



## Memorandum

**TO:** Chris Jordan, City Manager

**FROM:** Chris Kerr, Senior Planner 

**DATE:** December 5, 2008

**SUBJECT:** Summary of recommended amendments on the TSP and related regulatory amendments (PLN-08-07 / CDC 08-01)

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Please find below a synopsis of all of the recommended changes that Staff is proposing to be included into the final adopted Ordinance. If the Council agrees with these changes, the motion to approve the Ordinance should include the amendments as provided. The majority of these amendments have been provided to you previously, but for greater simplicity, this Memorandum collectively places them under one single document. Staff believes that these modifications will result in a more effective document and recommends that the Council include these with the adoption of the proposal.

For clarity and contextual purposes, where appropriate, attached to this Memorandum are the individual pages of the TSP proposed to be replaced, with each of the specific revisions highlighted for your review.

These proposed changes generally came as recommendations from three sources; the Planning Commission (PC), the Transportation Advisory Board (TAB), and the City Council worksession (CC). Next to each amendment is a short description with a notation indicating the body that requested the change, and, for the TSP changes, the referenced page number (of this memorandum) of the final amended version of the change for the Council to review.

It should be understood that, as is customary, Staff will make minor formatting/numbering or obvious typographical corrections prior to adoption of the final Ordinance, and these are not included herein.

### **Amendments to the Transportation System Plan (TSP)**

For ease of reference, the amendments below are presented in the same order in which that they appear in the TSP. (see attachment for revised pages)

1. Added Tim Collins (chairman) and Susan Hopkins (vice chair) first and second respectively in the TAB listing and other members are listed alphabetically. (TAB)(pg. 1)
2. The terms 'opportunity areas' and 'downtown', which were previously used in City plans, have been removed from various places that appear in the TSP and

CDC. They have been replaced with the term '*commercial centers*', or the specific actual center's name. (CC) (pg. 2, 5, 7, 10, 20, 21, 22)

3. Added standard 'conceptual' only note to Fig. 3-2. (TAB) (pg. 3)
4. In the Existing Conditions summary, replaced "\$1.5 million over six-years" with "\$250,000 per year over six years". (TAB) (pg. 6)
5. Corrected mislabeling of Pimlico Dr. to include Bicycle 'Boulevard' Treatment. (PC) (pg. 8)
6. Transit Chapter has been amended to indicate that no weekend bus service is provided on Route 154. (CC) (pg. 9)
7. Strengthened provisions regarding pursuit/study of jitney service (PC) (pg. 10,12, 13)
8. Added a statement regarding provisions for a transit transfer station by providing a breakroom to facilitate expansion of services. (TAB) (pg. 11)
9. Add in a statement that indicates that increased density may not necessarily result in additional transit service and that there are other options available that can be explored. Added that West Linn will explore options with Tri-Met to obtain additional service. (TAB) (pg. 12)
10. Corrected the Functional classification Map to show Cornwall as a Collector all the way from Summit to Sunset. (TAB) (pg. 14)
11. In order to allow for greater flexibility in street cross-section design of 'exceptionally' constrained arterials (particularly for Sunset Ave.) a specific notation has been added to the "Street cross-sections". (PC) (pg. 15)
12. Specific references to permit green street construction have been included. (PC) (pg. 15, 16, 17, 18)
13. The Dollar Street/Willamette Falls Drive connection has been added as a future connection to Figure 8-6 ("Future Local Street Connectivity Improvements") to the TSP as requested. (CC) (pg. 19)
14. The description of the Traffic Safety Committee has been amended to clarify the membership of the committee. (CC) (pg. 20)
15. Amended Table 8-14 to include paving on adjacent legs coming into the intersection and increased the cost by \$250K. (TAB) (pg. 23)
16. Added a description of loss of PGE franchise fee and how the discretionary monies were re-allocated to other funds. (TAB) (pg. 24)
17. Added the subtotals for System Projects and Maintenance to the TSP costs table. (TAB) (pg. 25)

18. Table added of the master plan projects not being funded in the action plan with costs through 2030 (2007 Dollars). (TAB) (pg. 26)
19. Correct the name of "Santa Anita Dr." It currently is labeled "Tack Court" on all 'Figures' in Chapter 3. (Various places in the TSP)

## **Amendments to the proposed Comprehensive Plan language**

1. In order to recognize the importance of the City's Locks and river for moving goods and people, a new Policy "3" is proposed under the 'Freight and Goods Movement', as follows (CC):

**"Recognize and promote the river and locks as important elements of the City's transportation system for transporting goods as well as recreational use. The City should encourage land use decisions and policies that promote opportunities to support these facilities."**

2. The Plan will be amended to consistently reference the "Old Oregon City Bridge". (CC)
3. Delete an incorrect sentence in the Background Section of Goal 12 that states that portions of Willamette Falls Drive are owned and operated by the county. The City now owns and maintains all of it. (CC)
4. Staff is proposing that the following additional Action Items from the Imagine document be included as 'Policies' into the proposed Comprehensive Plan amendments. (PC)

**"Coordinate with the Oregon Department of Transportation in implementing the Oregon Highway 43 Conceptual Design Plan."** (Proposed new Street Action Measure #8)

**"Encourage the expansion of transit in the West Linn area and the development of links along the periphery of the City and metropolitan area. Advocate for West Linn's interest in transit connections to Milwaukie and Lake Oswego as those communities pursue enhanced bus, light rail and/or street car service."** (Proposed new Transit Action Measure #4)

**"Reduce vehicle miles traveled through mixed use development in planned centers and regulations that encourage home-based businesses that are compatible with residential areas."** (Proposed new Policy #4 Transportation Demand Management)

5. Additionally, Staff is recommending that the following portion of the originally proposed Transit Policy #11 be amended as follows (shown in strikeout/underline): (PC)

*"11. Support a public transit system that is accessible to the largest number of people by:*

a. Locating transit-oriented development around transit stations, along major transit routes, and in the designated Town Center area.

b. Supporting more intense and mixed-use zoning designations in areas around transit stations, along major transit routes, in the designated Town Centers, the OR 43 Corridor and along designated Main Street areas identified in the Metro 2040 Growth Concept Plan, through provisions in the CDC. ~~The City will seek higher concentrations of employment opportunities, residential development and commercial uses in these areas.~~ Future proposed land use changes or rezonings that will result in increased residential densities, additional employment opportunities, or commercial activity should be located in these areas. The City will ensure that development is built consistently with the density allowed by zoning, while protecting the livability of existing neighborhoods. "

PLEASE NOTE THAT THE PLANNING COMMISSION DISCUSSED, AND WAS EVENLY SPLIT (3-3 VOTE), ON WHETHER OR NOT TO DELETE OR INCLUDE THE PROPOSED ABOVE 11(B) IN ITS ENTIRETY.

6. The following additional Policy is been proposed by Staff based on the comments raised at the recent Council worksession. It is intended to further the stated Goal of providing street connectivity in the City:

"Pursue an interconnected street system that provides connections both between and within neighborhoods on appropriate streets in the City. An interconnected street system shall discourage closed-end street systems and will serve to reduce travel distance, promote the use of alternative modes of travel, disperse traffic, and reduce air and energy pollution." (proposed new Policy 8, Goal 12, Comprehensive Plan) (CC)

## **Amendments to the Community Development Code (CDC)**

1. There CDC will be modified to match the above changes in the TSP where applicable (e.g. 'opportunity areas' and 'downtown' references).

attachment

# **AMENDED PAGES FOR TSP**

## Acknowledgements

Production of this report has been the collective effort of the following people:

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### Metro

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### Transportation Advisory Board

Tim Collins, Chair  
Susan Hopkins, Vice Chair  
William Bennett  
Thomas Frank  
Erik Gakstatter  
Joyce Jackson  
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## Pedestrian

To assess the adequacy of pedestrian facilities in West Linn, GIS data provided by the city was utilized to create an overview of crosswalks and off-street trails. A field inventory of sidewalks along the city's arterial and collector streets was conducted. The location of existing activity centers such as parks, schools, the library, City Hall, transit stops and the ~~downtown~~ central business district were identified to determine possible pedestrian trip generators. Figure 3-2 shows existing pedestrian facilities in West Linn as well as the location of major activity centers.

Sidewalk connectivity is generally adequate in the ~~downtown~~ commercial center area and near most schools. It is desirable to provide at least one continuous sidewalk connection between activity centers and arterial and collector roadways to provide safe and attractive non-motorized travel options. There are locations where sidewalk coverage could be more complete and provide greater connectivity throughout the city. The identified pedestrian issues are summarized below.

## Facility Connectivity

The existing sidewalk inventory showed that a basic system of walking facilities is provided along most of the major street within the city; however, there are significant gaps in sidewalks or walkways within the older neighborhoods. These older neighborhoods were developed when street standards did not require sidewalks on higher-class roads, or where topography constrained the ability to design an adequate sidewalk facility. For example, the Willamette district generally has sidewalks on at least one side of the road along collectors and arterials (such as Dollar Street) but there are key gaps along Willamette Falls Drive. The Robinwood neighborhood has no collector streets with sidewalks. An illustration of grade challenges is along Hidden Springs Road, where sidewalks are provided in the uphill direction only in its steepest sections. For many of these cases, it may be not feasible or desirable to construct sidewalks to fill in these gaps.

