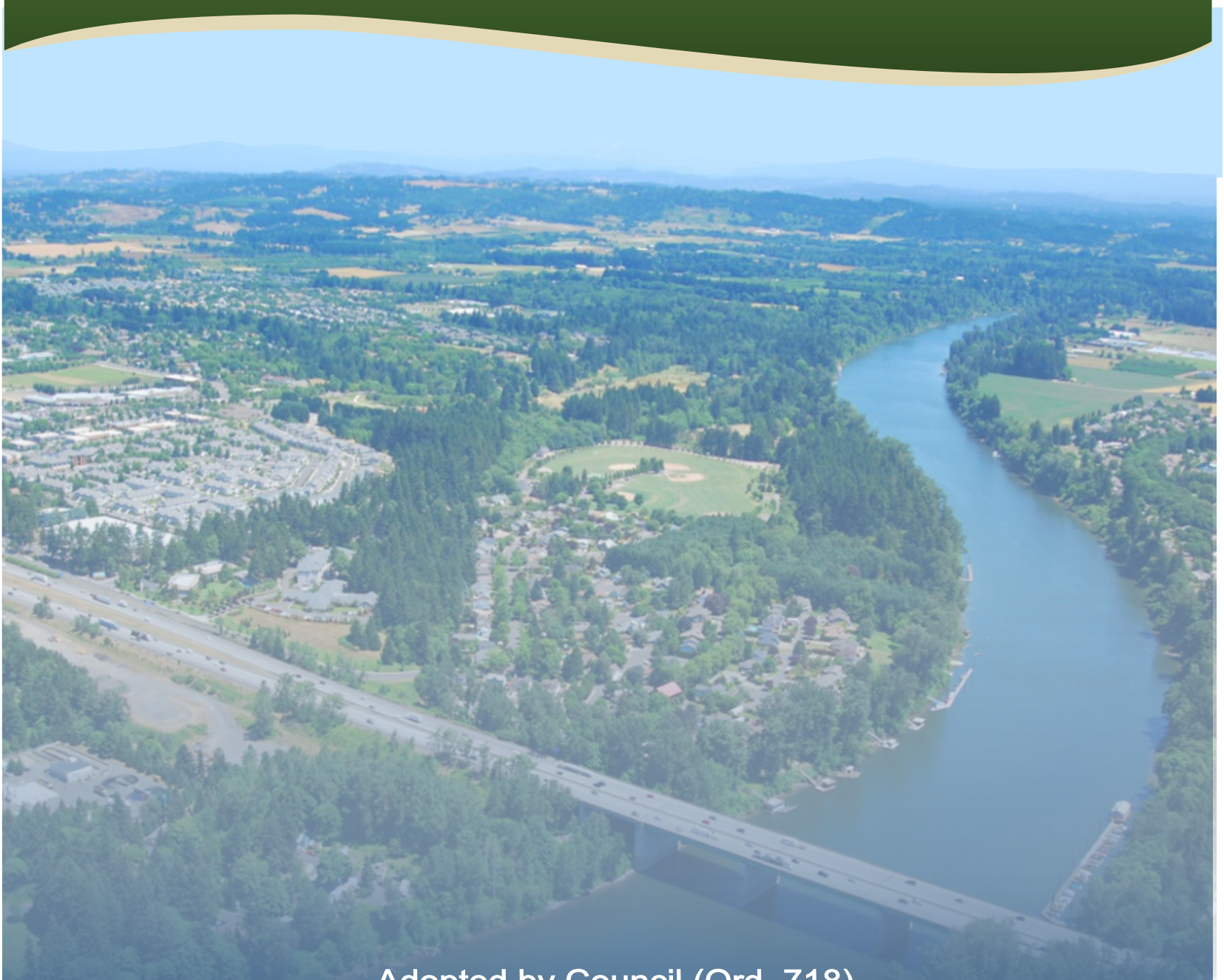
Wilsonville
Transportation System Plan



Adopted by Council (Ord. 718)

June 17, 2013

Amended (Ord. 789) on June 6, 2016

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Acknowledgements

This project was partially funded by a grant from the Transportation Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. This TGM grant is financed, in part, by federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), local government, and State of Oregon funds. The contents of this document do not necessarily reflect views or policies of the State of Oregon.

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How to Use This Plan

The Wilsonville TSP consists of two parts:

- ***Main body***
  (This report)
- ***Technical Appendix***
  (Separate document containing resources used to develop this plan)

Various sections answer the following questions:

- ***Table of Contents***
  (What does the TSP include and where can I find it?)
- ***Glossary of Terms***
  (What do the words and acronyms mean?)
- ***Executive Summary***
  (What are the TSP's key findings?)
- ***Chapter 2: The Vision***
  (What are the City's vision, goals, and policies?)
- ***Chapter 3: The Standards***
  (What standards will guide improvements?)
- ***Chapter 5: The Projects***
  (Which projects does the City expect to be able to fund in the 20-year planning horizon?)
- ***Chapter 6: Programs***
  (What system management efforts is the City engaged in?)

Relationship to Other City Plans

The Wilsonville Transportation System Plan (TSP) replaces the 2003 TSP in its entirety. In addition, it updates and builds upon the 2006 Bicycle and Pedestrian Master Plan and the 2008 Transit Master Plan. Where these documents may be in conflict, the new TSP takes precedence. However, there are many helpful details provided in the prior plans, which should be used for added clarity and direction.

TSP Content and Layout

The sections of these documents are listed in the Table of Contents. Following the Table of Contents, a **glossary of terms** is included to help the reader better understand the terminology used in the report. Then, the **executive summary** provides an overview of the TSP and the key findings of each chapter.

The TSP chapters tell a story of how the City's planning efforts are helping the community achieve its desired transportation system. They explain the planning **context** (Chapter 1), the City's overall **vision** and related goals and policies (Chapter 2), and the **standards** that support progress towards that vision (Chapter 3). The chapters then identify the existing and future transportation **needs** (Chapter 4), the **projects** to resolve infrastructure needs (Chapter 5), and the **programs** that support ongoing management of the transportation system (Chapter 6). Finally, the last chapter lists **performance** measures to help the City determine if its planning efforts are leading to the desired outcomes (Chapter 7).

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Glossary of Terms

A

Access Management *is the use of various techniques to improve traffic flow and safety by reducing conflict points at intersections and driveways while providing reasonable access to individual properties.*

Additional Planned Project List *includes those projects that would contribute to the City's desired transportation system through 2035 but that were not included as "Higher Priority" projects due to estimated funding limitations. This list represents a coordinated transportation network and adequate facilities to serve the community through 2035.*

Alternative Fuels *are transportation energy sources other than gasoline, including batteries (i.e., electric vehicles) and compressed natural gas.*

Americans with Disabilities Act (ADA) *is Federal legislation that seeks to remove and prevent barriers experienced by individuals with disabilities. With regards to transportation, it affects infrastructure design (especially curb ramps and sidewalks) as well as transit serve requirements.*

Arterials *are roadways where a higher priority is placed on moving traffic rather than accessing individual parcels. The City has two arterial functional classifications: Major Arterial and Minor Arterial.*

B

Buffered Bike Lanes *are on-street bike facilities that include a striped buffer between the bike lane and motor vehicle travel lane. When on-street parking is provided, the parking is located curbside, with the bike lane remaining adjacent to the motor vehicle travel lane.*

Bicycle Routes *are the designated on- and off-street bicycle facilities that connect neighborhoods, schools, parks, community centers, business districts, and natural resource areas. They are intended to create a network that supports bicycle travel by residents of varying physical capabilities, ages, and skill levels.*

Bicycle Friendly Community (BFC) *is a campaign administered by the League of American Bicyclists and awards cities one of four designations (from lowest to highest: bronze, silver, gold, and platinum) to recognize its efforts to improve its bicycle facilities.*

C

Capital Improvement Program (CIP) *is the City's short-range 5-year plan that identifies upcoming capital projects and equipment purchases, provides a planning schedule, and identifies financing options. It provides an important link between the projects identified in the City's master plans and its annual budget.*

Collectors *are roadways intended to serve as a transition between mobility and access. They are the primary roadways that "collect" traffic from neighborhoods and deliver it to the arterial network.*

Comprehensive Plan *is the City's generalized, coordinated land use map and policy statement, which interrelates all functional and natural systems and activities relating to the use of lands, including sewer and water systems, transportation systems, recreational facilities, natural resources, and air and water quality management programs.*

Connectivity *refers to the ease of movement between the city's neighborhoods, schools, parks, and retail/industrial areas.*

Cycle Tracks *are a relatively new on-street bicycle facility type where additional separation is provided between motor vehicle travel lanes and the bicycle facility. When on-street parking is provided, the parking is located adjacent to the travel lane and the cycle track is moved adjacent to the curb. Cycle tracks can be one-way (similar to a buffered bike lane but*

with a physical separation) or two-way (where both directions are served on the same side of the street).

E

Enhanced Pedestrian Crossings *are striped crosswalks that include additional crossing treatments, such as traffic signs, center median islands, flashing beacons, and/or other safety enhancements.*

Environmental Justice *is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. (Source: U.S. EPA, Environmental Justice, Compliance and Enforcement, Website, 2007).*

F

Freight Routes *are roads designated by the City to connect the city's industrial and commercial sites with I-5 and other regional facilities. They are a useful tool for improving the coordination between freight and other travel modes.*

Functional Classifications *are designations assigned to public roadways to provide a hierarchy for managing them practically and cost effectively. For example, they provide a framework for identifying which street elements to include in a street's design. Wilsonville's classifications include, Major Arterial, Minor Arterial, Collector, and Local Street.*

H

Higher Priority Project List *includes the City's recommended projects reasonably expected to be funded through 2035. These are the highest priority solutions to meet the City's most important needs. These projects will inform the City's yearly budget and 5-year Capital Improvement Plan (CIP).*

I

Ice Age Tonquin Trail *is a partially-completed regional trail located in the southwestern portion of the Portland metropolitan area that would span approximately 22 miles and travel through the communities of Wilsonville, Sherwood, and Tualatin. This trail would provide an active transportation link between the Willamette and Tualatin Rivers, while enhancing local pedestrian and bicycle connectivity connecting to neighborhoods, businesses, schools, and parks.*

Intelligent Transportation System (ITS) *strategies involve the deployment and management of advanced technologies that collect and distribute information to both users and operator staff so they can most effectively use and manage the transportation system.*

Interchange Area Management Plans (IAMP) *are transportation and land use plans prepared jointly by the Oregon Department of Transportation and local jurisdictions to balance and manage transportation and land use decisions in freeway interchange areas to protect their function while also supporting the local street network.*

Implementation Measures *are City actions identified to put broader policies into action.*

L

Level of Service (LOS) *is a "report card" rating (A through F) based on the average delay experienced by vehicles at the intersection. LOS A, B, and C indicate conditions where traffic moves without significant delays. LOS D and E are progressively worse, and LOS F represents conditions where average vehicle delay has become excessive and demand has exceeded capacity, which is typically evident in long queues and delays.*

Low Impact Development (LID) *is an approach to development and infrastructure improvements that works with nature to manage stormwater as close to the source as possible (i.e., adjacent to the roadway).*

Local Streets *are roadways where a higher priority is placed on local access rather than mobility. They are usually lower volume, lower speed streets with a narrow cross-section and numerous driveways.*

M

Metro *is the elected regional government for the Portland metropolitan area and provides region-wide planning, policy making, and coordination to manage growth, infrastructure, and development issues that cross jurisdictional boundaries.*

Multimodal *refers to the integration of multiple travel modes, which include walking, bicycling, riding transit, or driving.*

P

Parking Management Plans *inventory bicycle and motor vehicle parking supply in high demand locations (for example, park-and-ride lots, transit stations, and commercial areas). They do not require parking limitations but instead ensure that deliberate decisions are being made regarding parking provision and management.*

Performance Measures *are quantitative tools (based on data) or qualitative tools (based on judgment) used to evaluate how effectively the transportation system is operating and/or progressing towards identified performance targets.*

Planning Horizon *is the future year (in this case, 2035) that is the basis of the Transportation System Plan's future needs assessment.*

Policies *are the principles or rules the City has developed to serve as its blueprint for making decisions regarding its transportation investments, including how the system is designed, constructed, operated, and maintained. The City's transportation policies guide actions relative to its development code, capital project investment, and other investments.*

R

Regional Transportation Functional Plan (RTFP) *codifies the requirements that local plans must comply with to be consistent with the Regional Transportation Plan.*

Regional Transportation Plan (RTP) *is the long-range blueprint to guide transportation planning and investment in the region.*

Roadway Extensions *are new transportation facilities that begin at the termini of existing roads and connect neighborhoods to one another and to other important destinations.*

S

Safe Routes to School (SRTS) *is a collaborative program between schools and local agencies that combines ongoing educational and outreach efforts with pedestrian and bicycle infrastructure improvements along routes used by school children.*

Shared-Use Paths *are a type of trail designed to be part of the transportation system that provide off-road routes for a variety of users, which principally include bicyclists and pedestrians.*

South Metro Area Regional Transit (SMART) *is a City department that operates several fixed bus routes serving Wilsonville and making connections to regional transit providers. SMART also manages various programs, including Dial-a-Ride (door-to-door service for elderly and disabled residents) and SMART Options (programs that support, educate, and encourage the use of active transportation modes and rideshare).*

Spot Improvements *are isolated intersection and safety improvements throughout the city.*

System Deficiencies *are performance, design, or operational constraints that limit travel by a given mode. Examples may include unsafe designs, bicycle and pedestrian connections that contain obstacles,*

inadequate intersection or roadway capacity, insufficient bus frequency, and congestion.

System Development Charges (SDCs) *are a one-time fee charged to new developments based on land use and size. These funds are legally required to be used for capacity-related improvements.*

System Gaps *are missing connections or barriers in the urban transportation system that functionally prohibit travel for a given mode. While a gap generally means a connection does not exist, it could also be the result of a physical barrier (such as I-5, the Willamette River, other natural feature, or existing development) or a social barrier (including lack of information, language, education, and/or limited resources).*

T

Technical Advisory Committee (TAC) *consisted of agency staff from the City of Wilsonville and other local, regional, and state agencies that provided feedback on the Transportation System Plan deliverables throughout the update process.*

Transportation Demand Management (TDM) *refers to the implementation of strategies that support other travel choices (including other travel modes and travel during off-peak periods) in order to reduce traffic congestion.*

Transportation System Management and Operations (TSMO) *refers to strategies that improve the safety and efficiency of the transportation system in order to optimize the use of existing infrastructure.*

Transportation System Plan (TSP) *is the City's long-term transportation plan that guides the construction and operation of its transportation system. It is an element of its Comprehensive Plan and includes policies, projects, and programs that could be implemented through the City's Capital Improvement Plan, development requirements, or grant funding.*

U

Urban Growth Boundaries (UGB) *are regional boundaries that restrict where urban growth can occur in order to reduce urban sprawl and protect nearby natural resources.*

Urban Renewal Districts (URD) *are "blighted" areas where private development has stagnated or is not feasible and public funds are needed (and are raised through tax increment financing) to stimulate economic development, usually through the construction of supporting infrastructure.*

Urban Upgrades *are projects that widen existing roadways to meet the City's cross-section standards and often improve multimodal connectivity by adding bike lanes, sidewalks, and turn lanes that accommodate access to adjacent neighborhoods.*

V

Volume to Capacity Ratio (V/C) *is a decimal representation (typically between 0.00 and 1.00) of the proportion of capacity being used at a turn movement, approach leg, or intersection. A lower ratio indicates smooth operations and minimal delays. As the ratio approaches 1.00, congestion increases and performance is reduced. A ratio greater than 1.00 represents future conditions where demand is estimated to exceed capacity.*

W

Walk Friendly Communities *is a national recognition program developed to encourage cities across the U.S. to establish or recommit to supporting safer walking environments. It awards cities one of five designations (from lowest to highest: honorable mention, bronze, silver, gold, and platinum).*

Westside Express Service (WES) *is a commuter rail line serving Beaverton, Tigard, Tualatin, and Wilsonville that runs during the weekday morning and afternoon rush hours and provides service to Wilsonville's SMART Central transit center.*

Executive Summary

Introduction

The Wilsonville Transportation System Plan (TSP) is the City's long-term transportation plan and is an element of its Comprehensive Plan. It includes policies, projects, and programs that could be implemented through the City's Capital Improvement Plan, development requirements, or grant funding. The TSP's transportation planning story is outlined in the box at right, and the key findings of each TSP chapter are highlighted below.

The Context (See Chapter 1)

The 2013 TSP process built upon two decades of community planning to create a complete community transportation plan that integrates all travel modes. This update is needed to account for changing economic and social circumstances and to ensure consistency with state and regional planning policies. It also ensures the City will be prepared to support land use growth within the urban growth boundary through the 2035 planning horizon.

Most of the policies and projects come from prior adopted plans, including the Comprehensive Plan, 2003 TSP, 2006 Bicycle and Pedestrian Master Plan, and 2008 Transit Master Plan. While the TSP replaces the 2003 TSP in its entirety, it updates and builds upon the 2006 Bicycle and Pedestrian Master Plan and 2008 Transit Master Plan. Where these documents may be in conflict, the new TSP takes precedence.

The City's future financial outlook was also evaluated to identify the City's forecasted resources and financial limitations. The City draws upon multiple funding sources to manage, operate, and improve its transportation system. For capital improvement projects, the City relies heavily on developer contributions and fees (including system development charges) and urban

A Transportation Planning Story

The TSP chapters tell a story of how the City's planning efforts are helping the community achieve its desired transportation system:

- **Chapter 1: The Context** provides the background of the City's transportation planning efforts.
- **Chapter 2: The Vision** shares the City's visions of its desired transportation system.
- **Chapter 3: The Standards** outlines the standards the City is implementing to ensure ongoing progress towards its vision.
- **Chapter 4: The Needs** identifies the existing and anticipated needs of the transportation system through the 2035 planning horizon.
- **Chapter 5: The Projects** explains the transportation improvement projects that will allow the City to meet its infrastructure needs.
- **Chapter 6: The Programs** describes the ongoing transportation programs that help the City manage its transportation system.
- **Chapter 7: The Performance** lists the performance measures to be considered in subsequent TSP updates to determine if its planning efforts are leading to the desired outcomes.

renewal funds, which are primarily associated with new growth areas. With ongoing planning and investment in its transportation system, the City can continue to serve its residents, businesses, and the region.

The Vision (See Chapter 2)

As Wilsonville grows, it is essential for the community to work collaboratively toward its shared vision, which is summarized in the call-out box at right.

Transportation goals and policies form the bases for how the local transportation system will be developed and maintained through the TSP's 2035 horizon year. Wilsonville's seven transportation goals are identified in the table below. The City's vision and goals support a multimodal approach to transportation, which means that the system accommodates users of all travel modes.

Wilsonville's Transportation Vision

Wilsonville's coordinated multimodal transportation system is strategically designed and collaboratively built. Our system provides mode and route choices, delivering safe and convenient local accessibility to assure that Wilsonville retains its high levels of quality of life and economic health. Neighborhoods, employment centers, schools, shopping, and parks are connected by a network of streets and pathways that give residents options to easily get around town.

Our local accessibility is further enhanced through arterial connectivity with our neighboring communities, thereby providing excellent intercity and interstate mobility serving our residential and business needs. The system is designed, built and maintained to be cost effective and to maximize the

Wilsonville's Transportation Goals

Goals		Description
1	**Safe**	Follow current safety practices for design, operations, and maintenance of transportation facilities.
2	**Connected and Accessible**	Provide all users with access to integrated facilities and services that connect Wilsonville's neighborhoods, parks, schools, employment centers, and retail areas to each other and to the surrounding region.
3	**Functional and Reliable**	Provide, manage, and maintain sufficient transportation infrastructure and services throughout Wilsonville to ensure functional and reliable multimodal and freight operations as development occurs.
4	**Cost Effective**	Utilize diverse and stable funding sources to implement transportation solutions that provide the greatest benefit to Wilsonville residents and businesses, while mitigating impacts to the city's social, economic, and environmental resources.
5	**Compatible**	Develop and manage a transportation system that is consistent with the City's Comprehensive Plan and coordinates with other local, regional, and state jurisdictions.
6	**Robust**	Encourage and support the availability of a variety of transportation choices for moving people and goods.
7	**Promotes Livability**	Design and construct transportation facilities in a manner that enhances the livability of Wilsonville and health of its residents.

The Standards (See Chapter 3)

Wilsonville's transportation standards ensure the City develops and operates consistent with its goals and vision. Wilsonville's six types of transportation standards are listed in the call-out box at right.

How well a street serves its users ultimately depends upon which elements are included, their dimensions, and how they relate to each other (all of which are informed by the City's standards). For example, streets designed consistent with adjacent land uses can contribute to the identity and character of a neighborhood and increase property values. They can also affect traffic speeds, reduce environmental impacts, and allow for safe multimodal use.

The Needs (See Chapter 4)

Wilsonville's transportation standards and policies serve as a benchmark for determining what needs exist throughout the city. The city's needs are categorized as gaps (missing connections or barriers in the transportation network) or deficiencies (shortcomings of the existing system). The TSP identifies the gaps and deficiencies that currently exist or are anticipated to arise through the 2035 horizon year as additional local and regional development occurs.

The Projects (See Chapter 5)

Many of the city's existing and future transportation needs can be addressed through capital improvement projects. The projects needed through 2035 were principally based on prior City plans.

Constructing all identified transportation projects would cost approximately $218.2 million, which exceeds the $123.4 million forecasted to be available through 2035. Therefore, the transportation projects were separated into two lists:

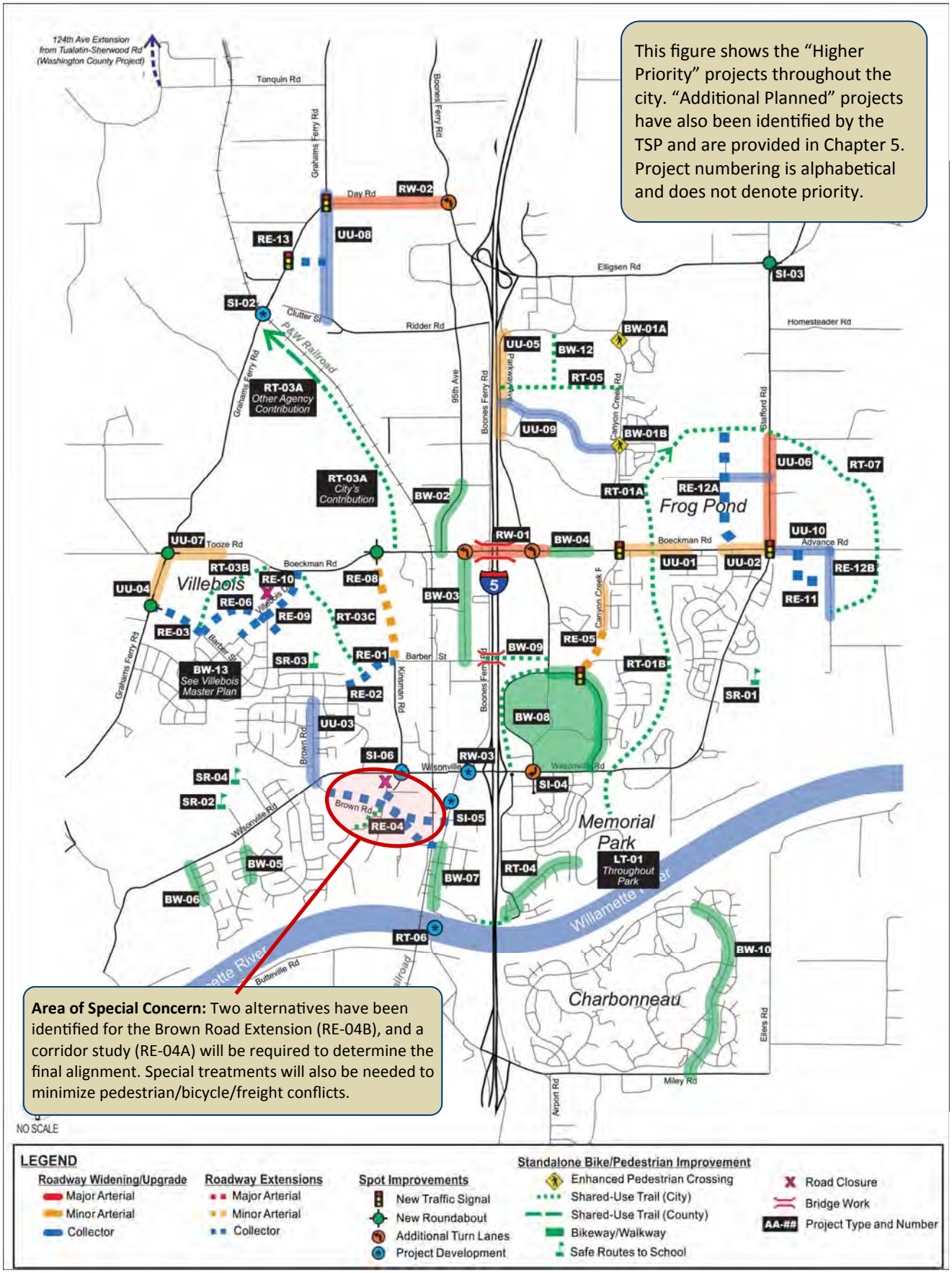
- The "Higher Priority" project list includes the recommended projects reasonably expected to be funded through 2035. These are the highest priority projects and will inform the City's yearly budget and 5-year Capital Improvement Plan (CIP). These projects are identified in the following figure (page v) and table (page vi).
- The "Additional Planned" project list includes those projects that would contribute to the City's desired transportation system through 2035 but that are not considered "Higher Priority" projects due to estimated funding limitations. These projects are identified in Chapter 5 and should be pursued as funding opportunities are available.

Wilsonville's Transportation Standards

Wilsonville's six types of transportation standards support its management of an effective multimodal transportation system:

- **Functional Classifications** provide a hierarchy for determining how streets should function and which street design elements to include.
- **Connectivity and Facility Spacing Standards** ensure that direct routes and travel options are available for all transportation users.
- **Freight Routes** connect the city's industrial and commercial sites with I-5 and other regional facilities and improve coordination between freight and other travel modes.
- **Bicycle Routes** connect neighborhoods, schools, parks, community centers, business districts, and natural resource areas to support bicycle travel by residents of varying physical capabilities, ages, and skill levels.
- **Cross-Section Standards** provide guidance for selecting and sizing various design elements to serve intended users' needs.
- **Access Management** balances the transportation system's need to provide safe, efficient, and timely travel with the need to allow access to individual properties.

Higher Priority Projects



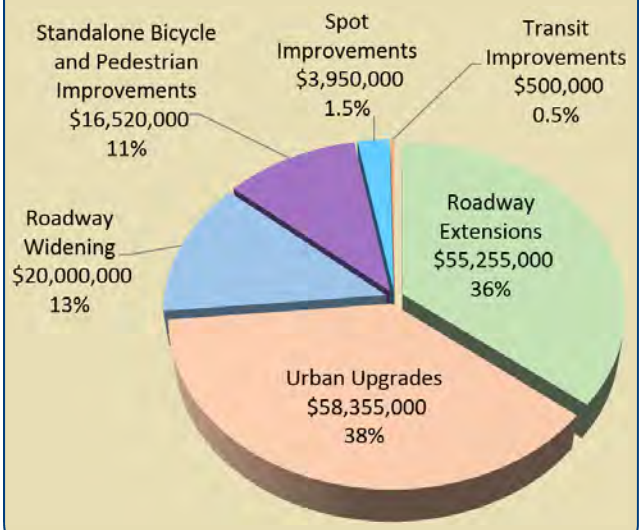
Higher Priority Projects (Listed Alphabetically By Improvement

No.	Higher Priority Project
Roadway Extensions (Multimodal Connectivity)	
RE-01	Barber Street Extension
RE-02	Barber Street Extension (Part 2)
RE-03	Barber Street through Villebois
RE-04A	Corridor Study for Brown Road Extension
RE-04B	Brown Road Extension (with Bailey Street or 5th Street Connection)
RE-05	Canyon Creek Road Extension
RE-06	Costa Circle Loop Extension
RE-08	Kinsman Road Extension (South)
RE-09	Villebois Drive Extension
RE-10	Villebois Drive Extension (Part 2)
RE-11	Meridian Creek Middle School Improvements
RE-12A	Frog Pond West Neighborhood Collector Roads
RE-12B	Frog Pond South Neighborhood Collector Road
RE-13	Java Road Connection and Signal
Roadway Widening (Capacity)	
RW-01	Boeckman Road Bridge and Corridor Improvements
RW-02	Day Road Widening
RW-03	Widen Wilsonville Road East of Boones Ferry Road
Urban Upgrades (Multimodal Connectivity and Safety)	
UU-01	Boeckman Road Dip Improvements
UU-02	Boeckman Road Urban Upgrade
UU-03	Brown Road Upgrades
UU-04	Grahams Ferry Urban Upgrade
UU-05	Parkway Avenue Urban Upgrade
UU-06	Stafford Road Urban Upgrade
UU-07	Tooze Road Urban Upgrade
UU-08	Garden Acres Road Urban Upgrade
UU-09	Printer Parkway Urban Upgrade
UU-10	Advance Road Urban Upgrade
Spot Improvements (Transportation System Management/ Operations)	
SI-02	Grahams Ferry Railroad Undercrossing Project Development
SI-03	Stafford Road/65th Avenue Intersection Improvements
SI-04	Wilsonville Rd/Town Center Loop West Intersection Improvements
SI-05	Curb Extension Removal on Boones Ferry Road
SI-06	Truck Turning Movements at SW Kinsman Road
Bikeways and Walkways (Standalone Pedestrian and Bicycle Improvements)	
BW-01 A/B	Canyon Creek Road Enhanced Pedestrian Crossings
BW-02	95th Avenue Sidewalk Infill

No.	Higher Priority Project
Bikeways and Walkways (Standalone Pedestrian and Bicycle Improvements) . . . Continued	
BW-03	Boberg Road Sidewalk Infill
BW-04	Boeckman Road Bike Lanes and Sidewalk Infill
BW-05	Willamette Way East Sidewalk Infill
BW-06	Willamette Way West Sidewalk Infill
BW-07	Boones Ferry Road Sharrows
BW-08	Town Center Loop Pedestrian, Bicycle, and Transit Improvements
BW-09	Town Center Loop Bike/Pedestrian Bridge
BW-10	French Prairie Drive Pathway
BW-12	Parkway Center Trail Connector
BW-13	Villebois Loop Trail
BW-14	Wayfinding Signage
BW-15	Property Acquisition for Bike/Ped Connectivity
Safe Routes to School (Standalone Pedestrian and Bicycle Improvements)	
SR-01	Boeckman Creek Primary Safe Routes to School Improvements
SR-02	Boones Ferry Primary Safe Routes to School Improvements
SR-03	Lowrie Primary Safe Routes to School Improvements
SR-04	Wood Middle School Safe Routes to School Improvements
Local Trails (Standalone Pedestrian and Bicycle Improvements)	
LT-01	Memorial Park Trail Improvements
Regional Trails (Standalone Pedestrian and Bicycle ImprovementsSafety)	
RT-01A	Boeckman Creek Trail (North)
RT-01B	Boeckman Creek Trail (South)
RT-03A	Tonquin Trail (North)
RT-03B/C	Tonquin Trail (Villebois)
RT-04	Waterfront Trail Improvements
RT-05	Wiedeman Road Trail
RT-06	Willamette River Bike/Pedestrian/Emergency Bridge Project Dev.
RT-07	Revised Frog Pond Trail
Transit Improvements	
TI-01	Pedestrian Access to Transit
TI-02	Transit Street Improvements

Wilsonville's "Higher Priority" project list includes several project types. The pie chart below provides the cost breakdown by project type. The highest costs would be incurred for the three roadway improvement types, which include facility improvements for all travel modes.

Higher Priority Project Costs (by Project Type)



Estimated Funding Available through 2035 for Capital Improvements

Funding Source	Estimated Capital Funding through 2035
Street System Development Charges (SDCs)	$42 million
Developer Contributions	$30 million
West Side Plan – Urban Renewal District (URD)	$27 million
Year 2000 Plan – Urban Renewal District (URD)	$5 million
Park System Development Charges (SDCs)	$0.7 million
Local/Regional Partnerships	$2.9 million
Grants	$3.2 million
State and Federal Funding	$12.6 million
Total Funds	**$123.4 million**

To fund its capital improvements projects, the City relies heavily on developer contributions and fees (including system development charges) and urban renewal funds, which are primarily associated with new growth areas. The table to the lower left lists the estimated funding available for capital improvements through the 2035 planning horizon year.

The Programs (See Chapter 6)

Wilsonville's transportation programs (listed below) also play an important role in the City's ongoing efforts to provide a coordinated, cost-effective, multimodal transportation system. Well-run programs help extend the service life of the City's infrastructure improvements and increase the value of transportation investments. The City's Community Development and SMART Transit departments are responsible for managing the majority of its transportation programs.

Transportation Programs

Wilsonville has various transportation programs that support ongoing operations and services:

- Capital Improvement Program (CIP)
- Safety (Proposed)
- Safe Routes to School
- ADA Comprehensive Access (Proposed)
- SMART Transit
- SMART Options and Transportation Demand Management (TDM)
- Intelligent Transportation System (ITS)
- Bike Smart and Walk Smart

The Performance (See Chapter 7)

Wilsonville's Transportation System Plan (TSP) provides policies, standards, projects, and programs that, when put into action, will improve the city's transportation system. By tracking appropriate performance measures in future TSP updates, the City can evaluate their progress.

The Context
Chapter 1

Wilsonville has a rich history as an important transportation connection between the north and south areas of the Willamette Valley. With ongoing planning and investment in its transportation system, the City can continue to serve its residents, businesses, and the region.

Prior to the arrival of non-indigenous settlers, the Willamette River served as a water route for Kalapuyan people. As settlers moved into the area in the early 1800's, the need arose for a way to cross the river. In 1847, Alphonso Boone, grandson of Daniel Boone, established Boones Ferry (located near the present day Boones Ferry Park) and an early settlement began providing needed support to the ferry.

Over time, steamboats, the railroad, and then Interstate-5 came to town—and Wilsonville continued to grow. In 1969, Wilsonville became a city. Shortly afterwards, the City began preparing planning documents to guide its development. As economic and social circumstances change and new state and regional planning policies are adopted, the City continues to improve and refine its planning efforts. In doing so, it takes a strategic approach to growth management.

By understanding the context surrounding its growth, the community can continue to build upon its rich history. The following pages provide a timeline of important events associated with Wilsonville's transportation planning history, current planning framework, and future growth. The City's future financial outlook is also provided to better frame the City's forecasted resources and challenges.

By understanding its . . .

- ***Unique history,***
- ***Current planning framework,***
- ***Future growth areas, and***
- ***Financial outlook,***

Wilsonville can continue to . . .

- ***Manage growth,***
- ***Serve its residents and business, and***
- ***Be an important transportation connection for the region.***

Transportation Planning History in Wilsonville

Early 1800's
Wilsonville area (traditional territory of the Kalapuyan people) was settled by people other than the indigenous Native Americans.

Early 1900's
Steamboats were used as the primary mode of shipping.

Pre-1960's
Before the construction of Interstate-5 and the Boone Bridge, personal automobiles had to be ferried across the Willamette River.

Early 1800's | 1900 | 1910 | 1920 | 1930 | 1940 | 1950

1847
Alphonso Boone, grandson of Daniel Boone, established Boone's Ferry across the Willamette River.

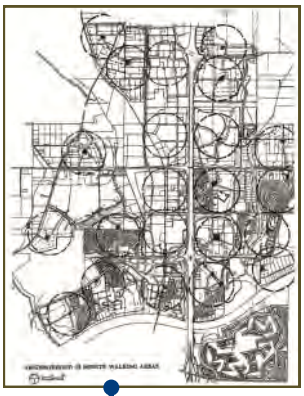
1950's
The Interstate-5 freeway system was built.

1908
Railroad comes to the area.

1975
The City adopted a new Comprehensive Plan Map, which included its first urban growth boundary. The 1982 Comprehensive Plan Map is shown at right.

1980
The City's new Comprehensive Plan was adopted and included a Transportation chapter with reduced street widths (3-5 lane arterials and 2-3 lane collectors). The street system concept included a series of loops increasing in size as travelers move from neighborhoods to arterials. The plan also recognized connectivity barriers, including I-5, the Willamette River, the railroad, and topography. Population 2,920.

1990's
The City undertook various community planning efforts that addressed transportation issues, including connectivity, by identifying walkable neighborhoods using a ¼-mile radius.



1971
Wilsonville completed it's first General Plan, which envisioned wide streets (5-7 lane arterials and 3-5 lane collectors). The plan did not address connectivity or alternative travel modes.

