



Salem Transportation System Plan Amended January 13, 2020

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State of Oregon Funding

The 2012 comprehensive update of the Bicycle and Pedestrian Elements of the Salem Transportation System Plan was funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. 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 original Plan development project was partially funded by grants from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. TGM grants rely on Federal Intermodal Surface Transportation Efficiency Act and Oregon Lottery funds.

The contents of this document do not necessarily represent the views or policies of the State of Oregon.



Table of Contents

SALEM TRANSPORTATION SYSTEM PLAN AMENDED JANUARY 13, 2020

STATE OF OREGON FUNDING

PREFACE

Providing Mobility for a New Century..... iii-1

INTRODUCTION

Overview 1-1
Regulatory Context..... 1-4
Planning Process..... 1-7
Salem—The Community 1-10
Population and Employment 1-12
Land Use Framework 1-12

SALEM TRANSPORTATION SYSTEM PLAN ELEMENTS

Guiding Principles of the 25-year Plan 2-1
Comprehensive Transportation Policies 2-3

STREET SYSTEM ELEMENT

Goal, Objectives, and Policies 3-1
Street Classification System 3-9
Critical Routes 3-9
Street Design Standards (Typical Street Standards)..... 3-10
Street System Inventory 3-10

Street System Capacity	3-12
Street System Performance	3-14
Traffic Safety	3-16
Improvements to the Salem Highway and Street System	3-18
Recommended Highway and Arterial Street Improvements.....	3-21
City of Salem Street System.....	3-27
Recommended Street Improvements: Marion County (Within the Salem Urban Area) .	3-56
Local Street Improvements	3-56

TRANSPORTATION SYSTEM MANAGEMENT ELEMENT

Goal, Objectives, and Policies	4-2
Traffic Management and Channelization	4-4
Intersection Widening and Modification	4-7
Access Management	4-8
Improved Traffic Control Devices	4-9
On-street Parking Management	4-11
Recommended TSM Improvements	4-11

NEIGHBORHOOD TRAFFIC MANAGEMENT ELEMENT

History and Context	5-1
Policy Framework.....	5-2
Goals, Objectives, and Policies	5-2

LOCAL STREET CONNECTIVITY ELEMENT

Policy Framework.....	6-1
Implementation Strategies.....	6-2
Goal, Objectives, and Policies	6-2

BICYCLE SYSTEM ELEMENT

What is the bicycle network today?	7-1
Policy Framework.....	7-4
Goals, Objectives, and Policies	7-4
Performance Measures.....	7-7
Bicycle Facility Types	7-9
Citywide Recommendations	7-10
Recommended Bicycle Projects.....	7-13
Project Prioritization	7-15
Bicycle Project Cost Estimates.....	7-16

PEDESTRIAN SYSTEM ELEMENT

What is the pedestrian network today?	8-1
Policy Framework.....	8-4
Goals, Objectives, and Policies	8-5
Performance Measures	8-7
Pedestrian Facility Types	8-7
Citywide Pedestrian Recommendations	8-8
Recommended Pedestrian Projects	8-11
Project Prioritization	8-12
Pedestrian Project Cost Estimates	8-13

TRANSIT SYSTEM ELEMENT

Major Transit Stops	9-1
Goal, Objectives, and Policies	9-3
Accessibility and Convenience.....	9-5
Park and Ride Lots	9-5
Increasing Mode Share.....	9-5
Paratransit Services.....	9-6
Rural Area Transit Service	9-6

TRANSPORTATION DEMAND MANAGEMENT ELEMENT

Policy Framework.....	10-2
Goal, Objectives, and Policies	10-2
TDM Programs	10-4

PARKING MANAGEMENT ELEMENT

Policy Framework.....	11-1
Goal, Objectives, and Policies	11-1
Transportation Planning Rule Compliance.....	11-5
Implementation Strategies.....	11-6

INTERCITY AND COMMUTER PASSENGER TRAVEL ELEMENT

Policy Framework.....	12-1
Goal, Objectives, and Policies	12-1

FREIGHT MOVEMENT ELEMENT

Policy Framework.....	13-1
Goal, Objectives, and Policies	13-2
Freight Movement System in the Salem Urban Area	13-3

TRANSPORTATION SYSTEM MAINTENANCE ELEMENT

Maintenance Programs	14-1
Street System Inventory	14-1
Levels of Street Maintenance	14-2
Pavement Management System	14-2
Goal, Objectives, and Policies	14-2

TRANSPORTATION FINANCE ELEMENT

Financial Constraint	15-1
Anticipated Needs	15-1
Transportation System Funding Sources	15-3
Goal, Objectives, and Policies	15-7
Capital Project Programming	15-8

LONG-RANGE TRANSPORTATION STRATEGY

Providing Mobility for a New Century	16-1
Long-range Assumptions	16-1
Long-range Issues	16-2
Guiding Principles of the Long-range Transportation Strategy	16-3

PLAN IMPLEMENTATION

Need for Implementation	17-1
Legal Basis of the Salem Transportation System Plan	17-1
Policy Foundation for Decision Making	17-1
Relationship with the Capital Improvement Program	17-2
Relationship with Land Use Actions and Development Review	17-2
Component of Regional and Statewide Transportation Plans	17-3
Transportation Improvement Programs	17-3
Other Implementation Mechanisms	17-3
Amending the Salem Transportation System Plan	17-4
Goal, Objectives, and Policies	17-4

ISSUES REQUIRING FUTURE STUDY

Willamette River Crossing Capacity Study	18-1
Highway 22 Urban Corridor Study	18-1
Sunnyside Road SE—Commercial Street SE—Hilfiker Lane SE Intersection Management and Improvement Study	18-2
River Road S to Commercial-Liberty Couplet Study	18-2

Vehicle Miles Traveled (VMT) Reduction Strategy and Development of Alternative Measures	18-2
Update to the Salem Area Comprehensive Plan (Land Use) and Development of an Integrated Land Use and Transportation Plan.....	18-3
Lancaster Drive Access Management Design Study.....	18-3
Arterial Streetscape Improvement Projects.....	18-4
Updates to City of Salem Neighborhood Plans	18-4
Innovative Treatment of Stormwater in Street Design	18-4
Cordon Road NE/SE Corridor Plan	18-4
Central Salem Streetcar Feasibility Study	18-5
Downtown Traffic Circulation Study.....	18-5

APPENDIX A - LEVEL OF SERVICE CRITERIA

Level Of Service Definitions for Signalized Intersections	A-1
Level of Service Definitions for Unsignalized Intersections.....	A-2

APPENDIX B - TRANSPORTATION GLOSSARY

Glossary	B-1
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APPENDIX C - ACRONYM LIST

Acronym List	C-1
--------------------	-----

APPENDIX D - SALEM WARD AND NEIGHBORHOOD ASSOCIATION BOUNDARY MAPS

APPENDIX E - CROSS-REFERENCE TO STATE TRANSPORTATION PLANNING RULE REQUIREMENTS

APPENDIX F - ADOPTING ORDINANCE

APPENDIX G - REFINEMENTS TO TYPICAL STREET REQUIREMENTS

Special Street Right-of-way and Improvement Requirements	G-1
Schematic Street Designs	G-2
Future Street Alignments.....	G-2



Preface

Providing Mobility for a New Century . . .

As our community moves forward in the new century, we must face its possibilities and challenges. The way we choose to live our individual lives and the decisions that we make as a community will determine how Salem prepares to meet the next century and its expected growth.

Providing mobility is the key to how we shape our future community. Mobility is the ability to travel safely within our neighborhoods, our city, our region, and beyond. Whether it be commuting to work, shopping, attending school, or visiting neighbors, personal mobility provides people choices of different means of travel to reach their destination. For those who choose to walk there should be sidewalks; for those who choose to bicycle there should be bicycle lanes; for those who choose to drive there should be an interconnected system of streets; and finally, for those who choose to ride, or who are unable to drive, there should be a system of buses, carpools, and vanpools. Mobility is giving people choices.

Mobility has another meaning when addressing the economic needs of our community. The ability to efficiently move goods and services both locally and regionally, has a direct consequence on the vitality of Salem's economy. This requires our community to have sufficient rail, air, pipeline, and road transport capabilities.

Mobility means more than just providing basic infrastructure. It means developing a multifaceted transportation system with sufficient capacity to move people and goods efficiently and conveniently. A vibrant community such as Salem should not strangle in its own congestion nor choke on its own air.

Mobility is the result of careful community planning that prudently builds needed infrastructure, respects the liveability of neighborhoods, reflects fiscal realities, and realizes that the development of land uses and our transportation system are forever linked. Mobility means never being overly dependent on any one mode of travel.

Achieving mobility requires our community to invest in its future . . . to do so, we must plan!



Introduction

Overview

The goal of the Salem Transportation System Plan is to provide a framework of goals, objectives, and policies that will guide our community's efforts at achieving mobility through the first third of the 21st century. In addition, the Plan will show how our community must invest its resources in future transportation programs and infrastructure to meet anticipated travel demands.

PLANNING HORIZONS

The Salem Transportation System Plan contains two planning horizons. The main portion of the Plan is a 20-year plan that contains policy language and detailed descriptions of transportation system investments that will take our community to 2035. The needs identified in this plan as projects are intended to support a preferred system that meets the State Transportation Planning Rule requirement to "establish a coordinated network of transportation facilities adequate to serve state, regional, and local transportation." The total cost of the projects included in this plan exceeds the anticipated available revenue, as described in the Transportation Finance Element.

A longer-term vision comprises the long-range transportation strategy. This strategy contains broader policies that extend beyond the 20-year time frame of transportation planning, and addresses the travel needs and urban form of our community as urban development nears its current Urban Growth Boundary. The long-range strategy takes a look at what investments may be necessary to provide mobility in the long-term.

IDENTIFYING SYSTEM NEEDS

Before transportation investments can be planned for our community, its current and future travel demands need to be assessed. Those assessments have been made using current and projected population and employment figures, social demographics, surveys of travel behavior, and inventories of developable land within the Urban Growth Boundary. Using computer models, future travel demand has been projected for the Salem transportation system. Deficiencies have been identified by comparing travel demand to the capacity of the existing transportation system. The investments that need to be made in the system are designed to remedy those deficiencies and maintain or increase overall mobility.

GOALS, OBJECTIVES, AND POLICIES

Contained in the Salem Transportation System Plan are goals, objectives, and policies that will guide how investments are to be made in Salem's transportation system over the next 20 years. These policies provide a comprehensive framework for more detailed City codes and requirements that relate to development standards, parking management, facilities design, system maintenance, and funding. Adopted by Council, these policies constitute the foundation and parameters of how transportation planning decisions should be made in the City of Salem.

PLANNING INVESTMENTS

The transportation investments identified in the Salem Transportation System Plan are designed to maximize mobility. Maximizing mobility means investing in several travel modes simultaneously. For example, the same street improvement project may widen a roadway to add vehicle travel lanes, add bicycle lanes, and construct sidewalks. Bus turn-outs may also be designed as part of the project. Most projects contained in the Plan are designed to be multimodal.

Investments are prioritized based on when they are expected to be needed. Funding constraints determine how many projects can be constructed at any given time. Prudently investing in infrastructure calls for building only what is needed, or reasonably anticipated to be needed, for the design life of the project. Maintaining surplus infrastructure is not cost effective over the long term, nor does it increase overall mobility.

INDIVIDUAL SYSTEM ELEMENTS

The Salem Transportation System Plan is a collection of smaller plan elements that deal specifically with each mode of travel, or aspect, of the entire transportation system. Most of these elements are required by the 1991 State Transportation Planning Rule. Others have been added for the benefit of the Plan. The Plan includes the following elements:

Street System Element

Identifies the needs of the entire street system, assigns each street a functional classification, provides typical design cross sections, and recommends planned street improvement projects.

Local Street Connectivity Element

Contains policies that require local streets to connect to each other and to higher level streets, provide connections to neighborhood activity centers such as schools, parks, and shopping, and provide access to transit service.

Transportation System Management Element

Identifies ways of maximizing the capacity and safety of the existing street system through traffic engineering and applications of technology. Contains access management standards that increase safety and decrease congestion on arterial streets.

Neighborhood Traffic Management Element

Outlines the policies and programs available for neighborhoods to mitigate residential traffic issues such as infiltration of through-traffic and speeding on local streets.

Bicycle System Element

Identifies bicycle system needs. Contains policies that encourage bicycle use and safety. Designates streets that are bicycle routes, and lists planned bicycle system improvements.

Pedestrian System Element

Identifies inadequacies in the sidewalk system and contains policies that encourage walking and infrastructure improvements.

Transit System Element

Describes the City's role in supporting the transit system through infrastructure improvements that make transit services more accessible. Although the City of Salem does not operate the transit system, this element identifies needs and develops policies that will encourage transit ridership.

Intercity and Commuter Passenger Travel Element

Identifies means, aside from the automobile, by which people can travel between cities in the region and beyond. Contains policies that encourage the availability of intercity passenger rail, bus, and aviation services.

Transportation Demand Management Element

Contains policies that encourage and facilitate the use of carpools, vanpools, flexible work hours, teleworking, and other alternative travel modes that decrease reliance on the single-occupant automobile for the commute to and from work.

Parking Management Element

Estimates the current and future supply of off-street parking for commercial, industrial, and institutional uses within the Salem/Keizer urban area. Contains policies that promote an adequate supply of parking, but discourages an oversupply of parking that would promote single-occupant vehicle travel.

Freight Movement Element

Identifies the infrastructure needs for moving goods and services throughout Salem. Contains policies and planned improvements for movement of goods through pipelines, aviation, rail, and trucks.

Transportation System Maintenance Element

Contains an inventory of maintenance and operations needs for the City's transportation system. It also contains policies that describe the City's strategies for preserving the investment made in transportation infrastructure.

Transportation Finance Element

Identifies the financial resources needed to achieve the level of mobility outlined in the Plan. Contains policies that guide the City's funding strategy for providing transportation services.

LAND USE, TRANSPORTATION, AND ECONOMIC DEVELOPMENT

The relationship between land use development and the transportation system is one of cause and effect. The type, density, and design of land use developments place differing demands on the transportation system. Citywide land use patterns will determine the type of transportation system that is developed. A compact development pattern with high intensities of mixed uses will support transit operations and walking more efficiently than a low-density, segregated land use pattern, which tends to be more automobile-oriented.

A key element that is important in the land use/transportation discussion is the relationship of both to a community's economic health and economic development. Economic activities are far more than simply a component of a community's land use, for they provide the jobs and income that drive the need for housing and various other urban land uses. Land use planning and regulations can support and stimulate economic development through a number of means including regulations that maintain the quality of life in the community and the proper location and designation of lands for economic activities. Transportation infrastructure, which is needed to accommodate economic activities, can often be utilized as a stimulant to economic development if planned properly. Land use, transportation, and economic development are interwoven and can be mutually supportive to help create a vibrant community.

The *Salem Transportation System Plan* has been developed to provide maximum mobility based on the currently adopted *Salem Area Comprehensive Plan*. The Plan contains land use planning recommendations that support greater efficiencies in the transportation system. These recommendations are included in the Plan to guide future City efforts to revise the *Salem Area Comprehensive Plan*.

ISSUES FOR FUTURE STUDY

There are many complex issues involved in planning a multimodal transportation system. Some issues require more detailed study and resources than are available during the development time frame of the Plan. In other cases, issues have surfaced during the planning process that require additional study. These additional studies are listed in the Plan.

PLAN IMPLEMENTATION

The *Salem Transportation System Plan* is adopted as a component of the City's Comprehensive Plan. The policies and projects contained in the Plan give the City direction on how to respond to land use and development proposals, what projects should have priority in the City's *Capital Improvement Program*, and under what policy framework specific codes and standards should be developed.

PLAN CONSISTENCY

The *Salem Transportation System Plan* must be consistent with the adopted SKATS *Regional Transportation System Plan* and those plans of neighboring jurisdictions. All of these plans must, in turn, be consistent with the broader transportation policies found in the adopted *Oregon Transportation Plan* and its statewide modal plans. The SKATS *Regional Transportation Systems Plan* is developed jointly by the partner jurisdictions, including the cities of Salem, Keizer, and Turner, Marion and Polk counties, and ODOT. Federal regulations require that the project list in the *Regional Transportation Systems Plan* be constrained to funds that are "reasonably anticipated" to be available over the time frame of the Plan. To meet this financial constraint requirement, only a portion of the projects from the *Salem Transportation System Plan* are included in the *Regional Transportation Systems Plan*.

Regulatory Context

There are several Federal and State policies and regulations that affect our regional and local transportation planning process. These policies provide: guidelines for how transportation planning should be undertaken, specific benchmark targets to evaluate plan performance, funding requirements, and elements required for inclusion in a plan. Among the more important Federal and State policies and regulations are the following:

FEDERAL POLICIES AND REGULATIONS

Federal Surface Transportation Acts

Current Federal surface transportation legislation affects the *Salem Transportation System Plan* in relation to projects using Federal funding and the requirement that regional and local plans be consistent.

In December 2015, the President signed into law the Fixing America's Surface Transportation Act, or "FAST Act." This federal transportation authorization provides funding certainty through 2020, increasing funding by 11 percent over a five year period. A portion of these funds are allocated to the Salem-Keizer region through the SKATS Metropolitan Planning Organization. The FAST Act authorization establishes both the allocation of funds and requirements for spending them. The law includes changes and reforms to some federal transportation programs, including

streamlining the approval processes for new transportation projects and establishing new programs to advance critical freight projects.

Clean Air Act Amendments of 1990

This legislation requires that projects listed in regional transportation plans may not contribute to worsening air quality or violations of standards set by the Environmental Protection Agency. These standards were revised and tightened in 1996. Failure to show conformance with the standards can result in the withdrawal of Federal funds.

Street improvement projects of regional significance contained in the *Salem Transportation System Plan* must be in conformance with Clean Air Act legislation in order for the Regional Transportation System Plan to be in compliance.

Americans with Disabilities Act (ADA) of 1990

This Act mandates that persons with disabilities be able to access public transportation facilities and services. It also requires that paratransit services be provided on a level comparable to overall mass transit services in the region. The local transit authority must prepare an ADA Paratransit Plan. That plan must be integrated in all regional and local transportation plans.

This Act relates mainly to how transportation facilities are built on the local level. The *Salem Transportation System Plan* must take into account paratransit services, and include ADA conforming designs for new construction, and significant reconstruction of streets and other transportation facilities.

STATE POLICIES AND REGULATIONS

Oregon Transportation Plan

Adopted by the Oregon Transportation Commission in 2006, this is the master plan that sets policies for the State's transportation facilities and services for the next 25 years. It outlines broad strategies the State has developed for implementing Federal and State policies.

Projects on State facilities, and those projects using State funding, contained within the *Salem Transportation System Plan* must be consistent with the *Oregon Transportation Plan* and its respective modal plans.

State Land Use Planning Goals

Developed through the State Land Conservation and Development Commission (LCDC), the State has adopted a series of statewide planning goals which are to be implemented through the comprehensive land use plans of each city and county. These goals address the manner in which the land, air, and water resources of the State will be used to determine the need for improved public facilities. Statewide Goal 12—Transportation, is to be implemented through compliance with the State Transportation Planning Rule.

The *Salem Transportation System Plan* (TSP) must be consistent with the Oregon Transportation Plan and the State Transportation Planning Rule. The Salem Plan must also be consistent with the other 19 Statewide Planning Goals.

State Transportation Planning Rule (OAR 660-12)

Originally adopted by LCDC in 1991, this Rule is the set of administrative rules implementing Statewide Goal 12—Transportation. It requires that each metropolitan planning organization, city, county, port, and transit authority develop a transportation system plan that:

- Promotes the provision of transportation services that are viable alternatives to reliance on the single-occupant vehicle;

- Requires local governments to adopt transit, bicycle, and pedestrian supportive land development and subdivision ordinances;
- Requires plans to target and work towards a reduction in the number of certain types of automobile parking spaces per person by 10 percent over a 20-year planning horizon; and
- Require that local transportation system plans be consistent with regional and neighboring local jurisdiction transportation plans, as well as Statewide Goal 12—Transportation.

State Conformity Rule (Air Quality)

Promulgated through the State Department of Environmental Quality (DEQ), this Rule requires that regional emissions must not contribute to worsening air quality or violations of Federal air quality standards. Projects found in the *Salem Transportation System Plan* that are of regional significance must demonstrate conformity.

Conformance

The consistency and conformance of the *Salem Transportation System Plan* with Federal and State plans, policies, and regulations is addressed in the Facts and Findings section of the staff reports that accompanied this plan when it, and subsequent amendments, were presented to the Salem City Council for formal adoption.

TRANSPORTATION PLANNING IN SALEM

This document is built upon a strong and lengthy history of transportation planning in Salem. From the earliest *SATS Plan* to the more recent *SKATS Regional Transportation System Plan*, Salem has always worked towards meeting the future mobility needs of the community.

SATS PLANS

One of the earliest comprehensive transportation planning efforts in Salem began in 1960 with the *Salem Area Transportation Study* (SATS), completed through the Oregon State Highway Department and the Mid-Willamette Valley Planning Council. By 1968 the SATS planning efforts resulted in a transportation plan for the Salem urban area. Among other things, this plan called for a circumferential parkway around the Salem Urban Area, and a total of six bridges across the Willamette River. The 1968 SATS Plan was revised several times in subsequent years.

URBAN GROWTH MANAGEMENT PROGRAM

In 1979, the City adopted the Urban Growth Management Program. This Program is still active and is designed to provide for major public facilities in the developing portions of the Salem Urban Area. The Program called for the development of major facility plans, including the 1990 *Salem Transportation Plan*. The Program also called for the development of interim plans, called Sector Plans, to guide development until master plans were developed.

SALEM TRAFFIC CIRCULATION STUDY

In the early 1980s, the *Salem Traffic Circulation Study* was developed. This research effort resulted in extensive transportation data, including traffic volumes, origin and destination studies, opinion surveys, and background materials that were integral in the development of the 1990 *Salem Transportation Plan*.

SECTOR PLANS

In the nine-year period after the adoption of the Urban Growth Management Program, seven Sector Plans were adopted. The planning threshold for these plans was build-out of the land uses found within the boundary of the *Salem Area Comprehensive Plan*. The Sector Plans included streets elements that were to provide arterial and collector street systems to support planned

development in the undeveloped areas of the Salem Urban Area. These Plans were superseded by the adoption of the 1990 *Salem Transportation Plan*.

AREA-SPECIFIC PLANS

Many smaller, area-specific transportation plans were developed and adopted between 1974 and 1990. These included various neighborhood plans and special studies such as the *Sunnyside Road Task Force Report*, and the *East/West Corridor Study*. These plans have directly influenced citywide planning efforts since their adoption.

SKATS YEAR 2005 TRANSPORTATION PLAN

In 1987, a new SATS plan was adopted. The plan was called the *SKATS Year 2005 Transportation Plan*, recognizing the incorporation of the City of Keizer and the name change to Salem-Keizer Area Transportation Study. This Plan provided a more realistic construction agenda than its predecessors. It also incorporated the urban street system as envisioned in the various Sector Plans.

SALEM TRANSPORTATION PLAN

Between 1987 and 1990, work proceeded on the *Salem Transportation Plan*. The 1990 Plan projected transportation needs to build-out for both the newly developing and developed areas of the Salem Urban Area. It placed a stronger emphasis on programs and less on intensive capital construction projects than in prior plans. The 1990 Plan recognized the community's concern about the financial, social, and environmental costs of utilizing major street construction as the only means of managing traffic demands. The 1990 Plan, however, still called for significant capital construction, including a circumferential parkway system with at least one additional bridge across the Willamette River in Keizer. Minor revisions were made to the Plan in 1992.

SKATS REGIONAL TRANSPORTATION SYSTEM PLAN

In the early 1990s work began on a major update to the *SKATS Year 2005 Transportation Plan*. This update was primarily in response to the adoption of the State Transportation Planning Rule and ISTEA legislation. The *SKATS Regional Transportation System Plan*, originally adopted in 1996 and updated in 2002, 2005, 2011, and 2015, provides a regional, multimodal framework for local transportation plans and is required for Federal highway funds to be spent within the metropolitan area.

SALEM TRANSPORTATION SYSTEM PLAN

The 1998 *Salem Transportation System Plan* followed the framework created by the 1996 *Regional Transportation System Plan* and replaced the 1992 *Salem Transportation Plan*. The Plan has been amended on a periodic basis to maintain its relevance and accuracy.

Planning Process

PROJECT GOALS AND OBJECTIVES

The goal of the original 1998 *Salem Transportation System Plan* project was to develop and adopt a plan that adequately provides for the current and future mobility needs of the residents, businesses, and industries within the City of Salem. The project had the following objectives:

Objective 1: To design a system of transportation facilities and services that provides the needed infrastructure to support the current and future growth identified in the adopted *Salem Area Comprehensive Plan*.

Objective 2: To provide an integrated system of transportation facilities and services that provides the needed infrastructure for multiple modes of travel throughout Salem.

Objective 3: To develop methods of efficiently managing travel demand over the existing transportation system, decreasing overall reliance on the single-occupant automobile as the dominant means of travel.

Objective 4: To design a plan that provides the needed infrastructure to support the different modes of travel necessary for the efficient and timely movement of goods and services throughout Salem.

Objective 5: To develop a coordinated transportation plan that is consistent with the transportation plans of surrounding State, regional, County, and City jurisdictions.

Objective 6: To develop and adopt a transportation plan that meets the requirements set forth in the State Transportation Planning Rule, and other statewide planning goals.

PLAN DEVELOPMENT

The original development of the *Salem Transportation System Plan* followed a nine-step process:

1. Identify system needs—Develop goals and objectives to achieve mobility.
2. Identify deficiencies in the transportation system that do not meet the identified goals and objectives.
3. Create policies that will guide City efforts in meeting its goals and objectives.
4. Determine physical and program-related investments that will correct identified deficiencies.
5. Identify and assign financial resources to provide transportation system investments.
6. Solicit public participation in each of the prior steps of the process, with the same goals and objectives of achieving mobility.
7. Coordinate planning activities with other government agencies.
8. Establish benchmarks to evaluate successful implementation of the Plan.
9. Implement the Plan through City codes, design standards, land use planning actions, City programs, and the *Capital Improvement Program*.

Subsequent amendments to the *Salem Transportation System Plan* have been consistent with this nine-step process.

PROJECT ORGANIZATION

The original *Salem Transportation System Plan* and subsequent amendments were developed by the Transportation Services Division of the City of Salem, Public Works Department. The original planning process was designed to allow for the input of interested citizens, City board and commission members, other jurisdictional staff, and City Council members, through an organization of two committees, four working groups, and a separately-charged task force, each of which is described below.

Salem Transportation Joint Advisory Subcommittee

The formulation of plans and policies was performed under the direction of an advisory subcommittee to the Council. The Subcommittee included three City Councilors, two Planning Commissioners, a member of the Salem-Keizer School Board, and a representative of Salem Neighborhoods, Inc. (SNI). Staff support for the Advisory Subcommittee was provided by the Salem Public Works Department, Salem Community Development Department, Salem Area Mass Transit District, and SKATS.

Coordinating Committee

A Coordinating Committee was formed to ensure consistency between the *Salem Transportation System Plan* and those of neighboring jurisdictions in the region. The membership of the Committee included representatives from Salem Public Works, Salem Community Development, Marion County, Polk County, City of Keizer, Salem Area Mass Transit District, Salem-Keizer School District, Oregon Department of Transportation, and SKATS. The Coordinating Committee met periodically at the beginning and ending phases of the project.

Street System Working Group

The Working Group acted as a technical advisory committee, charged with the development of the street system and related elements of the Plan. Working Group membership included staff from Salem Public Works, Salem Community Development, and SKATS.

Parking Management Working Group

This Working Group was charged with the task of advising staff on the development of the Citywide parking management element. Membership included City staff, interested citizen and business leaders, staff from the State Department of Administrative Services, and staff from the consultant team headed by Kimley-Horn and Associates.

Transportation Demand Management Working Group

This Working Group consisting mainly of City of Salem, SKATS, Marion County, and State agency staff, was charged with the task of developing both a regional and City of Salem transportation demand management element, park and ride plans, and a transit element.

Access Management Working Group

This Working Group consisted of City of Salem, Marion County, and Council of Governments staff, neighborhood association representatives, local business managers, real estate brokers and developers. Its task was to develop access management plans for use by the City of Salem and Marion County. Work focused specifically on developing an access management strategy for Lancaster Drive that could later be modified for use on other arterial streets. The consultant team of David Evans and Associates, Inc., developed recommendations reflecting the concerns and ideas generated by the Working Group.

Transportation Impact Task Force

The Task Force was created by the direction of City Council to develop a long-range revenue strategy for funding the construction and maintenance of transportation facilities in the City of Salem. It was charged with looking at transportation system development charges, general obligation bonds, and other taxes and fees for inclusion into a funding package to be considered by Council. Its membership consisted of City Councilors, Planning Commissioners, business leaders, developers, and citizens. Although created separately from the formal *Salem Transportation System Plan* process, its discussions and recommendations form the basis of the transportation finance element of the Plan.

Central Salem Development Plan Area Mobility Study

Funded through a grant from the State Transportation Growth Management Program, this Study looked at ways to improve multimodal mobility through the core area of Salem bounded by Mission Street, 12th Street, Market/D Streets, and the Willamette River. This Study had a small combined citizens and technical advisory committee called the Modal System Plans Working Group. Through the assistance of JHK and Associates, Inc., locations were identified where pedestrian crossings could be improved, core area bicycle lanes could be installed, and where various vehicular circulation improvements could be implemented. The results from this Study have been folded into the various elements of this Plan.

Elements of the *Salem Transportation System Plan* were also reviewed by regional committees of SKATS. Those committees included the SKATS Bicycle Advisory Committee and the SKATS Goods Movement Advisory Committee.

PUBLIC INVOLVEMENT

State and Federal transportation guidelines require public involvement as part of development of transportation system plans. More importantly, project staff needed to know what direction the community wanted to pursue in achieving mobility. City staff held several open houses, workshops, and public hearings to educate the public on the transportation planning process and to receive input towards the development of policies and projects. This Plan reflects many of the desires and comments received from the citizen participation process.

DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT REVIEW

The State Department of Land Conservation and Development reviewed the *Salem Transportation System Plan*, as an element of the Salem Comprehensive Plan, for conformance with the requirements set forth in the State Transportation Planning Rule. State planners identified several areas in the original TSP that needed improvement in order for the Plan to fully comply with the State Transportation Planning Rule. Those items not resolved prior to adoption were subsequently addressed through work tasks contained in the Amended Salem Periodic Review Work Program.

PLAN ADOPTION

Once completed, the draft *Salem Transportation System Plan* was forwarded from the Advisory Subcommittee and Coordinating Committees to the general public for a final round of review. When the public review period was completed, the Plan was formally reviewed by the Salem Planning Commission. Finally, in August 1998, the Salem City Council adopted the *Salem Transportation System Plan*.

POST-ADOPTION ACTIVITIES

The *Salem Transportation System Plan* has been amended several times since its original adoption. Each time after Council adopted amendments to the *Salem Transportation System Plan*, staff has and will continue to identify necessary revisions to the *Salem Revised Code* and *Salem Design Standards*. Adoption of these revisions is a major step in implementing the policies and standards found in the Plan.

Salem—The Community

GEOGRAPHY

Salem, the capitol city of Oregon, is located in the center of the Willamette Valley. Situated just 60 miles east from the Pacific Ocean and 60 miles west from the Cascade Mountains, Salem enjoys excellent scenery and ready access to the entire West Coast via the Interstate Highway 5 (I-5) corridor. The City of Keizer, located directly on Salem's northern boundary, is our closest neighboring community. The Portland metropolitan area is located 47 miles to the north—close enough to create employment commuting opportunities between the two areas and facilitate international freight shipment through the Port of Portland, Portland International Airport, and two transcontinental railroads. The cities of Albany and Eugene are located 24 and 64 miles, respectively, to the south of Salem along I-5.

The City of Salem spans both sides of the Willamette River and covers approximately 49 square miles. While mostly flat terrain dominates the east and north portions of the city, hilly terrain characterizes the west and south areas. In places, these hills attain an elevation of over 700

feet. The physical features, geological setting, and the types of soil to be found in the Willamette Valley have had a marked effect on the settlement and economic development of the area.

In addition to spanning the Willamette River, Salem spans two counties: Marion County on the east side of the river, and Polk County on the west. Salem is the county seat for Marion County.

HISTORY

Salem was founded in 1840 by the Reverend Jason Lee and other Methodist missionaries when they built a grist mill and lumber mill at the mouth of Mill Creek. Salem was initially platted in 1846. In 1847, the first store opened on the northeast corner of Commercial and Ferry Streets. The City of Salem was incorporated in 1860 and designated the state capitol in 1866. In 1867 Willamette University, the first university west of the Mississippi River, opened in Salem.

The Willamette River provides a natural link for transportation and communications with other communities. Steamboats first reached Salem from Portland about 1851. This mode of transportation enabled settlers adjacent to the Willamette River to reach the market place with their products. In the four decades preceding the turn of the century, steamboats hauled both freight and passengers. During the ensuing years after the turn of the century, steamboat transportation gradually declined and eventually ceased due to completion of the railroad and river fluctuations.

Salem was first connected by rail to Portland in 1870. This occasion was not of great importance to the railroad builders of that day, because their main orientation was toward California and the east. The railroad stop at Salem was more a result of the alignment of the rail route to California than any particular desire to serve the City. During that period, rail passenger service between Portland and Salem was provided via the Oregon Electric Interurban Line.

Roadways have played an important role in the growth and development of Salem. The two systems of most significance were the radial system of market roads connecting the city with farming areas, and the major highways that joined Salem with regional and national centers. The initial regional route through the area was US Highway 99E (99E). This highway was the major north-south route between Seattle and California until 1956, when I-5 was completed through the Salem area. Radial market roads such as: Commercial Street, Liberty Road, Wallace Road, and Silverton Road have today become major arterials in the city of Salem.

In recent times, Salem has become a major commercial and food processing center for the fertile Willamette Valley, and also the site of much State and Federal government activity. The development of the Salem and Fairview Industrial Parks has brought high technology and additional food processing plants into Salem, further diversifying its economy.

CLIMATE

Salem's climate is relatively mild. In the winter, snow is infrequent and seldom stays on the ground for more than a few days. The skies are often overcast from October to April; then comes the Oregon summer, when there can be a near total absence of rainfall for 60 to 90 days at a time. Temperatures during the summer months occasionally reach 100 degrees Fahrenheit, but only for short durations. The average maximum daily temperature for the month of July is 82 degrees Fahrenheit. Yearly rainfall can exceed 60 inches.

CITY GOVERNANCE

Incorporated in 1860, Salem is governed by a mayor-council-manager form of government. The Mayor is the presiding officer of the Council and is elected for a term of two years. The City Council consists of eight councilors, each representing a specific geographic area, or ward, of the city. Councilors are elected for four-year terms. The Council appoints a City Manager who is responsible for the day-to-day administration and execution of the City's policies and ordinances.

The Council depends on several citizen boards and commissions to advise them on particular issues. The two commissions most related to transportation issues are the Salem Planning Commission and the Citizens Advisory Traffic Commission.

Population and Employment

Formulating a transportation plan for Salem requires determining the needs of our community. Two key components in determining needs are trends in population and employment growth. Identifying the number of people living in the Salem area coupled with the opportunities for employment provides us a picture of what kind of travel demand the transportation system will experience. Using forecasting techniques, population and employment data can be projected into the future to determine what kind of travel demand the community may face into the next century.

The estimates and forecasts used to project traffic for the *Salem Transportation System Plan* are for the entire Salem-Keizer Transportation Study Area (SKATS). This covers an area slightly beyond the Salem-Keizer Urban Growth Boundary (UGB). Although politically separate from Keizer, Turner, and the urban portions of unincorporated Marion and Polk Counties, our community’s travel demand is not based solely on those living and working within Salem’s city limits, but within the entire region. Many people living outside the city limits choose to work or shop in Salem, thus creating travel demand for our community. The statistics that are presented below are for several different geographic areas. Some are for the City of Salem, some for the Salem-Keizer UGB (see Map 1-1), some for the SKATS area, and some for the Salem-Keizer Metropolitan Statistical Area or MSA (Marion and Polk Counties).

A detailed discussion of the population and employment trends, forecasts, and methodologies used for the region is included in the *Regional Transportation Systems Plan, 2015-2035*. For the purposes of the *Salem Transportation System Plan*, population and employment forecasts are included below.¹

Salem-Keizer UGB Population Forecast				
	2000	2010	2015	2035
Salem portion UGB	171,072	193,640	199,030	273,902
<i>East Salem</i>	151,189	167,499	171,394	230,138
<i>West Salem</i>	19,883	26,141	27,636	43,763
Keizer portion UGB	32,203	36,478	37,086	42,577
Total UGB	203,275	230,118	236,116	316,479

These estimates were developed by SKATS with input from local jurisdictions. They are consistent with the most recently adopted coordinated population projections by Marion and Polk Counties.

Land Use Framework

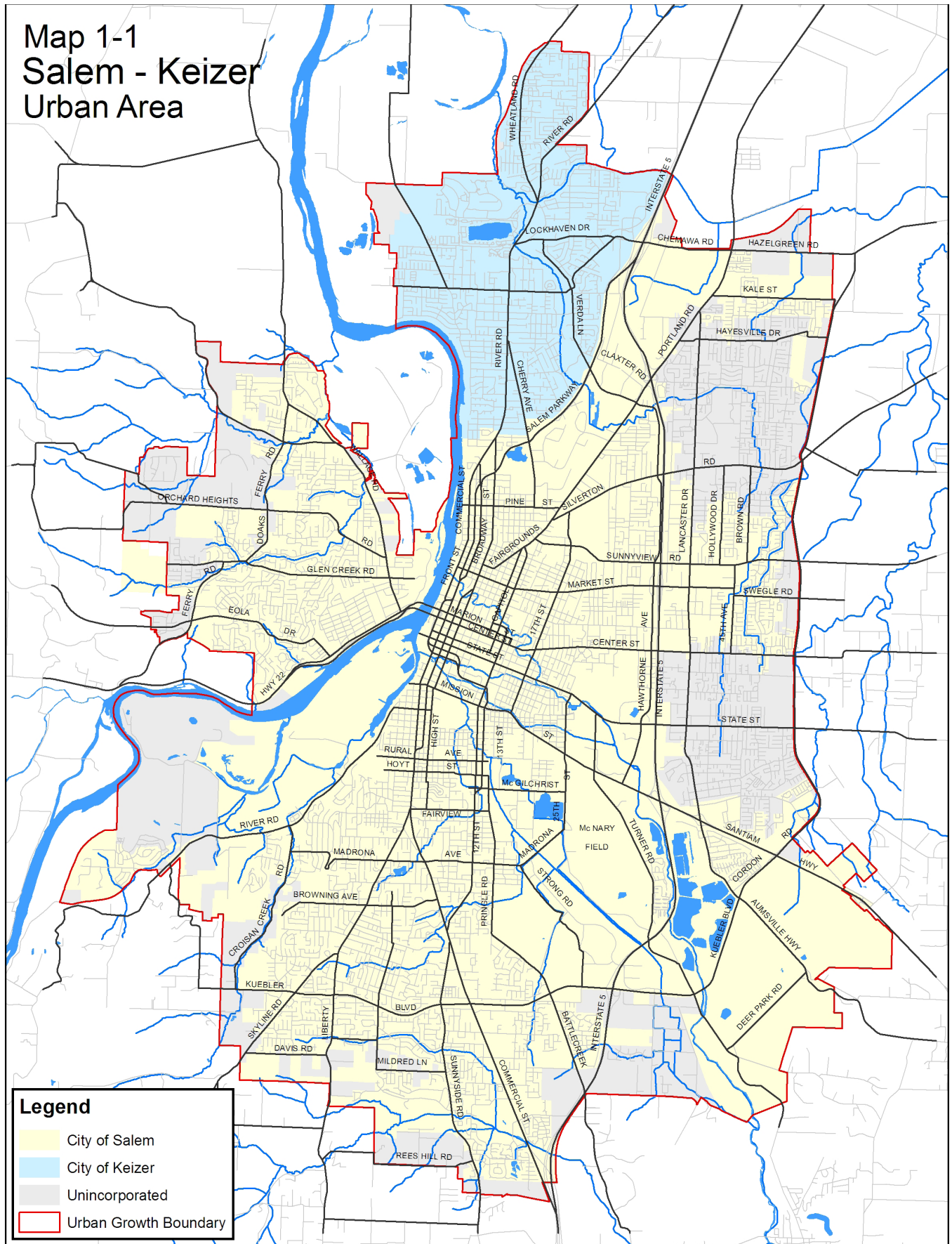
Salem-Keizer UGB Employment Forecast			
	2010	2035	Annual Percent Growth
Salem portion UGB	94,894	130,594	1.50%
Keizer portion UGB	5,403	8,209	2.08%
Total UGB	100,297	138,803	1.54%

The Salem Urban Area, encompassing the city limits and the area within the Urban Growth Boundary that will someday become Salem, comprises approximately 61 square miles. The *Salem Area Comprehensive Plan* was first adopted in 1973, with the latest significant revisions occurring in 1977. The *Salem Transportation System Plan* bases its planned investments on the land

use framework established in the Comprehensive Plan.

¹ These forecasts are intended only for the purposes of transportation planning and do not replace forecasts adopted for the purpose of analyzing land needed for housing and employment.

Map 1-1 Salem - Keizer Urban Area





Salem Transportation System Plan Elements

Guiding Principles of the 25-year Plan

PLAN HORIZON

The *Salem Transportation System Plan* works primarily on a 25-year planning horizon, taking us to the Year 2030. The Long-range Transportation Strategy of the Plan contains a long-range transportation planning strategy that extends beyond the 25-year horizon. There are several reasons for having a 25-year planning horizon for detailed planning:

- A horizon of 25 years is considered a reasonable amount of time to reliably forecast trends in population, employment, and development;
- Allows for the time required to plan, design, and construct capital improvements;
- Provides for programming of future funds for implementation of programs and construction of capital improvements;
- Gives decision-making bodies a set of policies and standards for guiding the growth of the community over time, especially when responding to development applications; and
- It is the time frame required by the State Transportation Planning Rule and Federal planning guidelines.

PLAN ELEMENTS

In addition to a set of comprehensive transportation policies, there are 13 elements to the *Salem Transportation System Plan*:

- | | |
|----------------------------------|-----------------------------------|
| Street System | Intercity Passenger Travel |
| Local Street Connectivity | Transportation Demand Management |
| Transportation System Management | Parking Management |
| Neighborhood Traffic Management | Freight Movement |
| Bicycle System | Transportation System Maintenance |
| Pedestrian System | Transportation Finance |
| Transit System | |

PLAN ASSUMPTIONS

Every plan must be based on a set of assumptions. The assumptions that form the basis of the Salem Transportation System Plan deal with the methods used to develop information; parameters used to make decisions; and the general philosophy of how to approach problems and regulatory guidelines.

POPULATION, EMPLOYMENT DATA

The Salem Transportation System Plan is based on the population estimates produced by the Salem-Keizer Area Transportation Study (SKATS). SKATS develops these estimates for use in the region's traffic model. Data used to develop the estimates comes from the Oregon Office of Economic Analysis, the Portland State University Center for Population Research, and forecasts prepared as part of local planning efforts. Other population information is provided directly from U.S. Census data. Employment estimates are provided from a variety of sources and compiled into a regional forecast produced by SKATS. Estimates and forecasts for population and employment are contained in the Introduction of this document.

LAND USE ASSUMPTIONS

The Salem Transportation System Plan is based on the land use designations found in the currently adopted Salem Area Comprehensive Plan. The Plan is also based on the continuation and static delineation of the existing Salem-Keizer Urban Growth Boundary. The amount of developable land is based on the inventory provided by the Salem Community Development Department, found in the Introduction. The rate of land development for the Plan is based on the absorption rates used in the current regional traffic analysis model produced by SKATS. It is assumed that opportunities for redevelopment of land within the current Urban Service Area (USA) and infill development will increase as land supply decreases within the Urban Growth Boundary (UGB), especially towards the latter half of the 25-year planning horizon.

TRAVEL DEMAND ASSUMPTIONS

It is assumed that the citizens and businesses of Salem will follow the same general travel behavior experienced elsewhere within the Salem-Keizer region. Travel demand forecasts are based on those derived from the regional traffic analysis model produced by SKATS. The travel demand used to identify deficiencies in the transportation system over the next 25 years is based on the continuation of current trends in driving behavior. Travel demand based on total or partial compliance with the vehicle-miles-traveled (VMT) per capita reduction requirement of the State Transportation Planning Rule is not used as a base forecast to identify deficiencies. Although an analysis completed by SKATS indicates that many, if not all, of the projects identified in both the Regional Transportation System Plan and Salem Transportation System Plan are needed even with a 5 percent reduction in VMT per capita.

TRAFFIC DEMAND AND MODAL SHARE

Although the Salem Transportation System Plan stresses increased mobility for all travel modes, the Plan takes a conservative approach in estimating vehicle traffic demand. Street system planning is based on the assumption that current trends will continue into the future as discussed in the Introduction. It is expected that with increased availability of bicycle facilities, sidewalks, transit service, carpooling, and other travel demand management measures, that the number of people using these modes will increase. It is an objective of this Plan for the Salem Urban Area to achieve a minimum of a 9 percent increase in work trips, a total of 25 percent, using modes other than the single-occupant vehicle (SOV) by 2015. While this may seem like a small goal, its accomplishment will be contrary to current trends, which show continued gains in SOV travel. If this objective is met, it may delay the need for specific projects to be constructed in the time frame identified in the Plan.

GENERAL PHILOSOPHY

The Salem Transportation System Plan follows the general philosophy that it is the responsibility of the community to provide increased mobility opportunities for all travel modes. As a comprehensive system of multimodal facilities is developed, more choices for travel will be available for people and services, thereby reducing reliance on any single mode of travel. This Plan does not attempt to make people change their auto-oriented travel behavior without first providing safe and convenient travel alternatives.

This Plan takes an incremental approach to planning for capital improvements, the philosophy being that improvements should attempt to solve identified safety problems first or simultaneously with system capacity improvements. Improvement projects must be multimodal whenever possible. Capacity improvements should be designed to solve identified deficiencies in the least impactful manner possible. Improvements should be timed to when they are needed, avoiding the surplus provision of infrastructure.

REGULATORY COMPLIANCE

Despite today's increasingly complex regulatory environment, the Salem Transportation System Plan attempts to comply with every aspect of Federal, State, and local laws, statutes, codes, and administrative rules.

Comprehensive Transportation Policies

The Salem Area Comprehensive Plan contains a chapter that has a comprehensive transportation goal and several supportive policies. The main emphasis of the comprehensive goal and policies is to guide City transportation-related decisions with a firm policy background in such areas as: overall system design, growth management, multimodalism, regional mobility, connectivity, circulation, efficiency, safety, accessibility, economic development, neighborhood livability, aesthetics, and citizen involvement. The goal and policies reflect an emphasis put on reducing our reliance on the SOV.

The following goal and policies, where different, are to replace those currently contained in Section IV.J. of the Salem Area Comprehensive Plan document:

TRANSPORTATION

GOAL: To provide a balanced, multimodal transportation system for the Salem Urban Area that supports the safe and efficient movement of goods and people.

POLICIES

Salem Transportation System Plan

1. The *Salem Transportation System Plan* shall contain goals, objectives, policies, plan maps, and project lists that will guide the provision of transportation facilities and services for the Salem Urban Area. Local governments shall cooperatively develop the *Salem Transportation System Plan* to serve as the transportation planning component of the *Salem Area Comprehensive Plan*. The *Salem Transportation System Plan* should contain the following plan elements:

Street System	Intercity Passenger Travel
Local Street Connectivity	Transportation Demand Management
Transportation System Management	Parking Management
Neighborhood Traffic Management	Freight Movement
Bicycle System	Transportation System Maintenance
Pedestrian System	Transportation Finance
Transit System	

The City of Salem *Airport Master Plan* shall be adopted as a separate planning document.

2. The *Salem Transportation System Plan* shall be updated, as necessary, to remain consistent with other City of Salem, regional, and statewide plans.

Regional Mobility

3. A balanced system of transportation facilities and services shall be designed to meet the regional travel patterns and mobility needs of residents, businesses, and industries.

Multimodal Transportation System

4. The transportation system for the Salem Urban Area shall consist of an integrated network of facilities and services for a variety of motorized and nonmotorized travel modes.

Connectivity and Circulation

5. The vehicle, transit, bicycle, and pedestrian circulation systems shall be designed to connect major population and employment centers in the Salem Urban Area, as well as provide access to local neighborhood residential, shopping, schools, and other activity centers.

Supportive of Land Use Plan Designations and Development Patterns

6. The provision of transportation facilities and services shall reflect and support land use designations and development patterns as identified in the *Salem Area Comprehensive Plan*. The design and implementation of transportation facilities and services shall be based on serving current and future travel demand, residential densities, retail, and employment centers.
7. Local governments shall develop integrated land use and transportation plans that help improve livability by promoting changes in land use patterns and the transportation system that makes it more convenient for people to walk, bicycle, use transit, and drive less to meet their daily needs.
8. Local governments shall encourage the expansion of transit services throughout and beyond the Salem Urban Area, especially to areas of increased residential densities, major commercial concentrations, and large institutional and employment centers.

Growth Management

9. The construction of transportation facilities shall be timed to coincide with community needs, and shall be implemented in such a way as to minimize impacts on existing development.
10. Improvements to the transportation system, in addition to those in or abutting a development, may be required as a condition of approval of subdivisions and other intensifications of land use.
11. To mitigate traffic impacts placed on areawide transportation facilities by new development, Transportation System Development Charges, as defined by *Oregon Revised Statutes* and local government ordinances, may be collected.

Decreased Reliance on the SOV

12. Local governments within the Salem Urban Area shall develop multimodal plans, services, and programs that decrease reliance on the SOV as the dominant means of travel.

System Efficiency

13. The implementation of transportation system and demand management measures, enhanced transit service, and provision for bicycle and pedestrian facilities shall be evaluated as a first choice for accommodating travel demand and relieving congestion in a travel corridor, before widening projects are constructed.

14. The *Salem Transportation System Plan* shall identify methods that citizens can use to commute to work and decrease overall traffic demand on the transportation system. Such methods include transit ridership, telecommuting, carpooling, vanpooling, flexible work schedules, walking, and bicycling.

Transportation Safety

15. Local governments within the Salem Urban Area shall make as a high priority the planning, design, construction, and operation of a safe transportation system for all modes of travel including minimizing conflicts between different travel modes.

Public Safety

16. The rapid and safe movement of fire, medical, and police vehicles shall be an integral part of the design and operation of the transportation system.

Accessibility for People with Disabilities

17. The transportation system shall be designed with consideration of the needs of people with disabilities by meeting the requirements set forth in the Americans With Disabilities Act.

Economic Development

18. Supportive of the mobility needs of businesses and industries, the transportation system shall consist of the infrastructure necessary for the safe and efficient movement of goods, services, and people throughout the Salem Urban Area. The *Salem Transportation System Plan* shall include consideration of the area's rail, aviation, inland marine, pipeline, and truck movement network. The Plan shall include ways to facilitate the intermodal transfer of freight in the area.
19. The *Salem Transportation System Plan* shall identify methods that employers can use to better facilitate the commute of their employees, encourage employees to use alternative travel modes other than the SOV, and decrease their needs for off-street parking.

Neighborhood Livability

20. Transportation facilities shall be designed and constructed to minimize noise; energy consumption; neighborhood disruption; economic losses to the private or public economy, and social, environmental, and institutional disruptions; and to encourage the use of public transit, bikeways, and walkways.

Aesthetics and Landscaping

21. Aesthetics and landscaping shall be considered in the design of the transportation system. Within the physical and financial constraints of the project, landscaping, and where appropriate, public art, shall be included in the design of the transportation facility. Various landscaping designs, plants, and materials shall be utilized by local governments, private entities, or individuals to enhance the livability of the area.
22. Major gateway points into the city enhance the impression of the area's beauty and vitality. The *Salem Transportation System Plan* shall identify major gateway points into the city of Salem.

Citizen Involvement

See Section B, General Development, Policy 1. Citizen Involvement of the Salem Area Comprehensive Plan.

Intergovernmental Coordination and Consistency

23. Local governments within the Salem Urban Area shall coordinate their transportation planning and construction efforts with those of the SKATS, the State of Oregon Department

of Transportation, the Salem Area Mass Transit District, and each other. Local transportation plans will be consistent with those developed at the regional and State level. The *Regional Transportation System Plan* shall be adopted as a detailed plan of the *Salem Revised Code*.

Environment

24. The City shall take proactive measures to reduce the environmental impacts from transportation programs and projects by ensuring that environmental resources are identified and evaluated for impacts early in the planning stage. Design, construction, and maintenance activities should avoid, minimize, or mitigate adverse environmental impacts. Where appropriate, the City shall look for cooperative opportunities with other public and private organizations to enhance the natural environment as a component of transportation projects and maintenance activities.

Airport Compatibility

The scope of the Salem Transportation System Plan does not cover Airport and Land Use Policies. The following are a restatement of previous Comprehensive Plan airport policies:

25. Land Uses around McNary Airport shall be required to provide an environment compatible with the airport and its operation and which will not be adversely affected by noise and safety problems. Appropriate development regulations shall be adopted as the City of Salem identifies suitable technical and procedural measures.

26. Because of the potential hazards to airborne aircraft, land uses beneath designated approach surfaces within 10,000 feet of the end of McNary Field runways shall not create water impoundments accessible by waterfowl.

27. Commercial uses and other uses that result in concentrations of people shall be prohibited within the clear zones of the runways at McNary Field, to avoid danger to the public safety by potential aircraft accidents.



Street System Element

The Salem street system represents the community's single largest investment in public infrastructure. The system consists of highways, arterial, collector, and local streets. The public street is a conduit for different travel modes, containing facilities for vehicle, bicycle, transit, and pedestrian travel. Achieving mobility requires fully utilizing our community's street system. Planning for our street system begins with a set of goals, objectives, and policies that will guide its design.

Goal, Objectives, and Policies

The City of Salem has the following goal, objectives, and policies for the planning, development, and operation of its street system:

GOAL: Provide a comprehensive system of streets and highways that serves the mobility and multimodal travel needs of the Salem Urban Area.

OBJECTIVE NO. 1

Develop a comprehensive, hierarchical system of streets and highways that provides for optimal mobility for all travel modes throughout the Salem Urban Area.

Policy 1.1 Multimodal Capacity

The City shall fulfill its systemwide travel capacity needs through the utilization of multiple travel modes within the public rights-of-way.

Policy 1.2 Radial System of Arterial Streets and Highways

The City's street system shall contain a network of radial arterial streets and highways that link the central core area with outlying districts and with major regional and statewide highways.

Policy 1.3 System of Peripheral Arterial Streets

The City's street system shall contain a network of peripheral arterial streets that intercept radial street routes, linking outlying residential, commercial, and business districts without having to travel through the central core area.

Policy 1.4 Circumferential Travel Route

The City's street system shall contain a circumferential travel route around the outlying districts of the Salem Urban Area east of the Willamette River.

Policy 1.5 System of Collector Streets

The City's street system shall contain a network of collector streets that serve to connect local traffic to and from the arterial street system.

Policy 1.6 Local Access and Circulation

The City's street system shall contain an interconnected network of local streets that provide property access and neighborhood circulation.

Policy 1.7 City of Salem Street Classification System and Basic Design Guidelines

The City shall classify streets and highways within the Salem Urban Area based on how they are to ultimately function within the overall system. (See Street Classification Section.)

Policy 1.8 Transportation System Redundancy

The City's street system shall be planned and constructed to provide multiple routes between locations, including making reasonable efforts to eliminate existing, and prevent creation of new, transportation chokepoints, both natural and man-made.

Policy 1.9 Enhance Safety

The City shall identify, maintain, and periodically review a network of existing and planned critical routes to support timely emergency response and evacuation in the event of a natural or man-made disaster.

OBJECTIVE NO. 2

Design City streets in a manner that maximizes the utility of public rights-of way, is appropriate to their functional role, and provides for multiple travel modes, while minimizing their impact on the character and livability of surrounding neighborhoods and business districts.

Policy 2.1 Multimodal Street Design

The City of Salem shall design its streets to safely accommodate pedestrian, bicycle, and motor vehicle travel, including transit service.

Policy 2.2 Multimodal Intersection Design

Arterial and collector street intersections shall be designed to promote safe and accessible crossings for pedestrians and bicyclists. Intersection design should incorporate measures to make pedestrian crossings convenient and less of a barrier to pedestrian mobility. Accommodations shall be made for transit stops at or near street intersections.

Policy 2.3 Arterial and Collector Street Intersections

Left-turn pockets shall be incorporated into the design of all intersections of arterial streets with other arterial and collector streets, as well as collector streets with arterials and other collectors.

Policy 2.4 City of Salem Street Design Standards

The City of Salem Street Design Standards shall be the basis for all street design within the Salem Urban Area. The Street Design Standards shall reflect the functional role of different street classifications and shall consider the impact on the character and livability of surrounding neighborhoods and businesses. Street design standards shall consider managing vehicle speeds as appropriate for the given functional classification, with particular attention given to this consideration in residential areas.

Policy 2.5 Capacity Efficient Design and Level of Service (LOS) Standards

The City of Salem shall apply the street design standard that most safely and efficiently provides motor vehicle capacity respective to the functional classification of the street. The City shall design its streets and intersections to the following LOS criteria:

1. *Definition of Capacity Deficient.* A street or intersection shall be determined to be capacity deficient when traffic volumes exceed its peak hour design LOS. A street or intersection shall be determined to be over-capacity when traffic volumes exceed its effective peak hour capacity.
2. *Peak Travel Periods*
 - a. The City shall design its streets and intersections to function at the lower end of LOS D (where traffic volumes approach 90 percent of the street's effective capacity) during the peak hour.
 - b. When the peak hour LOS exceeds LOS D on existing streets and intersections, the City shall first employ transportation system management measures, where feasible, to alleviate congestion. (See Transportation System Management Element.)
 - c. The City shall allow its existing streets and intersections to function at LOS E (where traffic volumes generally are approaching or at 100 percent of the street's effective capacity) during the morning and evening peak travel hours. However, traffic impacts created by new development, as identified in a traffic impact analysis, must be mitigated to maintain peak hour LOS D or better.
 - d. When existing streets and intersections experience, or are expected to experience, extended periods of LOS E or instances where the street is at LOS F (where traffic volumes exceed the effective capacity of the street) despite the aggressive use of transportation system management measures, the City shall consider designing and constructing additional physical capacity.
 - e. Regardless of its peak hour operating LOS designation, both transportation system management measures and additional physical capacity shall be considered for the effective mitigation of violations of regional air quality standards.

Policy 2.6 Streetscape Design and Aesthetics

Wherever possible the City of Salem shall incorporate safely designed, aesthetic features into the streetscape of its public rights-of-way. These features may include: planting of street trees, shrubs, and grasses; incorporation of planting strips and raised medians; and, in some instances, the installation of street furniture, planters, special lighting, public art, or nonstandard paving materials.

Policy 2.7 Development of New Streets Outside of the USA

New development occurring outside of the USA shall provide linking streets to the existing street system per the provisions of the *Salem Revised Code*, Chapter 66, Urban Growth Management Program.

Policy 2.8 Physical Improvements to Existing City Streets

Existing streets that are to be widened or reconstructed shall be designed to the adopted street design standards for the appropriate street classification. Adjustments to the design standards may be necessary to avoid existing topographical constraints, historic properties, schools, cemeteries, existing on-street parking, and significant cultural features. Whenever possible, the design of the street shall be sensitive to the livability of the surrounding neighborhood.

Policy 2.9 Access Management

To maintain the utility of the public right-of-way for the mobility of all users, access location and spacing to arterial and collector streets shall be controlled. (See Transportation System Management Element.)

Policy 2.10 Vacation of Rights-of-way

Vacation of public rights-of-way in the city of Salem are governed by State law (ORS Chapter 271) and SRC 255.065. In its consideration of a proposed right-of-way vacation, the City shall use evaluation criteria contained in the SRC which addresses future transportation and land use needs.

Policy 2.11 Undergrounding of Overhead Utilities

In order to improve the aesthetic appearance of the streetscape, the undergrounding of overhead utilities shall be required of all newly constructed streets in the city. The undergrounding of overhead utilities shall not be required of existing streets undergoing widening, major reconstruction, or paving unless required through an existing underground utility district in the *Salem Revised Code*. The undergrounding of overhead utilities will be considered, however, dependent upon the availability of financial resources, public sentiment, and design feasibility.

OBJECTIVE NO. 3

Promote traffic safety by working to reduce the number of reported motor vehicle accidents per capita in Salem, as measured in 1995, by 10 percent by the Year 2015.

Policy 3.1 Traffic Safety Education and Awareness

The City shall work with other Federal, State, and local government agencies to promote traffic safety education and awareness, emphasizing the responsibilities and courtesies required of drivers when operating a motor vehicle.

Policy 3.2 Enforcement of City and State Motor Vehicle Code

Through its law enforcement resources, the City shall work to increase traffic safety by actively enforcing the City and State Motor Vehicle Codes.

Policy 3.3 Street Safety Improvement Projects

The City shall place a higher priority on funding and constructing street projects that address identified vehicular, bicycle, and pedestrian safety problems than those projects that solely respond to automotive capacity deficiencies in the street system. An exception are those capacity improvements that, through their design, also resolve identified safety problems.

Policy 3.4 Removal of Vision Hazards on Private Property

The City shall work to increase traffic safety by requiring private property owners to maintain vision areas adjacent to intersections and driveways clear of fences, landscaping, and foliage that obstruct the necessary views of motorists, bicyclists, and pedestrians. Regulations to this effect shall be found in the *Salem Revised Code*.

OBJECTIVE NO. 4

Efficiently plan, design, and construct City-funded street improvement projects to meet the safety and travel demands of the community.

Policy 4.1 Citizen Participation in Project Planning and Transportation Studies

The City shall involve citizens in an advisory role in the planning of major new street projects, transportation studies, and updates to the *Salem Transportation System Plan*. Planning for transportation projects include: establishment of need and purpose; study of alternatives;

and selection of a preferred alternative. Citizen involvement may include such activities as: citizen advisory committees, task forces, open houses, forums, surveys, workshops, informational meetings, and public hearings.

Policy 4.2 Project Identification

The City shall select City-funded street improvement projects from those listed in the *Salem Transportation System Plan* when making significant increases in system capacity or bringing arterial or collector streets up to urban standards. The selection of improvement projects should be prioritized based on consideration of improvements to safety, creation of system redundancy, relief of existing congestion, response to near-term growth, systemwide benefits, geographic equity, designation as critical routes, and availability of funding.

Policy 4.3 Project Design Life

To maximize the longevity of its capital investments, the City shall design street improvement projects to meet existing travel demand and, whenever possible, accommodate the anticipated travel demand of the next 20 years for that facility.

Policy 4.4 Survey and Determination of Arterial and Collector Street Alignments

New arterial and collector streets alignments shall be surveyed and delineated after their adoption in the *Salem Transportation System Plan*. The determination of alignments will allow for the preservation of land for public rights-of-way and give advance notice to property owners and citizens of where future expansions of the street system will occur.

Policy 4.5 Deviation of Future Street Alignments

Between its intersections with arterial and collector streets, the location of a street right-of-way can be varied up to 200 feet on either side of the planned roadway centerline as identified in the *Salem Transportation System Plan* with the approval of the Public Works Director. Deviations greater than 200 feet shall require an amendment to the *Salem Transportation System Plan*.

Policy 4.6 Right-of-way Requirements

The minimum right-of-way requirements for typical arterial and collector streets are set forth in Table 3-1 and Figures 3-1 and 3-2. Some streets have special right-of-way requirements as set forth in Table G-1 and Figure G-1. City-funded street improvement projects on existing streets may necessitate variation from the typical right-of-way requirements in order to minimize impacts to abutting businesses, historic properties, schools, and other significant community features. Whenever possible, the design of the street shall be sensitive to the livability of the surrounding neighborhood. (This Policy is consistent with Policy 2.8.)

Policy 4.7 Additional Intersection Improvements and Right-of-way

Additional right-of-way and roadway improvements may be required at the intersections of arterial and collector streets. Intersections and access points for high traffic generators such as shopping centers, schools, major recreational sites, office complexes, etc., may require additional intersection right-of-way and improvements. The dimensional requirements of all intersections shall be determined by the Public Works Department. (This Policy is consistent with Policies 2.3 and 2.8.)

Policy 4.8 Additional Improvements and Right-of-way to Accommodate Physical Constraints

Additional right-of-way, easements, and improvements may be required to accommodate the design and construction of street improvement projects due to steep slopes, soils, water features, wetlands, transit bus bays, and other environmental and physical constraints.

Policy 4.9 Citizen Involvement in Project Design

The City shall involve representatives of affected neighborhood associations and citizens in an advisory role in the design of street improvement projects. The purpose of citizen involvement in project design is to be a resource to project staff in the design process. The need for, and purpose

Table 3-1 City of Salem Street Classification System and Basic Design Guidelines

Classification	Function	Ultimate Design ADT	Ultimate Traffic Design	Bicycles	Sidewalks	On-Street Parking	Access Control	Minimum Right-of-Way
Freeway	High capacity, high speed, highway that serves regional, statewide, and interstate travel	50,000+	Divided highway with minimum of four travel lanes designed to federal and state interstate highway standards	Allowed on shoulder Oregon State Statute (ORS)	No sidewalks, however pedestrians allowed on shoulder per ORS	Not permitted	Fully controlled through grade-separated interchanges	To be determined on a project specific basis
Parkway	High capacity, high speed, roadway that primarily serves regional and intracity travel	30,000-60,000	Divided highway with minimum of two-four travel lanes with raised center median	Bicycle lane or separate path	Sidewalks next to roadway or separate path	Not permitted	Limited access available through at-grade intersections or grade-separated interchanges with selected arterial and collector streets	120 feet (two-four travel lanes) 144 feet (six travel lanes)
Major Arterial	High capacity street that primarily serves regional and intercity travel	15,000-50,000	Depending on expected traffic volumes, has a minimum four travel lanes with left-turn pockets, raised medians, or center turn lanes where appropriate	Bicycle lane	Yes	Not permitted (except in existing business or residential districts where off-street parking alternatives are not available)	Minimum street and driveway spacing per <i>Salem Revised Code (SRC)</i>	96 feet (four travel lanes)
Minor Arterial	High capacity street that primarily serves regional and intracity travel. Serves as main radial and peripheral routes through the City.	7,000-20,000	Has a minimum of two travel lanes with left-turn pockets, raised median, or center turn lane where appropriate	Bicycle lane	Yes	Not permitted (except in existing business or residential districts where off-street parking alternatives are not available)	Minimum street and driveway spacing per SRC	72 feet
Collector	Primarily distributes traffic between neighborhoods, activity centers, and the arterial street system. Secondly provides property access.	1,600-10,000	Has a minimum of two travel lanes with left-turn pockets where appropriate	Bicycle lane or route per Bicycle Plan Map	Yes	Permitted where possible	Minimum street and driveway spacing per SRC	60 feet
Local Street	Provides access to properties and basic circulation within a neighborhood	Residential livability concerns arise at approximately 1,600	Standard width of improvement is 30 feet curb-to-curb. May be reduced per SRC.	Shared roadway or bicycle route per Bicycle Plan Map	Yes	Permitted	Minimum driveway spacing from intersections per SRC	60 feet (with 30 feet improvement) May be reduced in some instances per SRC
Cul-de-Sac	Serves as a dead-end local street with a turn-around at its terminus. Provides property access into areas of a neighborhood where continuous local street connections cannot be made.	Depends on number of properties served	Maximum length is 800 feet. Must have turn-around at terminus. Improvement varies per SRC.	Shared roadway	Yes	Permitted	None	Stem shall correspond with respective local street standard. Turn-around requirements per SRC and Street Design Standards.
Alleyway	Provides secondary property access and circulation within a city block	Depends on number of properties served	Improvement is wide enough to accommodate utilities, deliveries, emergency vehicles and off-street parking access	Shared roadway	Optional	Deliveries only	None	Minimum 16 feet Maximum 20 feet

of, the project have been determined as part of the earlier planning process undertaken when including the project in the *Salem Transportation System Plan*.

OBJECTIVE NO. 5

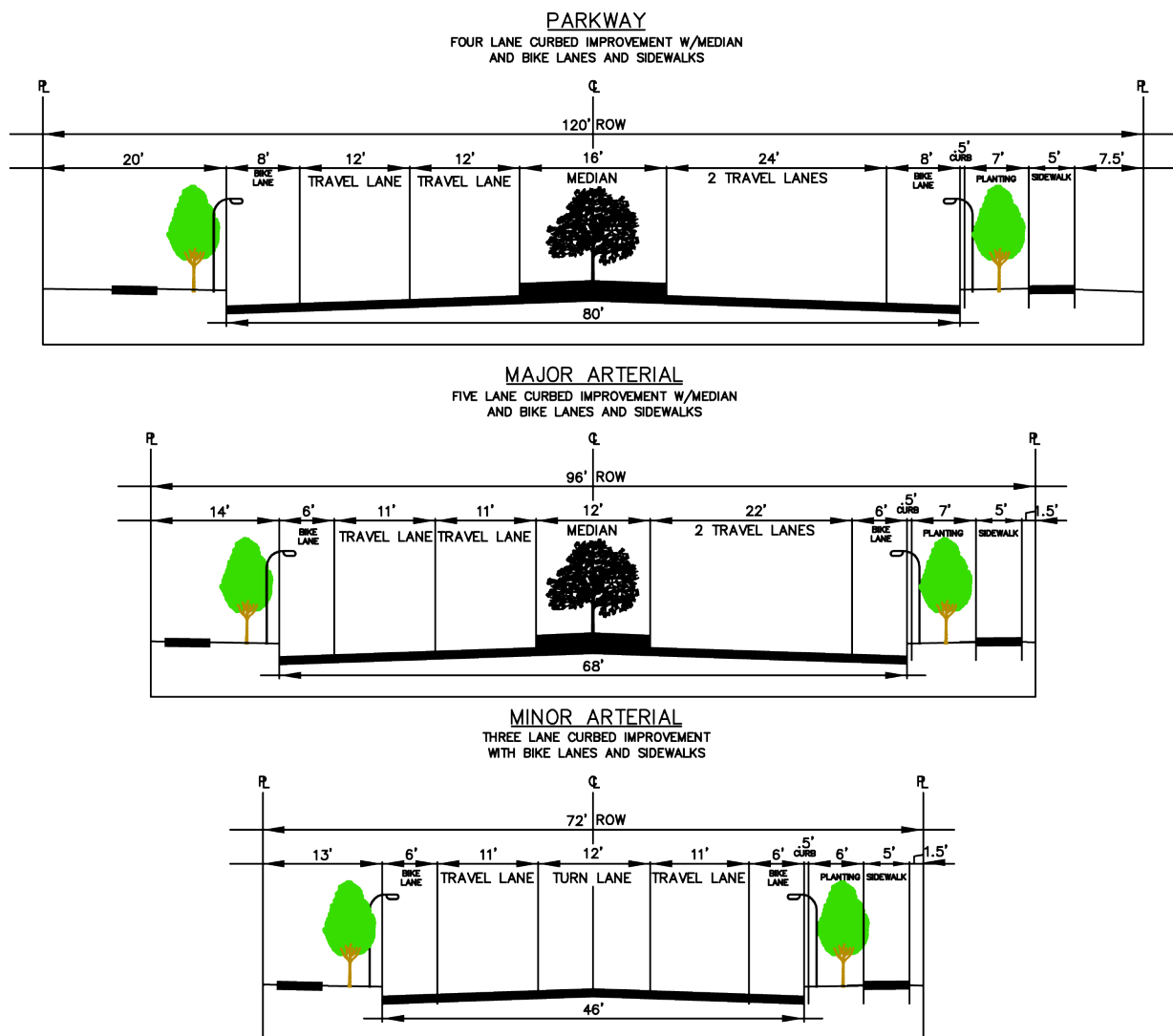
A street system that is improved to accommodate travel demand created by growth and development in the community.

Policy 5.1 Traffic Impact Analysis Requirements

The City shall require Traffic Impact Analyses as part of land use development proposals to assess the impact that a development will have on the existing and planned transportation system. Thresholds for having to fulfill this requirement and specific analysis criteria are established in the *City of Salem Street Design Standards*.

Figure 3-1

TYPICAL STREET DESIGN CROSS SECTIONS PARKWAY AND ARTERIAL STREETS



Policy 5.2 Exactions Required of Development

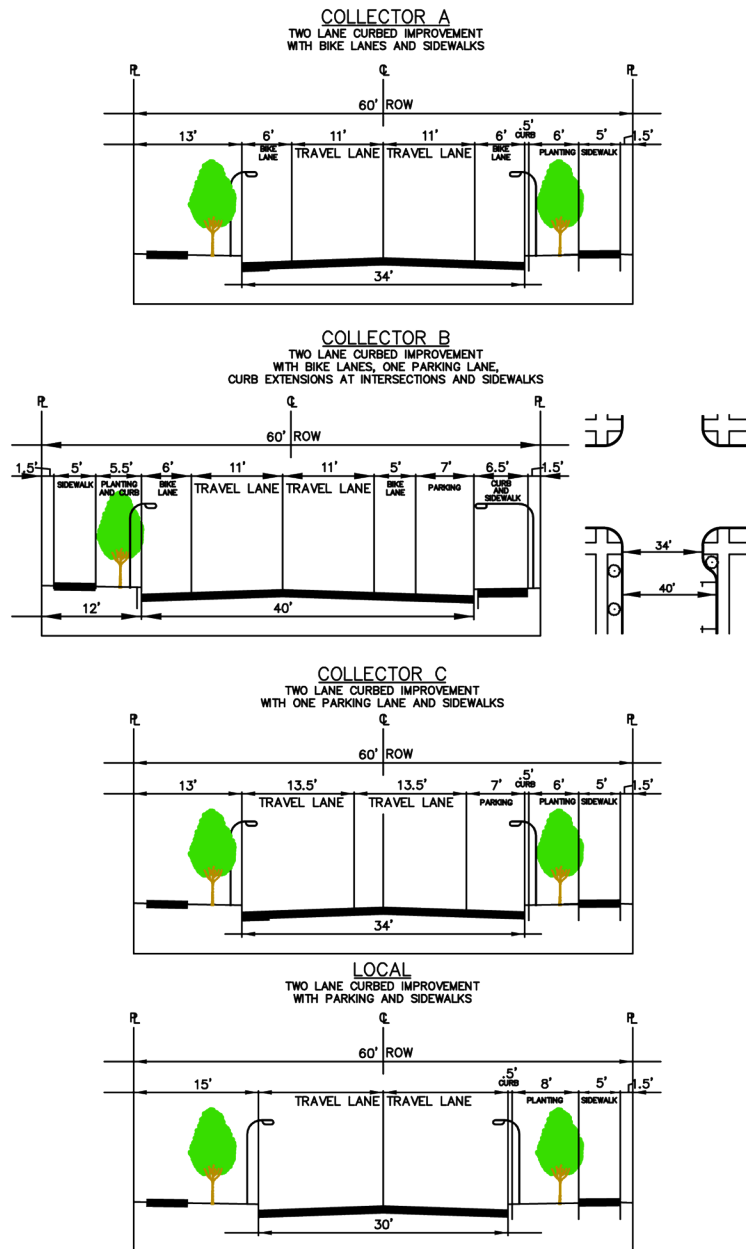
The City may require new development to make site-related, right-of-way dedication and transportation system improvements that are identified through the Traffic Impact Analysis process and other Code requirements.

Policy 5.3 Transportation Improvements Funded Through System Development Charges

The City may require new development to pay charges towards the mitigation of systemwide transportation impacts created by new growth in the community. These funds can be used towards improvements to the street and transit system. Improvements funded through these

Figure 3-2

TYPICAL STREET DESIGN CROSS SECTIONS COLLECTOR AND LOCAL STREETS



Note: To determine which collector standard is appropriate for a given collector street, refer to Street System Element, Street Design Standards. In general, Collector A is intended for use on streets with relatively high volume and running speed and which have limited residential frontage. Collector B is generally intended for use on streets with relatively high volume and running speed and which are residential in nature. Collector C is intended for residential streets with relatively lower volume and running speed and which are not designated for bike lanes on the Salem Bicycle System Map.

charges are growth-related and should be selected from the approved list, and prioritized based upon the criteria in Policy 4.1.

For other goals, objectives, and policies related to the function and design of the street system see the Local Street Connectivity, Transportation System Management, Bicycle System, Pedestrian System, and Freight Movement Elements of this Plan.

Street Classification System

The Street Classification System determines the function or “mission” of each street in the City’s street system. A street’s functional classification determines what type of traffic should use the street—regional, intra-city, or neighborhood. The type of traffic, combined with expected traffic volumes, determines whether a street is an arterial, collector, or local street. Local topography may also be a factor in assigning a classification to a street. It is important to note that traffic volumes alone do not determine the functional classification of a street. All of the characteristics listed play a role in the determination. Once the street’s function is determined, design characteristics are assigned—the number of travel lanes, turn pockets, access controls, on-street parking, bicycle lanes, and right-of-way widths, consistent with its classification. While the right-of-way requirement is constant, the ultimate number of lanes and access controls may be phased in over time depending on the existing and projected travel demand on the facility.

The importance of the Street Classification System cannot be overstated. The City of Salem uses the Street Classification System to reserve future rights-of-way, determine street design, and develop future street improvement projects. This system provides the “blueprint” of how the City wants its street system to develop and function over the next 20 years and beyond.

Table 3-1 describes the different characteristics that comprise each street classification in the Salem Urban Area. Each classification has: an assigned function or purpose; an ADT (average daily traffic) design range of volumes; an ultimate traffic design in number and configuration of lanes; a bicycle and pedestrian facilities design; allowance, or not, for on-street parking; guidelines for access control; and required right-of-way widths. These classifications are used to guide the development of new roads as they are brought into the system, as well as determining the types of improvements needed for existing streets.

The entire street classification system for the Salem Urban Area is shown on Map 3-1. Each individual street has been assigned a classification based on the criteria described above. It is vital that each street perform according to its function in the system. Individual street classifications should not be changed without consideration of the impacts that those changes will have on the rest of the street system.

Critical Routes

The City’s arterial street system connects people to critical facilities as well as providing emergency response and evacuation routes in the event of natural hazards. Planning for and maintaining a robust network of critical routes supports the health and safety of the community. Identification of transportation improvement projects for both existing and new facilities should take into consideration the function of the street as a critical route for emergency management purposes. Data available to support this analysis includes identification of street segments that are prone to flooding and information gained through bridge inspection reports. Future transportation projects should consider opportunities to reduce the potential for critical routes to be blocked during major floods or other hazards.

Street Design Standards (Typical Street Standards)

Once a classification has been assigned to an individual street, it needs to be designed in a manner that allows it to perform its function. Each street classification has a typical, or ideal, cross section design. This design determines how a “typical” street of that classification should be built. For a variety of reasons, not every street with a given classification can be ultimately built to the ideal standard. Topography, historic landmarks, and business and residential districts, are just a few limiting factors. The typical cross section design gives City staff the basis for requiring rights-of-way as part of development reviews, and the proper standards for how an existing street should be brought up to urban standards. Figures 3-1 and 3-2 illustrate the typical cross section design for each street classification.

COLLECTOR STREET CROSS SECTIONS

Streets classified as collectors distribute traffic between neighborhoods, activity centers, and the arterial street system, while also providing property access. Figure 3-2 includes three different “typical” cross sections for collector streets based on the nature of a given collector. All of the cross sections require the same right-of-way width (60 feet). The different cross sections are designed to address varying needs for accommodating bicycles and parking. While all arterial streets are designated for future bicycle lanes on the Bicycle Plan Map (Map 7-1), only a portion of the collectors are so designated. This is because on lower volume and speed collectors, bicycles can safely share the street with automobiles without requiring a separate striped lane. Collectors also experience different needs for parking based on the degree of property access that the collector provides. Collectors that provide limited residential access should not require room dedicated to parking, as shown in Collector A. On the other hand, collectors that provide a higher level of residential property access should accommodate some parking (Collectors B and C). This is because residential uses do not typically have sufficient off-street parking to meet all of the needs for visitor parking. Providing parking on one side of the street would serve this need, while maintaining facilities for bicycles, either through a bicycle lane (Collector B) or through a wider travel lane to allow bicycles to share the lane with automobiles (Collector C). City staff shall review the Bicycle Plan Map, ultimate design ADT, anticipated speeds, and proposed development pattern to determine which typical cross section best fits a particular collector street.

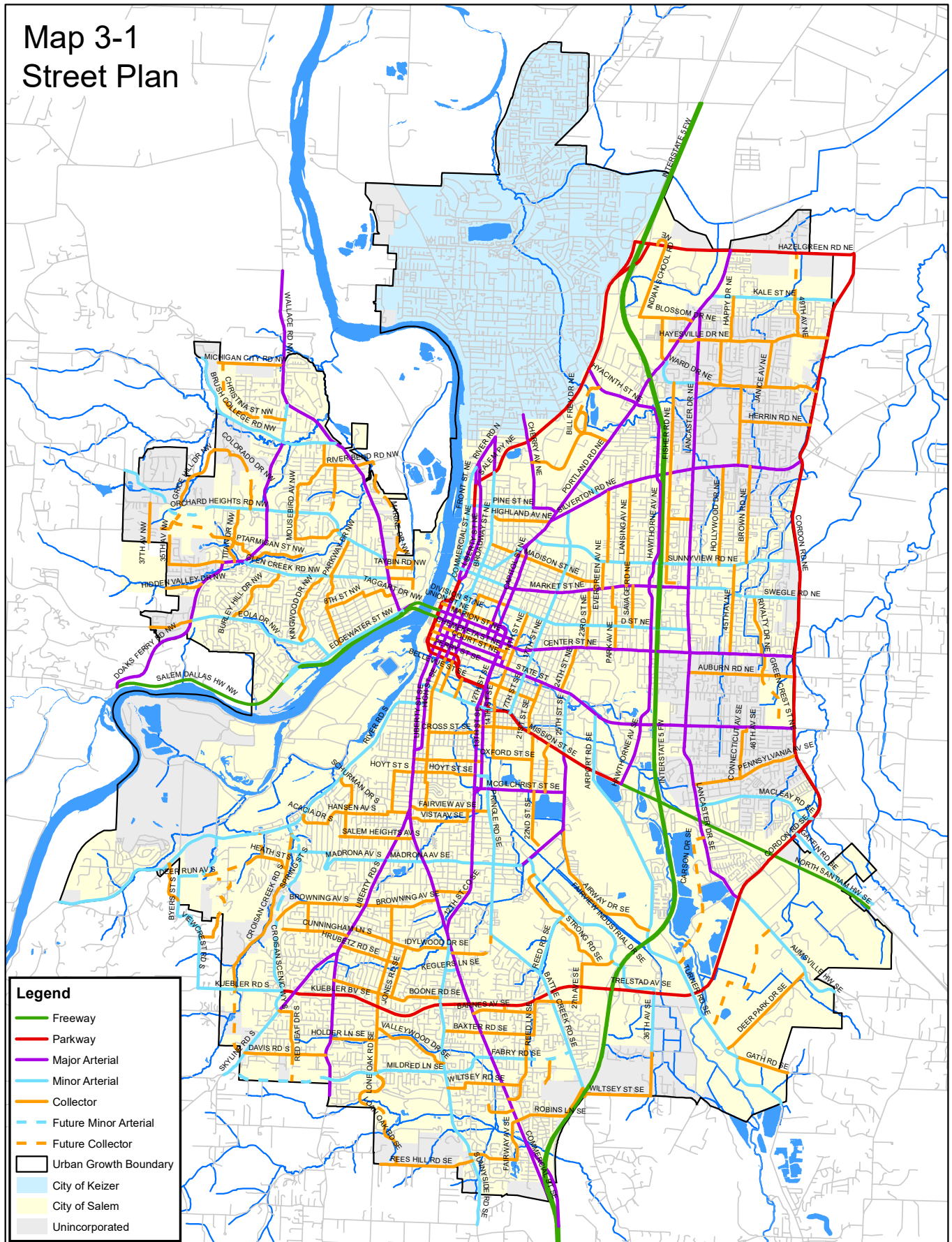
Street System Inventory

The street system for the Salem Urban Area is composed of a series of radial arterial streets that connect outlying City and regional areas with the central core area of Salem. Of greater significance are the several State highways that connect Salem to the rest of Oregon and beyond. In addition to radial arterial streets, several peripheral arterial streets interconnect areas outside of the central core area. A route around Salem, referred to as the circumferential travel route and mostly designated as a parkway, provides connectivity with major arterial streets and regional highways. A system of collector streets serve as connectors between residential neighborhoods and higher level arterial streets. Finally, a system of local streets provides access to properties as well as neighborhood circulation. Map 3-2 shows the streets, roads, and highways within the Salem Urban Area by jurisdiction.

The street and highway system for the Salem Urban Area contains over 593 miles of roadway within Salem and about 247 roadway miles within the UGB

Street Classification	Salem	Outside Salem	Total Miles
Freeway	13.7	1.9	15.6
Parkway	18.9	0.1	19.0
Major Arterial	57.8	9.0	66.8
Minor Arterial	55.5	4.1	59.6
Collector	65.6	16.1	81.6
Local Streets	381.9	215.8	597.7
Sub-Total	593.5	247.0	840.4

but outside of Salem, giving a total of 840 miles of roadways. Table 3-2 shows the amount of mileage by street classification in the Salem Urban Area.



Although each street in the system has a classification, it may not, as yet, be fully improved to its ultimate physical design. The status of streets can be divided into three groups: streets not improved to urban standards; streets improved to urban standards, but not to the ultimate design for its classification; and streets built to urban standards based on their classification. Streets that are fully improved to urban standards are constructed with appropriate substrate, curbs, gutters, storm drainage, sidewalks, illumination, and bicycle lanes where designated. Improved streets that are not currently built to their ultimate design capacity will be constructed to their ultimate design as travel demand warrants.

Street System Capacity

An important measure of the street system's ability to provide mobility is its capacity in relation to traffic demand. Traffic demand is not uniform throughout the day. Certain peak travel periods, usually centering around the morning commute to and evening commute from work, place a greater demand on the system's capacity. Traditionally, the capacity of the street system is planned and constructed to operate within an acceptable LOS during the peak travel hours. In Salem, these hours tend to occur between the hours of 7-8 a.m. and 4:30-5:30 p.m. Several measures are used to evaluate the performance of the street system:

AVERAGE DAILY TRAFFIC VOLUME (ADT)

This is the number of vehicles that use a segment of street over a 24-hour period of an average weekday. An ADT is of itself, not a measure of the performance of the street. It does, however, form the basis for an analysis. Fractions of the ADT, such as peak hour volumes, are used for analysis purposes.

VOLUME/CAPACITY RATIO

This measures the traffic volume on a segment of street compared to its ability to move traffic. An example of a volume-to-capacity (v/c) ratio is as follows: If a single freeway lane has a capacity of 2,200 vehicles per hour, and 1,800 vehicles use the lane during a given hour, the v/c ratio is .82 or its volume is 82 percent of its capacity.

LEVEL OF SERVICE (LOS)

LOS is a qualitative measure used to describe traffic operations. It is expressed as a letter designation A through F. LOS A indicates that traffic flows freely and that, generally, no vehicle waits longer than one red traffic light signal. LOS E indicates that an intersection or street is approaching capacity, with significant traffic delays during peak travel periods. LOS F indicates that the intersection has exceeded its effective capacity. For a full explanation of LOS, see Appendix A.

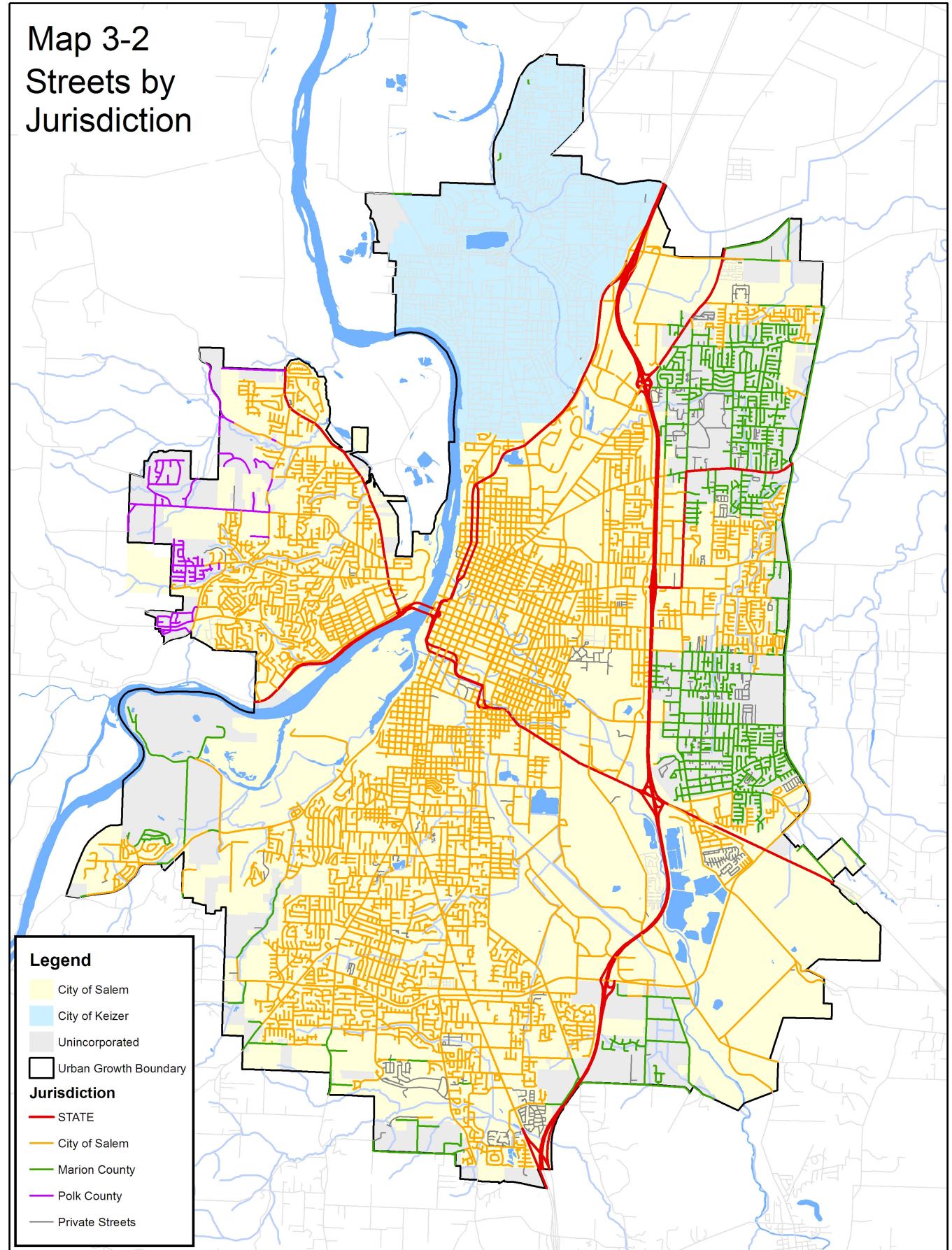
CONGESTION

Congestion is a condition where traffic experiences reduced speeds, little freedom of movement in the traffic stream, and lengthy delays at intersections. Two levels of congestion are used to describe capacity deficiencies on the Salem street system:

Approaching Capacity Deficient conditions are characterized by one or more of the following: reduced speeds, restricted freedom of movement within the traffic stream, and long waits at signalized intersections. The degree of congestion associated with these conditions is defined by LOS E (a v/c ratio of .88 to .99).

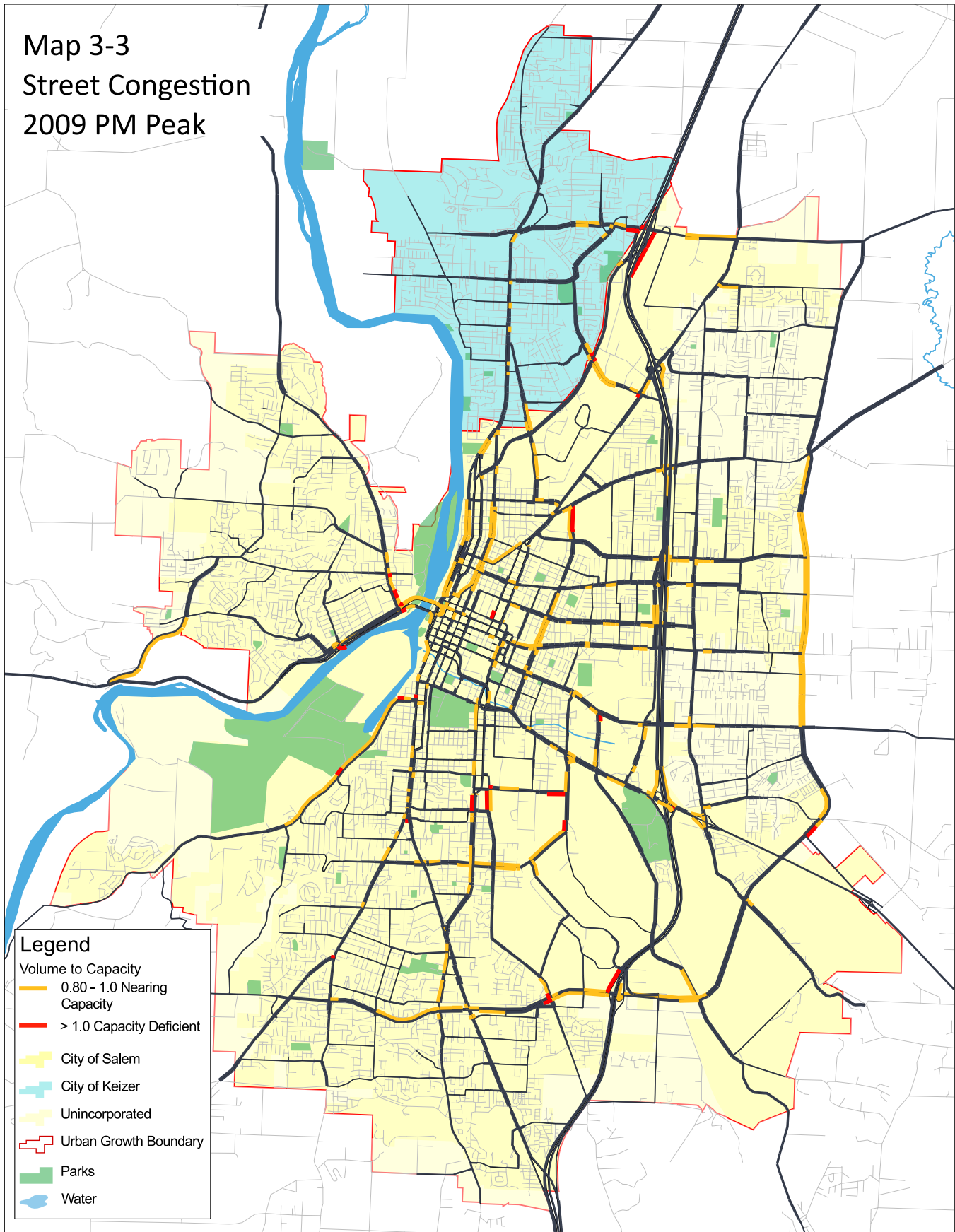
Capacity Deficient conditions are characterized by one or more of the following: extremely reduced speeds, very little freedom of movement, inability to weave/merge, and average waiting at red lights for longer than 60 seconds due to lengthy lines of vehicles at intersections.