Given the above, it is recommended that the public involvement process through this plan update should engage neighborhood representatives to identify elements of their area that are the best candidates for filling in facilities, either as sidewalks or more improved walkways. As needed, provisions should be made in the development code to allow for re-development with an appropriate choice of pedestrian facility types for a given neighborhood street.

It is recommended that the focus of filling gaps in the sidewalk occur along arterial streets where physical terrain allows. Examples would include Rosemont Road, Willamette Drive (Highway 43), West A Street, Salamo Road, and portions of Willamette Falls Drive.

## Pedestrian Activity Levels

Pedestrian crossing volumes at the study intersections were counted between 3:30 to 6:30 pm during the PM peak hour. The peak hour pedestrian volumes indicate the relative differences in pedestrian demand at study intersections. Although the study area vehicular evening peak





# Transportation System Plan

## FIGURE 3-3

### BICYCLE FACILITY INVENTORY

#### LEGEND

Bicycle Lanes

No Bicycle Facilities

Shared Lane

Bicycle Lane

Note: includes lanes under construction at the time of inventory.

Off-Street Paths

City Hall

Schools

Library

Parks

Community Center

Freeway

Major Roads

Streets

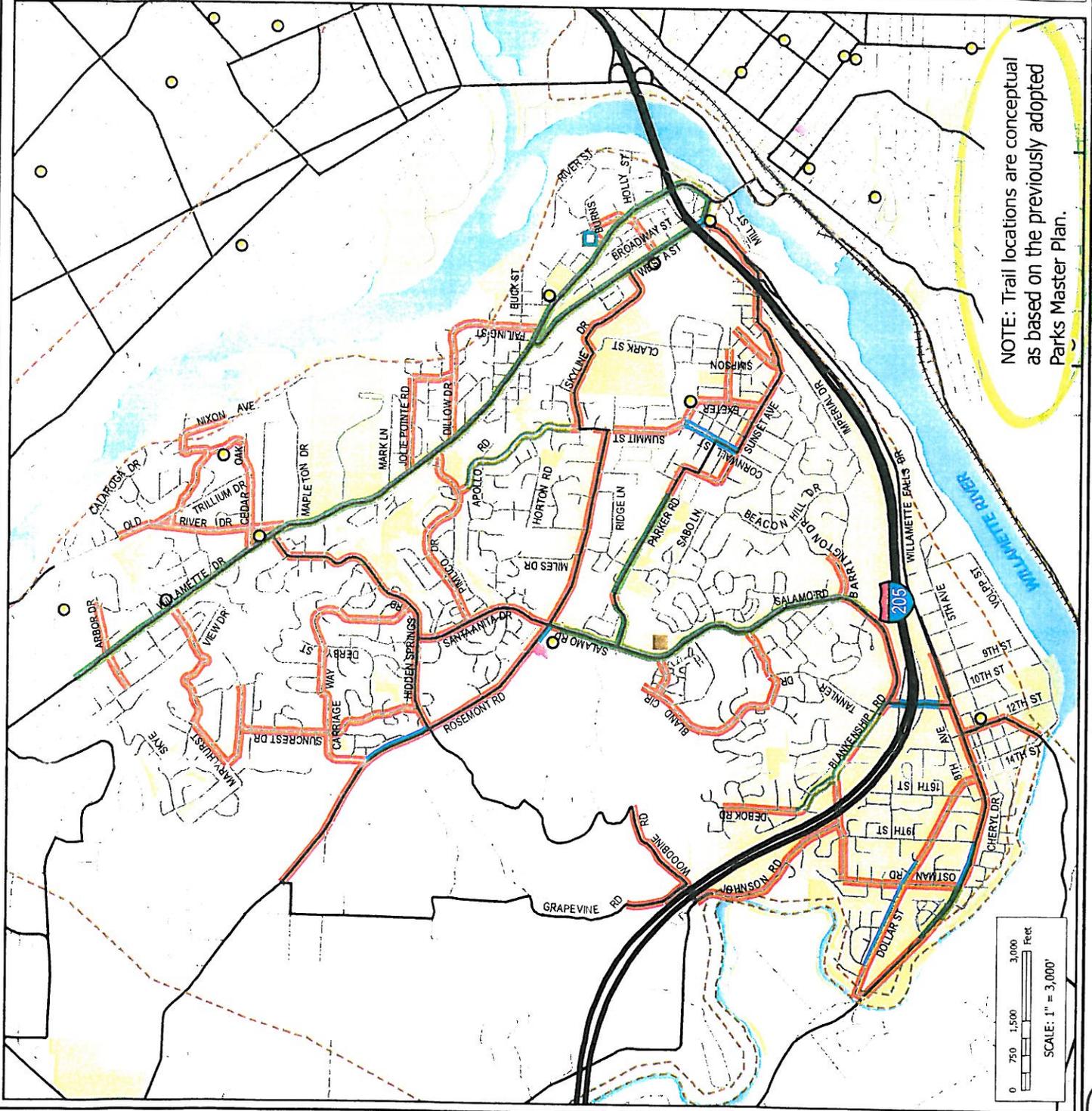
Railroad

Water

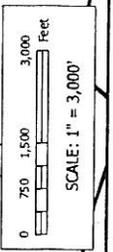
City Limits



**DKS Associates**  
TRANSPORTATION SOLUTIONS



NOTE: Trail locations are conceptual as based on the previously adopted Parks Master Plan.



## Bicycle

To assess the adequacy of bicycle facilities in West Linn, a field inventory of designated bike lanes and shoulder bikeways was conducted. The locations of identified shared roadways and off-street trails were obtained from city-supplied GIS data. The location of existing activity centers such as parks, schools, the library, City Hall, transit stops and the ~~downtown~~ central business district were identified to determine possible bicycle trip generators. Figure 3-3 shows the existing bicycle facility inventory in West Linn as well as the location of major activity centers.

The arterial roadway system in West Linn has basic bike lanes on a few major facilities, but most of the arterial streets have no designated bike facilities. Nearly all collector streets have no bike facilities at all. The only streets in the city with significant bike facilities are Willamette Drive (Highway 43), West A Avenue, and intermittent segments along Summit Street, Parker Road, and Willamette Falls Drive. In many cases, the slope of the roadway limits the feasibility or need for bike lanes on major arterials. Examples include Hidden Springs Road, and the south end of Salamo Road.

Roads with no bike lanes or intermittent bike lanes force bicyclists to share the travel lane with motor vehicles or use the shoulder if available. In many cases, this is not a desirable option for bicyclists due to narrow widths or uneven pavement conditions. Adequate bicycle facilities connections should be provided to allow for safe travel between neighborhoods and activity centers.

Local streets generally are not required to provide bike facilities, since streets with low vehicle volumes (under 3,000 average daily traffic) and slow speeds (25 miles per hour or less) do not require designated bike lanes. In these cases, the traveled way can be shared between motor vehicles and bicyclists. Bicycle issues are summarized at the end of this section.

### Bicycle Activity Levels

Bicycle counts were conducted during weekday three-hour periods (3:30 PM to 6:30 PM) at the study intersections in West Linn. The PM Peak hour bicycle volumes at each study intersection are shown in Table 3-2. These volumes indicate extremely low bicycle activity at the study intersections. The only study intersection where more than three bicycles were observed during the three-hour count period was Rosemont Road / Salamo Road with a total of seven. Some bike lanes and sidewalks are present at this intersection.

**Table 3-2: Bicycle Crossing Volumes at Study Intersections**

Intersection	North/South Bicycle Volume	East/West Bicycle Volume
Highway 43 / Arbor Drive	0	2
Highway 43 / Marylhurst Drive-Lazy River Way	0	0
Highway 43 / Walling Way	1	0
Highway 43 / Cedaroak Drive	0	1
Highway 43 / Hidden Springs Drive	0	0

## Pavement Conditions

The following section is an excerpt from the recent pavement conditions report<sup>3</sup> that was prepared for the City of West Linn.

Engineering Information Services, INC. of Salem, Oregon was contracted by the City of West Linn to Provide Pavement Management Technical Services to 1) Conduct a visual pavement assessment of each City street and, 2) Determine the impacts of funding levels on the network pavement condition. The Metropolitan Transportation Commission, MTC, Pavement Management Program (PMP) was used for this evaluation. This system strives to develop a maintenance strategy that will improve the overall condition of the street network to an optimal Pavement Condition Index, PCI, in the low to mid 80's and maintain it at that level.

A detailed visual inspection of the City of West Linn streets resulted in a calculated average PCI of 68. Using a 0-100 PCI scale, with 100 being most favorable, a rating of 68 places the City's street network in the upper range of the satisfactory condition category. In order to determine GASB 34 Statement asset valuation and funding levels to maintain current infrastructure, the City's street network replacement value is estimated at \$97.5 million. Using this estimate and the MTC program, an unrestricted funding level of \$15.1 million over the next six-year period is needed to achieve a PCI in the low to mid 80's. Of this total, approximately \$6.4 million is needed in the first year alone, primarily to repair streets in the 'fair' to 'poor' range, those streets with a PCI of 0-49, which is about 17 percent of West Linn's total network. The total budget needs amount of \$15.1 million exceeds West Linn's current funding level by \$13.6 million, thus creating a backlog in deferred maintenance.