1989
Wilsonville withdrew from TriMet's service district and established its own transit service.

1960 | 1970 | 1980 | 1990 | 2000

January 1, 1969
Wilsonville became a city and was named after early postmaster Charles Wilson. Population approximately 1,000.

1973
Oregon Senate Bill 100 creates new land use plan requirements

Results of Senate Bill 100

Statewide

- Established the Land Conservation and Development Commission (LCDC)
- Empowered the Commission to adopt Statewide Planning Goals

Requirements for Wilsonville

- Adopt a Comprehensive Plan and implementing ordinances (dominant legal documents directing land use and development) in conformance with the Statewide Planning Goals
- Coordinate plans with affected units of government (now includes Washington County, Clackamas County, and Metro)

1990
Population 7,705.

November 1992
Metro Charter approved by two-thirds of region's voters, establishes growth management as Metro's primary task and gives Metro's elected Council broad powers, affecting city and county planning programs throughout the region.

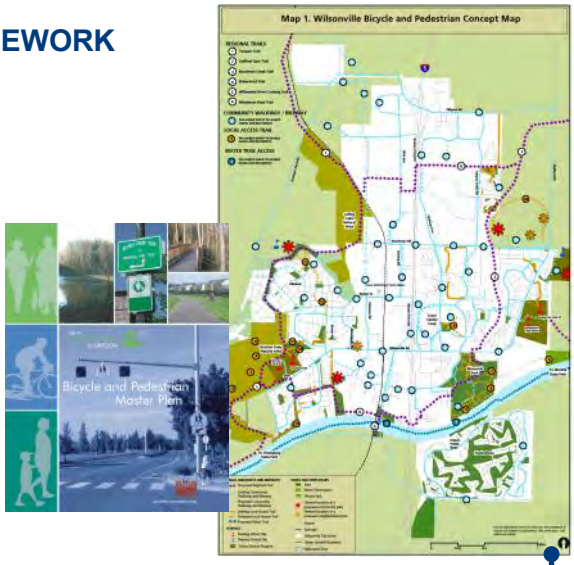
1994
WART (Wilsonville Area Rapid Transit) becomes SMART (South Metro Area Rapid Transit)

1994
Metro adopts the 2040 Growth Concept, its long-range plan to guide the region's growth and development for 50 years. With its adoption Wilsonville joined other cities and counties as active participant in regional planning efforts.

1999 and 2000
The State of Oregon adopts its 1999 Highway Plan and Metro adopts its first Regional Transportation Plan (RTP). Population 13,991.

Current Transportation Planning Framework

2003 Transportation Systems Plan (TSP)
The City replaced the transportation chapter of its Comprehensive Plan to comply with state mandates, develop transportation standards, address problem areas, revise forecasts (2020 horizon year), and provide transportation planning guidelines for all travel modes.



2006 Bicycle and Pedestrian Master Plan
The City replaced the bicycle and pedestrian chapters of the 2003 TSP with new prioritized project lists providing community and regional connectivity between parks, neighborhoods, schools, and commercial and industrial areas.

2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007

2001 Villebois Village Master Plan
A Master Plan was prepared to guide the development of a 480-acre area on the west side of the city into an urban village based on the guiding principles of connectivity, diversity, and sustainability.

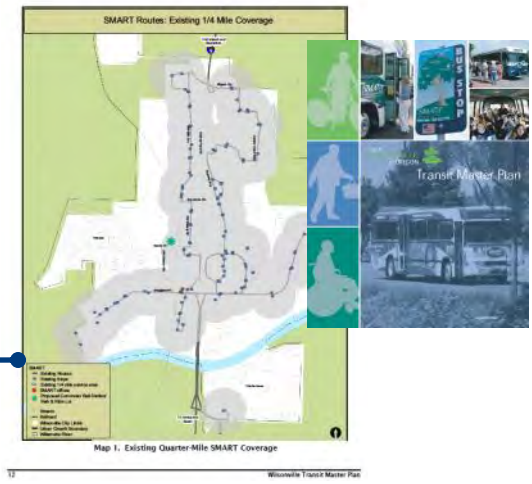
2006 Public Works Standards
Standards were provided for constructing public facilities, including streets, trails, and related infrastructure.

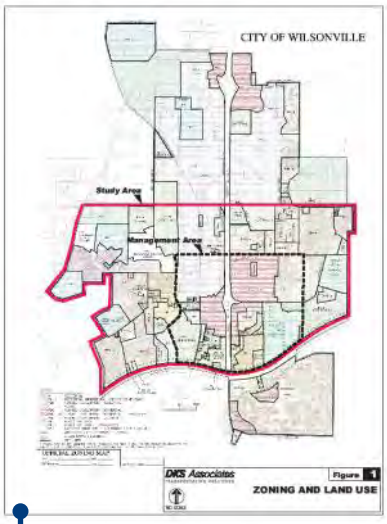
2007 Coffee Creek Master Plan
A Master Plan was prepared to guide development of 220-acre area on north side of city into industrial area.

2007 Parks and Recreation Master Plan
The City prepared a plan for achieving a comprehensive and interrelated system of parks, recreation, and natural areas that promote connectivity throughout the city and support the 2006 Bicycle and Pedestrian Master Plan.

2008 Transit Master Plan

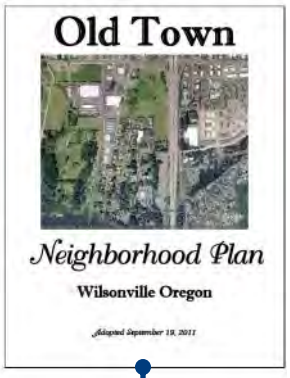
The City replaced the transit element of the 2003 TSP with new recommendations to increase and improve transit service and reduce the demand on roads and parking.





2011 Old Town Neighborhood Plan

A plan was prepared to ensure Old Town's unique character is maintained and enhanced.



2009

TriMet begins operating its Westside Express Service (WES) commuter rail line, which has its southern terminus at Wilsonville's transit center.

2009 Wilsonville Road Interchange Area Management Plan (IAMP)

A plan was prepared to identify how the City and ODOT will collaborate to improve the I-5 exit (#283) to serve planned growth. Population 17,940.

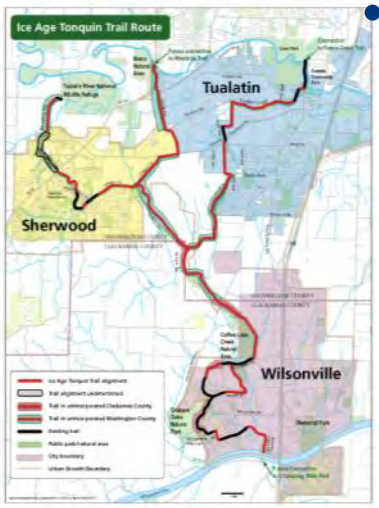
2008 | **2009** | **2010** | **2011** | **2012**

2010 Regional Transportation Plan (RTP) and Regional Transportation Functional Plan (RTFP)

Plans were prepared to provide a long-range blueprint for all modes of transportation throughout Portland region and support Metro's 2040 Growth Concept. The plans identified improvements focused on mobility corridors (e.g., Tigard/Wilsonville) and required compliance by local jurisdictions.

2012 Stormwater Master Plan

The City prepares a stormwater program that supports quality of life and meets regulatory requirements. The plan also includes resources for improved street cross-sections.

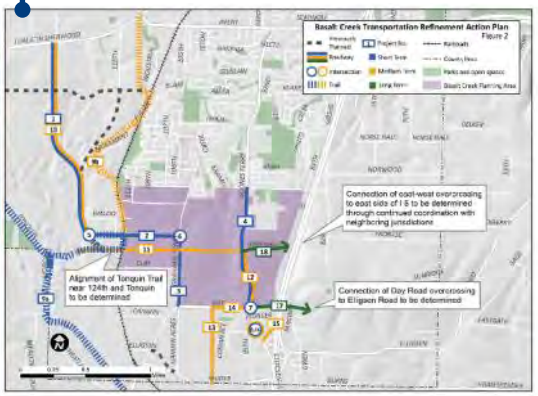


2012 Ice Age Tonquin Trail Master Plan

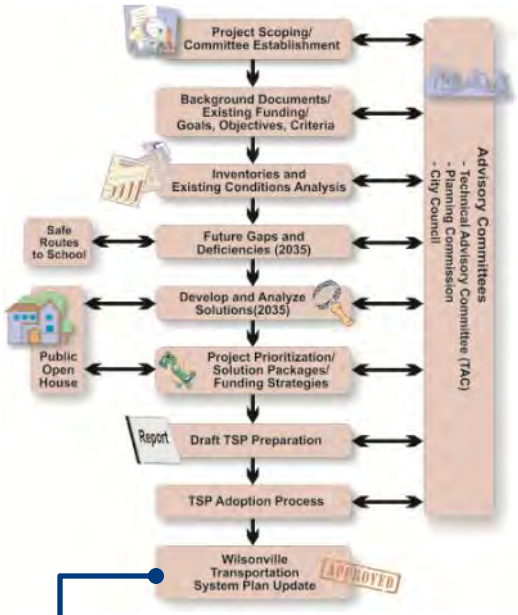
A plan was prepared to provide information needed to complete and connect 22 miles of trails within and between the cities of Wilsonville, Tualatin, and Sherwood. Approximately half of the 5 miles within Wilsonville City limits have already been completed.

2012 Basalt Creek Transportation Refinement Plan

A plan was prepared to refine the major transportation improvements connecting I-5 to Tualatin-Sherwood Road through the unincorporated area to the north to support future development of the Basalt Creek area.



Future Transportation Growth and Planning Needs



2013 Transportation System Plan (TSP) Update
The updated TSP envisions transportation improvements needed through 2035 horizon year for all travel modes based on revised traffic forecasts and integration of prior transportation planning efforts. It updates the transportation improvement project list, standards, programs, and performance measures to support City efforts to accomplish its vision and goals and to comply with new Regional Transportation Plan requirements.

Next Transportation System Plan (TSP) Update (In Approximately 5-10 Years)
In the future, the City will update its TSP to respond to transportation, land use, environmental, population growth, economic, and social changes. Updates may also be triggered by regulatory changes at the state, regional, and local levels, including changes in Metro's Regional Transportation Plan (RTP).

2012-2015 Climate Smart Communities Scenario Project
Wilsonville is participating with Metro and the surrounding jurisdictions in developing local strategies for reducing the region's greenhouse gas emissions. The project will help Wilsonville define specific goals that it can work towards to reduce pollution, create a healthy and equitable community, and nurture the economy.

2035 Land Use Growth Assumptions
To ensure the City is prepared for local and regional growth, a 2035 horizon year was the basis of the 2012/2013 TSP update. The 2035 land use projections were based on the build-out of all vacant and underdeveloped lands within the Urban Growth Boundary (UGB) assuming Comprehensive Plan designations.

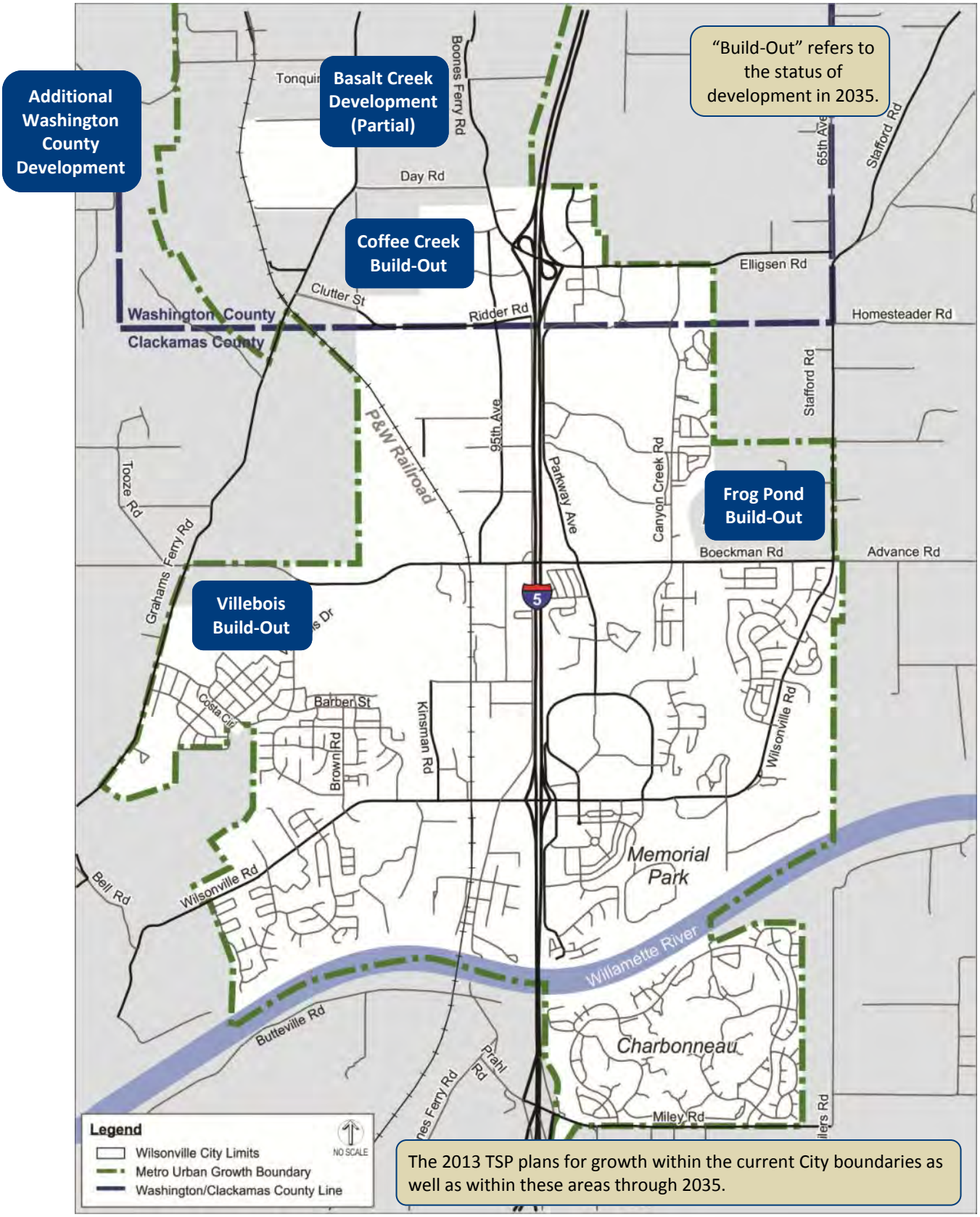
Table 1-1. Wilsonville Growth Forecasts

Land Use	Existing 2010 Land Use	Projected 2035 Land Use*
Total Households	**8,250**	**12,750**
Employees		
Retail Employees	2,500	3,600
Service Employees	4,900	9,200
Other Employees	11,000	19,050
Total Employees	**18,400**	**31,850**

*Note: 2035 land use estimates consistent with Metro forecasts

Wilsonville Growth From 2010 to 2035
- 50% More Households
- 75% More Employees

FIGURE 1-1. 2035 GROWTH AREAS



FUNDING OUTLOOK

The City draws from multiple funding sources to pay for the construction, operation, and maintenance of its transportation infrastructure and services. Table 1 -2 lists the sources, how they are used, and what estimated amounts would be available.

Approximately $104 million is estimated to be available from City sources to fund transportation-related capital improvement projects through 2035. Additional contributions are expected to be available from regional, state, and federal sources to partially fund the City projects included in the Regional Transportation Plan (RTP). Corresponding estimates are provided in Chapter 5 for specific projects. Detailed discussion of funding sources and the City's funding outlook by transportation expenditure are provided in the *Existing Funding* memorandum included in the Appendix.

Because the available funds will be insufficient for the City to construct all of its transportation projects (expected to cost at least $170 million), Wilsonville must choose how to invest its available funding to best meet its needs through the year 2035.

Table 1-2. Estimated City Funding Available through 2035 for Capital Improvements

City Funding Source	Use	Estimated Capital Improvement Funding through 2035[a]
Street System Development Charges (SDCs)	Capital improvement projects that increase transportation system capacity	$42 million
Developer Contributions	Exactions related to development impacts, on-site facilities, and half-street frontage improvements	$30 million
West Side Plan – Urban Renewal District (URD)	Improvements made to reduce blight and attract development within the West Side Plan URD	$27 million
Year 2000 Plan – Urban Renewal District (URD)	Improvements made to reduce blight and attract development within the Year 2000 Plan URD	$5 million
Park System Development Charges (SDCs)	Bicycle and pedestrian projects between and through the City parks and the off-street trail system	$0.7 million
Road Maintenance Regulatory Fund[b]	Major street repairs and reconstruction (including slurry seals and overlays)	None (for maintenance only)
Road Operating Fund[b]	Roadway operations and minor repairs (including signal lights, striping, curbs, gutters, and potholes)	None (focused on operations)
Street Lighting Fund[b]	Ongoing street light maintenance, operations, and infill	None (for ongoing costs)
Transit Fund[b]	Transit operations and programs	None (for operations and maintenance)
Community Development Fund[b]	Planning, engineering, and other administration (e.g., City staff and supply costs)	None (for administration)
	Total City Funds	**$104.7 million**

[a] Estimated funding amounts are planning-level approximations based on review of past ten years of City projects and budget estimates. They assume current fee structures remain in place through 2035 as all vacant land within the City's urban growth boundary (UGB) is developed. They also assume current urban renewal plans.

[b] Because roadway operations and maintenance are expected to be covered by related funds, no contributions from these funds are assumed to be available for capital improvements.

The Vision
Chapter 2

As Wilsonville grows, it will be essential for the community to work collaboratively toward a shared vision. Understanding the goals, and specific steps to achieve them, is the best and most cost-effective way to create a beautiful, functional transportation system.

To guide Wilsonville's transportation planning and investment decisions, the community has developed a new vision statement, transportation goals, policies, and implementation measures.

WILSONVILLE'S TRANSPORTATION VISION

Wilsonville's coordinated multimodal transportation system is strategically designed and collaboratively built. Our system provides mode and route choices, delivering safe and convenient local accessibility to assure that Wilsonville retains its high levels of quality of life and economic health. Neighborhoods, employment centers, schools, shopping, and parks are connected by a network of streets and pathways that give residents options to easily get around town.

Our local accessibility is further enhanced through arterial connectivity with our neighboring communities, thereby providing excellent intercity and interstate mobility serving our residential and business needs. The system is designed, built and maintained to be cost effective and to maximize the efficient utilization of public and private funding.

Wilsonville envisions a transportation system that is . . .

- ***Strategically designed,***
- ***Collaboratively built,***
- ***Safe,***
- ***Convenient, and***
- ***Cost effective.***

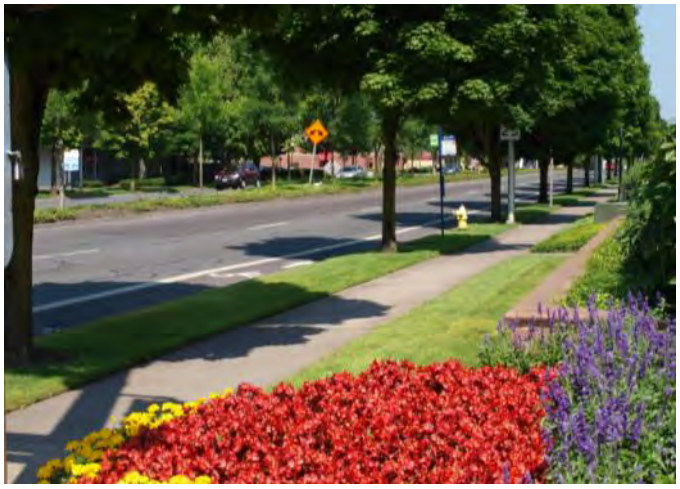
The result will be . . .

- ***Mode and route choices,***
- ***Quality of life,***
- ***Economic health,***
- ***Neighborhood connectivity, and***
- ***Mobility.***

TRANSPORTATION GOALS

The City of Wilsonville is responsible for managing a transportation system that efficiently and effectively transports people and goods within the city. This system should support the quality of life of residents and the economic vitality of businesses.

The City can best fulfill its responsibilities by working collaboratively with local and regional partners in developing a transportation system that achieves its seven goals, listed in Table 2-1.



Wilsonville Road's landscaping and streetscape provides an attractive environment for all users.

Table 2-1. Wilsonville's Transportation Goals

Goals	Description
1 Safe	Follow current safety practices for design, operations, and maintenance of transportation facilities.
2 Connected and Accessible	Provide all users with access to integrated facilities and services that connect Wilsonville's neighborhoods, parks, schools, employment centers, and retail areas to each other and to the surrounding region.
3 Functional and Reliable	Provide, manage, and maintain sufficient transportation infrastructure and services throughout Wilsonville to ensure functional and reliable multimodal and freight operations as development occurs.
4 Cost Effective	Utilize diverse and stable funding sources to implement transportation solutions that provide the greatest benefit to Wilsonville residents and businesses, while mitigating impacts to the city's social, economic, and environmental resources.
5 Compatible	Develop and manage a transportation system that is consistent with the City's Comprehensive Plan and coordinates with other local, regional, and state jurisdictions.
6 Robust	Encourage and support the availability of a variety of transportation choices for moving people and goods.
7 Promotes Livability	Design and construct transportation facilities in a manner that enhances the livability of Wilsonville and health of its residents.

Policies and Implementation Measures

Wilsonville's transportation policies serve as a blueprint for the City's investment in its transportation system. These policies cover a variety of areas, including how the system is designed, constructed, operated, and maintained.

The following polices all support the seven Transportation Goals. Each of the policy statements are supported by implementation measures that will guide City actions related to the development code, capital project investment, and other investments.

System Design

Policy 1. Provide a safe, well-connected, and efficient system of streets and supporting infrastructure for all travel modes.

Policy Areas

- ***System Design*** *(Policies 1-9)*
- ***Connectivity*** *(Policy 10)*
- ***Transportation System Management*** *(Policies 11-14)*
- ***Land Development Coordination*** *(Policies 15-16)*
- ***Agency Coordination*** *(Policies 17-21)*
- ***Goods Movement*** *(Policies 22-28)*
- ***Public Transit*** *(Policies 29-36)*
- ***Active Transportation: Pedestrians and Bicyclists*** *(Policies 37-42)*
- ***Interchange Management Areas*** *(Policy 43)*
- ***Transportation Funding*** *(Policies 44-46)*

Relationship of Policies and Implementation Measures

The City's policies support its seven Transportation Goals. Each policy statement may be supported by several implementation measures that will guide City actions relative to the development code, capital project investment, and other investments. Specific implementation measures, requirements, or standards will be included either in the TSP, the Development Code, Public Works Standards, or other implementing documents.

Implementation Measure (Policy 1):

1.a. Create a comprehensive signage and wayfinding system to assist all modes of transportation with navigating around the community.

Policy 2. Develop and maintain a transportation system that balances land use and transportation needs in a manner that enhances the livability and economic vitality of the city.

Implementation Measures (Policy 2):

2.a. Establish and maintain design standards for each arterial and collector street, in accordance with the Functional Street Classification System.

2.b. Refine the conceptual location of proposed new major streets identified in the TSP based on detailed engineering specifications, design considerations, and consideration of local impacts.

2.c. Evaluate the alignment and design of local streets on a project-by-project basis in coordination with the overall purposes of the TSP.

2.d. Dedicate all arterial and collector streets as public streets.

Policy 3. Support the use of alternative fuels by providing, or encouraging the provision of, needed infrastructure.

Implementation Measure (Policy 3):

3.a. Facilitate private sector exploration of alternative fuel technologies, including shared use of compressed natural gas fueling stations, and electric vehicle charging stations.

Policy 4. Provide a robust transportation system that provides all members of the community access to multiple travel mode choices.

Implementation Measures (Policy 4):

4.a. Provide pedestrian and bicycle connections between residential neighborhoods and major commercial, industrial, and recreational activity centers throughout the city, as shown in the Bicycle and Pedestrian Master Plan. Coordinate the system of pathways planned by adjacent jurisdictions to allow for regional travel.

4.b. Fill gaps in the existing sidewalk and off-street pathway systems to create a continuous network of safe and accessible bicycle and pedestrian facilities.

Policy 5. Design and manage the city street system to meet Level of Service (LOS) standard D. As may be approved by the City Council, possible exceptions to the LOS D standard are a change to LOS E on Boones Ferry Road and/or Elligsen Road, and on Wilsonville Road between and including the intersections with Boones Ferry Road and Town Center Loop West. Other capacity improvements intended to allow continued development without exceeding LOS E may also be approved by the City Council.

Policy 6. Evaluate, minimize, and balance the environmental impacts of new transportation projects.

Policy 7. Design the transportation system to be multifunctional by integrating stormwater management into the design of transportation facilities, as described in the Stormwater Master Plan.

Policy 8. Consider the needs of traditionally underserved citizens when planning and designing the transportation system, and identify targets and improvements to meet the specific needs of these populations.

Policy 9. Enhance transportation connections and choices in and between all parts of the city as a means for preserving the function and capacity of the existing system.

The recent Fred Meyer near the I-5/Wilsonville Road Interchange provides two electric vehicle charging stations for patrons to use for free to charge their vehicles while shopping.

Connectivity

Policy 10. Add system connections for all modes throughout the city's transportation system to improve access between neighborhoods, serve new development, and manage system performance.

Implementation Measures (Policy 10):

10.a. Promote the concept of a "walkable neighborhood" when advising developers and other agencies to ensure that logical connections are made to activity centers (e.g., schools, retail, and parks), and that such destinations can be reached on foot or by bicycle.

10.b. Where street connections are not possible, provide bicycle and pedestrian linkages to connect neighborhoods with each other and with surrounding destinations, except if prevented by physical barriers.

10.c. Where streets lack pedestrian and bicycle facilities, explore opportunities to fill these gaps.

A meandering sidewalk along Barber Street adjacent to the SMART Central at Wilsonville Station transit center supports connectivity by providing a safe and comfortable pedestrian environment with connections to transit.

Transportation System Management

Policy 11. Manage the transportation system to improve reliability and maximize efficient use of existing facilities.

Implementation Measures (Policy 11):

11.a. Continue to implement Transportation Demand Management measures through South Metro Area Regional Transit's SMART Options Program.

11.b: Manage access to improve safety and mobility in the city by applying access spacing standards, limiting access on arterials and at key identified intersections, and by preparing access management plans for interchanges.

Policy 12. Implement Intelligent Transportation System (ITS) improvements as identified in the Clackamas County ITS Plan.

Policy 13. Coordinate with Clackamas County, Washington County, and the Oregon Department of Transportation to implement system management and operations strategies on arterials and highways.

Policy 14. On- and off-street parking facilities are part of the transportation system, and will be managed and regulated to ensure sufficient parking is provided, maximize efficiency, minimize impacts to traffic in the right-of-way, and reduce environmental impacts. Over time as new development is planned in the Town Center area and the Westside Express Service (WES) commuter rail station area, the City will work with property owners to prepare parking management plans that manage supply and demand for parking areas.

Land Development Coordination

Policy 15. Review all land use/development proposals for consistency with the TSP.

Implementation Measures (Policy 15):

15.a. The City may approve local private streets through the Planned Development process, provided that adequate emergency access is available and that proper maintenance by private entities is ensured.

15.b. Any proposed change to the Comprehensive Plan or Zoning Maps that would result in additional trips above that allowed under the City's concurrency policies may be denied unless mitigation measures are identified and provided.

15.c. Consider only improvements listed in the Financially Constrained funding scenario of the Regional Transportation Plan, and/or in the City's Capital Improvement Plan (CIP), in determining the planned capacity, function and level of service of transportation facilities and services.

15.d. The Development Review Board or City Council may approve specific street design and alignment modifications through the planned development process. Such modifications shall be made in consideration of existing traffic volumes and the cumulative traffic generation potential of the land uses being developed.

Policy 16. Ensure new development and redevelopment provide connections to transit streets and facilities, providing protected street crossings, and bus stop amenities, if needed.

Villebois Village is the region's largest residential development and provides a variety of housing choices in a dense setting with wide open spaces, parks, and trails. It is located just west of the SMART Central transit center and WES Commuter Rail station .

Old Town Square, located near the I-5/Wilsonville Road interchange, provides a well-connected network of sidewalks and crosswalks and accommodates SMART Transit Route 4, which loops through the site.

"Connectivity is something I think is important within our transportation system. Having our schools not only connected to our neighborhoods, but neighborhoods connected to neighborhoods, and neighborhoods connected to retail and employment centers."

Marta McGuire
Planning Commission

Agency Coordination

Policy 17. Collaborate with the State, Metro, Clackamas and Washington Counties, and adjacent jurisdictions and transit agencies to develop and implement a Regional Transportation Plan that is complementary to and supportive of the City's Plan while addressing regional concerns. The City expects a reciprocal commitment from the other agencies. This policy recognizes that there is a need for a collective and cooperative commitment from all affected agencies to solve existing and future transportation problems. The City will do its part to minimize transportation conflicts, but it must also have the support of County, regional, State and Federal agencies to effectively implement this Plan.

Implementation Measure (Policy 17):

17.a. Advocate for the State, Metro, and Counties to improve regional transportation facilities which, due to inadequate carrying capacities, limits implementation of the City's Transportation Plan.

Policy 18. Work with ODOT, Metro, TriMet, Cherriots, and neighboring communities to maintain the capacity of I-5 through a variety of techniques, including requirements for concurrency, transit connections, continued development of a local street network within and connecting cities along I-5, access management, and completion of targeted improvements on I-5 such as auxiliary lanes, improvements at interchanges, etc.

Policy 19. Actively encourage the Federal Highway Administration, Federal Transit Administration, Oregon Department of Transportation, Clackamas and Washington Counties, Metro, TriMet, and Cherriots to improve regional transportation facilities and services.

Implementation Measure (Policy 19):

19.a. Consistent with the City's policy that needed public facilities and services are provided in advance of or concurrently with development, proposed land use changes within the I-5/Wilsonville Road Interchange Management Area (IMA) shall be consistent with planned future transportation projects.

19.b. Seek support from regional partners to construct connections that improve bicycle, pedestrian, and emergency vehicle access across the Willamette River.

19.c. Collaborate with Metro and surrounding jurisdictions to plan, and advocate for completion of, trails that link Wilsonville with neighboring jurisdictions as identified on the Regional Trails System Plan Map.

Policy 20. Work with neighboring jurisdictions to plan, fund, and implement a phased transportation network that serves southwest employment area growth while reserving I-5 interchange capacity for access to and from Wilsonville destinations.

Policy 21. Recognize the Aurora State Airport as a component of the state's transportation system and an economic asset to Wilsonville, while advocating that any expansion of the airport consider potential impacts (e.g., noise, pollution, and safety) to Wilsonville neighborhoods, area roadways, I-5 interchanges, agricultural operations, and the environment.

Goods Movement

Policy 22. Provide an adequate motor vehicle system that serves commercial vehicle/ truck traffic to and from the land uses they serve.

Policy 23. Consider the requirements for truck movement when designing all improvements in the public right of way on designated truck routes. Requirements include turn radii, sight distance, lane widths, turn pocket lengths, and pavement design.

Located along Interstate-5 just south of the Interstate-205 junction, Wilsonville is ideally situated as a freight hub in the region. The city is home to multiple distribution, manufacturing, and warehouse facilities.

Policy 24. Ensure that the needs of other transportation users are considered in the design and construction of freight improvements. Improvements that reduce freight vehicle impacts to bicyclists and pedestrians (particularly along identified bikeways and walkways) will be considered, including buffered bike lanes, enhanced pedestrian crossings, and other safety improvements.

Policy 25. Maintain access to the Willamette River so that the river may be used for transportation purposes in the future. Acquire or improve access to Willamette River for public docking purposes and consider the potential development of a new port or ports.

Policy 26. Assist with efforts to improve the viability of the railroad for freight.

Policy 27. Upgrade and/or complete the street network on the west side of I-5, including in the Coffee Creek and Basalt Creek areas, to serve the warehousing, distribution, and other industrial uses located there.

Policy 28. Coordinate with adjacent jurisdictions and the freight community to ensure that regional freight traffic is directed only toward the city's freight routes.

"A number of the companies that operate here in Wilsonville export outside the United States . . . that's why it is so important that we get to market as effectively and efficiently as possible as we can, but at the same time, our goal is to make it so transparent that the local residents are aware of it, but don't really have to deal with it."

Ray Phelps
Planning Commission

Public Transit

Policy 29. Increase public awareness of transit and other transportation options, such as walking and bicycling, so that individuals can make informed decisions.

Policy 30. Provide transit service which is coordinated, convenient, comfortable, and safe.

Implementation Measures (Policy 30):

30.a. Maintain transit service and expand as necessary to meet the demands of a growing population and employment base in Wilsonville.

30.b. Perform ongoing transit service updates, based on demand and available financial resources. Service updates will be considered following major roadway improvements, pedestrian and bicycle system completion, and master planned, or other major, development.

30.c. Construct transit stop amenities and implement technology improvements, as funding is available. Prioritize improvements in activity centers and when they can be constructed in coordination with land use development.

Policy 31. Create a sense of community ownership of the transit system by encouraging citizen involvement in the planning and development of transit facilities and services.

Policy 32. Develop a process for responding to public feedback regarding transit services, including additional service requests, bus routing, and transit stop amenities.

Policy 33. Guided by a transit-specific public feedback process, provide transit routes throughout the city so that transit stops are located within one-quarter mile walking distance from residents and businesses .

Policy 34. Establish a Transit Advisory Board comprised of interested stakeholders, including residents and employers, to guide future planning and decision-making regarding transit service.

Policy 35. Strive to improve air quality and traffic congestion by increasing transit efficiency, promoting transportation options, and implementing transportation system management.

Policy 36. Coordinate with other transit districts, including TriMet and Cherriots, to strengthen the efficiency and performance of the Wilsonville transit network.

Implementation Measures (Policy 36):

36.a. Advocate for TriMet to provide full day and Saturday service for its Westside Express Service (WES) commuter rail.

36.b. Advocate for the extension of WES to Salem.

Wilsonville's transit center, SMART Central at Wilsonville Station, is located at the corner of Baber Street and Kinsman Road. It is SMART's main transportation hub and includes a 400-stall park-and-ride lot, twelve bus bays, an operator break room, public restrooms, shelters, and a clock tower with security cameras. It also shares the site with TriMet's Westside Express Service (WES) commuter rail station. Wilsonville is WES's southern terminus.

Active Transportation: Pedestrians and Bicyclists

Policy 37. Provide facilities that allow more people to walk and bike, not only as low-impact transportation choices, but also to benefit the health and economy of the community.

Implementation Measures (Policy 37):

37.a. Encourage a balance between housing, employment, and commercial activities within the city so more people desire to live and work within Wilsonville, thereby reducing cross-jurisdictional commuting.

37.b. Increase densities and intensities of development in or near the Town Center area and in other locations where a multimodal transportation system can meet those needs.

37.c. Continue use of the Planned Development/Master Plan process to encourage developments that make it more convenient for people to use transit, walk, bicycle, and to drive less to meet daily needs.

37.d. Provide more and better options for travel between both sides of the freeway, the railroad, and the Willamette River.

37.e. Assist with efforts to improve the viability of rail for passenger service.

Bike lockers at the SMART Central at Wilsonville Station transit center provide secure storage for transit riders who use their bikes to complete a leg of their trip.

Pedestrians enjoy a casual stroll around the Villebois Sunday Market. The market uses Villebois Drive, which functions as a street when not being used for the market.

37.f. Consider reducing parking requirements where it can be shown that transit and/or bicycle pedestrian access will reduce vehicular trips.

37.g. Require new development to include sufficient and convenient bicycle parking, and encourage improvements to bicycle parking facilities throughout the community. Allow a range of bicycle parking solutions to address the specific needs of different users.

37.h. Construct stand-alone improvements to fill key gaps in the pedestrian and bicycle network, including Safe Routes to School projects and connections to transit stops, prioritizing low-cost and safety-related projects.

37.i. Improve the quality of the pedestrian environment by ensuring new public and private development meets a pedestrian quality standard that encourages walking for short trips and is fitting for the specific location.

Policy 38. Establish a Pedestrian and Bicycle Advisory Board comprised of interested stakeholders, including residents and employers, to guide future planning and decision-making regarding pedestrian and bicycle facilities.

Bicyclists riding north on Brown Road approach the Barber Street roundabout as they enter Villebois Village.

Policy 39. Improve and expand pedestrian and bicycle facilities throughout the community, with a focus on improved connectivity within the city and with the Regional bicycle and trails systems.

Policy 40. Ensure that pedestrian and bicycle networks provide direct connections between major activity centers (e.g., civic, recreation, employment, and retail centers) and minimize conflicts with other modes of transportation.

Policy 41 The planning, design, and construction of transportation projects should maintain or improve the accessibility and quality of existing and planned pedestrian and bicycle facilities.

