

# **City of Oregon City**

625 Center Street Oregon City, OR 97045 503-657-0891

# Meeting Agenda Transportation Advisory Committee

Tuesday, September 18, 2012

6:00 PM

City Hall, Commission Chambers

#### 1. Call To Order and Roll Call

#### 2. Approval of the Minutes

12-129 Minutes June 19, 2012

Staff: Interim Public Works Director John Lewis

Attachments: 6/19/12 TAC Minutes

#### 3. Chair Report

#### 4. Agenda Analysis

#### 5. Citizen Comments

Public Comments: The following guidelines are given for citizens presenting information or raising issues relevant to the City but not listed on the agenda.

- Complete a Comment Card prior to the meeting and submit it to the staff member.
- When the Chair calls your name, proceed to the speaker table and state your name and city of residence into the microphone.
- Each speaker is given 3 minutes to speak. To assist in tracking your speaking time, refer to the timer at the dais.
- As a general practice, Oregon City Officers do not engage in discussion with those making comments.

#### 6. New Business/Discussion Items

12-128 Access Issues at 107 Molalla Avenue

Staff: Interim Public Works Director John Lewis

Attachments: Big Dog Coffee Email

Big Dog Coffee Email - Lewis Evaluation

Photo 1
Photo 2
Photo 3
Photo 4

| 12-089        | Transportat<br>Session | ion System Plan (TSP) Update and Request for Work                            |
|---------------|------------------------|--|
|               | Staff:                 | Interim Public Works Director John Lewis                                     |
|               | Attachments:           | Technical Memo 11 - Planned and Financially Constrained Transportation Syste |
| <u>12-118</u> | McLoughlin             | Neighborhood Stop Sign Request   |
|               | Staff:                 | Interim Public Works Director John Lewis                                     |
|               | Attachments:           | Lewis Email on Stop Signs  |
|               |                        | Map of Carnegie Area Stop Signs  |
|               |                        | Traffic Study dated 12/13/10   |
| <u>12-126</u> | Trolley Usa            | ge   |
|               | Staff:                 | Interim Public Works Director John Lewis                                     |
| <u>12-125</u> | Upcoming E             | Events   |
|               | Attachments:           | Arch Bridge Re-Opening Event Schedule  |
| <u>12-124</u> | 99E Foot B             | ridge Evaluation   |
|               | Staff:                 | Interim Public Works Director John Lewis                                     |
| <u>12-123</u> | Downtown (             | Oregon City Parking Information  |
|               | Staff:                 | Interim Public Works Director John Lewis                                     |
|               | Attachments:           | Request for Free Parking   |
|               |                        | DRAFT Downtown Parking Facts   |
| <u>12-121</u> | Holcomb Bo             | oulevard Sidewalk Grant Application Update                                   |
|               | Staff:                 | Interim Public Works Director John Lewis                                     |
|               | Attachments:           | Notification of Grant Advancement  |
|               |                        | Notice of Intent Application   |
| <u>12-120</u> | Pavement (<br>9/19/12  | Cut Standards - Presentation Scheduled for City Commission                   |
|               | Staff:                 | Interim Public Works Director John Lewis                                     |
|               | Attachments:           | Draft Pavement Cut Standards   |
|               |                        |  |

## 7. Communications

# 8. Future Agenda Items

## 9. Adjournment

Agenda Posted at City Hall, Pioneer Community Center, Library, and City Web site(oregon-city.legistar.com).

Video Streaming & Broadcasts: The meeting is streamed live on Oregon City's Web site at www.orcity.org and is available on demand following the meeting.

ADA: City Hall is wheelchair accessible with entry ramps and handicapped parking located on the east side of the building. Hearing devices may be requested from the City staff member prior to the meeting. Disabled individuals requiring other assistance must make their request known 48 hours preceding the meeting by contacting the City Recorder's Office at 503-657-0891.



# **City of Oregon City**

625 Center Street Oregon City, OR 97045 503-657-0891

## **Staff Report**

File Number: 12-129

Agenda Date: 9/18/2012 Status: Agenda Ready

To: Transportation Advisory Committee Agenda #:

From: Interim Public Works Director John Lewis File Type: Minutes

Minutes June 19, 2012

#### **RECOMMENDED ACTION (Motion):**

Approve minutes of June 19, 2012 as written.



#### Transportation Advisory Committee Minutes

June 19, 2012

#### I. INTERVIEW

The TAC conducted an interview of Robert Mahoney.

Fred Wallace moved to recommend that Mayor Doug Neeley appoint Robert Mahoney to the Transportation Advisory Committee. Steve Johnson seconded the motion and it carried unanimously.

#### II. CALL TO ORDER

The Transportation Advisory Committee meeting of **Tuesday, June 19, 2012**, was called to order by Chair Meier at 6:25 PM in the Commission Chambers at Oregon City Hall, 625 Center Street, Oregon City, Oregon.

#### III. ROLL CALL

Committee members present included John Anderson, Steve Johnson, Chair Blane Meier, Bob La Salle and Fred Wallace. Betty Schaafsma, Scott Failmezger and Jonathan David were excused.

Staff members present included John Lewis, Operations Manager and Kathy Griffin, Administrative Assistant. Also in attendance was Mayor Doug Neeley; Gail Hoskins, Oregon City School District; Michael Sweeten, Principal, Holcomb Elementary School; and Lynne Mutrie, Oregon Safe Routes to School Program.

#### IV. APPROVAL OF MINUTES

**John Anderson moved to approve the minutes of May 15, 2012. Bob La Salle seconded** the motion and it **carried** unanimously.

#### V. CHAIR REPORT

None.

#### VI. AGENDA ANALYSIS

No changes were made to the agenda.

#### VII. CITIZEN COMMENTS

No comments were received.

#### VIII. DISCUSSION ITEMS

#### A. Safe Routes to School Program

Lynne Mutrie, Oregon Safe Routes to School Program talked about the five "E"s of safe routes to school which are Evaluation, Education, Encouragement, Enforcement, and Engineering. She indicated that they had limited staffing but that they help facilitate alternative transportation ideas.

She discussed the work that had been done at 38 schools in the Beaverton School District and how walking/bike route maps were being prepared which showed distances and drop off and pick up sites. Their goal was to work with communities to create opportunities to make walking and biking to school fun, easy, safe and healthy.

She talked about the concept of a walking school bus which was a group of kids and/or parents moving along a route on foot and without a bus "gathering" other students. John Anderson asked if there were liability implications associated with a walking school bus and Lynne replied that as long as it was done on a volunteer basis there shouldn't be any liability.

Ms. Mutrie added that weather doesn't keep people from walking; it is their clothing choices that keep them from walking.

She mentioned the website www.ridewithgps.com as a good tool for biking.

#### B. Holcomb Boulevard Sidewalk Grant Application

<u>Michael Sweeten, Principal, Holcomb Elementary School</u> estimated that roughly 10% of their students walk to school.

Discussion ensued about changing the school speed limit on Holcomb Boulevard and City staff said that the issue was complicated because the school wasn't physically on Holcomb Boulevard.

John Anderson inquired about installing a "school speed zone when lights are flashing" sign. John Lewis indicated that it was an option that the City would like to implement but it was costly. John Anderson made the suggestion of forming a Local Improvement District to pay for a flashing sign.

#### C. Transportation System Plan (TSP) Update

John Lewis talked about the progress of the update to the TSP. He mentioned that several open houses had been held on the TSP update during the past week.

John Anderson was concerned that the TAC wasn't being asked to prepare a recommendation on the TSP to give to the Planning Commission. He thought a work session would be helpful.

John Lewis agreed to look at the schedule to see if it makes sense to have a work session this summer or the first part of the school year and agreed to communicate to the TAC via email.

#### D. Update on Downtown Oregon City Parking

John Lewis provided an update on parking in downtown Oregon City.

#### E. Trolley Schedule

Bob La Salle expressed his concerns about what he perceived to be the underuse of the trolley system. John Lewis agreed to ask the project manager, Nancy Busch, to put together an explanation for discussion in September.

#### F. City Staffing Changes

John Lewis noted that Nancy Kraushaar was leaving the City of Oregon City to go to work for the City of Wilsonville. John will be the Interim Public Works Director until the position is permanently filled.

#### IX. INFORMATIONAL ITEMS

#### A. Construction Projects

- 1) CI 08-010, The Jughandle (OR 213 I-205: Redland Road O'xing)
- 2) CI 09-009, Main Street: 5th 10th Street, Phase 1
- 3) CI 12-001, 2012-2013 Oregon City Roadway Reconstruction Projects
- 4) CI 12-008, 2012 Oregon City Slurry Seal Project

#### X. FUTURE AGENDA ITEMS

None provided.

## XI. ADJOURNMENT

There being no further business, the meeting adjourned at approximately 8:21 p.m.

Respectfully Submitted,

Kathy Griffin Administrative Assistant



# **City of Oregon City**

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# **Staff Report**

File Number: 12-128

Agenda Date: 9/18/2012 Status: Agenda Ready

To: Transportation Advisory Committee Agenda #:

From: Interim Public Works Director John Lewis File Type:

SUBJECT:

Access Issues at 107 Molalla Avenue

From: <u>John M. Lewis</u>

To: "Donald Wright"; "Walter White"; Kathy Griffin

Subject: FW: Matthew Perry/Big Dog Coffee

Date: Wednesday, August 15, 2012 7:50:50 AM

Attachments: RE Matthew Perry/Big Dog Coffee.msg

#### Good morning Gentlemen.

I'm forwarding this email along with an attached email chain related to access concerns at Big Dog Coffee. This business is at the edge of your neighborhood and I wanted you to be informed of the dialog, possible meeting, and our position.

Kathy can you add this information to the September TAC packet as information but not further discussion unless someone asked to discuss it.