In order to sustain the current PCI of 68 over a six-year period, an annual investment level of \$550,000 would need to be allocated over the next six years. Using this budget amount, the cost of deferred maintenance backlog in 2012 would be approximately 14.8 million. Utilizing the same analysis period of six years with West Linn's **current maintenance and rehabilitation funding of \$250,000 per year over six years** shows the PCI decreasing to 64 in 2012-with deferred maintenance being just over \$16.2 million. Current funding allocation of \$1.5 million is not sufficient to address all of West Linn's future street maintenance needs.

Additionally, planning at an investment level totaling \$4.5 million over a six (6) year period shows that the PCI will gradually increase reaching 70 over the analysis period. This allows for 77.8% of the street network to be in the 'good' condition category with deferred maintenance in excess of \$13.5 million in the year 2015.

Although the Pavement Condition Index currently in the high 60's, the PCI is not the only critical indicator of the overall health of the paved street network. Based on the current funding levels the deferred maintenance backlog will continue to increase, which will place additional financial burden and funding requirements to maintain the street system in future years. A surface management plan should be developed that will address the projected deferred maintenance back-log to avoid future exponential cost increase in providing an acceptable service level of the City's paved street system.

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<sup>3</sup> Executive Summary from City of West Linn Public Works Department Pavement Management Program Budget Options Report, Prepared by Engineering Information Services, June 2007.

## Future Facility Needs

This section identifies study area intersection deficiencies resulting from increases in vehicle volumes as forecasted by the 2030 financially constrained Metro RTP model for the 2030 base case scenario. Additionally, this section also identifies citywide circulation and safety improvement needs.

Both regional and local traffic volumes are projected to increase on many of the streets within the city. Figure 4-3 shows the percent increase in PM peak hour volume between 2006 and 2030. As illustrated in this figure, two-way traffic volumes are predicted to increase city wide by the year 2030. Notable roadways with traffic volume increases are Highway 43, 10th Street on both sides of I-205, and Rosemont Road. Two-way traffic volumes on these streets are projected to increase during the PM peak hour by as many as 995 vehicles per hour (vph) on Highway 43, 1085 vph on 10th Street, and 690 vph on Rosemont Road. Traffic volumes on the streets intersecting the above named streets are projected to increase greatly as well.

Many of the study intersections fail to meet performance standards either for the City of West Linn or for the Oregon Department of Transportation (ODOT) as a result of the increases in volume. Traffic operations for each study intersection was rated as good, adequate, or poor during the 2030 PM peak hour and shown in Figure 4-4. Many of the city and state intersections will experience poor operating conditions. The deterioration in operations is a direct result of both city and regional growth. The future operational analysis for each intersection is outlined in greater detail in the following sections.

The local street network in the City of West Linn is mostly built out and has connectivity restrictions between the downtown-commercial center area and among some of the city's neighborhoods. Because of the city's developmental history and its geography, there are many winding, long blocks and cul-de-sacs outside of the downtown-commercial center area. This type of street layout forces out-of-direction travel when traveling between and within neighborhoods, and greater use of local streets to compensate for lack of connectivity to more major facilities. Few direct routes exist in the central area of the city; most of the designated arterials zigzag through neighborhoods. In addition, I-205 bisects the City of West Linn, serving as a major barrier between neighborhoods to the south and the rest of the city. Many intercity trips concentrate along the few streets that do connect across I-205, such as 10<sup>th</sup> Street and Willamette Drive.

investment on those projects that are most effective at meeting important needs, while deferring other projects of lesser need.

The strategies for bicycle facilities are to:

- Fill in gaps in the existing network where bike corridors exist (arterials and collectors);
- Construct bike lanes on strategic arterials and collectors;
- Connect key bicycle corridors to schools, parks, and activity centers;
- Improve crossing safety and connectivity;
- Designate bicycle boulevards on lower volume streets that connect major bike facilities and/or bicycle destinations; and
- Provide appropriate facilities to secure bicycles at trip terminations.

These strategies are used to guide and develop projects which address the needs of the bicycling community in the City of West Linn, as well as bicyclists throughout the region.

## Bicycle Master Plan

A list of potential bicycle projects to meet the identified needs and achieve these strategies was developed into a Bicycle Master Plan. The Master Plan shown in Figure 6-2 and summarized in Table 6-2 is an overall plan and summarizes the “wish list” of bicycle related projects in West Linn.

Each bicycle project was ranked based on how well it met the improvement strategies that were identified. A high, medium, and low designation was given to each project to indicate a general priority for implementation. Each of these projects will need further refinement to detail right-of-way requirements and costs associated with special design details as projects are pursued.

**Table 6-2: Bicycle Master Plan**

#	Priority	Location	Improvement	From	To	Cost \$1,000s
1	High	Rosemont Road*	On-street Bike Lanes	Carriage Way	Summit Street	\$1,425
2	High	Salamo Road*	On-street Bike Lanes	10 <sup>th</sup> Street	Barrington Drive	\$390
3	Med	Clark Street / Long Street / Simpson Street / Kelly Street	Bicycle Boulevard Treatment	Skyline Drive	Sunset Avenue	\$100
4	Med	Old River Road	Bicycle Boulevard Treatment	Willamette Drive	North City Limits	\$100
5	Med	Pimlico Drive	<del>Bicycle Boulevard Treatment</del> Bike Lane/ Shoulder Bikeway	Santa Anna Drive	Willamette Drive (Hwy 43)	\$95
6	Med	Blankenship Road	On-street Bike Lanes	Ostman Road	Debok Road	\$0**
7	Med	Hidden Springs Road*	On-street Bike Lanes	Rosemont Road	Willamette Drive	\$335
8	Med	Santa Anita Drive*	On-street Bike Lanes	Rosemont Road	Hidden Springs Road	\$525
9	Med	Skyline Drive*	On-street Bike Lanes	Summit Street	West A Street	\$630
10	Med	Summit Street*	On-street Bike Lanes	Skyline Drive	Cornwall Street	\$360
11	Med	Sunset Avenue	On-street Bike Lanes	Parker Road	Willamette Falls Drive	\$910
24	Med	Willamette Drive	On-street Bike Lanes -	North City Limits	McKillican Street	\$0

CHAPTER

7

## Transit Plan

This chapter summarizes existing and future transit needs in the City of West Linn. The following sections outline the criteria used to evaluate needs, strategies for implementing a transit plan, and the City of West Linn transit plan. The method used to develop the transit plan combined TriMet, city staff and other agencies input.

### Background

TriMet is the regional transit provider for the Portland area and operates the fixed route transit service in West Linn, which is located near the southern edge of TriMet's service area. West Linn is near the end point of the regional service system with only two routes serving the city:

- Route 35- Macadam Avenue, from Portland City Center to Oregon City Transit Center
- Route 154- Willamette Falls Drive to Oregon City Transit Center

Route 35 operates between downtown Portland and the Oregon City Transit Center, and includes 18 stops along Highway 43 within the city limits of West Linn. There is one park-and-ride lot, located at the Emanuel United Presbyterian Church near the Cedar Oak Drive intersection with Highway 43 (refer to Figure 7-1). In addition to commutes into downtown Portland, this route can be used for connections to other routes via Transit Centers in Lake Oswego and in Oregon City.

Route 154 operates from the Oregon City Transit Center along Willamette Falls Drive, and returns via a loop along 10<sup>th</sup> Street, Blankenship Road, and Ostman Road. The route includes 18 stops, with connections possible from the Oregon City Transit Center. No park and ride lots are provided along the remainder of the route.

On weekdays, bus services for Route 35 operate between approximately 5 a.m. and midnight, with about 30 minutes between buses during commute hours. Off-peak hours have 45 to 60 minutes between successive buses. Route 154 (which only runs Monday through Friday) operates between approximately 6 a.m. to 6 p.m., with about 30 minutes between buses during afternoon commute hours, and 60 minute headways during other periods.

## Transit Master Plan

Transit enhancements within the TriMet service area are ultimately decided based on regional transit goals. As such, West Linn has little control over dictating the expansion of local service or decreasing headways. These decisions can be influenced, however, if the proper densities are achieved along the transit routes, a decision over which the City has more control. Another tactic for increasing transit service to the City of West Linn is through inter-governmental agreements and funding strategies between the City of West Linn and TriMet in order to leverage transit dollars for local projects, providing better connections to transit facilities and supplying amenities at transit locations. Potential transit projects based on the transit strategies and feasibility are summarized in Table 7-3.