Policy 42. Provide more enhanced pedestrian crossings (which may include pedestrian flashers, a median refuge, or other treatments) as a way to improve safety and connectivity in Wilsonville's transportation system.

Policy 43. Develop more transportation options within the city, increasing transportation demand management programming and improving walking, biking, and transit facilities.

Interchange Management Areas

Policy 44. Provide for an adequate system of local roads and streets for access and circulation within I-5 Interchange Management Areas (IMAs) that minimize local traffic through the interchanges and on the interchange cross roads.

Implementation Measures for I-5/Wilsonville Road IMA, subject to Interchange Area Master Plan (IAMP) (Policy 43) :

44.a. Require future development to plan for and develop local roadway connections consistent with the I-5/Wilsonville Road IAMP as part of the development permit approval process.

44.b. Require bicycle and pedestrian connections within the IMA for new development consistent with the City's Bicycle and Pedestrian Plan.

44.c. Implement system operational improvements, including signal synchronization, transportation demand management measures and incident management within the vicinity of the interchange to maximize the efficiency of the local street network and minimize the impact of local traffic on the interchange.

The Interstate-5/Wilsonville Road interchange serves as a key regional connection while also providing connectivity between east and west Wilsonville.

44.d. The City will require future development to adhere to access management spacing standards for private and public approaches on statewide highways as adopted in the Wilsonville Road IAMP.

44.e. The City will approve development proposals in the I-5/Wilsonville Road IMA only after it is demonstrated that proposed access and local circulation are consistent with the Access Management Plan in the I-5/Wilsonville Road IAMP.

44.f. Ensure that future changes to the planned land use system are consistent with protecting the long-term function of the interchange and the surface street system.

44.g. Any proposed change to the Comprehensive Plan Map or existing zoning that would result in additional trips above that allowed under the current zoning and assumed in the I-5/Wilsonville Road IAMP must include a review of transportation impacts consistent with OAR 660-12-0060.

44.h. The City will provide notice to ODOT for any land use actions proposed within the I-5/Wilsonville Road IAMP Overlay Zone.

44.i. Eliminate or consolidate accesses on Wilsonville Road within one-quarter mile of the I-5 interchange as opportunities arise. Specific access management deficiencies were identified as part of the I-5/Wilsonville Road Interchange Area Management Plan (IAMP).

Implementation Measures for I-5/Elligsen Road Interchange (no adopted IAMP) (Policy 43 continued):

44.j. The City will require future development to adhere to access management spacing standards for private and public approaches on statewide highways as required by the Oregon Highway Plan.

44.k. Ensure that future changes to the planned land use system are consistent with protecting the long-term function of the interchange and the surface street system.

44.l. Bicycle and pedestrian connections within the Interchange Area will be required for new development consistent with the City's Bicycle and Pedestrian Plan.

44.m. System operational improvements, including signal synchronization, transportation demand management measures and incident management shall be implemented within the vicinity of the interchange to maximize the efficiency of the local street network and minimize the impact of local traffic on the interchange.

44.n. Eliminate or consolidate accesses on Elligsen Road and Boones Ferry Road within one-quarter mile of the I-5 interchange as opportunities arise.

"One of Wilsonville's strengths is location with it's easy access to I-5. Almost any point in town is within easy access to one of the interchanges. Preserving the capacity of two interchange will be important for the City's future."

Katie Mangle
Long Range Planning Manager

Transportation Funding

Policy 45. Require each individual development to provide all collector and local streets, unless the benefit to the entire community warrants public participation in funding those collector streets.

Policy 46. The City will plan, schedule, and coordinate implementation of all transportation system improvements through the on-going five-year Capital Improvements Plan. A priority is given to eliminating existing gaps and deficiencies and in upgrading the structural quality of the existing arterial system.

Implementation Measures (Policy 45):

46.a. The City shall coordinate routine and necessary maintenance with the appropriate State or County agencies.

46.b. The City shall pursue grants and other funding resources to assist the City with constructing infrastructure improvements, buying new transit buses, and making other transportation investments.

SMART Transit's 21-passenger compressed natural gas (CNG) buses offer a clean burning fuel alternative to traditional diesel buses.

46.c. To ensure development of an adequate transportation system, the City shall collect a System Development Charge as development occurs. Funds collected shall be allocated through the Capital Improvements Plan as needed to provide capacity service.

Policy 47. Maintain a transportation financing program for the construction and implementation of transportation facilities, improvements, and services necessary to support the TSP, the Transit Master Plan, and the Bicycle and Pedestrian Plan. This program should be resourceful and innovative to ensure the City can make key transportation investments. Revenue sources may include public/private partnerships, Local Improvement Districts (LIDs), grants, etc.

A family rides bikes together on Canyon Creek Road.

Looking southwest towards farmland and forests beyond Metro's urban growth boundary as Interstate 5's Boone Bridge and Portland and Western's Oregon Electric line railroad bridge cross the Willamette River. Wilsonville is Metro's southernmost city and provides an important connection to the rest of the Willamette Valley.

"Our city is great. We have done an excellent job in planning this community and being thoughtful, and maintaining that. But it is also important to look into the future and how we may grow and plan for that and find out what things continue to be a priority for our community."

Marta McGuire
Planning Commission

The Standards
Chapter 3

Wilsonville's transportation standards ensure the city develops consistent with its vision of supporting a multimodal transportation system that is strategically designed for optimum community function and benefit. A street's design determines how it will look and function. How a street looks and functions is ultimately dependent upon which street elements are included, their dimensions, and how they relate to each other.

The standards are intended to ensure appropriate design and create a consistent approach throughout the city as development and redevelopment occurs. Since the design of a street is so closely tied to how it performs and how people experience the city, it is important for Wilsonville to carefully consider how it wants its streets to look and function and then to design them accordingly.

Other City Documents with Transportation Standards

The transportation standards in this chapter cover a variety of areas that help inform other City documents:

- Standard Detail Drawings
- Public Works Standards
- Planning and Land Development Ordinance

Standards support the vision of a multimodal transportation system that is . . .

- ***Strategically designed and***
- ***Collaboratively built,***

Resulting in . . .

- ***Mode and route choices,***
- ***Safe and convenient local accessibility, and***
- ***Quality of life and economic health.***

How Standards Benefit the Transportation System

The transportation standards included in this chapter support the City's management of an effective multimodal transportation system:

- **Functional Classifications** provide a hierarchy for managing public roadways practically and cost effectively. They provide a framework for identifying which street elements to include in a street's design.
- **Connectivity and Facility Spacing Standards** ensure that direct routes and travel options are available for all transportation users.
- **Freight Routes** connect the city's industrial and commercial sites with I-5 and other regional facilities and improve the coordination between freight and other travel modes.
- **Bicycle Routes** connect neighborhoods, schools, parks, community centers, business districts, and natural resource areas to support bicycle travel by residents of varying physical capabilities, ages, and skill levels.
- **Cross-Section Standards** provide guidance for selecting and sizing various design elements to serve intended users' needs.
- **Access Management** balances the transportation system's need to provide safe, efficient, and timely travel with the need to allow access to individual properties.

Roadway Jurisdiction

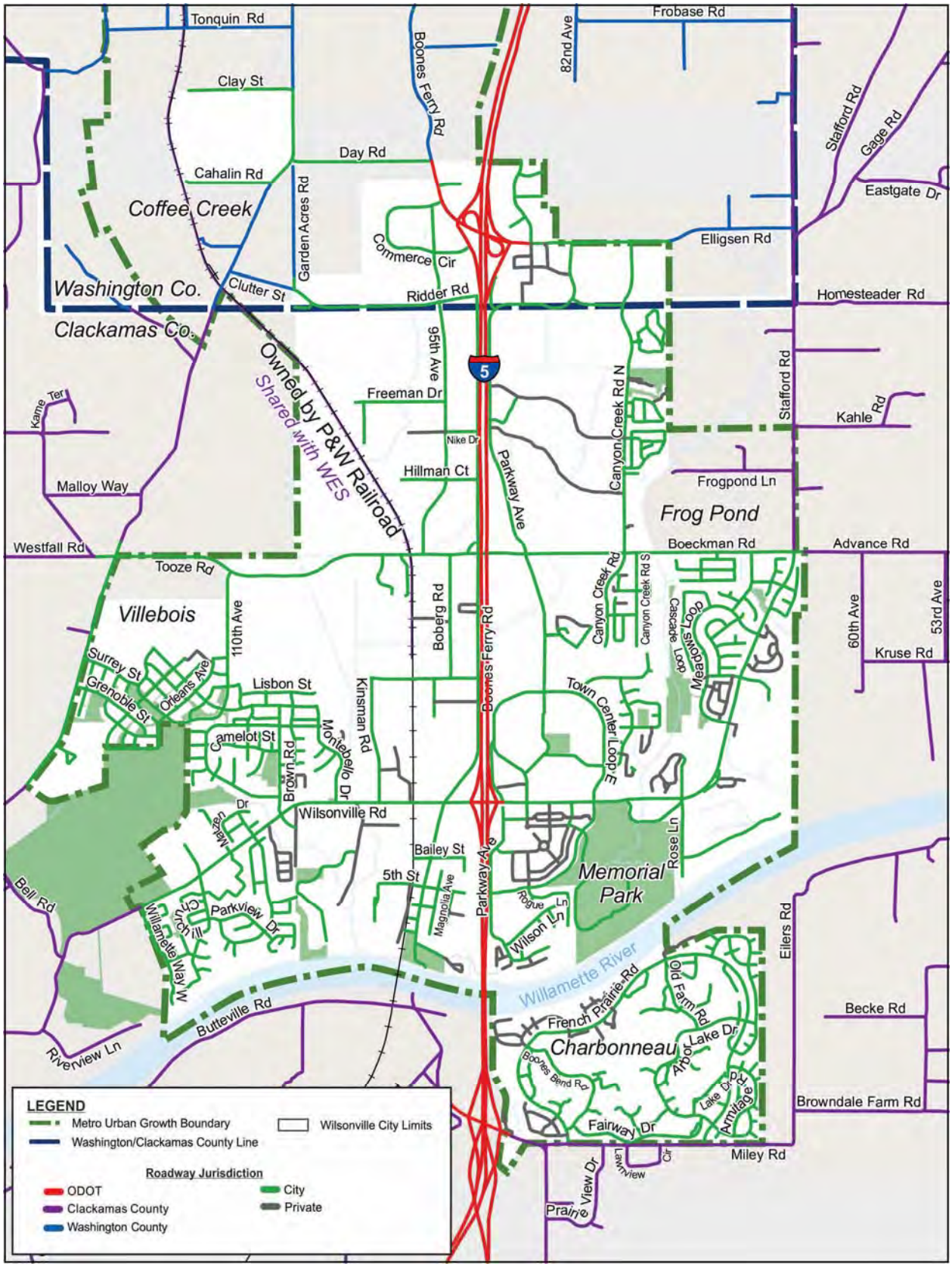
A roadway's jurisdiction affects who will have the ultimate authority over improvements and what standards apply. In the Wilsonville vicinity, there are four agencies with jurisdiction:

- **City of Wilsonville** has the majority of roadways within City limits.
- **Washington County** roadways are on the outskirts to the north of the city.
- **Clackamas County** roadways are on the outskirts to the east, west, and south of the city.
- **ODOT** has jurisdiction of Interstate-5, the corresponding interchange ramps, the portions of Elligsen Road and Boones Ferry Road between the Parkway Avenue and Day Road, and Wilsonville Road between Town Center Loop West and Boones Ferry Road.

As the City expands, it is expected that the county roadways in the immediate vicinity of the city will transfer jurisdictions to the City of Wilsonville. These roadways include Stafford Road, Advance Road, Elligsen Road, Frog Pond Lane, Clutter Street, and Grahams Ferry Road.

Looking north at Boones Ferry Road north of Day Road. Washington County recently received jurisdiction of this roadway from ODOT and will be constructing improvements that include roadway widening, bike lanes, and sidewalks.

Figure 3-1. Roadway Jurisdiction



Functional Classification

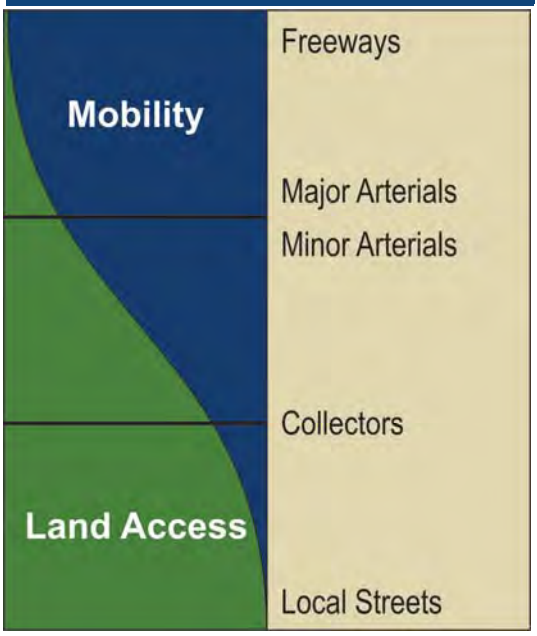
The City's street functional classification system is an important tool for managing public roadways. It is based on a hierarchical system of roads (see diagram at right) where streets with a higher classification, such as arterial streets, emphasize a higher level of mobility for through-movement. They look and function very differently than a street with a lower classification, such as local streets, which emphasize the land access function.

Wilsonville has four functional classes:

- **Major Arterials** primarily connect the I-5 interchanges with major activity centers (i.e., Town Center and Argyle Square) but also include the key connections requiring additional travel lanes (i.e., Boeckman Road bridge over I-5 and Stafford Road). They generally have four or more travel lanes, bicycle lanes, and limited access (preferably connecting with minor arterials).
- **Minor Arterials** serve as the direct connections through town and usually do not penetrate identifiable neighborhoods. They generally have two or three travel lanes, bicycle lanes, and consolidated access to larger developed areas and neighborhoods.
- **Collectors** provide traffic circulation within residential, commercial, and industrial areas and serve to funnel traffic from neighborhoods to the arterial street network. They have two or three travel lanes, bicycle lanes, optional on-street parking, and minor access restrictions.
- **Local Streets** are located within residential, commercial, and industrial areas and discourage through movement. They allow on-street parking and ensure that every parcel is accessible for all modes.

The roadway classifications throughout the city are shown in Figure 3-2. These classifications provide a vision of how these roadways should be designed and constructed as improvements are made.

Functional Class Hierarchy

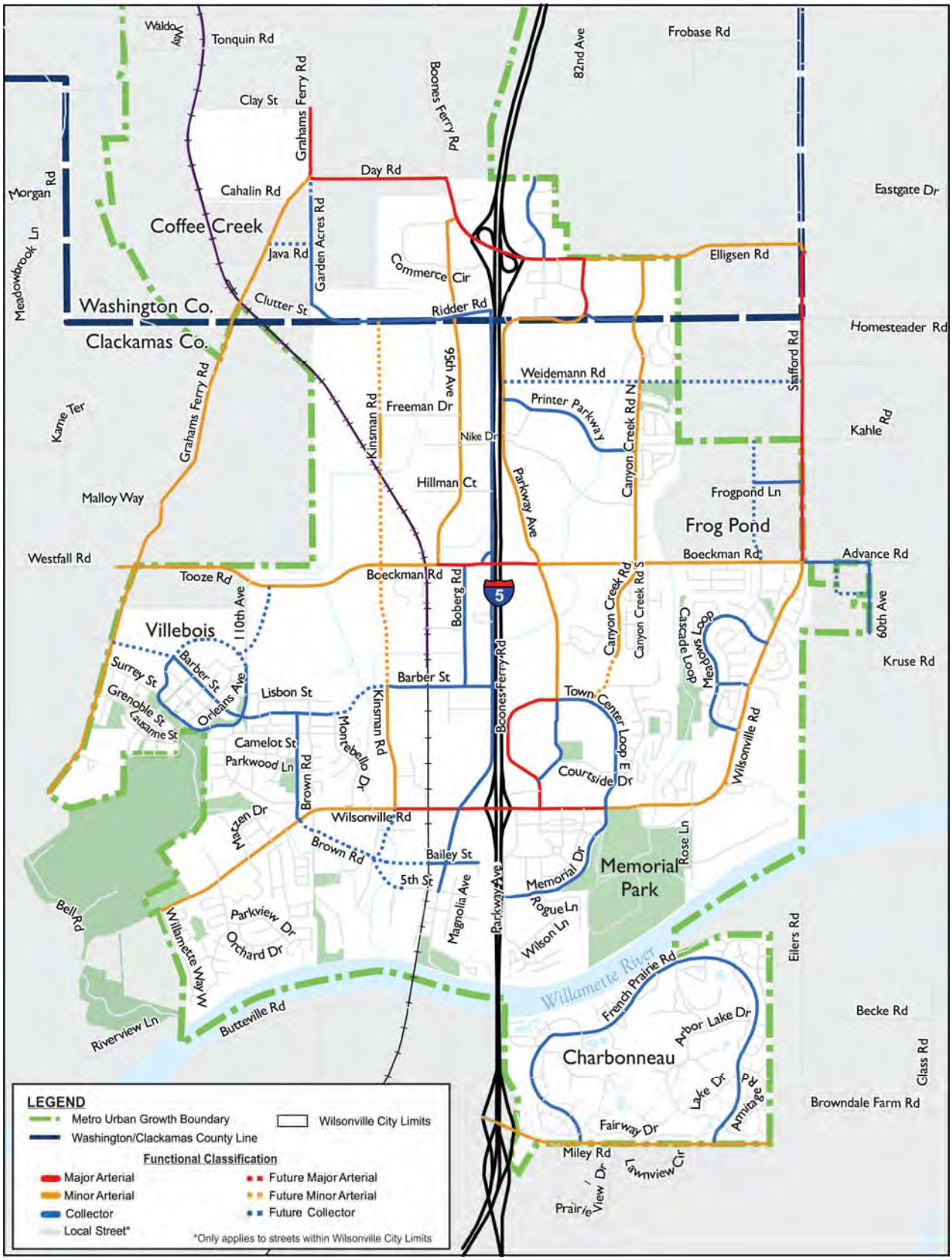


Functional Classification as a Framework for Standards

Functional classification provides a helpful framework for managing the City's transportation system and supporting the following standards:

- **Connectivity and Spacing Standards** indicate how far apart roadways of different functional classifications should be spaced to ensure a balanced approach to mobility and land access throughout the city.
- **Freight Routes and Transit Streets** primarily use higher classification roads to serve freight and/or transit vehicles due to the wider cross-sections and greater focus on mobility.
- **Cross-Section Standards** vary by functional classification to meet user needs. However, functional class is not the only factor in determining street design.
- **Access Management Standards** are more stringent for higher class roadways, which are intended to emphasize mobility.

Figure 3-2. Functional Class Designations



Connectivity and Spacing

One of Wilsonville's goals is to improve connectivity by constructing parallel facilities spaced at regular intervals throughout the city. These facilities provide multiple alternatives and more direct routes between both local and regional destinations, including neighborhoods, parks, schools, employment centers, and retail areas.

Table 3-1 lists the desired spacing of each facility type throughout Wilsonville to ensure a high level of connectivity. Figure 3-3 illustrates the desired spacing for the arterial and collector street network. Deviations to these guidelines may be needed in locations where there are significant barriers, such as topography, rail lines, freeways, existing development, and the presence of natural areas.

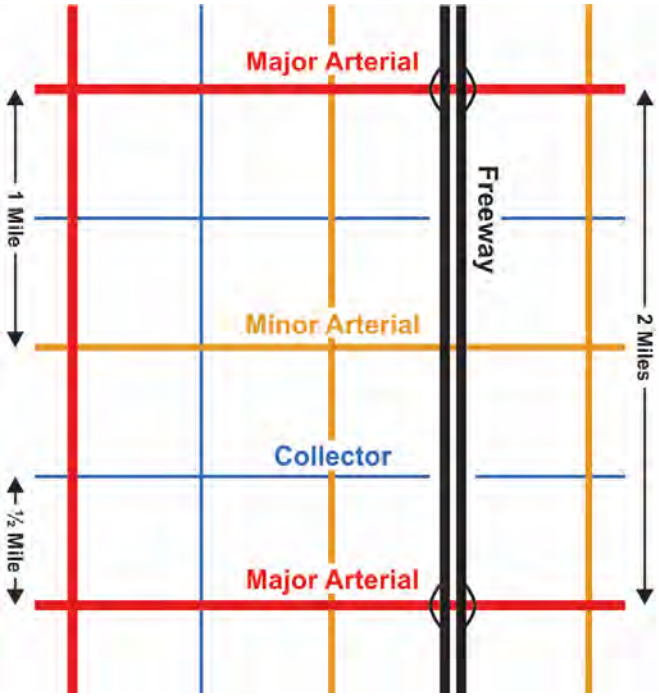
Bicyclists and pedestrians benefit the most from closely spaced facilities because they are the most affected by distance. By providing walking and biking facilities spaced less than 300 feet apart, Wilsonville will support walking and biking use within and between its neighborhoods. In addition, these connections can improve access to transit.

Table 3-1. Facility Spacing Guidelines

Facility Type	Desired Spacing[a]
Major Arterial	1 - 2 mi
Minor Arterial	1 mi
Collector	1/4 - 1/2 mi
Local Street	300 - 500 ft
Bicycle and Pedestrian Facilities	300 ft

[a] Desired Spacing refers to distance between facilities with same or higher functional classification.

Figure 3-3. Desired Facility



Benefits of Connectivity

Connectivity provides all transportation system users with multiple benefits:

- Increased mobility by distributing traffic over multiple connected streets rather than forcing all traffic onto the City's arterial street system
- More equitable access for all businesses and neighborhoods throughout the city
- Improved walking, biking, and transit use due to more direct connections and less out of direction travel between neighborhoods, schools, transit stops, retail centers, employment centers, and recreational areas
- Reduction in short auto trips between adjacent neighborhoods and land uses

Villebois Village Master Plan was designed to provide a high level of connectivity for all travel modes using short blocks arranged in a grid pattern, numerous pathways, and a diversity of land use.

"Connectivity is important because you want to be able to have options for how you move through your community. I don't personally always want to drive my car places, especially when I have my children with me. I want us to get out and be active and to be able to bike to the store. We have stores that are really close to us, but it's not always safe and convenient for us to ride our bike there. Which is why having bike lanes and sidewalks that are designed to accommodate these other options are critical to enhance our livability."

Marta McGuire
Planning Commission

Freight Routes

Wilsonville's freight routes connect the city's industrial and commercial sites with I-5 and other regional facilities. Figure 3-4 identifies the City's freight routes, which include truck routes, railroads, and waterways. Improvement projects should be coordinated to facilitate freight needs while balancing the needs of other users.

Some of the key truck routes that provide important truck connections to Washington County include Boones Ferry Road, Kinsman Road, and Tonquin Road. In addition, the Portland and Western Railroad runs through Wilsonville and serves freight traffic, and the Willamette River has the potential for handling barge traffic. These routes are identified in Metro's *Regional Freight Plan* (June 2010).

As a major employment center and industry hub along I-5, Wilsonville will benefit from ensuring that its freight routes are designed to accommodate the needs of its industrial and commercial sites. At the same time, Wilsonville's residential neighborhoods should be protected from freight traffic. The call-out box at right lists multiple freight coordination improvements resulting from having freight routes.

Improved Freight Coordination

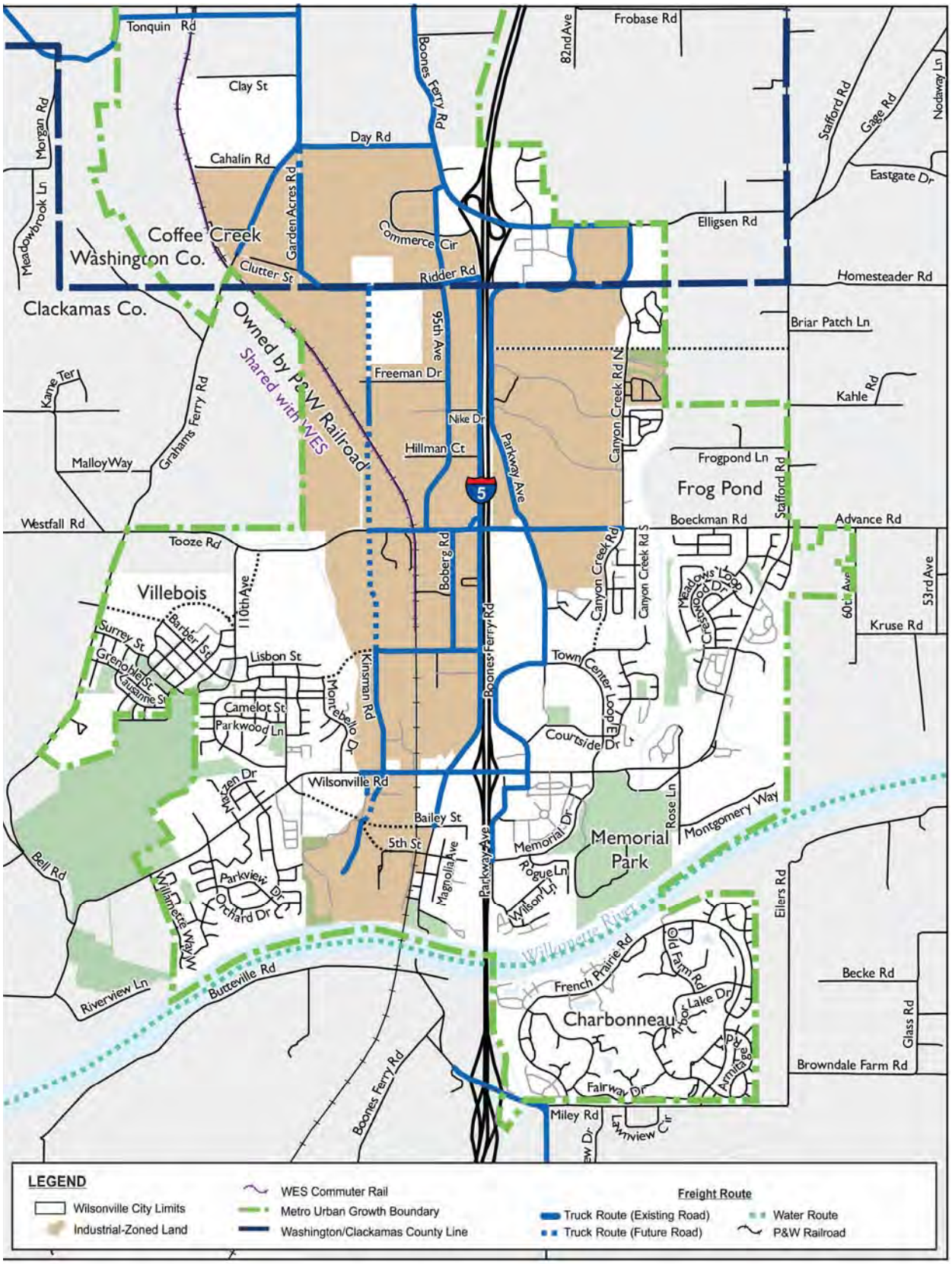
By having designated freight routes, various City efforts regarding freight and non-freight users will be improved:

- **Roadway and Intersection Improvements** can be designed for freight vehicles with adjustments for turn radii, sight distance, lane widths, turn pocket lengths, and pavement design.
- **Bicycle and Pedestrian Improvements**—such as buffered bike lanes, enhanced pedestrian crossings, and other safety improvements—can be identified to reduce freight impacts to other users (particularly along bikeways and walkways).
- **Roadway Durability** can be increased by using concrete instead of asphalt.
- **Railroad Connections** can be coordinated to support businesses that ship goods by rail, particularly in areas where railroad sidings can be provided along the Portland and Western Railroad track.
- **Willamette River Port** can be considered to support businesses that ship goods using barges on the Willamette River.
- **Coordination with Businesses and Adjacent Jurisdictions** can ensure that local and regional freight traffic uses the City's freight routes to travel

"We have a significant number of large manufacturing companies because we have an efficient freight mobility process where our trucks can get in and out of town with the least amount of interference from local traffic. For the part of the transporter, that's very important in as much as it costs money for these trucks, even when they are not moving. Secondly, the local resident doesn't want to have to be disrupted by freight transportation."

Ray Phelps
Planning Commission

FIGURE 3-4. FREIGHT ROUTES



Bicycle Routes

Bicycle routes are provided throughout Wilsonville and connect to neighborhoods, schools, parks, community centers, business districts, and natural resource areas. The City's bicycle network serves multiple users of varying physical capabilities, ages, and skill levels.

Figure 3-5 identifies the City's bicycle routes, which include three facility types:

- **Shared-Use Paths** are 10-foot to 12-foot wide pathways that have minimal conflicts with automobile traffic and may have their own right-of-way (cross-section standards shown in Figure 3-11). Shared-use paths serve multiple non-motorized users: bicyclists, pedestrians, wheelchair users, skaters, and others. Many of the shared-use paths throughout Wilsonville are part of the regional trail network, which traverses large sections of the city and connects to neighboring jurisdictions and regionally significant destinations. These regional trails are designed to meet state and federal guidelines, which make them eligible for state and federal transportation funding.

- **Bike Lanes** are provided on Arterial and Collector streets throughout Wilsonville. They are usually 6-feet wide and adjacent to motor vehicle travel lanes (cross-section standards shown in Figures 3-6, 3-7, and 3-8). Buffered bike lanes and one-way or two-way cycle tracks may be used instead of bike lanes and include buffers between the bike and motor vehicle travel lanes (cross-section standards shown in Figure 3-12).

- **Local Street Bikeways** are streets designated as important bicycle connections where bicyclists share the travel lane with motor vehicle traffic. Even though all Local Streets allow bicyclists to share the travel lane (cross-section standards shown in Figures 3-9 and 3-10), Local Street Bikeways are intended to serve a greater number of bicyclists. They typically are provided on low-volume, low-speed residential streets that serve as important connections to nearby bike lanes, shared-use paths, and key destinations. Modifications—such as sharrows, traffic calming devices, or wayfinding signage—may be made to these streets to emphasize their use as bicycling facilities and increase the comfort and confidence of bicyclists.

Key Bicycle Facilities

The following existing and future bicycle facilities (which are included in Figure 3-5) provide important connections throughout the city:

Regional Trails

- Ice Age Tonquin Trail (through West Wilsonville with connections to Tualatin and Sherwood)
- Waterfront Trail (along the Willamette River)
- Boeckman Creek Trail (along Boeckman Creek in East Wilsonville)
- Stafford Spur Trail (connecting to regional destinations in Northeast Wilsonville)

Shared-Use Paths

- Primarily near schools, parks, transit hubs, retail centers, and other pedestrian areas

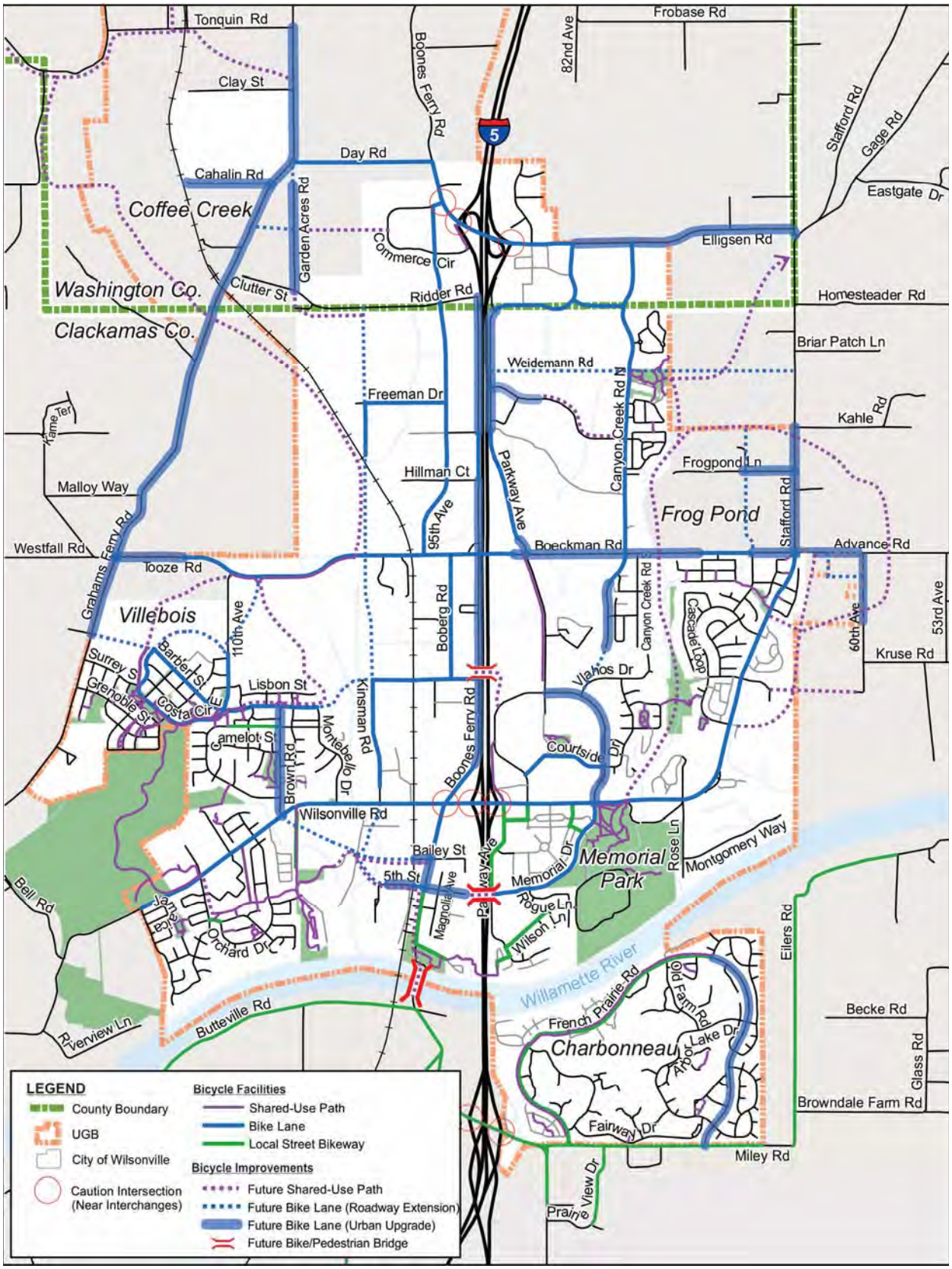
Bike Lanes

- On Arterial and Collector streets

Local Street Bikeways

- Boones Ferry Road south of 5th Street to connect to future Willamette River bridge
- Parkway Avenue connecting to Wilsonville Road to the nearby neighborhood
- Wilson Lane, Metolius Lane, and Kalyca Drive connecting Memorial Park to the Waterfront Trail near where it passes underneath the I-5 Boone Bridge

FIGURE 3-5. BICYCLE ROUTES



Street Cross-Section Design

Since different streets serve different purposes, a functional classification system—which is a hierarchy of street designations—provides a framework for identifying the size and type of various street elements to consider including in a street's design. Not all elements are included on all streets and so they must be carefully selected based on multimodal needs.

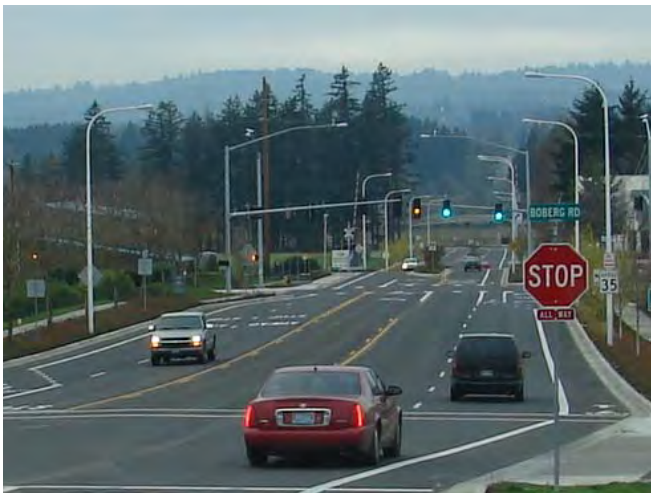
While a street's functional classification does not dictate which street elements to include, it does facilitate the selection of multimodal facilities and widths that will help ensure the roadway can meet its intended multimodal function. Adjacent land uses and available right-of-way width also influence which elements are included in a specific segment.

Roadway cross-section design elements include travel lanes, curbs, planter strips, sidewalks on both sides of the road, and bicycle facilities consistent with designated bikeways, walkways, and shared-use trails. Low impact development (LID) standards may also be used throughout the City at the City's discretion.