The degree of congestion associated with these conditions is defined by LOS F (a v/c ratio of 1.0 or greater).

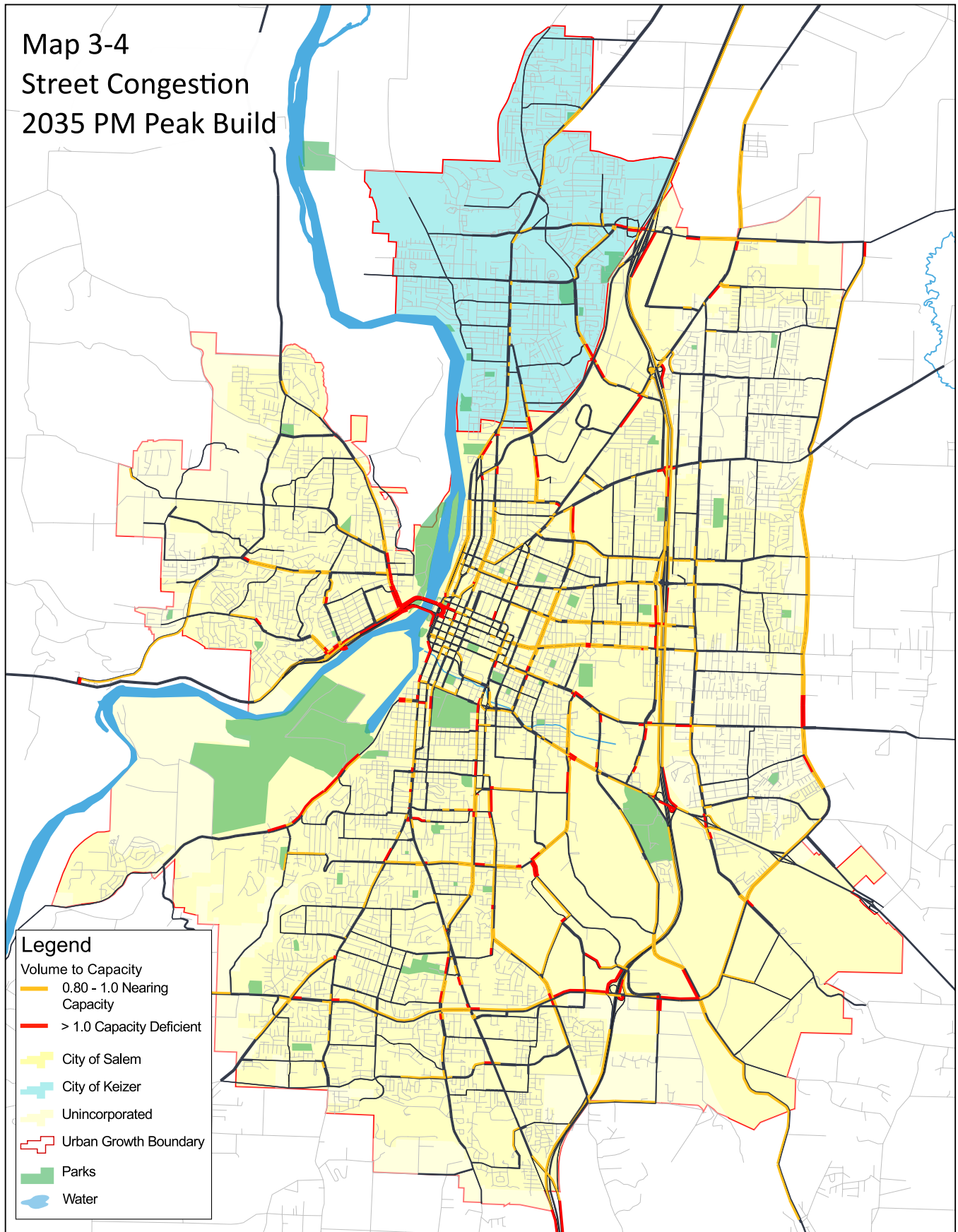


Street System Performance

Map 3-3
Street Congestion
2009 PM Peak



Map 3-4 Street Congestion 2035 PM Peak Build



Legend

- Volume to Capacity
 - 0.80 - 1.0 Nearing Capacity
 - > 1.0 Capacity Deficient
- City of Salem
- City of Keizer
- Unincorporated
- Urban Growth Boundary
- Parks
- Water

Using computer traffic models, SKATS staff evaluated the performance of the Salem-Keizer regional street system. The following two scenarios were developed:

2009 BASE YEAR SYSTEM

2009 population and employment estimates applied to the 2009 street system. Model results are calibrated to actual traffic counts taken around the Salem-Keizer area.

2035 REGIONAL TRANSPORTATION SYSTEMS PLAN (RTSP) BUILD ALTERNATIVE

2035 population and employment forecasts applied on a street network that includes the existing system, committed future projects, and projects included in the Regional Transportation System Plan. Recommended projects include only those that can be funded with reasonably expected revenues. Only a portion of the projects shown in the Salem TSP are included in the Build Alternative.

Table 3-3 shows the results of the computer model runs on the existing 2009 Base Year land use and street network and on the SKATS 2035 Build Alternative land use and street networks for the Salem-Keizer region. The *Salem TSP* deals with those streets and highways found within the Salem Urban Area, comprising about 90 percent of the total regional street mileage. In 2009, the total amount of streets either capacity deficient (3.7 miles)

Functional Classification	2009 Base		2035 Build	
	Approaching Capacity (v/c > 0.88 = < 0.99)	Exceeding Capacity (v/c > 0.99)	Approaching Capacity (v/c > 0.88 = < 0.99)	Exceeding Capacity (v/c > 0.99)
Freeway	0	0	9	0.4
Parkway	3.3	0.7	10.8	1.3
Major Arterial	6.2	1.4	11.5	6.1
Minor Arterial	6.1	1.6	17.8	6.9
Collector	0	0	2.4	4.9
Local	2.6	3.8	8.1	11.9
TOTAL	15.6	3.7	51.5	19.6

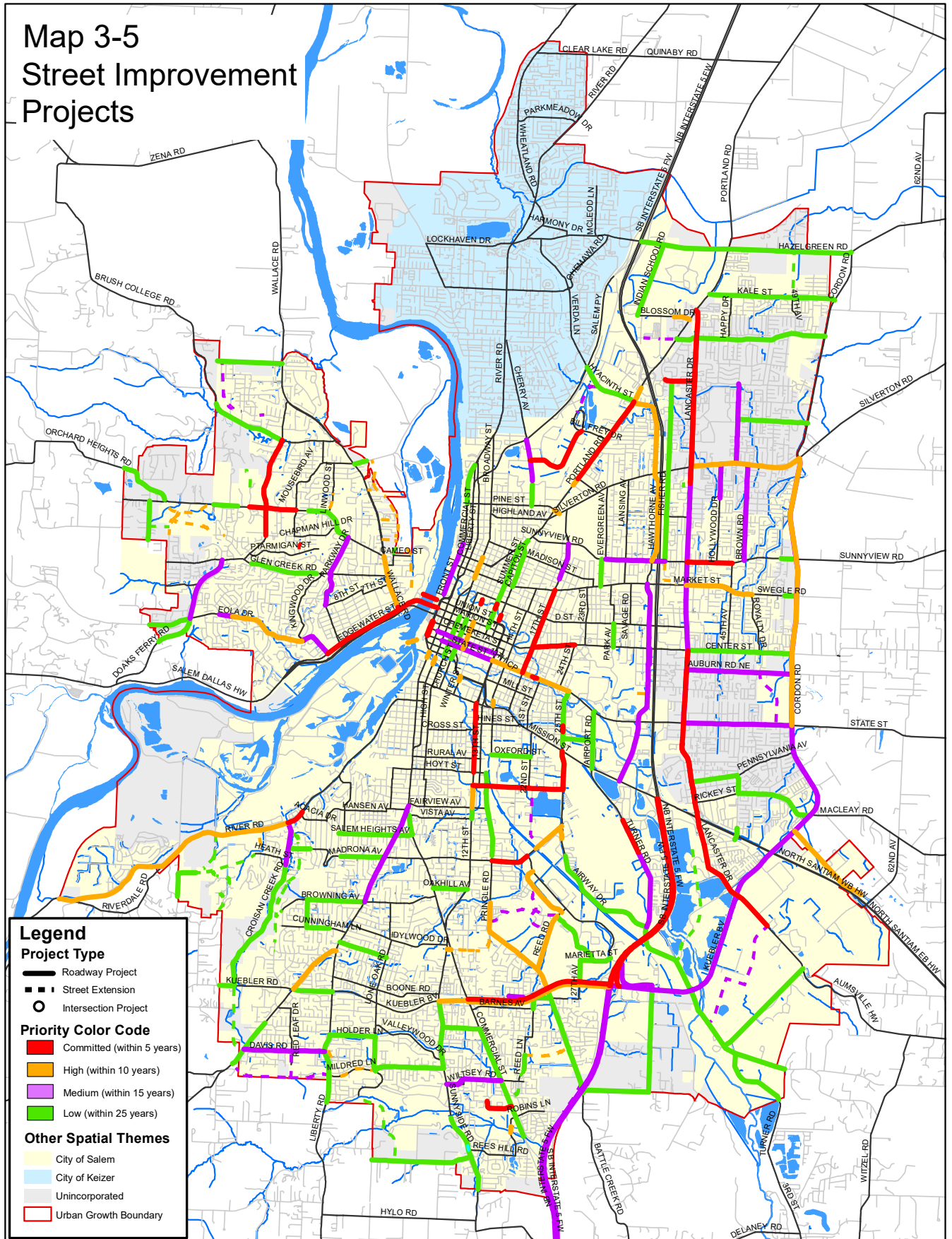
or approaching capacity deficient (15.6 miles) during the P.M. peak travel period was 19.3 miles (see Table 3-3 and Map 3-3). It is forecast that if those projects included in the Build Alternative were constructed by year 2035, the amount of congested streets would increase to 71.1 miles during the P.M. peak travel period (see Map 3-4).

It is important to note that even if the Salem-Keizer region is able to build all of the projects contained in the *Regional TSP* and many from the *Salem TSP*, we will still experience more than a threefold increase in the mileage of congested streets during the P.M. peak travel period by 2035 compared to 2009. Thus, we will be unable to build enough capacity into the system to handle all the peak hour traffic demand expected in the coming years. While it is important that these projects be built to reduce congestion, we can not completely build our way out of congestion! Over the long term our community will need to find other means of accommodating peak hour travel demand in addition to constructing street capacity. Other elements of the *Salem TSP* deal with how to increase mobility through other modes of travel and how to better manage travel demand.

Traffic Safety

Promoting traffic safety in Salem is a key objective of the *Salem Transportation System Plan* (refer to Street System Element, Objective No. 3). Red light photo radar is a relatively new tool that could assist in this effort, specifically related to Policy 3.2, Enforcement of City and State Motor Vehicle Code. The Oregon Legislature approved the use of red light photo radar for cities with a population of 30,000 or more in 2001 (ORS 810.434–810.436). By State law, this tool may be used at no more than eight intersections in the city and must be operated with City funds.

Map 3-5 Street Improvement Projects



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Date: 10/8/2019

While this tool has not been implemented in Salem as of 2006, it is being actively pursued jointly by the Public Works Department Transportation Services Division and Police Department Patrol Division. Additional tools available to increase safety on residential streets are described in the

Improvements to the Salem Highway and Street System

Our community will need to make investments in our street system if it is to provide the level of mobility that is important to economic vitality and overall livability. Based on the current and expected performance of the street system, it is evident that additional investments will need to be made to improve system capacity. In addition to increasing capacity, some arterial streets need to be improved to full urban standards to increase bicycle and pedestrian mobility. Street system improvement projects include needs on functionally classified streets (collector and higher) and are shown on Map 3-5. They are categorized as follows:

Committed Projects: Funds are available from an existing, ongoing, or authorized source. The project has a construction time frame.

Recommended Projects (High, Medium, and Low Priority): These projects are recommended to be completed in the future as funding becomes available. A general funding priority and time frame is listed for construction. Note that most of the high, some of the medium, but none of the low priority projects from this Plan are included in the region's recommended projects used for traffic modeling purposes. This is because the Regional Plan is required by Federal law to be "financially constrained."

Local Street Improvements: Local street improvements are needed to bring local residential streets up to urban standards, including curbs, sidewalks, drainage, and street lighting. These improvement needs for local streets are not individually identified in this Plan.

Projects are also categorized by jurisdiction, since projects within the Salem Urban Area shown in this Plan may be completed by other jurisdictions such as the Oregon Department of Transportation or Marion County. Each project is numbered to correspond with the numbered projects shown on the city sector maps (Maps 3-6 to 3-9).

COMMITTED PROJECTS

See Map 3-5 for the location of each of these projects.

Aumsville Highway SE (Kuebler Boulevard SE to Marion County Jail Entrance) (163)

Funds are identified in the *Capital Improvement Plan* to improve this section of roadway to a Minor Arterial turnpike standard, with two travel lanes, a center turn lane, paved shoulders, bioswales on both sides, and a 12-foot multi-use path. This project will also widen all approaches to the intersection at Kuebler Boulevard SE.

Doaks Ferry Road NW (Brush College Road NW to Orchard Heights Road NW) (82)

Funds are identified in the *Capital Improvement Plan* to improve this Major Arterial street to interim Minor Arterial standards.

Front Street Construction, Phase 2 (52)

The Front Street project was designed to facilitate pedestrian access between Riverfront Park and Downtown Salem. This project is fully funded with funds from the Riverfront-Downtown Urban Renewal District. Phase 1 was completed in 2004. Phase 2 includes widening the Center Street Bridge off-ramp to Front Street to two lanes.

Interstate 5 (Highway 22 to Kuebler Boulevard SE) (ODOT) (123)

ODOT has funded and begun this project to widen Interstate 5 to six lanes, to improve the interchanges at Highway 22 and at Kuebler Boulevard, and to replace seven bridges along this section of highway. This project is scheduled for completion in 2008.

Kuebler Boulevard SE (Interstate 5 Interchange to Commercial Street SE) (131)

Funds are committed to construct the westbound (north) side of this section of roadway to a modified Parkway standard, including intersection improvements at Battle Creek and a new signal at 27th Street SE.

Lancaster Drive Access Management (Marion County) (21)

The SKATS Transportation Improvement Program identifies funds to plan and possibly implement some access management measures on Lancaster Drive NE/SE in the Marion County portion of this major arterial.

McGilchrist Street SE (12th Street SE to 25th Street SE) (116)

Classified as a Major Arterial, McGilchrist Street SE provides a major east-west connection between inner Southeast Salem, the industrial district, and the airport. The 1993 daily traffic volumes of approximately 11,000 vehicles have increased to approximately 13,000 in 2006. A funding package has been created to reconstruct this roadway to a three-lane standard from 12th Street SE to 22nd Street SE, and to a four-lane standard (two eastbound lanes and a center turn lane) from 22nd Street SE to 25th Street SE. This project will also add or upgrade signals at five intersections, realign 22nd Street SE and widen both 22nd and 25th Streets in the vicinity of McGilchrist Street SE.

River Road S (Acacia Drive S to Croisan Creek Road S) (69)

Funds are committed to install a new traffic signal at Croisan Creek Road S and to construct left-turn pockets at intersections with Acacia Drive S, Golf Course Road S, and Valley High Street S.

Salem Industrial Drive NE (Cherry Avenue NE to Bill Frey Drive NE) (42)

Funds are committed to improve the southbound and westbound (north) side of this street to urban Collector standards, including travel lane with curb, gutter, sidewalk, bicycle lane, and storm drainage.

Turner Road SE (Cascade Gateway Park extending south 2,100 feet) (153)

Funds are committed to widen this roadway section to provide two travel lanes, a center turn lane, bicycle lanes, and curbs. The drainage ditch on the west side of the road will be relocated further to the west to make room for the widening project.

Ward Drive NE (Ward Court NE to Lancaster Drive NE) (Marion County) (28)

This segment of Ward Drive NE is classified as a Minor Arterial street in the *Salem Transportation System Plan*. This project will widen the roadway to two travel lanes and a center turn lane to improve traffic flow. This project will also construct curbs, sidewalks, and bicycle lanes.

Broadway Street NE (at Stark Street N) (258)

Funds are committed to construct a queue jump for northbound bus traffic at Stark Street N. This is a High Priority Transportation Corridor project.

Brown Road NE (at Sunnyview Road NE) (162)

Funds are committed to construct a dedicated southbound right-turn lane on Brown Road to westbound Sunnyview Road NE.

Center Street Bridge Ramp at Front Street Signal (50)

Replace stop sign on ramp with a signal to allow more bridge traffic to exit onto northbound Front Street NE; would require some modification to the median on Front Street NE. This project came from the 1998 Willamette River Bridgehead Engineering Study.

Cordon Road SE at Macleay Road SE and Gaffin Road SE (127)

Funds have been identified to install a traffic signal at the Macleay Road SE intersection and to make some improvements to the intersection. As traffic volumes increase, additional improvements will be needed to provide turn lanes on the Macleay Road SE approaches to Cordon Road SE. A southbound left-turn pocket will also be constructed at the intersection of Cordon Road SE with Gaffin Road SE.

Cordon Road SE (at State Street) (Marion County) (161)

Construct improvements to the intersection with State Street that include turn pockets where appropriate.

Cordon Road SE (at Pennsylvania Avenue SE) (Marion County) (104)

Pennsylvania Avenue SE is classified as a Collector street in the *Salem Transportation System Plan*. This project will add a northbound to westbound left-turn pocket on Cordon Road SE. This is a high hazard intersection and a high priority project for the Salem Urban Area.

Interstate 5 (at Kuebler Boulevard SE) (ODOT) (192)

Construct a new westbound to northbound ramp at the Kuebler Boulevard Interchange.

Market Street NE (at Broadway Street NE) (62)

Construct eastbound and westbound left-turn pockets on Market Street NE at Broadway Street NE. This project is a part of the High Priority Transportation Corridor.

Market Street NE at Lancaster Drive NE (24)

Funds are identified in the *Capital Improvement Plan* to construct right-turn lanes along the westbound and southbound legs of this intersection.

Salem Parkway (at Hyacinth Street NE and at Cherry Avenue NE) (35)

Provide upgrades at both intersections in order to improve safety.

Sunnyview Avenue NE at Lancaster Drive NE (43)

Funds are identified in the *Capital Improvement Plan* to construct eastbound and westbound right-turn lanes at this intersection.

Traffic Signals at Various Intersections

Install five new Traffic Signals at various intersections based on meeting signal warrants.

Wallace Road NW at Glen Creek Road NW (90)

A high priority should be given to solving the capacity and circulation problems on Wallace Road NW, especially the segment between Edgewater Street NW and Orchard Heights Road NW. With existing peak hour operations at LOS F, the City will need to work with ODOT to construct a second dedicated left-turn lane and a dedicated right-turn lane northbound on Wallace Road NW at the intersection with Glen Creek Road NW. The western approach to the intersection on Glen Creek Road NW will need to be expanded up the hill to accommodate vehicle queues and right turns eastbound on Glen Creek Road NW. Other improvements planned for this intersection include adding both an eastbound and a westbound approach lane on Glen Creek Road NW.

Wiltsey Road SE at Commercial Street SE (253)

Construct eastbound and westbound left-turn lanes at Commercial Street SE and signalize.

Bridge Replacement and Rehabilitation Projects

Several bridges in the Salem area have recently been improved using State funds. The following bridges are also scheduled to be either replaced or rehabilitated in the near future: State Street bridge at Mill Creek (237); 25th Street SE bridge at Shelton Ditch (238); Cottage Street NE bridge at Mill Creek (250); Capitol Street NE bridge at Mill Creek (239); and Summer Street NE bridge at Mill Creek (240).

Sundance Court NW Extension (End of Sundance Court NW to Olympia Avenue NW) (170)

A new local street connection should be built that will connect Ptarmigan Street NW to Olympia Avenue NW via a northward extension of Sundance Court NW. This local street connection is to be constructed to provide an improved connection to Chapman Hill Elementary School from residential neighborhoods to the south. It will also serve as a replacement connection for the former extension of Ptarmigan Street NW to Chapman Hill Road NW.

Traffic Signal Interconnect Projects/ITS

Funds have been committed to interconnect several traffic signals around the Salem area. Signal upgrading and interconnection allows for centralized computer control and coordination of traffic signals, thus allowing for greater efficiency in systemwide traffic control. These interconnect projects are one form of Intelligent Transportation System (ITS) improvements. For more information, see the Transportation System Management Element of the Plan. (See Table 4-1.)

Table 3-4 shows the estimated costs involved in constructing the committed street improvement projects in the Salem Urban Area. The table also indicates inside which wards and neighborhood associations each project is located along with other project information. When State highway projects are included, the total amount of committed projects waiting to be constructed in the Salem Urban Area amounts to nearly \$120 million.

Recommended Highway and Arterial Street Improvements

STATE OF OREGON HIGHWAYS

There are five State of Oregon Highway routes that traverse the Salem Urban Area: Interstate 5, Highway 22, Highway 99E (Portland Road NE), Salem Parkway NE, and Highway 221 (Wallace Road NW/Edgewater Street NW). Improvements to these highways are typically done by the Oregon Department of Transportation (ODOT), or by local jurisdictions with the permission of ODOT. These highways provide Salem with regional and statewide connections. They also serve as major freight and commute routes for businesses and residents in Salem. Access onto State of Oregon highways is regulated per OAR 734-051.

Interstate 5 is the principal north-south highway in Oregon. In 1993, Interstate 5 carried 67,000 vehicles per day at the north end of the Salem Urban Area, and 47,000 vehicles per day at the south end of the Salem Urban Area. By the Year 2005, traffic levels increased to 88,800 and 57,100 vehicles per day, respectively. Currently, there are only minor capacity deficiencies on several Interstate 5 interchanges as shown on Map 3-3. However, by the Year 2030, even after the completion of the widening projects, much of Interstate 5 will be approaching capacity deficient in the P.M. peak hour, including all of the main line between Kuebler Boulevard S and Portland Road NE (see Map 3-4).

Issues

With the eventual widening of Interstate 5 to six lanes through the Salem Urban Area and the improvement to area interchanges, primary north-south mobility will be assured through Salem. The major issues concerning State highways in Salem now relate to how our community utilizes State facilities as community thoroughfares without degrading their ability to serve as regional travel routes. Can the capacity of these highways be improved without creating physical barriers that divide our community? Another question is whether Salem should continue to rely on State highways as our only means to cross the Willamette River.

The Oregon Highway Plan (1999) includes a variety of different designations that can be applied to State highways to reflect the different roles that highways play in serving statewide and local transportation needs. These include Freight Route, Expressway, and National Highway System, as well as a classification for each highway (interstate, statewide, regional, or district). In addition there are four highway segment designations that can be applied to highways to foster compact development patterns in communities. These highway designations are Special Transportation Areas, Commercial Centers, Urban Business Areas, and Urban. These designations guide ODOT's position on local land use planning and development standards and actions and define the application of access management standards and broad types of highway facility design. None of these latter four highway segment designations have been applied in Salem. The City may wish to work with ODOT in the future to apply highway segment designations on State highways that serve core areas of the community.

ODOT has particular interest in the functioning of interchanges, particularly along I-5. ODOT prepares Interchange Area Management Plans (IAMP) to support safe and efficient operation of the state highway system. In the Salem area, to date, ODOT has prepared IAMPs for the Kuebler Boulevard SE interchange and the Chemawa Road NE interchange. To support the safe and efficient operation of these interchanges, Salem will provide to ODOT, other affected jurisdictions, and the Salem-Keizer Transit District notification about land use plan, zoning, and traffic-related ordinance changes proposed in any IAMP. The purpose of the notification will be to provide an opportunity to review and comment on any potential traffic impacts associated with the subject proposal.

Alternatives

Several State highway corridors within Salem are currently being studied, or planned to be studied, over the next five years. It is important that many of the questions listed above are answered through these studies.

Interstate 5

The remaining phases of construction are needed on Interstate 5 to complete the six-lane widening effort through the Salem Urban Area.

Phase IIIb: Widening from Santiam interchange to Kuebler Boulevard SE interchange. Construction is underway and scheduled for completion in 2008.

Phase IV: Widening from Kuebler Boulevard SE to Delaney Road SE, Illahe Crossing. Construction is needed within next 15 years.

Highway 22—Willamette River Bridges (Center Street and Marion Street Bridges)

The Rivercrossing Capacity Study identified the need for an additional bridge across the Willamette River to solve long-term capacity and circulation issues. The City is working cooperatively with other regional jurisdictions to proceed with the planning and environmental work required to locate and construct a new bridge. This effort is referred to as the Salem River Crossing Project. The initial goal of this process will be to identify an alignment specific enough so the City and the region can begin to acquire and preserve right-of-way that will be needed for the eventual

construction of an additional bridge. This issue is discussed further in the sections of this Plan that address Issues Requiring Future Study and the Long-range Transportation Strategy.

The 1998 Willamette River Bridgehead Engineering Study identified several improvements that could be made in the relative short term to increase the carrying capacity of the bridgehead area and extend the operational life of the bridges throughout the next 10 to 20 years. Some of these improvements have been constructed. The remaining are included in the project sections of this Plan.

Highway 22 Corridor

The Highway 22 Corridor Study, begun in 1994, has identified several refinement studies that will look at ways to improve the performance and safety of the highway as it traverses the Salem Urban Area. These studies are expected to look specifically at:

Highway 22 Expressway Management Plan (25th Street SE to Gaffin Road SE)

This planning effort, which was close to being completed in 2006, is defining improvement projects to the Mission Street SE/Highway 22 corridor that will be needed over the next 20 years to ensure that it continues to function properly. This Plan has been developed as a part of the Southeast Salem Area Transportation Study (SESATS), which is also being used to produce the Interstate 5/Kuebler Boulevard Interchange Management Plan.

Highway 22/Mission Street SE Through Central Salem (25th Street SE to the Willamette River Bridges)

Is the current route through Central Salem the best for the community? What can be done to expedite traffic movement through Central Salem? This could include recommendations that eventually eliminate direct property access to this portion of Highway 22.

Highway 22—West of the Willamette River (From the Marion Street and Center Street Bridges to the Salem UGB, including the Rosemont Avenue NW interchange, intersections at Stoneway Drive NW, College Drive NW, and Doaks Ferry Road NW)

The current Rosemont Avenue NW interchange requires drivers to merge from the left to go eastbound on Highway 22. Should the existing interchange be improved or replaced by a new interchange at Eola Drive NW? Such a new interchange would provide arterial street access to the established and developing areas of West Salem. Should actions be taken to improve safety at nonsignalized intersections at Rosewood Drive NW, Stoneway Drive NW, College Drive NW, and Doaks Ferry Road NW? Such actions could include prohibiting left turns to and from the highway to some or all of these city streets. Long-term actions could include the construction of frontage roads that would eliminate direct property access to the highway. In the future, should the intersection at Doaks Ferry Road NW be built as a grade-separated interchange?

One promising concept in this area is to realign Doaks Ferry Road NW to the east so that it intersects with Highway 22 closer to College Drive NW. A new connection then could be constructed between College Drive NW and the new alignment of Doaks Ferry Road NW. In the future, the new intersection with Highway 22 created by the realigned Doaks Ferry Road NW could be constructed as a grade-separated interchange much more easily than the current intersection of Highway 22 and Doaks Ferry Road NW. The existing College Drive NW intersection could either be closed or restricted to right-in/right-out. This potential future transportation improvement would help address circulation needs in the western portion of the Salem UGB and improve safety along Highway 22. While promising, the City, Polk County, and ODOT will need to complete significant planning, public involvement, and design work to determine if this concept is the best solution to transportation problems on this section of Highway 22.

Wallace Road NW (Highway 221)

Wallace Road NW serves as one of the primary routes into the city of Salem, connecting the Willamette River bridges with Dayton and McMinnville. Wallace Road NW is classified as a Major Arterial in the Salem classification system and as a District Highway in the State of Oregon highway system. Most of West Salem's east-west arterials begin at Wallace Road NW, making it the primary north-south route in West Salem. With the majority of traffic heading to or from the Center Street and Marion Street Bridges and the commercial district south of Orchard Heights Road NW, significant congestion occurs on the southern end of Wallace Road NW during peak travel hours.

In 1993 daily traffic volumes on Wallace Road NW ranged from 27,000 north of Edgewater Street NW to 6,800 north of Michigan City Lane NW. By the Year 2005, these traffic volumes had increased to 40,700 and 8,700 respectively. Volumes at the Edgewater location represent a 50 percent increase in the 12-year period.

A major issue concerning Wallace Road NW now and in the future is the ability of the highway, between Orchard Heights Road NW and Edgewater Street NW, to handle the tremendous traffic load expected over the next 20 to 40 years. The Wallace Road Local Access and Circulation Study, adopted by Council in November 1997, identified ways to increase local street circulation, connectivity between properties, consolidating access, and the potential of a collector level street that would parallel Wallace Road NW on the east.

LOCAL ACCESS AND CIRCULATION RECOMMENDATIONS

The following recommendations are adopted as part of the *Salem Transportation System Plan*:

1. The City of Salem shall work with the Salem Area Mass Transit District to modify or expand the current "pulse system" scheduling of transit bus service in West Salem to improve availability of buses during each service hour.
2. Bicycle lanes should be included in all plans for improvements to Wallace Road NW and all existing and new arterial and collector streets within West Salem.
3. Transportation alternatives need to be identified that will allow Wallace Road NW to remain in its existing configuration, whether it be a five-lane cross section with a continuous center turn lane or four travel lanes with a raised median and turn lanes, between Glen Creek Road NW and Edgewater Street NW.
4. At the Wallace Road NW intersection with Glen Creek Road NW, add a northbound right-turn lane on Wallace Road NW and one eastbound right-turn lane on Glen Creek Road NW, and reduce northbound left-turn green time by adding an additional left-turn lane on Wallace Road NW.
5. A new north-south collector street (Marine Drive NW) should be constructed east of Wallace Road NW that will provide a spine for local access and circulation. The alignment should begin at Moyer Lane NW and continue north parallel to Wallace Marine Park, then follow the UGB, ending at River Bend Road NW. An alternate alignment that extends 5th Avenue NW northward along the UGB should be built if there are difficulties in constructing the preferred eastern alignment along Wallace Marine Park.
6. To facilitate local access and circulation, new local streets should be constructed as development and redevelopment occurs to provide access and circulation to the area east of Wallace Road NW. These streets include:
 - a. An eastward extension of Moyer Lane NW to intersect with the new north-south collector street.

- b. An eastward extension of Veall Lane NW to intersect with the new north-south collector street.
- c. A new north-south local street that provides a connection between Taybin Road NW and Glen Creek Road NW. (Completed.)
- d. A new north-south local street that provides a connection between Glen Creek Road NW and Veall Lane NW. (Completed.)
- e. A new north-south local street that provides a connection between Veall Lane NW and Moyer Lane NW. (Completed.)
- f. A new local street connection between Moyer Lane NW and a new intersection with Wallace Road NW. (Completed.)
- g. An eastward extension of Narcissus Court NW across Wallace Road NW to intersect with the new north-south collector street.
- h. An eastward extension of Hope Avenue NW across Wallace Road NW to intersect with the new north-south collector street.
- i. An eastward extension of Harritt Drive NW across Wallace Road NW to intersect with the new north-south collector street.

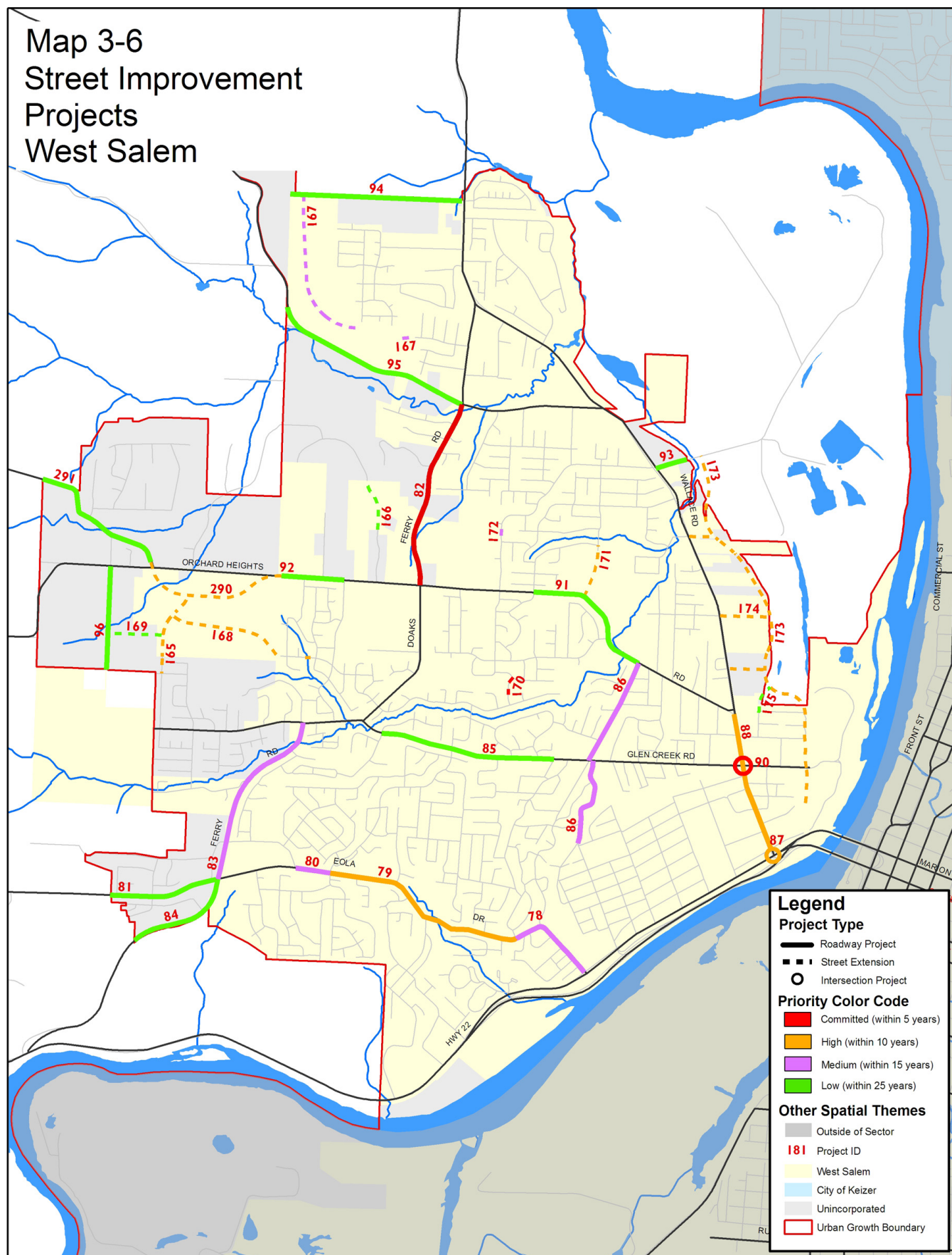
The location of future street alignments are shown on Map 3-5. The exact location of these future streets may need to be adjusted over time to take advantage of changing circumstances and opportunities. The primary focus is to establish a grid-like street system between Wallace Road NW and the new Marine Drive NW.

- 7. To facilitate local access and circulation for future commercial and retail development or redevelopment, new local streets should be constructed in the area west of Wallace Road NW. These streets include:
 - a. A new north-south collector street that partially bisects the block created by 7th Street NW, Murlark Avenue NW, Bassett Street NW, and Wallace Road NW. This street will provide a new collector street connection between 7th Street NW and a new east-west collector street. (Completed.)
 - b. A new east-west collector street that bisects the block created by 7th Street NW, the new north-south local street, Bassett Street NW, and Wallace Road NW. This street will provide a collector street connection between the new north-south collector street and Wallace Road NW. (Completed.)

The exact location of future streets in this area may need to be adjusted over time to take advantage of changing circumstances and opportunities. The primary focus is to establish a grid-like street system between Wallace Road NW and Murlark Avenue NW as the area redevelops into commercial or retail uses. It is not intended that this recommendation be implemented to the detriment of existing industrial uses.

- 8. To improve traffic progression and signal spacing on Wallace Road NW, the City shall relocate the existing traffic signal at the intersection of 7th Street NW and Wallace Road NW to a new location approximately one block south at the intersection of the new streets described in recommendations 6.f. and 7.a. The relocation of this signal shall occur only after these new streets are constructed. (Completed.)
- 9. To provide adequate right-of-way for future improvements, the Wallace Road NW right-of-way width requirement for the segment between Edgewater Street NW and Orchard Heights Road NW should be maintained at a minimum of 108 feet. Additional right-of-way may be required to construct turn lanes at intersections.

10. When resources are available, a raised landscaped median should be constructed between Edgewater Street NW and Orchard Heights Road NW, with appropriate locations for openings and turn lanes. The median will serve to enhance the gateway character of



the area and promote safety, traffic flow, and aesthetics. This gateway treatment should include landscaped planting strips and adequate pedestrian and bicycle facilities.

11. When resources are available, overhead utility wires along Wallace Road NW, both parallel and crossings, should be undergrounded in the area between Edgewater Street NW and Michigan City Lane NW.

Salem Parkway NE

Only moderate improvements are planned for the Salem Parkway NE within the next 25 years. However, efforts will need to be made to resist pressures to create more intersections with this important thoroughfare. There may be a future need to create a raised median to better separate traffic flows. The Salem Parkway/Kroc Center Access Study recommended installation of additional pedestrian and bicycle crossing enhancements at the intersection of Salem Parkway and Hyacinth Street NE with the goal of increasing the visibility and safety of pedestrians and bicyclists.

Highway 99E

There are not many large-scale issues that involve this highway (Portland Road NE) over the next 25 years. The main emphasis will be on streetscape improvements and on maximizing the capacity and safety of the existing roadway. Traffic signal coordination and other transportation system management measures will be utilized.

City of Salem Street System

WEST SALEM

Issues

The dominant issue facing West Salem is growth. West Salem has experienced rapid growth and will face the greatest increase in population in the city over the next 25 years. With a large portion of Salem's undeveloped land located there, the incorporated population in West Salem has grown from 13,675 in 1993 to 20,725 in 2005, an increase of over 50 percent in 12 years. Over the next 25 years it is forecast to more than double. On the other hand, employment, which stood at about 3,500 in 2000, is expected to increase by less than 1,000 jobs through 2030, representing a 26 percent increase. Many of these jobs are expected to be located along the Wallace Road NW corridor. The existing City street system is constrained by topography and existing development patterns. Access to West Salem is an issue with only two bridges crossing the Willamette River. In addition to issues of vehicular capacity, many of the arterial and collector streets in West Salem need to be upgraded to full urban standards with curbs, sidewalks, and bicycle lanes.

Arterial Street System

In addition to the State highways, the arterial street system contains four east-west arterials: Brush College Road NW, Orchard Heights Road NW, Glen Creek Road NW, and Eola Drive NW/Edgewater Street NW. Doaks Ferry Road NW is the one north-south arterial. These roadways feed into Wallace Road NW to the northeast and Highway 22 along the south. All of the east-west arterials are classified as Minor Arterials. Doaks Ferry Road NW is classified as a Major Arterial street south of Brush College Road NW and a Minor Arterial north of Brush College Road NW. Despite topographical constraints, the east-west arterial system is well-spaced and is expected to be able to distribute traffic to the respective north-south arterials. The major constraint points in the future will be Wallace Road NW and the Willamette River bridges.

Collector Street System

Over a dozen different streets are classified as collector streets in West Salem. Their primary purpose is to take local traffic and feed it to and from the arterial street system. Many of the collector streets are through residential neighborhoods, constituting the “spine” street of a subdivision or neighborhood. It is important that collector street connections be made between the east-west arterial streets so that traffic can circulate freely through the entire system. Improving vehicular capacity on the collector street system is not so much the issue as bringing these streets up to urban standards, having curbs, sidewalks, drainage, illumination, and where needed, bicycle facilities. Although some of these streets will need to be improved through citywide bond funding, many will be improved over time as a product of land development and systems development charges.

Land Use Alternatives

The West Salem Neighborhood Plan, adopted in 2003, provides detailed goals and policies for the West Salem neighborhood. This plan is a refinement of and consistent with the Salem Area Comprehensive Plan. The West Salem Neighborhood Plan recommends, in part, that the currently homogeneous single family land use designations for West Salem be revised so that small nodes or community centers can be developed at key intersections. This is reflected in the Generalized Land Use Map included in the neighborhood plan. By providing shopping opportunities, neighborhood services, and office space, residents will be able to reduce their travel to other areas of Salem. These centers would also provide employment opportunities in the West Salem hills. Those living near these centers will be able to walk or bicycle to shop or work, thus reducing automobile-oriented travel. More employment opportunities in West Salem will reduce the unidirectional peak hour commute patterns, thus creating a more balanced travel demand.

Transportation Alternatives

The best opportunity for improving local circulation within West Salem is to bring the area’s arterial and collector streets up to full urban standards. Having access to sidewalks and bicycle lanes will provide greater mobility options for people making short trips. An example of these types of improvements include those described in the Pedestrian System Element for the Edgewater District. Multimodal improvements will also provide greater accessibility to transit routes. Increased transit services and ridership is the best alternative to building more bridge crossing capacity across the Willamette River. This will require shorter headways for current bus services, peak hour express services, and the development of additional park-and-ride facilities.

Recommended Improvements

The arterial and collector street system needs to be constructed to full urban standards with an appropriate level of system capacity. The following projects are numbered to correspond with the numbered projects shown on Map 3-6:

High Priority (Construction needed within 10 years)

Eola Drive NW (Kingwood Drive NW to Sunwood Drive NW) (79)

This street needs to be improved to full urban standards with two travel lanes, center turn lane, bicycle lanes, curbs, and sidewalks.

Orchard Heights Road NW (BPA Power Line to Orchard Heights Place NW) (290)

Realign the roadway to the south to follow the topography in the area.

Wallace Road NW (Edgewater Street NW to Orchard Heights Road NW) (88)

This access management and local street circulation project will improve traffic flow on the most congested portions of Wallace Road NW. This project will include the installation of a

center, landscaped median with turn pockets to serve businesses along Wallace Road NW between Orchard Heights Road NW and Edgewater Street NW.

Wallace Road NW at Edgewater Street NW (87)

This project is part of a package of improvements needed to increase the capacity and operational life of the existing Willamette River bridges and their ramp systems. This project would increase the radius of the westbound off-ramp from Highway 22 to Wallace Road NW/Edgewater Street NW. Additional lanes would be added on the ramp. An additional eastbound bridge entrance lane would be added on Edgewater Street NW.

35th/34th Avenue NW Extension (Osage Drive NW to Orchard Heights Avenue NW) (165)

The current terminus of 35th Avenue NW should be extended northward to connect to Orchard Heights Road NW at or near the intersection with Grice Hill Road NW. At this point the street may be numbered as 34th Avenue NW. This street connection will be classified as a Collector street.

Islander Drive NW Extension (West Meadows Drive NW to 35th Avenue NW Extension) (168)

Islander Drive NW should be extended westward to intersect with the northward extension of 35th Avenue NW.

Linwood Street NW Extension (Goldcrest Avenue NW to Orchard Heights Road NW) (171)

This street should be extended southward to connect with Orchard Heights Road NW.

Marine Drive NW and Wallace Road Area Local Street Network (173 and 174)

A new collector street (Marine Drive NW) that parallels Wallace Road NW to the east will be constructed to provide local access and circulation for existing and future development. The portion of Marine Drive NW north of Cameo Street NW will need to be constructed as development occurs. A new system of local streets will be developed on the east side of Wallace Road NW to improve local access and circulation between Wallace Road NW and the new Marine Drive NW.

Medium Priority (Construction needed within 15 years)

Cascade Drive NW (8th Avenue NW to Glen Creek Road NW)/Parkway Drive NW (Glen Creek Road NW to Orchard Heights Road NW) (86)

In order to improve safety, it is necessary to improve the Cascade Drive NW/Parkway Drive NW collector street route between 8th Avenue NW and Orchard Heights Road NW to urban standards. This includes curbs, sidewalks, bicycle lanes (where feasible), and adequate storm drainage. Given steep slopes and close proximity of adjacent residences, particularly in the section of Cascade Drive NW between 8th Avenue NW and Glen Creek Road NW, improvements should be made within existing right-of-way widths wherever possible. The need to realign Parkway Drive NW and Cascade Drive NW at Glen Creek Road NW will require future study as part of project design.

Christina Street NW Extension (Elliot Street NW to Michigan City Lane NW) (167)

Extend Christina Street NW west and north creating a new collector street that makes a connection between Doaks Ferry Road NW and Michigan City Lane NW. Also complete the missing link between Redfir Street NW and Cherry Blossom Street NW. Much of this alignment is currently outside the city limits. This connection will occur as land comes into the city and is developed.

Doaks Ferry Road NW (Glen Creek Road NW to Eola Drive NW) (83)

Based on 2030 model traffic volumes, Doaks Ferry Road NW may ultimately need to be improved to a five-lane facility south of Orchard Heights Road NW to Highway 22 when build-out of the UGB is achieved. In the interim, it is recommended that Doaks Ferry Road NW be improved to a three-lane, Minor Arterial standard, including all necessary realignments and intersection improvements. Most of the east side of this roadway segment has already been improved to this interim standard.

Eola Drive NW (Edgewater Street NW to Kingwood Drive NW) (78)

The street will need widening for a center turn lane in specific locations, plus whatever other improvements are needed to bring the street up to full urban standards. The Eola Drive NW approach to the intersection with Edgewater Street NW will need to be widened to accommodate turn lanes and additional queuing distance for vehicles.

Eola Drive NW (Sunwood Drive NW to Gehlar Road NW) (80)

Improve to Minor Arterial standards with two travel lanes, center turn lane, bicycle lanes, curbs, gutters, and sidewalks. Some of the needed improvements along this section of roadway have already been completed through development.

Mousebird Avenue NW Extension (Royal Crown Avenue NW to Macaw Street NW) (172)

This very important connection needs to be completed through the remaining undeveloped land between Royal Crown Avenue NW and Macaw Street NW. When completed, this street will offer much needed circulation between River Bend Road NW and Orchard Heights Road NW. Mousebird Avenue NW intersects Orchard Heights Road NW and continues southward to where it connects with Chapman Hill Drive NW.

Low Priority (Construction needed within 25 years)

37th Avenue NW (Orchard Heights Place NW to the UGB) (96)

Brush College Road NW (Doaks Ferry Road NW to BPA Power Lines) (95)

Doaks Ferry Road NW (Eola Drive NW to UGB) (84)

Eola Drive NW (Doaks Ferry Road NW to UGB) (81)

Glen Creek Road NW (Crescent Drive NW to Westfarthing Way NW) (85)

Michigan City Lane NW (Wallace Road NW to end of roadway) (94)

Orchard Heights Road NW (Parkway Drive NW to Snowbird Drive NW) (91)

Orchard Heights Road NW (Titan Drive NW to BPA Power Line) (92)

Orchard Heights Road NW (Orchard Heights Place NW to UGB) (291)

River Bend Road NW (Wallace Road NW to UGB) (93)

All or portions of these streets need to be improved to full urban standards, which for the Minor Arterials includes having two travel lanes, a center turn lane, curbs, drainage, illumination, sidewalks, and bicycle lanes. The center turn lane is important to increase effective capacity by getting turning vehicles out of the traffic stream. Some of these improvements will occur with development, some may need to be City-funded.

New Streets and Extensions of Existing Streets (Low Priority):

The following streets will be extended through future development, possible expansion of the UGB, or City-initiated projects. These streets should be constructed to full urban standards. Map 3-6 shows the location and approximate alignment of these new street extensions.

5th Avenue NW Extension (Cameo Street NW to Marine Drive NW) (175)

Extend 5th Avenue NW from Cameo Street NW northward to Marine Drive NW, the planned new Collector east of Wallace Road NW.

Colorado Drive NW Extension (South terminus of Colorado Drive NW to Orchard Heights Road NW) (166)

This will extend the current streets that follow the bowl-shaped contour topography north of Orchard Heights Road NW and west of Doaks Ferry Road NW to create a loop road connected to and north of Orchard Heights Road NW. The loop road will be comprised of Grice Hill Drive NW, Vickery Lane NW, Colorado Drive NW, and possibly Landaggard Drive NW. This will be a new collector, which will curve around to connect back to Orchard Heights Road NW.

New Collector Street (35th Avenue NW Extension to 37th Avenue NW) (169)

A new collector level street connection will be needed between 35th Avenue NW and 37th Avenue NW. This connection should be made south of Dahlia Swale if possible.

NORTHEAST SALEM

Northeast Salem includes everything east of the Willamette River from State Street north (see Map 3-7).

Issues

The area west of Cherry Avenue NE and 14th Street NE, previously referred to as North Salem in the TSP, is unique in that it is the only area of the city that is not anticipating significant amounts of new development. The area may experience redevelopment opportunities within some neighborhoods. An established inner city area, its issues deal more with how to maximize existing street system performance and reduce traffic infiltration in residential neighborhoods.

The remainder of Northeast Salem, which encompasses a large portion of the Salem Urban Area, will continue to experience growth from development, although not at the levels of West or South/Southeast Salem. Access to Cherry Avenue Business Park continues to be a concern to businesses. Other issues include how to best serve the large and growing commercial district along Lancaster Drive NE; bringing the East Salem arterial streets up to full urban standards with necessary system capacity; and how to provide sufficient east-west system capacity without severely impacting inner northeast residential neighborhoods.

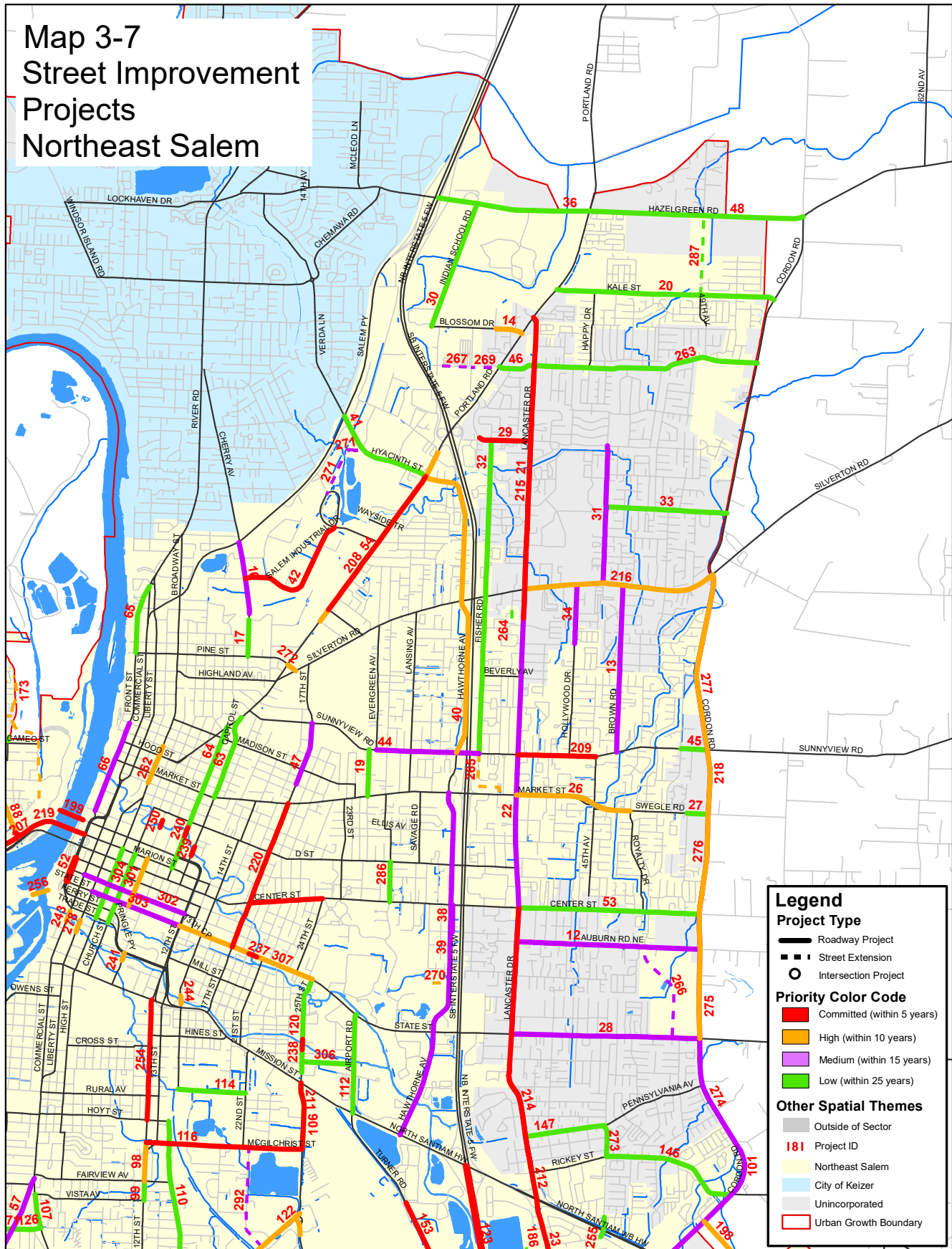
Arterial Street System

The western portion of Northeast Salem has the highest concentration of arterial streets of any area in the city, outside of downtown. There are four north-south arterial routes: Front Street NE, Liberty Street NE/Commercial Street NE couplet, Broadway Street NE, and the Summer Street NE/Capitol Street NE couplet. East-west arterials include Pine Street NE, Hood Street NE, and Market Street NE. Three of the north-south arterials are classified as Major Arterials, with Front Street NE being a Minor Arterial. All of the east-west arterials are classified as Minor Arterial streets in this portion of Northeast Salem.

The remainder of Northeast Salem is traversed by Interstate 5 and bounded on the northwest by Salem Parkway NE and the City of Keizer. Portland Road NE is a Major Arterial that runs southwest to northeast. The area is also bounded on the east and north by the Cordon Road NE/Hazelgreen Road NE/Chemawa Road NE circumferential travel route that connects to Salem Parkway NE to the west and Kuebler Boulevard SE to the south. Classified as a Parkway, this route is envisioned someday to have four travel lanes with a raised, landscaped median.

Several east-west arterials serve Northeast Salem, connecting downtown with the commercial districts and residential neighborhoods of the east. These arterials include: State Street (Major),

Center Street NE (Major), D Street NE (Minor), Market Street NE (Major), Sunnyview Avenue NE (Minor), Silverton Road NE (Major), Swegle Road NE (Minor), and Kale Street NE (Minor). Northeast Salem also has several north-south arterial streets that allow traffic to travel through



Salem without having to go through downtown. These arterials include: 17th Street NE (Minor), Cherry Avenue NE (Major), Lana Avenue NE (Minor), Hawthorne Avenue NE/Hyacinth Street NE (Major), and Lancaster Drive NE (Major).

Collector Street System

Over two dozen streets are classified as Collector streets in Northeast Salem. The majority of these streets provide north-south connections between the several east-west arterials. Although well developed in the inner northeast area, the collector street system needs to be completed in the area east of Lancaster Drive NE. This is especially important since no intervening north-south arterial route exists between Lancaster Drive NE and Cordon Road NE. Many of these outer northeast collectors need to be improved to full urban standards. The availability of sidewalks and bicycle lanes will improve overall mobility and access to transit routes.

Land Use Alternatives

One of the challenges facing Northeast Salem is how to increase mobility and connectivity within the commercial and residential areas east of Interstate 5. Issues that need to be addressed include better access management in commercial areas and better local street connectivity in and between residential neighborhoods. Given the high concentration of commercial activities along the Lancaster Drive NE corridor and its accompanying traffic congestion, it is recommended that the City seriously consider the traffic impacts associated with any proposal to convert more land to commercial designations in the Salem Area Comprehensive Plan in the future.

Goals associated with the area immediately north of downtown include maintaining neighborhood livability, affordable housing, and access to employment. The City completed the North Downtown Plan in 1997. As part of implementing the recommendations of this plan, land uses along Broadway Street NE were redesignated to allow for mixed use transit-oriented redevelopment. The goal is to have a small commercial retail, office, and residential district that is accessible to pedestrians, bicyclists, and transit. The Plan calls for streetscape improvements that enhance the pedestrian environment. See the Pedestrian System Element for details.

The Chemawa Indian School is located in the far northeast section of Salem. The City supports continued use of this property (owned by the Bureau of Indian Affairs) for educational purposes. Anticipated future traffic demand from this property is based upon the expectation that this property will continue to be used for educational purposes through the planning horizon. Given the proximity to I-5, Marion County roads, and the City of Keizer, the City will provide notice to these jurisdictions and the Salem Keizer Transit District of any proposed changes in the zoning or land use designation of this property with a timely opportunity to review and comment on the potential traffic impact that may be associated with the proposed changes.

State Street Corridor Plan

State Street serves as an important connection between employment and residential uses. The State Street Corridor Plan was developed to support revitalization of State Street from 12th to 25th Streets into a vibrant, walkable, mixed-use corridor. The results of the plan include:

- Land use regulations to encourage pedestrian-friendly, mixed-use development, and
- Alternative street designs intended to create a safer, more welcoming environment for pedestrians and bicyclists.

Transportation Alternatives

One way to increase the effective capacity of arterial streets north of downtown is to manage the availability of on-street parking. It is recommended that the City explore peak hour on-street parking prohibitions as a means of providing additional peak hour capacity on streets such as Capitol Street NE, Summer Street NE, and Broadway Street NE. On the Summer Street NE/Capitol

Street NE one-way couplet, on-street parking would only need to be prohibited during each street's two-hour peak period, thus allowing parking the remainder of the day.

Another remedy would require the Capitol Mall offices to institute mandatory staggered work schedules. If each agency staggered its work hours by 15 minutes, peak hour travel demand could be spread and require less overall roadway capacity.

Increasing the availability of transit services by reducing route headways and adding express peak hour service would enhance the attractiveness of transit as an option along the major east-west arterials within Northeast Salem. The addition of park-and-ride lots on outlying major arterials would help facilitate greater transit and carpool ridership.

High Priority Transportation Corridor

Providing viable, cost-effective options to driving alone is one way the City and its regional partners can help relieve traffic congestion that is expected to increase over time. As part of this effort, the City worked with its regional partners over the course of 2002-2003 to develop a High Priority Transportation Corridor Prototype Plan for how a specific corridor could achieve significant transit travel time improvement.

After a thorough study, the Broadway Street NE/River Road N corridor was selected as the preferred location for a series of low-impact improvements that will allow transit to improve schedule reliability and reduce travel time without degrading the flow of automobile traffic. Improvements identified for this corridor range from typical intersection improvements to green time extensions for approaching buses, construction of amenities for pedestrians and transit users, targeted bus stop relocation, passenger information systems, improved fare collection system, and transit service "branding." In concert with these recommendations, the transit service frequency would be increased along the corridor.

Central Salem Mobility Study (2013)

The Central Salem Mobility Study evaluated a range of multimodal transportation issues affecting downtown Salem, including circulation, access, and safety for people traveling to, through, and within central Salem. Recommendations were prepared based on two tiers of transportation analysis and feedback from advisory committees and the public. Projects were only recommended if they were able to provide adequate traffic flow while improving multimodal accessibility. Recommendations were designed to minimize parking impacts in the short term, with the understanding that management of the parking system may change over time.

Several of the recommendations are reflected in the Bicycle and Pedestrian System Elements as they relate most directly to these modes. One component of the study that would impact all modes of travel is the potential conversion from one-way to two-way operation on certain streets. The following streets are recommended for conversion from one-way to two-way operation in the future:

- Cottage Street NE from Marion Street NE to State Street (Short-term)
- Court Street NE from 12th Street NE to Commercial Street NE (Medium-term)
- State Street from 12th Street to Liberty Street (Medium-term)
- High and Church Streets NE/SE from Marion Street NE to Trade Street SE (Long-term)

Chemawa Interchange Area Management Plan

ODOT worked with local and regional partners to develop the Chemawa Interchange Area Management Plan (IAMP). The Plan recommends projects to increase capacity on the road network in order to meet mobility targets. The projects, separated into four phases, are estimated to cost a total of almost \$150 million (2009 dollars). No funding has been identified

to construct any of the projects within the 20 year planning horizon. For this reason, the Oregon Transportation Commission (OTC) will provide alternative mobility standards through their adoption of the Chemawa Interchange Area Management Plan (IAMP) for several intersections within the IAMP's defined Interchange Management Area (IMA). These standards are based on forecasted transportation system operational conditions in 2031 assuming build out of the land use designations adopted by the City of Salem, the City of Keizer, and Marion County and no changes to the transportation network within the IMA. These assumptions were used to simulate future 2031 transportation system operational conditions in the traffic model developed and maintained by the Salem-Keizer Area Transportation Study (SKATS) circa 2010.

Given that the recommendations from the Chemawa IAMP are outside of the planning horizon, none of the projects are included in the Salem TSP. The Chemawa IAMP will need to be updated if changes to the land use or transportation system are proposed that would significantly affect the alternative mobility standards within the IMA. The City of Salem will collaborate and coordinate with ODOT and other appropriate jurisdictions to update the Chemawa IAMP regarding any such legislatively-initiated land use or transportation changes.

Definition of Chemawa Interchange Function

The recommended interchange and transportation network improvements in the Chemawa IAMP are intended to serve the increased travel demand expected from planned and forecasted growth in Salem and Keizer. This demand will come largely from residential and commercial development as described in the Chemawa IAMP and provided for by the Salem and Keizer land use plans and zoning ordinance (circa 2010).

Recommended Improvements

Northeast Salem street system improvements include rehabilitation of bridges over Mill Creek and traffic signal interconnections to maximize traffic capacity through intersections. The traffic signal interconnect projects are listed in the Transportation System Management Element. Additional improvements recommended for arterial streets in Northeast Salem focus on bringing them up to full urban standards. Projects that improve accessibility for commercial and industrial areas are also considered important. The following projects have been numbered to correspond with the numbered projects shown on Map 3-7:

High Priority (Construction needed within 10 years):

Blossom Drive NE (Lilac Lane NE to Portland Road NE) (Marion County) (14)

This portion of Blossom Drive NE is a Marion County street. The City portion of Blossom Drive NE has already been improved. It is a high priority to improve the remaining County section of this street to urban standards with two travel lanes, curbs, sidewalks, and bicycle lanes.

Broadway Street NE (Belmont Street NE to Shipping Street NE) (262)

This project will construct streetscape improvements to facilitate the movement of transit through this portion of the High Priority Transportation Corridor. The project will need to accommodate other modes of transportation and the needs of the adjacent Urban Renewal District.

Cottage Street NE (Marion Street NE to State Street) (300)

Cottage Street from State Street to Marion Street NE is currently configured as a one-way street southbound. The Central Salem Mobility Study recommends that this street be converted to two-way operations with shared-lane markings. This will facilitate circulation between Willamette University and downtown.

Hawthorne Avenue NE and Hyacinth Street NE (Portland Road NE to Sunnyview Road NE) (40)

Widen to two travel lanes with center turn lane where needed. Add curbs, gutters, sidewalks, bicycle lanes, and widen intersection approaches to Portland Road NE, Silverton Road NE and Sunnyview Road NE.

Market Street NE/Swegle Road NE (Lancaster Drive NE to Royalty Drive NE) (26)

This project will realign both streets to replace two intersections at 45th Avenue NE with a single one and bring the roadway up to Minor Arterial Standards. Traffic will be routed away from the front of Swegle Elementary School, increasing safety.

Portland Road NE (Beach Avenue NE to Claxter Road NE) (54)

Using North Gateway Urban Renewal District Funds, this project will extend the streetscape improvements along Portland Road NE. The project will improve safety and traffic flow through installation of a center, landscaped median and access consolidation. Phase 1 (Capitol Street NE to the Railroad Undercrossing) was completed in 2004.

Silverton Road Realignment (East of Railroad to Pine Street/Portland Road Intersection) (272)

Realign Silverton Road NE westward to connect with Portland Road NE at Pine Street NE, allowing for the removal of the awkward existing Silverton Road NE/Portland Road NE intersection. Final approval of this realignment must be given by the Union Pacific Railroad and ODOT.

Auburn Road NE (at Cordon Road NE) (Marion County) (283)

Install eastbound and westbound left-turn lanes on Auburn Road NE to Cordon Road NE.

Center Street NE at 17th Street NE (15)

Center Street NE serves as a major connection between downtown Salem, the Willamette River bridges, and all of Northeast Salem. It provides a direct connection to Lancaster Mall. It also serves as a major transit trunk route. In addition to the completed intersection improvement at Hawthorne Avenue NE, the eastern and western approaches to the 17th Street NE intersection need to be improved to increase the capacity of the intersection.

This is part of the strategy of making improvements to the intersections on Center Street NE first before consideration of a general street widening. Over 17,000 vehicles per day used Center Street NE near Park Avenue NE in 2004 in mid-week, with that total expected to gradually rise in the coming years. If the intersection improvements at 17th Street NE and at Hawthorne Avenue NE do not provide sufficient capacity for Center Street NE, then other options will be considered such as removal of on-street parking and planting strips to provide a total of two eastbound travel lanes and one westbound travel lane. Given these options and the availability of other east-west arterials, it does not appear that a five-lane roadway is necessary within the time frame of this plan.

Commercial Street NE at Marion Street Bridge (49)

Provide two right-turn-only lanes for southbound Commercial Street NE movements onto westbound Marion Street Bridge entrance. Northwest corner of the intersection would be improved to facilitate truck turning movements. Provide bulbed corners on the south side of the intersection to improve pedestrian environment. This project came from the 1998 Willamette River Bridgehead Engineering Study.

Cordon Road NE at Carolina Avenue NE/Indiana Avenue NE (Marion County) (279)

Install northbound left-turn lane on Cordon Road NE to westbound Indiana Avenue NE.

Cordon Road NE at Herrin Road NE (Marion County) (280)

Install northbound left-turn lane on Cordon Road NE to westbound Herrin Road NE.

Cordon Road NE at Hayesville Drive NE (Marion County) (281)

Install northbound left-turn lane on Cordon Road NE to westbound Hayesville Drive NE.

Fisher Road NE Extension (Sunnyview Road NE to Market Street NE) (265)

Fisher Road NE shall be extended southward and eastward to intersect with Market Street NE at the location of the traffic signal constructed as part of the relocation of the access to the Fred Meyer property to the south of Market Street NE. The future extension will be classified as a Collector street.

Hazelgreen Road NE at Cordon Road NE/55th Avenue NE (Marion County) (282)

Construct turn lanes on all four legs, include minor intersection realignment, and install signal.

Hollywood Drive NE at Silverton Road NE (Marion County) (285)

Install northbound left-turn pocket on Hollywood Drive NE to westbound Silverton Road NE.

Lancaster Drive NE at Market Street NE (25)

Include as a high priority an improvement to widen Lancaster Drive NE to provide additional left-turn lanes both southbound and northbound at Market Street NE.

State Street (12th to 25th Streets) (307)

Classified as a Major Arterial street, State Street functions as a high capacity street which primarily serves regional and intercity travel. This function, however, must be balanced with the adjacent land uses and goals for this corridor to become vibrant and walkable with a mix of residential and commercial land uses. To that end, the State Street Corridor Plan was developed to make recommendations on how to facilitate the goal of revitalizing this area. In addition to land use changes, the State Street Corridor Plan identified the following alternative street design:

- Reconfigure State Street from 13th to 17th Streets from four vehicle travel lanes to one lane in each direction with a center turn lane
- Incorporate buffered bicycle lanes on State Street between 14th and 17th Streets to connect to existing and planned bicycle routes, including parallel routes on Chemeketa Street NE and Mill Street SE (facilitated by a proposed new bicycle and pedestrian bridge over Mill Creek at 24th Street SE).
- Add turn lanes at the intersections of State Street with 14th and 17th Streets to accommodate projected traffic volumes and future land uses.
- Add pedestrian crossing improvements near the intersections with 15th, 19th, and 21st Streets.
- Enhance the pedestrian realm with wider sidewalks and buffers between the pedestrians and vehicle travel lanes from 12th to 25th Streets. This added width east of 17th Street will allow for possible future parking pockets on the north side of State Street if desired through future redevelopment.
- Adopt special right-of-way widths for this corridor to reflect projected needs (refer to Appendix G).

East of 17th Street, the traffic volumes on State Street are projected to be higher than the volumes west of 17th Street. For this reason, the lane configuration east of 17th Street will

remain as existing pending an evaluation of the initial phase of the project west of 17th Street. Prior to implementing the lane reconfiguration west of 17th Street, an evaluation framework will be developed. This framework will include measures to evaluate performance of the street before and after implementation of the project. Measures will address travel time/queuing, neighborhood cut-through traffic, safety, and property improvements (e.g., property values or new businesses/residences). The evaluation will be used to determine what, if any, future changes should be made to the street design. The goal is to extend the reconfiguration of travel lanes – one lane in each direction, center turn lane, and bike lanes – east to 24th Street if warranted by the results of the evaluation.

Ward Drive NE at Lancaster Drive NE (Marion County) (284)

Add eastbound right-turn lane on Ward Drive NE to Lancaster Drive NE and upgrade signal.

Geer Park Access Street (Geer Park to Hawthorne Avenue NE) (270)

Extend the Geer Park Access Street eastward to Hawthorne Avenue NE, creating a second access point to the park. Medium Priority (Construction needed within 15 years):

17th Street NE (Norway Street NE to Sunnyview Road NE) (47)

Improve to Minor Arterial standards, including two travel lanes with curbs, gutters, sidewalks, and bicycle lanes, plus left-turn lanes at intersections.

45th Avenue NE (Silverton Road NE to Ward Drive NE) (Marion County) (31)

Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bicycle lanes where designated.

Auburn Road NE (Lancaster Drive NE to Cordon Road NE) (Marion County) (12)

Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bicycle lanes where designated.

Broadway Street NE (at Salem Parkway) (260)

Construct additional turn lanes for northbound and southbound traffic on Broadway Street NE and for southwestbound traffic on Salem Parkway. This is a High Priority Transportation Corridor project.

Broadway Street NE (at Salem Parkway) (257)

Construct a queue jump for northbound bus traffic at Salem Parkway. This is a High Priority Transportation Corridor project.

Brown Road NE (Sunnyview Road NE to Silverton Road NE) (13)

Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bicycle lanes where designated.

Cherry Avenue NE (BNRR/SF to Salem Parkway NE) (16)

This project will improve capacity and access to Northgate Industrial Park by widening the roadway to four travel lanes and a center turn lane. The project will also construct curbs, sidewalks, and bicycle lanes.

Cordon Road NE (State Street to Center Street NE) (Marion County) (275)

Improve to Parkway standards, including four travel lanes, center turn lane or left-turn lanes at selected locations, curbs, gutters, sidewalks, and bicycle lanes.

Cordon Road NE (Center Street NE to Sunnyview Road NE) (Marion County) (276)

Improve to Parkway standards, including four travel lanes, center turn lane or left-turn lanes at selected locations, curbs, gutters, sidewalks, and bicycle lanes.

Cordon Road NE (Sunnyview Road NE to Silverton Road NE) (Marion County) (277)

Improve to Parkway standards, including four travel lanes, center turn lane or left-turn lanes at selected locations, curbs, gutters, sidewalks, and bicycle lanes.

Court Street NE (12th Street NE to Commercial Street NE) (301)

Convert from one-way to two-way operation, including modification to traffic signals.

Front Street NE (Norway Street NE to Division Street NE) (66)

Reconstruct Front Street NE to a modified Minor Arterial standard and realign the railroad tracks down the center. Construct wide travel lanes as well as curbs, gutters, and sidewalks. The project includes the reconstruction of Mill Creek Bridge.

Hawthorne Avenue NE (Midway Street NE to Center Street NE) (38)

Add a northbound right-turn lane extending from Midway Street NE to the Center Street NE intersection.

Hawthorne Avenue NE (Mission Street NE to Market Street NE) (39)

As traffic volumes increase on Lancaster Drive NE, drivers will avoid congestion by using Hawthorne Avenue NE. Even without spillover traffic from Lancaster Drive NE, Hawthorne Avenue NE volumes are continuing to grow. Traffic volumes have increased from 12,000 vehicles per day in 1995 to over 15,000 in 2003 north of Center Street NE. The northbound approach to the Center Street NE intersection operates at LOS E and F during the P.M. peak travel periods. It is recommended that Hawthorne Avenue NE be widened to four travel lanes, with either a center turn lane or raised, landscaped median, between Mission Street SE and Market Street NE. Priority should be given to relieving congestion at the Center Street NE intersection approach prior to an overall widening of the corridor.

The purpose of the overall project is to alleviate congestion on Hawthorne Avenue NE and provide a much needed, second north-south Major Arterial street in East Salem. Having two Major Arterial routes, one on either side of Interstate 5, will give traffic an alternative to Lancaster Drive NE.

Hayesville Drive NE Extension (Portland Road NE to Astoria Street NE) (269)

The Hayesville Drive NE alignment should be extended west from Portland Road NE to meet with existing Phyllis Street NE just east of the intersection of Phyllis Street NE with Niles Avenue NE. The portion of this street extension between Portland Road NE and Astoria Street NE is classified as a future Collector street. The portion of this street extension east of Astoria Street NE to where it meets Phyllis Street NE is classified as a local street. (See Phyllis Street NE project below.)

Hollywood Drive NE (City Limits North to Silverton Road NE) (Marion County) (34)

Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bicycle lanes where designated.

Hood Street NE (at Broadway Street NE) (259)

Construct both eastbound and westbound left-turn pockets at Broadway Street NE.

Lancaster Drive NE (State Street to Silverton Road NE) (22)

One of the busiest and most congested arterial streets in the Salem Urban Area is Lancaster Drive NE. High intensity commercial activities, combined with a growing population in the East Salem area, have made traffic volumes soar along this roadway.

Widening Lancaster Drive NE to six travel lanes is not considered financially feasible, or desirable, within the time frame of this Plan. A project that is recommended as a high priority is an access management project that would help reduce the high concentration of driveways along Lancaster Drive NE. This would include: elimination of unnecessary driveways, access consolidation, connections between properties, development of a local street circulatory system, and, potentially, a raised, landscaped median that would focus access at planned locations.

Phyllis Street NE Extension (Niles Avenue NE to Astoria Street NE) (267)

Extend Phyllis Street NE eastward to connect with Astoria Street NE. This will complete the street connection discussed under the Hayesville Drive NE project above. This street segment will be classified as a local street.

State Street (12th Street to Liberty Street) (302)

Convert from one-way to two-way operation, including bike lanes. Requires modification to traffic signals and reduction in on-street parking. In the long-term, consider providing an enhanced bike facility on State Street. Options to consider may include one-way or two-way cycle tracks or buffered bike lanes. This should be looked at based on success of previously installed bike facilities downtown and taking into consideration additional cost and parking impacts.

State Street (Lancaster Drive NE to Cordon Road NE) (Marion County) (28)

Classified as a Major Arterial street in the *Salem Transportation System Plan*, this street will be widened to four travel lanes, with a center turn lane to improve traffic flow. The project will construct the street to urban standards having curbs, sidewalks, and bicycle lanes.

Sunnyview Road NE (Evergreen Avenue NE to Fisher Road NE) (44)

Install roundabout at Park Avenue NE, traffic signal at Lansing Avenue NE, and curbs, gutters, and sidewalks from Evergreen Avenue NE to Byram Street NE.

Evergreen Avenue NE (at Market Street NE) (18)

Add southbound right-turn lane on Evergreen Avenue NE at Market Street NE.

New Streets and Extensions of Existing Streets (Medium Priority)

Greencrest Street NE Extension (Auburn Road NE to State Street) (266)

Currently no north-south collector street exists between Center Street NE and State Street, east of Lancaster Drive NE. Greencrest Street NE should be extended to the south to intersect with State Street to serve as a north-south collector.

Salem Industrial Drive Extension (Bill Frey Drive NE to Hyacinth Street NE) (271)

Extend Salem Industrial Drive northward to Hyacinth Street NE.

Low Priority (Construction needed within 25 years):

Capitol Street NE/Summer Street NE Couplet (D Street NE to Fairgrounds Road NE) (63 and 64)

This one-way couplet serves as a major commuter route and connection to Portland Road NE (Highway 99E) and to Interstate 5, via Market Street NE. Daily traffic volumes were about 12,500 on Capitol Street NE in 2001 and about 11,000 on Summer Street NE by 2006. Existing

peak hour levels of service are already poor at the Market Street NE and Fairgrounds Road NE intersections.

It is recommended that on-street parking be permanently removed or prohibited during peak hours on both Capitol Street NE and Summer Street NE to provide for an additional lane of through traffic capacity. Peak hour prohibition of on-street parking would only be needed between 4-6 p.m. on Capitol Street NE and 7-9 a.m. on Summer Street NE. If the State agencies on the Capitol Mall are able to successfully stagger their work schedules, utilize park & ride lots, or otherwise reduce overall travel demand, these parking measures may not be necessary.

Center Street NE (Lancaster Drive NE to Cordon Road NE) (Marion County) (53)

Classified as a Major Arterial street in the *Salem Transportation System Plan*, this street will be widened to two travel lanes with a center turn lane to improve traffic flow. The project will construct the street to an interim Minor Arterial standard having curbs, sidewalks, and bicycle lanes.

Chemawa Road NE (Interstate 5 to Portland Road) (36)

Improve to urban Parkway standards, including four travel lanes and a center turn lane with curbs, gutters, sidewalks, and bicycle lanes.

Cherry Avenue NE (Pine Street NE to Johnson Street NE) (17)

With the completion of Bill Frey Drive NE, industrial park traffic should decrease on Cherry Avenue NE south of Johnson Street NE. However, as traffic congestion increases on the Liberty Street NE/Commercial Street NE couplet, Broadway Street NE, and Hyacinth Street NE, commuter traffic may increase on Cherry Avenue NE. If traffic volumes increase, it may become necessary to increase the effective capacity of this portion of Cherry Avenue NE by widening the roadway to add a center turn lane and removing on-street parking.

Church and High Streets NE/SE (Marion Street NE to Trade Street SE) (304)

Consider converting these streets from one-way to two-way operation, taking into consideration success of previously installed bike facilities in downtown and impacts to access in and out of the transit mall. Requires modification to traffic signals and reduction in on-street parking.

Front Street NE (River Road N to Pine Street NE) (65)

Improve to Minor Arterial standards, including two travel lanes with curbs, gutters, sidewalks, and left-turn pockets at intersections.

Hazelgreen Road NE (Portland Road NE to Cordon Road NE) (48)

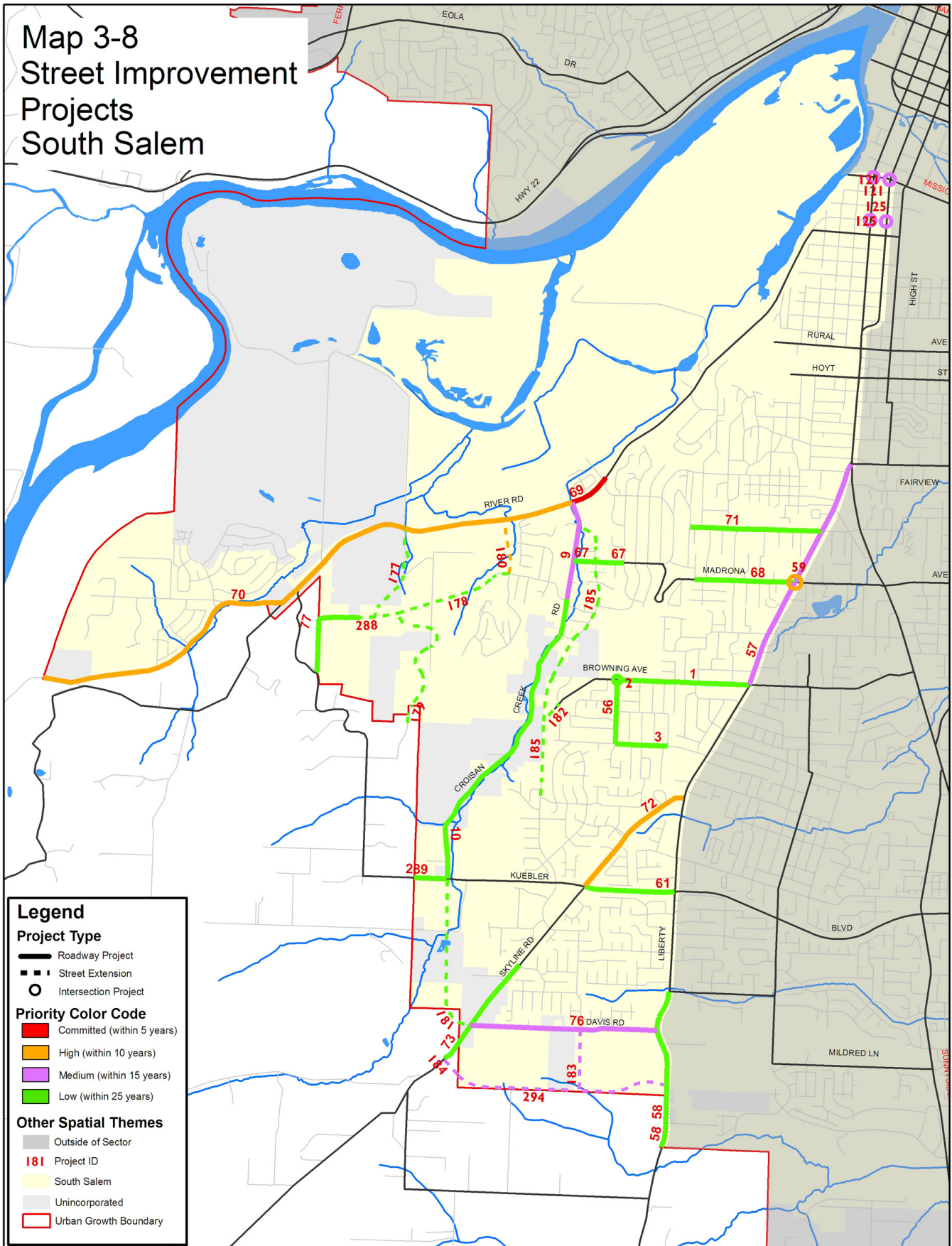
Improve to an interim two travel lanes with center turn lane where needed. Add curbs, gutters, sidewalks, bicycle lanes, and improve intersection approach to Portland Road NE.

Hyacinth Street NE (Portland Road NE to Salem Parkway NE) (41)

It is recommended that Hyacinth Street NE be widened and improved to serve as a major north-south arterial for Northeast Salem. The improvement would also improve access to Salem Industrial Park. The project will widen Hyacinth Street NE to four travel lanes and a center turn lane, plus curbs, sidewalks, and bicycle lanes. While daily traffic volumes have only grown slightly beyond the 16,000 level of 1993, this project will enable Hyacinth Street NE to carry the added traffic expected from the planned extension of Salem Industrial Drive NE.

Kale Street NE (Portland Road NE to Cordon Road NE) (20)

Connecting Portland Road NE to Cordon Road NE, Kale Street NE is classified as a Minor Arterial street. Kale Street NE is the only east-west arterial street serving the area between



Hazelgreen Road NE and Silverton Road NE. This street should be improved to full urban standards with curbs, sidewalks, and bicycle lanes. It may be necessary to signalize the intersection of Kale Street NE and Portland Road NE within the time frame of this Plan. Some of these improvements should occur over time with the development of abutting land. The remainder will need to be accomplished through City funds.

Sunnyview Road NE (Walker Road NE to Cordon Road NE) (45)

Improve to Minor Arterial standards, including two travel lanes with curbs, gutters, sidewalks, and bicycle lanes, plus left-turn lanes at intersections.

Swegle Road NE (Hoffman Road NE to Cordon Road NE) (27)

Improve to Minor Arterial standards, including two travel lanes plus a center turn lane with curbs, gutters, sidewalks, and bicycle lanes.

Evergreen Avenue NE (Market Street NE to Sunnyview Avenue NE) (19)

Fisher Road NE (Ward Drive NE to South of Sunnyview Road NE) (32)

Hayesville Drive NE (Portland Road NE to Lancaster Drive NE) (46)

Hayesville Drive NE (Lancaster Drive NE to Cordon Road NE) (Marion County) (263)

Herrin Road NE (45th Avenue NE to Cordon Road NE) (Marion County) (33)

Indian School Road NE (Chemawa Road NE to Blossom Drive NE) (30)

Park Avenue NE (Center Street NE to D Street NE) (286)

All or portions of these Collector streets need to be improved over the next 25 years, or more, to urban standards with two travel lanes, turn lanes where needed, curbs, drainage, sidewalks, illumination, and bicycle lanes where needed. These improvements may occur through the development of adjacent land or with City funding.

New Streets and Extensions of Existing Streets (Low Priority)

The following Collector streets will be extended through future development or City-initiated projects. These streets should be constructed to full urban standards. Map 3-7 shows the location of these new street extensions.

Harold Drive NE Extension (264)

This local street will need to be extended to the south to connect to Devonshire Avenue NE. This extension will likely occur along with commercial development. The street extension should align with the existing driveway easement that extends north from Devonshire Avenue NE.

New Collector (Kale Street NE to Hazelgreen Road NE) (287)

A new Collector street should be built to connect Kale Street NE to Hazelgreen Road NE. This street should be located roughly in the area of the 49th Avenue NE or Lake Labish Road NE alignments. This connection will most likely be constructed as a result of land development.

SOUTH SALEM

South Salem is defined as the area bounded by the Willamette River on the west, Mission Street SE to the north, Liberty Street SE/Commercial Street SE/Liberty Road S to the east, and the UGB to the south (see Map 3-8).

Issues

South Salem shares many of the same concerns that affect inner Northeast Salem. The historical development of the street system in South Salem has resulted in an arterial system dependent on Commercial Street SE to carry the majority of traffic and transit load. Most every arterial street in South Salem feeds into Commercial Street SE. With a large amount of developable land remaining in the far south of Salem, traffic pressure will continue to grow. Increased traffic will also place pressure on inner South Salem neighborhoods as they try to maintain livability in the face of increased traffic infiltration.

Arterial Street System

South Salem has few north-south arterial streets and even fewer east-west arterials. North-south arterials include: Commercial Street SE (Major Arterial), Liberty Road S (Major Arterial), Skyline Road S (Major Arterial), River Road S (Minor Arterial), and Croisan Scenic Way S (future Minor Arterial). East-west arterials include: Madrona Avenue S (Minor Arterial), Mission Street SE (Minor Arterial), Mildred Lane SE (Minor), and Kuebler Boulevard S (Parkway).

Collector Street System

While South Salem may lack in arterial streets, it has an adequate number of both north-south and east-west collectors. Most of the collector streets in inner South Salem are built to urban standards. However, many of the collectors further south need to be improved with curbs, sidewalks, and bicycle lanes, where needed.

Land Use Alternatives

There are very few alternatives that can be enacted within South Salem that would alleviate the current and expected traffic pressure, as inner South Salem is well established, and outer South Salem is primarily low density residential. It is possible that the introduction of employment uses in the far south would create a more balanced "reverse commute." Redevelopment opportunities should consider mixed use, transit-supportive design.

Transportation Alternatives

A major consideration should be the introduction of express transit service from the suburban south towards downtown. Increased transit trunk service is one relatively affordable option. Other options would require the City to expand Commercial Street SE to a wider, more costly facility such as a divided, six-lane arterial or high-speed, grade-separated expressway. Neither of these latter options will improve neighborhood livability.

Recommended Improvements

There are several strategies that are recommended for South Salem. The first priority is to maximize the capacity of the existing arterial street system through incremental improvements to traffic signalization, intersection design, and access control. Another important strategy is to bring the arterial streets up to full urban standards. As soon as funds permit, express and high-frequency transit service should be initiated in South Salem to relieve some of the traffic pressure.

High Priority (Construction needed within 10 years):

Fern Drive S Extension (Heath Street S to River Road S) (180)

A northward extension of Fern Drive S should connect with River Road S in the future as that area develops. The extension should follow the best contours possible to limit extreme grades.

Liberty Road S at Madrona Avenue S (59)

Improvements will be needed to this intersection to create left-turn lanes on all four approaches. A recent project added eastbound and westbound left-turn pockets on

Madrona Avenue S. This project will add northbound and southbound left-turn pockets on Liberty Road S.

River Road S (Croisan Creek Road S to the UGB) (70)

River Road S is constrained by high terrain on the east and the Railroad and the Willamette River on the west. Daily traffic volumes approaching Owens Street S were 11,000 vehicles per day in 2005 and west of Croisan Creek Road S they were 7,000 vehicles per day. Large scale widenings do not appear feasible since there is little room available for the roadway to expand. However, as traffic volumes increase, improvements will need to be made to increase intersection capacity at Fern Drive S, Homestead Road S, Browns Island Road S, and Viewcrest Road S among others. Those intersections meeting signal warrants will be signalized. Otherwise, left-turn refuges will be constructed. Other improvements will be made to bring River Road S up to Minor Arterial standards where topography allows between Croisan Creek Road S and the UGB.

Skyline Road S (Liberty Road S to Kuebler Boulevard S) (72)

Classified as a Major Arterial between Liberty Road S and Summercrest Drive S, this street needs to have an interim improvement of two travel lanes, a center turn lane, curbs, sidewalks, and bicycle lanes. These interim improvements should accommodate the travel needs of this roadway for the next 25 years.

Medium Priority (Construction needed within 15 years):

Croisan Creek Road S (River Road S to Heath Street S) (9)

This project will improve the intersection of Croisan Creek Road S at River Road S and bring this portion of Croisan Creek Road S up to urban standards with curbs, sidewalks, and bicycle lanes. This will be the first step in preparing for the eventual connection of Croisan Scenic Way S to Croisan Creek Road S prior to the River Road S intersection.

Davis Road S (Skyline Road S to Liberty Road S) (76)

Improve to Collector standards including two travel lanes, curbs, gutters, sidewalks, and bicycle lanes where designated.

Liberty Road S (Commercial Street SE to Browning Avenue SE) (57)

This project would widen Liberty Road S to have four travel lanes with either a center turn lane or raised landscape median. This would relieve congestion caused by left-turning traffic. Bicycle lanes would be constructed as part of this project, as well as sidewalks, and other standard improvements.

Mildred Lane SE Extension (Liberty Road S to Skyline Road S) (294)

The westward continuation of Mildred Lane SE is required to complete a necessary east-west Minor Arterial roadway south of Kuebler Boulevard S. Built to Minor Arterial standards, this connection, when completed, will provide a continuous east-west connection between Skyline Road S and Battle Creek Road SE. This connection should primarily occur as the surrounding area develops. Some City participation may be necessary.

Mission Street SE at Liberty Street SE and Commercial Street SE (121)

Improvements will need to be made to increase capacity at these intersections, especially for turning movements.

Owens Street S at Liberty Street SE and Commercial Street SE (125)

Improvements need to be made to these intersections to increase turning movement capacity from Owens Street SE to Liberty Street SE (northbound). This will be important as development increases off of the River Road S area.

Red Leaf Drive S Extension (Davis Road S to Mildred Lane SE Extension) (183)

This street should be extended south to connect with the future extension of Mildred Lane S. This street should be designed so that it can be extended further south toward the UGB.

Low Priority (Construction needed within 25 years):

Browning Avenue S at Kurth Street S (2)

The intersection needs to be realigned and improved to provide increased safety and capacity.

Byers Street S—Deer Run S (Viewcrest Road S to end of roadway) (77)

Improve to Minor Arterial standards including two travel lanes, turn lanes where appropriate, curbs, gutters, sidewalks, and bicycle lanes.

Croisan Creek Road S (Kuebler Boulevard S to Heath Street S) (10)

The project will widen this section of Croisan Creek Road S to a 30-foot cross section, which will include shoulders but no curbs, gutters, or sidewalks.

Kuebler Boulevard S (Liberty Road S to Skyline Road S) (61)

The portion of Kuebler Boulevard S needs to have four travel lanes, turn pockets, curbs, sidewalks, and bicycle lanes constructed to bring it up to Parkway standards. Additional widening may be needed at the approaches to the Liberty Road S and Skyline Road S intersections.

Liberty Road S (Holder Lane to south UGB) (58)

Improve to an interim three-lane urban standard, with two travel lanes, a center turn lane, curbs, gutters, sidewalks, and bicycle lanes.

Madrona Avenue S (Biegler Lane S to Liberty Road S) (68)

This portion of Madrona Avenue S would be improved to full urban standards with bicycle lanes, sidewalks, and street lighting. Pedestrian curb extensions and other traffic calming treatments may be considered where appropriate.

Madrona Avenue S (Croisan Creek Road S to Elderberry Drive S) (67)

This project would bring a difficult one-quarter-mile segment of Madrona Avenue S up to interim Collector standards by constructing curbs, gutters, and sidewalks.

Skyline Road S (Maplewood Drive S to Mildred Lane S) (73)

Improve to Minor Arterial standards including two travel lanes, a center turn lane, curbs, gutters, sidewalks, and bicycle lanes.

Browning Avenue S (Liberty Road S to Kurth Street S) (1)

Cunningham Lane S (Kurth Street S to Barrett Street S) (3)

Kuebler Road S (Croisan Creek Road S to UGB)

Kurth Street S (Browning Avenue S to Cunningham Lane S) (56)

Salem Heights Avenue S (Liberty Road S to Sunridge Drive S) (71)

These streets need to be improved to urban standards over the next 25 years or more. Improvements should include two travel lanes, turn lanes where necessary, curbs, sidewalks, drainage, illumination, and bicycle lanes, where needed. Improvements to these streets will be funded through adjacent development or through City funds.

New Streets and Extensions to Existing Street (Low Priority)

Arterial Streets

Major roadway extensions are needed in far South Salem to accommodate future development and improve circulation opportunities (see Map 3-8). In addition to the Mildred Lane SE extension listed as a medium priority, the following street extensions are needed:

Croisan Scenic Way S Extension (Joplin Street S to Croisan Creek Road S) (185)

This roadway has been planned for many years as a new Minor Arterial connection between Kuebler Boulevard S and River Road S. Portions of the street have been completed as part of subdivision development. One of the limiting factors in constructing this street is the difficulty and expense of negotiating the hilly terrain. The alignment would extend Croisan Scenic Way S northward connecting with a section already built near Madrona Avenue S then continuing northward and westward and intersecting with Croisan Creek Road S just south of River Road S. It is anticipated that this road will be completed as more development occurs and with the participation of the City.

New Minor Arterial Street Connection (Deer Run Avenue S to River Road S) (288)

A new street connection will be created between Deer Run Avenue S to River Road S to provide access from the surrounding area without having to use Homestead Road S or Viewcrest Drive S, both of which are substandard roadways for significant amounts of traffic. The street connection is to be built to Minor Arterial standards with one travel lane per direction plus left-turn pockets or center turn lanes where necessary. The street will also have bicycle lanes.

Collector Streets

The following Collector streets will be extended through future development or City-initiated projects. These streets should be constructed to full urban standards.