**Table 7-3: Potential Transit Projects**

Rank	Project	Agency Responsible	Description
1	Improve Service Coordination for Route 154	West Linn/ TriMet	Coordinate with TriMet to modify the schedule, stop locations, or add a layover to improve connections and service for Route 154.
2	Provide Transit Amenities at Major Transit Stops	West Linn/ TriMet	Provide shelters, information kiosks, etc along key transit routes in West Linn with land use development. Expand park and ride lots where demand exceeds existing capacity.
3	Improve Pedestrian Connections to Transit Facilities	West Linn/ TriMet	Construct sidewalks, crosswalks, etc. adjacent to transit routes and facilities (i.e. park-and-ride lots, bus stops, etc.). Within one-quarter mile of bus stops, focus on enhancing pedestrian access. Give priority to improvements within the designated overlay district <a href="#">downtown in Willamette community center</a> .
4	Increase Density Adjacent to Transit	West Linn	Direct growth to increase the density of houses within transit lines in the City of West Linn in an effort to support regional transit service goals.
5	Decrease Headways	TriMet	Provide more frequent transit service during peak commute periods.
6	Provide More Local Service	West Linn/ TriMet	Provide services along Rosemont Rd and/or Salamo Rd. Expand fixed-route <b>local transit (e.g. jitney)</b> services, as development requires. Time additional transit service to coordinate with major road extensions or street improvements. Enhance/expand pick up services.

Coordinating with TriMet to improve the service of Route 154 could make the route a more attractive option for transit service in West Linn. Potential modifications could begin with the current route schedule, which makes it difficult for riders to connect with Route 35. A potential layover at the Oregon City Transit Center (that arrives before Route 35 and leaves after the Route) would allow riders to transfer more easily between the two routes, regardless of direction of travel. A second phase of improvements for Route 154 could include

break rooms or other potential needs) for transit transfer stations may help facilitate expansion of service.

Providing additional transit amenities at existing transit stops can improve and increase ridership. TriMet generally limits placement of bus shelters to locations with 35 or more weekday boardings. Due to low ridership levels, the City may need to directly fund these amenities<sup>2</sup>. A variety of shelter layout options exist to meet the specific needs and constraints of the location<sup>3</sup>, though shelters need to meet local jurisdiction standards for structural integrity and wind load. By constructing 3-5 bus shelters (at a cost of approximately \$10,000 each), transit use will become a more attractive option.

Currently, there is just one park and ride facility<sup>4</sup> located in the City of West Linn, providing the opportunity for residents to be connected via transit to the larger Portland region. Additional park and ride lots would increase transit accessibility for those individuals that do not live within walking distance of transit stops. Church sites in particular may allow midweek parking opportunities if shared usage agreements are feasible. Potential new locations could include the Bolton shopping center, West Linn Public Library, Willamette Christian Church, or along Blankenship Road. Due to low demand at the existing park and ride lot, TriMet is currently not considering specific additional park and ride locations at this time, but can assist in user agreements with potential site owners as the need arises<sup>5</sup>.

Improving pedestrian connections to transit facilities is an important step in increasing accessibility of the existing transit facilities. Additional sidewalks and pedestrian refuge islands adjacent to Highway 43 will improve safety for not only potential transit riders but all pedestrians. Improvements described in the Highway 43 Concept Plan provide these crossing safety projects at key locations.

Implementation of a local circulator bus could be a joint City / TriMet effort and would increase transit coverage in West Linn. A potential route could include Salamo Road to Rosemont Road, down to Bolton shopping center and then returning along Willamette Falls Drive. Such a route would provide service to local destinations, as well as regional connections via Route 35 or 154. Previous service of Route 154 included service along Salamo Road and Rosemont Road (Figure 7-2) but was changed due to low ridership.

In addition to a fixed local route, local service improvements could include enhancing and expanding pick up services for those potential riders cannot use TriMet but do not qualify for existing pick up services.

<sup>2</sup> A similar city-funded effort has occurred in Lake Oswego. A TriMet crew would need to be hired to perform the work in order to meet union rules.

<sup>3</sup> Bus Stop Guidelines 2002, TriMet, October 2002.

<sup>4</sup> TriMet currently utilizes the parking lot of Emmanuel Presbyterian Church and has recently renewed the agreement at that location.

<sup>5</sup> Contact Young Park, Manager of Capitol Projects, TriMet.

to support a fixed route transit bus service with 1-hour schedule between arrivals is about four (4) housing units per acre or three (3) employees per acre. Figure 7-3 shows those areas in West Linn that meet this transit supportive density threshold with both the base year 2005 and future year 2030 land use cases.

Two areas that meet the base year 2005 density levels are located adjacent to I-205 near Highway 43 (served by Route 35) and in the Willamette neighborhood loop currently served by Route 154. The third area that meets transit supportive density levels is along Salamo Road south of Rosemont Road, a location that is currently not served by transit. Additional areas that are projected to meet future density thresholds include a northern portion of the Willamette neighborhood and along Hidden Springs Road and the northern portion of Highway 43. Areas that meet the density thresholds in Figure 7-3 should be considered for future transit routes. However, service to the Hidden Springs area would be difficult due to the grade of roadways, and a central route serving the additional areas shown in Figure 7-3 would likely resemble the prior Route 154 (Figure 7-2).

Increased density may not result in additional transit service; there are other options available that can be explored. West Linn will explore options with TriMet to obtain additional service.

To better understand the potential demand for transit, the City of West Linn should conduct an expanded survey of its residents to assess location, frequency, and willingness to pay for additional transit services and coverage in the City. The survey should explore the feasibility of providing local transit (jitney) service with 15-minute headways. Such a survey is beyond the scope of the TSP efforts but could be included in a comprehensive transit plan for the City that sets the foundation for additional transit routes.

**Table 7-4: Transit Action Plan**

Priority	Project	Agency Responsible	Description	Cost (\$1,000s)
High	Improve Service Coordination for Route 154	West Linn/TriMet	Coordinate with TriMet to modify the schedule, stop locations, or add a layover to improve connections and service for Route 154	-
High	Transit Expansion Study and Survey	West Linn	Explore the feasibility of local fixed-route transit (e.g. jitney) service including surveys of residents and potential users.	\$75
High	Provide Transit Amenities at Major Transit Stops	West Linn/TriMet	Provide shelters, information kiosks, etc along key transit routes in West Linn with land use development. Specific locations (5) to be determined through transit study and survey.	\$50
High	Improve Pedestrian Connections to Transit Facilities	West Linn/TriMet	Construct sidewalks, crosswalks, etc. adjacent to transit routes and facilities.	\$0*
Med	Decrease Headways	TriMet	Provide more frequent transit service during peak commute periods.	-
Med/ Low	Provide More Local Service	West Linn/TriMet	Expand coverage by providing local (e.g. jitney) service to connect to existing transit lines. Enhance/expand local pick up services. Specific locations/actions to be determined through transit study and survey. This project is a placeholder for funds pending the outcome of the study.	\$50/yr
<b>Transit Project Total (for 23 years)</b>				<b>\$1,275</b>

NOTE: \* Specific projects and costs included in Pedestrian Plan of this TSP



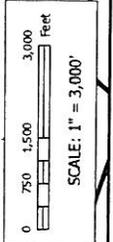
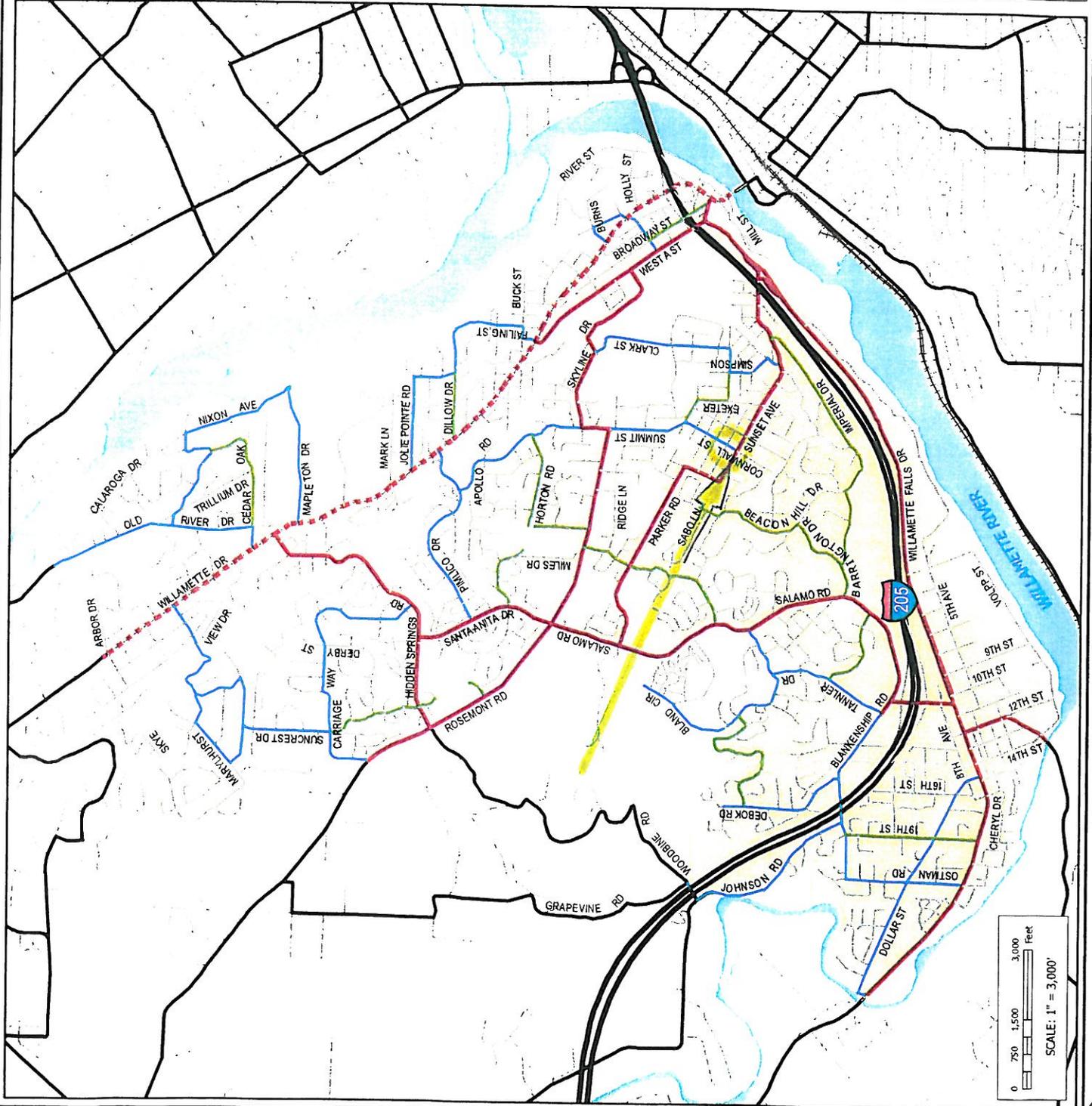
# Transportation System Plan