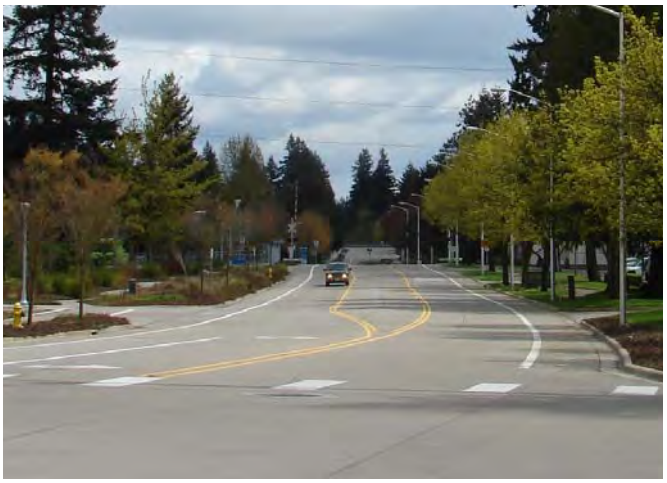
Facility Types

Cross-section standards are provided for the following facilities:

- Major Arterials
- Minor Arterials
- Collectors
- Local Streets
- Low Impact Development (LID) Local Streets (similar modifications may be made to other streets regardless of classification)
- Shared-Use Paths and Trails
- Bicycle Facility Design Options



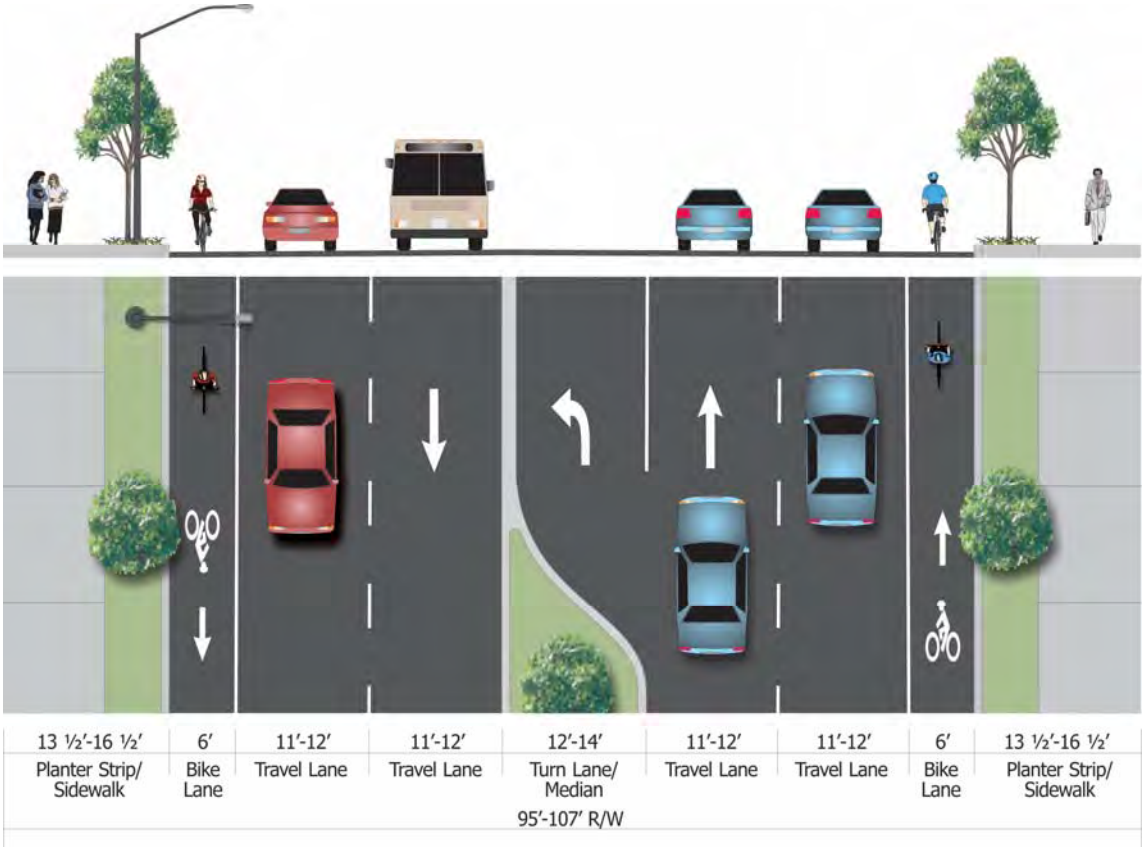
Example of a Major Arterial - Boeckman Road looking west towards Boberg Road and 95th Avenue



Example of a Collector - Barber Street looking east near SMART Central at Wilsonville Station transit center

Example of a Local Street - Rogue Lane looking east near Memorial Park

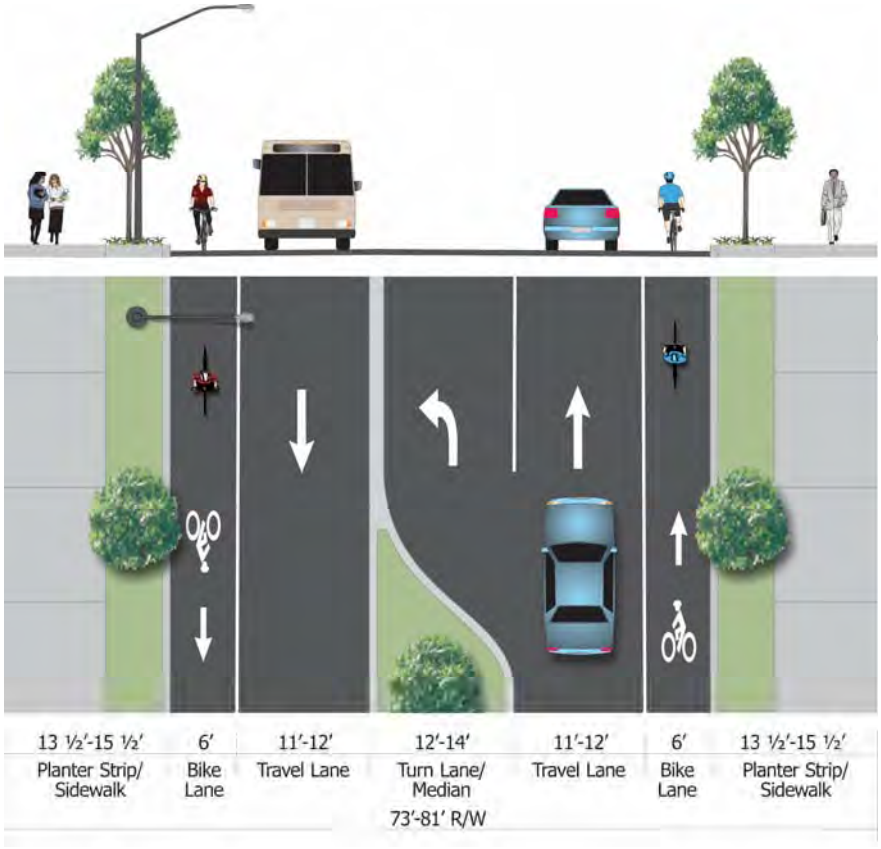
Figure 3-6. Major Arterial Cross-Section



Notes:

1. Travel lane and turn lane/median widths as determined by Community Development Director.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director. Width of sidewalk/planting strip may be combined in commercial/retail areas for a total width of 13½ to 16½ feet; street trees shall be located in minimum 4-foot tree wells.
3. Curb width of ½-foot is included in the sidewalk/planter strip width.
4. Street lights shall be located within the planter strip, center landscape median, or sidewalk as determined by Community Development Director.
5. Striping and signage as required in the PW Standards.
6. On-street parking is not allowed.
7. Transit stop locations to be determined by Transit Director.
8. When not needed as a left-turn lane, median may be provided to serve safety, stormwater, or aesthetic objectives.
9. New streets shall incorporate low impact development design as practicable.
10. Allow for separation for bikes on major arterials (especially freight routes).

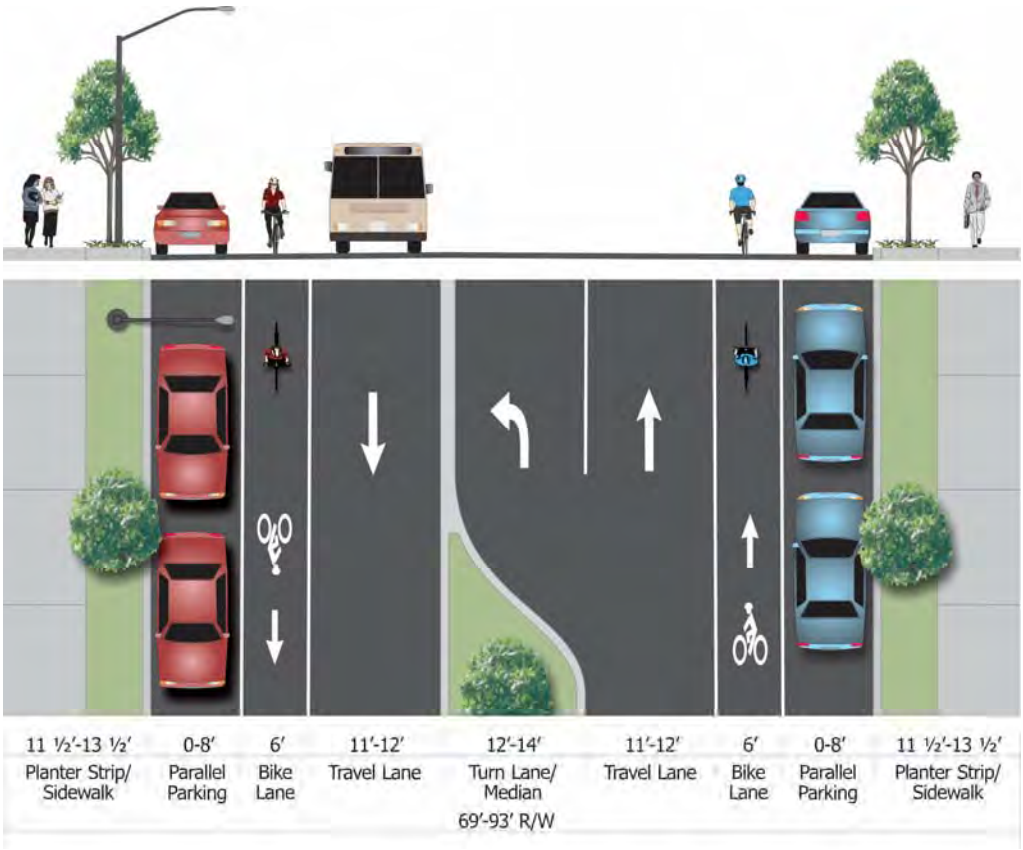
FIGURE 3-7. MINOR ARTERIAL CROSS-SECTION



Notes:

1. Travel lane and turn lane/median widths as determined by Community Development Director.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director. Width of sidewalk/planting strip may be combined in commercial/retail areas for a total width of 13½ to 15½ feet; street trees shall be located in minimum 4-foot tree wells.
3. Curb width of ½ foot is included in the sidewalk/planter strip width.
4. Street lights shall be located within the planter strip, center landscape median, or sidewalk as determined by Community Development Director.
5. Striping and signage as required in the PW Standards.
6. On-street parking is not allowed.
7. Transit stop locations to be determined by Transit Director.
8. When not needed as a left-turn lane, median may be provided to serve safety, stormwater, or aesthetic objectives.
9. New streets shall incorporate low impact development design as practicable.
10. Allow for separation for bikes on minor arterials (especially freight routes).

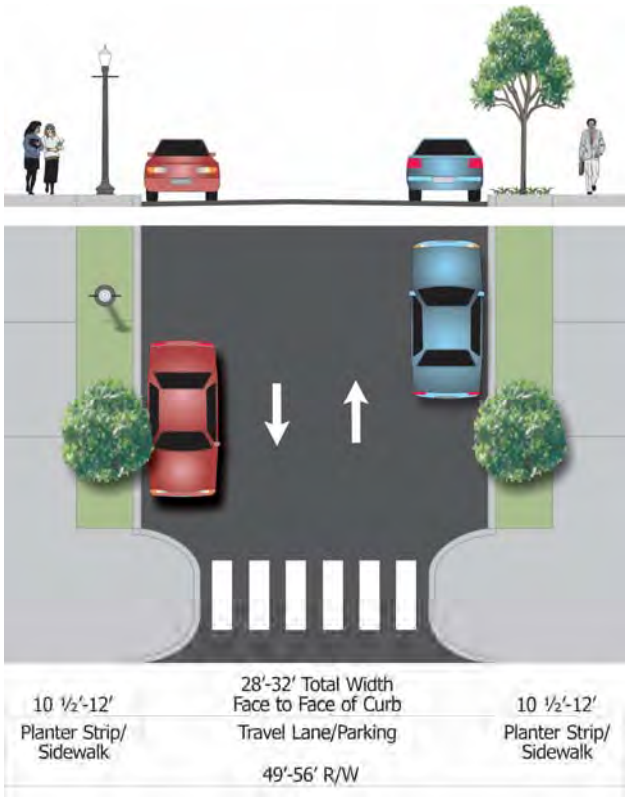
FIGURE 3-8. COLLECTOR CROSS-SECTION



Notes:

1. Collector right-of-way varies between 59 to 89 feet as determined by Community Development Director based on surrounding planned development of residential, commercial or industrial and need for on-street parking and/or turn lane/median.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director. Width of sidewalk/planting strip may be combined in commercial/retail areas for a total width of 11½ to 13½ feet; street trees shall be located in minimum 4-foot tree wells.
3. Curb and sidewalk bulb-outs at crosswalks or street intersections as determined by Community Development Director.
4. Curb width of ½ foot is included in the sidewalk/planter strip width.
5. Street lights shall be located within the planter strip, center landscape median, or sidewalk as determined by Community Development Director.
6. Travel lane and turn lane/median widths as determined by Community Development Director. Turn lane/median may be eliminated.
7. Striping and signage as required in the PW Standards.
8. On-street parking on one or both sides is allowed.
9. Transit stop locations to be determined by Transit Director.
10. When not needed as a left-turn lane, median may be provided to serve safety, stormwater, or aesthetic objectives.
11. New streets shall incorporate low impact development design as practicable.

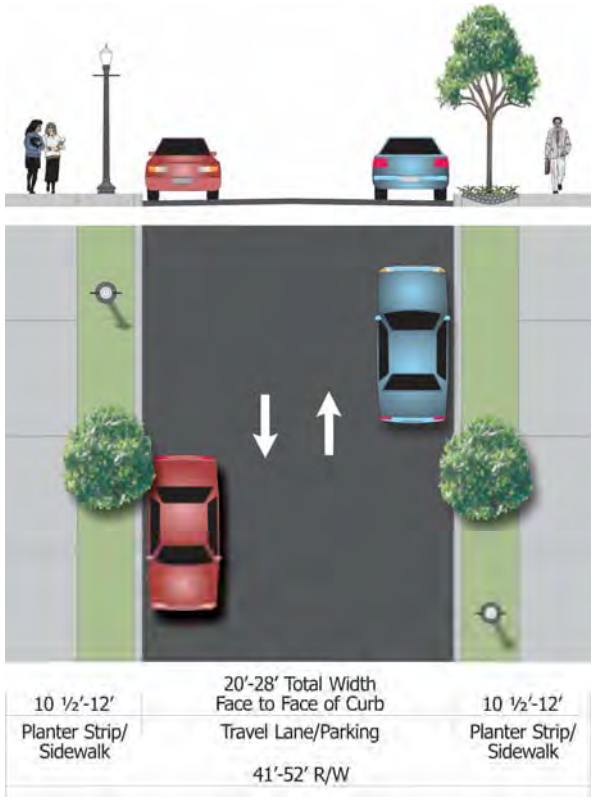
Figure 3-9. Local Street Cross-Section



Notes:

1. Minimum right-of-way width of 47 feet (parking on one side) and 51 feet (parking on both sides). Providing parking on both sides is preferred unless constraints exist.
2. Minimum sidewalk width is 5 feet; minimum planter strip width is 5 feet.
3. Curb width of ½ foot is included in the planter strip width.
4. Curb and sidewalk bulb-outs at crosswalks or street intersections as determined by Community Development Director.
5. Street lights shall be located within the planter strip as required in the PW Standards.
6. No lane striping on street. Signage as required.
7. New streets shall incorporate low impact development design as practicable.

Figure 3-10. Low Impact Development (LID) Local Street Cross-

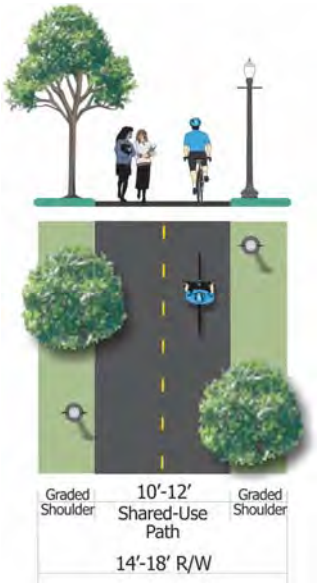


Notes:

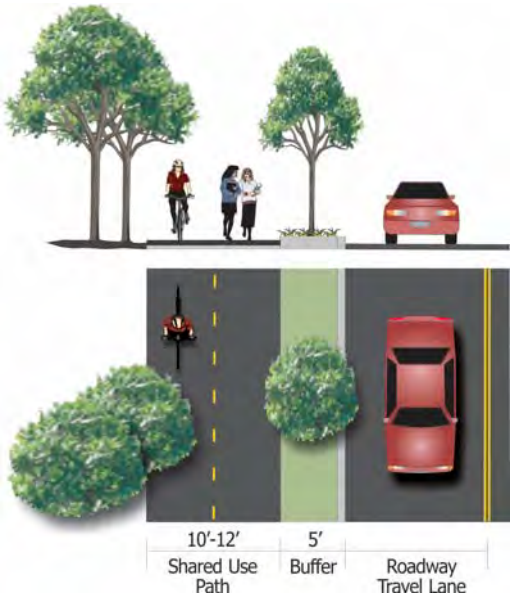
1. LID streets located as approved by Community Development Director.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director.
3. Minimum landscape width of 6½ feet where a water quality swale is proposed.
4. Curb width of ½ foot is included in the planter strip width.
5. Stormwater control as required in the PW Standards.
6. Use of pervious surfaces as determined by Community Development Director.
7. Narrower streets as approved by Community Development Director and as permitted in the PW Standards.
8. 28-foot curb-to-curb street is intended to allow on-street parking on both sides.
9. 24-foot curb-to-curb street is intended to allow on-street parking on one side.
10. 20-foot curb-to-curb street would not allow on-street parking on either side.

Figure 3-11. Shared-Use Path and Trail Cross-Sections

Shared-Use Path



Shared-Use Path Adjacent to Roadway



Nature Trail

Notes:

1. Trail types and widths as approved by Community Development Director.
2. Typical cross section of shared-use path is 12 feet wide with 2-foot-wide compacted crushed stone shoulders.
3. Vertical separation between shared-use path and roadway may be used instead of 5' buffer as approved by Community Development Director.
4. Cross-section standards identified in the Ice Age Tonquin Trail Master Plan are required along the Ice Age Tonquin Trail.
5. Additional design standards are available in the Bicycle and Pedestrian Master Plan.

Figure 3-12. Bicycle Facility Design Options

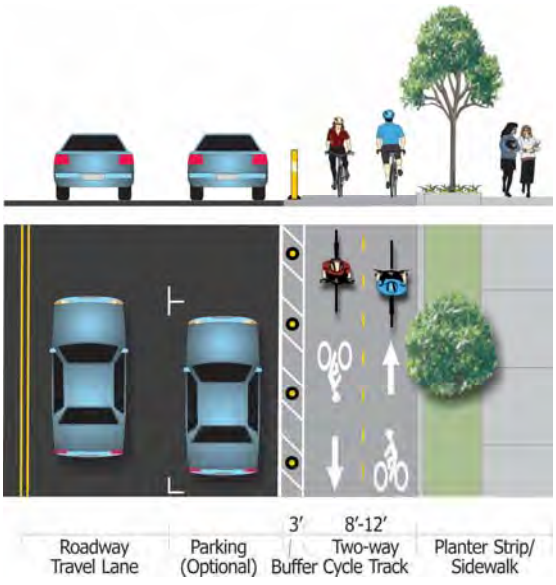
Buffered Bike Lanes and Cycle Tracks

Buffered bike lanes (buffer between travel lane and bike lane) and cycle tracks (parking and/or other buffer between travel lane and one- or two-way bike facility) are two alternate bicycle facility options that are gaining popularity throughout the United States and have been implemented in other parts of the Portland Metro area. Therefore, the design options shown below have been provided to allow the City flexibility to consider these bicycle treatments on their Arterial and Collector streets in place of typical bike lanes.

One-Way Cycle Track on Cully Boulevard in Northeast Portland. Cycle tracks are typically protected from motor vehicle traffic by parked cars, raised curbs, or other physical buffers.

Buffered Bike Lane or One-Way Cycle Track

Two-Way Cycle Track



Notes:

1. Design option locations, widths, separation buffer features, and adjacent parking as approved by Community Development Director.
2. Additional design guidance can be obtained from the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide

Access Management

Access management refers to the broad set of techniques that are used to balance safe, efficient, and timely travel with the ability to allow access to individual properties. Access is an important component of the city's transportation infrastructure and significantly affects system operations and safety.

Wilsonville should continue to manage roadway access to improve traffic flow and safety. By limiting access to higher classification roadways (especially Major and Minor Arterials), conflicts between vehicles entering and exiting driveways and vehicles on the roadway are reduced. Pedestrians and bicyclists also benefit from reduced conflicts with vehicles entering and exiting the roadway.

Table 3-2 lists the City's access spacing standards. Because there are existing non-conforming accesses, these standards will primarily guide access layout of future development consistent with the strategies listed in the call-out box at right. ODOT also has access spacing standards that apply to the I-5 interchange areas and to the section of Boones Ferry Road that is under ODOT jurisdiction (i.e., between Parkway Avenue and Day Road). The I-5/Wilsonville Road Interchange Area Management Plan (IAMP) should also be consulted when considering access needs near the Wilsonville Road interchange.

Looking east to the I-5/Wilsonville Road interchange. Interchange areas have the most restrictive access spacing standards to ensure safety and mobility.

Access Management Strategies

The City can use various access management strategies to help improve mobility and safety:

- **Interchange Areas:** Eliminate or consolidate accesses within one-quarter mile of the I-5 interchanges as opportunities arise.
- **Adjacent to High Volume Intersections:** Pursue appropriate treatments at accesses adjacent to high volume intersections, particularly when queues block access.
- **Existing Driveways:** Evaluate accesses that do not conform to the City's access spacing standard and consider modifications as practicable, while maintaining reasonable access to each property.
- **Ongoing Development Review:** Manage new driveway locations and spacing on a case-by-case basis. Where driveways do not meet spacing standards, consider mitigation treatments, such as consolidating accesses or restricting turn movements to right-in/right-out.

Table 3-2. Access Spacing Standards

Functional Classification	Access Spacing Standards[a]	
	Desired[b]	*Minimum*
Near Interchanges	ODOT Requires 1,320 ft	
Major Arterial	1,320 ft	1,000 ft
Minor Arterial	1,000 ft	600 ft
Collector	300 ft	100 ft
Local Street	Access Permitted to Each Lot	

[a] Spacing is measured from centerline to centerline on Major Arterials and Minor Arterials and between adjacent curb returns on Collectors and Local Streets

[b] Desired Access Spacing shall be adhered to unless otherwise approved by the City Engineer. Reasons for deviating from Desired Access Spacing include aligning with existing driveways, topography, property limitations, and other safety related issues as identified in a transportation study.

Figure 3-13. Access Management Interest Areas

A colorful row of street trees along Wilsonville Road near Boones Ferry Primary School during a fall day. Street trees can provide both aesthetic and safety benefits. They improve the walking environment by creating a pleasing buffer between the motor vehicle and pedestrian facilities. They also provide visual cues to drivers that can result in reduced traffic speeds.

"The City needs to have a Transportation System Plan to make sure we are prepared for how we get around the city in the future. This includes automobiles, freight, bikes, and pedestrians."

Nancy Kraushaar
Community Development Director

The Needs
Chapter 4

As a growing community, Wilsonville faces the challenge of addressing new and ongoing transportation system needs. These needs are categorized as either gaps (missing connections or barriers in the transportation network) or deficiencies (shortcomings of the existing system). The City's transportation policies (see Chapter 2) and standards (see Chapter 3) serve as a framework for determining what gaps and deficiencies currently exist or are anticipated to arise through the 2035 horizon year as additional development occurs throughout the city and the region. The City's transportation improvement projects (see Chapter 5) and programs (see Chapter 6) address these needs and ensure Wilsonville's continued growth and prosperity.

Gaps and Deficiencies

- **System Gaps** are missing connections or barriers in the urban transportation system that functionally prohibit travel for a given mode. While a gap generally means a connection does not exist, it could also be the result of a physical barrier (such as I-5, the Willamette River, other natural feature, or existing development) or a social barrier (including lack of information, language, education, and/or limited resources).
- **System Deficiencies** are performance, design, or operational constraints that limit travel by a given mode. Examples may include unsafe designs, bicycle and pedestrian connections that contain obstacles, inadequate intersection or roadway capacity, insufficient bus frequency, and congestion.

Wilsonville's transportation needs include . . .

- ***Gaps (missing connections or barriers)***
- ***Deficiencies (shortcomings)***

These needs will be addressed by . . .

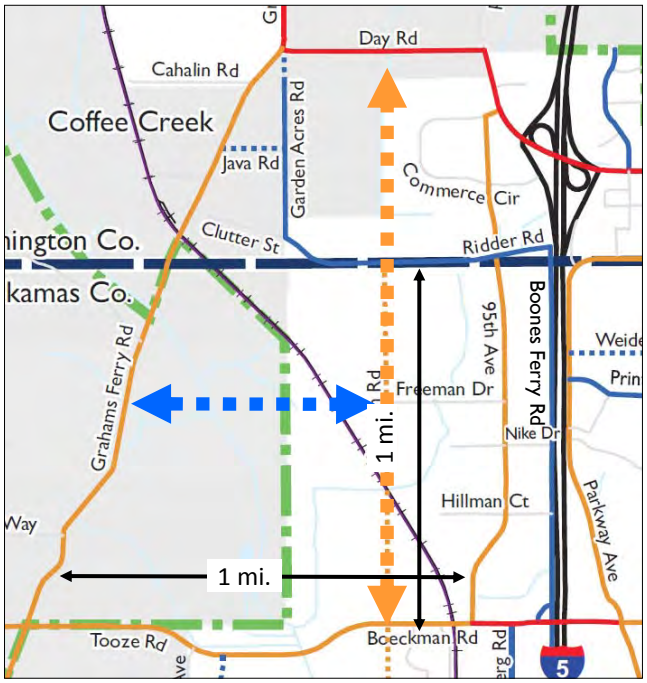
- ***Improvement projects (Chapter 5)***
- ***Programs (Chapter 6)***

Header Photo Source: OBEC

Multimodal Connectivity Gaps

Providing a well connected transportation system is one of the City's goals. In order to ensure this goal is achieved, the City has developed facility spacing standards to provide direct routes and travel options for system users. Based on the street connectivity guidelines set forth in Chapter 3, there are system gaps in each of the city's four quadrants. However, there are also constraints and barriers that may make some connections infeasible.

Northwest Quadrant Connectivity

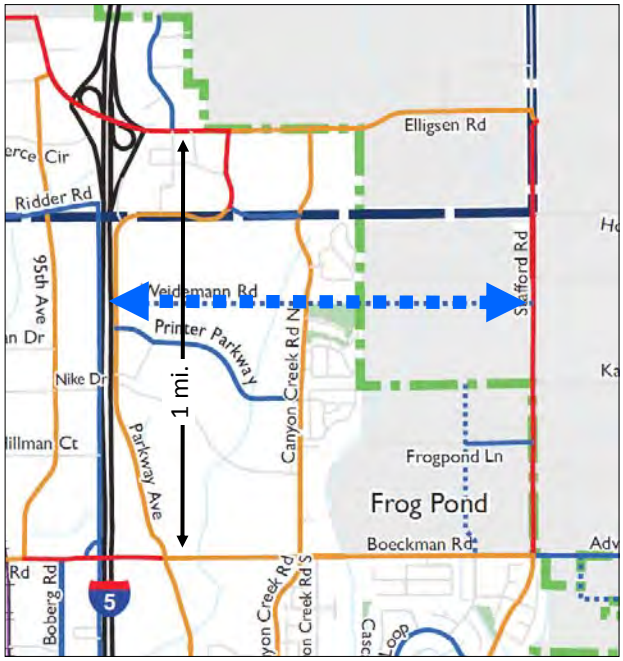


Two connectivity gaps exist in this quadrant:

- A north-south gap exists between Day Road and Boeckman Road that increases congestion at the 95th Avenue/Elligsen Road intersection and the nearby I-5 interchange.
- An east-west gap exists between 95th Avenue and Grahams Ferry Road.

North/south Minor Arterial and **east/west Collector** would be needed as future development occurs to fill these gaps, provide additional travel options, and allow access to future development. However, these roads will be difficult to construct due to the P&W railroad track and Metro green space in this quadrant that are barriers. The new north/south roadway should be considered after 95th Avenue between Boeckman Road and Ridder Road no longer sufficiently serves this function.

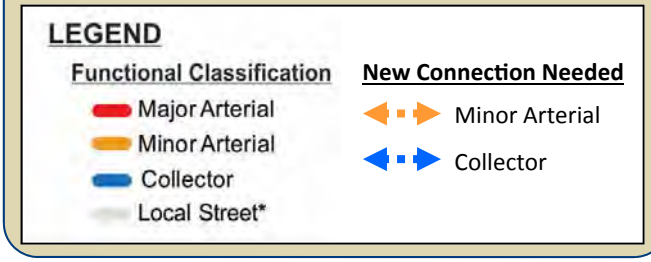
Northeast Quadrant Connectivity



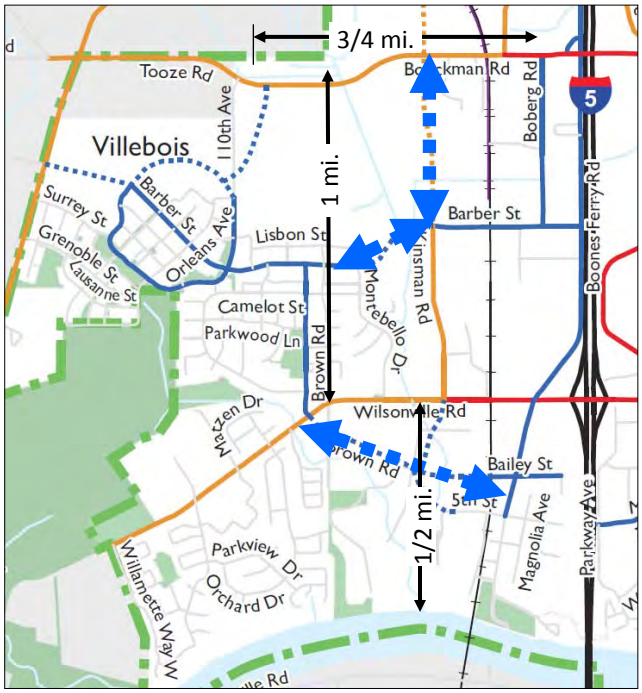
There is a gap in the east west connectivity between Elligsen Road and Boeckman Road.

An east/west Collector from Parkway Avenue to Stafford Road would be needed to fill this gap. The City currently owns partial right-of-way along the west end of Wiedemann Road, which is a single-lane gravel road that runs east/west for a short distance east of Parkway Avenue.

The following legend applies to each of the four quadrant images.



Southwest Quadrant Connectivity



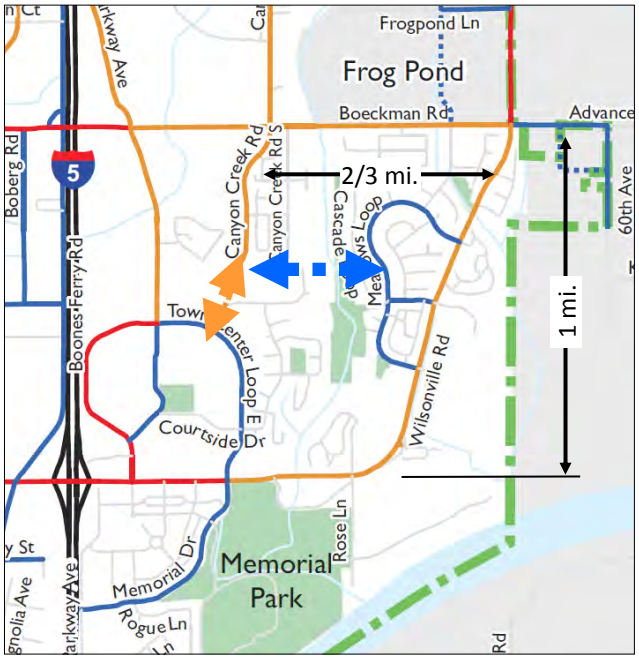
There are several gaps in east-west and north-south connectivity as follows:

- North/south and east-west gap exists between Wilsonville Road and Boeckman Road and between the Villebois development and the WES station.
- An east-west gap exists between the Willamette River and Wilsonville Road.

North/south Minor Arterial and **east/west Collector (north of Wilsonville Road)** streets are needed to fill these gaps. The Barber Street and Kinsman Road extensions are currently in the design phase that would satisfy these needs.

An east/west Collector (south of Wilsonville Road) would be needed as development occurs to provide the necessary connectivity. This roadway would also provide a secondary access option to and from Old Town (that is needed today), and the likely connection options are either 5th Street or Bailey Street.

Southeast Quadrant Connectivity



There are two existing gaps in this quadrant as follows:

- A north-south gap exists between Boeckman Road and Town Center Loop that leads to additional traffic on Parkway Avenue and Wilsonville Road.
- An east-west gap exists between Canyon Creek Road and Meadows Loop.

North/south Minor Arterial extension of Canyon Creek Road is needed as soon as funding is available and would provide the connection to Town Center Loop. A major portion of this connection has already been constructed by adjacent development.

An east/west Collector from Canyon Creek Road to Meadows Loop would provide the connectivity needed. However, there are topographical, environmental, and development constraints that make this connection difficult. An existing trail and bridge provide pedestrian and bicycle connectivity.

Cross-Section Deficiencies

To ensure Wilsonville's roadways adequately serve all modes, the City has cross-section standards that guide roadway design based on the street's functional classification with the acknowledgement that design elements shall be matched with the adjacent land use to provide safe transportation choices for users. The functional classifications and cross-section standards include number of motor vehicle travel lanes, sidewalks on both sides of the street, planter strips, and curbs (see Chapter 3: The Standards). In addition, the higher classification roadways also include bicycle facilities.

Building roads that provide facilities for all travel modes and meet applicable cross-section standards is critical to assure a safe and well connected transportation system. If bike lanes and sidewalks are missing, the users of these facilities are likely using other portions of the roadway (motor vehicle travel lanes or shoulders) that may be unsafe.

Figure 4-1 shows which City roadways do not meet their applicable cross-section standards. In some instances, all that is needed are sidewalks for improved pedestrian connectivity. In other instances, roadways may need to be widened to include center turn lanes or bike lanes. Many of these roads are adjacent to rural areas and will be brought up to meet standards as adjacent parcels develop. Others will require standalone improvement projects. Depending on the situation, these roadway sections will require urban upgrades, sidewalk infill, or bike lane infill improvements.

Parkway Avenue near the Xerox campus is a Minor Arterial but does not include bike lanes. There is a sidewalk on the east side, but it ends at the boundary with the vacant parcel to the north.

Freeman Drive between 95th Avenue and businesses lacks sidewalks on the south side.

"I-5 poses some challenges because it serves as a barrier in between the east and west sides of town. This puts a lot of pressure on the few existing connections that make it harder for people to walk between one place and another."

Katie Mangle
Long Range Planning Manager

Figure 4-1. Roadway Cross-Section Deficiencies

Capacity Deficiencies

Capacity deficiencies for motor vehicles were identified throughout Wilsonville by evaluating traffic operations for a 2035 future scenario. The traffic forecasts were performed using a travel demand model based on Metro regional land use with the transportation network refined specifically for Wilsonville.

Due to the high level of detail, the Wilsonville travel demand model was able to more accurately represent local routing choices while also forecasting traffic pattern changes resulting from varying levels of congestion and delay expected for 2035. The model also assumed the completion of seven key roadway extensions (listed in the call-out box at right), as well as land use growth based on regional population and employment forecasts for the 2035 horizon year.

Figure 4-2 shows the 20 study intersections and five roadway segments that would not meet adopted mobility standards under the 2035 baseline scenario. These roadway capacity improvements would primarily be needed when the vacant land in their vicinity is developed.