#### Thank you.



John M. Lewis, P.E.
Interim Public Works Director
City of Oregon City
PO Box 3040
122 S Center Street
Oregon City, Oregon 97045
503.657.8241 phone
503.650.9590 fax
jmlewis@orcity.org
www.orcity.org

From: John M. Lewis

Sent: Wednesday, August 15, 2012 7:39 AM

To: Matt

Subject: RE: Matthew Perry/Big Dog Coffee

#### Good morning Matt.

We have taken a fresh look at the accessibility concerns related to your business on Molalla Avenue and Division Street. As you have described access to your business is limited and it's unfortunate.

I would be happy to meet with you onsite to discuss the history and reasoning for the current roadway configuration. I can also discuss the long term future of the Molalla Avenue/ Division Street intersection. I could meet with you for about 20 minutes on August 20<sup>th</sup> at 2 PM or August 22 at 11:30 AM. Or we can meet the following week if neither of these dates work for you.

#### Thank you.



John M. Lewis, P.E.
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imlewis@orcity.org
www.orcity.org

From: Doug Neeley

Sent: Thursday, July 19, 2012 2:21 PM

To: Matt

**Cc:** David Frasher; John M. Lewis; Tony Konkol **Subject:** RE: Matthew Perry/Big Dog Coffee

This has been a problem from the opening by the original owner. I am forwarding this to our City Manager (David), and interim Public Works Director (John), and our Planning Director (Tony) to see what can be worked out.

#### Doug

From: Matt [Mattjenn99@hotmail.com] Sent: Tuesday, July 17, 2012 11:45 AM

**To:** Doug Neeley

Subject: Matthew Perry/Big Dog Coffee

Dear Mayor Neeley,

Good morning. My name is Matthew Perry and I am the new owner of Big Dog Coffee at 107 Molalla Ave. I want to talk to you about the intersection here at Division and Molalla. I knew when I opened the shop that this would be an issue but was hoping the quality of service and product would overcome the driving challenge. As you may know, there is no legal way for any traffic coming up the hill to get into the shop. There is a concrete barrier where traffic used to have the opportunity to turn left into our parking lot, and the traffic light at Division and Molalla is marked such that left turns are illegal. Unfortunately, it is near impossible for our customers to turn around and get into the shop once they pass these two obstacles. Many customers have told me they would frequent more often if only they could get in from the south coming up the hill.

A little background on me and my wife: we are Oregon City residents and active voters. My

wife is the head pharmacist at Walgreens in Oregon City; also, we have have five children. Our goal is to be very active in our community and promote healthy living; besides offering juicing and fresh fruit smoothies, we're busy planning community events, too. Our shop hosted a public education event with Walgreens and the American Diabetes Association today and I've coordinated to do two other events with the ADA, as well as host adult education and yoga instruction in our upstairs area during weekday mornings and nights.

I am not sure if this is something you have the time to review, but any help you can offer would be much appreciated. If you or the City need anything from me, please feel free to contact me.

Thank you for your time,

Matthew Perry
Big Dog Coffee
107 Molalla Ave.
Oregon City, OR 97045
(503) 891-3867
bigdogcoffeeoc@hotmail.com

 From:
 John M. Lewis

 To:
 Tony Konkol

 Cc:
 David Frasher

Subject: RE: Matthew Perry/Big Dog Coffee

Date: Thursday, August 02, 2012 2:53:13 PM

Attachments: photo.jpg

photo.jpg photo.jpg photo.jpg

Tony, I took the time to visit the site today to look closer at the suggestion that we consider striping the short leg of Division Street (between Molalla and 7<sup>th</sup> Street) for two way traffic. After looking at this suggestion as a possible solution to mitigate the impacts of the no left turn off of Molalla Avenue (south bound) I have concluded that this is not an option. I have attached some photos which demonstrate why I have determined this is not feasible.

Division Street at this location is 25 feet wide with parking on the Big Dog Coffee side of the street. During my site visit the on street parking was well utilized. This section of division street is just not wide enough. Prohibiting parking along a section of this street is not a good idea either given the turning radius from Molalla onto Division and then the through traffic from Division across Molalla is best aligned as is today. Re-alignment would require through traffic to jog over to the left which would be awkward.

No changes to Molalla are recommended. In my opinion, any modification on Molalla would be a safety liability the City does not need.

Take a look at the phones. This morning there were actually a fair amount of traffic both from Molalla and from the Big Dog Coffee Driveway. In one of the photos you will actually see one vehicle leaving the business and making a left turn out onto Division which is a significant problem given the speed many vehicles turning off of Molalla onto Division Street.

The only recommendation I see that might help is informational fliers the business could provide to its customers informing them of how they can drive around the block and back into the Molalla entrance. Something creative like napkins or coupons with the map as a secondary use.

I would be happy to meet with this property owner. Do you want to discuss further? I will contact Matthew and arrange to meet with him as soon as I hear from you.

From: Tony Konkol

Sent: Thursday, July 26, 2012 11:44 AM

**To:** John M. Lewis **Cc:** David Frasher

**Subject:** RE: Matthew Perry/Big Dog Coffee

John,

Please let me know when you have some time to discuss this property.

#### Tony

From: Doug Neeley

Sent: Thursday, July 19, 2012 2:21 PM

To: Matt

**Cc:** David Frasher; John M. Lewis; Tony Konkol **Subject:** RE: Matthew Perry/Big Dog Coffee

This has been a problem from the opening by the original owner. I am forwarding this to our City Manager (David), and interim Public Works Director (John), and our Planning Director (Tony) to see what can be worked out.

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I am not sure if this is something you have the time to review, but any help you can offer would be much appreciated. If you or the City need anything from me, please feel free to contact me.

Thank you for your time,

Matthew Perry
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# **City of Oregon City**

625 Center Street Oregon City, OR 97045 503-657-0891

## **Staff Report**

File Number: 12-089

Agenda Date: 9/18/2012 Status: Agenda Ready

To: Transportation Advisory Committee Agenda #:

From: Interim Public Works Director John Lewis File Type:

#### SUBJECT:

Transportation System Plan (TSP) Update and Request for Work Session



This document reduces the more than 350 solutions for the Oregon City transportation system into a Financially Constrained Plan. Included is a summary of the process utilized to develop and analyze the solutions for the transportation system and a detail of the Financially Constrained and Planned Transportation Systems identified for Oregon City.

# **Project Categories**

The Oregon City approach to developing transportation solutions for this update placed more value on investments in smaller cost-effective solutions for the transportation system rather than larger, more costly ones (see Technical Memorandum #9 for more information). The approach enabled more cost-effective solutions to increase transportation system capacity and helped to encourage multiple travel options, increase street connectivity and promote a more sustainable transportation system. Taking the network approach to transportation system improvements, the projects in this plan fall within one of several categories:

- **Driving** projects to improve connectivity, safety and capacity throughout the City. Oregon City identified 94 driving projects that will cost an estimated \$177.9 million to complete.
- Walking projects for sidewalk infill, providing seamless connections for pedestrians throughout the City. Oregon City identified 74 walking projects that will cost an estimated \$14.7 million to complete.
- **Biking** projects including an integrated network of bicycle lanes and marked on-street routes that facilitates convenient travel citywide. Oregon City identified 64 biking projects that will cost an estimated \$5.3 million to complete.
- Shared-Use Path projects providing local and regional off-street travel for walkers and bikers. The citywide shared-use path vision includes 52 projects totaling an estimated \$30.2 million.
- Family Friendly projects to fill gaps between shared-use paths, parks, and schools, offering a network of low-volume streets for more comfortable biking and walking throughout the City. The 33 family-friendly routes identified by the City will cost an estimated \$5.2 million to complete.

• **Crossing** project solutions, proving safe travel across streets along key biking and walking routes. A total of 36 crossing projects were identified, totaling an estimated \$2.8 million.

# **Assessing the Performance of Transportation Solutions**

The projects and/or policies in the categories listed above aim to satisfy the goals and policies for the Oregon City TSP Update. Each solution was evaluated to see how the community priorities match the perceived project benefits and shortfalls. A variety of transportation evaluation criteria and measures were derived from the community priorities (based on the project goals and objectives) and used to evaluate and compare the solutions to one another. The goals, objectives and evaluation criteria established for Oregon City can be found in Technical Memorandum #2.

Project stakeholders were given the opportunity to rank the eight project goals, from most valuable to least valuable. Using the weighted goals, the transportation solutions were evaluated and compared to one another, placing more value on those project stakeholders felt were most important to the community. The following goals (listed in order of importance to the community), were utilized to assess the performance of the transportation solutions:

- Enhance the health and safety of residents
- Emphasize effective and efficient management of the transportation system
- Foster a sustainable transportation system
- Provide an equitable, balanced and connected multi-modal transportation system
- Identify solutions and funding to meet system needs
- Increase the convenience and availability of pedestrian, bicycle, and transit modes
- Ensure the transportation system supports a prosperous and competitive economy
- Comply with state and regional transportation plans

Each transportation solution was assigned a time frame for the expected investment need, based on a project's contribution to achieving the community priorities of Oregon City. The investment recommendations attempted to balance implementation considerations. Complex and costly capital projects were disfavored compared with implementation of low cost projects that can have more immediate impacts and can spread investment benefits citywide.

# **Funding the Transportation Solutions**

With an estimated \$236 million worth of transportation solutions identified, Oregon City must make investments decisions to develop a set of transportation improvements that will likely be funded to meet identified needs through 2035. Overall, Oregon City is expected to have the following funds available through 2035 after accounting for the expenditures:

- Approximately \$14.7 million is expected to be available for capital needs after street operation and maintenance needs are met through 2035. These funds can be spent on non-SDC eligible project costs or other street improvements that are related to maintenance such as upgraded retaining walls and stairways, new guardrail, signal equipment replacement and upgrades, or curb and gutter.
- Over \$109 million is expected to be available for System Development Charge (SDC) projects after reducing the planned SDC project expenditures through 2035. This includes about \$2 million for pedestrian and bicycle SDC projects and over \$107 million for street SDC projects. The improvement projects eligible for SDC funding can be updated ongoing. It was assumed that the needed transportation system investments identified through the TSP update would be used to amend the existing SDC project list.

