 73C.
<b>MINIMUM SETBACKS</b>		
Minimum Building Setback for Yards Adjacent to Streets or Alleys, North of SW Leveton Drive	100 feet	
Minimum Building Setback for Yards Adjacent to Streets or Alleys, south of SW Leveton Drive	60 feet	
<u>Minimum Building Setback for Yards Adjacent to Residential District, south of Tonquin Loop</u>	<u>60 feet</u>	
Minimum Setback for Side and Rear Yards not Adjacent to Streets or Alleys, north of SW Leveton Drive	50 feet	No minimum setback if adjacent to railroad right-of-way or spur track.
Minimum Setback for Side and Rear Yards not Adjacent to Streets or Alleys, South of SW Leveton Drive	0-50 feet	Determined through Architectural Review Process. No minimum setback if adjacent to railroad right-of-way or spur track.
Parking and Circulation Areas Adjacent to Public Right-of-Way	50 feet	No minimum setback required adjacent to joint access approach in accordance with TDC 73C.
Parking and Circulation Areas Adjacent to Private Property Line	5-25 feet	Determined through Architectural Review Process. No minimum setback required adjacent to joint access approach in accordance with TDC 73C.
Fences	50 feet	From public right-of-way.

STANDARD	REQUIREMENT	LIMITATIONS AND CODE REFERENCES
<b>STRUCTURE HEIGHT</b>		
Maximum Height	70 feet	May be increased to 85 feet if yards adjacent to structure are not less than a distance equal to one and one-half times the height of the structure. Flagpoles may extend to 100 feet.
Maximum Height Adjacent to Residential District	28 feet	Measured at the required 50-foot or 100-foot setback line, includes flagpoles. The building height may extend above 28 feet on a plane beginning at the 50-foot or 100-foot setback line at a slope of 45 degrees extending away from the setback line.

**Section 62.310 – Additional Development Standards.**

(1) **Industrial Master Plan.** Minimum lot size, setbacks, maximum height, and other development standards may be modified by submittal of an Industrial Master Plan application. See TDC 33.050.

(2) **Spur Rail Tracks.** Spur rail tracks are not permitted within 200 feet of an adjacent residential district.

(3) **Wetland Conservation Lots.** Minimum lot size, width, or frontage requirement do not apply to wetland conservation lots.

[Ord. 1414-18, 12/10/18]

## TDC Chapter 75: Access Management

### Sections:

#### Section 75.010 Purpose.

The purpose of this chapter is to promote the development of safe, convenient and economic transportation systems and to preserve the safety and capacity of the street system by limiting conflicts resulting from uncontrolled driveway access, street intersections, and turning movements while providing for appropriate access for all properties. [Ord. 635-84, §43, 6/11/1984; Ord. 982-97, § 2, 8/4/1997; Ord. 1103-02, 3/25/02]

#### Section 75.020 – Permit for New Driveway Approach.

(1) **Applicability.** A driveway approach permit must be obtained prior to constructing, relocating, reconstructing, enlarging, or altering any driveway approach.

(2) **Exceptions.** A driveway approach permit is not required for:

- (a) The construction, relocation, reconstruction, enlargement, or alteration of any driveway approach that requires a state highway access permit; or
- (b) The construction, relocation, reconstruction, enlargement or alteration of any driveway approach that is part of the construction of a publicly or privately engineered public improvement project.

(3) **Procedure Type.** A Driveway Approach Permit is processed as a Type II procedure under TDC 32.220 (Type II).

(4) **Submittal Requirements.** In addition to the application materials required by TDC 32.140 (Application Submittal), the following application materials are also required:

- (a) A site plan, of a size and form and in the number of copies meeting the standards established by the City Manager, containing the following information:
  - (i) The location and dimensions of the proposed driveway approach;
  - (ii) The relationship to nearest street intersection and adjacent driveway approaches;
  - (iii) Topographic conditions;
  - (iv) The location of all utilities;
  - (v) The location of any existing or proposed buildings, structures, or vehicular use areas;
  - (vi) The location of any trees and vegetation adjacent to the location of the proposed driveway approach that are required to be protected pursuant to TDC Chapter 73B or 73C; and

(vii) The location of any street trees adjacent to the location of the proposed driveway approach.

(b) Identification of the uses or activities served, or proposed to be served, by the driveway approach; and

(c) Any other information, as determined by the City Manager, which may be required to adequately review and analyze the proposed driveway approach for conformance with the applicable criteria.

(5) **Criteria.** A Driveway Approach Permit must be granted if:

(a) The proposed driveway approach meets the standards of this Chapter and the Public Works Construction Code;

(b) No site conditions prevent placing the driveway approach in the required location;

(c) The number of driveway approaches onto an arterial are minimized;

(d) The proposed driveway approach, where possible:

(i) Is shared with an adjacent property; or

(ii) Takes access from the lowest classification of street abutting the property;

(e) The proposed driveway approach meets vision clearance standards;

(f) The proposed driveway approach does not create traffic hazards and provides for safe turning movements and access;

(g) The proposed driveway approach does not result in significant adverse impacts to the vicinity;

(h) The proposed driveway approach minimizes impact to the functionality of adjacent streets and intersections; and

(i) The proposed driveway approach balances the adverse impacts to residentially zoned property and the functionality of adjacent streets.

(6) **Effective Date.** The effective date of a Driveway Approach Permit approval is the date the notice of decision is mailed.

(7) **Permit Expiration.** A Driveway Approach Permit approval expires one year from the effective date, unless the driveway approach is constructed within the one-year period in accordance with the approval decision and City standards. [ Ord. 1414-18, 12/10/2018]

### **Section 75.030 – Driveway Approach Closure.**

(1) The City Manager may require the closure of a driveway approach where:

- (a) The driveway approach is not constructed in conformance with this Chapter and the Public Works Construction Code;
- (b) The driveway approach is not maintained in a safe manner;
- (c) A public street improvement project is being constructed, and closure of the driveway approach will more closely conform to the current driveway approach standards;
- (d) A new building or driveway is constructed on the property;
- (e) A plan text amendment or zone change is proposed for the property served by the driveway;
- (f) A change of use or activity in an existing building increases the amount of required parking;
- (g) The driveway approach has been abandoned; or
- (h) There is a demonstrated safety issue.

(2) **Notice.** Notice of driveway approach closure must be given in writing to the property owner and any affected tenants stating the grounds for closure, the date upon which the closure becomes effective, and the right to appeal.

(3) **Appeals.** Any person entitled to notice under subsection (2) of this section may appeal the decision to the City Council.

(4) **Effect.** Closure is effective immediately upon the mailing of notice of the decision. Unless otherwise provided in the notice, closure terminates all rights to continue the use the driveway approach for which the notice of closure has been issued.

(5) **Failure to Close Driveway.** If the owner fails to close the driveway approach to conform to the notice within 90 days, the City Manager may cause the closure to be completed and all expenses assessed against the property owner.

[Ord. 1414-18, 12/10/2018]

### **Section 75.040 – Driveway Approach Requirements.**

(1) The provision and maintenance of driveway approaches from private property to the public streets as stipulated in this Code are continuing requirements for the use of any structure or parcel of real property in the City of Tualatin. No building or other permit may be issued until scale plans are presented that show how the driveway approach requirement is to be fulfilled. If the owner or occupant of a lot or building changes the use to which the lot or building is put, thereby increasing driveway approach requirements, it is unlawful and a violation of this code to begin or maintain such altered use until the required increase in driveway approach is authorized by the City.

(2) Owners of two or more uses, structures, or parcels of land may agree to utilize jointly the same driveway approach when the combined driveway approach of both uses, structures, or parcels of land satisfies their combined requirements as designated in this code; provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts to establish joint use. Copies of said deeds, easements, leases or contracts must be placed on permanent file with the City Recorder.

**(3) Joint and Cross Access.**

(a) Adjacent commercial uses may be required to provide cross access drive and pedestrian access to allow circulation between sites.

(b) A system of joint use driveways and cross access easements may be required and may incorporate the following:

(i) A continuous service drive or cross access corridor extending the entire length of each block served to provide for driveway separation consistent with the access management classification system and standards;

(ii) A design speed of 10 mph and a maximum width of 24 feet to accommodate two-way travel aisles designated to accommodate automobiles, service vehicles, and loading vehicles;

(iii) Stub-outs and other design features to make it visually obvious that the abutting properties may be tied in to provide cross access via a service drive; and

(iv) An unified access and circulation system plan for coordinated or shared parking areas.

(c) Pursuant to this section, property owners may be required to:

(i) Record an easement with the deed allowing cross access to and from other properties served by the joint use driveways and cross access or service drive;

(ii) Record an agreement with the deed that remaining access rights along the roadway will be dedicated to the city and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway;

(iii) Record a joint maintenance agreement with the deed defining maintenance responsibilities of property owners; and

(iv) If subsection(i) through (iii) above involve access to the state highway system or county road system, ODOT or the county must be contacted and must approve changes to subsection(i) through (iii) above prior to any changes.

**(4) Requirements for Development on Less than the Entire Site.**

(a) To promote unified access and circulation systems, lots and parcels under the same ownership or consolidated for the purposes of development and comprised of more than one

building site must be reviewed as one unit in relation to the access standards. The number of access points permitted must be the minimum number necessary to provide reasonable access to these properties, not the maximum available for that frontage. All necessary easements, agreements, and stipulations must be met. This must also apply to phased development plans. The owner and all lessees within the affected area must comply with the access requirements.

(b) All access must be internalized using the shared circulation system of the principal commercial development or retail center. Driveways should be designed to avoid queuing across surrounding parking and driving aisles.

(5) Lots that front on more than one street may be required to locate motor vehicle accesses on the street with the lower functional classification as determined by the City Manager.

(6) Except as provided in **TDC 53.100**, all driveway approach must connect directly with public streets.

(7) To afford safe pedestrian access and egress for properties within the City, a sidewalk must be constructed along all street frontage, prior to use or occupancy of the building or structure proposed for said property. The sidewalks required by this section must be constructed to City standards, except in the case of streets with inadequate right-of-way width or where the final street design and grade have not been established, in which case the sidewalks must be constructed to a design and in a manner approved by the City Manager. Sidewalks approved by the City Manager may include temporary sidewalks and sidewalks constructed on private property; provided, however, that such sidewalks must provide continuity with sidewalks of adjoining commercial developments existing or proposed. When a sidewalk is to adjoin a future street improvement, the sidewalk construction must include construction of the curb and gutter section to grades and alignment established by the City Manager.

(8) The standards set forth in this Code are minimum standards for driveway approaches, and may be increased through the Architectural Review process in any particular instance where the standards provided herein are deemed insufficient to protect the public health, safety, and general welfare.

(9) Minimum driveway approach width for uses are as provided in Table 75-1 (Driveway Approach Width):

**TABLE 75-1**

**Driveway Approach Width**

Use	Minimum Driveway Approach Width	Maximum Driveway Approach Width
Single-Family Residential,	10 feet	26 feet for one or two care garages



townhouses, and duplexes		37 feet for three or more garages
Multi-family	<p>2 Units = 16 feet</p> <p>3-49 Units = 24 feet</p> <p>50-499 = 32 feet</p> <p>Over 500 = as required by the City Manager</p>	<p>May provide two 16 foot one-way driveways instead of one 24 foot driveway</p> <p>May provide two 24 foot one-way driveways instead of one 32 foot driveway</p>
Commercial	<p>1-99 Parking Spaces = 32 feet</p> <p>100-249 Parking Spaces = two approaches each 32 feet</p>	Over 250 Parking Spaces = As Required by the City Manager, but not exceeding 40 feet
Industrial	36 feet	Over 250 Parking Spaces = As Required by the City Manager, but not exceeding 40 feet.
Institutional	<p>1-99 Parking Spaces = 32 feet</p> <p>100-249 Parking Spaces = two approaches each 32 feet</p>	Over 250 Parking Spaces = As Required by the City Manager, but not exceeding 40 feet.

(10) **Driveway Approach Separation.** There must be a minimum distance of 40 feet between any two adjacent driveways on a single property unless a lesser distance is approved by the City Manager.

(11) **Distance between Driveways and Intersections.** Except for single-family dwellings, the minimum distance between driveways and intersections must be as provided below. Distances listed must be measured from the stop bar at the intersection.

(a) At the intersection of collector or arterial streets, driveways must be located a minimum of 150 feet from the intersection.

(b) At the intersection of two local streets, driveways must be located a minimum of 30 feet from the intersection.

(c) If the subject property is not of sufficient width to allow for the separation between driveway and intersection as provided, the driveway must be constructed as far from the intersection as possible, while still maintaining the 5-foot setback between the driveway and property line as required by TDC 73.400(14)(b).

(d) When considering a driveway approach permit, the City Manager may approve the location of a driveway closer than 150 feet from the intersection of collector or arterial streets, based on written findings of fact in support of the decision.

(12) **Vision Clearance Area.**

(a) **Local Streets.** A vision clearance area for all local street intersections, local street and driveway intersections, and local street or driveway and railroad intersections must be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are 10 feet from the intersection point of the right-of-way lines, as measured along such lines (see [Figure 73-2](#) for illustration).

(b) **Collector Streets.** A vision clearance area for all collector/arterial street intersections, collector/arterial street and local street intersections, and collector/arterial street and railroad intersections must be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are 25 feet from the intersection point of the right-of-way lines, as measured along such lines. Where a driveway intersects with a collector/arterial street, the distance measured along the driveway line for the triangular area must be 10 feet (see [Figure 73-2](#) for illustration).

(c) **Vertical Height Restriction.** Except for items associated with utilities or publicly owned structures such as poles and signs and existing street trees, no vehicular parking, hedge, planting, fence, wall structure, or temporary or permanent physical obstruction must be permitted between 30 inches and 8 feet above the established height of the curb in the clear vision area (see [Figure 73-2](#) for illustration).

[Ord. 1414-18, 12/10/2018]

**Section 75.050 Access Limited Roadways.**

(1) This section applies to all developments, permit approvals, land use approvals, partitions, subdivisions, or any other actions taken by the City pertaining to property abutting any road or street listed in TDC 75.050(2). In addition, any property not abutted by a road or street listed in subsection (2), but having access to an arterial by any easement or prescriptive right, must be treated as if the property did abut the arterial and this Chapter applies.

(2) The following Freeways and Arterials are access limited roadways:

- (a) Interstate 5 Freeway;
- (b) Interstate 205 Freeway;
- (c) Pacific Highway 99W;
- (d) Tualatin-Sherwood Road at all points located within the City of Tualatin Planning Area;
- (e) Nyberg Street, from its intersection with Tualatin-Sherwood Road east to 65th Avenue, including the I-5 Interchange;
- (f) 124th Avenue from Pacific Highway 99W south to ~~Tonquin~~Basalt Creek Parkway;
- (g) Lower Boones Ferry Road, from Boones Ferry Road to the Bridgeport/72nd intersection and from the Bridgeport/72nd intersection to the east City limits;
- (h) Boones Ferry Road at all points located within the City of Tualatin Planning Area;
- (i) 65th Avenue from its intersection with Nyberg Street south to City limits;
- (j) Borland Road from 65th Avenue east to Saum Creek;
- (k) Bridgeport Road from Lower Boones Ferry Road to the west City limits;
- (l) Martinazzi Avenue from Boones Ferry Road south to Sagert Street;
- (m) Sagert Street from Martinazzi Avenue to 65th Avenue;
- (n) Leveton Drive from 108th Avenue to 124th Avenue;
- (o) 108th Avenue from Leveton Drive to Herman Road;
- (p) Herman Road from Teton Avenue to 124th Avenue;
- (q) 90th Avenue;
- (r) Avery Street;
- (s) Teton Avenue;

(t) Basalt Creek Parkway-

If the Council finds that any other road or street is in need of access control for any reason, it may direct that the street or road be added to this section through a Plan Text Amendment.

(3) This Chapter takes precedence over any other TDC chapter and over any other ordinance of the City when considering any development, land use approval or other proposal for property abutting an arterial or any property having an access right to an arterial.

(4) The City may act on its own initiative to protect the public safety and control access on arterials or any street to be included by TDC 75.030, consistent with its authority as the City Road Authority. [Ord. 635-84, §45, 6/11/84; Ord. 982-97, §4, 8/4/97; Ord. 1103-02, 3/25/02; Ord. 1321-11 §52, 4/25/11; Ord. 1354-13 §22, 02/25/13; Ord. 1414-18, 12/10/2018]

**Section 75.060 Interim Access Agreement.**

(1) When a property abuts a freeway or arterial and a future street shown in **TDC Chapter 11, Transportation, (Figures 11-1 and 11-3)**, or abuts or bisects the property, the City Manager may approve an interim access on the arterial through an agreement with the property owner if:

(1) The City Manager finds that at the current time the construction of the new street shown in **TDC Chapter 11, Transportation, (Figures 11-1 and 11-3)**, is impractical due to costs of right-of-way acquisition.

(2) The Interim Access Agreement must be signed by the property owner and contain the following provisions:

(a) A statement that the property owner receiving interim access dedicates the right-of-way for the new street as shown in **TDC Chapter 11, Transportation, (Figures 11-1 and 11-3)**, if it would be on the property.

(b) A statement that the property owner agrees that at such time as the City Manager finds that it is practical to construct a new street as shown in **TDC Chapter 11, Transportation, (Figures 11-1 and 11-3)**, the property owner agrees to pay for or construct its fair share of the new street when it is practical.

(c) A statement that at such time as the new street as shown in **TDC Chapter 11, Transportation, (Figures 11-1 and 11-3)**, is constructed, the interim access must be closed and no longer used.

(d) A statement that the cost of this closure of the interim access must be borne by the property owner; and

(e) A statement that the City may enforce the Interim Access Agreement against the property owner, its successors, and assigns and seek any remedies available to the City at law and in equity.

(3) In granting the interim access the property owner may be required to share said interim access with adjacent properties.

(4) The interim access must be constructed in a manner to make it as efficient as possible. Improvements required as part of the interim access may include:

(a) A left turn lane;

(b) A right turn lane;

(c) Driveways constructed at street intersections to provide for truck turning movement;

(d) Dedication of additional right-of-way on the arterial;

(e) Installation of traffic control signals; and

(f) Limitation of new driveways to right turn in, right turn out movements by construction of raised median barriers or other means.

(5) Any interim access approved in accordance with this chapter must be set forth in the form of a written agreement, approved by the City Attorney. The agreement must be verified by the owner in the manner provided for deeds and restrictions on real property. The agreement must bind the parties thereto as well as their heirs, successors in interest and assigns and must not be modified without the express written approval of the City, and the agreement must be recorded in the deed of records for the County in which the property is located. [Ord. 635-84, §51, 6/11/84, §75.090(7); Ord. 743-88, §30, 3/28/88; Ord. 1103-02, 3/25/02; Ord. 1354-13 §25, 02/25/13; Ord. 1414-18, 12/10/2018]

#### **Section 75.070 Existing Driveways and Street Intersections.**

(1) Existing driveways with access onto arterials on the date this chapter was originally adopted are allowed to remain. If additional development occurs on properties with existing driveways with access onto arterials then this Chapter applies and the entire site must be made to conform with the requirements of this chapter.

(2) The City Manager may restrict existing driveways and street intersections to right-in and right-out by construction of raised median barriers or other means. [Ord. 635-84, §48, 6/11/84; Ord. 982-97, §7, 8/4/97; Ord. 1414-18, 12/10/2018]

**Section 75.100 – Spacing Standards for New Intersections.** Except as shown in **TDC Chapter 11**, Transportation, (**Figures 11-1 and 11-3**), all new intersections with arterials must have a minimum spacing of one-half mile between intersections.

**Section 75.110 – Joint Access Standards.** When the City Manager determines that joint accesses are required by properties undergoing development or redevelopment, an overall access plan shall be prescribed by the City Manager and all properties shall adhere to this. Interim accesses may be allowed in accordance with **TDC 75.060** of this chapter to provide for the eventual implementation of the overall access plan. [Ord. 1414-18, 12/10/2018]

**Section 75.120 – Collector Streets Access Standards.**

(1) **Major Collectors.** Direct access from newly constructed single family homes, duplexes or triplexes are not permitted. As major collectors in residential areas are fully improved, or adjacent land redevelops, direct access should be relocated to the nearest local street where feasible.

(2) **Minor Collectors.** Residential, commercial and industrial driveways where the frontage is greater or equal to 70 feet are permitted. Minimum spacing at 100 feet. Uses with less than 50 feet of frontage shall use a common (joint) access where available.

(3) If access is not able to be relocated to the nearest local street, the City Manager may allow interim access in accordance with 75.060 of this chapter to provide for the eventual implementation of the overall access plan.

[Ord. 1414-18, 12/10/2018]

**Section 75.130 New Streets Access Standards.**

(1) New streets designed to serve as alternatives to direct, parcel by parcel, access onto arterials are shown in **TDC Chapter 11**, Transportation, (**Figures 11-1 and 11-3**). These streets are shown as corridors with the exact location determined through the partition, subdivision, public works permit or Architectural Review process. Unless modified by the City Council by the procedure set out below, these streets will be the only new intersections with arterials in the City. See map for changes

(2) Specific alignment of a new street may be altered by the City Manager upon finding that the street, in the proposed alignment, will carry out the objectives of this chapter to the same, or a greater degree as the described alignment, that access to adjacent and nearby properties is as adequately maintained and that the revised alignment will result in a segment of the Tualatin road system which is reasonable and logical.

(3) The City Council may include additional streets in **TDC Chapter 11**, Transportation, (**Figures 11-1 and 11-3**), through the plan amendment procedure. In addition to other required findings, the City Council must find that the addition is necessary to implement the objectives of this chapter. [Ord. 635-84, §53, 6/11/84; Ord. 743-88, §31, 3/28/88; Ord. 975-97, §3, 5/12/97; Ord. 1023-99, §11, 6/28/99; Ord. 1354-13 §27, 02/25/13; Ord. 1414-18, 12/10/2018]

**Section 75.140 Existing Streets Access Standards.**

The following list describes in detail the freeways and arterials as defined in **TDC 75.030** with respect to access. Recommendations are made for future changes in accesses and location of future accesses. These recommendations are examples of possible solutions and shall not be construed as limiting the City's authority to change or impose different conditions if additional studies result in different recommendations from those listed below.

**(1) INTERSTATE 5 (I-5)**

I-5 is a State facility and access is controlled by the State.

**(2) INTERSTATE 205 (I-205)**

I-205 is a State facility and access is controlled by the State.

**(3) PACIFIC HIGHWAY 99W**

(a) On the southeasterly side of Pacific Highway 99W access will be provided by Cipole Road, 130th Avenue, 124th Avenue and Hazelbrook Road. In addition to 130th Avenue, shared driveway accesses will be allowed between Tax Lots 2S1 21A 1800 (Grimm's Fuel, 18850 Cipole Road) and 1801 (Construction Equipment Company, 18650 99W), and Lots 2000 (no street address) and 2101 (Anderson Forge & Machine, 18500 99W). A shared driveway access will also be allowed between 130th Avenue and 124th Avenue. West of Cipole Road and south of Pacific Highway 99W access will be provided by a new street or private drive extending west of Cipole Road across from the proposed Cummins Drive/Cipole Road intersection.

(b) East of 124th Avenue on the southeasterly side of Pacific Highway 99W, property will access onto Tualatin Road or onto Hazelbrook Road. In this area a central access from Pacific Highway 99W consisting of one right-in and one right-out driveway may be allowed. The access point shall be located within the middle one-third of the frontage between 124th Avenue and Hazelbrook Road. The City Manager shall determine the final location at the time any portion of either site is developed.

(c) On the northwesterly side of Pacific Highway 99W access will be provided by Cipole Road and Pacific Drive. West of Cipole Road and north of Pacific Highway 99W access will be provided by Pacific Drive. Pacific Drive will be extended as a frontage road toward the 124th Avenue intersection as far as is practicable as determined by the City Manager. Past that point shared driveways shall be used as determined by the City Manager. Pacific Drive will be reconfigured to align with 130th Avenue to form a new intersection. From the reconfigured intersection with Pacific Drive and Pacific Highway 99W to 124th Avenue, interim accesses may be approved in accordance with TDC Chapter 75. Between 124th Avenue and the Tualatin River on the northwesterly side of Pacific Highway 99W existing accesses will remain except as noted below for development or redevelopment due to the median of Pacific Highway 99W these will be limited to right-turn in, right-turn out. Any redevelopment in this area will require that the driveway accesses be consolidated to a minimum number as determined by the City Manager.

#### **(4) TUALATIN-SHERWOOD ROAD**

**(a) Nyberg Street to Boones Ferry Road:**

Access to this section was purchased at the time of right-of-way acquisition. Access will be provided by Martinazzi Avenue and Boones Ferry Road. Notwithstanding other provisions of this Code, a single access onto Tualatin-Sherwood Road shall be allowed along the north side of this section in the block between Martinazzi Avenue and Boones Ferry Road; its exact location and configuration shall be determined by the City Manager.

**(b) Boones Ferry Road to 89th Avenue:**

All access to this property was purchased as part of the right-of-way acquisition. Access shall be limited to right-in, right-out access on the south side at Mohave Court and on the north side kitty-corner or opposite to Mohave Court. Full access shall be prohibited at these locations by means of a median barrier. An existing four-way intersection serving 89th Avenue, Old Tualatin-Sherwood Road, and a driveway of the Hedges Greene retail development (Tax Lot 2S123D 2600) located approximately 800 feet west of Boones Ferry Road.

**(c) 89th Avenue to Teton Avenue:**

(i) Tualatin-Sherwood Road access shall be limited as follows: On the north side of the road the Emery Zidell Commons Subdivision (Tax Map 2S1-23D) shall have two street accesses located at 90th Avenue across from 90th Court and at 95th Place at the west property line. The intersection of 90th Avenue with Tualatin-Sherwood Road shall remain a four-way intersection. The four-way intersection at the west line of the Emery Zidell Subdivision shall remain located across from 95th Place on the south side of Tualatin-Sherwood Road.

(ii) Between 95th Place and 97th Avenue on the north side of Tualatin-Sherwood Road, the two existing driveways may remain, but limited to right-in, right-out. A cross access will be developed to serve tax lots 2S1 23CA 200, 90000, 700, 800, 801 and 900 for access to 95th Place.

(iii) The cul-de-sac street system (of 97th Avenue) extends north with Potano Street as a stub to the west to serve Tax Lot 2S1 23CB 100. On the south side Tualatin Gardens Subdivision (Tax Lot 2S1 23DA, 1400) shall access onto Old Tualatin-Sherwood Road. Tax Lots 2S1 23DB 00600 and 2S1 23DC 00401 shall access onto 95th Place. Between 97th Avenue and Teton Road, Tax Lots 2S1 23CC 200 and 300 shall have a joint driveway access, and Tax Lot 400 shall have a cross access to either the joint driveway on Tax Lots 200 and 300 or a cross access over Tax Lot 500 to Teton Avenue.

(iv) A driveway extends south of Tualatin-Sherwood Road at 97th Avenue. The driveway provides access for Tax Lot 2S1 23 CD 300 and the six Tualatin Business West Tax Lots 2S123CD 700, 800, 900, 1000, 1100, and 1200 located between 95th Place and the properties to the west fronting Teton (2S1 23CC/1100, 1200, 1300). The properties fronting on Teton Avenue take



access from Teton Avenue. The Washington County water quality facility (Tax Lot 2S123CC 1000) is permitted the one existing service driveway adjacent to its east property line.

**(d) Teton Avenue to Avery Street/112th Avenue:**

(i) On the north side of Tualatin-Sherwood Road no new driveways will be constructed and existing driveways will be removed at the time of development or redevelopment. All of the properties will be served by either Manhasset Drive or 112th Avenue. 112th Avenue will connect to Myslony Street. Tax Lot 2S1 22DD 600 (Western Industrial Ce-ramics (2S1 22D/200) shall take access to Manhasset Street. An eastern extension off of the 112th Avenue/Myslony Street connection will terminate at and provide access to Tax Lot 2S1 22D 600 (Pascuzzi Investment LLC and may provide additional access for Tax Lot 2S1 22DD 100 (UPS) which has access from the west end of Manhasset Drive.

(ii) On the south side of Tualatin-Sherwood Road there will be no new driveways or streets. Development of property east of Tax Lot 2S1 27AA 90000 (Arlington Commons at Tualatin Condominiums) on Tualatin-Sherwood Road may be accomplished only with a joint access agreement with Lakeside Lumber through its driveways on Tax Lot 2S1 27AA 2000. Tax Lot 90000 shall have one access onto Tualatin-Sherwood Road. Properties between Arlington Commons at Tualatin and Avery Street on the south side are served from Avery Street and Avery Court and no driveway access will be constructed with Tualatin-Sherwood Road.

**(e) Avery Street/112th to Cipole Road.** On the north side of Tualatin-Sherwood Road between 112th Avenue and Cipole Road the area will be served by the following streets or driveways:

(i) 115th Avenue which will extend north to Amu Street.

(ii) 124th Avenue which will extend north and west to an intersection at 124th Avenue approximately 800 feet north of Tualatin-Sherwood Road.

(iii) 124th Avenue.

(iv) Cipole Road. The exact location and configuration of the streets or driveways shall be determined by the City Manager.

(v) On the south side of Tualatin-Sherwood Road between Avery Street and 120th Avenue the area will be served by the following street system:

(A) 115th Avenue.

(B) 120th Avenue, which may be restricted to right-in, right-out movements in the future.

The exact location and configuration of the streets shall be determined by the City Manager . No driveways will be constructed in this area and existing driveways will be removed. Tax Lot 2S127B 800 (Select Sales) shall have a cross access to 115th Avenue.

## **(5) NYBERG STREET**

### **(a) Tualatin-Sherwood Road to 65th Avenue:**

(i) West of I-5. On the south side between Fred Meyer and I-5 any development shall be served by the Fred Meyer driveway Tax Lot 2S1 24CA 200 or Urban Renewal Area Block 6) aligned with the Urban Renewal Area Block 2 driveway on the north side and shall not be granted any access to Nyberg Street. No additional driveways will be allowed.

(ii) East of I-5.

(A) On the north side of the Nyberg Woods development (Tax Lot 2S1 24A 2503) shall be limited to one signalized access and one right-in/right-out access. The driveway for Forest Rim Apartments (Tax Lot 2S1 24A 2800) may remain.

(b) On the south side, access to Tax Lot 2S1 24DB 200 (Shell) shall be limited to right-in, right-out. Tax Lot 2S1 24DB 100 (La-Z-Boy) access shall be aligned with the Nyberg Woods signalized access. The existing westside Nyberg Retail access shall be limited to right-in, right-out. Tax Lot 2S1 24DA 100 (Meridian Park Veterinary Hospital and 7Eleven) shall share a driveway that aligns with the 65th/Nyberg Street intersection. There will be no new additional driveways created in this section of roadway.

## **(6) 124TH AVENUE**

(a) **Pacific Highway to Tualatin Road.** No street or driveway accesses on the west side of this intersection will be permitted. No driveway accesses shall be allowed between Pacific Highway 99W and Tualatin Road.

(b) **Tualatin Road to Herman Road.** Between Tualatin Road and Herman Road, access to 124th Avenue shall be limited to a street intersection at Leveton Drive. The area west of the 124th Avenue/Tualatin Road intersection and south of Pacific Highway 99W will be served by a cul-de-sac connecting to the westward extension of Leveton Drive.

(c) **Herman Road to Tualatin-Sherwood Road.** On the east side of 124th Avenue between Herman Road and Tualatin-Sherwood Road the area will be served by the following streets or driveways:

(i) A street intersection at Myslony Street.

(ii) A street or driveway intersection approximately 800 feet south of the Myslony Street/124th Avenue intersection extending east with an alternative to extend north to connect with Myslony Street a minimum of 150 feet east of 124th Avenue. Access may be limited to right in/right out as determined by the City Manager.

(iii) Cimino Street extending east and south to an intersection at Tualatin-Sherwood Road across from 120th Avenue. The exact location and configuration of the streets and driveways shall be determined by the City Manager.

(iv) On the west side of 124th Avenue between Herman Road and Tualatin-Sherwood Road the area will be served by the following streets or driveways:

(A) A driveway across from Myslony Street.

(B) A street or driveway intersection approximately 800 feet north of the intersection of Tualatin-Sherwood Road and 124th Avenue. The exact location and configuration of the streets or driveways shall be determined by the City Manager.

(d) **Tualatin-Sherwood Road.** Between Tualatin-Sherwood Road and ~~Tonquin Road~~ Basalt Creek Parkway access to 124th Avenue shall be limited to street intersections at ~~Blake Street and Tonquin Road and one other location and the unnamed east-west collector street.~~ Depending on when this segment of 124th Avenue is constructed a (possibly interim) connection to Tonquin Road may also be provided.

## **(7) LOWER BOONES FERRY ROAD**

### **(a) Boones Ferry Road to Childs Road.**

(i) On the south side of the road, Tax Lot 2S1 24AB 800 shall have its access located at its east property line. This access shall be combined with the access of the Mt. Hood Chemical Building (Tax Lot 2S1 24 700) at its west property line into one joint access.

(ii) On the north side of the road is a small lot (Leageld Development; Tax Lot 2S1 13DC/2000) the driveway of which shall line up with the intersection of Childs Road and Lower Boones Ferry Road.

### **(b) Childs Road to I-5 Freeway:**

(i) On the south side of the road the existing driveways may be allowed to remain. No new driveways will be permitted.

(ii) On the north side of the road, the existing driveways may be allowed to remain. No new driveways will be permitted.

**(c) I-5 Freeway northerly to Bridgeport Road:**

(i) On the west side, Hazel Fern Road shall intersect with Lower Boones Ferry Road, as Traveller's Lane.

(ii) On the east side, the Tri-Met park and ride shall be permitted two driveway accesses as determined by the City Manager.

**(d) 72nd Avenue to the east City limits:**

(i) On the north side access shall be permitted only by 65th Avenue and 63rd Avenue and a right-in, right-out driveway between 65th and 63rd Avenues. Between 63rd Avenue and the east City limits the properties fronting Lower Boones Ferry Road shall take access from 63rd Avenue.

(ii) On the south side access shall be permitted at 65th Avenue. Between 65th Avenue and the east City limits no new accesses shall be permitted. A median may be constructed to limit access to right-in, right-out.

**(8) BOONES FERRY ROAD**

**(a) North City Limits to the Tualatin River.** All existing driveways will remain. No new driveways will be permitted.

**(b) Tualatin River to Tualatin Road.**

(i) Between the River and Martinazzi Avenue on the south side, the access for the apartments (Tax Lot 2S1 24B 1500) will be closed and converted over to the Loop Road. The Loop Road will have a right-in, right-out connection to Boones Ferry Road between the river and Martinazzi Avenue.

(ii) On the south side of Boones Ferry Road between Martinazzi Avenue and the driveway for the White Lot (formerly Lot C), any development or redevelopment shall take access over the White Lot or from Martinazzi Avenue.

(iii) Between the White lot and 84th Avenue, all properties shall have combined accesses resulting in only one access on Boones Ferry Road. Between 84th Avenue and Tualatin Road on the south side, any redevelopment shall result in no driveways onto Boones Ferry Road and access shall be taken from 84th Avenue or Seneca Street.

(iv) On the north side Tax Lots 2S1 24BC 1301 and 1400 and Tax Lot 2S1 24B 1300 (Apartments by Hedges Creek: Kaplan) shall combine their driveways at a location to be determined by the design of the Martinazzi Avenue-Boones Ferry Road intersection. Further the properties shall combine their access into one on Lot 1300 across from the White lot's driveway. Between the Green (former Lot G) and Blue (former Lot H) Lots, any redevelopment of these properties shall remove the existing driveways and

take access from the public parking lots from a cross access between the two public lots. Between the Blue Lot and Tualatin Road any development or redevelopment shall have access off of Tualatin Road at the north edge of the property or over the Blue Lot.

**(c) Tualatin Road to Tualatin-Sherwood Road.**

(i) On the west side of this road is the Portland & Western Railroad (PNWR) tracks. There will be no access to Boones Ferry Road across the PNWR tracks except an access for a public street to the west side of the railroad tracks, centered on the centerline of Nyberg Street. The existing two driveways to the Tax Lot 2S1 23D 3400 (Sweek House also known as Willowbrook) shall be allowed a gated emergency access onto Boones Ferry Road, the other access shall be closed and access taken over Tax Lot 2S1 23D 2600 (Hedges Greene retail development) to Nyberg Street.

(ii) On the east side of this road, all redevelopment shall lead to elimination of all driveways onto Boones Ferry Road. Vehicular access to Boones Ferry Road in this section shall be limited to the Seneca Street intersection and Nyberg Street intersection. This will require interim access agreements per TDC 75.090.

**(d) Tualatin-Sherwood Road to Sagert Street.**

(i) On the west side, all existing driveways will be allowed to remain. On the frontage of the property of the demolished historic Tualatin Elementary School (Tax Lots 2S1 23DD 500 and 501), a new local street intersection is allowed on SW Boones Ferry Road that connects to a future public street on the Old Tualatin Elementary School property that extends north from Sagert Street in the approximate alignment of 90th Avenue. The new local street intersection may be located approximately 500 ft. north of the intersection with Sagert Street. Tax Lot 2S1 23DA 100 (the unnamed retail development at the intersection with Warm Springs Street will have one access aligned with Warm Springs.

(ii) On the east side, the driveway of McDonald's (Tax Lots 2S1 24CB 1201, 1301, and 1400) was closed and shall remain closed. Any additional development on the Brock property (Tax Lot 2S1 24CB 2100) shall result in closure of this driveway to Boones Ferry Road. Any additional development on (Tax Lot 2S1 24CB 2200) (Tualatin West Center retail development) shall result in closure of this driveway to Boones Ferry Road. Between Warm Springs Street and Tualatin-Sherwood Road, as an option to closing the driveways at Brocks, and Tualatin West Center, it may be permissible to construct a raised median barrier or other improvements in Boones Ferry Road in this section to physically eliminate left turning movements, thus limiting all these driveways to right turn in, right turn out. Any redevelopment of the residential property between Mohawk and Sagert on the east side of Boones Ferry Road shall be accomplished in such a manner that the ultimate

access to this area is from a street off of Sagert Street at its intersection with 86th Avenue. This may require interim agreements in accordance with TDC 75.090. All existing driveways in this area will be allowed to remain so long as the use of the property does not change.

(e) **Sagert Street to Avery Street.** The existing driveways will be allowed to remain. Any redevelopment of any residential property between Sagert and Avery shall result in no additional driveways being constructed in this area.

(f) **Avery Street to Ibach Street.** South of Avery Street, the Sundae Meadows Subdivision and Tualatin Presbyterian Church (Tax Lot 2S1 26AC 301) shall access Boones Ferry Road via Siletz Drive. One additional street or private drive (Cherry Lane) will be allowed for the Boones Ferry Commons Condominiums (Tax Lot 2S1 26CA 90000).

(g) **Ibach Street to Norwood Road.** Development of these residential properties shall result in no more than two driveway accesses for Tualatin High School, one emergency access with no curb cut for Grahams Landing Townhomes Condos (Tax Lot 2S1 35BA 90000) and only street intersections for other properties. All street intersections on Boones Ferry Road between Ibach and Norwood shall be spaced a minimum of 500 feet apart.

#### **(9) 65TH AVENUE**

(a) **Nyberg to Borland:**

There will be no new additional drive-ways.

(b) **Borland Road to south city limits:**

A street connection will be constructed across from Sagert Street to serve property to the east of 65th Avenue.

#### **(10) BORLAND ROAD**

(a) **Between 65th and the Entrance to Bridgeport School:**

In this section of roadway, as the residential properties develop, all accesses to Borland shall be limited to street intersections. These street intersections shall be spaced a minimum of 500 feet apart. All development in this area shall be interconnected so there are no dead-end entrances from Borland Road.

(b) **Bridgeport School Entrance to Saum Creek:**

As the residential properties develop, all accesses to Borland shall be limited to street intersections. These street intersections shall be spaced a minimum of 500 feet apart. All development in this area shall be interconnected so there are no dead-end entrances from Borland Road. Access to Prosperity Park Road is allowed.

#### **(11) BRIDGEPORT ROAD**

(a) **72nd Avenue to the West City Limits.**

(i) On the north side, the existing driveways will be allowed to remain. No new driveways will be permitted.

(ii) On the south the existing driveways will be allowed to remain. No new driveways will be permitted.

**(12) 72ND AVENUE**

(a) **Bridgeport Road to North City Limits.** The existing driveways will be allowed to remain. No new driveways will be permitted.

**(13) MARTINAZZI AVENUE**

(a) **Boones Ferry Road to Seneca Street:**

(i) On the west side, any redevelopment on the Haberman and Soft Tough Dentistry property (2S1 24BC 1500 and 1503) or the unnamed retail development property with corner tenant Umpqua Bank (Tax Lot 2S1 24BC 1502) shall result in combining these two driveways into one driveway on Martinazzi Avenue, or the Halstin retail development property shall take access from the White Lot (former Lot C) to Boones Ferry Road.

(ii) On the east side the existing driveway shall be removed and access shall be taken off of the Loop Road.

(b) **Seneca Street to Nyberg Street.** No driveways shall be permitted. The raised center median prohibiting left turns in this area shall remain until driveways are removed. On the west side on Tax Lot 2S1 24BC 2702 (Wells Fargo Bank), the driveway shall be removed and access taken from Seneca Street or Nyberg Street. On the east side the driveway for Tax Lot 2S114B 2000 (Tualatin Center retail development Building 1) shall be removed and access taken from the Loop Road or Nyberg Street.

(c) **Nyberg Street to Tualatin-Sherwood Road.** There shall be no access to Martinazzi Avenue.

(d) **Tualatin-Sherwood Road to Warm Springs Street.** The only access shall be the existing Fred Meyer/Martinazzi Square driveway intersection.

(e) **Warm Springs Street to Sagert Street.** There shall be no additional access granted. The only street intersection will be Mohawk Street.

**(14) SAGERT STREET**

(a) Martinazzi Avenue to 65th Avenue. No new driveways or streets shall be allowed, except the City Manager may allow one driveway from the SE corner lot of Sagert and Martinazzi. This driveway may be restricted to right-in, right-out.

**(15) LEVETON DRIVE**

(a) 108th Avenue to 118th Avenue.

(i) On the north side of Leveton Drive, JAE (2S122B 200) shall align a driveway across from 118th Avenue and be permitted a second driveway approximately 50 feet from their east property line. Novellus (2S122AA 500 and 2S122AB 100) shall be permitted three driveways located approximately 25 feet and 950 feet from the west property line for Tax Lot 100 and 600 feet west of 108th Avenue for Tax Lot 500.

(ii) On the south side, Phight Inc. (2S122 300) shall be allowed a driveway aligned with the west Novellus (2S122AB 100) driveway and a driveway adjacent to their east property line. Fujimi (2S122 400) shall be allowed a driveway adjacent to their west property line and east property line. Tofle (2S122AD 400) shall be allowed a driveway aligning across from the Novellus (2S122AA 500) driveway and a second driveway approximately 260 feet west of 108th Avenue.

(b) 118th Avenue to 124th Avenue. The existing driveways will be allowed to remain. No new driveways will be permitted.

**(16) 108TH AVENUE**

(a) Leveton Drive to Herman Road.

(i) On the west side, Tofle (2S122AD 400) shall take access from Leveton Drive. The undeveloped property (2S122AD 500) shall be allowed one driveway onto 108th Avenue. The old Shulz Clearwater site (2S122AD 800) and then Northwest Pipe and Metal Fab (2S122AD 600 and 700) shall provide a joint driveway access. The Wahco Inc. property (2S122AD 900) shall take access from Herman Road.

(ii) On the east side, the DOT Inc. site shall have a driveway that aligns with Leveton Drive. The City Operations Center (2S122AD 200 and 300) will be permitted two driveways at locations to be determined by the City Manager.

**(17) HERMAN ROAD**

(a) Teton Avenue to 108th Avenue:

(i) On the north side, the existing driveways will be allowed to remain. No new driveways will be permitted. Airifco (2S123B 600) will be permitted one driveway adjacent to their west property line.

(ii) On the south side is the Portland & Western Railroad (PNWR) tracks. There will be no access to Herman Road across the tracks except for a shared driveway between the Kem Equipment (2S122AD 800) and Marshall Property (2S122AD 1000) located on the common property line. The Marshall Property (2S123BC 1000) shall take access from Teton Avenue.



(b) 108th Avenue to 118th

(i) On the north side the existing driveways will be allowed to remain. No new driveways will be permitted.

(ii) On the south side is the Portland & Western Railroad (PNWR) tracks. There will be no access to Herman Road across the tracks.

(c) 118th Avenue to 124th Avenue:

(i) On the north side the existing driveways will be allowed to remain. No new driveways will be permitted.

(ii) On the south side is the Portland & Western Railroad (PNWR) tracks. There will be no access to Herman Road across the tracks.

**(18) 90TH AVENUE**

(a) Tualatin Road to Tualatin-Sherwood Road. The existing driveways will be allowed to remain. No new driveways will be permitted.

**(19) AVERY STREET**

(a) Teton Road to Tualatin-Sherwood Road:

**(20) TETON AVENUE**

(a) Tualatin Road to Herman Road. The existing driveways will be allowed to remain. No new driveways will be permitted.

(b) Herman Road to Tualatin-Sherwood Road. The existing driveways will be allowed to remain. No new driveways will be permitted.

(c) Tualatin-Sherwood Road to Avery Street. The existing driveways will be allowed to remain. No new driveways will be permitted.

**(20) BASALT CREEK PARKWAY**

(a) 124<sup>th</sup> Avenue to Boones Ferry Road. Access to the Parkway shall be limited to Grahams Ferry Road, Boones Ferry Road ~~and one other location within the City's section of the Basalt Creek Planning Area.~~

[Ord. 635-84, §54, 6/11/84; Ord. 786-89, 11/14/89; Ord. 859-92, §1, 2/24/92; Ord. 800-90, §2, 3 and 4, 3/26/90; Ord. 849-91, §41, 11/25/91; Ord. 879-92, §1, 10/12/92; Ord. 882-92, §26 and 27, 12/14/92; Ord. 975-97, §4, 5/12/97; Ord. 982-97, §9, 8/4/97; Ord. 1023-99, §12, 6/28/99; Ord. 1080-01 §1, 7/23/01; Ord. 1103-02, 03/25/02; Ord. 1080-01, 7/23/01; Ord. 1191-05, 6/27/05; Ord. 1234-07 §1, 4/9/07,

Chapter 75 – Access Management

Ord. 1309-10, §1. 8/23/10; Ord. 1321-11 §53, 4/25/11; Ord. 1354-13 §28, 02/25/13;  
Ord 1414-18, 12/10/2018]

# Revised Tualatin Transportation System Plan Update

Prepared for  
**City of Tualatin**

February 2013  
Updated ~~February-April 2014~~ 2019

**CH2MHILL®**

With

Angelo  
planning group

DKS

ila  
public  
involvement



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## Acronyms and Abbreviations

CIO	Citizen Involvement Organization
ESL	English as a Second Language
HDM	ODOT's <i>Highway Design Manual</i>
HOV	High-Occupancy Vehicle
LID	Local Improvement District
MBP	Minor Betterment Program
MSTIP	Major Streets Transportation Improvement Program (Washington County funding source)
NHS	National Highway System
ODOT	Oregon Department of Transportation
OHP	<i>Oregon Highway Plan</i>
OR 99W	Oregon Highway 99W
PNWR	Portland and Western Railroad
RTFP	<i>Metro's Regional Transportation Functional Plan</i>
RTP	<i>Metro's Regional Transportation Plan</i>
SDC	System Development Charges
SMART	South Metro Area Regional Transit
SOV	Single-Occupancy Vehicle
SRTS	Safe Routes to School
STIP	Statewide Transportation Improvement Program
TDC	Tualatin Development Code
TDM	Transportation Demand Management
TDT	Transportation Development Tax
TE	Transportation Enhancement
TMA	Transportation Management Association
TPC	Tualatin Planning Commission
TPARK	Tualatin Parks Advisory Committee
TPR	Transportation Planning Rule
TSM	Transportation System Management
TSMO Plan	<i>Metro's 2035 Transportation System Management and Operations Plan</i>
TSP	<i>Transportation System Plan</i>



## Acronyms and Abbreviations

TTF	Transportation Task Force
UGB	Urban Growth Boundary
WES	Westside Express Service

## Acknowledgements

### Transportation Task Force

#### Community Representatives

Alan Aplin, TPC  
 Bruce Andrus-Hughes, TPARK  
 Bill Beers, TPC  
 Monique Beikman, City Councilor  
 Charlie Benson, Citizen  
 Ryan Boyle, Citizen  
 Wade Brooksby, City Councilor  
 Joelle Davis, City Councilor  
 Cheryl Dorman, Business/Chamber of Commerce  
 Travis Evans, Citizen  
 Jan Giunta\*, CIO  
 Allen Goodall, Business  
 Gail Hardinger\*, Business  
 Nic Herriges\*, Citizen  
 John Howorth\*, Citizen  
 Candice Kelly\*, Tualatin Tomorrow  
 Nancy Kraushaar, Citizen  
 Lou Ogden\*, Mayor  
 Ray Phelps, Business  
 Valerie Pratt\*, TPARK  
 Mike Riley, CIO  
 Bethany Wurtz, Tualatin Tomorrow

#### Agency Representatives

Brian Barker, Tualatin Valley Fire & Rescue  
 Kelly Betteridge, TriMet  
 Karen Buehrig, Clackamas County  
 Judith Gray, City of Tigard  
 Julia Hajduk, City of Sherwood  
 Steve L. Kelley, Washington County  
 Deena Platman, Metro  
 Lidwien Rahman, ODOT

### Transportation System Plan Working Groups

Working Groups were loosely structured committees open to the public that helped develop content for the TSP. The following individuals signed in at one or more of the Working Group meetings.