Browning Avenue S Extension (Cloudview Drive S to Croisan Scenic Way S) (182)

Browning Avenue S should be extended westward to connect with Croisan Scenic Way S, as it is completed.

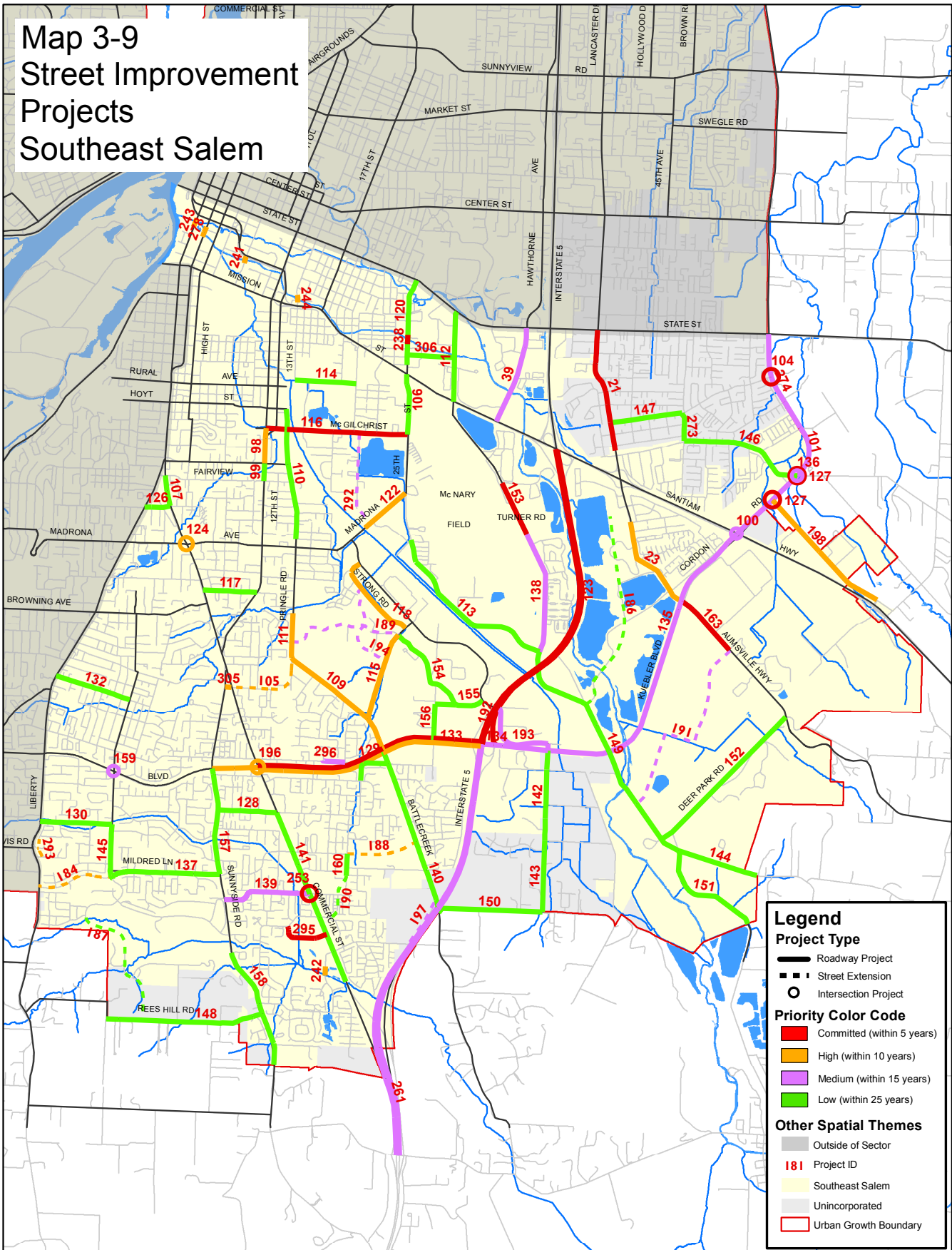
Croisan Creek Road S Extension (Kuebler Boulevard S to Skyline Road S) (181)

A southward extension of Croisan Creek Road S is needed to connect with Skyline Road S in the vicinity of the intersection of Davis Road S. The intersection of Croisan Creek Road S and Kuebler Boulevard S should be realigned to create a standard four-legged intersection. This will increase safety and intersection efficiency.

Croisan Ridge Way S Extension (Inland Drive S to the westward extension of Heath Street S) (179)

This Collector street should be extended to the northeast along the foot of Croisan Mountain, cross over Homestead Road S, and then connect to the westward extension of

Heath Street S. A local street extension should be made to connect Croisan Ridge Way S with Crestmont Circle S.



Deer Run Avenue S Extension (Byers Street S to Heath Street S Extension) (288)

This future Minor Arterial street should be extended eastward to connect to both a westward extension of Heath Street S and the southern terminus of the new Minor Arterial street connecting to River Road S. This connection will become important as the hilly area of far South Salem begins to develop. It will also be important given that Homestead Road S, a local residential street, is not suitable to handle significant increase in traffic, due to its tight curves and substandard improvement.

Heath Street S Extension (Fern Drive S to Deer Run Avenue S Extension) (178)

A westward extension of Heath Street S should occur to connect with an eastward extension of Deer Run Avenue S and the new north/south Minor Arterial connection to River Road S. This will provide another access to the development occurring around Fern Drive S and Heath Street S.

SOUTHEAST SALEM

Southeast Salem is roughly defined as the area bordered by Liberty Street SE/Commercial Street SE/Liberty Road S on the west, the UGB to the south and east, and State Street to the north (see Map 3-9).

Issues

Southeast Salem shares the other half of the mobility problem with South Salem. Almost every arterial street leads to and from Commercial Street SE. There are, however, other arterial streets in Southeast Salem that completely bypass the Commercial Street SE bottleneck. Pringle Road SE and Turner Road SE are peripheral arterials that provide access through the Fairview Industrial Area and McNary Field (airport). These roads will need to carry a larger burden of the traffic load as Southeast Salem continues to grow.

Another issue is how to provide sufficient street capacity to the Kuebler Boulevard SE/Interstate 5 interchange as the area develops. In addition, this interchange needs to provide a southerly access to the Fairview Industrial Park and a westerly access to the Mill Creek Industrial Park. City staff have been working with ODOT and other agency staff to complete the Interstate 5/Kuebler Boulevard Interchange Area Management Plan as a part the Southeast Salem Area Transportation Study. This Study will produce recommendations for future roadway improvements in this area.

A third issue is the development of an east-west Minor Arterial street south of Kuebler Boulevard SE. Final connections and upgrade need to be made to the Mildred Lane SE/Fabry Road SE arterial. This Minor Arterial street will need to be extended all the way to the west to Skyline Road S.

Arterial Street System

Southeast Salem has several north-south arterials. They include: Commercial Street SE (Major Arterial), 12th Street SE/13th Street SE (Major Arterials), Lancaster Drive SE (Major Arterial), 25th Street SE (Major Arterial), Pringle Road SE (Minor Arterial), Battle Creek Road SE (Minor Arterial), Sunnyside Road SE (Minor Arterial), Turner Road SE (Minor Arterial), Aumsville Highway SE (Minor Arterial), and Airport Road SE (Minor Arterial). The east-west arterials are fewer and include: Mission Street SE/Highway 22 (Minor Arterial/Parkway/Freeway), Madrona Avenue SE (Minor Arterial/Major Arterial east of Fairview Industrial Drive SE), McGilchrist Street SE east of 12th Street SE (Major Arterial), Kuebler Boulevard SE (Parkway), and Mildred Lane SE/Fabry Road SE (Minor Arterial).

Kuebler Boulevard SE provides a major portion of the region's circumferential travel route. Mission Street SE (Highway 22) also serves as a major east-west route through Salem, connecting via Pringle Parkway SE and Front Street SE to the Willamette River bridges.

Collector Street System

With so few arterial streets available in Southeast Salem compared to the amount of land area served, the collector street system must provide an additional level of circulation and capacity for the street system. Over two dozen collector streets serve Southeast Salem. Many of these streets need to be improved to urban standards to maximize their utility.

Land Use Alternatives

The City of Salem and Marion County have been working to create comprehensive plan designations for the Kuebler Boulevard SE/Interstate 5 interchange area that will limit strip commercial uses and encourage mixed uses such as neighborhood retail, residential housing, office space, and industrial land to the southeast. Southeast Salem neighborhoods share the same concerns of other inner city neighborhoods about increased traffic and street widenings. Creating employment opportunities in Southeast Salem will create a reverse commute situation, decreasing unidirectional traffic demand on arterial streets. This includes consideration of future expansions to both aviation-related and airtaxi business facilities at McNary Field and development of the Mill Creek Industrial Park east of Kuebler Boulevard SE, between Turner Road SE and Aumsville Highway.

Transportation Alternatives

Any strategy to improve mobility in Southeast Salem must have improved transit service and ridership as a key component. Transit ridership must increase in Southeast Salem or insufficient street capacity will cause congestion, cut-through traffic in neighborhoods, and significant degradations in air quality. Express bus service may offer some relief during the peak travel periods. If transit or other alternative travel modes are not successful in relieving automobile traffic, the City may have no alternative but to further widen 12th Street SE, Pringle Road SE, and Madrona Avenue SE.

Recommended Improvements

Increasing system capacity and improving streets to full urban standards are the two main objectives of the Plan for Southeast Salem. The following projects are numbered to correspond to the numbered projects shown on Map 3-9:

High Priority (Construction needed within 10 years)

12th Street SE (McGilchrist Street SE to Fairview Avenue SE) (98)

This project along with its lower priority companion project from Fairview Avenue SE to Vista Avenue SE completes a “missing link” in traffic capacity for 12th Street SE. This project will add turn lanes at Fairview Avenue SE and widen the bridge over Pringle Creek to allow for four travel lanes, bicycle lanes, and sidewalks.

Battle Creek Road SE (Kuebler Boulevard SE to Hillrose Street SE) (109)

This street is a part of an important north-south connection between far south and inner South Salem. This project will upgrade the street to Minor Arterial standards adding a center turn lane or left-turn pockets, curbs, gutters, sidewalks and bicycle lanes. Additional lanes may be required in the vicinity of the Kuebler Boulevard SE intersection. It is expected that a majority of this project will be completed by development.

Commercial Street SE at Kuebler Boulevard SE (196)

Widen from north of Boone Road SE to easterly Barnes Road SE to provide a second left-turn lane on both approaches to Kuebler Boulevard SE. This project will include an upgraded traffic signal and will restrict some left turns to/from Boone Road SE and Barnes Road SE.

Fabry Road SE Extension (Reed Lane SE to Battle Creek Road SE) (188)

Extend Fabry Road SE eastward from Reed Lane SE to Battle Creek Road SE. This, along with the westward extension of Mildred Lane SE, will provide an east/west Minor Arterial connection south of Kuebler Boulevard SE from Battle Creek Road SE to Skyline Road S.

Gaffin Road SE (Cordon Road SE to west of Highway 22 Interchange) (198)

Construct a 3/4 street improvement on a 1,500-foot segment bordering City-owned property to Minor Arterial standards and construct turnpike improvements to the remaining portion of the roadway (approximately 3,500 feet).

Hilfiker Lane SE (Commercial Street SE to Pringle Road SE via Hillrose Street SE) (105)

This project will construct a new street extension between Hilfiker Lane SE and Hillrose Street SE and reconstruct both to urban standards, creating a new connection between Commercial Street SE and Pringle Road SE. Although not expected to divert large amounts of commuting traffic away from Commercial Street SE and 12th Street SE, this collector street will provide a much-needed east-west connection to Pringle Road SE. Design of this project should be closely coordinated with the Morningside Neighborhood Association and adjacent properties to incorporate context sensitive elements, including appropriate access to the City-owned park property.

Hilfiker Lane SE (Sunnyside Drive SE to Commercial Street SE) (304)

This project will widen this short block of Hilfiker Lane SE to provide increased capacity for vehicles traveling between Sunnyside Drive SE and Commercial Street SE.

Kuebler Boulevard SE (Sunnyside Road SE to Interstate 5) (133)

Part of the regional circumferential travel route, Kuebler Boulevard SE will continue to grow in importance as one of the City's major travelways. Kuebler Boulevard SE is classified as a Parkway, a limited access facility, ultimately having four travel lanes, divided by a raised median. In 1993, Kuebler Boulevard SE carried 14,500 vehicles per day between Liberty Road S and Commercial Street SE. By 2002 this traffic had increased to 21,000 vehicles per day. Between Commercial Street SE and Interstate 5, the 1993 level of up to 20,500 had increased to nearly 30,000 by 2005. Each of these numbers represent a growth of about 45 percent.

The segment of Kuebler Boulevard SE from Sunnyside Road SE to the Interstate 5 Interchange needs to be widened to Parkway standards within the next ten years. The project will also include bicycle lanes and sidewalks. This project is needed to relieve congestion and provide adequate east-west capacity. A portion of this improvement between Commercial Street SE and Interstate 5 will already have been made through a committed project.

Lancaster Drive SE (Cranston Street SE to Kuebler Boulevard SE) (23)

This segment of Lancaster Drive SE, classified as a Major Arterial, needs to be widened to two travel lanes plus a center turn lane. Several curves need to be realigned to better facilitate traffic flow and improve safety. The improvement will also include construction of curbs, sidewalks, drainage, illumination, and bicycle lanes.

Madrona Avenue SE Realignment (25th Street SE to UPRR) (122)

Madrona Avenue SE needs to be realigned at its intersection with 25th Street SE in order to improve traffic flow and reduce delays. The realignment will remove the two existing stop signs and relocate Aviation Loop SE 150 to 200 feet south of its current connection with 25th Street SE. Once completed, 25th Street SE will flow directly into Madrona Avenue SE, and Airway Avenue SE will bend to the west and "T" into this Major Arterial. Madrona Avenue will be rebuilt to Major Arterial standards west to the UPRR.

Madrona Avenue SE at Commercial Street SE (124)

This intersection will need a northbound right-turn lane on the east approach of Madrona Avenue SE to increase the capacity of turning movements and through traffic.

Mildred Lane SE Extension (Lone Oak Road S to Liberty Road S) (184)

The westward continuation of Mildred Lane SE is required to complete a necessary east-west Minor Arterial roadway south of Kuebler Boulevard S. Built to Minor Arterial standards, this connection, when completed, will provide a continuous east-west connection between Skyline Road S and Battle Creek Road SE. This connection should primarily occur as the surrounding area develops. Some City participation may be necessary.

Pringle Road SE (Copper Glen Drive SE to Hillrose Street SE) (111)

Improve to Minor Arterial standards with two travel lanes, center turn lane or turn pockets, bicycle lanes, curbs, gutters, and sidewalks. This is a companion project with the Battle Creek Road SE project shown above. It is expected that a majority of this project will be completed by development.

Rainier Drive SE (Rainier Drive SE to Davis Road S and to Gamma Street SE) (293)

Realign and extend Rainier Drive SE northward and then westward to align with Davis Road S at Liberty Road S. Also continue roadway farther northward to connect with Gamma Street SE. Rainier Drive SE is a local street in an area that is experiencing increasing residential development. This realignment east of Liberty Road S to intersect with Davis Road S will provide a safe route to Crossler Middle School from the east when this intersection is signalized.

Reed Road SE (Battle Creek Road SE to Strong Road SE) (115)

Improve to Minor Arterial standards with two travel lanes, center turn lane or turn pockets, bicycle lanes, curbs, gutters, and sidewalks. This will be done largely by development.

Strong Road SE (Fairview Industrial Drive SE to Reed Road SE) (118)

Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bicycle lanes. This will be done largely by development.

Rehabilitation of Commercial Street NE Bridge over Pringle Creek (243)

Rehabilitation of 14th Street NE (244) and Winter Street NE Bridges over Shelton Ditch (241)

Replacement of Fairway Avenue SE Bridge over Battle Creek (242)

Additional Rehabilitation of Liberty Street NE bridge at Pringle Creek (278)

These projects are vitally needed to replace or extend the life of these aging and heavily used structures.

Medium Priority (Construction needed within 15 years):

22nd Street SE (Vista Avenue SE to Madrona Avenue SE) (305)

Extend 22nd Street SE southerly to connect to Madrona Avenue SE, and reclassify 22nd Street SE to Collector from McGilchrist Street SE to Madrona Street SE. The land uses in the area are Industrial. This street extension will enhance connectivity and circulation in the area. The additional connectivity will disperse traffic, thereby reducing overall congestion.

32nd Avenue SE and Trelstad Avenue SE (Interstate 5 to 36th Avenue SE signal at Kuebler Boulevard SE) (193)

As the Interstate 5 overcrossing is rebuilt during the Interstate 5 widening project, an opportunity exists to soften the right angle alignment on the east side of the freeway. The entire street should be built to Minor Arterial standards.

Brentwood Drive SE (Battle Creek Road SE to Robins Lane SE) (197)

Fully connecting Robins Lane SE and Brentwood Drive SE will provide an east-west collector level connection between Commercial Street SE and Battle Creek Road SE in the far Southeast Salem. Currently the streets are connected by an emergency vehicle accessway. An additional need relates to the location of Brentwood Drive SE. This street is currently located within the right-of-way for Interstate 5. The future widening of Interstate 5 may necessitate relocating this street. The eventual alignment of Brentwood Drive SE will need to be determined through future study or as a condition of future development. When the final alignment of Brentwood Drive SE has been determined, the street needs to be improved to urban Collector standards.

Boone Road SE (Between Kinsington Street SE and Southampton Street SE) (296)

Rebuild and lower Boone Road SE in the vicinity of the closed section and reopen the roadway to traffic as a local street.

Cordon Road SE (Caplinger Road SE to State Street) (Marion County) (274)

Improve to Parkway standards, including four travel lanes, center turn lane or left-turn lanes at selected locations, curbs, gutters, sidewalks, and bicycle lanes.

Cordon Road SE (Highway 22 to Caplinger Road SE) (101)

Improve to Parkway standards, including four travel lanes, center turn lane or left-turn lanes at selected locations, curbs, gutters, sidewalks, and bicycle lanes.

Cordon Road SE at Highway 22 (Santiam Highway) (100)

Construction of a grade-separated interchange is needed to improve access to the Cordon Road SE/Kuebler Boulevard SE circumferential travel route. The design of the interchange is dependent upon the findings of the Highway 22 studies.

Kuebler Boulevard SE (Interstate 5 Interchange to Turner Road SE) (134)

Widen to Parkway standards with four travel lanes, paved or raised median, bicycle lanes, curbs, gutters, and sidewalks. This project includes turn lanes at Turner Road SE and bridge improvements over the railroad.

Kuebler Boulevard SE (Highway 22 to Turner Road SE) (135)

Widen to Parkway standards with four travel lanes, paved or raised median, bicycle lanes, curbs, gutters, and sidewalks, and bridge improvements over Mill Creek.

Kuebler Boulevard SE at Lone Oak Road SE (159)

Construct both eastbound and westbound right turn lanes on Kuebler Boulevard at Lone Oak Road.

Macleay Road SE at Cordon Road SE (136)

Add left-turn pockets on both eastbound and westbound approaches to Cordon Road SE.

New Collector Streets (Pringle Road SE to Reed Road SE and Strong Road SE to Reed Road SE) (189 and 194)

The recommended land use master plan for the redevelopment of the Fairview Training Center site calls for the 152 acres to be developed primarily as residential housing, with some neighborhood commercial uses. In order to serve the travel demand generated by the redeveloped site, Collector street connections shall be constructed through the site between Pringle Road SE and Reed Road SE and between Strong Road SE to Reed Road SE. The exact alignment of the street connection will be determined at a future time, pending additional planning work. The streets shall be designed to incorporate planting strips, street trees, and other streetscape features, as appropriate, to soften the appearance of the street and encourage desired speeds and driver behavior.

New Collector Street (Aumsville Highway to Turner Road SE) (191)

A new collector street route is needed to serve development of the Mill Creek Industrial Park. The purpose of this route is to provide on-site circulation and limit direct access to arterials and parkway designated streets. This route will be located east of Kuebler Boulevard SE and will connect Aumsville Highway to Turner Road SE. The precise alignment will be developed through the master planning process.

Reed Lane SE (Soapstone Avenue SE to Madras Street SE) (190)

This extension will connect Reed Lane SE south toward a connection with Commercial Street SE and Madras Street SE.

Turner Road SE (2,100 feet south of Cascades Gateway Park to Airway Drive SE) (138)

This project will increase traffic, bicycle, and pedestrian safety by adding paved shoulders, drainage improvements, sidewalks, and bicycle lanes.

Wiltsey Road SE (Sunnyside Road SE to Commercial Street SE) (139)

Realign "S" curve and improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bicycle lanes where designated.

Low Priority (Construction needed within 25 years)

12th Street SE (Fairview Avenue SE to Vista Avenue SE) (99)

Widen the roadway to add a southbound lane. The additional lane becomes a right-turn-only lane at Vista Avenue SE.

25th Street SE (Mission Street SE to McGilchrist Street SE) (106)

Classified as a Major Arterial, 25th Street SE connects Mission Street SE to the airport and Fairview Industrial Park. In 1993, daily traffic volumes were as much as 19,000 vehicles per day. By 2006, these daily volumes exceeded 27,000. This project will improve the effective capacity of the street by widening the existing four-lane street to add a center turn lane. Bicycle lanes and sidewalks are also to be included.

Battle Creek Road SE (Kuebler Boulevard SE to Wiltsey Road SE) (140)

As traffic volumes increase on Battle Creek Road SE, it will become necessary to widen the roadway to increase the effective capacity of the street by adding a center turn lane. Bicycle lanes and sidewalks are to be included in this project.

Commercial Street SE (Baxter Road SE to Interstate 5 Interchange) (141)

Daily traffic volumes on Commercial Street SE in 2001 ranged from 23,500 vehicles per day at Baxter Road SE to 14,300 per day at Fairway Avenue SE. This project will increase the number of travel lanes from two to four, and install a raised landscape median with turn pockets.

This improvement will be necessary to improve traffic flow. Bicycle lanes and sidewalks will be constructed as part of this project. This project will incorporate recommendations of the South Salem Gateway Plan (2002), including an entryway to Salem with a landscape treatment focused on the south end of the project. The project will make every effort to preserve the Willamette Valley Ponderosa Pine trees along this corridor as referenced in the South Salem Gateway Plan. This could include shifting the alignment of Commercial Street SE to the east, just north of Wiltsey Road SE, to protect a large stand of pine trees on public and private property. This component of the project needs to be based on an evaluation of the health of these trees prior to project design. Portions of this project will be constructed as a result of adjacent development.

Commercial Street SE (Ratcliff Drive SE to Vista Avenue SE) (107)

This project would add paved shoulders, curbs, sidewalks, and bicycle lanes, where missing, on this segment of Commercial Street SE. (31)

Mildred Lane SE (Lone Oak Road SE to Sunnyside Road SE) (137)

The entire east-west arterial should be improved to Minor Arterial standards with two travel lanes, a center turn lane where necessary and feasible, sidewalks, and bicycle lanes.

Pringle Road SE (Hoyt Street SE to Georgia Avenue SE) (110)

Although currently underutilized, this street is a part of an important north-south connection between farSouth and inner South Salem. This project will upgrade this street to Minor Arterial standards, adding a center turn lane or left-turn pockets, curbs, gutters, sidewalks, and bicycle lanes.

Ratcliff Drive SE and Salem Heights Avenue SE (Liberty Road S to Commercial Street SE) (126)

This collector street needs to be improved to urban standards. The intersection of Ratcliff Drive SE with Commercial Street SE will require the addition of a westbound left-turn lane on Ratcliff Drive SE and signalization to improve future traffic flow.

25th Street SE (State Street to Helm Street SE) (120)

27th Avenue SE (Kuebler Boulevard SE to Marietta Street SE) (156)

36th Avenue SE (Kuebler Boulevard SE to Langley Street SE) (142)

36th Avenue SE (Langley Street SE to Wiltsey Road SE) (143)

Airport Road SE (State Street to Mission Street SE) (112)

Airway Drive SE (Ewald Avenue SE to Turner Road SE) (113)

Baxter Road SE (Sunnyside Road SE to Commercial Street SE) (128)

Boone Road SE (Reed Lane SE/Barnes Road SE to Battle Creek Road SE) (129)

Connecticut Avenue SE (Pennsylvania Avenue SE to Rickey Street SE) (Marion County) (273)

Deer Park Road SE (Turner Road SE to Aumsville Highway) (152)

Gath Road SE (Turner Road SE to UGB) (144)

Holder Lane SE (Lone Oak Road SE to Liberty Road S)(130)

Hrubetz Road SE (Liberty Road S to Lone Oak Road SE) (132)

Lone Oak Road SE (Holder Lane SE to Mildred Lane SE) (145)

Macleay Road SE (Lancaster Drive SE to Connecticut Avenue SE) (Marion County) (147)

Macleay Road SE (Pennsylvania Avenue SE to Cordon Road SE) (146)

Marietta Street SE (27th Avenue SE to Fairview Industrial Drive SE) (155)

Oak Hill Avenue SE (Commercial Street SE to 12th Street SE) (117)

Oxford Street SE (22nd Street SE to 14th Street SE) (114)

Reed Lane SE (Fabry Road SE to Soapstone Avenue SE) (160)

Rees Hill Road SE (Sunnyside Road SE West to Champion Hill Road SE) (148)

Strong Road SE (Reed Road SE to Marietta Street SE) (154)

Sunnyside Road SE (Kuebler Boulevard SE to Mildred Lane SE) (157)

Sunnyside Road SE (Pawnee Circle SE to the UGB) (158)

Turner Road SE (Airway Drive SE to Gath Road SE) (149)

Turner Road SE (Gath Road SE to UGB) (151)

Wiltsey Road SE (Battle Creek Road SE to 36th Avenue SE) (150)

These streets need to be improved to urban standards over the next 25 years or more. Improvements would include two travel lanes, turn lanes where necessary, curbs, sidewalks, drainage, illumination, and bicycle lanes, where needed. Improvements to these streets will be funded through adjacent development or City funds.

New Streets and Extensions to Existing Streets (Low Priority)

The following streets will be extended through future development or City-initiated projects. These streets should be constructed to full urban standards. Map 3-9 shows the location of these new street extensions.

New Collector Street (Lancaster Drive SE to Turner Road SE) (186)

This new collector street will create a connection between Lancaster Drive SE and Turner Road SE. This new street will be the result of eventual closure and reclamation of the sand pit operations west of Lancaster Drive SE. This street will be constructed as the property redevelops. The street would most likely intersect with Lancaster Drive SE across from Cranston Street SE. Its intersection with Turner Road SE would most likely be a realigned intersection with 37th Avenue SE.

Lone Oak Road SE Extension (Muirfield Avenue SE to Rees Hill Road SE) (187)

As development occurs south of Muirfield Avenue SE, Lone Oak Road SE should be extended south to intersect with Rees Hill Road SE. This will create an important north-south collector street connection through this developing area.

Recommended Street Improvements: Marion County (Within the Salem Urban Area)

It is the general philosophy of this Plan that all collector and arterial streets currently located outside the Salem city limits, but inside the Salem UGB, will be improved to urban standards over time by either Marion County or the City of Salem. The City of Salem takes responsibility for the street upon annexation. Given this dual responsibility, these projects have been included in the previous sections of the *Salem Transportation System Plan*.

The extension of existing streets and creation of new streets within the unincorporated Marion County area, but affecting the City of Salem, are also included in each of the previous sections dealing with recommended Salem street projects.

Local Street Improvements

Bringing local residential streets up to urban standards is an important step in providing people safe and convenient places to walk, and better facilitating pedestrian access to transit services. Although important, the location of local residential streets in the overall hierarchy of street classifications tends to place it in a low priority for City construction funding. Although the provision of new local streets is generally the result of new residential subdivisions completed through private developers, improvements to existing local residential streets have traditionally been through the voluntary assessment of abutting property owners. The most common financing method used for local street improvements is a Local Improvement District.

Table 3-4 Committed Street Improvement Projects

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
25th Street SE	at Shelton Ditch	Strengthen to current design standards, widen to accommodate bike lanes and shoulders, and install scour protection.	238	Bridge	\$1,300,000	2	SESNA	Salem
Aumsville Highway SE	Kuebler Boulevard SE to Marion County Jail entrance	Construct to a Minor Arterial turnpike standard, with two travel lanes, a center turn lane, paved shoulders, bio-swales on both sides, sidewalks, and a 12-foot multi-use path. Widen all approaches to the intersection at Kuebler Boulevard SE.	163	Roadway	\$3,090,000	3	SEMCA	Salem
Broadway Street NE	at Stark Street N	Construct a queue jump for northbound bus traffic at Stark Street N.	258	Intersection	\$500,000	5	Highland	Salem
Brown Road NE	at Sunnyview Road NE	Construct dedicated southbound right-turn lane on Brown Road NE to westbound Sunnyview Road NE.	162	Intersection	\$200,000	1, 6	NOLA, ELNA	Salem
Capital Street NE	at Mill Creek	Rehabilitate bridge over Mill Creek.	239	Bridge	\$2,200,000	1	CAN-DO, Grant	Salem
Center Street NE	at Front Street	Replace stop sign on the northbound Center Street Bridge ramp with a signal to allow more bridge traffic to exit northbound onto Front Street.	50	Signal	\$280,000	1	CAN-DO	Salem
Cordon Road SE	at Pennsylvania Avenue SE	Add a northbound to westbound left-turn pocket on Cordon Road SE.	104	Intersection	\$500,000	2	SEMCA	Marion County
Cordon Road SE	at State Street	Construct improvements to the intersection with State Street that include turn pockets where appropriate.	161	Intersection	\$500,000			Marion County
Cordon Road SE	Macleay Road SE and Gaffin Road SE	Signalize and provide northbound and southbound left-turn lanes at Macleay Road SE intersection and provide southbound left-turn lane at Gaffin Road SE	127	Intersection	\$950,000	2	SEMCA	Salem
Cottage Street NE	at Mill Creek	Design and construct scour countermeasures.	250	Bridge	\$690,000	1	CAN-DO	Salem
Doaks Ferry Road NW	Brush College Road NW to Orchard Heights Road NW	Improve to interim Minor Arterial standards, including 2 travel lanes, turn lanes where appropriate, curbs, gutters, sidewalks, and bike lanes. Also improve intersection at Orchard Heights Road NW.	82	Roadway	\$5,883,000	8	West Salem	Salem
Front Street NE	Chemeketa Street NE to State Street	Widen southbound Center Street Bridge off ramp to Front Street to 2 lanes.	52	Roadway	\$1,750,000	1	CAN-DO	Salem
Interstate 5	at Kuebler Boulevard SE	Construct a new westbound to northbound ramp at the Kuebler Boulevard SE interchange.	192	Intersection	\$4,560,000	3, 4	SEMCA, Morningside	ODOT
Interstate 5	Highway 22 to Kuebler Boulevard SE	Widen Interstate 5 to six lanes, improve interchanges at Highway 22 and at Kuebler Boulevard, and replace 7 bridges along this section of highway.	123	Roadway	\$62,200,000	2, 3	SEMCA, Morningside	ODOT
Kuebler Boulevard SE	I-5 Interchange to Commercial Street SE	Build westbound (north) side of the roadway to Parkway standards, including intersection improvements at Battle Creek Road SE and a new signal at 27th Street SE.	131	Roadway	\$4,486,000	3, 4	Morningside, South Gateway	Salem
Lancaster Drive NE and SE	Along unincorporated sections of the roadway	Conduct an access management study within the Marion County portion of this Major Arterial.	21	Roadway	\$279,000			Marion County
Market Street NE	at Lancaster Drive NE	Construct right-turn lanes on westbound Market Street NE at Broadway Street NE.	62	Intersection	\$625,000	5	CAN-DO, Grant	Salem
McGilchrist Street SE	12th Street SE to 25th Street SE	Reconstruct to a 3-lane standard from 12th Street SE to 22nd Street SE, and to a 4-lane standard (two eastbound lanes) from 22nd Street SE to 25th Street SE. Add or revise signals at five intersections, realign 22nd, and widen both 22nd and 25th.	116	Roadway	\$16,760,000	2, 3	SESNA, SEMCA, Morningside	Salem

Table 3-4 Committed Street Improvement Projects (Continued)

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
River Road S	Acacia Drive S to Croisan Creek Road S	Signalize the intersection and construct left-turn pockets at intersections with Acacia Drive S, Golf Course Road S, and Valley High Street S.	69	Roadway	\$800,000	7	Croisan-Illahe, South Salem	Salem
Salem Industrial Drive NE	Cherry Avenue NE to Bill Frey Drive NE	Improve half the street to urban Collector standards, including travel lanes with curb, gutter, sidewalks, and bike lane.	42	Roadway	\$3,000,000	5	Northgate, Highland	Salem
Salem Parkway	at Hyacinth Street NE and at Cherry Avenue NE	Provide upgrades at both intersections in order to provide safety.	35	Intersection	\$1,238,000	5	Northgate	ODOT
State Street	at Mill Creek	Design and construct scour countermeasures.	237	Bridge	\$650,000	2	SESNA, NESCA	Salem
Summer Street NE	at Mill Creek	Design and construct scour countermeasures.	240	Bridge	\$215,000	1	CAN-DO, Grant	Salem
Sundance Court NW	End of Sundance Court NW to Olympia Avenue NW	Extend Sundance Court NW northward to connect with Olympia Avenue NW.	170	Street Extension	\$292,000	8	West Salem	Salem
Sunnyview Road NE	at Lancaster Drive NE	Construct both eastbound and westbound right-turn pockets at the intersection with Lancaster Drive NE.	43	Intersection	\$452,000	1, 6	NESCA, NOLA, ELNA	Salem
Traffic Signals at Various Intersections	Multiple Locations	Install five new Traffic Signals at various intersections based on meeting signal warrants.	203	Signal	\$3,300,000	All	All	Salem
Turner Road SE	Cascade Gateway Park extending south 2100 feet	Widen to provide two travel lanes, a center turn lane, bike lanes, curbs, and gutters. The drainage ditch on the west side of the road will be relocated.	153	Roadway	\$725,000	2	SEMCA	Salem
Wallace Road NW	at Glen Creek Road NW	Northbound on Wallace Road NW add a dedicated right-turn lane and add a second dedicated left-turn lane. On Glen Creek Road NW add a second westbound receiving lane and add both an eastbound and a westbound approach lane.	90	Intersection	\$8,000,000	8	West Salem	Salem
Ward Drive NE	Ward Court NE to Lancaster Drive NE	Improve to Minor Arterial standards, including two travel lanes and a center turn lane with curbs, gutters, sidewalks, and bike lanes, plus intersection improvements. A signal and turn lanes are included at Fisher Road NE.	29	Roadway	\$1,575,000			Marion County
Wiltsey Road SE	at Commercial Street SE	Construct eastbound and westbound left-turn lanes at Commercial Street SE and signalize.	253	Intersection	\$558,000	4	South Gateway	Salem

Table 3-5 High Priority Street Improvement Projects

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
12th Street SE	McGilchrist Street SE to Fairview Avenue SE	Widen the roadway to add a southbound lane. The additional lane becomes a right-turn-only lane at Fairview Avenue SE.	98	Roadway	\$1,100,000	2	Morningside	Salem
14th Street SE	at Shelton Ditch	Rehabilitate bridge over Shelton Ditch.	244	Bridge	\$428,000	2	SESNA	Salem
35th Avenue NW	Osage Drive NW to Orchard Heights Road NW	Extend 35th Street NW from its current terminus northward to connect with Grice Hill Road NW at Orchard Heights Road NW. At this point, the street may be numbered as 34th Street NW.	165	Street Extension	\$1,987,000	8	West Salem	Salem
Auburn Road NE	at Cordon Road NE	Install eastbound and westbound left-turn lanes and signal at Cordon Road NE.	283	Intersection	\$750,000			Marion County
Battle Creek Road SE	Kuebler Boulevard SE to Hillrose Street SE	Improve to Minor Arterial standards with two travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters, and sidewalks. Additional lanes may be required in the vicinity of the Kuebler Boulevard SE intersection.	109	Roadway	\$6,163,000	3	Morninside	Salem
Blossom Drive NE	Lilac Lane NE to Portland Road NE	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	14	Roadway	\$1,000,000			Marion County
Broadway Street NE	Belmont Street NE to Shipping Street NE	This project will construct streetscape improvements to facilitate the movement of transit through this portion of the High Priority Transportation Corridor. The project will accommodate other modes and the needs of the adjacent properties.	262	Roadway	\$750,000	1	Grant	Salem
Center Street NE	at 17th Street NE	Widen Center Street NE approaches to the intersection to add turn lanes.	15	Intersection	\$2,732,000	1, 2	NEN	Salem
Commercial Street NE	at Marion Street Bridge	Restripe the through/right lane to a right-turn-only lane giving two right-turn-only lanes onto the bridge. Add curb extensions on the south side of the intersection and improve the northwest corner to facilitate truck turning movements.	49	Intersection	\$165,000	1	CAN-DO	Salem
Commercial Street SE	at Kuebler Boulevard SE	Widen from north of Boone Road SE to easterly Barnes Road SE to provide a second left-turn lane on both approaches to Kuebler Boulevard SE. This project will include a new traffic signal and will restrict some left-turns to/from Boone Road SE and Barnes Road SE.	196	Intersection	\$1,540,000	4, 3	South Gateway, Faye Wright, Morningside	Salem
Commercial Street SE	at Pringle Creek	Rehabilitate bridge over Pringle Creek.	243	Bridge	\$1,997,000	2	CAN-DO	Salem
Cordon Road NE	at Carolina Avenue/Indiana Avenue NE	Install northbound left-turn lane on Cordon Road NE to westbound Herrin Road NE.	279	Intersection	\$500,000	1	NOLA	Marion County
Cordon Road NE	at Hayesville Drive NE	Install northbound left-turn lane on Cordon Road NE to westbound Hayesville Drive NE.	281	Intersection	\$500,000			Marion County
Cordon Road NE	at Herrin Road NE	Install northbound left-turn lane on Cordon Road NE to westbound Herrin Road NE.	280	Intersection	\$500,000			Marion County
Cottage Street NE	Marion Street NE to State Street	Convert street to two-way operation, including signal modifications.	301	Roadway	\$700,000	1	CAN-DO	Salem
Eola Drive NW	Kingwood Drive NW to Sunwood Drive NW	Improve to Minor Arterial standards with two travel lanes, center turn lane, bike lanes, curbs, gutters, and sidewalks.	79	Roadway	\$3,307,000	8	West Salem	Salem
Fabry Road SE	Reed Lane SE to Battle Creek Road SE	Extend Fabry Road SE eastward from Reed Lane SE to Battle Creek Road SE. This, along with the westward extension of Mildred Lane SE, will provide an east/west Minor Arterial connection south of Kuebler Blvd. SE from Battle Creek Road SE to Skyline Road SE.	188	Street Extension	\$2,930,000	4	South Gateway	Salem
Fairway Avenue SE	at Battle Creek	Rehabilitate bridge over Battle Creek.	242	Bridge	\$357,000	4	South Gateway	Salem

Table 3-5 High Priority Street Improvement Projects (Continued)

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
Fern Drive S	Heath Street S to River Road S	Extend Fern Drive S northward to connect with River Road S. The extension should follow the best contours possible to limit extreme grades.	180	Street Extension	\$1,753,000	7	Croisan-Illahe	Salem
Fisher Road NE	Sunnyview Road NE to Market Street NE	Extend Fisher Road NE southward and eastward to intersect with Market Street NE and install a new signal at that intersection.	265	Street Extension	\$1,654,000	6	NESCA	Salem
Gaffin Road SE	Cordon Road SE to west of Highway 22 interchange	Construct a 3/4 street improvement on a 1,500-foot segment bordering City-owned property to Minor Arterial standards, and construct turnpike improvements to the remaining portion (approximately 3,500 feet) of the roadway.	198	Roadway	\$2,082,000	3	SEMCA	Salem
Geer Park Access Street	Geer Park to Hawthorne Avenue NE	Extend the Geer Park Access Street eastward to Hawthorne Avenue NE, creating a second access point to the park.	270	Street Extension	\$593,000	6	NESCA	Salem
Hawthorne Avenue NE and Hyacinth Road NE	Portland Road NE to Sunnyview Road NE	Widen to two travel lanes with center turn lane where needed. Add curbs, gutters, sidewalks, bicycle lanes, and widen intersection approaches to Portland Road NE, Silverton Road NE, and Sunnyview Road NE.	40	Roadway	\$14,546,000	5, 1	Northgate, Lansing	Salem
Hazelgreen Road NE	at Cordon Road NE/55th Avenue NE	Construct turn lanes on all four legs, include minor intersection realignment, and install signal.	282	Intersection	\$1,500,000			Marion County
Hilfiker Lane SE	Commercial Street SE to Pringle Road SE via Hillrose Street SE	Construct extension of Hilfiker Lane SE to Hillrose Street SE and reconstruct both Hilfiker and Hillrose to urban standards, with two travel lanes, or turn pockets at key intersections, and curbs, gutters, sidewalks, and bike lanes.	105	Street Extension	\$3,866,000	3	Morningside, Faye Wright	Salem
Hilfiker Lane SE	Sunnyside Drive SE to Commercial Street SE	Widen Hilfiker Lane SE by adding additional turn lanes.	305	Roadway	TBD	3	Faye Wright	Salem
Hollywood Drive NE	at Silverton Road NE	Install signal and northbound left-turn pocket on Hollywood Drive NE to westbound Silverton Road NE.	285	Intersection	\$500,000			Marion County
Islander Avenue NW	West Meadows Drive NW to 35th Avenue NW extension	Extend Islander Avenue NW westward to intersect with the northward extension of 35th Avenue NW.	168	Street Extension	\$2,685,000	8	West Salem	Salem
Kuebler Boulevard SE	Sunnyside Road SE to I-5 interchange	Improve to a 5-lane Parkway standard, including intersection improvements. North side between Battle Creek Road SE and I-5 interchange to be completed in another project.	133	Roadway	\$2,593,000	3, 3	Morningside, South Gateway, Faye Wright	Salem
Lancaster Drive NE	at Market Street NE	Widen Lancaster Drive NE to provide additional left-turn lanes both southbound and northbound at Market Street NE.	25	Intersection	\$5,569,000	6	NESCA, ELNA	Salem
Lancaster Drive SE	Cranston Street SE to Kuebler Boulevard SE	Realign curves and widen to two travel lanes plus a center turn lane with curbs, gutters, sidewalks, and bike lanes as an interim improvement.	23	Roadway	\$3,146,000	2	SEMCA	Salem
Liberty Road S	at Madrona Avenue S	Improve this intersection by adding northbound and southbound left-turn pockets on Liberty Road S.	59	Intersection	\$2,728,000	7, 3	South Salem, Faye Wright	Salem
Liberty Street SE	at Pringle Creek	Provide retaining wall repair, bridge rail concrete repair, approach roadway subsidence repair, and scour countermeasures.	278	Bridge	\$2,978,000	2	CAN-DO, SCAN	Salem
Linwood Street NW	Goldcrest Avenue NW to Orchard Heights Road NW	Extend Linwood Street NW southward to connect with Orchard Heights Road NW.	171	Street Extension	\$950,000	8	West Salem	Salem

Table 3-5 High Priority Street Improvement Projects (Continued)

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
Madrona Avenue SE	25th Street SE to UPRR	Realign the Madrona Avenue SE/25th Street SE intersection as a T intersection with the primary flow going between Madrona Avenue and the north leg of 25th Street. Rebuild Madrona to Major Arterial standards west to UPRR and relocate Aviation Loop SE.	122	Intersection	\$3,748,000	2	SEMCA, SESNA	Salem
Madrona Avenue SE	at Commercial Street SE	Add a westbound to northbound right-turn lane and signal improvements.	124	Intersection	\$372,000	3	Morningside, Faye Wright	Salem
Marine Drive NW	Moyer Drive NW to River Bend Road NW	Construct a new Collector (Marine Drive NW) east of and parallel to Wallace Road NW to provide local access and circulation for development. The alignment will proceed northward from Moyer Drive NW along the west edge of Wallace Marine Park.	173	Street Extension	\$7,052,000	8	West Salem	Salem
Marine Drive NW Vicinity	Marine Drive NW to Wallace Road NW	Once Marine Drive NW is completed, construct new connections from Marine Drive NW to Wallace Road NW at Harritt Drive NW, Hope Avenue NW, and Narcissus Court NW.	174	Street Extension	\$1,784,000	8	West Salem	Salem
Market Street NE and Swegle Road NE	Lancaster Drive NE to Royalty Drive NE	Realign both Market Street NE and Swegle Road NE to connect at 45th Avenue NE, and bring both streets up to Minor Arterial standards. Install traffic signal at 45th Avenue NE if warranted.	26	Roadway	\$4,987,000	4	ELNA	Salem
Mildred Lane SE	Lone Oak Road S to Liberty Road S	Extend Mildred Lane SE westward to connect to Liberty Road S creating an east west Minor Arterial roadway south of Kuebler Boulevard.	184	Street Extension	\$3,183,000	4	South Gateway	Salem
Portland Road NE	Beach Avenue NE to Claxter Road NE	Improve the streetscape by undergrounding utilities, installing a landscaped median, and consolidating accesses among others.	54	Roadway	\$18,000,000	5	Northgate	Salem
Pringle Road SE	Copper Glen Drive SE to Hillrose Street SE	Improve to Minor Arterial standards with two travel lanes, center turn lane, or turn pockets, bike lanes, curbs, gutters, and sidewalks.	111	Roadway	\$2,055,000	3	Morningside	Salem
Rainier Drive SE	Rainier Drive SE to Davis Road S and to Gamma Street SE	Realign and extend roadway northward and then westward to align with Davis Road S at Liberty Road S. Also continue roadway farther northward to connect with Gamma Street SE.	293	Street Extension	\$679,000	4	South Gateway	Salem
Reed Road SE	Battle Creek Road SE to Strong Road SE	Improve to Minor Arterial standards with two travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters, and sidewalks.	115	Roadway	\$1,778,000	3	Morningside	Salem
River Road S	Croisan Creek Road S to UGB	Improve to Minor Arterial standards where topography allows, including two travel lanes with curbs, gutters, sidewalks, and bike lanes, plus left-turn pockets at intersections.	70	Roadway	\$9,800,000	7	SCAN, South Salem, Croisan-Illahe	Salem
Silverton Road NE	East of Railroad to Pine Street/Portland Road Intersection	Realign Silverton Road NE westward to connect with Portland Road NE at Pine Street NE, allowing for the removal of the awkward existing Silverton Road/Portland Road intersection.	272	Roadway	\$2,255,000	5	Northgate	Salem
Skyline Road S	Liberty Road S to Kuebler Boulevard S	Widen to an interim 3-lane urban standard with two travel lanes, center turn lane, curbs, gutters, sidewalks, and bike lanes.	72	Roadway	\$2,784,000	7	Sunnyslope, Faye Wright	Salem
State Street	12 th to 25 th Street	Reconfigure street from 13 th to 17 th Streets to one travel lane in each direction, center turn lane, buffered bike lanes, and wide sidewalks; widen sidewalks between 17 th and 25 th Streets; includes intersection modifications at 17 th and 14 th Streets.	307	Roadway	\$4,000,000	1, 2	NEN, SESNA	Salem

Table 3-5 High Priority Street Improvement Projects (Continued)

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
Strong Road SE	Fairview Industrial Drive SE to Reed Road SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes.	118	Roadway	\$3,200,000	3	Morningside	Salem
Traffic Signals at Various Intersections	Multiple Locations	Install five new Traffic Signals at various intersections based on meeting signal warrants.	204	Signal	\$3,300,000	All	All	Salem
Wallace Road NW	at Edgewater Street NW and at west end of bridge ramps	Increase radius of westbound bridge ramp to Wallace Road NW, provide an additional eastbound bridge entrance lane on Edgewater Street NW, and close Musgrave Lane NW. Alternative access will be provided to impacted businesses.	87	Intersection	\$1,681,000	8	West Salem	Salem
Wallace Road NW	Edgewater Street NW to Orchard Heights Road NW	Improve safety through construction of a raised median with turn pockets to serve businesses. Pedestrian and bicycle facilities will be included.	88	Roadway	\$1,196,000	8	West Salem	Salem
Ward Drive NE	at Lancaster Drive NE	Add eastbound right-turn lane on Ward Drive NE to Lancaster Drive NE and upgrade signal.	284	Intersection	\$600,000			Marion County
Winter Street SE	at Shelton Ditch	Rehabilitate bridge over Shelton Ditch.	241	Bridge	\$714,000	2	CAN-DO	Salem

Table 3-6 Medium Priority Street Improvement Projects

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
17th Street NE	Norway Street NE to Sunnyview Road NE	Improve to Minor Arterial standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes, plus left-turn lanes at intersections.	47	Roadway	\$1,791,000	1	NEN	Salem
22nd Street SE	Vista Avenue SE to Madrona Avenue SE	Extend roadway south to connect to Madrona Avenue SE. Reclassify 22nd Street SE to Collector from McGilchrist Street SE to Madrona Avenue SE.	292	Street Extension	\$1,600,000	2	SESNA	Salem
32nd Avenue SE and Trelstad Avenue SE	I-5 to 36th Avenue SE signal at Kuebler Boulevard SE	Improve to Minor Arterial standards, including two travel lanes, left-turn pockets where needed, curbs, gutters, sidewalks, and bike lanes.	193	Roadway	\$2,600,000	3	SEMCA	Salem
45th Avenue NE	Silverton Road to Ward Drive NE	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	31	Roadway	\$2,635,000			Marion County
Auburn Road NE	Cordon Road NE to Lancaster Drive NE	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	12	Roadway	\$3,000,000			Marion County
Boone Road SE	Between Kinsington Street SE and Southampton Street SE	Rebuild and lower Boone Road SE in the vicinity of the closed section and reopen the roadway to traffic.	296	Roadway	\$520,000	3	Morningside	Salem
Brentwood Drive SE	Battle Creek Road SE to Robins Lane SE	Realign Brentwood Drive SE, build it to Collector standards, and connect it to Robins Lane SE.	197	Street Extension	\$2,517,000	4	South Gateway	Salem
Broadway Street NE	at Salem Parkway	Construct additional turn lanes for northbound and southbound traffic on Broadway Street NE and for southwestbound traffic on Salem Parkway.	260	Intersection	\$600,000	5	Highland	Salem
Broadway Street NE	at Salem Parkway	Construct a queue jump for northbound bus traffic at Salem Parkway.	257	Intersection	\$500,000	5	Highland	Salem
Brown Road NE	Sunnyview Road NE to Silverton Road NE	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	13	Roadway	\$1,621,000	1	NOLA	Salem
Cascade Drive-Parkway Drive NW	8th Avenue NW to Orchard Heights Road NW	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes (where feasible). Make Cascade Drive NW improvements within existing ROW where feasible. Study realignment of both intersections at Glen Creek Road NW.	86	Roadway	\$3,377,000	8	West Salem	Salem
Cherry Avenue NE	BNRR to Salem Parkway NE	Widen to 5 lanes with four travel lanes, a center turn lane, curbs, gutters, sidewalks, and bike lanes.	16	Roadway	\$5,523,000	5	Highland, Northgate	Salem
Christina Street NW	Elliot Street NW to Michigan City Lane NW	Extend Christina Street NW west and north connecting to Michigan City Lane NW, creating a new Collector connection. Also complete missing link between Redfir Street NW to Cherry Blossom Street NW.	167	Street Extension	\$3,912,000	8	West Salem	Salem
Cordon Road NE	Center Street NE to Sunnyview Road NE	Improve to Parkway standards, including four travel lanes, center turn lane or left-turn lanes at selected locations, curbs, gutters, sidewalks, and bike lanes.	276	Roadway	\$4,600,000			Marion County
Cordon Road NE	State Street to Center Street NE	Improve to Parkway standards, including four travel lanes, center turn lane or left-turn lanes at selected locations, curbs, gutters, sidewalks, and bike lanes.	275	Roadway	\$4,600,000			Marion County
Cordon Road NE	Sunnyview Road NE to Silverton Road NE	Improve to Parkway standards, including four travel lanes, center turn lane or left-turn lanes at selected locations, curbs, gutters, sidewalks, and bike lanes.	277	Roadway	\$4,600,000			Marion County

Table 3-6 Medium Priority Street Improvement Projects

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
Cordon Road SE	at Santiam Highway (Highway 22)	Construct a grade-separated interchange to improve access to the Cordon Road SE/Kuebler Boulevard SE circumferential travel route.	100	Intersection	\$20,000,000	2, 3	SEMCA	Salem
Cordon Road SE	Caplinger Road SE to State Street	Improve to Parkway standards, including four travel lanes, center turn lane or left-turn lanes at selected locations, curbs, gutters, sidewalks, and bike lanes.	274	Roadway	\$2,480,000			Marion County
Cordon Road SE	Highway 22 to Caplinger Road SE	Improve to Parkway standards, including four travel lanes, center turn lane or left-turn lanes at selected locations, curbs, gutters, sidewalks, and bike lanes.	101	Roadway	\$3,390,000	2, 3	SEMCA	Salem
Court Street NE	12th Street NE to Commercial Street NE	Convert to two-way operation.	302	Roadway	\$850,000	1	CAN-DO	Salem
Croisan Creek Road S	River Road S to Heath Street S	The project will improve this section of Croisan Creek Road S to urban Collector standards with curbs, gutters, sidewalks, and bike lanes, and will also improve the intersection at River Road S.	9	Roadway	\$2,770,000	7	South Salem, Croisan-Illahe	Salem
Davis Road S	Skyline Road S to Liberty Road S	Improve to Collector standards including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	76	Roadway	\$2,850,000	7	Sunnyslope	Salem
Doaks Ferry Road NW	Glen Creek Road NW to Eola Drive NW	Improve to an interim 3-lane, Minor Arterial standard, with two travel lanes, center turn lane, bike lanes, curbs, gutters, and sidewalks. Include all necessary realignments and intersection improvements.	83	Roadway	\$2,138,000	8	West Salem	Salem
Eola Drive NW	Edgewater Street NW to Kingwood Drive NW	Improve to Minor Arterial standards adding turn lanes where needed, bike lanes, curbs, gutters, and sidewalks.	78	Roadway	\$2,138,000	8	West Salem	Salem
Eola Drive NW	Sunwood Drive NW to Gehlar Road NW	Improve to Minor Arterial standards with two travel lanes, center turn lane, bike lanes, curbs, gutters, and sidewalks.	80	Roadway	\$1,005,000	8	West Salem	Salem
Evergreen Avenue NE	at Market Street NE	Add southbound right-turn lane on Evergreen Avenue NE at Market Street NE	18	Intersection	\$116,000	1, 6	Lansing, NESCA	Salem
Front Street NE	Norway Street NE to Division Street NE	Reconstruct Front Street NE to a modified Minor Arterial standard and realign the railroad tracks down the center. Construct wide travel lanes as well as curbs, gutters, and sidewalks. The project includes the reconstruction of Mill Creek Bridge.	66	Roadway	\$4,000,000	1	CAN-DO	Salem
Greencrest Street NE	Auburn Road NE to State Street NE	Extend Greencrest Street NE south to State Street to create a north-south collector connecting Center Street NE and State Street.	266	Street Extension	\$2,470,000	6	ELNA	Salem
Hawthorne Avenue NE	Midway Street NE to Center Street NE	Add a northbound right-turn lane extending from Midway Street NE to the Center Street NE intersection.	38	Intersection	\$710,000	6	NESCA	Salem
Hawthorne Avenue NE	Market Street NE to Mission Street SE	Improve to Major Arterial standards, including four travel lanes and a center turn lane (or raised median) with curbs, gutters, sidewalks, and bike lanes.	39	Roadway	\$15,791,000	6, 2	NESCA, SESNA	Salem
Hayesville Drive NE	Portland Road NE to Astoria Street NE	Extend Portland Road NE westward to connect with Astoria Street NE.	269	Street Extension	\$767,000	5	Northgate	Salem
Hollywood Drive NE	Silverton Road NE to city limits	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	34	Roadway	\$1,300,000			Marion County
Hood Street NE	at Broadway Street NE	Construct both eastbound and westbound left-turn pockets at Broadway Street NE.	259	Intersection	\$1,200,000	1	Grant	Salem
Interstate 5	Kuebler Boulevard SE to Delaney Road SE, Illahe Crossing	Widen Interstate 6 to six lanes.	261	Roadway	\$119,980,000	4	SEMCA, South Gateway	ODOT

Table 3-6 Medium Priority Street Improvement Projects

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
Kuebler Boulevard SE	at Lone Oak Road	Construct both eastbound and westbound right-turn lanes on Kuebler Boulevard SE at Lone Oak Road SE.	159	Intersection	\$710,000	4	Faye Wright, South Gateway	Salem
Kuebler Boulevard SE	Highway 22 to Turner Road SE	Widen to Parkway standards with four travel lanes, paved or raised median, bike lanes, curbs, gutters, and sidewalks, and bridge improvements over Mill Creek.	135	Roadway	\$9,840,000	2, 3	SEMCA	Salem
Kuebler Boulevard SE	I-5 interchange Turner Road SE	Widen to Parkway standards with four travel lanes, paved or raised median, bike lanes, curbs, gutters, and sidewalks. This project includes turn lanes at Turner Road SE and bridge improvements over the railroad.	134	Roadway	\$13,400,000	3	SEMCA	Salem
Lancaster Drive NE	State Street to Silverton Road NE	Provide access management improvements along this corridor to improve safety and capacity.	22	Roadway	\$4,058,000	1, 6	NESCA, ELNA, NOLA	Salem
Liberty Road S	Commercial Street SE to Browning Avenue SE	Widen to four travel lanes, center turn lanes or raised medians, curbs, gutters, sidewalks, and bike lanes.	57	Roadway	\$10,347,000	7, 3	South Salem, Faye Wright	Salem
Macleay Road SE	at Cordon Road SE	Add left-turn pockets on both eastbound and westbound approaches to Cordon Road SE.	136	Intersection	\$411,000	2	SEMCA	Salem
Mildred Lane SE	Liberty Road S to Skyline Road S	Continue the extension of Mildred Lane SE westward from Liberty Road S to Skyline Road S creating an east-west Minor Arterial roadway south of Kuebler Boulevard.	294	Street Extension	\$6,545,000	7	Sunnyslope	Salem
Mission Street SE	at Liberty Street SE and Commercial Street SE	Improve capacity of both intersections with additional turn lanes,	121	Intersection	\$2,680,000	2, 7	SCAN, CAN-DO	Salem
Mousebird Avenue NW	Royal Crown Avenue NW to Macaw Street NW	Construct a short missing link along Mousebird Avenue NW. When completed, this street will offer much needed circulation between River Bend Road NW and Orchard Heights Road NW.	172	Street Extension	\$120,000	8	West Salem	Salem
New Collector Street	Pringle Road SE to Reed Road SE	Construct a new east-west Collector through the Sustainable Fairview Training Center property as a part of development of the Sustainable Fairview Masterplan.	189	Street Extension	\$3,602,000	3	Morningside	Salem
New Collector Street	Strong Road SE to Reed Road SE	Construct a new north-south Collector through the Sustainable Fairview Training Center property as a part of development of the Sustainable Fairview Masterplan.	194	Street Extension	\$2,771,000	3	Morningside	Salem
New Collector Street within Mill Creek	Aumsville Highway to Turner Road SE	Build a new Collector street within the Mill Creek Industrial Park to provide on-site circulation and to limit direct access to the arterials in the area. The precise alignment of this street will be developed through the master planning process.	191	Street Extension	\$6,282,000	3	SEMCA	Salem
Owens Street SE	at Liberty Street SE and at Commercial Street SE	Improve intersections to increase turning movement capacity to and from Commercial Street SE and Liberty Street SE.	125	Intersection	\$4,306,000	2, 7	SCAN	Salem
Phyllis Street NE	Niles Avenue NE to Astoria Street NE	Extend Phyllis Street NE eastward to connect with Astoria Street NE.	267	Street Extension	\$683,000	5	Northgate	Salem
Red Leaf Drive S	Davis Road S to Mildred Lane SE Extension	Extend Red Leaf Drive S southward to the extension of Mildred Lane SE.	183	Street Extension	\$1,243,000	7	Sunnyslope	Salem
Salem Industrial Drive NE	Bill Frey Drive NE to Hyacinth Street NE	Extend Salem Industrial Drive northward to Hyacinth Street NE.	271	Street Extension	\$8,500,000	5	Northgate	Salem
Salem River Crossing	East and west of the Willamette River within the Salem Urban Area	Acquire right-of-way for a new vehicular bridge crossing over the Willamette River within the Salem Urban Area.	245	Bridge	\$20,000,000			Salem

Table 3-6 Medium Priority Street Improvement Projects

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
State Street	12th Street to Liberty Street	Convert to two-way operation with bike facilities.	303	Roadway	\$1,400,000	1	CAN-DO	Salem
State Street	Lancaster Drive NE to Cordon Road NE	Improve to Major Arterial standards, with four travel lanes plus a center turn lane with curbs, gutters, sidewalks, and bike lanes.	28	Roadway	\$1,463,000	6, 2	NESCA, SESNA	Marion County
Sunnyview Road NE	Evergreen Avenue NE to Fisher Road NE	Install roundabout at Park Avenue NE, traffic signal at Lansing Avenue NE, and curbs, gutters, and sidewalks from Evergreen Avenue NE to Byram Street NE.	44	Roadway	\$2,466,000	1, 6	Lansing, NOLA, NESCA	Salem
Traffic Signals at Various Intersections	Multiple Locations	Install five new Traffic Signals at various intersections based on meeting signal warrants.	205	Signal	\$3,300,000	All	All	Salem
Turner Road SE	2100 feet south of Cascade Gateway Park to Airway Drive SE	Improvements to include bike lanes, drainage, paved shoulder on one side, and curb, gutter, and sidewalk on the other.	138	Roadway	\$3,984,000	2	SEMCA	Salem
Wiltsey Road SE	Sunnyside Road SE to Commercial Street SE	Realign S-curve and improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	139	Roadway	\$3,565,000	4	South Gateway	Salem

Table 3-7 Low Priority Street Improvement Projects

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
12th Street SE	Fairview Avenue SE to Vista Avenue SE	Widen the roadway to add a southbound lane. The additional lane becomes a right-turn-only lane at Vista Avenue SE.	99	Roadway	\$1,000,000	2	Morningside	Salem
25th Street SE	Mission Street SE to McGilchrist Street SE	Widen the existing four-lane street to add a center turn lane, bicycle lanes, curbs, gutters, and sidewalks, bringing it up to full standards for a Major Arterial.	106	Roadway	\$3,069,000	2	SESNA, SEMCA	Salem
25th Street SE	State Street to Helm Street SE	Improve to Minor Arterial standards with two travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters, and sidewalks.	120	Roadway	\$2,654,000	2, 6	SESNA	Salem
27th Avenue SE	Kuebler Boulevard SE to Marietta Street SE	Improve to Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	156	Roadway	\$950,000	3	Morningside	Salem
36th Avenue SE	Kuebler Boulevard SE to Langley Street SE	Improve to Minor Arterial standards with two travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters, and sidewalks.	142	Roadway	\$889,000	4	SEMCA	Salem
36th Avenue SE	Langley Street SE to Wiltsey Road SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	143	Roadway	\$1,178,000	4	SEMCA	Salem
37th Avenue NW	Orchard Heights Place NW to the UGB	Improve to Collector standards, including two travel lanes, curbs, gutters, and sidewalks.	96	Roadway	\$1,372,000	8	West Salem	Salem
5th Avenue NW	Cameo Street NW to Marine Drive NW	Extend 5th Avenue NW from Cameo Street NW northward to Marine Drive NW	175	Street Extension	\$530,000	8	West Salem	Salem
Airport Road SE	State Street to Mission Street SE	Improve to Minor Arterial standards with two travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters and sidewalks. This project will include a major widening or replacement of the bridge at Shelton Ditch.	112	Roadway	\$2,242,000	2	SESNA	Salem
Airway Drive SE	Ewald Avenue SE to Turner Road SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes.	113	Roadway	\$2,216,000	2	SEMCA	Salem
Battle Creek Road SE	Kuebler Boulevard SE to Wiltsey Road SE	Improve to Minor Arterial standards with two travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters, and sidewalks.	140	Roadway	\$3,520,000	4	South Gateway	Salem
Baxter Road SE	Sunnyside Road SE to Commercial Street SE	Improve to Collector standards, including two travel lanes, curbs, gutters, and sidewalks.	128	Roadway	\$2,503,000	4	South Gateway	Salem
Boone Road SE	Reed Lane SE/ Barnes Road SE to Battle Creek Road SE	Improve to Collector standards, including two travel lanes, curbs, gutters, and sidewalks.	129	Roadway	\$1,116,000	4	South Gateway	Salem
Browning Avenue S	at Kurth Street S	Realign intersection and make improvements to increase safety and capacity.	2	Intersection	\$72,000	7	South Salem, Sunnyslope	Salem
Browning Avenue S	Cloudview Drive S to Croisan Scenic Way S Extension	Extend Browning Avenue S westward to connect with the extension of Croisan Scenic Way S.	182	Street Extension	\$479,000	7	Sunnyslope	Salem
Browning Avenue S	Liberty Road S to Kurth Street S	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	1	Roadway	\$2,013,000	7	South Salem	Salem
Brush College Road NW	Doaks Ferry Road NW to BPA Power Lines	Improve to Minor Arterial standards with two travel lanes, left-turn lanes, bike lanes, curbs, gutters, and sidewalks.	95	Roadway	\$1,977,000	8	West Salem	Salem
Byers Street S-Deer Run S	Viewcrest Road S to end of roadway	Improve to Minor Arterial standards including two travel lanes, turn lanes where appropriate, curbs, gutters, sidewalks, and bike lanes.	77	Roadway	\$1,977,000	7	Croisan-Illahe	Salem

Table 3-7 Low Priority Street Improvement Projects

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
Capitol Street NE	Market Street NE to Fairgrounds Road NE	Add a third travel lane and bike lane by removing parking. An alternative for adding a travel lane is to prohibit parking during peak hours.	63	Roadway	\$40,000	1, 5	Grant, Highland	Salem
Center Street NE	Lancaster Drive NE to Cordon Road NE	Improve to interim Minor Arterial standards, including two travel lanes and a center turn lane with curbs, gutters, sidewalks, and bike lanes.	53	Roadway	\$5,051,000	6	ELNA, NESCA	Marion County
Chemawa Road NE	I-5 to Portland Road	Improve to urban Parkway standards, including four travel lanes and a center turn lane with curbs, gutters, sidewalks, and bike lanes.	36	Roadway	\$2,511,000	5	Northgate	Salem
Cherry Avenue NE	Johnson Street NE to Pine Street NE	Widen to an interim 3-lane configuration, with two travel lanes, a center turn lane, curbs, gutters, sidewalks, and bike lanes.	17	Roadway	\$1,604,000	5	Highland	Salem
Church and High Streets NE/SE	Marion Street NE to Trade Street SE	Possible conversion from one-way to two-way operation with bike facilities.	304	Roadway	\$3,000,000	1	CAN-DO	Salem
Colorado Drive NW	South terminus of Colorado Drive NW to Orchard Heights Road NW	Extend street to complete a loop road connected to and north of Orchard Heights Road NW and west of Doaks Ferry Road NW, comprised of Grice Hill Drive NW, Vickery Lane NW, Colorado Drive NW, and possibly Landaggard Drive NW.	166	Street Extension	\$919,000	8	West Salem	Salem
Commercial Street SE	Baxter Road SE to I-5 Interchange	Improve to Major Arterial standards, including four travel lanes, left-turn lanes at selected locations, curbs, gutters, sidewalks, and bike lanes.	141	Roadway	\$7,329,000	4	South Gateway	Salem
Commercial Street SE	Ratcliff Drive SE to Vista Avenue SE	Add curbs, gutters, and sidewalks where missing along this segment of Commercial Street SE.	107	Roadway	\$1,803,000	3, 2	Faye Wright, Morningside, SCAN	Salem
Connecticut Avenue SE	Pennsylvania Avenue SE to Rickey Street SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	273	Roadway	\$640,000			Marion County
Croisan Creek Road S	Kuebler Boulevard S to Heath Street S	The project will widen this section of Croisan Creek Road S to a 30-foot cross section which will include shoulders but no curbs, gutters, or sidewalks.	10	Roadway	\$7,770,000	7	Croisan-Illahe, Sunnyslope	Salem
Croisan Creek Road S	Kuebler Boulevard S to Skyline Road S/Davis Road S	Extend Croisan Creek Road S southward to the intersection of Skyline Road S and Davis Road S.	181	Street Extension	\$1,312,000			Marion County
Croisan Ridge Way S	End of Croisan Ridge Way S to Heath Street S Extension	Extend this street northeastward along the foot of Croisan Mountain, cross over Homestead Road S, and then connect to the westward extension of Heath Street S.	179	Street Extension	\$3,116,000	7	Croisan-Illahe	Salem
Croisan Scenic Way S	Joplin Street S to Croisan Creek Road S	Extend Croisan Scenic Way S southward connecting with a section already built near Madrona Avenue S then continuing southward and westward and intersecting with Croisan Creek Road S just south of River Road S.	185	Street Extension	\$5,806,000	7	Sunnyslope, South Salem, Croisan-Illahe	Salem
Cunningham Lane S	Kurth Street S to Barrett Street S	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	3	Roadway	\$711,000	7	South Salem	Salem
Deer Park Road SE	Turner Road SE to Aumsville Highway	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	152	Roadway	\$3,660,000	3	SEMCA	Salem
Deer Run Avenue S	Byers Street S to Heath Street S Extension	Extend Deer Run Avenue S eastward to connect to both the westward extension of Heath Street S and the southern terminus of the new Minor Arterial street connecting to River Road S.	288	Street Extension	\$440,000	7	Croisan-Illahe	Salem

Table 3-7 Low Priority Street Improvement Projects (Continued)

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
Doaks Ferry Road NW	Eola Drive NW to UGB	Improve to an interim three-lane, Minor Arterial standard, with two travel lanes, center turn lane, bike lanes, curbs, gutters, and sidewalks. Include all necessary realignments and intersection improvements.	84	Roadway	\$2,048,000	8	West Salem	Salem
Eola Drive NW	Doaks Ferry Road NW to UGB	Improve to Collector standards with two travel lanes, curbs, gutters, and sidewalks.	81	Roadway	\$1,448,000	8	West Salem	Salem
Evergreen Avenue NE	Market Street NE to Sunnyview Road NE	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	19	Roadway	\$585,000	1	Lansing	Salem
Fisher Road NE	Ward Drive NE to Sunnyview Road NE	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	32	Roadway	\$6,017,000	1, 5	Northgate, NOLA	Salem
Front Street NE	River Road N to Pine Street NE	Improve to Minor Arterial standards, including two travel lanes with curbs, gutters, sidewalks, and left-turn pockets at intersections.	65	Roadway	\$3,650,000	5	Highland	Salem
Gath Road SE	Turner Road SE to UGB	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	144	Roadway	\$1,178,000	3	SEMCA	Salem
Glen Creek Road NW	Crescent Drive NW to Westfarthing Way NW	Improve to Minor Arterial standards with two travel lanes, left-turn lanes, bike lanes, curbs, gutters, and sidewalks.	85	Roadway	\$2,617,000	8	West Salem	Salem
Harold Drive NE	End of Harold Drive NE to Devonshire Avenue NE	Extend Harold Drive NE to Devonshire Avenue NE in order to improve access to commercial properties in their area.	264	Street Extension	\$375,000	1	NOLA	Salem
Hayesville Drive NE	Lancaster Drive NE to Cordon Road NE	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	46	Roadway	\$716,000	5	Northgate	Salem
Hazelgreen Road NE	Portland Road NE to Cordon Road NE	Improve to an interim two travel lanes with center turn lane where needed. Add curbs, gutter, sidewalks, bicycle lanes, and improve intersection approach to Portland Road NE.	48	Roadway	\$5,984,000	5	Northgate	Salem
Heath Street S	Fern Drive S to Deer Run Avenue S Extension	Extend Heath Street S westward to connect with both the eastward extension of Deer Run Avenue S and the new north/south Minor Arterial connection to River Road S.	178	Street Extension	\$2,908,000	7	Croisan-Illahe	Salem
Herrin Road NE	45th Avenue NE to Cordon Road NE	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	33	Roadway	\$2,412,000			Marion County
Holder Lane SE	Lone Oak Road SE to Liberty Road SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	130	Roadway	\$1,368,000	4	South Gateway	Salem
Hrubetz Road SE	Liberty Road S to Lone Oak Road SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	132	Roadway	\$3,448,000	5	Northgate	Salem
Indian School Road NE	Chemawa Road NE to Blossom Drive NE	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	30	Roadway	\$2,392,000	5	Northgate	Salem
Kale Road NE	Portland Road NE to Cordon Road NE	Improve to Parkway standards, including four travel lanes, left-turn pockets at selected locations, curbs, gutters, sidewalks, and bike lanes.	20	Roadway	\$3,894,000	5	Northgate	Salem
Kuebler Boulevard S	Liberty Road S to Skyline Road S	Improve to Parkway standards, including four travel lanes, left-turn pockets at selected locations, curbs, gutters, sidewalks, and bike lines.	61		\$1,127,000	7	Sunnyslope, Faye Wright, South Gateway	Salem

Table 3-7 Low Priority Street Improvement Projects (Continued)

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
Kuebler Road S	Croisan Creek Road S to UGB	Improve to Minor Arterial standards, including two travel lanes, left-turn pockets where needed, curbs, gutters, sidewalks, and bike lanes.	289	Roadway	\$3,960,000	7	Sunnyslope, Croisan-Illahe	Salem
Kurth Street S	Browning Avenue S to Cunningham Avenue S	Improve to urban Collector standards, with two travel lanes, curbs, gutters, and sidewalks.	56	Roadway	\$1,124,000	6	Sunnyslope	Salem
Liberty Road S	Holder Lane to South UGB	Improve to an interim three-lane urban standard, with two travel lanes, a center turn lane, curbs, gutters, sidewalks, and bike lanes.	58	Roadway	\$1,822,000	7	Sunnyslope, South Gateway	Salem
Lone Oak Road SE	Holder Lane SE to Mildred Lane SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	145	Roadway	\$4,987,000	4	South Gateway	Salem
Lone Oak Road SE	Muirfield Avenue SE to Rees Hill Road SE	Extend Lone Oak Road SE southward to intersect with Rees Hill Road SE.	187	Street Extension	\$3,834,000	4	South Gateway	Salem
Macleay Road SE	Lancaster Drive SE to Connecticut Avenue SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	147	Roadway	\$1,625,000			Marion County
Macleay Road SE	Pennsylvania Avenue SE to Cordon Road SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	146	Roadway	\$4,059,000	2	SEMCA	Salem
Madrona Avenue S	Biegler Lane S to Liberty Road S	Improve to Minor Arterial standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes, plus left-turn lanes at intersections.	68	Roadway	\$650,000	7	South Salem	Salem
Madrona Avenue S	Croisan Creek Road S to Elderberry Drive S	Improve to an interim Collector standard, including two travel lanes with curbs, gutters, sidewalks, and bike lanes.	67	Roadway	\$2,203,000	7	South Salem, Croisan-Illahe	Salem
Marietta Street SE	27th Avenue SE to Fairview Industrial Drive SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	155	Roadway	\$1,200,000	3	Morningside	Salem
Michigan City Lane NW	Wallace Road NW to end of roadway	Build a 3/4 street improvement with urban Collector standards on one side. This would include two travel lanes and curb, gutter, and sidewalk on one side.	94	Roadway	\$2,283,000	8	West Salem	Salem
Mildred Lane SE	Lone Oak Road SE to Sunnyside Road SE	Improve to Minor Arterial standards with two travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters, and sidewalks.	137	Roadway	\$3,356,000	4	South Gateway	Salem
New Collector	Kale Street NE to Hazelgreen Road NE	Construct new Collector street to connect Kale Street NE to Hazelgreen Road NE. This street should be located roughly in the area of the 49th Avenue NE or Lake Labish Road NE alignments.	287	Street Extension	\$2,112,000	5	Northgate	Salem
New Collector Street	35th Avenue NW extension to 37th Avenue NW	Construct a new Collector street connection between 35th Street NW extension and 37th Street NW south of Dahlia Swale.	169	Street Extension	\$978,000	8	West Salem	Salem
New Collector Street in SE Salem	Lancaster Drive SE to Turner Road SE	Construct a new Collector Street between Lancaster Drive SE and Turner Road SE east of I-5 and west of Kuebler Boulevard SE. It will begin near Carson Drive SE and end near 37th Avenue SE.	186	Street Extension	\$6,723,000	2	SEMCA	Salem
<u>New Local Street</u>	<u>Airport Road SE to 25th Street SE</u>	<u>Construct a new Local Street to connect Airport Road SE and 25th Street SE north of Mission Street SE and south of Shelton Ditch. Alignment to be determined through future development planning.</u>	306	<u>Street Extension</u>	<u>TBD</u>	2	<u>SESNA</u>	<u>Salem</u>
New Minor Arterial Street	Deer Run Avenue to River Road S	Construct a new Minor Arterial street connection in the vicinity of Homestead Road S, extending from Deer Run Avenue S to River Road S.	177	Street Extension	\$3,271,000	7	Croisan-Illahe	Salem
Oak Hill Avenue SE	Commercial Street SE to 12th Street SE	Improve Collector standards, including two travel lanes, curbs, gutters, and sidewalks.	117	Roadway	\$1,211,000	3	Morningside	Salem

Table 3-7 Low Priority Street Improvement Projects

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
Orchard Heights Road NW	Parkway Drive NW to Snowbird Drive NW	Improve to Minor Arterial standards with two travel lanes, left-turn lanes, bike lanes, curbs, gutters, and sidewalks.	91	Roadway	\$2,860,000	8	West Salem	Salem
Orchard Heights Road NW	Titan Drive NW to UGB	Improve to Minor Arterial standards with two travel lanes, left-turn lanes, bike lanes, curbs, gutters, and sidewalks.	92	Roadway	\$2,779,000	8	West Salem	Salem
Oxford Street SE	22nd Street SE to 14th Street SE	Improve to Collector standards, including two travel lanes, curbs, gutters, and sidewalks.	114	Roadway	\$902,000	2	SESNA	Salem
Park Avenue NE	Center Street NE to D Street NE	Improve to urban Collector standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes where designated.	286	Roadway	\$1,316,000	6	NESCA	Salem
Pringle Road SE	Hoyt Street SE to Georgia Avenue SE	Improve to Minor Arterial standards with two travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters, and sidewalks.	110	Roadway	\$6,000,000	3, 2	Morningside, SESNA	Salem
Ratcliff Drive SE and Salem Heights Avenue SE	Commercial Street SE to Liberty Road S	Improve to Collector standards, signalize Commercial/Ratcliff intersection, and add westbound left-turn lane on Ratcliff Drive SE at Commercial Street SE.	126	Roadway	\$1,725,000	3	Faye Wright, Morningside	Salem
Reed Lane SE	Fabry Road SE to Soapstone Avenue SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	160	Roadway	\$1,356,000	4	South Gateway	Salem
Reed Lane SE	Soapstone Avenue SE to Madras Street SE	Realign and extend Reed Lane SE from Soapstone Avenue SE to Madras Street SE connecting to Commercial Street SE.	190	Street Extension	\$3,766,000	4	South Gateway	Salem
Rees Hill Road SE	Sunnyside Road SE to Champion Hill Road SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	148	Roadway	\$2,603,000	4	South Gateway	Salem
River Bend Road NW	Wallace Road NW to UGB	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes.	93	Roadway	\$430,000	8	West Salem	Salem
Salem Heights Avenue S	Liberty Road S to Sunridge Drive S	Improve to urban Collector standards, with two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	71	Roadway	\$919,000	7	South Salem	Salem
Skyline Road S	Maplewood Drive S to Mildred Lane S	Improve to Minor Arterial standards including two travel lanes, a center turn lane, curbs, gutters, sidewalks, and bike lanes.	73	Roadway	\$2,535,000	7	Sunnyslope	Salem
Strong Road SE	Reed Road SE to Marietta Street SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	154	Roadway	\$2,042,000	3	Morningside	Salem
Summer Street NE	Fairgrounds Road NE to Marion Street NE	Add a third travel lane and bike lane by removing parking. An alternative for adding a travel lane is to prohibit parking during peak hours.	64	Roadway	\$56,000	1, 5	Grant, Highland, CAN-DO	Salem
Sunnyside Road SE	Kuebler Boulevard SE to Mildred Lane SE	Improve to Minor Arterial standards with two travel lanes, left-turn pockets, bike lanes, curbs, gutters, and sidewalks.	157	Roadway	\$4,520,000	4	South Gateway	Salem
Sunnyside Road SE	Pawnee Circle SE to UGB	Improve to Minor Arterial standards with two travel lanes, left-turn pockets, bike lanes, curbs, gutters, and sidewalks.	158	Roadway	\$3,784,000	4	South Gateway	Salem
Sunnyview Road NE	Walker Road NE to Cordon Road NE	Improve to Minor Arterial standards, including two travel lanes with curbs, gutters, sidewalks, and bike lanes, plus left-turn lanes at intersections.	45	Roadway	\$765,000			Marion County
Swegle Road NE	Hoffman Road NE to Cordon Road NE	Improve to Minor Arterial standards, including two travel lanes plus a center turn lane with curbs, gutters, sidewalks, and bike lanes.	27	Roadway	\$586,000	6	ELNA	Salem
Traffic Signals at Various Intersections	Multiple Locations	Install five new Traffic Signals at various intersections based on meeting signal warrants.	206	Signal	\$3,300,000	All	All	Salem

Table 3-7 Low Priority Street Improvement Projects

Street	Location	Full Project Description	ID	Project Type	Cost Estimate	Wards	Neighborhoods	Lead Agency
Turner Road SE	Airway Drive SE to Gath Road SE	Improve to Minor Arterial standards with two travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters, and sidewalks.	149	Roadway	\$5,131,000	3, 2	SEMCA	Salem
Turner Road SE	Gath Road SE to UGB	Improve to Minor Arterial standards with two travel lanes, left-turn pockets, bike lanes, curbs, gutters, and sidewalks.	151	Roadway	\$3,502,000	3	SEMCA	Salem
Wiltsey Road SE	Battle Creek Road SE to 36th Avenue SE	Improve to Collector standards, including two travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	150	Roadway	\$2,377,000		SEMCA	Salem

Table 3-8 Street System Projects Costs by Jurisdiction

Priority	Salem	Marion County	ODOT	Total
Committed	\$57,492,000	\$2,854,000	\$67,998,000	\$128,344,000
High	\$140,687,000	\$5,850,000	\$0	\$146,537,000
Medium	\$183,602,000	\$27,148,000	\$119,980,000	\$330,730,000
Low	\$203,847,000	\$16,407,000	\$0	\$220,254,000
Total	\$585,628,000	\$52,259,000	\$187,978,000	\$825,865,000



Transportation System Management Element

Transportation system management (TSM) is a term used to describe a wide range of measures and techniques that attempt to both maximize the capacity of the street system and reduce the demand on it. Although some may be very expensive to implement, TSM measures are typically low cost localized improvements that attempt to take full advantage of the existing street infrastructure thereby increasing the efficiency of the street system. In recent years, the industry has folded travel demand management (TDM) measures into the TSM family of measures. TDM measures generally work to reduce the demand placed on the street system, particularly by SOVs. This element of the Salem Transportation System Plan will not address TDM measures as it is addressed in a separate element of the Plan starting on page 10-1. This element deals explicitly with supply side improvements.

TSM measures provide for better traffic movement and increased safety by managing the existing street system. TSM measures will generally not require midblock widening of the roadway system.¹ Because they typically are low-cost and low-impact (to surrounding land uses and neighborhoods) improvements, TSM measures are a significant resource to traffic engineers and planners. This is particularly true when existing traffic congestion requires street improvements in highly developed areas of the community or when finances dictate the need for an intermediate improvement.

While the spectrum of TSM measures is wide, the measures that are applicable to Salem will generally fall into one of five categories listed below:

- Traffic Management and Channelization;
- Intersection Modification and Widening;
- Access Management;
- Improved Traffic Control Devices; and
- On-street Parking Management.

This Element provides a summary of the TSM measures that may be carried out in Salem. We describe each measure along with a summary of its potential impact on traffic congestion, implementation issues, and its history in Salem—if any—and potential for future use.

Goal, Objectives, and Policies

The City of Salem has the following goal, objectives, and policies for utilizing transportation system management techniques:

GOAL: To maximize the efficiency of the existing surface transportation system through management techniques and, facility improvements.

OBJECTIVE NO. 1

A system of traffic control devices maintained and operated at an optimal LOS and efficiency consistent with existing funding levels.

Policy 1.1 Improve the Efficiency of the Signal System

The City shall continue to modernize the signal system and improve its coordination and efficiency by ultimately connecting all of its signals to the centralized Traffic Control Center. The City shall increase its communication abilities with the traffic signals and cameras through installation of fiber optic communication network, or through the most cost-effective and reliable method available. The City shall employ traffic signal timing plans that maximize the efficiency of the system given the particular travel demand of that time of day. City traffic signals should be evaluated and retimed, as warranted, at least every three years to maximize the operational performance of the system.

Policy 1.2 Maintain Signal System Operations

The City shall conduct regular and preventive maintenance on the signals within its inventory so as to prevent traffic delays and congestion due to avoidable malfunctions.

Policy 1.3 Maintain Clear and Effective Signs and Pavement Markings

The City shall regularly maintain all of the traffic control devices (signs and markings) within its inventory so as to minimize congestion and driver delay due to confusion. While priority shall always be given to regulatory and warning signs, informational (street name and directional) signs shall also be given proper maintenance.

OBJECTIVE NO. 2

To maximize the effective capacity of the street system through improvements in physical design and management of on-street parking.

Policy 2.1 Giving Intersection Improvements Priority

Consistent with adopted LOS standards, the City shall give the physical improvement of intersections a higher priority in the design process than general street corridor widenings when seeking ways to increase capacity and relieve congestion on a street.

Policy 2.2 On-street Parking Management

Where on-street parking is permitted on a congested arterial street, the City shall give first priority to removing on-street parking as a means of enhancing the capacity of the facility. Depending upon the situation and proper analysis, the City may consider timed on-street parking prohibitions during peak travel periods in lieu of permanent removal.

Policy 2.3 Bus Bays on Arterial Streets

The City shall consider installing bus bays on congested arterial streets as a means of facilitating traffic flow during peak travel periods. The feasibility, location, and design of bus bays shall be developed in consultation with the Salem Area Mass Transit District.

OBJECTIVE NO. 3

To increase street system safety and capacity through the adoption and implementation of access management standards.

Policy 3.1 Development and Adoption of Access Management Standards

The City shall develop and adopt specific access management standards to be contained in the Department of Public Works Design Standards, based on the following principles:

1. Properties with frontage along two streets shall take primary access from the street with the lower classification.
2. Any one development along the arterial street system shall be considered in its entirety, regardless of the number of individual parcels it contains. Individual driveways will not be considered for each parcel.
3. Access to the arterial street system shall be primarily limited to one point, provided adequate street frontage is available. Additional access may be permitted, provided adequate frontage and access spacing is available.
4. Signalized access for private streets and driveways onto the major street system shall not be permitted within 1,320 feet of any existing or planned future signal.
5. Shared mutual access easements shall be designed and provided along arterial street frontage for both existing and future development.
6. The spacing of access points shall be determined based on street classification. Generally, access spacing includes accesses along the same side of the street or on the opposite side of the street. Access points shall be located directly across from existing or future access, provided adequate spacing results.
7. All access to the public right-of-way shall be located, designed, and constructed to the approval of the Public Works Director or his designee. Likewise, variances to access management standards shall be granted at the discretion of the Public Works Director or his designees.

Policy 3.2 Incorporate Access Management into Arterial Street Design

The City shall incorporate access management plans into all of its arterial street design projects. Access management measures shall include, but not be limited to, construction of raised medians, driveway consolidation, driveway relocation, and closure of local street access to the arterial. Access onto State of Oregon Highways is regulated per OAR 734-051.

Policy 3.3 Access Management Projects

Consistent with the City's goal of improving mobility, the City shall consider developing access management projects for congested arterials to help improve safety and traffic flow. Access management projects shall include, but not be limited to, construction of raised medians, driveway consolidation, driveway relocation, and closure of local street access to the arterial.

OBJECTIVE NO. 4

To actively manage the operation of the surface transportation system during peak travel periods.

Policy 4.1 Real-time System Management

The City shall consider including funding for arterial surveillance and real-time management projects that will relieve or prevent arterial street congestion. These projects shall include, but not be limited to, real-time arterial surveillance, motorist information techniques, and incident response and clearance programs.

Traffic Management and Channelization

Traffic management and channelization are those TSM measures that improve the operation of a significant length of street facility, not just the intersection. Many of these measures lead to a more intensive use of the existing street space.

ONE-WAY STREETS

Although most streets are designed for use by two-way traffic, high volumes of traffic and vehicle conflicts often lead to consideration of one-way traffic regulations. Cities have generally set up a one-way street system in major activity centers, such as downtowns, where high traffic volumes and signal timing considerations have required it. One-way streets provide increased traffic carrying capacity by:

- reducing intersection delays caused by vehicle turning movement conflicts;
- allowing a reduction in vehicle lane widths;
- reducing travel time;
- improving transit operations;
- permitting turns from more than one lane; and
- simplifying signal timing.

How much data to be collected and analyzed in planning for one-way streets depends largely on the size of the system being contemplated. Generally, two-way streets should be made one-way streets only when:

1. Analysis can show that a one-way system will alleviate a specific traffic problem or improve overall efficiency of the transportation system;
2. One-way operation is more desirable and cost-effective than alternative solutions;
3. Parallel streets of a suitable capacity, preferably not more than a block apart, are available or can be constructed;
4. Such streets provide adequate traffic service to the area traversed and carry traffic through and beyond the congested area;
5. The existing street system can provide safe transition to two-way operation at the ends of the one-way section;
6. The one-way system can maintain proper transit service; and
7. Such streets are consistent with the adopted Transportation Plan and compatible with abutting land uses.

The City of Salem has had much experience with the use of one-way streets, both in the downtown and Capitol Mall areas, and on the arterial approaches to these areas. Salem may develop additional one-way systems in the future if the need arises and if the conditions meet the application criteria described above. The Salem Transportation System Plan does not propose new one-way systems.

REVERSIBLE TRAFFIC LANES

Arterial routes that normally operate as two-way streets, particularly those in urban areas, can experience greater peak hour traffic volumes in one direction than in the other. This results in an underutilization of one-half of the street width and overuse and congestion on the other half. The reversible lane system takes advantage of the total capacity of the street. Here, one or

more lanes are designated for movement one way during part of the day and in the opposite direction during another part of the day. On a three-lane road, for example, the center lane might normally operate as a two-way, left-turn lane, but during the peak hour operate in the direction of greater flow.

A reversible lane system is one of the most efficient methods of increasing the peak hour capacity of an existing street. It takes advantage of the unused capacity in the off-peak direction of traffic by making the lane available to the heavier (or peak) flow of traffic. The result is that all of the lanes are used to their fullest capacity. Two key issues of concern in setting up a reversible lane operation are the potential for higher accidents given the dynamic nature of a reversible lane system, and the need to address the operational issues at the termini.

Several factors need to be considered before setting up a reversible lane operation:

1. Traffic congestion should be to the point where demand is greater than the street's actual capacity;
2. The congestion is occurring during predictable and periodic times of the day, such that the traffic lanes may be reversed during certain times of the day;
3. The off-peak, or lighter flow direction, may be easily satisfied within the capacity remaining after the lanes are reversed for use in the peak direction; and
4. Adequate capacity exists at the ends of the reversible lane system, with an easy transition from the reversed operation to the normal operation.

The City of Salem does not have experience with reversible lane operations. This makes this type of operation especially difficult, due to driver expectation and performance. While this is an acceptable measure to consider in the proper circumstance, we should apply it with care and plenty of advance public notification and education.

HIGH OCCUPANCY LANES ON ARTERIALS

Priority treatments for high occupancy vehicles (HOVs)—such as buses and carpools—provide for more effective use of street space during peak periods of traffic. Moving more people in fewer vehicles accomplishes this. HOV facilities in the United States, for the most part, are in use on freeways. Surface street applications are not as prevalent, but do exist. It is the latter type of HOV facility that would be applicable for use in Salem.

Two types of surface street HOV facilities are available: concurrent flow and contraflow. Other HOV treatments, usually used in downtown areas, include:

- Exclusive transit streets, such as the transit mall in downtown Portland; and
- Priority signals for HOVs and buses.

These two types of HOV treatments are further described below.

Concurrent flow HOV lanes on surface streets are found in more than 30 cities throughout the United States. Most applications use the curb lanes of downtown streets with minimal signing and marking. Concurrent flow HOV lanes in downtown areas are carried out either by taking an existing lane of traffic, removing on-street parking, or by narrowing existing lanes to achieve an extra lane. Restricted right-of-way, and the potential for significantly impacting adjoining land uses, usually prohibits the construction of a full added lane. Concurrent flow lanes usually operate during either one, or both, of the peak hours, or during other specified periods of the day. Twenty-four-hour restrictions are rare for this type of treatment due to enforcement problems, lack of physical separation, and low HOV demand during off-peak hours.

Contraflow applications have generally been used on one-way streets although a few projects have applied the concept to two-way streets, either on the opposite side of a median or on a

two-way, left-turn lane. These latter applications are most prevalent on arterial routes outside the downtown area. Because a contraflow lane is taken from the off-peak direction, there are usually no major physical changes required for the roadway. To date, all contraflow operations in downtown areas have been limited to buses due to the typically high bus volumes and the safety concerns associated with contraflow movements. Most downtown contraflow lanes operate on a permanent basis. The special signing and signalization required for this type of operation dictate 24-hour restrictions.

If properly set up, HOV facilities can accomplish the following:

- Induce commuters to shift to HOV travel modes due to the faster travel times associated with the exclusive facilities;
- Increase the person-carrying capacity of critically congested arterial corridors and provide increased accessibility to major activity centers such as downtown;
- Optimize the travel times for the maximum number of people, but not necessarily vehicles;
- Reduce or defer the need to construct additional highway capacity for general purpose traffic; and
- Improve the efficiency and economy of public transit operations.

Although every HOV treatment is unique to its setting, several guidelines are common to most projects. These are:

- Advance planning and inclusion of all stakeholders, governmental and private, is critical to the eventual success of the HOV treatment;
- Flexibility to meet the changing conditions in the area where the treatment is carried out;
- Enforcement of the restrictions put in place;
- Public education and marketing before the program's start-up; and
- Clear signing and marking.

A limited example of an HOV treatment is present in downtown Salem at the High Street bus terminal. The extensive network of one-way streets may someday form the basis of an HOV network to and from Salem's central core. Other possible locations for this type of measure are along some east-west arterials, particularly if implemented along with park-and-ride lots. Any future development of HOV treatments must be done in coordination and cooperation with the Salem Area Mass Transit District and the Salem Rideshare Program.