The majority of the intersection and roadway deficiencies were identified in prior planning efforts and already included associated improvement projects. Therefore, many of the City's planned projects only required minor revisions, refinements, and prioritization adjustments. Along with minor changes to existing projects, a few new projects are also needed to meet the city's long term capacity needs.

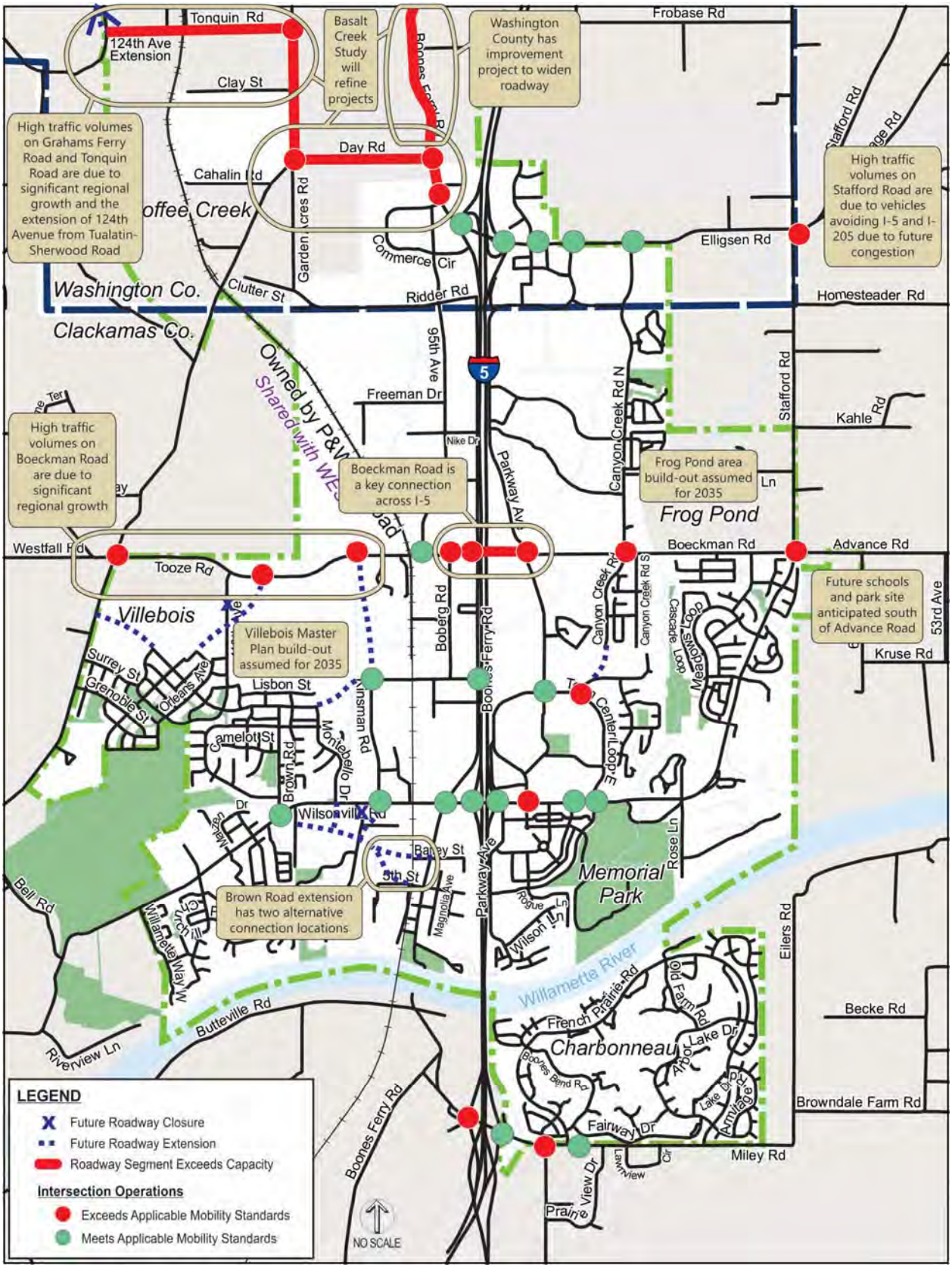
2035 Baseline Roadway Extension Assumptions

Various roadway extensions throughout the city satisfy critical connectivity needs and would be constructed as development occurs. To account for the resulting traffic patterns, the 2035 baseline capacity analysis assumed the completion of these projects:

- **Barber Street Extension** from Kinsman Road to Montebello Drive, connecting the WES Station to Villebois (Regional Transportation Plan Project 10153, design plans are currently in process)
- **Barber Street Extension** to Grahams Ferry Road (Key roadway in Villebois Master Plan Area)
- **Villebois Drive Extension** to Boeckman Road (Key roadway in Villebois Master Plan Area to replace existing 110th connection)
- **Kinsman Road Extension** from Barber Street to Boeckman Road (Regional Transportation Plan Project 10130; design plans are currently in process)
- **Kinsman Road Extension** from Ridder Road to Day Road (Regional Transportation Plan Project 10853; key roadway in Coffee Creek Master Plan Area)
- **Brown Road Extension** (Currently has partial preliminary design plans for two alternatives)
- **Canyon Creek Road Extension** to Town Center Loop East (Small segment remains to finish connection; eligible as one of final projects using East Side Urban Renewal funding)

These roadway improvements are included in Figure 4-2, which also shows with the 2035 capacity

Figure 4-2. Future 2035 Capacity Deficiencies



Freight-Related Deficiencies

In the past, Wilsonville relied on county and Metro designated freight routes. As a major employment center and industry hub along Interstate-5 (I-5), the city and its freight community will benefit from adopting a local freight plan and freight routes. Wilsonville's residential areas will also benefit from designating freight routes that avoid neighborhoods. The community would also benefit from increased marine freight traffic on the Willamette River.

The plan is a result of outreach to identify the city roadways used by freight carriers, as well as the freight-related deficiencies and problem locations on these roadways. This outreach included distribution of surveys to the city's major freight carriers, and a meeting with the Allied Waste commercial and residential drivers, who service the entire city and have a particularly extensive understanding of the city's freight needs.

Figure 4-3 identifies the key gaps and deficiencies that were identified based on the feedback received. It also identifies the streets where freight vehicles are present, though not all of these should become designated freight routes.

The following feedback, which is more general in nature, was also provided by the freight carriers:

- Flashing yellow left-turn arrows at traffic signals are the preferable design treatment for protective/permissive phasing.
- Where possible, it is important to separate trucks from pedestrians and bicycles (especially on roadways and at tight intersection corners).
- There are inconsistent speeds on similar functioning roadways (for example, Boones Ferry Road versus Parkway Avenue).
- Trucks block traffic when they must wait off-site to access busy on-site loading docks.
- Improved loading areas and site access at retail establishments would aid delivery.
- There are limited direct routes for freight that exist between north and south Wilsonville.

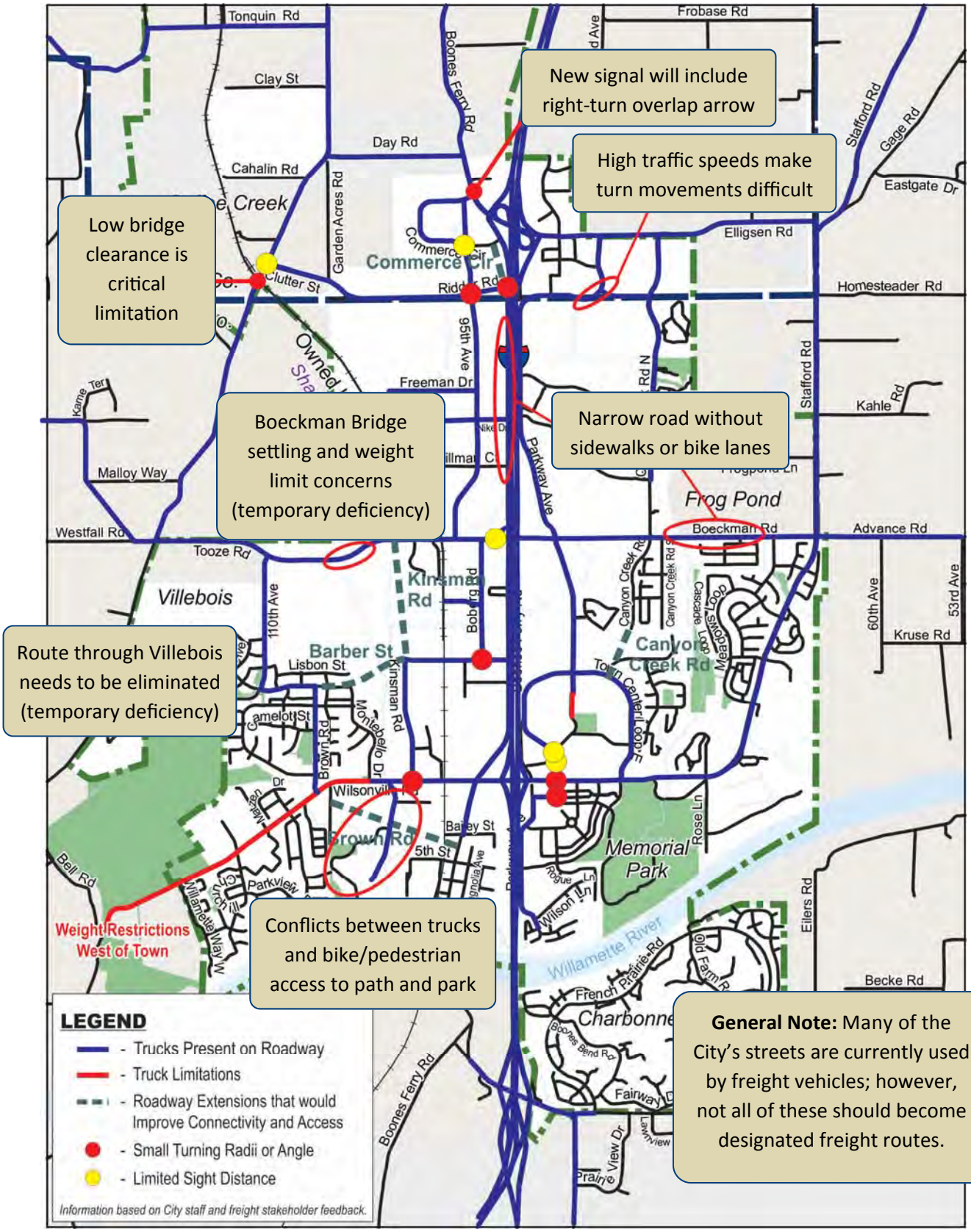
Freight Carrier Outreach

Multiple freight carriers provided feedback on freight routes and deficiencies:

- Allied Waste Services of Wilsonville
- Coca-Cola Bottling of Oregon
- Eaton Corporation
- FLIR Systems, Inc.
- Mentor Graphics Corp
- OrePac Building Products
- Owens & Minor Distribution Inc
- Parker Johnstone's Wilsonville Honda
- Rite Aid Distribution Center
- Rockwell Collins Head-Up Guidance Systems
- SYSCO Food Services of Portland
- Tyco Electronics Medical Products/Precision Interconnect Corp.
- US Crane & Hoist, Inc.
- Vision Plastics, Inc.
- Wilsonville Concrete
- Wilsonville Toyota
- Xerox Corporation

Roadway congestion and queuing on Elligsen Road leads to increased delay to freight movement.

Figure 4-3. Freight-Related Deficiencies



Bicycle and Pedestrian Needs

Bicycle and pedestrian facilities support complete community connectivity and opportunities for work, play, shopping, and exercise. They also help reduce traffic congestion, vehicle-miles traveled, and greenhouse gas emissions, while increasing the vibrancy and connectedness of communities and improving the health of city residents.

Figure 4-4 shows the major bicycle and pedestrian gaps and deficiencies in Wilsonville. These needs are due to the various barriers in the system relating to natural areas, topography, and existing development.

There is also a need for improved street cleaning and related maintenance to remove debris from the I-5 interchange areas on Wilsonville Road and Elligsen Road, which are under ODOT jurisdiction. These facilities serve as primary connections over the city's two most significant barriers (i.e., Interstate-5 and the Willamette River).

The lack of continuous bike lanes on Brown Road north of Wilsonville Road requires cyclists to use the travel lane.

Safe Routes to School

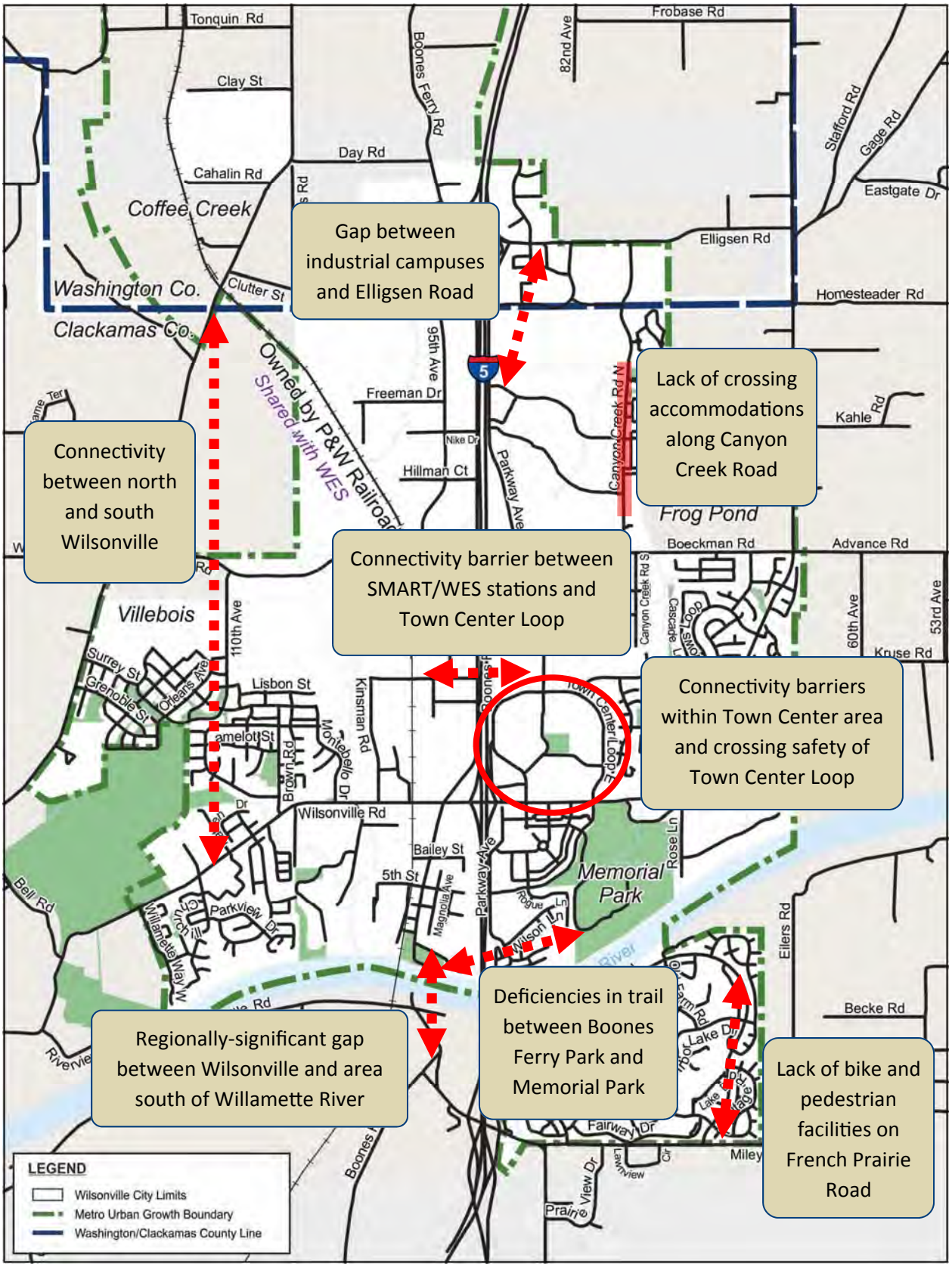
Additional bicycle and pedestrian gaps and deficiencies were identified as part of the Safe Routes to School assessment that the City performed in collaboration with the West Linn-Wilsonville School District and each of the city's primary and middle school. These needs are identified in Chapter 6: The Programs.

Another pedestrian and bicycle need that affects Wilsonville is regional access to the nearby communities. The Ice Age Tonquin Trail and Boones Ferry Road improvements north of Day Road are two examples of facilities that will provide regional connectivity. In addition, Clackamas County has identified the need to provide bicycle facilities on Stafford Road and 65th Avenue to the north and east of Wilsonville. A connection to the south over the Willamette River is also a critical need to link to Charbonneau and the Willamette River Heritage Area (including Champoeg State Park and the Willamette Valley Scenic Bikeway).

To further enhance regional connectivity, the City should continue to coordinate with Clackamas County and Washington County to ensure that bicycle and pedestrian improvements on county roadways are identified in their county TSP updates and that these facilities connect to the city's bicycle and pedestrian systems.

> *"Right now there are many gaps where sidewalks end or cross into areas where there are no receiving facilities for them. So, the transportation system plan is looking at those gaps and will be trying to fill them."*
>
> *Al Levit*
> *Planning Commission*

Figure 4-4. Major Bicycle and Pedestrian Needs



Transit Needs

Wilsonville is unique among the cities within the Portland Metro area because it has its own transit system. While the rest of Metro is served by TriMet, Wilsonville has been operating South Metro Area Regional Transit (SMART) since it withdrew from TriMet's service district in 1988.

A locally run transit system provides many benefits for Wilsonville's residents and employees. Because it is not dependent upon another agency, SMART is able to determine its own bus routes, frequencies, and fares. It currently provides fare-free service within Wilsonville and supports other programs unique to Wilsonville, such as the SMART Options program. SMART is financially supported by payroll taxes from its strong employment base.

SMART also experiences various challenges, including six key transit needs:

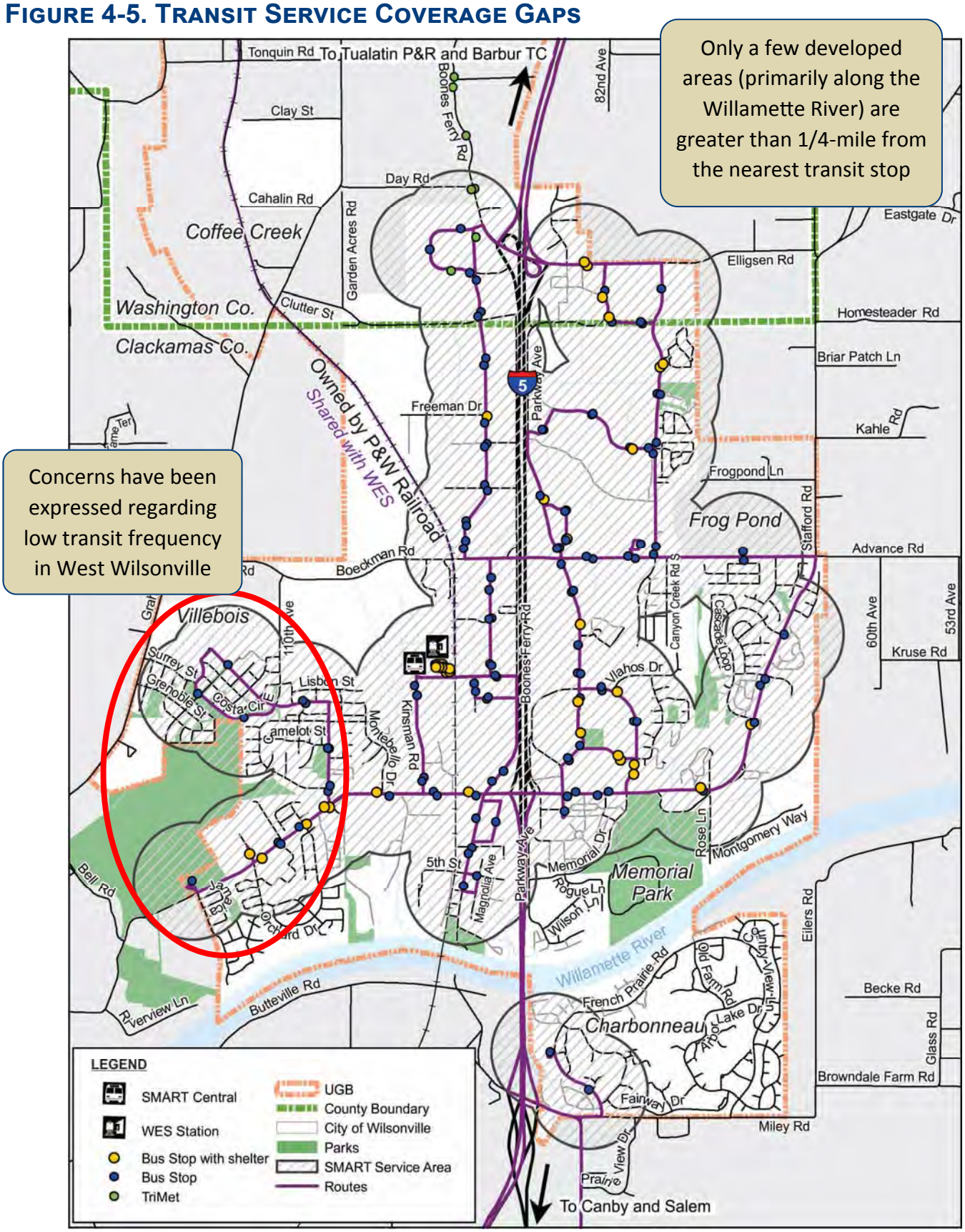
- **Regional Transit Connections** are important for SMART due to Wilsonville's central location between two metropolitan areas (Portland Metro and Salem-Keizer) and its large employment base. While it has existing connections to TriMet (Portland Metro) and Cherriots (Salem-Keizer), these connections should be improved as opportunities arise. For example, expanded service hours and express service to downtown Portland would benefit a larger population of employees and residents of Wilsonville.
- **Service Coverage and Bus Frequency** require ongoing adjustments as demand and resources change. SMART should provide transit service within 1/4-mile of land uses throughout the city. Currently, there are only a few areas that do not fall within the 1/4-mile coverage radius, including Wilson Lane on the east, Willamette Way and Orchard Drive on the west, and the majority of Charbonneau. SMART will need to be responsive to the desires of the public and all affected neighbors before providing or removing service from a given neighborhood. SMART will also need to expand its service as new development occurs in the areas of Coffee Creek, Villebois, and Frog Pond. To expand coverage and service, SMART may require additional buses.
- **Pedestrian and Bicycle Access to Transit** can help improve transit service by providing safe and convenient connections at either end of transit trips. Pedestrian and bicycle networks that provide access to transit stops and good connectivity to all destinations throughout the city are important. They encourage increased use of transit, walking, and bicycling, which are

Recent Transit Improvements

Since the prior 2008 Transit Master Plan was adopted, three major transit system improvements have been implemented that provide a backbone to the city's transit service:

- **SMART Central at Wilsonville Station** was constructed to act as SMART's main transportation hub and includes a 400 space park and ride lot, twelve bus bays, a new facility with an operator break room and public restrooms, shelters, and a clock tower with security cameras.
- **TriMet's Westside Express Service (WES) Commuter Rail** service began operating out of its new station located adjacent to the SMART Central at Wilsonville Station transit center.
- **SMART Bus Routes** changed to coordinate with WES train departures and arrivals.
- **SMART Operations Center** was built to house fleet and operations facilities, including administration offices, maintenance bays, and a bus parking area.

FIGURE 4-5. TRANSIT SERVICE COVERAGE GAPS



complementary travel modes and often used as part of the same trip. Some of the most important locations for access improvements include the Town Center Loop area and the Barber Street connection between Villebois Village and the SMART Central transit center. Other needs throughout the city should be addressed on an ongoing basis.

- **New Buses** are needed for SMART to maintain a quality transit fleet. Many of its buses are aging and require a greater amount of maintenance to keep them in operation. SMART can lower the amount of its budget that it spends on maintenance costs by replacing these buses. Additional buses will also be needed as growth occurs throughout the city. When possible, new buses should use alternative fuels, such as compressed natural gas. This will help SMART to reduce fuel costs and help meet regional and statewide goals for reducing greenhouse gas emissions.

- **Development Review** should address transit needs to ensure that transit users are accommodated as new development occurs in the city. SMART should be involved in the development review process to ensure that existing transit stops are improved and new stops, amenities or routes are provided as needed. In addition, when a new employment or commercial development occurs near a major transit stop, it should locate its building close to the transit stop.

- **Rider Education and Outreach** are ongoing needs that support and encourage transit ridership. One particular area where improvement is needed is adapting to new technology. This includes passenger access to 'real time' transit data and improved on-board amenities. Rider safety education is also an ongoing need.

Environmental Justice

As stated by the Environmental Protection Agency, "Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies" (U.S. EPA, Environmental Justice, Compliance and Enforcement, Website, 2007).

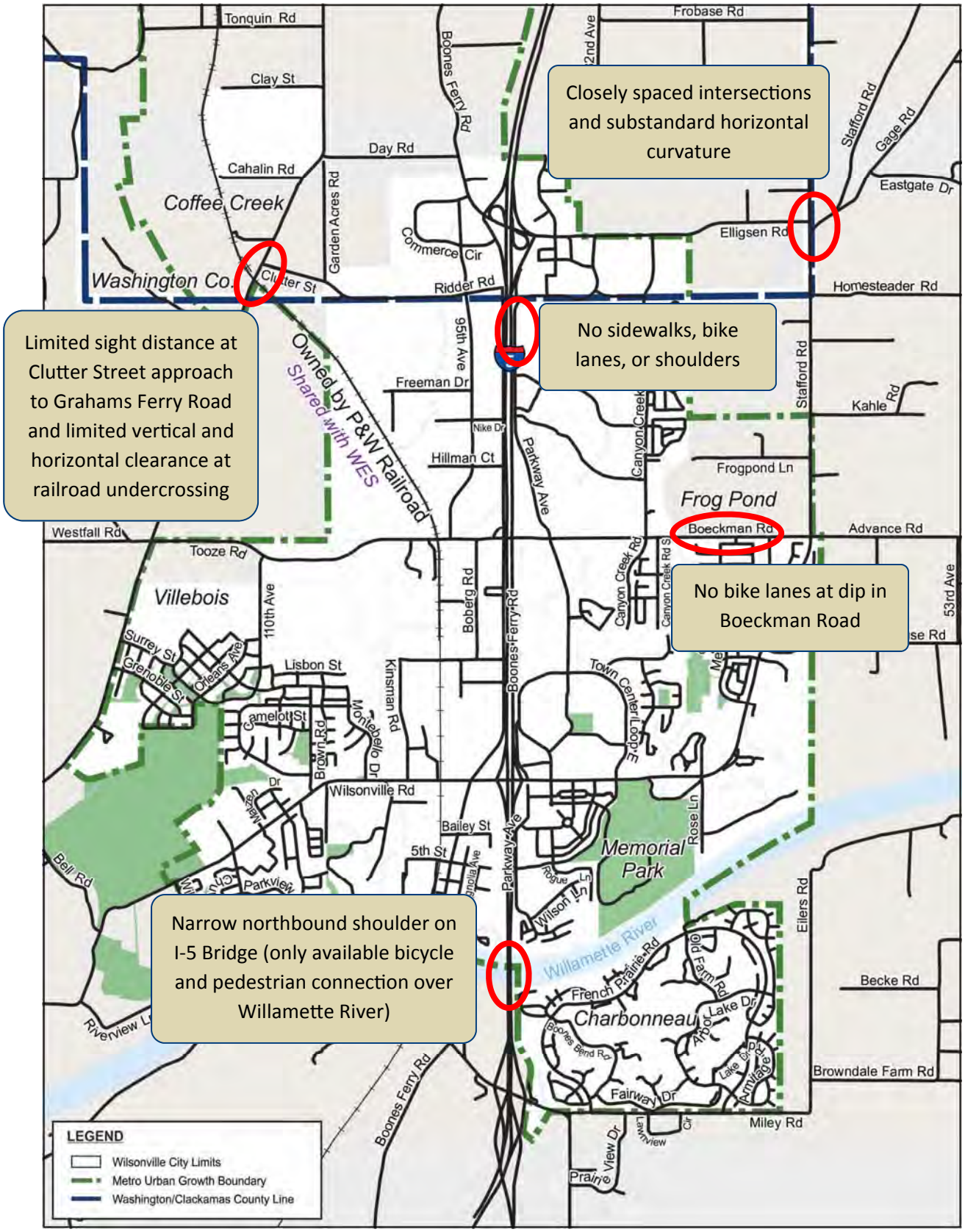
Within the context of the TSP, Environmental Justice is an effort to identify underserved and vulnerable populations so the City can improve transportation services while reduce future inequalities. Two areas of particular need are Charbonneau (due to the higher proportion of elderly residents) and a small area on the southern edge of Villebois (due to lower income housing).

Safety Needs

While there are no high-collision locations within Wilsonville, various safety-related deficiencies exist. Figure 4-6 shows five primary locations where there are existing safety concerns. Topography, roadway curvature, and nearby barriers (including I-5 and the railroad track) are key contributors.

The railroad bridge over Grahams Ferry Road has limited horizontal and vertical clearance. This creates a safety hazard, particularly for bicyclists, pedestrians, and freight traffic.

Figure 4-6. Safety Deficiencies



Rail Needs

The primary rail-related deficiency in Wilsonville is the limited vertical and horizontal clearance that the railroad bridge over Grahams Ferry Road causes for trucks. This is also a safety deficiency.

ODOT Rail has a policy of not granting new at-grade crossings. Crossings may be relocated (i.e., a new one is provided but only if an old one is removed). Therefore, railroad tracks can pose a significant barrier to the transportation system due to the high cost of grade separated crossings. The primary location in Wilsonville where the railroad contributes to a roadway system gap is the potential Kinsman Road extension in the northwest quadrant (see the prior Multimodal Connectivity Gaps discussion in this chapter).

Another future item that may affect Wilsonville is that ODOT Rail is studying the feasibility of improving intercity rail service between Eugene and Portland (with the potential for developing a high-speed rail line). Portland and Western's Oregon Electric rail line, which runs through Wilsonville, is one of the existing rail alignments being studied. Depending on the outcome of this study, there may be additional passenger rail trains traveling through Wilsonville that would increase gate down time and rail related congestion for all modes of travel.

Portland and Western's Oregon Electric rail line runs north/south through Wilsonville and serves as an important freight and commuter rail corridor. However, it also creates a barrier to travel for other modes due to limited crossing locations.

Air Needs

The City of Wilsonville has no direct jurisdictional control or responsibility for managing the Aurora Airport. However, the City, concerned citizens, and local businesses have participated in the Oregon Department of Aviation's (ODA) development of an updated Master Plan for the airport. The City acknowledges the adoption of the Master Plan by ODA and will continue to monitor planned improvements at the airport and coordinate with ODA and Marion County, who have jurisdictional responsibilities.

The City also has two, potentially conflicting interests that must be balanced related to the airport. These include noise sensitivity for city residents and the reliance local businesses have on the airport for corporate travel.

Water Needs

The City of Wilsonville has no direct jurisdictional control or responsibility for managing activities on the Willamette River. However, it supports efforts by Corps of Engineers to maintain the following two activities , which are essential for the river to function over time as a viable transportation facility:

- Periodic dredging to maintain channel depth to support applicable river traffic
- Maintenance of the Locks at Oregon City

Pipeline System

A high-pressure natural gas mainline pipe exists in the vicinity of the Interstate-5 corridor. The location of this pipeline may impact a project's feasibility or limit available improvement options in its vicinity.

Transportation System Management and Operations Needs

Transportation System Management and Operations (TSMO) improvements include integrated operations solutions that incorporate advanced technologies. Due to the regional significance of TSMO improvements, Clackamas County and Metro have prepared their own plans. Some key needs include:

- **Arterial Corridor Management** for Boones Ferry Road, Elligsen Road, 65th Avenue, Wilsonville Road, and Stafford Road to improve reliability and traveler information along the corridors. Arterial Corridor Management includes installing fiber optic cable to allow communication with the ODOT/County Transportation Management and Operations Center as well as other intelligent transportation devices such as variable message signs, CCTV cameras, traveler information and adaptive traffic signal systems.
- **Transportation Demand Management (TDM)** by supporting the SMART Options Program, which works with Wilsonville area employers and residents to promote transit and other transportation options that reduce traffic congestion, such as carpool, vanpool, bike, walk, and telecommute.
- **Regional Fiber Network Connections** between Wilsonville's traffic signals and Clackamas County's fiber network (Clackamas County currently maintains and operates the City's traffic signals on its behalf).

"We have a new beautiful interchange with much more capacity, but we don't want to use up the capacity just to get from one side of town to the other."

Ben Altman, Chair
Planning Commission

- **Adaptive Signal Timing** and associated video monitoring cameras and vehicle detection equipment (to collect traffic counts and speeds) on Wilsonville Road from Brown Road to Town Center Loop East.
- **Closed Circuit Television Cameras** at the key locations along Wilsonville Road and I-5.
- **Video Monitoring Cameras and Vehicle Detection Equipment** (to collect traffic counts and speeds) on Elligsen Road from Day Road to Canyon Creek Road.
- **Railroad Crossing Alert System** at Portland and Western at-grade railroad crossings.

Recent TSMO Projects

Through a collaborative effort by Wilsonville, Clackamas County, and ODOT, the following TSMO projects have already been implemented:

- **Wilsonville Road Traffic Signal Communications** were improved as part of the Wilsonville Road Interchange Improvements to help manage traffic operations.
- **I-5 Interchange Area CCTV Cameras** were installed by ODOT and linked to the ODOT Trip Check website to provide real time information to drivers traveling within and through Wilsonville.
- **Discover Wilsonville** was a one-year program to make sure every Wilsonville resident has all the information they need to use whatever travel options interest them.
- **Sunday Streets** was a special event focusing on connecting neighborhoods, parks, and people. Bicyclists, walkers, runners, seniors, adults, and children enjoyed traffic-free streets filled with physical activities, fun and

Alternative Fuel Needs

Within Wilsonville and throughout the Portland Metro area, there is an increasing need to provide infrastructure to support vehicles that use alternative fuels (i.e., electrical and compressed natural gas vehicles). These vehicles help to reduce greenhouse gas emissions and are becoming more popular and affordable. SMART already has a compressed natural gas fueling station that it will use for its bus fleet.

The City could consider identifying various electrical vehicle stations at strategic locations that serve both residential and business users. Level II charging stations (input voltage of 240 volts, which requires two to four hours for charging) already exist at City Hall (2 stations) and the Fred Meyer parking lot (2 stations). Additional locations that may be considered for Level II charging stations are the SMART Central transit center and Town Center Loop.

The City of Wilsonville could also take advantage of its location at the southern tip of the Portland Metropolitan area to install (or coordinate with a willing business to install) a Level III (480 volt) fast charging station, which require only 20 to 40 minutes to complete the charge. An ideal location would be near one of the I-5 interchanges.

Another option to be ready for the transition to electric transportation would be to include provisions in residential, commercial, and industrial building codes for supporting the required infrastructure. It would be less expensive to require new buildings and parking lots to have the required electrical wiring and outlets to support future electric vehicle charging stations than it would be to retrofit older buildings and parking lots. By taking this preliminary step in preparing its infrastructure, a smoother transition could be made to alternative fuels for vehicles.

Electric vehicle charging stations, such as those located at Fred Meyer (shown above) and Wilsonville City Hall (shown below), allow patrons, employees, and visitors to charge their vehicles while working, shopping, and visiting Wilsonville.

The Projects
Chapter 5

Wilsonville is responsible for managing an efficient and effective transportation system that supports the quality of life of its residents and the economic vitality of its businesses. This is no easy task, but the City can succeed by implementing programs and projects that provide three primary benefits:

- Reduce rush hour traffic
- Improve operations and safety
- Make strategic investments in new and expanded facilities to serve all modes.

Wilsonville should be engaged in these three activities simultaneously through a balanced effort of programs and projects to receive the greatest value from its infrastructure expenditures. This balanced approach can also guard against over-building roadway capacity.

The list of transportation projects that will repair or complete the transportation system through 2035 is based largely on past plans, but includes updated solutions. Constructing all of the identified transportation solutions would cost approximately $218.2 million, which exceeds $123.4 million, which is forecasted to be available through 2035 from both City and other funding sources. Therefore, Wilsonville must choose how to invest its limited resources to provide the greatest benefit to Wilsonville residents and businesses. The highest priority solutions to meet the most important transportation system needs are included in the “Higher Priority” project list , while all other projects are included in the “Planned“ project list.

Wilsonville will . . .

- ***Improve system efficiency,***
- ***Reduce congestion, and***
- ***Save money***

By implementing programs and projects that . . .