#### Bicycle and Pedestrian Working Group

Bruce Andrus-Hughes  
 Hal Ballard  
 Monique Beikman, City Councilor  
 June Bennet  
 Carol Cesnalis  
 Joelle Davis, City Councilor  
 Suzette Davis  
 Ann DeHaan  
 Jeff DeHaan  
 Joe Freichante  
 Jan Giunta  
 Nic Herriges  
 Marissa Houlberg  
 Michael Houlberg  
 John Howorth  
 Nancy Kraushaar  
 Connie Ledbetter  
 Joe Lipscomb  
 Lonnie Martinez  
 Linda Moholt  
 Alex Sander  
 Doug Ulmer

#### Downtown Working Group

Toni Anderson  
 Monique Beikman, City Councilor  
 June Bennett  
 Wade Brooksby, City Councilor  
 Frank Bubenik, City Councilor  
 Joelle Davis, City Councilor

Travis Evans  
Jan Giunta  
Cathy Holland  
Marissa Houlberg  
Michael Houlberg  
Dolores Hurtado  
Del Judy  
Candice Kelly  
Robert Kellogg  
Nancy Kraushaar  
Joe Lipscomb  
Linda Moholt  
Del Moore  
Dorothy Moore  
Ray Phelps  
Alex Sander  
Steve Titus  
Ed Truax, City Councilor  
Christine Tunstall

### Industrial and Freight Working Group

Bruce Andrus-Hughes  
Carol Cesnalis  
John Cesnalis  
Jonathan Crane  
Joelle Davis, City Councilor  
Mike Elden  
Jan Giunta  
Gail Hardinger  
Cathy Holland  
Dolores Hurtado  
Nancy Ismail  
Robert Kellogg  
Todd Kond  
John Kuypers  
Joe Lipscomb  
Linda Moholt  
Dick Neely  
Christopher Nelson  
Kathy Newcomb  
Kenn Nickall  
Mayor Lou Ogden

Ray Phelps  
Randy Pitchford  
Mike Riley  
Dean Sorensen  
Steve Titus  
Ed Truax, City Councilor  
Robin Walker

### Neighborhood Livability Working Group

William Beers  
Monique Beikman, City Councilor  
June Bennett  
J Binn  
Wade Brooksby, City Councilor  
Frank Bubenik, City Councilor  
Carol Cesnalis  
Deborah Conchuratt  
Cori Conway  
Allison Cornilles  
Rob Cornilles  
Joelle Davis, City Councilor  
Linda Fletcher  
Dave Gellos  
Teri Gellos  
Jan Giunta  
Kathy Holland  
John Howorth  
Dolores Hurtado  
Bob Ingber  
Candice Kelly  
Nancy Kraushaar  
Joe Lipscomb  
Julia Makarowsky  
Christopher Nelson  
Cindy Phillips  
Judy Pozo  
Alex Sander  
Steve Titus  
Margo Traines  
Chris Tunstall  
Doug Ulmen

## Major Corridors and Intersections Working Group

Toni Anderson  
 Alan Aplin  
 Monique Beikman, City Councilor  
 June Bennett  
 John Bosket  
 Wade Brooksby, City Councilor  
 Carol Cesnalis  
 John Cesnalis  
 Cheryl Dorman  
 Mark Eberhart  
 Jan Giunta  
 Cameron Grile  
 Cathy Holland  
 John Howorth  
 Dolores Hurtado  
 Robert Kellogg  
 Joe Lipscomb  
 Grace Lucini  
 John Lucini  
 Del Moore  
 Dorothy Moore  
 Dick Neely  
 Amanda Nelson  
 Christopher Nelson  
 Kathy Newcomb  
 Kenn Nickell  
 Lou Ogden, Mayor  
 Randy Pitchford  
 Tom Re  
 Susan Rupert  
 Alex Sander  
 Tim Stackin  
 Stephen Titus  
 Reba Tobey  
 Christine Tunstall  
 Doug Ulmen  
 Jill Williams

## Transit Working Group

Toni Anderson  
 Ron Audette  
 Brian Barker  
 Bill Beers  
 Carol Bellows  
 June Bennett  
 Charlie Benson  
 Kelly Betteridge  
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 Del Judy  
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Joelle Davis  
Nancy Grimes  
Lou Ogden, Mayor  
Ed Truax

## City Project Staff

Denice Ambrosio  
Ben Bryant  
Colin Cortes  
Tony Doran  
Cindy Hahn  
Will Harper  
Paul Hennon  
Kaaren Hofmann, City Project Manager  
Aquilla Hurd-Ravich  
Ginny Kirby  
Sherilyn Lombos  
Alice Rouyer  
Carol Rutherford  
Lynette Sanford  
Matt Scheidegger  
Sara Singer  
Carl Switzer  
Dayna Webb

## Consultant Staff

Sam Beresky, JLA Public Involvement  
Theresa Carr, CH2M HILL, Technical Consultant Project Manager  
Mat Dolata, DKS  
Darren Hippenstiel, CH2M HILL  
Eryn Deeming Kehe, JLA Public Involvement, Public Involvement Project Manager  
Terra Lingley, CH2M HILL  
Kate Lyman, CH2M HILL  
Shayna Rehberg, Angelo Planning Group  
Darci Rudzinski, Angelo Planning Group  
Alan Snook, DKS

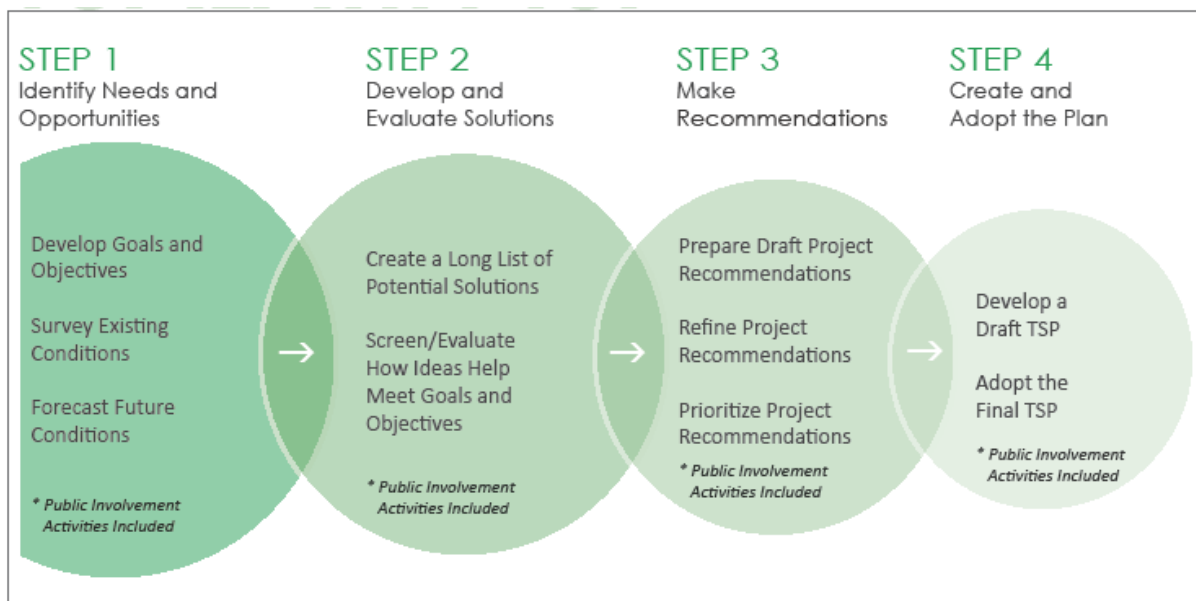
# Chapter 1. Introduction

The Tualatin Transportation System Plan (TSP) establishes a long-range vision for the combination of projects, programs, and policies that will achieve Tualatin’s transportation goals. To do this, the TSP looks at the needs of its residents, businesses, employees, and visitors – now (year 2012), and what is expected for the future (Year 2035). TSPs are required by the state of Oregon for all cities with populations greater than 2,500 people, and this is not Tualatin’s first TSP. However, it serves as a major update. The previous TSP was adopted in 2001, with analyses completed in 2000, necessitating a new evaluation of transportation conditions in Tualatin and an updated vision for its future. The TSP considers the diverse needs of all users of the City’s transportation network, and sets out recommendations that will serve the needs of transit riders, bicyclists, pedestrians, freight traffic, and drivers.

This plan has been prepared in compliance with state, regional, and local plans and policies, including the *Oregon Highway Plan (OHP)*, the state *Transportation Planning Rule (TPR)*, *Metro’s Regional Transportation Plan (RTP)*, *Metro’s Regional Transportation Functional Plan (RTFP)*, Washington and Clackamas Counties Transportation System Plans, and Tualatin’s Comprehensive Plan. The TSP presents a vision specific to the City’s transportation future, while remaining consistent with these state, regional, and local plans. Plan elements will be implemented by the City, private developers, and regional, or state agencies.

## Plan Process

Tualatin began the process to update their TSP in 2011. Staff organized their work into four basic steps, as described here and illustrated in the graphic below. Step 1 identified existing and future needs, opportunities, project goals, and objectives. City staff and the consultant project team assembled existing and collected new data, analyzed the data to identify deficiencies and opportunities, and attended a number of community events to



Vision —————> Reality

### The Adopted Tualatin Transportation System Plan (TSP):

- Creates a vision for Tualatin's future as it relates to transportation
- Establishes our community's priorities so we know what should be done first
- Helps the City of Tualatin get funding and build projects

ask about issues with the transportation system to form an understanding of transportation problems to be addressed in the TSP. Additionally, the project website included an issues map where visitors to the website could identify transportation problems within the City.

Step 2 of the process included creating a long list of potential solutions, then screening and evaluating the potential solutions to see how ideas help meet project goals and objectives. An open house, several Transportation Task Force meetings, and the working group meetings helped create and/or evaluate potential solutions (working groups are described in the next section). Throughout each of these steps, the project team engaged the community to ensure that each element was appropriate for Tualatin. The Public Involvement section presents more information about the public involvement activities.

Step 3 included preparing the draft recommendations for projects to be included into the TSP, refining a number of recommendations for the more complex transportation needs, and prioritizing the project recommendations to help both the City and the community define which projects and programs should be implemented first.

Step 4 included developing the draft and final TSPs for City adoption. This process focused on compiling all recommendations into the TSP document, and coordinating with relevant stakeholders in reviewing the TSP for completeness and consistency. These stakeholders included the community, City Council, Tualatin Planning Commission (TPC), Tualatin Parks Advisory Committee (TPARK), Washington County, Metro, Oregon Department of Transportation (ODOT), Clackamas County, adjacent cities, and the state's Department of Land Conservation and Development (DLCD).

## Study Area

The study area for the Tualatin TSP is comprised of the Tualatin Planning Area Boundary, with two additions - the Basalt Creek planning area between Tualatin and Wilsonville, and the SW Concept Plan area between the Cities of Sherwood and Tualatin. Those areas outside of the City limits, but within the study area, were included because of the transportation impact that they could have on the City's transportation network associated with the potential development of residential and employment areas. The Tualatin River serves as the northerly boundary of the City west of I-5, with SW Cipole Road and SW 124th Avenue as the boundary to the west, and SW Helenius Street and SW Norwood Road to the south. There is a section of the city north and east of the Tualatin River south of SW Peters Road and west of SW Upper Boones Ferry Road. Additionally, the Horizon Christian High School south of SW Norwood Road is within City limits. The eastern study area boundary from the south follows the west side of I-5 until north of I-205. The City then extends east into Clackamas County east of SW 65th Avenue to Halcyon Road. The City also includes a section of the Bridgeport Village shopping center on the west side of I-5. The northern part of the City also extends to the east side of I-5 to the rail line, and north of the Tualatin River to approximately SW Rosewood Street. In addition to the City limits, there are a handful of areas that are surrounded by the City but not officially incorporated. The study area is shown on several of the TSP's figures, including Figure 1 in the following section.

## Public Involvement for the Transportation System Plan

The TSP planning process actively engaged the citizens of Tualatin in the production of its TSP. Residents, business owners, employees, and agency partners were encouraged to participate and were provided with multiple ways to share their thoughts - from initial goal development and issue identification to evaluation and screening. The public involvement plan outlined a thorough outreach process, making it easy and fun for the public to share ideas. The process provided meaningful ways to influence outcomes and took advantage of existing communication networks to reach more people.



## Transportation Task Force

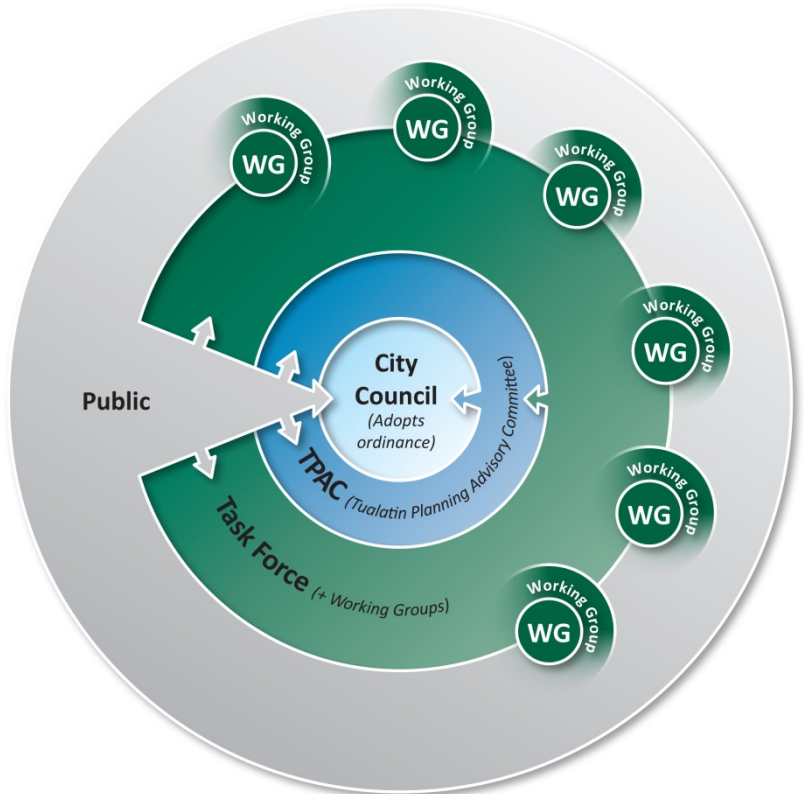
The public involvement plan established a clear decision-making framework for the TSP. The Transportation Task Force (TTF), with input from the Working Groups (described below), advised the TPC. TPC then made a recommendation to the City Council, which will then adopt the final TSP and any changes to the City’s Code. In addition, TPARK made recommendations on the bicycle and pedestrian elements to the City Council. Each of these organizations received regular project updates from City staff throughout the process and each had representative members on the TTF. These groups were given the opportunity to provide their recommendation before the TTF decisions were forwarded to TPC and the City Council.

The TTF was formed in November 2011 for the purpose of advising TPC and the City Council about the needs and concerns of the community with regard to transportation. The City Council Citizen Involvement Committee selected TTF members carefully to be representative of neighborhoods, the business community, and the interests of Tualatin’s advisory committees. Members and alternates were selected from a pool of applications. Neighboring communities, counties, Tualatin Valley Fire & Rescue, ODOT, Metro, and TriMet also had representatives on the TTF.

The TTF met 16 times between November 2011 and November 2012. The TSP was discussed at most meetings, though the TTF also helped to prepare Tualatin’s companion land use plan for high capacity transit, known as *Linking Tualatin* during the same timeframe. TTF meetings were advertised by the City and open to the public. The TTF agenda included time for public comment at the beginning and end of every meeting.

## Public Open Houses

The TSP process featured two in-person public involvement opportunities as well as a two-month long online open house. The City of Tualatin held the “Tualatin Year of Transportation” kick-off meeting on February 16, 2012, to provide information and an opportunity to comment on various transportation projects in the Tualatin area. The City also sponsored a Transportation Summit on September 20, 2012, to allow the public an opportunity to understand the full picture of how proposed projects work together. The Summit included a presentation by technical staff and provided a “town hall” style forum for comment and discussion of final recommendations before the draft TSP was developed.



## Working Groups

Working Groups were another forum for public engagement in the project. The groups were open to the public and generated ideas and transportation solutions to be considered by the TTF. Six groups were established: Neighborhood Livability, Transit, Downtown, Bike and Pedestrian, Industrial and Freight, and Major Corridors and Intersections. Each working group met at least three times between February and July 2012, and anyone with an interest was encouraged to attend. Between six and thirty-five participants attended each working group meeting.

Because community members are much more likely to get involved if invited by a trusted source, the project made use of established lines of communication within the community. Notifications for events and opportunities to participate were sent through the City's list of interested citizens, the Tualatin Mayor's email list, the Chamber of Commerce email list, and members of City advisory committees. Emails were also sent to major employers and the Portland Hispanic Professionals Network. The City posted fliers and meeting notices in English and Spanish at City offices and the library. Event information was presented in school newsletters. The project produced press releases and submitted articles for the City's sponsored newsletter and the local newspaper, *Tualatin Life*.

## Spanish Language Outreach

According to the 2005–2009 American Community Survey, 17 percent of Tualatin's population speaks Spanish at home. For that reason, attention was placed on reaching out to this important part of the population. Interviews with leaders in the Latino community held early in the process suggested several ways to engage the Spanish-speaking population of Tualatin. Following these suggestions, the project team:

- ◆ Created English and Spanish language materials
- ◆ Visited the bilingual Parent-Teacher Organization at Bridgeport Elementary School
- ◆ Provided materials at the library and especially at Spanish-language events attended by families
- ◆ Shared information at local English as a Second Language (ESL) classes
- ◆ Contacted local churches (Tualatin Spanish Seventh-Day Adventist Church and Esperanza Iglesia)
- ◆ Left materials at local businesses

## Making Involvement Easy and Fun

In addition to the more traditional meetings and events, this TSP process employed many unique tools for making involvement easy and fun.

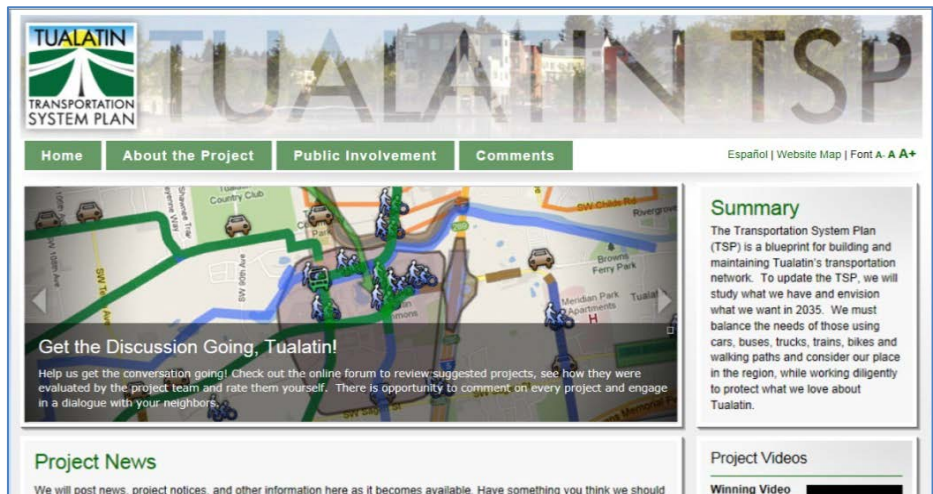
All project information was shared on the website,

[www.tualatintsp.org](http://www.tualatintsp.org), with information available in both English and Spanish. The website was updated weekly throughout the project with new deliverables, upcoming meetings, ways to get involved, questions for the

community, and updates on what the team was doing. Project videos were produced that appeared on the project website that provided fun and unique updates from community members throughout the process. More than 2,240 people accessed the website during the project and more than 460 people submitted comments online on the Comment Map, the TSP Ideas Map, and the general comments section.

All TSP information was posted to the website to maintain an open and transparent process. TTF materials—including agendas, technical material, and meeting summaries—were posted on the City of Tualatin's website at <http://www.tualatinoregon.gov/meetings> and linked through the TSP project site.

Through the summers of 2011 and 2012, City staff attended public events to educate people about the TSP update and seek input on transportation system needs and recommendations. During this time staff attended the Tualatin Farmers Market, Concerts on the Commons, ArtSplash Arts Festival, and the annual Crawfish Festival.



Staff also attended each of the city Advisory Committee meetings, made contact with the Juanita Pohl Senior Center attendees, and made presentations to the Tualatin Chamber and the Tualatin Rotary.

In the summer of 2011 the project team developed an iPhone application and a map-based web tool for the public to suggest project ideas and identify system needs. About 250 people participated, providing more than 360 suggestions. The project also sponsored a video contest and honored two winners in October 2011. The City used its Facebook account to share TSP updates with its 392 followers and the project ran a Facebook ad in August 2012. Finally, the team prepared a short video to encourage input on the TSP's preliminary recommendations in summer 2012; this video was featured in several prominent spots and helped drive traffic to the project website. These non-traditional methods expanded the reach of the outreach program and engaged more Tualatin residents in development of the TSP.

## Project Goals

Over a span of three meetings the TTF prepared a vision for the TSP, conveyed as a set of goals and objectives. In early 2012 they adopted seven principal goals organized into the following goal categories:

1. Access and Mobility
2. Safety
3. Vibrant Community
4. Equity
5. Economy
6. Health and the Environment
7. Ability to be Implemented

These goals and objectives were also discussed by the community at the first open house in February 2012 and by TPC, TPARK, and City Council. The full description of goals and objectives, included as Table 1, served as the basis for the TSP's evaluation framework. This means that all TSP recommendations were tied back to the underlying vision as established by these groups.

## Regulatory Requirements

The TPR, developed by the state DLCD in accordance with state law, requires that local TSPs contain the following elements:

- ◆ A road plan for a network of arterial and collector roads
- ◆ A public transit plan
- ◆ A bicycle and pedestrian plan
- ◆ An air, rail, water, and pipeline plan
- ◆ A transportation financing plan
- ◆ Policies and ordinances for implementing the TSP

The TPR requires that alternate travel modes including cycling, walking, and transit, be given equal consideration with automobile travel and states that reasonable effort must be applied in the development and enhancement of alternate modes in Tualatin's future transportation system. Local jurisdictions must also coordinate their plans with relevant state, regional, and county plans and amend their own ordinances to implement the TSP.

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TABLE 1  
Goals and Objectives of the Tualatin Transportation System Plan

Goal Category	Goal	Objective
<b>Access and Mobility</b>	Maintain and enhance the transportation system to reduce travel times, provide travel-time reliability, provide a functional and smooth transportation system, and promote access for all users.	Improve travel time reliability//provide travel information for all modes including freight and transit.
		Provide efficient and quick travel between points A and B.
		Provide connectivity within the City between popular destinations and residential areas.
		Accommodate future traffic, bicycle, pedestrian, and transit demand.
		Reduce trip length and potential travel times for motor vehicles, freight, transit, bicycles, and walkers.
		Improve comfort and convenience of travel for all modes including bicycles, pedestrians, and transit users.
<b>Safety</b>	Improve safety for all users, all modes, all ages, and all abilities within the City of Tualatin.	Increase access to key destinations for all modes.
		Address known safety locations, including high-crash locations for motor vehicles, bicycles, and pedestrians.
		Address geometric deficiencies that could affect safety including intersection design, location and existence of facilities, and street design.
		Ensure that emergency vehicles are able to provide services throughout the City to support a safe community.
<b>Vibrant Community</b>	Allow for a variety of alternative transportation choices for citizens of and visitors to Tualatin to support a high quality of life and community livability.  Produce a plan that respects and preserves neighborhood values and identity.	Provide a secure transportation system for all modes.
		Create a variety of safe options for transportation needs including bicycles, pedestrians, transit, freight, and motor vehicles.
		Provide complete streets that include universal access through pedestrian facilities, bicycle facilities, and transit on some streets.
		Support a livable community with family-friendly neighborhoods.
<b>Equity</b>	Consider the distribution of benefits and impacts from potential transportation options, and work towards fair access to transportation facilities for all users, all ages, and all abilities.	Maintain a small-town feel.
		Promote a fair distribution of benefits to and burdens on different populations within the City (that is, low-income, transit-dependent, minority, age groups) and different neighborhoods and employment areas within the City.  Consider access to transit for all users.

## Major Arterials

The following roadways are either reclassified as major arterials or are future major arterials:

- ◆ **SW Lower Boones Ferry Road** between SW Boones Ferry Road and SW Bridgeport Road changed from a minor arterial. This section of SW Lower Boones Ferry Road provides the only non-highway north-south connection within the City and carries a large amount of regional traffic from I-5 into Tualatin.
- ◆ **SW Boones Ferry Road between SW Norwood Road and the Basalt Creek Parkway** is classified as a major arterial.
- ◆ **SW 124th Avenue** south of SW Tualatin-Sherwood Road (~~future road~~) to SW Tonquin Road. This connection will allow industrial and manufacturing properties on the west side of Tualatin to access the regional highway system south of the City.
- ◆ **SW Basalt Creek Parkway (future road)** which acts as an extension of SW 124th Avenue as it turns east-west, from SW Tonquin Road to SW Boones Ferry Road. This connection will act as one of three ultimate connectors between Highway 99W and I-5.
- ◆ **SW 65th Avenue** south of SW Sagert Street to the city limits changed from a minor collector. This designation recognizes that south of SW Sagert Street, SW 65th Avenue provides connections to the Stafford area, and changing this designation makes it consistent with the rest of SW 65th Avenue within the City.

## Minor Arterials

The following roadways are reclassified as minor arterials:

- ◆ **SW 108th Avenue** between SW Leveton Drive to SW Herman Road changed from a major arterial. Downgrading this section of roadway recognizes that freight and regional traffic will access SW Leveton Drive due to the existing land uses, but it is not a major freight throughway. A minor arterial will serve the industrial and manufacturing area without attracting additional through traffic to SW Tualatin Road.
- ◆ **SW Leveton Drive** between SW 118th and SW 124th Avenues changed from a minor collector, and SW Leveton Drive between SW 118th and SW 108th Avenues changed from a major arterial. These changes address the freight traffic anticipated on SW Leveton Drive and recognize the importance of connecting to the regional transportation system via SW 124th Avenue and OR 99W.
- ◆ **SW Herman Road** west of SW Teton Avenue to SW 108th Avenue changed from a major arterial, and SW Herman Road between SW 108th Avenue and SW Cipole Road changed from a major collector. These changes make the roadway a consistent minor arterial between SW Cipole Road and SW Teton Avenue, and help support the community's desire to remove some through traffic off of SW Tualatin Road to SW Herman Road.
- ◆ **SW Teton Avenue** between SW Tualatin Road and SW Avery Street changed from a major collector. SW Teton Avenue is recommended as a freight route to reduce pressure on SW Tualatin Road, upgrading to a minor arterial indicates the anticipated traffic.
- ◆ **SW Avery Street** between SW Teton Avenue and SW Tualatin-Sherwood Road changed from a major collector. Upgrading this section of SW Avery Street provides a connection to the minor arterial on SW Teton Avenue and SW Tualatin-Sherwood Road, a major arterial to allow freight and other regional traffic access to I-5 and OR 99W.
- ◆ **SW Sagert Street** from SW Martinazzi Avenue to SW 65th Avenue changed from a major arterial. This change acknowledges that SW Sagert Street is an important connection between SW 65th Avenue and SW Martinazzi



Avenue, but recognizes that the road carries local trips and serves residential land uses. SW Sagert Street carries a mix of through and local traffic.

- ◆ **SW 90th Avenue** from SW Tualatin Road to SW Tualatin-Sherwood Road changed from a major arterial. This change is in response to removing the Hall Street north-south extension over the Tualatin River from the City's TSP. Reducing the classification from a major to a minor collector reflects the reduced importance of SW 90th Avenue without that connection.

## Major Collectors

The following roadways are reclassified as major collectors or are future major collectors:

- ◆ **SW Grahams Ferry Road** between SW Ibach Street and ~~the southern City limits~~ Basalt Creek Parkway as a major ~~changed from a minor~~ collector. This ~~change classification~~ anticipates planned development along SW Graham's Ferry Road both in Tualatin and to the south, recognizing that it is the only route from the neighborhoods to arterial connections and the regional network.
- ◆ **SW Myslony Street Extension** (Future road) to SW 112th Avenue as a future major collector. This is consistent with roadway designations on either side of the future connection.
- ◆ **SW Tualatin Road** between SW 90th Avenue and the curve south at SW Chinook Street changed from a major arterial. This change creates consistency between the segments east and west, which are already major collectors. Originally this was a major arterial because along with SW 90th Avenue, it was to connect to a future Hall Boulevard extension over the river. Since the Hall Boulevard extension was removed from the City's TSP, this roadway was downgraded.
- ◆ **SW Norwood Road** between SW Boones Ferry Road and the eastern City limits changed from a local road. SW Norwood Road is one of the only east-west connections in the south part of the City, and provides a connection over I-5. There are very few local accesses along SW Norwood Road, and the connectivity makes it consistent with a major collector designation.
- ◆ **SW Tonquin Road between SW 124th Ave. and SW Grahams Ferry Road.**

## Minor Collectors

The following roadways are future minor collectors:

- ◆ **New Roads in Urban Renewal Block 2<sup>1</sup>** will be classified as minor collectors since they connect two major arterials, SW Boones Ferry Road and SW Nyberg Street.
- ◆ **New Road** east of SW 65th Avenue and SW Borland Road.

## Regional Coordination

Several roadways within the City of Tualatin are owned by Washington County, Clackamas County, or ODOT. Coordination with these regional partners is key to implement a functional roadway network. Many of the County- and State-owned roadways are major and principal arterials respectively, and serve regional traffic needs. The City of Tualatin will continue to work with regional partners to implement projects on County and State-

<sup>1</sup> Urban Renewal Block 2 is the site of the former Kmart. It is located north of SW Nyberg Road west of I-5 in the northwest quadrant of the interchange.

More information on Urban Renewal in downtown Tualatin is located here:

[www.tualatinoregon.gov/sites/default/files/fileattachments/economicdevelopment/webpage/12237/curp-curr\\_oct\\_2009.pdf](http://www.tualatinoregon.gov/sites/default/files/fileattachments/economicdevelopment/webpage/12237/curp-curr_oct_2009.pdf)



owned roadways in Tualatin. Within the following modal plans, the projects that require regional coordination are called out separately than the projects under the City's sole jurisdiction.

## Street Design Standards

Street functional classification guides the design standards including the number of travel lanes, presence of bicycle lanes, the width of sidewalks, and other design elements. Table 3 shows the design standards by functional classification, and Figure 2 has the minimum and preferred street cross sections.



## Chapter 2. Modal Plans

This chapter outlines the preferred transportation system for the City of Tualatin. It is organized by modal element, though it should be noted that many TSP programs and projects benefit more than one mode of transportation. All attempts have been made to describe multi-modal TSP recommendations under the mode primarily served, with cross references made to other modes benefited by the project.

This chapter consists of a street system plan, a transit plan, a bicycle, pedestrian, and trail plan, a rail plan, a freight plan, a water and pipeline plan, and an air plan. As per TPR requirements this chapter also specifically includes plans for TDM, TSM, and parking.

### Definitions: TDM and TSM

#### *TDM*

Projects designed to manage travel demand, preserving transportation system capacity. Examples include teleworking, carpooling, and a Transportation Management Association.

#### *TSM*

Projects designed to optimize travel on the current network. Examples include traffic calming techniques, signal timing, and signal coordination.

## 1 Functional Classification Plan

A city's functional classification plan defines the intended operations and character of roadways within the overall transportation system including standards for roadway and right-of-way width, access spacing, and pedestrian and bicycle facilities. The City of Tualatin's functional classification system applies to roadways owned by the City, the County, and the State, and includes principal arterials, major arterials, minor arterials, major collectors, minor collectors, connector, and local roads. Figure 1 presents the updated functional classification plan for the City of Tualatin. Table 2 describes the functional classifications and the purpose they are intended to serve.

Tualatin's street system has a well-established network of arterials and collectors serving a variety of land uses throughout the City. The arterial roadways carry a high number of vehicles including transit and freight vehicles, and provide mobility with few opportunities for local access. Collectors assemble traffic from a neighborhood or district and deliver it to the closest arterial street. Collectors serve shorter trip lengths than arterials and have more local access opportunities. Both arterials and collectors within Tualatin are owned by a variety of agencies including the City, ODOT, and Clackamas and Washington Counties. The roadway owners are responsible for maintenance and upkeep on the roadways and they make decisions on upgrades to their facilities. Appendix A, Plan and Policy Review, provides a detailed description of the various policies associated with roadway ownership.

There are a number of existing freight and truck routes through the City designated by the City, the State, and the Federal government. These routes have specific design criteria and mobility standards to ensure that these roadways serve freight traffic.

### Functional Classification Policies

Policies support the City's transportation goals and objectives included in the previous section. Policies help provide direction for roadways and roadway classifications.

- ◆ **Functional Classification Policy 1:** Major and minor arterials will comprise the main backbone of the freight system, ensuring that freight trucks are able to easily move within, in, and out of the City
- ◆ **Functional Classification Policy 2:** Continue to construct existing and future roadways to standard when possible for the applicable functional classification to serve transportation needs within the City

## Functional Classification Changes

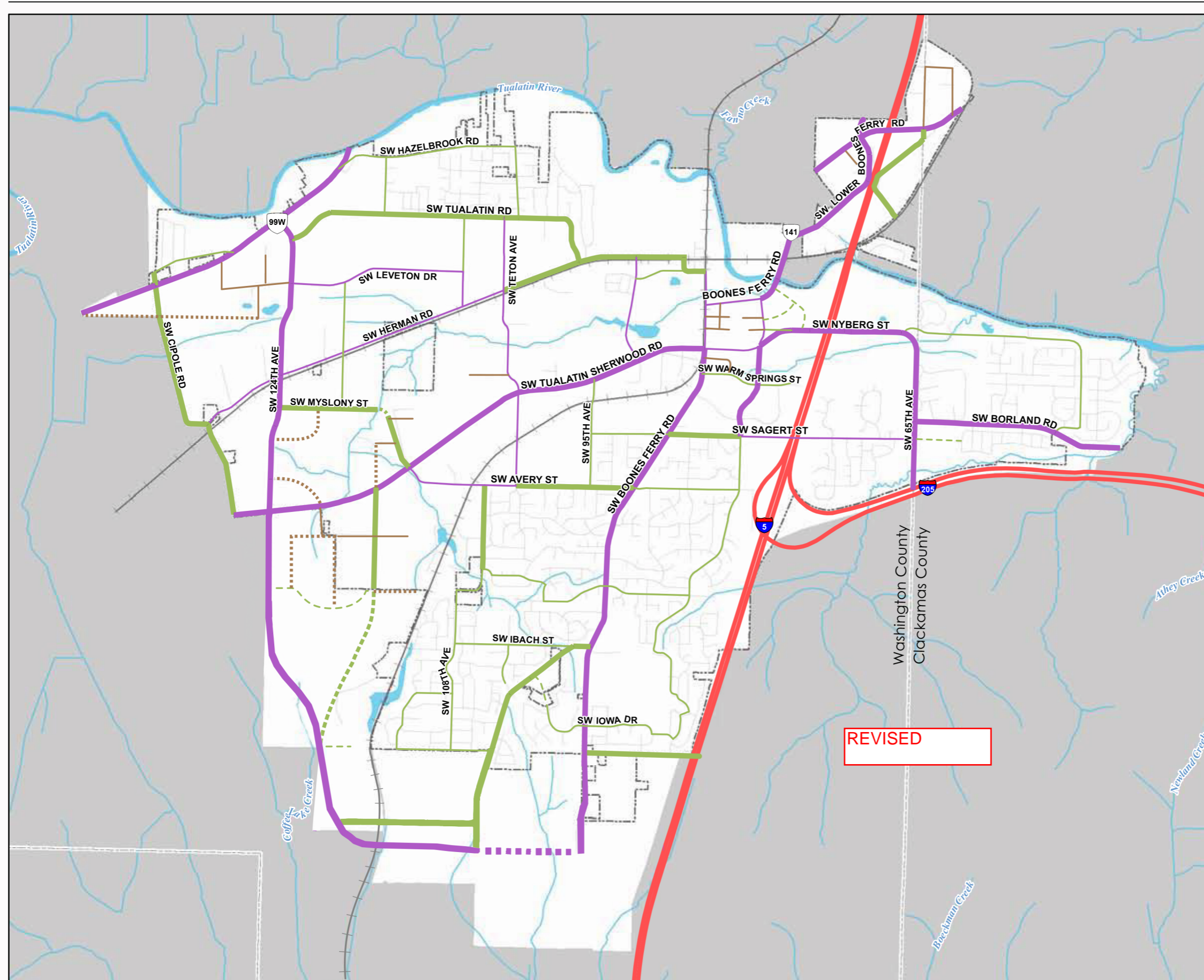
Several changes were made to the City’s functional classification system in this TSP update, including a simplification of the classifications themselves (from nine to seven classifications), updates to the descriptions and design standards, and several modifications within the City. Table 2 includes the description of the functional classifications, and Figure 1 includes a map of the updated Functional Classifications in Tualatin.

TABLE 2  
**City of Tualatin Functional Classification Description**

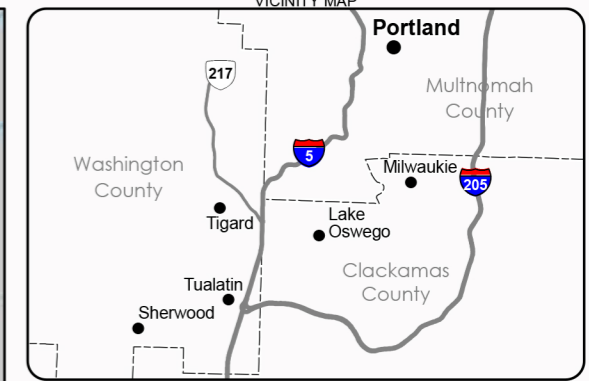
Functional Classification	Description
Principal Arterial	Primary function is to serve through, intra-city, regional, and interstate travel; connects major cities and states; connects to the major arterial system; serves through and regional freight movements; facilities are fully and partially access controlled; access control through medians, interchanges; no on-street parking, few sidewalks and bicycle facilities; may be used by public transit.
Major Arterial	Primary function is to serve both local and through traffic as it enters and leaves the urban area; connects the minor arterial and collector street system to principal arterials and other major arterials; serves freight movements between Tualatin and the regional system; provides access to other cities and communities; serves major traffic movements; access control through medians and/or channelization; restricted on-street parking; sidewalks and bicycle facilities required; may allow a right-turn pocket if warranted; will be used by public transit.
Minor Arterial	Primary function is to serve local and through traffic between community and regional facilities; distributes traffic from major arterials to collectors and local streets; serves freight movements between Tualatin and the regional system; higher degree of access than major arterials; trip lengths, traffic volumes, and speeds are lower than on major arterials; sidewalks and bicycle lanes required; may allow a right turn pocket if warranted; likely to be used by public transit.
Major Collector	Primary function is to serve local traffic between neighborhoods and community facilities; principal carrier between arterials and local streets; provides some degree of access to adjacent properties, while maintaining circulation and mobility for all users; carries lower traffic volumes at slower speeds than arterials; typically has two to three lanes; typically does not include on-street parking; pedestrian and bicycle facilities are required; may be used by public transit.
Minor Collector	Primary function is to connect neighborhoods with major collector streets to facilitate movement of local traffic; serves as primary routes into residential neighborhoods; has slower speeds to ensure community livability and safety for pedestrians and bicyclists; on-street pedestrian and bicycle facilities are required; bicycle facilities may be exclusive or where street parking is prevalent, shared roadways depending on traffic volumes, speeds, and extent of bicycle travel; may be used by public transit.
Connector	Primary function is to provide direct access to adjacent land uses, specifically in the downtown core* and industrial, commercial, and manufacturing areas; characterized by short roadway distances, slow speeds, and low volumes; offers a high level of accessibility; provides on-street parking, serves passenger cars, pedestrians, bicycles, and trucks for industrial areas. May be used by public transit; pedestrian facilities are required. Does not serve through traffic.
Local Street**	Primary function is to provide direct access to adjacent land uses; characterized by short roadway distances, slow speeds, and low volumes; offers a high level of accessibility; serves passenger cars, pedestrians, and bicycles, but not trucks; pedestrian facilities are required.

\* The downtown core is consistent with the Town Center Plan study area, centered on the Lake of the Commons and includes land south of the Tualatin River and west of I-5, including the Tualatin Community Park. The western Boundary is SW 95<sup>th</sup> Avenue south to SW Tualatin-Sherwood Road, and then east near SW Warm Springs Street.

\*\* Local streets are not address in the TSP as per the TPR Section 660-012-0020(2)(b)



**REVISED**



**LEGEND**

- Study Area
- Principal Arterial
- Major Arterial
- Future Major Arterial
- Minor Arterial
- Major Collector
- Future Major Collector
- Minor Collector
- Future Minor Collector
- Connector
- Future Connector
- City Boundaries
- County Boundaries
- Railroad

Note:  
 Future roadway alignments are approximate and subject to additional engineering and design.

0 0.5 1  
 Miles

**FIGURE 1**  
**Functional Classification**  
 Functional Classification Plan  
 City of Tualatin Transportation System Plan

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## Major Arterials

The following roadways are either reclassified as major arterials or are future major arterials:

- ◆ **SW Lower Boones Ferry Road** between SW Boones Ferry Road and SW Bridgeport Road changed from a minor arterial. This section of SW Lower Boones Ferry Road provides the only non-highway north-south connection within the City and carries a large amount of regional traffic from I-5 into Tualatin.
- ◆ **SW 124th Avenue** south of SW Tualatin-Sherwood Road (future road). This connection will allow industrial and manufacturing properties on the west side of Tualatin to access the regional highway system south of the City.
- ◆ **SW 65th Avenue** south of SW Sagert Street to the city limits changed from a minor collector. This designation recognizes that south of SW Sagert Street, SW 65<sup>th</sup> Avenue provides connections to the Stafford area, and changing this designation makes it consistent with the rest of SW 65<sup>th</sup> Avenue within the City.

## Minor Arterials

The following roadways are reclassified as minor arterials:

- ◆ **SW 108th Avenue** between SW Leveton Drive to SW Herman Road changed from a major arterial. Downgrading this section of roadway recognizes that freight and regional traffic will access SW Leveton Drive due to the existing land uses, but it is not a major freight throughway. A minor arterial will serve the industrial and manufacturing area without attracting additional through traffic to SW Tualatin Road.
- ◆ **SW Leveton Drive** between SW 118<sup>th</sup> and SW 124<sup>th</sup> Avenues changed from a minor collector, and SW Leveton Drive between SW 118<sup>th</sup> and SW 108<sup>th</sup> Avenues changed from a major arterial. These changes address the freight traffic anticipated on SW Leveton Drive and recognize the importance of connecting to the regional transportation system via SW 124<sup>th</sup> Avenue and OR 99W.
- ◆ **SW Herman Road** west of SW Teton Avenue to SW 108<sup>th</sup> Avenue changed from a major arterial, and SW Herman Road between SW 108<sup>th</sup> Avenue and SW Cipole Road changed from a major collector. These changes make the roadway a consistent minor arterial between SW Cipole Road and SW Teton Avenue, and help support the community's desire to remove some through traffic off of SW Tualatin Road to SW Herman Road.
- ◆ **SW Teton Avenue** between SW Tualatin Road and SW Avery Street changed from a major collector. SW Teton Avenue is recommended as a freight route to reduce pressure on SW Tualatin Road, upgrading to a minor arterial indicates the anticipated traffic.
- ◆ **SW Avery Street** between SW Teton Avenue and SW Tualatin-Sherwood Road changed from a major collector. Upgrading this section of SW Avery Street provides a connection to the minor arterial on SW Teton Avenue and SW Tualatin-Sherwood Road, a major arterial to allow freight and other regional traffic access to I-5 and OR 99W.
- ◆ **SW Sagert Street** from SW Martinazzi Avenue to SW 65<sup>th</sup> Avenue changed from a major arterial. This change acknowledges that SW Sagert Street is an important connection between SW 65<sup>th</sup> Avenue and SW Martinazzi Avenue, but recognizes that the road carries local trips and serves residential land uses. SW Sagert Street carries a mix of through and local traffic.
- ◆ **SW 90th Avenue** from SW Tualatin Road to SW Tualatin-Sherwood Road changed from a major arterial. This change is in response to removing the Hall Street north-south extension over the Tualatin River from the City's TSP. Reducing the classification from a major to a minor collector reflects the reduced importance of SW 90<sup>th</sup> Avenue without that connection.

## Major Collectors

The following roadways are reclassified as major collectors or are future major collectors:

- ◆ **SW Grahams Ferry Road** between SW Ibach Street and the southern City limits changed from a minor collector. This change anticipates planned development along SW Graham's Ferry Road both in Tualatin and to the south, recognizing that it is the only route from the neighborhoods to arterial connections and the regional network.
- ◆ **SW Myslony Street Extension** (Future road) to SW 112th Avenue as a future major collector. This is consistent with roadway designations on either side of the future connection.
- ◆ **SW Tualatin Road** between SW 90<sup>th</sup> Avenue and the curve south at SW Chinook Street changed from a major arterial. This change creates consistency between the segments east and west, which are already major collectors. Originally this was a major arterial because along with SW 90<sup>th</sup> Avenue, it was to connect to a future Hall Boulevard extension over the river. Since the Hall Boulevard extension was removed from the City's TSP, this roadway was downgraded.
- ◆ **SW Norwood Road** between SW Boones Ferry Road and the eastern City limits changed from a local road. SW Norwood Road is one of the only east-west connections in the south part of the City, and provides a connection over I-5. There are very few local accesses along SW Norwood Road, and the connectivity makes it consistent with a major collector designation.

## Minor Collectors

The following roadways are future minor collectors:

- ◆ **New Roads in Urban Renewal Block 2<sup>1</sup>** will be classified as minor collectors since they connect two major arterials, SW Boones Ferry Road and SW Nyberg Street.
- ◆ **New Road** east of SW 65th Avenue and SW Borland Road.

## Regional Coordination

Several roadways within the City of Tualatin are owned by Washington County, Clackamas County, or ODOT. Coordination with these regional partners is key to implement a functional roadway network. Many of the County- and State-owned roadways are major and principal arterials respectively, and serve regional traffic needs. The City of Tualatin will continue to work with regional partners to implement projects on County and State-owned roadways in Tualatin. Within the following modal plans, the projects that require regional coordination are called out separately than the projects under the City's sole jurisdiction.

## Street Design Standards

Street functional classification guides the design standards including the number of travel lanes, presence of bicycle lanes, the width of sidewalks, and other design elements. Table 3 shows the design standards by functional classification, and Figure 2 has the minimum and preferred street cross sections.

<sup>1</sup> Urban Renewal Block 2 is the site of the former Kmart. It is located north of SW Nyberg Road west of I-5 in the northwest quadrant of the interchange.