BUS BAYS

Bus bays provide areas separated from the flow of traffic for boarding and alighting bus passengers. As such, they are generally designed as safety facilities on streets with posted speeds greater than 40 mph. By having the bus pull out of the flow of traffic, it reduces the disruption to through traffic. However, delays can result from the bus merging back into the travel lanes. Bus bays generally require additional right-of-way to fit them. Another effective way of creating bus bays is to eliminate curbside parking for a length of several hundred feet at a bus stop location.

Bus bays are generally inexpensive measures that are typically installed as part of street modernization projects. On existing streets in Salem, bus bays have generally been created by removing parking. Coordinating the location of bus bays with the Salem Area Mass Transit District is important to confirm its location and to ensure that the bus drivers will use them.

IMPROVED SIGNS AND MARKINGS

Improvements in street signing and markings, with the intent to provide better information to

the driver, are beneficial in reducing congestion and increasing the efficiency of the roadway system. Improved directional signs, route markers, large (easy to read) street signs, signs on mast arms, cross street signs ahead of major intersections, etc., all provide a means of reducing the uncertainty of drivers. In addition, they also tend to increase safety, which further increases the efficiency of the street system.

Intersection Widening and Modification

These techniques relate to geometric improvements at intersections.

ROADWAY ALIGNMENT AT INTERSECTION

Possibly one of the simplest of the TSM measures is roadway alignment at intersections. At intersections where a roadway's centerline is offset on opposite sides of the cross street, reductions in traffic flow can result. Reduced traffic flow can cause significant congestion, particularly during peak hours. Correcting the offset problem may require acquisition of additional right-of-way for moving curbs and sidewalks, but can result in substantial increases in operational efficiency.

The City of Salem has many locations where a roadway centerline does not match up across the intersecting street. The cause of these offsets is typically interspersed development of parcels. While the City does not have a program to correct these misalignments, many of these problems are corrected when reconstruction of the street is undertaken. Other locations are corrected ad hoc, as funding allows.

INTERSECTION WIDENING

Widening intersection approaches to provide left- and right-turn lanes can increase the approach capacity by up to 25 percent. This increase allows for a better balance between intersections and midblock capacities. Turn lanes also allow for simplified, and often more efficient, signal timing.

Another possibility is to increase the corner radii at intersections. Larger radii provide smoother right turns and reduce the negative effects right turns have on the capacity of through traffic at intersections. However, increasing a turn radius can also negatively impact pedestrian activity. Usually, corner radii of 25 to 35 feet are adequate for smooth turns.

Intersection widening is a cost-effective technique for improving capacity that is widely used throughout Salem. Understanding the impacts to pedestrian safety, however, these are done with advanced planning and caution to not create a hazard at locations heavily traveled by pedestrians.

TURN CONTROLS

Turn controls at intersections include prohibitions, limitations, and channelization. We discuss each of these measures in greater detail below.

Turn prohibitions can increase intersection capacity by eliminating delays due to pedestrian conflict and left turns. Turns can be prohibited during certain parts of the day, particularly during the peak periods. Signs, signals, and pavement markings are used to control the movement. Where painted or channelized turn bays are provided, extra attention must be given to signing and marking for turn prohibitions at specific hours.

Alternatives should be carefully examined before banning turns from an arterial street due to other problems that these measures sometimes create. These problems include an overall increase in system travel and new traffic patterns that may result in new problem locations

upstream or downstream from the subject intersection. Special signing may be used to help drivers find an alternative method for making a left turn that has been prohibited.

Right-turn lanes may be installed independent of signal control by using channelization, or they may be given a signal phase free of opposing left turns or pedestrians. Right-turn-on-red ordinances and one-way street patterns are considerations in developing right-turn lanes. Continuous right-turn channels may create some problem with safe pedestrian crossing of the channel, although placement of the crosswalk near the entry end of the channel will improve visibility for driver and pedestrian alike.

A modest planning effort is required to identify arterial locations where turn controls should be considered and installed. These should include:

- Amount of congestion and delay caused by turning movements;
- Number of accidents caused by turning vehicles;
- Availability of suitable alternative routes for the restricted turns;
- Impacts of the traffic diversion on congestion and accidents at other locations;
- Feasibility of alternative solutions.

Turn controls are cost-effective measures that are in widespread use throughout Salem. The need for these is evaluated based upon the five issues discussed above and done on a case-by-case basis.

GRADE SEPARATION AT MAJOR INTERSECTIONS

This technique is costly and requires major reconstruction of existing at-grade intersections. Typical costs are two to three million dollars for reconstruction. Additionally, it may require acquisition of costly right-of-way. Maintenance of traffic during construction activities is also a major consideration. Grade separation, however, may be required at intersections of major arterials serving a corridor with increasingly dense population or major trip generators/attractors such as large shopping centers. It should also be considered where at-grade arterial street and railroad crossings currently exist.

In urban areas that continue to develop, intersections serving these areas may no longer provide the capacity necessary to provide for safe and efficient traffic movement. These intersections often form bottlenecks during both peak periods, backing up traffic, and retarding traffic movement at upstream intersections. The design engineer can expect that when total entering daily volumes exceed 60,000 or 70,000, an at-grade intersection will become saturated no matter the efficiency of control applied. For safety and operational reasons, local access is not desirable in the immediate area of interchanges. These access points reduce the effectiveness of providing separation of flows.

The City of Salem has one grade-separated intersection (Mission Street SE at 12th Street SE/13th Street SE). There is a strong possibility that they will develop additional grade-separated intersections as increased densities lead to greater traffic congestion. Primary candidates for this type of treatment are the two signalized intersections along Salem Parkway NE and the Kuebler Boulevard SE/Commercial Street SE intersection. None, however, are planned at this time.

Access Management

Access management can improve the operation of an arterial street by reducing the number of traffic conflicts. Studies have shown that access management can both increase the average travel speeds and the carrying capacity of arterials while reducing accident rates. Without an access management program for arterial streets, capital investment for roadway improvements

is required at periodic intervals. This cycle is a result of continually trying to satisfy traffic demands that are often a result of increased business activity that improved traffic conditions influence leading to further traffic demands. The number of conflict points among vehicles rises because of an increased number of driveways, causing the capacity of a specific LOS to diminish. Access management strategies typically include one or more of the following:

- physical restriction of left turns;
- restriction of direct access driveways;
- separation of obvious conflict points;
- placement of intersections and driveways at no less than minimum intervals; and
- development of frontage roads to collect local traffic and funnel to selected intersections.

Effective management of the location and number of access points can result in the following:

- Improved safety. Over 50 percent of arterial accidents are access related.
- Increased capacity and reduced congestion. Controlling turning movements and eliminating conflicting movements, while controlling speed and ease of ingress and egress, can increase street capacity by as much as 35 percent.
- Increased functional life of the existing roadway by increased or preserved capacity. This reduces the need for new capital construction to meet increased traffic demands.
- Assures equitable and consistent treatment for all.
- Protects the economic vitality of the abutting properties. Inadequate access management will drive potential customers to other less congested locations.
- Reduced travel time and delay. Up to a 60 percent reduction can be achieved due to fewer stops, less vehicle deceleration and acceleration.
- Decreased energy consumption. Up to a 50 percent reduction can result due to fewer stops, less vehicle deceleration and acceleration. This has a positive effect on air quality.
- Reduced costs to customers, commercial shipments, and services.

ARTERIAL ACCESS MANAGEMENT

Controlling or managing access along arterial highways is perhaps one of the most difficult tasks facing local officials and transportation engineers. This difficulty comes from a time-honored tradition and, occasionally, a legal right for land owners abutting a road to have access to their land. In addition, the process for land development decisions is often very different from that for transportation system planning.

One approach for providing proper coordination for access management plans and programs is to undertake corridor level planning studies. Corridor analyses that assess future demands and capacity of freeway and parallel arterials and evaluate major development proposals provide essential information to decision makers. Successful arterial access management relies on the adoption of effective access management standards and adequate site analysis by the developer and City staff.

Improved Traffic Control Devices

TRAFFIC SIGNAL IMPROVEMENTS

Traffic signal improvements generally provide the greatest payoffs for reducing congestion on

surface streets. Some basic improvements can and should be made to improve traffic flow on arterials. These actions are:

- Updating old signals with modern equipment having greater capabilities for complex timings and connections between signals;
- Updating and improving the signal timing plans and retiming the signals, as needed;
- Interconnect signals along key arterial routes;
- Remove traffic signals that are no longer justified; and
- Maintain signals, both through periodic preventive maintenance and immediate response to signal malfunctions.

When these efforts are combined with an advanced, computer-based signal control system, traffic flow on arterials can be increased by up to 25 percent.

This is a TSM measure that the City of Salem is actively using. About half of the Salem traffic signals are under the control of a computer-based system.

Ultimately, all of the signals within the Salem-Keizer area will be under City jurisdiction and under the control of the City's central system. In addition, many signals along major arterial routes either have been or will be interconnected. Both actions will allow for greater progression of vehicular traffic during peak travel times.

IMPROVED SIGNS AND MARKINGS

Improvements in street signing and markings, with the intent to provide better information to the driver, are beneficial in reducing congestion and increasing the efficiency of the roadway system. Improved directional signs, route markers, large (easy to read) street signs, signs on mast arms, cross street signs ahead of major intersections, etc., all provide a means of reducing the uncertainty of drivers. In addition, they also tend to increase safety, which further increases the efficiency of the street system.

Five basic factors must be employed in designing and maintaining an improved signing and marking system:

1. Design. The combination of physical features such as size, colors, and shape needed to command attention and convey a message;
2. Placement. The installation of devices so that they are within the lines of vision of the users and thus able to command attention and allow time for response;
3. Operation. The application of devices so that they meet traffic requirements in a uniform and consistent manner, fulfill a need, command respect, and allow time for response;
4. Maintenance. The upkeep of devices to retain legibility and visibility or the removal of devices if not needed; and
5. Uniformity. The uniform application of similar devices for similar situations.

The City of Salem observes all of the factors listed above in the design and maintenance of the street signs and markings.

ARTERIAL SURVEILLANCE AND MANAGEMENT

Although not traffic control devices in and of themselves, the measures included in this section work in concert with traffic control devices—specifically, computerized signal systems—to further increase the efficiency of arterials.

- Incident detection, citizen alert of the incident, and follow-up action to remove it from the travel lanes;
- Intersection surveillance and monitoring using loop detectors, interconnected signal systems, and video monitoring;
- Use of variable message signs to convey real-time information to motorists on the street; and
- Use of parking and access management techniques (as described in other parts of this element).

These measures may be carried out at discrete locations or as a system on key arterials. At discrete locations, these measures may be relatively simple, albeit costly, to implement. On a systemwide level, the planning and implementation of an arterial surveillance and management system is a major undertaking. The Traffic Control Center at City Hall that houses the central signal computer forms the backbone for implementation of arterial surveillance and management in Salem. Once all of the signals are connected to the computer, the logical next step will be to initiate these types of measures to further the efficiency of the arterial system.

On-street Parking Management

REMOVAL OF PARKING

Removal of on-street parking can be considered on a systemwide basis for arterials and collectors for increasing through-traffic capacity. It requires thorough study involving operational and capacity benefits, availability of off-street parking facilities, loss of parking revenue, and commercial truck loading requirements. Removal of on-street parking should be done consistent with a community's parking needs, providing sufficient parking spaces to serve residential, commercial, and retail activities. Any change in on-street parking supply requires a thorough public education, notification, and involvement process to address possible resistance from citizens and merchants.

Curb parking, particularly angle parking, reduces the street width available for the through movement of traffic. Parking maneuvers at on-street spaces further decrease the capacity of the street by producing interruptions in the traffic flow. Capacity can be reduced by 25 to 35 percent. On-street parking is also considered a frictional factor to the street's capacity. Thus, where capacity deficiencies exist, removal of the on-street parking is an effective first consideration for increasing capacity.

The City of Salem has a successful history of removing on-street parking to enhance the capacity of the street system. Parking removal has provided for increased carrying capacity, with the least impacts to adjoining properties. Recently, we have removed on-street parking in some locations in favor of providing on-street bicycle lanes.¹

Recommended TSM Improvements

It is anticipated that about 40 new traffic signals will be needed in the City of Salem over the next 20 years. Currently (in 2006) the average cost for a traffic signal is about \$330,000. These costs are shown in the Street System Element. A number of traffic signal interconnect projects will be completed over the next 20 years as well. These, along with various other ITS projects, are recommended for implementation and funding as part of an overall strategy to maximize the capacity of the existing arterial and collector street system within the Salem Urban Area (see Table 4-1).

The City also supports implementation of other ITS strategies (see Table 4-2) but does not

¹ See Bicycle System Element of Salem Transportation System plan for a more detailed discussion on this topic and the City Council-adopted policies that govern its implementation.

anticipate programming significant capital funds toward these within the 25-year planning period. These strategies build on ITS infrastructure shown in Table 4-1 and/or involve one or more of the following:

- A Management and/or Coordination Strategy.
- Another Agency Taking the Lead.
- A Maintenance-related Strategy.

Table 4-1 Intelligent Transportation Systems (ITS) Projects

Street	Location	Full Project Description	ID	Priority	Cost Estimate	Wards	Neighborhoods	Lead Agency
12th and 13th Streets SE	Mission Street SE to Hoyt Street SE	Install fiber optic cable and Interconnect Signals along 12th Street SE and upgrade signals at 12th and 13th Streets.	254	Committed	\$167,000	2	SESNA	Salem
17th Street NE and Center Street NE	State Street to Market Street NE and 17th Street NE to 24th Street NE	Install fiber optic cable and Interconnect Signals along these two corridors.	220	Committed	\$329,000	1, 2, 6	NEN	Salem
25th Street SE	Mission Street SE to McGilchrist Street SE	Install fiber optic cable and Interconnect Signals along 25th Street SE.	211	Committed	\$150,000	2	SESNA, SEMCA	Salem
Edgewater Street NW	Wallace Road NW to Eola Drive NW	Install fiber optic cable and Interconnect Signals along Edgewater Street NW.	207	Committed	\$375,000	8	West Salem	Salem
Lancaster Drive NE	Hayesville Drive NE to Silverton Road NE	Install fiber optic cable and Interconnect Signals along Lancaster Drive NE.	215	Committed	\$125,000			Marion County
Lancaster Drive SE	Act 3 Theater to Rickey Street SE	Install fiber optic cable and Interconnect Signals along Lancaster Drive SE.	214	Committed	\$75,000			Marion County
Lancaster Drive SE	Hagers Road SE to Cordon Road SE	Install fiber optic cable and Interconnect Signals along Lancaster Drive SE.	212	Committed	\$200,000	2	SEMCA	Salem
Madrona Avenue SE	Pringle Road SE to Fairview Industrial Drive SE	Install fiber optic cable and Interconnect Signals along Madrona Avenue SE.	213	Committed	\$100,000	3	Morningside	Salem
Marion Street Bridge	Wallace Road NE to Front Street NE	Install fiber optic cable over the bridge in order to interconnect traffic signals in West Salem to Downtown and to the Salem Traffic Control Center.	219	Committed	\$100,000	8, 1	West Salem, CAN-DO	Salem
Portland Road NE	Lana Avenue NE to Hyacinth Street NE	Install fiber optic cable and Interconnect Signals along Portland Road NE.	208	Committed	\$375,000	5	Northgate	Salem
Sunnyview Road NE	Lancaster Drive NE to 45th Avenue NE	Install fiber optic cable, Interconnect Signals, and install new signal at 45th Avenue NE. Extend interconnect project to Cordon Road NE if resources allow.	209	Committed	\$290,000	1, 6	NOLA, ELNA, NESCA	Salem
Cordon Road NE	State Street to Silverton Road NE	Install fiber optic cable and Interconnect Signals along Cordon Road NE.	218	High	\$400,000	1, 6	ELNA, NOLA	Salem
Fiber Optic Communications	Citywide	Install fiber optic cable to provide high speed communication among traffic management centers and field devices.	231	High	\$462,000	All	All	Salem
Silverton Road NE	Lancaster Drive NE to Cordon Road	Install fiber optic cable and Interconnect Signals along Silverton Road NE.	216	High	\$150,000			Marion County
Video Deployment	Citywide	Deploy pan-tilt-zoom cameras to monitor roadway conditions, trouble spots, incidents, equipment failures, traffic signal operations, and to provide real-time roadway condition information to travelers.	221	High	\$2,100,000	All	All	Salem
Center to Center Integration	Citywide	Implement communications links among the Salem Traffic Control Center, ODOT's Northwest Traffic Operations Center, and other transportation operations centers in the area.	226	Medium	\$205,000	All	All	Salem
Central Signal System Upgrade	Downtown Salem	Upgrade the Salem Traffic Control Center's computer and other equipment to maximize ITS systems capabilities.	229	Medium	\$600,000	All	CAN-DO	Salem
Communications to Isolated Signals	Citywide	Connect all remaining isolated signals to the central signal system computer.	234	Medium	\$445,000	All	All	Salem
Computer Aided Dispatch Interface	Citywide	This project will provide traffic related information and video directly to the 911 Computer Aided Dispatch system.	236	Medium	\$83,000	All	All	Salem
Downtown Salem Parking Management	Downtown Salem	Display dynamic message signs and HAR radio messages to direct motorists to available parking facilities in downtown Salem.	228	Medium	\$448,000	1, 2	CAN-DO	Salem
Fiber Optic Communications	Citywide	Install fiber optic cable to provide high speed communication among traffic management centers and field devices.	232	Medium	\$385,000	All	All	Salem

Table 4-1 Intelligent Transportation Systems (ITS) Projects (Continued)

Street	Location	Full Project Description	ID	Priority	Cost Estimate	Wards	Neighborhoods	Lead Agency
Intra-Agency Information Sharing	Citywide	This project will provide for information flow (traffic data and video) among the various traffic management and emergency operations centers.	235	Medium	\$79,000	All	All	Salem
Traffic Data Collection System	Citywide	Deploy equipment to automate traffic data collection and link it directly to the Salem Traffic Control Center.	224	Medium	\$210,000	All	All	Salem
Video Deployment	Citywide	Deploy pan-tilt-zoom cameras to monitor roadway conditions, trouble spots, incidents, equipment failures, traffic signal operations, and to provide real-time roadway condition information to travelers.	222	Medium	\$1,470,000	All	All	Salem
Adaptive Signal Timing	Citywide	Deploy adaptive signal timing on selected signalized corridors in the region with the highest levels of congestion and the most fluctuation in volumes.	230	Low	\$1,400,000	All	All	Salem
Fiber Optic Communications	Citywide	Install fiber optic cable to provide high speed communication among traffic management centers and field devices.	233	Low	\$539,000	All	All	Salem
Traffic Control Center Upgrade	Downtown Salem	Upgrade the existing Salem Traffic Control Center to provide additional space for equipment and for Salem-Keizer metropolitan area traffic management activities.	227	Low	\$351,000	All	All	Salem
Traffic Data Collection System	Citywide	Deploy equipment to automate traffic data collection and link it directly to the Salem Traffic Control Center.	225	Low	\$210,000	All	All	Salem
Video Deployment	Citywide	Deploy pan-tilt-zoom cameras to monitor roadway conditions, trouble spots, incidents, equipment failures, traffic signal operations, and to provide real-time roadway condition information to travelers.	223	Low	\$1,554,000	All	All	Salem

Table 4-2 Additional ITS Projects & Strategies Supported by the City of Salem

Project/Strategy Title	Project/Strategy Description
Incident Management Plan for West Salem Bridges	Provide traffic management and traveler information tools (cameras, advisory radio (HAR), moveable barriers, transit vehicles) and specific plan outlining roles, responsibilities and procedures for handling an emergency bridge closure.
Incident Response	Build on current ODOT incident response program to support incident management on state, county and city roadways. Equip incident response vehicles with GPS to enhance dispatch. Provide additional incident response vehicles and personnel.
Detour Route Management	Includes the mapping of detour route plans in GIS, incident signal timing plans, electronic message signs, and congestion monitoring to support incident responders and management of the roadway network during incidents. This includes improving communications to field devices (traffic signals, vehicle detectors, message signs and cameras). High priority will be given to Kuebler Boulevard S/Cordon Road, and Salem Parkway/Commercial Street/Liberty Road corridors.
Arterial Congestion Map	Create a congestion map that shows actual travel speeds on roadways throughout the region.
Advanced Rail Warning System	Deploy railroad crossing detection to determine rail crossing occupation and duration at crossings. This information can be used by emergency service providers and motorists to avoid those crossings and use an alternative route.
Central Signal System Upgrade	Upgrade the central computer control to provide additional functionality including advanced signal control, camera control, automated incident response timing plans and arterial congestion mapping.
Flood Warning System	This project will monitor rising water on roadways and alert transportation managers of high water.
Advanced Vehicle System	Deploy Mayday system information from vehicle to Traffic Control Center (e.g. air bag deployment) and from roadside to vehicle (e.g. transmit traveler information).
Isolated Intersection Safety Warning System	Deploy devices at high crash locations that warn drivers of changing conditions (e.g. tee intersections or sharp curves).
En-route Traveler Information	Dynamic message signs, websites and HAR would notify motorists of incidents, detour routes, construction, and other traveler information.
Cable TV Traveler Information Channel	Provide camera images and other traveler information to cable TV companies to display on a channel.
Broadcast Traveler Information	A dedicated traffic condition radio channel will be provided.
Interactive Traveler Information	Allow the motorist to request specific traveler information, utilize dynamic ridesharing and provide yellow page and reservation services prior to a trip or en-route using wide-area wireless connections
Transit Signal Priority	This project will install transit priority emitters and upgrade traffic signal controllers along selected routes.
Dynamic Routing of Emergency Vehicles	This project would automatically calculate the ideal route between two points based on real-time roadway congestion, construction, and incident information.
Traffic Signal Preemption by Vehicle ID	Implement preemption equipment to provide traffic signal preemption by specific vehicle ID.
Work Zone Safety Systems and Monitoring	This project would provide portable cameras, variable speed limit signs and speed detection devices to monitor and control traffic conditions in work zones. It also would utilize technology within work zones to reduce motor vehicle conflicts with workers by warning workers of vehicles entering work zones.
Maintenance and Construction Coordination System	Deploy a construction activity information site that contains regional and state-wide maintenance and construction activities, including active and planned construction sites, weight and width restrictions, and travel times through work zones.
Work Zone Traveler Information	This project will provide travel time information through work zones using electronic message signs, the internet, and HAR.
Roadway Weather Information System	Install weather stations with roadway temperature, wind speed, humidity, and precipitation sensors.
Maintenance Vehicle Tracking	Track maintenance vehicles to enhance dispatch of personnel and equipment to daily events and for management of the transportation network during events.
Maintenance Event Logging System	Log maintenance requirements through an automated system to record items that require maintenance as personnel identify them daily.



Neighborhood Traffic Management Element

As a result of continued growth in the community, there is a greater potential for the quality of life in neighborhoods to be impacted by increased traffic volumes and speeding. Many neighborhoods in Salem already experience these problems and their detrimental effects on safety and livability. Left unmanaged, the City could find itself responding to these issues in an inefficient, case-by-case manner. This element of the *Salem Transportation System Plan* (TSP) provides a citywide framework for addressing neighborhood traffic issues now and in the future.

History and Context

The purpose of Neighborhood Traffic Management (NTM) is to address the negative impacts of unchecked traffic speed and volume on neighborhood streets. Neighborhood traffic management encompasses a wide range of measures and activities that are effective in curbing the cause of these impacts, thus improving the livability of a neighborhood. While there are a wide range of issues that are commonly addressed by NTM, the bottom line is mitigating the speed and volume of vehicle traffic on local streets.

While the need for NTM can generally be attributed to growth in the community, other—more direct—factors also play a role in creating this need. One of these factors includes the growth in the VMT and the continued reliance on the automobile as the primary mode of transportation. Another is the decline in road building in general, and particularly in Salem, where policies in the TSP have placed limits on the maximum width of arterial streets. Combined, these factors lead to a congested arterial street system and the need for drivers to find alternative routes. Many times these alternatives are local, neighborhood streets.

The City of Salem adopted its original NTM program in January 1985¹ and implemented an initial priority list of projects. In 1987 a status report on the NTM program² was developed and, due to several considerations (principally funding and vandalism), little has been done on a citywide basis since that time. As Salem has grown over the past ten years, so have issues associated with neighborhood traffic. Several cities in Oregon, such as Portland and Beaverton, have implemented citywide NTM plans successfully. This plan element provides a foundation for public and private transportation investment in NTM that builds from the prior experience and focuses on the needs of the community.

¹ *Neighborhood Traffic Management Program*, City of Salem. A report to City Council by the Citizens Advisory Traffic Commission, adopted by City Council January 21, 1985.

² *A Status Report on the NTM Program*, City of Salem, March 1987.

The NTM plan was developed through a Transportation/Growth Management grant provided by the State of Oregon. Its development has included organized public participation from neighborhood associations in a citizen advisory committee and special stakeholder interviews. The meeting minutes and technical memorandums prepared in the development of the NTM plan are provided in a separate technical appendix to this plan element.

The following sections summarize the goals of NTM, sample measures for Salem, procedures for implementation, and prioritization methodology.

Policy Framework

Arterial congestion and lack of connectivity are the leading causes of cut-through traffic on neighborhood streets. The City should identify the causes of congestion, or lack of connectivity, and correct these issues—if possible—before looking to implement NTM measures. Solutions to congestion or lack of connectivity may be the best long term NTM measure. The City recognizes, however, that traffic impacts are immediate concerns to neighborhoods. As such, implementable and less-expensive solutions should not be postponed for the sake of long term design and construction of arterial capacity.

Neighborhood traffic management measures are a means of addressing traffic safety issues on a citywide basis. As such, their application should not be limited to just local streets. NTM measures should be used to increase safety for pedestrians, bicyclists and motorists regardless of street classification. However, it should be recognized that not all NTM measures are appropriate for all streets. Where appropriate, NTM measures may be installed in neighborhoods to limit speed and volume of traffic; on collector streets to reduce speeding traffic and enhance pedestrian safety; and on arterials to enhance neighborhood pedestrian safety. Often a combination of solutions may be required.

The NTM element provides a means to implement other policies outlined in the TSP. The TSP policies provide background related to implementation and funding of NTM. While there are many TSP policies which could be related to NTM, the key policies for implementation of NTM are listed below:

OVERALL:

Comprehensive Transportation Policy 19: Neighborhood Livability

Local Street Connectivity Policy 3.2: Discouraging Cut-through Traffic

DESIGN:

Comprehensive Transportation Policy 15: Public Safety

Comprehensive Transportation Policy 20: Aesthetics and Landscaping

MONITORING:

Street System Policy 5.1: Traffic Impact Analysis Requirement

FUNDING:

Street System Policy 5.2: Exactions Required of Development

Goals, Objectives, and Policies

The City of Salem has the following goal, objectives, and policies for the planning and operation of its Neighborhood Traffic Management Program.

GOAL: To preserve and enhance neighborhood livability and safety through community supported education, enforcement, and engineering measures that address vehicle speed and volume appropriate to the street's designated functional classification.

OBJECTIVE NO. 1

The City will carry out a process to identify and address neighborhood traffic issues and the implementation of neighborhood traffic management in a consistent, citywide manner.

Policy 1.1 The City Shall Create and Carry Out a Neighborhood Traffic Management Program

The NTM program shall identify neighborhood traffic problems in a consistent manner and assure that solutions do not simply move the problem elsewhere, or worse, create other neighborhood traffic issues.

Policy 1.2 Use Established Guidelines to Address Problem Identification, its Impacts, and Types of Solutions

The NTM process shall address neighborhood needs in combination with the realities of the fiscal constraints and administrative efficiencies needed to assure successful implementation. This will be accomplished by implementing the program described in this element of the TSP.

Policy 1.3 Neighborhood Traffic Measures Shall be Multimodal and not Limit the Use of the Street by Public Transit Services, Emergency Response Vehicles, School Buses, and Other Service Delivery Vehicles

NTM projects shall not prevent and should not negatively impact the flow of pedestrians and bicycles on the street system. NTM projects shall not prevent public transit and emergency response vehicles from using a street needed to provide these services. NTM should enhance pedestrian safety and provide a more desirable environment for bicyclists (e.g., slower vehicle speeds) and transit users (e.g., curb extensions). NTM should not significantly slow the response time of emergency vehicles.

Policy 1.4 Develop Design Standards for NTM Applications

For the City to provide a program that is consistent in implementation and limits liability, a set of design standards shall be developed. As with all design standards, they should be based upon successful designs already implemented (in Salem and elsewhere) and be refined over time to reflect experience in the field. The NTM material shall become a part of the *City of Salem Street Design Standards*.

Policy 1.5 Use a Prioritization Process for the Efficient Use of Transportation Resources

A point scoring system shall be used to evaluate NTM projects citywide. The scoring system will provide a mechanism with which to allocate limited resources to the most critically needed projects. The criteria for scoring the projects should reflect the values of the community.

Policy 1.6 Apply Land Use Review Guidelines for NTM

To implement NTM only as retrofits of already built streets will miss the opportunity to address the impacts of additional traffic and potential speed at the land use review approval. The City shall apply the following approaches to addressing new development and NTM: (1) incorporate appropriate portions of NTM into the design of new residential areas; and (2) have developments that create significant neighborhood impacts provide mitigation as part of the project approval process. The same measures used to retrofit neighborhoods with NTM should be applied in the site planning and original construction of a new street system.

Policy 1.7 Monitor the Effectiveness of the NTM Program

Each NTM project is viewed as an opportunity to learn more about what is still an emerging concept. The City will conduct before/after studies to demonstrate the performance of these

measures. Additionally, design standards should be reviewed over time to reflect the best construction, safety, and maintenance characteristics.

OBJECTIVE NO. 2

The City will work to identify and correct problems of congestion and lack of connectivity at locations within the transportation system that cause neighborhood traffic infiltration.

Policy 2.1 The City Shall Carry Out a Program of Identifying Congested Arterial and Collector Streets

Through existing programs of data collection and analysis, arterial and collector streets that do not meet the adopted level of service standard (as defined in other elements of the *Salem Transportation System Plan*) will be identified. Street congestion problems that are the cause of neighborhood traffic infiltration will be given added priority. Capacity enhancement projects will be developed and prioritized in the *Salem Transportation System Plan* and, as appropriate, placed in the Capital Improvement Program for future construction.

Policy 2.2 A Proposed NTM Project Should not be Delayed due to a Planned Capacity Enhancement Project

While the City recognizes that arterial and collector capacity enhancements will lead to reduced traffic intrusion onto neighborhood streets, proposed NTM projects should not be delayed for planned capacity enhancement projects (projects not yet funded for construction). The City should delay NTM projects where a funded adjacent project may lead to reduced traffic intrusion on neighborhood streets.

Policy 2.3 NTM Projects Shall not be Proposed in Lieu of Arterial and Collector Capacity Improvements

Arterial and collector street capacity improvements are the key to alleviating most of the cut-through speeding and traffic volume intrusion on neighborhood streets. As such, these projects should take precedence in improving the City's transportation system. NTM projects do not take the place of these improvements and shall not be proposed as either a substitute to a major street improvement nor subsequent to a decision to not construct a funded improvement.

Policy 2.4 Use of Neighborhood Traffic Control Devices to Address Temporary Impacts

The City shall amend the *City of Salem Street Design Standards* to allow for the use of temporary neighborhood traffic control devices to mitigate impacts caused by detoured traffic resulting from street construction projects.

NEIGHBORHOOD ROUTES

Recent work in the area of neighborhoods and their specific street needs provides an additional level of functional classification—the *neighborhood route*. Neighborhood routes are commonly used by residents to circulate into or out of their neighborhood. They have connections within the neighborhood and between neighborhoods. These routes have neighborhood connectivity, but are not intended to serve as citywide streets. They are the most sensitive routes to through and speeding traffic due to their residential frontages.

In past plans, many communities defined these routes as minor collectors or neighborhood collectors; however, use of the term collector is not appropriate for these neighborhood streets. Collectors provide neighborhood connectivity and circulation. There is a level between collector and local streets that is unique due to its level of connectivity. Local streets provide access to property—typically homes. They can be part of a grid system with extensive connectivity or they can be short streets or culs-de-sac with limited or no connectivity. Because neighborhood routes provide some level of connectivity, they can commonly be used as cut-through routes in lieu of congested or less direct arterial or collector streets that are not performing adequately.

Cut-through traffic has the highest propensity to speed, creating negative impacts for these neighborhoods. It is important to note, however, that well connected neighborhood streets are important to the delivery of emergency and public transportation services.

A process was used to identify the neighborhood routes in Salem by working together with the Citizens Advisory Committee and City staff for input. A definition was prepared for the TSP of the neighborhood route, as follows:

Neighborhood routes are typically longer than the average local street and usually connect other local streets to collectors or arterials. Because neighborhood routes have greater connectivity, they have more traffic than local streets and are used by residents in the area to get into and out of the neighborhood, but are not intended to serve citywide/large area circulation.

Because the traffic needs on neighborhood routes are greater than a local street, certain measures should be considered to retain the neighborhood character and livability of these routes. Neighborhood traffic management measures are often appropriate (including tools such as traffic circles or other devices—refer to a later portion of this section). However, it should not be construed that neighborhood routes automatically qualify for NTM measures.

NTM PROGRAM

The process for determining appropriate NTM measures is established through the City's NTM Program. The policies included in this element of the Salem TSP guide the City's NTM Program. The details of this program and the process used to implement it are set forth in the *Neighborhood Traffic Management Handbook*.

LAND USE REVIEW PROCESS GUIDELINES INCLUDING NTM

Policy 1.6 acknowledges that the most opportune time to address neighborhood needs is at the point of development. Whether it is a residential subdivision, commercial development, or a transportation project, incorporating NTM elements into the design, development, and mitigation of the off-site impacts of the project assures that the inventory of neighborhood problems does not grow. To best address this through policy, a two-tiered approach is recommended. The first tier is aimed at new residential development planning and the second tier is focused on mitigating impacts of new land use or transportation development. If, in either case, it is desired to consider a NTM measure not part of the tool box (refer to *Neighborhood Traffic Management Handbook*), the applicant—through a registered professional engineer—will be required to provide and certify the appropriate performance and design standards.

Tier 1: Design of New Residential Street System. Using the existing Traffic Impact Analysis requirements, an additional level of analysis should be added into the guidelines for studies. The site plan for a residential site should designate neighborhood routes (based upon the description provided in this element). On all single family residential projects, any internal street that is forecast to have 500 vehicles per day (either at project completion or ultimately due to stub street connections) will be designed utilizing NTM measures or concepts to ensure traffic speeds and volumes will remain at acceptable levels. For example, long, straight, wide, steep streets should be avoided for neighborhood routes and local streets. In project review, this criteria will be evaluated and if adequate measures are not identified, staff can request that the site plan be modified to reflect the future neighborhood needs for NTM measures.

Tier 2: Mitigating the Impact of New Development. All new major land development projects will be required to provide information in their Traffic Impact Analysis (TIA) that identifies the potential impact on neighborhood or local streets. This goes beyond the capacity analysis that is conducted presently. A section would be added to the TIA that assesses the impact of a land use or transportation project on neighborhood routes or local streets. The TIA should identify if the project add more than 25 vehicles per hour (two-way—AM, PM, and/or retail peak hours) to

a street and the street volume is projected be greater than 800 vehicles per day. An estimate will be made of the potential for a neighborhood or local street to exceed 800 vehicles per day. Determination of potential streets for consideration for each project should be reviewed with City staff prior to submitting the TIA.

If a project exceeds this threshold, they will be required to:

- Mitigate the impact below the threshold levels without impacting connectivity.
- Implement NTM measures to mitigate the impact.
- Provide a cash contribution, equivalent to the applicant's fair share impacts, to the NTM program to be used in future NTM projects in the area, developed by the neighborhood through the process identified above. The cash contribution should be determined by staff case by case and reflect the cost to install NTM measures.

STANDARDS FOR NTM

Implementing NTM measures can impact several stakeholders who use public streets—from utilities to garbage companies, from delivery companies to school buses, from emergency services to maintenance, from the postal service to the school district. The needs of all the stakeholders should be considered in any NTM measure. To best address the input of key stakeholders, it is recommended that a series of design standards be developed, reviewed, and approved for inclusion in the *City of Salem Street Design Standards*. This process will allow critical input and review by the stakeholders at one point, rather than having to seek each stakeholder's input for each NTM project that is contemplated.

The benefit of developing design standards is that NTM can be uniformly applied in Salem. The standardization of NTM elements also helps keep the costs down. Most importantly, by going through a process of adopting the design standards with stakeholder input, the potential liability to the City is significantly reduced.

The development of standards can build off experience in Oregon with NTM and throughout the United States in tailoring a set of standards that meets Salem's needs. As long as the standards of design are adhered to, the stakeholders can be assured of the character and nature of what may impact the street related to their operational needs.

The *Manual of Uniform Traffic Control Devices* (MUTCD) provides a reference for most traffic signing and striping needs. While the MUTCD does not address many of the NTM measures outlined in the tool box, many other cities and Salem itself have working design experience with all of the measures. The following standards should be developed for the City of Salem. In some cases, samples from other cities are attached for reference.

- Speed Humps
- Circle (prior installations in Salem)
- Medians
- Street Width
- Street Curvature (possibly 50-foot radius, reversing curves for curvilinear)
- Chicane
- Curb Extensions
- Pavement Texture

FUNDING

Funds for NTM projects would most likely come from the approved Capital Improvement Program for the current year budget. Funding may be limited or not available in any given year. NTM projects with private funding will be able to proceed through the NTM process even if public funding is not available at the time.

There are several options for funding NTM measures in Salem. They will include:

- Full funding through the CIP
- Partial funding through the CIP
- New voter approved funding dedicated to NTM
- Private funding NTM without public funds
 - Local residents pay cash
 - Local residents agree to a local improvement district
 - Private development funds NTM as mitigation measure of project approval or as an element of site plan design
- Full funding as a mitigation measure of a transportation project (public funds)



Local Street Connectivity Element

The street network plays a very important role in determining the character and form of a community. Residential local streets are instrumental in shaping the identity of a neighborhood, determining how people travel and how they feel about their neighborhood. Local streets, which include all the streets that are not designated as Collectors or Arterials, serve to provide access to property and neighborhood facilities such as parks and schools. Although local streets are not designed for through or heavy traffic, the connectivity of these streets with each other and with Collectors is crucial to ensure that residents can easily reach local destinations.

Local streets should form a well-connected network that provides for safe, direct, and convenient access by automobile, bicycle, and pedestrian. A poorly-connected street network encourages use of the automobile over other travel modes; creates the need for excessive out-of-direction travel; divides neighborhoods; and limits accessibility to property and neighborhood facilities. A well-connected street network provides more travel choices, helps to disperse traffic, and encourages pedestrian and bicycle travel.

The design of local streets also plays an important role in affecting traffic speed and choice of travel modes. Narrow streets tend to slow traffic and be more conducive to pedestrian travel. Narrow streets also cost less to build and maintain, encourage more efficient land use, and improve neighborhood character. Narrow streets are an efficient way of connecting the local street system without encouraging the use of local streets for through or fast-moving traffic. Local streets should not be excessively wide, but must be wide enough to accommodate emergency vehicles and provide for on-street parking.

Policy Framework

In developing the local street connectivity goal for the city, emphasis was placed on connectivity of streets in and through new development. There are many existing cul-de-sacs in the City and streets that were constructed without due consideration to connectivity. Due to existing physical obstacles such as houses and other development, there is little that can be done to remedy the existing lack of connectivity in some areas. Topography also plays a role in limiting connectivity of existing and new streets since much of the remaining undeveloped land in Salem is hilly.

There are undeveloped parcels in the city that, when developed, can provide vital connections to already developed areas. It is the intent of this Element of the Plan to ensure that those connections are made and that new developments provide adequate connections to

neighboring undeveloped land. This policy framework reflects the State Transportation Planning Rule requirement that Transportation Systems Plans (TSPs) plan for extension of existing streets and connections to the street network and neighborhood destinations.

The State Transportation Planning Rule requires that the City of Salem incorporate the following into its Transportation Plan:

A road plan for a system of arterials and collectors and standards for the layout of local streets and other important noncollector street connections. Functional classifications of roads in regional and local TSPs shall be consistent with functional classifications of roads in state and regional TSPs and shall provide for continuity between adjacent jurisdictions. The standards for the layout of local streets shall provide for safe and convenient bike and pedestrian circulation necessary to carry out OAR 660-12-045(3)(b). The intent of this requirement is to provide guidance on the spacing of future extensions and connections along existing and future streets which are needed to provide reasonably direct and safe routes for bicycle and pedestrian travel. The standards for the layout of local streets shall address:

- a. Extensions of existing streets;
- b. Connections to existing or planned streets, including arterials and collectors; and
- c. Connections to neighborhood destinations. (OAR 660-12-020(2)(b))

In addition, it is specified that:

Local governments shall establish standards for local streets and access ways that minimize pavement width and total right-of-way consistent with the operational needs of the facility. The intent of this requirement is that local governments consider and reduce excessive standards for local streets and access ways in order to reduce the cost of construction, provide for more efficient use of urban land, provide for emergency vehicle access while discouraging inappropriate traffic volumes and speeds, and which accommodate convenient pedestrian and bicycle circulation. Notwithstanding subsection (1) and (3) of the section, local streets standards and adopted to meet this requirement need not be adopted as land use regulations. (OAR 660-12-045(7))

Implementation Strategies

The Local Street Connectivity Element of this Plan acts as a policy framework in the design and implementation of individual development projects. After adoption of the Plan, staff will submit to the Planning Commission and the City Council a package of Code revisions necessary to bring the *Salem Revised Code* in conformance with the Transportation Plan. Revisions to the *City of Salem Street Design Standards* will also be necessary.

Goal, Objectives, and Policies

The City of Salem has the following goal, objectives, and policies for achieving connectivity of the local street system:

GOAL: To provide an interconnected local street system that allows for dispersal of traffic and encourages a mix of travel modes.

OBJECTIVE NO. 1

A local street circulation pattern that provides access to property and connections to Collector and Arterial streets, neighborhood activity centers, and emergency access.

Policy 1.1 Connectivity to the Street System and Neighborhood Activity Centers

Applicants submitting preliminary development plans shall provide for local street connections toward existing or planned streets and neighborhood activity centers located within one-half-mile of the development. Street alignments should be sensitive to natural features, topography, and layout of adjacent development.

Policy 1.2 Connectivity of New Developments to Adjoining Undeveloped Land

Applicants submitting preliminary development plans shall provide for extension of local streets to adjoining undeveloped properties and eventual connection with the existing street system. Street alignments should be sensitive to natural features, topography, and layout of adjacent development.

Policy 1.3 Spacing of Connections

Connections to existing or planned streets and undeveloped properties along the border of a parcel shall be provided at no greater than 600-foot intervals unless the City determines that adjacent layout or topographical conditions justify greater length.

OBJECTIVE NO. 2

A local street system designed to meet the needs of pedestrians and encourage walking as a transportation mode.

Policy 2.1 Sidewalks

All development shall include sidewalk and walkway construction as required by the *Salem Revised Code* and the adopted *City of Salem Design Standards*. All new road construction or reconstruction projects shall include sidewalks as specified in the Pedestrian Element of the *Salem Transportation System Plan*.

Policy 2.2 Block Standards

The City shall set a maximum block-length standard of 600 feet between street centerlines unless the City determines that adjacent layout or topographical conditions justify greater length.

Policy 2.3 Public Accessways

The City may require pedestrian and bicycle accessways to connect to cul-de-sac streets, to pass through long blocks, and to provide for networks of public paths creating nonmotorized access to neighborhood activity centers.

OBJECTIVE NO. 3

Provide for minimal paved area and dimensional requirements for local streets consistent with efforts to reduce street construction and maintenance costs, storm water runoff and environmental impacts, and provide for pedestrian-friendly streets.

Policy 3.1 Street Width

In order to facilitate pedestrian crossing, discourage through traffic, and reduce speeds, local streets shall not be excessive in width. However, public local streets must have sufficient width to allow for emergency access and provide parking on at least one side.

Policy 3.2 Discouraging Cut-through Traffic

Local streets shall be designed to minimize cut-through traffic. Limiting street length, width, and the installation of traffic calming measures may be used to discourage through traffic from using local streets.

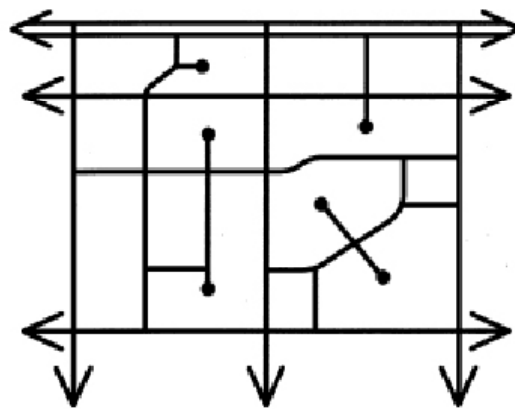
Policy 3.3 Purpose of Cul-de-sac Streets

The purpose of cul-de-sac streets shall be to increase density by accessing land not otherwise accessible through a connected street pattern due to topography or other constraints. Construction of cul-de-sac streets shall be minimized to the extent practicable.

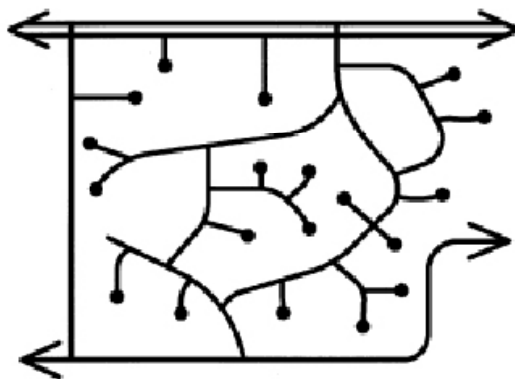
Policy 3.4 Cul-de-sac Street Length

Cul-de-sac streets shall not exceed 800 feet in length. However, no portion of the cul-de-sac street shall be more than 400 feet from an intersecting street or public accessway unless physical constraints make it impracticable.

Figure 6-1 Example Local Street Circulation Patterns



Preferred



Discouraged

Original Source: Tri-County Metropolitan Transportation District of Oregon (Tri-Met), *Planning and Design for Transit*, 1993. (Modified by City of Salem)



Bicycle System Element

Bicycles offer a viable and economical mode of transportation with fewer negative impacts on air quality and finite land resources than those associated with automobiles. To increase the role of the bicycle as a viable mode of transportation in the city, it is important to provide a safe, convenient, well connected, comprehensive system of bicycle facilities that accommodates a range of bicyclists with varying skill levels.

In addition to creating facilities for bicycles, the community must develop an awareness that bicycles and motor vehicles are equal partners on the roadway. The bicycle is considered a vehicle in the State of Oregon Motor Vehicle Code and must adhere to the same rules of the road. Likewise, motorists must respect the presence and vulnerability of bicyclists.

Originally developed in the mid 1990s, the Bicycle System Element was updated through the Bike and Walk Salem project, initiated in 2010. The Bicycle System Element establishes a “roadmap” for a safe and convenient bicycle system in Salem and the surrounding Urban Growth Area. The Bicycle Network presented on Maps 7-1 through 7-5 is intended to guide completion of a comprehensive, safe, and convenient bicycle system. This network incorporates a variety of bicycle facility types and citywide strategies described later in this Element.

It is important to note that some of the bicycle connections shown require additional refinement to determine how the desired connection can be accomplished. This is particularly true of proposed shared-use paths that would appear to cross over private property or through other sensitive areas (e.g., historic resource, natural resource, etc.). What is shown on the Bicycle Network reflects only a conceptual alignment based on the need for connectivity. Any publicly-funded project to pursue creation of a shared-use path will require that a feasibility study be conducted to identify and address the full range of issues associated with the proposed connection.

What is the bicycle network today?

Existing conditions for bicycling in Salem were evaluated as a basis for creating recommendations for future improvement strategies and projects. The following tasks were undertaken to understand what Salem’s bicycle network looks like today:

- Conducted field work.

- Used information from the City’s Geographic Information System (GIS), planning, and public works departments.
- Analyzed crash data from the Oregon Department of Transportation (ODOT).
- Examined existing local, regional, and state plans and policies.
- Collected extensive public input through the project website, questionnaires, an online interactive comment map, listening stations, project meetings, and public open houses.

Existing condition highlights are described in the following section.

NETWORK COVERAGE

Salem’s existing bicycle network generally consists of bike lanes, paved and unpaved path corridors, and a small network of streets with recently-installed shared lane markings. Most bike lanes exist on arterial and collector streets, which provide direct and efficient routes to major destinations. The distribution of Salem’s bike lane network generally reflects the distribution of major streets across the city.

However, while several streets radiating from Downtown include bike lanes, fewer options exist for cross-town travel.

SYSTEM CONNECTIVITY

Connectivity is also an issue, as the bike lane network includes gaps in several locations. The City has recently expanded the on-street bikeway system with more diverse facility types, namely the recent installation of shared lane markings on Chemeketa Street NE and Commercial Street NE in Downtown and on Rosemont Avenue NW in West Salem. Implementation of these recent projects contributes to a more well-connected on-street system in these areas.

BICYCLE PARKING

The availability and type of bicycle parking in Salem varies by location. Downtown Salem provides the greatest availability of short- and long-term parking options, including an expanding inventory of bicycle racks. Bicycle lockers, available for rent on a quarterly or semi-annual basis, exist in the Liberty Square and Chemeketa parkades, YMCA, City Hall, and at the 12th Street SE Amtrak Station.

BICYCLE WAYFINDING SIGNAGE

The City of Salem has achieved significant progress in developing its bicycle wayfinding signage, particularly in the downtown core and surrounding neighborhoods, and in inner West Salem. The City plans to install additional signage in these areas to simplify bicyclist connections to bridges and other key destinations and routes.

OFF-STREET PATH NETWORK

Salem currently lacks a comprehensive and interconnected path network, with existing paths concentrated primarily in the city’s central neighborhoods. The existing paved path system includes longer path segments along Salem Parkway, River Road S, State Street, 12th Street (NE and SE), and on the Center and Union Street bridges; while shorter segments exist within Riverfront Park, Bush’s Pasture Park, and State Lands Ballfields City Park. Informal unpaved paths also exist along some undeveloped public rights-of-way. Despite the presence of short segments, paths are generally lacking in most of West Salem and in neighborhoods east of Interstate 5.

BICYCLE ACCESS TO TRANSIT

Bicycle access to transit is essential to establishing seamless multi-modal transportation connections. Bicycling and transit are mutually beneficial, and increasing bicycle access is

recognized as an efficient and effective way to improve transit ridership, as bicycles effectively extend transit's reach.

The availability of transit service can also help meet the needs of bicycle users. For example, bicyclists who may not be comfortable riding at night or in inclement weather may be more inclined to make a bicycle trip knowing that transit exists as an alternative option for their return trip should conditions change during an outing. Transit can also help bicyclists overcome steep hills and provides a convenient safety net when bicyclists encounter a flat tire, equipment breakdown, or other unforeseen event.

Transit stop passenger infrastructure, such as short- and long-term bicycle parking near transit stops, can help to improve multi-modal transportation connections. Some of the major transit stops in Salem provide bicycle parking, though most do not. Currently, Cherriots buses include bike racks with a capacity for two bicycles.

NEEDS ASSESSMENT

The technical bicycle system needs assessment included field work and the review of background data and information to determine items such as key bicyclist destinations and existing access, high crash corridors and intersections, and the location of transportation disadvantaged populations.

Supplementing field work and the review of background information, the project team identified bicycle system needs based on feedback received during the public involvement process. Bicycle system need highlights are provided below:

- There is a desire for improved bicycle system connectivity.
- More formalized bicycle facilities are desired along major streets (e.g., 25th Street SE, Reed Road SE, Skyline Road S, Turner Road SE, Brown Road NE).
- Enhanced visual cues (e.g., shared lane markings or physical separation) are needed to increase motorists' awareness of bicyclists on the roadway.

BICYCLE USER TYPES

Bicyclists vary substantially in their experience, confidence levels, and preferences for bicycle facility types. Since this Plan aims to enhance user safety and comfort for all potential bicyclists, it is important to understand the various types of bicyclists that may want to use the system.

The overall population can be divided into four general groups according to their abilities and inclination toward bicycling for transportation. The following sections briefly describe the four primary bicycle user types.

- *"Strong and fearless"* These bicyclists make up the smallest portion of the bicycling population, and are comfortable bicycling on almost any road (regardless of roadway condition and presence of bicycle facilities).
- *"Enthusied and confident"* These bicyclists represent the majority of people who bike regularly. These cyclists typically prefer to ride on streets designed with bicyclists in mind (e.g., streets with bike lanes).
- *"Interested but concerned"* These bicyclists represent the majority of the general population. They likely rode a bike during childhood and may ride for recreation, but they hold concerns about riding on major streets with higher vehicle speeds and volumes. Riding on residential streets is a possibility, but these riders typically wouldn't ride on or across major streets without bicycle infrastructure.
- *"Not Interested in Bicycling (No Way, No How)"* This population is either unable to ride a bicycle or is simply not interested in bicycling regardless of the existence of a bikeway network.

This plan aims to serve the first three categories, with an emphasis on the “Interested but concerned” category because these bicyclists represent the majority of the general population. The breakdown of the population represented by each of these four groups is represented by the relative size of the bars in the figure below. This typology is helpful for framing the discussion about how and where people may choose to bicycle.

This Plan is targeted at increasing the user comfort and safety of the first three categories of bicyclists (those who are interested in bicycling) on Salem’s bicycle network.

Figure 7-1
Four Types of Cyclists by Proportion of Population



Policy Framework

The Bicycle System Element of the Salem TSP establishes goals, objectives, and policies that will guide how improvements are made to the bicycle network over the next 25 years. Salem’s previous Bicycle Plan placed a major focus on building new bike lanes, which typically accommodate more confident and commuter cyclists. Research in recent years has shed light on a much broader user base whose preferences and demands may differ from one another. Considering a wider range of potential bicycle facilities (such as shared lane markings, family-friendly bikeways, colored bicycle lanes, cycle tracks, and buffered bicycle lanes in addition to the bike lanes and trail network recommended in the previous Bicycle Plan) increases the potential to accommodate a greater number of users. Considering a wider range of potential bicycle facilities also increase the likelihood of providing a complete bicycle network balanced with other modes, such as transit and automobiles.

This updated Bicycle Plan goes beyond an emphasis on bicycle lanes by focusing on the following areas:

- Serving a broad range of existing and potential cyclists (including users of various ages, experience and confidence levels, and trip types).
- Building upon investments in the existing and planned system and enhancing the existing system to better serve users.
- Expanding the system to streamline bicycle connections and develop new routes to better serve existing and future destinations.
- Establishing seamless links with surrounding communities including Keizer, and Marion and Polk counties.
- Enhancing user safety and comfort.

Goals, Objectives, and Policies

The City of Salem has the following goals and policies for the planning, development, and operation of its bicycle system:

GOAL: To provide a comprehensive system that accommodates a range of bicyclists with varying skill levels by providing a well-connected system of bicycle facilities that will encourage increased ridership, safe bicycle travel, active transportation, and support public health.

OBJECTIVE NO. 1

The City of Salem will create a comprehensive system of bicycle facilities.

Policy 1.1 Provide Bicycle Facilities on Arterial and Collector Streets

Bicycle lanes shall be provided on all newly constructed Arterial and Collector streets. Arterial and Collector streets undergoing overlays or reconstruction will be re-striped with bicycle lanes, as designated on Maps 7-1 through 7-5. Every effort will be made to retrofit existing Arterials and Collectors with bicycle lanes, as designated on the Maps. Where bicycle lanes are difficult to accommodate on existing Arterials and Collectors due to limited right-of-way or other environmental constraints, alternate bicycle facilities may be provided on a parallel street within the vicinity of an existing Arterial or Collector.

Policy 1.2 Mitigation of On-street Parking Loss Due to Future Bicycle Facility Projects

Where new, City-sponsored bicycle facilities require the removal of on-street parking spaces on existing roadways, the City shall provide parking facilities that mitigate, at a minimum, the existing parking demand with nearby on-street parking. This policy does not apply to street widening or major reconstruction projects.

Policy 1.3 Connecting Trail Network

To enhance the system of on-street bicycle lanes, the City shall encourage the development of a connecting, multiuse trail network using linear corridors such as: rivers, creeks, utility easements, and abandoned rail lines using such programs as rail-banking that complements the on-street bicycle system.

Policy 1.4 Eliminate Barriers to Bicycle Travel

The City shall actively pursue a comprehensive system of bicycle facilities through designing and constructing projects, as resources are available, and implementing standards and regulations designed to eliminate barriers to bicycle travel.

As a result of this policy, new developments or major transportation projects will neither create new, nor maintain existing, barriers to bicycle travel. Through the implementation of development Codes and standards, the City will require the creation of pathways and connections for bicyclists to schools, neighborhood shopping, and other activity centers. The City will adopt, include, and use bicycle supportive design and signage standards as part of roadway design standards, zoning and subdivision regulations, parking code requirements, railroad crossing standards, and other appropriate documents. As resources are available, the City will support projects designed to eliminate identified barriers relating to bicycle travel, either as stand-alone projects or as part of a major capital improvement project.

Policy 1.5 Bicycle System Identification and Signage

As resources are available, the City shall, in consultation with local bicyclists, review existing and proposed bicycle lanes, family-friendly bikeways, cycle tracks, buffered bicycle lanes, crossing treatments, other bicycle facilities, and other streets, to identify a preferred bicycle system, and make improvements as necessary for these routes to function better for bicyclists. The system shall be identified using wayfinding signage on facilities, and shown on updates of the bicycle route map.

Wayfinding signage shall be prioritized to aid cyclists' ability to navigate from arterials or

collectors to nearby, parallel family-friendly bikeways, especially in areas with a high number of destinations such as shopping areas.

OBJECTIVE NO. 2

Increase citywide journey to work (U.S. Census) bicycling mode share to 3 percent by 2020 and 5 percent by 2030 (2008 baseline is 1.6 percent based on 2006-2008 American Community Service data).

Policy 2.1 Establish a Baseline of Bicycle Use

Upon adoption of the Plan, the City will conduct the necessary research to establish a baseline of bicycle use for all trips. Necessary facility inventories and usage surveys will be performed every five years to determine the success or failure of the Plan's bicycle goal, objectives, and policies.

Policy 2.2 Complete the Bicycle System

Recognizing that a completed system of bicycle facilities is one of the most important factors in encouraging bicycle travel, the City will construct 70 percent of the bicycle network by 2030. The "bicycle network" is defined as shared lane markings, family-friendly bikeways, bike lanes (buffered, raised, and colored included), off-street paths, and cycle tracks, with priority given to projects that fill a missing link in the bicycle system or address an identified safety hazard.

Policy 2.3 Establish Minimum Standards for Bicycle Facility Maintenance

The City shall develop minimum standards that will maintain bicycle facilities clean of debris, properly striped, and clearly marked and signed.

Policy 2.4 Develop a Maintenance Reporting Program

To assist the City in achieving a high standard of maintenance on existing bicycle facilities, a program shall be developed that allows the public to identify repair, sweeping, and other maintenance needs.

Policy 2.5 Require Relevant Bicycle Accommodations During All Transportation Construction Projects

The City shall require each urban street construction project within the city to include consideration of bicyclists in the traffic control plan; including placement of signs, routing, and lane width. High standards for resurfacing and sweeping shall be required of all construction projects in the roadway right-of-way.

Policy 2.6 City Code Requirements for Bicycle Parking

The City of Salem Revised Code will contain bicycle parking supply requirements and standards that require new developments to provide a minimum amount of bicycle parking, based on the needs of the specific zone or land use type.

Policy 2.7 Develop a Bicycle Parking Program for Businesses

To assist businesses desiring to install bicycle parking, standards and placement criteria will be developed for acceptable short- and long-term bicycle parking facilities, including bicycle parking corrals. Annually, the City will provide a limited number of installed bicycle racks to existing businesses and agencies in commercial districts that were developed prior to bicycle parking requirements, by request, on a first come, first served basis, as resources are available.

Policy 2.8 Bicycle Parking at Transit and Intermodal Facilities

The City shall encourage the installation of secure, public bicycle parking facilities for both short- and long-term parking needs at park and ride facilities, transit stations, bus terminals, train

stations, airports, and other intermodal facilities. The City shall encourage the continuation of bicycle racks on transit vehicles.

Policy 2.9 Promote Bicycle Use

The City shall encourage bicycling by sponsoring or participating in activities that promote bicycle transportation and recreation.

Policy 2.10 Enhance Bicycle Access to All City Offices

Where practicable, the City shall provide secure bicycle parking and lockers for employees and visitors at all City offices and provide showers and lockers for employees.

Policy 2.11 Travel by Skateboard

The City encourages all forms of active transportation, including the use of skateboard and similar devices, in a manner that protects the safety of all roadway users.

OBJECTIVE NO. 3

The City of Salem shall encourage education services and promote safe bicycle travel in order to reduce the number of accidents involving bicyclists by 50 percent and aim for zero fatalities by the year 2030 (note: 60 reported bicycle crashes in 2008).

Policy 3.1 Target and Eliminate Key Behaviors that Lead to Bicycle Accidents

The City shall encourage schools, safety organizations, and law enforcement agencies to provide information and instruction on bicycle safety issues that focus on the most important accident problems.

Policy 3.2 Bicycle Safety Awareness Programs

The City shall develop training and awareness programs that encourage the public to ride safely and use bicycle safety equipment when bicycling. These programs shall encourage all roadway users to courteously share the road and be aware of their privileges and responsibilities when driving, bicycling, and walking.

Policy 3.3 Safe Access to Schools

The City shall work with the Salem-Keizer School District and neighborhood associations to maintain and improve its programs to evaluate the existing bicycle access to local schools and supporting infrastructure at schools (bicycle racks, lockers, etc.), estimate the current and potential use of bicycling as a travel mode, evaluate safety needs, and propose changes to increase the percentage of children and young adults safely using this mode.

Performance Measures

Evaluating progress towards the implementation of bicycle goals can help the City and community understand what has been achieved through project implementation. This information can inform plan updates and future plans. The performance measures and targets in Table 7-1 rely on readily available data, specifically network implementation and journey to work mode share data collected by the US Census, to help ensure periodic evaluation.

TABLE 7-1 Bicycle System Performance Measures

Performance Measure	Target
Bicycle Commute Mode Share*	Increase citywide journey to work (US Census) bicycling mode share to 3 percent by 2020, and 5 percent by 2030.
Bicycle Network Construction	Construct 70 percent of the bicycle network by 2030. The “bicycle network” is defined as shared lane markings, family-friendly bikeways, bike lanes (buffered, raised, and colored included), off-street paths**, and cycle tracks.

*According to the American Community Survey (ACS), bicycle Journey to Work mode share was 1.6% for t2006-2008.

**Note that shared-use paths should be counted only toward bicycle network construction evaluation and not pedestrian network construction so as not to double count shared-use path construction.

Bicycle Facility Types

The recommended bicycle projects refer to several different bicycle facility types. A brief description of each facility type and purpose is provided below for reference.

TABLE 7-2 Bicycle Facility Types and Treatments

Facility Type



Bike Lanes: Designated exclusively for bicycle travel; separated from vehicle travel lanes with striping and also include pavement stencils; typically most appropriate on major streets where higher traffic volumes and speeds create a greater need for separation between cyclists and motorists. This is an FHWA approved treatment.



Shared Lane Markings: High-visibility pavement markings that heighten the awareness of cyclists sharing the road with motorists; often used on streets where bike lanes are desirable but not possible due to physical or other constraints; positioned strategically in the travel lane to encourage cyclists to ride in a straight line so their movements are predictable to motorists, while also riding at an appropriate distance from the “door zone” of adjacent parked cars; may not be used on streets with posted speeds greater than 35 M.P.H. This is an FHWA approved treatment.

Family-Friendly Bikeways: Also known as bicycle boulevards, these are lower-volume, lower-speed streets optimized for bicycle travel through treatments such as traffic calming, bicycle wayfinding signs, pavement markings, and intersection crossing treatments; intended to prioritize bicycle circulation while discouraging non-local cut-through traffic; intended for the “interested, but concerned” bicycle user types, appropriate treatments should be determined on a case-by-case basis through engineering analysis and coordination with agencies including Public Works and emergency services. Note that standards/guidelines vary depending on the specific treatment under focus.



Shared-Use Paths: Physically separated from motor vehicle traffic; serve one or more nonmotorized user including bicyclists, pedestrians, in-line skaters, skateboarders, or wheelchairs; typically serve bi-directional traffic. Design guidance is provided by FHWA and ODOT. Design should be tailored to the particular project location.



Colored Bike Lanes: Similar to conventional bike lanes, with an added coloring treatment to heighten the facility’s visibility; particularly effective on bike lanes with frequent vehicle/cyclist conflict points; coloring may take the form of an asphalt mix, pavement dye or skid-resistant application material. The focus of colored bike lanes should be conflict areas. FHWA has issued interim approval for green bike lanes.



Buffered Bike Lanes: Conventional bike lanes paired with a delineated buffer space (typically through pavement striping) further separating the bike lane from the adjacent motor vehicle travel lane and/or parking lane; provide greater shy distance between motor vehicles and bicyclists; typically used on streets with excess width (either in the number of lanes or lane width). This is an FHWA-approved treatment, provided MUTCD-compliant markings are used.

TABLE 7-2 Bicycle Facility Types and Treatments

Facility Type



Contra-Flow Bike Lanes: Enable bicyclists to safely ride in the opposite direction of vehicle traffic on one-way streets; placed on the opposite side of vehicle travel lanes (to the motorists' left), and typically separated from traffic with a double yellow line; signs should be posted at intersecting streets, alleys and driveways, informing motorists to expect two-way traffic; intersection traffic controls along the street should also be installed and oriented toward the contra-flow lane; on-street parking prohibited between the contra-flow lane and the curb. This is an FHWA-approved treatment, provided MUTCD-compliant signs and markings are used.



Cycle Tracks: Exclusive bicycle facility combining the user experience of a shared-use path with the on-street infrastructure of a conventional bike lane; separated from vehicle travel lanes, parking lanes and sidewalks; can be either one-way or two-way, on one or both sides of a street; careful design attention is necessary at intersections, driveways and other bicycle/vehicle conflict points. Design guidance is provided by FHWA and ODOT.



Bicycle Detection (Signalized Intersections): Enables cyclists to trigger a green signal phase through the use of a push-button, loop detector or video detector. This is an FHWA-approved treatment



Advanced Stop Bars ("Bike Boxes"): Designated area at the head of a traffic lane at a signalized intersection providing bicyclists a safe and visible means to maneuver ahead of queuing traffic during a red signal phase; helps prevent "right hook" collisions with turning vehicles at the start of the "green" signal indication by positioning cyclists in front of the leading vehicle; additional treatments include a right-turn-on-red prohibition, supplemental warning signs, and may also include pavement coloring to heighten visibility of the bike box. This is currently designated by FHWA as an "experimental" treatment.



Bicycle-Only Signals: Traffic signal device used in conjunction with conventional signals; applied at signalized intersections to indicate bicycle-only signal phases or other bicycle-specific timing strategies; typically used to separate bicycle movements from conflicting motor vehicle movements (e.g., separating through bicycle movements from vehicle turning movements). Bicycle symbols on traffic signals are currently designated by FHWA as an "experimental" treatment.



Bicycle Wayfinding Signs: Wayfinding signs specifically intended for bicyclists; placed at key locations leading to and along bicycle routes, at junctions of multiple routes, and at user "decision points;" may display destinations, distances and "riding time." This is an FHWA-approved treatment, though more limited compared with Salem's current signs. ODOT prescribes additional standards for signs within ODOT right-of-way.

Citywide Recommendations

The following section describes recommendations to enhance Salem's bicycle environment on a citywide scale.

INTERSECTION UPGRADES

Facilitate convenient, safe, comfortable and intuitive bicycle movements through intersections using intersection crossing treatments. Several potential intersection crossing treatments for bicycles are described in Table 7-2. Additional potential treatments include the optimization of traffic signal timing for bicycle speeds, and the reduction of multiple vehicle turning lanes (to reduce the number of potential conflict points).

Appropriate treatments will vary based on site-specific conditions and issues. A detailed engineering analysis should be conducted prior to implementation to identify the appropriate treatment(s) at each intersection.

RAILROAD CROSSING IMPROVEMENTS

Though most at-grade street/railroad crossings in Salem intersect perpendicularly (the ideal crossing angle for bicyclists, pedestrians, and wheelchair users), the crossing angle at some locations may present difficulties for safe bicycle maneuvers. Additionally, railroad tracks imbedded in the street parallel to bicycle travel (e.g., along Front Street NE north of Downtown) may complicate travel. Where a 90-degree railroad/street crossing is not possible, additional shoulder widths are to be provided to enable a cyclist to cross at a safe angle. If a safe crossing angle cannot be provided (due to physical constraints or other factors) and where train speeds are low, commercially-available compressible flangeway fillers should be considered.

TRANSIT ACCESS ENHANCEMENTS

The City of Salem and Salem Area Mass Transit District will need to work jointly to enhance pedestrian and bicycle access to transit stops. Key recommendations include providing:

- Convenient and direct bicycle links to transit stops.
- Paved landing pads to safely accommodate wheeled users.
- Covered passenger shelters.
- Seating areas.
- Posted system map, route map, and schedule (additional options include real-time information display of upcoming bus arrivals).
- Adequate lighting.
- Trash receptacles.
- Short- and long-term bicycle parking.

BICYCLE PARKING

Destinations in Downtown and throughout Salem could benefit from improved bicycle parking facilities. Based on international best practices for cost, simplicity of design and theft-resistance, the recommended single-rack design is the inverted-U style rack mounted parallel to the curb.

For higher capacity bicycle parking, “bike corrals” provide increased bicycle storage options. Bike corrals involve converting a specific number of on-street vehicle parking spaces into bicycle parking (one on-street parking space typically has the capacity for up to ten bicycles). In addition to providing greater capacity (compared with a single sidewalk rack), on-street bicycle parking can derive numerous benefits, including:

- Maximizing space for sidewalk café tables and seating.
- Improving the pedestrian experience and mobility by reducing congestion from parked bicycles on the sidewalk.

- Improving visibility for merchants and storefronts by opening sightlines from the street and passing traffic.
- Creating additional activity nodes and drawing attention to storefronts.

This Plan supports efforts to diversify Salem’s bicycle parking options, including the Downtown Vision 2020 Bicycle/Pedestrian Working Group’s concepts for Downtown bike corrals. It is recommended that the City establish criteria for determining appropriate locations for bike corrals or other high-capacity facilities throughout the community (e.g., locations where parking demand exceeds capacity, locations with limited sidewalk space, and locations with clusters of cyclist destinations). Additional options include creating a bicycle rack request system whereby the City works with merchants who express interest in expanding bicycle parking within the public right-of-way. Opportunities also exist to leverage improved bicycle storage in tandem with private development.

TRIP-END FACILITIES

The presence and quality of trip-end facilities (e.g., showers, lockers, and changing facilities) can greatly influence a person’s decision to complete a trip via bicycle. These facilities enable cyclists to change into work attire (especially after riding in wet or hot conditions). The City of Salem will work with and encourage major employers to improve existing trip-end facilities and/or develop new facilities, as well as encourage developers to include trip-end facilities with new development.

The City will first work with major employers to inventory and assess existing trip-end facilities, followed by identification of locations where new or upgraded facilities are needed. New facilities could be sited at major employment sites, at gyms, and other centrally-located areas.

WAYFINDING SIGNAGE

Placing signs along the bikeway network indicating to bicyclists their direction of travel, location of destinations, and the riding time/distance to those destinations will increase users’ comfort and accessibility to the bicycle system. Wayfinding signs also visually cue motorists that they are driving along a bicycle route and should use caution.

Salem will build upon the existing and planned signage system by expanding on this concept to cover bikeways throughout the community. Developing a Bicycle Wayfinding Signage Plan would establish guidance for the orderly expansion of the network along existing, planned and proposed bikeways.

WILLAMETTE VALLEY SCENIC BIKEWAY

Stretching from Champoeg Park to Eugene and passing directly through Salem, the Willamette Valley Scenic Bikeway represents one of Oregon’s most popular and well-known recreational cycling routes, and is credited with boosting bicycle tourism in the Willamette Valley. The route includes wayfinding signage created by the Oregon Parks and Recreation Department (OPRD) to help navigate bicyclists through communities in which the Bikeway passes. As Salem’s bicycle network expands to provide additional route options, the City and OPRD should periodically revisit the designated Scenic Bikeway route to explore opportunities for adjustment in order to provide a premier riding experience. For example, completion of a bicycle/pedestrian bridge linking Riverfront and Minto-Brown Island parks presents an excellent opportunity to shift the Scenic Bikeway to a pleasant park-like environment (and away from heavy traffic on the Commercial Street SE/Liberty Street SE/River Road S corridors). The Bikeway’s wayfinding signage will accordingly be updated in tandem with route modifications.

SYSTEM MAINTENANCE

System maintenance can increase user safety and comfort and encourage the use of the bicycle

network. Recommended maintenance activities include the continuation of sweeping, debris removal, sign replacement, trimming overgrown vegetation; graffiti removal, and pavement and signal repair as needed.

PROGRAMMATIC STRATEGIES

Becoming a truly bicycle-friendly community requires a multi-faceted approach including encouragement, education, enforcement, and evaluation programs to support on-the-ground infrastructure improvements. Bicycle education and promotional programs can:

- Promote safety.
- Raise awareness of bicycling as a legitimate transportation mode.
- Connect current and potential riders to existing resources.
- Educate current and potential bicyclists about their rights and responsibilities.
- Encourage residents to bicycle more often.

These efforts should provide measurable results in the bicycling mode share, increase safe rider behavior (and correspondingly reduce crashes), and raise cultural awareness of cycling.

Recommended Bicycle Projects

Recommendations for bicycle facilities were developed based on:

- Project goals, policies, and evaluation criteria.
- Field work.
- Findings from the bicycle needs assessment.
- A review of background documents, plans, studies, and available data.
- Input from the Project Stakeholder Advisory Committee; and input from the public involvement process.

The existing, planned, and proposed bicycle network is shown on Maps 7-1 through 7-5 and individual bicycle projects are listed in Tables 7-5 through 7-7.

Brief descriptions of the types of proposed projects are provided below.

BIKE LANES

The recommended expansion of Salem's bike lane network is illustrated on Maps 7-1 through 7-5. The expansion is envisioned to occur through new street construction, gap closures on existing streets, and as part of major reconstruction projects on existing roadways.

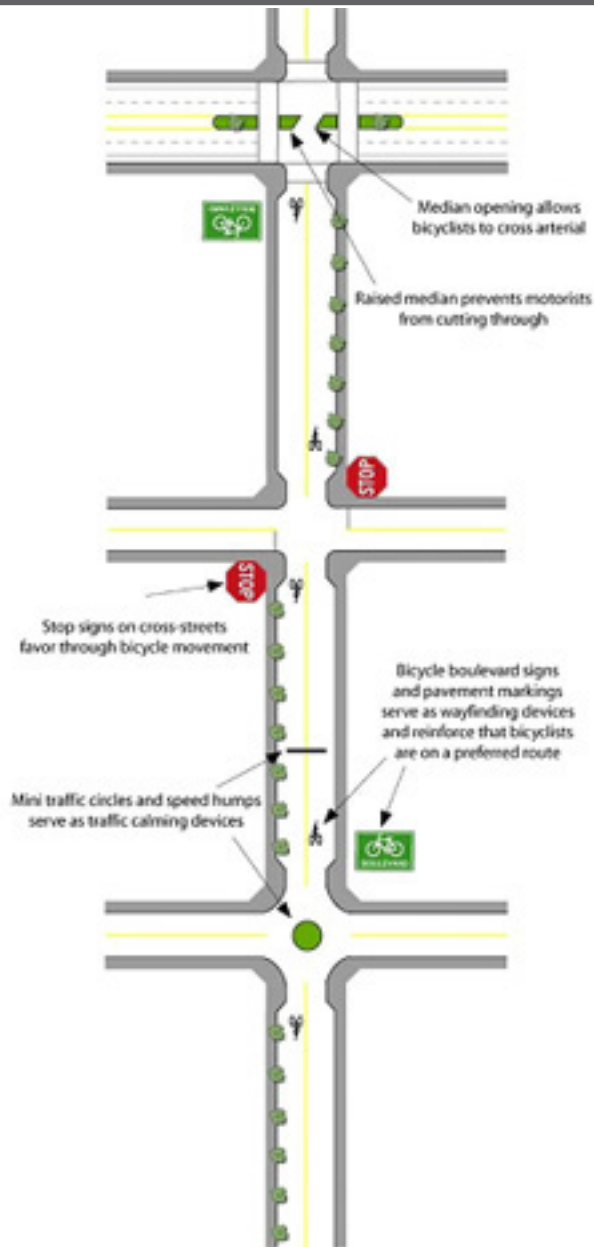
SHARED LANE MARKINGS

Described in Table 7-2, shared lane markings are recommended as an interim measure when physical or other constraints preclude the installation of bike lanes. A combination of bike lanes and shared lane markings can also be used, particularly on streets traversing hills. However, despite the presence of shared lane markings, some riders may still feel uncomfortable sharing the road with motorists on higher-volume roadways. Therefore, this treatment may have limited effectiveness in attracting a broad range of users.

FAMILY-FRIENDLY BIKEWAYS

Described in Table 7-2 and illustrated in Figure 7-2, family-friendly bikeway treatments are intended

Figure 7-2
Sample Family-Friendly Bikeway
Treatments on a Hypothetical Street



to prioritize bicycle circulation while discouraging non-local, cut-through traffic. Family-friendly bikeways (also known as “bicycle boulevards”) go beyond signed bike routes to create a safe and attractive riding environment for cyclists of all ages, abilities, and comfort levels.

Many local streets in Salem exhibit family-friendly bikeway characteristics, including lower traffic volumes and speeds, traffic calming measures, and proximity to schools and other bicyclist destinations. The proposed network takes advantage of these attractive corridors, particularly those needing minimal and cost-effective treatments (e.g., wayfinding signage) that could be implemented in the near-term.

Appropriate treatments for each family-friendly bikeway should be determined on a case-by-case basis. As the City moves forward with project implementation, extensive outreach should also be conducted with the bicycling community and affected neighborhood groups. As a result of outreach prior to implementation of a family-friendly bikeway, minor route modifications that do not result in a change to the street cross section may be made and later incorporated into updates of this plan.

SHARED-USE PATHS

Significant opportunities exist to develop an expanded shared-use path network in Salem that serves a variety of users. The proposed bicycle network, as shown in Maps 7-1 through 7-5, includes a diverse shared-use path system. Some proposed path corridors would involve upgrading existing sidewalks passing through parks, widening existing narrow paths to minimize bicyclist/pedestrian conflicts, or upgrading existing unpaved paths to accommodate a broader range of users. Most off-street paths are

intended for use by pedestrians, bicyclists, skateboarders, and other non-motorized users. In some cases, one or more non-motorized uses may be prohibited based on the width of the facility, adjacent land uses, topography, location relative to the Bicycle Network, or other considerations. The network of shared-use paths is not intended to be all-inclusive. Additional shared-use paths may be identified through the subdivision or other development process to address neighborhood connectivity.

Where a proposed shared-use path is shown over private property, the desired connection may be provided with sidewalks and local streets that connect to the existing street and sidewalk network in a relatively direct manner. Many of the proposed shared-use path projects will require “path feasibility studies” before a specific alignment can be determined. These studies, which would only occur for paths to be constructed with public funds, will examine issues related to potential environmental impacts, route directness, land availability, property ownership, and estimated costs.

ENHANCED BIKEWAY TREATMENTS

Although bike lanes may be appropriate along many routes, stakeholders and residents acknowledged that bike lanes alone may not always be enough to attract new riders. Therefore, stakeholders and residents throughout the planning process identified several corridors where more innovative treatments are desired to enhance user safety and comfort. These corridors primarily encompass Salem’s major street network.

Maps 7-1 through 7-10 identify several roadway corridors as “potential enhanced bikeways,” where enhanced bikeway treatments should be considered. Enhanced bikeway treatments could include:

- Colored bike lanes.
- Buffered bike lanes.
- Cycle tracks.

These treatments are described briefly in Table 7-2. For each corridor under focus, further analysis will be necessary to identify and address site-specific issues, assess the benefits and trade-offs of an enhanced bikeway treatment, and to identify appropriate treatments.

SAFE ROUTES TO SCHOOL IMPROVEMENTS

Projects identified as part of the proposed bicycle network also incorporate relevant bicycle improvements identified Safe Routes to School Solutions. These projects generally consist of on- and off-street bikeway enhancements and intersection improvements near schools.

Project Prioritization

The Bicycle Network, illustrated on Maps 7-1 through 7-5 identifies bicycle capital improvement projects that once constructed will encourage bicycling. The order in which projects in this Element are constructed will depend on many factors, including budget and grant availability, community support, and City priorities. The City does not anticipate that all of these projects will be constructed within the 20-year life of this plan. To prioritize projects included in the proposed Bicycle Network, a network of critical links was developed with an emphasis on family-friendly bikeways in order to create cost-effective facilities that are appealing to the widest range of potential users. These projects were then evaluated using the following eight criteria established for the Bike and Walk Salem Project: system connectivity, multi-modal connections, user safety and comfort, community support, cost, accommodating a broad range of users, environmental justice, and land use connections. The resulting priorities were reviewed by the Bike and Walk Salem Stakeholder Advisory Committee and members of the public.

The evaluation exercise resulted in a three-tiered priority list illustrated on Maps 7-6 through 7-10. The three tiers represent a general implementation timeline:

- Tier 1, Near-term Priority Network (approximately 0-10 years).
- Tier 2, Medium-term (approximately 10-15 years).
- Tier 3, Longer-term (approximately 15-20 years or longer).

The Tier 1 projects are designed to complete a priority network of bicycle facilities serving high-priority destinations, including employment centers, parks, and schools. While the tier system helps identify high-priority projects for available funding, it should be noted that medium- and longer-term projects may be implemented at any point in time as part of a development or public works project, or as additional funding becomes available. Additionally the tiers should be reviewed frequently to ensure that they continue to reflect current priorities. Some of the factors that can and should affect project implementation include:

- Project cost relative to funding availability.
- Change to existing grant programs, or creation of new grant or funding programs that affect the type or number of large-budget projects that can be implemented.
- Changes in City policy that could affect how local or state funds can be spent.
- Changes to zoning and land use that will affect where and how development occurs in Salem.
- The pace of development, which will affect which projects are implemented through development requirements and impact prioritization by changing existing land use.
- Changes to City staff capacity to manage bicycle projects.
- Community input (e.g., through neighborhood associations or other).
- Directives (policy or otherwise) from elected officials and other governing bodies.
- Interest from partners (such as counties and ODOT) in implementing projects that are partially or entirely within their jurisdiction.

Bicycle Project Cost Estimates

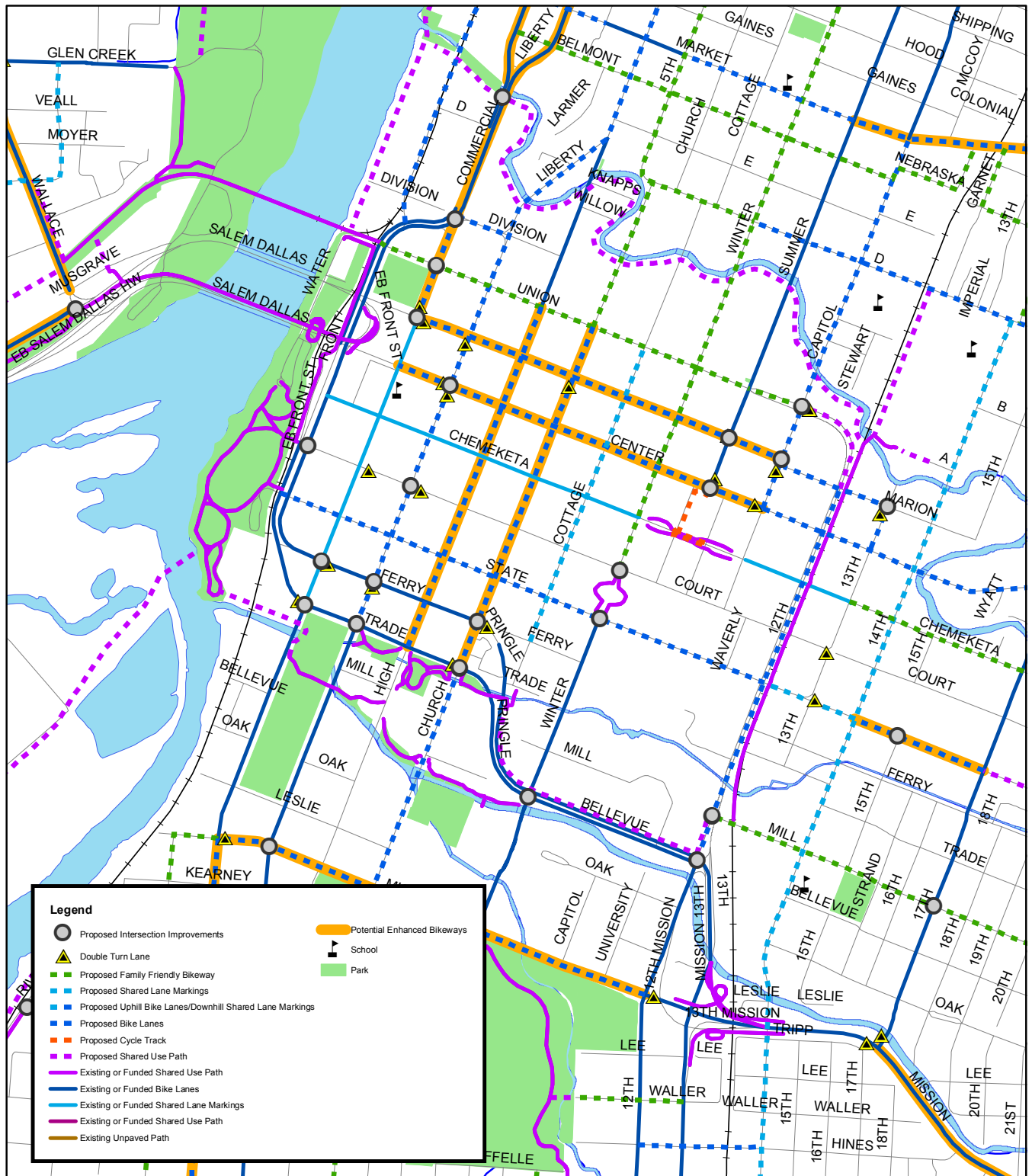
Tables 7-3 and 7-4 summarize total planning-level cost opinions for Salem’s proposed bikeway network. Table 7-3 summarizes estimated costs by “tier” while Table 7-4 presents aggregated costs by facility type. It should be noted that estimated costs for shared-use paths and intersection improvements are shown in the Pedestrian Element Chapter, as these facilities benefit both pedestrians and cyclists alike.

Tier	Estimated Cost
Tier 1	\$4,410,000
Tier 2	\$4,712,000
Tier 3	\$28,056,000

Note: Estimated Cost totals do not include estimates for projects already accounted for in Tables 3-4, 3-5, 3-6, and 3-7 of the Street System Element. Cost estimates for shared-use paths and intersection improvement projects are included in the Pedestrian Plan Element.

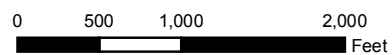
Facility Type	Estimated Cost (all Tiers)
Cycle Track	\$145,000
Bike Lanes*	\$27,323,000
Shared Lane Markings	\$2,175,000
Uphill Bike Lanes/Downhill Shared Lane Markings	\$1,067,000
Family-Friendly Bikeway	\$6,468,000

Note: Estimated Cost totals do not include estimates for projects already accounted for in Tables 3-4, 3-5, 3-6, and 3-7 of the Street System Element. Cost estimates for shared-use paths and intersection improvement projects are included in the Pedestrian Plan Element.

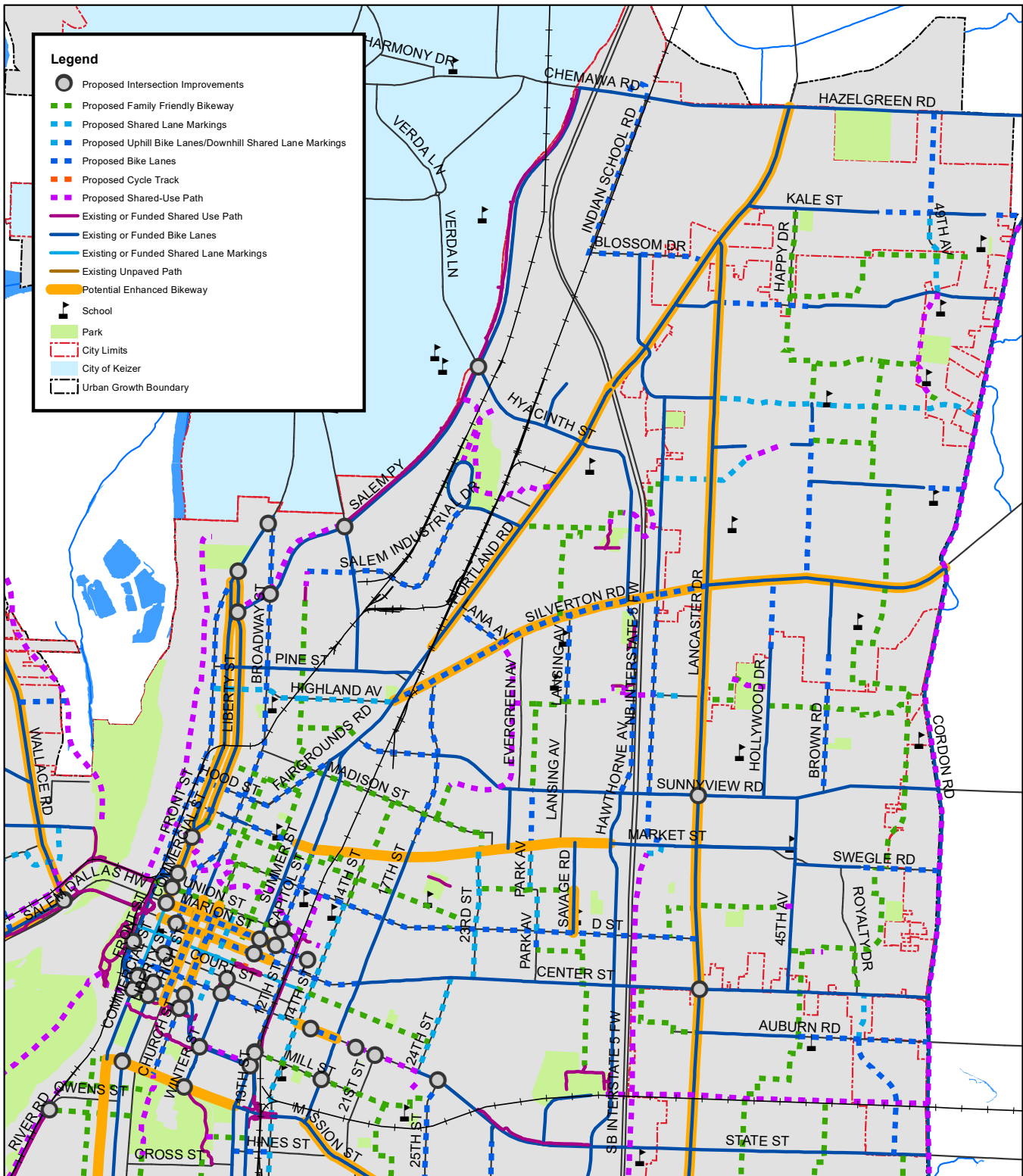


Map 7-1: Bicycle Network - Downtown Salem

Salem Transportation System Plan Bicycle System Element

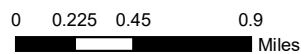


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.