1. ***Reduce rush hour traffic,***
2. ***Improve operations and safety, and***
3. ***Make strategic investments in new and expanded facilities to serve all modes***

System Improvement Priorities

Most of the transportation system improvement projects needed to address gaps and deficiencies in the system were identified in prior City plans, including its 2003 Transportation Systems Plan, 2006 Bicycle and Pedestrian Master Plan, 2008 Transit Master Plan, and multiple development master plans (see Chapter 1: The Context). The City's prior transportation projects were reconsidered, integrated, and revised to address updated information and prepare for the 2035 planning horizon.

Because transportation funding is limited, Wilsonville recognizes the importance of being fiscally responsible in managing and improving its transportation system. The diagram at right illustrates cost-effective steps and associated solution areas to resolving transportation needs by following a multimodal, network-wide approach. These five steps were considered from top to bottom when evaluating Wilsonville's transportation projects:

- **Manage** the performance of congested locations with strategies that reduce traffic conflicts, increase safety, and encourage more efficient usage of the transportation system. Intersection operational improvements are considered to fall under this category.
- **Reduce** the driving demand at congested locations by ensuring safe and available walking, biking, and transit options.
- **Revisit** land use decisions and congestion thresholds to support shorter driving trips or modified travel decisions.
- **Extend** streets to increase connectivity and create parallel routes that reduce the driving demand on congested facilities.
- **Expand** existing streets or intersections to increase the driving capacity of congested facilities.

Cost-Effective Steps to Resolving Transportation Needs

Figure 5-1. Improvement Priori-

"We want to create a transportation system that has multiple choices . . . That way we are not heavily reliant on the car, which will still stay a key element to the system. But we want to make sure we are providing options for bicycles, pedestrians, and transit."

Ben Altman, Chair
Planning Commission

Prioritized Solution Areas

As illustrated in Figure 5-1, the City can best manage its transportation system by having plans, programs, and/or projects that address each of the following solution areas:

1. **Transportation System Management and Operations (TSMO)** strategies that improve the safety and efficiency of the current system, including Transportation Demand Management (TDM)
2. **Bicycle, Pedestrian, and Transit** system improvements that target key system gaps and safely accommodate all transportation users
3. **Land Use and Development Strategies** that (1) provide equal accessibility and connectivity to those users who choose to travel by transit, bicycle, and pedestrian modes and (2) utilize the City's functional classification hierarchy to reduce out-of-direction travel and manage congestion on arterials
4. **Connectivity** improvements that include motor vehicle, pedestrian, bicycle, and transit facilities to provide more direct routes for all transportation users between neighborhoods, schools, parks, and retail/industrial areas
5. **Motor Vehicle Capacity** improvements upon a demonstration that the other strategies are not appropriate or cannot adequately address identified transportation needs

General preference should be given to those listed first, but only to the degree to which they are more cost-effective at supporting the City's vision and goals (i.e., a transportation system that is safe, connected and accessible, functional and reliable, cost effective, compatible, robust, and promotes livability). Many of the City's projects include elements that address multiple solutions.

Project Evaluation Process

Wilsonville's transportation improvement projects were also evaluated and prioritized to help select which projects to include in the Higher Priority project list. Many projects had been evaluated and prioritized in recently adopted mode-specific transportation plans. As a result, the TSP evaluation process varied for the different modes:

- **Motor Vehicle Projects:** The projects were ranked according to a point-based technical scoring methodology using evaluation criteria consistent with the City's transportation goals. This allowed for a consistent method to understand how well the projects would meet the City's transportation goals and policies. In addition, community input was considered when prioritizing the projects.
- **Bicycle, Pedestrian, and Transit Projects:** The project priorities in the 2006 Bicycle and Pedestrian Master Plan and 2008 Transit Master Plan were reviewed, and a few changes were made based on City staff and public input. The majority of the higher priority bicycle and pedestrian projects were included in the Higher Priority project list, even if it would require them to be constructed separately from associated motor vehicle projects.

Prioritizing the projects in this way allowed for them to be separated into two lists: the "Higher Priority" project list includes the highest priority solutions to meet the City's most important transportation system needs, while the "Additional Planned" project list includes all of the other projects.

Higher Priority Projects

The "Higher Priority" project list includes the recommended projects reasonably expected to be funded through 2035. These are the highest priority solutions to meet the City's most important needs. These projects will inform the City's yearly budget and 5-year Capital Improvement Plan (CIP). As shown in Table 5-1, the Higher Priority projects would cost a total of $118.0 million, which is consistent with forecast available funding through 2035.

Figures 5-2 through 5-6 show locations of the projects, and corresponding project details are included in Tables 5-1 through 5-5 (project numbering is alphabetical). Some of the City's Higher Priority projects are not associated with a specific location but instead will be applied citywide as needed. These projects are listed in Table 5-6. Additional project details are included in the appendix (where they are sorted by project type).

Table 5-1. Higher Priority Project Costs[a]

Project Type	2011 Cost Estimate
Roadway Extensions	$55,255,000
Roadway Widening	$20,000,000
Urban Upgrades	$58,355,000
Spot Improvements	$3,950,000
Standalone Bicycle and Pedestrian Improvements	$16,520,000
Transit Improvements	$500,000
Total Higher Priority Project Costs	**$154,580,000**

[a] See Tables 5-2, 5-3, 5-4, 5-5, and 5-6 for individual project costs.

Project Types

RE – Roadway Extensions (Multimodal Connectivity): New transportation facilities in Wilsonville will connect neighborhoods to one another and to other important destinations. Many of the bicycle and pedestrian improvements related to roadway extensions will fill important system gaps so that neighborhoods have improved non-motorized connectivity, while roadway extension projects are the key motor vehicle improvements that provide increased connectivity in Wilsonville. The roadway extensions help the City to meet the one-mile arterial and half-mile collector spacing standards, consistent with City and regional policy.

RW – Roadway Widening (Capacity): The roadway widening projects increase roadway capacity.

UU – Urban Upgrades (Multimodal Connectivity and Safety): The urban upgrade projects complete existing roadways, and often improve connectivity by adding bike lanes, sidewalks, and turn lanes that accommodate access to adjacent neighborhoods. These projects improve the roadways to meet the City's cross-section standards.

SI – Spot Improvements (Transportation System Management and Operations): Spot improvements consist of isolated intersection improvements and safety improvements throughout the city.

BW, SR, LT, and RT – Standalone Bicycle and Pedestrian Improvements (Multimodal Connectivity and Safety): While many bicycle and pedestrian facilities will be constructed as elements of roadway extension and widening projects, there are a number of projects that the City should construct separately or as part of future development. These include the highest priority bikeways/walkways (**BW**), Safe Routes to School projects (**SR**), local trails (**LT**), and regional trails (**RT**).

TI – Transit Improvements: Transit projects are needed throughout the city to provide bus stop amenities and improve bicycle and pedestrian access to

Figure 5-2. Higher Priority Projects

This figure provides an overall perspective of the Higher Priority projects throughout the city. Additional details are provided on the pages that follow for each of the City's four quadrants (Northwest, Northeast, Southwest, Southeast), which use I-5 and Boeckman Road as dividing lines.

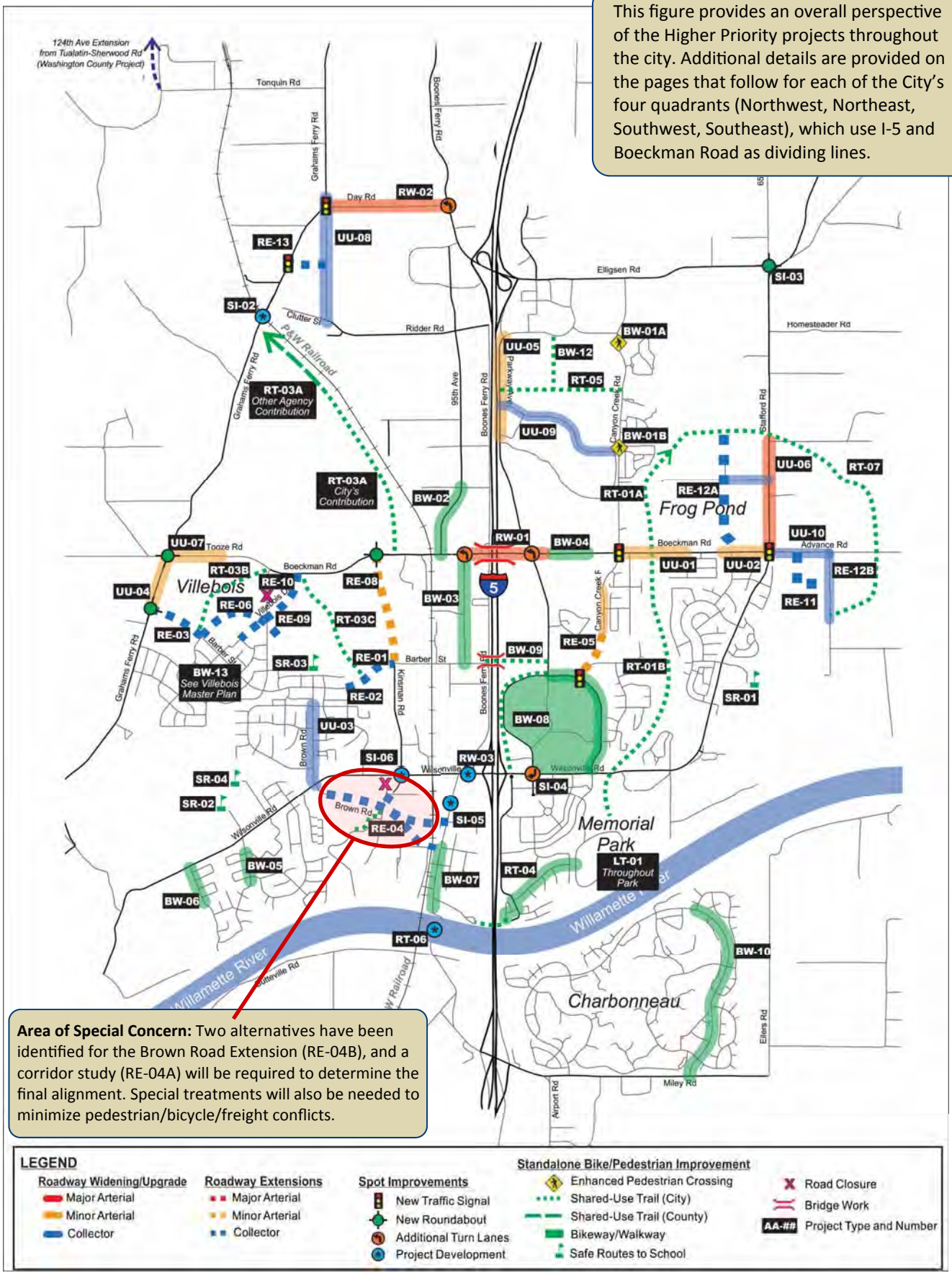


Table 5-2. Higher Priority Projects (Northwest Quadrant)

Project		Description	Cost
Roadway Extensions			
RE-13	Java Road Connection and Signal	Construct Java Road from Boones Ferry Road to Grahams Ferry Road and Garden Acres Road with a signal at the Java Road/Grahams Ferry Road intersection and disconnect Clutter Street from Grahams Ferry Road.	$1,500,000
Urban Upgrades			
UU-08	Garden Acres Road Urban Upgrade	Upgrade Garden Acres Road to a three-lane collector with bicycle lanes and upgrade the Garden Acres Road/Day Road intersection to either a signal or a roundabout. Realign Ridder Road to Garden Acres Road. Close the existing Clutter Road connection to Grahams Ferry Road after completion of Project RE-13. Close the existing Coffee Creek Correctional Facility driveway to Grahams Ferry Road and relocate the driveway to Cahalin Road.	$14,260,000
Roadway Widening			
RW-02	Day Road Widening	Widen Day Road from Boones Ferry Road to Grahams Ferry Road to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes improvements at the Day Road/Boones Ferry Road intersection.	$5,900,000
Spot Improvements			
SI-02	Grahams Ferry Railroad Undercrossing Project Development	Perform preliminary analysis to determine needs, feasibility, etc.	$500,000
Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)			
BW-02	95th Avenue Sidewalk Infill	Fill in gaps in the sidewalk network on the east side of 95th Avenue from Boeckman Road to Hillman Court, and construct transit stop improvements.	$85,000
Standalone Pedestrian and Bicycle Improvements (Regional Trails)			
RT-03A	Ice Age Tonquin Trail (North)	Construct sections of the Ice Age Tonquin Trail north of Boeckman Road; City to construct portion within City limits (approximately $750,000) and coordinate portion farther north with Washington County and neighboring cities.	$2,040,000 (Partial Regional funding)

FIGURE 5-3. HIGHER PRIORITY PROJECTS (NORTHWEST QUADRANT)

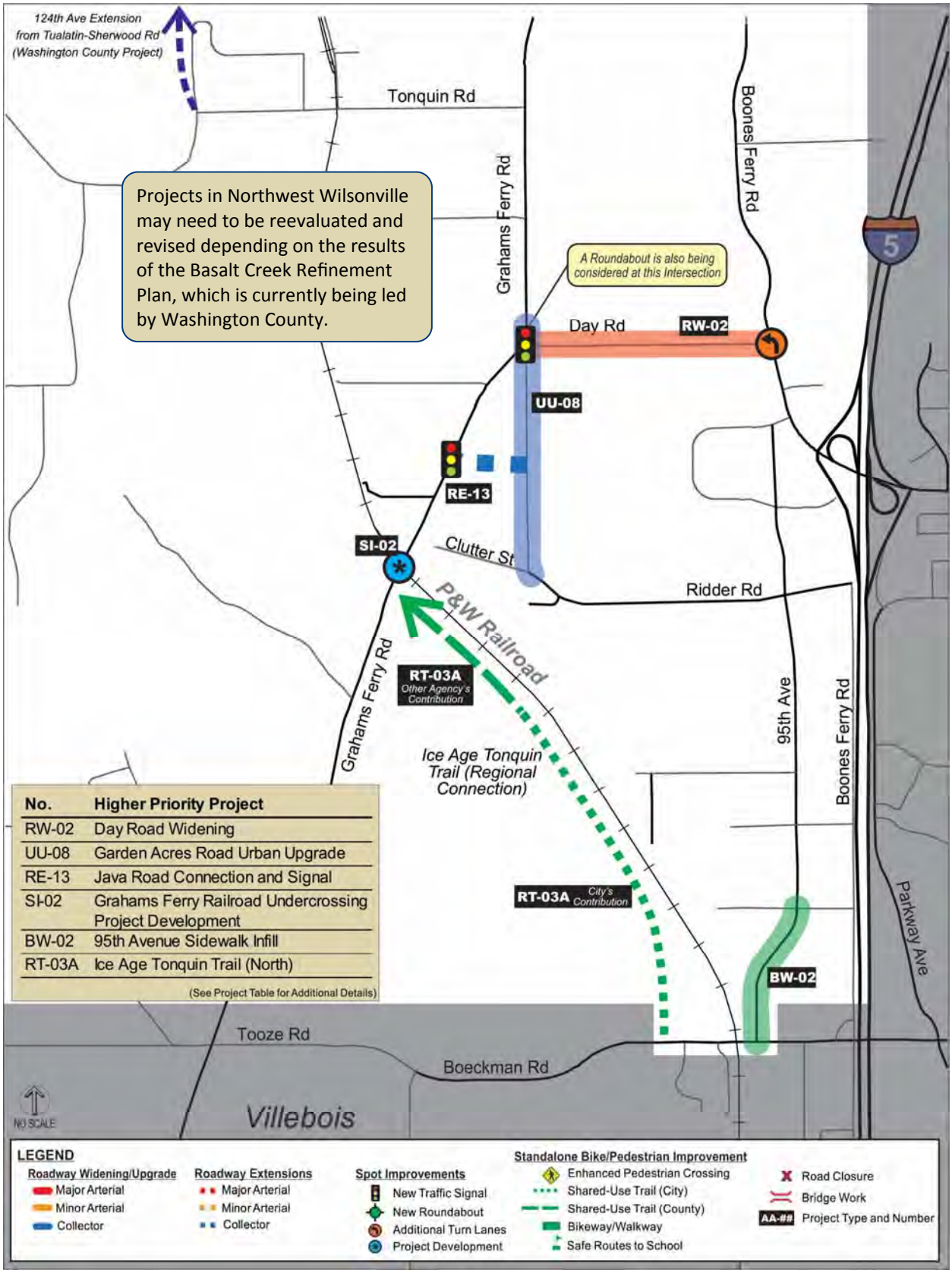


Table 5-3. Higher Priority Projects (Northeast Quadrant)

Project		Description	Cost
Roadway Extensions			
RE-11	Meridian Creek Middle School Site Improvements	Construct the collector roadways and site improvements associated with the proposed Meridian Creek Middle School site	$1,600,000
RE-12A	Frog Pond West Neighborhood Collector Roads	Construct the collector roadways within the west neighborhood as identified in the Frog Pond Area Plan	$9,510,000
RE-12B	Frog Pond South Neighborhood Collector Roads	Construct the collector roadways within the south neighborhood as identified in the Frog Pond Area Plan	$2,650,000
Roadway Widening			
RW-01	Boeckman Road Bridge and Corridor Improvements	Widen Boeckman Road from Boberg Road to 500 feet east of Parkway Avenue to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes reconstruction of the bridge over I-5 and improvements at Boeckman Road/Boberg Road and Boeckman Road/Parkway Avenue intersections and adjacent transit stops	$13,600,000
Urban Upgrades			
UU-01	Boeckman Road Dip Improvements	Upgrade at vertical curve east of Canyon Creek Road to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); options should also be considered to make connections to the regional trail system and to remove the culvert and install a bridge	$12,220,000
UU-02	Boeckman Road Urban Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); project includes a traffic signal or roundabout at the Boeckman Road-Advance Road/Stafford Road-Wilsonville Road Intersection	$2,100,000
UU-05	Parkway Avenue Urban Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements)	$5,000,000
UU-06	Stafford Road Urban Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements)	$4,200,000
UU-09	Printer Parkway Urban Upgrade	Upgrade Printer Parkway to a three-lane collector with bicycle lanes and multiuse path	$3,600,000
UU-10	Advance Road Urban Upgrade	Upgrade Advance Road to collector standards starting at Stafford Road to the proposed 63rd Avenue (entrance to proposed Meridian Creek Middle School)	$3,175,000
Spot Improvements			
SI-03	Stafford Road/65th Avenue Intersection Improvements	Improve turn radii, sight distance and grade differential by combining intersections as either a roundabout or traffic signal	$2,000,000 (Partial County funding)
Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)			
BW-01 A/B	Canyon Creek Road Enhanced Pedestrian Crossings	Install two new pedestrian crossings of Canyon Creek Road that include rectangular rapid flashing beacons (RRFBs), center pedestrian median island, signage, etc. (final locations to be determined)	$130,000
BW-04	Boeckman Road Bike Lanes and Sidewalk Infill	Construct bike lanes (both sides of street) and sidewalks (south side of street) from Parkway Avenue to Canyon Creek Road	$515,000
BW-12	Parkway Center Trail Connector	Construct shared-use path as development occurs; with connection to proposed regional trail (Wiedeman Road Trail) on the south	$120,000
Standalone Pedestrian and Bicycle Improvements (Regional Trails)			
RT-01A	Boeckman Creek Trail (North)	Construct north-south trail through east Wilsonville following Boeckman Creek, with connections to neighborhoods, parks, and intersecting roads (may need a boardwalk for various sections and would require a comprehensive public process)	$850,000
RT-05	Wiedeman Road Trail	Construct east-west trail in north Wilsonville near the Xerox campus with City responsible for portion through developed land and future developer responsible for portion on future development site	$340,000
RT-07	Revised Frog Pond Regional Trail	Construct the regional trail identified in the Frog Pond Area Plan	$700,000

Figure 5-4. Higher Priority Projects (Northeast Quadrant)

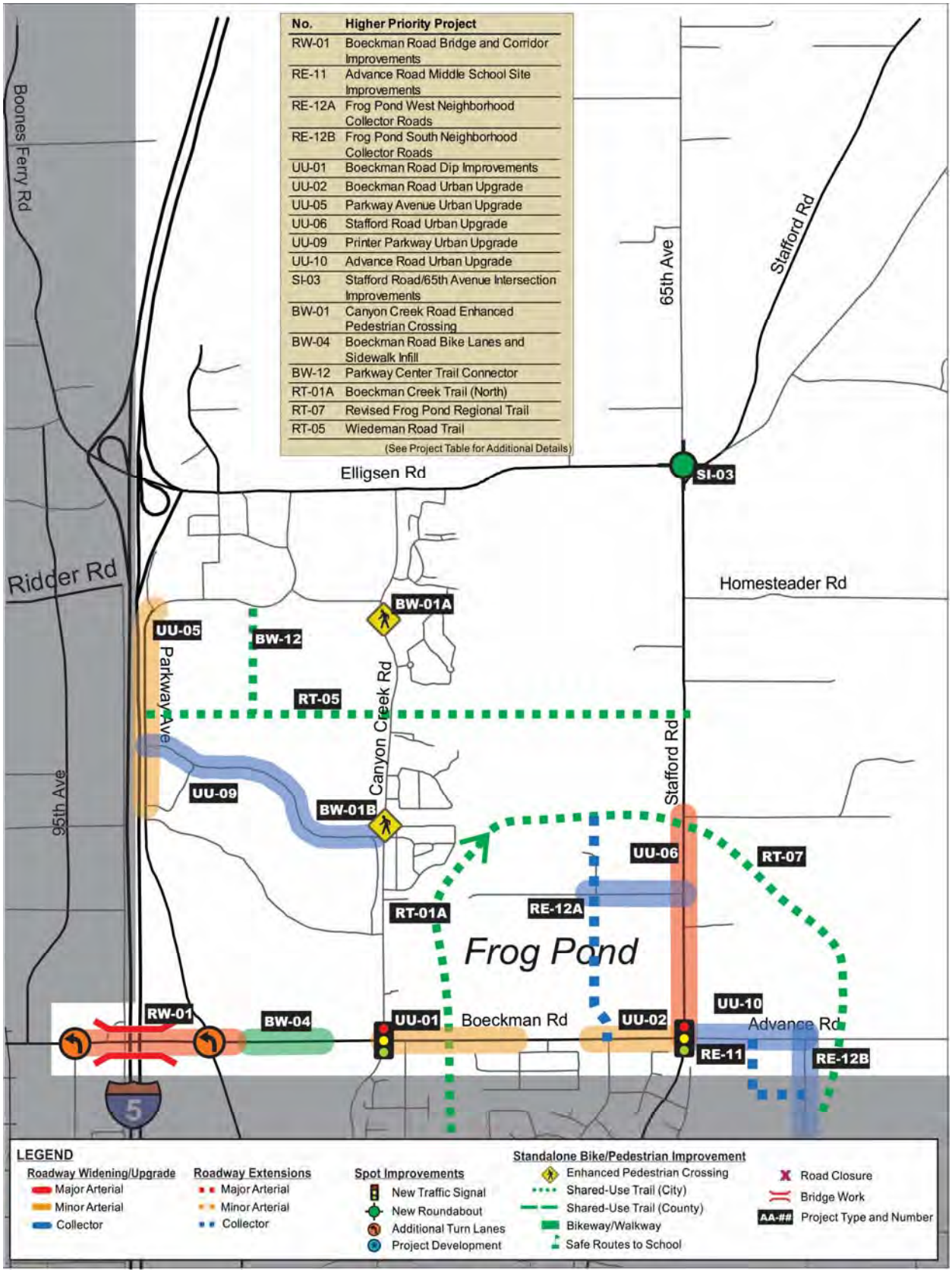
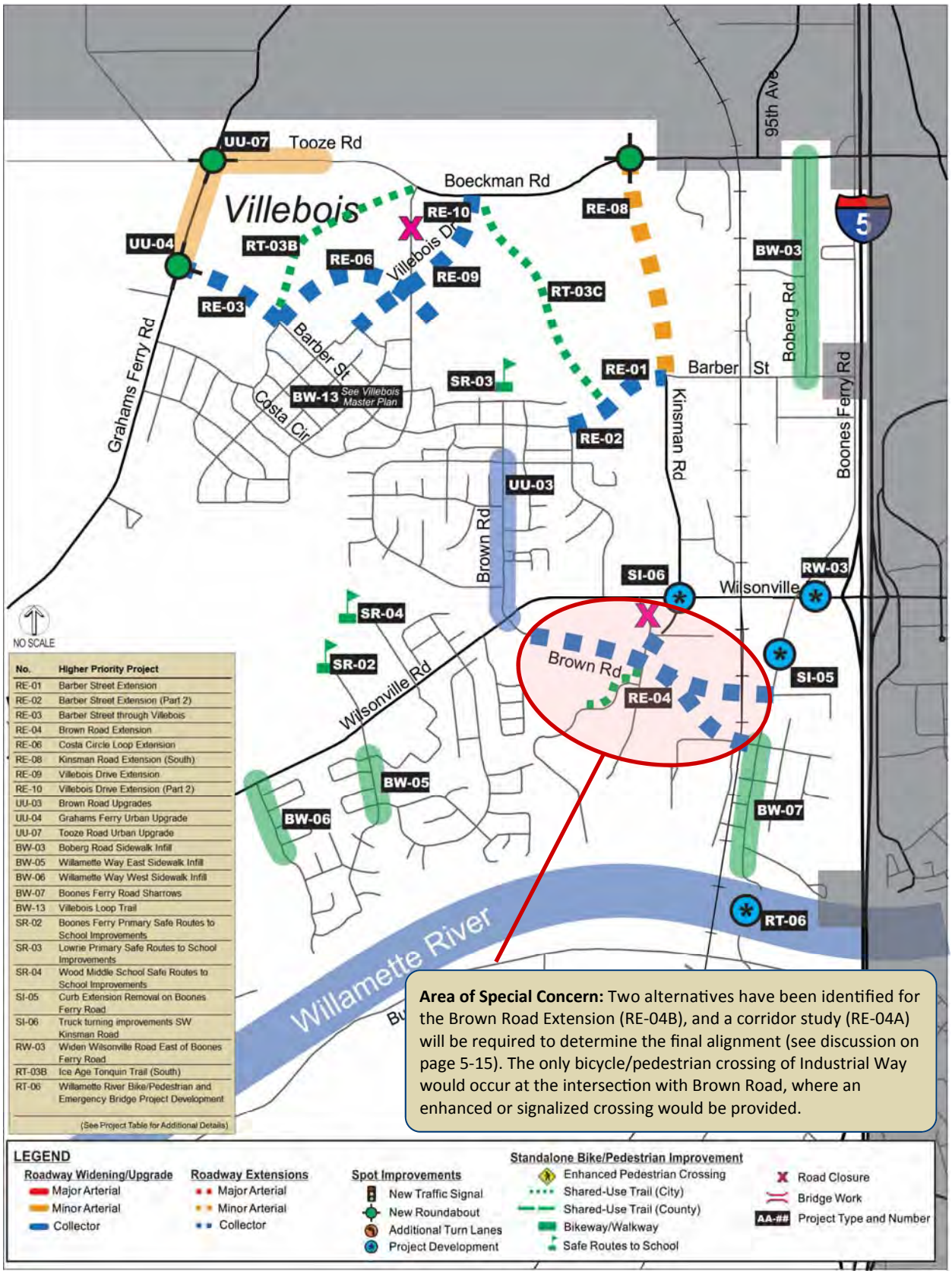


Table 5-4. Higher Priority Projects (Southwest Quadrant)

Project		Description	Cost
Roadway Extensions			
RE-01	Barber Street Extension	Construct 2-lane roadway with bridge, bike lanes, sidewalks, and transit stop improvements from Kinsman Road to Coffee Lake Drive to facilitate access and circulation to WES Station and Villebois	$8,315,000
RE-02	Barber Street Extension (Part 2)	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Coffee Lake Drive to Montebello Drive to facilitate access and circulation to WES Station and Villebois	$400,000
RE-03	Barber Street through Villebois	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Monte Carlo Avenue to Grahams Ferry Road	$520,000
RE-04A	Corridor Study for Brown Road Extension	Perform a corridor study to determine the recommended Brown Road extension alignment (i.e., connection at either Bailey Street or 5th Street)	$20,000
RE-04B	Brown Road Extension	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Wilsonville Road to Boones Ferry Road (connect at either Bailey Street or 5th Street); includes roadway connection to Kinsman Road (with bike lanes and sidewalks), portion of Ice Age Tonquin Trail connecting to trial terminus on Arrowhead Creek Lane, and Brown Road/Kinsman Road intersection	$15,200,000
RE-06	Costa Circle Loop Extension	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Barber Street to Villebois Drive to Mont Blanc Street	$3,000,000
RE-08	Kinsman Road Extension (South)	Construct 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Barber Street to Boeckman Road; project also includes a roundabout at Kinsman Road/Boeckman Road intersection	$8,400,000
RE-09	Villebois Drive Extension	Construct 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Costa Circle to Coffee Lake Drive	$390,000
RE-10	Villebois Drive Extension (Part 2)	Construct 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Coffee Lake Drive to Boeckman Road	$250,000
Roadway Widening			
RW-03	Widen Wilsonville Road East of Boones Ferry Road	Widen eastbound SW Wilsonville Road east of SW Boones Ferry Road by removing the center median. This project involves lane configuration analysis to best address congestion.	$500,000
Urban Upgrades			
UU-03	Brown Road Upgrades	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stops)	$3,500,000
UU-04	Grahams Ferry Urban Upgrade	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); includes roundabout at Grahams Ferry Road/Barber Street intersection	$2,400,000
UU-07	Tooze Road Urban Upgrade	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); includes roundabout at Grahams Ferry Road/Tooze Road intersection	$7,900,000
Spot Improvements			
SI-05	Curb Extension Removal on Boones Ferry Road	Remove curb extension and add an additional northbound through lane on SW Boones Ferry Road starting at the southern SW Boones Ferry Road/Fred Meyer access and ending at the SW Boones Ferry Road/SW Wilsonville Road intersection where the curbside through lane will terminate into the existing right turn lane.	$200,000
SI-06	Truck Turning Improvements SW Kinsman Road	Rebuild the northwest corner of the Wilsonville Road/Kinsman Road intersection to accommodate truck turning movements and improve pedestrian safety. Requires right-of-way acquisition, widening, pedestrian ramp replacement, and traffic signal pole relocation.	$750,000
Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)			
BW-03	Boberg Road Sidewalk Infill	Fill in gaps in the sidewalk network on the east side of the roadway from Boeckman Road to Barber Street, and construct transit stop improvements	$375,000
BW-05	Willamette Way East Sidewalk Infill	Fill in gaps in the sidewalk network on the west side of the roadway from Chantilly to south of Churchill (part of Ice Age Tonquin Trail)	$50,000
BW-06	Willamette Way West Sidewalk Infill	Construct a new sidewalk on west side of the roadway from Wilsonville Road to Paulina Drive	$50,000
BW-07	Boones Ferry Road Sharrows	Stripe sharrows (shared travel lanes) from 5th Street to Boones Ferry Park; this will connect Ice Age Tonquin Trail (once the portion along the Brown Road Extension is completed) to Waterfront Trail	$5,000
BW-13	Villebois Loop Trail	Construct shared-use path as part of Villebois development; include connections to Villebois Greenway, the Ice Age Tonquin Trail, and the Village Center	$180,000
Standalone Pedestrian and Bicycle Improvements (Safe Routes to School)			
SR-02	Boones Ferry Primary Safe Routes to School Improvements	Construct shared-use path between Boones Ferry Primary and Wood Middle School, a bicycle parking shelter near the school, and a shared-use path connecting the bicycle shelter to the sidewalks along Wilsonville Road	$200,000
SR-03	Lowrie Primary Safe Routes to School Improvements	Construct shared-use path from existing connection of Lowrie Primary School to Barber Street as part of Villebois development; include connections to new school, Ice Age Tonquin Trail, and Barber Street To future connections	$150,000
SR-04	Wood Middle School Safe Routes to School Improvements	Construct a bicycle parking shelter near the school and a shared-use path connecting the bicycle shelter to the sidewalks along Wilsonville Road; also widen and stripe the Park at Merryfield Trail, which connects Wood Middle School to Camelot Street to the north	$150,000
Standalone Pedestrian and Bicycle Improvements (Regional Trails)			
RT-03 B/C	Ice Age Tonquin Trail (Villebois)	Construct the remaining sections of the Ice Age Tonquin Trail within Villebois Village in conjunction with development and adjacent roadway improvements	$560,000
RT-06	Willamette River Bike/ Pedestrian and Emergency Bridge Project Development	Perform feasibility study and project development for bike/pedestrian/emergency bridge over the Willamette River to provide a non-motorized alternative to the I-5 freeway deck	$1,380,000 (Partial Regional funding)

Figure 5-5. Higher Priority Projects (Southwest Quadrant)



No.	Higher Priority Project
RE-01	Barber Street Extension
RE-02	Barber Street Extension (Part 2)
RE-03	Barber Street through Villebois
RE-04	Brown Road Extension
RE-06	Costa Circle Loop Extension
RE-08	Kinsman Road Extension (South)
RE-09	Villebois Drive Extension
RE-10	Villebois Drive Extension (Part 2)
UU-03	Brown Road Upgrades
UU-04	Grahams Ferry Urban Upgrade
UU-07	Tooze Road Urban Upgrade
BW-03	Boberg Road Sidewalk Infill
BW-05	Willamette Way East Sidewalk Infill
BW-06	Willamette Way West Sidewalk Infill
BW-07	Boones Ferry Road Sharrows
BW-13	Villebois Loop Trail
SR-02	Boones Ferry Primary Safe Routes to School Improvements
SR-03	Lowrie Primary Safe Routes to School Improvements
SR-04	Wood Middle School Safe Routes to School Improvements
SI-05	Curb Extension Removal on Boones Ferry Road
SI-06	Truck turning improvements SW Kinsman Road
RW-03	Widen Wilsonville Road East of Boones Ferry Road
RT-03B	Ice Age Tonquin Trail (South)
RT-06	Willamette River Bike/Pedestrian and Emergency Bridge Project Development

(See Project Table for Additional Details)

Table 5-5. Higher Priority Projects (Southeast Quadrant)

Project		Description	Cost
Roadway Extensions			
RE-05	Canyon Creek Road Extension	Construct remaining 3-lane roadway with bike lanes, sidewalks, and transit stop improvements from existing terminus to Town Center Loop East; project also includes realigning a portion of Vlahos Drive (so it intersects Canyon Creek Road) and installing a traffic signal at the Town Center Loop East/Canyon Creek Road intersection	$3,500,000
Spot Improvements			
SI-04	Wilsonville Road/ Town Center Loop West Intersection Improvements	Widen the north leg of the intersection and install a second southbound right-turn lane (dual lanes)	$500,000
Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)			
BW-08	Town Center Loop Pedestrian, Bicycle, and Transit Improvements	Create more direct connections between destinations within Town Center area, improve accessibility to civic uses and transit stops, retrofit sidewalks with curb ramps, highlight crosswalks with colored pavement, and construct other similar treatments that support pedestrian, bicycle, and transit access and circulation; also construct shared-use path along Town Center Loop West from Wilsonville Road to Parkway Avenue and restripe Town Center Loop East from Wilsonville Road to Parkway Avenue to a three-lane cross-section with bike facilities	$500,000
BW-09	Town Center Loop Bike/Pedestrian Bridge	Construct bike/pedestrian bridge over I-5 approximately aligned with Barber Street to improve connectivity of Town Center area with businesses and neighborhoods on west side of I-5; include aesthetic design treatments	$4,000,000
BW-10	French Prairie Drive Pathway	Construct 10-foot wide shared-use path along French Prairie Drive from Country View Lane to Miley Road or reconfigure existing roadway to remove a travel lane in each direction and add bicycle and pedestrian facilities	$1,140,000
Standalone Pedestrian and Bicycle Improvements (Safe Routes to School)			
SR-01	Boeckman Creek Primary Safe Routes to School Improvements	Construct a bicycle parking shelter near the school and a new 10 to 12-foot bike path on the south side of the existing sidewalk that meanders south of the tree line and connects to the existing marked crosswalk near the school parking lot	$65,000
Standalone Pedestrian and Bicycle Improvements (Local Trails)			
LT-01	Memorial Park Trail Improvements	Construct trails throughout Memorial Park, including the Memorial Park Center Loop Trail, the River Trail, Kolbe Homestead Trail, and Klein Homestead Trail	$595,000
Standalone Pedestrian and Bicycle Improvements (Regional Trails)			
RT-01B	Boeckman Creek Trail (South)	Construct north-south trail through east Wilsonville following Boeckman Creek, with connections to neighborhoods, parks, and intersecting roads (may need a boardwalk for various sections and would require a comprehensive public process)	$1,150,000 (Partial Regional funding)
RT-04	Waterfront Trail Improvements	Improve the condition of the shared-use path as it passes underneath the I-5 Boone Bridge by removing the Jersey barriers, installing bollards, widening the trail, adding appropriate pedestrian features such as benches and lighting, and altering the grade of the path underneath the underpass to make it more easily accessible	$125,000

Figure 5-6. Higher Priority Projects (Southeast Quadrant)

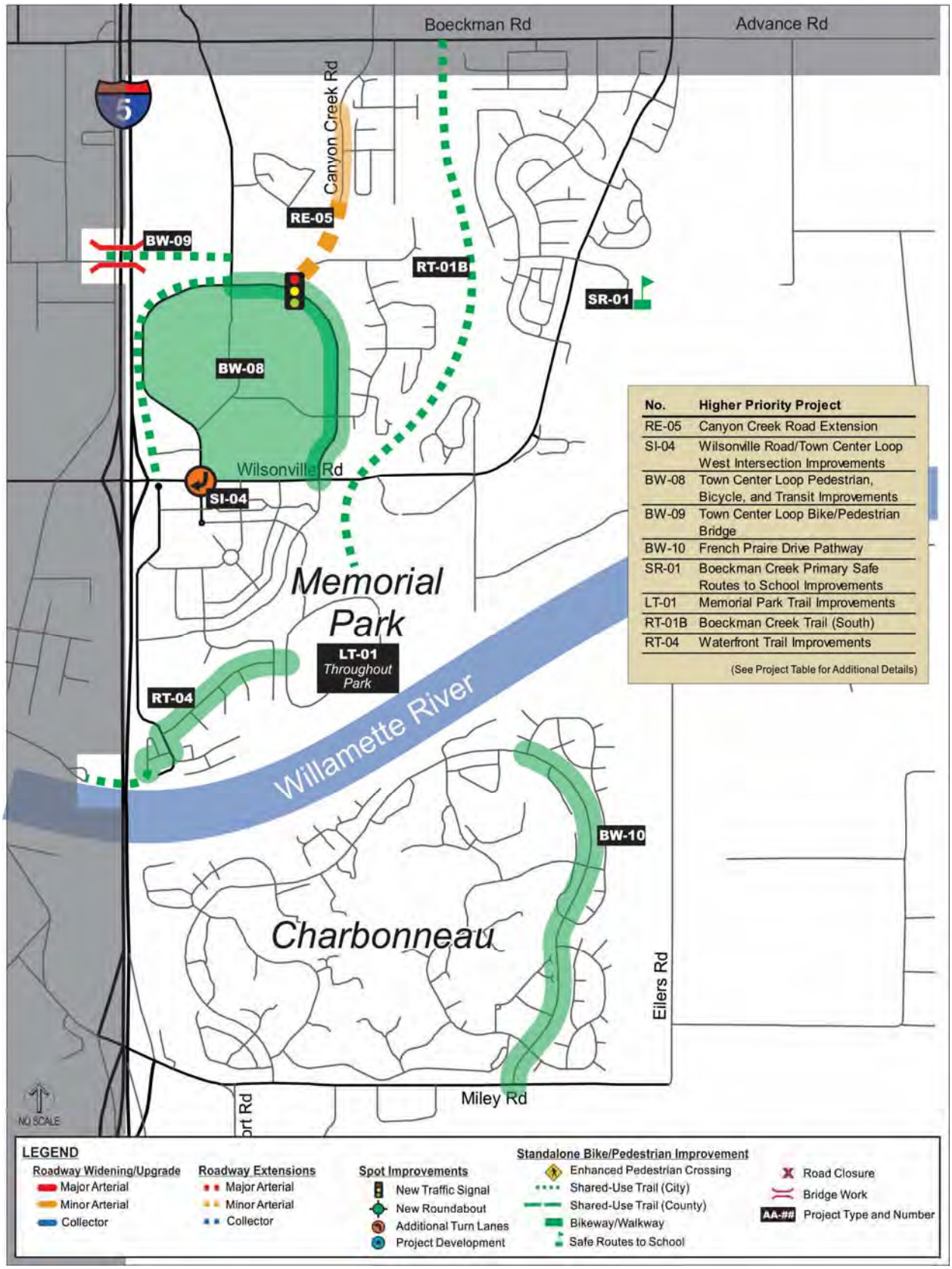


Table 5-6. Higher Priority Projects (Citywide)

Project		Description	Cost
Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)			
BW-14	Wayfinding Signage	Provide bicycle, pedestrian, and transit wayfinding signage directing users to/from the Ice Age Tonquin Trail, the SMART and WES transit center, and other points of interest throughout the city	$65,000
BW-15	Property Acquisitions for Bike/Ped Connectivity	Provide set-aside funds to allow purchase of strategically located properties that can facilitate bicycle and pedestrian connections as these properties become available.	$1,000,000
Transit Improvements			
TI-01	Pedestrian Access to Transit	Construct sidewalk and curb ramp improvements at SMART stops throughout the city to meet ADA requirements, create safe street crossings, and connect new development with transit (includes retrofits at substandard stops)	$200,000
TI-02	Transit Street Improvements	Widen roadways or construct sidewalk extensions on a case-by-case basis to improve transit on-time performance and passenger/pedestrian safety; may involve on-site bus turnarounds with property owner approval	$300,000

Table 5-7 provides a side-by-side comparison of the estimated funding sources available and how much they would contribute to the Higher Priority projects. Additional cost information is provided in the appendix. The planning level project costs are intended to cover a moderate level of unanticipated costs that may arise at the time the projects are constructed.