More information on Urban Renewal in downtown Tualatin is located here:

[www.tualatinoregon.gov/sites/default/files/fileattachments/economicdevelopment/webpage/12237/curr-curr\\_oct\\_2009.pdf](http://www.tualatinoregon.gov/sites/default/files/fileattachments/economicdevelopment/webpage/12237/curr-curr_oct_2009.pdf)



TABLE 3  
Street Design Standards

Functional Classification	Cross-section width	Travel lanes	Center lane or landscaped median <sup>‡</sup>	Bike lanes	Sidewalks*	Multi-use path <sup>†</sup>	On-street Parking	Planter Strip <sup>£</sup>
Major Arterial	70-98'	Two to four lanes at 12' each	14'	5-6' on both sides	5-6' on both sides	12' multi-use path could replace bike lanes and sidewalks on one or both sides	None	6' on both sides
Minor Arterial	56-74'	Two lanes at 12' each	Optional 14'	5-6' on both sides	5-6' on both sides	12' multi-use path could replace bike lanes and sidewalks on one or both sides	None	6' on both sides
Major Collector	54-74'	Two lanes, 11' minimum, 12' maximum	Optional 14'	5-6' on both sides	5-6' on both sides	12' multi-use path could replace bike lanes and sidewalks on one or both sides	None	6' on both sides
Minor Collector	62-76'	Two lanes, 11' minimum, 12' maximum	None	5-6' on both sides	5-6' on both sides	12' multi-use path could replace bike lanes and sidewalks on one or both sides	8' parking strip on one or both sides	6' on both sides
Connector	60'	Two lanes at 12' each	None	None	6' on both sides	None	8' parking strip on both sides	4' on both sides, 5' x 5' tree well for downtown connector streets
Local Street	46-50'	Two lanes, 14' minimum, 16' maximum	None	None	5' on both sides	None	Allowed	4' on both sides

\*All sidewalks shall have a clear zone - minimum unobstructed width of five feet for all City streets, and assume a 6" curb

<sup>†</sup> The City of Tualatin may allow a 12' multi-use path to be substituted for the sidewalk and bicycle lane on either or both sides. If allowed, the planter strip must be installed between the travel lane and the multi-use path.

<sup>‡</sup> Landscaped medians may include pedestrian refuges where appropriate, and where they can be installed by meeting appropriate design standards.

<sup>£</sup> Low Impact Development Approaches (LIDA) are allowed, where appropriate as determined by the City Engineer

For roadways all efforts are made to achieve the preferred cross sections described in Table 3 and illustrated in Figure 2. However it is acknowledged that this preferred width is not always achievable, due to environmental constraints or existing development.

The City Engineer may reduce the requirements of the preferred standard based on specific site conditions, but in no event will the requirement be less than the minimum cross-section. The City Engineer shall take into consideration the following factors when decision whether the site conditions warrant a reduction of the preferred standard:

### Arterials

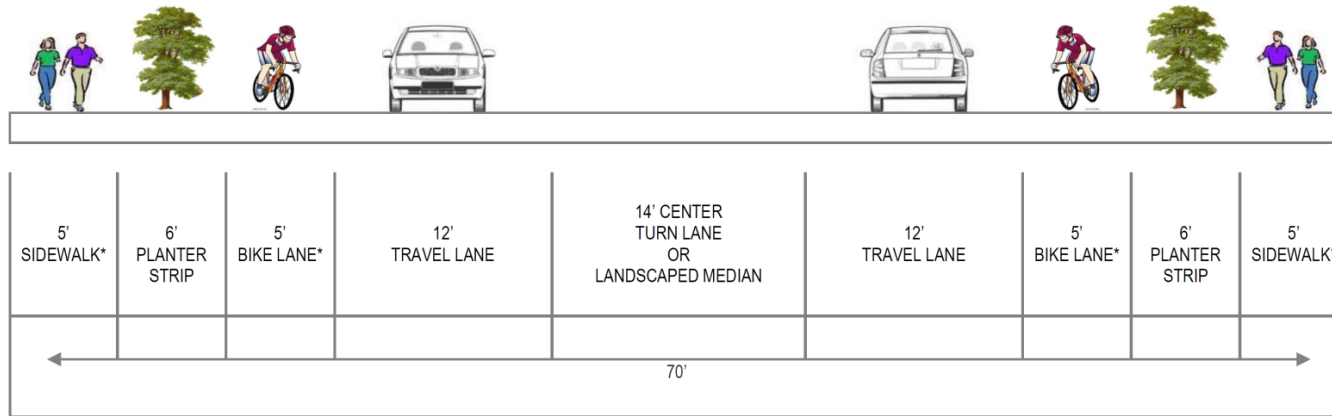
1. Whether adequate right-of-way exists
2. Impacts to properties adjacent to right-of-way
3. Current and future vehicle traffic at the location
4. Amount of heavy vehicles (buses and trucks)

### Collectors

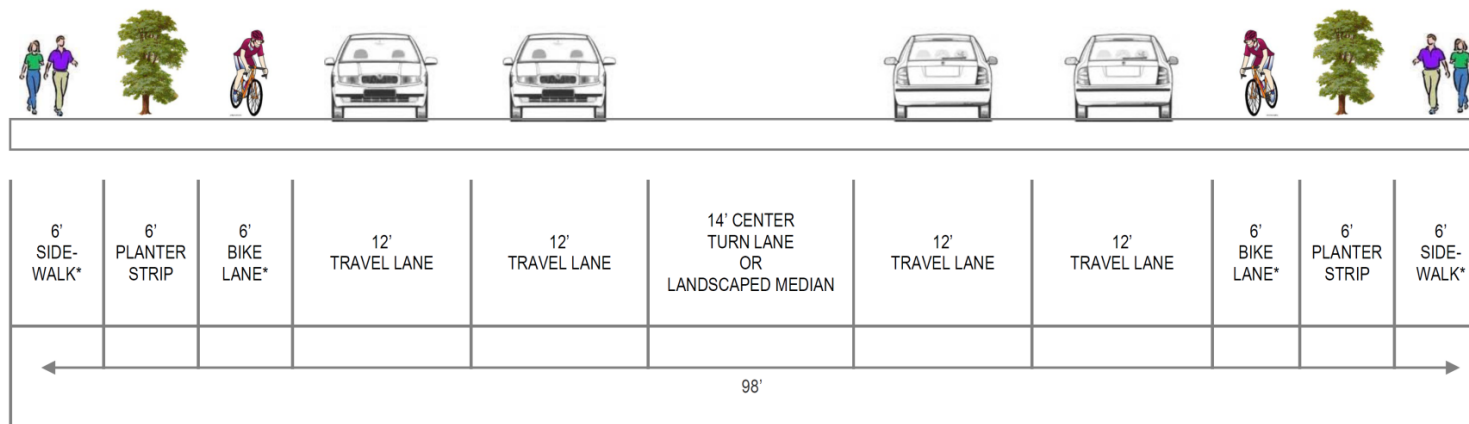
1. Whether adequate right-of-way exists
2. Impacts to properties adjacent to right-of-way
3. Amount of heavy vehicles (buses and trucks)
4. Proximity to property zoned manufacturing or industrial



**Figure 2. Street Design Standards**  
Major Arterial  
Minimum



Preferred

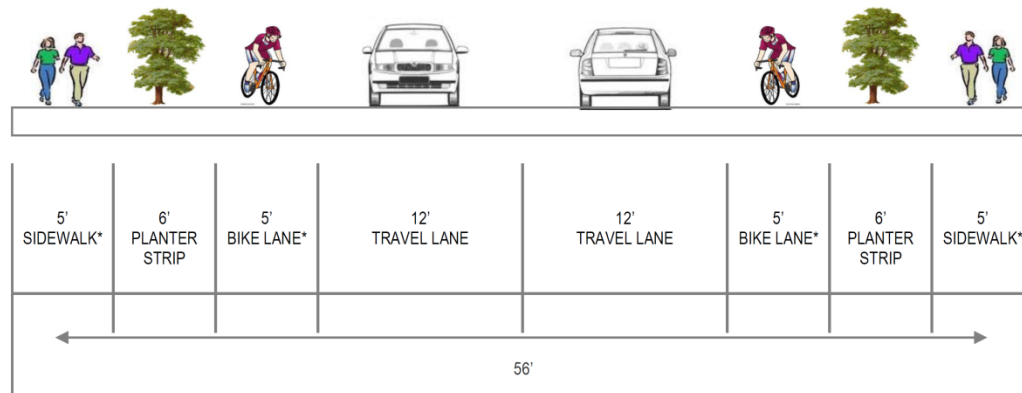


\*The City of Tualatin may allow a 12' multi-use path to be substituted for the sidewalk and bicycle lane on either or both sides. If allowed, the planter strip must be installed between the travel lane and the multi-use path.

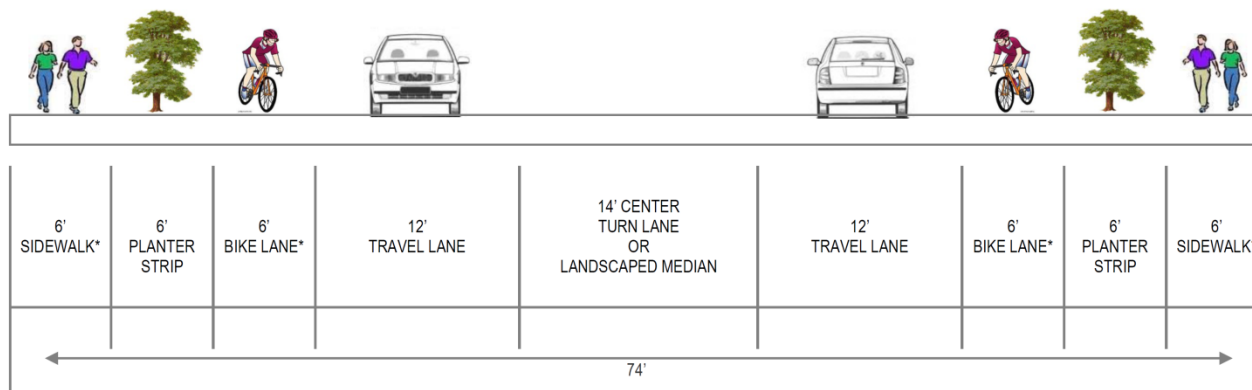
Figure 2. Street Design Standards, cont.

Minor Arterial

Minimum



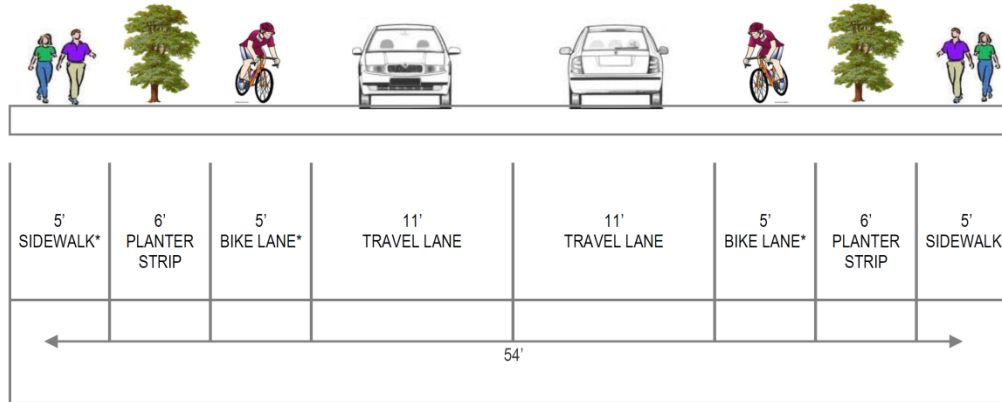
Preferred



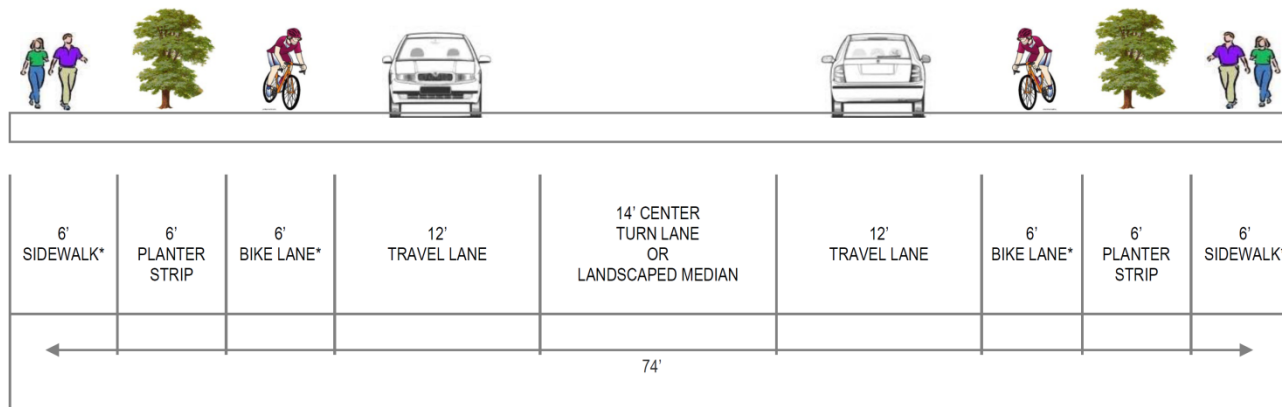
\*The City of Tualatin may allow a 12' multi-use path to be substituted for the sidewalk and bicycle lane on either or both sides. If allowed, the planter strip must be installed between the travel lane and the multi-use path.

**Figure 2. Street Design Standards, cont.**  
Major Collector

Minimum



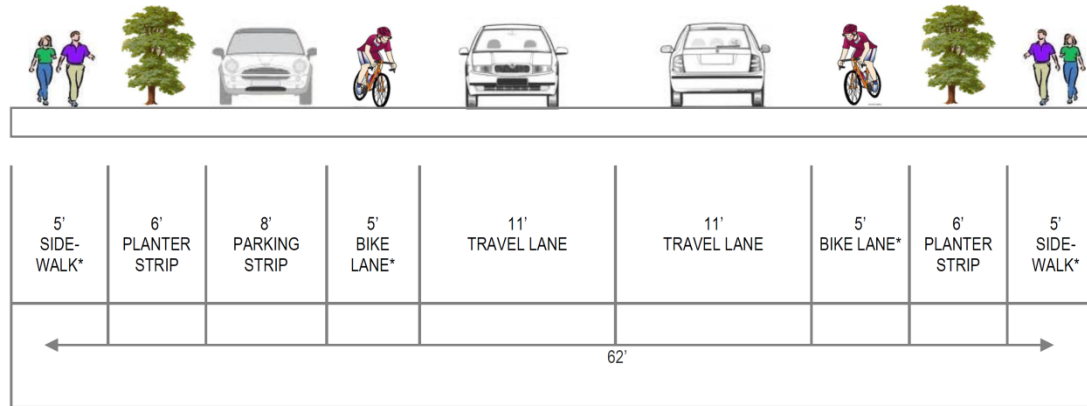
Preferred



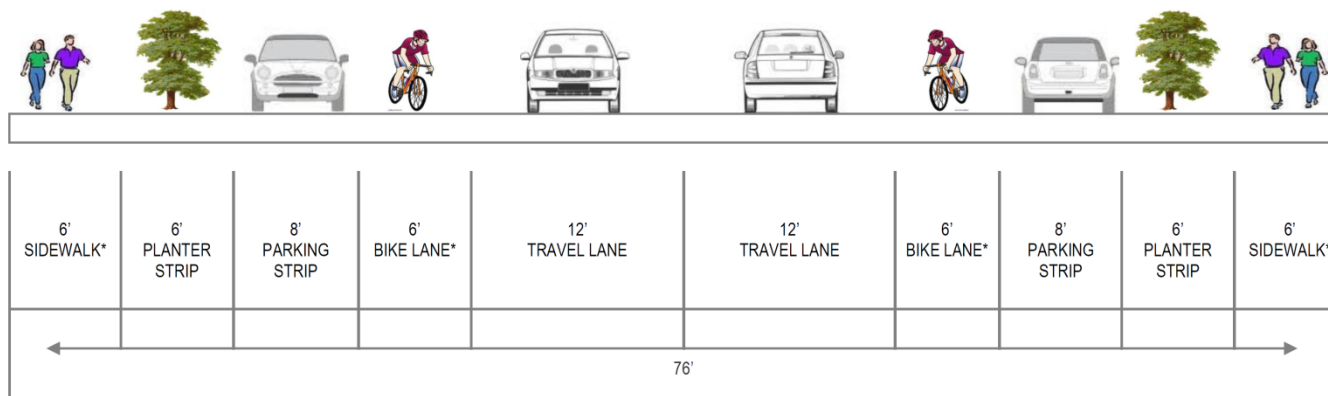
\*The City of Tualatin may allow a 12' multi-use path to be substituted for the sidewalk and bicycle lane on either or both sides. If allowed, the planter strip must be installed between the travel lane and the multi-use path.

Figure 2. Street Design Standards, cont.  
Minor Collector

Minimum



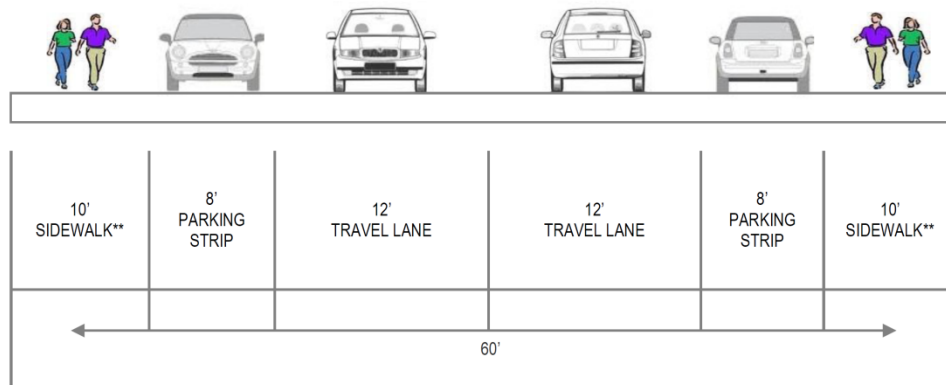
Preferred



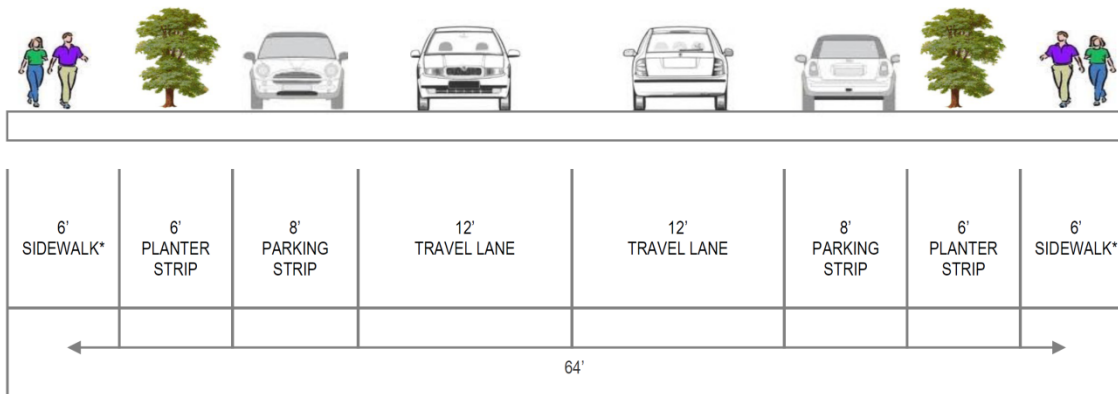
\*The City of Tualatin may allow a 12' multi-use path to be substituted for the sidewalk and bicycle lane on either or both sides. If allowed, the planter strip must be installed between the travel lane and the multi-use path.

**Figure 2. Street Design Standards, cont.**  
Connector

Downtown Core



Commercial/Industrial



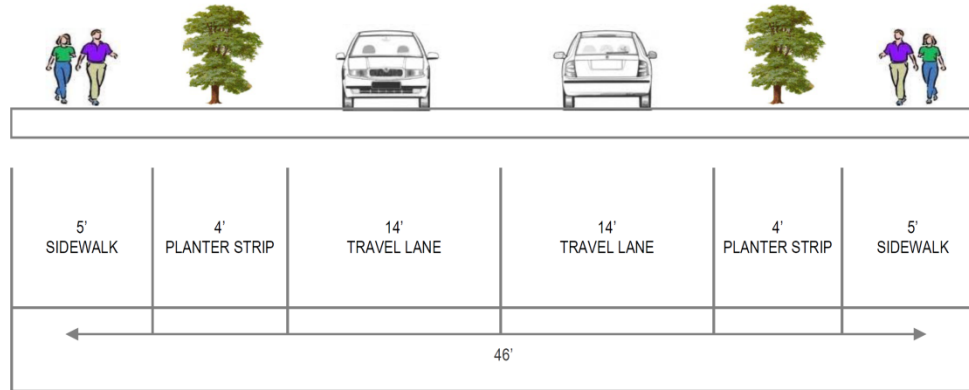
\*The City of Tualatin may allow a 12' multi-use path to be substituted for the sidewalk and bicycle lane on either or both sides. If allowed, the planter strip must be installed between the travel lane and the multi-use path.

\*\*Sidewalks on the downtown connector roads have 4' x 4' tree grates instead of planter strips.

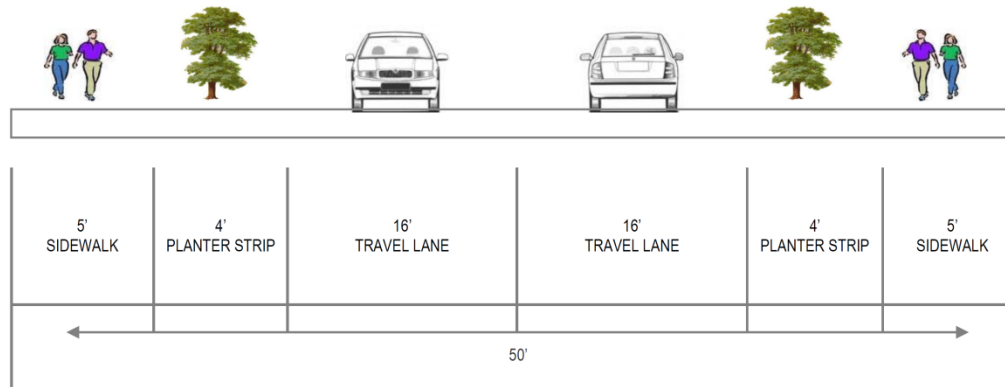
Figure 2. Street Design Standards, cont.

Local

Minimum\*



Preferred



\* The City of Tualatin may consider as low as 28' curb-to-curb pavement widths and as low as 46' right-of-way when needed to address constraints.



## 2 Street System Modal Plan

The street system modal plan consists of several sections: a listing of street urban upgrades and new streets, other intersection-specific or non-capacity streets projects, access management policies, and traffic operation standards.

### Existing and Future Roadway Conditions

Some of the existing roadways do not meet City, County, or State design standards. Further, there are a number of major roadways intersect with other roadways at a skew. This creates sight distance limitations and, thus, safety concerns.

The two most highly-traveled roadways are SW Tualatin-Sherwood Road and SW Nyberg Road with over 20,000 vehicles per day. SW Tualatin Road and SW Boones Ferry Road corridors have 10,000 vehicles daily at multiple locations. Additionally, SW Tualatin-Sherwood Road carries a large amount of heavy vehicles, around 11.5 percent, with SW Boones Ferry Road carrying 8.4 percent heavy vehicles.<sup>2</sup> Appendix B provides a full description of existing (2011) roadway conditions, while Appendix C provides a description of future (2035) forecasted roadway conditions.

In the existing conditions analysis only two intersections - SW Martinazzi Avenue and SW Sagert Street as well as SW Teton Avenue and SW Tualatin Road were found to have greater congestion than mobility standards allow. In the future (2035) the number of intersections not meeting operations standards grew to twelve, as listed below:

- ◆ SW Teton Avenue and SW Tualatin-Sherwood Road
- ◆ SW Boones Ferry Road and SW Tualatin-Sherwood Road
- ◆ SW Martinazzi Avenue and SW Tualatin-Sherwood Road
- ◆ SW 65<sup>th</sup> Avenue and SW Borland Road
- ◆ SW Martinazzi Avenue and SW Boones Ferry Road
- ◆ SW Boones Ferry Road and SW Lower Boones Ferry Road
- ◆ SW Boones Ferry Road and SW Avery Street
- ◆ SW Boones Ferry Road and SW Sagert Street
- ◆ SW Teton Avenue and SW Avery Street
- ◆ SW 65<sup>th</sup> Avenue and SW Sagert Street
- ◆ SW Teton Avenue and SW Tualatin Road
- ◆ SW Nyberg Street and SW 65<sup>th</sup> Avenue

The key needs identified in the existing conditions report include:

- ◆ **Improved Roadway connectivity** - new roadway connections should be explored to improve east-west connectivity south of SW Tualatin-Sherwood Road and north-south regional connectivity. Metro RTP policies related to a complete street system identify one-mile spacing between major arterial streets with collector streets or minor arterials spaced a half-mile apart.

<sup>2</sup> The average road in the Portland Metro area typically carries 2-4 percent heavy vehicles.

- ◆ **Improved travel time along congested corridors** – Focus on reducing vehicle delay on key corridors.
- ◆ **Intersection improvements** - address intersection delay and intersection issues in congested areas.
- ◆ **Upgrading roadway geometries** - City design standards for roadway width, sidewalks, and bicycle facilities should be followed where specific deficiencies have been identified.

Additionally, safety is a concern for the community. Safety issues were identified at the following intersections:

- ◆ SW Tualatin-Sherwood Road and SW Boones Ferry Road
- ◆ SW Nyberg Street and I-5 southbound off ramps.

## Roadway Policies

The following establish the City's policies on roadways.

- ◆ **Roadway Policy 1:** Implement design standards that provide clarity to developers while maintaining flexibility for environmental constraints.
- ◆ **Roadway Policy 2:** Ensure that street designs accommodate all anticipated users including transit, freight, bicyclists and pedestrians, and those with limited mobility.
- ◆ **Roadway Policy 3:** Work with Metro and adjacent jurisdictions when extending roads or multi-use paths from Tualatin to a neighboring City.

## Roadway Projects

### City Street Urban Upgrades

Tualatin's TSP strives to put forward a set of complete streets that minimize delay for trucks and drivers while maintaining Tualatin's community character. The TSP's ultimate goal with its street upgrade program is to provide a safe system for those walking, driving, riding transit, operating a wheelchair, or riding a bicycle.

Several streets in Tualatin do not meet design standards outlined in the previous section, and create a safety risk. These streets are identified here for upgrades as development occurs. Many of these upgrades include adding travel lanes to address congestion, adding a center turn lane or median to help mobility and safety, widening travel lanes, and upgrading the cross section to improve a roadway from a rural two-lane facility to an urban feel with curb, gutters, and bicycle and pedestrian facilities or just adding bicycle and pedestrian facilities. For cost estimating purposes, the project team used the street standards in Figure 2 to estimate the lane and right-of-way width.

Bicycle and pedestrian upgrades are projects where only a sidewalk, bicycle lane, or multi-use path would be added to make the street more attractive to all modes. Table 4 describes a suite of local urban upgrade projects, presenting cost estimates, potential funding sources, and implementation timeframe for these upgrades. Table 5 includes the regional urban upgrades that require coordination with other agencies, including Washington and Clackamas Counties and ODOT. Figure 3 shows the projects geographically, and bicycle and pedestrian urban upgrades are also shown on the bicycle and pedestrian figure (Figure 7). The evaluation process which led to these TSP recommendations is described in Appendix D.

Projects included in the City tables over \$5 million will require the City to find additional funding sources (i.e. potential transportation bonds, regional flex funds, and transportation enhancements) beyond funding currently available to the City. Most of these projects are long-term priorities.



TABLE 4

## City Urban Upgrade Cost Estimates and Prioritization

Project ID	Project Description	Cost Estimate (in 2012 dollars)*	Champion	Funding Source	Priority**
R1	Widen SW Herman Road to a three-lane cross-section between SW 124 <sup>th</sup> Avenue and SW Cipole Road	\$2,574,000	City	TDT, LID, gas tax, Bike/Ped funds	As development occurs
R2	Upgrade SW Hazelbrook Road to roadway standards between 99W and just east of SW Jurgens Avenue	\$3,543,000	City	TDT, LID, gas tax, Bike/Ped funds	As development occurs
R3	Upgrade SW Herman Road as an urban two-lane cross-section between SW Tualatin Road and SW Teton Road	\$2,390,000	City	TDT, LID, gas tax, Bike/Ped funds	As development occurs
R4	Widen SW Teton Avenue between SW Herman Road and SW Tualatin-Sherwood Road to a complete three-lane cross-section including bike lanes for its entire length	\$2,464,000	City	TDT, LID, gas tax, Bike/Ped funds	As development occurs
R5	Upgrade SW Myslony Street to roadway standards for its entire length	\$11,437,000 <sup>3</sup>	City	TDT, LID, gas tax, Bike/Ped funds, Regional flex funds, bonds, TE	Short-term
R6	Widen SW Avery Street to a three lane cross-section between SW Teton Avenue and SW Tualatin-Sherwood Road	\$3,600,000	City	TDT, gas tax, Bike/Ped funds	Long-term
R7	Upgrade SW 105 <sup>th</sup> Avenue/SW Blake Street/SW 108 <sup>th</sup> Avenue to roadway standards between SW Avery Street and SW Willow Street	\$5,086,000	City	TDT, gas tax, Bike/Ped funds	Short-term
R8	Upgrade SW Boones Ferry Road to roadway standards between SW Ibach Road and SW Norwood Road	\$660,000	City	TDT, gas tax, Bike/Ped funds	Long-term
R9	Upgrade SW Helenius Road to roadway standards between SW 109 <sup>th</sup> Terrace and SW Grahams Ferry Road	\$1,403,000	City	TDT, gas tax, Bike/Ped funds	Long-term
R10	Upgrade SW Norwood Road to roadway standards between SW Boones Ferry Road and the eastern City limits.	\$2,824,000	City	TDT, gas tax, Bike/Ped funds	Long-term
R11	Add sidewalks or a multi-use path on SW Sagert Street bridge over I-5 – assume widening on either side of the bridge	\$3,282,000	City, ODOT	TDT, Bike/Ped funds, Travel Options	Long-term
R12	Fill sidewalk gaps on SW Boones Ferry Road between Tualatin High School and the southern City limits	\$315,000	City	TDT, Bike/Ped funds, Travel Options	Short-term

<sup>3</sup> From Metro's *Regional Transportation Plan (RTP) 2007*. Estimate grown to 2012 dollars.

TABLE 4

**City Urban Upgrade Cost Estimates and Prioritization**

Project ID	Project Description	Cost Estimate (in 2012 dollars)*	Champion	Funding Source	Priority**
R13	Fill sidewalk gaps on SW Herman Road between SW Tualatin Road and the western City limits	Included in cost estimates for Projects R1 and R3	City	TDT, Bike/Ped funds, Travel Options	As development occurs
R14	Add bicycle lane on SW Martinazzi Avenue between SW Warm Springs Road and SW Boones Ferry Road	\$2,403,000 <sup>4</sup>	City	TDT, Bike/Ped funds, Travel Options, LID	Medium-term
R15	Add bicycle facilities on SW 95 <sup>th</sup> Avenue between SW Avery Street and SW Tualatin-Sherwood Road	\$2,920,000 <sup>5</sup>	City, school	TDT, Bike/Ped funds	Medium-term
R16	Add a multi-use path along SW 65 <sup>th</sup> Avenue from the Tualatin River to I-205	\$9,734,000 <sup>6</sup>	City	TDT, Bike/Ped funds, Travel Options	Long-term
R17	Add sidewalks and bicycle lanes (or a multi-use path) on SW Norwood Road from SW Boones Ferry Road to the eastern City limits	\$305,000	City	TDT, Bike/Ped funds, Travel Options	Medium-term

\* Costs are rounded to the nearest \$1,000

\*\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more

LID – Local Improvement District

TDT – Transportation Development Tax

TE – Transportation Enhancement

<sup>4</sup> From the *East Commons Enhancement Plan* 2010. Estimate grown to 2012 dollars.

<sup>5</sup> From Metro's *Regional Transportation Plan (RTP)* 2007. Estimate grown to 2012 dollars.

<sup>6</sup> From Metro's *Regional Transportation Plan (RTP)* 2007. Estimate grown to 2012 dollars.

## Regional Street Urban Upgrades

Regional street upgrades serve regional travel needs, and are more expensive than what the City is anticipated to be able to fund by itself. These projects will rely on regional and State funding sources for implementation.

TABLE 5

Regional Urban Upgrade Cost Estimates and Prioritization

Project ID	Project Description	Cost Estimate (in 2012 dollars)	Champion	Funding Source	Priority*
R18	Upgrade SW Cipole Road to roadway standards between 99W and SW Tualatin-Sherwood Road, include a multi-use path on one side	\$20,030,000 <sup>7</sup>	Washington County, City	Washington County MSTIP, TDT, LID, Bike/Ped funds	As development occurs
R19	Widen SW Boones Ferry Road to 5-lanes north of SW Martinazzi Avenue	\$17,818,000	City, ODOT, Washington County	Washington County MSTIP, TDT, gas tax, STIP	Long-term
R20	Widen SW Tualatin-Sherwood Road to five lanes between SW Teton Avenue and SW Cipole Road†	\$10,883,000	Washington County, City	TDT, Washington County MSTIP, gas tax	Medium-term
R21	Upgrade SW Borland Road to roadway standards between SW 65 <sup>th</sup> Ave. and the eastern City limits	\$9,646,000	Clackamas County, City	TDT, gas tax, Clackamas County	Medium-term
R22	Upgrade SW Grahams Ferry Road to roadway standards between SW Ibach Road and SW Helenius Road	\$3,300,000	Washington County	TDT, gas tax, Washington County MSTIP,	Long-term
R23	Upgrade SW Tonquin Road to roadway standards between SW Waldo Way and SW Grahams Ferry Road	\$11,193,000 <sup>8</sup>	Washington County	TDT, gas tax, Washington County MSTIP	Medium-term
R24	Fill sidewalk gap and add a colored bicycle lane at SW Boones Ferry Road and SW Lower Boones Ferry Road Intersection	\$10,000	City, ODOT, Washington County, City of Durham	Bike/Ped funds, Travel Options	Short-term
R25	Fill sidewalk gaps on SW Grahams Ferry Road between SW Ibach Road and southern City limits	\$1,680,000 <sup>9</sup>	Washington County	TDT, Bike/Ped funds, Travel Options, MBP	Short-term
R26	Fill sidewalk gaps on SW Borland Road from SW 65 <sup>th</sup> Avenue to the eastern City limits	\$2,603,000	Clackamas County, City	TDT, Bike/Ped funds, Travel Options	Short-term

<sup>7</sup> From Metro's *Regional Transportation Plan (RTP) 2007*. Estimate grown to 2012 dollars.

<sup>8</sup> From the *SW Tualatin Concept Plan 2010*. Estimate grown to 2012 dollars.

<sup>9</sup> From the *Tualatin Bikeway Plan 1993*. Estimate grown to 2012 dollars.

TABLE 5

**Regional Urban Upgrade Cost Estimates and Prioritization**

Project ID	Project Description	Cost Estimate (in 2012 dollars)	Champion	Funding Source	Priority*
R27	Add bicycle lanes on SW Boones Ferry Road from SW Norwood Road south to SW Day Road. Project will realign horizontal curves, add an intermittent center turn lane, pedestrian facilities on the west side of the road.	\$10,000,000 <sup>10</sup>	Washington County	Washington County MSTIP	Short-term (underway)

\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more

† Metro's *Regional Transportation Plan (RTP)* includes SW Tualatin-Sherwood Road as a 5 lane cross section west of the City limits to 99W

LID – Local Improvement District

MBP – Minor Betterment Program (Washington County)

MSTIP – Major Streets Transportation Improvement Program

STIP – Statewide Transportation Improvement Program

TDT – Transportation Development Tax

<sup>10</sup> From Washington County's ongoing Boones Ferry Road improvement project.



## New City Street Extensions

Tualatin's residential areas are largely established; most of the recommended new streets occur as extensions in the industrial and manufacturing areas and in conjunction with other planning processes. The extension of SW 124<sup>th</sup> Avenue and ~~the east-west connection south of the City~~ [SW Basalt Creek Parkway](#) addresses the need for additional access to the regional transportation network including the OR 99W and I-5 corridors. The [adopted Basalt Creek Concept planning Plan](#) area ~~anticipates~~ [identified future](#) additional residential, [industrial](#) and commercial development, creating more demand, and future industrial and manufacturing development in the western part of the City ~~will need additional access~~. Table 6 presents cost estimates and priorities for the City street extensions, and Table 7 presents cost estimates for the regional street extensions.

TABLE 6

### City Street Extension Cost Estimates and Prioritization

Project ID	Project Description	Cost Estimate	Champion	Funding Source	Priority*
R28	Build a bridge over Hedges Creek and extend SW Myslony Street to connect with SW 112 <sup>th</sup> Avenue	\$2,593,000	City	TDT, LID, bonds, gas tax	Medium-term
R29	Build the Roadways from the SW Concept Plan: Extend SW 115 <sup>th</sup> Avenue south to connect with the SW 124 <sup>th</sup> Avenue, create an east-west connection between SW 115 <sup>th</sup> and SW 124 <sup>th</sup> Avenues.	\$31,446,000 <sup>11</sup>	City	TDT, LID, gas tax, Oregon Immediate Opportunity Fund	Long-term

\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more

LID – local improvement district

TDT – Transportation Development Tax

<sup>11</sup> From the *SW Tualatin Concept Plan* 2010. Estimate grown to 2012 dollars.

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## New City Street Extensions

Tualatin's residential areas are largely established; most of the recommended new streets occur as extensions in the industrial and manufacturing areas and in conjunction with other planning processes. The extension of SW 124<sup>th</sup> Avenue and the east-west connection south of the City addresses the need for additional access to the regional transportation network including the OR 99W and I-5 corridors. The Basalt Creek planning area anticipates additional residential and commercial development, creating more demand, and future industrial and manufacturing development in the western part of the City will need additional access. Table 6 presents cost estimates and priorities for the City street extensions, and Table 7 presents cost estimates for the regional street extensions.

TABLE 6  
City Street Extension Cost Estimates and Prioritization

Project ID	Project Description	Cost Estimate	Champion	Funding Source	Priority*
R28	Build a bridge over Hedges Creek and extend SW Myslony Street to connect with SW 112 <sup>th</sup> Avenue	\$2,593,000	City	TDT, LID, bonds, gas tax	Medium-term
R29	Build the Roadways from the SW Concept Plan: Extend SW 115 <sup>th</sup> Avenue south to connect with the SW 124 <sup>th</sup> Avenue, create an east-west connection between SW 115 <sup>th</sup> and SW 124 <sup>th</sup> Avenues.	\$31,446,000 <sup>11</sup>	City	TDT, LID, gas tax, Oregon Immediate Opportunity Fund	Long-term

\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more

LID – local improvement district

TDT – Transportation Development Tax

<sup>11</sup> From the *SW Tualatin Concept Plan* 2010. Estimate grown to 2012 dollars.

## Regional Street Extensions

TABLE 7

**Regional Street Extension Cost Estimates and Prioritization**

Project ID	Project Description	Cost Estimate	Champion	Funding Source	Priority*
R30	Extend SW 124 <sup>th</sup> Avenue south – include a multi-use path on one or both sides per street standards	\$15,000,000 <sup>12</sup>	City, City of Wilsonville, Washington County	Washington County MSTIP, TDT, LID	Short-term

\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more

LID – local improvement district

MSTIP – Major Streets Transportation Improvement Program

TDT – Transportation Development Tax

Please note: the City considered possible north-south crossings of the Tualatin River both east and west of I-5 in its TSP development. In the end, the City decided that the impacts of these crossings to Tualatin and/or to its neighboring communities outweighed the forecasted benefits and therefore no new river crossings are recommended in this TSP.

## Additional City Roadway Projects

Table 8 presents cost estimates and priorities for City roadway projects designed to address transportation deficiencies. Table 9 presents cost estimates for Regional roadway projects. These deficiencies include safety, congestion, and other community concerns. These projects are focused on improving localized issues, and intersection-specific upgrades to address safety and congestion concerns. Where traffic signals are recommended, traffic signal warrants would be conducted and the intersection would need to meet warrants before a signal is installed. Traffic warrant requirements are based on traffic volumes, pedestrian volumes, safety, and operation analyses. Figure 4 shows the projects geographically.

TABLE 8

**City Roadway Project Cost Estimates and Prioritization**

Project ID	Project Description	Cost Estimate	Champion	Funding Source	Priority*
R31	Add a traffic signal at SW Tualatin Road and SW 115 <sup>th</sup> Avenue	\$609,000 <sup>13</sup>	City	TDT, LID, gas tax	Medium-term
R32	Remove some trees in the southwest corner of the intersection of SW Tualatin Road and SW 108 <sup>th</sup> Avenue to improve sight distance	\$8,000	City	TDT, LID, gas tax	Short-term
R33	Add a traffic signal at SW Tualatin Road and SW Teton Avenue	\$609,000 <sup>14</sup>	City	TDT, LID, gas tax	Short-term
R34	Eliminate the free right turn at SW Tualatin Road at the intersection with SW Herman Road, and consider a roundabout at this location. (cost estimate is for roundabout as assumed to	\$1,631,000	City	TDT, LID, gas tax	Long-term

<sup>12</sup> From Washington County's ongoing 124<sup>th</sup> Avenue extension project.

<sup>13</sup> See Project R33 for the cost estimate to a similar project.

<sup>14</sup> See Project R33 for the cost estimate to a similar project.



TABLE 8  
**City Roadway Project Cost Estimates and Prioritization**

Project ID	Project Description	Cost Estimate	Champion	Funding Source	Priority*
	be higher cost of the two options)				
R35	Add a traffic signal or roundabout at SW Sagert Street and SW Martinazzi Avenue	\$2,069,000 <sup>15</sup>	City	TDT, LID, gas tax	Medium-term
R36	Add a southbound turn pocket from SW Teton Avenue to Avery Street	\$274,000	City	TDT, LID, gas tax	Medium-term
R37	Add a traffic signal at SW Avery Street and SW Teton Avenue	\$609,000	City	TDT, LID, gas tax	Medium-term
R38	Add signage to indicate that SW Tualatin Road is for local traffic, both along SW Tualatin Road and at either end (SW 124 <sup>th</sup> Avenue and SW Boones Ferry Road)	\$20,000	City	TDT, LID, gas tax	Short-term
R39	Add truck information signs along SW 105 <sup>th</sup> and 108 <sup>th</sup> Avenues. Install signs for no through trucks on SW 105 <sup>th</sup> and SW 108 <sup>th</sup> Avenues. Also places signs on SW Avery Street east and west of SW 105 <sup>th</sup> .	\$12,000	City	TDT, gas tax	Short-term
R40	Create a local street grid system on Urban Renewal Block 2 upon redevelopment with a connection opposite SW Seneca Street	\$2,307,000	City	TDT, gas tax, LID	Short-term
R41	Add bus pullouts on SW Boones Ferry Road at existing bus stops– 10 assumed at \$20,000 each	\$20,000 each	City	TDT, LID, gas tax, Travel Options	Medium-term

\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more

LID – local improvement district

TDT – Transportation Development Tax

<sup>15</sup> From Metro's *Regional Transportation Plan (RTP) 2007*. Estimate grown to 2012 dollars.

## Regional Roadway Projects

TABLE 9

**Regional Roadway Project Cost Estimates and Prioritization**

Project ID	Project Description	Cost Estimate	Champion	Funding Source	Priority*
R42	Add an eastbound right-turn lane on SW Tualatin-Sherwood Road at SW Boones Ferry Road	\$792,000	City	TDT, gas tax	Medium-term
R43	Restripe the turn lanes to extend the southbound left turn pocket on SW Boones Ferry Road at SW Tualatin-Sherwood Road to accommodate more vehicles	\$8,000	City	TDT, LID, gas tax	Short-term
R44	Move the guardrail directly east of the I-5 southbound off-ramp to the north to improve sight distance for vehicles turning west off of I-5.	\$32,000	City, ODOT	TDT, gas tax	Short-term
R45	Add an additional on-ramp lane for vehicles traveling westbound on SW Nyberg Street to I-5 northbound (northeast quadrant of the Nyberg Interchange). Reduce the pedestrian island and improve illumination to enhance safety	\$1,071,000	City, ODOT	STIP: TE, TDT	Medium-term
R46	Add signage on the northbound off-ramp at Nyberg Interchange to discourage traffic getting off and then right back onto I-5	\$2,000	City, ODOT	STIP: TE, TDT	Medium-term
R47	Redesign SW Nyberg Street and Fred Meyer intersection and improve pedestrian crossing. Add pedestrian warning signs, and a concrete z-crossing on SW Nyberg Street with a pedestrian island. Optimize signal timing so it allows adequate time for pedestrian crossing while minimizing impacts on auto traffic.	\$156,000	City, ODOT, Washington County	TDT, LID, STIP: TE, Bicycle and Pedestrian Program	Medium-term
R48	Add a dedicated right-turn lane on SW Teton Avenue southbound onto SW Tualatin-Sherwood Road westbound	\$890,000	City, Washington County	TDT, LID, gas tax	Medium-term
R49	Add a right turn lane from westbound SW Tualatin-Sherwood Road to northbound SW 124 <sup>th</sup> Avenue	\$320,000	City, Washington County	Washington County MSTIP, TDT, LID	Medium-term
R50	Improve lane signage on SW Tualatin Sherwood Road west of the Nyberg interchange to help vehicles be in the correct lane before entering the interchange area	\$345,000	City, Washington County, ODOT	TDT, gas tax, STIP: TE	Short-term
R51	Add a signal at SW 65 <sup>th</sup> Avenue and SW Sagert Street	\$681,000	City, Washington County	TDT, LID, gas tax	Medium-term

\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more

LID – local improvement district

MSTIP – Major Streets Transportation Improvement Program

STIP – Statewide Transportation Improvement Program

TDT – Transportation Development Tax

TE – Transportation Enhancement

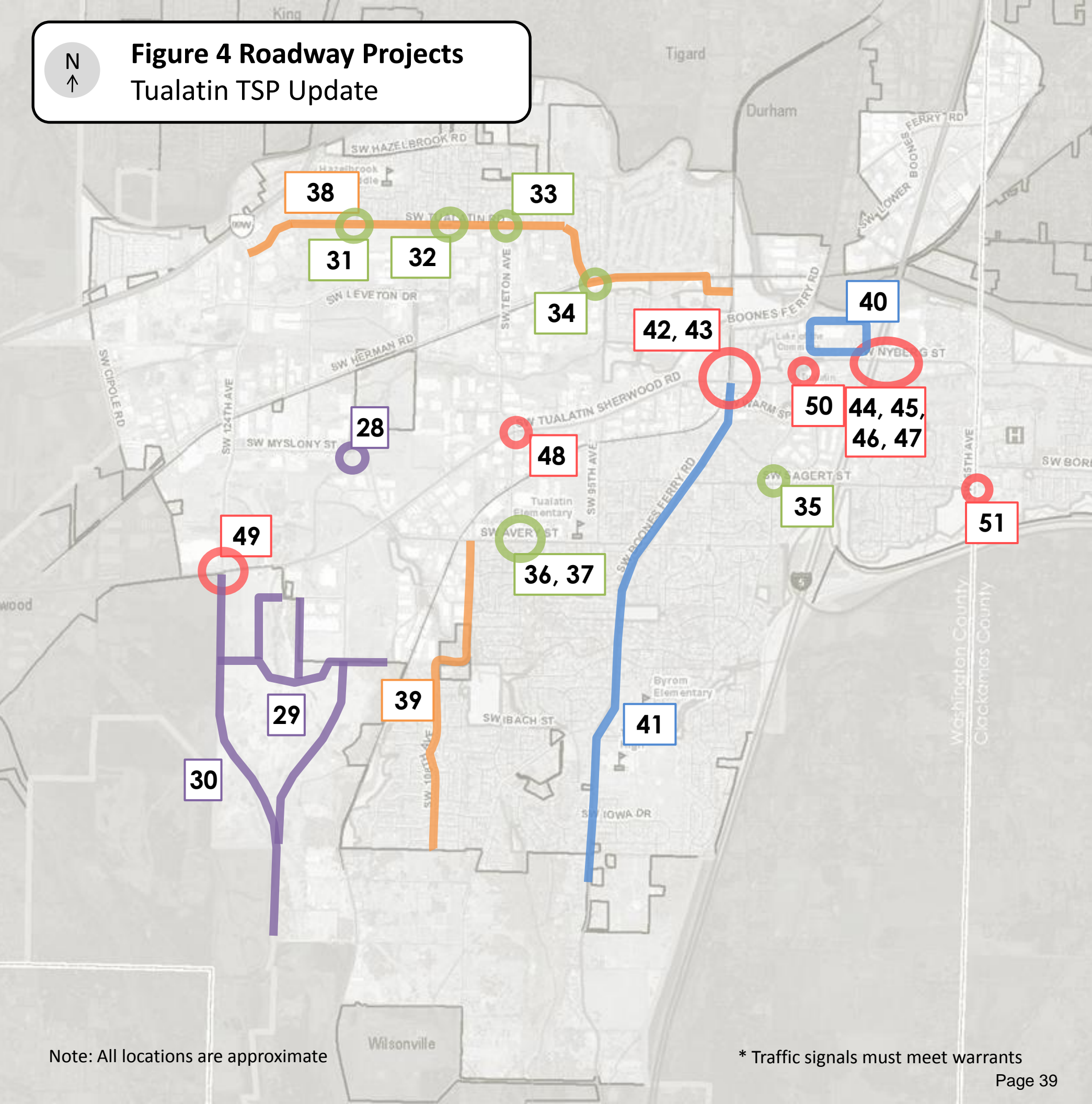


Tualatin/I-5 Nyberg Interchange: I-5 Northbound Off-ramp At the Tualatin/I-5 Nyberg Interchange Northbound off-ramp, future traffic growth (2035) indicates a potential for backups into the deceleration portion of the ramp due to lack of storage space. The existing off-ramp structure has a horizontal curve which limits the ability to modify striping on the ramp in an effort to extend the deceleration section, especially in light of exiting freight vehicles. In addition, the off-ramp is adjacent to the I-205 interchange which limits the ability to extend the off-ramp length for additional storage. It is likely that a solution to this issue would require widening of the existing structure to provide safe and sufficient vehicle storage. This project is not included in the TSP at this time, However, ODOT will coordinate with the City of Tualatin to explore this project and the City will consider adding it to the TSP at a future date.