Map 7-2: Bicycle Network - Northeast Salem

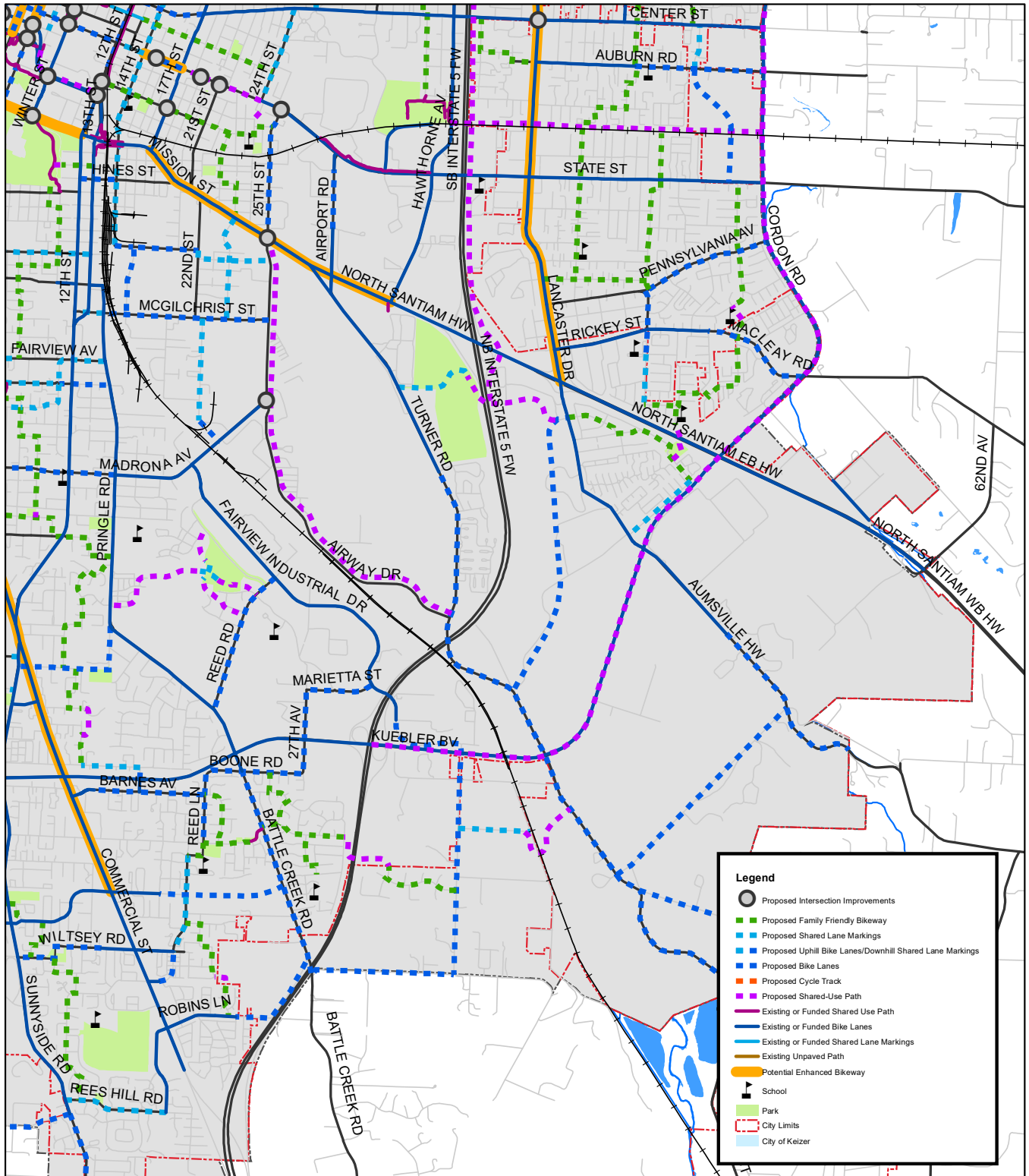
Salem Transportation System Plan Bicycle System Element



Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

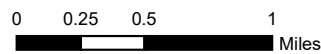
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Date: 10/10/2019



Map 7-3: Bicycle Network - Southeast Salem

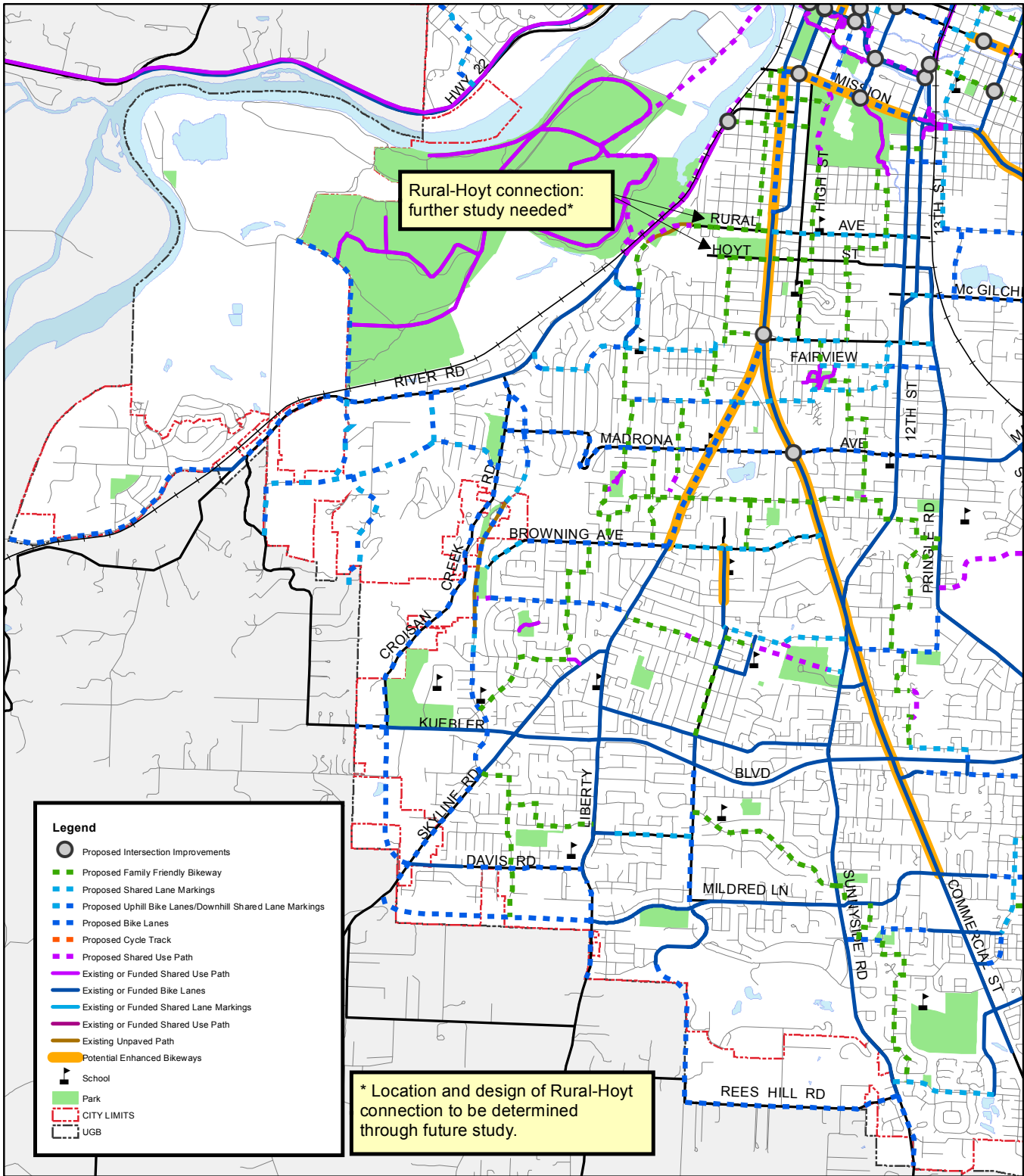
Salem Transportation System Plan Bicycle System Element



Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

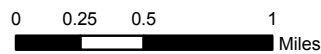
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Date: 10/10/2019

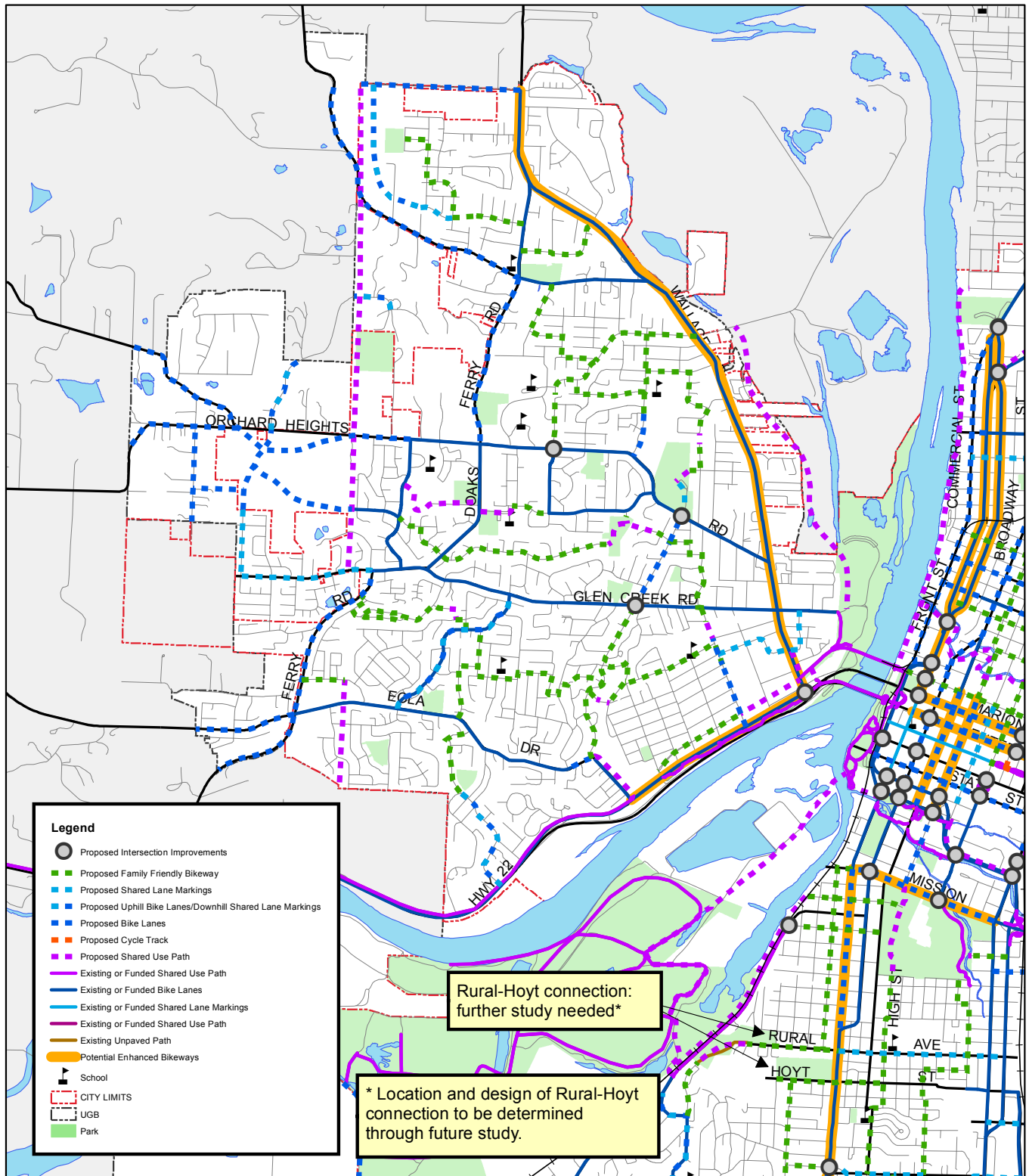


Map 7-4: Bicycle Network - South Salem

Salem Transportation System Plan Bicycle System Element

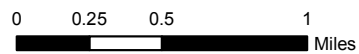


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

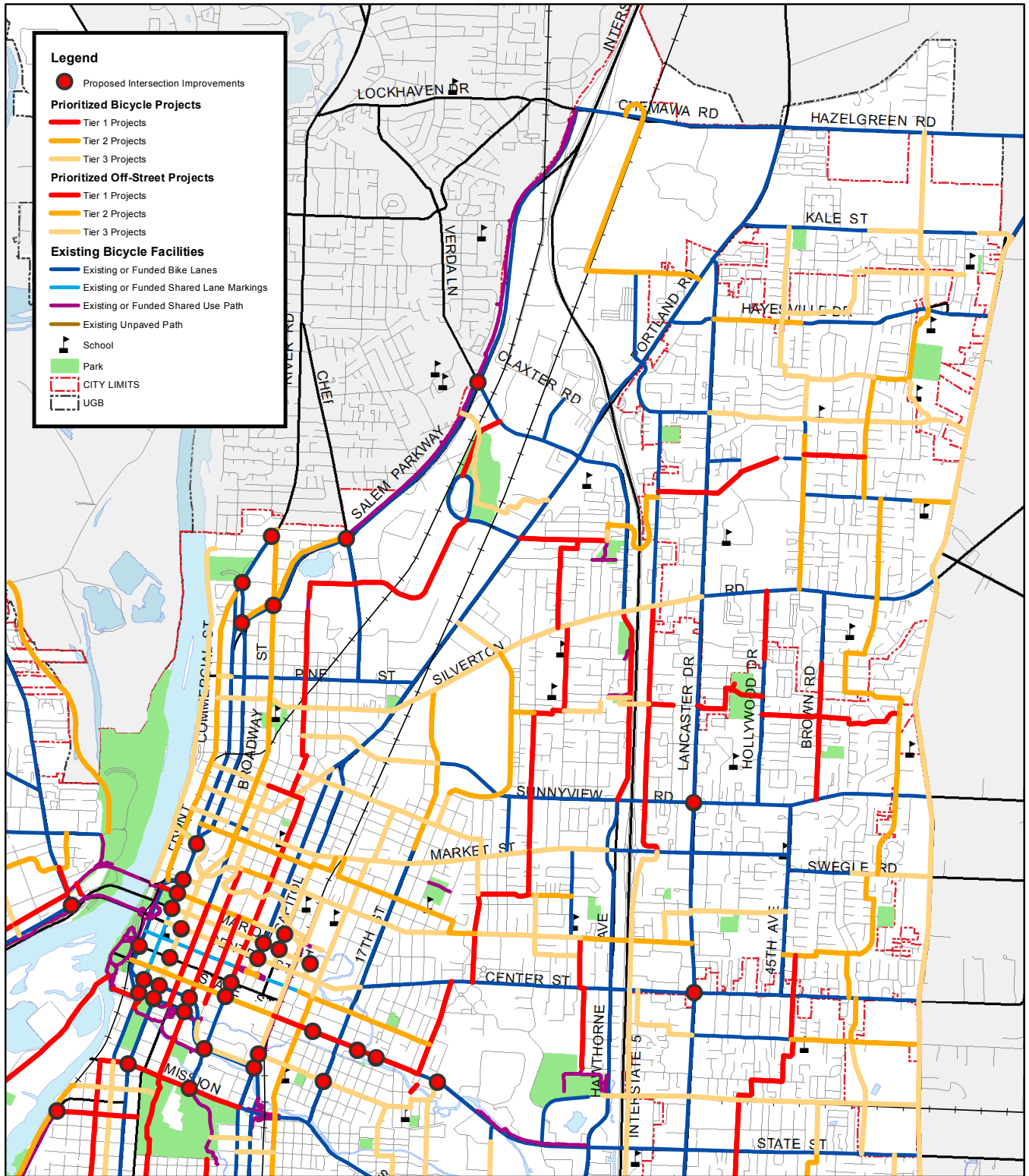


Map 7-5: Bicycle Network - West Salem

Salem Transportation System Plan Bicycle System Element

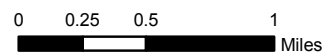


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

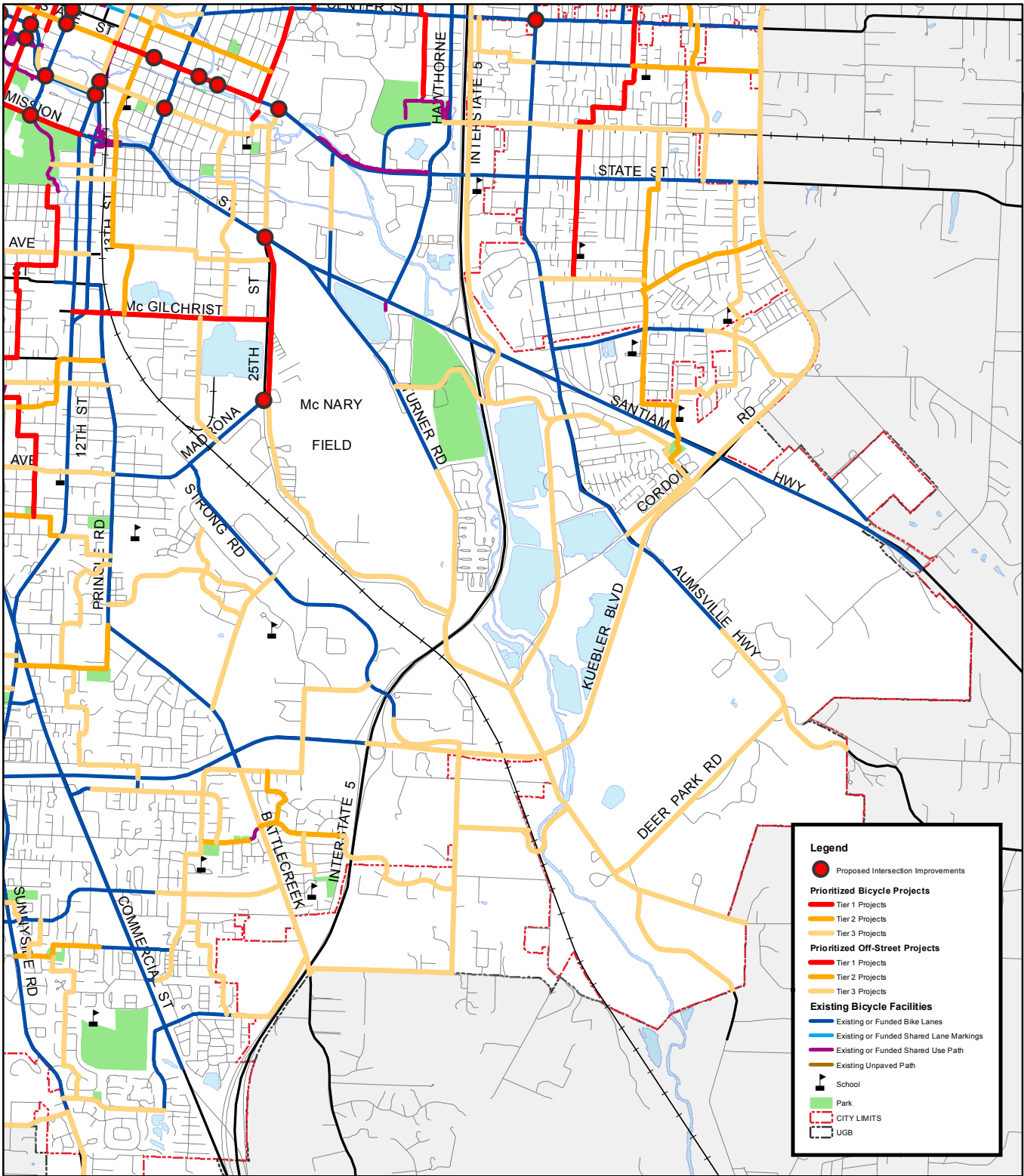


Map 7-7: Bicycle Project Priorities - Northeast Salem

Salem Transportation System Plan Bicycle System Element

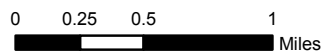


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

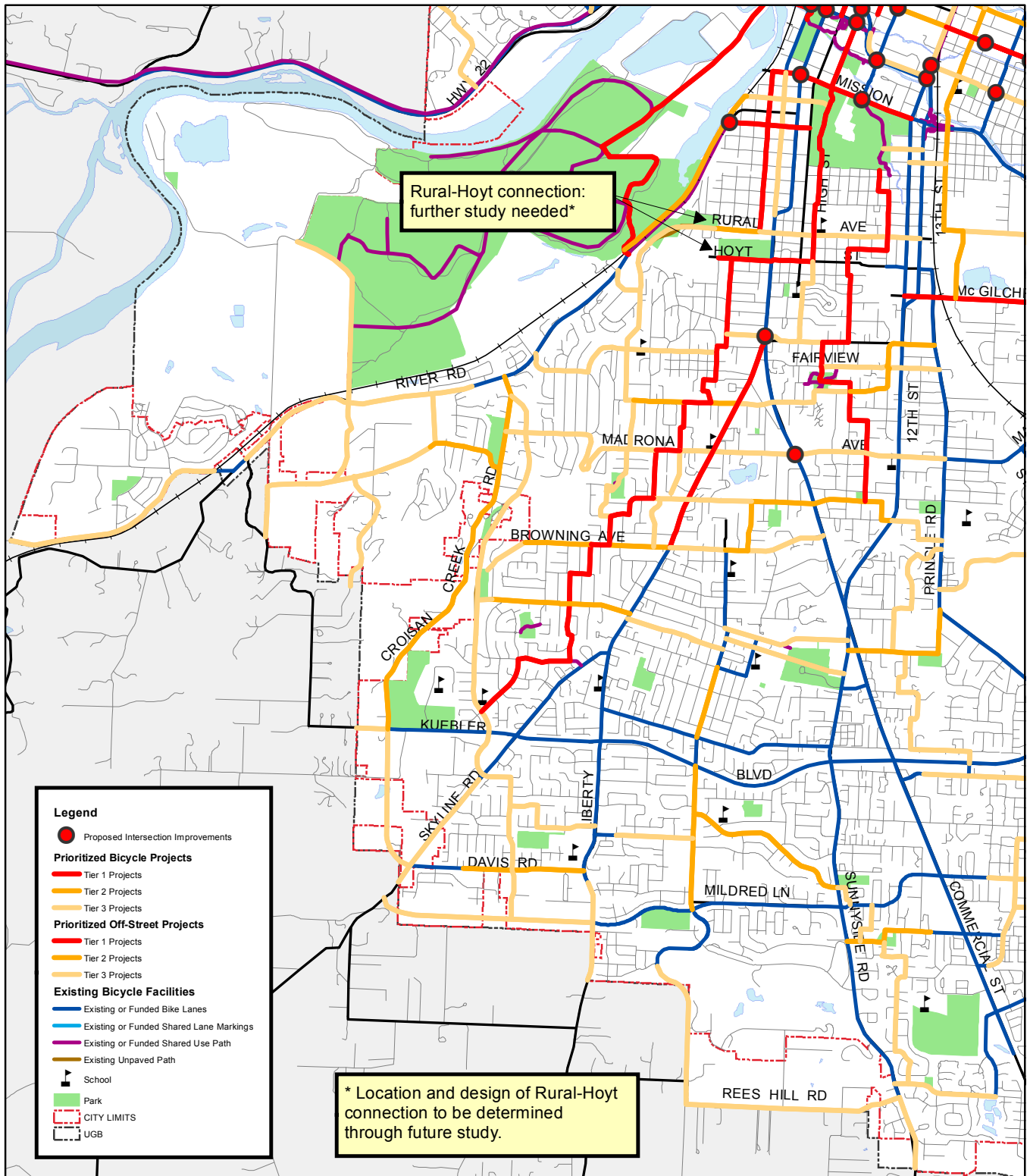


Map 7-8: Bicycle Project Priorities - Southeast Salem

Salem Transportation System Plan Bicycle System Element

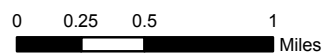


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

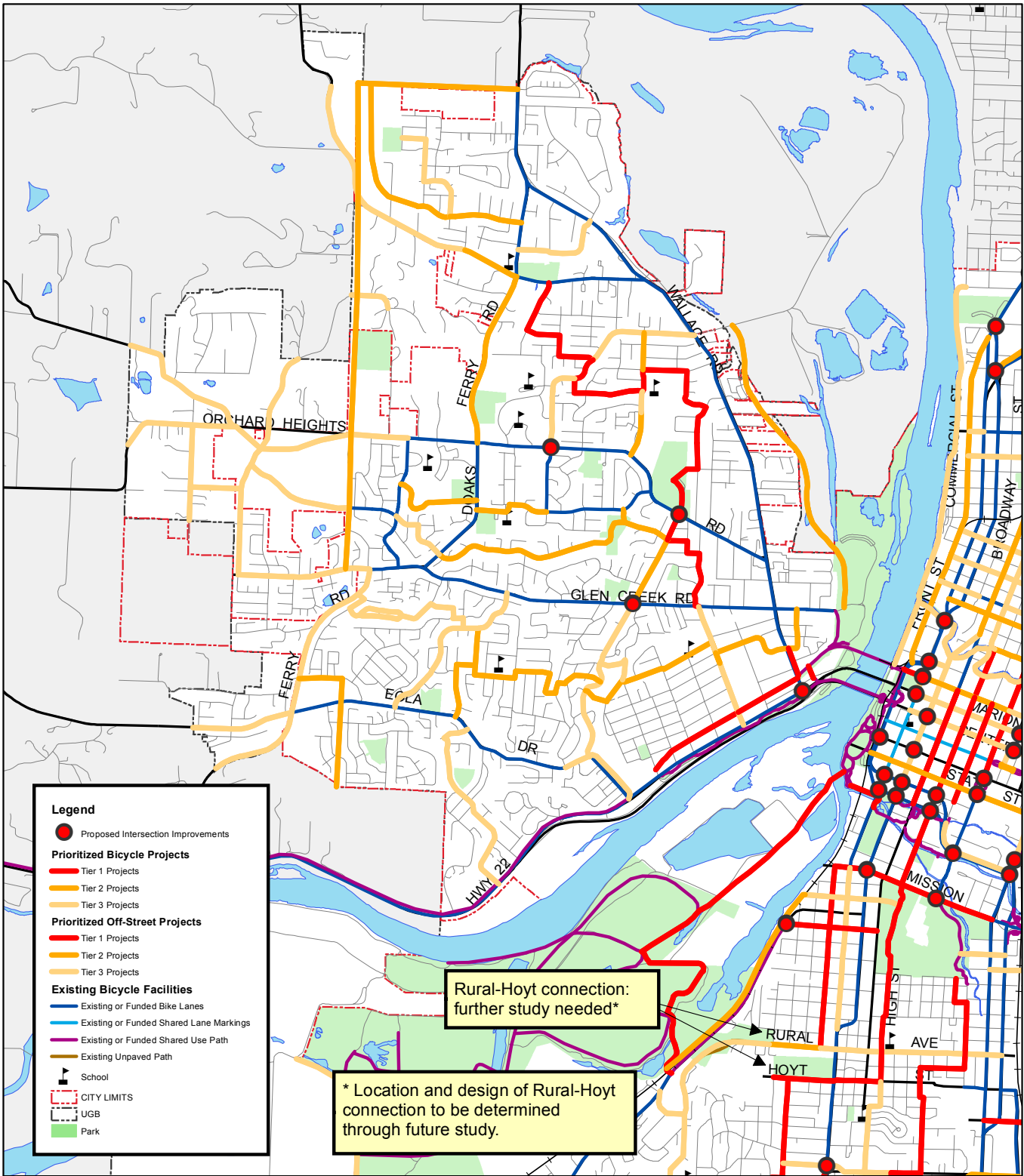


Map 7-9: Bicycle Project Prioritization - South Salem

Salem Transportation System Plan Bicycle System Element

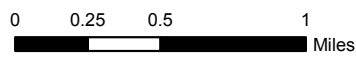


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.



Map 7-10: Bicycle Project Prioritization- West Salem

Salem Transportation System Plan Bicycle System Element



Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

Table 7-5 Recommended Tier 1 Bicycle Projects (not in priority order)

Corridor and Segments	From	To	Facility Type	Partner Agencies	Estimated Cost
Capital Mall to Keizer and Kroc Center Bike Corridor					
Winter Street NE	Court Street NE	Norway Street NE	Family-Friendly Bikeway	City of Salem	\$63,000
Norway Street NE	Winter Street NE	5th Street NE	Family-Friendly Bikeway	City of Salem	\$20,000
Cottage Street NE/Maple Avenue NE	Norway Street NE	Bliler Avenue NE	Family-Friendly Bikeway	City of Salem	\$103,000
Salem Industrial Drive NE	Western Terminus	North of Anunsen Street NE	Bike Lanes	City of Salem	*
Claggett Creek Path	Bill Frey Drive NE	Hyacinth Street NE	Path	City of Salem; Urban Renewal Agency; City of Keizer; Cherriots	**
State Street Bike Facilities					
State Street	12 th Street	14 th Street	Shared Lane Markings	City of Salem	*
State Street	14 th Street	17 th Street	Buffered Bike Lanes	City of Salem	*
State Street	17 th Street	24 th Street	Shared Use Path	City of Salem	*
Union Street Bike Corridor-Phase 1					
Union Street NE	Front Street NE	Commercial Street NE	Family-Friendly Bikeway	City of Salem; Urban Renewal Agency	\$1,050,000
Church/High Street Bike Corridor Through Downtown					
Church Street SE	Hoyt Street SE	Lefelle Street SE	Family-Friendly Bikeway	City of Salem	\$52,000
Bush's Pasture Park/Church Street SE Connector	Lefelle Street SE	Mission Street SE	Path	City of Salem	**
Church Street SE	Mission Street SE	Trade Street SE	Bike Lanes	City of Salem	\$76,000
Church and High Streets NE/SE	Trade Street SE	Union Street NE	Enhanced Bike Lanes	City of Salem	\$600,000
Church Street NE	Union Street NE	D Street NE	Family-Friendly Bikeway	City of Salem	\$25,000
State Street to Kroc Center Bike Corridor					
24th Street NE	State Street	Center Street NE	Shared Lane Markings	City of Salem	\$16,000
23rd Street NE	Center Street NE	Ellis Avenue NE	Shared Lane Markings	City of Salem	\$14,000
Ellis Avenue NE	23rd Street NE	Park Avenue NE	Family-Friendly Bikeway	City of Salem	\$27,000
Park Avenue NE	Ellis Avenue NE	Market Street NE	Shared Lane Markings	City of Salem	\$8,000
Park Avenue NE	Market Street NE	Sunnyview Road NE	Bike Lanes	City of Salem	\$337,000
Park Avenue NE	Sunnyview Road NE	Florence Avenue NE	Family-Friendly Bikeway	City of Salem	\$46,000
Florence Avenue NE/Chester Avenue NE	Park Avenue NE	Lansing Avenue NE	Family-Friendly Bikeway	City of Salem	\$18,000
Lansing Avenue NE	Chester Avenue NE	Silverton Road NE	Bike Lanes	City of Salem	\$525,000
Williams Avenue NE/Edgewood Avenue NE/30th Avenue NE	Silverton Road NE	Northgate Avenue NE	Family-Friendly Bikeway	City of Salem	\$57,000
Northgate Avenue NE	Portland Road NE	Eastern Terminus	Family-Friendly Bikeway	City of Salem	\$47,000
Geer Community Park to Hoover Elementary School Bike Corridor					
Illinois Avenue NE/Vinyard Avenue NE	Monroe Avenue NE	D Street NE	Family-Friendly Bikeway	City of Salem	\$72,000
Chemeketa Community College East/West Bike Corridor					
Cooley Drive NE	Fisher Road NE	Chemeketa CC West Transit Station	Shared Lane Markings	City of Salem, CCC, Marion County	\$15,000
Chemeketa Cross Campus Path	Cooley Drive NE	Satter Drive NE	Path	City of Salem, CCC, Marion County	**
Satter Drive NE	45th Avenue NE	47th Avenue NE	Family-Friendly Bikeway	Marion County	\$33,000
McKay Park East/West Bike Corridor					
Beverly Avenue NE	Fisher Road NE	Coral Avenue NE	Shared Lane Markings	City of Salem	\$4,000

* The estimated cost for these projects is included in the Street System Element.

** The estimated cost for these projects is included in the Pedestrian System Element.

Table 7-5 Recommended Tier 1 Bicycle Projects (not in priority order)

Corridor and Segments	From	To	Facility Type	Partner Agencies	Estimated Cost
Beverly Avenue NE/Phipps Lane NE/ Carolina Avenue NE	Lancaster Drive NE	Eastern Terminus of Carolina Avenue NE	Family-Friendly Bikeway	Marion County	\$33,000
McKay Park Connector	Phipps Lane NE	Hollywood Drive NE	Path	City of Salem, Marion County, SKSD	**
San Francisco Drive NE	Hollywood Drive NE	Walker Road NE	Family-Friendly Bikeway	City of Salem	\$79,000
Four Corners Elementary School and Auburn Elementary School Bike Corridor					
Elma Avenue NE/SE/Donalyn Lane NE/Deana Street NE/ Monroe Avenue NE/45th Avenue NE/Barker Street NE/45th Place NE/Mitchell Street NE	Glendale Drive SE	Dean Street NE	Family-Friendly Bikeway	Marion County	\$189,000
McGilchrist Street SE, 12th Street SE to 25th Street SE Bike Corridor					
McGilchrist Street SE	Pringle Road SE	25th Street SE	Bike Lanes	City of Salem	*
McGilchrist Street SE	12th Street SE	Pringle Road SE	Shared Lane Markings	City of Salem	\$5,000
Sprague High School to South Salem High School Bike Corridor					
Justice Way Court S/Joplin Street S/12th Place S/Camellia Drive S/ Barrett Street S	Croisan Scenic Way S	Browning Avenue S	Family-Friendly Bikeway	City of Salem	\$139,000
Browning Avenue S	Barrett Street S	Neelon Drive S	Bike Lanes	City of Salem	*
Crestview Drive S/Ewald Avenue S	Browning Avenue S	Stanley Lane S	Family-Friendly Bikeway	City of Salem	\$46,000
Stanley Lane S	Ewald Avenue S	Madrona Avenue S	Family-Friendly Bikeway	City of Salem	\$26,000
Madrona Avenue S	Stanley Lane S	Winola Avenue S	Bike Lanes	City of Salem	*
Winola Avenue S	Madrona Avenue S	Salem Heights Avenue S	Family-Friendly Bikeway	City of Salem	\$28,000
Salem Heights Avenue S	Winola Avenue S	View Drive S	Uphill Bike Lane/Downhill Shared Lane Markings	City of Salem	*
Nohlgren Street S/King Street S/ Argyle Drive S	Salem Heights Avenue S	Hansen Avenue S	Family-Friendly Bikeway	City of Salem	\$37,000
Hansen Avenue S	Argyle Drive S	Mountain View Drive S	Shared Lane Markings	City of Salem	\$2,000
Mountain View Drive S	Hansen Avenue S	Hoyt Street S	Family-Friendly Bikeway	City of Salem	\$47,000
Hoyt Street S	Skopil Avenue S	Church Street SE	Family-Friendly Bikeway	City of Salem	\$51,000
Bush's Pasture Park to River Road Bike Corridor					
Miller Street S/SE	River Road S	High Street SE	Family-Friendly Bikeway	City of Salem	\$43,000
Saginaw Street S Bike Corridor					
Saginaw Street S/Mission Street S	Rural Avenue S	Commercial Street SE	Family-Friendly Bikeway	City of Salem	\$93,000
Lower Leffelle/Clark Creek Park/South Village Park Bike Corridor					
Yew Street SE/Berry Street SE/ Electric Street SE/Summer Street SE	Leffelle Street SE	Vista Avenue SE	Family-Friendly Bikeway	City of Salem	\$121,000
Clark Creek Park Connector	Vista Avenue SE	Norwood Street SE	Path	City of Salem	**
Norwood Street SE/Hulsey Avenue SE/Morningside Street SE/Peck Avenue SE	Clark Creek Park	Harris Avenue SE	Family-Friendly Bikeway	City of Salem	\$79,000
South Village Park Connector	Harris Avenue SE	Ewald Avenue SE	Path	City of Salem	**
Pringle Creek to Minto-Brown Island Park Corridor					
Pringle Creek Path	Riverfront Park	Civic Center	Path	City of Salem	**
Minto-Brown Island Path	River Road S	Riverfront Park	Path	City of Salem	**
Orchard Heights Park/Brush College Park Bike Corridor					
Lupin Lane NW/Larkspur Lane NW/Karen Way NW	Parkway Drive NW	Glen Creek Road NW	Family-Friendly Bikeway	City of Salem	\$49,000
Parkway Drive NW	Lupin Lane NW	Orchard Heights Road NW	Bike Lanes	City of Salem	*
Orchard Heights Park Access Road	Orchard Heights Road NW	Northern Terminus	Shared Lane Markings	City of Salem	\$6,000

* The estimated cost for these projects is included in the Street System Element.

** The estimated cost for these projects is included in the Pedestrian System Element.

Table 7-5 Recommended Tier 1 Bicycle Projects (not in priority order)

Corridor and Segments	From	To	Facility Type	Partner Agencies	Estimated Cost
Orchard Heights Park/Hope Avenue NW Connector	Orchard Heights Park	Hope Avenue NW	Path	City of Salem	**
Hope Avenue NW/Westhaven Avenue NW	Western Terminus of Hope Avenue NW	Northern Terminus of Westhaven Avenue NW	Family-Friendly Bikeway	City of Salem	\$18,000
Westhaven Avenue NW/Harritt Drive NW	Northern Terminus of Westhaven Avenue NW	Southeast Corner of Harritt Loop NW	Path	City of Salem	**
Orchardview Avenue NW/Woodhill Street NW/Harritt Drive NW	Southeast Corner of the Loop on Harritt Drive NW	Linwood Street NW	Family-Friendly Bikeway	City of Salem	\$59,000
Linwood Street NW	Ammon Street NW	Orchardview Avenue NW	Family-Friendly Bikeway	City of Salem	\$11,000
Cerise Avenue NW/Ammon Street NW	Mousebird Avenue NW	Linwood Street NW	Family-Friendly Bikeway	City of Salem	\$40,000
Mousebird Avenue NW	Cerise Avenue NW	Lambert Street NW	Family-Friendly Bikeway	City of Salem	\$13,000
Wilark Drive NW/Waymire Street NW/Westminster Avenue NW/Lambert Street NW	Mousebird Avenue NW	Brush College Road NW	Family-Friendly Bikeway	City of Salem	\$67,000
2nd Street NW Bike Corridor					
2nd Street NW	Rosemont Avenue NW	Patterson Avenue NW	Family-Friendly Bikeway	City of Salem	\$48,000
Union Street Bridge Path Extension (far western segment)	Patterson Street NW	Murlark Avenue NW	Path	City of Salem	**
Union Street Bridge Path Extension	Murlark Avenue NW	East of Wallace Road NW	Path	City of Salem, ODOT	**
Union Street Bridge Path—Musgrave Lane NW Connector	Union Street Bridge Path	Musgrave Lane NW	Path	City of Salem	**
Wallace Road NW Path	Union Street Bridge Path	Taggart Lane NW	Path	ODOT	**
25th Street SE South of Mission Street SE Bike Corridor					
25th Street SE	Madrona Avenue SE	Mission Street SE	Path	City of Salem	**
Liberty Road S Bike Lanes					
Liberty Road S	Browning Avenue S	Commercial Street S	Enhanced Bike Lanes	City of Salem	*
Mission Street SE, Commercial Street SE to 12th Street SE, Bike Corridor					
Mission Street SE	Commercial Street SE	12th Street SE	Enhanced Bike Lanes	City of Salem	\$146,000
Hawthorne Avenue NE Bike Lanes					
Hawthorne Avenue NE	Sunnyview Road NE	Silverton Road NE	Bike Lanes	City of Salem	*
Fisher Road NE Bike Lanes					
Fisher Road NE	Existing Southern Terminus	Silverton Road NE	Bike Lanes	City of Salem	*
Fisher Road NE	Market Street NE	Existing Southern Terminus	Bike Lanes	City of Salem	*
Hollywood Drive NE Bike Lanes					
Hollywood Drive NE	Hollyridge Loop NE	Silverton Road NE	Bike Lanes	Marion County	*
Brown Road NE Bike Lanes					
Brown Road NE	Sunnyview Road NE	Glendale Avenue NE	Bike Lanes	City of Salem	*
Cottage Street NE/SE Bike Corridor					
Cottage Street NE/SE	Union Street NE	Ferry Street SE	Shared Lane Markings	City of Salem	*

* The estimated cost for these projects is included in the Street System Element.

** The estimated cost for these projects is included in the Pedestrian System Element.

Table 7-6 Recommended Tier 2 Bicycle Projects By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost
Downtown	Capitol Mall Cycle Track (one-way eastbound)	East of Winter Street NE	West of Capitol Street NE	Cycle Track	City of Salem	\$40,000
Downtown	Capitol Mall Cycle Track (one-way westbound)	West of Capitol Street NE	East of Winter Street NE	Cycle Track	City of Salem	\$40,000
Downtown	State Street	Front Street	12th Street	Bike Lanes	City of Salem	*
Downtown	Union Street NE–Phase 2	Commercial Street NE	Winter Street NE	Family-Friendly Bikeway	City of Salem	\$1,500,000
Northeast	D Street NE	22nd Street NE	23rd Street NE	Bike Lanes	City of Salem	\$160,000
Northeast	D Street NE	Vinyard Avenue NE	Lancaster Drive NE	Bike Lanes	City of Salem	\$687,000
Northeast	D Street NE	5th Street NE	Winter Street NE	Family-Friendly Bikeway	City of Salem	\$18,000
Northeast	17th Street NE	Pearl Street NE	Silverton Road NE	Bike Lanes	City of Salem	*
Northeast	32nd Place NE/ Rockingham Court NE	Wooddale Avenue NE	Eastern Terminus of Rockingham Court NE	Family-Friendly Bikeway	City of Salem	\$12,000
Northeast	35th Place NE	Southern Terminus	Fisher Road NE	Family-Friendly Bikeway	Marion County	\$18,000
Northeast	45th Avenue NE	Silverton Road NE	Letteken Way NE	Bike Lanes	Marion County	*
Northeast	47th Avenue NE	Herrin Road NE	Ward Drive NE	Family-Friendly Bikeway	Marion County	\$65,000
Northeast	Auburn Road NE	45th Place NE	UGB	Bike Lanes	Marion County	*
Northeast	Belmont Street NE/ Nebraska Street NE/ 12th Street SE	Commercial Street NE	Market Street NE	Family-Friendly Bikeway	City of Salem	\$84,000
Northeast	Bill Frey Extension	Kroc Center	Hyacinth Street NE	Bike Lanes	City of Salem	*
Northeast	Blossom Drive NE/Indian School Road NE	Portland Road NE	Chemawa Road NE	Bike Lanes	City of Salem, Marion County	*
Northeast	Broadway Street NE	Pine Street NE	Salem Parkway NE	Bike Lanes	City of Salem	\$79,000
Northeast	Broadway Street NE	Salem Parkway NE	River Road N	Bike Lanes	City of Salem	\$83,000
Northeast	Broadway Street NE	E Street NE	Pine Street NE	Bike Lanes	City of Salem	\$201,000
Northeast	Chemeketa Street NE	13th Street NE	24th Street NE	Family-Friendly Bikeway	City of Salem	\$76,000
Northeast	Dean Street NE	45th Avenue NE	Eastern Terminus	Family-Friendly Bikeway	City of Salem	\$12,000
Northeast	Ellis Avenue NE	Park Avenue NE	Savage Road NE	Family-Friendly Bikeway	City of Salem	\$24,000
Northeast	Florence Avenue NE/ Chester Avenue NE	West of Evergreen Street NE	Lansing Avenue NE	Family-Friendly Bikeway	City of Salem	\$8,000
Northeast	Front Street NE	South of Division Street NE	Riviera Drive NE	Bike Lanes	City of Salem	*
Northeast	Garnet Street NE/ Nebraska Avenue NE/22nd Street NE	Market Street NE	D Street NE	Family-Friendly Bikeway	City of Salem	\$84,000
Northeast	Greencrest Street NE	Auburn Road NE	Center Street NE	Shared Lane Markings	City of Salem	\$7,000
Northeast	Hayesville Drive NE	Lancaster Drive NE	Lisa Street NE	Bike Lanes	City of Salem, Marion County	*
Northeast	Herrin Road NE	Middle Grove Drive NE	Cordon Road NE	Bike Lanes	Marion County	*
Northeast	Jade Street NE	47th Avenue NE	Eastern Terminus	Family-Friendly Bikeway	Marion County	\$19,000
Northeast	Royalty Drive NE	Center Street NE	Regal Drive NE	Family-Friendly Bikeway	City of Salem	\$25,000
Northeast	Scepter Way NE/Regal Drive NE/Princess Lane NE	Southern Terminus of Scepter Way NE	Swegle Road NE	Family-Friendly Bikeway	City of Salem	\$76,000
Northeast	Walker Road NE/Carolina Avenue NE/Randi Lane NE/48th Avenue NE	Swegle Road NE	Herrin Road NE	Family-Friendly Bikeway	City of Salem, Marion County	\$243,000
South	Ash Avenue SE	Browning Avenue SE	Ewald Avenue SE	Family-Friendly Bikeway	City of Salem	\$27,000
South	Browning Avenue S	Neelon Drive S	Liberty Road S	Bike Lanes	City of Salem	*
South	Browning Avenue S	West of Cloud Drive S	Barrett Street S	Bike Lanes	City of Salem	*
South	Browning Avenue SE	Lone Oak Road SE	Ash Avenue SE	Shared Lane Markings	City of Salem	\$4,000
South	Croisan Creek Road S	Kuebler Road S	River Road S	Bike Lanes	City of Salem, Marion County	*
South	Cunningham Lane S	Cloudview Drive S	Liberty Road S	Bike Lanes	City of Salem	*
South	Davis Road S	West of Red Leaf Drive S	Liberty Road S	Bike Lanes	City of Salem	*

* The estimated cost for these projects is included in the Street System Element.

Table 7-6 Recommended Tier 2 Bicycle Projects By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost
South	Ewald Avenue SE/Oakhill Avenue SE	Ash Avenue SE	12th Street SE	Family-Friendly Bikeway	City of Salem	\$86,000
South	Heath Street S	Existing Western Terminus	Croisan Scenic Way S	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	\$257,000
South	Lone Oak Road SE	Mildred Lane SE	Kuebler Boulevard SE	Bike Lanes	City of Salem	*
South	Lone Oak Road SE	Boone Road SE	Hrubetz Road SE	Family-Friendly Bikeway	City of Salem	\$39,000
South	Ratcliff Drive SE/Bluff Avenue SE/Fairview Avenue SE	Hulsey Avenue SE	Pringle Road SE	Shared Lane Markings	City of Salem	\$20,000
South	Rural Avenue S	John Street S	Saginaw Street S	Family-Friendly Bikeway	City of Salem	\$25,000
South	Salem Heights Avenue S	View Drive S	Liberty Road S	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	*
South	Salem Heights Avenue S	Crestview Drive S	Winola Avenue S	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	*
South	Valleywood Drive SE	Lone Oak Road SE	Sunnyside Road SE	Family-Friendly Bikeway	City of Salem	\$93,000
Southeast	14th Avenue NE/SE	Oxford Street SE	Chemeketa Street NE	Shared Lane Markings	City of Salem	\$36,000
Southeast	16th Street SE	McGilchrist Street SE	Oxford Street SE	Bike Lanes	City of Salem	\$421,000
Southeast	46th Place SE/ Wildcherry Drive SE	Southern Terminus of 46th Place SE	Connecticut Street SE	Family-Friendly Bikeway	City of Salem	\$28,000
Southeast	Baxter Road SE	Reed Lane SE	East of Salal Street SE	Family-Friendly Bikeway	City of Salem	\$26,000
Southeast	Connecticut Street SE	Grouse Drive SE	Macleay Road SE	Bike Lanes	City of Salem	\$393,000
Southeast	Connecticut Street SE	Wildcherry Drive SE	Grouse Drive SE	Shared Lane Markings	City of Salem	\$8,000
Southeast	Connecticut Street SE/48th Court SE	Pennsylvania Avenue SE	State Street	Family-Friendly Bikeway	Marion County	\$64,000
Southeast	Eastlake Drive SE	Battle Creek Road SE	Landon Street SE	Family-Friendly Bikeway	City of Salem	\$46,000
Southeast	Hilfiker Lane SE/Hillrose Street SE	Sunnyside Road SE	Pringle Road SE	Bike Lanes	City of Salem	*
Southeast	Metolius Avenue SE/ Foxhaven Drive SE/ Cultus Avenue SE	Eastlake Drive SE	Boone Road SE	Family-Friendly Bikeway	City of Salem	\$37,000
Southeast	Oxford Street SE	14th Street SE	16th Street SE	Bike Lanes	City of Salem	\$114,000
Southeast	Pennsylvania Avenue SE	Connecticut Street SE	Cordon Road SE	Bike Lanes	Marion County	\$140,000
Southeast	Wiltsey Road SE	Sunnyside Road SE	Madelyn Avenue SE	Bike Lanes	City of Salem	*
West	7th Street NW/Taggart Drive NW	Patterson Street NW	Wallace Road NW	Shared Lane Markings	City of Salem	\$12,000
West	Brush College Road NW	Conner Street NW	Doaks Ferry Road NW	Bike Lanes	City of Salem, Polk County	*
West	Chapman Hill Drive NW	Chapman Hill Elementary School Entrance	Mousebird Avenue NW	Family-Friendly Bikeway	City of Salem	\$19,000
West	Chapman Park Access Road	Chapman Hill Drive NW	Southern Terminus	Family-Friendly Bikeway	City of Salem	\$4,000
West	Christina Street NW	West of Redfir Court NW	Doaks Ferry Road NW	Family-Friendly Bikeway	City of Salem	*
West	Christina Street NW	Cherry Blossom Drive NW	West of Redfir Court NW	Family-Friendly Bikeway	City of Salem	*
West	Christina Street NW	West of Elliot Street NW	Cherry Blossom Drive NW	Shared Lane Markings	City of Salem	*
West	Christina Street NW	West of Elliot Street NW	Michigan City Lane NW	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	*
West	Doaks Ferry Road NW	Orchard Heights Road NW	Brush College Road NW	Bike Lanes	City of Salem, Polk County	*
West	Gehlar Road NW	Doaks Ferry Road NW	Future BPA Corridor Trail	Family-Friendly Bikeway	City of Salem	\$21,000
West	Islander Avenue NW/ Ptarmigan Street NW	Doaks Ferry Road NW	Eastern Terminus of Ptarmigan Street NW	Family-Friendly Bikeway	City of Salem	\$84,000
West	Linwood Street NW	Orchard Heights Road NW	South of Goldcrest Avenue NW	Bike Lanes	City of Salem	*
West	Linwood Street NW	Orchardview Avenue NW	River Bend Road NW	Family-Friendly Bikeway	City of Salem	\$18,000

* The estimated cost for these projects is included in the Street System Element.

Table 7-6 Recommended Tier 2 Bicycle Projects By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost
West	Lupin Lane NW	West of Parkway Drive NW	Parkway Drive NW	Family-Friendly Bikeway	City of Salem	\$7,000
West	Michigan City Lane NW	Western Terminus	Wallace Road NW	Bike Lanes	Polk County	*
West	Mule Deer Street NW/ Desert Deer Avenue NW	Eola Drive NW	Whitetail Deer Street NW	Family-Friendly Bikeway	City of Salem	\$34,000
West	Parkway Drive NW	Glen Creek Road NW	Lupin Lane NW	Bike Lanes	City of Salem	\$397,000
West	Patterson Street NW	8th Street NW	7th Street NW	Bike Lanes	City of Salem	\$11,000
West	Piedmont Avenue NW/8th Street NW	Cascade Drive NW	Patterson Street NW	Family-Friendly Bikeway	City of Salem	\$66,000
West	Taggart Drive NW/Bartell Drive NW	Wallace Road NW	Glen Creek Road NW	Shared Lane Markings	City of Salem	\$7,000
West	Whitetail Deer Street NW/Margarett Street NW/Engel Avenue NW/ Hillcrest Court NW/Kent Street NW/Arrow Street NW	Burley Hill Drive NW	Cascade Drive NW	Family-Friendly Bikeway	City of Salem	\$107,000

* The estimated cost for these projects is included in the Street System Element.

Table 7-7 Recommended Tier 3 Bicycle Projects By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost
Downtown	12th Street NE	Bellevue Street SE	Marion Street NE	Bike Lanes	City of Salem	\$1,024,000
Downtown	13th Street NE/Marion Street NE	Center Street NE	Capitol Street NE	Bike Lanes	City of Salem	\$301,000
Downtown	Capitol Street NE	Center Street NE	Market Street NE	Bike Lanes	City of Salem	\$127,000
Downtown	Center Street NE	Commercial Street NE	Capitol Street NE	Bike Lanes	City of Salem, ODOT	\$125,000
Downtown	Center Street NE	Capitol Street NE	17th Street NE	Bike Lanes	City of Salem	\$565,000
Downtown	Commercial Street NE	Marion Street NE	Division Street NE	Bike Lanes	ODOT	\$35,000
Downtown	High Street NE	Marion Street NE	Union Street NE	Bike Lanes	City of Salem	\$17,000
Downtown	Liberty Street NE	Trade Street SE	E Street NE	Bike Lanes	City of Salem, ODOT	\$179,000
Downtown	Marion Street NE	Capitol Street NE	Commercial Street NE	Bike Lanes	City of Salem	\$125,000
Downtown	Summer Street NE/ Capitol Mall Connector (one-way cycle track)	Summer Street NE	Chemeketa Street NE	Cycle Track	City of Salem	\$65,000
Downtown	Union Street NE/12th Street NE–Phase 3	Winter Street NE	Marion Street NE	Family-Friendly Bikeway and Path	City of Salem	\$1,200,000
Northeast	D Street NE	5th Street NE	Summer Street NE	Bike Lanes	City of Salem	\$328,000
Northeast	D Street NE	23rd Street NE	Vineyard Avenue NE	Bike Lanes	City of Salem	\$648,000
Northeast	D Street NE	Winter Street NE	22nd Street NE	Bike Lanes	City of Salem	\$1,151,000
Northeast	14th Street NE	D Street NE	Market Street NE	Family-Friendly Bikeway	City of Salem	\$29,000
Northeast	14th Street NE	Chemeketa Street NE	D Street NE	Shared Lane Markings	City of Salem	\$15,000
Northeast	15th Street NE	Market Street NE	Madison Street NE	Family-Friendly Bikeway	City of Salem	\$30,000
Northeast	18th Street NE	Madison Street NE	Garfield Street NE	Family-Friendly Bikeway	City of Salem	\$19,000
Northeast	23rd Street NE	Ellis Avenue NE	Market Street NE	Shared Lane Markings	City of Salem	\$6,000
Northeast	36th Avenue NE/Midway Avenue NE/Auburn Road NE	Center Street NE	Lancaster Drive NE	Family-Friendly Bikeway	Marion County	\$53,000
Northeast	38th Avenue NE/Manor Drive NE/Weathers Street NE	D Street NE	Eastern Terminus of Weathers Street NE	Family-Friendly Bikeway	City of Salem	\$77,000
Northeast	45th Avenue NE/Jade Street NE/Happy Drive NE	Ward Drive NE	Kale Street NE	Family-Friendly Bikeway	Marion County	\$117,000
Northeast	49th Avenue NE	Kale Street NE	Hazelgreen Road NE	Bike Lanes	City of Salem	*
Northeast	49th Avenue NE	Hayesville Drive NE	Kale Street NE	Shared Lane Markings	City of Salem, Marion County	\$13,000
Northeast	5th Street NE	D Street NE	Norway Street NE	Family-Friendly Bikeway	City of Salem	\$49,000
Northeast	Academy Street NE	Maple Avenue NE	Fairgrounds Road NE	Family-Friendly Bikeway	City of Salem	\$33,000
Northeast	Chester Avenue NE	Lansing Avenue NE	Byram Street NE	Family-Friendly Bikeway	City of Salem	\$20,000
Northeast	Division Street NE	Liberty Street NE	High Street NE	Bike Lanes	City of Salem	\$18,000
Northeast	Fisher Road NE	South of Market Street NE	Market Street NE	Shared Lane Markings	City of Salem	\$4,000
Northeast	Greencrest Street NE	State Street	Auburn Road NE	Bike Lanes	Marion County	*
Northeast	Highland Avenue NE	Front Street NE	Maple Avenue NE	Shared Lane Markings	City of Salem	\$14,000
Northeast	Highland Avenue NE	Maple Avenue NE	Portland Road NE	Shared Lane Markings	City of Salem	\$14,000
Northeast	Hood Street NE/ Fairgrounds Road NE	Front Street NE	Summer Street NE	Bike Lanes	City of Salem	\$162,000
Northeast	Jade Street NE	45th Avenue NE	47th Avenue NE	Family-Friendly Bikeway	Marion County	\$37,000
Northeast	Jan Ree Drive NE/ Patricia Street NE/ Settlers Drive NE	Happy Drive NE	Bayne Street NE	Family-Friendly Bikeway	City of Salem, Marion County	\$116,000
Northeast	Kale Street NE	East of Bayne Street NE	Cordon Road NE	Bike Lanes	City of Salem, Marion County	*
Northeast	Kale Street NE	East of Countryside Drive NE	49th Avenue NE	Bike Lanes	City of Salem	*
Northeast	Kenwood Avenue NE	State Street	Future Geer Line Trail	Family-Friendly Bikeway	Marion County	\$25,000

* The estimated cost for these projects is included in the Street System Element.

Table 7-7 Recommended Tier 3 Bicycle Projects By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost
Northeast	Knox Avenue NE	Park Avenue NE	Vinyard Avenue NE	Family-Friendly Bikeway	City of Salem	\$25,000
Northeast	Lana Avenue NE	Portland Road NE	Silverton Road NE	Bike Lanes	City of Salem	\$57,000
Northeast	Madison Street NE/23rd Street NE	Cottage Street NE	Market Street NE	Family-Friendly Bikeway	City of Salem	\$114,000
Northeast	Market Street NE	Front Street NE	4th Street NE	Bike Lanes	City of Salem	\$229,000
Northeast	Market Street NE	Summer Street NE	Hawthorne Avenue NE	Bike Lanes	City of Salem	\$1,902,000
Northeast	Norway Street NE	Front Street NE	5th Street NE	Family-Friendly Bikeway	City of Salem	\$34,000
Northeast	Park Avenue NE	Knox Avenue NE	D Street NE	Bike Lanes	City of Salem	*
Northeast	Park Avenue NE	D Street NE	Ellis Avenue NE	Shared Lane Markings	City of Salem	\$7,000
Northeast	Pine Street NE	Front Street NE	Commercial Street NE	Bike Lanes	City of Salem	\$14,000
Northeast	Plow Court NE/Log Drive NE	Ward Drive NE	Northern Terminus	Family-Friendly Bikeway	City of Salem	\$7,000
Northeast	Silverton Road NE	Portland Road NE	Lancaster Drive NE	Bike Lanes	City of Salem	\$2,033,000
Northeast	Sunnyview Road NE	Fairgrounds Road NE	17th Street NE	Bike Lanes	City of Salem	\$500,000
Northeast	Swegle Road NE	Plateau Street NE	Cordon Road NE	Bike Lanes	City of Salem, Marion County	\$480,000
Northeast	Ward Drive NE	Lancaster Drive NE	Cordon Road NE	Shared Lane Markings	City of Salem, Marion County	\$42,000
South	Acacia Drive S	Sumac Drive S	Hansen Avenue S	Shared Lane Markings	City of Salem	\$7,000
South	Acacia Drive S	River Road S	Sumac Drive S	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	\$14,000
South	Alice Avenue S	Mountain View Drive S	Commercial Street SE	Family-Friendly Bikeway	City of Salem	\$21,000
South	Browning Avenue S	Western Terminus	West of Cloud Drive S	Shared Lane Markings	City of Salem	\$7,000
South	Browning Avenue SE	Liberty Road S	Lone Oak Road SE	Shared Lane Markings	City of Salem	\$9,000
South	Browning Avenue SE	Ash Avenue SE	Commercial Street SE	Shared Lane Markings	City of Salem	\$13,000
South	Bush Street S	Western Terminus	Bush's Pasture Park	Family-Friendly Bikeway	City of Salem	\$45,000
South	Byers Street S/Deer Run Avenue S	Viewcrest Road S	Northern Terminus	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem, Marion County	*
South	Cedarcrest Drive S/ Brookwood Street S/ Rock Creek Drive S	Red Leaf Drive S	Liberty Road S	Family-Friendly Bikeway	City of Salem	\$59,000
South	Commercial Street SE	Mission Street SE	Superior Street SE	Bike Lanes	City of Salem	\$155,000
South	Crestview Drive S	Southern Terminus	Madrona Avenue S	Family-Friendly Bikeway	City of Salem	\$13,000
South	Crestview Drive S	Shurman Drive S	Northern Terminus	Family-Friendly Bikeway	City of Salem	\$28,000
South	Crestview Drive S	Madrona Avenue S	Hansen Avenue S	Family-Friendly Bikeway	City of Salem	\$58,000
South	Crestview Drive S/ Shurman Drive S	Hansen Avenue S	River Road S	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	\$16,000
South	Croisan Creek Road S	Skyline Road S	Kuebler Boulevard SE	Bike Lanes	City of Salem, Marion County	*
South	Croisan Ridge Way S	Existing Northern Terminus	Heath Street S	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem, Marion County	*
South	Croisan Scenic Way S	North of Roberta Avenue S	Croisan Creek Road S	Bike Lanes	City of Salem	*
South	Croisan Scenic Way S	Skyline Road S	Joplin Street S	Bike Lanes	City of Salem	\$802,000
South	Croisan Scenic Way S	North of Brock Loop S	Spring Street S	Bike Lanes	City of Salem, Marion County	*
South	Croisan Scenic Way S	Joplin Street S	North of Brock Loop S	Shared Lane Markings	City of Salem	\$3,000
South	Croisan Scenic Way S	Spring Street S	North of Roberta Avenue S	Shared Lane Markings	City of Salem	*
South	Ewald Avenue S	Stanley Lane S	Ash Avenue SE	Family-Friendly Bikeway	City of Salem	\$53,000
South	Fairview Avenue SE	Commercial Street SE	Cottage Street NE	Shared Lane Markings	City of Salem	\$10,000
South	Fern Drive S	Heath Street S	River Road S	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	*

* The estimated cost for these projects is included in the Street System Element.

Table 7-7 Recommended Tier 3 Bicycle Projects By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost
South	Future Unnamed Street	Heath Street S	Homestead Road S	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	*
South	Gregory Lane SE	Lone Oak Road SE	Jones Road SE	Family-Friendly Bikeway	City of Salem	\$16,000
South	Hansen Avenue S	Crestview Drive S	Argyle Drive S	Shared Lane Markings	City of Salem	\$15,000
South	Hansen Avenue S	Acacia Drive S	Crestview Drive S	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	\$34,000
South	Heath Street S	Deer Run Avenue S	Existing Western Terminus	Uphill Bike Lanes/ Downhill Shared Lane Markings	Marion County	*
South	High Street SE/ Church Street SE	Fairview Avenue SE	Hoyt Street SE	Family-Friendly Bikeway	City of Salem	\$48,000
South	Holder Lane SE	West of Seeger Lane SE	Lone Oak Road SE	Shared Lane Markings	City of Salem	*
South	Homestead Road S	River Road S	Brown Island Road S	Bike Lanes	City of Salem	\$1,170,000
South	Homestead Road S	Southern Terminus	River Road S	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	*
South	Idylwood Drive SE	Lone Oak Road SE	Sunnyside Road SE	Shared Lane Markings	City of Salem	\$20,000
South	Kuebler Boulevard S	Urban Growth Boundary	Croisan Creek Road S	Bike Lanes	City of Salem	*
South	Liberty Road S	Urban Growth Boundary	Rainier Drive SE	Bike Lanes	Marion County	*
South	Lone Oak Road SE	Rees Hill Road SE	Muirfield Avenue SE	Bike Lanes	City of Salem, Marion County	*
South	Madrona Avenue S	Crestview Drive S	Stanley Lane S	Bike Lanes	City of Salem	*
South	Madrona Avenue S	Winola Avenue S	Commercial Street SE	Bike Lanes	City of Salem	*
South	Madrona Avenue SE	Commercial Street SE	Pringle Road SE	Bike Lanes	City of Salem	\$925,000
South	Madrona Avenue S	Croisan Scenic Way S	Crestview Drive S	Bike Lanes	City of Salem	*
South	Marietta Street SE	Coloma Drive SE	Lone Oak Road SE	Family-Friendly Bikeway	City of Salem	\$18,000
South	Marietta Street SE	Liberty Road S	Eastern Terminus	Family-Friendly Bikeway	City of Salem	\$34,000
South	Mildred Lane S	Skyline Road S	Liberty Road S	Bike Lanes	City of Salem, Marion County	*
South	Neelon Drive S/Garlock Street S/Cavalier Drive S/ Luradel Avenue S	Browning Avenue S	Eastern Terminus of Luradel Avenue S	Family-Friendly Bikeway	City of Salem	\$26,000
South	Red Leaf Drive S/ Summercrest Drive S	Future Alignment of Mildred Lane SE	Skyline Road S	Family-Friendly Bikeway	City of Salem	\$91,000
South	Rees Hill Road SE	Lone Oak Road SE	Sunnyside Road SE	Bike Lanes	City of Salem, Marion County	*
South	River Road S	Urban Growth Boundary	West of Riverdale Road S	Bike Lanes	City of Salem, Marion County	*
South	River Road S	Viewcrest Road S	West of Equestrian Loop S	Bike Lanes	City of Salem, Marion County	*
South	Rural Avenue S	Saginaw Street S	Commercial Street SE	Family-Friendly Bikeway	City of Salem	\$8,000
South	Rural Avenue S	Western Terminus	John Street S	Family-Friendly Bikeway	City of Salem	\$12,000
South	Rural Avenue SE	Commercial Street SE	Pringle Road SE	Shared Lane Markings	City of Salem	\$23,000
South	Salem Heights Avenue SE/Ratcliff Drive SE	Liberty Road S	Hulsey Avenue SE	Shared Lane Markings	City of Salem	\$20,000
South	Skyline Road S	Urban Growth Boundary	South of Summercrest Drive S	Bike Lanes	City of Salem, Marion County	*
South	Stanley Lane S	Browning Avenue S	Ewald Avenue S	Family-Friendly Bikeway	City of Salem	\$28,000
South	Sunnyside Road SE	Urban Growth Boundary	Rees Hill Road SE	Bike Lanes	City of Salem	*
South	Vista Avenue SE	Bluff Avenue SE	Pringle Road SE	Bike Lanes	City of Salem, Marion County	\$196,000
South	Vista Avenue SE	Cottage Street SE	Bluff Avenue SE	Shared Lane Markings	City of Salem	\$11,000
South	Waller Street SE	Western terminus	13th Street SE	Family-Friendly Bikeway	City of Salem	\$15,000

* The estimated cost for these projects is included in the Street System Element.

Table 7-7 Recommended Tier 3 Bicycle Projects By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost
South	Winola Avenue S	Southern Terminus	Madrona Avenue S	Family-Friendly Bikeway	City of Salem	\$13,000
South	Woodmansee Street SE	Western Terminus	Sunnyside Road SE	Shared Lane Markings	City of Salem	\$3,000
Southeast	12th Street SE/Albert Drive SE/Mandy Avenue SE/Copper Glen Drive SE	Hilfiker Lane SE	Pringle Road SE	Family-Friendly Bikeway	City of Salem	\$80,000
Southeast	14th Avenue SE/ Neahkahnie Street SE/13th Avenue SE/ Jonmart Avenue SE	Rees Hill Road SE	Wiltsey Road SE	Family-Friendly Bikeway	City of Salem	\$97,000
Southeast	22nd Street SE	Southern Terminus	McGilchrist Street SE	Shared Lane Markings	City of Salem	\$16,000
Southeast	22nd Street SE/Electric Street SE	Oxford Street SE	East of 23rd Street SE	Shared Lane Markings	City of Salem	\$9,000
Southeast	23rd Street SE	McGilchrist Street SE	Mission Street SE	Shared Lane Markings	City of Salem	\$17,000
Southeast	23rd Street SE/Townsend Way SE/Ford Street SE	Mission Street SE	Mill Street SE	Family-Friendly Bikeway	City of Salem	\$55,000
Southeast	25th Street SE	Mission Street	State Street	Bike Lanes	City of Salem	*
Southeast	32nd Avenue SE	Litchfield Place SE	36th Avenue SE	Bike Lanes	City of Salem	*
Southeast	36th Avenue SE	Wiltsey Street SE	32nd Avenue SE	Bike Lanes	City of Salem, Marion County	*
Southeast	46th Place SE/Arabian Avenue SE/Seattle Slew Drive SE/49th Avenue SE/Jenah Street SE	Wild Cherry Drive SE	East of Honestus Drive SE	Family-Friendly Bikeway	City of Salem, Marion County	\$79,000
Southeast	Airport Road SE	Militia Way SE	South of State Street	Bike Lanes	City of Salem	*
Southeast	Aumsville Highway SE	South of Depot Court SE	UGB	Bike Lanes	City of Salem	*
Southeast	Barnes Avenue SE	West of Peterson Street SE	Stroh Lane SE	Bike Lanes	City of Salem	\$276,000
Southeast	Barnes Avenue SE	Stroh Lane SE	Reed Lane SE	Bike Lanes	City of Salem	\$41,000
Southeast	Battle Creek Road SE	Wiltsey Street SE	Boone Road SE	Bike Lanes	City of Salem, Marion County	*
Southeast	Boone Road SE	Textrum Street SE	Stroh Lane SE	Shared Lane Markings	City of Salem	\$10,000
Southeast	Buffalo Drive SE/49th Avenue SE	Indian Court SE	State Street	Family-Friendly Bikeway	Marion County	\$70,000
Southeast	Carson Drive SE/ Cranston Street SE/ Campbell Drive SE	Lancaster Drive SE	Saddle Club Street SE	Family-Friendly Bikeway	City of Salem	\$85,000
Southeast	Cascades Gateway Park Access Road	Turner Road SE	Eastern Terminus	Shared Lane Markings	City of Salem	\$13,000
Southeast	Catalina Street SE/ Monterey Drive SE/ Summerlake Street SE	Bastille Avenue SE	Eastlake Court SE	Family-Friendly Bikeway	City of Salem	\$27,000
Southeast	32nd Avenue SE	Litchfield Place SE	36th Avenue SE	Bike Lanes	City of Salem	*
Southeast	36th Avenue SE	Wiltsey Street SE	32nd Avenue SE	Bike Lanes	City of Salem, Marion County	*
Southeast	46th Place SE/Arabian Avenue SE/Seattle Slew Drive SE/49th Avenue SE/Jenah Street SE	Wild Cherry Drive SE	East of Honestus Drive SE	Family-Friendly Bikeway	City of Salem, Marion County	\$79,000
Southeast	Airport Road SE	Militia Way SE	South of State Street	Bike Lanes	City of Salem	*
Southeast	Aumsville Highway SE	South of Depot Court SE	UGB	Bike Lanes	City of Salem	*
Southeast	Barnes Avenue SE	West of Peterson Street SE	Stroh Lane SE	Bike Lanes	City of Salem	\$276,000
Southeast	Barnes Avenue SE	Stroh Lane SE	Reed Lane SE	Bike Lanes	City of Salem	\$41,000
Southeast	Battle Creek Road SE	Wiltsey Street SE	Boone Road SE	Bike Lanes	City of Salem, Marion County	*
Southeast	Boone Road SE	Textrum Street SE	Stroh Lane SE	Shared Lane Markings	City of Salem	\$10,000
Southeast	Buffalo Drive SE/49th Avenue SE	Indian Court SE	State Street	Family-Friendly Bikeway	Marion County	\$70,000

* The estimated cost for these projects is included in the Street System Element.

Table 7-7 Recommended Tier 3 Bicycle Projects By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost
Southeast	Carson Drive SE/ Cranston Street SE/ Campbell Drive SE	Lancaster Drive SE	Saddle Club Street SE	Family-Friendly Bikeway	City of Salem	\$85,000
Southeast	Cascades Gateway Park Access Road	Turner Road SE	Eastern Terminus	Shared Lane Markings	City of Salem	\$13,000
Southeast	Catalina Street SE/ Monterey Drive SE/ Summerlake Street SE	Bastille Avenue SE	Eastlake Court SE	Family-Friendly Bikeway	City of Salem	\$27,000
Southeast	Cinnabar Street SE/ Natalie Avenue SE	Eastern terminus of Natalie Avenue SE	Mildred Lane SE	Family-Friendly Bikeway	City of Salem	\$17,000
Southeast	Crowley Avenue SE/ Chaparral Drive SE	Eastern Terminus	Hilfiker Lane SE	Family-Friendly Bikeway	City of Salem	\$31,000
Southeast	Deer Park Drive SE	Turner Road SE	Aumsville Highway SE	Bike Lanes	City of Salem	*
Southeast	Electric Street SE	East of 23rd Street SE	25th Street SE	Shared Lane Markings	City of Salem	\$736,000
Southeast	Fabry Road SE	Sugar Plum Avenue SE	Battle Creek Road SE	Bike Lanes	City of Salem	*
Southeast	Future Unnamed Street	Madrona Avenue SE	22nd Street SE	Bike Lanes	City of Salem	\$644,000
Southeast	Future Unnamed Street	Turner Road SE	Lancaster Drive SE	Bike Lanes	City of Salem	*
Southeast	Future Unnamed Street 1	West of Reed Lane SE	West of Reed Lane SE	Shared Lane Markings	City of Salem	\$397,000
Southeast	Future Unnamed Street 2	West of Reed Lane SE	West of Reed Lane SE	Shared Lane Markings	City of Salem	\$475,000
Southeast	Gath Road SE/Turner Road SE	Urban Growth Boundary	37th Avenue SE	Bike Lanes	City of Salem	*
Southeast	Genesis Street SE	Robins Lane SE	Northern Terminus	Family-Friendly Bikeway	City of Salem	\$18,000
Southeast	Glenwood Drive SE	Lancaster Drive SE	Connecticut Avenue SE	Family-Friendly Bikeway	Marion County	\$56,000
Southeast	Hines Street SE	12th Street SE	14th Street SE	Bike Lanes	City of Salem	\$225,000
Southeast	Kashmir Way SE	36th Avenue SE	Eastland Avenue SE	Shared Lane Markings	Marion County	\$12,000
Southeast	Macleay Road SE	Arabian Avenue SE	Cordon Road SE	Bike Lanes	City of Salem, Marion County	*
Southeast	Madras Street SE	East of Commercial Street SE	Wiltsey Road SE	Bike Lanes	City of Salem	\$235,000
Southeast	Mill Street SE/Trade Street SE	12th Street SE	25th Street SE	Family-Friendly Bikeway	City of Salem	\$100,000
Southeast	Oakhill Avenue SE/ Centennial Street SE	12th Street SE	Pringle Road SE	Family-Friendly Bikeway	City of Salem	\$36,000
Southeast	Oxford Street SE	16th Street SE	22nd Street SE	Bike Lanes	City of Salem	*
Southeast	Pikes Pass Street SE/ Soapstone Avenue SE	Mistymorning Avenue SE	Reed Lane SE	Family-Friendly Bikeway	City of Salem	\$43,000
Southeast	Reed Lane SE	Pringle Road SE	Fairview Industrial Drive SE	Bike Lanes	City of Salem	*
Southeast	Reed Lane SE	Jamison Drive SE	Baxter Road SE	Family-Friendly Bikeway	City of Salem	\$15,000
Southeast	Reed Lane SE	Soapstone Avenue SE	Jamison Drive SE	Shared Lane Markings	City of Salem	\$11,000
Southeast	Reed Lane SE	Wiltsey Road SE	Soapstone Avenue SE	Shared Lane Markings	City of Salem	*
Southeast	Reed Lane SE/ Boone Road SE/27th Avenue SE/Marietta Street SE	Baxter Road SE	Fairview Industrial Drive SE	Bike Lanes	City of Salem	\$1,960,000
Southeast	Rees Hill Road SE	Sunnyside Road SE	Fairway Avenue SE	Shared Lane Markings	City of Salem	\$17,000
Southeast	Robins Lane SE/ Brentwood Drive SE	East of Genesis Street SE	Battle Creek Road SE	Bike Lanes	Marion County	*
Southeast	Saddle Club Street SE	Lancaster Drive SE	Campbell Drive SE	Shared Lane Markings	City of Salem	\$13,000
Southeast	Serenity Drive SE/ Tanglewood Way SE	Lois Court SE	36th Avenue SE	Family-Friendly Bikeway	Marion County	\$47,000
Southeast	Stroh Lane SE	Kuebler Boulevard SE	Boone Road SE	Bike Lanes	City of Salem	\$74,000
Southeast	Textrum Street SE	Boone Road SE	South of Royvonne Avenue SE	Family-Friendly Bikeway	City of Salem	\$19,000
Southeast	Turner Road SE	Urban Growth Boundary	Gath Road SE	Bike Lanes	City of Salem, Marion County	*
Southeast	Turner Road SE	37th Avenue SE	South of Cascades Gateway Park	Bike Lanes	City of Salem, Marion County	*
Southeast	Valleywood Drive SE/ Sunstone Street SE	Sunnyside Road SE	Mildred Lane SE	Family-Friendly Bikeway	City of Salem	\$15,000

* The estimated cost for these projects is included in the Street System Element.

Table 7-7 Recommended Tier 3 Bicycle Projects By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost
Southeast	Wiltsey Road SE	Battle Creek Road SE	36th Avenue SE	Bike Lanes	Marion County	*
Southeast	Woodscape Drive SE	Baxter Road SE	Reed Lane SE	Family-Friendly Bikeway	City of Salem	\$34,000
West	35th Avenue NW	Existing Northern Terminus	Orchard Heights Road NW	Bike Lanes	City of Salem	*
West	35th Avenue NW	Glen Creek Road NW	Existing Northern Terminus	Shared Lane Markings	Polk County	\$10,000
West	37th Avenue NW	Urban Growth Boundary	Orchard Heights Road NW	Bike Lanes	Polk County	*
West	40th Avenue NW	Urban Growth Boundary	Orchard Heights Place NW	Bike Lanes	Polk County	\$645,000
West	Andrew Avenue NW/ Elliot Street NW/Cherry Blossom Drive NW	Future Ellen Lane Park	Christina Street NW	Family-Friendly Bikeway	City of Salem	\$59,000
West	Brookside Avenue NW	Doaks Ferry Road NW	Wallace Road NW	Family-Friendly Bikeway	City of Salem	\$45,000
West	Brush College Road NW	Urban Growth Boundary	Conner Street NW	Bike Lanes	City of Salem, Polk County	*
West	Burley Hill Drive NW	Eola Drive NW	Glen Creek Road NW	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	\$25,000
West	Cascade Drive NW/ Parkway Drive NW	Eola Drive NW	Glen Creek Road NW	Family-Friendly Bikeway	City of Salem	\$83,000
West	Dalke Ridge Drive NW/ Deerwind Avenue NW	West of Deerwind Avenue NW	Burley Hill Drive NW	Family-Friendly Bikeway	City of Salem	\$10,000
West	Doaks Ferry Road NW	Urban Growth Boundary	Glen Creek Road NW	Bike Lanes	City of Salem	*
West	Eola Drive NW	Kingwood Drive NW	Cascade Drive NW	Bike Lanes	City of Salem	\$137,000
West	Eola Drive NW	Urban Growth Boundary	Doaks Ferry Road NW	Bike Lanes	Polk County	*
West	Future Unnamed Street	37th Avenue NW	35th Avenue NW	Bike Lanes	Polk County	*
West	Glen Creek Road NW	35th Avenue NW	Doaks Ferry Road NW	Shared Lane Markings	City of Salem, Polk County	\$19,000
West	Grice Hill Drive NW	Orchard Heights Road NW	Urban Growth Boundary	Uphill Bike Lanes/ Downhill Shared Lane Markings	Polk County	\$222,000
West	Islander Avenue NW	35th Avenue NW	Horse Clover Drive NW	Bike Lanes	City of Salem	*
West	Islander Avenue NW/ Ptarmigan Street NW	Titan Drive NW	Doaks Ferry Road NW	Family-Friendly Bikeway	City of Salem	\$31,000
West	Limelight Avenue NW/ Breckenridge Street NW/ Crestbrook Drive NW	Doaks Ferry Road NW	Eastern Terminus of Crestbrook Drive NW	Family-Friendly Bikeway	City of Salem	\$65,000
West	Linwood Street NW	South of Goldcrest Avenue NW	Ammon Street NW	Family-Friendly Bikeway	City of Salem	\$10,000
West	Lower Breckenridge Loop NW	Breckenridge Street NW	Breckenridge Street NW	Family-Friendly Bikeway	City of Salem	\$22,000
West	Mousebird Avenue NW	South of Royal Crown Avenue NW	Cerise Avenue NW	Family-Friendly Bikeway	City of Salem	\$15,000
West	Mousebird Avenue NW	Orchard Heights Road NW	North of Macaw Street NW	Family-Friendly Bikeway	City of Salem	\$24,000
Mousebird Avenue NW	Lambert Street NW	Wallace Road NW	Family-Friendly Bikeway	City of Salem	\$54,000	
West	Mousebird Avenue NW	North of Macaw Street NW	South of Royal Crown Avenue NW	Family-Friendly Bikeway	City of Salem	\$140,000
West	Orchard Heights Road NW	Urban Growth Boundary	Titan Drive NW	Bike Lanes	Polk County	*
West	Patterson Street NW	7th Street NW	Northern Terminus	Bike Lanes	City of Salem	\$16,000
West	Patterson Street NW	Edgewater Street NW	6th Street NW	Bike Lanes	City of Salem	\$64,000
West	Patterson Street NW	Glen Creek Road NW	Lavona Drive NW	Family-Friendly Bikeway	City of Salem	\$7,000
West	Stoneway Drive NW	Highway 22	College Drive NW	Uphill Bike Lanes/ Downhill Shared Lane Markings	City of Salem	\$334,000

* The estimated cost for these projects is included in the Street System Element.

Table 7-7 Recommended Tier 3 Bicycle Projects By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost
West	Stoneway Drive NW/ Kaley Avenue NW	College Drive NW	Eola Drive NW	Family-Friendly Bikeway	City of Salem	\$40,000
West	Vickery Drive NW	Urban Growth Boundary	Colorado Way NW	Uphill Bike Lanes/ Downhill Shared Lane Markings	Polk County	\$124,000

* The estimated cost for these projects is included in the Street System Element.



Pedestrian System Element

The goal of the City of Salem is to encourage and increase safe pedestrian travel. Many short trips to school, work, or the neighborhood store can be made entirely by walking. The key to encouraging more walking trips is to eliminate obstacles to walking such as deficient sidewalks, a lack of connectivity, unattractive sidewalks, and concerns about safety. A completed, well-designed, inviting sidewalk system encourages walking and provides important connections to other modes of transportation such as transit. By providing this infrastructure, we can expect to decrease the need for people to drive in their cars every time they want to make a trip. This, in turn, helps to lessen traffic congestion, preserve good air quality, improve public health, and enhance community livability in Salem.

Originally developed in the mid 1990s, the Pedestrian System Element was updated through the Bike and Walk Salem Project, initiated in 2010. The Pedestrian System Element identifies specific strategies that will result in a well-designed, safe, and convenient pedestrian network in Salem and the surrounding Urban Growth Area. The Pedestrian Network presented on Maps 8-3 through 8-12 identifies and prioritizes needed improvements in the pedestrian system.

It is important to note that some of the pedestrian connections shown require additional refinement to determine how the desired connection can be accomplished. This is particularly true of proposed shared-use paths that would appear to cross over private property or through other sensitive areas (e.g., historic resource, natural resource, etc.). What is shown on the Pedestrian Network reflects only a conceptual alignment based on the need for pedestrian connectivity. Any publicly-funded project to pursue creation of a shared-use path will require that a feasibility study be conducted to identify and address the full range of issues associated with the proposed connection.

What is the pedestrian network today?

Existing conditions for walking in Salem were evaluated as a basis for creating recommendations for future improvement strategies and projects. The following tasks were undertaken to understand what Salem's pedestrian network looks like today:

- Conducted field work.
- Used information from the City's Geographic Information System, Planning, and Public Works Departments.

- Analyzed crash data from the Oregon Department of Transportation.
- Examined existing local, regional, and state plans and policies.
- Collected extensive public input through the project website, questionnaires, an online interactive comment map, listening stations, project meetings, and public open houses.

Existing condition highlights are described in the following section.

SIDEWALK COVERAGE

Salem’s existing pedestrian network consists of sidewalks, paved and unpaved path corridors, and various crossing treatments at intersections and mid-block locations. Sidewalk coverage is highest in Downtown Salem, where sidewalks exist on both sides of most streets. Several areas outside of Downtown such as neighborhoods east of Lancaster Drive (NE and SE), near Commercial Street SE and Liberty Road S, and parts of West Salem have significant gaps in sidewalk coverage. In these areas, sidewalk gaps exist along some major streets, while residential streets may lack sidewalks altogether.

SIDEWALK CONDITIONS ON CRITICAL ADA ROUTES

In light of the need for upgraded facilities in several areas that accommodate able-bodied and mobility-impaired users alike, and limited financial resources, a Critical Americans with Disabilities Act (ADA) Routes Network was developed as part of this Plan. The Critical ADA Routes Network comprises approximately 150 miles of streets within the Salem Urban Growth Boundary (which equates to about 300 miles of sidewalks) that connect mobility-impaired users with major destinations. The Critical ADA Routes network was developed based on extensive input provided by members of the disabled community, City staff, pedestrian advocates, and the public involvement process. The Critical ADA Routes Network is presented in Map 8-1: Critical ADA Routes Network.

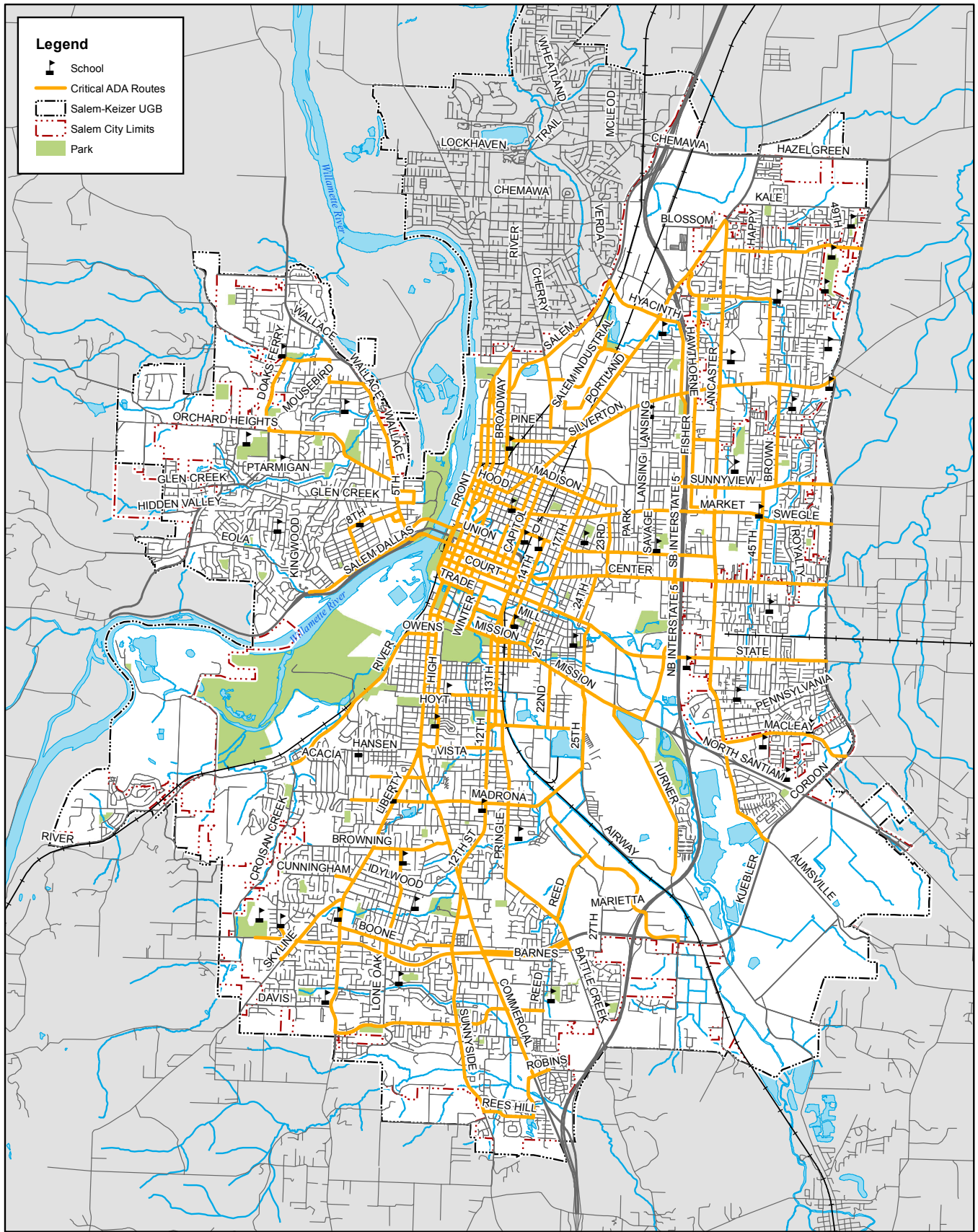
Using existing available data, City of Salem staff conducted a broad assessment of existing sidewalk conditions along the Critical ADA Routes Network, assigning general ratings to corridor segments based on current physical conditions. While not citywide, this assessment provides a general understanding of the sidewalk conditions facing disabled pedestrians along key routes.

- 60 percent of sidewalks along the Critical ADA Routes Network are in “excellent” or “good” condition, with little or no cracking or other adverse surface conditions.
- 10 percent of sidewalks along the Critical ADA Routes Network are in “fair” condition; having cracks or some other tripping hazards that make it hard for mobility-impaired pedestrians to get around.
- 30 percent of sidewalks along the Critical ADA Routes Network are in “poor” or “bad” condition; having cracks or other conditions that make it hard for mobility-impaired pedestrians to get around.

The pedestrian improvement strategies and projects that came out of the Critical ADA Routes assessment are included in the pedestrian system recommendations that are described in this Element and listed in Tables 8-5 through 8-7.

STREET CONNECTIVITY

Street connectivity represents an important issue facing pedestrians. Some areas, including the downtown core, West Salem’s Edgewater District, and neighborhoods immediately to the east, north, and south of Downtown benefit from generally well-connected streets. However, beyond these areas, the street system is less connected with large blocks and cul-de-sacs in several areas that can make walking distances longer. Since most walking trips are for short distances



Map 8-1: Critical ADA Routes

Bike & Walk Salem

Source: City of Salem, ODOT, MWVCOG, Cherriots, Salem-Keizer School District
 Author: Alta Planning + Design



(one mile or less), long street blocks or discontinuous streets may hamper the practicality of walking.

OFF-STREET PATH NETWORK

Salem currently lacks a comprehensive and interconnected path network, with existing paths concentrated primarily in the city's central neighborhoods. The existing paved path system includes longer path segments along Salem Parkway, State Street, 12th Street (NE and SE), and on the Center and Union Street bridges; while shorter segments exist within Riverfront Park, Bush's Pasture Park and Geer Community Park. Informal unpaved paths also exist between some subdivisions and along undeveloped public rights-of-way that help to provide local pedestrian connectivity.

PEDESTRIAN ACCESS TO TRANSIT

Ensuring that pedestrians have a safe and comfortable route to transit stops is a critical element towards greater transit use. Field observations of major transit stops were conducted to identify existing passenger infrastructure (e.g., shelters and rider information) and the current pedestrian network close to each stop. This was done because the presence or absence of these elements may influence a person's decision whether to use transit (particularly for new or infrequent transit users). Major transit stops were identified by reviewing ridership data provided by the Salem Area Mass Transit District.

Several of the observed major transit stops in Salem were found to lack important pedestrian infrastructure components and have missing sidewalks, difficult crossings, and/or steep curb ramps. Additionally, a few major transit stops, such as the stop at Lancaster Drive and State Street, were found to lack critical passenger infrastructure, such as a shelters, benches, and posted schedules.

NEEDS ASSESSMENT

The technical pedestrian system needs assessment included field work and the review of background data and information to determine items such as key pedestrian destinations and existing access, high crash corridors and intersections, and the location of transportation disadvantaged populations.

Supplementing field work and the review of background information, the pedestrian system needs were identified based on feedback received during the public involvement process. Pedestrian system need highlights are provided below:

- Upgraded or new sidewalks are needed in the vicinity of major pedestrian destinations.
- Sidewalk maintenance is critical for pedestrians, especially for pedestrians using mobility-assistance devices.
- Improved wayfinding is needed to better orient pedestrians to key destinations such as libraries, parks, and community centers.

Policy Framework

The Pedestrian System Element of the Salem TSP establishes goals, objectives, and policies that will guide how improvements are made to Salem's pedestrian facilities over the next 25 years. Pedestrian-related policies in Salem's previous Pedestrian Plan placed a major focus on connecting the pedestrian network by building new sidewalks. This updated Pedestrian Plan adds a special emphasis on ADA compliance and accommodating a wider range of pedestrians, including those that require mobility-assistance devices.

The projects and strategies included in this updated Pedestrian Plan focus on the following areas:

- Serving a broad range of pedestrians (including users of various ages, confidence levels, trip types, and abilities).
- Enhancing the existing system (e.g., upgrades to meet ADA requirements) to better serve users.
- Building upon investments in the existing and planned system.
- Expanding the system to streamline walking connections and developing new routes to better serve existing and future destinations.
- Establishing seamless links with surrounding communities including Keizer, and Marion and Polk counties.
- Enhancing user safety and comfort.

This policy framework reflects the State Transportation Planning Rule requirement that a pedestrian system plan element be included in local transportation system plans.

Goals, Objectives, and Policies

The City of Salem has the following goal, objectives, and policies for the planning, development, and operation of its pedestrian system.

GOAL: To provide a comprehensive system of connecting sidewalks and walkways for a range of pedestrians with different abilities that will encourage and increase safe pedestrian travel and active transportation to support public health.

OBJECTIVE NO. 1

The City of Salem shall create a comprehensive system of pedestrian facilities.

Policy 1.1 Inventory Existing System and Identify Future Needs

The City shall inventory and map existing pedestrian facilities. Facility inventories and selected usage surveys shall be performed every five years to determine the success or failure of meeting the Plan's pedestrian goal, objectives, and policies.

Policy 1.2 Establish Sidewalk Construction Program

To complete the pedestrian facility network, the City shall establish a Sidewalk Construction Program that reflects the City's funding resources. This program will give priority to the construction of missing sidewalks in already developed areas of the City that would provide improved access to schools, parks, shopping, and transit services.

Policy 1.3 Focus Attention on Intermodal Connections

Sidewalks and walkways shall complement access to transit stations/stops, train stations, and multiuse paths. Activity centers and business districts should focus attention on and encourage pedestrian travel within their proximity.

Policy 1.4 Ensuring Future Sidewalk Connections

All future development shall include sidewalk and walkway construction as required by the Salem Revised Code and adopted City of Salem Design Standards. All road construction or renovation projects shall include sidewalks. The City shall support, as resources are available, projects that address identified barriers to pedestrian travel or safety.

Policy 1.5 Complete Connections with Crosswalks

All signalized intersections shall have marked crosswalks. School crosswalks will be marked where crossing guards are provided. Marked crosswalks, along with safety enhancements (medians and curb extensions), shall be provided, as resources are available, at unsignalized intersections and uncontrolled traffic locations in order to provide greater mobility in areas frequently traveled by persons with limited pedestrian capabilities. Marked crosswalks may also be installed at other high volume pedestrian locations without medians or curb extensions if a traffic study shows there would be a benefit to those pedestrians.

Policy 1.6 Compliance with ADA Standards

The City shall comply with the requirements set forth in the Americans with Disabilities Act regarding the location and design of sidewalks. To do so, the City shall establish Critical ADA Routes where compliance with Americans with Disabilities Act Accessibility Guidelines is prioritized. Critical ADA routes are to be those that provide direct, convenient, and safe on-street and off-street pathway connections to existing and planned neighborhood and community destinations such as schools, shopping areas, parks, multifamily developments, government offices, and transit stops.

OBJECTIVE NO. 2

Increase citywide journey to work walking mode share (U.S. Census) to 7 percent by 2020, and 11 percent by 2030.

Policy 2.1 Maintaining and Assuring the Quality of Facilities

The City shall establish standards for the maintenance and safety of pedestrian facilities. These standards shall include the removal of hazards and obstacles to pedestrian travel, as well as maintenance of benches and landscaping. A minimum clear path of 36 inches shall be maintained in compliance with ADA standards, with a priority for ADA critical routes. Definition of a clear path includes an area free of debris, hazards, and obstacles, as well as substantially broken sidewalks.

Owners of property within the city limits and adjacent to sidewalks built since September 1, 1992, will be responsible for repairing or replacing damaged sidewalks, unless the damage has been caused by a City street tree. Owners of property within the city limits and adjacent to sidewalks built prior to September 1, 1992, will be assigned responsibility for repairing or replacing damaged sidewalks after the City of Salem first repairs the existing sidewalk and brings them up to an acceptable standard. The City will remain responsible for future damage caused by City street trees.

Policy 2.2 Pedestrian Supportive Land Uses

Comprehensive Plan land use designations and zoning shall be developed to allow for mixed land uses which promote pedestrian travel.

Policy 2.3 Promotion of Walking for Health and Community Livability

The City shall encourage efforts that inform and promote the health, economic, and environmental benefits of walking for the individual and the community. Walking for travel and recreation shall be encouraged to achieve a more healthful environment that reduces pollution and noise to foster a more livable community.

Policy 2.4 Connecting Pathway Network

The City shall encourage the development of a connecting, multiuse pathway network, using linear corridors such as rivers, creeks, utility easements, and abandoned rail lines, using such programs as rail-banking, which complement and connect to the sidewalk, park, and transit systems.

OBJECTIVE NO. 3

The City of Salem shall encourage education services and promote safe pedestrian travel in order to reduce the number of accidents involving pedestrians by 50 percent and aim for zero fatalities by 2030. (Note: 45 pedestrian-related crashes, with 5 resulting in fatalities in 2008.)

Policy 3.1 Education of Pedestrian Safety Needs

The City shall encourage schools, safety organizations, and law enforcement agencies to provide information and instruction on pedestrian safety issues that focus on prevention of the most important accident problems. The programs shall educate all roadway users of their privileges and responsibilities when driving, bicycling, and walking.