To put the expected available funding in context, over \$177 million worth of motor vehicle, over \$50 million worth of pedestrian, bicycle and shared-use path improvements and \$8 million worth of street crossing and family-friendly route projects were identified by the City. Of those project costs, approximately \$110 million of the motor vehicle and \$23 million of the pedestrian, bicycle and shared-use path project costs are needed to accommodate new development, and therefore are eligible for SDC funding. This leaves about \$67 million in motor vehicle and \$27 million in pedestrian, bicycle and shared-use path project costs to serve existing transportation deficiencies. These project costs, in addition to the street crossing and family-friendly route project costs, are not eligible to utilize SDC funds and must be funded through other means, such as the Street Fund or other State or Federal grants. Unless additional funds are explored, Oregon City will be expected to have a little over \$14.7 million (from the Street Fund) to cover the \$67 million in motor vehicle, \$27 million in pedestrian, bicycle and shared-use path, and \$8 million in street crossing and family-friendly route project costs that are not eligible for SDC funds (based on the current revenue and expenditure forecasts).

As detailed above, the City is expected to have approximately \$14.7 million for non-SDC eligible project costs or other street improvements. Clearly, most of the transportation solutions identified for the City are not reasonably likely to be funded through 2035. For this reason, the transportation solutions were split into two categories. Those reasonably expected to be funded by 2035 were included in the Financially Constrained Transportation System, while the projects that are not expected to be funded by 2035 were included in the Planned Transportation System.

# **Financially Constrained Transportation System**

The Financially Constrained Plan identifies the transportation solutions reasonably expected to be funded by 2035 and have the highest priority for implementation. Transportation solutions within the Financially Constrained Transportation System were recommended within several different priority/time horizons:

- Short-term: projects recommended for implementation in the 1 to 5 year timeframe.
- Medium-term: projects recommended for implementation in the 5 to 10 year timeframe.
- Long-term: projects likely to be implemented beyond 10 years from the time of this plan; these are projects that are important for the development of the City transportation network, but are unlikely to be funded in the next 10 years.

The Financially Constrained Transportation solutions are summarized in Table 1 and illustrated in Figures 1 to 6. The projects numbered on Figures 1 to 6 correspond with the project numbers in Table 1. The project numbers are denoted as a driving ("D"), walking ("W"), biking ("B"), shared-use path ("S"), street crossing ("C") or a family-friendly route ("FF"). Planning level cost estimates for the projects can be found in the appendix.

Table 1: Financially Constrained Transportation System

| Project #  | Project Description  | Project Extent   | Project Elements  | Priority    |
|------------|--|--|---|-------------|
| Driving So | lutions (Intersection Management   | t- see Figure 1)   |   |             |
| D1         | Molalla Avenue/ Beavercreek<br>Road Adaptive Signal Timing                 | Molalla Avenue from<br>Washington Street to Gaffney<br>Lane; Beavercreek Road from<br>Molalla Avenue to Maple Lane<br>Road | Deploy adaptive signal timing that adjusts signal timings to match real-time traffic conditions.  | Short-term  |
| D7         | Molalla Avenue Transit Signal<br>Priority                                  | Washington Street to Gaffney<br>Lane   | Provide priority at traffic signals for buses behind schedule.  This includes the use and deployment of Opticom detectors   | Short-term  |
| D8         | OR 99E Transit Signal Priority   | Dunes Drive to 10th Street   | at traffic signals and emitters on buses.   | Short-term  |
| D11        | Optimize existing traffic signals  | Citywide   | Optimize the existing traffic signals by updating the existing coordinated signal timing plans, upgrading traffic signal controllers or communication infrastructure or cabinets. | Short-term  |
| D12        | Protected/permitted signal phasing   | Citywide   | Incorporate protected/permitted phasing for left turn movements at traffic signals.   | Short-term  |
| D14        | Southbound OR 213 Advanced<br>Warning System                               | Southbound OR 213, north of<br>the Beavercreek Road<br>intersection  | Install a queue warning system for southbound drivers on OR 213 to automatically detect queues and warn motorists in advance via a Variable Message Sign                          | Short-term  |
| D27        | Main Street/14 <sup>th</sup> Street Safety<br>Enhancement                  | Main Street/14 <sup>th</sup> Street  | Convert to all-way stop to be consistent with the traffic control at surrounding intersections on Main Street.  | Short-term  |
| D28        | Washington Street/12th Street<br>Safety Enhancement                        | Washington Street/12th Street  | Install a traffic signal with dedicated left turn lanes for the 12 <sup>th</sup> Street approaches to Washington Street.  | Medium-term |
| D30        | Molalla Avenue/Division Street-<br>Taylor Street Safety Enhancement        | Molalla Avenue/Division Street-<br>Taylor Street   | Install a single-lane roundabout  | Medium-term |
| D32        | South End Road/Warner Parrott<br>Road Operational Enhancement              | South End Road/Warner Parrott<br>Road  | Install a traffic signal with dedicated left turn lanes for the<br>South End Road approaches to Warner Parrott Road   | Medium-term |
| D33        | South End Road/Lafayette<br>Avenue-Partlow Road<br>Operational Enhancement | South End Road/Lafayette<br>Avenue-Partlow Road  | Install a single-lane roundabout  | Medium-term |
| D40        | Main Street/Dunes Drive<br>Extension Operational<br>Enhancement            | Main Street/Dunes Drive<br>Extension   | Install a single-lane roundabout  | Long-term   |
| D41        | South End Road/Buetel Road<br>Extension Operational                        | South End Road/Buetel Road<br>Extension  | Install a single-lane roundabout  | Medium-term |

Table 1: Financially Constrained Transportation System

| Project #  | Project Description  | Project Extent                                   | Project Elements   | Priority    |
|------------|--|--|--|-------------|
|            | Enhancement  |  |  |             |
| D42        | South End Road/Deer Lane<br>Extension Operational<br>Enhancement           | South End Road/Deer Lane<br>Extension            | Install a single-lane roundabout   | Long-term   |
| D43        | Holcomb Boulevard/Holly Lane<br>North Extension Operational<br>Enhancement | Holcomb Boulevard/Holly Lane<br>North Extension  | Install a single-lane roundabout   | Long-term   |
| D44        | Beavercreek Road/Loder Road<br>Extension Operational<br>Enhancement        | Beavercreek Road/Loder Road<br>Extension         | Install a roundabout   | Medium-term |
| D45        | Meyers Road Extension/ Loder<br>Road Extension Operational<br>Enhancement  | Meyers Road Extension/ Loder<br>Road Extension   | Install a single-lane roundabout   | Medium-term |
| D94        | OR 213/Beavercreek Road<br>Operational Enhancement                         | OR 213/Beavercreek Road                          | Lengthen the dual left-turn lanes along Beavercreek Road to provide an additional 200 feet of storage for the eastbound approach   | Short-term  |
| Driving So | lutions (Street Extensions- see Fig  | gure 2)  |  |             |
| D46        | Meyers Road West extension   | OR 213 to High School Avenue                     | Extend Meyers Road from OR 213 to High School Avenue as an Industrial Minor Arterial. Create a local street connection to Douglas Loop.  | Short-term  |
| D47        | Meyers Road East extension   | Beavercreek Road to the<br>Meadow Lane Extension | Extend Meyers Road from Beavercreek Road to the Meadow Lane Extension as an Industrial Minor Arterial. Between the Holly Lane and Meadow Lane extensions, add a sidewalk and bike lane to the south side of the street, with a shared-use path to be added on north side per project S19. Modify the existing traffic signal at Beavercreek Road | Medium-term |
| D48        | Holly Lane North extension   | Redland Road to Holcomb<br>Boulevard             | Extend Holly Lane from Redland Road to Holcomb<br>Boulevard as a Residential Minor Arterial. Create local street<br>connections to Cattle Drive and Journey Drive.   | Long-term   |
| D49        | Swan Avenue extension  | Livesay Road to Redland Road                     | Extend Swan Avenue from Livesay Road to Redland Road as an Residential Collector   | Long-term   |
| D50        | owan rivelide extension  | Redland Road to Morton Road                      | Extend Swan Avenue from Redland Road to Morton Road as an Residential Collector  | Long-term   |

Draft T.M. #11- Planned and Financially Constrained Transportation Systems: August 2012