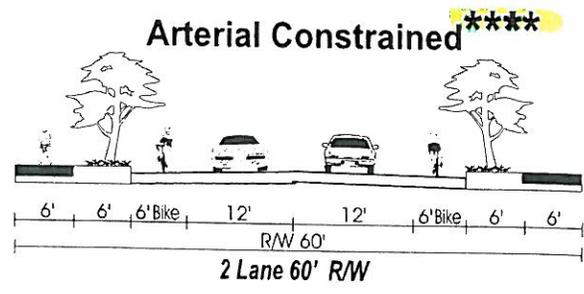
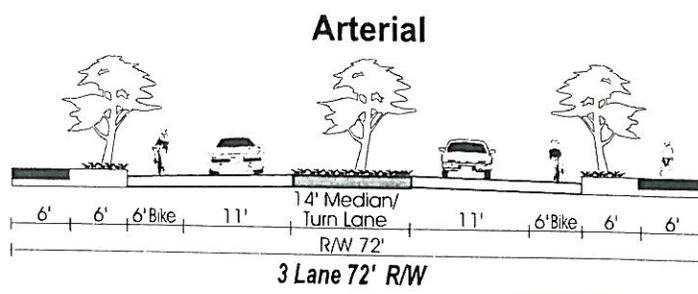
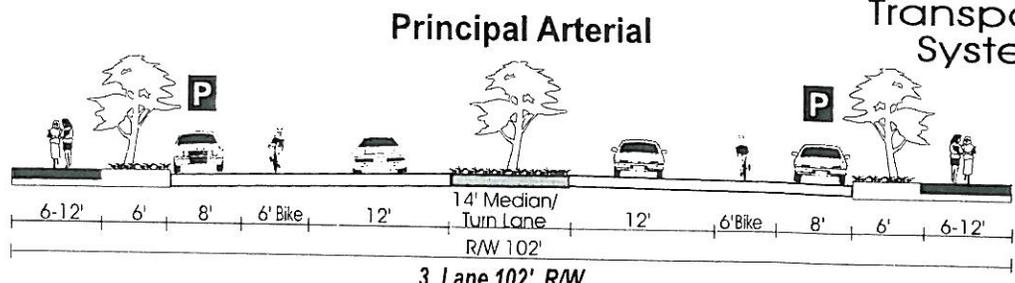
## FIGURE 8-1

### EXISTING/FUTURE FUNCTIONAL CLASS

#### LEGEND

- Freeway
- Principal Arterial
- Arterial
- Collector
- Neighborhood Route
- Local Street
- Railroad
- Water
- City Limits





Standards	Principal Arterial	Arterial
Vehicle Lane Widths:	11-14 ft.	11-12 ft.
On Street Parking:	Limited *	Limited *
Bicycle Lanes: (See Chapter 5)	4-6 ft.	4-6 ft.
Sidewalks:	6-12 ft.	6-12 ft. ****
Landscape Strips:	0-6 ft.	0-6 ft. ***
Medians/Turn Lane Widths:	0-14 ft. **	0-14 ft. **
Neighborhood Traffic Management:	Not Appropriate	Not Appropriate

- \* Note: On-street parking allowed in designated opportunity areas.
- \*\* Note: Two-lane arterial allowed in designated opportunity areas, or where property access is limited to right-turn movement only. (No center lane)
- \*\*\* Note: When abutting commercially zoned property - sidewalks shall be 12' wide with street tree cut-outs and no separate landscape strip. When abutting residentially zoned property, sidewalks shall be 6' wide with 6' wide landscape strip.
- \*\*\*\* Note: Landscape strips may be removed and/or bicycle lanes may be relocated to a parallel facility at the discretion of the City Engineer.

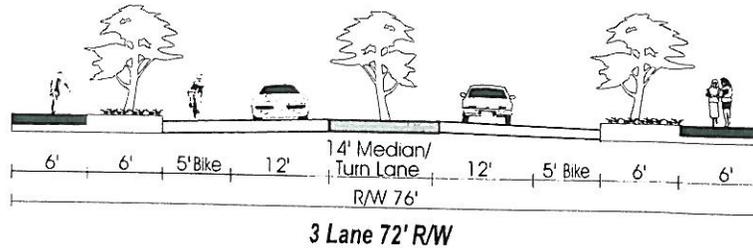
Green street variations of each cross section may be implemented at the discretion of the city engineer and planning director. These variations may include replacing the standard six foot planter strip with a five and a half to eight foot wide rain garden or swale, or substituting the concrete sidewalk for an asphalt pathway and in some cases providing such a pathway on only one side of the street.

**Legend**

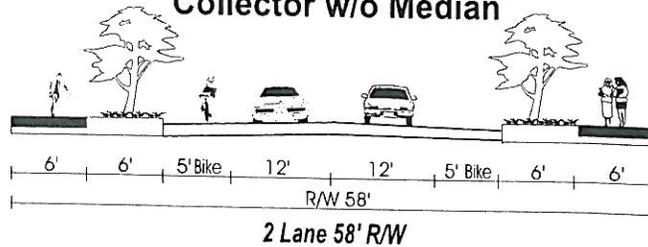
**P** - On-street Parking Lane

**Figure 8-2  
ARTERIAL  
STREET CROSS SECTIONS**

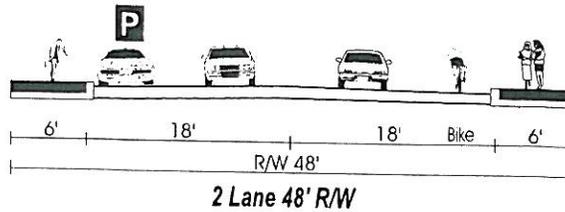
**Collector with Median/Center Lane**



**Collector w/o Median**



**Collector Constrained**



**Standards Collector**

Vehicle Lane Widths:	10-12 ft.
On Street Parking:	5-8 ft.
Bicycle Lanes:	4-6 ft. *
Sidewalks:	4-8 ft.
Landscape Strips:	0-6 ft.
Medians/Turn Lane Widths:	10-14 ft. **
Neighborhood Traffic Management:	Under Special Conditions

\* Note: Bike lanes required where future traffic volumes > 3,000 ADT. When < 3,000 ADT, 14' travel lanes will be provided.

\*\* Note: Center turn lane maybe omitted where future traffic volumes < 5,000 ADT.

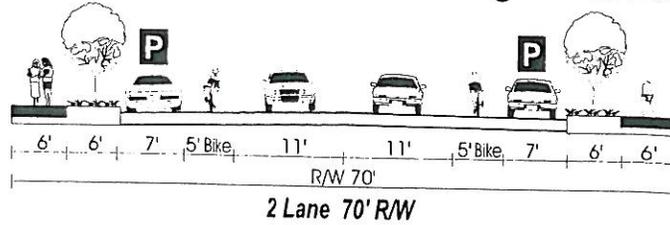
Green street variations of each cross section may be implemented at the discretion of the city engineer and planning director. These variations may include replacing the standard six foot planter strip with a five and a half to eight foot wide rain garden or swale, or substituting the concrete sidewalk for an asphalt pathway and in some cases providing such a pathway on only one side of the street.