Policy 3.2 Taking Action to Improve Safety

The City shall enforce pedestrian safety laws and regulations to help increase safety as measured by a reduction in accidents. Attention should be focused on areas where high volumes of automobile and pedestrian travel occur. Warnings and citations given to drivers and pedestrians should serve to impress the importance of safety issues.

Policy 3.3 Completion of Street Lighting Facilities

The City shall work toward the completion of the street lighting system, designed to City illumination standards, on all Arterial and Collector streets within the Urban Service Area (USA).

Policy 3.4 Safe Access to Schools

The City shall work with the Salem-Keizer School District and neighborhood associations to maintain and improve its programs to evaluate the existing pedestrian access to local schools, estimate the current and potential use of walking as a travel mode, evaluate safety needs, and propose changes to increase the percentage of children and young adults safely using this mode.

Performance Measures

Evaluating progress towards the implementation of pedestrian goals can help the City and community understand what has been achieved through project implementation. This information can inform plan updates and future plans. The performance measures and targets in the table below rely on readily available data, specifically network implementation and journey to work mode share data collected by the US Census, to help ensure periodic evaluation.

Table 8-1 Pedestrian System Performance Measures

Performance Measure	Target
Pedestrian Commute Mode Share*	Increase citywide journey to work walking mode share (US Census) to 7 percent by 2020, and 11 percent by 2030.
Pedestrian Network Construction**	Construct 90 percent of the Critical ADA Routes by 2030.

*According to the American Community Survey (ACS), walking Journey to Work mode share was 3.6% for 2006-2008.

**Note that off-street paths should be counted only towards bicycle network construction evaluation and not pedestrian network construction so as not to double count off-street path construction.

Pedestrian Facility Types

The recommended pedestrian projects refer to a variety of pedestrian facility types.

Table 8-2 Pedestrian Facility Types

Facility Type



Sidewalks: Paved walkways adjacent to roadways; particularly important for mobility-impaired pedestrians. Design standards and guidelines are provided by FHWA, ADA and ODOT.



Shared-Use Paths: Physically separated from motor vehicle traffic; serve one or more non-motorized user including bicyclists, pedestrians, in-line skaters, skateboarders, or wheelchairs; typically serve bi-directional traffic. Design guidance is provided by FHWA and ODOT. Design should be tailored to particular project locations.



Curb Ramps: Facilitate transitions between the sidewalk and roadway; particularly important for mobility-impaired pedestrians and other “wheel” users. Design standards and guidelines are provided by ADA.



Median Refuge Islands: Enable pedestrians to break up a crossing into multiple segments, allowing pedestrians to judge conflicts with vehicles traveling in each direction separately, while also providing a resting location so that slower pedestrians can wait for a break in traffic. Design guidance is provided by FHWA and ODOT.



Curb Extensions: Expand the sidewalk or curb face into the on-street parking lane at intersections or mid-block crossings; shorten the pedestrian crossing distance; commonly used for traffic calming. Design guidance is provided by FHWA and ODOT.



Audible Pedestrian Signals: Used at signalized intersections to assist visually-impaired pedestrians by alerting them to when they may safely enter a crosswalk; provide additional information regarding the length of time the signal will remain in the pedestrian crossing phase. Design guidance is provided by FHWA.



Pedestrian Countdown Signals: Used at signalized intersections; provide a visual cue to pedestrians indicating remaining time in the pedestrian crossing phase. Design guidance is provided by FHWA.

Citywide Pedestrian Recommendations

The following are recommendations for citywide efforts, some of which are already underway, to enhance Salem’s pedestrian environment on a citywide scale.

SIDEWALK INVENTORY AND INSPECTION

The City will continue its Sidewalk Inspection and Repair Program to enable the City to measure

progress toward upgrading the existing sidewalk network and completing the sidewalk system. Priority inspections should be assigned to the approximately 150-mile Critical ADA Routes network identified in Map 8-1: Critical ADA Routes Network.

SIDEWALK INFILL

The City will continue to pursue sidewalk infill and upgrade opportunities. Per the City's street design standards, sidewalks will be developed as part of new roadway construction, while upgrades along existing streets may occur in tandem with other planned corridor improvements. Other options include privately-funded small sidewalk gap closures on existing streets, possibly triggered upon a change in ownership of the adjacent property. For projects constructed independently of larger corridor-wide improvements, priority is assigned to the Critical ADA Routes Network and corridors that serve major pedestrian destinations.

ALTERNATIVES TO SIDEWALKS

The public right-of way located on either side of a paved roadway is typically intended for walking, whether or not a sidewalk currently exists. However, completing some sidewalk gaps can be challenging.

In areas where paved sidewalks are not feasible or appropriate, several options can be explored, including paths constructed of pervious materials, shoulder widening, traffic calming measures, and/or colored shoulders. The latter two options can visually narrow the roadway and may slow traffic, making the street more pedestrian-friendly.

CROSSING IMPROVEMENTS

Significant opportunities also exist to enhance the pedestrian crossing environment at intersections and mid-block locations throughout the city. Potential crossing treatments include pedestrian refuge islands, passive pedestrian detection, curb extensions and mid-block crossings. Additional treatments could include high-visibility crosswalks and signs, pedestrian countdown signals, and the addition of pedestrian crossings on intersection legs where crossings are currently prohibited.

UPGRADES TO ACCOMMODATE PEDESTRIANS WITH DISABILITIES

Salem recognizes that all pedestrian routes should safely and conveniently accommodate able-bodied and mobility-impaired users alike. The approximately 150-mile Critical ADA Routes Network provides guidance for where improvements should be prioritized to enhance mobility and accessibility for pedestrians with disabilities. Examples of potential treatments are described briefly below.

- Repair or replacement of damaged sidewalks (e.g., to address cracking, breaking, and uneven surfaces).
- Sidewalk obstruction removal or relocation (e.g., utility poles, mailboxes, encroaching vegetation).
- Reconstruction of steep driveway cross-slopes.
- Pedestrian push button retrofits (placed at a location accessible by wheelchair users).
- Audible pedestrian signals at signalized intersections.

As corridors and intersections are upgraded to better accommodate pedestrians with disabilities, each disability type and its corresponding limitations must be considered. It is important to also be aware of how planning and designing for people with one disability may affect users with other impairments. For instance, curb cuts and smooth transitions to the street assist people in wheelchairs, but may present challenges for sight-impaired pedestrians attempting to locate the curb.

TRANSIT ACCESS ENHANCEMENTS

The City of Salem will work jointly with the Salem Area Mass Transit District to enhance pedestrian access to transit stops. Key recommendations include providing all of the following at transit stops:

- Convenient and direct pedestrian links to transit stops.
- Paved landing pads to safely accommodate wheelchairs.
- Covered passenger shelters.
- Seating areas.
- Posted system maps, route maps, and schedules (additional options include providing real-time information display of upcoming bus arrivals).
- Adequate lighting.
- Trash receptacles.

STREETSCAPE ENHANCEMENTS

Streetscape treatments help establish neighborhood identity, activate public spaces, and are a key ingredient in creating an attractive and inviting pedestrian environment. Examples of streetscape treatments include street trees, ornamental lighting, street furniture, outdoor dining, awnings on building facades, and public art. Several recent planning efforts include key streetscape-related recommendations that this Plan supports, including the Salem Vision 2020 Action Plan, Salem Downtown Strategic Action Plan, and Edgewater/Second Street Redevelopment Action Plan.

“GREEN STREET” ENHANCEMENTS

As the City of Salem works to improve and expand the pedestrian environment, opportunities exist to implement supplemental treatments that benefit both pedestrians and the natural environment. Often referred to as “green street” treatments, these innovative applications address stormwater management while improving walkability through new sidewalk connections, traffic calming, and other pedestrian-friendly elements. Common green street treatments include:

- Minimizing impermeable surfaces.
- Installing bioswales.
- Installing curb extensions with stormwater treatment elements.
- Using permeable pavements, where practical.

WAYFINDING SIGNS

Wayfinding signs can vastly improve the walking environment by orienting pedestrians (especially those unfamiliar with an area) to and through destinations, and highlight features that may have otherwise been overlooked by the community. This Plan supports efforts to implement a pedestrian wayfinding signage system in Downtown and inner West Salem, and encourages the expansion of the program to eventually serve surrounding areas. Areas or intersections with complex pedestrian routing (e.g., in vicinity of the 12th Street SE/Mission Street SE intersection) should be prioritized for nearer-term implementation.

SYSTEM MAINTENANCE

System maintenance can increase user safety and comfort and encourage the use of the pedestrian network. Recommended maintenance activities include the continuation of

sweeping, debris removal, sign replacement, trimming overgrown vegetation, graffiti removal, and pavement and signal repair as needed.

PROGRAMMATIC STRATEGIES

Becoming a truly pedestrian-friendly community requires a multi-faceted approach including encouragement, education, enforcement, and evaluation programs to support on-the-ground infrastructure improvements. Pedestrian education and promotional programs can:

- Promote safety.
- Raise awareness of walking as a legitimate transportation mode.
- Connect current and potential pedestrians to existing resources.
- Educate current and potential pedestrians about their rights and responsibilities.
- Encourage residents to walk more often.

In other communities, these efforts have provided measurable increases in the walking mode share, amount of safe walking behavior (and a corresponding reduction in crashes), and an increase in the cultural awareness of walking.

Recommended Pedestrian Projects

Recommendations for pedestrian facilities were developed based on:

- Project goals, policies, and evaluation criteria.
- Field work.
- Findings from the pedestrian needs assessment.
- A review of background documents, plans, studies, and available data.
- Input from the Project Stakeholder Advisory Committee.
- Input from the public involvement process.

The existing, planned, and proposed pedestrian network is shown on Maps 8-3 through 8-7 and individual pedestrian projects are listed in Tables 8-5 through 8-7.

SIDEWALK IMPROVEMENTS

Sidewalk improvements constitute a major element of Salem's proposed pedestrian network. Most proposed sidewalk improvements are located along the major street system; however several improvements are targeted on local streets to enhance connections to schools, other neighborhood attractors, and access to transit. The improvement and expansion of Salem's sidewalk network will occur primarily through new street construction and sidewalk infill along existing roadways.

In implementing this Plan element, several methods of providing sidewalks are currently available to the City:

- *Private Development of Properties and Subdivisions.* All new streets are required to have sidewalks. Most developing properties are required to construct sidewalks on abutting street frontages as part of the building permit process. The majority of new sidewalks are constructed in this manner.
- *City-funded Street Improvement Projects.* The City will typically construct sidewalks as part of a street improvement project that brings a street up to urban standards. The City will also use federal and state grants to enhance pedestrian facilities.

- *Assessed Projects.* An assessed project involves the direct financial participation of abutting or nearby property owners to fund the construction of public improvements. This is implemented through the creation of an assessment district called a Local Improvement District (LID). Individual properties can also be assessed for the improvements required along their own frontage.

STREET LIGHTING

Currently, all new public streets constructed in Salem require the installation of street lighting. Several options currently exist for property owners to have street lighting in place. Individual owners can pay to have a light in front of their property or, more frequently, a group of property owners from a street lighting district.

SHARED-USE PATHS

Significant opportunities exist to develop an expanded shared-use path network in Salem that serves a variety of users. The proposed pedestrian network, as shown in Maps 8-3 through 8-7, includes a diverse shared-use path system. Some proposed path corridors would involve upgrading existing sidewalks passing through parks, widening existing narrow paths to minimize bicyclist/pedestrian conflicts, or upgrading existing unpaved paths to accommodate a broader range of users. Most shared-use paths are intended for use by pedestrians, bicyclists, skateboarders, and other non-motorized users. In some cases, one or more non-motorized uses may be prohibited based on the width of the facility, adjacent land uses, topography, location relative to the bicycle network, or other considerations. The network of shared-use paths is not intended to be all-inclusive. Additional shared-use paths may be identified through the subdivision or other development process to address neighborhoods connectivity.

Where a proposed shared-use path is shown over private property, the desired connection may be provided with sidewalks and local streets that connect to the existing street and sidewalk network in a relatively direct manner. Many of the proposed shared-use path projects will require “path feasibility studies” before a specific alignment can be determined. These studies, which would only occur for paths to be constructed with public funds, will examine issues related to potential environmental impacts, route directness, land availability, property ownership, and estimated costs.

SAFE ROUTES TO SCHOOL IMPROVEMENTS

Projects identified as part of the proposed pedestrian network, shown in Maps 8-3 through 8-7, also incorporate relevant pedestrian improvements identified as part of Safe Routes to School Solutions. These projects generally consist of sidewalk, shared-use path, and intersection improvements near schools.

Project Prioritization

The Pedestrian Network illustrated on Maps 8-3 through 8-7 identifies pedestrian capital improvement projects that, once constructed, will encourage walking. The order in which projects in this Element are constructed will depend on many factors, including budget and grant availability, community support, and City priorities. The City does not anticipate that all of these projects will be constructed within the 20-year life of this Plan. To prioritize projects included in the proposed pedestrian network, a network of critical links was developed and then evaluated using the following eight criteria established for the Bike and Walk Salem Project: system connectivity, multi-modal connections, user safety and comfort, community support, cost, accommodating a broad range of users, environmental justice, and land use connections. The resulting priorities were reviewed by the Bike and Walk Salem Stakeholder Advisory Committee and members of the public.

The evaluation exercise resulted in a three-tiered priority list illustrated on Maps 8-8 through 8-12. The three tiers represent a general implementation timeline:

- Tier 1, Near-term (approximately 0-10 years)
- Tier 2, Medium-term (approximately 10-15 years)
- Tier 3, Longer-term (approximately 15-20 years or longer)

While these tiers help to identify high-priority projects for available funding, it should be noted that medium- and longer-term projects may be implemented at any point in time as part of a development or public works project, or as additional funding becomes available. Additionally, the tiers should be reviewed frequently to ensure they continue to reflect current priorities. Some of the factors that can and should affect project implementation include:

- Project cost relative to available funding.
- Change to existing grant programs, or creation of new grant or funding programs that affect the type or number of large-budget projects that can be implemented.
- Changes in City policy that could affect how local or state funds can be spent.
- Changes to zoning and land use that will affect where and how development occurs in Salem.
- The pace of development, which will affect which projects are implemented through development requirements and impact prioritization by changing existing land use.
- Changes to City staff capacity to manage pedestrian projects.
- Community input (e.g., through neighborhood associations or other).
- Directives (policy or otherwise) from elected officials and other governing bodies.
- Interest from partners (such as counties and ODOT) in implementing projects that are partially or entirely within their jurisdiction.

Pedestrian Project Cost Estimates

Tables 8-3 and 8-4 summarize total planning-level cost opinions for Salem’s proposed pedestrian network. Table 8-3 summarizes estimated costs by “tier” while Table 8-4 presents aggregated costs by facility type. The pedestrian project cost estimate tables include costs for shared use paths and intersection improvements. Although these facilities benefit both pedestrians and cyclists alike, they are listed as pedestrian projects.

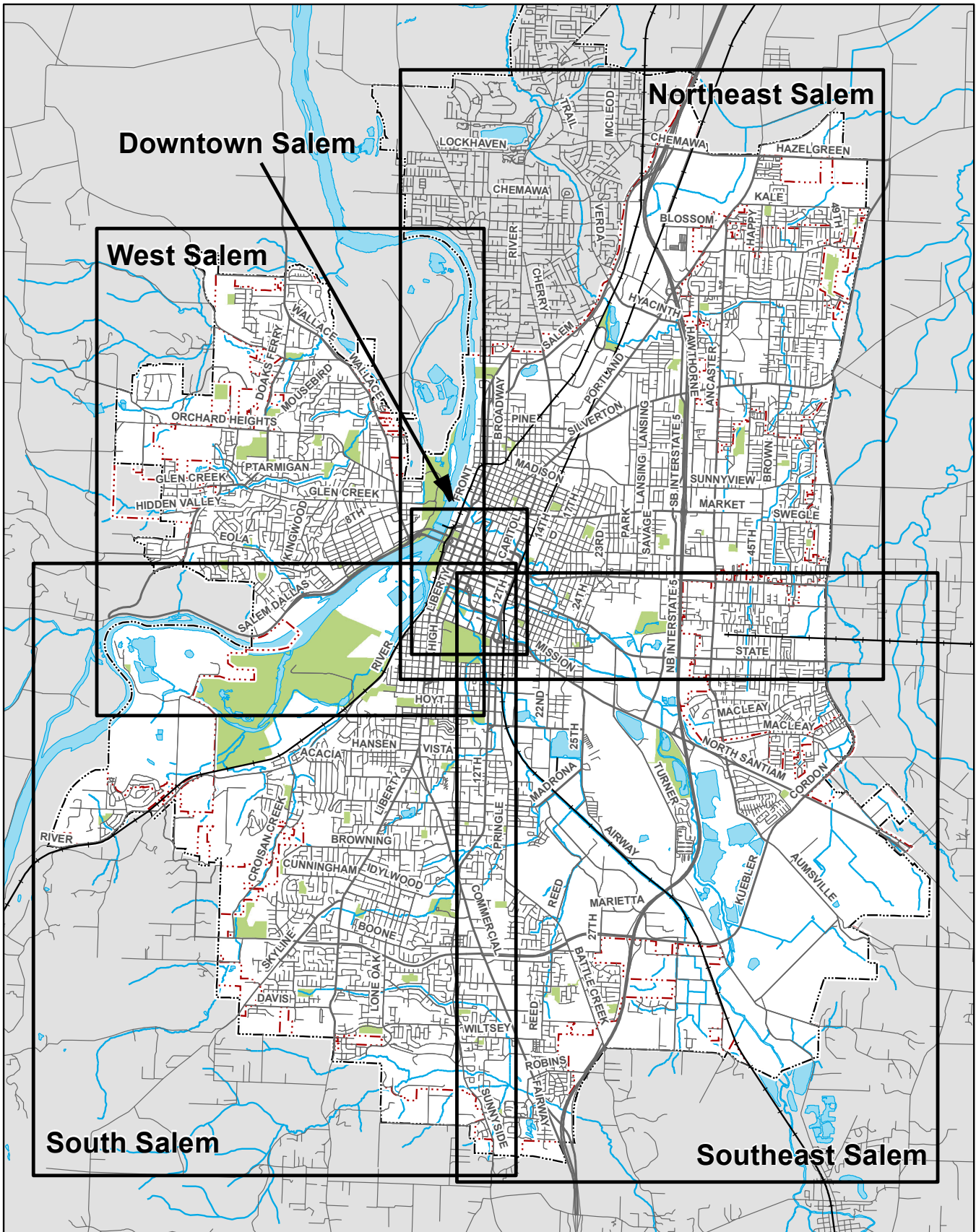
Table 8-3 Estimated Planning-Level Costs by Tier

Tier	Estimated Cost
Tier 1	\$25,761,000
Tier 2	\$17,454,000
Tier 3	\$71,558,000

Note: Estimated cost totals do not include estimates for projects already accounted for in Tables 3-4, 3-5, 3-6, and 3-7 of the Street System Element. Cost totals include shared-use path and intersection improvement projects, which benefit both pedestrians and bicyclists.

Table 8-4 Estimated Planning-Level Costs by Facility Type

Facility Type	Estimated Cost (All Tiers)
Shared-Use Path	\$75,955,000
Proposed New Sidewalks/Sidewalk Infill	\$26,003,000
Intersection Improvements	\$12,815,000

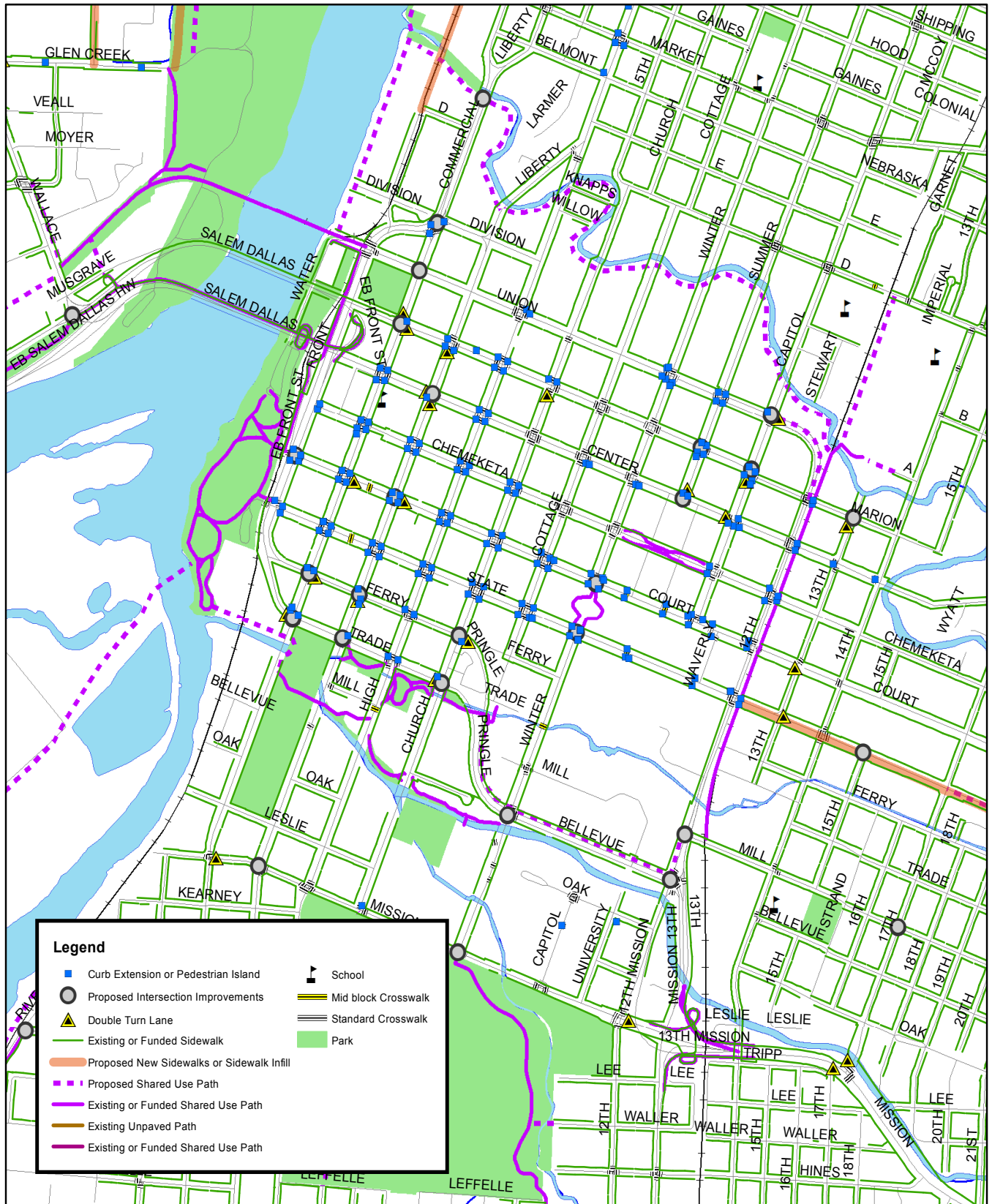


Map 8-2: Quadrant Key Map

Bike & Walk Salem

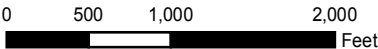
Source: City of Salem, ODOT, MWVCOG, Cherriots, Salem-Keizer School District
 Author: Alta Planning + Design



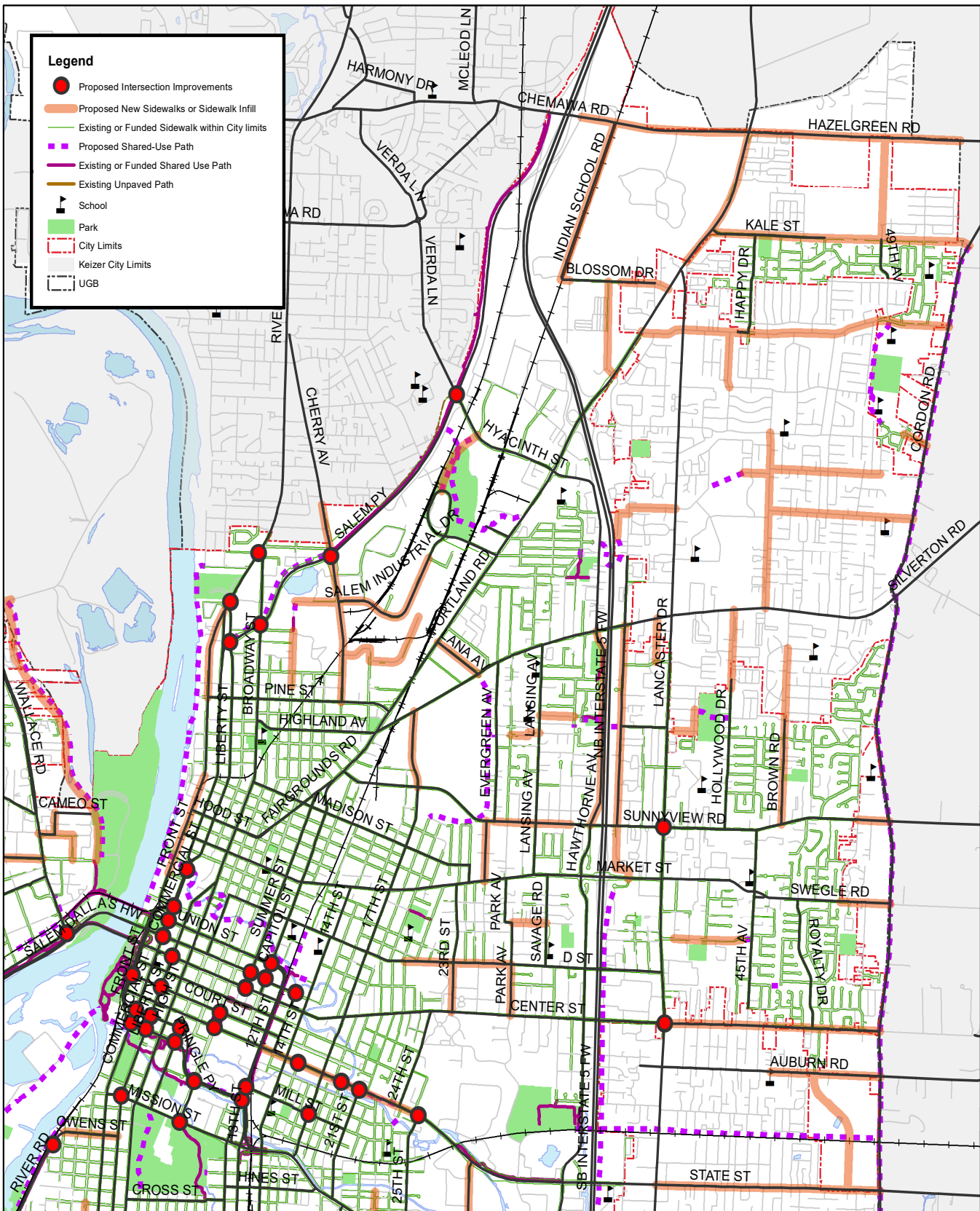


Map 8-3: Pedestrian Network - Downtown Salem

Salem Transportation System Plan Pedestrian System Element

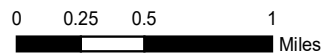


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

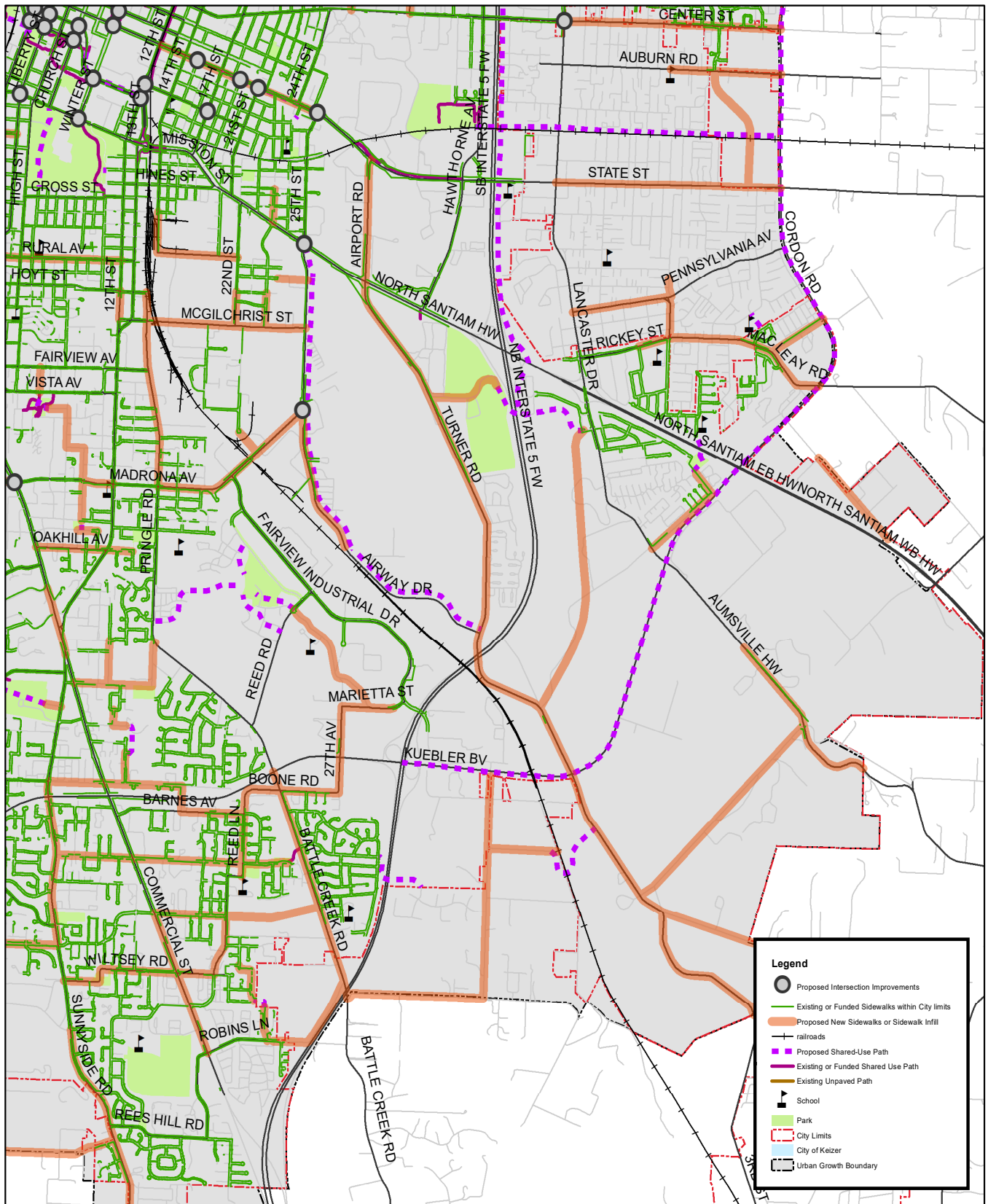


Map 8-4: Pedestrian Network - Northeast Salem

Salem Transportation System Plan Pedestrian System Element

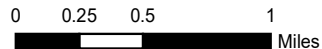


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

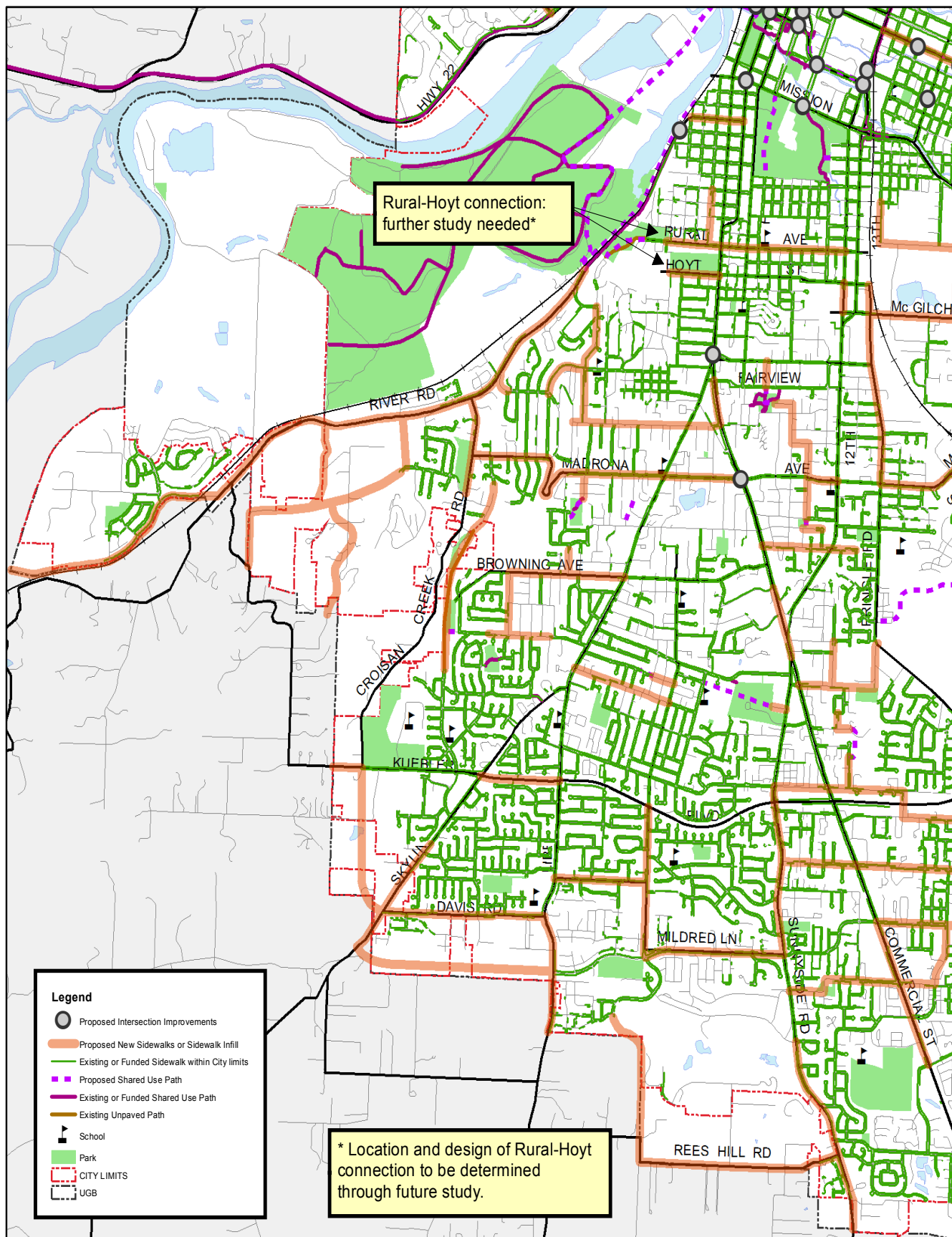


Map 8-5: Pedestrian Network - Southeast Salem

Salem Transportation System Plan Pedestrian System Element

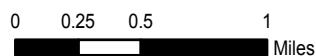


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

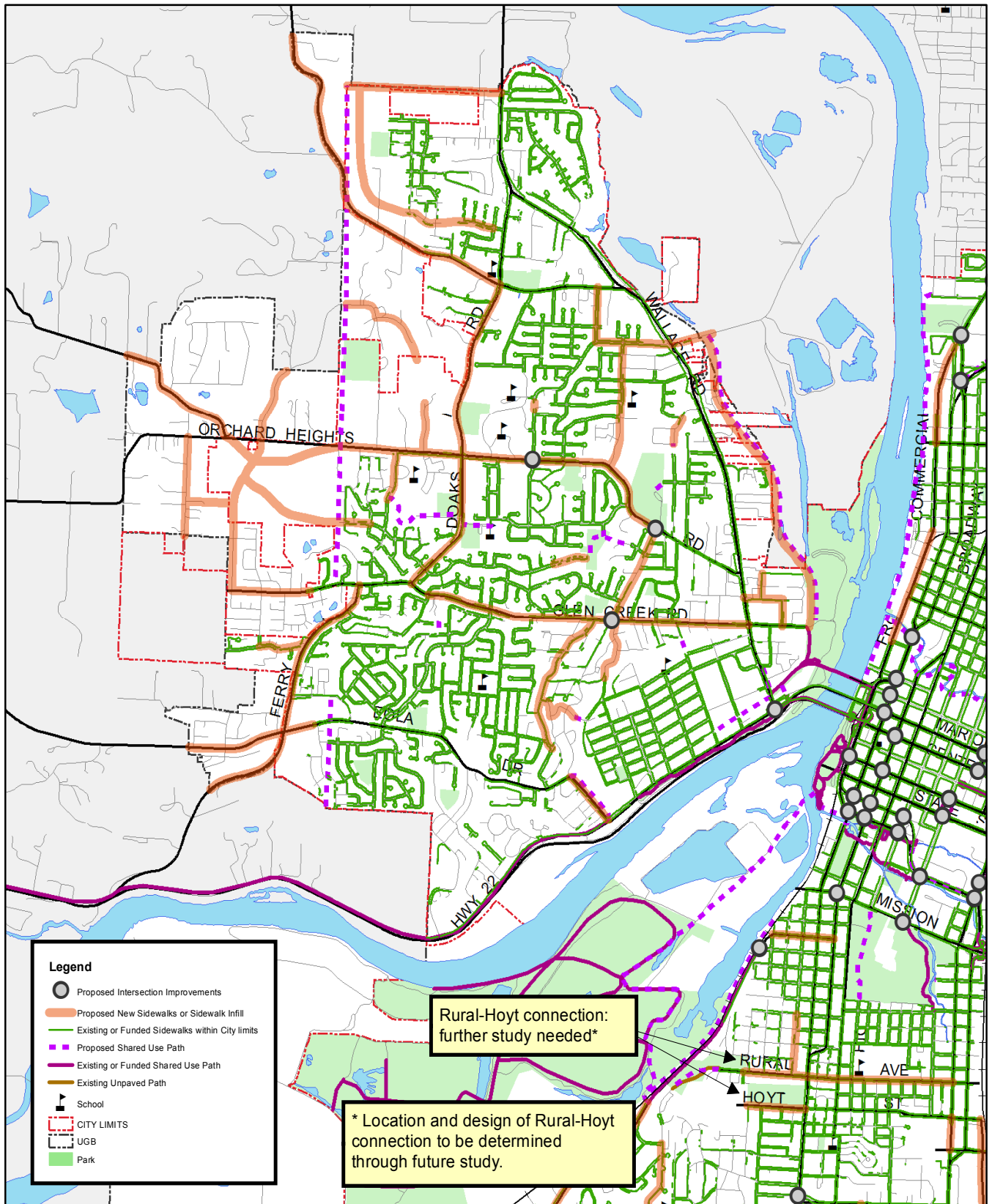


Map 8-6: Pedestrian Network - South Salem

Salem Transportation System Plan Pedestrian System Element

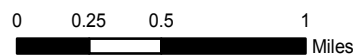


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

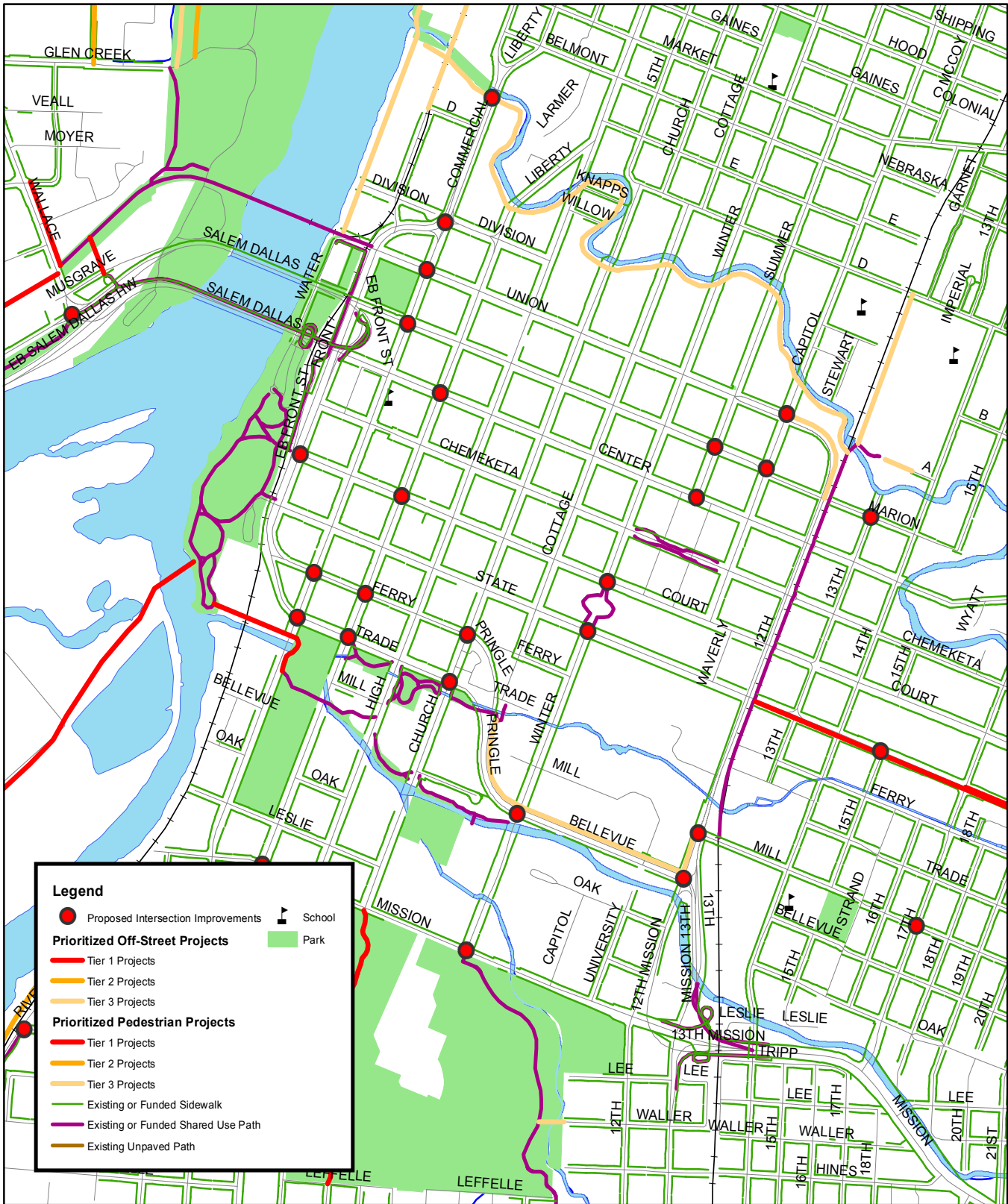


Map 8-7: Pedestrian Network - West Salem

Salem Transportation System Plan Pedestrian System Element

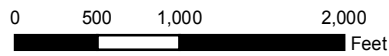


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

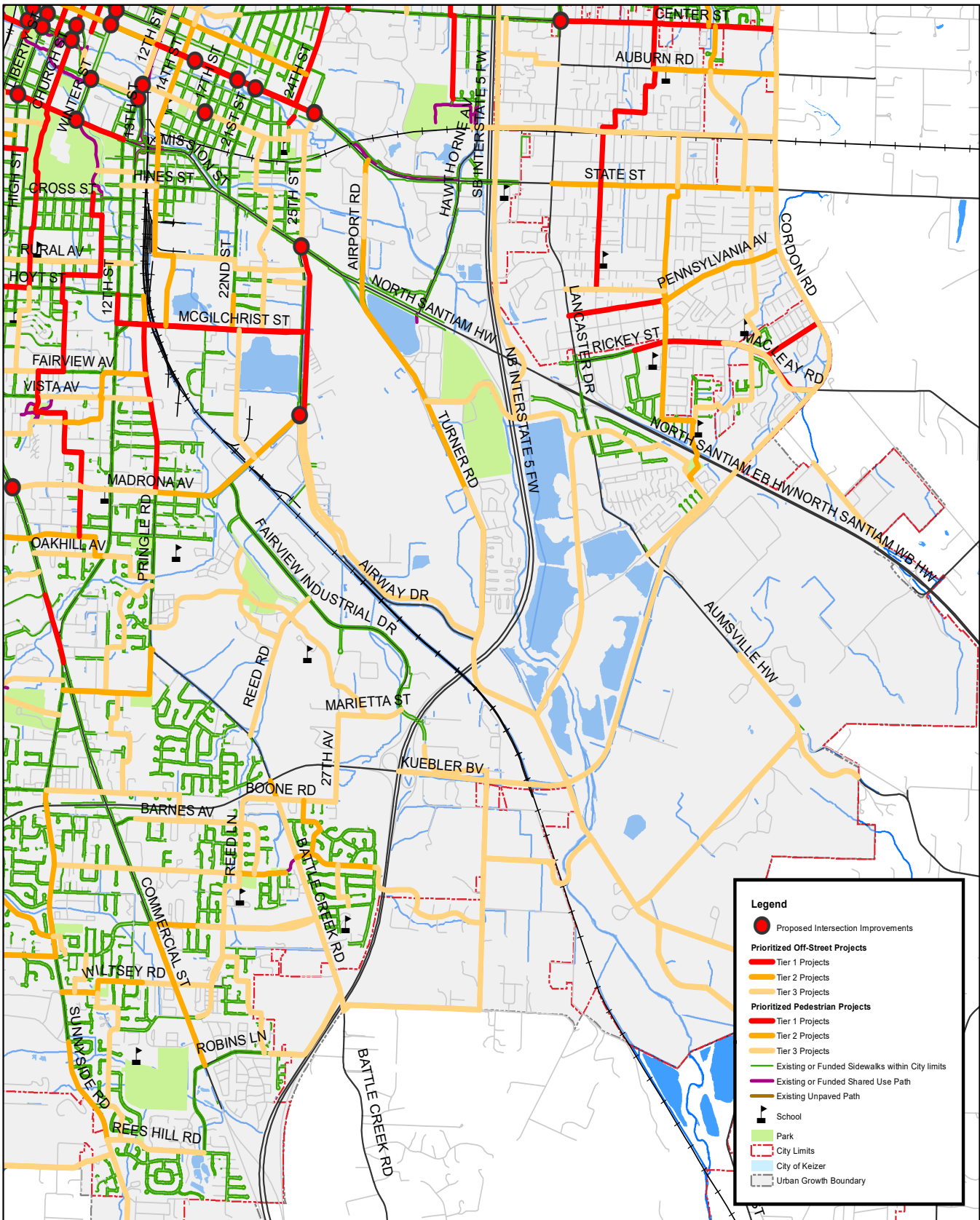


Map 8-8: Pedestrian Project Prioritization - Downtown Salem

Salem Transportation System Plan Pedestrian System Element

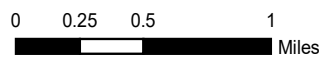


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.



Map 8-10: Pedestrian Project Prioritization - Southeast Salem

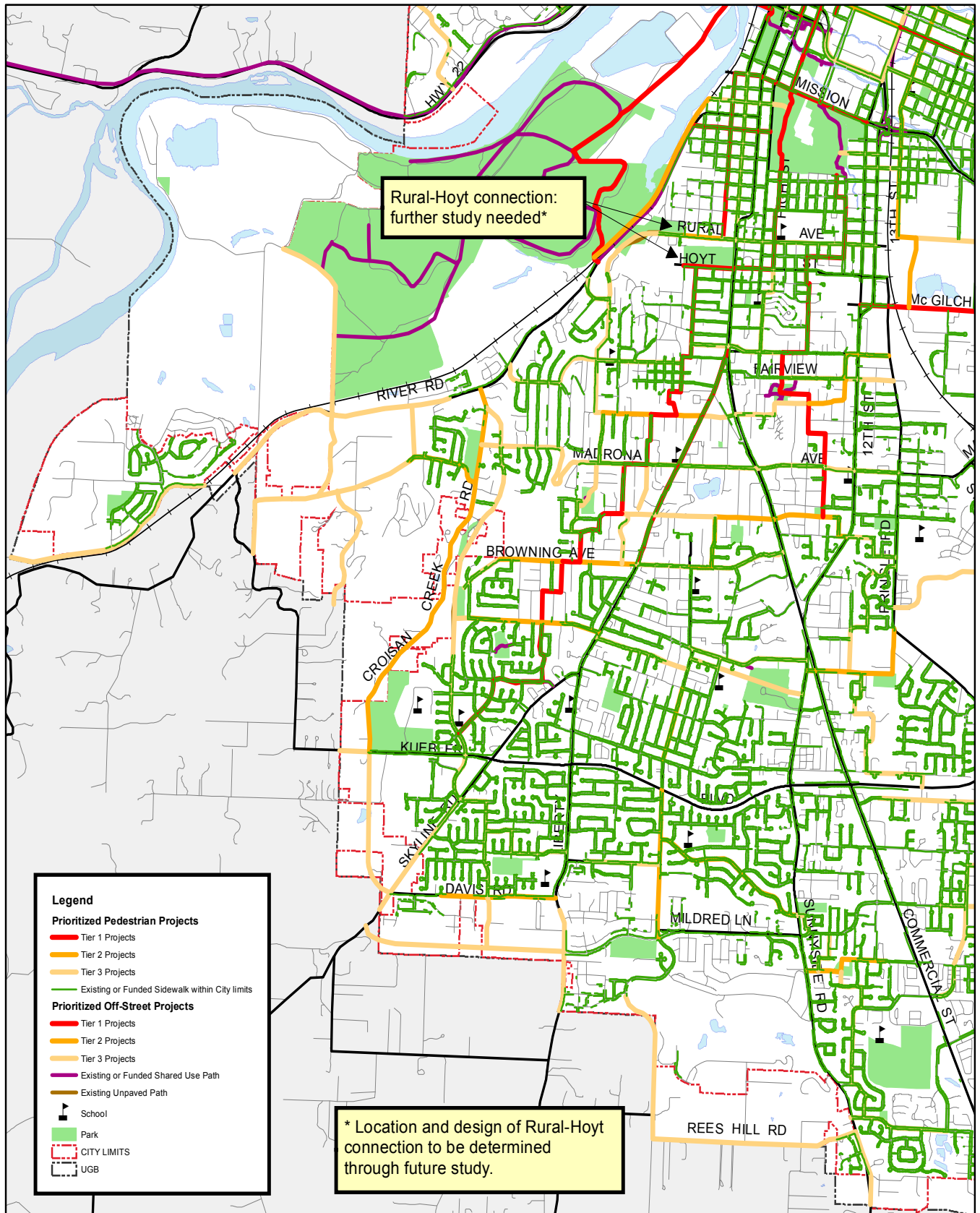
Salem Transportation System Plan Pedestrian System Element



Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

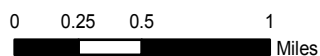
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Date: 10/11/2019

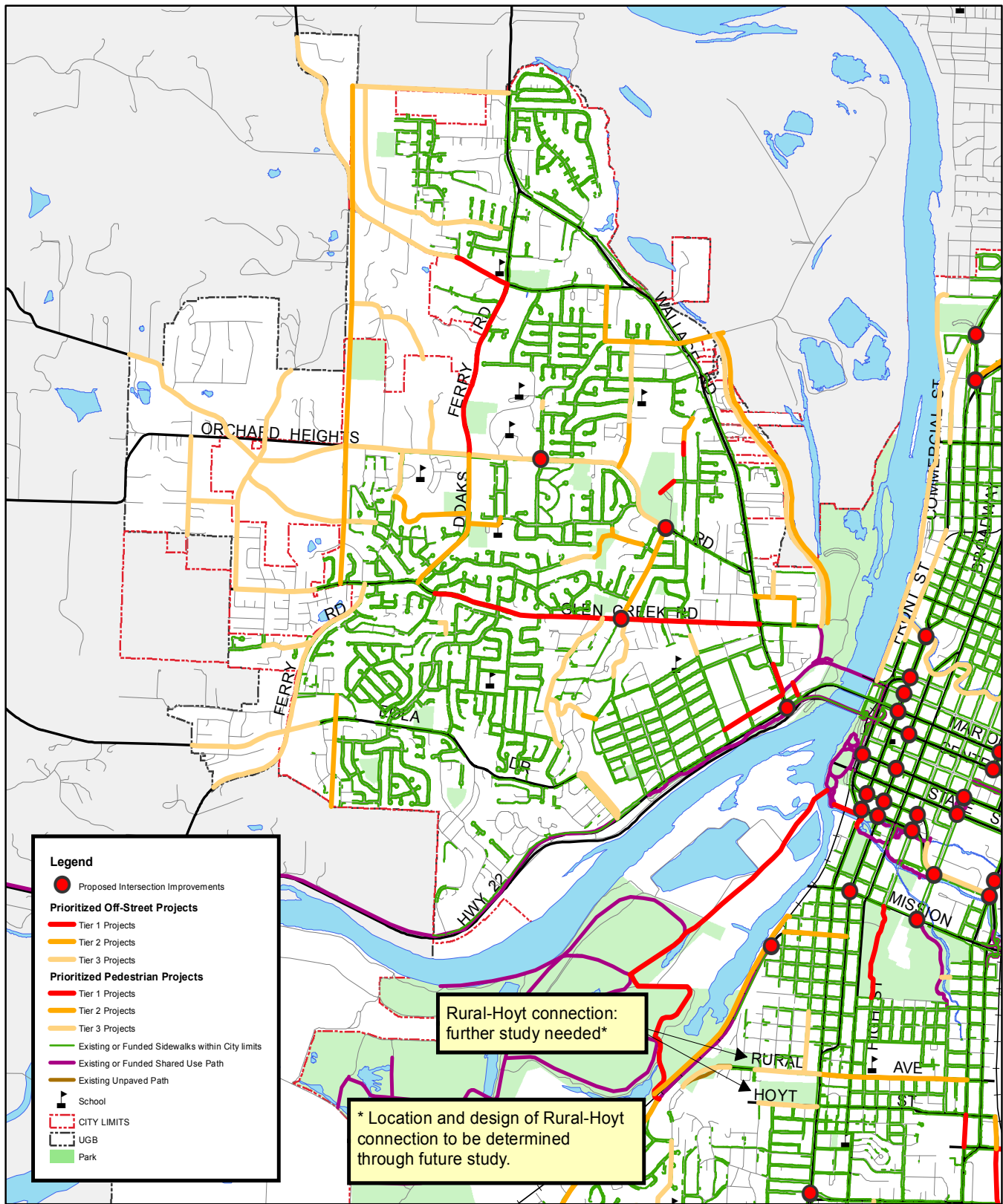


Map 8-11: Pedestrian Project Prioritization - South Salem

Salem Transportation System Plan Pedestrian System Element

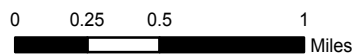


Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.



Map 8-12: Pedestrian Project Prioritization - West Salem

Salem Transportation System Plan Pedestrian System Element



Disclaimer: The alignment of proposed facilities is shown at a conceptual level only. Final alignment and design will be determined through further analysis.

Table 8-5 Recommended Tier 1 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
Downtown	12th Street SE at Bellvue Street SE	–	–	Intersection Improvements	City of Salem, ODOT	\$400,000
Downtown	12th Street SE at Mill Street SE	–	–	Intersection Improvements	City of Salem	\$400,000
Downtown	Commercial Street NE at Marion Street NE	–	–	Intersection Improvements	City of Salem	\$20,000
Downtown	Commercial Street SE at Trade Street SE	–	–	Intersection Improvements	City of Salem, ODOT	\$400,000
Downtown	Liberty Street NE at Center Street NE	–	–	Intersection Improvements	City of Salem	\$20,000
Downtown	Liberty Street SE at Ferry Street SE	–	–	Intersection Improvements	City of Salem, ODOT	\$120,000
Downtown	Liberty Street SE at Mission Street SE	–	–	Intersection Improvements	City of Salem	\$400,000
Downtown	Liberty Street SE at Trade Street SE	–	–	Intersection Improvements	City of Salem, ODOT	\$400,000
Downtown	Pringle Creek Path	Riverfront Park	Civic Center	Shared Use Path	City of Salem	\$165,000
Downtown	Winter Street SE at Bellevue Street SE/Pringle Parkway SE	–	–	Intersection Improvements	City of Salem, ODOT	\$400,000
Downtown	Winter Street NE at Court Street NE	–	–	Intersection Improvements	City of Salem, Oregon Parks & Recreation Dept., Oregon Legislative Administration	\$400,000
Downtown	Winter Street SE at Mission Street SE	–	–	Intersection Improvements	City of Salem	\$400,000
Downtown	Winter Street NE/SE at State Street	–	–	Intersection Improvements	City of Salem, Oregon Parks & Recreation Dept., Oregon Legislative Administration	\$400,000
Downtown	Ferry Street SE at Commercial Street SE	–	–	Intersection Improvements	City of Salem, ODOT	\$120,000
Downtown	Church Street SE at Trade Street SE	–	–	Intersection Improvements	City of Salem, ODOT	\$20,000
Downtown	Ferry Street SE at Church Street SE	–	–	Intersection Improvements	City of Salem, ODOT	\$20,000
Downtown	Court Street SE at Liberty Street SE	–	–	Intersection Improvements	City of Salem	\$120,000
Downtown	Capitol Street NE at Marion Street NE	–	–	Intersection Improvements	City of Salem	\$20,000
Downtown	Union Street NE at Capitol Street NE	–	–	Intersection Improvements	City of Salem	\$20,000
Northeast	D Street NE	Thompson Avenue NE	Park Avenue NE	New Sidewalks or Sidewalk Infill	City of Salem	\$478,000

*Estimated cost for intersection improvements represents a placeholder cost, pending further analysis, engineering, and design to determine appropriate treatments. **The estimated cost for these projects is already included in the Street System Element.

Table 8-5 Recommended Tier 1 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
Northeast	23rd Street NE	Center Street NE	D Street NE	New Sidewalks or Sidewalk Infill	City of Salem	\$209,000
Northeast	45th Avenue NE	Silverton Road NE	Ward Drive NE	New Sidewalks or Sidewalk Infill	Marion County	**
Northeast	Claggett Creek Path	Bill Frey Drive NE	Hyacinth Street NE	Path	City of Salem, Urban Renewal Agency, City of Keizer, Cherriots	\$1,850,000
Northeast	Broadway Street NE at River Road N	–	–	Intersection Improvements	City of Salem	\$400,000
Northeast	Broadway Street NE at Salem Parkway NE	–	–	Intersection Improvements	City of Salem, ODOT	\$400,000
Northeast	Brown Road NE	Sunnyview Road NE	Arizona Avenue NE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
Northeast	Center Street NE	Lancaster Drive NE	Cordon Road NE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
Northeast	Chemeketa Cross-Campus Path	Cooley Drive NE	Satter Drive NE	Shared Use Path	City of Salem, Marion County, Chemeketa Comm. College	\$170,000
Northeast	Cherry Avenue NE at Salem Parkway NE	–	–	Intersection Improvements	City of Salem, ODOT	\$400,000
Northeast	Commercial Street NE at Division Street NE	–	–	Intersection Improvements	City of Salem	\$400,000
Northeast	Fisher Road NE	Existing Southern Terminus	Silverton Road NE	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Fisher Road NE	Market Street NE	Existing Southern Terminus	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Hawthorne Avenue NE	Sunnyview Road NE	Silverton Road NE	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Hayesville Drive NE	Portland Road NE	Cordon Road NE	New Sidewalks or Sidewalk Infill	Marion County	**
Northeast	Hollywood Drive NE	South of Hollyridge Loop NE	Silverton Road NE	New Sidewalks or Sidewalk Infill	Marion County	**
Northeast	Lancaster Drive NE at Center Street NE	–	–	Intersection Improvements	City of Salem, Marion County	\$400,000
Northeast	Lancaster Drive NE at Sunnyview Road NE	–	–	Intersection Improvements	City of Salem	\$400,000
Northeast	Liberty Street NE at River Road N	–	–	Intersection Improvements	City of Salem	\$400,000
Northeast	Liberty Street NE at Salem Parkway NE	–	–	Intersection Improvements	City of Salem, ODOT	\$400,000
Northeast	Maple Avenue NE/ Salem Industrial Drive NE Connector	Bliler Avenue NE	Salem Industrial Drive NE	Shared Use Path	City of Salem	\$63,000

*Estimated cost for intersection improvements represents a placeholder cost, pending further analysis, engineering, and design to determine appropriate treatments. **The estimated cost for these projects is already included in the Street System Element.

Table 8-5 Recommended Tier 1 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
Northeast	Marion Street NE and 13th Street NE	–	–	Intersection Improvements	City of Salem	\$400,000
Northeast	McKay Park Connector	Phipps Lane NE	Hollywood Drive NE	Shared Use Path	City of Salem, Marion County, Salem-Keizer School Dist.	\$167,000
Northeast	Salem Industrial Drive NE	Cherry Avenue NE	Anunsen Street NE	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Salem Parkway NE at Hyacinth Street NE	–	–	Intersection Improvements	City of Salem, ODOT, City of Keizer	TBD
Northeast	State Street	12 th Street	25 th Street	Wider Sidewalks	City of Salem	**
Northeast	State Street at 15 th Street, 19 th Street, and 21 st Street	–	–	Intersection Improvements	City of Salem	**
South	12 th Street SE	McGilchrist Street SE	Hoyt Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$118,000
South	Bush’s Pasture Park/ Church Street SE Connector	Leffelle Street SE	Mission Street SE	Shared Use Path	City of Salem	\$359,000
South	Clark Creek Park Connector	Norwood Street SE	Vista Avenue SE	Shared Use Path	City of Salem	\$114,000
South	Commercial Street SE	Salem Heights Avenue SE	Vista Avenue SE	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Commercial Street SE	Sunnyside Road SE	Winding Way SE	New Sidewalks or Sidewalk Infill	City of Salem	\$294,000
South	Commercial Street SE at Alice Avenue S/Fairview Avenue SE	–	–	Intersection Improvements	City of Salem	\$400,000
South	Commercial Street SE at Madrona Avenue SE	–	–	Intersection Improvements	City of Salem	\$400,000
South	Minto-Brown Island Path	River Road S.	Riverfront Park	Shared Use Path	City of Salem	\$6,768,000
South	River Road S at Miller Street S	–	–	Intersection Improvements	City of Salem	\$15,000
South	South Village Park Connector	Ewald Avenue SE	Harris Avenue SE	Shared Use Path	City of Salem	\$42,000
Southeast	17 th Street SE at Mill Street SE	–	–	Intersection Improvements	City of Salem	\$400,000
Southeast	24 th Street Bridge over Mill Creek	24 th Street SE	24 th Street SE	Shared Use Path	City of Salem	\$600,000
Southeast	25 th Street SE at Madrona Avenue SE	–	–	Intersection Improvements	City of Salem	\$400,000
Southeast	25 th Street SE at Mission Street SE	–	–	Intersection Improvements	City of Salem	\$400,000
Southeast	25 th Street NE/SE at State Street	–	–	Intersection Improvements	City of Salem	\$400,000
Southeast	Airway Drive SE/25 th Street SE	Madrona Avenue SE	Mission Street SE	Shared Use Path	City of Salem	\$703,000

*Estimated cost for intersection improvements represents a placeholder cost, pending further analysis, engineering, and design to determine appropriate treatments. **The estimated cost for these projects is already included in the Street System Element.

Table 8-5 Recommended Tier 1 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
Southeast	Caplinger Road SE	Macleay Road SE	Cordon Road SE	New Sidewalks or Sidewalk Infill	City of Salem	\$178,000
Southeast	Macleay Road SE	Lancaster Drive SE	Connecticut Street SE	New Sidewalks or Sidewalk Infill	Marion County	**
Southeast	McGilchrist Street SE	Pringle Road SE	25th Street SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Pringle Road SE	Madrone Avenue SE	McGilchrist Street SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Rickey Street SE	Houck Middle School	Cordon Road SE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
West	Brush College Road NW	Conner Street NW	Doaks Ferry Road NW	New Sidewalks or Sidewalk Infill	City of Salem, Polk County	**
West	Doaks Ferry Road NW	Orchard Heights Road NW	Brush College Road NW	New Sidewalks or Sidewalk Infill	City of Salem, Polk County	**
West	Glen Creek Road NW	Westfarthing Way NW	Wallace Road NW	New Sidewalks or Sidewalk Infill	City of Salem	\$1,271,000
West	Glen Creek Road NW at Parkway Drive NW	–	–	Intersection Improvements	City of Salem	\$400,000
West	Orchard Heights Park/Hope Avenue NW Connector	Orchard Heights Park	Hope Avenue NW	Shared Use Path	City of Salem	\$68,000
West	Orchard Heights Road NW at Mousebird Avenue NW	–	–	Intersection Improvements	City of Salem	\$400,000
West	Orchard Heights Road NW at Parkway Drive NW	–	–	Intersection Improvements	City of Salem	\$400,000
West	Union Bridge Path Extension	Murlark Avenue NW	East of Wallace Road (including grade-separated crossing of Wallace Road NW)	Shared Use Path	City of Salem, ODOT	\$1,574,000
West	Union Bridge Path Extension (far western segment)	Patterson Street NW	Murlark Avenue NW	Shared Use Path	City of Salem	\$113,000
West	Union Street Bridge Path-Musgrave Lane NW Connector	Union Street Bridge Path	Musgrave Lane NW	Shared Use Path	City of Salem	\$50,000
West	Wallace Road NW at Edgewater Street NW	–	–	Intersection Improvements	City of Salem, ODOT	**
West	Wallace Road NW Path	Union Street Bridge Path	Taggart	Shared Use Path	ODOT	**
West	Westhaven Avenue NW/Harritt Drive NW Connector	Northern terminus of Westhaven Avenue NW	SE corner of Harritt Loop NW	Shared Use Path	City of Salem	\$42,000

*Estimated cost for intersection improvements represents a placeholder cost, pending further analysis, engineering, and design to determine appropriate treatments. **The estimated cost for these projects is already included in the Street System Element.

Table 8-6 Recommended Tier 2 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
Downtown	Summer Street NE at Center Street NE	–	–	Intersection Improvements	City of Salem	\$25,000
Downtown	Summer Street NE at Marion Street NE	–	–	Intersection Improvements	City of Salem	\$120,000
Northeast	17th Street NE	Sunnyview Road NE	Silverton Road NE	New Sidewalks or Sidewalk Infill	City of Salem	\$320,000
Northeast	35th Place NE	Southern Terminus	Fisher Road NE	New Sidewalks or Sidewalk Infill	Marion County	\$143,000
Northeast	Bill Frey Drive NE Extension	Kroc Center	Hyacinth Street NE	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Cherry Avenue NE	Pine Street NE	City Limits	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Dean Street NE/Scepter Court NE Connector	Dean Street NE	Scepter Court NE	Shared Use Path	City of Salem	\$48,000
Northeast	Fairgrounds Path	Garfield Street NE	Silverton Road NE	Shared Use Path	City of Salem, Oregon State Fairgrounds	\$869,000
Northeast	Fairgrounds Path/ Evergreen Avenue NE Connector	Fairgrounds Path	Evergreen Avenue NE	Shared Use Path	City of Salem, Oregon State Fairgrounds	\$37,000
Northeast	Hawthorne Avenue NE/ Fisher Road NE Connector (including grade-separated crossing of Interstate 5)	Rockingham Court NE	35th Place NE	Shared Use Path	City of Salem, Marion County, ODOT	\$2,453,000
Northeast	Herrin Road NE	45th Avenue NE	Cordon Road NE	New Sidewalks or Sidewalk Infill	Marion County	**
Northeast	Johnson Street NE/ McDonald Street NE	Pine Street NE	Eastern Terminus of McDonald Street NE	New Sidewalks or Sidewalk Infill	City of Salem	\$518,000
Northeast	Salem Parkway NE Path	Liberty Street NE	Cherry Avenue NE	Shared Use Path	City of Salem, ODOT	\$623,000
Northeast	Sunnyview Road NE	Walker Road NE	Cordon Road NE	New Sidewalks or Sidewalk Infill	Marion County	**
Northeast	Sunnyview Road NE	Evergreen Avenue NE	Byram Street NE	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Swegle Road NE	Walker Road NE	Cordon Road NE	New Sidewalks or Sidewalk Infill	Marion County	**
Northeast	Yoshikai/Adam Stephens Path	Jade Street NE	Hayesville Drive NE	Shared Use Path	City of Salem, Salem-Keizer School Dist.	\$338,000
South	Browning Avenue S	Kurth Street S	Liberty Road S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Cunningham Lane S	West of High Ridge Court S	Barrett Street S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Kuebler Boulevard S	Urban Growth Boundary	Croisan Creek Road S	New Sidewalks or Sidewalk Infill	City of Salem	**

*Estimated cost for intersection improvements represents a placeholder cost, pending further analysis, engineering, and design to determine appropriate treatments. **The estimated cost for these projects is already included in the Street System Element.

Table 8-6 Recommended Tier 2 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
South	Kuebler Boulevard S	Skyline Road S	Liberty Road S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Kurth Street S	Cunningham Lane S	Browning Avenue S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Liberty Road S	Urban Growth Boundary	Davis Road S	New Sidewalks or Sidewalk Infill	Marion County	**
South	Lone Oak Road SE	Mildred Lane S	Kuebler Boulevard S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Madrona Avenue S	Croisan Creek Road S	Crestview Drive S	New Sidewalks or Sidewalk Infill	City of Salem	\$757,000
South	Mildred Lane SE	Lone Oak Road SE	Sunnyside Road SE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
South	Owens Street S/SE	River Road S	Liberty Road S	New Sidewalks or Sidewalk Infill	City of Salem	\$242,000
South	River Road S	Acacia Drive S	Minto Island Road S	New Sidewalks or Sidewalk Infill	City of Salem	\$583,000
South	River Road S	Homestead Road S	Acacia Drive S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	River Road S/Railroad Corridor Path	Minto Island Road S	Bush Street S	Shared Use Path	City of Salem	\$1,222,000
South	Rural Avenue SE	Summer Street SE	12th Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$251,000
South	Rural Avenue SE	John Street S	Commercial Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$323,000
South	Rural Avenue SE/Hoyt Connector	Hoyt Street SE	Rural Avenue SE	Shared Use Path	City of Salem	\$144,000
South	Salem Heights Avenue SE	6th Avenue S	Commercial Street SE	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Sunnyside Road SE	Rees Hill Road SE	Cayuse Circle SE	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Sunnyside Road SE	Mildred Lane SE	Boone Road SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	22nd Street SE	McGilchrist Street SE	Hoyt Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$144,000
Southeast	Battle Creek Road SE	Boone Road SE	Kuebler Boulevard SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Commercial Street SE	Robins Lane SE	Fabry Road SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Connecticut Street SE	Rickey Street SE	Witten Street SE	New Sidewalks or Sidewalk Infill	Marion County	**
Southeast	Fabry Road SE	Commercial Street SE	Reed Lane SE	New Sidewalks or Sidewalk Infill	City of Salem	\$322,000
Southeast	Hilfiker Lane SE/Hillrose Street SE	Commercial Street SE	Pringle Road SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Madrona Avenue SE	Pringle Road SE	25th Street SE	New Sidewalks or Sidewalk Infill	City of Salem	**

*Estimated cost for intersection improvements represents a placeholder cost, pending further analysis, engineering, and design to determine appropriate treatments. **The estimated cost for these projects is already included in the Street System Element.

Table 8-6 Recommended Tier 2 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
Southeast	Miller Elementary/Bill Riegel Park Connector	Campbell Drive SE	46th Place SE	Shared Use Path	City of Salem, Marion County, ODOT	\$1,973,000
Southeast	Pringle Road SE	McGilchrist Street SE	Hoyt Street SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	State Street	Lancaster Drive NE/SE	Cordon Road NE/SE	New Sidewalks or Sidewalk Infill	Marion County	**
Southeast	Turner Road SE/Airport Road SE	Airway Drive SE	State Street	New Sidewalks or Sidewalk Infill	City of Salem	**
West	BPA Corridor Trail	Urban Growth Boundary	Gehlar Road NW	Shared Use Path	City of Salem	\$414,000
West	BPA Corridor Trail	Glen Creek Road NW	Michigan City Lane NW	Shared Use Path	City of Salem	\$1,861,000
West	Chandler Park Path	Eastern Terminus of Ptarmigan	Lupin Lane NW	Shared Use Path	City of Salem	\$272,000
West	Chapman Hill Elementary Connector	Doaks Ferry Road NW	Chapman Hill Drive NW	Shared Use Path	City of Salem, Salem-Keizer School Dist.	\$145,000
West	Doaks Ferry Road NW	Glen Creek Road NW	Orchard Heights Road NW	New Sidewalks or Sidewalk Infill	City of Salem, Polk County	\$564,000
West	Donkey Trail	East of Cascade Drive NW	Piedmont Avenue NW	Shared Use Path	City of Salem	\$53,000
West	Harritt Drive NW	SE Corner of Harritt Loop NW	Woodhill Street NW	New Sidewalks or Sidewalk Infill	City of Salem	\$106,000
West	Linwood Street NW	Orchard Heights Road NW	South of Goldcrest Avenue NW	New Sidewalks or Sidewalk Infill	City of Salem	**
West	Marine Drive NW Path	Glen Creek Road NW	Riverbend Road NW	Shared Use Path	City of Salem, Polk County	**
West	Parkway Drive NW	Glen Creek Road NW	Orchard Heights Road NW	New Sidewalks or Sidewalk Infill	City of Salem	**
West	Riverbend Road NW	Wallace Road NW	Urban Growth Boundary	New Sidewalks or Sidewalk Infill	City of Salem	**
West	Taybin Road NW/ Cornucopia Street NW	Wallace Road NW	Glen Creek Road NW	New Sidewalks or Sidewalk Infill	City of Salem	\$255,000
West	West Salem High School Connector	Titan Drive NW	Doaks Ferry Road NW	Shared Use Path	City of Salem, Salem-Keizer School Dist.	\$370,000
West	Wintergreen Avenue NW/ Riverbend Road NW	Brush College Road NW	Wallace Road NW	New Sidewalks or Sidewalk Infill	City of Salem	\$485,000

*Estimated cost for intersection improvements represents a placeholder cost, pending further analysis, engineering, and design to determine appropriate treatments. **The estimated cost for these projects is already included in the Street System Element.

Table 8-7 Recommended Tier 3 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
Downtown	12th Street NE	Capitol Street NE	Marion Street NE	Shared Use Path	City of Salem	***
Downtown	Commercial Street NE at Mill Creek	–	–	Shared Use Path	City of Salem	TBD
Downtown	Cottage Street NE	Marion Street NE	State Street	Curb Extensions	City of Salem	\$1,200,000
Downtown	Front Street NE at Court Street NE	–	–	Shared Use Path	City of Salem	TBD
Downtown	Willamette University Cross-Campus Path	Cottage Street SE	Mill Street SE	Shared Use Path	City of Salem, Willamette University	\$356,000
Northeast	12th Street Promenade Extension	Existing Northern Terminus	D Street NE	Shared Use Path	City of Salem	\$199,000
Northeast	12th Street Promenade/14th Street NE Connector	Olinger Pool	14th Street NE	Shared Use Path	City of Salem, Salem-Keizer School Dist.	\$38,000
Northeast	49th Avenue NE	Kale Street NE	Hazelgreen Road NE	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Astoria Street NE	Portland Road NE	Blossom Drive NE	New Sidewalks or Sidewalk Infill	City of Salem	\$404,000
Northeast	Auburn Road NE	46th Avenue NE	Cordon Road NE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
Northeast	Beverly Avenue NE/Phipps Lane NE	East of Lancaster Drive NE	Carolina Avenue NE	New Sidewalks or Sidewalk Infill	Marion County	\$176,000
Northeast	Blossom Drive NE	East of Astoria Street NE	Portland Road NE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
Northeast	Byram Street NE Connector	Chester Avenue NE	Kathleen Avenue NE	Shared Use Path	City of Salem	\$42,000
Northeast	Chemawa Road NE/Hazelgreen Road NE	Interstate 5	Cordon Road NE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
Northeast	Claggett Creek Greenway	Portland Road NE	Salem Parkway NE	Shared Use Path	City of Salem	TBD
Northeast	Cooley Drive NE	Fisher Road NE	Lancaster Drive NE	New Sidewalks or Sidewalk Infill	Marion County	\$208,000
Northeast	Ellis Avenue NE	Park Avenue NE	Savage Road NE	New Sidewalks or Sidewalk Infill	City of Salem	\$153,000
Northeast	Evergreen Avenue NE	Market Street NE	Sunnyview Road NE	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Florence Avenue NE/Chester Avenue NE	Park Avenue NE	Lansing Avenue NE	New Sidewalks or Sidewalk Infill	City of Salem	\$143,000
Northeast	Front Street NE	Pine Street NE	Riviera Drive NE	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Front Street NE	D Street NE	South Street NE	New Sidewalks or Sidewalk Infill	City of Salem	**

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Table 8-7 Recommended Tier 3 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
Northeast	Geer Line Trail (east segment)	Lancaster Drive NE	Cordon Road NE	Shared Use Path	City of Salem, Marion County	\$998,000
Northeast	Geer Line Trail (west segment, including grade-separated crossing of Interstate 5)	Geer Park	Lancaster Drive NE	Shared Use Path	City of Salem, Marion County, ODOT	\$2,154,000
Northeast	Greencrest Street NE	State Street	Auburn Road NE	New Sidewalks or Sidewalk Infill	Marion County	**
Northeast	Harold Drive NE	Silverton Road NE	Southern Terminus	New Sidewalks or Sidewalk Infill	Marion County	\$97,000
Northeast	Harold Drive NE	Existing Southern Terminus	Devonshire Avenue NE	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Indian School Road NE/ Blossom Drive NE	Niles Avenue NE	Chemawa Road NE	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Kale Street NE	Portland Road NE	Cordon Road NE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
Northeast	Keen Avenue NE	Lansing Avenue NE	Byram Street NE	New Sidewalks or Sidewalk Infill	City of Salem	\$155,000
Northeast	Kuebler Boulevard SE/ Cordon Road NE/SE	Interstate 5	Hazelgreen Road NE	Shared Use Path	City of Salem, Marion County	**
Northeast	Lana Avenue NE	Portland Road NE	Silverton Road NE	New Sidewalks or Sidewalk Infill	City of Salem	\$255,000
Northeast	Livingston Park Path	Keen Avenue NE	Hawthorne Avenue NE	Shared Use Path	City of Salem	\$95,000
Northeast	Livingston Park/Fisher Road NE Connector (east segment, including grade-separated crossing of Interstate 5)	Livingston Park	Fisher Road NE	Shared Use Path	City of Salem, ODOT	\$2,266,000
Northeast	Livingston Park/Fisher Road NE Connector (west segment)	Livingston Park	Future grade-separated crossing of Interstate 5	Shared Use Path	City of Salem	\$29,000
Northeast	Maple Avenue NE	Hickory Street NE	Bliiler Avenue NE	New Sidewalks or Sidewalk Infill	City of Salem	\$233,000
Northeast	Mill Creek Path (downtown)	Willamette River	12th Street NE	Shared Use Path	City of Salem	\$1,072,000
Northeast	Northgate Avenue NE/ Wooddale Avenue NE Connector	Northgate Avenue NE	Wooddale Avenue NE	Shared Use Path	City of Salem	\$40,000
Northeast	Park Avenue NE	Center Street NE	D Street NE	New Sidewalks or Sidewalk Infill	City of Salem	**
Northeast	Portland Road NE	North of Lancaster Drive NE	Hazelgreen Road NE	New Sidewalks or Sidewalk Infill	ODOT	\$618,000
Northeast	Reimann Street NE	Jade Street NE	Hayesville Drive NE	New Sidewalks or Sidewalk Infill	Marion County	\$231,000

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Table 8-7 Recommended Tier 3 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
Northeast	Riverfront Path	Union Street NE	Delmar Drive N	Shared Use Path	City of Salem	\$34,690,000
Northeast	Salem Industrial Drive NE	Western Terminus	Cherry Avenue NE	New Sidewalks or Sidewalk Infill	City of Salem	\$194,000
Northeast	Satter Drive NE	Western Terminus	45th Avenue NE	New Sidewalks or Sidewalk Infill	Marion County	\$117,000
Northeast	Satter Drive NE	45th Avenue NE	Trapper Drive NE	New Sidewalks or Sidewalk Infill	Marion County	\$494,000
Northeast	Ward Drive NE	Hearth Drive NE	Cordon Road NE	New Sidewalks or Sidewalk Infill	City of Salem	\$112,000
Northeast	Weathers Street NE	Clay Street NE	Eastern Terminus	New Sidewalks or Sidewalk Infill	City of Salem	\$307,000
Northeast	Weathers Street NE/45th Avenue NE Connector	Eastern Terminus of Weathers Street NW	45th Avenue NE	Shared Use Path	City of Salem	\$43,000
Northeast	Yoshikai/Adam Stephens Path	Plow Court NE/Log Drive NE	Jade Street NE	Shared Use Path	City of Salem, Salem-Keizer School District	\$155,000
South	Acacia Drive S	River Road S	Sumac Drive S	New Sidewalks or Sidewalk Infill	City of Salem	\$93,000
South	Bush's Pasture Park/Waller Street SE Connector	Bush's Pasture Park Path	Western Terminus of Waller Street SE	Shared Use Path	City of Salem	\$400,000
South	Cottage Street SE	Vista Avenue SE	Fairview Avenue SE	New Sidewalks or Sidewalk Infill	City of Salem	\$105,000
South	Crestview Drive S	Southern Terminus	Madrona Avenue S	New Sidewalks or Sidewalk Infill	City of Salem	\$100,000
South	Crestview Drive S	Salem Heights Avenue S	Schurman Road S	New Sidewalks or Sidewalk Infill	City of Salem	\$491,000
South	Croisan Creek Road S	Heath Street S	River Road S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Croisan Creek Road S	Skyline Road S	Kuebler Road S	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
South	Croisan Ridge Way S	Existing Northern Terminus	Heath Street S	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
South	Croisan Scenic Way S	Spring Street S	North of Roberta Avenue S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Croisan Scenic Way S	North of Roberta Avenue S	South of Hillwood Court S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Croisan Scenic Way S	North of Brock Loop S	Spring Street S	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
South	Cunningham Lane Park Connector	Croisan Scenic Way S	Cunningham Lane S	Shared Use Path	City of Salem	\$62,000

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Table 8-7 Recommended Tier 3 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
South	Davis Road S	Skyline Road S	Liberty Road S	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
South	Deer Run Avenue S	Viewcrest Road S	Northern Terminus	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
South	Ewald Avenue SE	Helen Avenue SE	11th Avenue SE	New Sidewalks or Sidewalk Infill	City of Salem	\$90,000
South	Fairmount Park Connector	Crestview Drive S	Rural Avenue S	Shared Use Path	City of Salem	\$208,000
South	Felton Street S/Winola Avenue S Connector	Felton Street S	Southern Terminus of Winola Avenue S	Shared Use Path	City of Salem	\$87,000
South	Fern Drive S	Heath Street S	River Road S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Fircrest Park Connector	Luradel Avenue S	Crestview Drive S	Shared Use Path	City of Salem	\$126,000
South	Future Unnamed Street	Heath Street S	Homestead Road S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Hansen Avenue S	Acacia Drive S	Crestview Drive S	New Sidewalks or Sidewalk Infill	City of Salem	\$235,000
South	Heath Street S	Deer Run	Existing Western Terminus	New Sidewalks or Sidewalk Infill	Marion County	**
South	Holder Lane SE	Liberty Road S	Lone Oak Road SE	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Homestead Road S	Southern Terminus	River Road S	New Sidewalks or Sidewalk Infill	City of Salem	\$193,000
South	Hoyt Street S	Skopil Avenue S	Commercial Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$229,000
South	Hrubetz Road SE	Liberty Road S	Lone Oak Road SE	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Judson Middle School/Woodmansee Connector	Lone Oak Road SE	Woodmansee Street SE	Shared Use Path	City of Salem, Salem-Keizer School Dist.	\$339,000
South	Lone Oak Road SE	Trillium Lane SE	Muirfield Avenue SE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
South	Lone Oak Road SE/Rees Hill Road SE	Trillium Lane SE	Sunnyside Road SE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
South	Madrona Avenue SE	Peck Avenue SE	12th Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$140,000
South	Madrona Avenue SE	Crestview Drive S	Commercial Street SE	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Marietta Street SE	Coloma Drive SE	Lone Oak Road SE	New Sidewalks or Sidewalk Infill	City of Salem	\$100,000
South	Marietta Street SE Connector	2nd Way SE	Pullman Court SE	Shared Use Path	City of Salem	\$68,000
South	Mildred Lane SE	Skyline Road S	Liberty Road S	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**

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Table 8-7 Recommended Tier 3 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
South	Neelon Drive S	Browning Avenue S	South of Garlock Avenue S	New Sidewalks or Sidewalk Infill	City of Salem	\$102,000
South	Oakhill Avenue SE	Commercial Street SE	Courtney Lane SE	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Peck Avenue SE/ Morningside Street SE/ Hulsey Avenue SE/ Norwood Street SE	Harris Avenue SE	Clark Creek Park	New Sidewalks or Sidewalk Infill	City of Salem	\$629,000
South	River Road S	Urban Growth Boundary	Homestead Road S	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
South	Rural Avenue S	Commercial Street SE	Summer Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$252,000
South	Saginaw Street S	Lincoln Street S	Rural Avenue S	New Sidewalks or Sidewalk Infill	City of Salem	\$229,000
South	Salem Heights Avenue S	Sunridge Drive S	6th Avenue S	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Skyline Road S	Mildred Lane SE	North of Maplewood Drive S	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
South	Sunnyside Road SE	Urban Growth Boundary	Rees Hill Road SE	New Sidewalks or Sidewalk Infill	City of Salem	**
South	Woodmansee Street SE	Western Terminus	Sunnyside Road SE	New Sidewalks or Sidewalk Infill	City of Salem	\$65,000
Southeast	12th Street SE	Hilfiker Lane SE	Albert Drive SE	New Sidewalks or Sidewalk Infill	City of Salem	\$184,000
Southeast	23rd Street SE	McGilchrist Street SE	Hoyt Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$144,000
Southeast	23rd Street SE	Mission Street SE	Hyde Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$148,000
Southeast	25th Street SE	Turner Road SE	Madrona Avenue SE	Shared Use Path	City of Salem	**
Southeast	27th Avenue SE/Marietta Street SE	Kuebler Boulevard SE	West of Fairview Industrial Drive SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	36th Avenue SE	Wiltsey Road SE	Kuebler Boulevard SE	New Sidewalks or Sidewalk Infill	Marion County	**
Southeast	Airway Drive SE	South of Madrona Avenue SE	Madrona Avenue SE	New Sidewalks or Sidewalk Infill	City of Salem	\$623,000
Southeast	Aumsville Highway SE	Urban Growth Boundary	North of Deer Park Drive SE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	\$797,000
Southeast	Battle Creek Road SE	Wiltsey Road SE	Boone Road SE	New Sidewalks or Sidewalk Infill	City of Salem, Marion County	**
Southeast	Baxter Road SE	Sunnyside Road SE	Eastern Terminus	New Sidewalks or Sidewalk Infill	City of Salem	**

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Table 8-7 Recommended Tier 3 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
Southeast	Boone Road SE	Sunnyside Road SE	Commercial Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$239,000
Southeast	Boone Road SE/27th Avenue SE	Battle Creek Road SE	Kuebler Boulevard SE	New Sidewalks or Sidewalk Infill	City of Salem	\$411,000
Southeast	Boone Road SE/Stroh Lane SE/Barnes Road SE	Commercial Street SE	Reed Lane SE	New Sidewalks or Sidewalk Infill	City of Salem	\$746,000
Southeast	Brentwood Drive SE	East of Genesis Street SE	Battle Creek Road SE	New Sidewalks or Sidewalk Infill	Marion County	**
Southeast	Cascades Gateway Park	Turner Road SE	Eastern Terminus	New Sidewalks or Sidewalk Infill	City of Salem	\$347,000
Southeast	Cascades Gateway Park/ SE Salem Connector (east segment)	East of Interstate 5	Lancaster Drive SE	Shared Use Path	City of Salem	\$331,000
Southeast	Cascades Gateway Park/ SE Salem Connector (west segment, including grade-separated crossing of Interstate 5)	Cascades Gateway Park	East of Interstate 5	Shared Use Path	City of Salem	\$1,962,000
Southeast	Crowley Avenue SE/ Chaparral Drive SE	Eastern Terminus	Anneka Loop SE	New Sidewalks or Sidewalk Infill	City of Salem	\$121,000
Southeast	Deer Park Drive SE	Turner Road SE	Aumsville Highway SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Electric Street SE	East of 23rd Street SE	25th Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$736,000
Southeast	Fabry Road SE	Reed Lane SE	Battle Creek Road SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Future Path Along Unnamed Street #3	Future Unnamed Street #2	Old Strong Road SE	Shared Use Path	City of Salem	\$142,000
Southeast	Future Path Along Unnamed Street #4	Pringle Road SE	Future Unnamed Street #1	Shared Use Path	City of Salem	\$480,000
Southeast	Future Unnamed Street	Madrona Avenue SE	22nd Street SE	New Sidewalks or Sidewalk Infill	City of Salem	\$644,000
Southeast	Future Unnamed Street	Turner Road SE	Lancaster Drive SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Gaffin Road SE	Urban Growth Boundary (south)	Urban Growth Boundary (north)	New Sidewalks or Sidewalk Infill	Marion County	**
Southeast	Gath Road SE/Turner Road SE	Urban Growth Boundary	Airway Drive SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Genesis Street SE	Robins Lane SE	Northern Terminus	New Sidewalks or Sidewalk Infill	City of Salem	\$143,000
Southeast	Interstate 5 Path (including grade-separated crossing of Highway 22)	South of Highway 22	South of Market Street NE	Shared Use Path	City of Salem, Marion County, ODOT	\$3,369,000
Southeast	Kashmir Way SE	36th Avenue SE	Eastland Avenue SE	New Sidewalks or Sidewalk Infill	Marion County	\$311,000

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Table 8-7 Recommended Tier 3 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
Southeast	Landon Street SE/ Tanglewood Way SE Connector (including grade-separated crossing of Interstate 5)	Landon Street SE	Serenity Drive SE	Shared Use Path	City of Salem, ODOT	\$2,070,000
Southeast	Mary Eyre Elementary Connector	Jenah Street SE	Buffalo Drive SE	Shared Use Path	City of Salem, Marion County, Salem-Keizer School Dist.	\$87,000
Southeast	Mill Creek Path (including grade-separated railroad crossing)	Kashmir Way SE	Turner Road SE	Shared Use Path	City of Salem, Marion County	\$2,162,000
Southeast	Mistymorning Avenue SE/Genesis Street SE Connector	Mistymorning Avenue SE	Genesis Street SE	Shared Use Path	City of Salem	\$75,000
Southeast	Oxford Street SE/14th Street SE	22nd Street SE	Wilbur Street SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Path Along Future Unnamed Street #1	Reed Road SE	West of Reed Road SE	Shared Use Path	City of Salem	**
Southeast	Path Along Future Unnamed Street #2	Reed Road SE	West of Reed Road SE	Shared Use Path	City of Salem	**
Southeast	Pikes Pass Street SE	South of Soapstone Avenue SE	Mistymorning Avenue SE	New Sidewalks or Sidewalk Infill	City of Salem	\$194,000
Southeast	Reed Lane SE	Soapstone Avenue SE	Fabry Road SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Reed Road SE	Baxter Road SE	Barnes Road SE	New Sidewalks or Sidewalk Infill	City of Salem	\$262,000
Southeast	Reed Road SE	Wiltsey Road SE	Soapstone Avenue SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Reed Lane SE/Boone Road SE	Barnes Road SE	Battle Creek Road SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Saddle Club Street SE	Lancaster Drive SE	Campbell Drive SE	New Sidewalks or Sidewalk Infill	City of Salem	\$460,000
Southeast	Strong Road SE	Marietta Street SE	Reed Road SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Textrum Street SE	Boone Road SE	South of Royvonne Avenue SE	New Sidewalks or Sidewalk Infill	City of Salem	\$131,000
Southeast	Textrum Street SE/Crowley Avenue SE Connector	Textrum Street SE	Crowley Avenue SE	Shared Use Path	City of Salem	\$162,000
Southeast	Turner Road SE	Urban Growth Boundary	Gath Road SE	New Sidewalks or Sidewalk Infill	City of Salem	**
Southeast	Wiltsey Road SE	Battle Creek Road SE	36th Avenue SE	New Sidewalks or Sidewalk Infill	Marion County	**
Southeast	Wiltsey Road SE	Sunnyside Road SE	Reed Lane SE	New Sidewalks or Sidewalk Infill	City of Salem	**

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Table 8-7 Recommended Tier 3 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
West	35th Avenue NW	Osage Drive NW	Orchard Heights Road NW	New Sidewalks or Sidewalk Infill	City of Salem, Polk County	**
West	35th Avenue NW/Glen Creek Road NW	Existing Northern Terminus of 35th Avenue NW	East of 31st Court NW	New Sidewalks or Sidewalk Infill	Polk County	\$561,000
West	37th Avenue NW	Urban Growth Boundary	Orchard Heights Road NW	New Sidewalks or Sidewalk Infill	Polk County	**
West	5th Drive NW	Taybin Road NW	Cameo Street NW	New Sidewalks or Sidewalk Infill	City of Salem	\$91,000
West	Audubon Avenue NW Trail	Edgewater Street NW	Cascade Drive NW	Shared Use Path	City of Salem	\$244,000
West	Brush College Road NW	Urban Growth Boundary	Conner Street NW	New Sidewalks or Sidewalk Infill	City of Salem, Polk County	
West	Christina Street NW	West of Redfir Court NW	Doaks Ferry Road NW	New Sidewalks or Sidewalk Infill	City of Salem	\$143,000
West	Christina Street NW	West of Elliot Street NW	Cherry Blossom Drive NW	New Sidewalks or Sidewalk Infill	City of Salem	\$154,000
West	Christina Street NW	East of Cherry Blossom Drive NW	West of Redfir Court NW	New Sidewalks or Sidewalk Infill	City of Salem	**
West	Christina Street NW	West of Elliot Street NW	Michigan City Lane NW	New Sidewalks or Sidewalk Infill	City of Salem	**
West	Crestbrook Drive NW/Dalke Ridge Drive NW Connector	Crestbrook Drive NW	Dalke Ridge Drive NW	Shared Use Path	City of Salem	\$64,000
West	Doaks Ferry Road NW	Urban Growth Boundary	Glen Creek Road NW	New Sidewalks or Sidewalk Infill	City of Salem	**
West	Eola Drive NW	Edgewater Street NW	Cascade Drive NW	New Sidewalks or Sidewalk Infill	City of Salem	**
West	Eola Drive NW	Urban Growth Boundary	Eagle Ridge Avenue NW	New Sidewalks or Sidewalk Infill	City of Salem, Polk County	**
West	Future Unnamed Street	37th Avenue NW	35th Avenue NW	New Sidewalks or Sidewalk Infill	Polk County	**
West	Grice Hill Road NW	Orchard Heights Road NW	Urban Growth Boundary	New Sidewalks or Sidewalk Infill	Polk County	\$291,000
West	Hidden Valley Drive NW	34th Avenue NW	Doaks Ferry Road NW	New Sidewalks or Sidewalk Infill	City of Salem	\$190,000
West	Hillcrest Drive NW/Altimont Drive NW	Kingwood Drive NW	East of Cascade Drive NW	New Sidewalks or Sidewalk Infill	City of Salem	\$211,000
West	Islander Avenue NW	Horseclover Drive NW	West Meadows Drive NW	New Sidewalks or Sidewalk Infill	City of Salem	**

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Table 8-7 Recommended Tier 3 Pedestrian Projects—By Quadrant

Quadrant	Corridor	From	To	Facility Type	Partner Agencies	Estimated Cost*
West	Islander Avenue NW	35th Avenue NW	Horseclover Drive NW	New Sidewalks or Sidewalk Infill	City of Salem	**
West	Kingwood Drive NW	Lowen Street NW	Glen Creek Road NW	New Sidewalks or Sidewalk Infill	City of Salem	\$574,000
West	Landaggard Drive NW	Orchard Heights Road NW	Northern Terminus	New Sidewalks or Sidewalk Infill	Polk County	\$187,000
West	Linwood Street NW	South of Goldcrest Avenue NW	River Bend Road NW	New Sidewalks or Sidewalk Infill	City of Salem	\$298,000
West	Marine Drive NW	Glen Creek Road NW	River Bend Road NW	New Sidewalks or Sidewalk Infill	City of Salem, Polk County	**
West	Michigan City Lane NW	Western Terminus	Wallace Road NW	New Sidewalks or Sidewalk Infill	Polk County	**
West	Mousebird Lane NW	Royal Crown Avenue NW	Macaw Street NW	New Sidewalks or Sidewalk Infill	City of Salem	**
West	Orchard Heights Road NW	Urban Growth Boundary	Future Roadway Alignment West of Grice Hill Road NW	New Sidewalks or Sidewalk Infill	Polk County	**
West	Orchard Heights Road NW	West of Titan Drive NW	Parkway Drive NW	New Sidewalks or Sidewalk Infill	City of Salem, Polk County	**
West	Orchard Heights Road NW	Existing Roadway Alignment West of Grice Hill Road NW	Grice Hill Road NW	New Sidewalks or Sidewalk Infill	City of Salem	**
West	Orchard Heights Road NW	Grice Hill Road NW	Existing Roadway Alignment East of Grice Hill Road NW	New Sidewalks or Sidewalk Infill	City of Salem	**
West	Patterson Street NW Trail	9th Street NW	South of Glen Creek Road NW	Shared Use Path	City of Salem	\$120,000
West	Ptarmigan Street NW	East of Moonbeam Court NW	Eastern Terminus	New Sidewalks or Sidewalk Infill	City of Salem	\$128,000
West	Rosemont Avenue NW	Cascade Drive NW	Glen Creek Road NW	New Sidewalks or Sidewalk Infill	City of Salem	\$242,000
West	Titan Drive NW	North of Old Farm Avenue NW	Orchard Heights Road NW	New Sidewalks or Sidewalk Infill	City of Salem	\$184,000
West	Vickery/Colorado Way/ Drive NW	Urban Growth Boundary	Eastern Terminus	New Sidewalks or Sidewalk Infill	Polk County	**

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Transit System Element

The Salem Area Mass Transit District, formed in 1979 as a special service district, provides transit and paratransit services to Salem, Keizer, Marion, and Polk County and operates Monday through Friday. The fixed route bus service, referred to as Cherriots, provides service within Salem and Keizer with connections to Wilsonville and Grand Ronde. Chemeketa Area Regional Transportation System (CARTS), which is also part of the Salem Area Mass Transit District, provides service to rural communities in Marion and Polk counties. Other services provided by the Salem Area Mass Transit District include the RED Line shopper and Dial-a-Ride service, CherryLift service, general public demand response service (connector), travel training, and rideshare information including carpool and vanpool matching.