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**Figure 4 Roadway Projects**  
Tualatin TSP Update



- New Streets and Street Extensions**
- 28 Connect SW Myslony Street to SW 112<sup>th</sup> Avenue
  - 29 Build the roadways from the SW Concept Plan
  - 30 Extend SW 124<sup>th</sup> Avenue south (Regional Project)

- City Intersection Improvements**
- 31 Add signal\* at SW Tualatin Road and SW 115<sup>th</sup> Avenue
  - 32 Remove some trees at intersection of SW Tualatin Road and SW 108<sup>th</sup> Avenue to improve sight distance
  - 33 Add signal\* at SW Tualatin Road and SW Teton Avenue
  - 34 Remove the free right turn at SW Tualatin Road at the intersection of SW Herman Road, consider a roundabout
  - 35 Add a signal\* or roundabout at SW Sagert St and SW Martinazzi Ave
  - 36 Add a southbound turn pocket from SW Teton Avenue to Avery Street
  - 37 Add a signal\* at SW Avery Street and SW Teton Avenue

- City Roadway Signs**
- 38 Add signage indicating that Tualatin Road is for local traffic
  - 39 Add truck info signs along 108th/105th Avenues to indicate that these roads are for local traffic

- City Roadway Changes**
- 40 Create a local street grid system on Urban Renewal Block 2 upon redevelopment with a connection to SW Seneca Street
  - 41 Add bus pullouts on SW Boones Ferry Road at existing bus stops where possible (this project is also shown on the transit figure)

- Regional Intersection Improvements**
- 42 Add an eastbound right turn lane on SW Tualatin-Sherwood Road at SW Boones Ferry Road
  - 43 Extend the southbound left turn pocket on SW Boones Ferry Road at SW Tualatin-Sherwood Road
  - 44 Move guardrail on southbound off ramp to improve sight distance
  - 45 Northbound I-5 on-ramp: reduce pedestrian island, add an additional lane
  - 46 Add signage at the northbound off ramp to discourage traffic getting off and then back onto I-5
  - 47 Redesign SW Nyberg Street and Fred Meyer intersection and improve pedestrian crossing, add striping and a pedestrian island
  - 48 Add a dedicated right turn lane on southbound SW Teton Avenue and SW Tualatin-Sherwood Road
  - 49 Add a right turn lane from westbound SW Tualatin-Sherwood Road to northbound SW 124<sup>th</sup> Avenue
  - 50 Improve lane signage west of the Nyberg interchange to indicate lanes passing through the interchange area
  - 51 Add signal\* at SW 65<sup>th</sup> Avenue and SW Sagert Street

Note: All locations are approximate

\* Traffic signals must meet warrants

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## Access Management

Access management is important to maintain traffic flow and ensure safety on the City's arterial street network, including SW Tualatin-Sherwood Road, Oregon Highway 99W (OR 99W), and other high-traffic routes. Limiting the number of points where traffic can enter and exit reduces potential conflict points, improves roadway performance, and reduces the need for capacity expansion. The City manages access through Chapter 75 of the Tualatin Development Code (TDC); that chapter details where access is permitted on arterial and collector roads within the City. Tualatin must coordinate with Washington and Clackamas Counties and ODOT to manage access on roads the City does not own, including SW Tualatin-Sherwood Road, SW Cipole Road, SW 65<sup>th</sup> Avenue, SW Borland Road, and sections of SW Boones Ferry Road.

Access management policies are:

- ◆ **Access Management Policy 1:** No new driveways or streets on arterial roadways within the City, except where noted in the TDC, Chapter 75, usually when no alternative access is available
- ◆ **Access Management Policy 2:** Where a property abuts an arterial and another roadway, the access for the property shall be located on the other roadway, not the arterial
- ◆ **Access Management Policy 3:** Adhere to intersection spacing included in Chapter 75 of the TDC
- ◆ **Access Management Policy 4:** Limit driveways to right-in, right-out (where appropriate) through raised medians or other barriers to restrict left turns
- ◆ **Access Management Policy 5:** Look for opportunities to create joint accesses for multiple properties, where possible, to reduce the number of driveways on arterials
- ◆ **Access Management Policy 6:** No new single-family home, duplex or triplex driveways on major collector roadways within the City, unless no alternative access is available
- ◆ **Access Management Policy 7:** On collector roadways, residential, commercial and industrial driveways where the frontage is greater or equal to 70 feet are permitted. Minimum spacing at 100 feet. Uses with less than 50 feet of frontage shall use a common (joint) access where available

Chapter 75 of the TDC, most recently updated in 2012, has specific access standards for each arterial road within Tualatin. It provides recommendations for future changes on specific roads, as well as potential solutions for access issues. Generally, all new intersections with arterials must have a minimum spacing of 0.5 mile. On Washington County roads, the access spacing on arterials is 600 feet from any intersection or other access. The City Engineer is responsible for reviewing all requests for access to arterial streets, and will be consistent with County and ODOT standards on facilities owned by those agencies. Exceptions to these standards may be allowed, but only under special circumstances and with conditions.

## Traffic Operations Standards

This section includes a discussion of standards included in the OHP, ODOT's *Highway Design Manual* (HDM), and the TPR and City documents for local roadways. Based on the preferred system for operational analysis, there are four intersections that do not meet jurisdictional standards after mitigation strategies are included. These intersections that experience operational constraints are in the SW Lower Boones Ferry Road/I-5 interchange area, and are due to the additional motor vehicle trips associated with the widening of SW Boones Ferry Road from SW Martinazzi Avenue to SW Lower Boones Ferry Road. The results of the traffic operations for the 2035 PM peak with the preferred system are shown in Table 10.

The first mitigation strategies explored transportation system management techniques (maximizing operations at intersections through signal timing adjustments and/or phasing adjustments). If system management techniques did not achieve acceptable jurisdictional operations, localized capacity improvements were explored (for example, a new turn pocket). Generally these improvements allowed for adequate signal operations under a mitigated scenario.

TABLE 10  
2035 PM Peak Hour Preferred System Intersection Operations

Intersection	Jurisdiction	Minimum Standard	Preferred System
<b>Signalized Intersections</b>			
SW 124th Ave/Hwy 99W	ODOT	0.99	D 0.97
SW 124th Ave/SW Tualatin Rd	Tualatin	D	C 0.88
SW 124th Ave/SW Herman Rd	Tualatin	D	C 0.77
SW 124th Ave/SW Tualatin-Sherwood Rd	Washington County	0.99	C 0.92
SW Avery St/SW Tualatin-Sherwood Rd	Washington County	0.99	D 0.98
SW Teton Ave/SW Tualatin-Sherwood Rd	Washington County	0.99	E 0.92
SW 90th Ave/SW Tualatin-Sherwood Rd	Washington County	0.99	C 0.80
SW Boones Ferry Rd/SW Tualatin-Sherwood Rd	Washington County	0.99	E <b>1.00</b>
SW Martinazzi Ave/SW Tualatin-Sherwood Rd	Washington County	0.99	F <b>1.08</b>
I-5 SB Ramps/SW Nyberg Rd	ODOT	0.99	D 0.86
I-5 NB Ramps/SW Nyberg Rd	ODOT	0.99	C 0.85
SW 65th Ave/SW Borland Rd	Washington County	0.99	D 0.99
SW Teton Ave/SW Herman Rd	Tualatin	D	C 0.67
SW Tualatin Rd/SW Herman Rd	Tualatin	D	B 0.77
SW 90th Ave/SW Tualatin Rd	Tualatin	D	C 0.94
SW Tualatin Rd/SW Boones Ferry Rd	Washington County	0.99	C 0.89
SW Martinazzi Ave/SW Boones Ferry Rd	Tualatin	D	E <b>1.08</b>
SW Boones Ferry Rd/SW Lower Boones Ferry Rd	ODOT	0.99	D <b>1.02</b>
SW 72nd Ave/SW Lower Boones Ferry Rd/SW Bridgeport Rd	Washington County	0.99	D 0.89
I-5 SB Ramps/SW Lower Boones Ferry Rd	ODOT	0.99	D 0.98
I-5 NB Ramps/SW Lower Boones Ferry Rd	ODOT	0.99	D 0.96
SW Boones Ferry Rd/SW Avery St	Washington County	0.99	D 0.94
SW Boones Ferry Rd/SW Sagert St	Washington County	0.99	D 0.93
SW Boones Ferry Rd/SW Ibach St	Washington County	0.99	D 0.98
SW 105th Ave/SW Avery St <sup>16</sup>	Tualatin	E	C 0.94
SW Martinazzi Ave/SW Sagert St <sup>17</sup>	Tualatin	E	D 0.92

<sup>16</sup> Operations evaluated with minor street stop control.



TABLE 10  
2035 PM Peak Hour Preferred System Intersection Operations

Intersection	Jurisdiction	Minimum Standard	Preferred System	
SW 65 <sup>th</sup> Ave & SW Nyberg Rd	Washington County	0.99	C	0.92
<b>Unsignalized Intersections</b>				
SW Martinazzi Ave & SW Avery St*	Tualatin	E	D	0.83
SW Teton Ave & SW Avery St*	Tualatin	E	B**	0.62**
SW 65th Ave & SW Sagert St* <sup>18</sup>	Washington County	0.99	D**	0.97**
SW Teton Ave & SW Tualatin Rd	Tualatin	E	B**	0.70**

\* LOS and V/C reported for the highest delay movement

\*\* Evaluated as a traffic signal. Assumes construction of traffic signal

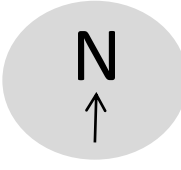
There were some intersections located in the downtown core area that were not able to meet jurisdictional standards without the implementation of significant capacity and/or roadway widening improvements. These types of major infrastructure improvements were deemed to be too impactful to the downtown core and were not included in the final preferred system improvements. The downtown Tualatin area is designated a Town Center by Metro, and using that designation, Town Centers are allowed to not meet jurisdictional standards. Alternate standards for Town Centers in the RTP are based on a two-hour peak hour. The standard v/c for the first peak hour is 1.1, and for the second peak hour is 0.99. These intersections meet the RTP standards, and there is no need for additional alternate mobility standards.

<sup>17</sup> Operations evaluated with minor street stop control. HCM Methodology does not account for a three-lane approach for an all way stop (as exists for the southbound approach.) To estimate LOS and V/C for the intersection the three lanes (one dedicated to each movement) are combined into two: through-right and through-left lanes. Because of this approximation, actual performance may be slightly better than reported above.

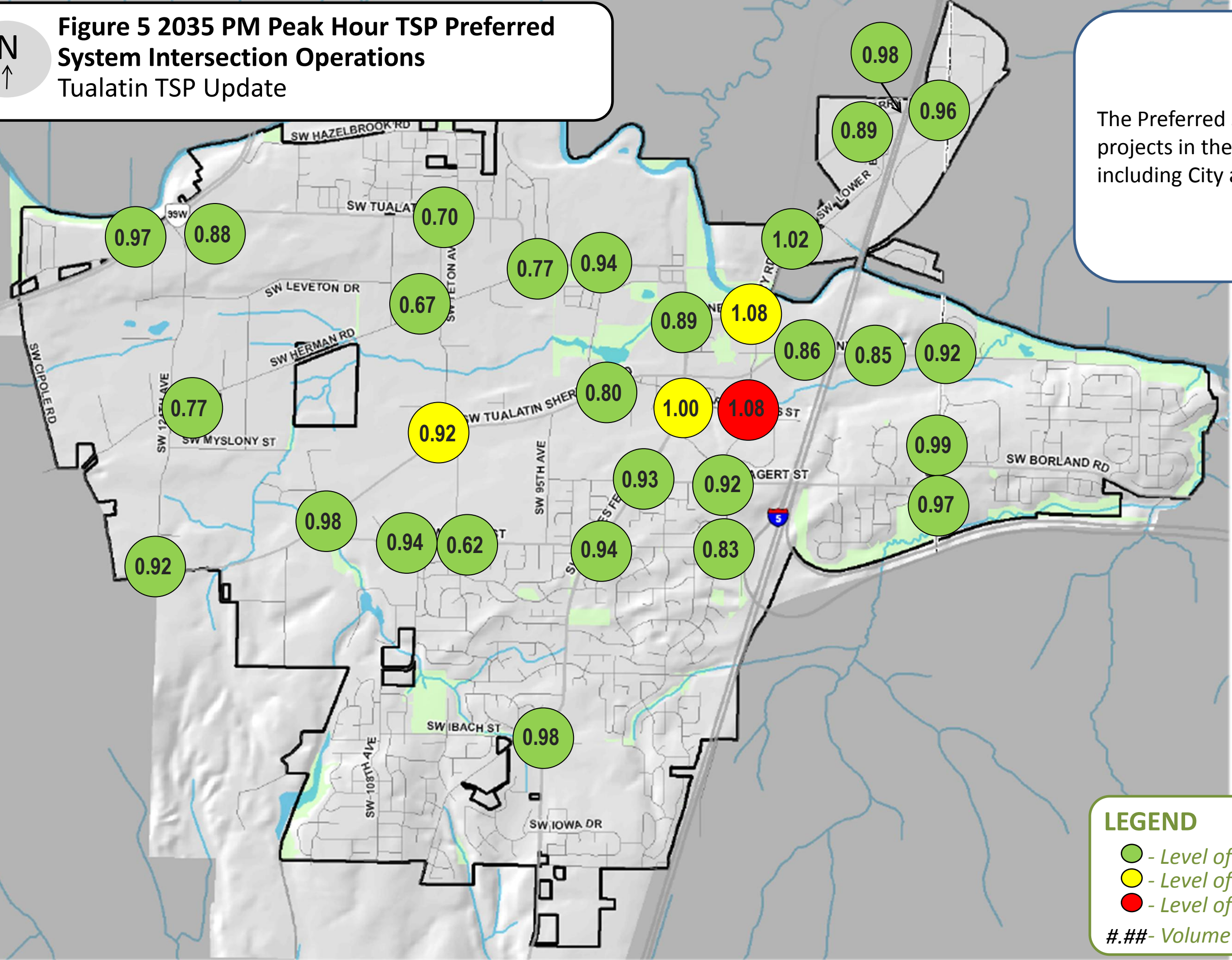
<sup>18</sup> HCM Methodology does not account for a three-lane approach for an all way stop (as exists for the southbound approach.) To estimate LOS and V/C for the intersection the dedicated southbound left turn lane and through lane are combined, due to the relatively small volume on the left turn movement. Because of this approximation, actual performance may be slightly better than reported above.

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**Figure 5 2035 PM Peak Hour TSP Preferred System Intersection Operations**  
Tualatin TSP Update



The Preferred System includes all projects in the Street Modal Plan including City and regional projects.



**LEGEND**

- - Level of Service A through D
- - Level of Service E
- - Level of Service F

### - Volume to Capacity Ratio

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## 3 Transit Modal Plan

This chapter describes the City of Tualatin's public transit modal plan. Public transit in Tualatin is envisioned to be multi-faceted by including local and express bus service, commuter rail, potential high capacity transit, and local transit shuttle services. In addition, the community's vision for public transit includes improvements in the quality of transit service, as well as land uses that better complement and encourage use of transit in downtown Tualatin. This section provides a brief overview of existing conditions and needs for public transit, provides a list of policies relating to transit that will guide the City's implementation of this plan, and provides a list of key projects identified by the community that would improve public transit. This chapter concludes by providing cost estimates for each project and a description of each project's relative priority.



*Tualatin WES Station*

## Existing Conditions for Public Transit

### Transit Service

Public transit in Tualatin currently consists of TriMet bus lines, one South Metro Area Regional Transit district (SMART) bus line, Westside Express Service (WES) commuter rail, LIFT paratransit service, and the Tualatin Shuttle.

Five TriMet bus lines currently serve Tualatin:

- ◆ Line 36 (South Shore) connecting Lake Oswego to Tualatin and downtown Portland
- ◆ Line 37 (Lake Grove) connecting Lake Oswego to Tualatin
- ◆ Line 38 (Boones Ferry Road) connecting Tualatin to Portland City center
- ◆ Line 76 (Beaverton/Tualatin) connecting Beaverton and Tualatin
- ◆ Line 96 (Tualatin/I-5) express route from Tualatin to downtown Portland via I-5

WES commuter rail service connects Beaverton to Wilsonville via Tualatin. LIFT paratransit service is available for qualified persons with disabilities within Tualatin and the greater Portland metropolitan region. SMART serves Tualatin with its bus line No. 2X service, connecting Wilsonville to the Barbur Transit Center. The Tualatin Shuttle operates on weekdays in the morning and afternoon rush hours, connecting passengers from TriMet bus stops, WES, and downtown Portland to businesses in Tualatin.

### Park-and-Rides

There are four park-and-ride lots within the City of Tualatin, all of which are served by TriMet:

- ◆ The Tualatin Park-and-Ride is the largest park-and-ride lot within the City of Tualatin. It is located at SW 72nd Avenue and SW Bridgeport Road in the northern part of the City, north of the Tualatin River and downtown. It has 466 total vehicle spaces and is open all days. It is a major transfer station with five separate bus lines stopping at this location.

- ◆ The Mohawk Park-and-Ride is located at SW Mohawk Street and SW Martinazzi Avenue about 0.5 miles south of the Tualatin Commons and downtown Tualatin. It has 232 total vehicle spaces and is open all days. Two bus lines stop at this park and ride, providing an opportunity to transfer.
- ◆ The Tualatin South Park-and-Ride is the newest park-and-ride in the City. It is located at 18955 SW Boones Ferry Road just west of the Tualatin Commons and downtown. It is open all days and provides bike parking with lockers and covered racks. It has 147 total vehicle spaces. This park and ride is the only transfer station between the WES commuter rail and a bus line.
- ◆ The Boones Ferry Community Church Park-and-Ride is the smallest park-and-ride in the City of Tualatin and is located at 20500 SW Boones Ferry Road. It is open Monday through Friday only, and provides 20 vehicle spaces. This park and ride only serves one bus line, and is not a transfer station.



Bus stop for TriMet line Nos. 76 and 96

More information on existing transit service, transit amenities, fares, and ridership is provided in Appendix B, Existing Conditions and Deficiencies.

## Summary of Limitations and Needs for Transit

It is likely that most residents of Tualatin do not currently rely solely on transit service to meet their transportation needs. One reason may be because most residents do not live within walking distance (0.25 mile) of a transit stop, and because transit is not provided at frequent intervals during all hours of the day. In addition, only 8 percent of households in the city of Tualatin do not have access to a vehicle.<sup>19</sup> According to the *Conceptual Linking Tualatin Plan*, over 11,000 workers and over 5,000 households (over half of the people living and working in the city) lack regular transit service within a quarter mile of where they live or work.<sup>20</sup>

TriMet does not provide transit service within all areas of the City or on all major corridors. No transit service is provided on SW Tualatin-Sherwood Road or SW Tualatin Road, and many residents in the western portion of the City live more than a mile from the nearest transit line. Many residents who do live near a bus line are not served by transit at regular intervals during the day. Because of the limitations of service during off-peak hours, noncommuting trips may be more difficult to complete using transit in Tualatin. Community feedback indicated the following specific needs for transit:

- ◆ Service connecting the west side of Tualatin to the downtown core
- ◆ Park-and-rides in the west and south areas of Tualatin
- ◆ Extended service hours, including weekend service
- ◆ More direct connections to places other than downtown Portland

Additional needs for transit stops include direct and safe access to transit stops and bicyclist and pedestrian amenities at stops, especially where transit riders are able to transfer lines or modes.

<sup>19</sup> U.S. Census Bureau, 2009-2011 American Community Survey, Table B08201

<sup>20</sup> *Conceptual Linking Tualatin Plan Draft*, 2012.

## Transit Policies

The City of Tualatin's policies on public transit are as follows:

- ◆ **Transit Policy 1:** Partner with TriMet to jointly develop and implement a strategy to improve existing transit service in Tualatin.
- ◆ **Transit Policy 2:** Partner with the Tualatin Chamber of Commerce to support grant requests that would expand the Tualatin Shuttle services.
- ◆ **Transit Policy 3:** Partner with TriMet, Metro, and neighboring communities to plan the development of high-capacity transit in the Southwest Corridor, as adopted in the Metro High Capacity Transit System Plan.
- ◆ **Transit Policy 4:** Partner with TriMet, Metro, and neighboring communities to plan development of high-capacity transit connecting Tualatin and Oregon City, as adopted in the Metro High Capacity Transit System Plan.
- ◆ **Transit Policy 5:** Coordinate with ODOT and neighboring communities on conversations related to Oregon Passenger Rail between Portland and Eugene.
- ◆ **Transit Policy 6:** Develop and improve pedestrian and bicycle connections and access to transit stops.
- ◆ **Transit Policy 7:** Encourage higher-density development near high-capacity transit service.
- ◆ **Transit Policy 8:** Metro in the RTP calls for increased WES service frequency. The City will coordinate with TriMet, Metro, and ODOT to explore service frequency improvements and the possible inclusion of a second WES station in south Tualatin.

In addition to the transit policies included here, there is also a bicycle and pedestrian policy applicable to transit:

- ◆ **Bicycle and Pedestrian Policy 7:** Implement bicycle and pedestrian projects to provide pedestrian and bicycle access to transit and essential destinations for all mobility levels, including direct, comfortable, and safe pedestrian and bicycle routes
- ◆ **Bicycle and Pedestrian Policy 8:** Ensure that there are bicycle and pedestrian facilities at transit stations

## Regional Coordination

The City of Tualatin will participate fully in the development of regional transit projects through partnering with other agencies. Regional projects currently under development include the following:

- ◆ **Southwest Corridor Project.** The purpose of the Southwest Corridor project is to extend high-capacity transit from downtown Portland into the southwest part of the region. Doing so will help to fulfill the vision of the Metro *High Capacity Transit System Plan*. The City of Tualatin is partnering with Metro and TriMet to bring regional high-capacity transit to Tualatin and neighboring communities.
- ◆ **Linking Tualatin Project.** The purpose of the Linking Tualatin project is to better link people to the places they need to go via transit, particularly linking employees to their jobs, and creating linkages between Tualatin and the rest of the region. It addresses one of the community's biggest concerns, which is the lack of east-west transit connections. The Linking Tualatin Plan presents the community's vision, developed through working groups and an intensive workshop, of land use and transportation options for the city's major employment areas intended to improve local and regional transit service. These options include suggested changes to future land uses, bicycle and pedestrian connections, road connections, and transit facilities to make Tualatin more "transit ready." It is a work in progress, and will continue to be reviewed by the community and refined through early 2013 to incorporate property owner and employer input and address future high capacity transit options being studied in the Southwest Corridor Project. The project goal is to complete the planning process by June 2013.

The community's vision for "transit ready places" in the Linking Tualatin Plan includes potential transit and other transportation improvements to increase access to and use of transit. Public and private projects focus on improved bicycle and pedestrian connections and road crossings, new local street connections, and new transit services or facilities. Some public projects are unique to the Linking Tualatin Plan and will be studied further through that planning process. These projects include:

1. Bridgeport Village Area: **Provide a new pedestrian crossing** on SW Lower Boones Ferry Road at entrance to the south lot of the Tualatin Park-and-Ride.
2. Bridgeport Village Area: **Provide new local street connections** north of the proposed Bridgeport Apartments development, west, and north of the Grand Hotel.
3. Downtown Area: **Improve pedestrian crossing** on SW Boones Ferry Road at SW Nyberg Street near the WES station.
4. Meridian Park/Nyberg Woods Area: **Provide a new pedestrian crossing** on SW 65<sup>th</sup> Avenue near the north entrance to Meridian Park Hospital.
5. Leveton Area: **Provide a new pedestrian crossing** on SW Herman Road west of SW 108<sup>th</sup> Avenue to access a future bus stop and improve bicycle/pedestrian connectivity.
6. Teton Area: **Provide a new WES stop** near SW Tualatin-Sherwood Road, west of the intersection of SW Avery Street and SW 105<sup>th</sup> Avenue.
7. Teton Area: **Improve pedestrian crossing** at the SW Teton Avenue and SW Tualatin-Sherwood Road intersection.
8. Southwest Industrial Area: **Consider providing parkway treatment** along SW Tualatin-Sherwood Road between SW 124<sup>th</sup> Avenue and SW Avery Street.
9. Pacific Financial/SW 124<sup>th</sup> Avenue Area: **Provide new trails** parallel to OR 99W between SW Hazelbrook Road and the north side of the Tualatin River to connect with the Tualatin River Greenway Trail.
10. Pacific Financial/SW 124<sup>th</sup> Avenue Area: **Connect the Tualatin River Greenway trail** under the OR 99W bridge on both side of the river.

Other public projects in the Linking Tualatin Plan are included in the Transit Modal Plan of this Transportation System Plan. The focus of these projects is on providing east-west connectivity between OR 99W and downtown Tualatin via local bus transit, anchored by park-and-ride facilities in west, east and south Tualatin, and a transit hub at the downtown Tualatin WES station. These projects are shown in Figure 4 and more detail is provided later in this section.

- ◆ **Oregon Passenger Rail.** The purpose of the Oregon Passenger Rail project is to improve passenger rail service between Portland and Eugene. Along the way, the rail service is expected to serve the south Metro area via an alignment either east or west of the Willamette River. The City of Tualatin intends to coordinate with ODOT to help determine an appropriate corridor that would improve intercity passenger rail service in Oregon.
- ◆ **WES Extension.** TriMet and ODOT may consider the feasibility of extending WES commuter rail from Wilsonville to Salem. The City of Tualatin is supportive of the WES extension and intends to partner with ODOT and TriMet in facilitating this project.

## Transit Projects

The following proposed projects represent the community's desires for future improvements to transit service. Figure 4 depicts the projects geographically. These projects can be grouped into the following categories: fixed-route bus service, shuttle service, WES, and park-and-rides.



## Expansions of Fixed-route Bus Transit Service

1. **Provide transit service on SW Herman Road.** SW Herman Road connects to several centers of employment. Bus transit service along SW Herman Road would allow workers to travel more easily from the center of Tualatin to their work sites.
2. **Provide transit service on SW 124<sup>th</sup> Avenue.** SW 124<sup>th</sup> Avenue is a key north-south connection on the west side of Tualatin, connecting OR 99W with SW Tualatin-Sherwood Road. Adding transit service on SW 124<sup>th</sup> Avenue would improve access to the frequent transit service already provided on OR 99W.
3. **Provide transit service on SW Avery Street.** SW Avery Street connects SW Tualatin-Sherwood Road to the City's central residential areas. Providing bus transit service along SW Avery Street would provide an important connection to residential areas in the central part of Tualatin and provide an opportunity to connect with the existing transit service on SW Boones Ferry Road.
4. **Provide transit service on SW Tualatin Road between downtown and OR 99W.** SW Tualatin Road is an important connection to both residential areas in northwest Tualatin and to employment between SW Tualatin Road and SW Herman Road.
5. **Provide transit service on Tualatin-Sherwood Road.** Tualatin-Sherwood Road is Tualatin's major east-west roadway, connecting it to 99W and Sherwood to the west and to Boones Ferry Road and I-5 on the east. It serves the greatest number of people in Tualatin and major activity centers including the WES station, retail shopping, and businesses are located along it. Transit service along Tualatin-Sherwood Road would provide an alternative to driving for Tualatin's residents as well as its employees and visitors.
6. **Extend transit service to the east in Tualatin.** The area of Tualatin east of I-5 is served only by TriMet's No. 76 bus line, which extends to Meridian Park Hospital at SW 65th Avenue and SW Borland Road. East of the hospital are several residential developments, as well as the Rolling Hills Community Church, which houses the Tualatin Food Pantry, and two schools.
7. **Extend service hours for transit.** Most of the bus service provided in Tualatin operates primarily during commuting hours on weekdays. WES also operates only on weekdays during peak hours. TriMet's line No. 76 operates with limited frequency on Saturday and Sunday. Extending service hours for transit lines would allow citizens to use transit as a viable transportation option for more of their needs.
8. **Explore a shuttle or trolley service between Bridgeport Village and the Tualatin Commons area, especially on weekends.** Both Bridgeport Village and the Tualatin commons near the City-owned parking lots are destinations for local and regional residents. Providing a shuttle service between the two areas would potentially reduce traffic in central Tualatin and would help foster activity in downtown Tualatin. Residents would be able to park at the Commons and take the Shuttle into Bridgeport Village.
9. **Expand the Tualatin Shuttle and Consider a Deviated Fixed Route.** The Tualatin Shuttle currently operates during a.m. and p.m. peak hours only. There are two vehicles, a larger van and a smaller van. Both currently operate on a demand-responsive basis and do not have fixed routes. The City should partner with the Chamber of Commerce to explore a deviated fixed route for the larger van that would serve as a city-wide transit circulator serving existing and future major employment markets in Tualatin. The route would connect to the Tualatin Park and Ride and travel south via SW Lower Boones Ferry Road and SW Boones Ferry Road. It would then connect three major employment districts in the city in this order:
  - ✓ **Southwest and near west of downtown Tualatin** via SW Boones Ferry Road, SW Avery Street, and SW Teton Ave
  - ✓ **West Tualatin** via SW Tualatin-Sherwood Road, SW 124<sup>th</sup> Ave, and SW Herman Road

- ✓ **Northwest Tualatin** via SW Cipole Road, OR 99W, and SW 115<sup>th</sup> and SW 118<sup>th</sup> Aves
  - The route would complete by returning east on SW Herman Road and SW Tualatin Road.
  - In the future, the route could be extended to include a fourth major employment district as demand is created with future development:
- ✓ **East Tualatin** via SW Nyberg Street, SW 65<sup>th</sup> Ave, and SW Sagert Street

The smaller van that currently operates as the Tualatin Chamber of Commerce Shuttle would continue to be run on a demand-responsive basis and would serve key residential areas throughout the city. In addition, expanding the service hours of the Tualatin Chamber of Commerce Shuttle would allow more employees to use it. Funding for these service expansions should be sought, and used for the following purposes, in order of priority:

- ✓ Additional van for the afternoon peak
- ✓ Broader service hours (still within an AM and PM peak period)
- ✓ Provision of mid-day service

## WES

- 10. Make the WES station a central focus of downtown and the main transit center.** The WES station is located in central Tualatin and three actions would make it more of a central focus of downtown: (1) Transit-oriented development that over time would refocus activity towards the train station; (2) Improving pedestrian activity and connectivity to both these future transit-oriented uses but also to existing uses, including Haggen's and development east of Boones Ferry Road and south of Tualatin-Sherwood Road; and (3) Add local transit connections to the WES station over time, including the Routes 96 and the 38, as well as potential future fixed-route service.

## Expansions of the Park-and-Ride System

- 11. Improve transit service on OR 99W and look for potential shared use park-and-ride locations in west Tualatin.** There are few park-and-ride options on or near OR 99W for Tualatin residents. The closest are in Sherwood (shared use with Regal cinemas) to the south or Tigard to the north (shared use with Christ the King Lutheran Church). Further, the Route 12 discontinued service in 2012 to Sherwood, terminating at the Tigard Transit Center to the north. The one route along OR 99W through Tualatin is the Route 94 which does not stop between Sherwood and Tigard. This limits the ability of Tualatin residents to access transit along OR 99W. Add a transit stop in the vicinity of Tualatin Road for the 94 and future fixed route transit, and look for potential shared use park-and-ride locations in this vicinity that would serve Tualatin residents.



*Mohawk Park-and-Ride*

- 12. Look for potential, shared use park-and-ride locations in south Tualatin.** Bus line No. 96 travels through south Tualatin via SW Boones Ferry Road. However, there is no park-and-ride currently serving this area south of the Boones Ferry Community Church Park-and-Ride. Adding a park-and-ride in the south part of Tualatin or south of Tualatin near the terminus of bus No. 96 would improve access to transit for residents of that area.

- 13. Add bus pullouts on SW Boones Ferry Road at existing bus stops where possible.** The streets modal plan describes a preferred cross section on SW Boones Ferry Road that retains one travel lane in each direction with a center-turn lane, bicycle lanes and sidewalks throughout. This cross section was selected over a wider, five-lane cross section for reasons of neighborhood livability, however it means that buses traveling on SW Boones Ferry Road can create congestion by blocking the travel lane when stopping to pick up or drop off passengers. This project constructs bus pullouts where buses could pull out of the travel lane at existing stops.

## Cost Estimates and Prioritization

Table 11 provides cost estimates and priorities for each of these proposed transit projects.

TABLE 11

**Transit Project Cost Estimates and Prioritization**

Project ID	Project Description	Cost Estimate		Champion	Funding Source	Priority*
		Capital	Operating			
T1	Provide transit service on SW Herman Road	\$466,000	\$168,000	TriMet, City	TriMet	Medium-term
T2	Provide transit service on SW 124 <sup>th</sup> Avenue	\$462,000	\$114,000	TriMet, City	TriMet	Medium-term
T3	Provide transit service on SW Avery Street	\$460,000	\$97,000	TriMet, City	TriMet	Medium-term
T4	Provide transit service on SW Tualatin Road between downtown and OR 99W	\$471,000	\$184,000	TriMet, City	TriMet	Short-term
T5	Provide transit service on SW Tualatin-Sherwood Road	\$473,000	\$218,000	TriMet, City	TriMet	Medium-term
T6	Extend transit service to east Tualatin	\$466,000	\$97,000	TriMet, City	TriMet	Medium-term
T7	Extend service hours for all transit, with a focus on the No. 96 bus line	N/A	\$1,083,000	TriMet, City	TriMet	Medium-term
T8	Trolley service between Bridgeport Village and the Tualatin Commons	\$50,000	\$308,000	Chamber of Commerce, City, Metro	Fares, Chamber of Commerce	Medium-term
T9	Expand the Tualatin Shuttle for industrial and manufacturing workers during the day	N/A	\$58,000	Chamber of Commerce, City, Metro	Chamber of Commerce, Metro (JARC)	Short-term
T10	Make the WES station a central focus of downtown and the main transit center; improve pedestrian connectivity, transit-oriented development opportunities, and local transit connections	N/A	N/A	City	TriMet, City	Long-term
T11	Look for potential shared use park-and-ride locations in west Tualatin	N/A	\$51,000	City, TriMet	TriMet, City	Medium-term
T12	Look for potential shared use park-and-ride locations in south Tualatin	N/A	\$51,000	City, TriMet	TriMet, City	Medium-term

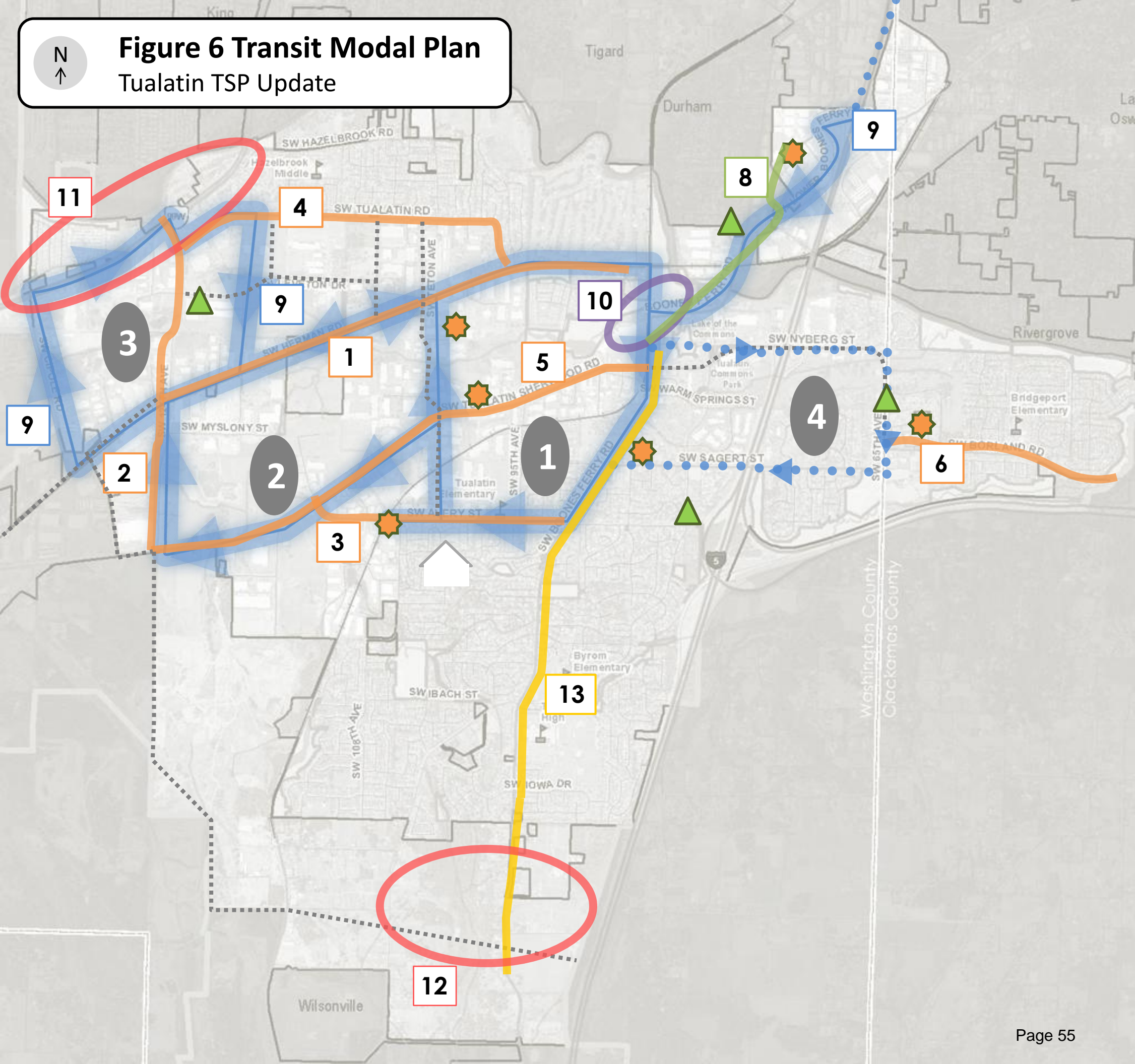
\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more

JARC – Jobs Access Reverse Commute



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**Figure 6 Transit Modal Plan**  
Tualatin TSP Update



**Expansions of Fixed-Route Bus Transit Service**

- 1 Provide bus transit service on Herman Rd
- 2 Provide bus transit service on 124<sup>th</sup> St
- 3 Provide bus transit service on Avery St
- 4 Provide bus transit service on Tualatin Rd between downtown Tualatin and 99W
- 5 Provide transit service on Tualatin-Sherwood Rd
- 6 Extend bus service further east in Tualatin
- 7 Throughout – quality of service improvements (not shown on map)

**Expansions of the Shuttle Service**

- 8 Provide a trolley service between Bridgeport Village and Commons area
- 9 Create an on-call shuttle for industrial & manufacturing workers during the day:

- Partial fixed route for Van 1
- Potential future route as demand grows
- Employment centers served by shuttle (existing, potential)
- Residential centers served by shuttle
- Directional for partial fixed routes

Note: Shuttle Van 2 would retain a flexible, on-call route connecting residential areas with employment

**WES**

- 10 Make the WES station a central focus of downtown and the main transit center. Improve pedestrian connectivity, transit-oriented development opportunities, and local transit connections

**Park-and-ride System Expansion**

- 11 Look for potential park-and-ride locations in west Tualatin
- 12 Look for potential park-and-ride locations south of Bridgeport Village (Wilsonville area)

**Bus Pull-outs**

- Note: this project is also included on the Roadway improvements figure
- 13 Add bus pullouts on SW Boones Ferry Road at existing bus stops where possible

**Additional Transit Route Recommendations from Linking Tualatin**

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## 4 Pedestrian, Bicycle, and Multi-Use Path Modal Plan

This chapter describes the pedestrian and bicycle improvement projects to comfortably and safely accommodate bicyclists and pedestrians within the City. These projects include multi-use paths, specific bicycle and pedestrian improvements, and street upgrades. There is a stand-alone bicycle and pedestrian plan in Appendix H.

### Existing Conditions for Bicyclists and Pedestrians

#### Existing On-Street Bicycle Facilities

Tualatin streets provide a variety of bicycle facilities, including bike lanes, shared roadways, and multi-use paths. There are a few facility gaps for both bicyclists and pedestrians throughout the City, generally on roadways that are planned for urban upgrades.

The bicycle network in Tualatin consists of on-street bike lanes ranging in width from 4 to 6 feet. There are buffered bike lanes<sup>21</sup> along SW Tualatin-Sherwood Road between Sherwood and SW Teton Avenue. Additionally, there are a number of shared roadway facilities, usually on lower volume streets within and around residential neighborhoods.

Traffic counts collected in October 2011 did not reflect a high degree of bicycle usage. The intersections with the most bicyclists were located along SW Tualatin-Sherwood Road in the core of downtown Tualatin, near SW Martinazzi Avenue and SW Boones Ferry Road.

There appears to be adequate bicycle parking at transit centers and park-and-rides to accommodate the bicycle demand. The TDC includes language requiring developments that are zoned multi-family, commercial, or industrial to provide for bicycle parking when developing land.

#### Existing Pedestrian Facilities

Pedestrian facilities include sidewalks, multi-use paths, crosswalks, and pedestrian signals. The most prevalent pedestrian facility in the City is the sidewalk. All City street standards include a sidewalk requirement, with a minimum width of 5 feet. Most of the collector and arterial streets in Tualatin have sidewalks, and many neighborhoods and local streets include pedestrian sidewalks. A few locations throughout the City lack sidewalks—mainly areas with narrow roadways, some older neighborhoods, and sections on larger roads, especially towards the City limits where the roadway character transitions from urban to rural.



*Example of a bike lane on SW Martinazzi Avenue*



*Concrete path in Tualatin Community Park*

<sup>21</sup> Buffered bike lanes are bike lanes with extra striping allowing for a buffer between the travel lane and the bike lane. The striping provides extra separation between vehicles and bicyclists.

There are a number of high-pedestrian-use areas, including near Tualatin High School at SW Boones Ferry Road and SW Ibach Street, and at two intersections near the Tualatin Commons: (1) SW Martinazzi Avenue and SW Boones Ferry Road and (2) SW Martinazzi Avenue and SW Tualatin-Sherwood Road.

## Existing Multi-use Paths

The City has a number of multi-use paths<sup>22</sup>, including paths that run through City-owned parks and identified greenways and extend into residential areas. Multi-use paths in Tualatin are built from a variety of materials, including pavement, concrete, gravel, or—in the case of the Tualatin River greenway boardwalk—wood. Most multi-use path users walk or bicycle along the paths for recreation or exercise<sup>23</sup>; some use them for commuting or running errands. The City has a comprehensive planned multi-use path network, though about only half of the multi-use path system has been built.

## Summary of Limitations and Needs for Bicycle and Pedestrian Facilities

### Bicycle Facility Needs

Existing bicycle facilities in Tualatin have a few gaps and challenging connections:

- ◆ Difficult left-turn maneuvers
- ◆ Constrained environment
- ◆ Difficult areas with low bike visibility
- ◆ Bike lanes outside of turn lanes
- ◆ Obstacles within the bike lanes
- ◆ Gaps in the network



*Unsignalized crosswalk on SW 108th Avenue*

In addition to these needs, there are a number of high-crash locations. Most crashes result in an injury to the bicyclist, and most occur on a dry roadway surface in daylight conditions. High-crash locations include SW Boones Ferry Road and SW Tualatin-Sherwood Road, as well as the SW Nyberg Road interchange ramps at I-5.

### Pedestrian Facility Needs

The community and the existing conditions report identified a number of pedestrian facility needs:

- ◆ Fill sidewalk gaps on arterials and collector streets
  - Sections of SW Herman Road
  - Sections of SW Grahams Ferry Road
  - Sections of SW Boones Ferry Road
  - SW Blake Street between SW 105<sup>th</sup> and SW 108<sup>th</sup> Avenues

<sup>22</sup> A multi-use path is a shared-use trail or other path, physically separated from motorized vehicular traffic by an open space or barrier, either within a roadway right-of-way or within an independent right-of-way, and usable for transportation purposes. Shared use paths may be used by pedestrians, bicyclists, skaters, equestrians, and other nonmotorized users. Definition from FHWA: [www.fhwa.dot.gov/environment/bicycle\\_pedestrian/guidance/design\\_guidance/freeways.cfm](http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design_guidance/freeways.cfm)

<sup>23</sup> According to the Intertwine Trail Use Snapshot: An Analysis of National Bicycle and Pedestrian Documentation Data from 2008 to 2010 (available at [http://library.oregonmetro.gov/files/intertwine\\_trail\\_use\\_snapshot\\_2008-2010.pdf](http://library.oregonmetro.gov/files/intertwine_trail_use_snapshot_2008-2010.pdf), last accessed December 26, 2012), page 181, only 20 percent of bicyclists use the Tualatin River Greenway multi-use path to commute to work or school. This was the only multi-use trail in Tualatin for which these usage numbers were available.





## 5 Freight Plan

Efficient truck movement plays a critical role in the economic well-being and development of Tualatin. Trucks must be able to access commercial, industrial, manufacturing, distribution, and other employment areas both in Tualatin and connecting to the regional system. Future commercial/industrial uses are expected to be located consistent with the land uses identified in the Comprehensive Plan, which matches the current zoning designations, as codified in the TDC.

The freight network described in this plan and illustrated in Figure 6 is largely consistent with the functional classification plan, which strives to connect industrial and manufacturing uses to the regional and state transportation network via a series of major and minor arterial roadways. The movement of raw materials and finished products via designated truck routes provides for efficient movement of goods while maintaining neighborhood livability, public safety, and minimizing maintenance costs of the roadway system. Federally and state designated truck routes, part of the National Highway System (NHS), have been identified on I-5 and OR 99W. Metro identifies “road connectors” in the RTP freight network on SW 124<sup>th</sup> Avenue, SW Tualatin-Sherwood Road, SW Lower Boones Ferry Road, and SW Boones Ferry Road. The City of Tualatin designates additional truck routes on roadway facilities that connect commercial/industrial districts within the City to major arterials and, ultimately, to OR 99W, I-5, and I-205. The following facilities are currently identified as City of Tualatin truck routes:

- ◆ I-5 (north to south City limits)
- ◆ I-205 (east to west City Limits)
- ◆ OR 99W (west to north City limits)
- ◆ SW Tualatin-Sherwood Road (west City limits to the Nyberg Street Interchange)
- ◆ SW 124<sup>th</sup> Avenue (OR 99W to SW Tualatin-Sherwood Road)
- ◆ SW Boones Ferry Road (south City Limits to SW Lower Boones Ferry Road)
- ◆ SW Lower Boones Ferry Road (SW Boones Ferry Road to the northeast City limits)
- ◆ SW Herman Road (SW 90<sup>th</sup> Avenue to SW Cipole Road)
- ◆ SW 108<sup>th</sup> Avenue (SW Tualatin Road to SW Herman Road)
- ◆ SW Teton Avenue (SW Tualatin Road to SW Avery Street)
- ◆ SW Cipole Road (OR 99W to SW Tualatin-Sherwood Road)
- ◆ SW Avery Street (SW Tualatin-Sherwood Road to SW 95<sup>th</sup> Avenue)
- ◆ SW Leveton Drive (SW 124<sup>th</sup> Avenue to SW 108<sup>th</sup> Avenue)
- ◆ SW 105<sup>th</sup> Avenue (SW Avery Street to SW Moratoc Drive)
- ◆ [Basalt Creek Parkway \(within City limits\)](#)

One existing truck route (SW Tualatin Road – SW 124<sup>th</sup> Avenue to SW Teton Avenue) was removed as a recommendation from the truck network based on discussions with the team, City Staff, the TTF and policy makers feedback. This change is consistent with the low volume of trucks currently using the road.