Table 1: Financially Constrained Transportation System

| Project # | Project Description        | Project Extent                                    | Project Elements  | Priority    |
|-----------|----------------------------|---|---|-------------|
| D51       |                            | Rose Road to Buetel Road                          | Extend Deer Lane from Rose Road to Buetel Road as a Residential Collector. Add a sidewalk and bike lane to the east side of the street, with a shared-use path to be added on west side per project S32.  | Long-term   |
| D52       | Deer Lane extension        | Buetel Road to Parrish Road                       | Extend Deer Lane from Buetel Road to Parrish Lane as a Residential Collector. Add a sidewalk and bike lane to the east/north side of the street, with a shared-use path to be added on west/south side per project S33. Create a local street connection to Finnegans Way Install a roundabout at South End Road (per project D42). | Long-term   |
| D53       | Madrona Drive extension    | Madrona Drive to Deer Lane                        | Extend Madrona Drive to Deer Lane as a Constrained<br>Residential Collector   | Long-term   |
| D54       | Clairmont Drive extension  | Beavercreek Road to Holly Lane<br>South Extension | Extend Clairmont Drive from Beavercreek Road to the Holly Lane South extension as an Industrial Collector. Add a sidewalk and bike lane to the south side of the street, with a shared-use path to be added on north side per project S17.  | Long-term   |
| D55       | Glen Oak Road extension    | Beavercreek Road to the<br>Meadow Lane Extension  | Extend Glen Oak Road from Beavercreek Road to the<br>Meadow Lane Extension as a Residential Collector. Install a<br>roundabout at Beavercreek Road (per project D39)  | Long-term   |
| D56       | Timbersky Way extension    | Beavercreek Road to the<br>Meadow Lane Extension  | Extend Timbersky Way from Beavercreek Road to the Meadow Lane Extension as a Residential Collector. Add a sidewalk and bike lane to the south side of the street, with a shared-use path to be added on north side per project S20.   | Long-term   |
| D57       |                            | Maple Lane Road to Thayer<br>Road                 | Extend Holly Lane from Maple Lane Road to Thayer Road as a Residential Collector. Add a sidewalk and bike lane to the west side of the street, with a shared-use path to be added on east side per project S14. Install a roundabout at Maple Lane Road (per project D37).  | Medium-term |
| D58       | Holly Lane South extension | Thayer Road to Meyers Road                        | Extend Holly Lane from Thayer Road to the Meyers Road extension as an Industrial Collector. Add a sidewalk and bike lane to the west side of the street, with a shared-use path to be added on east side per project S15.   | Medium-term |
| D59       |                            | Meyers Road to the Meadow                         | Extend Holly Lane from the Meyers Road extension to the   | Long-term   |

Draft T.M. #11- Planned and Financially Constrained Transportation Systems: August 2012

Table 1: Financially Constrained Transportation System

| Project #             | Project Description            | Project Extent   | Project Elements   | Priority     |
|-----------------------|--------------------------------|--|--|--------------|
|                       |                                | Lane Extension   | Meadow Lane Extension as a Mixed-Use Collector. Add a            |              |
|                       |                                |  | sidewalk and bike lane to the west side of the street, with a    |              |
|                       |                                |  | shared-use path to be added on east side per project S16.        |              |
|                       |                                |  | Extend Meadow Lane to the Meyers Road Extension as a             |              |
|                       |                                |  | Mixed-Use Collector. Between Old Acres Lane and the Glen         |              |
| D60                   |                                | Meadow Lane to Meyers Road   | Oak Road extension, add a sidewalk and bike lane to the west     | Long-term    |
|                       | Meadow Lane extension          |  | side of the street, with a shared-use path to be added on east   |              |
|                       |                                |  | side per project S21.  |              |
| D61                   |                                | Meyers Road to UGB (north of   | Extend Meadow Lane from the Meyers Road Extension to             | M 1' .       |
| D61                   |                                | Loder Road)  | the UGB (north of Loder Road) as an Industrial Collector         | Medium-term  |
|                       |                                |  | Extend Dunes Drive from OR 99E to Agnes Avenue as a              |              |
| D(2                   | D D' E ' '                     |  | Mixed-Use Collector. Install a roundabout at the Dunes           | M 1'         |
| D62 Dunes Drive Exter | Dunes Drive Extension          | OR 99E to Agnes Avenue   | Drive/Agnes Avenue intersection (per project D38). Will          | Medium-term  |
|                       |                                |  | require redevelopment of the Oregon City Shopping Center.        |              |
|                       |                                |  | Connect Washington Street to Abernethy Road with a Mixed-        |              |
|                       | Washington Street to Abernethy | hington Street to Abernethy Road Connection  Washington Street to Abernethy Road | Use Collector. Add a sidewalk and bike lane to the west side     |              |
| D63                   |                                |  | of the street, with a shared-use path to be added on east side   | Long-term    |
|                       | Road Connection                |  | per project S5. This street should be a public access road built | _            |
|                       |                                |  | to City standards but maintained by a private entity.            |              |
|                       |                                |  | Extend Loder Road from Beavercreek Road to Glen Oak              |              |
|                       |                                |  | Road as an Industrial Collector. Add a sidewalk and bike lane    |              |
| D64                   | Loder Road Extension           | Beavercreek Road to Glen Oak   | to the west side of the street, with a shared-use path to be     | Short-term   |
| D04                   | Loder Road Extension           | Road   | added on east side per project S18. Create a local street        | Snort-term   |
|                       |                                |  | connection to Douglas Loop. Install a roundabout at Meyers       |              |
|                       |                                |  | Road (per project D45).  |              |
| D65                   | Parrish Road Extension         | From Parrish Road east to Kolar  | Complete the gap between Parrish Road as a Constrained           | Longton      |
| D05                   | Parrish Road Extension         | Drive  | Residential Collector.   | Long-term    |
| D((                   | Washington Street Poolis       | Home Depot Driveway to   | Washington Street Realignment associated with the OR             | Under        |
| D66                   | Washington Street Realignment  | Clackamas River Drive  | 213/Washington Street Jug-handle Project.                        | Construction |
| D72                   | Hampton Drive Extension        | Hampton Drive to Atlanta Drive   | Extend Hampton Drive to Atlanta Drive as a Residential           | Long-term    |
| 1/14                  | Tampion Drive Extension        | Transport Drive to Atlanta Drive   | Local Street.  | Long-telli   |

Driving Solutions (Street and Intersection Expansions- see Figure 3)

Table 1: Financially Constrained Transportation System

| Project # | Project Description                                  | Project Extent  | Project Elements  | Priority                  |
|-----------|--|---|---|---------------------------|
| D80       | Division Street Upgrade                              | 7 <sup>th</sup> Street to 18 <sup>th</sup> Street               | Improve to Collector cross-section, as a constrained street                                       | Long-term                 |
| D81       | Beavercreek Road Upgrade                             | Clairmont Drive (CCC<br>Entrance) to Meyers Road                | Improve to Industrial Major Arterial cross-section  | Medium-term               |
| D82       | 10   | Meyers Road to UGB  | Improve to Residential Major Arterial cross-section   | Long-term                 |
| D89       | South End Road Upgrade                               | Partlow Road-Lafayette Road to UGB                              | Improve to Residential Minor Arterial cross-section   | Medium-term               |
| D92       | Washington Street Upgrade                            | 11th Street to 7th Street                                       | Improve to Minor Arterial cross-section, as a constrained street. Add curb-ramps at intersections | Medium-term               |
| Walking S | olutions (see Figure 4)                              |   |   |                           |
| W5        | Washington Street Sidewalk Infill                    | Washington Street-Abernethy Road<br>Extension to Abernethy Road | Complete sidewalk gaps on both sides of the street  | Short-term                |
| W11       | Holcomb Boulevard (East of OR                        | OR 213 overcrossing to Swan<br>Avenue                           | Complete sidewalk gaps on both sides of the street  | Medium-term               |
| W12       | 213) Sidewalk İnfill                                 | Longview Way to Winston Drive                                   | Complete sidewalk gaps on both sides of the street  | Medium-term               |
| W13       |  | Barlow Drive to UGB   | Complete sidewalk gaps on both sides of the street  | Medium-term               |
| W34       | Molalla Avenue Sidewalk Infill                       | Gaffney Lane to Sebastian Way                                   | Complete sidewalk gaps on both sides of the street  | Included with project W74 |
| W35       | Leland Road Sidewalk Infill                          | Warner Milne Road to Meyers Road                                | Complete sidewalk gaps on both sides of the street  | Short-term                |
| W41       | Warner Milne Road Sidewalk<br>Infill                 | Leland Road to west of Molalla<br>Avenue                        | Complete sidewalk gaps on both sides of the street  | Short-term                |
| W42       | Beavercreek Road Sidewalk Infill                     | Warner Milne Road to east of Kaen<br>Road                       | Complete sidewalk gaps on the east side of the street   | Short-term                |
| W47       | South End Road (south of                             | Partlow Road to Buetel Road                                     | Complete sidewalk gaps on both sides of the street  | Included with project D89 |
| W48       | Partlow) Sidewalk Infill                             | Buetel Road to UGB  | Complete sidewalk gaps on both sides of the street  | Included with project D89 |
| W54       | South End Road (north of<br>Partlow) Sidewalk Infill | Partlow Road to Barker Avenue                                   | Complete sidewalk gaps on both sides of the street  | Short-term                |
| W56       | Warner Parrott Road Sidewalk<br>Infill               | King Road to Marshall Street                                    | Complete sidewalk gaps on the north side of the street  | Short-term                |