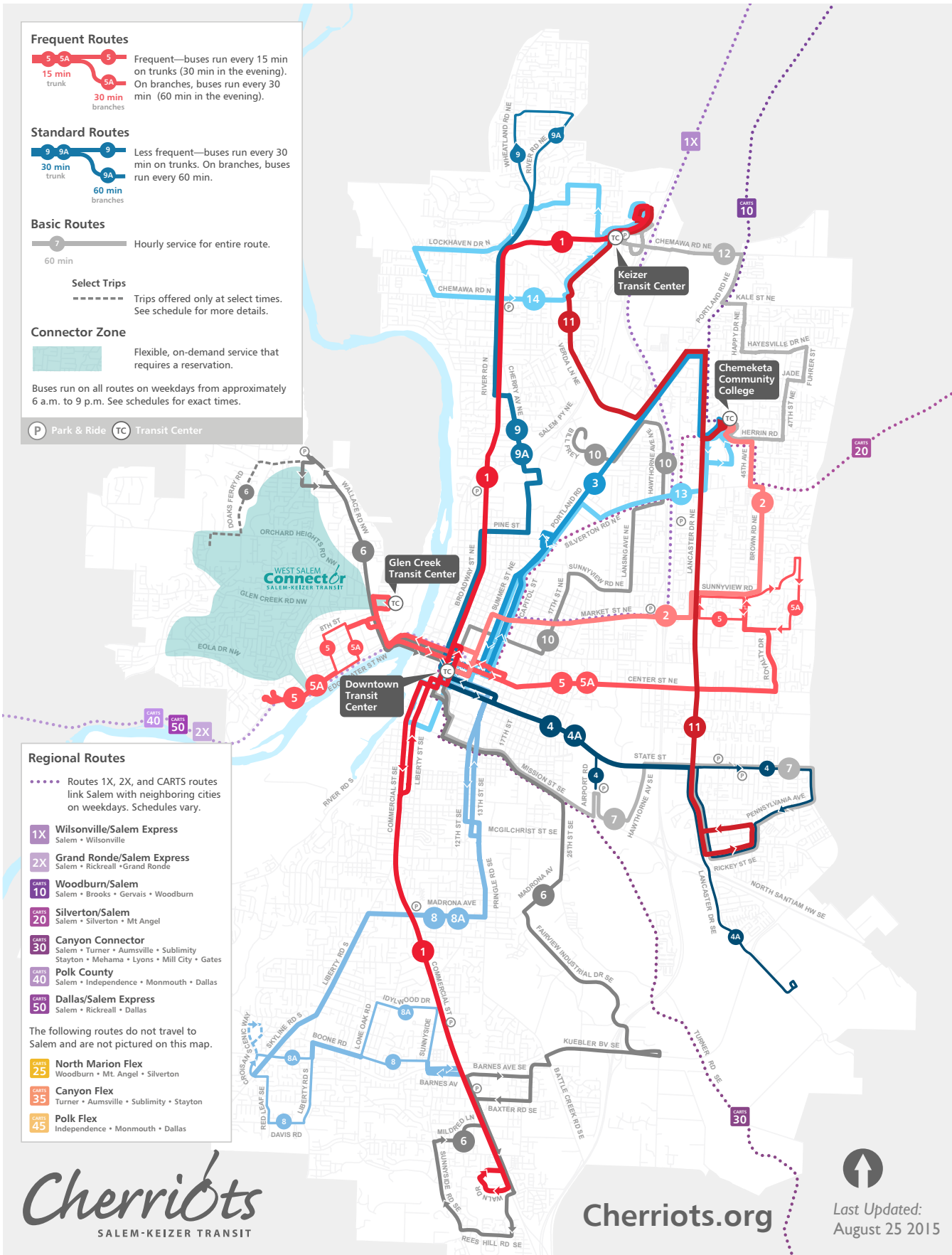
The District is governed by a seven-member board of directors elected by residents in each of seven sub-districts. The seven-member Board provides the policy direction for transit operations serving more than 225,000 residents in Salem and Keizer. Cherriots provides about 3.5 million rides a year, CARTS provides about 120,000 rides, and CherryLift services provide over 100,000 rides.

Map 9-1 illustrates the Cherriots Bus Routes. It has a fixed route structure with most routes converging at the Cherriots Downtown Transit Center at Courthouse Square, located in downtown Salem. Over 10 million passenger miles are traveled annually, with a total ridership of 3,322,655 for fiscal year 2013-14.

The Salem Area Mass Transit District conducted a Comprehensive Service Analysis in 2014. As a result of this analysis, the Board of Directors adopted a policy to allocate resources 75 percent to productivity routes designed to serve the greatest demand, and 25 percent to coverage routes designed to provide access to a broader geographic area. The use of transit centers will facilitate the effectiveness of this type of network allowing for convenient connections between productivity routes and coverage routes.

Major Transit Stops

Major transit stops identified in the system include the downtown Cherriots Transit Center at Courthouse Square, Lancaster Mall, Chemeketa Community College, and the Keizer Transit Center. Major stops are served by more than one bus route and have a high number of boardings and alightings. Land uses located near major transit stops should be designed to support transit and pedestrian uses.



Cherriots
 SALEM-KEIZER TRANSIT

Cherriots.org

Last Updated:
 August 25 2015

Planning for transit services is primarily the responsibility of the Salem Area Mass Transit District. The City of Salem plays a supporting role by facilitating access to transit services. The State Transportation Planning Rule requires that all jurisdictions place a public transportation

element in their respective transportation system plans. The Transit System Element of the *Salem Transportation System Plan* is written to be consistent with the regional policies and specific to the needs and responsibilities of the City of Salem.

Goal, Objectives, and Policies

The City of Salem has the following goal, objectives, and policies for improving the effectiveness of transit services within the Salem Urban Area:

GOAL: A public mass transit system that provides convenient and accessible transit services to the citizens of the Salem Urban Area.

OBJECTIVE NO. 1

Ensure that transit services are accessible to Salem Urban Area residences and businesses.

Policy 1.1 Routing of Transit Services

The City shall encourage transit services be routed in a manner that, where practical, provides service coverage within a quarter-mile walking distance of Salem Urban Area residences and businesses.

Policy 1.2 Transit-supportive Land Uses

To encourage accessibility and increased ridership, the City shall encourage future transit-supportive land uses, such as mixed uses, multiple family, and employment centers, be located on or near transit corridors. Likewise, appropriate transit services should be made available to existing transit-supportive land uses.

Policy 1.3 Transit-supportive Urban Design

Through its zoning and development regulations, the City shall facilitate accessibility to transit services through transit-supportive streetscape, subdivision, and site design requirements that promote pedestrian connectivity, convenience, and safety.

Policy 1.4 Transit-supportive Street System Design

The City shall include the consideration of transit operations in the design and operation of street infrastructure in identified transit-oriented centers and corridors, as well as in other appropriate locations.

Policy 1.5 Transit Services Accessible to the Transportation Disadvantaged

The City shall support the continued development and implementation of accessible fixed-route and appropriate complementary paratransit services.

Policy 1.6 Intermodal Connectivity

The City of Salem shall encourage connectivity between different travel modes. Transit stops, transfer centers, and park-and-ride facilities should be accessible by pedestrian, bicycle, bus, and automobile travel. Priority should be given to completing the sidewalk network within a quarter-mile of high frequency corridors and at all transit stops. Intercity passenger bus, aviation, and rail terminals should be accessible by transit services.

Policy 1.7 Enhanced Access Opportunities for the Transportation Disadvantaged

The City will support the efforts made by the Salem Area Mass Transit District to increase mobility for transportation disadvantaged citizens, in providing the maximum level of access to social, work, welfare, and resources, including the creation of a customer-oriented, regionally coordinated public transit system that is efficient, effective, and founded on present and future needs.

OBJECTIVE NO. 2

Develop and operate a public transit system that provides both convenient service and travel times that are competitive enough with the automobile to attract increased ridership.

Policy 2.1 Convenient and Competitive Transit Service Routing

The City shall support the development and implementation of the Salem Area Mass Transit District's public transit system.

Policy 2.2 Increased Frequency and Availability of Services

The City shall support attempts made by the Salem Area Mass Transit District to increase the frequency of transit services (shorter headways), extend its hours of operation, and provide weekend service.

Policy 2.3 Transit Facilities

The City shall continue to work with the Salem Area Mass Transit District and other State and local jurisdictions to identify and develop capital facilities for express, connector, and regular transit services, vanpools, and carpools.

Policy 2.4 Express Transit Service

The City shall support the Salem Area Mass Transit District's express transit services to and from outlying park-and-ride facilities and the central core area of Salem.

Policy 2.5 Transit Fares

The City shall support efforts by the Salem Area Mass Transit District to develop and implement transit fares that balance the need for passenger revenues with the goal of maximizing ridership.

Policy 2.6 Transit Priority

The City shall work with the Salem Area Mass Transit District to implement the latest transit priority technology to facilitate transit service efficiency.

OBJECTIVE NO. 3

To mitigate a portion of the traffic pressures expected by regional growth, increase overall daily transit ridership in the Salem Urban Area to the point that at least 25 percent of all work commute trips are completed using transit or travel modes other than the single-occupant vehicle.

Policy 3.1 Transit Ridership Incentives

The City shall support efforts of the Salem Area Mass Transit District to increase commuter transit ridership through voluntary employer-based incentives such as subsidized transit passes and guaranteed ride home programs.

Policy 3.2 Effective Marketing of Transit Services

The City shall support the Regional Rideshare Program and other Transportation Demand Management (TDM) efforts to assist in the effective marketing of transit services to Salem Urban Area residents and businesses.

Policy 3.3 Transit Supportive Parking Policies

The City shall develop and implement parking policies that manage the supply and costs of public parking in a manner that supports increased transit ridership taking into consideration the economic needs of surrounding business districts.

OBJECTIVE NO. 4

A financially stable and adequately funded transit system for the Salem Urban Area.

Policy 4.1 Adequacy of Long-term Funding

The City shall support regional efforts to identify and implement transit funding strategies that will provide adequate, long-term, and stable revenue sources for the public transit system.

Accessibility and Convenience

There are several reasons that more people in the Salem area do not utilize transit services. They range from both the perceived and real issues of accessibility and convenience to the perceived convenience of the automobile that is affected by transportation policy decisions, the supply and cost of parking, and other factors. People will be more likely to use transit if service is within a quarter-mile walking distance of their trip origin and destination. Studies indicate that most people are willing to walk up to a quarter-mile to reach transit service. Providing sidewalks to bus stops, and providing a safe place to await the bus, are both key ingredients to a successful transit system.

A factor in increasing ridership is the availability of direct and rapid transit routes that require few, if any, transfers. In addition, frequency of service can affect ridership. Cherriots implemented a significant change to its routes and schedules in September 2015 to create a more robust system. The new service has increased frequency on busy routes that serve jobs, shopping, and other places people frequent.

In order to increase frequency on busy routes, some routes with low ridership were eliminated. This loss of coverage was particularly significant in many residential neighborhoods in west Salem. Cherriots is seeking alternative service models, such as a general public demand response service, referred to as a connector, to offset this loss of fixed route service.

Park and Ride Lots

An ongoing component of transit service is the continued operation of park-and-ride lots. The major focus of the Cherriots park-and-ride program is to link the park and ride lots to the frequent corridor routes carrying riders from these lots to their work sites. Park-and-ride lots give automobile commuters a place to park or drop off passengers and then ride transit to their destination. Map 9-2 identifies the locations of existing park-and-ride lots within the Salem-Keizer region.

Increasing Mode Share

The City's target, as defined in Objective No. 3, is for at least 25 percent of work trips to be by transit, carpools, vanpools, or by active transportation, such as by bicycling or walking.

This target will only be met if transportation policies that impact mode-choice support walking, biking, and transit. For transit these policies need to aid transit services in becoming more competitive with the automobile in regards to frequency, accessibility, travel time, and convenience. Additionally, land uses and developments need to become more transit-supportive, and a larger share of the commute, school, and shopping trips need to be captured by transit. Finally, the objective will only be met if the Salem Area Mass Transit District is able to secure sufficient funding to expand its services.

The City of Salem can play a role in increasing transit mode share by completing the pedestrian sidewalk system. Other than at park-and-ride lots, every transit trip begins and ends as a pedestrian trip. Without adequate sidewalks, transit riders are less likely to walk to the bus stop. The Pedestrian System Element contains goals, objectives, and policies that are intended to move the City towards completion of the sidewalk system. The City can also encourage greater transit ridership by requiring new development be more transit-oriented in design, working with

the Salem Area Mass Transit District to identify and implement transit friendly improvements at some intersections and corridors, and through continued support of parking fees for downtown employees.

Paratransit Services

Currently there are three types of paratransit services for elderly and persons with disabilities in the Salem Urban Area:

- Cherriots fixed-route accessible (lift-equipped) service;
- Cherry-Lift Dial-a-Ride Service; and
- RED Line—a shopper shuttle and dial-a-ride service available Monday through Friday, from 8:00 a.m. to 6:00 p.m.

These services are provided to assist in meeting the transportation needs of the transportation disadvantaged. The most significant gap in service to the transportation disadvantaged is a result of the lack of service on weekends. This makes it difficult for people who rely on public transportation to get to work or access services two days each week. The City of Salem supports efforts by the Salem Area Mass Transit District to secure funding to institute weekend service.

CHERRIOTS FIXED-ROUTE ACCESSIBLE SERVICE

All of Cherriots buses are lift-equipped and have secured wheelchair positions. The Salem Area Mass Transit District and the City continue to make improvement to the sidewalk network and to transit stops to increase accessibility to the Cherriots fixed-route service.

DIAL-A-RIDE SERVICE

In January 1997, the Salem Area Mass Transit District added its ADA “Cherrylift” program. This program provides Dial-a-Ride services to disabled persons who are unable to use regular Cherriots bus service. Cherrylift gives disabled residents equal access to public transportation.

RED LINE

The RED Line is a dial-a-ride shopper shuttle in the mornings and a dial-a-ride service in the afternoon. It is available Monday through Friday, from 8:00 a.m. to 6:00 p.m. The RED Line is for seniors and people with disabilities. Since all RED Line buses are ADA accessible, anyone with a disability or using a mobility device can ride. The RED Line picks up passengers and takes them to popular stores in their part of town in the mornings and picks up passengers and takes them to all destinations in the afternoons with preference given to medical related trips.

TRILINK

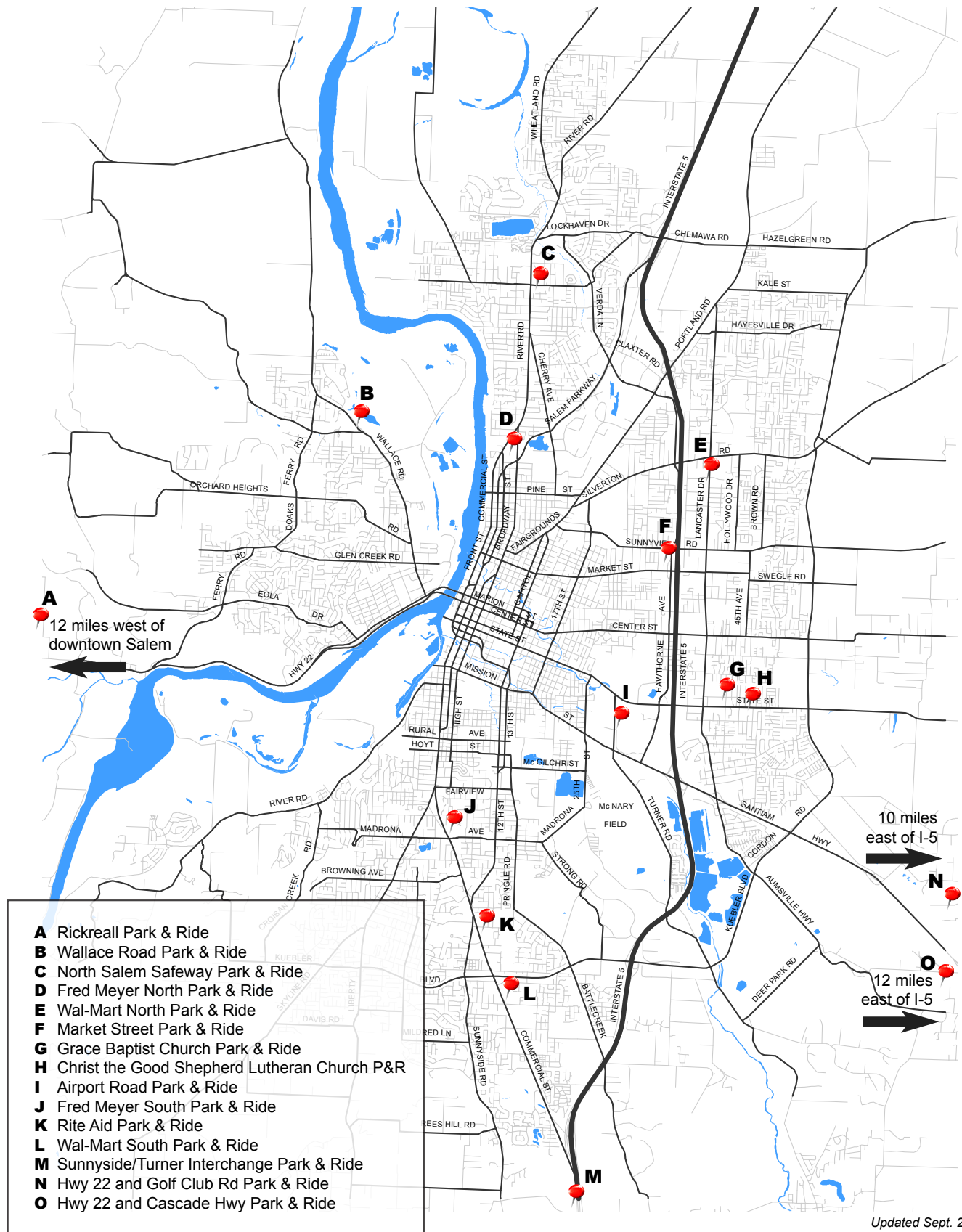
The TripLink Call Center takes reservations for the RED Line, CherryLift and non-emergency medical transportation. TripLink also provides non-emergency medical transportation to eligible Oregon Health Plan Plus (OHP Plus) clients traveling to covered medical services.

Rural Area Transit Service

Chemeketa Area Regional Transportation System (CARTS) provides daily and on-call public transportation service from Salem to rural Marion and Polk counties including the following communities: Woodburn, Gervais, Brooks, Mt. Angel, Silverton, Gates, Mill City, Lyons, Mehama, Stayton, Sublimity, Aumsville, Turner, Dallas, Monmouth, Independence and Rickreall.

Cherriots Route 2X provides daily service between Salem and the Spirit Mountain Casino with

Park & Ride Lots in the Salem-Keizer Area



stops in Rickreall, west Salem and the Downtown Transit Center. Cherriots 2X provides eight inbound and eight outbound trips daily and operates between 6:30 and 12:15 a.m.

SERVICE TO PORTLAND

South Metro Area Regional Transit (SMART) and Cherrriots provide daily express commuter services between Salem and Portland through operation of Route 1X. This route operates eleven northbound and eleven southbound buses daily with stops at the Market Street Park and Ride, the State Capitol, and the Downtown Transit Center.

TRANSIT SYSTEM FUNDING

The Regional Transportation Systems Plan contains the most current information on anticipated revenues and expenditures for the next 20 years. The anticipated needs for operating, maintenance, and capital equipment far exceeds the anticipated revenue.

Operating and Maintenance Revenue	\$594,052,000
Operating and Maintenance Needs	\$856,062,000
Capital Revenue	\$142,364,700
Capital Needs	\$101,890,500



Transportation Demand Management Element

Over the years, our reliance on the private automobile as our primary mode of transportation has grown substantially. Our dependence on the automobile is evidenced by continual increases in automobile ownership, the number of drivers, the length and number of auto trips, and, as a result, a large escalation in vehicle-miles of travel (VMT) per person. This trend in automobile use has led to mounting traffic congestion, greater transportation costs, worsening air quality, and increasing numbers of traffic accidents. In addition, future projections indicate an ever-widening gap between vehicular travel demand and the physical capability of our existing transportation system to provide adequate levels of mobility. By continuing to rely almost totally on the automobile for our daily transportation needs, we decrease our ability to get where we want to go as well as the overall quality of life in our community.

Adding automobile travel lanes and building new roads has been the traditional approach to addressing increased transportation demand. However, there are several reasons why merely adding additional highway capacity is generally not the most efficient way of meeting our increasing mobility needs. First, highway construction is very expensive and there are limited sources of funding to finance those costs. Second, there are significant constraints associated with constructing new and widened highways, as well as growing citizen resistance to converting more and more of our urban land resource to pavement. Third, the negative impacts on our neighborhoods and communities associated with the disruption, fragmentation, air pollution, and danger that new and expanded highway facilities entail are often unacceptable. Finally, the faster rate of growth of vehicle travel, relative to the increase in the total movement of persons and goods in the region, contributes to a continuing decline in the overall efficiency of our transportation system areawide.

It has become increasingly evident that we can no longer afford—in a variety of ways—to “build our way” out of our transportation problems. As transportation funding becomes more scarce and the cost of constructing new facilities spirals upward, we must seek more creative solutions to meet our future transportation needs. We must make more efficient use of existing facilities and increase their overall capacity to move people and goods, not merely vehicles.

There are effective options to highway construction for relieving traffic congestion and meeting increased travel demand. TDM actions increase system efficiency by managing and reducing automobile trip demand and maximizing the movement of people and goods, not just vehicles. Typical TDM strategies include ridesharing programs, vanpooling, buspooling, promoting

alternative work schedules, travel-time shifting (out of the peak period), teleworking, and increasing bicycle, pedestrian, and transit use.

The City of Salem’s TDM Element provides the framework for reducing vehicular demand on the existing and planned transportation network as a component of developing an efficient and balanced transportation system for Salem. In turn, the City’s TDM Element must be consistent with the regional plan and with State and Federal plans, policies, and mandates.

The goal, objectives, and policies contained in the TDM Element are designed to work toward a reduction in the demand for existing and future transportation infrastructure as a way of reducing traffic congestion. They are also geared toward meeting the long term mobility needs of the citizens and businesses in the Salem Urban Area by promoting an increased variety of viable travel choice options and making the most efficient use of existing transportation capacity and infrastructure.

Policy Framework

In developing the TDM goal for the City, an emphasis was placed on reducing the demands on the current and future transportation network reflecting the goals and objectives of the State Transportation Planning Rule.

In order to achieve the TDM goal, five objectives have been outlined that deal with reducing per capita vehicle miles traveled: reducing transportation demand to and from employment sites and colleges; increasing public awareness of alternatives to the single-occupant-vehicle; providing support for regional TDM efforts; and serving as an institutional model for other agencies and businesses. Each objective is to be met through the implementation of selected policies.

Goal, Objectives, and Policies

The City of Salem has the following goal, objectives, and policies for reducing overall traffic demands on the Salem street system:

GOAL: To reduce the demands placed on the current and future transportation system by the single-occupant vehicle.

OBJECTIVE NO. 1

The City shall work towards reducing per capita vehicle-miles-traveled in the Salem Urban Area by assisting individuals in choosing alternative travel modes.

Policy 1.1 Support the Regional TDM Program

The City of Salem shall continue to be an active supporter of the regional TDM program, including Cherrlots Rideshare.

Policy 1.2 Support Adequate and Consistent Funding for the Regional TDM Program

The City shall work cooperatively with regional partners to identify funding sources to assure the ongoing viability of the regional TDM program.

Policy 1.3 Reduce Per Capita Vehicle-miles-traveled

The implementation of the regional TDM program shall be an important component in any comprehensive strategy to increase more efficient transportation choices and achieve a reduction in the number of per capita vehicle-miles-traveled.

OBJECTIVE NO. 2

Reduce automobile travel demand generated by employment sites, colleges, and schools.

Policy 2.1 Target Marketing Efforts

The City shall support the regional TDM program's efforts to target marketing to groups which have the greatest potential for reducing automobile trips, including employers and employment sites, and commuting students.

Policy 2.2 Increase Marketing to Employers

The City shall support the regional TDM program's efforts to provide assistance to employers in designing and implementing trip reduction plans at their work sites. Trip reduction plans will include strategies to encourage employees to use alternative transportation modes and discourage them from commuting in single-occupant-vehicles. Alternative work hours and teleworking will also be recommended as a way of reducing peak hour congestion.

Policy 2.3 Assist in the Formation of Vanpools

The City shall support the regional TDM program's efforts to provide information on forming and joining vanpools to employers and individuals.

Policy 2.4 Encourage State Agencies to Reduce Peak Hour Travel Demand

The City of Salem shall encourage the State of Oregon to implement, through its agencies, significant measures that will reduce peak hour travel demand on Salem's street system. These measures should include the widespread institution of flexible work schedules, increased carpooling, vanpooling, teleworking, and transit ridership.

OBJECTIVE NO.3

Increase public awareness of alternative transportation modes.

Policy 3.1 Provide Information Through Public Events

The City shall coordinate with the regional TDM program to provide information to the public on transportation options at appropriate public events to raise awareness of available options and to encourage the use of alternative transportation modes.

Policy 3.2 Outreach to Schools and Community Groups

The City shall coordinate with the regional TDM program to conduct outreach activities at schools and community groups to inform them about transportation mode choices and their benefits. Outreach to schools should be designed to educate children about alternative transportation modes before they start driving.

OBJECTIVE NO. 4

Coordinate regional TDM efforts.

Policy 4.1 Work with Other Agencies and Organizations

The City shall work cooperatively with other agencies and organizations to further the goals of TDM and to ensure that efforts are coordinated.

Policy 4.2 Monitor TDM Programs Nationwide

The City shall monitor the effectiveness of trip reduction efforts and programs throughout the nation to determine potential applicability for Salem.

OBJECTIVE NO. 5

The City of Salem shall encourage the use of alternative travel modes by serving as an institutional model for other agencies and businesses in the community.

Policy 5.1 Employee Incentive Programs

The City shall serve as a leading example for other businesses and agencies by maximizing the use of alternative transportation modes among City employees through incentive programs. The City shall provide information on alternative transportation modes and provide incentives for employees who use alternatives to the single-occupant vehicle.

Policy 5.2 Reduce Peak Hour Travel Demand

The City shall implement measures directed at City employees that will reduce peak hour travel demand on Salem's street system. These measures should include the widespread institution of flexible work schedules, increased carpooling, vanpooling, teleworking, and transit ridership.

TDM Programs

REGIONAL TDM PROGRAM—SALEM AREA MASS TRANSIT DISTRICT

The Salem-Keizer Region has supported a regional TDM program since 1994. This program is designed to complement and enhance the efforts that began with the regional rideshare program in 1975 (see below). The regional TDM program and the regional rideshare program are funded by the Salem Keizer Area Transportation Study (SKATS) through the federal Surface Transportation Program as well as local funding sources. The regional TDM and rideshare programs serve as the primary means for implementing the policies of the City's Transportation Demand Management Element.

The City of Salem administered the regional TDM and rideshare programs through the operation of Mid-Valley Rideshare from the late 1970s through 2005. Administration of Mid-Valley Rideshare moved to the Salem Area Mass Transit District in July 2005. Advantages of this move include enhanced funding opportunities for the vanpool program; consolidation of alternative transportation services in one agency; a more regional context for the program; and enhanced privacy protection for the ride-matching database as required under state law. The rideshare program was subsequently rebranded to Cherriots Rideshare.

Major components of the rideshare program include the following:

Employee/Employer and Community Outreach

An essential part of the TDM program is informing employers and employees that there are options available for the commute to work. The overall goal of this service is to coordinate the development and implementation of transportation alternative programs, activities, and incentives in the Salem-Keizer area. Cherriots Rideshare works with over 100 worksites throughout the region to offer Employee Transportation Programs. These programs usually incorporate multiple elements to allow the employer the opportunity to tailor the choices to meet the needs of their employees.

Cherriots Rideshare is continually striving to provide community outreach to promote alternatives to the single-occupant vehicle. This includes education regarding impacts on energy conservation, air quality, and health. Cherriots Rideshare sponsors marketing promotions and produces regular newsletters with a broad distribution. Updated information on Cherriots Rideshare is located at: <http://cherriots.org/en/services/rideshare>.

Emergency Ride Home

Cherriots Rideshare administers a regional emergency ride home program. This program is a popular component of many Employee Transportation Programs. By enrolling in the program, employees who use alternative modes of transportation are eligible for free taxi-rides home in the event of an emergency.

Regional Rideshare

Cherriots Rideshare offers free carpool and vanpool matching through Drive Less Connect, Oregon's online ride-matching tool. This free and easy to use tool allows commuters to register at www.drivelessconnect.com and receive a customized ride-match list of other commuters who have the same travel needs. It helps commuters to either set up new carpools or join an existing carpool or vanpool.

Park & Ride

Park & Ride lots are located throughout Salem and provide convenient locations for drivers to park their cars and meet carpool or vanpool partners. Some Park & Ride lots are also served by local as well as regional transit services and equipped with bike racks and lockers to facilitate the use of bicycles for the last mile of travel. A list of Park & Ride Lots can be found on the Cherriots website.



Parking Management Element

The State Transportation Planning Rule, adopted in 1991, requires that the Metropolitan Planning Organization (MPO) area implement, through its member jurisdictions, a parking plan which:

Achieves a ten percent reduction in the number of parking spaces per capita in the MPO area over the (20-year) planning period. This may be accomplished through a combination of restrictions on development of new parking spaces and requirements that existing parking spaces be redeveloped to other uses. (OAR 660-12-045.(5).(c).(A))

Policy Framework

In developing the parking goal for the City, an emphasis was placed on ensuring the City would have both an adequate supply of parking to meet its needs and an appropriate amount of parking supply reflecting the goals and objectives of the State Transportation Planning Rule. It was also important to state in the goal that the City's parking supply be supportive of the mission of the overall transportation system.

In working to achieve the parking goal, the Parking Management Element has four objectives:

- The role of on-street parking facilities;
- Supply of off-street parking facilities;
- Per capita parking supply reduction; and
- Public parking facility pricing.

Each objective is to be met through the implementation of one or more policies. Upon adoption of the Salem Transportation System Plan, these policies will be reflected in changes, where necessary, to the Salem Revised Code.

Goal, Objectives, and Policies

The City of Salem has the following goal, objectives, and policies designed to better manage overall parking supply of the Salem Urban Area and reduce the amount of parking per capita:

GOAL: To ensure the Salem Urban Area has an appropriate supply of parking facilities that supports the goals and objectives of the Salem Transportation System.

OBJECTIVE NO. 1

The City of Salem will define an appropriate role for on-street parking facilities.

Policy 1.1 Priority of On-street Parking Facilities

The provision of on-street parking is second in priority to the needs of the travel modes (i.e., vehicle, transit, bicycle, pedestrian) using the street right-of-way, except where abutting properties have no ability to provide their own off-street parking or where on-street parking is needed to support an existing business district.

Policy 1.2 On-street Parking Removal

Where practical, existing on-street parking will be removed in preference to widening streets for additional travel lanes. Efforts will be made to mitigate the impact of parking removal in those areas where abutting properties have no ability to provide their own adequate supply of off-street parking or where on-street parking is needed to support an existing business district.

Policy 1.3 Provision of On-street Carpool Parking

In those areas where demand exists, an adequate supply of on-street carpool and vanpool parking spaces shall be provided. The location of these spaces shall have preference over those intended for general purpose on-street parking.

Policy 1.4 Preservation of Residential On-street Parking Supply

To preserve the supply of on-street parking in residential areas for use by local residents and maintain neighborhood livability, the City shall restrict the overflow parking impacts of nearby employment centers, entertainment venues, schools, and other institutions through the availability of a residential parking permit program.

Policy 1.5 Provision of Short-term Parking

Where existing business districts require provision of short-term, on-street parking, such spaces, to the extent possible, shall be located consistently on each block face within a given business district. The total number of spaces will depend on the balance of businesses located within a specified block.

Policy 1.6 Central Salem Pay-to-Park District

To efficiently manage parking resources in this area of high demand and to incorporate market principles, the City will designate a Central Salem Pay-to-Park District within which all on-street parking will be restricted using methods including, but not limited to, pricing or time limitations.

Policy 1.6 will not result in a charge to customers for parking within the Downtown Free Parking District. On-street parking in this area is paid for by business assessments through the Downtown Parking District.

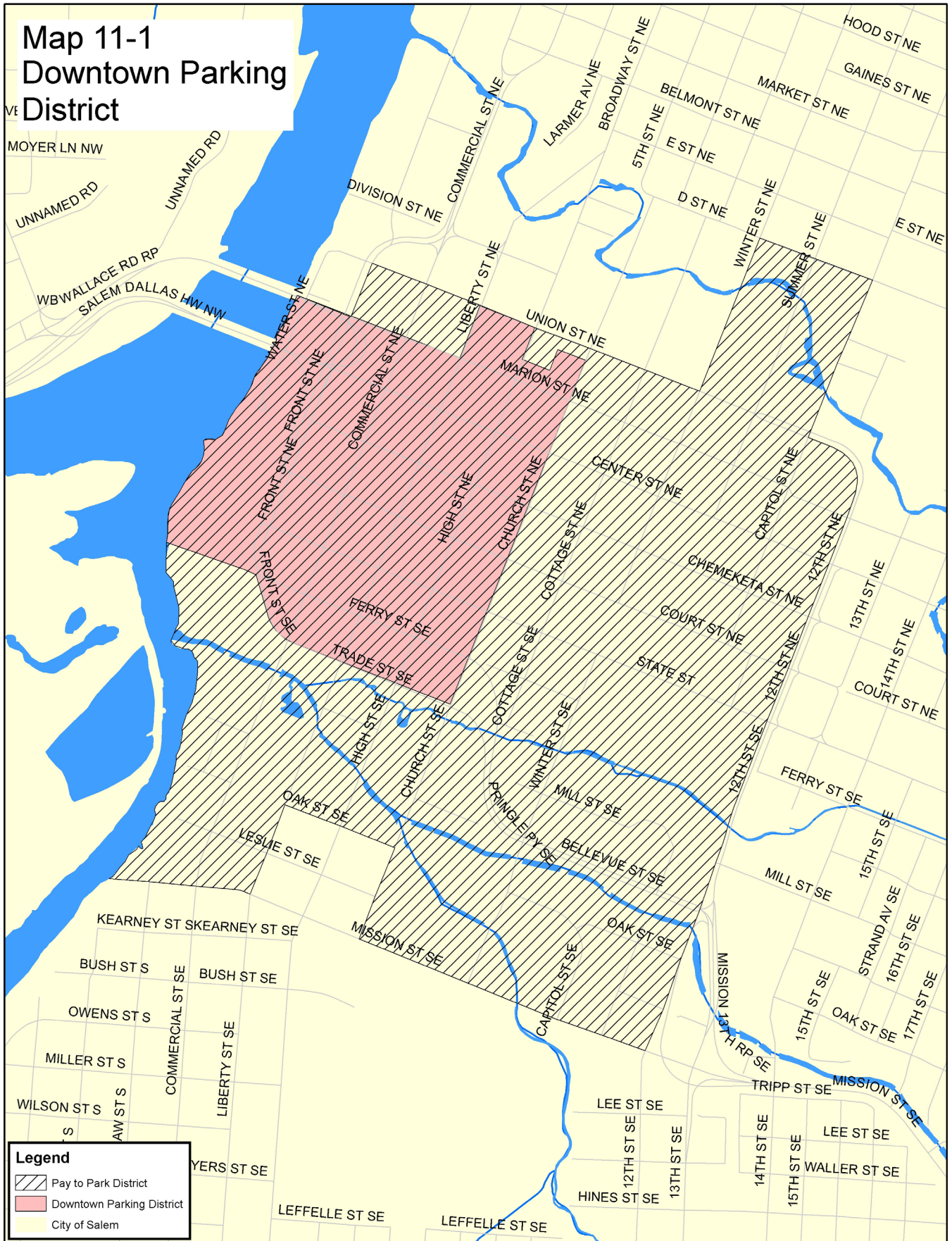
OBJECTIVE NO. 2

The City of Salem shall promote economic vitality and neighborhood livability by requiring an appropriate supply of off-street parking facilities.

Policy 2.1 Provision of an Appropriate Supply of Off-street Parking Facilities

To avoid the negative impacts to surrounding residential neighborhoods or other nearby land uses, new development must provide, or have access to, an appropriate supply of off-street parking.

Map 11-1 Downtown Parking District



Policy 2.2 Avoid Unnecessary Utilization of Lands Through City Code Requirements for Off-street Parking

To avoid the unnecessary utilization of lands for off-street parking, the Salem Revised Code will contain off-street parking supply requirements, specific to individual zoning designations and/or land use types, that require new development to provide:

1. A minimum amount of parking based on the needs of the specific zone or land use type; and
2. A maximum amount of parking allowed based on the needs of the specific zone or land use type.

Policy 2.3 Parking for Major Activity Centers

The location of major activity centers shall be accessible by transit, and shall meet their parking demand through a combination of shared, leased, and new off-street parking facilities.

Policy 2.4 Promoting Alternative Modes

New developments are encouraged to design features or institute programs to promote use of alternative modes of transportation as one way to reduce the needs for off-street parking facilities.

OBJECTIVE NO. 3

To decrease reliance on the SOV and encourage the use of alternative modes of travel, the City of Salem will work towards meeting the State Transportation Planning Rule requirement to reduce the regional parking supply per capita by 10 percent by the Year 2015.

Policy 3.1 Monitoring of New Commercial, Industrial, and Institutional Land Designations in the Comprehensive Plan

To achieve a decrease in the parking supply per capita for commercial, industrial, and institutional lands over the next 20 years, the City of Salem shall carefully monitor how new lands are designated in the Salem Area Comprehensive Plan. Any significant expansion in the supply of commercial, industrial, or institutional designated land shall have its impacts on overall parking supply and Transportation Planning Rule compliance taken into account.

Policy 3.2 Periodic Monitoring of Parking Supply

Every five years the City of Salem shall calculate a parking supply estimate of those lands designated commercial, industrial, and institutional in the Salem Area Comprehensive Plan. The estimate will be used to monitor the City's progress towards meeting the Statewide goal of reducing parking supply per capita by 10 percent over 20 years.

Policy 3.3 Regulate Parking Supply Through Periodic Adjustment of Parking Maximums in the City Code

If, after each five-year parking supply estimate, the Salem Urban Area does not show at least a 2.5 percent reduction in parking supply per capita for that period, the parking maximums found in the Salem Revised Code will be reduced sufficiently to achieve the 2.5 percent.

Policy 3.4 Satisfaction of Off-street Parking Requirements Through Alternative Modes of Transportation

The City of Salem will allow owners and lessees of nonresidential developments to satisfy off-street parking requirements by implementation of a plan to provide for, or increase the use of, alternative modes of transportation as detailed in the Salem Revised Code.

OBJECTIVE NO. 4

To encourage Salem Area workers to carpool, ride transit, and use alternative modes of travel, the City of Salem shall charge for parking at City-owned parking facilities, and encourage other government agencies to do likewise at their facilities.

Policy 4.1 Employee Parking Charges at City-owned Parking Facilities

The City will set prices for City-owned parking facilities in Central Salem to a level that discourages employees from driving alone to work, reflects the relative demand for parking supply, and the cost of constructing, maintaining, and operating such facilities. The City will investigate charging its own employees for parking, or implementing other financial incentives, at its facilities located outside of Central Salem that are on, or near, transit routes.

Policy 4.2 Pricing of Carpool Parking Facilities

In order to encourage the use of carpools and vanpools, the City will offer discounted prices for City-controlled carpool parking facilities.

Policy 4.3 Pricing of Other Publicly-owned Parking Facilities

The City will encourage other Federal, State, regional, and local government agencies to charge their employees for parking at their facilities in Central Salem and at other locations in the City that are on or near transit routes.

Policy 4.4 Pay-to-Park District

The City will charge for, or otherwise restrict, on-street parking in Central Salem to encourage use of alternative modes of travel by regular commuters to the Central Salem area. This district may be expanded to on-street parking facilities in other areas of Salem as conditions warrant.

Transportation Planning Rule Compliance

The consultant firm of Kimley-Horn and Associates, worked directly with City staff to produce an existing parking supply estimate for the Salem-Keizer Urban Area. This was accomplished through an extensive inventory of both on-street and off-street parking in the Central Business District, Capitol Mall area, and along all the major commercially-oriented arterial streets in Salem and Keizer. The remaining portion of the parking supply estimate was derived through sample estimation and air photo analysis.

It is important to note that the parking supply estimate includes only parking associated with commercial, industrial, and institutional land uses. Residential parking supply was not counted as part of the overall supply because it would only act as a constant in any per capita calculations, has very little bearing on automobile dependent behavior, and is already a low per capita value, especially involving multiple family residential housing. The only real opportunity for change in parking supply involves commercial, industrial, and institutional uses. Institutional uses include government offices, schools, and hospitals. The Salem airport, parks, water and sewer facilities, and cemeteries were excluded from parking supply calculations.

As of spring of 1995 the Salem-Keizer Urban Area had a per capita parking supply of .84 spaces per person. Assuming no significant changes in the Comprehensive Plans of Salem, Keizer, or Marion County, the 2015 per capita parking estimate is calculated to be .76 spaces per person, or an 8 percent reduction. The remaining 2 percent will be accommodated through the implementation of the proposed parking policies.

The key reason why the parking supply per capita is reduced over the 20-year planning period relates to the dynamics between expected population growth of the region versus the rate of absorption of industrial, commercial, and institutional lands. The Salem-Keizer Urban Area has already developed the majority of its commercial lands which have high parking supply rates.

The remaining industrial and institutional lands which have much lower rates, will be the primary nonresidential lands developed over the next 20 years. The population will to grow, but with lower parking rates developed in the nonresidential lands. This relationship results in a decrease in the per capita parking supply simply by avoiding large-scale changes to the commercial land supply in the *Salem Area Comprehensive Plan*.

Land Use Designations	1995		2015	
	Percent Developed	Estimated Parking Spaces	Percent Developed	Estimated Parking Spaces
CBD	100%	12,050	100%	14,050
Commercial	85%	69,686	100%	81,894
Industrial-Commercial	79%	7,266	100%	9,197
Industrial	61%	27,315	82%	36,719
Education	70%	9,739	90%	12,522
Government	32%	25,043	52%	27,547
Health	50%	2,294	70%	3,212
Total		153,393		185,141
Population		181,650		242,700
Parking Per Capita		0.84		0.76

Implementation Strategies

Many of the policies found in the Parking Management Plan Element will be implemented through the *Salem Revised Code*. The remainder will act as a policy framework to aid in the design and implementation of individual transportation projects.



Intercity and Commuter Passenger Travel Element

Intercity passenger services and facilities serve both long distance and commuter passengers traveling from one city to another. Typically, intercity passenger facilities include train stations, bus terminals, airports, and transit centers. Intercity passenger facilities can provide efficient and convenient transfers between intercity travel services and local travel services such as local transit, taxis, shuttles, bikeways, sidewalks, and the automobile. Although it is most convenient to have all local and intercity travel services meet in one facility, it is not always possible given geographic, historic, or land utilization reasons.

The State Transportation Planning Rule requires that all communities include planning for intercity passenger facilities in their transportation system plans.

Policy Framework

The *Salem Transportation System Plan Intercity and Commuter Passenger Element* has two main objectives:

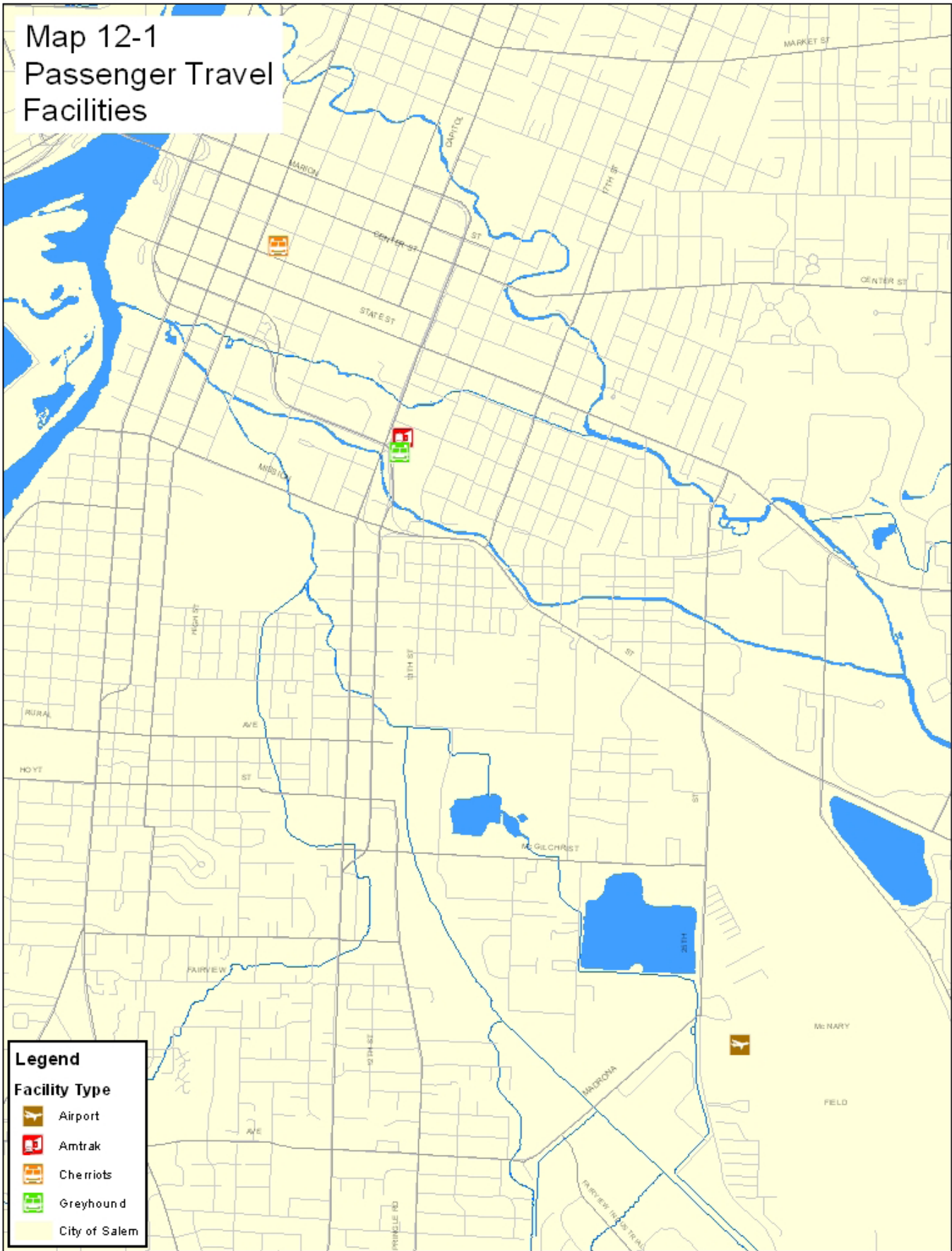
- Expand intercity travel options and services to better serve a broader range of users; and
- Enhance user convenience by providing seamless intermodal connections at intercity transportation facilities.

With the exception of the airport, all intercity travel modes should locate their primary facilities in the central Salem area near the Capitol Mall, Universities, and downtown commercial core. Connecting these facilities together and providing more intermodal transfer opportunities, are integral parts of the second objective. Map 12-1 identifies intercity transportation facilities within Salem.

Goal, Objectives, and Policies

The City of Salem shall have the following goal, objectives, and policies regarding the development and improvement of intercity travel opportunities:

Map 12-1 Passenger Travel Facilities



GOAL: To provide safe, efficient and convenient locations for passengers to access a variety of local and intercity travel services.

OBJECTIVE NO. 1

The City of Salem shall work to ensure the availability of various intercity and commuter passenger travel services.

Policy 1.1 Availability of Passenger Railroad Services

The City shall support Federal and State programs that increase the frequency, intercity travel speed, commuter service, and quality of passenger rail services available to the Salem Urban Area.

Policy 1.2 Availability of Intercity Bus Services

The City shall encourage the continued operation and, where possible, expansion of intercity and commuter bus services available to the Salem Urban Area.

Policy 1.3 Availability of Intercity Air Travel Services

The City shall maintain and improve the necessary facilities at McNary Field to accommodate passenger air travel services for charter flight operations, airport shuttle services, and regularly scheduled commercial passenger flight operations.

OBJECTIVE NO. 2

The City of Salem shall work to ensure that intercity passenger facilities within the Salem Urban Area are located conveniently and efficiently in relation to other travel services and major activity centers.

Policy 2.1 Preservation and Improvements to Salem's Passenger Railroad Station

To facilitate convenient passenger rail service, the City shall work with federal, state, and local government agencies to ensure the continued operation and physical improvements to the existing Salem passenger railroad station. Improvements should include connections to transit, intercity bus, and taxi services, as well as improvements to access the surrounding street, bicycle, and pedestrian system, including convenient secured bicycle parking facilities.

Policy 2.2 Increased Intermodal Connections to McNary Field

The City shall plan for improvements that provide street, bicycle, and pedestrian connections to McNary Field. The City shall encourage direct transit service to the airport passenger terminal when warranted by increased passenger utilization of McNary Field.

Policy 2.3 Location and Intermodal Connections to Intercity Bus Terminals

To promote convenient connections to other intermodal facilities, the City shall strongly encourage intercity bus providers to locate their primary passenger terminals within the Central Salem area. Intercity bus terminals shall be accessible by bicycles and pedestrians. Additional connections should be made convenient to rail, transit, and taxi services.

Policy 2.4 Intermodal Connections to Major Transit Transfer Facilities

The City shall work with the Salem Area Mass Transit District to ensure that transit transfer facilities are accessible to pedestrians and bicyclists, including provisions for secured bicycle parking. Provisions should be made for accommodating passenger pick up/drop off and taxi services.

Policy 2.5 Connections Between Intercity Passenger Facilities

Where the consolidation of intercity passenger facilities and services is not possible, intercity facilities should be linked via adequate transit, taxi, or shuttle services. Intercity passenger facilities should be linked by adequate pedestrian and bicycle facilities.

INTERCITY PASSENGER TRAVEL SERVICES

Intercity Bus Service

Once a major mode of intercity travel, regular bus line service captures a very small segment of today's overall intercity travel. However small that market share may be, intercity bus service provides mobility to those who are unable to drive or who do not have the resources to travel by other means. Greyhound Lines, Inc., is the only nationwide provider of intercity bus service. Greyhound Lines operates a bus station at the Amtrak Station on 12th Street SE and Mill Street SE in Salem. There are five daily southbound buses and five daily northbound buses that service the Interstate 5 corridor between Portland and cities south towards California. The Portland bus station serves as the major transfer point for those passengers traveling north to Seattle and to points east. Valley Retriever Lines provides intercity service from Newport to Bend, and Newport to Portland, both via Corvallis, Albany, and Salem. The Salem Urban Area has regular bus service to the coast via Cherriots route 2X to Grand Ronde and the Coastal Connector. This service is available seven days a week. The City of Salem should continue to support efforts to provide east-west intercity bus services in the future.

Intercity Rail Service

Amtrak provides the only nationwide passenger rail service. Salem is served by daily Amtrak service at the City's passenger rail station at 12th Street SE and Mill Street SE. The Coast Starlight train stops daily at Salem, providing service between Los Angeles and Seattle. The Cascades line provides daily round trip service between Eugene and Seattle. The Cascades train provides two trips to the north and south from Salem daily. Additionally, The Point Bus service provides six trips to the south and seven trips to the north daily. Funding for the Cascade Train and The Point Bus are subject to approval by the legislature biennially, and therefore schedules may change in the future.

The City of Salem should support efforts to keep passenger train service at least at today's level and encourage expansions whenever possible.

Air Services

Scheduled passenger airline service is currently unavailable at Salem's airport, McNary Field. Passenger ground transportation services to Portland International Airport are primarily provided by Hut Airport Limousine Service with eleven round trips daily and City2City Shuttle with five round trips daily.

Commuter Bus and Vanpool Services

Commuter service between cities is provided through various local services. Connections to the north are through Cherriots Route 1X to Wilsonville, where connections to Portland are available through the South Metro Area Rapid Transit (SMART) service, TriMet WES Commuter Rail service, and Bus Route 96.

Chemeketa Area Regional Transit Service (CARTS) provides service from Salem to Brooks, Gervais, Woodburn, Mt. Angel, Silverton, Turner, Aumsville, Stayton, Sublimity, Mehama, Lyons, Mill City, Gates, Dallas, Independence, Monmouth, and Rickreall. CARTS service to Woodburn connects with Woodburn Transit and Canby Area Transit that provides connections to Canby and Oregon City. In Canby, connections can also be made to South Clackamas Transportation District (Molalla) and SMART.

Yamhill County Transit provides service between Salem and McMinnville with five daily round trips Monday through Friday. Yamhill County Transit connects with Grand Ronde, Willamina, Sheridan, Amity, Carlton, Yamhill, Hillsboro, Lafayette, Dayton, Dundee, Newberg, and Tlgard.

Currently there are no commuter services to the south of Salem.

The provision of commuter bus and vanpool services will become more important as the populations of Salem's surrounding communities continue to grow. The City of Salem should support and encourage the establishment of additional commuter bus and vanpool services to these satellite communities.

Taxi Service and Transportation Network Companies

Although generally more expensive than other travel modes, regular taxi service provides an option for people who otherwise would not have the flexibility to travel within the Salem-Keizer region or surrounding communities. Transportation network companies offer a similar service to traditional taxis, but with a different business model. A transportation network company establishes a network of drivers as independent contractors who utilize technology provided by the company to connect to individuals in need of transportation through the use of a downloaded smart phone application. In 2015, Salem amended the regulations that govern vehicles for hire to address this newer business model.

INTERCITY PASSENGER TRAVEL FACILITIES

There are several intercity travel facilities in Salem that provide intermodal transfer opportunities.

Salem Passenger Rail and Bus Stations

The Salem Amtrak and Greyhound stations, located at 12th Street SE and Mill Street SE, are currently served by taxis and by two Cherriots bus routes. The stations are located approximately nine blocks from the Cherriots Downtown Transit Mall at Courthouse Square.

McNary Field (Airport)

Airport activities continue to focus on general and charter aviation, air freight, and military aviation. Intermodal connections are only available via taxi, bicycle, and private automobile. Future improvements in transit service and sidewalk construction on 25th Street SE are necessary to make this facility more passenger friendly. See the Freight Movement Element of the *Salem Transportation System Plan* or the 2012 Airport Master Plan Update for more information on future improvements to McNary Field.

Cherriots Downtown Transit Mall at Courthouse Square

The Cherriots Downtown Transit Mall is located in downtown Salem at 220 High Street NE. In addition to regular fixed route transit service, it is serviced by taxis and commuter buses and is within bicycling and walking distance to the Amtrak and Greyhound stations.



Freight Movement Element

Planning for mobility includes more than just moving people—it means moving freight and services as well. The *Salem Transportation System Plan* places a greater emphasis on planning for all modes of travel, including the movement of freight within the Salem-Keizer Urban Area and beyond.

Unlike most transportation elements, government jurisdictions have much less involvement in planning for and providing freight transport services and facilities. These services and facilities are generally provided by private transportation companies. Although streets, highways, and airports are publicly owned, the actual provision of freight transportation services is done via private enterprises. This provides a unique challenge to local government planning, as it requires government take a supportive role.

Policy Framework

The State of Oregon Department of Transportation has developed statewide rail, marine, aviation, and other freight movement plans. Regional and local transportation plans are to expand, and need to be consistent with, the statewide plans.

The majority of the policies included in this element commit the City of Salem to taking a supportive role in the continuation and development of services and facilities. It is to the City's economic advantage that a variety of transportation modes be available to the area to meet the varied needs of area businesses. Issues that local government can play a key role in are related to safety and the mitigation of the negative impacts resulting from freight movement activities.

A newly emerging innovation is the operation of intermodal freight transfer facilities. These facilities allow the transfer and reloading of freight from one transport mode to another. Examples would include truck-to-rail facilities, pipeline-to-truck terminals, or truck-to-air freight facilities. The increased use of standardized intermodal containers has led to even greater utilization of intermodal transfer facilities. This Element includes an objective and policies that encourage enhancement of the area's intermodal facilities.

Goal, Objectives, and Policies

The City of Salem shall have the following goal, objectives, and policies for ensuring the efficient and safe movement of freight within the Salem Urban Area:

GOAL: To ensure a multimodal transport system for the efficient, safe, and competitive movement of goods and services to, from, and within the Salem Urban Area.

OBJECTIVE NO. 1

The City of Salem shall encourage accessibility to a range of viable and competitive transport modes that fulfill the needs of Salem area shippers.

Policy 1.1 Access to Streets and Highways

The City of Salem shall create a street and highway system that provides direct and efficient access to and between Salem Urban Area industrial and commercial centers, regional intermodal freight facilities, and statewide transport corridors.

Policy 1.2 Accessibility to Railroads

The City shall encourage the availability of railroad freight services to those industrial and commercial areas where utilization is economically viable.

Policy 1.3 Accessibility to Air Freight Services

The City shall promote the utilization of air freight services by continuing to provide and maintain facilities at McNary Field that enable the operation of private air freight providers.

Policy 1.4 Regional Pipeline Systems

The City shall promote accessibility to, protection of, and the appropriate location of, regional pipeline systems that service the Salem Urban Area.

Policy 1.5 Explore Feasibility of Inland Marine Transport Services

If there is an increased regional interest, the City shall work cooperatively with other governmental organizations to explore the feasibility of reestablishing barge freight services on the Willamette River.

Policy 1.6 Planning for Freight Accessibility

The City shall consider freight accessibility and movement in circulation studies and corridor studies, especially in areas serving or bordering freight terminals.

OBJECTIVE NO. 2

The City of Salem shall promote the safe transport of goods to, from, and within the Salem Urban Area.

Policy 2.1 Safety Awareness Programs

The City shall support commercial vehicle safety programs provided by public agencies, private firms, and organizations that work to increase freight transport safety awareness.

Policy 2.2 Safety Improvements to Freight Transport Facilities

The City shall work with public agencies and private freight service providers to reduce the number and severity of commercial transport-related accidents through the design, construction, and proper maintenance of freight transport facilities, especially where these facilities cross or share public rights-of-way.

Policy 2.3 Adequate Street Design Standards for Trucks

The City shall develop adequate design standards that meet the weight and dimensional needs of trucks, particularly for those streets that serve industrial and commercial areas.

Policy 2.4 Transportation of Hazardous Materials

The City shall encourage responsible Federal and State agencies to develop and enforce appropriate regulations regarding the safe transport of hazardous materials through the Salem Urban Area. In addition, the City shall prepare its emergency services resources to respond to emergencies involving the transport of hazardous materials.

OBJECTIVE NO. 3

To increase transport opportunities, the City of Salem shall encourage the development of efficient intermodal freight transfer facilities serving the Salem Urban Area.

Policy 3.1 Retention and Enhancement of Intermodal Freight Transfer Capabilities

The City shall encourage private shippers and transport providers to maintain and, where possible, improve their intermodal freight transfer capabilities.

OBJECTIVE NO. 4

The City of Salem shall work to minimize the negative impacts associated with the movement of freight within the Salem Urban Area.

Policy 4.1 Reduce Commercial Vehicle Traffic Through Residential Neighborhoods

Working within the context of State and local statutes, the City shall employ physical and legal measures to reduce through commercial vehicle traffic on residential streets where problems exist.

Policy 4.2 Eliminate Lengthy Blockage of Public Streets at Railroad Crossings

To better facilitate the movement of traffic, especially emergency services vehicles, the City shall work with the railroad companies and the appropriate State agencies to eliminate frequent, lengthy blockages of public streets by trains at railroad crossings.

Policy 4.3 Commercial Vehicle Loading and Unloading During Peak Travel Times

In order to facilitate the movement of traffic, the City shall adopt ordinances that prohibit commercial vehicles from blocking the travel lanes of arterial and collector streets while loading or unloading during peak weekday travel periods.

Policy 4.4 Establish Noise Overlay Zones Near Aviation Facilities

As permitted by Federal law, the City shall establish noise overlay zones in areas adjacent to aviation facilities.

Freight Movement System in the Salem Urban Area

Although the *Salem Transportation System Plan* deals specifically with the Salem Urban Area, freight movement is essentially a global activity. Freight movement will be treated from a Salem-Keizer regional perspective in this Element. This freight movement system contains facilities and terminals for intercontinental pipeline systems, air freight, rail, and truck lines.

AVIATION (AIR FREIGHT)

The Salem Municipal Airport, also known as McNary Field, is owned and operated by the City of Salem and has evolved into a regional general aviation facility that supports private passenger,

charter, air freight, and military aviation activities. The airport is located close to Interstate 5, Mill Creek Corporate Center, Fairview Industrial Park and the Southern Pacific Railroad line and is a key local and regional economic development asset. The airport is certified by the Federal Aviation Administration (FAA) as a commercial service airport under Federal Air Regulations and is included in the National Plan of Integrated Airport Systems (NPIAS) as a public use airport.

Federal Express operates a facility at the airport with local delivery services. Federal Express air freight services operates one daily flight from Salem to Portland. United Parcel Services (UPS) operates daily air freight services from Salem under contract with AmeriFLight, a contract air freight carrier.

McNary Field has a considerable array of modern facilities capable of handling jet aircraft up to the size of a Boeing 737, MD-80/90 series, and similarly sized aircraft. Runway 13-31 is the primary runway, having a length of 5,811 feet and an array of modern guidance and lighting systems. Runway 16-34 is 5,145 feet long and serves as the airport's secondary runway. The airport has a passenger terminal, gate aprons, hangars, tie-downs, T-hangars, fueling facilities, and several parallel taxiways. Currently, passenger aircraft having over 30 seats require a temporary presence of additional fire and rescue apparatus and personnel in order to land or take off from McNary Field. See the *2012 Airport Master Plan Update* for more information on the facilities and future plans for McNary Field.

Recommended Improvements

The *Airport Master Plan Update (2012)* calls for extension of the airport's longest runway from 5,811 ft. to 7,000 ft. The runway extension will meet current federal aviation design standards, improve safety, and better accommodate airport users. The runway extension is needed to serve existing airport demand. Today, some flights reduce their freight loads or take on less fuel to safely operate from the shorter runway. Top priority airport improvements also include:

- Reconfigure taxiway system for efficiency, better line-of-sight
- Develop hangars, commercial property

Other long-term projects included in the *Master Plan*:

- Relocate aircraft rescue, firefighting station
- Improve passenger terminal access

RAILROADS

During the late 20th century, America's railroad system transformed from 45 major railroads in 1980 to just seven by the year 2014. Today, two huge systems, Union Pacific Railroad and BNSF Railway Co., predominate west of the Mississippi River but only Union Pacific (UP) directly serves Salem. UP's presence in Salem dates from September 1996 when it acquired Southern Pacific Transportation Co., which had been Salem's principal interstate railroad for more than a century. UP's Salem track is part of its main north/south route extending from the Pacific Northwest to California with connections at Portland to UP's transcontinental east/west route to the Midwest with a northeasterly connection to the Canadian rail system via Spokane, Washington. Amtrak's long-distance Seattle-Los Angeles passenger service and the state-supported regional Cascades trains use UP's line through Salem.

In 1908 the Oregon Electric Railway (OE) completed a line between Salem and Portland and four years later extended it to Albany and Eugene, providing the genesis for a competitive alternative to Southern Pacific's regional monopoly. Soon thereafter the OE became a subsidiary of two Northern transcontinental railroads that eventually were merged with other companies to form the BNSF Railway. For almost a century the BNSF branch through Salem offered local shippers access to a second major rail system with east/west and north/south routes. But in December of 2002, BNSF leased the OE to Portland & Western Railroad (PNWR), flagship of an

Oregon short line duo begun in 1993 to operate branch lines belonging to Southern Pacific Transportation Company. PNWR is headquartered in Salem and it has grown to operate more than 500 miles of track, becoming Oregon's second-largest railroad by mileage. As OE's lessee, PNWR works closely with BNSF to offer Salem businesses access to BNSF interstate transportation in competition with Union Pacific, thus preserving the historic competitive balance that prevailed in Salem during most of the previous century.

Without counting spurs and sidings, there are approximately 25 miles of rail within the combined Salem-Keizer UGB.

Between UP and PNWR, about 20 trains run through Salem daily. This does not include switching activities. In addition to freight train movements, six Amtrak passenger trains travel through and stop in Salem. The number of trains passing through Salem is expected to increase with the predicted 80% growth in freight rail traffic over the next 20 years.

There are currently 14 businesses in the Salem-Keizer region that are served by active rail sidings. Salem has the following active rail spurs and switching yards:

PNWR/UP Interchange

Currently classified as yard trackage, the interchange connects the mainlines of Union Pacific with the mainline of regional carrier Portland & Western, which is providing services on behalf of line owner BNSF Railway. The interchange runs just north of Johnson Street NE through the Cherry Avenue Business and Salem Industrial Parks. Although curvature is tight the railroads have improved track quality in this facility after experiencing some derailment problems a few years ago. In addition to interchanging cars destined to/from local shippers located on each other's lines, this link often hosts through PNWR freight trains operating between Albany to Vancouver, Washington. PNWR has an agreement permitting its trains to run over UP's line between Portland and Salem to access the BNSF leasehold, even though PNWR has its own track between the Portland area and Salem via Donald and Keizer.

UP Salem Switching and Storage Yard

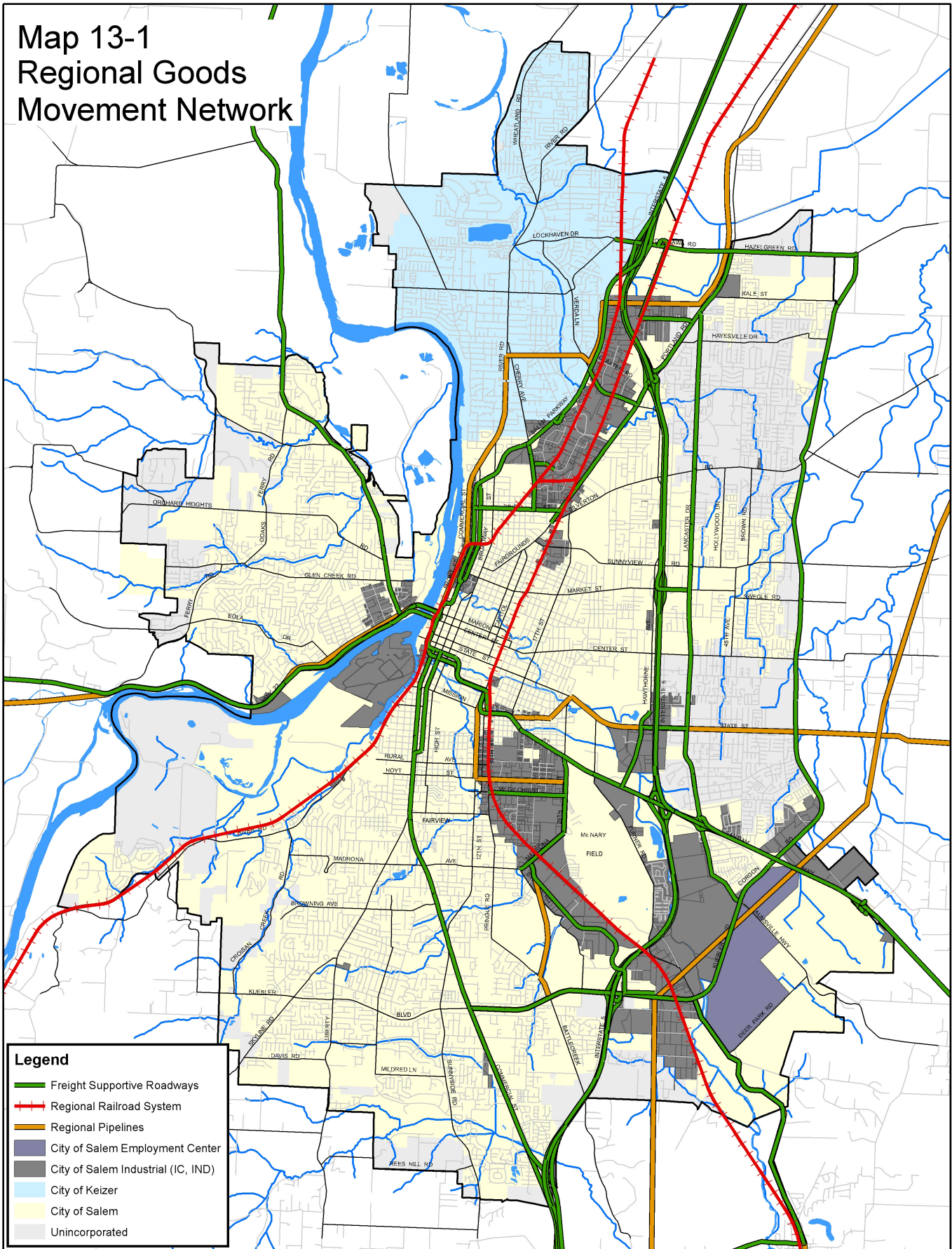
Bordered by Hines Street SE to the north, McGilchrist Street SE to the south, Pringle Road SE to the east, and 14th Avenue SE to the west, UP maintains a small switching and car storage yard south of the Salem rail station. Salem Yard has become the hub for local freight service on UP's rail lines in much of the Willamette Valley and at least two local freight train assignments are headquartered there to perform local switching service for industrial customers. The service territory of these assignments ranges from south of Junction City to north of Woodburn.

Conflicts between rail traffic, motor vehicles, bicycles, and pedestrians are issues of continuing concern. The Union Pacific mainline crosses 12 major roadways at-grade as it travels through Salem. The PNWR mainline crosses six major roadways at-grade and operates within the Front Street right-of-way just north of downtown Salem. If the number and length of trains were to significantly increase, extra delays can be expected on City streets.

Several projects have been completed in recent years to increase pedestrian and bicycle safety at rail crossings including installation of new crossing surfaces, tactile warnings, pedestrian flashers, countdown timers, and signage. Additionally, the construction of the 12th Street Pedestrian Safety Promenade has significantly improved pedestrian accessibility and connectivity along the Union Pacific line which parallels 12th Street. Recommendations for improving pedestrian safety include continuation of public education programs and trespassing enforcement.

Federal law requires trains to sound their horns at every at-grade crossing for safety. In residential areas this can cause livability issues for residents. Over the last several years, the City of Salem has worked with Federal Rail Administration (FRA), Oregon Department of Transportation (ODOT) Rail Division and the Union Pacific Railroad to make safety improvements at crossings. These improvements allow the establishment of Rail Quiet Zones at specific crossings. Today, Rail Quiet

Map 13-1 Regional Goods Movement Network



Zones have been established between Mill Street NE and “D” Street NE on the UP line. The City is continuing to work on expanding the Rail Quiet Zones in Salem.

Recommended Improvements

Currently, all freight rail trackage and facilities are privately owned. Improvements to that infrastructure are completed by the railroads themselves. The railroad companies employ track inspectors who regularly inspect their facilities in accordance with frequencies established by the Federal Railroad Administration. The Portland & Western line inspects their tracks at least once a week. The UP line is inspected at least twice per week. Additionally, track inspectors employed by ODOT and the FRA make periodic inspections of each railroad’s track to ensure that applicable maintenance standards are being met.

The City is continuing to work with ODOT Rail Division, the Federal Rail Administration and the railroads to make safety improvements to rail crossings as a part of individual street improvement projects and to expand Rail Crossing Quiet Zones in residential areas.

MARITIME/INLAND MARINE

There are currently no maritime port or freight barging activities on the Willamette River in the Salem area. There have been discussions about dredging the Willamette River both to restore barge service to Salem and Independence from Portland and to improve the river’s flood capacity. However, it is not known if barge service would be profitable or worth the financial or environmental cost of such large-scale dredging efforts.

The Willamette Falls Locks, which allowed boat traffic on the Willamette to navigate beyond Willamette Falls, have been closed since 2011. The locks re classified to be in a non-operational status and are expected to remain permanently closed. Finally, the lift span on the Union Street Pedestrian Bridge was permanently closed in 1980 with permission of the U.S. Coast Guard, which manages navigable waterways.

While there are many obstacles to instituting commercial maritime activities on the Willamette River in Salem, the River continues to be classified as navigable by the U.S. Coast Guard. This classification requires close coordination with the Coast Guard for construction of any future bridges across the River.

PIPELINES

Pipelines are the silent, and usually unknown, freight movement system that transport natural gas and petroleum products within and through the Salem Urban Area. Only two major pipelines traverse the Salem Urban Area. Kinder Morgan’s petroleum pipeline carries liquid petroleum products through its pipeline that crosses under the southeast corner of the Salem Urban Area across State Street, Highway 22, Aumsville Highway SE, Kuebler Boulevard SE, and southward between Interstate 5 and Turner Road SE. Williams Northwest pipeline operates a natural gas transmission main that traverses thru Marion County east of Salem, from which NW Natural Gas receives natural gas for retail delivery to its customer base within the Marion County service area. Northwest Natural Gas has a system of high pressure natural gas distribution pipelines that serve the Salem Urban Area, see Map 13-1.

Recommended Improvements

Similar to the railroads, investments made in pipeline infrastructure are completed by the private utility companies to meet increased customer demand. Northwest Natural Gas can meet increased consumer demand by expanding its current natural gas distribution system or constructing new natural gas transmission pipeline facilities.

TRUCK MOVEMENTS OVER SALEM STREETS AND HIGHWAYS

It is easy to think of the City’s street system only in terms of moving people in automobiles.

However, a major purpose of the street system is to move freight and service vehicles throughout the Urban Area. The street system provides mobility for trucks and service vehicles that, in turn, represent jobs and economic vitality.

Providing mobility for trucks means constructing certain streets and highways with thicker, deeper substrates and designing them with adequate lane widths, curb radii, and height clearances. Bridges must be designed to carry the added weight of heavily-loaded trucks. All freeways, parkways, arterials, and most collectors are built to facilitate truck movements. Local streets, particularly residential streets, are not usually designed to carry significant numbers of heavy trucks. In addition to trucks, transit buses require the same level of construction design.

Truck movements, with the exception of local deliveries, should be limited to the freeway, parkway, and arterial street system. Some Collector-level streets also serve as truck routes when those streets connect industrial and commercial districts to the higher level street system. The City of Salem does not regulate which streets are "truck routes." Instead, it encourages the use of the Arterial and State highway system and discourages the use of local residential streets for truck movements through street design and signage.

Recommended Improvements

The City of Salem uses the location of industrial and commercial districts to determine which streets and highways are in need of truck-facilitating improvements. The following streets have been identified as requiring improvements to better facilitate truck movements. The need for improvements are based on the status and condition of the roadway and/or the amount of congestion that causes delays to freight movement. All of these projects are described in the Street System Element of this Plan.

High Priority Freight-related Street Improvements

Traffic Signal Interconnects and Coordination (Citywide)
Kuebler Boulevard SE (Commercial Street SE to Interstate 5)
Hawthorne Avenue SE (Access to/from Interstate 5 and Mission Street SE)
McGilchrist Street SE (12th Street SE to 25th Street SE)
Kuebler Boulevard SE (Interstate 5 to new interchange needed at Highway 22)
Cordon Road NE (State Street to Center Street NE)
Ferry Street SE (Church Street SE to Liberty Street SE)

Medium Priority Freight-movement Street Improvements

Lancaster Drive SE (Highway 22 to Kuebler Boulevard SE)
Madrona Avenue SE at 25th Street SE
Commercial Street NE at Division Street NE
Commercial Street SE at Madrona Avenue SE
Commercial Street SE (Baxter Road SE to Interstate 5)
25th Street SE (Mission Street SE to McGilchrist Street SE)
Salem Industrial Drive NE (Extensions and Improvements)
Blossom Drive NE/Indian School Road NE

Low Priority Freight-movement Street Improvements

Cherry Avenue NE (Pine Street NE to Salem Parkway NE)
Madrona Avenue SE (25th Street SE to Union Pacific Rail Line)
25th Street SE (McGilchrist Street SE to Madrona Avenue SE)

The projects listed above will accommodate the needs of trucks in their design. While some projects are listed as high priority freight-movement improvements, they may not be listed in

the Street System Element with the same priority. The priority given to the projects in this Element should be factored into the funding and time frame priorities given projects as a whole.



Transportation System Maintenance Element

While the *Salem Transportation System Plan* identifies needs for new or expanded transportation infrastructure, an equally important component to the Plan is the establishment of objectives and policies that will preserve the investment already made in transportation infrastructure. Mobility cannot be achieved for our community if its streets, bridges, bicycle lanes, and sidewalks exist in a state of crumbling, disrepair. Likewise, it is not wise to invest in new infrastructure if existing facilities go lacking. The City of Salem must protect its infrastructure investment through prudent and efficient maintenance practices.

Maintenance Programs

In the total array of services provided by the Public Works Department, street maintenance is one of the most costly. Besides being one of the largest expenditures, street maintenance activities are also very visible to the public. Street maintenance programs must be designed to address needs or problems in three categories:

- **Structural Maintenance:** Includes routine and preventive maintenance programs designed to prolong the useful life of pavements, sidewalks, bridges, traffic signals, and traffic signs;
- **Operational Maintenance:** Includes restoration or repair of pavements, sidewalks, bridges, traffic signals, pavement markings, and traffic signs; and
- **Roadside Maintenance:** Includes maintenance on gravel shoulders, vegetation control at intersections for vision clearance, weed abatement mowing, graffiti removal, and removal of litter, dust, and debris from street and sidewalk surfaces.

Street System Inventory

Listed below is an inventory of the primary maintenance categories the Salem Transportation Services Division must maintain to keep all modes of transportation moving safely and efficiently.

Traffic signals	229 (2004)
Signs (regulatory, warning, and information)	19,776
School Zone flashers	183 (2004)
Centerline buttons and reflectors	50,000 (estimate)
Painted striping (centerline, bike lanes, etc.)	1,060 miles

Painted markings (turn arrows, “only,” etc.)
Streets
Bridges

7,600
535 miles
118

Levels of Street Maintenance

Perpetual life maintenance is the optimal repair and replacement of streets so they never wear out. While this is a worthy goal, it is unattainable given the limited financial resources available to the City of Salem. In recognition of this, the City is striving to attain an “adequate” level of street maintenance and operations services to the community. The adequate LOS requires approximately \$1.0 million more per year than was available for street maintenance operations in FY 2006-07. This can be compared to an additional \$8-9 million that would be needed to attain the theoretical perpetual life maintenance service level.

Pavement Management System

Since 1990, the City of Salem has used a computerized pavement management system to help in identifying street maintenance needs and determine how resources will be allocated. The system processes a variety of street condition information to identify cost-effective maintenance applications to address defects or deficiencies on specific street segments. This information is then used by the Street Division in identifying priority street maintenance programs and projects.

CONDITION OF EXISTING STREET SYSTEM

Additional funding needs to be allocated to resurfacing and restoration projects to decrease the growing backlog of street repairs. Investments made at the relatively inexpensive preventive maintenance level prevent the later, significantly more expensive, reconstruction and restoration projects.

Goal, Objectives, and Policies

The City of Salem shall have the following goal, objectives, and policies to guide the preservation and repair of its transportation infrastructure:

GOAL: To provide adequate maintenance to the City of Salem’s street, sidewalk, and bikeway system.

OBJECTIVE NO. 1

The City of Salem shall fund and implement a maintenance program, based on available funding, that will sustain safe facilities and prolong service life of pavement surfaces.

Policy 1.1 Pavement Management System

The City shall maintain a current inventory of streets in a Pavement Management System database that rates street condition.

Policy 1.2 Routine Maintenance

The City shall have a routine maintenance strategy that targets good to fair condition streets. It shall include scheduled maintenance activities that focus on isolated surface defects such as crack sealing and isolated pavement and base repairs.

Policy 1.3 Preventive Maintenance

The City shall have a preventive maintenance strategy that targets good to fair condition streets. It shall incorporate general surface treatment over the entire surface of the street (i.e., slurry seals, chip seals, microsurfacing), extending the serviceable life of the street.

Policy 1.4 Response Maintenance

The City shall have a response maintenance strategy that targets streets that are in the final stages of serviceable life. These streets are beyond the point where routine and preventive maintenance will be cost effective. Maintenance will focus on these activities that will keep the street in safe driving condition, such as keeping potholes filled.

Policy 1.5 Pavement Restoration

The City shall have a restoration strategy when the condition of the street begins transition from fair to poor. This strategy usually requires a new asphalt surface and isolated base repairs. Once this work is complete, the street begins a new serviceable life.

OBJECTIVE NO. 2

Consistently clean and safe travel ways.

Policy 2.1 Minimize Airborne Pollutants

The City shall have a street and bike lane cleaning program of sufficient frequency that will reduce dust accumulations.

Policy 2.2 Protect Water Runoff Quality

The City shall have a street cleaning program that uses Best Management Practices (BMPs) to reduce the impact on water quality from street runoff.

Policy 2.3 Minimize impact of dangerous debris accumulation

The City shall have a cleaning program that provides a timely and adequate response to removal of debris from streets and bicycle lanes.

OBJECTIVE NO. 3

Bridges in Salem shall be safe and in good repair for commerce and the traveling public.

Policy 3.1 Bridge Maintenance Plan

The City shall maintain bridges at a safe and usable condition. Periodic inspections shall be performed to identify weaknesses and defects.

OBJECTIVE NO. 4

A safe and clean sidewalk system that encourages its use by Salem's pedestrians.

Policy 4.1 Sidewalk Safety and Repair

The City shall have in place a process to assure that sidewalks are kept clean and maintained to City standards.

OBJECTIVE NO. 5

To provide traffic control devices that are consistently functioning and properly maintained.

Policy 5.1 Inventory Database

The City shall maintain an inventory database of all traffic control devices (i.e., traffic signals, signs, stripings, and markings).

Policy 5.2 Traffic Signals

The City shall facilitate the safe and efficient movement of vehicles by properly maintaining its traffic signal system.

Policy 5.3 Signage

The City shall provide for the proper installation and maintenance of regulatory, warning, and informational signs.

Policy 5.4 Stripings and Markings

The City shall provide for the proper installation and maintenance of travelway stripings and markings.

IMPLEMENTATION STRATEGIES

Effective implementation of Salem's maintenance policies requires adequate funding. To achieve an adequate level of street maintenance and operation will require an additional \$3.5 million per year as compared to the FY 2003-04 funding level. Salem uses almost all of its annual allocation of State Highway Fuel Tax revenue for maintenance operations. Future increases in fuel tax, or other, revenue will be needed to meet the current and future maintenance needs of the Salem transportation system. In recognition of this, the City will pursue a strategy to work towards achieving an adequate LOS by incremental increases in revenue over a ten-year period with the goal of achieving the adequate LOS by FY 2013-14.



Transportation Finance Element

A transportation plan is only as good as the community's ability to implement it. To implement the *Salem Transportation System Plan*, adequate financing must be available to construct and maintain the proposed infrastructure. This Element outlines the policy parameters involved in financing the transportation system, identifies funding sources, compares them to identified needs, and provides a determination what portions of the Plan may be implemented within the 20-year Plan horizon.

Financial Constraint

The 1991 State Transportation Planning Rule requires that all transportation system plans contain a financial plan for funding the current and future needs of a jurisdiction's transportation system. Federal regulations contained in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) require that the financial plan for metropolitan planning organizations demonstrate "financial constraint." This means that prior to expending resources to expand an urban region's transportation system, it must be demonstrated that adequate funding is expected to be available to adequately maintain and operate the existing transportation facilities and services. If new funding sources are required to meet existing needs, the Plan must present the actions to be taken to secure the additional funding. The financial plan must also identify which improvements can be implemented using "committed funding sources," which improvements can be implemented using "reasonably anticipated" resources, and which improvements will require the development of "new funding sources." To ensure consistency, the *Salem Transportation System Plan* is structured to comply with the fiscal constraint requirements found in the *Regional Transportation System Plan*.

Anticipated Needs

The first half of the equation in determining whether Salem will have adequate funding for its transportation system involves estimating the overall system needs for both an annual basis and for the next 25 years. The following estimates are calculated based on the best information available, and have been adjusted to 2006 dollars.

Table 15-1 Capital Transportation Improvement Needs (2006 dollars)

Project Priority or Type	Salem	Marion County	ODOT	Salem Area Transit	Total Cost Estimate
Committed	\$57,492,000	\$2,854,000	\$67,998,000		\$128,344,000
High	\$140,687,000	\$5,850,000			\$146,537,000
Medium	\$183,602,000	\$27,148,000	\$119,980,000		\$330,730,000
Low	\$203,847,000	\$16,407,000			\$220,254,000
Local Streets	\$263,000,000				\$263,000,000
ITS	\$13,027,000	\$350,000			\$13,377,000
Bicycle & Pedestrian	\$17,068,000				\$17,068,000
Railroad Crossing	\$99,000				\$99,000
Transit System Capital				\$30,000,000	\$30,000,000
Total	\$878,822,000	\$52,609,000	\$187,978,000	\$30,000,000	\$1,149,409,000

Table 15-2 Pavement Maintenance Strategies: Annual Funding Needs, Allocation & Shortfall

Pavement Maintenance Programs	Arterial	Collector	Local	Total
Perpetual Life Level				
Preventative Maintenance	\$100,000	\$100,000	\$1,000,000	\$1,200,000
Routine & Response Maintenance	\$1,150,000	\$350,000	\$1,500,000	\$3,000,000
Restoration & Reconstruction	\$2,750,000	\$750,000	\$2,300,000	\$5,800,000
Total	\$4,000,000	\$1,200,000	\$4,800,000	\$10,000,000
Adequate Level				
Preventative Maintenance	\$50,000	\$50,000	\$500,000	\$600,000
Routine & Response Maintenance	\$375,000	\$75,000	\$200,000	\$650,000
Restoration & Reconstruction	\$750,000	\$150,000	\$450,000	\$1,350,000
Total	\$1,175,000	\$275,000	\$1,150,000	\$2,600,000
Actual Budgeted FY06-07				
Preventative Maintenance	\$10,000	\$40,000	\$250,000	\$300,000
Routine & Response Maintenance	\$350,000	\$50,000	\$50,000	\$450,000
Restoration & Reconstruction	\$250,000	\$50,000	\$550,000	\$850,000
Total	\$610,000	\$140,000	\$850,000	\$1,600,000
Shortfall: Perpetual Life - Budgeted	\$3,390,000	\$1,060,000	\$3,950,000	\$8,400,000
Shortfall: Adequate - Budgeted	\$565,000	\$135,000	\$300,000	\$1,000,000

Note: Amounts shown in 2006 dollars based on Adopted FY2006-07 Budget

CAPITAL TRANSPORTATION IMPROVEMENTS

The *Salem Transportation System Plan* identifies almost \$880 million in capital projects that need to be completed within the Salem Urban Area over the 25-year horizon of the Plan. Table 15-1 breaks these amounts by priority and jurisdiction. Project priorities are shown only for street system projects on facilities classified as collector or higher. An estimate is also provided for local street improvement needs, although no specific local street projects are shown in this Plan. All amounts are in 2006 dollars.

MAINTENANCE AND OPERATIONS FUNDING

Table 15-2 shows estimated annual pavement maintenance needs based on implementation of an adequate level maintenance program. For comparison purposes, it also shows the additional cost that would be required to maintain a perpetual life level of maintenance.

The total annual funds necessary to implement an adequate level maintenance strategy is \$2.6 million, and \$10 million to implement the perpetual life street maintenance strategy. The amount budgeted for the 2006-07 fiscal year was \$1 million short of reaching the adequate level, and \$8.4 million short of reaching a perpetual life maintenance level.

In addition to pavement maintenance, there are many other operations and maintenance costs associated with maintaining the City's street system. In 2006, these needs were at a level of about \$7.8 million per year. Projecting these costs along with the pavement maintenance costs over the next 25 years gives a total of approximately \$260 million needed to maintain Salem's street system to an adequate level.

PROGRAM FUNDING

Table 15-3 shows operations and maintenance costs for the several agencies with transportation responsibilities within the Salem Urban Area along with other transportation program costs. The agencies include the City of Salem, Marion County, Polk County, ODOT, and the Salem Area Mass Transit District. Most of the nearly \$1 billion in program funding needs come from the City and from the Transit District (\$647 million).

TOTAL TRANSPORTATION SYSTEM FUNDING

Table 15-4 shows that the total estimated funding needs to provide transportation infrastructure, maintenance, programs, and transit service over the next 25 years will be approximately \$1.1 billion for the City of Salem and \$2 billion for the total Salem Urban Area.

Transportation System Funding Sources

Under current Federal and State legislation, there are several methods of financing available to the City of Salem for street system studies, improvements, programs, and maintenance:

SAFE, ACCOUNTABLE, FLEXIBLE, EFFICIENT TRANSPORTATION EQUITY ACT: A LEGACY FOR USERS (SAFETEA-LU) FUNDS

These are Federal funds available through SAFETEA-LU legislation that are available to the Salem-Keizer Urban Area through the Metropolitan Planning Organization (Mid-Willamette Valley Council of Governments/SKATS). These funds are flexible and can be used for different types of capital improvements and transportation programs.

FEDERAL ENHANCEMENT FUNDS

Federal funds are available to complete capital improvements and programs related to pedestrian, bicycle, and other alternative travel modes to the automobile. This program can also be used for historic preservation of transportation facilities.

Table 15-3 Program Funding Needs 2006-2031

Transportation Program (Inside UGB)	Total Needs (25 Years)
City of Salem Operations & Maintenance	\$260,475,000
Marion County Operations & Maintenance	\$16,866,000
Polk County Operations & Maintenance	\$6,325,000
State of Oregon Operations & Maintenance	\$9,538,000
Salem-Keizer Transit Operations & Maintenance	\$647,487,000
Mid-Valley Rideshare & Regional TDM Program	\$7,436,000
Regional Traffic Control Center	\$3,897,000
Total Program Needs	\$952,024,000

Table 15-4 Total Transportation Funding Needs for the Salem Urban Area 2006-2031

Type of Need	City of Salem	Salem Urban Area Total
Capital Improvements	\$878,822,000	\$1,149,409,000
Operations & Maintenance Programs	\$260,475,000	\$952,024,000
Total System Needs	\$1,139,297,000	\$2,101,433,000

CITY ALLOCATION OF STATE HIGHWAY FUEL TAX REVENUES

These revenues are used by the City of Salem to operate and maintain the City's street and highway system. These funds are also used to provide transportation engineering and planning support.

STATE TRANSPORTATION PROGRAM GRANTS

The State provides grant funds to local jurisdictions to conduct transportation studies, improve bicycle and pedestrian facilities, and participate in State-sponsored transportation activities.

GENERAL OBLIGATION BONDS (PROPERTY TAX SUPPORTED)

Bonds are the main source of funds for constructing capital improvement projects in the City. Voter-approved bonds are sold to fund street improvement projects. Transportation projects are grouped in "bond packages" that go before the public for voter approval. General Obligation Bonds are supported through the City's property tax base and, by City Council policy, currently do not exceed \$2.42 per thousand dollars of the City's property tax authority.

TRANSPORTATION SYSTEM DEVELOPMENT CHARGES

These funds are collected from developers as new development occurs in the City. Fees are based on the number of daily trips generated by different types of land uses (i.e., single family residential, commercial, industrial, etc.). These funds may only be used to fund transportation improvements caused through the impacts of new growth and may not be used to fix existing capacity deficiencies.

UTILITY FRANCHISE FEES

Public utilities that use the public right-of-way to convey their services are charged a fee for that privilege. Examples include the City of Salem water and sewer, Northwest Natural Gas, Salem Electric, Portland General Electric, Viacom Cable, U.S. West, and others.

DEVELOPMENT EXACTIONS

To provide adequate infrastructure in response to site-specific growth, capital improvements can be exacted as conditions of approval for building permits, subdivisions, and zoning actions. Developers are usually required to complete frontage street improvements and other off-site transportation improvements to mitigate traffic impacts. The majority of the city's new local and collector streets are created and improved as a result of development exactions.