Updated truck route designations have been identified for existing roadways to match major arterial and minor arterial functional classifications. In addition, new roadway (or roadway extension) projects are recognized as truck routes when they provide connections to future commercial/industrial land uses. New truck route designations will include the following:

- ◆ SW 124<sup>th</sup> Avenue Extension (SW Tualatin-Sherwood Road to south City limits)
- ◆ SW 65<sup>th</sup> Avenue
- ◆ SW Bridgeport Road
- ◆ SW Borland Road

## Bicycle and Pedestrian Projects

The following projects were developed by the project team in concert with the community, Working Groups, TPARK, and Transportation Task Force to improve the facilities and networks for bicyclists and pedestrians. These projects can be grouped into the following categories: bicycle and pedestrian projects, multi-use path projects, urban upgrades. Figure 5 shows the projects geographically, and Table 12 lists the projects, cost estimates, champion, potential funding source, and priority for each project. Figure 5 shows all bicycle and pedestrian projects geographically.

Bicycle and pedestrian specific urban upgrades (sidewalk gaps, adding bicycle lanes and sidewalks) are included in section 2 Street System Modal Plan (Tables 4 and 5). They are shown on the bicycle and pedestrian modal plan map but the tables are not in this section.

TABLE 12  
Bicycle and Pedestrian Project Cost Estimate and Prioritization

Project ID	Project Description	Cost Estimate	Champion	Funding Source	Priority*
BP1	Provide wayfinding signs for Safe Routes to School	\$73,000	City, School District	Bike/Ped Funds	Short-term
BP2	Add a colored bicycle lane on SW Bridgeport Road and SW 72 <sup>nd</sup> Avenue near Bridgeport Village to make the bicycle lane more visible	\$10,000	City, Washington County	TDT, Bike/Ped funds, Washington County MSTIP	Medium/Long-term
BP3	Add a crosswalk at Tualatin View Apartments on SW Boones Ferry Road north of the Tualatin River	\$59,000 <sup>†</sup>	City, ODOT	Bike/Ped Funds	Medium-term
BP4	Add new signs and re-stripe crosswalk at SW Siletz Drive and SW Boones Ferry Road	\$24,000	City	Bike/Ped Funds	Short-term
BP5	Add dedicated bike lane through the intersection of SW Avery Street and SW Boones Ferry Road	\$117,000	City	Bike/Ped funds, Travel Options	Short-term

\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more

<sup>†</sup> This cost estimate is based on the conceptual layout from a 2008 study and does not include railroad crossing or signal upgrades.

Estimate may increase based on ODOT rail requirements for additional study.

MSTIP – Major Streets Transportation Improvement Program

TDT – Transportation Development Tax

## Multi-Use Path Projects

Multi-use paths are paths set back from a roadway that are reserved exclusively for bicyclists and pedestrians. The majority of TSP recommendations are multi-use paths, as they provide the greatest potential for safe and enjoyable travel to and from homes, businesses, and services throughout the community.

City standards for multi-use paths are 12 feet with a minimum of 1 foot shoulders. All cost assumptions include this width.

Table 13 presents cost estimates and priorities for these projects.

TABLE 13  
Multi-Use Path Project Cost Estimates and Prioritization

Project ID	Project Description	Cost Estimate	Champion	Funding Source	Priority*
BP6	Upgrade bridge surface along the path behind the Haggens shopping center to make it less slippery for pedestrians	\$100,000	City	Parks SDC, Bike/Ped funds	Short-term
BP7	Build multi-use paths from the previously adopted Tualatin Pedestrian, Bikeway, and Greenway Plans	\$24,445,000 <sup>24</sup>	City	Parks SDC or bond, Bike/Ped funds, Travel Options, ODOT Bike/Ped grants	Long-term
	Tualatin River Greenway from west UGB to east UGB	\$6,641,000			
	Connections to the Tualatin River Greenway	\$1,810,000			
	I-5 Path: Bridgeport Village to SW Nyberg Street to SW Sagert Street to SW Avery Street, and SW 80 <sup>th</sup> Avenue to SW Blake Street to SW Norwood Road	\$3,245,000			
	Connections to the I-5 Path: SW Martinazzi Avenue to I-5 path	\$209,000			
	Saum Creek Greenway: SW Sagert Street to SW Delaware Circle to SW 65 <sup>th</sup> Avenue to Tualatin River	\$2,135,000			
	Norwood Road Path: SW Boones Ferry Road to I-5	\$3,757,000			
	Connections to the Saum Creek Greenway: SW Sagert Street to Saum Creek Greenway	\$30,000			
	Hedges Creek Greenway Connections: SW Myslony to SW Tualatin-Sherwood Road to SW 105 <sup>th</sup> Avenue	\$199,000			
	Helenius Greenway Trail	\$236,000			
	Porous Concrete Trail	\$179,000			
	Aggregate (Gravel) Surface Trail				
BP8	Build the section of the Tualatin River Greenway from SW Boones Ferry Road along the Tualatin River, extend to existing Tualatin River Greenway east of I-5	\$2,135,000 <sup>25</sup>	City	Parks SDC or bond, Bike/Ped funds, Travel Options	Short-term
BP9	Fill gaps in the multi-use path as part of the Tualatin River Greenway on the east side of the City	\$123,000 <sup>26</sup>	City	Parks SDC or bond, Bike/Ped funds, Travel Options	Long-term

<sup>24</sup> Cost estimates for all BP7 projects are from the *Tualatin Bikeway Plan* 1993. Estimates grown to 2012 dollars.

<sup>25</sup> From the *Tualatin Bikeway Plan* 1993. Estimate grown to 2012 dollars.

<sup>26</sup> From the *Tualatin Bikeway Plan* 1993. Estimate grown to 2012 dollars.

TABLE 13  
Multi-Use Path Project Cost Estimates and Prioritization

Project ID	Project Description	Cost Estimate	Champion	Funding Source	Priority*
BP10	Add trail on the east side of SW 105 <sup>th</sup> Avenue, SW Blake Street, and SW 108 <sup>th</sup> Avenue through Ibach Park to accommodate bicyclists and pedestrians	\$810,000	City, Ibach CIO	Parks SDC or bond, Bike/Ped funds, Travel Options	Medium-term
BP11	Add a multi-use path undercrossing of I-5 near Fred Meyer as part of the Nyberg Creek Greenway—connect to planned and existing multi-use paths	\$1,947,000 <sup>27</sup>	City	Bike/Ped funds, Travel Options, ODOT Bike/Ped grants	Medium-term
BP12	Not Used				

\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more

CIO – Citizen Involvement Organization

ODOT – Oregon Department of Transportation

SDC – System Development Charges

## Regional Coordination

A number of bicycle and pedestrian projects will require coordination with regional agencies such as Washington and Clackamas Counties, Metro, or ODOT. The City of Tualatin will participate fully in the development of regional multi-use trail projects through partnering with neighboring cities and lead agencies. Regional projects currently under development include intersection and bike lane projects on facilities owned by Washington or Clackamas Counties, or ODOT these projects are included in Tables 14 and 15.

<sup>27</sup> From Metro's *Regional Transportation Plan (RTP)* 2007. Estimate grown to 2012 dollars.



## Regional Bicycle and Pedestrian Projects

TABLE 14

Regional Bicycle and Pedestrian Project Cost Estimates and Prioritization

Project ID	Project Description	Cost Estimate	Champion	Funding Source	Priority*
BP13	Add a colored bike lane through Nyberg Interchange to make the bicycle lane more visible and distinct from travel lanes	\$24,000	City, ODOT	Bike/Ped funds, Travel Options	Short-term
BP14	Add skip striping for the bicycle lane across the I-5 southbound off-ramp on the west end of the interchange	\$2,000	City, ODOT	Bike/Ped funds, Travel Options	Short-term
BP15	Redesign bike lane on the east side of the Nyberg interchange by modifying where bicyclists cross the northbound on ramps and creating a 90 degree angle	\$62,000	City, ODOT	Bike/Ped funds, Travel Options	Medium-term
BP16	Improve the condition of bicycle and pedestrian railroad crossing panels on SW Boones Ferry Road and SW Lower Boones Ferry Road by adding new panels	\$310,000	City, ODOT Rail, Portland and Western Railroad	STIP: TE, Bike/Ped funds	Medium-term

\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more

STIP – Statewide Transportation Improvement Program

TE – Transportation Enhancement

## Regional Multi-Use Path Projects

TABLE 15

**Regional Multi-Use Path Project Cost Estimate and Prioritization**

Project ID	Project Description	Cost Estimate	Champion	Funding Source	Priority*
BP17	Build pedestrian and bicycle bridges over the Tualatin River: North of SW Cipole Road in conjunction with the Westside Trail Near SW 108 <sup>th</sup> Avenue	\$2,434,000 <sup>28</sup> \$2,434,000 <sup>29</sup>	City, Metro	Parks SDC or bond, Bike/Ped funds, Travel Options	Long-term
BP18	Not Used				

\* Short term = within 5 years, medium term = 5–10 years, long-term = 10 years or more  
SDC – System Development Charges

<sup>28</sup> From Metro's *Regional Transportation Plan (RTP)* 2007. Estimate grown to 2012 dollars.

<sup>29</sup> From Metro's *Regional Transportation Plan (RTP)* 2007. Estimate grown to 2012 dollars.

<sup>30</sup> Not used.

<sup>31</sup> Not used.

**Figure 7 Bicycle and Pedestrian Element**  
Tualatin TSP Update

**City Safety Improvements**

- 1 Add wayfinding signs for Safe Routes to School at all public schools
- 2 Add colored bike lanes on Bridgeport Road near Bridgeport Village
- 3 Improve visibility and illumination at crosswalk at Siletz Dr & Boones Ferry Rd

**Bicycle and Pedestrian Facilities**

- 4 Add a crosswalk at Tualatin View Apartments on SW Boones Ferry Rd
- 5 Add a dedicated bike lane through intersection at Avery St & Boones Ferry Rd

**Multi-Use Trails**

- 6 Upgrade bridge surface along the path behind the Haggan shopping center
- 7 Build multi-use paths from the previously adopted Tualatin Pedestrian, Bikeway, and Greenway Plans (indicated by - - - -)
- 8 Build trail along Tualatin River from the Community Park, extend to Tualatin River Greenway
- 9 Fill gaps in the multi-use path as part of the Tualatin River Greenway
- 10 Add a trail on the east side of SW 105<sup>th</sup> Avenue, SW Blake Street, and SW 108<sup>th</sup> Avenue through Ibach Park to accommodate bicyclists and pedestrians
- 11 Add I-5 multi-use undercrossing - connect to existing multi-use paths
- 12 Not Used

**Regional Bicycle & Pedestrian Projects**

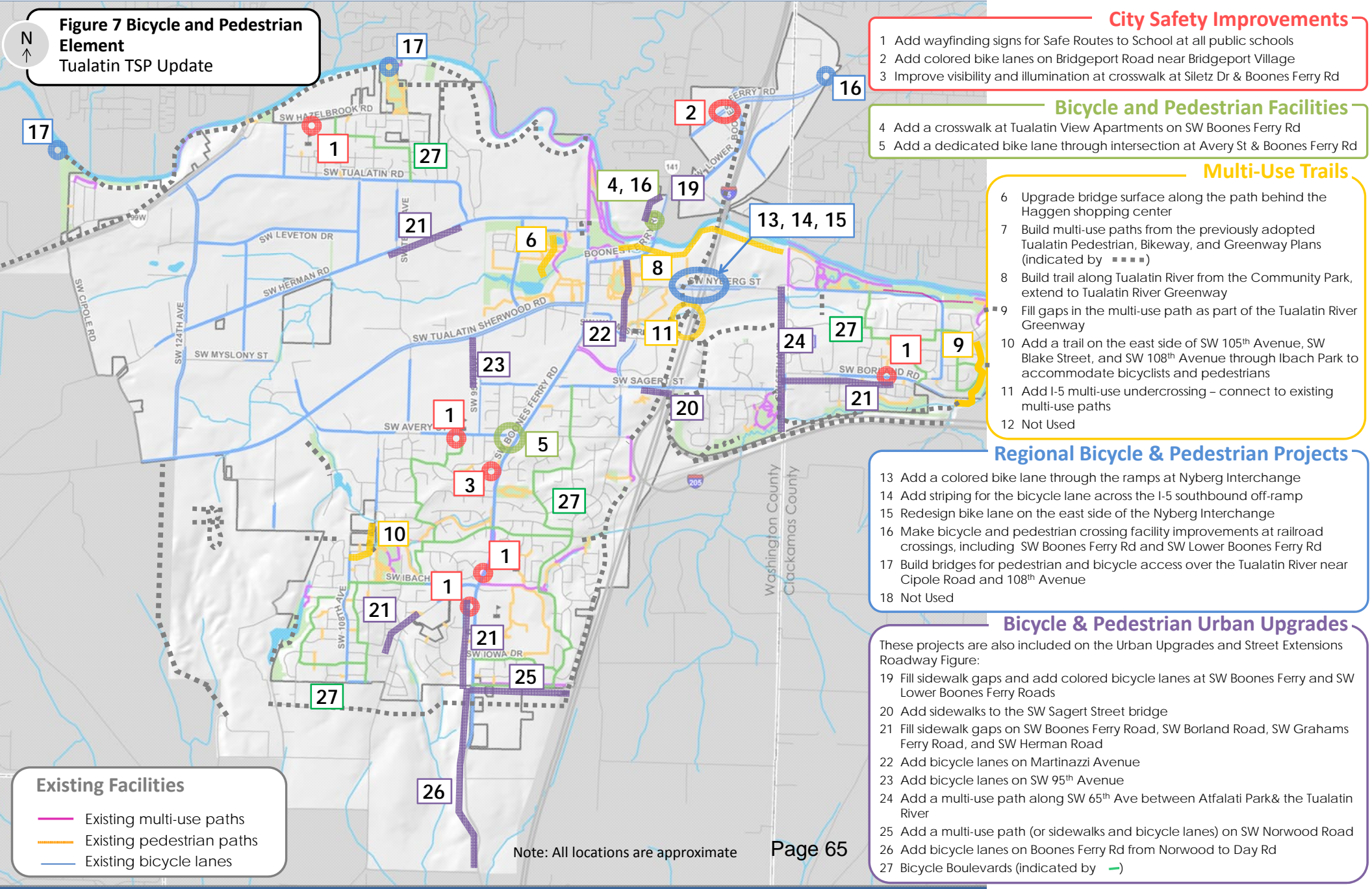
- 13 Add a colored bike lane through the ramps at Nyberg Interchange
- 14 Add striping for the bicycle lane across the I-5 southbound off-ramp
- 15 Redesign bike lane on the east side of the Nyberg Interchange
- 16 Make bicycle and pedestrian crossing facility improvements at railroad crossings, including SW Boones Ferry Rd and SW Lower Boones Ferry Rd
- 17 Build bridges for pedestrian and bicycle access over the Tualatin River near Cipole Road and 108<sup>th</sup> Avenue
- 18 Not Used

**Bicycle & Pedestrian Urban Upgrades**

- These projects are also included on the Urban Upgrades and Street Extensions Roadway Figure:
- 19 Fill sidewalk gaps and add colored bicycle lanes at SW Boones Ferry and SW Lower Boones Ferry Roads
  - 20 Add sidewalks to the SW Sagert Street bridge
  - 21 Fill sidewalk gaps on SW Boones Ferry Road, SW Borland Road, SW Grahams Ferry Road, and SW Herman Road
  - 22 Add bicycle lanes on Martinazzi Avenue
  - 23 Add bicycle lanes on SW 95<sup>th</sup> Avenue
  - 24 Add a multi-use path along SW 65<sup>th</sup> Ave between Atfalati Park & the Tualatin River
  - 25 Add a multi-use path (or sidewalks and bicycle lanes) on SW Norwood Road
  - 26 Add bicycle lanes on Boones Ferry Rd from Norwood to Day Rd
  - 27 Bicycle Boulevards (indicated by →)

**Existing Facilities**

- Existing multi-use paths
- Existing pedestrian paths
- Existing bicycle lanes



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## Bicycle Boulevards

Currently, there are no existing bicycle boulevards in the City, though the city of Portland<sup>32</sup>, the City of Tigard, and Washington County have bicycle boulevard policies and design standards.

Bicycle boulevards are roadways that use a variety of design treatments to reduce vehicle speeds so that motorists and bicyclists generally travel at the same speed, to create a safer and more-comfortable environment for all users. Bicycle boulevards may include a variety of applications ranging from minor street signing enhancements (such as shared lane markings) to larger scale projects (for example, bike-only access at intersections, traffic diverters). Boulevards also incorporate treatments to facilitate safe and convenient crossings where bicyclists must traverse major streets. Traffic controls along a boulevard may assign priority to through cyclists while encouraging through vehicle traffic to use alternate parallel routes.

There are five different types of treatments for bicycle boulevards; the lowest cost and least impactful are wayfinding and warning signs, and shared lane markings and directional markings. Other types of treatments with higher capital investment include adding medians/islands and bicycle signals, curb extensions, and mini traffic circles, and restricting and diverting traffic at intersections. The basic bicycle boulevard uses the lower cost elements such as signage and lane markings, and is recommended as the first step to creating and maintaining bicycle boulevards in the City.

Bicycle boulevards work best in well-connected street grids, where riders can follow intuitive and reasonably direct routes. Boulevards also work best when higher-order parallel streets exist to serve through vehicle traffic. Hilly areas and twisting locations where speed or visibility can create safety issues should be avoided. Bicycle boulevards are generally located on streets with lower traffic volumes and vehicle speeds, such as Minor Collectors or Local Streets passing through residential neighborhoods. Typically a bicycle boulevard would be located on a street where vehicles travel less than 30 miles per hour and average daily traffic volume is less than 3,000 vehicles (in both directions). Additionally, the recommended bicycle boulevards for the City include consideration of topography—where possible, areas with steep hills were not recommended for bicycle boulevards.

Proposed bicycle boulevards in Tualatin are shown on Figure 7. These are all low volume, low speed streets that connect neighborhoods with roadways and trails where bicycle infrastructure investments have been made. As a short-term action, the City should consider signing these roadways as bicycle routes, and monitor usage on an annual basis. As bicycle usage increases, and bicyclists and drivers become more used to sharing travel lanes, further investments could be considered as described in the paragraphs above to enhance safety for bicyclists.

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<sup>32</sup> The City of Portland refers to its bicycle boulevards as “Neighborhood Greenways”



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## 5 Freight Plan

Efficient truck movement plays a critical role in the economic well-being and development of Tualatin. Trucks must be able to access commercial, industrial, manufacturing, distribution, and other employment areas both in Tualatin and connecting to the regional system. Future commercial/industrial uses are expected to be located consistent with the land uses identified in the Comprehensive Plan, which matches the current zoning designations, as codified in the TDC.

The freight network described in this plan and illustrated in Figure 6 is largely consistent with the functional classification plan, which strives to connect industrial and manufacturing uses to the regional and state transportation network via a series of major and minor arterial roadways. The movement of raw materials and finished products via designated truck routes provides for efficient movement of goods while maintaining neighborhood livability, public safety, and minimizing maintenance costs of the roadway system. Federally and state designated truck routes, part of the National Highway System (NHS), have been identified on I-5 and OR 99W. Metro identifies “road connectors” in the RTP freight network on SW 124<sup>th</sup> Avenue, SW Tualatin-Sherwood Road, SW Lower Boones Ferry Road, and SW Boones Ferry Road. The City of Tualatin designates additional truck routes on roadway facilities that connect commercial/industrial districts within the City to major arterials and, ultimately, to OR 99W, I-5, and I-205. The following facilities are currently identified as City of Tualatin truck routes:

- ◆ I-5 (north to south City limits)
- ◆ I-205 (east to west City Limits)
- ◆ OR 99W (west to north City limits)
- ◆ SW Tualatin-Sherwood Road (west City limits to the Nyberg Street Interchange)
- ◆ SW 124<sup>th</sup> Avenue (OR 99W to SW Tualatin-Sherwood Road)
- ◆ SW Boones Ferry Road (south City Limits to SW Lower Boones Ferry Road)
- ◆ SW Lower Boones Ferry Road (SW Boones Ferry Road to the northeast City limits)
- ◆ SW Herman Road (SW 90<sup>th</sup> Avenue to SW Cipole Road)
- ◆ SW 108<sup>th</sup> Avenue (SW Tualatin Road to SW Herman Road)
- ◆ SW Teton Avenue (SW Tualatin Road to SW Avery Street)
- ◆ SW Cipole Road (OR 99W to SW Tualatin-Sherwood Road)
- ◆ SW Avery Street (SW Tualatin-Sherwood Road to SW 95<sup>th</sup> Avenue)
- ◆ SW Leveton Drive (SW 124<sup>th</sup> Avenue to SW 108<sup>th</sup> Avenue)
- ◆ SW 105<sup>th</sup> Avenue (SW Avery Street to SW Moratoc Drive)

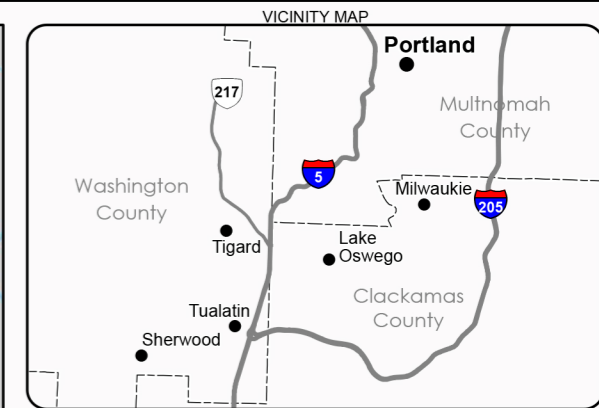
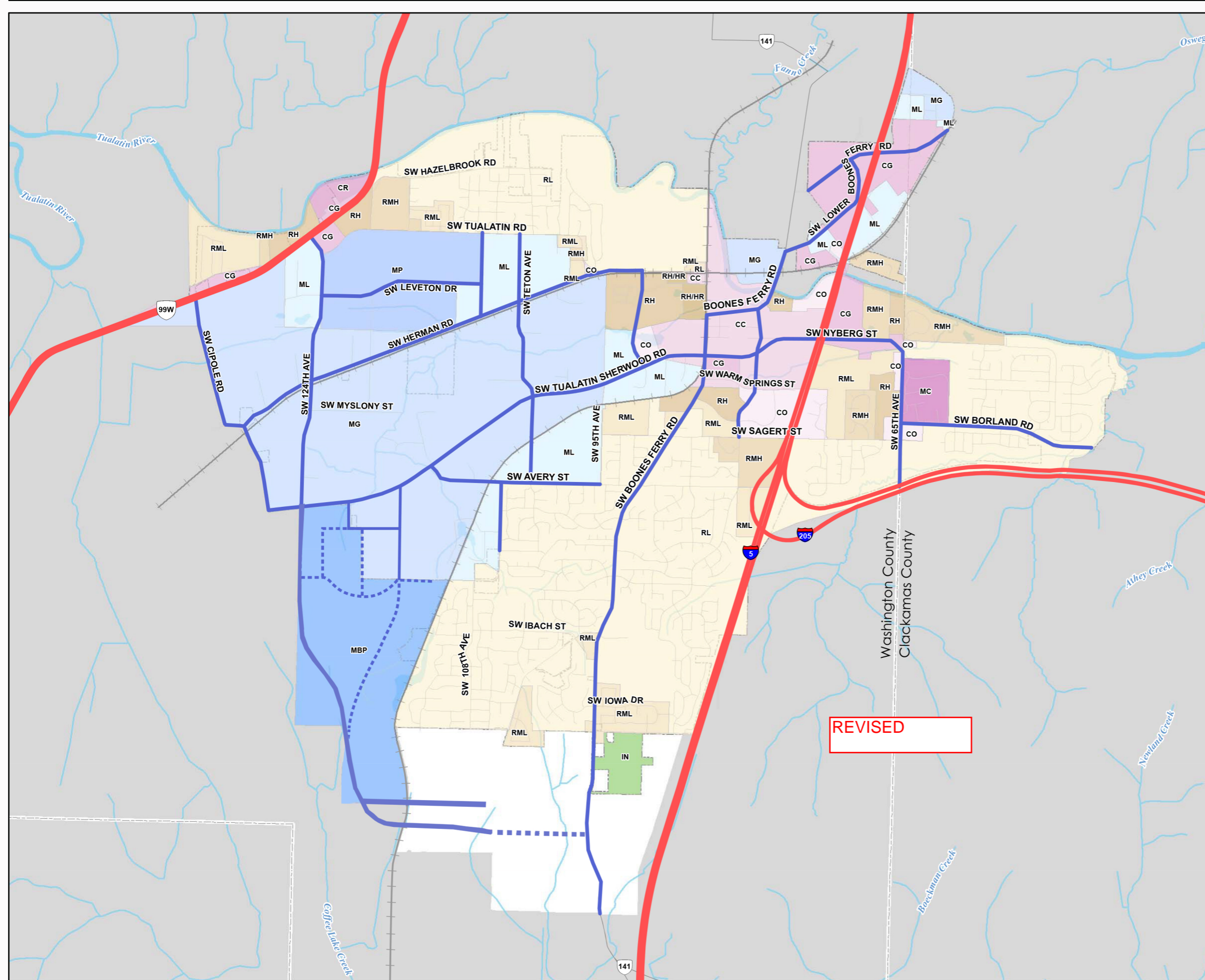
One existing truck route (SW Tualatin Road – SW 124<sup>th</sup> Avenue to SW Teton Avenue) was removed as a recommendation from the truck network based on discussions with the team, City Staff, the TTF and policy makers feedback. This change is consistent with the low volume of trucks currently using the road.

Updated truck route designations have been identified for existing roadways to match major arterial and minor arterial functional classifications. In addition, new roadway (or roadway extension) projects are recognized as truck routes when they provide connections to future commercial/industrial land uses. New truck route designations will include the following:

- ◆ SW 124<sup>th</sup> Avenue Extension (SW Tualatin-Sherwood Road to south City limits)
- ◆ SW 65<sup>th</sup> Avenue
- ◆ SW Bridgeport Road
- ◆ SW Borland Road

- ◆ SW Martinazzi Avenue (SW Sagert Street to SW Boones Ferry Road)
- ◆ SW 90th Avenue
- ◆ SW Nyberg Street (SW 65<sup>th</sup> Avenue to SW Martinazzi Avenue)

The needs of the freight system are consistent with those identified in the Street System Plan for the truck routes listed above. Projects that address needs related to truck routes, either directly or by providing alternate routes that improve traffic operations along truck routes, serve the needs of the freight system. All new roadways should be built to current City design standards to meet the operational needs of trucks on designated truck routes. Existing geometric deficiencies are identified in Appendix B.



**LEGEND**

Study Area

0 0.5 1 Miles

**Regional Transportation System**  
State and Federal Truck Routes

**Local Freight Routes**  
Existing Roadways  
Future Roadways

City Boundaries  
County Boundaries  
Railroad

**Institutional**  
IN - Institutional

**Commercial**  
CO - Office  
CC - Central  
CG - General  
CR - Recreational  
MC - Medical

**Manufacturing**  
ML - Light  
MG - General  
MP - Park  
MBP - Business Park

**Residential**  
RL - Low Density  
RML - Medium Low Density  
RMH - Medium High Density  
RH - High Density  
RH/HR - High Density High Rise

**FIGURE 8**  
**Freight Routes**  
Street Element  
City of Tualatin Transportation System Plan

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## 6 Rail Plan

Portland and Western Railroad (PNWR) owns and operates two freight rail lines within the City. One track (running north-south) accommodates both freight and the WES commuter rail, and an east-west line runs along the south side of SW Herman Road. As of November 2012 the east-west line carries one train daily in each direction, and the north south has two freight trains daily in addition to the WES trains described in the Transit section.

There are 13 gated public railroad crossings in Tualatin and a number of additional driveways or private roads that cross the railroad. The private crossings are stop controlled, but not signalized. Freight trains have the right of way at all intersections. The low number of trains does not present a large safety concern in the City, and recent Quiet Zone work done in conjunction with the north-south WES rail line opening added gates at all public crossings.

PNWR has no current plans to increase freight service through Tualatin. Although the east-west track runs adjacent to manufacturing areas, no rail sidings or other access to businesses are planned.

### Freight Rail Policies

- ◆ **Freight Policy 1:** Continue to coordinate with PNWR and TriMet to ensure that railroad crossings are safe and have few noise impacts on adjacent neighborhoods
- ◆ **Freight Policy 2:** Look for opportunities to shift goods shipments to rail to help reduce the demand for freight on Tualatin's roads.
- ◆ **Freight Policy 3:** Look for opportunities to create multi-modal hubs to take advantage of the freight rail lines

### Freight Rail Projects

Only one freight rail project was identified for the Tualatin TSP to support freight traffic within the City. The project would add a rail station with easy offload and access for industrial and manufacturing businesses in the west part of town. This project would need a high degree of coordination between PNWR and the City to ensure it is located appropriately for both the railroad and potential facility users.

### Passenger Rail Policies

The City of Tualatin's policies on public transit are described more fully in the Transit Modal Plan, but some policies apply to rail and are pulled from that section here. Policies that may relate to the existing heavy rail lines in Tualatin include:

- ◆ **Transit Policy 3:** Partner with TriMet, Metro, and neighboring communities to plan the development of high-capacity transit in the Southwest Corridor, as adopted in the Metro High Capacity Transit System Plan.
- ◆ **Transit Policy 4:** Partner with TriMet, Metro, and neighboring communities to plan development of high-capacity transit connecting Tualatin and Oregon City, as adopted in the Metro High Capacity Transit System Plan.
- ◆ **Transit Policy 5:** Coordinate with ODOT and neighboring communities on conversations related to Oregon Passenger Rail between Portland and Eugene.
- ◆ **Transit Policy 8:** Metro in the RTP calls for increased WES service frequency. The City will coordinate with TriMet, Metro, and ODOT to explore service frequency improvements and the possible inclusion of a second WES station in south Tualatin.

## Regional Coordination

The City of Tualatin will participate fully in the development of regional transit projects through partnering with lead agencies. Regional projects currently under development include the following:

- ◆ **The Southwest Corridor Project.** The purpose of the Southwest Corridor Project is to extend high-capacity transit from downtown Portland into the southwest part of the region. Doing so will help to fulfill the vision of the Metro *High Capacity Transit System Plan*. The City of Tualatin is partnering with Metro and TriMet to bring high-capacity regional transit to Tualatin and neighboring communities.
- ◆ **Oregon Passenger Rail.** The purpose of the Oregon Passenger Rail project is to improve intercity passenger rail service along the Oregon section of the Pacific Northwest high speed rail corridor between Portland and Eugene. Along the way, the rail service is expected to serve the south Metro area via an alignment either east or west of the Willamette River. The City of Tualatin intends to coordinate with ODOT and to explore an appropriate corridor that would best improve intercity passenger rail service in the Willamette Valley.
- ◆ **WES Extension.** TriMet and ODOT will study the feasibility of extending WES commuter rail from Wilsonville to Salem. The City of Tualatin is supportive of the WES extension and intends to partner with ODOT and TriMet in facilitating this project.
- ◆ **WES Service Enhancements.** Metro in the RTP calls for increased WES service frequency. The conceptual Linking Tualatin study recommended adding an additional WES station in the south part of Tualatin. The City will coordinate with TriMet, Metro, and ODOT to explore service frequency improvements and the possible inclusion of a second WES station in south Tualatin.





## 7 Water, Pipeline, and Air Plan

### Water

The Tualatin River is the only large waterway within the City of Tualatin. The river is not navigable from the Willamette River due to impassable areas and a diversion dam downstream. The river is used primarily for recreation and is open for canoeing and kayaking. Therefore, the TSP does not include any specific policies, programs, or projects for the Tualatin River as part of the transportation network. However, several projects are proposed in other sections of this chapter to increase access to the river for recreation purposes.

### Pipeline

A natural gas transmission pipeline and a gasoline pipeline cross through the City. There is no anticipated need to increase pipeline capacity or construct new pipelines through the City, and therefore no such improvements are proposed in the TSP.

### Air

There are no airports within the City of Tualatin, although several airports are located within 30 miles of the City: the Aurora State Airport, Hillsboro Municipal Airport, and Portland International Airport. These airports meet the commercial, freight, and business aviation needs of Tualatin residents. No plans are proposed to construct airport facilities within the City of Tualatin; existing airports are anticipated to continue serving the citizens of Tualatin adequately.



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## 8 Transportation Demand Management

The TPR requires all cities with populations greater than 25,000 people to develop a TDM Plan. The RTP also requires that TDM strategies be used to encourage alternative transportation modes and achieve higher vehicle occupancy targets. TDM measures are designed to change travel behavior in order to reduce the need for more road capacity and improve performance of the road system. Typical TDM projects include encouraging use of travel modes other than the auto, ride sharing, and measures to reduce the need for travel—such as telecommuting policies.

TDM policies and projects can be cost-effective ways to reduce congestion by encouraging the use of other modes, reducing the need for travel or reducing the number of vehicle-miles driven. The City of Tualatin can implement a range of TDM measures to manage travel demand, in conjunction with partner organizations in many cases. Providing bicycle, pedestrian, and transit infrastructure can be effective means to encourage drivers to switch to other modes. Many of the pedestrian, bicycle, and transit improvements proposed in other sections of the TSP can be considered TDM measures as they encourage use of travel modes other than the auto. In addition to these infrastructure projects, a number of strategies are applicable to Tualatin, as discussed in the following subsections.

### Transportation Demand Management Policies

The following policies support other modal plans in the TSP and help Tualatin meet its mode-share targets, as required by the RTP and presented in Table 16:

- ◆ **TDM Policy 1:** Support demand reduction strategies, such as ride sharing, preferential parking, and flextime programs<sup>33</sup>
- ◆ **TDM Policy 2:** Partner with the Tualatin Chamber of Commerce, the Westside Transportation Alliance, major employers, and business groups to implement TDM programs
- ◆ **TDM Policy 3:** Explore the use of new TDM strategies to realize more efficient use of the City's transportation system
- ◆ **TDM Policy 4:** Support Washington County's regional TDM programs and policies to reduce the number of single-occupancy vehicle (SOV) trips
- ◆ **TDM Policy 5:** Promote the use and expansion of the Tualatin Shuttle program

Metro in its RTP established modal targets for how residents in the region will make trips in 2040. These are separated out by regional designations. Tualatin has a number of designations within the City limits:

- ◆ **Town Center** – this designation is consistent with the Town Center Plan study area, centered on the Lake of the Commons and includes land south of the Tualatin River and west of I-5, including the Tualatin Community Park. The western boundary is SW 95<sup>th</sup> Avenue south to SW Tualatin-Sherwood Road, and then east near SW Warm Springs Street.
- ◆ **Corridors** – there are a number of corridors in Tualatin: SW Tualatin-Sherwood Road is a regional street, along with 99W, SW 124<sup>th</sup> Avenue, and SW Tualatin Road. SW Boones Ferry Road is a community street, and SW Tualatin-Sherwood Road/SW Nyberg Street in downtown are community boulevards. Regional arterials

<sup>33</sup> Ride sharing is defined as carpools and vanpools that increase the number of occupants in a vehicle. Preferential parking is for carpools and vanpools, and is closer than regular parking to a building or office. It provides an incentive to carpool by providing designated parking closer to destinations. Flextime programs allow employees to work hours other than a typical 8 am- 5 pm workday, and can include four 10-hour days with Fridays off, a two-week rotation of nine 9-hour days with every other Friday off, etc.

include 99W, SW 124<sup>th</sup> Avenue, SW Boones Ferry Road, SW Tualatin-Sherwood Road, SW Herman Road, SW Nyberg Street, SW Sagert Street, SW Borland Road, and SW 65<sup>th</sup> Avenue.

- ◆ Employment Land – most of western Tualatin is employment land south of SW Tualatin Road and west of the railroad tracks.
- ◆ Parks and Natural Areas – Hedges Creek is designated a park and natural area, along with many of the other greenway areas including Nyberg Creek Greenway, Saum Creek, and other City parks.
- ◆ Neighborhoods – neighborhood areas include southern Tualatin near SW Boones Ferry Road, northern Tualatin north of SW Tualatin Road, and eastern Tualatin excluding the hospital area and the greenways and parks.

These designations have modal targets associated with them, as seen in Table 16 below, and the non-drive-alone modal target for Tualatin is 45-55 percent in the Town Center and Station Community, and 40-45 percent for the employment land, parks and natural areas, and neighborhoods.

TABLE 16  
Metro Modal Targets

2040 Regional Designation	Non-drive-alone Modal Target
Regional Centers	
Town Centers	
Main Streets	
Station Communities	<b>45–55%</b>
Corridors	
Passenger Intermodal Facilities	
Industrial Areas	
Freight Intermodal Facilities	
Employment Areas	<b>40–45%</b>
Inner Neighborhoods	
Outer Neighborhoods	

Source: Metro’s RTP

## TDM Programs

Constructing bicycle lanes, sidewalks, and other facilities greatly increases the ability of people to get around by walking and biking. These efforts are made even more effective when education and encouragement programs are developed. These programs help address barriers to walking and biking, such as where and how to ride safely.

### Individualized Marketing

Individualized marketing programs offer customized packets of information about transit, car/vanpool, bicycling, and walking options to target populations at events and through various venues. Such a program in Tualatin would build on and support both new and existing TDM strategies by providing a tailored framework that consisted of the following: (1) information about resources, such as transit maps and schedules, local walking and bicycling maps, safety information, discounts at local shops, and other locally available material; (2) encouragement events, such as employment fairs, guided walks and rides, guided transit trips, personalized trip planning assistance, and trainings; and (3) encouraging communications through social media, virtual or physical bulletin boards, and newsletters. Individualized marketing programs could be implemented by the City directly, or by a Transportation Management Association (TMA). A TMA is an independent entity dedicated to solving transportation problems in a particular geographic area through actively managing transportation demand and encouraging alternate travel modes. Currently, the Westside



Transportation Alliance provides TMA services to the Tualatin Chamber of Commerce, and the Cities of Hillsboro, Beaverton, and Tigard.

## Bicycle and Pedestrian Education and Encouragement Programs

Constructing bicycle lanes, sidewalks, and other facilities greatly increases the ability of people to get around by walking and biking. These efforts are made even more effective when education and encouragement programs are developed. These programs help address barriers to walking and biking, such as where and how to ride safely. It should be noted that all programs listed below can be implemented in coordination with an individualized marketing program, as described above.

### Employer Bicycle and Pedestrian Programs

Employers, especially larger employers, should implement a number of low-cost measures to encourage walking and biking to and from work. Example incentives include giving gift cards or discounts at local restaurants to those who choose to walk or bike. Parking “cash outs” are another incentive: If workers have free or subsidized parking, employers offer employees a choice to keep a parking space at work, or to accept a cash payment and give up the parking space.

### Improve “End of Trip” Facilities

Workers often cite a lack of secure bike storage areas and showering and changing facilities as reasons they do not bike to work. If providing these amenities is cost prohibitive, employers could direct employees to nearby gyms or community centers where these facilities already exist and subsidize membership to them.

### Safe Routes to School Programs (SRTS)

Nationally, the number of children walking and biking to school has declined greatly over the last several decades. SRTS programs currently existing in Tualatin. They are designed to educate parents and schoolchildren about safe walking and biking and encourage students to walk or bike to school. Typical measures include distributing safety information to parents and kids, prizes for kids who walk and bike to school, month-long walk-and-bike challenges, and bicycle rodeos. Bicycle and pedestrian infrastructure improvements, such as improving crosswalks or striping bike lanes, are usually done in conjunction with these efforts.

### Community Bicycle Education, Encouragement, and Commuter Challenges

Many cities in Oregon participate in sponsored commuter challenge events, such as the national bike to work day in May and the month-long bike commute challenge in September. The month-long event is a friendly competition among employers. Awards and local bike shop discounts are offered throughout the month. Participants log their daily travel by bike on a website, track others’ progress, and access free commuting resources.

### Bicycle Route Maps

One of the major reasons many people do not bike to their destinations is a lack of knowledge about where to safely ride. The Washington County Visitors Association currently produces a countywide cycling map that includes major routes in Tualatin. A link to this map should be placed prominently on the City of Tualatin’s webpage, and paper copies of the map made available at City Hall and other civic locations. However, the

Visitors Association's map does not include the portions of Tualatin that are north of the Tualatin River or east of I-5. The City should consider developing a comprehensive bicycle map for Tualatin that includes current and planned bicycle facilities. A locally produced map can be updated more frequently as bicycle infrastructure projects in the Pedestrian and Bicycle Plan are constructed.

## Transit Strategies

Transit projects in the Transit Plan can be supplemented with other programs that make using transit easier for residents and provide incentives for its use. It should be noted that all programs listed below are most effectively implemented in coordination with a TMA and individualized marketing programs as described above.

### Employee Shuttle Service

The Tualatin Chamber of Commerce operates a free shuttle service from TriMet bus stops, the WES station, and downtown Portland to employers within Tualatin. This free service enhances transit by bridging the final distance between transit stops and the work site, which can often be too far to walk or bike.

### Employer-Subsidized Transit Pass Programs

Transit passes increase ridership because they are simple and easier to use than single ticket purchases. However, annual transit passes can be prohibitively expensive (as of September 2012 the annual TriMet pass is \$1,100) and out of line with driving costs such as gasoline and parking where purchases are made on a more incremental basis (weekly, monthly). To encourage more transit ridership, and in coordination with implementation of transit service recommendations outlined in the Transit Modal Plan, employers could subsidize the cost of transit passes either: (a) directly through bearing some of the cost of the pass as an employer-provided benefit; (b) indirectly through being a pass-through purchasing the annual passes from TriMet and allowing employees to pay on a monthly basis; or (c) indirectly through taking advantage of pre-tax transportation fringe benefits under Title 26 section 132(f) of the US tax code. This program allows employers to offer a tax-free benefit to employees that commute to work by transit and allow employees to purchase transit passes on a pre-tax basis through payroll deduction.

## Other Strategies

### Rental or Car-share Services

The ability to make midday trips with personal vehicles is cited as an important reason that employees drive to work. By providing car-sharing or rental service, such as Zipcar ([www.zipcar.com](http://www.zipcar.com)) and Car2Go ([www.car2go.com](http://www.car2go.com)), workers can make short trips at low cost during the workday and leave their personal vehicles at home. Zipcar and Car2Go are not currently available in Tualatin. The City could partner with Metro to discuss expanding these services to the suburbs and for major employers to explore maintaining a small fleet of bicycles and/or vehicles for midday trips.

### Ride Sharing

Carpooling and vanpooling can be very cost effective by filling empty seats in vehicles that would otherwise be unoccupied. Ride-sharing strategies are most effective for trips with predictable schedules, like commuting or special events. Ride sharing is accomplished through ride matching, or matching commuters with carpools and vanpools that meet their travel needs. Matching is accomplished through websites like Oregon's "Drive Less. Connect" program ([www.drivelessconnect.com/](http://www.drivelessconnect.com/)) or through bulletin boards and employer-organized services.



## Telecommuting and Flexible Work Schedules

Telecommuting (working from home instead of traveling to the workplace every day) reduces the need for travel and can have beneficial effects on traffic congestion. Many employers in Tualatin have employees who travel to work from outside the City, and many Tualatin residents travel outside the City to go to work. Supporting telecommuting could reduce peak-hour congestion on roadways in Tualatin. Support for telecommuting includes providing information to employers within the City and providing resources for citizens who commute out of Tualatin.

Employers can also allow employees to adopt work schedules different from the typical 8 to 5 schedule, or allow employees to compress regularly scheduled hours into fewer workdays per week (four 10-hour shifts, for instance). Allowing work schedule flexibility shifts travel out of the peak morning and evening travel hours, reducing congestion.

## Location-specific TDM Programs

Throughout the TSP development a few programmatic ideas arose that were specific to locations within Tualatin. These programs are listed here, separate from the city-wide ideas, though implementation could be accomplished through many of the programs listed above.

### Encourage Off-peak Use of SW Herman and SW Tualatin-Sherwood Roads

SW Tualatin-Sherwood Road is congested during peak hours, and freight vehicles use both SW Herman and SW Tualatin-Sherwood Roads to access regional transportation facilities (OR 99W and I-5). Policies encouraging drivers and freight haulers to use these routes outside of peak hours would help alleviate peak-hour congestion.

### Reduce Congestion near Tualatin High School

Tualatin High School generates a significant number of trips just before the school day starts and when classes let out in the afternoon. Projects and policies that discourage the use of personal automobiles to get to and from the high school could be effective at reducing congestion in the vicinity of the school. SRTS projects, such as adding wayfinding signage for pedestrians and bicycles, encouraging cycling and walking, and improving the walking and cycling environment in the vicinity of the school can be very effective at encouraging students to use alternative modes of travel. A number of pedestrian and bicycle improvement projects are proposed near the high school; refer to the Pedestrian and Bicycle Plan earlier in this chapter for a complete list of projects.

### Provide Wayfinding Signs to Encourage Walking and Bicycling

Providing wayfinding signage near popular destinations such as schools, commercial areas, parks, and city services allows residents to use non-motorized modes. Wayfinding signs will also allow users on multi-use paths to determine their location and how to get to various destinations. Providing wayfinding signs can improve user comfort with different modes and may encourage travelers to switch transportation modes as they become as comfortable with these modes as with driving.

## Metro Transportation Demand Management Projects

Metro's 2035 Regional Transportation System Management and Operations Plan (TSMO Plan) also includes TDM projects and policies within Tualatin. These relatively low-cost projects (Table 17) will be implemented by a variety of local and regional organizations and with a variety of funding sources.

TABLE 17

**Planned Metro TDM Projects in Tualatin**

Project or Policy	Description
Individualized Marketing for Tualatin Transit Center and adjacent neighborhoods	Implement outreach to targeted neighborhoods that encourages use of travel options through delivery of local travel options information and services to interested residents
Location-efficient Living	Support programs and strategies that promote location-efficient living strategies in industrial employment and residential areas west of I-5. The goal of location efficient living is to provide affordable housing near employment centers to reduce travel distances for employees. Location-efficient living strategies also market employment opportunities to nearby residents.
Transportation Management Associations	Support the activities of organizations, such as the Tualatin Chamber of Commerce, that help employees and/or residents increase use of non-single-occupant vehicle travel options

Source: Metro’s TSMO Plan





## 9 Transportation System Management

Transportation System Management (TSM) measures are designed to increase the efficiency, safety, capacity, and level of service of the transportation system without physically increasing roadway capacity. Typical TSM projects include traffic light synchronization, traffic calming, travel information systems, access management, and parking management strategies. Many of the projects listed in the other modal plans—including the Transit, Pedestrian and Bicycle, and Access Management plans—qualify as TSM measures.

Many TSM tools can be implemented inexpensively to help make the existing system work more efficiently. A wide range of TSM strategies are applicable to Tualatin.

### Signal Timing and Optimization

Traffic congestion is caused in part by poorly timed traffic signals, especially on longer arterial corridors with many signalized intersections. The City will continue to review and update signal timing on streets in order to maximize signal efficiency. Many strategies can be implemented to improve coordination of signals and optimize signal timing. Advanced signal systems can detect vehicles approaching intersections, reducing the number of stops vehicles make and reducing delay. With good traffic data, signal timing can be adjusted throughout the day to reflect traffic patterns. Adaptive signal controls actively change signal timing based on real-time traffic information, further optimizing traffic flow.

Adding bicycle detector loops or sensor cameras are effective methods for optimizing signal timing for cyclists, who often must wait long periods before crossing an intersection if they are not detected by the signal system. Adding bike detection loops or sensor cameras would eliminate this problem, ensuring cyclists can get through major intersections without delay and without having to activate pedestrian crossing signals. ODOT recently put in a bike detection loop at the SW 72<sup>nd</sup> Avenue, SW Bridgeport Road, and SW Lower Boones Ferry Road intersection for the northbound bike lane.



*Example of a Bicycle Detector Loop*

### Real-time Traveler Information Systems

Real-time travel information on traffic congestion, roadway incidents, road hazards, weather conditions and construction delays can help drivers make better travel decisions. This information can be provided through electronic signs, or websites and applications available on computers and mobile devices, to help travelers avoid delay by changing their route, starting their trip at another time, or changing which mode they use to get to their destinations.

### Traffic Calming

Traffic-calming measures can improve neighborhood livability, slow traffic, and reduce undesirable cut-through traffic on local streets. Typical traffic-calming measures include speed humps, medians, street trees, narrower streets, traffic circles, and speed reader boards that display vehicle speeds to drivers. These strategies are effective at encouraging vehicle traffic to make their through trips on more appropriate collector and arterial

streets, and help calm traffic in neighborhoods where slow speeds and low traffic volumes are desirable. Table 18 summarizes common traffic-calming strategies.