Table 1: Financially Constrained Transportation System

| Project #  | Project Description   | Project Extent                                    | Project Elements   | Priority                  |
|------------|---|---|--|---------------------------|
| W62        | Linn Avenue Sidewalk Infill   | Ella Street to Charman Avenue                     | Complete sidewalk gaps on both sides of the street   | Short-term                |
| W64        | Brighton Avenue-Creed Street<br>Sidewalk Infill                       | Charman Avenue to Waterboard<br>Park Road         | Complete sidewalk gaps on both sides of the street   | Short-term                |
| W65        | Brighton Avenue-Park Drive<br>Sidewalk Infill                         | Charman Avenue to Linn Avenue                     | Complete sidewalk gaps on both sides of the street   | Short-term                |
| W70        | Division Street Sidewalk Infill                                       | 7 <sup>th</sup> Street to 18 <sup>th</sup> Street | Complete sidewalk gaps on both sides of the street   | Included with project D80 |
| W73        | Molalla Avenue Streetscape<br>Improvements Phase 3                    | Holmes Lane to Warner Milne Road                  | Streetscape improvements including widening sidewalks, sidewalk infill, ADA accessibility, bike lanes, reconfigure travel lanes, add bus stop amenities. | Medium-term               |
| W74        | Molalla Avenue Streetscape<br>Improvements Phase 4                    | Beavercreek Road to OR 213                        | Streetscape improvements including widening sidewalks, sidewalk infill, ADA accessibility, bike lanes, reconfigure travel lanes, add bus stop amenities. | Medium-term               |
| Biking Sol | utions (see Figure 5)   |   |  |                           |
| B1         | 7th Street Shared Roadway   | OR 43 Bridge to Railroad Avenue                   | Add wayfinding and shared lane markings  | Short-term                |
| B2         | Railroad Avenue-9th Street Shared<br>Roadway                          | OR 99E to Main Street                             | Add wayfinding and shared lane markings  | Short-term                |
| В3         | Main Street Shared Roadway  | OR 99E to 15th Street                             | Add wayfinding and shared lane markings  | Short-term                |
| В5         | 12 <sup>th</sup> Street (west of Washington<br>Street) Shared Roadway | OR 99E to Washington Street                       | Add wayfinding and shared lane markings  | Short-term                |
| В6         | 15 <sup>th</sup> Street (west of Washington<br>Street) Shared Roadway | Main Street to Washington Street                  | Add wayfinding and shared lane markings  | Short-term                |
| B12        | Holcomb Boulevard (East of OR<br>213) Bike Lanes                      | Longview Way to UGB                               | Add bike lanes to both sides of the street   | Medium-term               |
| B29        | Beavercreek Road Bike Lanes   | Pebble Beach Drive to UGB                         | Add bike lanes to both sides of the street   | Included with project D82 |
| B32        | Fir Street Bike Lanes   | Molalla Avenue to 1,500 feet east                 | Add bike lanes to both sides of the street   | Medium-term               |
| B33        | Leland Road Bike Lanes  | Marysville Lane to Meyers Road                    | Add bike lanes to both sides of the street   | Medium-term               |
| B35        | Meyers Road Bike Lanes  | Leland Road to Autumn Lane                        | Add bike lanes to both sides of the street   | Medium-term               |
| B37        | Molalla Avenue Bike Lanes   | Gales Lane to Adrian Way                          | Complete bike lane gaps on both sides of the street  | Included with project W73 |

Table 1: Financially Constrained Transportation System

| Project #   | Project Description                                     | Project Extent   | Project Elements   | Priority                  |  |
|-------------|---|--|--|---------------------------|--|
| B42         | South End Road (south of<br>Partlow) Bike Lanes         | Buetel Road to UGB                                       | Add bike lanes to both sides of the street   | Included with project D89 |  |
| B53         | Holmes Lane Bike Lanes                                  | Linn Avenue to Rilance Lane                              | Add bike lanes to both sides of the street   | Medium-term               |  |
| B55         | Pearl Street Bike Lanes                                 | Linn Avenue to Molalla Avenue                            | Add bike lanes to both sides of the street   | Medium-term               |  |
| B60         | Division Street Bike Lanes                              | 7 <sup>th</sup> Street to 18 <sup>th</sup> Street        | Add bike lanes to both sides of the street   | Included with project D80 |  |
| Shared-Us   | Shared-Use Path Solutions (see Figure 6)                |  |  |                           |  |
| S14         | Maple Lane-Thayer Shared-Use<br>Path                    | Maple Lane Road to Thayer Road                           | Add a shared-use path on the east side of the Holly Lane extension between Maple Lane and Thayer.  | Long-term                 |  |
| S15         | Thayer-Loder Shared-Use Path                            | Thayer Road to Loder Road                                | Add a shared-use path on the east side of the Holly Lane extension between Thayer and Loder.   | Long-term                 |  |
| S18         | Loder Road Shared-Use Path                              | Glen Oak Road to Holly Lane<br>Extension                 | Add a shared-use path on the south/east side of the Loder Road extension between Glen Oak Road and the Holly Lane extension.   | Long-term                 |  |
| S24         | Gaffney Lane Elementary Shared-<br>Use Path             | Eastborne Drive to Falcon Drive                          | Add a shared-use path along the northern boundary of<br>Gaffney Lane Elementary School between the Eastborne<br>Drive path and Falcon Drive  | Long-term                 |  |
| S36         | Tumwater-4 <sup>th</sup> Shared-Use Path                | Tumwater Drive to 4 <sup>th</sup> Avenue                 | Add a shared-use path through Old Canemah Park connecting 4 <sup>th</sup> Avenue to the Tumwater/South 2 <sup>nd</sup> intersection  | Long-term                 |  |
| Street Cros | ssing Solutions (see Figure 6)                          |  |  |                           |  |
| C11         | Beavercreek Road/Loder Road<br>Shared-Use Path Crossing | Beavercreek Road/Loder Road intersection                 | Install crosswalk and pedestrian activated flasher on<br>Beavercreek Road  | Long-term                 |  |
| C35         | John Adams/7h Family Friendly<br>Route Crossing         | 7 <sup>th</sup> Street/John Adams Street<br>intersection | Install crosswalk and pedestrian activated flasher on 7 <sup>th</sup> Street   | Long-term                 |  |
| Family-Fri  | iendly Routes (see Figure 4 or 5)                       |  |  |                           |  |
| FF13        | Leland-Warner Parrot Family<br>Friendly Route           | Leland Road to Warner Parrot Road                        | Add sidewalks on both sides of the street. Add wayfinding, traffic calming and shared lane markings. Route via Hampton Drive, Atlanta Drive, Auburn Drive and Boynton Street. Includes Hampton Drive extension to Central Point Road | Long-term                 |  |

Table 1: Financially Constrained Transportation System

| Project # | Project Description                           | Project Extent                         | Project Elements   | Priority  |
|-----------|---|--|--|-----------|
| FF19      | Warner Parrot-Barker Family<br>Friendly Route | Warner Parrot Road to Barker<br>Avenue | Add sidewalks on both sides of the street. Add wayfinding and shared lane markings. Route via Woodlawn Avenue and Woodfield Court. | Long-term |
| FF20      | Barker Avenue Family Friendly<br>Route        | South End Road to Telford Road         | Add sidewalks on both sides of the street. Add<br>wayfinding, traffic calming and shared lane markings.<br>Route via Barker Avenue | Long-term |
| FF23      | Charman Avenue Family Friendly<br>Route       | Telford Road to Linn Avenue            | Add sidewalks and bike lanes on both sides of the street.  Add wayfinding and traffic calming                                      | Long-term |

# **Planned Transportation System**

The projects and actions outlined within the Financially Constrained System will make significant progress toward creating travel options and connecting Oregon City's neighborhoods. If the City is able to implement a majority of the Financially Constrained System, nearly two decades from now Oregon City residents will have access to a safer, more balanced multimodal transportation network.

The Planned Transportation System identifies those transportation solutions that are not reasonably expected to be funded by 2035, but many of which are critically important to the transportation system. Some of these projects will require funding and resources beyond what is available in the time frame of this plan. Others are contingent upon redevelopment that makes it possible to create currently missing infrastructure, such as street connections.

The Planned Transportation System solutions are summarized in Table 2 and illustrated in Figures 1 to 6. The projects numbered on Figures 1 to 6 correspond with the project numbers in Table 2. The project numbers are denoted as a driving ("D"), walking ("W"), biking ("B"), shared-use path ("S"), street crossing ("C") or a family-friendly route ("FF"). Planning level cost estimates for the projects can be found in the appendix.

Table 2: Planned Transportation System

| Project #    | Project Description   | Project Extent  | Project Elements  | Priority |
|--------------|---|---|---|----------|
| Driving Solu | tions (Intersection Management- see Fi  | gure 1)   |   |          |
| D2           | Beavercreek Road Traffic Surveillance   | Molalla Avenue to Maple Lane Road                             | T . 11 '1 '. ' 1 1' 1   | Medium   |
| D3           | Washington Street Traffic Surveillance  | 7th Street to OR 213  | Install video monitoring cameras and vehicle detection equipment to provide turn movement                                 | Medium   |
| D4           | 7th Street/Molalla Avenue Traffic<br>Surveillance   | Washington Street to OR 213                                   | counts, hourly volumes, travel times, and speed   | Medium   |
| D5           | OR 213/ 7th Street-Molalla Avenue/<br>Washington Street Integrated Corridor<br>Management | I-205 to Henrici Road   | Integrate traffic surveillance and traffic control equipment with ODOT  | Medium   |
| D6           | OR 99E Integrated Corridor<br>Management  | OR 224 (in Milwaukie) to 10th Street                          | equipment with ODO1   | Medium   |
| D9           | OR 213/Beavercreek Road Weather<br>Information Station                                    | OR 213/Beavercreek Road                                       | Install road weather information stations that  | Low      |
| D10          | Warner Milne Road/Linn Avenue Road<br>Weather Information Station                         | Warner Milne Road/Linn Avenue                                 | provide temperature, road conditions, and a video image.  | Low      |
| D13          | Oregon City TMA Startup Program   | Oregon City Regional Center                                   | Implements a transportation management association program with employers.  | Medium   |
| D15          | Holcomb Boulevard Curve Warning<br>System   | Holcomb Boulevard just to the west of the OR 213 overcrossing | Install a curve warning system on Holcomb  Boulevard that activates when a motorist approaches the curve at a high speed. | Medium   |
| D16          | Holcomb Boulevard Speed Warning<br>System   | Holcomb Boulevard east of Jada Way                            |   | Medium   |
| D17          | Washington Street Speed Warning<br>System   | Washington Street near 9th Street                             |   | Medium   |
| D18          | 7th Street Speed Warning System   | 7th Street near Harrison Street                               |   | Medium   |
| D19          | Linn Avenue Speed Warning System  | Linn Avenue near Glenwood Court                               | Install a speed warning system that activates when a  | Medium   |
| D20          | OR 99E Northbound Speed Warning<br>System   | OR 99E near Paquet Street                                     | motorist approaches at a high speed.  | Medium   |
| D21          | OR 99E Southbound Speed Warning<br>System   | OR 99E near Hedges Street                                     |   | Medium   |
| D22          | Central Point Road Speed Warning<br>System  | Central Point Road near White Lane                            |   | Medium   |
| D23          | South End Road School Zone Flashers   | South End Road near Salmonberry<br>Drive and Filbert Drive    | Install school zone flashers  | Low      |
| D24          | Gaffney Lane School Zone Flashers   | Gaffney Lane near Glenview Court and Falcon Drive             | mstan school zone hasnets   | Low      |