**Legend**

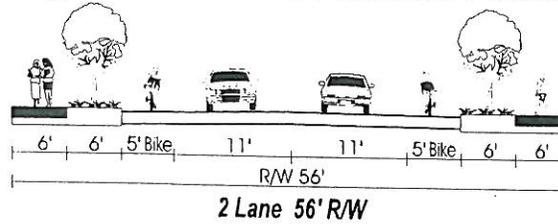
**P** - On-street Parking Lane

**Figure 8-3  
COLLECTOR  
STREET CROSS SECTIONS**

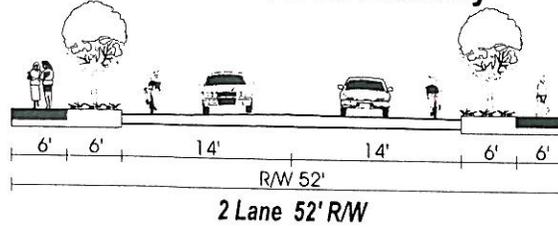
**Neighborhood Route With Parking & Bike Lane \***



**Neighborhood Route Without Parking \***



**Neighborhood Route Without Parking \* \*\* and with Shared Bikeway**



**Standards Neighborhood Route**

Vehicle Lane Widths:	10-12 ft.
On Street Parking:	7-8 ft. ***
Bicycle Lanes: (See Chapter 5)	4-6 ft.
Sidewalks:	4-6 ft.
Landscape Strips:	0-6 ft.
Medians/Turn Lane Widths:	None
Neighborhood Traffic Management:	Under Special Conditions

- \* Note: When shown as a bicycle route on the Bicycle Route Plan.
- \*\* Note: Shared Bikeway will be used when volumes < 3,000 ADT.
- \*\*\* Note: Allowance of on-street parking shall be based upon the nature and intensity of adjacent development and physical constraints.

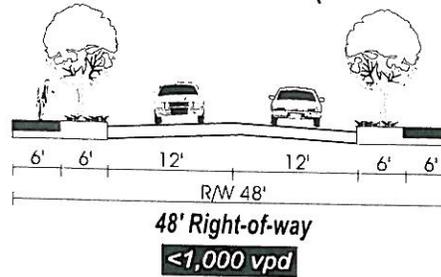
Green street variations of each cross section may be implemented at the discretion of the city engineer and planning director. These variations may include replacing the standard six foot planter strip with a five and a half to eight foot wide rain garden or swale, or substituting the concrete sidewalk for an asphalt pathway and in some cases providing such a pathway on only one side of the street.

**Legend**

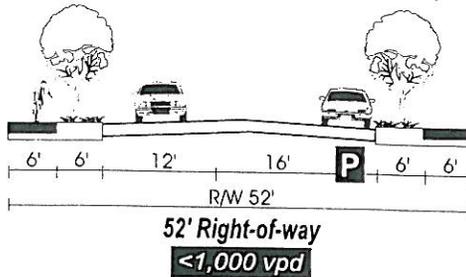
**P** - On-street Parking Lane

**Figure 8-4  
NEIGHBORHOOD ROUTE  
STREET CROSS SECTIONS**

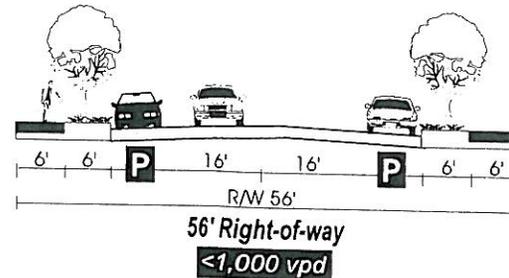
**24' Local Residential (No Parking)**



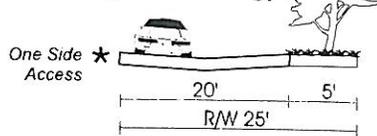
**28' Local Residential (No Parking On One-side)**



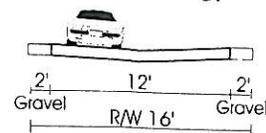
**32' Local Residential**



**Alley (No Parking)**



**Alley (No Parking)**



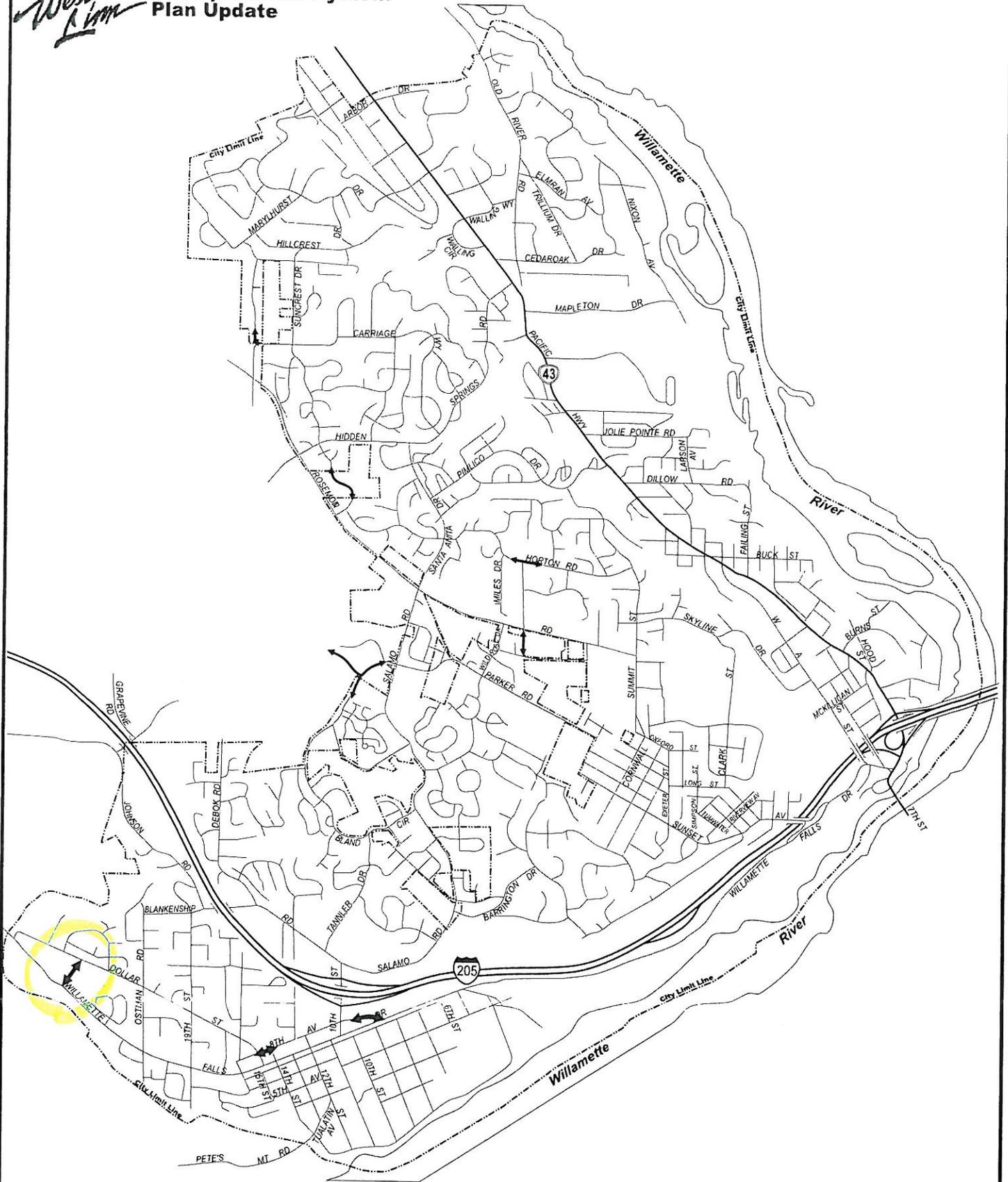
Green street variations of each cross section may be implemented at the discretion of the city engineer and planning director. These variations may include replacing the standard six foot planter strip with a five and a half to eight foot wide rain garden or swale, or substituting the concrete sidewalk for an asphalt pathway and in some cases providing such a pathway on only one side of the street.

**Legend**

**P** - On-street Parking Lane

Note: Landscape stripe may be narrowed or eliminated and sidewalks may be narrowed to 4 feet and/or placed on one-side of the street in areas of severe physical constraints or constraints from existing development.