LOCAL IMPROVEMENT DISTRICTS

This method allows neighboring property owners to group together to improve public facilities and then pay for them through individual assessments. These districts are generally used to complete local street improvements or improvements to business districts. This is the primary source of funding for street lights in residential areas.

CITY GENERAL FUNDS

Though seldom available for transportation purposes, the City may choose to use general property tax revenues to build or operate transportation facilities. However, using general fund revenues places transportation system finance in direct competition with other City services such as police, fire, libraries, and parks. Currently, no general funds are spent on transportation.

CAPITAL FUNDING LIMITATIONS

General Obligation Bonds pledge that the full faith and credit of the City will be used to ensure that the principal and the interest will be paid. When General Obligation Bonds are approved

by voters for specific uses, the repayment of the debt is financed with a dedicated property tax levy, commonly referred to as a debt service levy. Subject to State limitations, the City has the unlimited power to levy property taxes to repay principal and interest for the term of the bonds. Because this is an unlimited pledge, the State imposes a legal debt ceiling limiting outstanding bonds to no more than 3 percent of a City's total assessed value.

The Salem City Council has adopted a more restrictive policy which limits the amount of outstanding General Obligation debt to the lesser of: (1) Outstanding debt which requires a required debt service tax rate of no more than \$2.42 per thousand dollars of a property owner's assessed valuation; or, (2) Outstanding debt that does not exceed 2.5 percent of the total assessed valuation within City limits.

Following voter approval of the 2006 Fire Bond, the outstanding General Obligation debt subject to this limit will increase to approximately \$90 million, or about 1.2 percent of the 2005-06 total assessed value. This is less than 50 percent of the limit. The actual General Obligation Bond rate for fiscal year 2005-06 (prior to the 2006 Fire Bond) was \$0.776 per thousand dollars of assessed value. While it has not yet been determined how much this rate will increase because of the Fire Bond, it does appear that the general obligation bond rate, like the General Obligation debt, will continue to remain under 50 percent of the limit. Thus the City could likely double its General Obligation debt and still remain within both of its General Obligation debt limitations.

CONSTRUCTION LIMITATIONS

The City has the institutional capability of annually constructing (in 2006 dollars) between \$12 to \$15 million of street projects. It is also assumed that \$15 million per year is the maximum tolerance of the citizens of Salem for this level of very disruptive construction. Assuming the higher value of \$15 million per year, a total of \$375 million (in 2006 dollars) worth of capital construction is able to be constructed for the 25-year planning period.

The needs for the street system for the next 25 years are independent of our institutional ability to build the projects as well as our ability to fund them. Salem has a large backlog of transportation system needs that clearly points to the possibility that we did not achieve enough in the last 25 years.

TRANSPORTATION IMPACT TASK FORCE

The Transportation Impact Task Force, a committee of 20 citizens, was organized by the Salem City Council in November 1994, in response to strong opposition to the then-proposed transportation systems development charge (TSDC). Its purpose was to study ways with which to finance Salem's capital and maintenance needs. Its adopted mission statement was:

To study the transportation system needs of the greater Salem area and to recommend ways and means to meet those needs, automotive and other, to assure a functioning transportation system for today's and tomorrow's users.

The Task Force adopted a "three-legged stool" approach to financing the City's transportation infrastructure:

- Funding of capital improvements through General Obligation Bonds;
- Funding of capital improvements caused by areawide impacts of new growth through TSDCs; and
- Funding of a perpetual life maintenance program through a broad-based general tax, the preferred option being a local gasoline tax.

The third leg of the stool, funding for maintenance, was not brought before the City Council for adoption. Council adopted the first two legs of the stool by reaffirming the use of General Obligation Bonds and authorizing the implementation of a TSDC. It should be noted that the

TSDC adopted was not the maximum amount permitted by law. Action was deferred on the local gasoline tax option based on anticipated opposition and uncertainty involving the actions of the State legislature regarding future increases in highway fuel taxes.

In 2003, the Save Our Streets Council Subcommittee recommended the incremental transition of Water/Sewer Franchise Fees to be used for street operations and maintenance, as well as the continued use of General Obligation bonding for capital construction.

CAPITAL FUNDING STRATEGY

Based on the recommendations of the Transportation Impact Task Force and the Save Our Streets committee, the following capital finance strategy is recommended for funding transportation infrastructure over the next 25 years:

- Adopt \$325 million (in 2006 dollars) over 25 years (\$13 million per year), as the target for capital construction of transportation infrastructure.
- Target General Obligation Bonding at \$175 million over the next 25 years, \$118 million in 2006 dollars, with \$86 million (in 2006 dollars) targeted for major improvement projects included in the *Salem Transportation System Plan*.
- Adopt a TSDC charge which generates an estimated annual revenue of approximately \$3.4 million in the early years and generating about \$80 million over the next 25 years.
- Assume approximately \$93 million in private construction of transportation infrastructure provided through development-related, site-specific improvements.

FUNDING AVAILABILITY

The *Salem Transportation System Plan* anticipates the following amount of funding will be available for use in financing the Salem transportation system:

Capital

Based on the various assumptions related to funding availability and future bonding, the City of Salem expects to have a total of about \$324 million available for capital construction within the limits of the city of Salem over the next 25 years.

Maintenance and Operation

The City of Salem has not yet fully addressed its maintenance funding needs. The funding shortfall may be partially mitigated if the legislature raises the fuel tax rate per gallon sufficient to exceed inflationary costs and/or the State modifies the formula used to allocate fuel taxes to increase the City's share. The City of Salem has been supportive of legislative efforts to increase State Fuel Taxes in order to make up the current shortfall in maintenance and operations funding. However, other options may need to be pursued in the future if needs continue to exceed revenues. Some of the options available to the City to increase maintenance funding include: increased utility franchise fees, transportation utility fees, local/regional fuel taxes, general fund revenues, local/regional vehicle registration fees, and general obligation bonds. The City of Salem's current policy is to continue funding operations and maintenance primarily through existing funding sources.

Transit

The passage of a new tax base by the Salem Area Mass Transit District has opened the door for the expansion of transit service and the eventual introduction of express services and expanded weekend service. Continued voter support will be needed over the next 20 years to maintain and expand services.

To continue the ongoing transportation programs at the levels identified in the "Needs" section

of this Element, the City of Salem will have to depend on the continued availability of flexible Federal and State funds and grants. Transportation engineering and planning support services are funded through a mix of fuel tax revenues, grants, and capital projects.

Goal, Objectives, and Policies

The City of Salem has the following goal, objectives, and policies on financing transportation capital and maintenance needs through the 25-year horizon of this Plan:

GOAL: A transportation system for the Salem Urban Area that is adequately funded to meet its current and future capital, maintenance, and operations needs.

OBJECTIVE NO. 1

Meet the current and future capital improvement needs of the transportation system for the Salem Urban Area, as outlined in the *Salem Transportation System Plan*, through a variety of funding sources.

Policy 1.1 General Obligation Bonds

The City shall pursue the sale of General Obligation Bonds to finance capital improvements to the transportation system alone or in combination with other funding sources, including potential user fees. Projects shall be selected for each bond package, with each package authorized by a vote of the citizens of Salem.

Policy 1.2 Transportation System Development Charges

As defined by Oregon Revised Statutes and City ordinances, TSDCs may be collected by the City to mitigate impacts placed on areawide transportation facilities.

Policy 1.3 Development Exactions

The City shall require those responsible for new development to mitigate their development's impacts to the transportation system, as authorized in the *Salem Revised Code* and *Oregon Revised Statutes*, concurrent with the development of the property.

Policy 1.4 Federal Funding Sources

The City shall seek Federal funding for capital improvements through participation in the metropolitan planning organization (MPO) or other designated distribution process, as provided in currently-authorized Federal transportation legislation.

Policy 1.5 Bicycle and Pedestrian System Funding

The City shall continue to set aside 1 percent of its allocation of State Highway Fuel Tax funds for creation of on-street bicycle and pedestrian facilities.

Policy 1.6 Right-of-way Acquisition Trust Fund

The City shall continue to reserve funds in a trust fund account for acquisition of property for future right-of-way opportunities.

Policy 1.7 Assessment of Special Benefit for Vacation of Rights-of-way

The City shall collect an assessment of special benefit from petition-initiated right-of-way vacations. The funds received from assessments of special benefit shall be placed in the Right-of-way Trust Fund for the acquisition of future public rights-of-way.

Policy 1.8 Funding Transportation Study Recommendations

Future transportation planning studies performed by the City shall contain an implementation section indicating what actions can be taken with current revenues and what actions may be needed to fund remaining recommendations.

OBJECTIVE NO. 2

Secure adequate funding to implement an adequate level street maintenance program which shall sustain a maximum service life for pavement surfaces and other transportation facilities.

Policy 2.1 Primary Maintenance Funding Sources

Assuming no changes in State funding mechanisms, the primary funding sources for street system maintenance activities shall be the City's allocation of the State Highway Fuel Tax and collection of water and sewer utility franchise fees.

Policy 2.2 Seeking Additional Funding Sources for Maintenance

The City shall seek additional funding sources to meet the long term financial requirements of an adequate level street maintenance program.

Policy 2.3 Responsibilities for System Maintenance

The City shall continue to participate in cooperative agreements with other State and local jurisdictions for maintenance and operations activities based on equitable determinations of responsibility and benefit.

OBJECTIVE NO. 3

Secure funding to adequately fund the operation of the transportation system that includes advance planning, design engineering, signal operations, system management, illumination, and cleaning activities.

Policy 3.1 Primary Funding Sources for Operations

Assuming no changes in State funding mechanisms, transportation system operations activities shall be funded primarily from the City's allocation of the State Highway Fuel Tax. Other funding sources should be pursued to augment the financial requirements of providing adequate future system operations.

Policy 3.2 Street Lighting Districts

The City shall encourage and facilitate the formation of local street lighting districts to enable neighborhoods the opportunity for street illumination. The City shall consolidate street lighting districts by subdivision to achieve cost equity and benefits from economies of scale.

Policy 3.3 Pursuing Federal and State Grants

The City shall pursue the awarding of Federal, State, and private grants to augment operations activities, especially in the planning and engineering functions.

Capital Project Programming

A picture of what can be accomplished over the next 25 years can be determined by comparing the amount of City of Salem capital project needs to the available funding. Table 15-5 shows that the City should be able to meet at least 37 percent of its total

**Table 15-5 Salem Capital Project Funding
2006-2031 (2006 dollars)**

Revenue Forecast Category	25-Year Totals
G.O. Bond Funds	\$85,613,000
TSDCs	\$80,466,000
Developer Funded	\$93,350,000
State & Federal Funds	\$23,369,000
1% Bikeway/Pedestrian	\$1,412,000
Urban Renewal/Other	\$39,492,000
Total Revenue Forecast	\$323,702,000
Total Capital Costs	\$878,822,000
Unfunded Capital Costs	\$555,120,000

estimated 25-year capital project costs. This includes all committed, high, medium, and low priority arterial and collector street improvement projects along with ITS projects, bicycle and pedestrian projects, and local street improvements. If local streets improvements are excluded, this increases to 53 percent. This strategy assumes an average institutional limit of \$13 million per year of construction in the city. This strategy assumes the continuation of TSDCs. Finally, this strategy assumes that the citizens of Salem will vote to approve General Obligation Bond measures for transportation.



Long-range Transportation Strategy

Providing Mobility for a New Century . . .

. . . requires an extended vision of the future and the challenges that it will bring. A long-range transportation strategy provides a general philosophy and policy framework that will guide the development of the Salem transportation system beyond the traditional 20- to 25-year planning horizon found in most infrastructure plans. A long-range transportation strategy allows the City to make strategic-level decisions regarding growth and the eventual build-out of the existing Salem Urban Growth Boundary (UGB).

A long-range vision provides a valuable measure of freedom from the Federal rules of fiscal constraint and regional consistency that are required within the 25-year planning window. Issues that deal with build-out, future river crossings, and urban form are ones that can best be addressed outside of these constraints.

Long-range Assumptions

Preparing a long-range strategy requires making a number of broad assumptions concerning future conditions in Salem. The following are a few basic assumptions:

- Although significant strides will be made in the use of alternative travel modes, such as transit, walking, bicycling, and carpooling, it is assumed that the most common form of transportation will remain the personal or family vehicle. The power source for these vehicles is not particularly relevant for this discussion.
- It is assumed that the economy of Salem and the Pacific Northwest will remain healthy enough to result in continued population and employment growth. The 20 years after 2030 may see a less rapid growth rate.
- For planning purposes, it is assumed that the regional UGB will stay essentially the same as it is now, with few, if any, expansions.

Long-range Issues

The following issues will require serious consideration by our community in order to make our transportation system function as we approach build-out of the existing Salem UGB:

FUTURE GROWTH AND ITS TRAFFIC IMPACTS

- How will the street system accommodate the growth in traffic expected over the very long term?
- Can we ever build our way out of traffic congestion?

STREET IMPROVEMENTS

- How much pavement is acceptable to the community before it significantly impacts the character and livability of the community we are trying to serve?
- How much pavement can we afford to build and maintain over the long term?
- Should we set limits as to how wide a street can become?

TRANSIT AND ALTERNATIVE MODES

- Over the long term, will other modes of travel, such as transit, carpooling, bicycling, and walking, be able to adequately pick up an increased share of overall travel demand to help alleviate congestion and reduce road widenings?
- What kind of transit service should we have over the long term?

URBAN FORM

- What kind of urban form should Salem attain as we approach existing UGB build-out? Vehicle-oriented? More or less dense?
- Can the demand for transportation services truly be affected by a long term change in urban form?

RIVER CROSSINGS

- What demand for additional Willamette River crossings will exist over the long term?
- Should we build additional river crossings? If so, how many? Where should they be located? How can they be financed?

REGIONAL GROWTH

- As Salem develops closer to its UGB, will growth in surrounding communities create an additional burden on our transportation system?
- How do we best serve the growing transportation needs of these communities?

The answers to many of these questions require a level of comprehensive planning beyond the scope of any one single plan. Ideally, the *Salem Area Comprehensive Plan* should have been revised prior to, or concurrent with, the development of the *Salem Transportation System Plan*. Many of the concepts outlined in this long-range strategy will require further attention in future revisions to the Comprehensive Plan. In fact, some of these issues essentially require a regional approach to planning and problem-solving. Despite these limitations, it is important that Salem has a long-range transportation strategy to provide interim guidance until resources are available to address other comprehensive issues. This long-range strategy should be considered a basis for developing future plans and policies.

Guiding Principles of the Long-range Transportation Strategy

The City of Salem shall incorporate the following goal and principles in planning for its long-range transportation system:

GOAL: A long-term transportation strategy that guides Salem toward eventual build-out of its existing UGB, through principles aimed at providing mobility, accessibility, and developing efficient and livable urban form.

MOBILITY

Urban Standard Streets

1. The City shall make it a priority to bring the arterial and collector street system within the Salem Urban Area up to urban design standards, having such features as curbs, sidewalks, corner curb ramps, bicycle lanes, drainage, and illumination. Local streets should be improved to urban standards, as feasible and appropriate.

Efficient Regional Transit Service

2. The City shall support the development of a transit system that, over the long term, will provide a level of service that can accommodate the travel demands expected over the long term. The city will need to be served by a system of buses that have short headways and provide a system of direct and convenient connections to employment, retail, institutional, and educational centers. The city's street system will need the transit system to help relieve its capacity deficiencies by providing express transit service during peak travel periods. Express transit routes should be served by a series of park and ride facilities.
3. The City shall support the development of an expanded transit system that provides frequent service to outlying satellite communities such as: Woodburn, Silverton, Dallas, Monmouth, Independence, Turner, Sublimity, Stayton, Aumsville, and others. The City shall also support the development of frequent and convenient intercity passenger services that connect the Salem-Keizer region to the Portland metropolitan area, Coast, and other Willamette Valley cities.

Arterial Street Width

4. The City shall limit its arterial streets to a total cross section of no more than five lanes wide. Some intersections may need to exceed the five-lane standard. State facilities and those roads classified as Freeways and Parkways may also need to exceed this standard. Travel demand that would require the exceedence of five-lane arterial cross sections should be accommodated through increased transit service, demand management techniques, and alternative travel modes. Applications of technology and access control should be used to maximize the capacity of the existing and planned street system.

Willamette River Crossings

5. The City shall work with the Oregon Department of Transportation to first identify what types of capacity and seismic improvements can and should be made to the existing Center Street and Marion Street Bridges. Secondly, the City shall work with the State and other regional jurisdictions to identify the need for additional river crossings over the next 20 to 40 years. If such a need is justified, the location of additional river crossings should be identified. The type of crossing method should then be determined. Finally, the method of finance for construction and operation should be identified and pursued.

Off-street Facilities

6. The City shall explore the feasibility of establishing exclusive rights-of-way for future high capacity transit operations and the development of a system of off-street bicycling and walking pathways or trails.

TRANSPORTATION-SUPPORTIVE URBAN FORM

Activity Subcenters

7. The City shall support the continued development of the Central Salem core area as the focal point of the community, while creating opportunities for employment and retail centers outside of the downtown that will spread travel demand more uniformly throughout the urban area, easing pressure on Salem's radial arterial streets. These activity centers should be served extensively by transit services.

Mixed Use Developments

8. The City shall facilitate the development of mixed use developments that reduce automobile dependence and encourage walking, bicycling, and transit ridership. This can be accomplished through revisions to the *Salem Area Comprehensive Plan* and *Salem Revised Code*. Comprehensive Plan and Zoning Code maps should identify where mixed use developments can be located. They should be located where they can be best supported by the overall city transportation system.

Increased Residential Densities

9. Through future amendments to the *Salem Area Comprehensive Plan*, the City shall provide opportunities for increased residential densities in locations that support increased use of alternative travel modes, especially transit.

Local Street Connectivity

10. The City shall require subdivision and development plans to provide local street connections to neighborhood activity centers, such as parks, schools, and neighborhood retail centers, thus reducing automobile demand and promoting walking and bicycling. Accessibility to transit service shall be provided via connections to streets designated as transit routes.

RECOMMENDED LONG-RANGE TRANSPORTATION SYSTEM IMPROVEMENTS

Street System

As the Salem Urban Area develops closer to its existing UGB, increased traffic will require additional expansions to those facilities identified in the 20-year Street System Element. The future will see continued growth in the number of automobiles and trucks, including a greater number of transit vehicles, all trying to use the same street system. Although capacity improvements will still be necessary, the long-range street system will look essentially the same as it is now. No new arterial street routes are recommended to be added to the system with the exception of those needed to serve future Willamete River bridges.

Long-range Strategy Principle No. 4 states that the city's arterial streets should not exceed five lanes in width, except at some major intersections, freeways, and parkways. The result will be a mature arterial street system that relies on transit and alternative modes to carry the remainder of future traffic demand. This maturation of the street system is expected to be completed beyond the time frame of the 20-year Detailed Plan.

Part of the maturation process for the street system will include the introduction of grade-separated interchanges at selected intersections on the highest level streets in the system. However, these interchanges will be relatively few in number. The introduction of an additional

Willamette River crossing(s) may occur during the long-range horizon. Additional streets and ramps may also be required to connect this facility (or facilities), to the Salem street system.

Recommended Long-range Street System Improvements

Based on long-range traffic capacity and safety analysis, the following improvements may be necessary during the 20-year period beyond the Year 2030:

Highway 22 Corridor (includes Mission Street SE and Pringle Parkway SE)

It is recommended that Highway 22 become a limited access facility along its entire length through the Salem Urban Area. It is envisioned that:

- A new interchange will exist at Highway 22 and Cordon Road SE. This interchange should become part of an interconnected system of grade-separated interchanges at Cordon Road SE, Lancaster Drive SE, Interstate 5, and Hawthorne Avenue SE.
- Driveway accesses will be entirely eliminated along the section of Mission Street SE between Hawthorne Avenue SE and Church Street SE. A system of frontage roads may be necessary to provide access to properties lacking frontage on side streets.
- Pringle Parkway SE and the Trade Street SE/Ferry Street SE couplet will remain essentially as they are today, with no new accesses permitted. On-street parking on Ferry Street SE will be permanently removed to facilitate traffic flow.
- The existing Marion Street and Center Street Bridges will be reconfigured to eliminate weaving movements that reduce effective bridge capacity. The ramp systems at either end of the bridges will be configured so that movements are free from stop controls. The intersection of Edgewater Street NW and Wallace Road NW will be eliminated and replaced with a free-flowing design.
- A new interchange will need to be constructed at or near the southern terminus of Eola Drive NW at Edgewater Street NW. This will allow direct access from Highway 22 to Eola Drive NW, a minor arterial street, and the long term growth areas of West Salem. This new interchange will replace the existing interchange at Rosemont Avenue NW, eliminating an obsolete interchange design and problematic left-hand merge onto the highway. A method should be studied to see how both Eola Drive NW and Rosemont Avenue NW can both be better served by one interchange.
- New grade-separated interchanges will be needed at the intersections of Highway 22 and Doaks Ferry Road NW and the western terminus of Edgewater Street NW. These interchanges will need to be connected, where feasible, by a system of parallel frontage roads to eliminate direct access onto the highway.

The entire length of Highway 22 within the Salem Urban Area is scheduled to be studied as part of a future State corridor study. The recommendations mentioned above will be studied in further detail and a determination made as to their feasibility, benefit, and estimated costs.

Circumferential Travel Route (Includes: Kuebler Boulevard S/SE, Cordon Road SE/NE, Hazelgreen Road NE, Chemawa Road NE, and Salem Parkway NE)

It is recommended that all the streets constituting the circumferential travel route become limited access facilities. It is envisioned that:

- No new at-grade intersections will be permitted on Salem Parkway NE. No additional traffic signals or other stop controls will be installed that would impede the flow of traffic on this facility.
- Kuebler Boulevard SE will be improved to a Parkway design between Interstate 5 and Liberty Road S having four travel lanes and a landscaped median. Bicycle lanes, sidewalks, and/

or separate pedestrian paths will be incorporated into the design. A new grade-separated interchange may exist at the intersection of Kuebler Boulevard SE and Commercial Street SE, possibly linked to a partial interchange at Sunnyside Road SE.

- Kuebler Boulevard S, although classified as a Parkway, will be improved to a modified Minor Arterial design west of Liberty Road S having two travel lanes, separated by a paved or raised median between street intersections. The design will also include bicycle lanes, sidewalks, and provisions for limiting access.

In the future, there may be a need to continue the circumferential travel route north from Kuebler Boulevard S to a possible future Willamette River crossing (see discussion of Southern Alignment in following section). This route could generally follow the existing alignment of Viewcrest Drive S.

- The circumferential travel route may extend west to West Salem from the Salem Parkway across a possible future Willamette River crossing (see discussion of Northern Alignment in following section). The specific alignment of such an extension would require additional analysis.

Future Willamette River Crossings

- Purpose and Need—Results of the Rivercrossing Study Phase I demonstrate that future travel demand will greatly exceed the capacity of the existing Willamette River bridges. One or more additional rivercrossings will be needed in the long-term future, as well as aggressive improvements in alternative travel modes, to accommodate regional travel demand and circulation needs. The purpose of a future river crossing(s) would be to relieve current and future traffic congestion on the existing Willamette River bridges and provide greater opportunities for circulation and accessibility in the Salem Urban Area.
- Northern Alignment—The Tryon Avenue NE/Pine Street NE alignment should be shown as a shaded area that connects that portion of North Salem to a range of possible locations in West Salem. This future river crossing does not have a definitive time frame or cost estimate. The specific alignment will need to be determined through a future Environmental Impact Statement (EIS) process. This northern alignment should be considered the leading priority for any future river crossing in the Salem Urban Area. Statewide Goal 3 exceptions and Willamette Greenway issues will need to be addressed through further study and findings.
- Southern Alignment—After the completion of a future northern river crossing, the next most feasible rivercrossing alignment would connect the New Viewcrest Street S Extension to an area around the intersection of Doaks Ferry Road NW and Highway 22. This alignment option should be shown as a general shaded area until future study determines a more specific alignment. This future river crossing does not have a definitive time frame or cost estimate. The completion of a southern alignment should be considered second in priority to the completion of a northern alignment rivercrossing. State, SKATS, and City staff do not recommend incorporation of this alignment into an EIS process at this time, due to the anticipated cost to mitigate physical terrain and environmental concerns. Statewide Goal 3 exceptions and Willamette Greenway issues will need to be addressed through further study and findings.
- Alternative Modes Improvements—In order for the existing Marion Street and Center Street bridges to function at an acceptable level of service, even with additional future rivercrossing(s), an aggressive strategy to improve the percentage of trips using alternative travel modes will be required. These improvements will require increased transit service, carpooling, vanpooling, bicycling, walking, telecommuting, flexible work schedules, and other transportation demand management measures. Changes in the amount of employment in West Salem may affect the directionality of future traffic flows.

12th Street SE

It is recommended that within the time horizon of the long-range strategy, 12th Street SE (between Cannon Street SE and Commercial Street SE) be improved to a five-lane, Major Arterial cross section having four travel lanes, a landscaped median, sidewalks, and bicycle lanes. The intersection at 12th Street SE and Commercial Street SE will need to be reconfigured for better traffic flow, possibly including a grade-separated design that would provide a direct connection between Sunnyside Road SE and 12th Street SE. Any grade-separated design would have to provide accommodations for bicycle and pedestrian travel.

Center Street NE

It may become necessary within the time horizon of the long-range strategy, if not sooner, to create a total of three travel lanes between Illinois Avenue NE and 13th Street NE. This can be accomplished through removal of on-street parking and the planting strips. A small amount of additional widening may be needed at some locations. The resulting design would have two eastbound travel lanes and one westbound lane.

Wallace Road NW (State Highway 221)

It is recommended that the segment of Wallace Road NW between Orchard Heights Road NW and Edgewater Street NW bridgehead area be improved with the installation of a landscaped median, plus additional turn lanes at intersections as needed. A more efficient configuration of the existing bridgehead area will be needed. A series of local circulation streets will be required on both sides of Wallace Road NW in order to preserve property access.

Doaks Ferry Road NW

As part of the long-range strategy for Highway 22, a new grade-separated interchange will be necessary at Doaks Ferry Road NW and Highway 22. As West Salem further develops, it may become necessary to improve Doaks Ferry Road NW to a five-lane cross section south of Orchard Heights Road NW.

Arterial and Collector Street Standard Upgrades

Within the 45-year horizon of the long-range strategy, it is important that all arterial and collector streets within the Salem Urban Area be brought up to full urban standards. This will ensure a completed system of bicycle lanes and sidewalks.

Transit System

In order for the City of Salem to avoid major traffic congestion and subsequent road widenings, the percentage of work trips using travel modes other than the single-occupant automobile must increase significantly beyond the 25 percent goal identified in the original 20-year Plan. Three major improvements are envisioned for the transit system in this long-range strategy:

- Establishment of a timed-transfer bus route system that increases crosstown travel opportunities. This system will be configured either in a traditional “grid” transit route design; via several smaller transit hubs, located at major employment and activity centers; or a hybrid of both designs. The downtown transit center will still remain the focus of the transit system, using a modified “pulse” system to facilitate transfers.
- Expansion of transit service hours to cover all seven days of the week with increased frequencies especially during peak hours. Express bus service from park-and-ride lots will be expanded as ridership and the number of park-and-ride lots increase.
- The establishment of intercity commuter service to outlying communities such as Woodburn, Stayton, Sublimity, Turner, Aumsville, Silverton, Dallas, Monmouth, and Independence. This can be accomplished through either an expansion of the Salem Area Mass Transit District boundary, creation of another public entity, or through private vanpools and shuttles. Park-

and-ride lots will be located along major highways and arterials to intercept other incoming commuters at the fringes of the city, where they can transfer to express bus service.

Other Transportation System Improvements

It is envisioned that other improvements will need to occur to the transportation system such as:

- All signalized street intersections will be connected to the City's traffic control center where their status and timing will be coordinated by time of day. Major travel corridors will be monitored in real-time, so that signals can be adjusted and the system managed around incidents and congestion delays.
- Other technological aids, such as in-vehicle navigational computers, variable message signing, and incident detection systems, will be incorporated into the transportation system as they are developed.
- The availability of high speed passenger rail service between Salem and other Willamette Valley cities.
- The potential use of McNary Field as a "reliever" airport for Portland International Airport for either passenger and/or air freight services. This possibility is more feasible with the establishment of a high speed rail link between Salem and Portland.
- The completion of the city sidewalk system, not only on arterial and collector streets, but on most local streets as well. This would provide safe and convenient connections to transit service and reduce the need to drive the automobile for short trips.



Plan Implementation

Need for Implementation

Once developed, a plan is still just a collection of words and good intentions. It has no effectiveness unless its goals, objectives, and policies are adopted as a foundation for decision making. Its recommended projects and programs will not be constructed unless designed and financed. In essence, a plan is only as good as the actions taken to implement it.

Legal Basis of the *Salem Transportation System Plan*

Implementing the *Salem Transportation System Plan* begins with the adoption of the plan as a support document of the *Salem Area Comprehensive Plan*. The *Salem Transportation System Plan* is adopted by City Council as a Detailed Plan of the *Salem Revised Code*. State Administrative Rule (OAR 660-11-045) requires portions of the *Salem Transportation System Plan* to be adopted as part of the City's *Public Facilities Plan*, an element of the *Salem Area Comprehensive Plan*; and, therefore, have the same effect as provisions of the Comprehensive Plan.

Adopted neighborhood plans and the *Salem Transportation System Plan* are to be consistent, thereby avoiding conflicts between citywide needs and neighborhood interests. When new studies or neighborhood plans develop recommendations that would improve upon the *Salem Transportation System Plan*, the Plan can be amended to reflect those changes. Amendments to the Plan require a public hearing and vote of approval by City Council.

Policy Foundation for Decision Making

The *Salem Transportation System Plan* provides the policy foundation for City decision makers, advisory bodies, and citizens. The goals, objectives, and policies of the Plan are to be considered in all decision-making processes mandated by State law, acknowledged plans, and land use regulations. Specifically, the Plan is to guide decisions involving:

- **The Function and Location of Streets**

The Plan describes, through the use of maps and descriptions, the classification or function of

all public streets within the Salem Urban Area. It also describes the approximate alignment of all streets and extensions of existing streets.

- **Land Use Development**

The Plan contains policies and recommendations that require new development to provide adequate accessibility for all travel modes within its development, or in coordination with existing and new developments. Street design guidelines contained in the Plan allow for adequate right-of-way dedication. The Plan also contains recommended land use alternatives that support walking, bicycling, and transit ridership. This is a Major Facility Plan, as defined in the Urban Growth Management Program of the *Salem Revised Code* (SRC Chapter 66). As such, it is one component in the process that guides the development of new street system elements as development occurs.

- **Transportation Programs**

This Plan identifies measures and programs that should be undertaken to increase mobility for all travel modes, reduce congestion, and improve air quality. A major focus of these programs is to reduce our community's reliance on the single-occupant automobile, especially for work commute trips.

- **Capital Investments**

The project and program recommendations contained within the Plan form the basis from which projects are placed into the *Capital Improvement Program*, *Regional Transportation Improvement Program*, and annual City budgets. The projects and programs awaiting funding in the *Capital Improvement Program* must be consistent with the needs identified in the *Salem Transportation System Plan*.

- **Funding Priorities**

The projects and programs recommended in the Plan are prioritized based on need and general time frame. These priorities should be considered when preparing funding scenarios and bond measures. It is understood that priorities may change over time, and other factors need to be considered when preparing funding and construction priorities.

Relationship with the *Capital Improvement Program*

The *Capital Improvement Program* (CIP) is a five-year implementation plan for the City's capital construction projects. The CIP is also the central reference document for all unfunded public capital infrastructure projects identified from adopted master plans. The major transportation-related projects contained in the CIP shall be derived from the projects and needs identified in the *Salem Transportation System Plan*. All transportation projects contained in the CIP, whether major or minor, must be consistent with the goals, objectives, policies, and needs identified in the *Salem Transportation System Plan*. While open to neighborhood and citizen input, the formation of each edition of the CIP should not result in a parallel transportation planning process.

Relationship with Land Use Actions and Development Review

In accordance with requirements contained in the State Transportation Planning Rule and the *Salem Revised Code*, the adopted goals, objectives, policies, projects, and maps of the *Salem Transportation System Plan* must be considered and applied toward the review and approval of specified land use actions and development applications. This means that applications submitted for such actions as Comprehensive Plan Map amendments, zone changes, conditional use permits, subdivision review, and land partitions need to include findings that show how the

application is in conformance with the tenets of the *Salem Transportation System Plan*. City staff need to review these findings for conformity.

Component of Regional and Statewide Transportation Plans

The *Salem Transportation System Plan* has been developed in concert with recent revisions to the transportation plans of neighboring jurisdictions. These jurisdictions include: City of Keizer, Marion County, Polk County, and the Salem Area Mass Transit District. Upon their completion, the entire region will have a uniformly consistent array of transportation plans. The glue that holds all of the local transportation plans together is the recently adopted *Regional Transportation System Plan*, produced by the Salem-Keizer Area Transportation Study. Because of the required conformity between the *Salem Transportation System Plan* and the *Regional Transportation System Plan*, City Council will adopt the Regional Plan after it adopts the Salem Plan. The City Council will also have to vote approval of the transportation system plans of the individual jurisdictions within the region. Likewise, the affected jurisdictions will have to approve the Salem Plan.

Transportation Improvement Programs

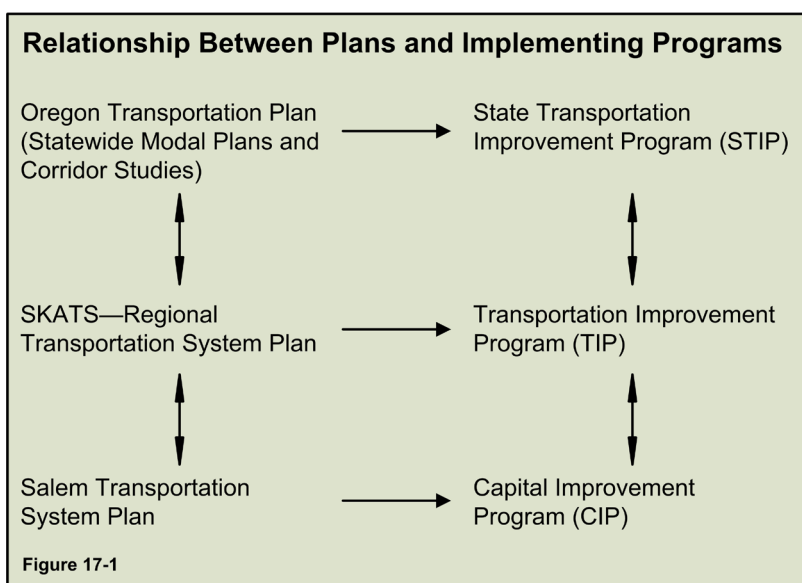
Just as the CIP is an implementing document for the *Salem Transportation System Plan*, the *Transportation Improvement Program (TIP)* is the implementing mechanism for the *Regional Transportation System Plan*. The TIP contains all projects of regional significance from each of the region's local jurisdictions. Projects requiring the participation of State or Federal funds must be included

in the TIP. All projects of regional significance must also be evaluated for conformity with State and Federal air quality standards. Project priorities and the assignment of Federal funds are reviewed by the Policy Committee of the Salem-Keizer Area Transportation Study, which consists of elected officials from each participating local jurisdiction, and the Oregon Department of Transportation. The TIP is updated annually. Projects and programs identified in the *Salem Transportation System Plan* will constitute a significant portion of the TIP.

State highways play a significant role in the Salem street system. Projects that are identified in the TIP on State highways, and other projects or programs requiring State or Federal funding, must be included in the State Transportation Improvement Program (STIP). The STIP is the implementation mechanism of the Oregon Transportation Plan, Statewide Modal Plans, and Corridor Studies. It is through the STIP document that capital projects and transportation programs are prioritized and funded. The STIP is updated every two years to reflect changing statewide needs. There are several projects and programs contained in the *Salem Transportation System Plan* that will also be included in current and future STIPs.

Other Implementation Mechanisms

In addition to the CIP, the tenets of the *Salem Transportation System Plan* will be implemented



through various transportation-related sections of the *Salem Revised Code*. The *City of Salem Design Standards* will be used as a basis for the design of all capital construction projects. Administrative procedures will be implemented through the *City of Salem Department of Public Works Departmental Policies*. All three of these documents will be reviewed and revised for conformity after adoption of the *Salem Transportation System Plan*.

Amending the Salem Transportation System Plan

With the detailed elements of the 25-year plan and the broader principles contained in the long-range strategy, the *Salem Transportation System Plan* is designed to be relevant for a long time. However, like all plans, over time circumstances change, assumptions become modified, and new priorities are developed. Even small changes in a plan can make a printed document obsolete. The *Salem Transportation System Plan* is designed to be a “living document,” where changes can be incorporated over time without difficulty.

AMENDMENT PROCESS

It is recommended that proposed amendments to the *Salem Transportation System Plan* be considered during the fall of each year. This will allow amendments to be adopted prior to the preparation process of the next year’s edition of the *CIP* and City budget. Amending the Plan on an annual basis provides for an organized, thoughtful process, and avoids piecemeal changes to the Plan.

Goal, Objectives, and Policies

The City of Salem shall have the following goal, objectives, and policies to implement the *Salem Transportation System Plan*:

GOAL: To implement the adopted goals, objectives, policies, projects, and programs of the Salem Transportation System Plan.

OBJECTIVE NO. 1

To provide a legal basis and foundation for decision making in transportation-related issues.

Policy 1.1 Policy Foundation for Decision Making

The *Salem Transportation System Plan* shall be used as the legal basis and policy foundation for all City decision makers, advisory bodies, and citizens in issues related to transportation. The goals, objectives, policies, principles, maps, and recommended projects shall be considered in all decision-making processes that impact, or are impacted by, the transportation system, as required by law.

Policy 1.2 Specific Guidance

The *Salem Transportation System Plan* shall be used to:

1. Describe the classification or function of all public streets within the Salem Urban Area. It shall be used to describe the approximate alignment of all new collector and arterial streets, including selected local streets, and extensions of existing streets. Policies found in the Plan shall be used to develop connective local street circulation patterns.
2. Require, as provided by law, new development to provide adequate accessibility for all travel modes within its development and in coordination with existing and other new developments. Street design guidelines contained in the Plan are to be used to secure adequate amounts of public rights-of-way.

3. Identify measures and programs that should be undertaken to increase mobility for all travel modes.
4. Form the basis from which projects are placed into the City's CIP and other regional and statewide transportation improvement programs.
5. Establish funding and project construction priorities when preparing funding scenarios and City General Obligation Bond sales.
6. Evaluate proposed petition- and City-initiated right-of-way vacations based upon the criteria set forth in Policy 2.10 of the Street System Element of the Plan.

Policy 1.3 Standard Policy Citation Protocol

For the purposes of consistency, the following protocol should be used when citing specific policies in the Plan:

Salem TSP, <Element>, <Policy>, <Sub-policy>, <page #>.

OBJECTIVE NO. 2

Serve as the basis for placing projects and programs into transportation improvement programs.

Policy 2.1 Relationship with CIP

The Salem CIP shall derive its projects from those projects and needs identified in the *Salem Transportation System Plan*. All transportation projects contained in the CIP must be consistent with the goals, objectives, policies, and needs identified in the *Salem Transportation System Plan*.

Policy 2.2 Other Transportation Improvement Programs

Those projects and programs contained in the *Salem Transportation System Plan* of regional or statewide significance, or requiring the use of State or Federal funding, shall be included in the *Regional Transportation Improvement Program* and *Statewide Transportation Improvement Program*.

OBJECTIVE NO. 3

Consideration in all pertinent land use actions and development reviews.

Policy 3.1 Land Use Actions and Development Review

The goals, objectives, policies, standards, and maps contained in *Salem Transportation System Plan*, and its implementing ordinances, shall be considered and applied towards the review and approval of all land use actions and development applications. Applications need to contain findings that show how the proposed land use action or development is in conformity with the *Salem Transportation System Plan*.

Policy 3.2 Relationship to Other City Standards

The *Salem Transportation System Plan* shall be used as the basis for other implementing standards and ordinances. The *City of Salem Design Standards* and *City of Salem Standard Construction Specifications* shall be the basis for the design of all capital construction projects. Administrative procedures shall be implemented through the *City of Salem Public Works Departmental Policies*. These documents must be consistent with the adopted tenets of the *Salem Transportation System Plan*.

OBJECTIVE NO. 4

A regularly updated and current transportation plan, amended to reflect changing circumstances and opportunities.

Policy 4.1 Amending the Plan

The following process shall be used to amend the *Salem Transportation System Plan*:

1. Amendment proposals are initiated by persons, neighborhood associations, City staff, Planning Commission, or City Council.
2. City staff will review the proposed amendments as to intent, impact on the overall transportation system, fiscal impact, feasibility, and conformity with the plans of other local jurisdictions, *Regional Transportation System Plan*, and statewide plans and regulations.
3. If the proposed amendment is considered area-specific, as opposed to citywide, City staff may present the proposed amendment to the affected neighborhood association(s) prior to presentation to the Planning Commission.
4. The proposed amendments presented to the Salem Planning Commission will have a public hearing and will be attended by a recommendation.
5. The proposed amendments will then be presented to the Salem City Council for a public hearing and potential adoption during a prescribed time period every two years beginning in 2002.
6. Individual amendments to the Salem TSP may be entertained between the biennial process if the issue is of an urgent nature or represents a unique opportunity that cannot be postponed until the planned amendment process takes place.

Policy 4.2 Using Performance Measures to Evaluate Plan's Effectiveness

In support of the Plan amendment process, the City shall periodically compile information to be analyzed to measure the performance of the City's transportation system and evaluate the effectiveness of the Plan's policies, programs, and projects. The information gathered will focus on measuring progress towards the following citywide indicators: mobility, accessibility, safety, livability, and infrastructure performance. A complete list of measures is found in Table 17-1.

Table 17-1 Performance Measures	
Performance Indicator	Measure
Mobility	Average travel time for work trips
	Average peak period speeds on arterial streets
	Average peak period travel times on arterial streets
	Total hours of delay for peak travel periods
Accessibility	Mode share for commute trips by all travel modes
	Mode share for all trips by all travel modes
	Percent of population living within ¼ mile of a transit route
	Total daily transit revenue hours of service
Safety	Fatalities in Salem per million vehicle miles traveled
	Injury crashes in Salem per million vehicle miles traveled
	Property damage crashes per million vehicle miles traveled
	Crashes by travel mode
Livability	Total vehicle miles traveled (VMT)
	Vehicle miles traveled per capita
	Estimated amount of nonresidential off-street parking
Infrastructure Performance	Condition of street pavement
	Miles of bicycle lanes
	Miles of sidewalks
	Number of transit shelters



Issues Requiring Future Study

Transportation planning is an ongoing process that tends to identify new issues as it finds solutions for others. Some issues are so complex that a solution to one problem may need to be linked to the solution of another. Building community consensus on an issue may also require additional time and study. There are several issues that, for reasons related to timing, funding, and staff availability, will need to be studied in greater detail in the near future. The *Salem Transportation System Plan* has identified the following issues as requiring future study. When completed, the Plan can be amended to reflect the recommendations of these studies.

Willamette River Crossing Capacity Study

The first phase of the Rivercrossing Capacity Study was completed in 1999. The need for additional crossings has been identified, as well as two general crossing alignment areas. The northern alignment area (Tryon Avenue NE/Pine Street NE Corridor) has been identified as the primary one to be studied and pursued first. The second, or southern, general alignment area (Kuebler Boulevard SE) is to be pursued over a much longer time frame. The next phase of work associated the Study will be to begin the formal Environmental Impact Statement (EIS) process. This will specifically refine the northern alignment, begin preliminary design, identify potential funding, and begin the study of potential environmental impacts. SKATS adopted Resolution 03-9 in 2003 supporting any and all efforts related to the procurement of the necessary funding to produce an EIS for a new bridge in the northern alignment area connecting the Salem Parkway, West Salem, and Highway 22. The Salem City Council adopted a similar resolution in November 2003 (Resolution 2003-132) to support efforts related to producing an EIS for a new bridge crossing in the Tryon Avenue NE/Pine Street NE Corridor. In 2004, Congress approved earmarked funding to assist in developing this EIS. Salem also has committed funds towards this effort. The EIS process is expected to be completed in the next few years, pending availability of additional Federal, State, or local funds to supplement funds already identified.

Highway 22 Urban Corridor Study

State Highway 22 crosses the Salem Urban Area from east to west, serving as one of Salem's most heavily traveled roads. The purpose of the study is to examine ways to improve the corridor's travel capacity, safety, and multimodal travel needs. The components of this study

are described in both the Street System Element and the Long-range Transportation Strategy Element of this Plan. This study is expected to begin within the next few years.

Sunnyside Road SE—Commercial Street SE—Hilfiker Lane SE Intersection Management and Improvement Study

The segment of Commercial Street SE between 12th Street SE and Keglars Lane SE is the subject of increasing congestion and frustration among drivers. The closely-spaced intersections of five major streets in the area create a confusing and inefficient circulation pattern. The future eastern extension of Hilfiker Drive SE will add additional traffic demand to the intersection area. To address these concerns, an intersection management and improvement study is needed to identify transportation system management measures to make the intersections operate more efficiently and, if necessary, potential realignments of existing streets and other physical improvements to increase capacity, circulation and street system connectivity.

River Road S to Commercial-Liberty Couplet Study

It is expected that traffic volumes will continue to grow on River Road S as future residential development occurs in the far south of Salem. Currently, traffic must use Owens Street S as the link between River Road S and the Commercial/Liberty Street SE couplet. Congestion will increase on Owens Street S, particularly in the eastbound-to-northbound movement, as traffic attempts to negotiate the closely-spaced intersections and lengthy signals. A study is needed to identify measures, potential realignments, or physical improvements that can be employed to better facilitate future traffic circulation and reduce congestion.

Vehicle Miles Traveled (VMT) Reduction Strategy and Development of Alternative Measures

The *Salem Transportation System Plan* contains an ambitious set of goals and objectives to reduce our community's reliance on the single-occupant vehicle. However, meeting these goals may still not be sufficient to achieve the numerical requirements set forth in the State Transportation Planning Rule for the reduction of VMT per capita. The purpose of this study would be to identify specific measures that could help the Salem-Keizer region comply with these requirements. Some of these measures could include, but not be limited to, enhancing the region's ongoing transportation demand management program, expanding regional transit service, and adopting land use development codes that promote mixed-use and transit accessibility.

The City of Salem, in coordination with its regional partner jurisdictions will work together to develop alternative measures to VMT reduction that measure progress toward achieving a more balanced transportation system. These alternative measures may include:

- Modal Share of alternative modes, including walking, bicycling, and transit trips;
- Vehicle hours of travel per capita;
- Accessibility of people to goods and services necessary to meet their daily needs;
- The Oregon Benchmark for a reduction in peak hour commuting by SOVs; and
- Other alternative measures that would produce an equivalent benefit to a reduction in VMT per capita.

A major component of this study would include the determination of its feasibility and benefit to

the community. These two related planning efforts are anticipated to be completed as part of the update to the SKATS Regional Transportation System Plan in 2001-2002.

Update to the Salem Area Comprehensive Plan (Land Use) and Development of an Integrated Land Use and Transportation Plan

Given the age of the current version of the City's comprehensive land use plan and the continued growth being experienced by our community, it is imperative that the *Salem Area Comprehensive Plan* be revised to reflect a greater linkage between land use development and transportation services. It should also be revised to address policies on mixed-use development, residential land supply, and urban design overlays. Aspects of this study would help address the issue of meeting the VMT reductions in the State Transportation Planning Rule. The *Salem Futures* process is currently underway and contains both a visioning component and an analysis of several land use alternatives for the Salem Urban Area. The *Salem Futures* process should be completed in 2003.

The final evolution of the *Salem Futures* process is to combine its results with ongoing revisions to the *Salem Revised Code* and the *Salem Transportation System Plan* to produce an integrated land use and transportation plan. This plan would then be adopted into and reflected in all of Salem's pertinent planning documents. Specifically, the goal of the effort would be to develop an integrated land use and transportation plan that helps improve livability by promoting changes in land use patterns and the transportation system that makes it more convenient for people to walk, bicycle, use transit, and drive less to meet their daily needs.

Other specific objectives of this planning effort are to include development of regulations that:

- Increase residential densities within a quarter-mile of transit routes, major employment areas, and major retail shopping areas;
- Increase allowed densities in new commercial office and retail developments in designated community centers;
- Designate lands for neighborhood shopping centers within convenient walking and bicycling distance of residential areas;
- Designate land to provide a better balance between jobs and housing considering the total number of jobs and housing units, the availability of affordable housing, and the provision of housing opportunities near employment areas; and
- Establish a mechanism to review and manage major roadway projects to ensure that the effects of such projects are consistent with an integrated land use and transportation plan to reduce reliance on the automobile.

This planning process will be closely linked to developing a VMT Reduction Strategy and Alternative Measures. An integrated land use and transportation plan should begin to take shape in the years 2002-2005.

Lancaster Drive Access Management Design Study

Two recent efforts have been made to improve traffic conditions on Lancaster Drive SE/NE in East Salem. Improvements in traffic signal coordination were completed in 1994. In 1995, the first phase of the Lancaster Drive Improvement Strategies project was completed, creating a menu of access management measures that could be implemented on Lancaster Drive SE/NE to improve traffic flow and safety. The second phase of this project would be a design study

to determine the type and location of access control measures that could be implemented. Funding for this study has not been identified.

Arterial Streetscape Improvement Projects

As part of its 1994-1995 Neighborhood Environmental Evaluation and Design Study, the Northeast Neighbors (NEN) and the Southeast Salem Neighborhood Association (SESNA) identified a need to improve and beautify the streetscape for State Street between 13th Street SE and 23rd Street SE. Similar support has been expressed over possible improvements to Edgewater Street NW, Wallace Road NW, and Broadway Street NE. It is recommended that studies be completed with local neighborhood participation to identify specific design improvements for these arterial corridors. Improvements could include, but not be limited to, landscaping, street lighting, wider sidewalks, street furniture, public art, and other public amenities. The identification and design of major gateway points, as referenced in Comprehensive Transportation Policy No. 21, should be accomplished as a part of the studies and design work related to these arterial streetscape projects. A funding mechanism needs to be identified for this program to proceed.

Updates to City of Salem Neighborhood Plans

All of Salem's adopted neighborhood plans need to be revised to reflect the changes in the transportation system identified in the *Salem Transportation System Plan*. West Salem was the first to revise its plan, which was adopted in 2003. These plans need to reflect transportation-supportive land use policies and include revisions resulting from other City infrastructure plans. Neighborhood plans will be undertaken as funding and staff resources are available.

Innovative Treatment of Stormwater in Street Design

It is a policy of this Plan to take proactive measures to reduce the environmental impacts from transportation projects. To support this policy, the City plans to explore ways to reduce the impacts of road surface runoff. Alternative designs, including use of biological, vegetative, or passive filtration, can reduce runoff velocity and negative impacts to the environment. The Public Works Department is committed to gaining experience with alternative designs through pilot projects. Appropriate standards will be created once the City has more experience specific to Salem with these designs, including cost and maintenance considerations.

Permeable pavements are another tool that can reduce stormwater runoff. Benefits of permeable pavements include better infiltration, groundwater recharge, reduction in runoff volume, and treatment of stormwater for pollutants. At this point permeable pavements are not considered appropriate for use on streets in Salem. This is in part due to the soil types in Salem and concerns with maintenance. Permeable pavements may be appropriate for private driveway or parking areas.

Cordon Road NE/SE Corridor Plan

Cordon Road NE/SE serves as a strategic corridor for traffic to and from the Salem area. Partly due to its relative attractiveness as a travel route, and partly due to the rapid growth of the eastern Salem area, traffic volumes have increased substantially on this road in recent years. These traffic volumes are starting to push the boundaries of available capacity on this road. The purpose of this study would be to develop a thorough plan to ensure the adequacy of Cordon Road NE/SE as a travel route in the future. This will include evaluating the adequacy of the current roadway to serve future traffic, as well as evaluating the possibilities of turn lanes and traffic signals at intersections and the possibility of widening the roadway. While most of

Cordon Road NE/SE is outside the Salem UGB, Salem sees this study as a regional planning effort to coordinate transportation needs.

Central Salem Streetcar Feasibility Study

Streetcars are enjoying a renaissance in American cities of all sizes, as both public and private interests have realized the potential for meeting transportation circulation needs and economic development goals through the implementation of streetcar service. In Salem streetcars have long been a part of the city's heritage—horsedrawn streetcar lines were in place in 1889. In 1890 the Capitol City Railway Company installed the first electric streetcar lines, and by the early twentieth century the streetcar system in Salem had grown into an extensive network of lines. As other forms of transit replaced streetcar networks, streetcars were usually replaced by diesel buses, which were broadly seen as less expensive, more flexible, and more "modern." In Salem buses began to make inroads in the city in 1924 and had completely replaced the streetcar by 1924.

Today many of the basic community and economic development principles that fueled the development of early streetcar lines are being revived. A focus on street-front retail, development of core city retail and services, demand for close-in, pedestrian-friendly, mixed-use neighborhoods, and convenient access to transportation are among the factors that have restored interest in streetcars. These factors, and a need for circulation in Central Salem, generated interest in a streetcar system within Central Salem. The City is participating with Cherriots and other downtown interests to conduct a streetcar feasibility study. The results of this study will help guide decisions about pursuing a new streetcar system in Central Salem. If a future streetcar is proposed, it will be very important to design it to interface with other modes of transportation.

Downtown Traffic Circulation Study

Traffic circulation in Downtown Salem consists primarily of a one-way grid system. Traffic patterns have been modified several times over recent decades. There is an interest in revisiting the current traffic circulation system downtown to determine if it remains the best configuration to meet the city's needs and priorities. Such a study would need to take into consideration a variety of issues, including traffic volumes, speeds, pedestrian and bicycle access, parking, existing and proposed land uses, among others. Funding has not been identified to conduct this study.



Appendix A - Level of Service Criteria

Level Of Service Definitions for Signalized Intersections

LEVEL OF SERVICE	TRAFFIC FLOW CHARACTERISTICS
A	Very low delay, less than 5.0 seconds per vehicle. This occurs when traffic progression is extremely favorable, and most vehicles arrive during the green phase. The traffic volume-to-capacity (V/C) ratio is between 0.0 to 0.60.
B	Average delay is in the range of 5.1 to 15.0 seconds per vehicle. This generally occurs with good traffic progression. More vehicles stop than for LOS A. The traffic V/C ratio is between 0.61 to 0.70.
C	Average delay is in the range of 15.1 to 25.0 seconds per vehicle. These higher delays may result from fair traffic progression and/or longer signal cycle lengths. The number of vehicles stopping is significant at this level, although some may still pass through the intersection without stopping. Individual vehicles may have to wait through more than one green signal phase. The traffic V/C ratio is between 0.71 to 0.80.
D	Average delay is in the range of 25.1 to 40 seconds per vehicle. The influence of congestion becomes more noticeable. Longer delays may result from combination of unfavorable traffic progression, longer cycle lengths, or high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Groups of vehicles may frequently have to wait through more than one green signal at this point. The traffic V/C ratio is between 0.81 to 0.90.
E	Average delay is in the range of 40.1 to 60 seconds per vehicle, This is considered to be the limit of acceptable delay. These high delay values generally indicate poor traffic progression, long signal cycle lengths, and high V/C ratios. Groups of vehicles frequently have to wait through more than one green signal at this point. The traffic V/C ratio is between 0.91 to 1.00. The intersection is basically operating at capacity.
F	Reflects forced flow, with an average delay in excess of 60 seconds per vehicle. This condition indicates that the intersection has greater vehicle arrival rates than its capacity. Poor traffic progression and long signal cycle lengths may be major contributing causes to such long delays. Groups of vehicles will be waiting through two or more green signal cycles at this point. The traffic V/C ratios are > 1.00.

Level of Service Definitions for Unsignalized Intersections

LEVEL OF SERVICE	TRAFFIC FLOW CHARACTERISTICS
A	Average delay per vehicle is in the range of 0 to 5 seconds. Free flowing with no congestion. Very few vehicles waiting in a queue.
B	Average delay per vehicle is in the range of 5 to 10 seconds. Slight delay to vehicles or no vehicles waiting in a queue.
C	Average delay per vehicle is in the range of 10 to 20 seconds. Occasional delay and congestion. More than one vehicle may be waiting in a queue.
D	Average delay per vehicle is in the range of 20 to 30 seconds. Frequent delay and congestion. More than one vehicle is waiting in a queue.
E	Average delay per vehicle is in the range of 30 to 45 seconds. This condition exists when the demand is near or equal to the capacity of the intersection or movement. Unstable flow includes almost continuous lines of vehicles waiting in queues.
F	Forced flow, with an average delay per vehicle in excess of 45 seconds. Queues are extensive. The intersection is considered to be overcapacity.

Source: Transportation Research Board, Highway Capacity Manual, "Special Report 209," 1985.



Appendix B - Transportation Glossary

Glossary

Access Management: Process by which access to private property is limited to improve the operational capacity of the street. Typically implemented on high volume arterials.

Americans with Disabilities Act of 1990 (ADA): Federal law that mandates equal access to public facilities to all persons regardless of disability.

Arterial Streets: High capacity—and typically high speed—streets that serve both intra- and intercity travel needs of the community.

Average Daily Traffic (ADT): The number of automobiles that use a portion of a street, in all directions, over a 24-hour period.

Bancroft Bonding: A funding instrument that allows residents to fund assessed local improvements over a period of years.

Best Management Practices (BMP): Refers to a series of maintenance programs designed to cost effectively improve storm water quality. These programs are defined in the City of Salem’s stormwater permit application.

Capital Improvement Program (CIP): Adopted each year, the Capital Improvement Program is the document that budgets the capital investment program for the city’s infrastructure.

(Salem’s) Central Core: Downtown, the Capitol Mall, and their immediate vicinity.

Clean Air Act Amendments of 1990: Federal legislation that set higher standards for emission controls and required state and regional conformance with these standards.

Collector Streets: Streets used to distribute neighborhood traffic from the local street system to the arterial street system.

Committed Network: The existing street system and the planned improvements to it that have funding identified for them.

(State) Conformity Rule: A state administrative rule requiring that regional emissions not contribute to a worsening of the regional air quality. The rule is administered by the State Department of Environmental Quality and implements federal air quality standards.

(Salem or Street) Design Standards: The minimum standards under which all Salem public facilities are designed.

Effective Capacity: The amount of traffic a roadway can carry given the physical and environmental limitations (i.e., amount of pavement, number of driveways, etc.).

Enhancement Funds: A source of federal transportation funds created by the ISTEA legislation. Enhancement funds may be used for any planned bicycle and pedestrian project or for preservation of historic passenger railroad stations.

Expanded Intersection: A street intersection treatment that provides additional through- and turn-lanes to increase capacity.

Financial Constraint: A concept by which a transportation plan only includes projects that a community can reasonably expect to fund either through existing, on-going or reasonably anticipated sources.

Franchise Fees: Payments made to the city by utility companies for use of the street rights-of-way.

Frictional Factor: Elements of street design and operation that impact the operational capacity of the street (i.e., on-street parking, heavy pedestrian volumes, etc.).

Headway: Frequency of bus service.

High Occupancy Vehicle (HOV): Typically refers to vans and buses, however sometimes used to refer to an automobile with more than one person in it.

Home-Based Work Trips: All trips, regardless of mode, that begin at home and end at work.

Home-Based Non-Work Trips: All trips, regardless of mode, that begin at home and end at a destination other than home (i.e., shopping, recreation, education, etc.).

(State) Land Use Planning Goals: Nineteen goals related to environmental resources and public infrastructure adopted by the Land Conservation and Development Commission. The goals are implemented by local governments through local comprehensive plans.

Level of Service: A set of characteristics that indicate the quality and quantity of transportation service provided. For streets, a qualitative rating of the effectiveness of the street in terms of operating conditions. The condition is typically expressed as a letter grade from A to F, where A described free flowing traffic and F describes gridlock. (See Appendix A.)

Local Streets: Streets whose primary function is property access, and secondary function is movement of traffic.

Major Activity Center: A location with intensive land development (i.e., downtown, Capitol Mall, Lancaster Mall, Fairview Industrial Park, etc.).

Metropolitan Planning Organization: A federally-mandated consortium of local governments and the state department of transportation whose purpose is to provide local input into the expenditure of federal transportation funds. In the Salem/ Keizer area, the MPO function is administered by the Mid-Willamette Valley Council of Governments through the Salem-Keizer Area Transportation Study.

Mode: The means of travel (i.e., automobile, public transportation, bicycle, walk, etc.).

Multimodal: Providing the capability for more than one mode of transportation.

Non-Home Based Trips: Trips, regardless of mode, that neither begin nor end at home (e.g., trips made while at work).

One Way Couplet: A system of two parallel one way streets providing traffic movement in opposite directions.

Oregon Administrative Rules (OAR): The code that implements the statutes of the State of Oregon.

Oregon Benchmarks: State-adopted performance measures, used to measure progress towards the vision outlined in the State's Strategic Plan.

Oregon Revised Statutes: The laws of the State of Oregon.

Oregon Transportation Plan: The state's master plan for transportation policy, services and infrastructure for the next 40 years. The Plan was adopted by the Oregon Transportation Commission in 1992.

Paratransit: Public or privately provided public transportation service to special needs groups such as the elderly or the disabled.

Park-and-Ride Lots: Designated parking area for automobile drivers who then board transit vehicles from these locations.

Pavement Management System: A computer database which contains street structural condition, scored by a rating system, based on the level of surface deterioration. The pavement management system provides accurate street condition information that is used to plan for more effective maintenance programs.

Peak Hour: The hour with the highest volume of automobiles, beginning at any one of the four quarter hours (:00, :15, :30, or :45). Traffic analyses typically uses a morning, or A.M. peak hour, and an afternoon, P.M. peak hour, analysis.

Perpetual Life Maintenance: A maintenance standard where streets are maintained and restored so they never fail.

Preventative Maintenance: Maintenance activities that go beyond a routine level of treatment, proactively extending pavement life. These activities are generally site-specific, occurring on an as needed basis.

Quick Response System II (QRS II): The travel demand computer model used by transportation planners in the Salem-Keizer region.

Regional Transportation System Plan (RTSP): The umbrella transportation plan that covers the entire regional roadway system within the Salem-Keizer urban area.

Response Maintenance: Maintenance activities that are made in immediate response to existing problems. These activities are designed to keep the street's structure and surface in a minimally operable condition.

Reverse Commute: Travel to work in a direction opposite that to where most travelers are headed. In Salem's case away from the downtown/ Capitol Mall area.

Reversible Lane: A travel lane that operates in more than one direction during the day.

Right-of-Way Vacation: A process by which the city relinquishes its rights to use a certain property for transportation purposes.

Routine Maintenance: Maintenance that occurs on a determined frequency that prolongs the useful life of the facility or pavement surface for as long as possible.

Salem Area Comprehensive Plan: The city's land master plan. This document provides the policy basis for all of the city's land development regulations as well as the zoning designations.

Salem Area Transportation Study (SATS): Predecessor to SKATS.

Salem Departmental Policies: A set of policies adopted by the Department Director in conjunction with the City Attorney and the City Manager that guide the day-to-day operations of a City of Salem department.

Salem-Keizer Area Transportation Study (SKATS): The designated metropolitan planning organization for the Salem/ Keizer urban area.

Salem Neighborhoods, Inc. (SNI): The umbrella organization for all of Salem’s neighborhood associations. Membership is made up of the neighborhood chairs.

Salem Revised Code (SRC): The code of ordinances and laws of the City of Salem.

Salem Transportation Joint Advisory Committee (JASC): The transportation policy advisory committee to the Salem City Council.

Salem Urban Area: The geographical area encompassing all of the land within the Salem city limits and that portion within the urban growth boundary that will someday be incorporated by Salem.

Single Occupant Vehicle (SOV): An automobile with only the driver as an occupant. Typically used to refer to commuter travel.

State Transportation Improvement Program (STIP): Federally-mandated document that shows how the state department of transportation intends to spend its transportation funds. The STIP is adopted by the Oregon Transportation Commission every 3 years.

Street Classification System: The blueprint for the city’s roadway system, it classifies every street and alley within the city into one of eight categories. The categories define the mission of the street. Standards such as right-of-way width, access management, pavement depth, traffic control, etc., are then applied to the facility depending on its classification.

Surface Transportation Program (STP): A source of federal transportation funds created by the ISTEA legislation. STP funds may be used for any planned transportation project or program.

Telecommuting: Working from home.

Through Trips: Trips, regardless of mode, that neither begin nor end within the Salem-Keizer region, but pass through the region (e.g., trips from Eugene to Portland on I-5).

Transportation Demand Management (TDM): Actions that attempt to manage and reduce the automobile trip demand on the transportation system.

Transportation-Disadvantaged: All persons without the ability or capability to use personal conveyance to travel. This term commonly applies to many seniors, youth, and persons with disabilities.

Transportation Efficiency Act for the 21st Century (TEA-21): The umbrella Federal legislation that appropriates transportation funding and mandates local transportation planning.

Transportation Improvement Program (TIP): Federally-mandated document that shows how a region intends to spend its transportation funds. The TIP is typically created and adopted by the MPO governing board every 3 to 5 years.

Transportation Management Association (TMA): A voluntary association of neighboring employers for the purpose of providing access to alternative modes of transportation to their employees.

Transportation/Growth Management Program (TGM): A joint project of the Oregon Department of Transportation and the Oregon Department of Land Development and Conservation that provides planning grants to local governments.

(State) Transportation Planning Rule (TPR): Administrative rule that implements Goal 12—Transportation, of the State Land Use Planning Goals.

Transportation System Development Charges (TSDC): Developer exactions used to finance transportation infrastructure improvements required due to urban growth.

Transportation System Management (TSM): Low cost, localized improvements used to increase the efficiency of streets and intersections.

Urban Growth Boundary (UGB): The state-mandated boundary that separates land available for urban development from rural or farm lands.

Urban Growth Management Program: A city-adopted program that delegates responsibility for the provision of major public facilities in the developing areas of Salem. Implemented through Chapter 66 of the *Salem Revised Code*.

Urban Services Area (USA): An area defined by the Salem Urban Growth Management Program as having existing and accessible public facilities.

Urban Standards: A street with sidewalks, bicycle lanes (where applicable), curbs and gutters.

Vehicle Miles of Travel (VMT): The number of miles traveled regionally by vehicles for a period of one year.

Volume-to-Capacity Ratio (v/c): An expression of the amount of street capacity being used during a period of time, typically either 1 or 24 hours, in percent.



Appendix C - Acronym List

Acronym List

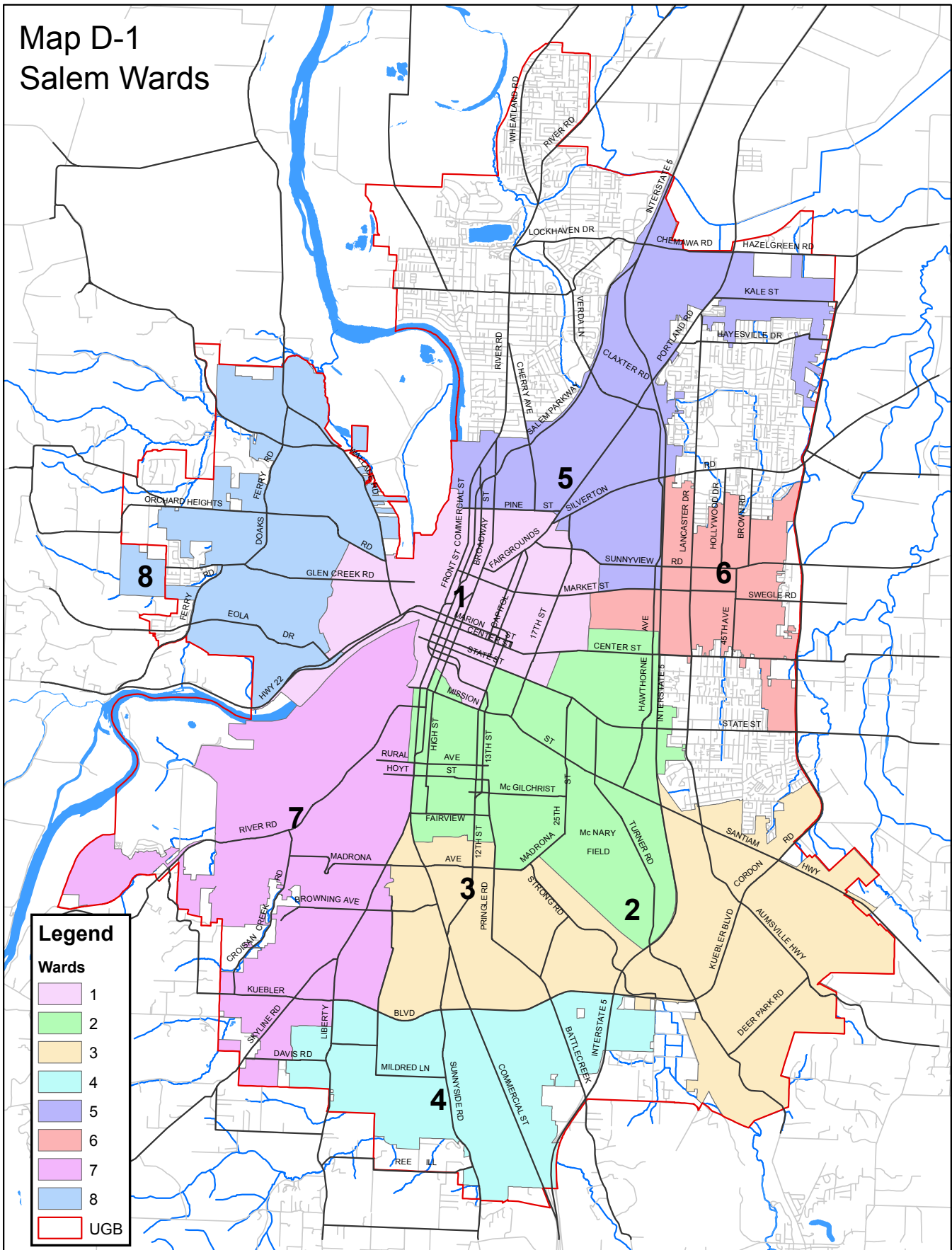
ADA	The Americans with Disabilities Act of 1990
ADT	Average Daily Traffic
AICP	American Institute of Certified Planners
BMP	Best Management Practices
BNSF	Burlington Northern/Santa Fe Railroad
CAN-DO	Central Area Neighborhood Development Organization
CBD	Central Business District
CIP	Capital Improvement Program
DEQ	State of Oregon Department of Environmental Quality
ELNA	East Lancaster Neighborhood Association
HOV	High Occupancy Vehicle
LCDC	State of Oregon Land Conservation and Development Commission
NESCA	Northeast Salem Community Association
NEN	Northeast Neighbors
NOLA	North Lancaster Neighborhood Association
ODOT	Oregon Department of Transportation
P.E.	Professional Engineer
PGE	Portland General Electric
OAR	Oregon Administrative Rule
QRS II	Quick Response System II
RTSP	Regional Transportation System Plan
SATS	Salem Area Transportation Study

SCAN	South Central Association of Neighbors
SESNA	Southeast Salem Neighborhood Association
SEMCA	Southeast Mill Creek Association
SKATS	Salem-Keizer Area Transportation Study
SOV	Single Occupant Vehicle
SNI	Salem Neighborhoods, Inc.
SRC	Salem Revised Code
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TDM	Transportation Demand Management
TGM	Transportation/Growth Management Program
TIP	Transportation Improvement Program
TMA	Transportation Management Association
TSDC	Transportation System Development Charge
TSM	Transportation System Management
TSP	Transportation System Plan
UGB	Urban Growth Boundary
UP	Union Pacific Railroad
UPS	United Parcel Service
v/c	Volume-to-Capacity Ratio
VMT	Vehicle Miles of Travel



Appendix D - Salem Ward and Neighborhood Association Boundary Maps

Map D-1 Salem Wards



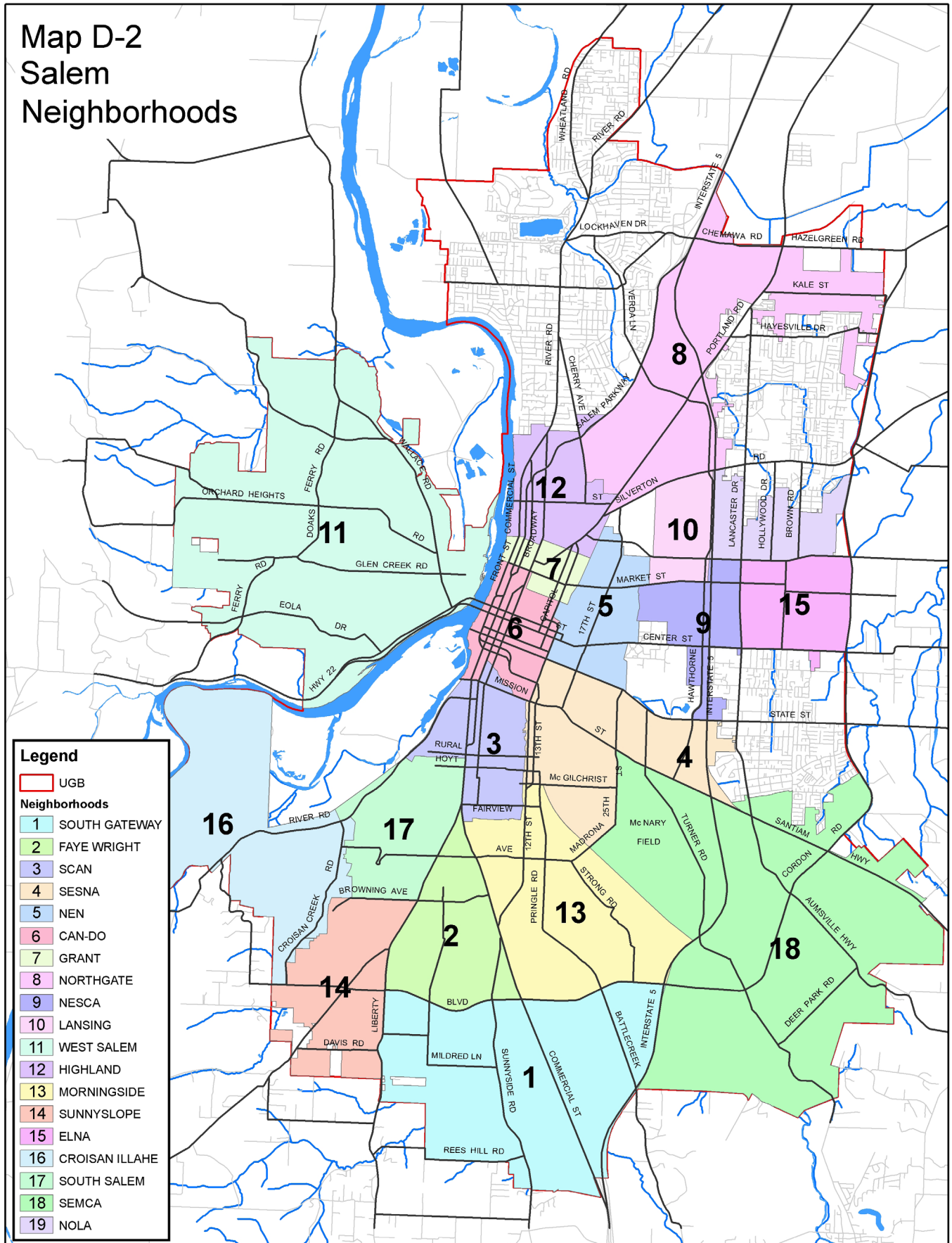
Legend

Wards

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

UGB

Map D-2 Salem Neighborhoods





Appendix E - Cross-Reference to State Transportation Planning Rule Requirements

Available at the Public Works Department.



Appendix F - Adopting Ordinance

Available at the Public Works Department.



Appendix G - Refinements to Typical Street Requirements

The *Salem Transportation System Plan, Street System Element*, establishes guidelines for street right-of-way width, typical street design cross sections, and future street extensions. This appendix is a refinement to these guidelines for specific streets. These refinements were developed by the City of Salem through additional planning and engineering analysis.

The refinements contained in this appendix shall be used to guide improvements to the specified existing and future City streets. The Public Works Director shall have the authority to make minor modifications to these requirements in response to changed circumstances. Minor modifications shall be limited to changes that do not substantially impact street connectivity or the functional classification of the street. Modifications to future street alignments shall follow the policy guidance in the Street System Element, Policy 4.5, Deviation of Future Street Alignments. Any modification to the street right-of-way, design cross section, or alignment that is not considered minor shall require an amendment to the *Salem Transportation System Plan*.

Special Street Right-of-way and Improvement Requirements

The Street System Element, Policy 4.6, provides the policy basis for right-of-way requirements. The Plan identifies typical right-of-way requirements based on functional classification. This and other policies acknowledge that there are circumstances that will require adjustments to either the right-of-way required or the physical improvements to the street. These considerations include topographic constraints, natural resources, historic properties, schools, cemeteries, existing on-street parking, livability, and significant cultural features. The Public Works Director has the authority to approve adjustments to street cross sections or right-of-way requirements in response to these or other documented considerations. In some cases the City has undertaken additional analysis to determine adjustments that are likely to be needed. Variations from the typical right-of-way requirements are documented in the table, *Special Street Right-of-way and Improvement Requirements*. Special street cross sections for the following streets are included in this appendix:

- Hawthorne Avenue NE, Sunnyview Avenue NE to Silverton Road NE
- Marine Drive NW
- State Street, 12th Street to 24th Street

Schematic Street Designs

For some existing streets, the City has invested engineering resources to develop schematic designs to guide either interim or final street improvements. Street improvement projects in these areas should be built to fit in with these schematic designs.

Schematic designs for the following existing streets are on file at the Public Works Department:

- **Doaks Ferry Road NW, Brush College Road NW to Orchard Heights Road NW, as documented in the *Feasibility Study for Doaks Ferry Road NW, December 29, 2006.***

Future Street Alignments

The Street System Element, Policy 4.4, identifies the need to survey and delineate all new arterial and collector street alignments after their adoption into the *Salem Transportation System Plan*. The survey and delineation of future streets is conducted either as part of development, subject to City approval, or by the City in advance of development. Alignments for which the City has developed a surveyed alignment are contained in this appendix and shall be used to guide dedication of future right-of-way and construction of the future street. Minor modifications may be approved by the Public Works Director if they are consistent with Street System Element Policy 4.5.

Surveyed alignments for the following future collector and arterial streets are on file at the Public Works Department:

- **Marine Drive NW***
- **Mildred Lane SE**

** Note that portions of the alignment for Marine Drive NW currently leave the UGB. This issue needs to be resolved in order for these portions to be constructed. This can be done either through an amendment to the UGB or approval of an exception to Statewide Planning Goals.*

**Table G-1
Special Street Right-of-way and Improvement Requirements**

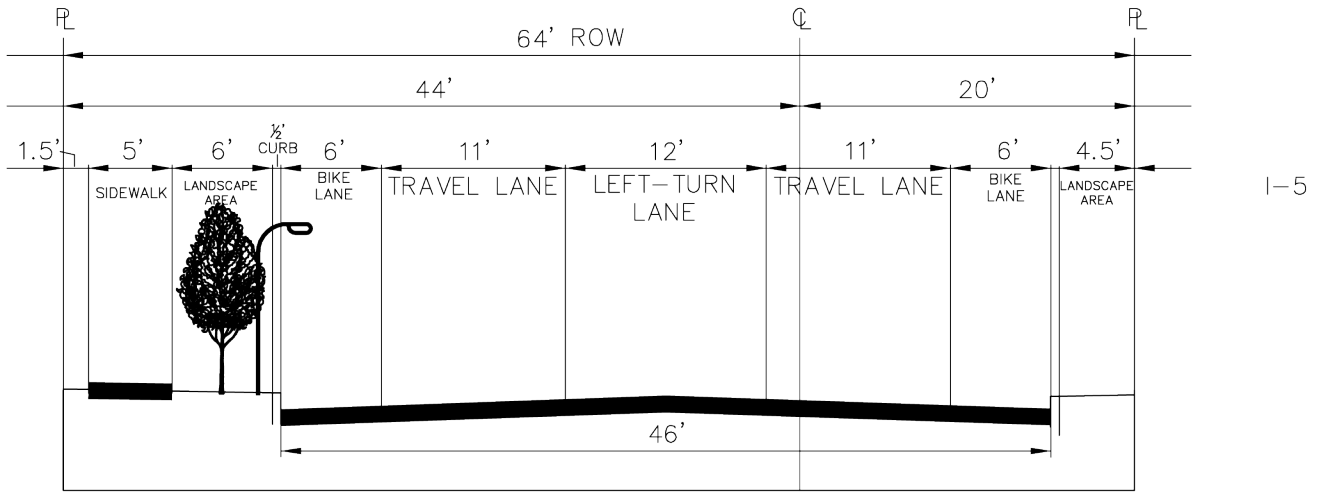
Street Name	From	To	Classification	Minimum Right-of-way	Improvement Width
12th Street SE	Bellevue Street SE	Cannon Street SE	Major Arterial	68 feet	46 feet
13th Street SE	Bellevue Street SE	Cannon Street SE	Major Arterial	68 feet	40 feet
13th Street NE	Center Street NE	Marion Street NE	Major Arterial	60 feet	34 feet
13th Street NE	State Street NE	Court Street NE	Major Arterial	60 feet	34 feet
Capital Street NE	Mill Creek	Erixon Street NE	Major Arterial	75 feet	40 feet
Commercial Street NE	Riviera Street NE	South of Belmont Street NE	Major Arterial	66 feet	36 feet
Commercial Street SE	Mission Street SE	Washington Street S	Major Arterial	66 feet	40 feet
Commercial Street SE	Washington Street S	Oxford Street SE	Major Arterial	68 feet	40 feet
Commercial Street SE	Vista Avenue SE	Hilfiker Lane SE	Major Arterial	100 feet	84 feet
Commercial Street SE	Hilfiker Lane SE	Interstate 5	Major Arterial	100 feet	68 feet
Croisan Creek Road S	Kuebler Boulevard S	Heath Street S	Major Arterial	60 feet	30 feet
Ferry Street SE	Church Street SE	Front Street SE	Parkway	60 feet	42 feet
Hawthorne Avenue NE	400 feet north of Sunnyview Road NE	400 feet south of Silverton Road NE	Major Arterial	64 feet	46 feet
Kuebler Boulevard SE	Interstate 5	Croisan Scenic Way S	Parkway	120 feet	66 feet
Lancaster Drive NE/SE	State Street	Portland Road NE	Major Arterial	96 feet	68 feet
Liberty Street SE	Superior Street SE	Mission Street SE	Major Arterial	80 feet	44 feet
Liberty Street NE	South of Belmont Street NE	Riviera Street NE	Major Arterial	66 feet	36 feet
Marion Street NE	12th Street NE	13th Street NE	Major Arterial	60 feet	34 feet
McGilchrist Street SE	12th Street SE	25th Street SE	Major Arterial	84 feet	68 feet
State Street	12th Street	13th Street	Major Arterial	101 feet	73 feet
State Street	13th Street	17th Street	Major Arterial	88 feet	64 feet
State Street	17th Street	24th Street	Major Arterial	69 feet	42 feet
State Street	24th Street	25th Street	Major Arterial	86 feet	68 feet
Summer Street NE/SE	Fairgrounds Road NE	Mill Creek	Major Arterial	75 feet	40 feet
Wallace Road NW	Edgewater Street NW	Orchard Heights Road NW	Major Arterial	108 feet	76 feet
Wallace Road NW	Orchard Heights Road NW	Doaks Ferry Road NW	Major Arterial	104 feet	76 feet

Note: Improvement width is curb to curb.

Note: The Special Right-of-way and Improvement Requirements Table is being moved from the Street System Element, pages 3-8 and 3-9, to this Appendix. Changes proposed to the table from what is currently adopted are shown in underline.

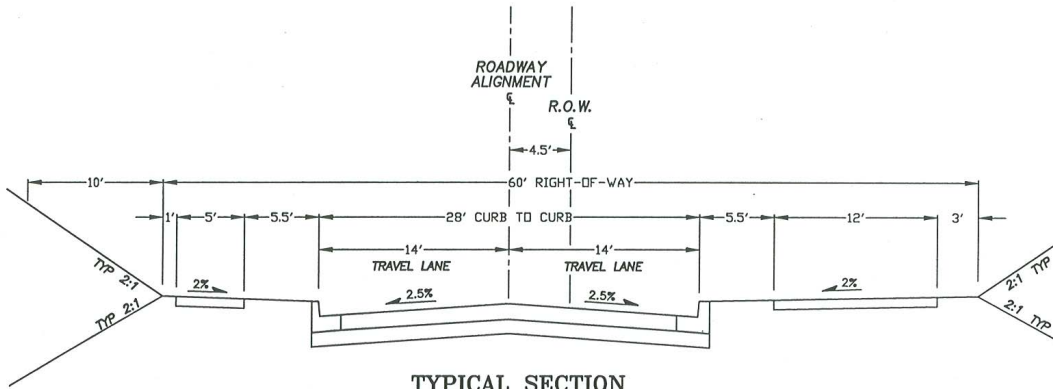
Figure G-1
Special Street Cross Section*
Hawthorne Avenue NE
(from Sunnyview Avenue NE to Silverton Road NE, where I-5 is the east property line)

Note: The Special Street Cross Section for Hawthorne Avenue NE is being moved from the Street System Element, page 3-7, to this Appendix.

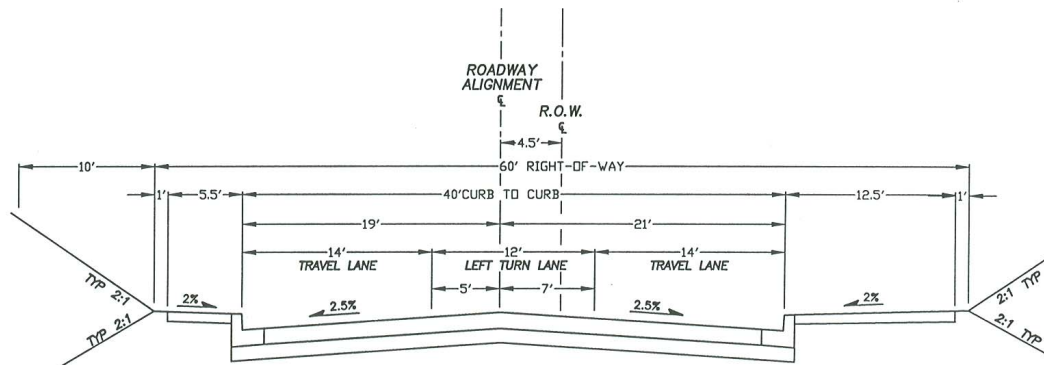


* Note: Right-of-Way would be to Major Arterial Standards within 400 feet of the intersections with Sunnyside Av NE and Silverton Rd NE.

FIGURE G-2
MARINE DRIVE NW
TYPICAL CROSS SECTIONS



TYPICAL SECTION
 (LOOKING NORTH)
 HORIZONTAL SCALE: 1"=10'



LEFT TURN SECTION
 (LOOKING NORTH)
 HORIZONTAL SCALE: 1"=10'

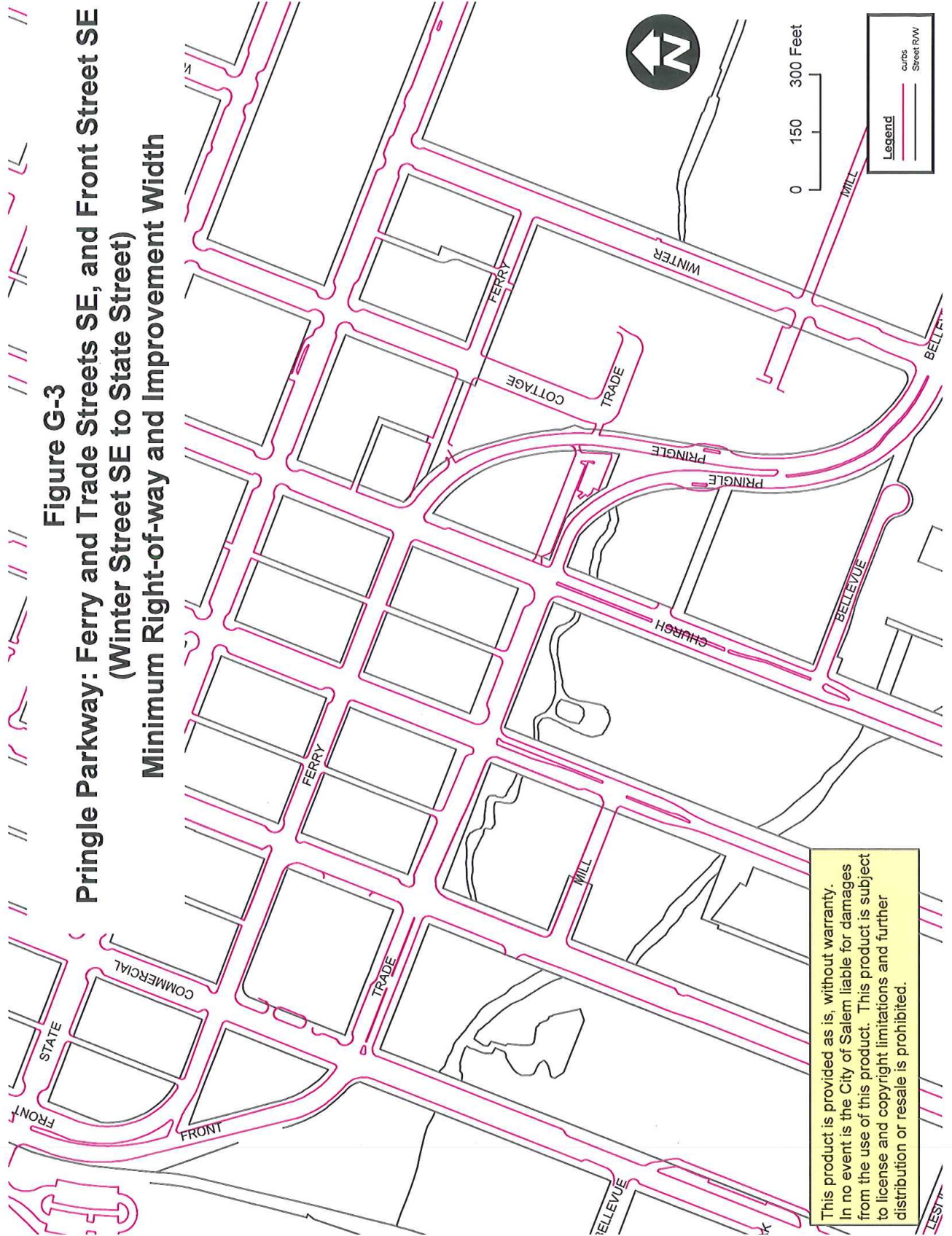
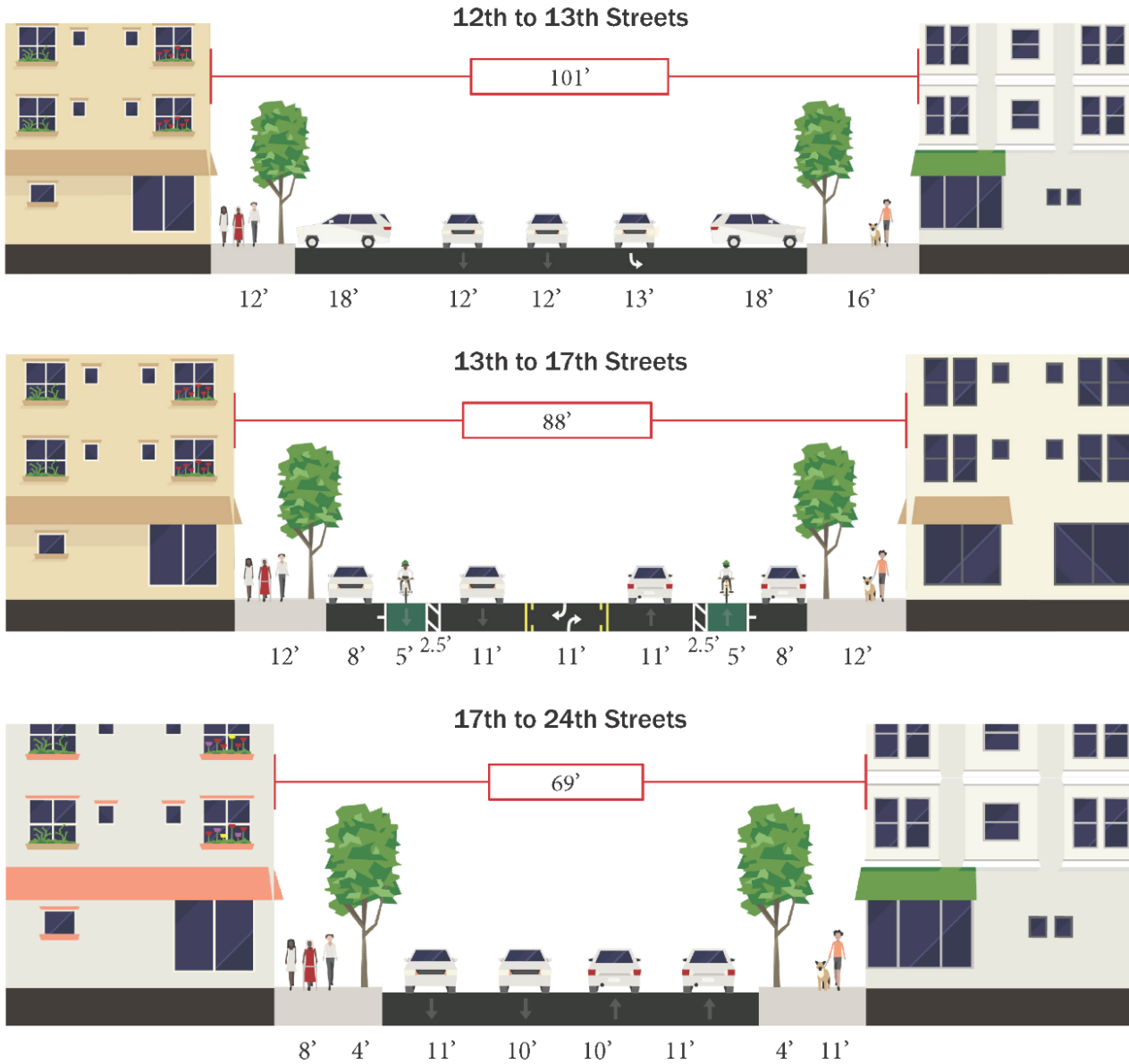


Figure G-3
Pringle Parkway: Ferry and Trade Streets SE, and Front Street SE
(Winter Street SE to State Street)
Minimum Right-of-way and Improvement Width

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Figure G-4 Proposed Street Design

Cross sections for State Street from 12th to 24th Streets



Note: The proposed design of State Street between 13th to 14th street does not include bike lanes. It has one lane in each direction and a center turn lane, and it provides wider sidewalks and on-street parking.