Table 2: Planned Transportation System

| Project #    | Project Description   | Project Extent   | Project Elements   | Priority |
|--------------|---|--|--|----------|
| D25          | Meyers Road School Zone Flashers                                  | Meyers Road near High School Lane                                  |  | Low      |
| D26          | Beavercreek Road School Zone Flashers                             | Beavercreek Road south of Loder<br>Road and north of Glen Oak Road |  | Low      |
| D29          | John Adams Street/7th Street Safety<br>Enhancement                | John Adams Street/7th Street                                       | Restripe 7th Street to include a northbound left-turn pocket from 7th Street to John Adams Street.   | Medium   |
| D31          | High Street/2nd Street Operational<br>Enhancement                 | High Street/2nd Street   | Install a traffic signal   | Low      |
| D34          | Central Point Road/Warner Parrott<br>Road Operational Enhancement | Central Point Road/Warner Parrott<br>Road                          | Restrict left turns from Central Point Road to<br>Warner Parrott Road. Install a roundabout at the<br>Linn Avenue-Leland Road/ Warner Parrott Road-<br>Warner Milne Road intersection  | Low      |
| D35          | Redland Road/Anchor Way Operational<br>Enhancement                | Redland Road/Anchor Way  | Install a traffic signal   | Low      |
| D36          | Redland Road/Holly Lane Operational<br>Enhancement                | Redland Road/Holly Lane  | Install a single-lane roundabout   | Low      |
| D37          | Maple Lane Road/Holly Lane<br>Operational Enhancement             | Maple Lane Road/Holly Lane   | Install a single-lane roundabout   | Low      |
| D38          | Maple Lane Road/Walnut Grove Way<br>Operational Enhancement       | Maple Lane Road/Walnut Grove<br>Way                                | Install a single-lane roundabout   | Medium   |
| D39          | Beavercreek Road/Glen Oak Road<br>Operational Enhancement         | Beavercreek Road/Glen Oak Road                                     | Install a roundabout   | Medium   |
| Driving Solu | utions (Street Extensions- see Figure 2)                          |  |  |          |
| D67          | OR 99E to Beutel Road Extension                                   | OR 99E to Beutel Road  | Further study a potential connection between OR 99E and Beutel Road as a Constrained Minor Arterial. Add shared-use path on the east side of the street per project S34. Install a roundabout at South End Road (per project D41). The connection will likely be hindered by topography. | Low      |
| D68          | Chanticleer Place Extension                                       | Glen Oak Road to north of Russ<br>Wilcox Way                       | Extend Chanticleer Place from Glen Oak Road to<br>Russ Wilcox Way as a Residential Collector.  | Low      |
| D69          | Chanteleer 1 lace Extension                                       | South of Talawa Drive to Chanticleer<br>Drive                      | Extend Chanticleer Place from Talawa Drive to<br>Chanticleer Drive as a Residential Collector.   | Low      |
| D70          | Chanticleer Drive Extension                                       | South of Edgemont Drive to Henrici                                 | Extend Chanticleer Drive from Edgemont Drive to  | Low      |

Draft T.M. #11- Planned and Financially Constrained Transportation Systems: August 2012

Table 2: Planned Transportation System

| Project #   | Project Description                            | Project Extent                                | Project Elements  | Priority |
|-------------|--|---|---|----------|
|             |  | Road  | Henrici Road as a Residential Collector.  |          |
| D71         | Coquille Drive Extension                       | Quinalt Drive to Henrici Drive                | Extend Coquille Drive from Quinalt Drive to<br>Henrici Drive as a Residential Collector.  | Low      |
| Driving Sol | utions (Street and Intersection Expansion      | n- see Figure 3)                              |   |          |
| D73         | McLoughlin Boulevard Improvements -<br>Phase 2 | Dunes Drive to Clackamas River<br>Bridge      | Boulevard and gateway improvements, including pedestrian and bicycle facilities. Access management improvements just north of the I-205 southbound ramps.   | High     |
| D74         | McLoughlin Boulevard Improvements -<br>Phase 3 | 10 <sup>th</sup> Street to Main Street        | Widen OR 99E to a five-lane cross-section that includes two travel lanes in each direction and a center two-way left-turn lane and/or a median to improve access management. The project will also improve pedestrian and bicycle facilities.   | High     |
| D75         | I-205 Southbound Interchange<br>Improvements   | OR 99E/I-205 Southbound Ramps                 | Add dual left-turn lanes on the southbound OR 99E approach to the southbound I-205 ramp.  Widen the on-ramp to the ramp meters to accommodate the dual left-turn approach.  | Medium   |
| D76         | I-205 Northbound Interchange<br>Improvements   | OR 99E/I-205 Northbound Ramps                 | Add dual left-turn lanes on the westbound I-205<br>Off-ramp approach to OR 99E. Widen the off-<br>ramp approaching OR 99E to maintain the<br>separated westbound right-turn lane.   | Medium   |
| D77         | OR 213 Safety Improvement                      | Molalla Avenue to Conway Drive                | Widen to five lanes (two travel lanes in each direction, with a center turn lane/median) with bike lanes and sidewalks  | Low      |
| D78         | Anchor Way Safety Improvement                  | 18th Street to Division Street                | Realign Anchor Way to connect with Division<br>Street   | Low      |
| D79         | OR 213/Redland Road Capacity<br>Improvements   | Redland Road to Redland Road<br>undercrossing | Add a third northbound travel lane on OR 213 north of the Redland Road undercrossing.  Extend the third southbound travel on OR 213 south of the Redland Road intersection and merge the third lane before the Redland Road undercrossing.  Add a right-turn lane (southbound OR 213 to | Low      |

Table 2: Planned Transportation System

| Project #   | Project Description                                   | Project Extent                                     | Project Elements   | Priority                        |
|-------------|---|--|--|---------------------------------|
|             |   |  | westbound Redland).  Convert the Redland Road approach to OR 213 to 1 receiving lane, 2 left-turn approach lanes, and 1 right-turn lane. |                                 |
| D83         | Holly Lane Upgrade                                    | Redland Road to Maple Lane Road                    | Improve to Residential Minor Arterial cross-section  | Low                             |
| D84         | Maple Lane Road Upgrade                               | Beavercreek Road to UGB                            | Improve to Residential Minor Arterial cross-section  | Low                             |
| D85         | Loder Road Upgrade                                    | Beavercreek Road to UGB                            | Improve to Industrial Collector cross-section. Install a roundabout at the Beavercreek Road/Loder Road intersection.                     | Medium                          |
| D86         |   | Redland Road to Swan Avenue                        | Improve to Residential Collector cross-section.  | Low                             |
| D87         | Livesay Road Upgrade                                  | Swan Avenue to Holly Lane extension                | Improve to Mixed-Use Collector cross-section.  | Low                             |
| D88         | Donovan Road Upgrade                                  | Holly Lane to UGB                                  | Improve to Mixed-Use Collector cross-section.  | Low                             |
| <b>D</b> 90 | Main Street Upgrade                                   | 15 <sup>th</sup> Street to Agnes Avenue            | Improve to Mixed-Use Collector cross-section   | Medium                          |
| D91         | Redland Road Upgrade                                  | Holcomb Boulevard to Holly Lane                    | Improve to Minor Arterial cross-section, as a constrained street   | Medium                          |
| D93         | Beutel Road Upgrade                                   | South End Road to OR 99E- Beutel<br>Road Extension | Improve to Minor Arterial cross-section, as a constrained street   | Low                             |
| Walking Sol | utions (see Figure 4)                                 |  |  |                                 |
| W1          | Dunes Drive Sidewalk Infill                           | OR 99E to Clackamette Drive                        | Complete sidewalk gaps the south side of the street  | Low                             |
| W2          | M' C. (C'I II I CII                                   | OR 99E to 17 <sup>th</sup> Street                  | Complete sidewalk gaps on west/south side of the street. A shared-use path will be added on east/north side per project S1               | Included<br>with project<br>D90 |
| W3          | Main Street Sidewalk Infill                           | 17 <sup>th</sup> Street to 15 <sup>th</sup> Street | Complete sidewalk gaps the west side of the street   | Included<br>with project<br>D90 |
| W4          | Agnes Avenue Sidewalk Infill                          | Main Street to Washington Drive                    | Complete sidewalk gaps on both sides of the street   | Low                             |
| W6          | Holcomb Boulevard (West of OR 213)<br>Sidewalk Infill | Abernethy Road to OR 213 overcrossing              | Complete sidewalk gaps on both sides of the street   | Medium                          |
| W7          | Redland Road (West of OR 213)<br>Sidewalk Infill      | Abernethy Road to Anchor Way                       | Complete sidewalk gaps on west/south side of the street. A shared-use path will be added on west side                                    | Medium                          |