**Figure 8-5  
RESIDENTIAL LOCAL  
STREET CROSS SECTIONS**



**LEGEND**

- ↔ - Local Street Connection
- ↔ - Pedestrian/Bike Connection (No Autos)

NOTE: General connection route indicated. Precise alignments to be determined

**DKS Associates**  
TRANSPORTATION SOLUTIONS



**Figure 8-6**

**FUTURE LOCAL STREET  
CONNECTIVITY IMPROVEMENTS**

**Table 8-1: City of West Linn Roadway Cross-Section Standards**

Street Element	Characteristic	Width/Options
Vehicle Lane Widths: (Minimum widths)	Arterial	11 feet
	Collector	10 feet
	Neighborhood	10 feet
	Local	12 feet
	Turn Lane	10-14 feet
On-Street Parking:	Arterials	Limited (in designated <del>opportunity</del> <del>areas</del> commercial centers)
	Collectors	Some (unstriped)
	Neighborhood	Some (8 feet)
	Local	Some (unstriped)
Bicycle Lanes: (minimum widths)	New Construction	5 to 6 feet
	Reconstruction	5 to 6 feet
Sidewalks: (Minimum width)	Arterial	6 feet
	Collector	6 feet
	Neighborhood/Local	6 feet
Landscape Strips:	Can be included on all streets	6 feet
Medians:	5-Lane	Optional
	3-Lane	Optional
	2-Lane	Consider if appropriate
Neighborhood Traffic Management:	Arterials	Not recommended
	Collectors	Under special conditions
	Neighborhood	Should consider if appropriate
	Local	Should consider if appropriate
Transit:	Arterial/Collectors	Appropriate
	Neighborhood/Local	Only in special circumstances
	Local	Not recommended

*Note: These standards apply to City of West Linn facilities only. ODOT width standards apply for ODOT facilities.*

## Neighborhood Traffic Management (NTM)

Neighborhood Traffic Management (NTM) is a term that has been used to describe traffic control devices typically used in residential neighborhoods to slow traffic or possibly reduce the volume of traffic. NTM is descriptively called traffic calming due to its ability to improve neighborhood livability.

The City of West Linn currently utilizes a variety of NTM elements such as speed humps, raised pavement markings, median, bulb-outs, etc.

The City has an established traffic safety committee (whose membership consists of city staff and a representative from TVF&R), which meets on a monthly basis ~~that and~~ oversees NTM issues among their other responsibilities. The committee has a set procedure for NTM implementation that starts with the identification of a perceived problem by concerned citizens, after which the committee conducts a speed/volume survey to identify if the problem exists. Once the problem has been identified and classified, the committee discusses the various approaches to solving the problem. There are many different NTM options available to the committee, which are described in the technical appendix. Typically, the committee starts with lower cost solutions, such as education and enforcement and if it is deemed that either of these solutions are not having the desired effect, an engineering solution is selected by the committee. The implementation of the selected NTM solution may be funded by the city and/or the concerned citizens. Often the city pays for the logistics of the NTM implementation and the citizens pay for the material costs.

- Provide left turn lanes where warranted for access onto cross streets.
- Construct raised medians to provide for right-in/right-out driveways as appropriate.

New development and roadway projects on city street facilities should meet the recommended access spacing standards summarized in Table 8-3.

**Table 8-3: Access Spacing Standards for City Street Facilities**

Roadway Functional Classification	Area	Traffic Signals (miles)	Public Intersections (feet)	Private Driveways (feet)	Median Opening (feet)
Arterial	Urban	½	600	300	600
	Opportunity	¼	NA	NA	NA
	Commercial center				
Collector	All	¼	200	150	NA
Neighborhood Route	All	¼	150	100	NA
Local Residential Street	All	NA	100	50	NA
Local Commercial Street	All	NA	100	50	NA

"Urban" refers to intersections inside the West Linn urban growth boundary and outside the central business district or designated town centers.

"Opportunity Commercial" refers to the designated opportunity areas commercial centers located in the Robinwood, Bolton, and Willamette neighborhoods.

Many existing roadways and/or driveways do not currently meet these standards. These access points were installed when traffic volumes were substantially lower and no access spacing criteria were mandated. With higher traffic volume in the future, the need for access control on all arterial and collector roadways is critical to allow for safe mobility.

#### **Highway 43 Access Management Plan**

Preserving capacity on state facilities is especially important, since a large number of regional trips are served daily on both of these facilities (I-205 and Highway 43) in West Linn. Substandard performance because of a lack of capacity could force drivers to look for alternative routes along city streets. Preservation of capacity through specific access spacing standards on state facilities is outlined in the *Oregon Highway Plan (OHP)*<sup>2</sup> for Highway 43. Table 8-4 lists the minimum access spacing standard requirements for segments of Highway 43, based on speed and functional classification.

**Table 8-4: ODOT Access Spacing Standards for Highway 43**

Location	Speed (mph)	Highway Classification	NHS*	Truck Route	Freight Route	Access Spacing Standard (ft)
MP 8.04 (City Limit) – MP 11.29 (I-205 NB Off-Ramp)	35	Statewide	Yes	No	No	720
MP 11.29 (I-205 NB Off Ramp) – 11.43 (City Limit)	35	District	No	No	No	350

Note: Minimum access management spacing for public road approaches is the existing city block spacing or the city block spacing as identified in the local comprehensive plan. Public road connections are preferred over private driveways and in Special Transportation Areas (STA) driveways are discouraged. However, where driveways are allowed and where land use patterns permit, the minimum access management spacing for driveways is 175 feet (55 meters) or mid-block if the current city block is less than 350 feet (110 meters)<sup>3</sup>.

\* National Highway System

<sup>2</sup> OAR 734-051 Highway Approaches, Access Control, Spacing Standards and Medians, adopted per ORS 374.310(1).

<sup>3</sup> Oregon Department of Transportation (ODOT), 1999 Oregon Highway Plan (OHP)

## 2030 Transportation Demand Management Scenario

The implementation of various TDM strategies are generally aimed at reducing the trips that begin and end within the City, specifically with a trip end in the downtown-commercial center area. The target trips for reduction in West Linn make up approximately 9% of the total number of trips<sup>9</sup> on the street system. As the trips are focused in the downtown-commercial center core; the trip reduction is significantly less in the rest of the City.

The system improvements that make up this scenario include build-out of each of the multi-modal plans presented in this TSP (pedestrians, bicycles, transit, TDM). The 2030 forecasts for this scenario are based on potential reduction that could be achieved with each of these elements in place. These TDM measures are estimated to have approximately a 2% reduction of trips locally (and 5% reduction in trips regionally), which was applied to the 9% of target trips yielding an estimated trip reduction of 3%. This scenario focuses on improvements that are alternatives to increasing facility capacity for motor vehicles and (for comparative purposes) does not include capacity improvements in West Linn.

The v/c ratios were compared between the 2030 No-Build and 2030 Transportation Demand Management Scenarios to quantify the impacts that the implementation of TDM measures may have on the West Linn street system. The highest change in v/c ratios generally occurred along Highway 43 and Hidden Springs Road. The drop in v/c ratio of these areas was generally 0.03 to 0.04, but ranged from 0.01 to 0.06 along these roads. Similar impacts occurred throughout the city, with many roads exhibiting changes less than 0.02. This indicates that the relative changes due to this scenario would have a limited impact on the transportation system.

While a comprehensive TDM program may not address the transportation operational issues in West Linn during the PM peak times, employers that have more than 100 employees should be required to implement a van pool program, flexible working hours or another transportation demand management strategy that would influence regional trips be implemented and administered by these large employers to obtain compliance with OAR 340-242-0010 (through 0290). Setting TDM goals and policies for new development will be necessary to implement TDM measures in the future.

## Safety

The analysis in the Existing Conditions Chapter revealed that there are currently no major safety issues at any of the intersections studied for this TSP. ODOT uses the safety priority index system (SPIS) to prioritize safety improvements based on crash frequency and severity on state facilities. A potential southbound climbing lane for trucks traveling on I-205 out of West Linn is the only location in West Linn identified in the Top 5% Report<sup>10</sup>. No locations along Highway 43 were listed.

There are, however, several strategies for improving safety in the City of West Linn that are consistent with the prior TSP. These strategies are aimed at identifying priorities that meet the goals and policies of the city and should be carried forward with this TSP.

- Work with other agencies such as Clackamas County, ODOT, the school district, as well as local businesses and neighborhood groups to help prioritize and fund safety programs in a coordinated approach
- Develop a citywide safety priority system which identifies high accident locations, ranks the locations and identifies safety mitigation measures
- Consider installation of red light photo equipment where appropriate

<sup>9</sup> Excluding though traffic on I-205

<sup>10</sup> *Top 5 Percent Report*, ODOT Traffic-Roadway Section, August 30, 2007.

programmed into the Statewide Transportation Improvement Plan (STIP). As such, projects proposed in the TSP that are located on a State highway cannot be considered mitigation for future development or land use actions until they are programmed into the STIP. Unanticipated issues related to project funding, as well as the environment, land use, the economy, changes in the use of the transportation system, or other concerns may be causes for re-evaluation of alternatives discussed below and possible removal of a project from consideration for funding or construction. Highway projects that are programmed to be constructed may have to be altered or canceled at a later time to meet changing budgets or unanticipated conditions.