Table 5-7. Higher Priority Project Funding Sources and Contributions

Project Type	Capital Improvement Funding Estimates through 2035	
	Approximate Funding Available	*Contributions to Higher Priority Projects*
Street System Development Charges (SDCs)	$72 million	$68.6 million
West Side Plan – Urban Renewal District	$27 million	$26.6 million
Year 2000 Plan – Urban Renewal District	$5 million	$3.5 million
Park System Development Charges (SDCs)	$0.7 million[a]	$0.7 million
Local/Regional Partnerships	$2.9 million[a]	$2.9 million
Grants	$3.2 million[a]	$3.2 million
State and Federal Funding	$12.6 million[a]	$12.6 million
Total	**$123.4 million[a]**	**$118.1 million**

[a] The approximate funding levels estimated for various sources were considered to be equal to the contributions due to the prior experience of how the City has been able to fund transportation projects. If the City is unable to obtain local/regional partnerships, grants, and/or state and federal funding, then the associated projects that assume these funding sources may have to be put on hold until other funding becomes available.

Brown Road Extension Alternatives

From a transportation planning standpoint, both Brown Road extension alternatives would provide comparable benefits to the transportation network. Selection of an alignment should be made during or prior to the master planning process for the large area south of Wilsonville Road and west of the railroad tracks.

The following factors should be considered as part of selecting a future alignment:

- Access
- Bicycle and pedestrian network connections
- Environmental impacts
- Freight benefits/impacts
- Future development plans and land use changes in the two areas most impacted by the roadway extension: (1) west of the railroad tracks south of Wilsonville Road and (2) in Old Town, specifically along Boones Ferry Road
- Motor vehicle capacity
- Neighborhood/commercial connectivity
- Private property impacts
- Project costs
- Public input
- Railroad crossings
- Small business impacts
- Timing
- Traffic diversion
- Water and sewer utility issues

Additional Planned Projects

The "Additional Planned" project list includes those projects that would contribute to the City's desired transportation system through 2035 but that were not included as "Higher Priority" projects due to estimated funding limitations. This list represents a coordinated transportation network and adequate facilities to serve the community through 2035.

The State stipulates that projects listed in the TSP form the legal basis for exacting developer-provided improvements. Together, the "Higher Priority" and "Additional Planned" project lists document all the City's desired projects so that it is clear what improvements are needed to ensure that the City's transportation network fully supports its continued growth.

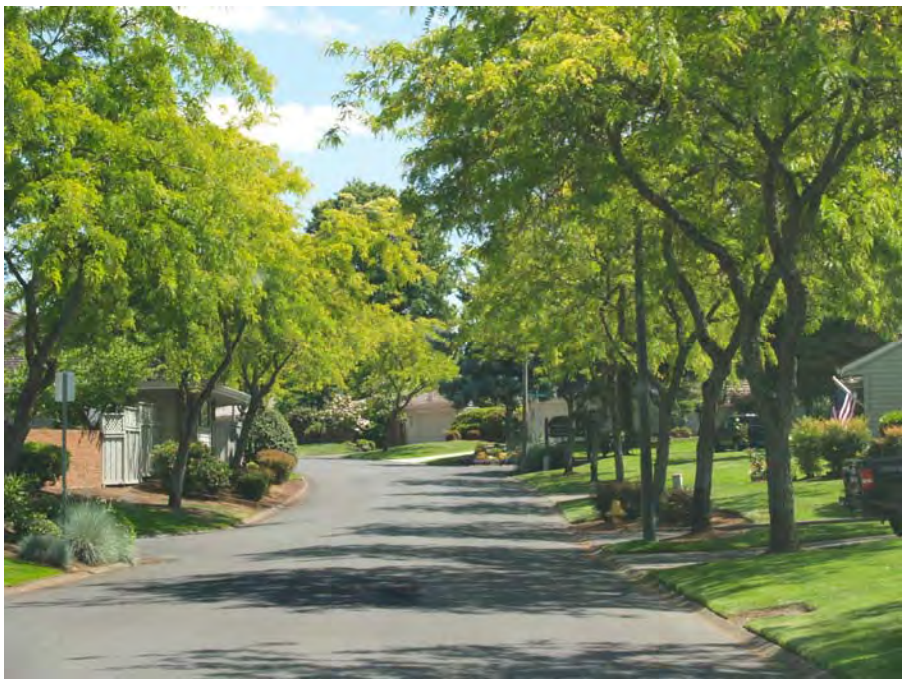
Even though the City should primarily focus on the projects included in the Higher Priority Solutions Package, it should look for opportunities to pursue these remaining projects as funding opportunities become available, including grant funding.

As shown in Table 5-8, the "Additional Planned" projects would cost a total of $100.1 million. Figures 5-7 through 5-11 show locations of the projects, and corresponding project details are included in Tables 5 -8 through 5-12. Some of the City's Additional Planned projects are not associated with a specific location but instead will be applied citywide as needed. These projects are listed in Table 5-13.

Table 5-8. Additional Planned Project Costs[a]

Project Type	2011 Cost Estimate
Roadway Extensions	$27,200,000
Roadway Widening	$8,280,000
Urban Upgrades	$19,800,000
Spot Improvements	$6,500,000
Standalone Bicycle and Pedestrian Improvements	$25,610,000
Transit Improvements	$14,450,000
Total Additional Planned Project Costs	**$101,840,000**

[a] See Tables 5-9, 5-10, 5-11, 5-12, and 5-13 for individual project costs.



Trees provide an aesthetically pleasing environment and shade along a street in Charbonneau, a private planned community in Wilsonville surrounding a 27-hole golf course. Because Charbonneau is on the southern bank of the Willamette River, it is separated from the remainder of the city and would benefit from a dedicated bicycle and pedestrian bridge.

FIGURE 5-7. ADDITIONAL PLANNED PROJECTS

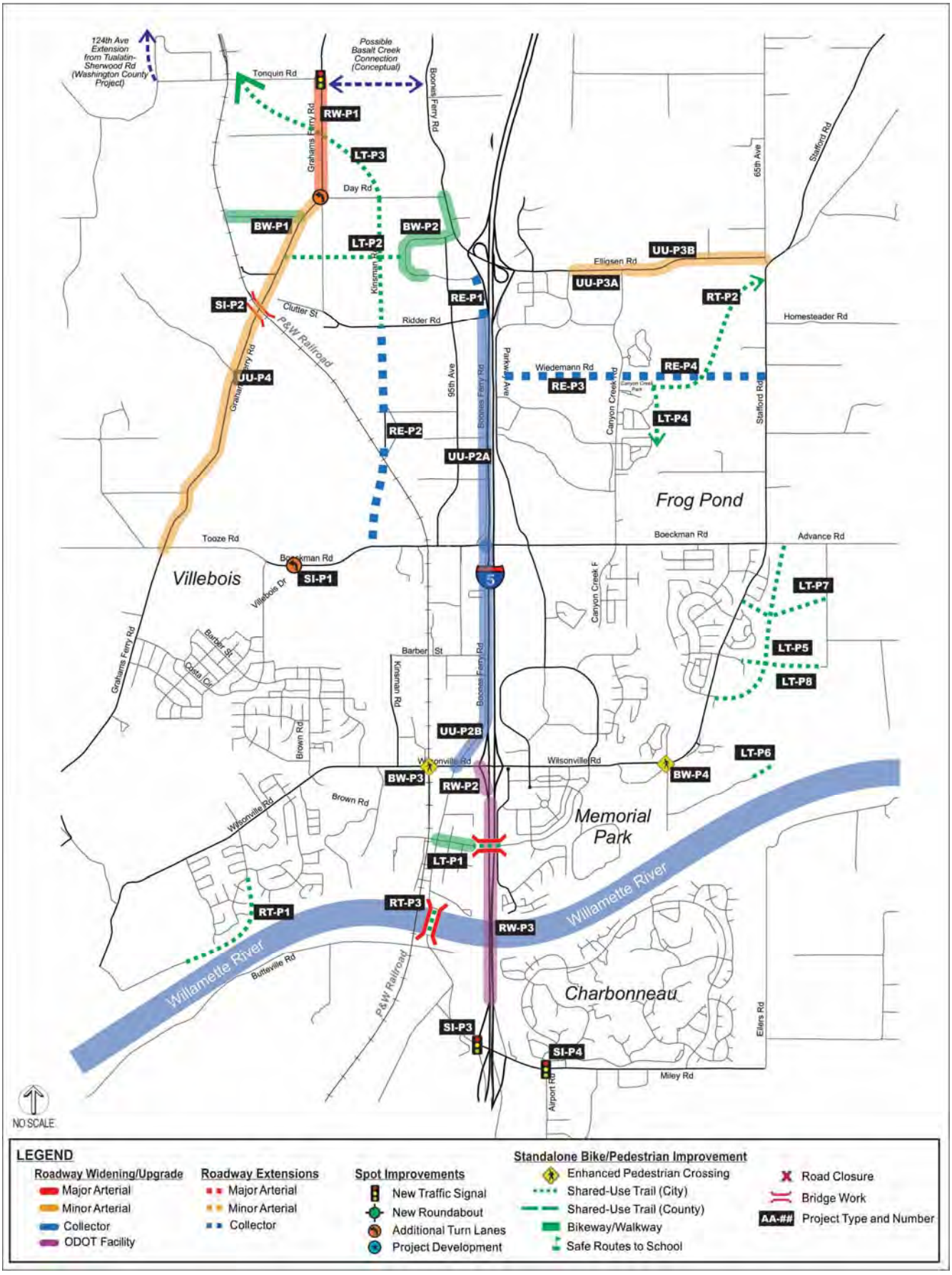


Table 5-9. Additional Planned Projects (Northwest Quadrant)

Project		Description	Why Not Higher Priority?	Cost
Roadway Extensions				
RE-P1	Boones Ferry Road Extension	Construct 2-lane roadway from Ridder Road to Commerce Circle with bike lanes, sidewalks, and transit improvements to facilitate access and circulation in the area surrounding Ridder Road and 95th Avenue	Identified as potentially helpful freight connection, but not a critical need at this time	$2,100,000
RE-P2	Kinsman Road Extension (Central)	Construct 2/3-lane roadway from Boeckman Road to Ridder Road with bike lanes and sidewalks	High cost due to grade-separated RR crossing and construction across Metro lands; alternative route (95th Avenue) is available	$12,000,000
Roadway Widening				
RW-P1	Grahams Ferry Road Widening	Widen Grahams Ferry Road from Tonquin Road to Day Road to four lanes with bike lanes, sidewalks, and transit improvements; acquire the full five-lane right-of-way width to accommodate future left-turn lanes; also provide additional left-turn lanes at Tonquin Road and Day Road intersections	Located within Washington County and is only needed under certain scenarios of the pending Basalt Creek Refinement Plan	$7,000,000
Urban Upgrades				
UU-P2A	Boones Ferry Road Urban Upgrade	Upgrade Boones Ferry Road from Wilsonville Road to Ridder Road with bike lanes on both sides and sidewalks on west side only	High cost with limited connectivity benefit alternative parallel routes exist	$5,900,000
UU-P4	Grahams Ferry Road Urban Upgrade	Upgrade Grahams Ferry Road from Day Road to Tooze Road to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit improvements)	Grahams Ferry Road is primarily a rural road and Ice Age Tonquin Trail is a preferred option for providing north-south connection through this part of Wilsonville	$2,000,000
Spot Improvements				
SI-P2	Grahams Ferry Road Undercrossing Improvements at Railroad Bridge	Reconstruct existing railroad under-crossing to City of Wilsonville Minor Arterial standards; Higher Priority project list includes project development portion of this project (costs are separate)	Located within Washington County jurisdiction, and it is an important safety-related project with particular benefits for freight travel; however, it comes with high cost and freight traffic has alternate travel routes	$4,500,000
Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)				
BW-P1	Cahalin Road Bike Lanes and Sidewalks	Construct bike lanes and sidewalks from Kinsman Road extension to Ice Age Tonquin Trail	High cost due to railroad crossing barrier	$700,000
BW-P2	Commerce Circle Loop and Boones Ferry Road Sidewalk Infill	Fill in gaps in the sidewalk network on Commerce Circle Loop and Boones Ferry Road	Industrial area with no connectivity to other facilities	$150,000
Standalone Pedestrian and Bicycle Improvements (Local Trails)				
LT-P2	Area 42 Trail	Shared Use Path from Kinsman Road to Day Road	To be constructed as Coffee Lake Creek Master Plan Area Redevelops	$220,000
LT-P3	BPA Power Line Trail	Shared Use Path from Day Road to Ice Age Tonquin Trail providing trail users to City's northern industrial area	Ice Age Tonquin Trail provides key connection to north (more critical when Coffee Lake Creek develops)	$500,000

Figure 5-8. Additional Planned Projects (Northwest Quadrant)

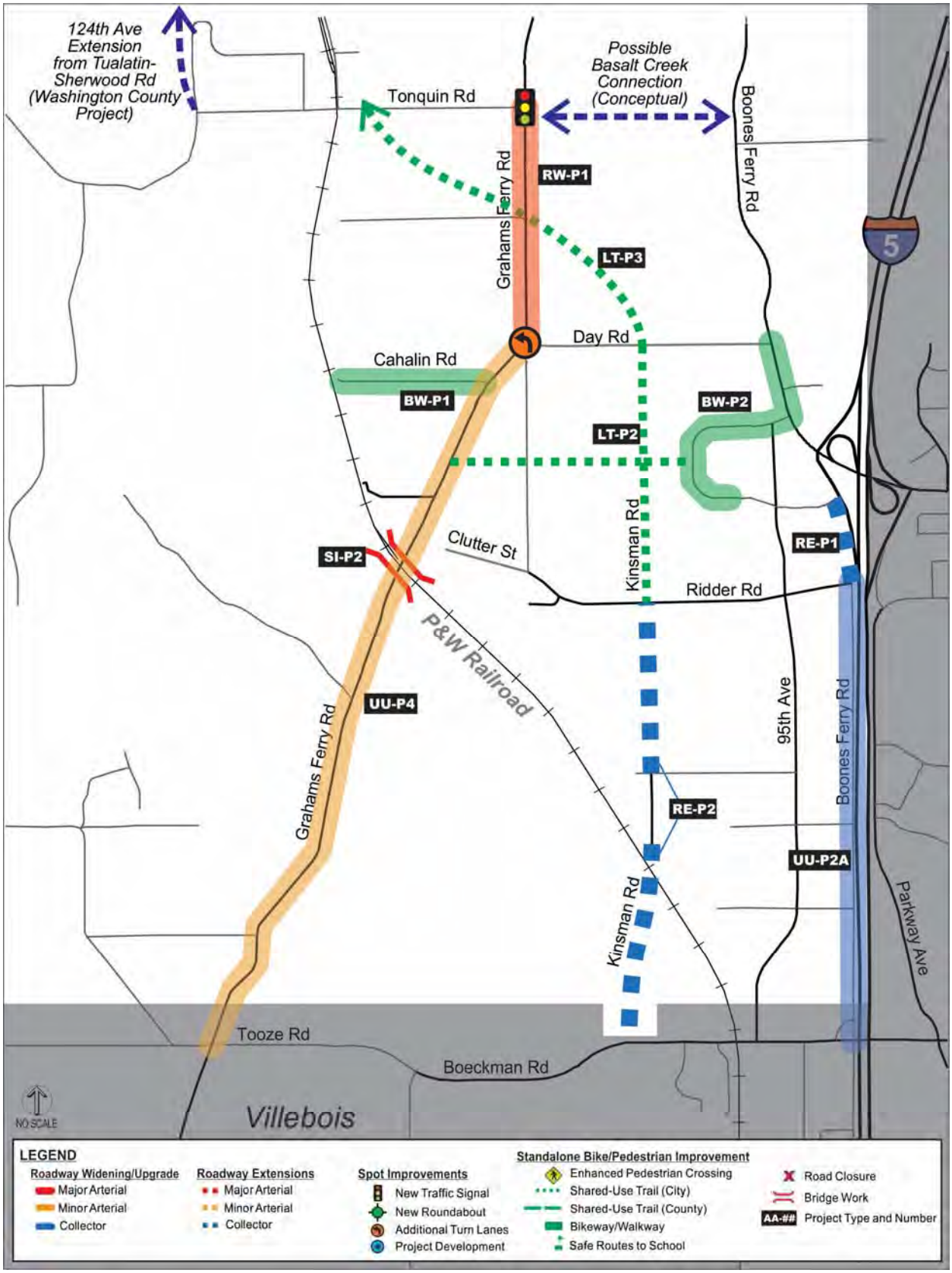


Table 5-10. Additional Planned Projects (Northeast Quadrant)

Project		Description	Why Not Higher Priority?	Cost
Roadway Extensions				
RE-P3	Wiedeman Road Extension (West)	Construct 2/3-lane roadway from Parkway Avenue to Canyon Creek Road with bike lanes and sidewalks	Limited impact on system capacity; money better spent upgrading Boeckman Road and Elligsen Road	$4,300,000
RE-P4	Wiedeman Road Extension (East)	Construct 2/3-lane roadway from Canyon Creek Road to Stafford Road with bike lanes and sidewalks; would require construction over Boeckman Creek	Only needed with future development on land east of Canyon Creek Road; costly (especially over wetlands) and has limited impact on system capacity; and money better spent upgrading Boeckman Road and Elligsen Road	$8,800,000
Urban Upgrades				
UU-P3 A/B	Elligsen Road Urban Upgrade	Upgrade Elligsen Road from Parkway Center to Stafford Road to meet applicable cross-section standards including bike lanes, sidewalks, and transit improvements	Much of the land is in Clackamas County; significant slopes from Parkway Center Drive to Canyon Creek Road would likely require retaining walls (higher costs) and large oak trees would be impacted	$6,000,000 (Partial Federal funding)
Standalone Pedestrian and Bicycle Improvements (Local Trails)				
LT-P4	Canyon Creek Trail	Shared Use Path from Canyon Creek Park to Boeckman Creek Trail providing connectivity to neighborhoods to the south	Low priority as it needed after the Boeckman Creek Trail is constructed	$200,000
Standalone Pedestrian and Bicycle Improvements (Regional Trails)				
RT-P2	Stafford Spur Trail	Shared-Use Path from Canyon Creek Park to Stafford Road	High cost project that provides limited connectivity to land uses in Clackamas County	$1,640,000

Figure 5-9. Additional Planned Projects (Northeast Quadrant)

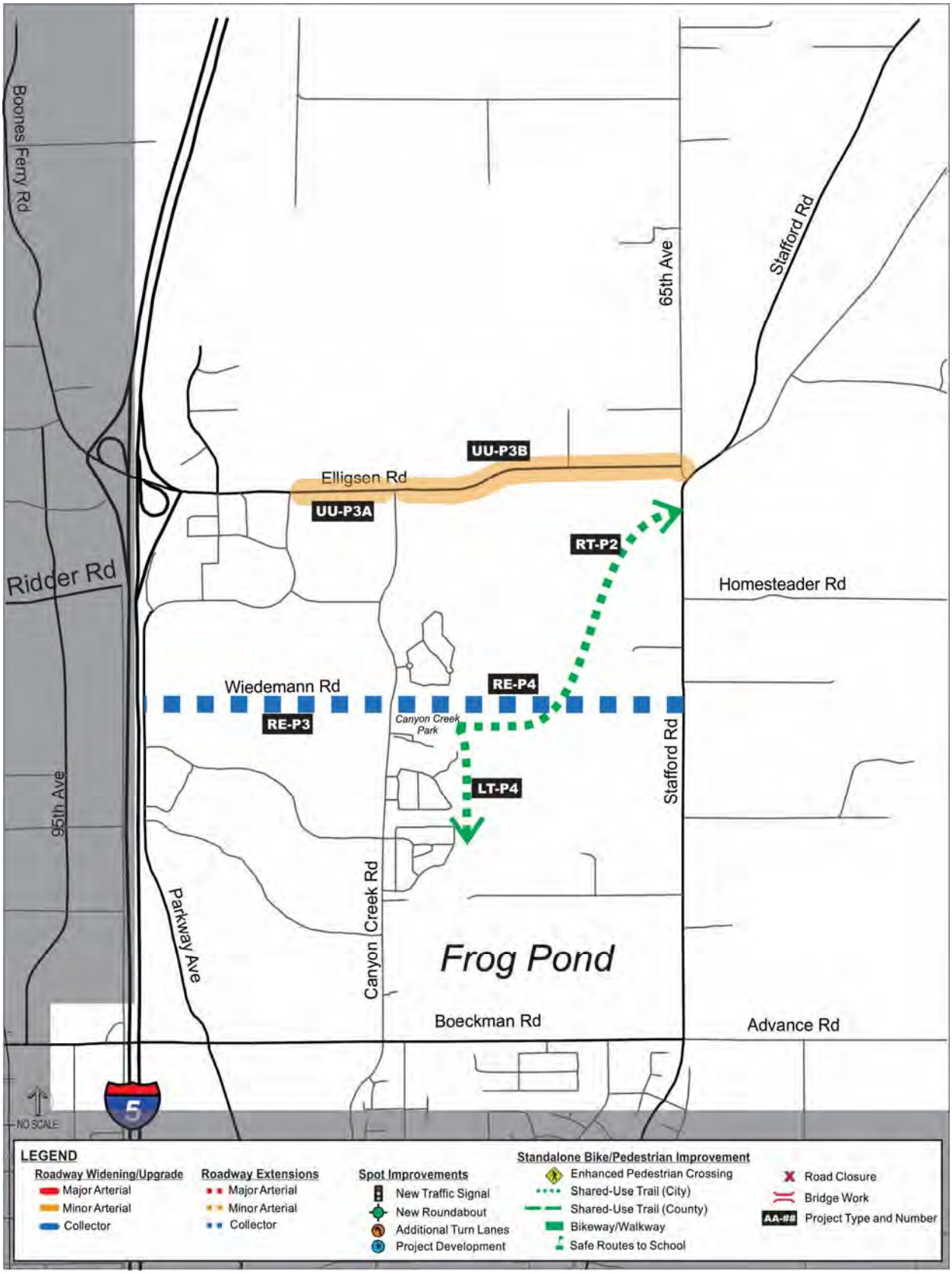


Table 5-11. Additional Planned Projects (Southwest Quadrant)

Project		Description	Why Not Higher Priority?	Cost
Urban Upgrades				
UU-P2B	Boones Ferry Road Urban Upgrade	Upgrade Boones Ferry Road from Wilsonville Road to Ridder Road with bike lanes on both sides and sidewalks on west side only	High cost with limited additional connectivity benefits due to alternative parallel routes (i.e., Kinsman Road extension); project would become more beneficial once bike and pedestrian bridge is built over I-5 connecting Barber Street to Town Center Loop West	$5,900,000
Spot Improvements				
SI-P1	Boeckman Road/ Villebois Drive Roundabout Widening	Expand roundabout by adding a westbound slip lane to accommodate two westbound travel lanes on Boeckman Road	Potential improvement need expected to be triggered by future regional traffic traveling east-west through Wilsonville	$500,000
Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)				
BW-P3	Wilsonville Road Enhanced Pedestrian Crossing at Railroad Track	Install new pedestrian crossing adjacent to the railroad tracks that includes rectangular rapid flashing beacons (RRFBs), center pedestrian median island, signage, etc.	Not critical until land south of Wilsonville Road Develops	$70,000
Standalone Pedestrian and Bicycle Improvements (Local Trails)				
LT-P1	5th Street Bike/ Pedestrian Bridge and Connections	Construct bike/pedestrian bridge over I-5 approximately aligned with 5th Street; also construct bike lanes and sidewalks on 5th Street connecting the new bridge to Boones Ferry Road	High cost and recent improvements to Wilsonville Road Interchange have improved East/West pedestrian connectivity	$6,400,000
Standalone Pedestrian and Bicycle Improvements (Regional Trails)				
RT-P1	Rivergreen Trail	Natural Trail from Ice Age Tonquin Trail/SW Willamette Way to Waterfront Trail	Low priority as it is needed after other critical trail and pathway connections are completed (i.e. Ice Age Tonquin Trail)	$260,000
RT-P3	Willamette River Bike/Pedestrian and Emergency Bridge	Construct bridge over Willamette River for bike, pedestrian, and emergency access to provide an alternative to the I-5 freeway deck; Higher Priority project list includes project development portion of this project (costs are separate)	High cost; next step is to determine feasibility within planning horizon	$14,000,000
Roadway Widening				
RW-P2	Additional Queuing Lane on Southbound I-5 Ramp	Construct a third queuing lane on the southbound I-5 ramp at the I-5/Wilsonville Road interchange.	I-5 is an ODOT facility and therefore high priority has not been identified.	$1,280,000
RW-P3	Auxiliary Lane Across Boone Bridge	Construct a northbound auxiliary lane on I-5 beginning at the Charbonneau northbound entrance ramp and terminating just north of the Wilsonville Road Interchange.	I-5 is an ODOT facility and therefore high priority has not been identified.	N/A

Figure 5-10. Additional Planned Projects (Southwest Quadrant)

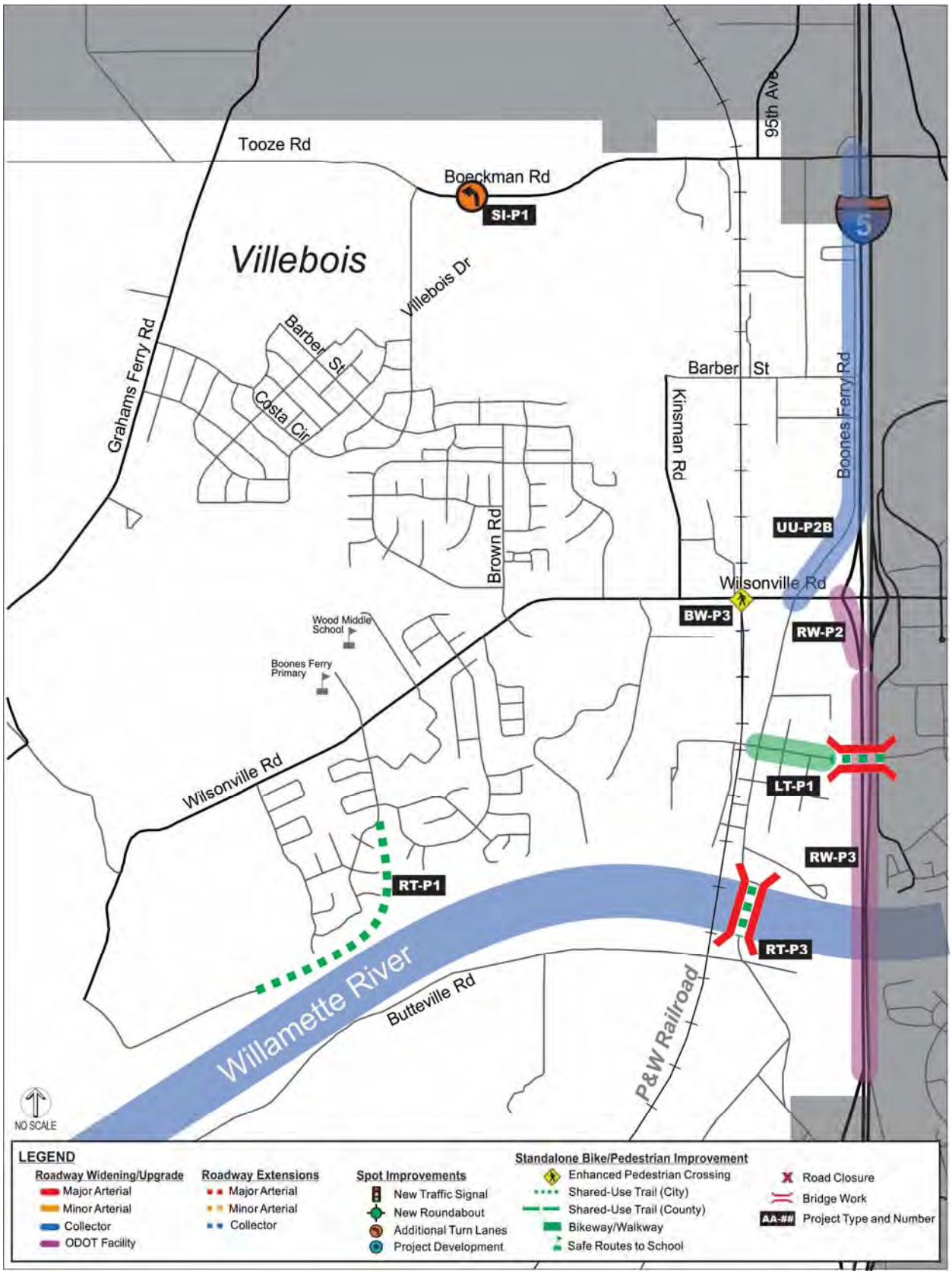


Table 5-12. Additional Planned Projects (Southeast Quadrant)

Project		Description	Why Not Higher Priority?	Cost
Spot Improvements				
SI-P3	Miley Road/I-5 Southbound Ramp Improvements	Install traffic signal and southbound left-turn lane	Outside City's jurisdiction (ODOT facility) and no future Wilsonville growth expected; improvement needs would be triggered primarily by regional traffic	$750,000
SI-P4	Miley Road/Airport Road Intersection Improvements	Install traffic signal and northbound left-turn lane	Outside City's jurisdiction (Clackamas County facility) and no future Wilsonville growth expected; improvement needs would be triggered primarily by regional traffic	$750,000
Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)				
BW-P4	Wilsonville Road Enhanced Pedestrian Crossing at Rose Lane	Install new pedestrian crossing adjacent to Rose Lane and nearby transit stops; potential crossing treatments include, but are not limited to, rectangular rapid flashing beacons (RRFBs), signage, etc.	Crossing need at this location is considered low at this time, and there is an existing pedestrian crossing and flasher to the west at Kolbe Lane that provides more direct access to Memorial Park and the Boeckman Creek Trail	$50,000
Standalone Pedestrian and Bicycle Improvements (Local Trails)				
LT-P5	New School Site Trail	Shared Use Path from Boeckman Creek Elementary School to planned school and park site, with possible connections to adjacent neighborhoods	Medium priority due to existing connections; will become important when school and park are constructed	$700,000
LT-P6	Park Access Trail	Low Volume Roadway accessed from Montgomery Way; would require extensive public process	Lower priority until after other critical trail and pathway connections are completed	$20,000
LT-P7	School Connection Trail	Construct the School Connection Trail identified in the Frog Pond Area Plan	Medium priority due to existing connections; will become important when school and park are constructed	$460,000
LT-P8	60th Avenue Trail	Construct the 60th Avenue Trail identified in the Frog Pond Area Plan	Medium priority due to existing connections; will become important when school and park are constructed	$240,000

Figure 5-11. Additional Planned Projects (Southeast Quadrant)

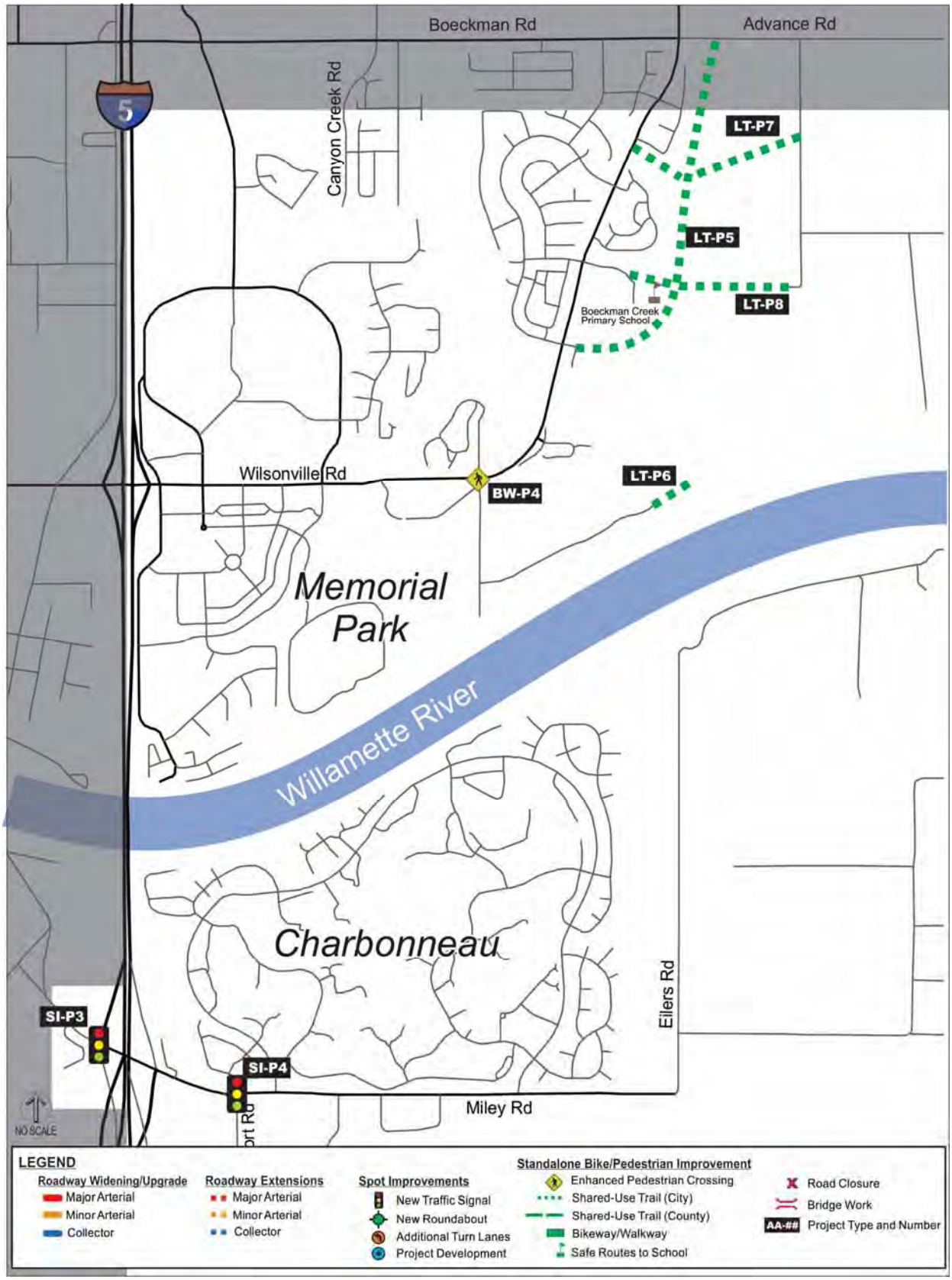


Table 5-13. Additional Planned Projects (Citywide)

Project		Description	Why Not Higher Priority?	Cost
Spot Improvements				
TI-P1	Bus Stop Amenities	Install bus shelters, benches, and bus seat poles on a case-by-case basis as needs are identified and funds are available	Funding has not been identified	$450,000
TI-P2	SMART Buses	Replace old buses; also outfit each bus with a tracking system and provide real-time display boards at the SMART Central station and other key routes	Funding has not been identified	$14,000,000

"It is very important we prepare now so that we don't have congestion in the future—or can at least manage the congestion. We can also prepare for connectivity so we can get places conveniently."