Table 2: Planned Transportation System

| Project # | Project Description                              | Project Extent                            | Project Elements   | Priority                            |
|-----------|--|---|--|-------------------------------------|
|           |  |   | per project S6   |                                     |
| W8        | Forsythe Road Sidewalk Infill                    | Clackamas River Drive to Harley<br>Avenue | Complete sidewalk gaps on south side of the street.  A shared-use path will be added on north side per project S7  | Low                                 |
| W9        | Clackamas River Drive Sidewalk Infill            | OR 213 to Forsythe Road                   | Complete sidewalk gaps on east side of the street.  A shared-use path will be added on west side per project S8    | Medium                              |
| W10       |  | Forsythe Road to UGB                      | Complete sidewalk gaps on both sides of the street   | Low                                 |
| W14       | Apperson Boulevard Sidewalk Infill               | La Rae Street to Gain Street              | Complete sidewalk gaps on the west side of the street  | Low                                 |
| W15       | Swan Avenue Sidewalk Infill                      | Forsythe Road to Ann Drive                | Complete sidewalk gaps on both sides of the street   | Medium                              |
| W16       | Livesay Road Sidewalk Infill                     | Redland Road to Frank Avenue              | Complete sidewalk gaps on both sides of the street   | Included<br>with project<br>D86/D87 |
| W17       | Redland Road (East of OR 213)<br>Sidewalk Infill | Anchor Way to Livesay Road                | Complete sidewalk gaps on north side of the street.  A shared-use path will be added on south side per project S6  | Included<br>with project<br>D91     |
| W18       |  | Livesay Road to UGB                       | Complete sidewalk gaps on both sides of the street   | Low                                 |
| W19       | Donovan Road Sidewalk Infill                     | Holly Lane to western terminus            | Complete sidewalk gaps on north side of the street.  A shared-use path will be added on south side per project S12 | Low                                 |
| W20       | Morton Road Sidewalk Infill                      | Holly Lane to Swan Extension              | Complete sidewalk gaps on both sides of the street   | Low                                 |
| W21       | Holly Lane Sidewalk Infill                       | Redland Road to Donovan Road              | Complete sidewalk gaps on both sides of the street   | Included<br>with project<br>D83     |
| W22       |  | Donovan Road to Maple Lane Road           | Complete sidewalk gaps on west side of the street.  A shared-use path will be added on east side per project S13   | Included<br>with project<br>D83     |
| W23       | Maple Lane Road Sidewalk Infill                  | Beavercreek Road to UGB                   | Complete sidewalk gaps on both sides of the street   | Included<br>with project<br>D84     |
| W24       | Thayer Road Sidewalk Infill                      | Maple Lane Road to UGB                    | Complete sidewalk gaps on both sides of the street   | Medium                              |
| W25       | Loder Road Sidewalk Infill                       | Beavercreek Road to the Holly Lane        | Complete sidewalk gaps on north side of the street.  | Included                            |

Table 2: Planned Transportation System

| Project # | Project Description                | Project Extent                      | Project Elements                                      | Priority     |
|-----------|------------------------------------|-------------------------------------|---|--------------|
|           |                                    | Extension                           | A shared-use path will be added on south side per     | with project |
|           |                                    |                                     | project S18.  | D85          |
|           |                                    |                                     |   | Included     |
| W26       |                                    | Holly Lane Extension to the UGB     | Complete sidewalk gaps on both sides of the street    | with project |
|           |                                    |                                     |   | D85          |
| W27       | High School Avenue Sidewalk Infill | Meyers Road to Glen Oak Road        | Complete sidewalk gaps on the west side of the street | Medium       |
| W28       | Glen Oak Road Sidewalk Infill      | OR 213 to High School Avenue        | Complete sidewalk gaps on both sides of the street    | Medium       |
| W29       |                                    | Coquille Drive to Augusta Drive     | Complete sidewalk gaps on both sides of the street    | Low          |
| W30       | Chanticleer Drive Sidewalk Infill  | North terminus to south terminus    | Complete sidewalk gaps on both sides of the street    | Low          |
|           |                                    |                                     | 1 01  | Included     |
| W31       | OR 213 Sidewalk Infill             | Molalla Avenue to Conway Drive      | Complete sidewalk gaps on both sides of the street    | with project |
|           |                                    | ·                                   |   | D77          |
| W32       | Bertha Drive Sidewalk Infill       | Claimment Way to Caffney Land       | Complete sidewalk gaps on the east side of the        | Low          |
| W 32      | Bertha Drive Sidewalk Illilli      | Clairmont Way to Gaffney Lane       | street  | LOW          |
| W33       | Gaffney Lane Sidewalk Infill       | Cokeron Drive to Glenview Court     | Complete sidewalk gaps on both sides of the street    | Medium       |
| W36       | Leland Road Sidewalk Infill        | Meyers Road to McCord Road          | Complete sidewalk gaps on both sides of the street    | Medium       |
| W37       | Leiand Road Sidewaik Inini         | McCord Road to UGB                  | Complete sidewalk gaps on both sides of the street    | Low          |
| W38       | Meyers Road Sidewalk Infill        | Leland Road to Frontier Parkway     | Complete sidewalk gaps on both sides of the street    | Medium       |
| W39       | Jessie Avenue Sidewalk Infill      | Leland Road to Frontier Parkway     | Complete sidewalk gaps on both sides of the street    | Low          |
| W40       | Clairmont Way Sidewalk Infill      | Leland Road to Bertha Drive         | Complete sidewalk gaps on both sides of the street    | Medium       |
| W43       | McCord Road Sidewalk Infill        | Sunset Springs Drive to Leland Road | Complete sidewalk gaps on both sides of the street    | Low          |
| W44       | Pease Road Sidewalk Infill         | Leland Road to Tidewater Street     | Complete sidewalk gaps on both sides of the street    | Low          |
| W45       | Central Point Road Sidewalk Infill | McCord Road to Trade Wind Street    | Complete sidewalk gaps on both sides of the street    | Medium       |
| W46       | Central Point Road Sidewalk Infill | Parrish Road to Hazeldell Avenue    | Complete sidewalk gaps on both sides of the street    | Medium       |
| W49       | Parrish Road Sidewalk Infill       | South End Road to eastern terminus  | Complete sidewalk gaps on both sides of the street    | Low          |
| W50       |                                    | Kolar Drive to Central Point Road   | Complete sidewalk gaps on the south side of the       | Т            |
| W 50      |                                    | Rolar Drive to Central Point Road   | street  | Low          |
|           |                                    |                                     |   | Included     |
| W51       | Buetel Road Sidewalk Infill        | South End Road to western terminus  | Complete sidewalk gaps on both sides of the street    | with project |
|           |                                    |                                     |   | D93          |
| W52       | Partlow Road Sidewalk Infill       | South End Road to Central Point     | Complete sidewalk gaps on both sides of the street    | Medium       |
| VV 32     | 1 artiow Road Oldewalk IIIIII      | Road                                | Complete sidewark gaps on both sides of the sidet     | Micaidiii    |

Table 2: Planned Transportation System

| Project #   | Project Description                                 | Project Extent                            | Project Elements   | Priority |
|-------------|---|---|--|----------|
| W53         | Rose Road Sidewalk Infill                           | South End Road to Deer Lane               | Complete sidewalk gaps on both sides of the street   | Low      |
| W55         | Lawton Road Sidewalk Infill                         | South End Road to Netzel Street           | Complete sidewalk gaps on both sides of the street   | Low      |
| W57         | Canemah Road Sidewalk Infill                        | Warner Parrott Road to Telford<br>Road    | Complete sidewalk gaps on both sides of the street   | Medium   |
| W58         | Hood Street Sidewalk Infill                         | Linn Avenue to eastern terminus           | Complete sidewalk gaps on both sides of the street   | Low      |
| W59         | Telford Road Sidewalk Infill                        | Ogden Drive to Holmes Lane                | Complete sidewalk gaps on both sides of the street   | Medium   |
| W60         | AV Davis-Ethel Street Sidewalk Infill               | Holmes Lane to Leonard Street             | Complete sidewalk gaps on both sides of the street   | Medium   |
| W61         | Holmes Lane (west of Bell Court)<br>Sidewalk Infill | Telford Road to Bell Court                | Complete sidewalk gaps on both sides of the street   | Medium   |
| W63         | Charman Avenue Sidewalk Infill                      | Linn Avenue to Electric Avenue            | Complete sidewalk gaps on both sides of the street   | Medium   |
| W66         | Warner Street Sidewalk Infill                       | Prospect Street to Molalla Avenue         | Complete sidewalk gaps on the south side of the street   | Low      |
| W67         | Holmes Lane (east of Bell Court)<br>Sidewalk Infill | Bell Court to Prospect Street             | Complete sidewalk gaps on the north side of the street   | Medium   |
| W68         | Pearl Street Sidewalk Infill                        | Linn Avenue to Eluria Street              | Complete sidewalk gaps on both sides of the street   | Medium   |
| W69         | Center Street Sidewalk Infill                       | Clinton Street to 1st Street              | Complete sidewalk gaps on both sides of the street   | Medium   |
| W71         | 15 <sup>th</sup> Street Sidewalk Infill             | Harrison Street to Jefferson Street       | Complete sidewalk gaps on both sides of the street   | Low      |
| W72         | Anchor Way Sidewalk Infill                          | 18 <sup>th</sup> Street to Redland Road   | Complete sidewalk gaps on east side of the street.  A shared-use path will be added on west side per project S49.  | Low      |
| Biking Solu | tions (see Figure 5)                                |   |  |          |
| B4          | Main Street Bike Lanes                              | Agnes Avenue to I-205<br>undercrossing    | Add a bike lane to the west side of the street. A shared-use path will be added on east/north side per project S1  | Medium   |
| В7          | Agnes Avenue Bike Lanes                             | Main Street to Washington Drive           | Add bike lanes to both sides of the street   | Low      |
| В8          | Abernethy Road Bike Lanes                           | Washington Street to Redland Road         | Add a bike lane to the south side of the street. A shared-use path will be added on the north side per project S2. | Medium   |
| В9          | Holcomb Boulevard (West of OR 213)<br>Bike Lanes    | Abernethy Road to OR 213 overcrossing     | Add bike lanes to both sides of the street   | Medium   |
| B10         | Forsythe Road Bike Lanes                            | Clackamas River Drive to Harley<br>Avenue | Add a bike lane to the south side of the street. A shared-use path will be added on north side per project S7      | Low      |