**Table 8-14: Motor Vehicle Master Plan and Action Plan Projects**

Project Number	Location	Description	Plan	Cost (\$1,000)
<b>City of West Linn Facility Projects</b>				
1	Salamo Road / Rosemont Road	Add a traffic signal when warranted <u>and pave adjacent intersection legs</u>	Action	<del>\$250</del> 500
2	Willamette Falls Drive / Sunset Avenue	Add a traffic signal when warranted	Action	\$250
3	Rosemont Road / Carriage Way	Add a center median on Rosemont Road to allow two-stage left turn from Carriage Way	Action	\$1,420
4	Rosemont Way / Hidden Springs Road	Add a traffic signal when warranted and northbound/southbound left turn lanes on Rosemont Road	Action	\$750
5	Willamette Falls Drive / Ostman Road	Widen Willamette Falls Drive with center median 500' on each side of intersection to allow for two-stage left turn from Ostman Rd	Action	\$1,285
6	Willamette Falls Drive / Dollar Street (east)	Widen Willamette Falls Drive with center median 500' on each side of intersection for two-stage left turn from Dollar St	Action	\$1,420
7	10 <sup>th</sup> Street (I-205 SB Ramps to 8 <sup>th</sup> Court)	Widen to 5-lane section with center turn lane and 2 travel lanes each direction	Action	\$1,625
8	10 <sup>th</sup> Street (8 <sup>th</sup> Ave to Willamette Falls Drive)	Add through lanes on 10 <sup>th</sup> Street for a total of 2 lanes in each direction. Prohibit northbound left turn movement and replace left turn lane with ped island.	Action	\$480
9	Blankenship Road / 10 <sup>th</sup> Street	Add 2 <sup>nd</sup> eastbound right turn lane and restripe westbound approach to have exclusive left turn and shared left-thru lane	Action	\$500
10	10 <sup>th</sup> Street / Willamette Falls Drive	Change/upgrade traffic control to either signal or roundabout	Action	\$800
11	10 <sup>th</sup> Street / 8 <sup>th</sup> Avenue	Add right-in right-out access at the time of 8 <sup>th</sup> Court extension.	Action	\$20
12	10 <sup>th</sup> Street / I-205 NB Ramps	Add turn lanes (northbound right turn lane, stripe southbound approach to have dual left turn lanes and one thru lane, add exclusive NB Off-ramp left turn lane, and widen NB On-ramp to have two receiving lanes to support dual SB left turn movement)	Action	\$1,000
13	8 <sup>th</sup> Court	Extend 8 <sup>th</sup> Ct to Willamette Falls Dr. to provide additional access to 8 <sup>th</sup> Court retail. (Concurrently make 10 <sup>th</sup> Street/ 8 <sup>th</sup> Avenue right-in right-out access.)	Action	\$2,000
14	Willamette Falls Drive /12 <sup>th</sup> Street	All way stop control/ traffic signal when warrants are met	Action	\$250
15	Willamette Falls Drive /14 <sup>th</sup> Street	All way stop control when warrants are met	Action	\$10

## State Fuel Tax and Vehicle License Fee

State gas tax and license fees are distributed to municipalities by the State of Oregon. By statute, the money must be used for any road-related purpose, with one percent dedicated to bicycle path development. The State of Oregon Highway Trust Fund collects taxes and fees on fuel, vehicle licenses, and permits. A portion is paid to cities annually on a per capita basis. Oregon gas taxes are collected as a fixed amount per gallon of gasoline served. The gas tax in Oregon has not increased since 1993 (currently \$0.24 per gallon.) The tax does not vary with gas prices changes, nor is there an adjustment for inflation. The lack of change since 1993 means that the net revenue collected has gradually eroded as the cost to construct and repair transportation systems has increased. Increased fuel efficiency in new vehicles has further reduced the revenue stream. Oregon vehicle registration fees are collected as a fixed amount at the time a vehicle is registered with the Department of Motor Vehicles. Vehicle registration fees in Oregon have recently increased from \$15 per vehicle per year to \$27 per vehicle per year for passenger cars, with similar increases for other vehicle types. There is no adjustment for inflation tied to registration fees. If revenues received from the state increase in future years, then the anticipated need for other revenue sources explained in this chapter (e.g. fees, etc.) can be decreased.

## Roadway Maintenance Fee

The roadway maintenance fee is billed on monthly utility bills. By ordinance, the money must be used for road-related purposes. The current fee is set at \$4.40 per month per household, and up to \$440 per month from businesses. In the fiscal year 2009 budget, this fee is scheduled to increase on January 1, 2009 by ten percent to \$4.84 per month per household and by three percent to a maximum of \$453 per month from businesses. The fee is allocated to any qualifying roadway maintenance service expenditures as defined in the enabling ordinance, which includes but is not limited to roadway surface repair and maintenance, street lighting, ice and snow removal, traffic control/calming, sidewalk and curb repair, and bicycle and pedestrian path maintenance. The fees currently raise approximately \$714,000 annually for the City. A recent levy was defeated (Measure 3-285) in May 2008, which would have replaced the fee.

## Franchise Fees & Miscellaneous

Franchise fees from the City's solid waste franchise agreement are receipted to the Street fund. This is discretionary revenue that is currently dedicated to the Street fund on the rationale that garbage trucks impact street condition. The current annual amount is approximately \$68,000. Prior to fiscal year 2009, franchise fee revenue from the City's electrical franchise agreement (approximately \$500,000) was receipted to the Street fund. Because franchise fee revenue is discretionary, funds were moved to another fund in fiscal year 2009. The creation of a Roadway Maintenance Fee (explained in the preceding paragraph) filled the funding gap that was created when the discretionary electrical franchise fee revenues were allocated to another fund. Miscellaneous funds include interest, reimbursement charges, and other revenues. These revenues total no more than \$15,000 annually, and are not a significant source of income for the Streets fund.

## System Development Charge

System Development Charges (SDC) can be used to acquire needed property and improvements related to capacity required for growth as development occurs. Construction of new streets for the last fifteen years or more has been almost exclusively done in conjunction with new development. SDCs for streets is used as a funding source for projects that add capacity to the transportation system. The SDC is collected from new development based on the proposed land use and size, and is proportional to each land use's potential PM peak hour vehicle trip generation. The current SDC rate (updated June 2008) per PM peak hour trip is \$4,849, which includes \$4,628 towards improvements. The City has approximately \$500,000 in SDC credits awaiting redemption by developers holding the credits.

## West Linn Costs for Action Plans

The costs outlined in the Transportation System Plan to implement the Action Plans for Streets, Transit, Bicycles, and Pedestrians total \$20.3 million. While the cost of the Highway 43 Concept Plan will likely be funded by various sources, a 15% local share contribution (\$3.1 million) is assumed by the City of West Linn in order to make the project attractive for other funding agencies and is included in the Action Plan estimates.

The addition of other recommended transportation operations and maintenance programs, including street lighting, would add \$24.8 million.

Required costs for personnel, operations, and support, which assume a four percent increase each year would add \$39.5 million.

And, West Linn financial policies require ten percent fund balance for the Streets fund would add approximately \$390,000 on a one-time basis and would be carried forward from year to year.

This results in a total cost of \$85.0 million. The Action Plan costs through 2030 are summarized in Table 10-4.

**Table 10-4: Transportation System Plan Costs**

TSP Element	Estimated Cost
<b>Action Plan System Projects (Tables 5-3, 6-3, 7-4, and 8-14)</b>	
Motor Vehicle – West Linn Facilities	\$14,590,000
Motor Vehicle – State Facilities (West Linn 15 percent contribution)	\$3,250,000
Bicycle	\$1,880,000
Transit	\$1,320,000
Pedestrian	\$0*
<b>Action Plan System Projects Subtotal</b>	<b>\$21,040,000</b>
<b>Maintenance Projects</b>	
Roadway Maintenance (\$750,000 per year)	\$17,250,000
Street Lighting (\$330,000 per year)	\$7,590,000
<b>Maintenance Projects Subtotal</b>	<b>\$24,840,000</b>
Operations & Support (assumes a four percent increase per year)	\$39,491,000
Reserves (financial policies require ten percent of total expenditures)	\$390,000
<b>TOTAL</b>	<b>\$85,761,000</b>
<b>Anticipated Revenue (Table 10-3)</b>	<b>\$43,056,000</b>
<b>Variance</b>	<b>(\$42,705,000)</b>

\*Pedestrian projects and funding are included in the Highway 43 Concept Plan.

\*\*Includes the Highway 43 Concept Plan.

The total \$85.0 million cost of the Action Plan is compared to the expected year revenue estimate of \$43.1 million (see Table 10-3). The gap between available revenue and total costs of projects included in

the Action Plan is significant and indicates that even the most needed projects included in the Action Plan face a significant funding hurdle in order to become reality

Notably, the assumption of an increased roadway maintenance fee decreases the funding gap. Decisions related to roadway maintenance fee amounts will be the decision of Citizens' Budget Committee and City Councils during budget discussion each fiscal year.

The costs for the remaining projects noted in the modal Master Plans require additional funding beyond existing program levels, and they are expected to be built beyond the 2030 horizon or completed with development exactions or other unanticipated funding sources. Table 10-3 summarizes the value of additional Master Plan projects for each mode that are not included in the reasonably fundable Action Plan. A listing of the Master Plan projects is contained in Tables 5-2, 6-2, and 8-14.

**Table 10-5: Master Plan Projects not in Action Plan – Costs Through 2030 (2007 Dollars)**

Transportation Element	Approximate Cost (\$1,000)
<b>System Improvement Projects (Not funded by City in Action Plan)</b>	
Motor Vehicle	\$6,115
Bicycle	\$6,970
Pedestrian	\$20,430
<b>TOTAL in 2008 Dollars</b>	<b>\$33,515</b>