TABLE 18  
**Potential Traffic-Calming Strategies**

Traffic-calming Strategy	Goal	Description
Speed Tables	Speed reduction	Speed tables are flat-topped speed humps constructed from asphalt, brick, or other materials. They allow higher speed travel than speed bumps. Speed tables are effective at reducing vehicle speeds, and are most applicable on residential streets or other streets where a smooth ride is needed for larger vehicles.
Roundabouts and Traffic Circles	Speed reduction, reduce through traffic	These force drivers to slow at intersections and may encourage through traffic to use other routes. They are typically constructed of concrete, brick or other materials and often have center landscaping that additionally improves street aesthetics.
Chicanes, Curb Extensions	Speed reduction, improve walking environment	Chicanes are bulb-outs that physically narrow the roadway. Chicanes create S-shaped curves that force drivers to slow and can also be designed so that drivers have to yield to oncoming traffic. Curb extensions at intersections physically narrow the roadway and reduce vehicle speed, but they also reduce intersection crossing distance for pedestrians.
Median Barriers	Reduce through traffic	Median barriers prevent vehicle traffic from turning into or out of streets in a certain direction, reducing through traffic.
Road Diets	Speed reduction, reduce through traffic, improve walking & biking environment	Road diets reduce the number of automobile travel lanes, freeing road space for bicycle lanes, sidewalks, paths, or landscaping. A typical road diet may reduce a four-lane road to three lanes (two travel lanes and a center turn lane) and add bicycle lanes or parking.
Street Trees	Speed reduction, improve walking & biking environment	Street trees visually narrow streets, forcing drivers to slow down. Trees placed between sidewalks and the street improves street aesthetics and provides a buffer between pedestrians and traffic.
Pavement Treatments	Speed reduction	Pavement treatments include colored and textured paving materials, rumble strips and other pavement markings. These treatments provide visual and auditory cues to drivers that they should be more alert, causing drivers to slow. Typical application includes paving a residential intersection with bricks, or adding rumble strips to an intersection approach.
Tighten Corner Radii	Improve walking and biking environment, speed reduction	Large intersection corner radii allow vehicles to make higher speed turns, increasing risk for pedestrians. Reducing curb radii forces traffic to slow when making turns and reduces crossing distance for pedestrians.
Roadway Striping	Speed reduction	Adding roadway striping, especially on unstriped residential streets, can visually narrow the street and causes drivers to slow down. Roadway edge lines, striped medians, etc., can all help achieve speed reductions at relatively low cost.

Source: Metro’s *Transportation System Management and Operations (TSMO) Plan*

Metro’s *Transportation System Management and Operations (TSMO) Plan* includes projects on regionally significant routes within Tualatin. It also includes arterial corridor management strategies and other improvements to facilities within Tualatin (Table 19). Most of these projects are currently underway or are planned to start within the next 5 to 10 years and will be funded through a combination of regional and local sources.

TABLE 19  
**Planned Metro TSMO Projects in Tualatin**

Facility Name	TSM Strategy	Description
SW Boones Ferry Road, SW Upper Boones Ferry Road, SW 65 <sup>th</sup> Avenue, and SW Borland Road	Arterial Corridor Management	Improve arterial corridor operations by expanding traveler information and upgrading traffic signal equipment and timings. Install upgraded traffic signal controllers, establish communications to the central traffic signal system, provide arterial detection (including bicycle detection where appropriate), and routinely update signal timings. Provide real-time and forecasted traveler information, including current roadway conditions and weather conditions, on arterial roadways.
OR 99W, from SW 124 <sup>th</sup> Avenue to SW Tualatin-Sherwood Road	Real-time Traveler Information	Provide real-time and forecasted traveler information on arterial roadways, including current roadway conditions, congestion information, travel times, incident information, construction work zones, current weather conditions, and other events that may affect traffic conditions.
SW Tualatin-Sherwood Road	Arterial Corridor Management with Adaptive Signal Timing	Signal systems that automatically adapt to current roadway conditions, in addition to arterial corridor management strategies listed above.



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## 10 Parking Plan

The City owns several public parking lots in downtown Tualatin to support denser development in the City's core area. A separate taxing district has been created to support ongoing maintenance and operations of these parking lots. The city completed a study in 2011 which identified that the existing parking supply is sufficient to meet the parking demand in downtown Tualatin.

The RTP requires parking policies and a parking plan in a TSP or other planning document. The current TDC includes parking minimums and is compliant with this requirement.

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## Chapter 3. Implementation

Implementation of TSP projects will depend on funding and community priorities. There are a variety of funding sources available at the City, County, Region, and State level, and each project table includes recommendations for applicable funding sources. Additionally, the relative importance of TSP projects are identified in the project tables, based on community goals, the magnitude of the deficiency or issue that the project addresses, and the ability to secure funding, conduct engineering, and build a project. Appendix E provides a detailed description of transportation funding and improvement costs for all of the TSP's recommendations.

### Funding Sources

#### Established Funding Sources for Future Projects

A variety of established federal, state and local funding sources are available to fund future transportation projects in the Tualatin TSP, depending on the eligibility requirements.

#### Federal Funding Sources

Federal funding currently accounts for approximately 20 percent of total funding for transportation projects in Oregon. Allocation of federal funds is managed through Metro, Tualatin's Metropolitan Planning Organization (MPO). Metro generally programs federal funding for regional and local projects that affect the state transportation system, though some funds are made available directly for local projects. All projects utilizing federal funds must be programmed through Metro's 20-year RTP and the Metropolitan Transportation Improvement Program (MTIP), as well as the STIP.

Most federal funding is available through the federal surface transportation program, supported by tax revenue to the Highway Trust Fund.

#### ***Federal Highway Trust Fund (HTF)***

Revenues to the HTF are comprised of motor vehicle fuel taxes, sales taxes on heavy trucks and trailers, tire taxes, and annual heavy truck use fees. The fund is split into two accounts – the highway account and transit account. Funds are appropriated to individual states on an annual basis. The 2005 legislation for the federal surface transportation program (Safe, Accountable, Flexible and Efficient Transportation Equity Act – A Legacy for Users, referred to as SAFETEA-LU) was replaced with Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21), effective October 1<sup>st</sup>, 2012. This new 2-year program keeps total federal funding at the SAFETEA-LU rate, consolidates the 90 current programs under SAFETEA-LU into 30, eliminates transportation earmarks, and increases funding for the Transportation Infrastructure Finance and Innovation Program (TIFIA). The TIFIA program provides loans to finance transportation projects of regional or national significance, and seeks to leverage federal transportation dollars with local funds and private investment. Tualatin may be eligible to receive funding under the expanded TIFIA program.

Most federal funds must be matched with state or local funds; the current matching ratio for most projects is 10.27 percent.

#### ***Federal Transit Administration grants***

The Federal Transit Administration (FTA) manages a number of grants available to transit agencies nationwide. The City of Tualatin could work with TriMet to fund transit projects serving the City.

### ***Transit Expansion and Livable Communities Grants***

Approximately \$2.4 billion in funds was appropriated for this program in the current budget year (2012). The goal of this initiative from the FTA is to advocate for and support projects and programs that improve the link between public transit and communities. Several formula and competitive grant programs are available through this initiative. Policy goals include better integrating transportation and land use planning, fostering multimodal systems, providing transportation options and improving access, reducing emissions, and increasing public participation in transportation decision-making. Tualatin and TriMet may be eligible for grant funding under this program.

### ***Transportation for Elderly Persons and Persons with Disabilities (MAP-21 §20009, former SAFETEA-LU §5310)***

This formula grant program is managed by the state, with funds provided for capital projects that enhance the accessibility of older adults and those with disabilities.

### ***Job Access Reserve Commute (JARC) program (MAP-21 §20010, former SAFETEA-LU §5316)***

Activities funded by the JARC program (formerly Section 5316 of SAFETEA-LU) have been preserved in MAP-21. The JARC program was established to address the transportation needs of welfare recipients and other low-income persons seeking to obtain or maintain employment. This program helps provide mobility to those whose work hours may fall outside traditional transit service hours and service areas. Under MAP-21, JARC activities have been integrated into the urban and rural formula grant programs. Financial assistance will be available for capital, planning and operations projects. In addition to local government and transit operators, private non-profits are eligible to receive funds. In 2012, as in past years, the Chamber of Commerce received JARC monies that funded the Tualatin Shuttle service. The Chamber of Commerce is an ongoing recipient of JARC funds, and annually re-completes for funds.

TriMet is the current recipient of all JARC funds which are distributed to regional agencies through a competitive application process. Under MAP-21, the competitive application requirement has been removed. TriMet is currently developing its new JARC program in response to MAP-21; it is presently unclear how much funding will be available, or how agencies will apply for funding from the program. Approximately \$600,000 has been available regionally under the program in recent funding cycles.

## **Other Federal Sources**

### ***Section 319 Non-Point Source Implementation Grants***

Transportation projects that integrate stormwater treatment may be eligible to receive federal funding through Section 319 grants. This program, administered by the Oregon Department of Environmental Quality (DEQ), provides federal funds to address non-point pollution, including stormwater improvement projects. Funding is very competitive, with less than \$500,000 available statewide in the most recent grant cycle. Projects that could be eligible for funding include applications of pervious pavements, stormwater detention and retention, and other low impact stormwater development tactics. Funds can be used for all or a portion of a project, but require a minimum 40 percent match. The Tualatin River and several of its tributaries are on the Clean Water Act 303(d) list for a number of pollutants, and projects within the river basin may be attractive for funding.

## **State Funding Sources**

State funds are distributed via the Oregon Transportation Commission (OTC). The State Highway Fund is the most significant source of funding for the programs described below. To be eligible for funding, projects must be programmed through the STIP.



### ***State Highway Fund***

State Highway Fund Revenues are received from a combination of fuel taxes, vehicle registration and title fees, driver's license fees, the truck weight-mile tax and federal monies. Fund revenues may only be used for construction and maintenance of state and local highways, bridges, and roadside rest areas. State law (ORS 366.514) specifies that a reasonable amount of highway funds must be spent on walkways and bikeways, and that in any given fiscal year, a minimum of 1 percent of State Highway Funds must be spent on these projects by funding recipients. However, cities and counties receiving may allocate these funds to a reserve fund, which they must expend within a period not to exceed 10 years. All funds must be expended on projects within road, street, or highway rights-of-way.

State Highway Funds are appropriated by the OTC on an annual basis. Sixty percent of fund revenues are kept at the state level, 24 percent is distributed to counties based on the number of vehicles registered in each county, and 16 percent is distributed to cities based on population.

### ***Statewide Transportation Improvement Program (STIP)***

The STIP is the 4-year capital improvement program for the state of Oregon. It provides a schedule and identifies funding for projects throughout the state. Projects included in the STIP are generally "regionally significant" and have been given a high priority through planning efforts and by the relevant area commission on transportation (ACT) or MPO. For Tualatin, the relevant MPO is Metro.

All regionally significant state and local projects, as well as all federally-funded projects and programs, must be included in the STIP. The 2010-2013 STIP includes projects totaling \$1.25 billion and covers the period from October 2009 to the end of September 2013. The 2012-2015 STIP was recently approved. About 80 percent of projects are expected to use federal funds. Federal funding levels projected for the 2010-2013 and draft 2012-2015 STIP are assumed to be at the same annual level distributed under SAFETEA-LU from 2005 to 2009.

ODOT has started the planning process for the 2015-2018 STIP. The STIP will be reorganized into two broad categories: "Fix-it" and "Enhance" that encompass the previous funding categories detailed in the 2012-2015 STIP. "Fix-it" projects are those that fix or preserve the current transportation system; "Enhance" projects are those that enhance, expand or improve the transportation system. The main purpose of this reorganization is to allow maximum flexibility to fund projects that reflect community and state values, rather than those that fit best into prescriptive programs.

#### **"Fix-it" activities will include:**

- ◆ Bicycle and pedestrian facilities on state routes only
- ◆ Bridges (state owned)
- ◆ Culverts
- ◆ High Risk Rural Roads
- ◆ Illumination, signs and signals
- ◆ Landslides and Rockfalls
- ◆ Operations (includes ITS)
- ◆ Pavement Preservation
- ◆ Rail-Highway Crossings
- ◆ Safety

- ◆ Salmon (Fish Passage)
- ◆ Site Mitigation and Repair
- ◆ Stormwater Retrofit
- ◆ Transportation Demand Management (part of Operations)
- ◆ Work zone Safety (Project specific)

**“Enhance” activities will include:**

- ◆ Bicycle and/or Pedestrian facilities on or off the highway right-of-way
- ◆ Development STIP (D-STIP) projects (development work for projects that will not be ready for construction or implementation within the four years of the STIP)
- ◆ Modernization (projects that add capacity to the system, in accordance with ORS 366.507)
- ◆ Most projects previously eligible for Transportation Enhancement funds
- ◆ Projects eligible for Flex Funds (the Flexible Funds program funded Bicycle, Pedestrian, Transit and Transportation Demand Management (TDM) projects, plans, programs, and services)
- ◆ Protective Right-of-Way purchases
- ◆ Public Transportation (capital projects only, not operations)
- ◆ Safe Routes to School (infrastructure projects)
- ◆ Scenic Byways (construction projects)
- ◆ Transportation Alternatives (new with MAP-21, the federal transportation authorization)
- ◆ Transportation Demand Management

Under this new STIP organization, there will be one application for all projects eligible under the “Enhance” program. Communities will apply for the “Enhance” projects that best serve their community and ODOT will determine the appropriate funding mechanism. “Fix-it” projects will be selected through a collaborative process between ODOT and MPOs. This new organization is primarily intended to increase funding flexibility and does not represent a fundamental change in the type of projects that will be funded through the STIP. The current “Enhance” application process for the 2015-2018 STIP will close at the end of November, 2012.

- **ConnectOregon:** *ConnectOregon* funds are lottery-backed bonds distributed to air, marine, rail, transit and other multimodal projects statewide. No less than 10 percent of *ConnectOregon* IV funds must be distributed to each of the five regions of the state, provided that there are qualified projects in the region. The objective is to improve the connections between the highway system and other modes of transportation.

***Oregon Parks and Recreation Local Government Grants***

The Oregon Parks and Recreation Department (OPRD) administers this program using Oregon Lottery revenues. These grants can fund acquisition, development and major rehabilitation of public outdoor parks and recreation facilities. OPRD has distributed \$4 million annually under this program through a competitive grant process. A match of at least 20 percent is required.

***Oregon Transportation Infrastructure Bank (OTIB)***

The OTIB is a statewide revolving loan fund available to local governments for many transportation infrastructure improvements, including highway, transit and non-motorized projects. Most funds made available through this program are federal, and roads must be functionally classified as a major collector or higher to be eligible for loan funding.

***Oregon Parks and Recreation Department: Recreational Trails Grant<sup>34</sup>***

These grants from the Oregon Parks and Recreation Department provide funding for recreational trail projects to build new recreation trails, including trail bridges and installing wayfinding signs, restoring existing trails, developing and rehabilitating trailhead facilities, and acquiring land and permanent easements for trails. Cities are eligible to apply, and must provide at least a 20 percent match of total project cost. Recent grants (2011) ranged from \$10,000 to \$130,000.

***Oregon Immediate Opportunity Fund***

The Oregon immediate opportunity fund supports primary economic development in Oregon through construction and improvements of streets and roads. Funds are discretionary and may only be used when other sources of financial support are unavailable or insufficient. The objectives of the Opportunity Fund are providing street or road improvements to influence the location, relocation, or retention of a firm in Oregon, providing procedures and funds for the OTC to respond quickly to economic development opportunities, and providing criteria and procedures for the Oregon Economic and Community Development Department (OECDD), other agencies, local government and the private sector to work with ODOT in providing road improvements needed to ensure specific job development opportunities for Oregon, or to revitalize business or industrial centers.

**Regional Funding Sources**

Metro coordinates two transportation grant programs relevant to Tualatin. As the regional government and MPO, Metro is responsible for distributing federal monies in a variety of programs.

***Flexible Funds***

Metro manages the allocation of regional federal flexible funds. These funds come from two federal funding sources: the Surface Transportation program (STP) and the Congestion Mitigation/Air Quality program (CMAQ). These funds can be spent on a wide variety of projects. In the most recent funding round, \$24 million was made available to Metro jurisdictions for various projects, including transit oriented development, high capacity transit, transportation system management, and regional planning projects. Funding is allocated through a competitive process.

***Regional Travel Options grants***

Metro also manages this federal grant source, distributing over \$500,000 to several projects in the Metro region in the most recent round of funding. Projects are selected through a competitive process. Projects that improve air quality, address community health, reduce auto traffic or create more opportunities for walking and biking are all eligible for funding.

***Nature in Neighborhoods Grants***

Metro provides funds to communities to add vegetation and natural features in neighborhoods. Funds for Nature in Neighborhoods come from the voter-approved 2007 natural areas bond measure. Projects awarded grants

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<sup>34</sup> From [www.oregon.gov/oprd/GRANTS/Pages/index.aspx](http://www.oregon.gov/oprd/GRANTS/Pages/index.aspx)

involve the community, foster diverse partnerships and innovate, leading to bigger social and economic benefits, from jobs and economic development to livable neighborhoods and clean air. Metro has awarded \$6.6 million to 23 projects. Up to \$2.25 million is available annually, with \$15 million available through the life of the program.

## County Funding Sources

### ***Washington County Gas Tax***

Tualatin receives approximately \$90,000 per year currently in county gas tax revenue. These funds can be spent on a wide variety of transportation projects, though are currently only spent on construction and maintenance of City streets.

### ***Washington County Major Streets Transportation Improvement Program (MSTIP)***

Washington County's MSTIP program provides funding for major transportation improvements on roads throughout the county. The program is funded through property taxes with approximately \$35 million available each year. MSTIP has funded a wide variety of projects, including expansion of Highway 26, Intelligent Transportation System (ITS) and signal upgrades to Tualatin-Sherwood Road and numerous bicycle and pedestrian improvements. Only roads classified in the Washington County Functional Classification system are eligible for funding from MSTIP. Roads that would be eligible under this program include Tualatin-Sherwood Road, Boones Ferry Road, Nyberg Road, 65<sup>th</sup> Avenue, Sagert Street, and several others. Tualatin does not have any projects identified for funding in the current 5 year MSTIP program (MSTIP 3d), but several projects just outside the city, including the extension of 124<sup>th</sup> Avenue south to Tonquin Road, are funded. The city can continue to pursue funding for major improvements on these streets through this dedicated funding source.

### ***Washington County Minor Betterment Program***

Washington County administers the Minor Betterment Program (MBP), funded by an allocation from the County Road Fund (County Gas Tax). The Program funds small-scale interim improvements beyond routine maintenance but not large enough to be programmed as capital improvements. MBP projects are site-specific enhancements to the county's transportation system, projects are typically interim and intended to supplement routine maintenance and capital improvements. Eligible projects need to be on a county road, improve or resolve a specific situation, and address safety, capacity, environmental and/or connectivity issues. In fiscal year 2013/14 the County is funding sidewalk completing along SW Grahams Ferry Road with this funding source.

## Local Funding Sources

Major local funding sources include general fund revenues, road utility fees, system development charges, and the City's share of State Highway Fund revenue.

### **Road Utility Fees**

This fee is assessed to all residential and non-residential properties in the city of Tualatin to fund upkeep of the City's road system. Approximately \$650,000 in fee revenue was forecast for FY 2011. These revenues are made available exclusively for road maintenance. These fees represent a significant source of funding for maintenance of existing roads. Per city code (TMC 3-4), these funds may be spent on pavement rehabilitation, sidewalk maintenance, landscaping enhancements, replacing street trees and street lighting.

### **Transportation Development Taxes (TDT)**

Transportation Development Taxes (TDT) are one-time fees on new development that compensate for the increased traffic associated with new development, and are system development charges or impact fees for transportation. The City has authorized the collection of transportation system development charges since 1991. The former county-managed Transportation Impact Fee (TIF) program has been replaced with the Transportation Development Tax (TDT), approved by voters in 2008. TDTs cannot be expended on transportation operations or maintenance projects, and may be used exclusively for capital improvement projects. These taxes are payable to the City when a building or other development permit is issued. The outlook for TDT revenue is very uncertain, given limited development during the current economic downturn.

### **Potential Other Funding Sources for Future Projects**

The following funding sources and strategies may be available to the City in addition to the established programs listed above.

#### **Department of Energy: Energy Efficiency and Conservation Block Grants (EECBG)**

This program was initially funded through the American Recovery and Reinvestment Act of 2009. The current funding authorization expired in April 2012. Future funding for this program is currently uncertain. The program provided formula grants to states and competitive grants for projects that reduce fossil fuel emissions, reduce total energy use of eligible grantees, and improve energy efficiency of transportation and other sectors. Tualatin may be eligible for competitive grants if this program is funded in future federal budgets.

#### **Local Improvement Districts (LID)**

LIDs are created by property owners within a district of a city to raise revenues for constructing improvements within the district boundaries. LIDs may be used to assess property owners for improvements that benefit properties and are secured by property liens. Property owners typically enter into LIDs because of the economic or personal advantages of the improvements. The City would work with property owners to acquire financing at lower interest rates than under typical financing methods. The formation of LIDs is governed by state law and local jurisdictional development codes. LID revenues can only be used on capital projects. LID revenues can be combined with other revenue sources to fully fund projects.

#### **Transit Utility Fee**

A number of jurisdictions in Oregon have implemented transportation utility fees that fund road system maintenance, transportation improvements, and transit service. The city of Corvallis, Oregon recently enacted a Transit Utility Fee in 2011 to support transit operations. These fees are typically collected on monthly residential and business utility bills and assessed on a per-housing unit basis, with businesses and industry charged rates based on the type of business or number of employees. A modest monthly transit utility fee could fund capital improvements and transit operations in Tualatin. Fee revenue can also be used to support or improve existing transit services in Tualatin, like the Tualatin Chamber of Commerce Shuttle service. A transit utility fee would provide dedicated and reliable funding for transit projects identified in the Transit Plan.

## Urban Renewal Areas

The City of Tualatin has successfully implemented two urban renewal areas over the past 25 years in the central area and Leveton. Both Urban renewal areas have expired and are no longer collecting revenue. Urban Renewal Areas (URA) remain an option for the City in the future whereby tax increment financing (TIF) can be used for a variety of improvements within the URA. With TIF, the county assessor “freezes” the assessed value of properties within the URA and the property taxes collected above those that were collected when the property values were frozen are used to pay for improvements within the URA. This financing method assumes that property values within the urban renewal area will increase over time. URA designations are primarily used as an economic development tool, but may be useful for targeting areas in the City with serious improvement needs.

## Revenue and General Obligation Bonds

Bonding allows municipal and county government to finance construction projects by borrowing money and paying it back over time, with interest. Financing requires smaller regular payments over time compared to paying the full cost at once, but financing increases the total cost of the project by adding interest. General Obligation Bonds are often used to pay for construction of large capital improvements and must be approved by a vote of the public. These bonds add the cost of the improvement to property taxes over a period of time. Tualatin could consider issuing a General Obligation Bond to pay for significant transportation improvement projects identified within the City.

## Parking Fees

The City does not currently charge for parking, but does charge an annual fee to business owners in the “core area parking district” that funds parking maintenance in the immediate core area. Income generated by charging parking fees could be used to implement a variety of transportation projects. The collection system would require purchase of parking meter infrastructure, careful study of where to install meters, and analysis of the appropriate fee amount to charge drivers.

## Prioritization

Prioritization of projects within this TSP is separated into three categories: short-term, medium-term, and long-term. Short term projects are expected to be built within 0-5 years, while medium-term are 5-10 years, and long-term projects are expected to be built in the 10-20 year time frame. Prioritization is determined based on a combination of the most important projects to implement first, the ease of implementation, and the potential cost – some projects will take a number of years to identify and secure funding. Some projects will also need regional coordination and support, which may take time to secure an agreement. Prioritization is an estimate: long-term projects may be implemented sooner than 10-20 years due to funding becoming available, a high degree of community support or other factors. The suggested priority for projects in this TSP is a general guide, and not a required timeframe.

## Fiscally Constrained TSP Project List

Based on an analysis of existing and likely future funding sources, the Project Team assumed the City of Tualatin will have around \$16 million in funds for transportation over the next 20 years. All projects currently labeled short and medium-term projects fall within this constrained list, with the exception of upgrading SW Myslony Street (R5). The fiscally constrained list represents the likely projects that the City will be able to fund before the next TSP update. The long-term priorities (and the project on SW Myslony Street) that are more expensive and complex are the preferred transportation system in Tualatin, and the City will need to look for additional funding such as grants and potential borrowing strategies to implement these projects. These projects will also likely require a suite of funding strategies to implement.

## Policy and Code Language

In preparing implementation measures for the TSP, the project team evaluated the City's TSP and development code for compliance with the TPR and the RTFP. These state and regional regulations are intended to increase the amount of coordination between public agencies, protect transportation investments, support efficient urban development, and promote the use of modes other than single-occupancy vehicles. The project team found that the TSP and development code were largely in compliance with the TPR and RTFP, but that some updates to policy and code would be needed for full compliance. The evaluation findings are included in the TSP as Appendix F.

There were limited compliance issues and needed amendments identified through the process of evaluating the City's development code against TPR and RTFP requirements. The proposed code amendments represent refinements to the code, and in most cases they are minor or administrative. The following represent the types of amendments proposed to implement the TSP and comply with state and regional regulations:

- ◆ Supporting more communication between the City and transportation-related agencies on applications for architectural review and proposed plan amendments
- ◆ Extending requirements for short and direct pedestrian and bicycle routes to general multi-family housing, commercial, industrial, public, and semi-public development
- ◆ Treating long and wide driveways more like streets in terms of lining up and connecting with other streets
- ◆ Setting up conditions when crossings on transit streets need to be provided
- ◆ Allowing on-street parking to count toward off-street parking requirements
- ◆ Differentiating existing bicycle parking requirements into long-term and short-term bicycle parking
- ◆ Permitting on-street freight loading under certain conditions

These proposed amendments will be carried through the hearings and adoption process concurrently with the TSP document itself. Language for proposed code changes can be requested from City Staff.

## Tualatin TSP Policies

The following TSP policies were included in each of the modal plans, and repeated here for quick reference.

### Functional Classification

- ◆ **Functional Classification Policy 1:** Major and minor arterials will comprise the main backbone of the freight system, ensuring that freight trucks are able to easily move within, in, and out of the City
- ◆ **Functional Classification Policy 2:** Continue to construct existing and future roadways to standard when possible for the applicable functional classification to serve transportation needs within the City

## Roadway

- ◆ **Roadway Policy 1:** Implement design standards that provide clarity to developers while maintaining flexibility for environmental constraints.
- ◆ **Roadway Policy 2:** Ensure that street designs accommodate all anticipated users including transit, freight, bicyclists and pedestrians, and those with limited mobility.
- ◆ **Roadway Policy 3:** Work with Metro and adjacent jurisdictions when extending roads or multi-use paths from Tualatin to a neighboring City.

## Access Management

- ◆ **Access Management Policy 1:** No new driveways or streets on arterial roadways within the City, except where noted in the TDC, Chapter 75, usually when no alternative access is available
- ◆ **Access Management Policy 2:** Where a property abuts an arterial and another roadway, the access for the property shall be located on the other roadway, not the arterial
- ◆ **Access Management Policy 3:** Adhere to intersection spacing included in Chapter 75 of the TDC
- ◆ **Access Management Policy 4:** Limit driveways to right-in, right-out (where appropriate) through raised medians or other barriers to restrict left turns
- ◆ **Access Management Policy 5:** Look for opportunities to create joint accesses for multiple properties, where possible, to reduce the number of driveways on arterials
- ◆ **Access Management Policy 6:** No new single-family home, duplex or triplex driveways on major collector roadways within the City, unless no alternative access is available
- ◆ **Access Management Policy 7:** On collector roadways, residential, commercial and industrial driveways where the frontage is greater or equal to 70 feet are permitted. Minimum spacing at 100 feet. Uses with less than 50 feet of frontage shall use a common (joint) access where available

## Transit

- ◆ **Transit Policy 1:** Partner with TriMet to jointly develop and implement a strategy to improve existing transit service in Tualatin.
- ◆ **Transit Policy 2:** Partner with the Tualatin Chamber of Commerce to support grant requests that would expand the Tualatin Shuttle services.
- ◆ **Transit Policy 3:** Partner with TriMet, Metro, and neighboring communities to plan the development of high-capacity transit in the Southwest Corridor, as adopted in the Metro High Capacity Transit System Plan.
- ◆ **Transit Policy 4:** Partner with TriMet, Metro, and neighboring communities to plan development of high-capacity transit connecting Tualatin and Oregon City, as adopted in the Metro High Capacity Transit System Plan.
- ◆ **Transit Policy 5:** Coordinate with ODOT and neighboring communities on conversations related to Oregon Passenger Rail between Portland and Eugene.





- ◆ **Transit Policy 6:** Develop and improve pedestrian and bicycle connections and access to transit stops.
- ◆ **Transit Policy 7:** Encourage higher-densities near high-capacity transit service.
- ◆ **Transit Policy 8:** Metro in the RTP calls for increased WES service frequency. The City will coordinate with TriMet, Metro, and ODOT to explore service frequency improvements and the possible inclusion of a second WES station in south Tualatin.

## Bicycle and Pedestrian

- ◆ **Bicycle and Pedestrian Policy 1:** Support Safe Routes to Schools (SRTS) for all Tualatin schools
- ◆ **Bicycle and Pedestrian Policy 2:** Work with partner agencies to support and build trails
- ◆ **Bicycle and Pedestrian Policy 3:** Allow wider sidewalks downtown for strolling and outdoor cafes
- ◆ **Bicycle and Pedestrian Policy 4:** Add benches along multi-use paths for walkers throughout the City (especially in the downtown core)
- ◆ **Bicycle and Pedestrian Policy 5:** Develop and implement a toolbox, consistent with Washington County, for mid-block pedestrian crossings
- ◆ **Bicycle and Pedestrian Policy 6:** Implement bicycle and pedestrian projects to help the City achieve the regional non-single-occupancy vehicle modal targets in Table 16 (earlier in this chapter; its source is the RTFP)
- ◆ **Bicycle and Pedestrian Policy 7:** Implement bicycle and pedestrian projects to provide pedestrian and bicycle access to transit and essential destinations for all mobility levels, including direct, comfortable, and safe pedestrian and bicycle routes
- ◆ **Bicycle and Pedestrian Policy 8:** Ensure that there are bicycle and pedestrian facilities at transit stations
- ◆ **Bicycle and Pedestrian Policy 9:** Create on- and off-street bicycle and pedestrian facilities connecting residential, commercial, industrial, and public facilities such as parks, the library, and school
- ◆ **Bicycle and Pedestrian Policy 10:** Create obvious and easy to use connections between on- and off-street bicycle and pedestrian facilities, and integrate off-street paths with on-street facilities

## Freight

- ◆ **Freight Policy 1:** Continue to coordinate with PNWR and TriMet to ensure that railroad crossings are safe and have few noise impacts on adjacent neighborhoods
- ◆ **Freight Policy 2:** Look for opportunities to shift goods shipments to rail to help reduce the demand for freight on Tualatin's roads.
- ◆ **Freight Policy 3:** Look for opportunities to create multi-modal hubs to take advantage of the freight rail lines

## Transportation Demand Management

- ◆ **TDM Policy 1:** Support demand reduction strategies, such as ride sharing, preferential parking, and flextime programs
- ◆ **TDM Policy 2:** Partner with the Chamber of Commerce, the Westside Transportation Alliance, major employers, and business groups to implement TDM programs
- ◆ **TDM Policy 3:** Explore the use of new TDM strategies to realize more efficient use of the City's transportation system

- ◆ **TDM Policy 4:** Support Washington County’s regional TDM programs and policies to reduce the number of single-occupancy vehicle (SOV) trips
- ◆ **TDM Policy 5:** Promote the use and expansion of the Tualatin Shuttle program



## Performance Measures

Metro’s *Regional Transportation Plan* requires the following performance measures in a City’s TSP: safety, vehicle miles traveled per capita, freight reliability, congestion, and walking, bicycling and transit mode shares to evaluate and monitor performance of the TSP. The Table below includes the measure categories, the specific performance measures for the Tualatin TSP, the applicable system deficiencies, and the associated TSP projects that help address the deficiencies, and thus, help meet the performance measures.

Category	Metro’s 2035 Performance Metrics	Tualatin TSP Performance Measure	Tualatin System Deficiencies	Tualatin TSP projects that address the deficiencies
Safety	By 2035, reduce the number of pedestrian, bicyclist, and motor vehicle occupant fatalities plus serious injuries each by 50% compared to 2005.	<p>Reduce fatalities for drivers, walkers, and bikers from existing conditions</p> <p>Address known deficiencies and high-accident areas as high-priority projects</p> <p>Reduce the number of County and State SPIS sites within the City.</p>	<p>The three high crash locations in Tualatin are Tualatin-Sherwood Road/ Boones Ferry, Tualatin-Sherwood Road/ Martinazzi, and SW Nyberg Street/I-5 Southbound ramps.</p> <p>The first two of these roads are also on the Washington County’s SPIS list along with the Lower Boones Ferry and Bridgeport intersection. ODOT’s nearby SPIS locations are limited to I-5 and OR 99W.</p>	<p>Projects at the Nyberg interchange and I-5 will improve safety for bicyclists and pedestrians. The suite of intersection upgrades at Tualatin-Sherwood Road/ Boones Ferry and Tualatin-Sherwood Road/Martinazzi will address both congestion and safety. Completing the multi-use path network and bicycle improvements near Lower Boones Ferry and Bridgeport will reduce conflicts between vehicles and bicyclists and improve safety for all users.</p>

Category	Metro's 2035 Performance Metrics	Tualatin TSP Performance Measure	Tualatin System Deficiencies	Tualatin TSP projects that address the deficiencies
Congestion	By 2035, reduce vehicle hours of delay (VHD) per person by 10 percent compared to 2005	<p>On Washington County and ODOT owned roads the v/c is less than or equal to 0.99</p> <p>On City roads, LOS D or E depending on the road</p> <p>In downtown Tualatin (a Metro designated Town Center) – 2-hour peak hour standards:</p> <ul style="list-style-type: none"> <li>• First peak hour the v/c is less than or equal to 1.1</li> <li>• Second peak hour the v/c is less than or equal to 0.99</li> </ul>	Analysis shows two intersections not meeting standards (SW Teton Ave/SW Tualatin Road, and SW Martinazzi Ave/SW Sagert) which increased to 11 intersections in the future conditions analysis	<p>Roadway capacity and intersection optimization projects improve traffic flow and help maintain future congestion within the existing standards. Additionally, the TDM/TSM programs, increased transit, and more complete bicycle and pedestrian network will help reduce vehicle demand on roads within Tualatin.</p> <p>The preferred system of transportation improvements meets the relevant requirements for Town Centers.</p>

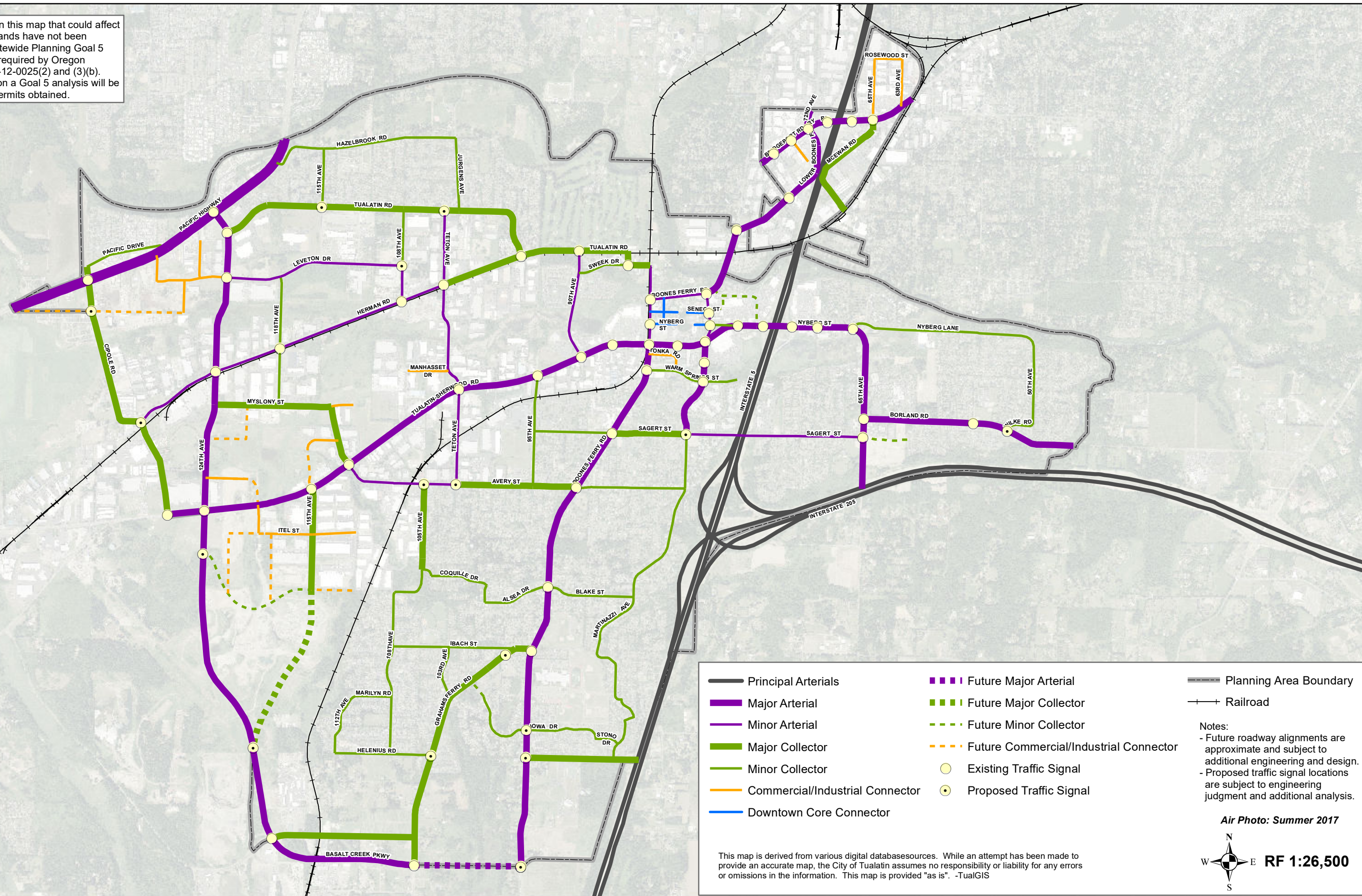
Category	Metro's 2035 Performance Metrics	Tualatin TSP Performance Measure	Tualatin System Deficiencies	Tualatin TSP projects that address the deficiencies
Freight Reliability	By 2035, reduce vehicle hours of delay truck trip by 10 percent compared to 2005	Reduce vehicle delay for truck trips on identified truck routes  Improve reliability for truck trips on identified truck routes	A number of freight routes within the City experience delay currently, including the roads around the downtown core (SW Tualatin-Sherwood Road, SW Boones Ferry Road, and SW Martinazzi Avenue). Travel times during the afternoon peak hour are not predictable, and delay can vary from day to day, increasing transportation costs for businesses that rely on shipping.	Optimizing signal timing on regional roadways, encouraging off-peak travel on both SW Herman Road, and SW Tualatin-Sherwood Road help reduce truck delay. Capacity projects on Tualatin-Sherwood Road, sections of Avery, Teton, Herman, Myslony, and others, as well as turn lane, intersection configurations, and coordinated signals at specific locations help reduce vehicle hours of delay.

Category	Metro’s 2035 Performance Metrics	Tualatin TSP Performance Measure	Tualatin System Deficiencies	Tualatin TSP projects that address the deficiencies
Walking, Biking, Transit, and Non-SOV	<p>By 2035, triple walking, biking, and transit mode share compared to 2005.</p> <p>Town Center mode share is 45-55% non-drive alone modal target for Downtown Tualatin and 40-45 percent for other areas of the City.</p>	<p>Implement policies and projects to move towards the regional non-SOV mode share for the appropriate areas in the City</p> <p>Work toward achieving the Metro non-SOV mode share targets of 45 to 55 percent for Downtown Tualatin and 40 to 45 percent for other areas of the City.</p>	<p>There are a number of gaps in the sidewalk, bike lane, and multi-use path network in Tualatin. There are also few wayfinding signs to direct pedestrians and bicyclists to the existing multi-use paths. Current mode share for those traveling to work who live in Tualatin is 77.6 percent drive to work alone, 7.4 percent carpool, 4.2 percent take transit, 2.9 percent walk, and 0.4 percent bicycle.</p>	<p>The TDM/TSM programs, increased transit, and more complete bicycle and pedestrian network will help increase the percentage of residents in Tualatin who walk, bicycle, take transit, and carpool in the downtown core and other areas of the City.</p>
Climate Change	<p>By 2035 reduce transportation related carbon dioxide emissions by 40 percent below 1990 levels</p>	<p>Strive to reduce VMT per capita by 10 percent compared to 2010</p>	<p>There are more jobs in Tualatin than there are workers to fill those jobs in the City, additionally, 75 percent of residents in Tualatin work outside of the City, which increases VMT per capita.</p>	<p>The TDM/TSM programs, increased transit, and more complete bicycle and pedestrian network will help decrease per capita VMT and the associated transportation-related emissions to meet this performance measure.</p>

The projects and policies included in the Tualatin TSP meaningfully contribute towards Metro achieving its performance metrics by addressing safety concerns, reducing congestion, improving freight reliability, and providing non-driving options that help affect mode split and VMT per capita. Combined with other metropolitan area cities Tualatin’s TSP will help Metro reach its 2035 Performance Targets.

# Figure 11-1: Functional Classification and Traffic Signal Plan

The projects embodied in this map that could affect rivers, streams and wetlands have not been analyzed in terms of Statewide Planning Goal 5 (Natural Resources) as required by Oregon Administrative Rule 660-12-0025(2) and (3)(b). Thus, prior to construction a Goal 5 analysis will be completed and proper permits obtained.



— Principal Arterial	■ Future Major Arterial	— Planning Area Boundary
■ Major Arterial	■ Future Major Collector	—+— Railroad
■ Minor Arterial	--- Future Minor Collector	
■ Major Collector	- - - Future Commercial/Industrial Connector	
■ Minor Collector	● Existing Traffic Signal	
■ Commercial/Industrial Connector	○ Proposed Traffic Signal	
■ Downtown Core Connector		

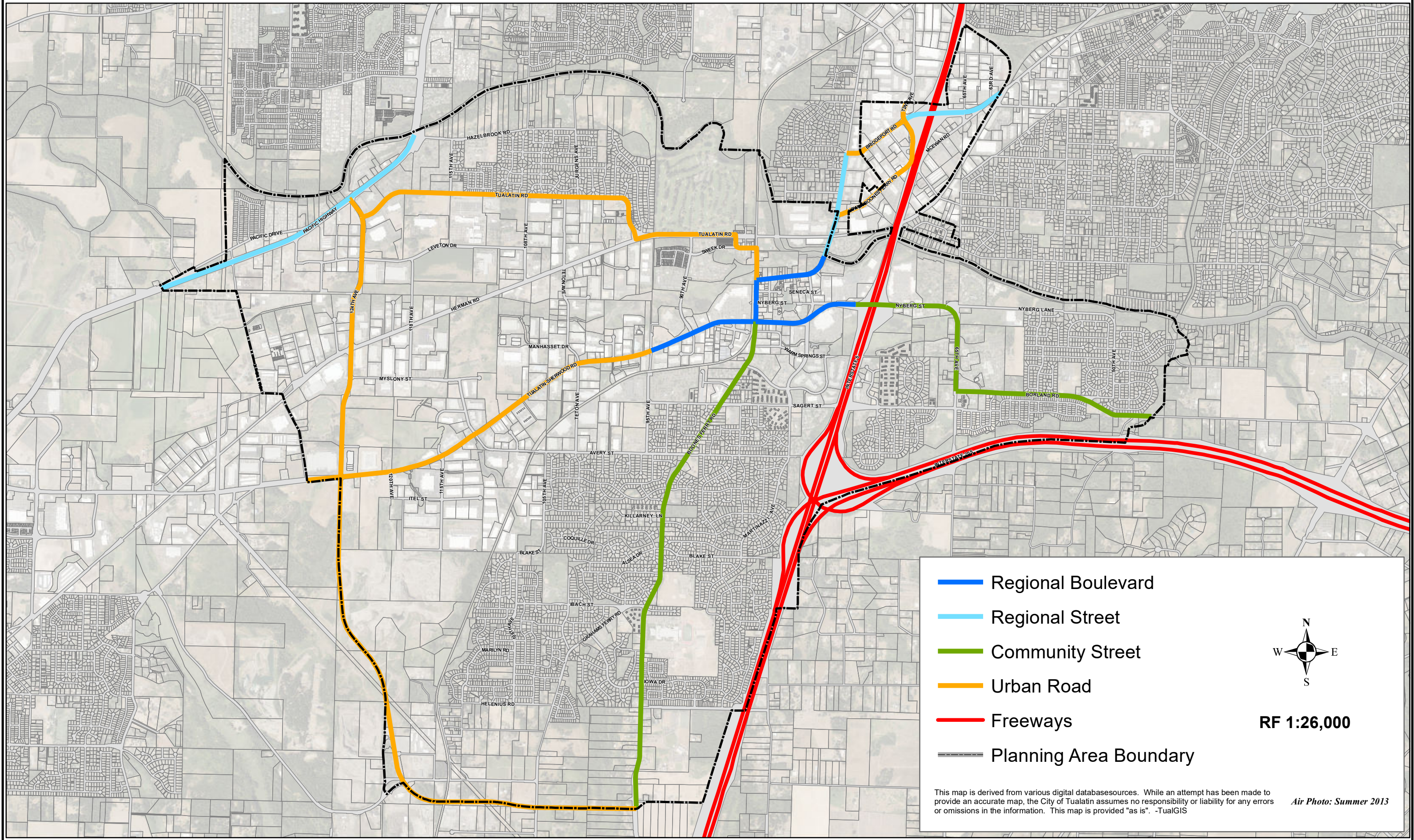
Notes:  
 - Future roadway alignments are approximate and subject to additional engineering and design.  
 - Proposed traffic signal locations are subject to engineering judgment and additional analysis.

**Air Photo: Summer 2017**

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S



This map is derived from various digital databasesources. While an attempt has been made to provide an accurate map, the City of Tualatin assumes no responsibility or liability for any errors or omissions in the information. This map is provided "as is". -TualGIS

# Figure 11-2: Metro Regional Street Design System





**Figure 11-3: Local Street Plan**

-  Local Street Connection
-  Planning Area Boundary

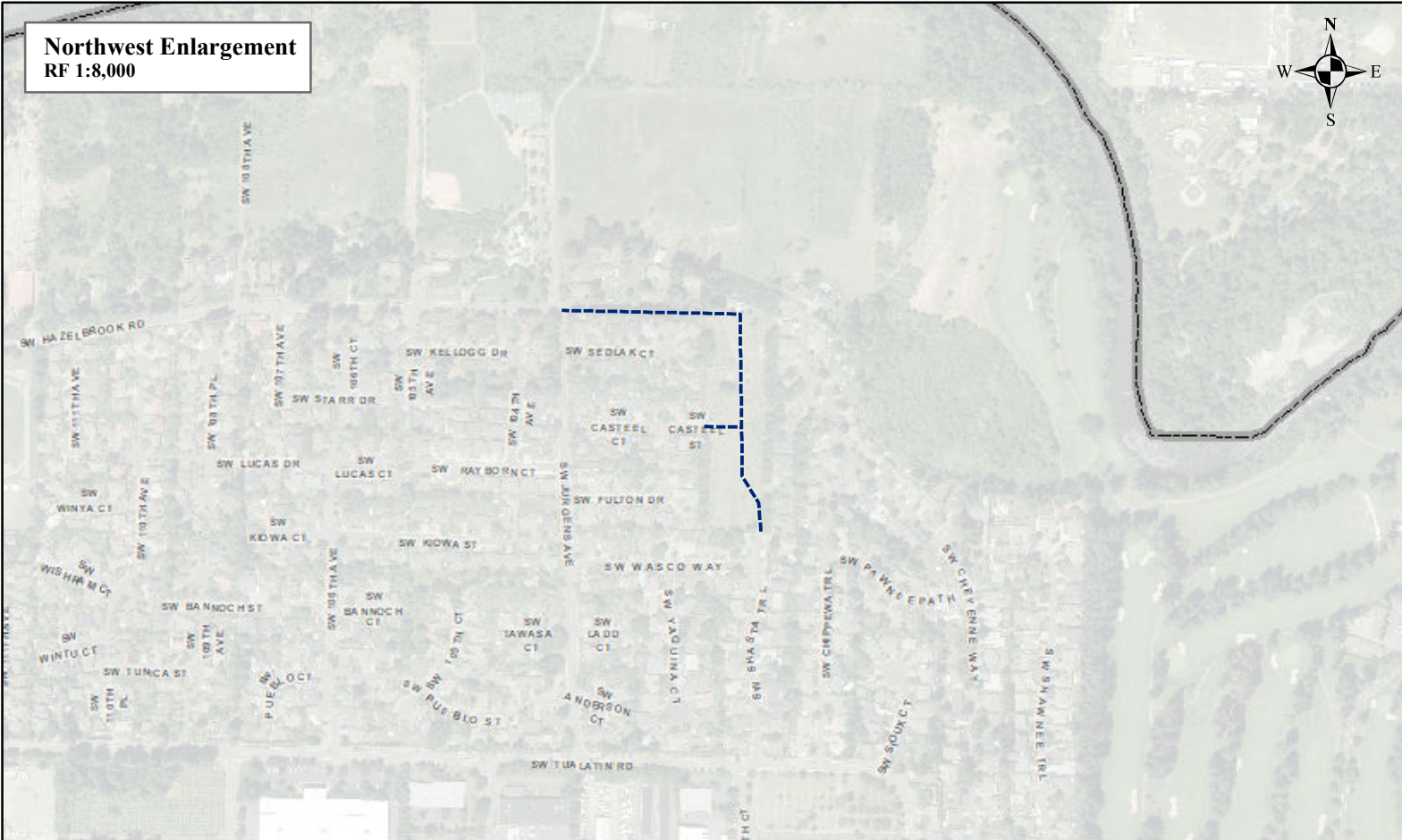
Air Photo: Summer 2017

Note:  
Future roadway alignments are approximate and subject to additional engineering and design.