Nancy Kraushaar
Community Development Director

The Programs
Chapter 6

Wilsonville's transportation programs play an important role in the City's ongoing efforts to provide a coordinated, cost-effective, multimodal transportation system. Well-run programs help extend the service life of infrastructure improvements and increase the value of transportation investments. The City's Community Development and SMART Transit departments are responsible for managing the majority of its transportation programs.

Transportation Programs

Wilsonville has various transportation programs that support ongoing operations and services:

- Capital Improvement Program (CIP)
- Safety (Proposed)
- Safe Routes to School
- ADA Comprehensive Access (Proposed)
- SMART Transit
- SMART Options and Transportation Demand Management (TDM)
- Intelligent Transportation System (ITS)
- Bike Smart and Walk Smart

Instead of trying to . . .

- ***Build its way out of congestion***

Wilsonville's programs help the City . . .

- ***Extend the service life of infrastructure improvements and***
- ***Increase the value of transportation investments.***

Capital Improvement Program

Wilsonville's Capital Improvement Program (CIP) is a short-range 5-year plan that identifies upcoming capital projects and equipment purchases, provides a planning schedule, and identifies financing options. It provides an important link between the projects identified in the City's master plans and its annual budget, which enables the City to manage and use public dollars in the most efficient and productive manner possible.

Through its annual CIP efforts, the City considers which capital investments enable it to manage growth to boost the economy, protect the environment and public health, and enhance community vitality while working to preserve the special qualities of life in Wilsonville.

Wilsonville uses its Capital Improvement Program (CIP) to plan and prioritize its infrastructure investments in eight categories:

- Water
- Sewer
- Streets
- Streetscape/Bicycle
- Stormwater
- Transit
- Buildings
- Parks

The CIP program includes a 5-year project list, which provides a short-range plan of upcoming infrastructure improvement needs. These projects include new facilities, major repairs, replacement and improvements of roads, buildings, water systems (sanitary, drinking, storm), and parks. The City regularly packages multiple capital projects together (such as roads, sewer, and water) to maximize the cost effectiveness of City funds.

Public Investment Benefits

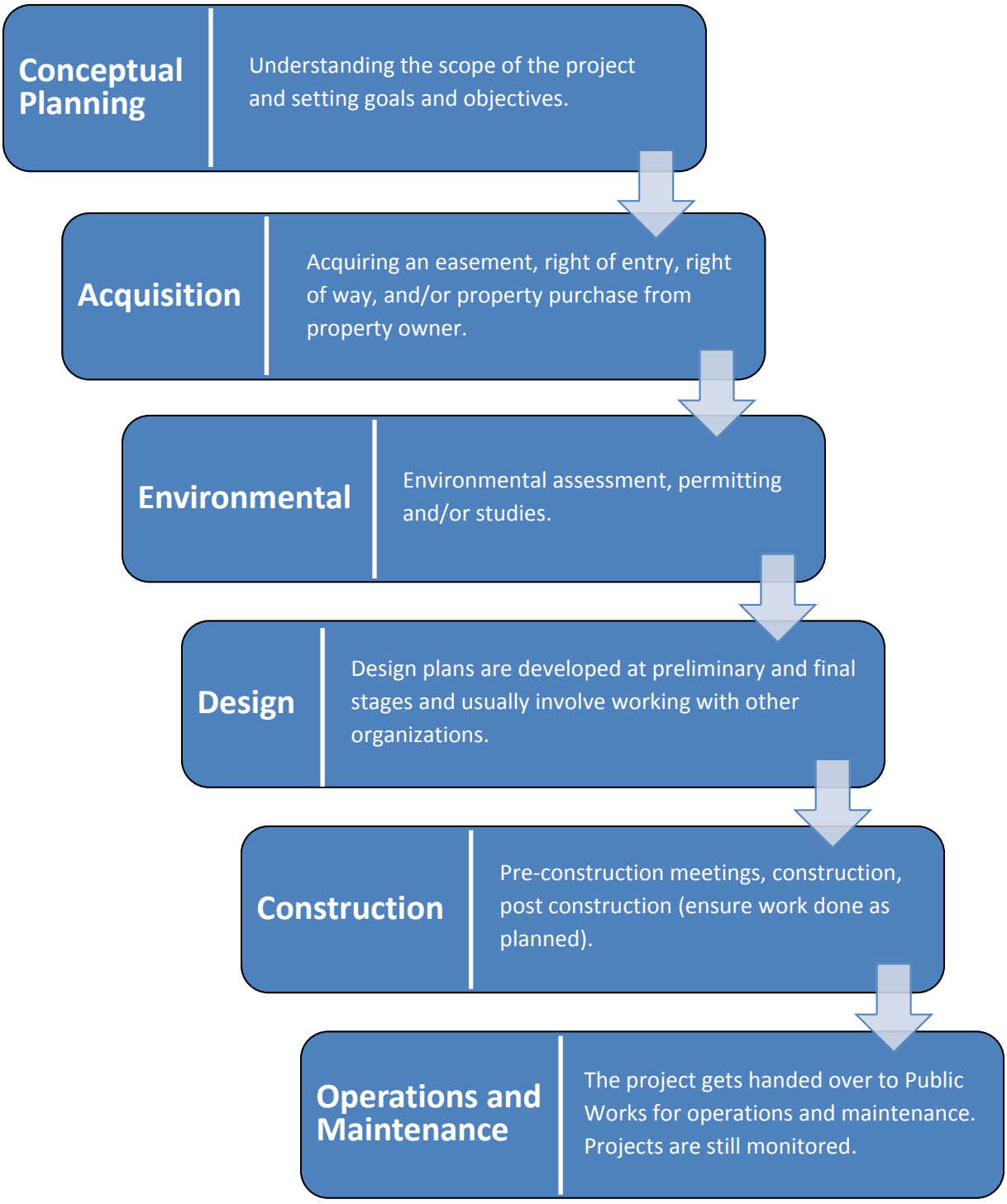
From clean, safe drinking water to convenient transportation options, the City's public investment funds an improved quality of life. Benefits of investment into the City's Capital improvement Program include:

- Transportation facilities that provide capacity to support economic development
- Streets that are maintained and constructed to ensure safety and comfort for all users
- A multimodal transportation system that provides options to commuters and travelers
- Trails and green spaces that are maintained and enhanced, providing both wildlife habitat and a place for outdoor recreation
- Water and sewer maintenance and expansion for increased water quality, convenience and sanitation
- Stormwater improvements for safety and efficiency

"A city thrives when the vision for the community includes designing attractive, safe neighborhoods, protecting natural resources, stimulating economic growth, and maintaining existing infrastructure."

Tim Knapp
Mayor

Figure 6-1. Multiple Stages of Capital Improvement Project Process



Notes:

- Stages of the project often occur simultaneously and include engagement of surrounding property owners.
- Projects are reviewed by other City departments, regional partners (such as ODOT and Metro) ,and consultants.
- Staff is held accountable to City Council throughout the life of the project.
- The City's website is a helpful tool for sharing project information with the public.

SAFETY

Transportation safety is an important goal of Wilsonville's transportation system. To ensure the well being of residents, employees, and visitors, the City follows the most current safety practices for the design, construction, operation, and maintenance of its transportation facilities.

Many of the City's transportation standards and improvement projects provide safety benefits. Access management, multimodal connectivity, cross-section and other design standards, and capacity improvements all contribute to improve safety.

Wilsonville will also benefit from a safety program founded on the five E's, listed at right. Specific actions of the safety program would include the following:

- **Construct Safety-Related Infrastructure Improvements** as identified in Chapter 4: The Projects, including Safe Routes to School projects.
- **Prepare and Distribute Education Materials** that effectively convey the best safety practices for all travel modes.
- **Coordinate Education Efforts with Local Partners** including West Linn-Wilsonville School District (Safe Routes to School programs for each school), local businesses, and neighborhood groups. Particular benefits will be realized from educating youth, new users, and those who express interest.
- **Collaborate with Regional and State Partners** by (1) developing relationships with the ODOT, Clackamas County, Washington County, and Metro staff members who oversee their agencies' safety efforts; (2) communicating the City's needs and limitations to these agencies as applicable; and (3) seeking ways to benefit from regional and state resources, information, training, and publicity campaigns.
- **Coordinate with Law Enforcement Officers** regarding the enforcement and reporting of traffic safety issues.

FIVE E'S (SAFETY PROGRAM)

Wilsonville's Safety Program will be most effective by addressing the five E's identified by the Metro Regional Transportation Safety Plan:

- **Educate** transportation users of all ages about bicycle, pedestrian, transit, and traffic safety skills and laws
- **Emergency Medical Service (EMS)** providers are supported by a highly organized transportation and information system that ensures prompt notification of the location and severity of a crash, timely dispatch of trained emergency care providers, use of evidence-based treatment protocols, and triage to an appropriate health care facility
- **Engineer** a safe and efficient multimodal transportation system that meets the needs of all users
- **Enforce** traffic laws, particularly those relating to safety, such as speeding and cell phone use while driving
- **Evaluate** program periodically to measure performance and adjust efforts as needed

These five E's encompass a broad group of solutions administered by a wide variety of stakeholders responsible for making the transportation system safe for all users. There is a similar set of five E's for Safe Routes to School programs, but "EMS" is replaced with "Encouragement."

Regional, State, and National Safety Plans

Regional, state, and national safety plans serve as a helpful resource for Wilsonville's safety program:

- **Toward Zero Deaths: A National Strategy on Highway Safety** is a data-driven effort by the Federal Highway Administration (FHWA) to enhance national, state, and local safety planning and implementation efforts in identifying and creating opportunities for changing American culture as it relates to highway safety
- **ODOT's 2011 Transportation Safety Action Plan (TSAP)** is the safety element of the Oregon Transportation Plan (OTP) and provides guidance for safety-related investment decisions, including helpful information for local agencies, such as Wilsonville
- **Metro's 2012 Regional Transportation Safety Plan (RTSP)** is a data-driven framework and urban-focused safety plan intended to help the region reduce fatalities and serious injury crashes by 50 percent by 2035 (as compared to 2005)
- **Clackamas County Transportation Safety Action Plan (TSAP)** outlines a strategy for the county to build and implement a county-wide safety culture with the goal of reducing transportation-related fatalities and serious injuries by 50 percent over the next ten years

These plans are helpful resources that support the City's efforts to improve transportation safety.

Wilsonville residents take to the streets during the City's Sunday Streets event in August 2012.

This special event focused on connecting neighborhoods, parks, and people. Bicyclists, walkers, runners, seniors, adults, and children enjoyed traffic-free streets filled with fun and interactive educational demonstrations, entertainment, music, physical activities, and food.

Safe Routes to School

Wilsonville is helping to facilitate Safe Routes to School (SRTS) programs to improve the transportation system in the neighborhoods around its each of its public schools, whose locations are shown in Figure 6-2. These programs also incorporate five E's (shown at right), which include a combination of ongoing educational and outreach efforts as well as pedestrian and bicycle infrastructure improvements along routes used by school children. Federal funding is available for these programs and is administered by the Oregon Department of Transportation (ODOT).

The SRTS programs are intended to reduce school-related traffic congestion and provide numerous additional benefits, including improved safety, increased physical activity and related health benefits, increased sense of community, and reductions in transportation-related air pollution. To be successful, these programs require the coordinated effort and support of school officials, parents, residents, City planning and engineering staff, and law enforcement agencies.

Five E's (Safe Routes to School)

The most successful Safe Routes to School programs incorporate five E's (which are similar to the five E's identified for Wilsonville's Safety Program but the "EMS" is replaced by "Encourage"):

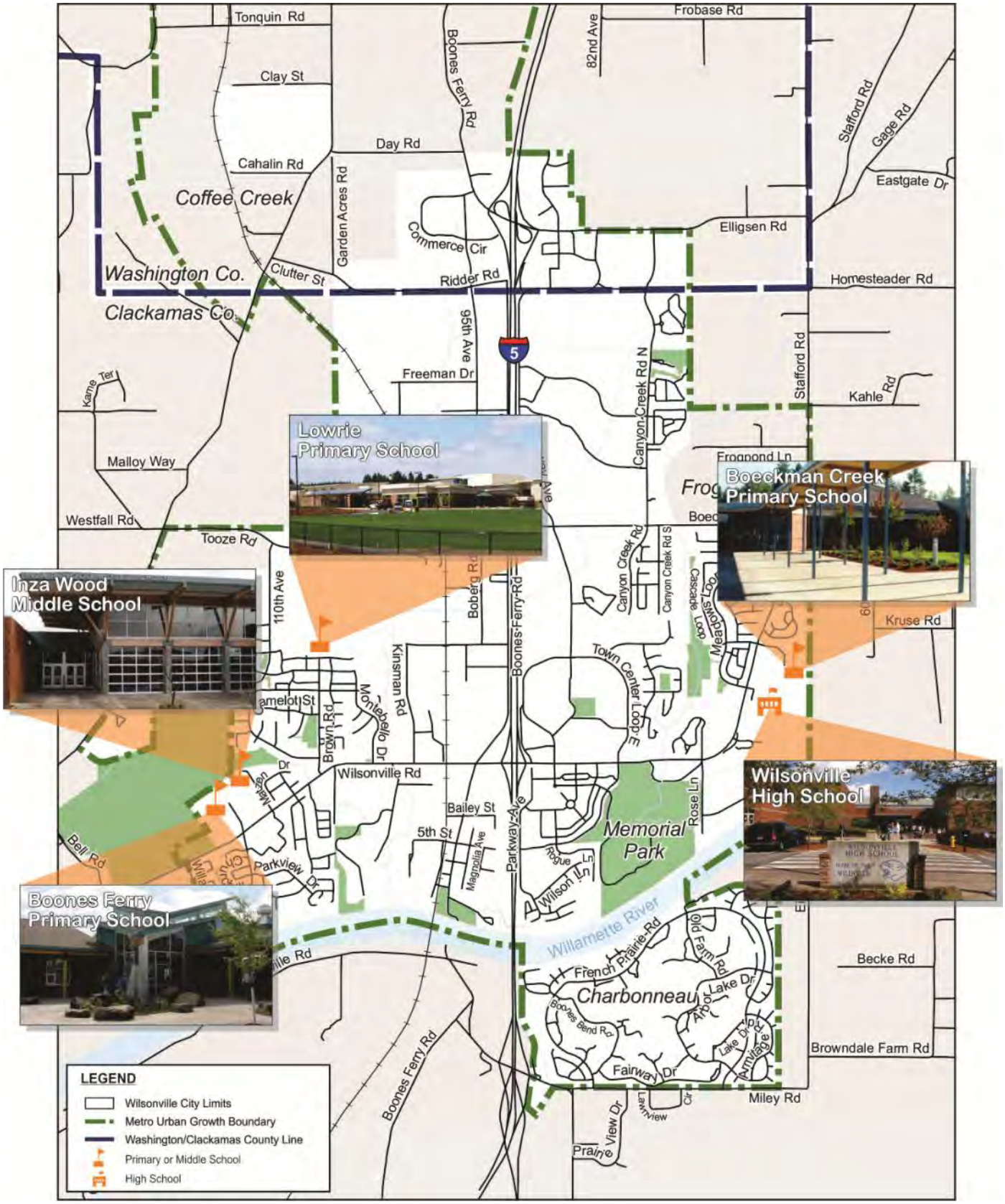
- **Educate** students, parents, and drivers about bicycle, pedestrian, and traffic safety skills, laws, and educational programs
- **Encourage** participation through fun events and contests such as walk-to-school days
- **Engineer** walking and biking infrastructure improvements along school routes
- **Enforce** traffic laws, particularly relating to speeding and pedestrian safety
- **Evaluate** program periodically to measure performance and adjust efforts as needed

Each of the five E's has a range of possible interventions and must be tailored to suit each school's unique needs and challenges.

Students use the crosswalk on Wilsonville Road at the Willamette Way East traffic signal to walk and bike to Boones Ferry Primary School.

Students use the bike lanes on Wilsonville Road to bike to Inza Wood Middle School.

FIGURE 6-2. WILSONVILLE SCHOOLS



ADA Comprehensive Access

Wilsonville has a goal to provide all users with access to integrated facilities and services that connect Wilsonville's neighborhoods, parks, schools, employment centers, and retail areas to each other and to the surrounding region. The City can achieve this goal by addressing the needs of those with limited mobility, consistent with the federal Americans with Disabilities Act (ADA).

Identifying and improving existing ADA-related deficiencies will be an ongoing effort to ensure that new facilities account for the needs of all users. There are four specific areas of focus:

- Providing ADA-compliant curb ramps and pedestrian push buttons at intersection and roadway crossings.
- Maintaining sidewalks and curb ramps to meet ADA accessibility guidelines, including slopes and accessible area.
- Providing sidewalk connectivity between neighborhoods, businesses, transit stops, and other destinations.
- Providing sufficient on-street and off-street disabled parking stalls.

Curb ramps with gradual slopes and large transit pads at the SMART Central transit center can accommodate users in wheel chairs or with other special needs.

SMART Transit

The City's transit service plays an important role in providing mobility for residents, employees, and students who travel to, from, and within Wilsonville. It provides an important connection to the region, particularly due to Wilsonville's strong employment base and central location between Portland and Salem.

South Metro Area Regional Transit (SMART) is a City department and operates several fixed bus routes that serve Wilsonville and make connections to TriMet in Portland, Cherriots in Salem, and Canby Area Transit. SMART also manages various programs, including Dial-a-Ride (door-to-door service for elderly and disabled residents) and SMART Options (programs that support, educate, and encourage the use of active transportation modes and rideshare). SMART also provides Spanish language assistance regarding its services and on its website.

The primary transit hub in Wilsonville is the SMART Central at Wilsonville Station transit center, which provides connections to all SMART bus routes and TriMet's Westside Express Service (WES) commuter rail station. Wilsonville Station includes a 400-space park-and-ride lot and 48 bicycle lockers.

In the immediate future, SMART will benefit from focusing its efforts in five key improvement areas:

- **Transit Hubs** are key multimodal activity centers within the community that can most effectively provide efficient access and connections for transit users. Hubs include SMART Central/WES Commuter Rail station, Town Center Loop, Villebois Village Center, and other community and employment centers. By ensuring a high level of transit service is provided at these hubs, SMART can serve a greater number of transit riders most efficiently.

A bus for Route 1X (servicing the Salem Transit Center) waits at its designated space in the SMART Central at Wilsonville Station transit center.

- **Information Technology** is an important way for SMART to enhance transit efficiency and enhance customer service. Key investments in innovative technology will provide new venues to communicate with passengers, coordinate service in real-time with regional providers, and provide an enhanced understanding of operational metrics and measures.

- **Service Innovation** is an important way for Wilsonville to explore new transit service options or adjustments that can better meet the needs of its growing community. Possibilities include express service to downtown Portland and earlier peak commuter services for industrial and office uses that operate with an early morning shift. In addition, other service models can be considered, particularly relating to the integration of its various programs and services.

Other Transit References

Wilsonville's transit system is also addressed in the following chapters:

- **Transit-Related Policies** (see Chapter 2: The Vision) are provided for land development coordination, transit services and facilities, pedestrian and bicycle access, and funding.

- **Transit Needs** (see Chapter 4: The Needs) include regional transit connections, service coverage and bus frequency, pedestrian and bike access, new buses, developer coordination, and rider education and outreach.

- **Transit Projects** (see Chapter 5: The Projects) include pedestrian access to transit, transit street improvements, bus stop amenities, and new buses.

- **Public Feedback Process** refinement would help SMART improve its efforts to respond to residents and employees regarding transit services, including bus routing and transit stop amenity decisions. This process should address both complaints and additional service requests while allowing an equal opportunity for input from those with opposing viewpoints. It should also give consideration to the needs of youth, seniors, people with disabilities, and environmental justice populations (including minorities and low-income families) due to the greater dependence that these citizens have on transit services for basic mobility.

SMART
SOUTH METRO AREA REGIONAL TRANSIT

SMART Options and Transportation Demand Management (TDM)

SMART Options is a program administered by SMART to help residents and employees in Wilsonville find the best way to get to work. By using other options besides traveling alone in personal automobiles during peak congestion times, Wilsonville will extend the service life of its infrastructure improvements. These efforts are referred to as Transportation Demand Management (TDM) and are an important component of a well-managed transportation system.

SMART Options can help individuals determine whether to take transit (bus, train, or commuter rail), carpool/vanpool, walk, or bike. SMART Options also can provide information about car sharing, park and rides, close-to-home commuting, teleworking, and creative work schedules to help individuals make informed decisions regarding their travel needs.

SMART Options also provides free assistance to Wilsonville businesses that set up transportation programs. They can organize vanpools, write articles for employee newsletters, and hold transportation fairs. In addition, they are able to help with commuter surveys, trip reduction plan creation, and monitoring and compliance of the DEQ Employee Commute Options Rules, which apply to businesses with more than 100 employees.

SMART Options staff participate in an information fair in the Town Center parking lot with education materials and a bus bike rack display.

The following additional TDM efforts will benefit the SMART Options program:

- **Mode Choice Surveys** performed on a consistent basis for residents and employees in each of the city's neighborhoods and commercial/industrial areas would allow the City to better understand what transportation choices are being made. This information would also allow the City to determine the impacts that its bicycle, pedestrian, and transit infrastructure improvements are having on the use of these facilities so that it can make improved decisions in the future.
- **Car Sharing Demand Monitoring** will be helpful for determining when sufficient interest is shown by residents and businesses to support a car sharing system.

DEQ Employee Commute Options Rules

The Oregon Department of Environmental Quality (DEQ) Employee Commute Options Rules apply to all businesses within the Portland-metro area having more than 100 employees reporting to one work site. These businesses are required to:

- Receive approval from DEQ for a site specific trip reduction plan to reduce motor vehicle trips to their work site
- Survey and monitor progress at least every two years

SMART Options helps business comply with these rules.

Other Transportation Demand Management (TDM)

Transportation Demand Management (TDM) is the general term for implementing strategies that either reduce or shift the number of vehicles on the roadway (i.e., the "demand"). By managing transportation demand, Wilsonville will ensure more efficient use of the system's available capacity and also support members of the community who may otherwise be increasingly burdened by the rising fuel prices.

The two primary methods for managing demand are to (1) reduce the overall number of vehicles on the roadway and (2) shift demand to less congested (i.e., off-peak) periods. These methods are best achieved by a combination of educational and outreach programs as well as supporting infrastructure and services (i.e., bicycle and pedestrian facilities and transit services).

In the past, the City has coordinated with large employers to schedule off-peak shift changes. This coordination was beneficial to both the City and the employers because it allowed development to occur even though there were capacity limitations at the Wilsonville Road interchange and the 95th Avenue/ Boones Ferry Road intersection. Traffic counts and observations suggest that the majority of these large employers still operate with off-peak shifts, but the City can improve its tracking and management.

There are three TDM improvements (in addition to the SMART Options program) that will benefit Wilsonville:

- **Off-Peak Shift Change Policies and Practices:** Develop consistent policies and practices to encourage, document, track, and manage off-peak shift changes, starting with employers who have already agreed to operate off-peak shifts. These efforts could be performed in conjunction with the SMART Options program. Because businesses that enact TDM measures may have lower traffic volumes (and associated system impacts) during peak congestion periods, these businesses may be eligible for reduced Transportation System Development Charges (SDCs). Efforts should be made to provide these employers with public transit options that accommodate their schedules.

- **Town Center Parking Management Plan:** Prepare and adopt a parking management plan that includes an inventory of parking supply and usage, an evaluation of bicycle parking needs, the identification of desired improvement strategies and policies, and car sharing considerations (additional explanation provided in the call-out box above). This parking management plan will be an important component of an overall concept plan, which would benefit the Town Center area by ensuring the highest and best uses are provided to support the nearby businesses and residents and to formulize the City's vision for this area.

- **WES Station Parking Management Plan:** Prepare and adopt a parking management plan that includes an inventory of parking supply and usage, an evaluation of bicycle parking needs, and the identification of desired strategies and policies (additional explanation provided in the call-out box above). These considerations should support future park-and-ride demand increases to avoid impacts resulting from inadequate capacity.

Parking Management Plans

Parking management plans are a helpful way to inventory bicycle and motor vehicle parking supply in high demand locations (for example, park-and-ride lots, transit stations, and commercial areas). They do not require parking limitations but instead ensure that deliberate decisions are being made regarding parking provision and management.

There are two key locations that would benefit from parking management plans:

- Town Center
- WES Station

Transportation System Management and Operations

Transportation System Management and Operations (TSMO) is the general term for implementing various solutions that enhance the performance of existing and programmed transportation infrastructure. The focus of TSMO is to reduce congestion and save money by improving the transportation system's efficiency before expanding infrastructure. Improving efficiency requires a collaborative effort by system managers, operators, and users both prior to and during travel.

Four of the primary TSMO strategies include:

- **Access Management** strategies reduce traffic conflicts at intersections and driveways in order to improve traffic flow and safety (Addressed in Chapter 5: The Standards).
- **Safety Improvements** support the efficient use of existing infrastructure by reducing safety-related incidents.
- **Transportation Demand Management (TDM)** strategies encourage users to choose other transportation modes besides traveling alone in their vehicles or to travel at off-peak periods of the day.
- **Intelligent Transportation System (ITS)** strategies involve the deployment and management of advanced technologies that collect and distribute information to both users and operator staff so they can most effectively use and manage the transportation system.

Intelligent Transportation System

The development and management of intelligent transportation system (ITS) solutions is one of the most important areas of recent transportation-related technological advancement. ITS strategies are a type of Transportation System Management and Operation (TSMO) strategy (additional explanation provided in the call-out box at left).

ODOT currently manages and operates the ITS infrastructure along the I-5 corridor. In addition, Clackamas County manages and operates the ITS infrastructure in and around Wilsonville. One of the basic ITS strategies is to effectively operate the City's traffic signals. Two of the signalized roadway corridors currently have coordinated signals that allow improved traffic flow:

- Wilsonville Road from Kinsman Road to Town Center Loop East
- Boones Ferry Road/Elligsen Road from Day Road to Parkway Center Drive

Additional ITS solutions will benefit Wilsonville:

- **Coordinate with Clackamas County** to ensure that projects include improvements consistent with those identified in the Clackamas County Intelligent Transportation System (ITS) Plan, particularly on Wilsonville Road and Elligsen Road near the two I-5 interchanges. Clackamas County is one of the agencies that is part of the Transport ITS working group made up of ITS professionals within the Metro boundary.
- **Install 3-Inch Conduit** as part of all Arterial and Collector roadway improvement projects to prepare the City for future fiber communications. This conduit can be used for fiber, traffic counters, and other ITS equipment. By connecting Clackamas County's fiber network to the City's traffic signals and traffic control cameras, Clackamas County will be able to transfer

information back to their operations center in order to more effectively monitor and operate the City's traffic signal system. This infrastructure will also support emergency responders in performing rapid incident detection and response. SMART would also benefit from improved integration with traffic operations by connecting its new service and operations center to Clackamas County's fiber.

- **Deploy Adaptive Signal Timing on Wilsonville Road** from Brown Road to Town Center Loop East consistent with Clackamas County's ITS Plan, including the installation of video monitoring cameras and vehicle detection equipment to collect traffic counts and speeds.
- **Collect and Manage Transportation Data** to help the City evaluate the performance of its transportation system and to help travelers make more informed decisions regarding their choice of mode, departure time, and routing. The City will first need to evaluate ways to collect and distribute information in coordination with Clackamas County.

The Clackamas County Traffic Management Center is located in Oregon City and is connected to Wilsonville via State, County, and City communication links. These links allow County staff to remotely manage and operate Wilsonville's traffic signals and ITS infrastructure.

"Transportation is important for all of us whether you ride your bike around town, whether you walk, or whether you drive a car, take transit, or for that matter, drive a truck through town. It is very important for you to be able to get where you want to go and not have a lot of trouble doing so."

Nancy Kraushaar
Community Development Director

Bike Smart and Walk Smart

Wilsonville benefits from focusing staff resources on coordinating bicycle and pedestrian outreach and infrastructure planning, which it does primarily through its Bike Smart and Walk Smart programs. SMART and Community Development staff collaborate to lead the City's efforts.

Four ongoing efforts will help improve walking and biking in Wilsonville:

- Maintain an updated **bike and pedestrian map** that provides the current bicycle and pedestrians faculties that are available to Wilsonville residents for these mode choices.
- Expand **bike and pedestrian safety education and outreach** to the general public, focusing on clinics and workshops that communicate safety messages to particular audiences like children, motorists, and older pedestrians.
- Coordinate **group rides and walking tours** to identify street, trail, art and natural amenities that are available to residents.
- Staff an **Active Transportation Planner** that works for both Community Development and SMART and is tasked with development review, plan implementation and updates, safety education and outreach, and program support (Bike SMART, Walk SMART, and Safe Routes to Schools). This planner could also continue **regional coordination** efforts with other agency Active Transportation Plans and Metro.

National Recognition Available as Walk Friendly and Bike Friendly Community

Two national recognition programs have been developed in recent years to encourage towns and cities across the U.S. to establish or recommit to a high priority for supporting safer walking and bicycling environments. These programs evaluate current efforts and provide recommendations for improvement:

- **Walk Friendly Communities** designation is awarded at one of five levels (from lowest to highest): honorable mention, bronze, silver, gold, and platinum. Wilsonville was awarded a bronze designation in 2011. As additional pedestrian improvements are made throughout the city, Wilsonville may consider reapplying for a higher designation.
- **Bicycle Friendly Community (BFC) Campaign** is administered by the League of American Bicyclists and awards one of four designations (from lowest to highest): bronze, silver, gold, and platinum. Wilsonville has not yet applied for a BFC designation, but doing so will provide the City with recognition while also providing helpful recommendations for how it can continue to improve its bicycle network.

In 2011, Wilsonville was awarded the designation of being a Walk Friendly Community due to its commitment to improving walkability and pedestrian safety through comprehensive programs, plans, and policies. The Bronze Level designation indicates the City is "on the right track" but has several areas where it can continue to improve.

The Performance
Chapter 7

Wilsonville's transportation system plan (TSP) provides standards, projects, and programs that, when put into action, will improve the City's transportation system. By tracking specific performance measures with each successive TSP update, the City will learn if its planning efforts are leading to the desired outcomes and if additional improvements are needed. In this way, Wilsonville will make continued progress towards its transportation system vision and goals.

To be most effective, the City's transportation performance measures should provide its decision-makers with metrics that reflect what progress is being made towards Wilsonville's goals and policies. They should also include a combination of system-wide and facility-level performance measures so that incremental progress can be determined for the entire system as well as on a project-by-project basis.

Performance measurement is an approach to transportation planning that has been receiving increased national and regional attention. The new federal transportation legislation, Moving Ahead for Progress in the 21st Century (MAP-21), transitions the nation towards performance-based, outcome-driven planning processes. In doing so, this law is not prescriptive regarding what the standards should be, but instead requires that states and metropolitan planning organizations (MPOs) establish their own targets and measures. This encourages the framework of performance measurement throughout the nation without requiring a one-size-fits-all approach.

Performance measures allow Wilsonville to . . .

- ***Track the benefits of its efforts and***
- ***Identify areas where additional improvements are needed***

So that it can . . .

- ***Make more informed investment decisions and***
- ***Best achieve its vision and goals.***

PERFORMANCE MEASURES

Though it preceded MAP-21, Metro's Regional Transportation Plan (RTP) also focuses on performance targets and standards. While there are some performance targets specified by Metro, Metro requires each city to identify its own performance measures for five areas and then to evaluate them with each successive transportation system plan (TSP) update to check its progress.

Table 7-1 lists Wilsonville's performance measures, including the 2035 targets and how they will be measured. The majority of these performance measures were selected because they are recommended by Metro and can be relatively easily measured using Metro's travel demand model, which is also the basis for Wilsonville's future travel demand forecasting. The one performance target that differs is safety. Because the City has such a low number of collisions, its target is to keep the collision rate below the statewide average.

Table 7-1. Wilsonville Performance Measures

Performance Area	2035 Performance Target[a]	How Measured
Safety	Maintain collision rates below the statewide average and zero fatalities	Analysis of ODOT, Washington County, and Clackamas County collision data
Vehicle Miles Traveled (VMT) Per Capita	Reduce VMT/capita by 10% compared to 2005[b]	Estimate using travel demand model
Freight Reliability	Reduce vehicle hours of delay[c] for truck trips by 10% from 2005	Estimate using travel demand model for roadways on City's freight network
Congestion	Reduce vehicle hours of delay[c] (VHD) per person by 10% from 2005	Estimate using travel demand model
Walking, Biking, and Transit Mode Shares	Triple walking, biking and transit mode share from 2005	Use Metro mode split forecasts and provide qualitative assessment; supplement with SMART data

[a] Performance targets are for the 2035 horizon year. Performance tracking during intermediate years should be compared against interpolated values.
[b] Oregon House Bill 3543 codifies greenhouse gas emission reductions, and the Portland Metro area has set this regional target.
[c] Delay is defined in the 2035 RTP as the amount of time spent in congestion > than .9 V/C (see p.5-7 of RTP)

"The TSP is doing an excellent job addressing bicycle and pedestrian issues. Once the TSP is adopted, it is going to be a matter of following through to make these things happen."

Al Levit
Planning Commission