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Printed TBD



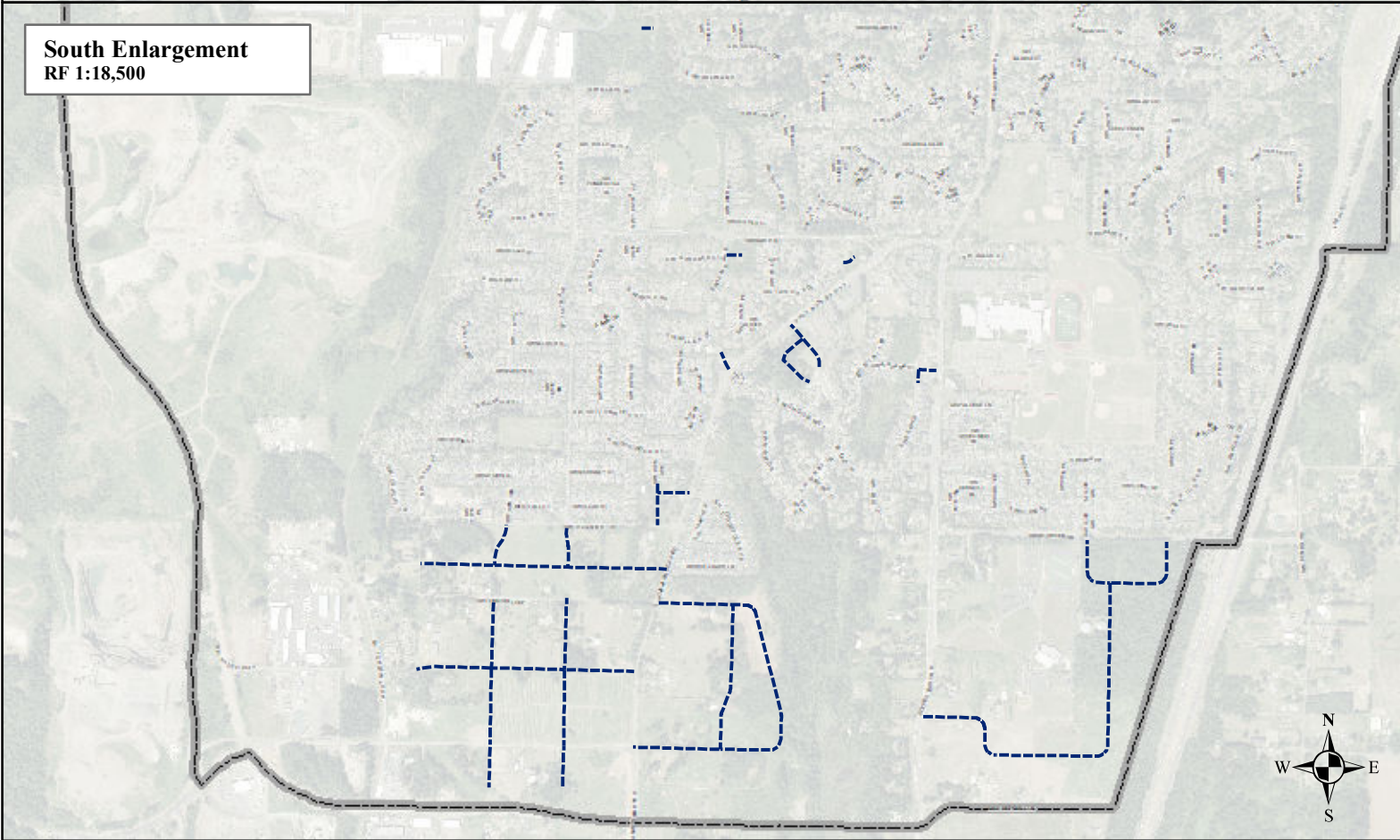
**Northwest Enlargement**  
RF 1:8,000



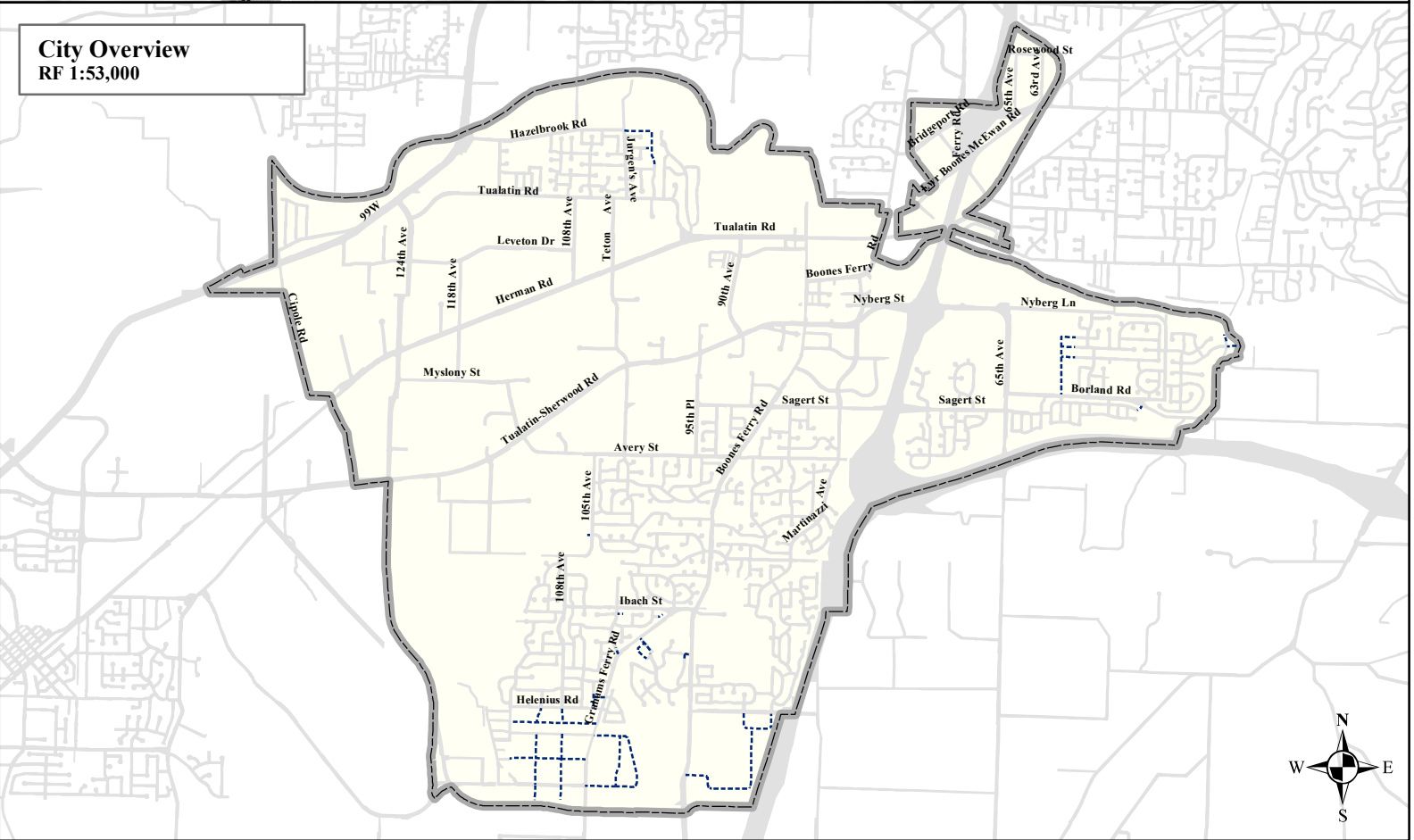
**East Enlargement**  
RF 1:9,000



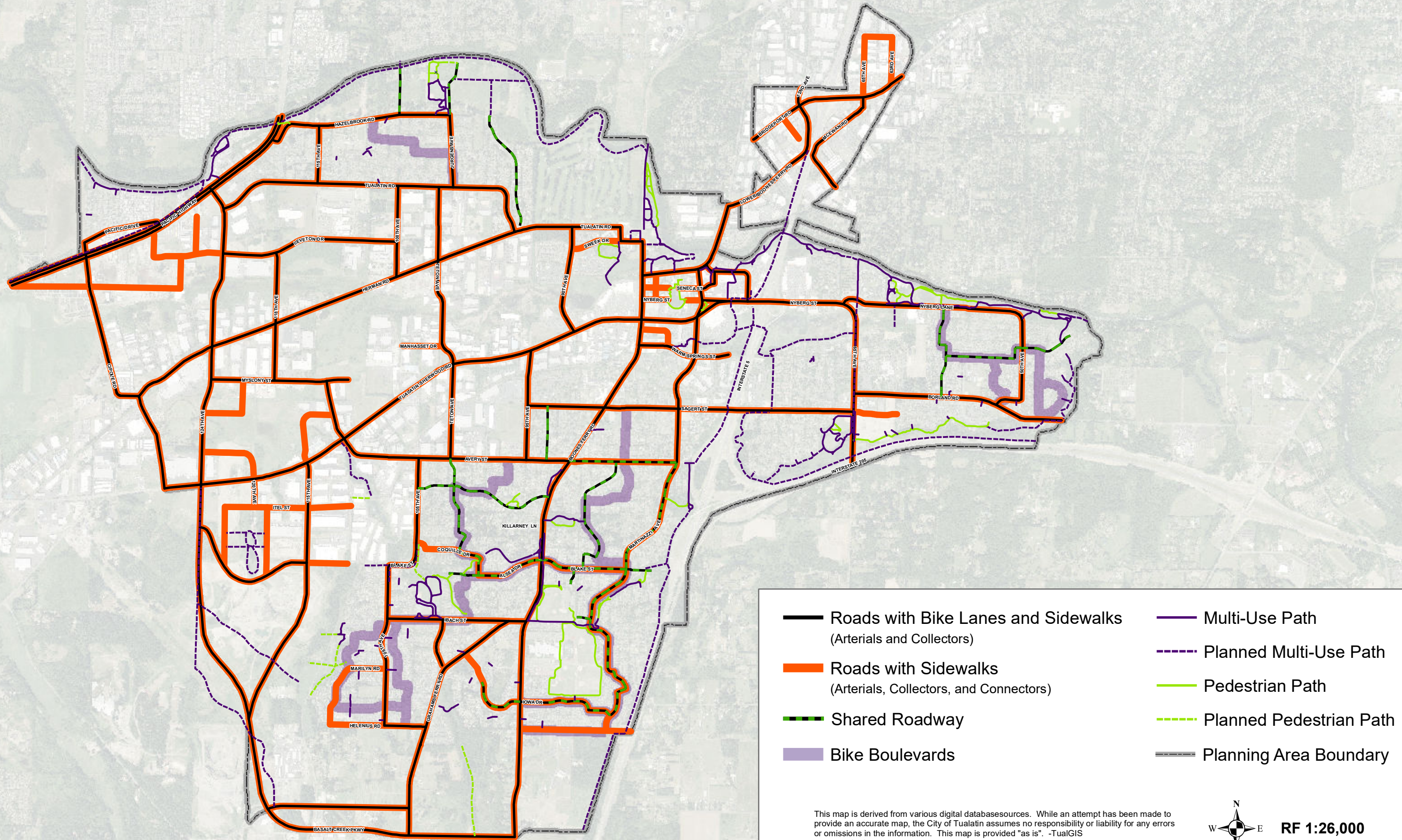
**South Enlargement**  
RF 1:18,500












**City Overview**  
RF 1:53,000



**Figure 11-4: Bicycle and Pedestrian Plan**

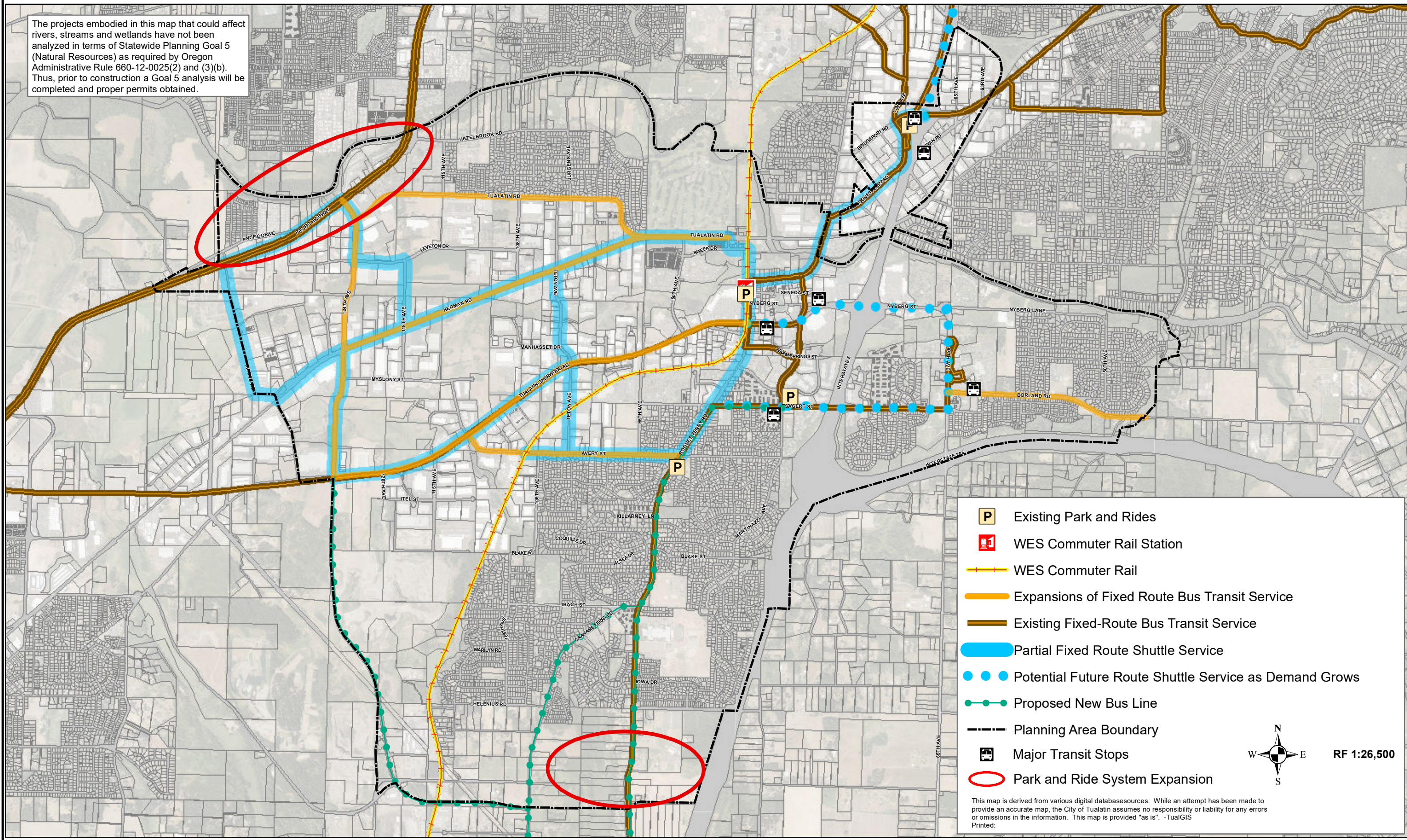


- |   |   |
|---|---|
|  Roads with Bike Lanes and Sidewalks<br>(Arterials and Collectors) |  Multi-Use Path          |
|  Roads with Sidewalks<br>(Arterials, Collectors, and Connectors)   |  Planned Multi-Use Path  |
|  Shared Roadway  |  Pedestrian Path         |
|  Bike Boulevards   |  Planned Pedestrian Path |
|   |  Planning Area Boundary  |

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Printed: 2/27/2019

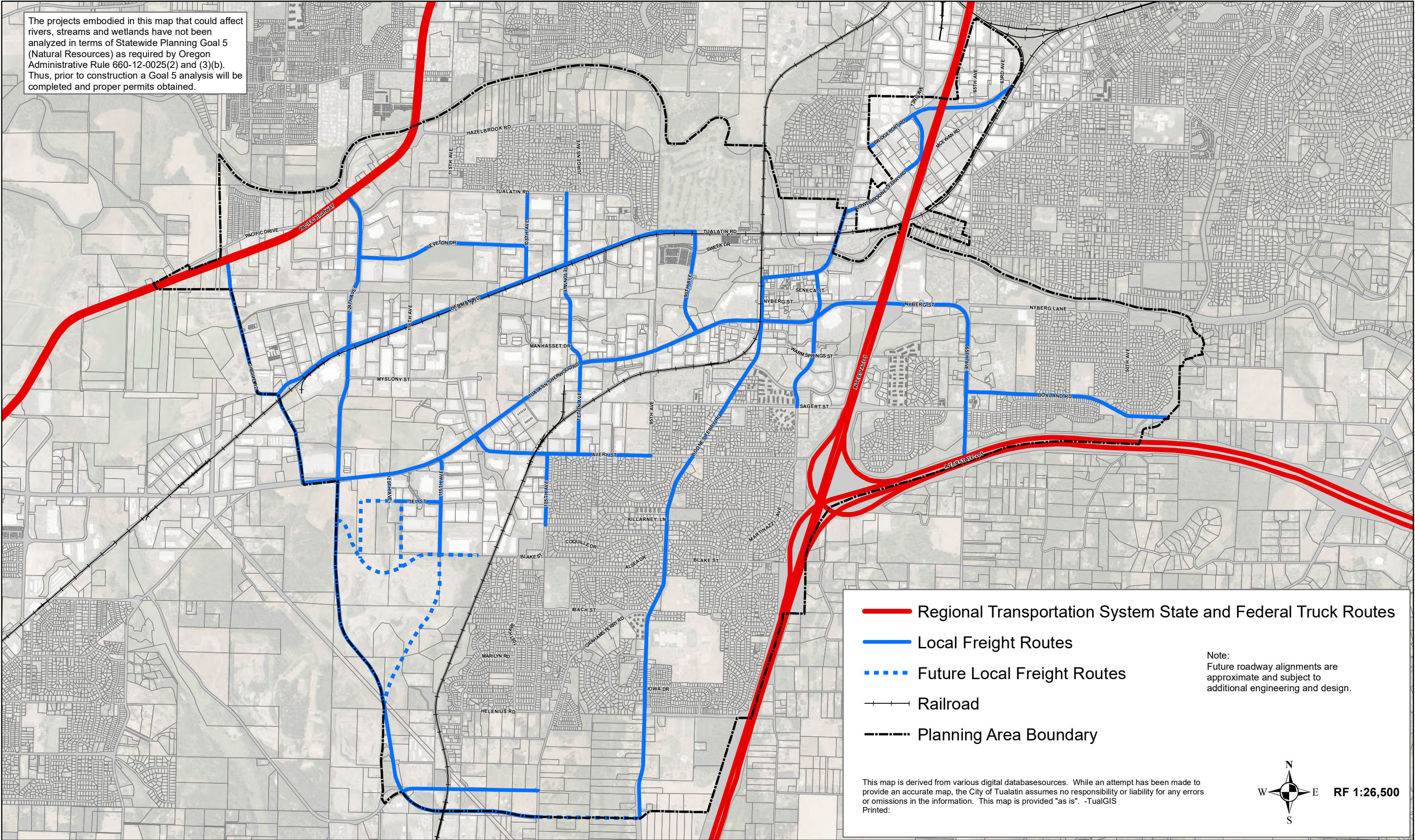
# Figure 11-5: Tualatin Transit Plan

The projects embodied in this map that could affect rivers, streams and wetlands have not been analyzed in terms of Statewide Planning Goal 5 (Natural Resources) as required by Oregon Administrative Rule 660-12-0025(2) and (3)(b). Thus, prior to construction a Goal 5 analysis will be completed and proper permits obtained.



# Figure 11-6: Freight Routes

The projects embodied in this map that could affect rivers, streams and wetlands have not been analyzed in terms of Statewide Planning Goal 5 (Natural Resources) as required by Oregon Administrative Rule 660-12-0025(2) and (3)(b). Thus, prior to construction a Goal 5 analysis will be completed and proper permits obtained.



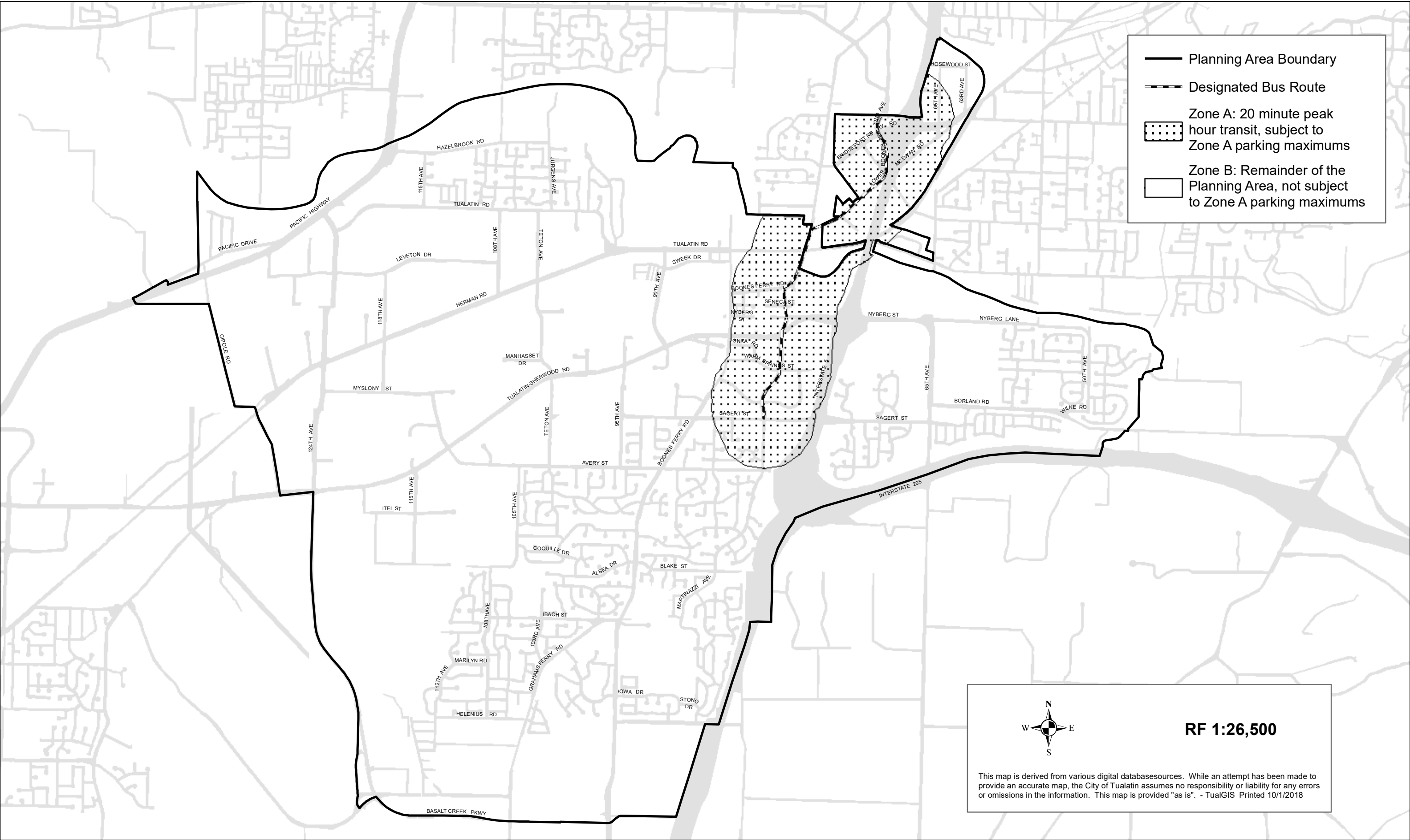
- Regional Transportation System State and Federal Truck Routes
- Local Freight Routes
- - - Future Local Freight Routes
- + + + Railroad
- - - Planning Area Boundary





Note:  
Future roadway alignments are approximate and subject to additional engineering and design.


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Printed:

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**Figure 73-3: Parking Maximum Map**



-  Planning Area Boundary
-  Designated Bus Route
-  Zone A: 20 minute peak hour transit, subject to Zone A parking maximums
-  Zone B: Remainder of the Planning Area, not subject to Zone A parking maximums

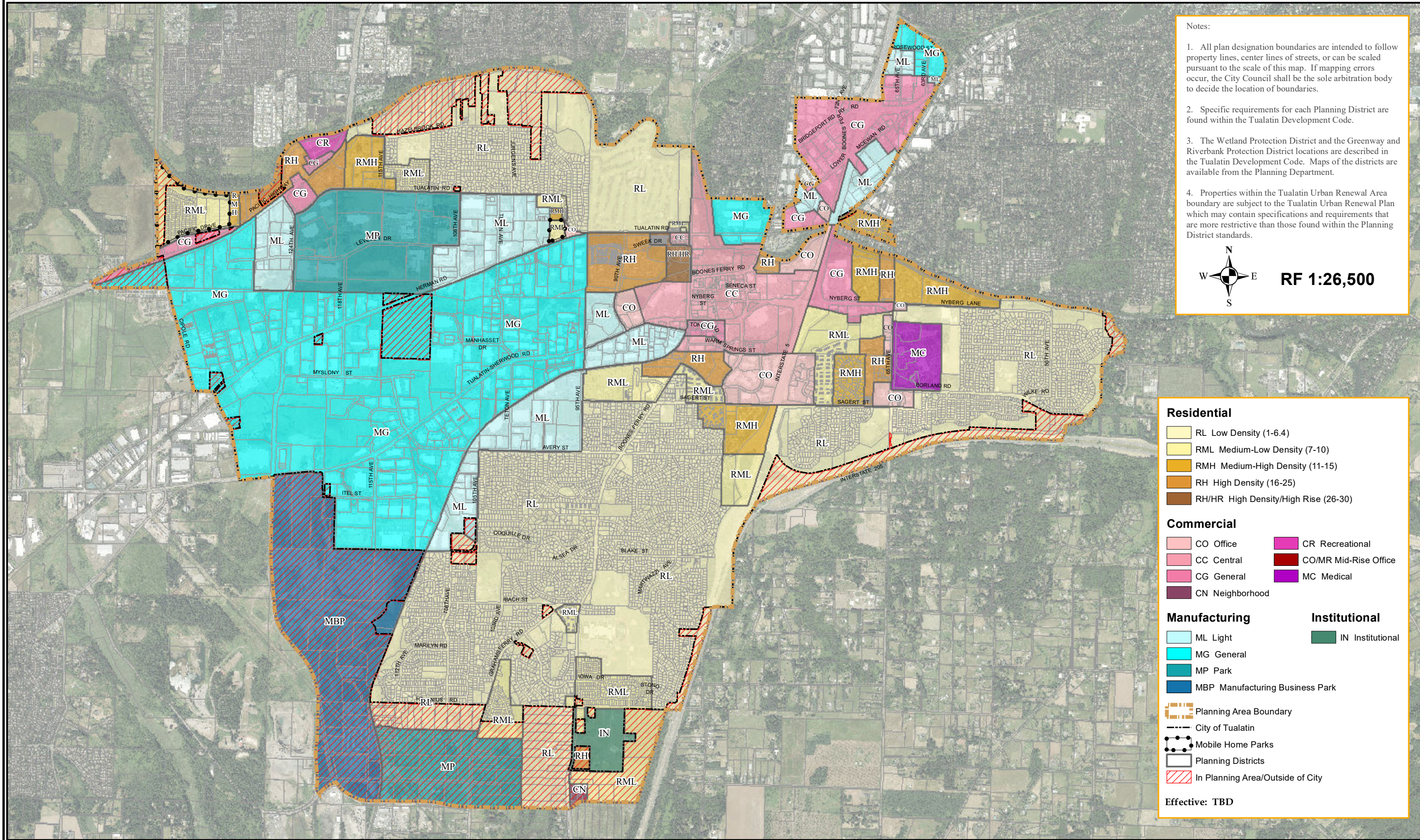


**RF 1:26,500**

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# Map 9-1 Community Plan Map - DRAFT

Exhibit 11



Notes:

1. All plan designation boundaries are intended to follow property lines, center lines of streets, or can be scaled pursuant to the scale of this map. If mapping errors occur, the City Council shall be the sole arbitration body to decide the location of boundaries.
2. Specific requirements for each Planning District are found within the Tualatin Development Code.
3. The Wetland Protection District and the Greenway and Riverbank Protection District locations are described in the Tualatin Development Code. Maps of the districts are available from the Planning Department.
4. Properties within the Tualatin Urban Renewal Area boundary are subject to the Tualatin Urban Renewal Plan which may contain specifications and requirements that are more restrictive than those found within the Planning District standards.



**Residential**

- RL Low Density (1-6.4)
- RML Medium-Low Density (7-10)
- RMH Medium-High Density (11-15)
- RH High Density (16-25)
- RH/HR High Density/High Rise (26-30)

**Commercial**

- CO Office
- CC Central
- CG General
- CN Neighborhood
- CR Recreational
- CO/MR Mid-Rise Office
- MC Medical

**Manufacturing**

- ML Light
- MG General
- MP Park
- MBP Manufacturing Business Park

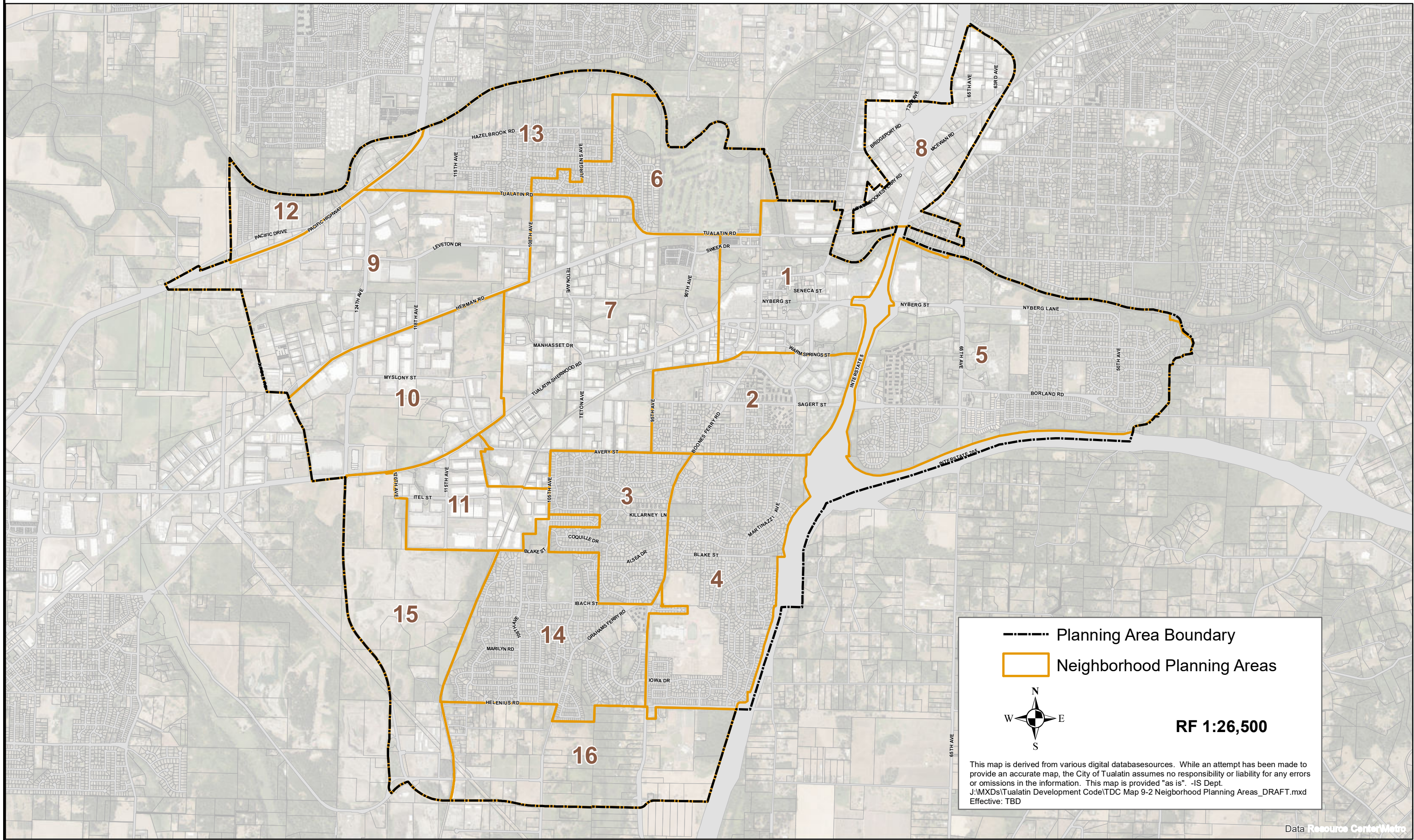
**Institutional**

- IN Institutional

Planning Area Boundary  
 City of Tualatin  
 Mobile Home Parks  
 Planning Districts  
 In Planning Area/Outside of City

Effective: TBD

# Map 9-2: Neighborhood Planning Areas - DRAFT



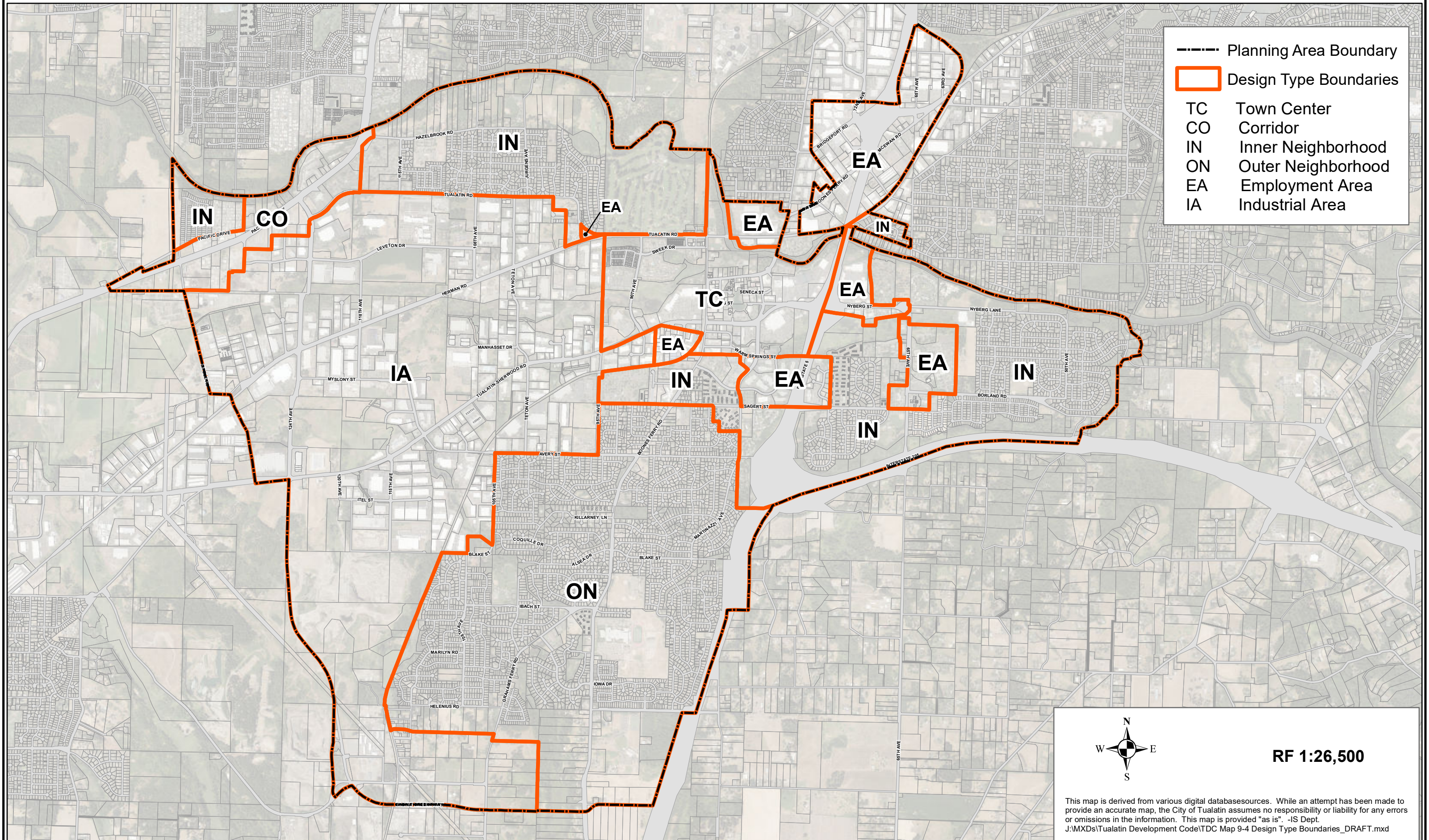
--- Planning Area Boundary

Neighborhood Planning Areas

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J:\MXDs\Tualatin Development Code\TDC Map 9-2 Neighborhood Planning Areas\_DRAFT.mxd  
Effective: TBD

# Map 9-4: Design Type Boundaries - DRAFT



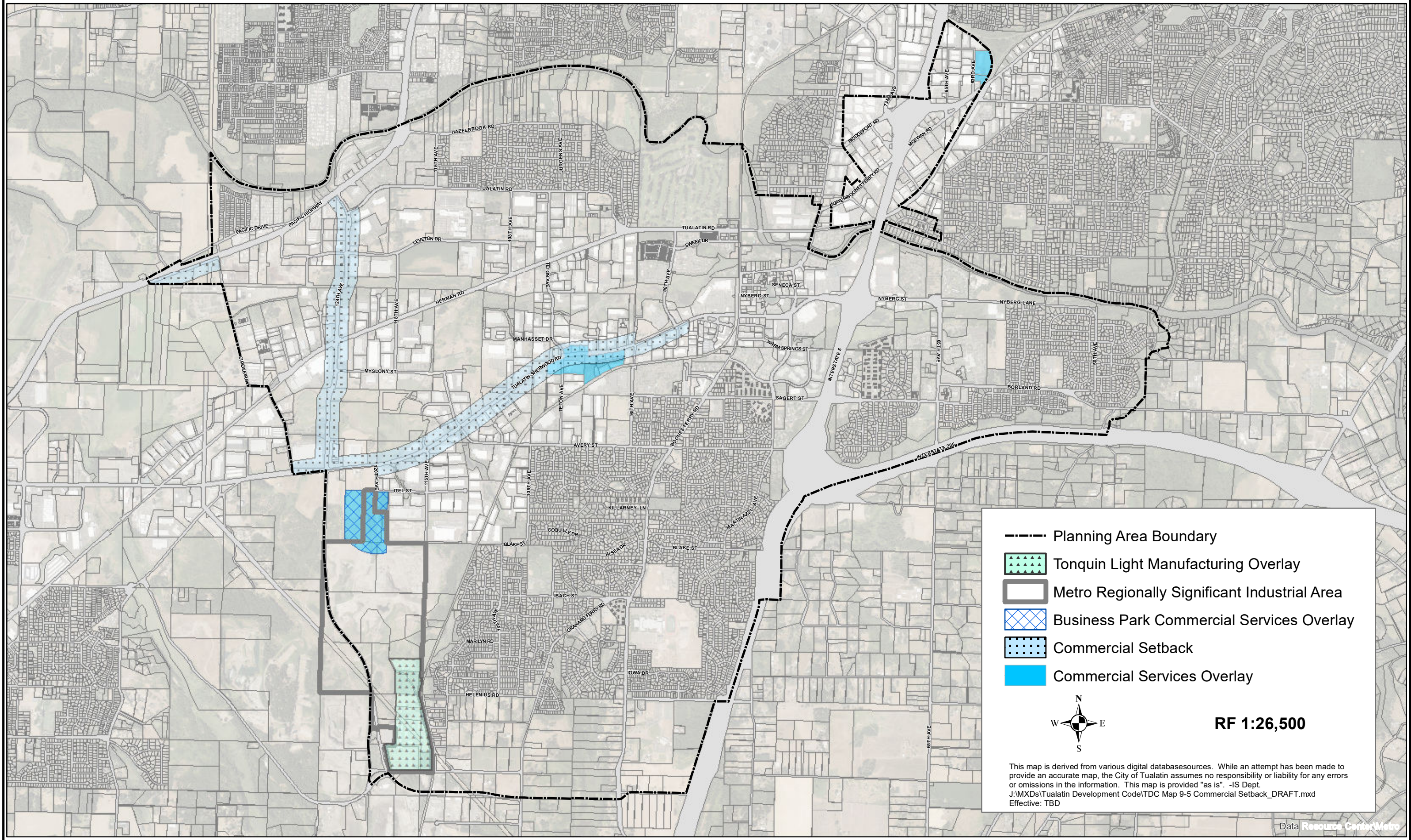
	Planning Area Boundary
	Design Type Boundaries
TC	Town Center
CO	Corridor
IN	Inner Neighborhood
ON	Outer Neighborhood
EA	Employment Area
IA	Industrial Area

**RF 1:26,500**

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J:\MXDs\Tualatin Development Code\TDC Map 9-4 Design Type Boundaries\_DRAFT.mxd



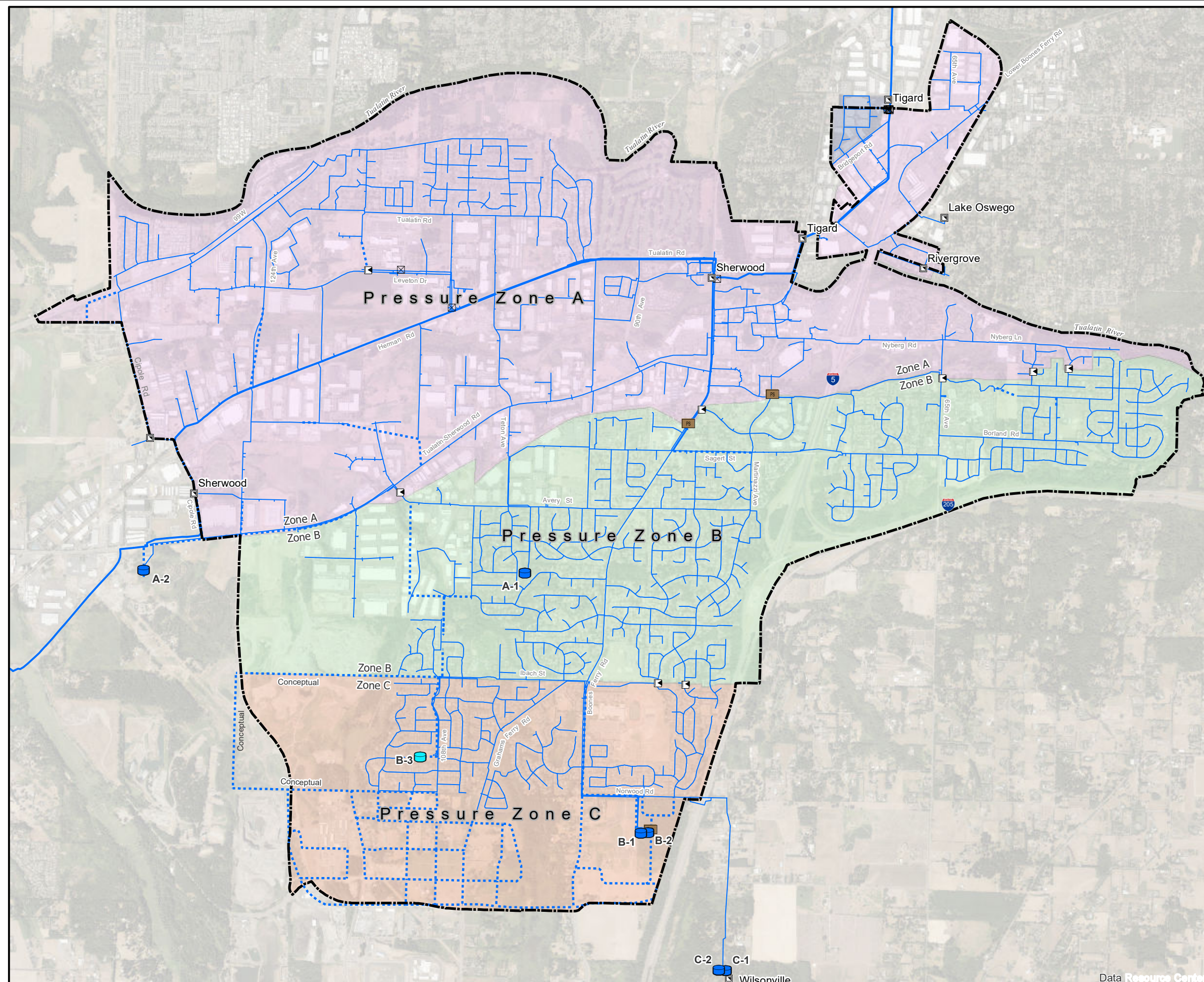
# Map 9-5: Special Commercial Setback & Commercial Services Overlay - DRAFT

















Planning Area Boundary  
 Tonquin Light Manufacturing Overlay  
 Metro Regionally Significant Industrial Area  
 Business Park Commercial Services Overlay  
 Commercial Setback  
 Commercial Services Overlay

**RF 1:26,500**

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 J:\MXDs\Tualatin Development Code\TDC Map 9-5 Commercial Setback\_DRAFT.mxd  
 Effective: TBD










-  Pump Stations
-  Pressure Reducing Valve
-  Pressure Reducing-Sustaining Valve
-  Existing Reservoirs
-  Future Reservoirs
-  Water System Interties
-  Transmission Lines
-  Distribution System
-  Future System Improvements
-  A-Level
-  B-Level
-  C-Level
-  Bridgeport
-  Planning Area Boundary



RF 1:26,500

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-  Gravity Pipe
-  Force Main
-  Lift Station
-  Conceptual Gravity Pipe
-  Conceptual Force Main
-  Conceptual Lift Station
-  Planning Area Boundary

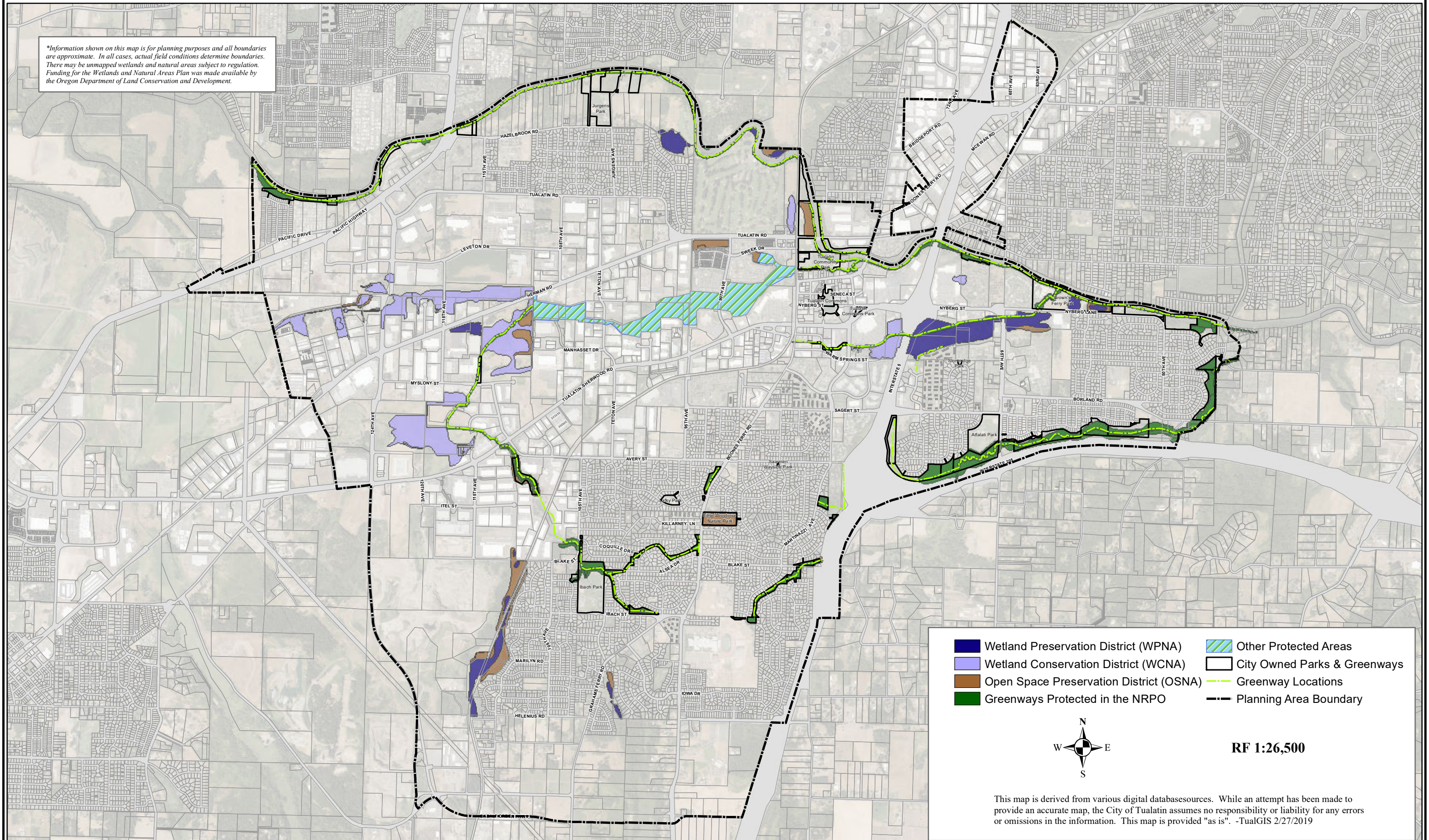


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# Map 72-1: Natural Resources Protection Overlay District (NRPO) and Greenway Locations DRAFT

\*Information shown on this map is for planning purposes and all boundaries are approximate. In all cases, actual field conditions determine boundaries. There may be unmapped wetlands and natural areas subject to regulation. Funding for the Wetlands and Natural Areas Plan was made available by the Oregon Department of Land Conservation and Development.

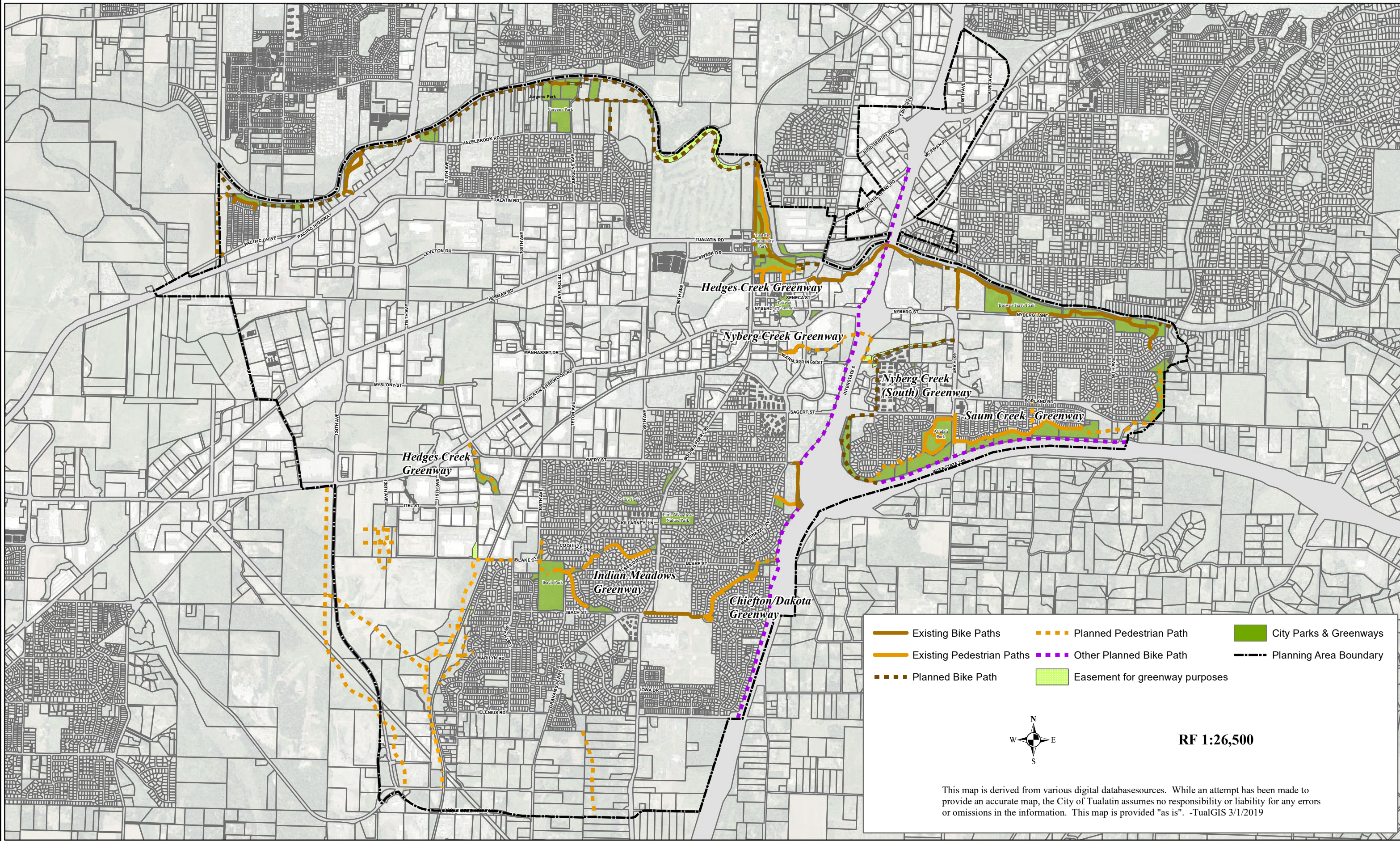



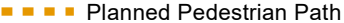






Wetland Preservation District (WPNA)	Other Protected Areas
Wetland Conservation District (WCNA)	City Owned Parks & Greenways
Open Space Preservation District (OSNA)	Greenway Locations
Greenways Protected in the NRPO	Planning Area Boundary



RF 1:26,500

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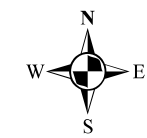
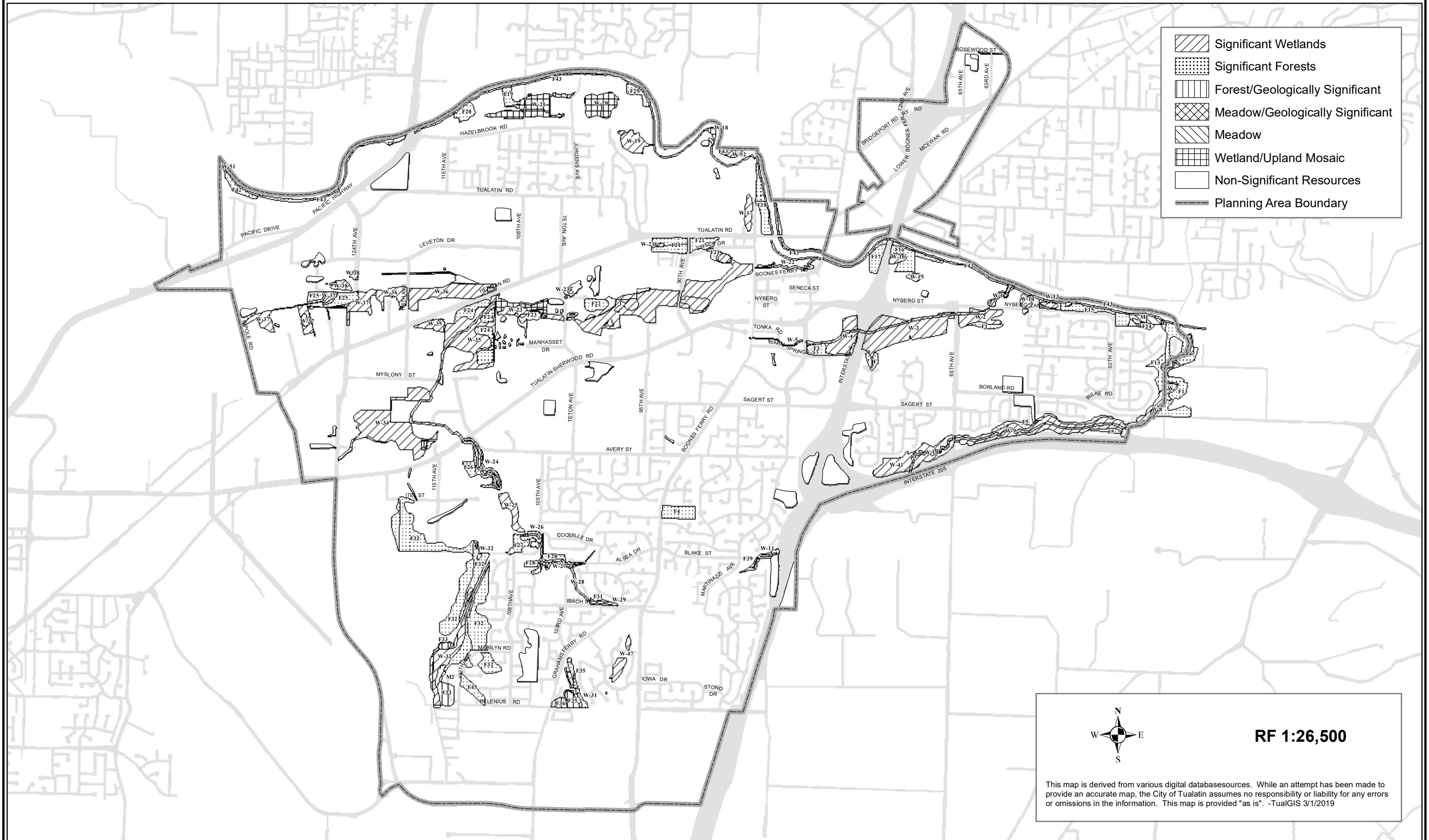
-  Existing Bike Paths
-  Planned Pedestrian Path
-  City Parks & Greenways
-  Existing Pedestrian Paths
-  Other Planned Bike Path
-  Planning Area Boundary
-  Planned Bike Path
-  Easement for greenway purposes



**RF 1:26,500**

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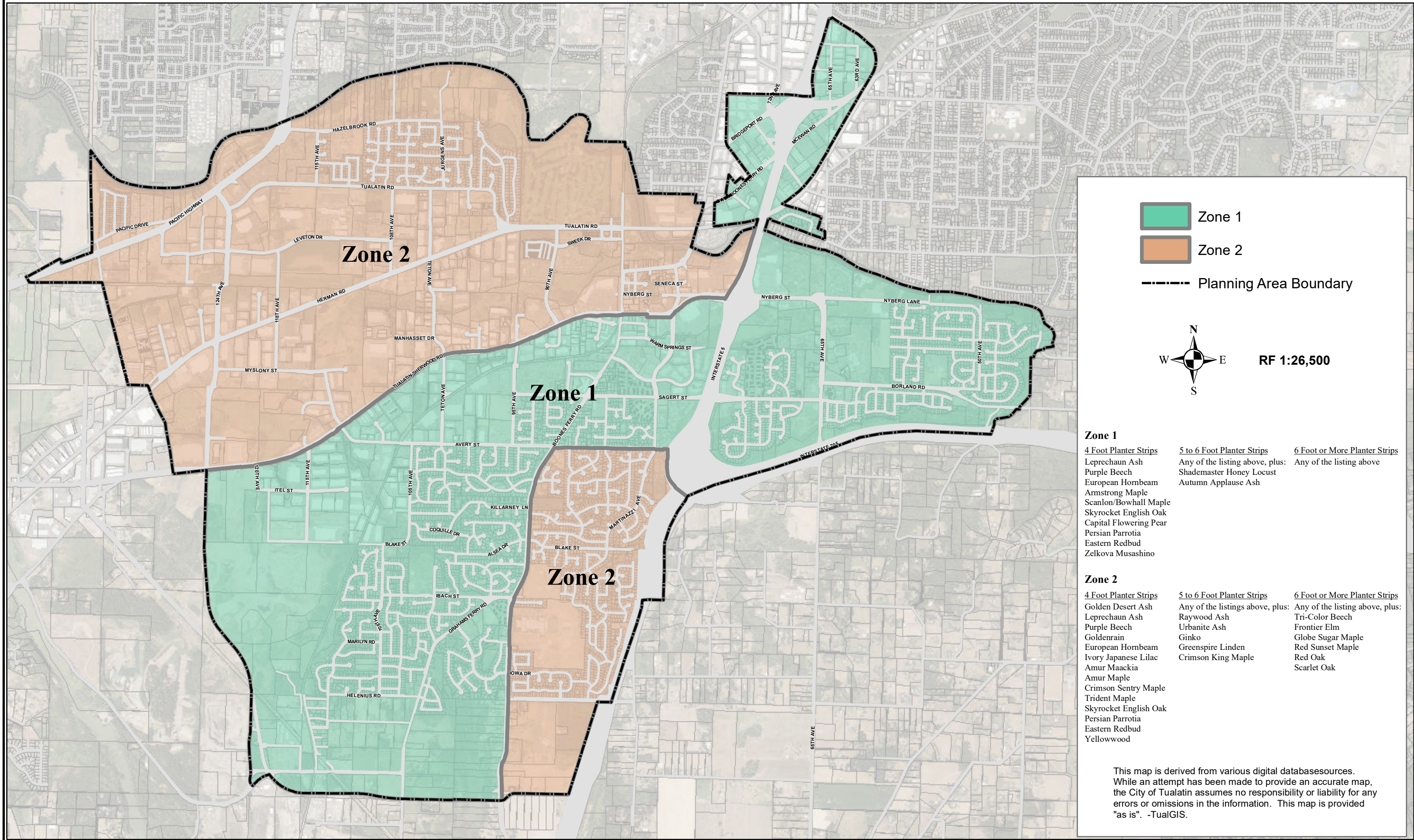
# Map 72-3: Significant Natural Resources



RF 1:26,500

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# Map 74-1: Street Tree Plantings DRAFT



Zone 1  
 Zone 2  
 Planning Area Boundary

**RF 1:26,500**

<b>Zone 1</b>		
4 Foot Planter Strips	5 to 6 Foot Planter Strips	6 Foot or More Planter Strips
Leprechaun Ash	Any of the listing above, plus:	Any of the listing above
Purple Beech	Shademaster Honey Locust	
European Hornbeam	Autumn Applause Ash	
Armstrong Maple		
Scanlon/Bowhall Maple		
Skyrocket English Oak		
Capital Flowering Pear		
Persian Parrotia		
Eastern Redbud		
Zelkova Musashino		
<b>Zone 2</b>		
4 Foot Planter Strips	5 to 6 Foot Planter Strips	6 Foot or More Planter Strips
Golden Desert Ash	Any of the listings above, plus:	Any of the listing above, plus:
Leprechaun Ash	Raywood Ash	Tri-Color Beech
Purple Beech	Urbanite Ash	Frontier Elm
Goldenrain	Ginko	Globe Sugar Maple
European Hornbeam	Greenspire Linden	Red Sunset Maple
Ivory Japanese Lilac	Crimson King Maple	Red Oak
Amur Maackia		Scarlet Oak
Amur Maple		
Crimson Sentry Maple		
Trident Maple		
Skyrocket English Oak		
Persian Parrotia		
Eastern Redbud		
Yellowwood		

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# AFFIDAVIT OF MAILING

STATE OF OREGON                    )  
  ) ss  
COUNTY OF WASHINGTON        )

I, Lynette Sanford, being first duly sworn, depose and say:

That on the 5th day of March, 2019, I served upon the persons shown on Exhibit A, attached hereto and by this reference incorporated herein, a copy of a Notice of Hearing marked Exhibit B, attached hereto and by this reference incorporated herein, by mailing to them a true and correct copy of the original hereof. I further certify that the addresses shown on said Exhibit A are their regular addresses as determined from the books and records of the Washington County and/or Clackamas County Departments of Assessment and Taxation Tax Rolls, and that said envelopes were placed in the United States Mail at Tualatin, Oregon, with postage fully prepared thereon.

Dated this 12 of March, 2019

Lynette Sanford  
Signature

SUBSCRIBED AND SWORN to before me this 12 day of March, 2019.

Onnie Tashanne Neumann  
Notary Public for Oregon



My commission expires: 12.26.20

RE: PTA 19-0001 AND PMA 19-0001 – PROPOSES AMENDMENTS TO THE BASALT CREEK CONCEPT PLAN AND APPLY THE CITY OF TUALATIN COMPREHENSIVE PLAN, AND DEVELOPMENT CODE WITHIN THE BASALT CREEK PLANNING AREA UPON ANNEXATION OF PROPERTY TO THE CITY.





**THIS IS TO NOTIFY YOU THAT THE CITY OF TUALATIN HAS PROPOSED A LAND USE REGULATION THAT MAY AFFECT THE PERMISSIBLE USES OF YOUR PROPERTY AND OTHER PROPERTIES.**

**NOTICE IS HEREBY GIVEN** that on Monday, April 8, 2019 at 7:00 p.m., the City of Tualatin City Council will hold a public hearing to consider:

A Comprehensive Plan Text Amendment (PTA 19-0001) and Plan Map Amendment (PMA 19-0001) that would implement the Basalt Creek Concept Plan and apply the City of Tualatin Comprehensive Plan, and Development Code within the Basalt Creek Planning Area, upon annexation of property to the City. The Basalt Creek Planning Area is generally north of Basalt Creek Parkway and Greenhill Lane, south of Helenius Road and Norwood Rd., east of 124th Avenue, and west of Interstate 5.

This land use hearing notice is being sent to you to comply with Oregon Revised Statute (ORS) 227.186 (Measure 56), and requires the following language:

*Adoption of the proposed amendments may affect the permissible uses and/or change the value of your property and other properties in the affected zone/area.*

**The City Council public hearing will be held at  
7:00 p.m. on  
Monday, April 8, 2019  
Juanita Pohl Center,  
8513 SW Tualatin Road,  
Tualatin, OR 97062**

**PROPOSAL:**

The proposed amendments include updates to: Chapters 4, 7, 9, Figures 11-1, 11-2, 11-3, 11-4, 11-5, 11-6, and Maps 9-1, 9-2, 9-4, 9-5, 12-1, and 13-1, of the Tualatin Comprehensive Plan; Chapters 51, 62, and 75, Figure 73-3, and Maps 72-1, 72-2, 72-3, and 74-1 of the Tualatin Development Code; and the Tualatin Transportation System Plan. The proposed amendments can be viewed at: <https://www.tualatinoregon.gov/planning/basalt-creek-area-planning>.

**TO COMMENT:**

You may comment in writing to the Planning Division by email to [skoper@tualatin.gov](mailto:skoper@tualatin.gov) or mail to the address listed below by **March 29, 2019** to be included in the City Council packet. Written and/or verbal testimony may also be presented to the City Council at the hearing. *Note: Failure to raise an issue with sufficient specificity to allow the decision-maker to the opportunity to respond precludes appeal to the Oregon Land Use Board of Appeals (LUBA) on that issue.*

**ADDITIONAL INFORMATION:**

For additional information concerning the proposal, please contact Steve Koper, Planning Manager at 503-691-3028 or [skoper@tualatin.gov](mailto:skoper@tualatin.gov).

A copy of the staff report, findings and draft Ordinance on PTA 19-0001/PMA 19-0001 will be available one week before the hearing at <https://www.tualatinoregon.gov/citycouncil> or upon request at the Planning Division (18880 SW Martinazzi Avenue, Tualatin, OR 97062) during business hours.



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Juanita Pohl Center,  
8513 SW Tualatin Road,  
Tualatin, OR 97062**

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City of Tualatin  
18880 SW Martinazzi Ave  
Tualatin, OR 97062

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PERMIT NO. 11



City of Tualatin  
18880 SW Martinazzi Ave  
Tualatin, OR 97062

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AGHAZADEH-SANAEI MEHDI &  
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TUALATIN, OR 97062-9640

ANDERSON STEPHEN FRANK &  
8590 SW MIAMI ST  
WILSONVILLE, OR 97070-9798

BEWLEY ROY W JR & KELLEY J  
11290 SW TONQUIN LOOP RD  
SHERWOOD, OR 97140

BRAMEL ROBERT A & SHARON K REV  
23070 SW 112TH AVE  
SHERWOOD, OR 97140-9537

CHAMBERLAIN JOHN &  
9000 SW GREENHILL LN  
TUALATIN, OR 97062-9603

DAANE MARGARET L  
PO BOX 28  
ALSEA, OR 97324-0028

FOX LOIS C REV TRUST  
23550 SW GRAHAMS FERRY RD  
SHERWOOD, OR 97140-7216

HARRIS SUSAN  
22060 SW GRAHAMS FERRY RD UNIT C  
TUALATIN, OR 97062-8948

HICKOK TODD J &  
23855 SW BOONES FERRY RD  
TUALATIN, OR 97062-9639

CE JAMES NEAL  
1348 SW TONQUIN LOOP  
SHERWOOD, OR 97140-9501

ALVSTAD RANDALL & KAREN  
23515 SW BOONES FERRY RD  
TUALATIN, OR 97062-9641

AUTUMN SUNRISE LLC  
485 S STATE ST  
LAKE OSWEGO, OR 97034-3937

BOCCI JAMES A & JULIA A  
23205 SW BOONES FERRY RD  
TUALATIN, OR 97062-9619

BRAUN LAURA  
11235 SW NOOTKA ST  
SHERWOOD, OR 97140-9543

CHILDS THOMAS L &  
23470 SW GRAHAMS FERRY RD  
SHERWOOD, OR 97140-9529

DAIISADEGHI MOHAMMAD HOSSEIN  
RE  
9393 SW 171ST AVE  
BEAVERTON, OR 97007-6101

GERTTULA DEBRA KAY &  
770 AVENUE S  
SEASIDE, OR 97138-7510

HELENIUS LLC  
PO BOX 1606  
LAKE OSWEGO, OR 97035-0806

HOLSTROM ERIC  
10545 SW TONQUIN LOOP  
SHERWOOD, OR 97140-9542

JOHANSEN MATTHEW &  
23740 SW GRAHAM'S FERRY RD  
SHERWOOD, OR 97140-9028

ANDERSON STEPHEN &  
8590 SW MIAMI ST  
WILSONVILLE, OR 97070-9798

BAZANT CHRISTINE LEE &  
36449 HWY 34  
LEBANON, OR 97355-9682

BOWEN EDWARD A  
640 SEA SPRAY PL  
BULLHEAD CITY, AZ 86442-4910

CATALDO MICHAEL C &  
11080 SW TONQUIN LOOP  
SHERWOOD, OR 97140-9540

CLARK KURT C &  
23170 SW BOONES FERRY RD  
TUALATIN, OR 97062-9619

FELLERS RICHARD R &  
15065 S KIRK RD  
OREGON CITY, OR 97045-8773

GROSSMAN JEFFERY A  
23605 SW BOONES FERRY RD  
TUALATIN, OR 97062-9641

HERBST PROPERTIES LLC  
10595 SW IBACH ST  
TUALATIN, OR 97062-8011

HOUSTON HOWARD W JR  
6214 LAKE WASHINGTON BLVD NE  
KIRKLAND, WA 98033-6804

JOHANSEN GARY C &  
120 GLENWOOD CIR  
ROSEVILLE, CA 95678-7024

LEDOUX FAMILY TRUST  
23155 SW BOONES FERRY RD  
TUALATIN, OR 97062-9619

LEGEND HOMES CORPORATION  
735 SW 158TH AVE STE 130  
BEAVERTON, OR 97006-4914

LEGGETT ALBERT SCOT  
11150 SW TONQUIN LOOP  
SHERWOOD, OR 97140-9540

LEITGEB SHERMAN W &  
23200 SW GRAHAMS FERRY RD  
SHERWOOD, OR 97140-9529

LITERA JIRI  
9287 SW SWEET DR  
TUALATIN, OR 97062-7407

LOVITT ROBYN C &  
11400 SW NOOTKA ST  
SHERWOOD, OR 97140-9504

LUCINI JOHN W & GRACE N FAM TRU  
23677 SW BOONES FERRY RD  
TUALATIN, OR 97062-9641

MAST MARVIN R &  
23845 SW BOONES FERRY RD  
TUALATIN, OR 97062-9639

MCGUIRE BROS LLC  
947 SE MARKET ST  
PORTLAND, OR 97214-3556

MCLEOD RANDY FRANKLIN &  
23465 SW BOONES FERRY RD  
TUALATIN, OR 97062-9642

MINER RHONDA L  
449 SW 351ST RD  
CLINTON, MO 64735-8908

MOLEN JON A &  
11365 SW NOOTKA ST  
SHERWOOD, OR 97140-9543

MONEGO JOSEPH A &  
11190 SW TONQUIN PL  
SHERWOOD, OR 97140-9664

MORRIS MELVIN H & DIANE M REV L  
12100 AGATE RD  
EAGLE POINT, OR 97524-6556

NATIONSTAR MORTGAGE  
PO BOX 619093  
DALLAS, TX 75261-9093

OAKES LARRY M  
11220 SW TONQUIN RD  
SHERWOOD, OR 97140-9548

P3 PROPERTIES LLC  
PO BOX 691  
WHITE SALMON, WA 98672-0691

PARR STEVEN M & KATHRYN E  
10650 SW TONQUIN LOOP  
SHERWOOD, OR 97140-9532

PAUL JAMES V &  
10630 SW TONQUIN LOOP  
SHERWOOD, OR 97140-9532

POTTER DYLAN D &  
23405 SW BOONES FERRY RD  
TUALATIN, OR 97062-9642

RE THOMAS J & KATHRYN S  
19035 SW CHESAPEAKE DR  
TUALATIN, OR 97062-7722

RICHARDS DONALD P  
PO BOX 1488  
WILSONVILLE, OR 97070-1488

RILEY SHAWN O  
23365 SW BOONES FERRY RD  
TUALATIN, OR 97062-9643

SATTLER STEVEN E  
17225 SW GREEN HERON DR  
SHERWOOD, OR 97140-8973

SHAMBURG SCOTT A &  
PO BOX 829  
TUALATIN, OR 97062-0829

SHERWOOD GRAHAMS FERRY  
INVESTORS  
22400 SALAMO RD STE #106  
WEST LINN, OR 97068-8269

SHEVCHENKO DAVID &  
11015 SW TONQUIN LOOP  
SHERWOOD, OR 97140-9540

SLENES CHAD J &  
11125 SW TONQUIN LOOP  
SHERWOOD, OR 97140-9540

SPENCER DUDLEY &  
11300 SW NOOTKA ST  
SHERWOOD, OR 97140-9543

SUMMERS JARED J &  
10800 SW TONQUIN RD  
SHERWOOD, OR 97140-9558

5160  
SUMMERS STEVEN J  
PO BOX 1562  
WILSONVILLE, OR 97070-1562

Easy Peel Address Labels  
Bend along line to expose Pop-up Edge  
THOMPSON LEE H & MARION B FOUND  
24170 SW GRAHAM'S FERRY RD  
SHERWOOD, OR 97140-7218

GO TO avery.com/templates  
Use Avery Template 5160  
TYLER MARVIN L &  
PO BOX 242  
TUALATIN, OR 97062-0242

UNITED STATES OF AMERICA  
1002 NE HOLLADAY ST  
PORTLAND, OR 97232

VENABLES JOHN V TRUST &  
7120 SW 60TH AVE  
PORTLAND, OR 97219-1182

WALDO RONALD M TRUST  
10965 SW TONQUIN LOOP  
SHERWOOD, OR 97140-9535

WASHINGTON COUNTY  
1400 SW WALNUT ST MS 18  
HILLSBORO, OR 97123

WASHINGTON COUNTY  
169 N 1ST AVE MS 42  
HILLSBORO, OR 97124

WILLIAMS TOM K  
9300 SW NORWOOD RD  
TUALATIN, OR 97062-9618

WOODBURN INDUSTRIAL CAPITAL  
GROU  
PO BOX 1060  
WOODBURN, OR 97071-1060

YACKLEY DIANE M &  
23240 SW BOONES FY RD  
TUALATIN, OR 97062-9619



# AFFIDAVIT OF POSTING

STATE OF OREGON                    )  
  ) SS  
COUNTY OF WASHINGTON        )

I, Lynette Sanford, being first duly sworn, depose and say:

That at the request of Sherilyn Lombos, City Recorder for the City of Tualatin, Oregon; that I posted two copies of the Notice of Hearing on the 11<sup>th</sup> day of March 2019, a copy of which Notice is attached hereto; and that I posted said copies in two public and conspicuous places within the City, to wit:

- 1. City of Tualatin – Development Services Building
- 2. City of Tualatin - Library

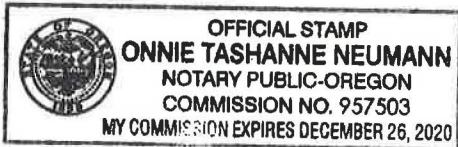
Dated this 11 day of March, 2019

*Lynette Sanford*  
Lynette Sanford

Subscribed and sworn to before me this 12 day of March, 2019.

*Onnie Tashanne Neumann*  
Notary Public for Oregon

My Commission expires: 12-26-20



**RE: PLAN TEXT AMENDMENT (PTA)19-0001 AND PLAN MAP AMENDMENT (PMA) 19-0001 TO IMPLEMENT THE BASALT CREEK CONCEPT PLAN.**



# City of Tualatin

[www.tualatinoregon.gov](http://www.tualatinoregon.gov)

## NOTICE OF HEARING CITY OF TUALATIN, OREGON

NOTICE IS HEREBY GIVEN that a public hearing will be held before the City of Tualatin City Council at 7:00 p.m., Monday, April 8, 2019, at the Juanita Pohl Center (8513 SW Tualatin Road, Tualatin, OR 97062).

**You are invited to attend and participate in the public hearing.** Under consideration is File Nos. PTA 19-0001 and PMA 19-0001:

- A Comprehensive Plan Text Amendment (PTA 19-0001) and Plan Map Amendment (PMA 19-0001) that would implement the Basalt Creek Concept Plan and apply the City of Tualatin Comprehensive Plan, and Development Code within the Basalt Creek Planning Area, upon annexation of property to the City. The Basalt Creek Planning Area is generally north of Basalt Creek Parkway and Greenhill Lane, south of Helenius Road and Norwood Rd., east of 124th Avenue, and west of Interstate 5.

**The public is invited to comment by e-mail, writing or by testifying at the hearing.** Written comments can be made: by email to Steve Koper (503-691-3028) at [skoper@tualatin.gov](mailto:skoper@tualatin.gov), by mail or in person (18880 SW Martinazzi Avenue), or submitted at the hearing. Failure to raise an issue at the hearing or in writing or to provide sufficient specificity to afford the City Council an opportunity to respond to the issue precludes appeal to the Land Use Board of Appeals (LUBA). Legislative hearings begin with the Mayor opening the hearing, presentation of the staff report, public testimony, questions of staff or anyone who testified by Council, after which the Mayor closes the public hearing, and Council may then deliberate to a decision and a motion would be made to either *approve*, *deny*, or *continue* the public hearing. The time of individual testimony may be limited.

**To view the application materials visit:** <https://www.tualatinoregon.gov/planning/basalt-creek-area-planning>. Copies of the application materials, all supporting documents and applicable criteria are available for inspection at no cost and will be provided at reasonable cost. A staff report will be available seven days prior to the public hearing. This meeting and any materials being considered can be made accessible upon request.

**If approved, PTA 19-0001 and PMA 19-0001** would include updates to: Chapters 4, 7, 9, Figures 11-1, 11-2, 11-3, 11-4, 11-5, 11-6, and Maps 9-1, 9-2, 9-4, 9-5, 12-1, and 13-1, of the Tualatin Comprehensive Plan; Chapters 41, 51, 62, and 75, Figure 73-3, and Maps 72-1, 72-2, 72-3, and 74-1 of the Tualatin Development Code; and the Tualatin Transportation System Plan.

**To grant the amendment,** Council must find the proposal meets the applicable criteria of the Oregon Statewide Planning Goals, Oregon Administrative Rules, Metro Code, and the Tualatin Comprehensive Plan and Development Code, including Tualatin Development Code Section 33.070.

CITY OF TUALATIN, OREGON

NOTICE TO THE TUALATIN TIMES: Please publish on March 21, 2019



# STAFF REPORT

## CITY OF TUALATIN

**TO:** Tualatin Planning Commissioners

**FROM:** Steve Koper, Planning Manager

**DATE:** 03/21/2019

**SUBJECT:** 2018 Annual Report of the Tualatin Planning Commission

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### **ISSUE BEFORE TPC:**

Consideration of the 2018 Tualatin Planning Commission Annual Report and a recommendation that the City Council accept the report.

### **RECOMMENDATION:**

Staff respectfully requests that TPC accept the report and recommend that Council also accept the report at their regularly scheduled meeting on April 8, 2019.

### **EXECUTIVE SUMMARY:**

- This is not a public hearing. There are no criteria applied to acceptance of the annual report.
- Not later than April 1 of each year, commencing with the year 1977, the Commission shall file with the City Council its annual report of the activities of the Commission.
- The annual report shall include a survey and report of the activities by the Commission during the preceding year, in addition to specific recommendations to the City Council not otherwise requested by the City Council, relating to the planning process, plan implementation measures within the City, or future activities of the Commission.
- The report may include activities of the Commission. The report may include any other matters deemed appropriate by the Commission for recommendation and advice to the Council.
- The Tualatin Municipal Code 11-1 contains the provisions for the functions and activities of the Tualatin Planning Commission (TPC).
- TPC is the official Commission for the Citizen Involvement in accordance with Statewide Land Use Planning Goal 1, Citizen Involvement.
- TPC reviewed three Plan Text Amendments during 2018.

### **OUTCOMES OF DECISION:**



Planning Commission acceptance of the Annual Report will result in the following:

- A recommendation to the Council to accept the report.
- Compliance with Section 11-1-080 of the Tualatin Municipal Code.

If the Planning Commission does not accept the Annual Report the following outcomes will result:

- A recommendation that Council not accept the report.
- Non-compliance with Section 11-1-080 of the Tualatin Municipal Code.

**ALTERNATIVES TO RECOMMENDATION:**

- Direct staff to amend the Annual Report based on recommendations from the Planning Commission.
- Continue the discussion and return to the matter at a later date.

**FINANCIAL IMPLICATIONS:**

Funds are budgeted in the Planning Division for preparation of the Annual Report of the Tualatin Planning Commission.

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**Attachments:**    2018 Annual Report of the Tualatin Planning Commission



*City of Tualatin*

**2018 ANNUAL REPORT**

**TUALATIN PLANNING COMMISSION**

**March 21, 2019**

Planning Commissioners:

Bill Beers, Chair  
Kenneth Ball, Vice Chair  
Alan Aplin  
Angela Demeo  
Mona St. Clair  
Janelle Thompson  
Travis Stout

# 2018 ANNUAL REPORT OF THE TUALATIN PLANNING COMMISSION

## BACKGROUND

The Tualatin Planning Commission, formerly the Tualatin Planning Advisory Committee, was established on July 26, 1976 (Ord. 1339-12 and Ord. 342-76). The Planning Commission's membership, organization and duties are prescribed in Tualatin Municipal Code Chapter 11-1. The Planning Commission is the official Committee for Citizen Involvement in accordance with Statewide Land Use Planning Goal 1, Citizen Involvement. This annual report covers activities conducted by the Planning Commission in 2018.

This report will address a section of the Tualatin Municipal Code Chapter 11-1.

**11-1-080:** Not later than April 1 of each year, the Commission shall file its annual report of the activities of the Commission with the City Council. The annual report shall include a survey and report of the activities of the committee during the preceding year, in addition to specific recommendations to the City Council not otherwise requested by the City Council, relating to the planning process, plan implementation measures within the City, or the future activities of the Committee. The report may include any other matters deemed appropriate by the Committee for recommendation and advice to the Council.

### *2018 Planning Commission*



*Janelle Thompson, Alan Aplin, Kenneth Ball, Travis Stout,  
Mona St. Clair, Bill Beers, Angela Demeo*

## **CITIZEN INVOLVEMENT AND INPUT**

The Planning Commission is the official Committee to fulfill Goal 1: Citizen Involvement of Oregon's statewide land use planning program. The purpose of Goal 1 is to develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the land use planning process.

Goal 1 is specific to land use and involving citizens in land use making decisions. The Planning Commission serves two functions in Tualatin's land use planning program. Their first and original function is to serve as an advisory committee to the City Council by reviewing and making recommendations on comprehensive plan amendments. Plan amendments implement policy direction and are essentially legislative decisions. The second function of the Planning Commission is decision making authority over a specified set of quasi-judicial land use decisions. In other words, the Planning Commission has the authority to approve or deny projects tied to specific properties.

Goal 1 allows for varying degrees of citizen involvement that is appropriate to the scale of the planning effort. For example in 2018, the Planning Commission recommended approval of PTA 18-0003: Tualatin Development Code Improvement Project (TDCIP) Phase 1 that resulted in modernization updates to the Tualatin Development Code. Staff provided notification of the public meeting Tualatin Development Code requirements and citizens were afforded the opportunity to comment at the Planning Commission meeting and the City Council public hearing. This outreach served as the public involvement for this Plan Text Amendment. The Planning Commission also reviewed two other Plan Text Amendments - PTA18-0001: updates to residential zoning districts to allow accessory dwelling units and PTA18-0002: updates to TDC Chapter 70 to achieve continued compliance with National Flood Insurance Program Requirements. Notice for these amendments was given in accordance with the Tualatin Development Code and citizens were afforded the opportunity to comment at the Planning Commission meetings and the City Council public hearings.

In all three cases, citizens had a chance make comments either in writing or verbally at the public meeting prior to the Planning Commission making a recommendation to the City Council. All Planning Commission meetings regardless of the agenda items are published on the City website and notices of the meetings are posted in two different locations in City buildings. Additionally, the Community Development staff meets with the Citizen Involvement Organization Land Use Officers as topics arise. The purpose of the meetings is to provide updates on land use items such as projects under construction, upcoming decisions and long range planning. These meetings are held directly before the Planning Commission meetings, and they provide a forum for CIO officers to ask questions and get more information about community development processes.

## **PLANNING COMMISSION ACTION ITEMS**

In January 2012, the City Council changed the Tualatin Planning Advisory Committee to the Tualatin Planning Commission and gave the Commission purview over certain quasi-judicial land use applications. In December of 2017, Conditional Use Permits were assigned to the Planning Commission in addition to the below listed applications:

- Industrial Master Plan
- Reinstatement of Use
- Sign Variance
- Variance
- Transitional Use Permit
- Conditional Use Permit

The Planning Commission retains the duties of the Advisory Committee, which is to make recommendations to City Council on comprehensive plan amendments such as Plan Text and Plan Map changes. In 2018, the Planning Commission reviewed and made recommendations on three Plan Text Amendments and approved two Variances. They met ten times during the calendar year. Two meetings were cancelled due to a lack of agenda items.

**VAR17-0001: A Resolution for the Variance request to the Wireless Communication Facility (WCF) Separation Requirement for the POR Durham project.** Approved 5-0.

**VAR18-0001: Consideration of a Variance request for two standards in the Tualatin Development Code for the Tualatin Professional Center in the Office Commercial (CO) Planning District.** Approved 6-0.

**PTA18-0001: Plan Text Amendment (PTA18-0001) to modify process, criteria and standards for accessory dwelling units (ADU).** Recommended approval to Council.

**PTA18-0002: Consideration to amend the Tualatin Development Code Chapter 70: Flood Plain District to meet minimum National Flood Insurance Program Requirements.** Recommended approval to Council.

**PTA18-0003: Tualatin Development Code Improvement Project (TDCIP) Phase 1 – Recommendation to City Council.** Recommended approval to Council.

## **STAFF UPDATES TO THE PLANNING COMMISSION**

Staff presented several long range planning topics for discussion including:

- Capital Improvement Plan update: The CIP identifies the anticipated projects for the upcoming year as well as the projects that the City is planning for over the next ten years.
- Tualatin Development Code Improvement Project (TDCIP) Phase 1.

- Progress update
- Overview of staff accomplishments
  
- Basalt Creek
  - Update on the overview of the work staff carried out on the central subarea and Council's confirmation on the Concept Map.
  - Update on the Transportation Refinement Plan, future transit framework, parks, and utility summary.
  
- Parks and Recreation Master Plan Update: An update on the master plan moving forward to 2035.
  
- Potential Tualatin Development Code Plan Text Amendment to increase building height in the Mixed Use Commercial Overlay District.
  
- Tualatin Moving Forward Update: Program implementing the \$20 million transportation bond.
  - The first of five "fast track" projects
  - Upcoming projects

### **COMMISSIONER TRAININGS**

None.



# STAFF REPORT

## CITY OF TUALATIN

**TO:** Tualatin Planning Commissioners

**FROM:** Lynette Sanford, Office Coordinator

**DATE:** 03/21/2019

**SUBJECT:** Approval of November 15, 2019 TPC Minutes.

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**ISSUE BEFORE TPC:**

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**Attachments:** [TPC Minutes 11.15.18](#)



# City of Tualatin

www.tualatinoregon.gov

UNOFFICIAL

TUALATIN PLANNING COMMISSION

MINUTES OF November 15, 2018

**TPC MEMBERS PRESENT:**

Bill Beers  
Alan Aplin  
Travis Stout  
Janelle Thompson

**STAFF PRESENT**

Steve Koper  
Karen Perl Fox  
Jeff Fuchs  
Lynette Sanford

**TPC MEMBER ABSENT:** Kenneth Ball, Mona St. Clair

**GUESTS:** Cathy Corliss

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**1. CALL TO ORDER AND ROLL CALL:**

Mr. Beers called the meeting to order at 6:30 PM and reviewed the agenda. Roll call was taken

**2. APPROVAL OF MINUTES:**

Mr. Beers asked for approval of the August 16, 2018 and the October 25, 2018 TPC minutes. MOTION by Aplin SECONDED by Beers to approve the minutes as written. MOTION PASSED 4-0.

**3. COMMUNICATION FROM THE PUBLIC (NOT ON THE AGENDA):**

None

**4. COMMUNICATION FROM CITY STAFF**

**A. Tualatin Moving Forward Update**

Jeff Fuchs, Public Works Director, shared an update on Tualatin Moving Forward. This is the program implementing the transportation bond. Mr. Fuchs stated that since the approval of the \$20 million general obligation bond by Tualatin voters last May, significant progress has been made to roll out this program. The first of five “fast track” projects was completed in September 2018 and four more will be completed by early 2019.

Mr. Fuchs stated that the voters were mostly interested in congestion relief and safety projects. Mr. Fuchs stated that the fast-track projects include:

These minutes are not verbatim. The meeting was recorded, and copies of the recording are retained for a period of one year from the date of the meeting and are available upon request.



- 115<sup>th</sup> Ave: Bike lanes serving Hazelbrook Middle School
- Avery St: Driver feedback signs
- Ibach St: Pedestrian crossing serving Ibach Park
- Sagert St: Pedestrian crossing to Atfalati Park
- Boones Ferry Rd at Siletz: Pedestrian crossing and intersection improvements

Mr. Fuchs noted that work begins on each of these projects this year and will be completed by early 2019. Mr. Fuchs added that pedestrian, bike and roadway improvements are coming soon to reduce speed and safety at the Garden Corner Curves – Morotoc Dr. to Willow St.

Mr. Fuchs stated that the City has created a web site [tualatinmovingforward.com](http://tualatinmovingforward.com). At this site you can learn more about the existing and upcoming projects and offer suggestions for additional projects.

Ms. Thompson inquired about non-pedestrian projects. Mr. Fuchs replied that congestion reducing projects take additional time; the other projects will be listed at a later date. Mr. Fuchs added that a Program Manager was hired and will be working with Council to generate a schedule.

## 5. **ACTION ITEMS:**

### **A. Plan Text Amendment (PTA 18-0003 – Tualatin Development Code Improvement Project (TDCIP) Phase 1.**

Karen Perl Fox, Senior Planner, and Cathy Corliss, Angelo Planning Group, presented a staff report for the Planning Commission to make a recommendation to City Council to approve, approve with revisions or deny PTA-18-0003 (TDCIP Phase 1) at its upcoming City Council hearing on November 26, 2018.

Ms. Corliss stated that we are currently focusing on Phase I – Code Clean-up. This phase primarily focuses on Chapters 31-80. The goal is to improve the overall organization, streamline planning district chapters with tables, and improve language and readability. The approach for this phase was intended as “policy neutral”, meaning that the amended code would result in the same built outcomes as the existing code.

Ms. Corliss stated that there are also new chapters: Procedures and Applications. The new chapters consolidated information that was spread across multiple chapters. This improved the ability to efficiently administer the code. Ms. Corliss presented examples of the new chapters.

Ms. Corliss stated that accomplishments to date include presentations to Council and Planning Commission, coordination with other agencies, and public engagement. Ms. Perl Fox added that the public engagement process included online questions to frequent users and a Planning Commission Workshop on September 6<sup>th</sup>. We received

positive feedback and strong support from both.

Steve Koper, Planning Manager, stated that a notice to the Department of Land Use and Development (DLCD) was provided on October 17<sup>th</sup> which was within 35 days of the City Council Hearing. Furthermore, a Measure 56 Notice was mailed out to 6,884 property owners within the City's Planning Area Boundary in October with greater than the minimum 20 days' notice allowed. Mr. Koper added that we received a few phone inquiries and one written notice, which has been distributed to the Commission members.

Mr. Koper stated that the Phase 1 schedule includes a public hearing at City Council on November 26<sup>th</sup> where they will review the Planning Commission recommendation and decide to approve or deny the ordinance. On December 10<sup>th</sup>, the City Council will adopt the ordinance if they go forward on November 26<sup>th</sup>.

Mr. Beers inquired about the requirements regarding flag lots. Ms. Corliss replied that a flag lot must be of sufficient width to access requirements.

Ms. Thompson stated that the new code is much easier to read and to access information.

Mr. Aplin asked if developers and other businesses offered feedback. Ms. Perl Fox replied that they offered grammatical suggestions.

Ms. Thompson inquired about the content of the phone calls received. Ms. Perl Fox replied that the inquiries were very general and were mostly a reaction to the first line of the postcard, which stated that their property uses may be affected. Ms. Thompson added that the new code is much easier to read and she appreciated that the out of date items were removed.

Mr. Stout asked if we received specific feedback from the interactive polling. Ms. Perl Fox replied that the questions were highly graded in the range provided and the overall impression was favorable.

MOTION by Beers, SECONDED by Thompson to recommend City Council approve PTA18-0003. MOTION PASSED 4-0.

## **6. FUTURE ACTION ITEMS**

Mr. Koper stated that the TPC meeting scheduled for December has been cancelled. Future action items will include a Plan Text Amendment to incorporate the changes in the Parks Master Plan that City Council accepted into the development code.

Ms. Perl Fox stated that we are conducting preliminary work for Phase 2. We have received a preliminary policy audit and will be sorting out the upcoming steps. Ms. Perl Fox added that the kickoff will be February 2019. Mr. Koper added that Basalt Creek

Comprehensive Plan has been adopted by Council and we're on schedule to begin the public process. This process includes public outreach and we will bring the comprehensive plan to the Commission members in February or March. Mr. Aplin asked if the Basalt Creek property boundaries have been set. Mr. Koper answered affirmatively.

Mr. Koper noted that there have been recent conversations regarding having all of Development Services in one central location. Currently Engineering and Public Works are in two different buildings. The plan is to expand the Operations site on Herman Road to include Building, Planning and Engineering. Mr. Koper added that currently government offices are not allowed in that zone. There will likely be a plan text amendment to amend the existing zone and to include government office uses.

Mr. Beers asked if a new City Hall will be built. Mr. Koper replied that a new City Hall is not on the agenda because there is a sense that the community is not interested in a bond to finance it.

Mr. Koper added that we potentially have a new Planning Commissioner. Additional information to follow.

Mr. Beers noted that we will need to hold elections for a Chair and Vice Chair at the beginning of the year.

7. **ANNOUNCEMENTS/PLANNING COMMISSION COMMUNICATION**

None

8. **ADJOURNMENT**

MOTION by Aplin to adjourn the meeting at 7:20 PM.

\_\_\_\_\_ Lynette Sanford, Office Coordinator