Table 2: Planned Transportation System

| Project # | Project Description               | Project Extent                                   | Project Elements  | Priority                        |
|-----------|-----------------------------------|--|---|---------------------------------|
| B11       | Clackamas River Drive Bike Lanes  | Forsythe Road to UGB                             | Add bike lanes to both sides of the street  | Low                             |
| B13       | Apperson Boulevard Shared Roadway | Forsythe Road to Holcomb<br>Boulevard            | Add wayfinding and shared lane markings   | Medium                          |
| B14       | Swan Avenue Bike Lanes            | Forsythe Road to Holcomb<br>Boulevard            | Add bike lanes to both sides of the street  | Medium                          |
| B15       | Swan Avenue Shared Roadway        | Holcomb Boulevard to southern terminus           | Add wayfinding and shared lane markings   | Low                             |
| B16       | Livesay Road Bike Lanes           | Redland Road to Frank Avenue                     | Add bike lanes to both sides of the street  | Low                             |
| B17       | Donovan Road Bike Lanes           | Holly Lane to western terminus                   | Add a bike lane to the north side of the street. A shared-use path will be added on south side per project S12  | Low                             |
| B18       | Morton Road Bike Lanes            | Holly Lane to Swan Extension                     | Add bike lanes to both sides of the street  | Low                             |
| B19       | Halla Laga Dila Laga              | Redland Road to Donovan Road                     | Add bike lanes to both sides of the street  | Included<br>with project<br>D83 |
| B20       | Holly Lane Bike Lanes             | Donovan Road to Maple Lane Road                  | Add a bike lane to the west side of the street. A shared-use path will be added on east side per project S13    | Included<br>with project<br>D83 |
| B21       | Maple Lane Bike Lanes             | Walnut Grove Way to UGB                          | Add bike lanes to both sides of the street  | Included<br>with project<br>D84 |
| B22       | Thayer Road Bike Lanes            | Elder Road to UGB                                | Add bike lanes to both sides of the street  | Low                             |
| B23       | I I D ID' I                       | Beavercreek Road and the Holly<br>Lane Extension | Add a bike lane to the north side of the street. A shared-use path will be added on south side per project S18. | Included<br>with project<br>D85 |
| B24       | Loder Road Bike Lanes             | Holly Lane Extension to the UGB                  | Add bike lanes to both sides of the street  | Included<br>with project<br>D85 |
| B25       | High School Avenue Shared Roadway | Meyers Road to Glen Oak Road                     | Add wayfinding and shared lane markings   | Low                             |
| B26       | Glen Oak Road Bike Lanes          | Coquille Drive to Augusta Drive                  | Add bike lanes to both sides of the street  | Low                             |
| B27       | Coquille Drive Shared Roadway     | Glen Oak Road to Turtle Bay Drive                | Add wayfinding and shared lane markings   | Low                             |
| B28       | Chanticleer Drive Shared Roadway  | North terminus to south terminus                 | Add wayfinding and shared lane markings   | Low                             |
| B30       | Bertha Drive Bike Lanes           | Clairmont Way to Gaffney Lane                    | Add bike lanes to both sides of the street  | Low                             |

Table 2: Planned Transportation System

| Project # | Project Description                            | Project Extent                                    | Project Elements   | Priority                        |
|-----------|--|---|--|---------------------------------|
| B31       | Gaffney Lane Bike Lanes                        | Cokeron Drive to Glenview Court                   | Add bike lanes to both sides of the street   | Low                             |
| B34       | Leland Road Bike Lanes                         | Kalal Court to UGB                                | Add bike lanes to both sides of the street   | Low                             |
| B36       | Jessie Avenue Bike Lanes                       | Leland Road to Jessie Court                       | Add bike lanes to both sides of the street   | Low                             |
| B38       | McCord Road Bike Lanes                         | Central Point Road to Leland Road                 | Add bike lanes to both sides of the street   | Medium                          |
| B39       | Pease Road Shared Roadway                      | Leland Road to Tidewater Street                   | Add wayfinding and shared lane markings  | Low                             |
| B40       | Central Point Road Bike Lanes                  | Partlow Road to Swallowtail Place                 | Complete bike lane gaps on both sides of the street  | Medium                          |
| B41       | Central Point Road blke Lanes                  | Parrish Road to Skellenger Way                    | Add bike lanes to both sides of the street   | Medium                          |
| B43       | Parrish Road Shared Roadway                    | South End Road to eastern terminus                | Add wayfinding and shared lane markings  | Low                             |
| B44       | Parrish Road Bike Lanes                        | Kolar Drive to Central Point Road                 | Add bike lanes to both sides of the street   | Low                             |
| B45       | Buetel Road Bike Lanes                         | South End Road to western terminus                | Add bike lanes to both sides of the street   | Included<br>with project<br>D93 |
| B46       | Partlow Road Bike Lanes                        | South End Road to Central Point<br>Road           | Complete bike lane gaps on both sides of the street  | Medium                          |
| B47       | Rose Road Bike Lanes                           | South End Road to Deer Lane                       | Add bike lanes to both sides of the street   | Low                             |
| B48       | Lawton Road Shared Roadway                     | South End Road to Netzel Street                   | Add wayfinding and shared lane markings  | Low                             |
| B49       | Canemah Road Shared Roadway                    | Warner Parrott Road to Telford<br>Road            | Add wayfinding and shared lane markings  | Low                             |
| B50       | Telford Road Shared Roadway                    | Charman Avenue to Holmes Lane                     | Add wayfinding and shared lane markings  | Medium                          |
| B51       | AV Davis-Ethel Street Shared Roadway           | Holmes Lane to Leonard Street                     | Add wayfinding and shared lane markings  | Medium                          |
| B52       | Holmes Lane Shared Roadway                     | Telford Road to Linn Avenue                       | Add wayfinding and shared lane markings  | Low                             |
| B54       | Brighton Avenue-Creed Street Shared<br>Roadway | Charman Avenue to Waterboard<br>Park Road         | Add wayfinding and shared lane markings  | Medium                          |
| B56       | Pearl Street Shared Roadway                    | Molalla Avenue to Eluria Street                   | Add wayfinding and shared lane markings  | Medium                          |
| B57       | Center Street Shared Roadway                   | Clinton Street to 5th Street                      | Add wayfinding and shared lane markings  | Medium                          |
| B58       | South 2 <sup>nd</sup> Street Shared Roadway    | High Street to Tumwater Drive                     | Add wayfinding and shared lane markings  | Medium                          |
| B59       | 5 <sup>th</sup> Street Shared Roadway          | Washington Street to Center Street                | Add wayfinding and shared lane markings  | Medium                          |
| B61       | Taylor Street Shared Roadway                   | 7 <sup>th</sup> Street to 12 <sup>th</sup> Street | Add wayfinding and shared lane markings  | Medium                          |
| B62       | 12th Street Shared Roadway                     | Taylor Street to Washington Street                | Add wayfinding and shared lane markings  | Medium                          |
| B63       | 15th Street Shared Roadway                     | Division Street to Washington Street              | Add wayfinding and shared lane markings  | Low                             |
| B64       | Anchor Way Bike Lanes                          | 18 <sup>th</sup> Street to Redland Road           | Add a bike lane to the east side of the street. A shared-use path will be added on west side per | Medium                          |

Table 2: Planned Transportation System

| Shared-Use Path Solutions (see Figure 6)  Shared-Use Path Solutions (see Figure 6)  Salar Main Street Shared-Use Path  Clackamette Park to 17th Street  Add a shared-use path on the north/east side of the street from Main Street to Redland Road, Add a railroad gate at the 17th Street all crossing, Will require permission for an art grade pedestrian and bicycle rail crossing.  Abbernethy Road Shared-Use Path  Salar Abernethy Road-Clackamas River Drive Shared-Use Path  Abernethy Road-Clackamas River Drive Shared-Use Path  Abernethy Road Shared-Use Path  Abernethy Road Shared-Use Path  Abernethy Road Shared-Use Path  Clackamas River Drive Shared-Use Path  Abernethy Road Shared-Use Path  Clackamas River Drive to UGB  Salar Clackamas River Drive Shared-Use Path  Abernethy Road to Livesay Road  Clackamas River Drive Shared-Use Path  Abernethy Road to Livesay Road  Add a shared-use path on the west/south side of the street side of the Street  Add a shared-use path on the cast side of the Street Abernethy-shington extrension and on the cast side of the Washington Street realignment to Clackamas River Drive  Shared-Use Path  Clackamas River Drive to UGB  Add a shared-use path on the west/south side of the Street  Add a shared-use path on the west/south side of the Street  Add a shared-use path on the morth side of the Street  Add a shared-use path on the morth side of the Street  Salar Road Shared-Use Path  Bonn Street to Livesay Road  Add a shared-use path on the west side of the Street  Add a shared-use path on the west side of the Street  Bonn Street to Livesay Road  Add a shared-use path on the morth side of the Street  Bonn Street to Livesay Road  Add a shared-use path on the morth side of the Street  Bonn Street to Livesay Road  Add a shared-use path on the morth side of the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Add a shared-use path on the morth side of the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Add a shared-use path bong the north side of the gully from the Red | Project #  | Project Description                   | Project Extent                             | Project Elements  | Priority     |
|--|------------|---------------------------------------|--|---|--------------|
| S1 Main Street Shared-Use Path Clackamette Park to 17th Street Medium the street Stared of the street Medium the street Stared Shared-Use Path Nain Street to Redland Road Shared-Use Path Street to Redland Road Path Path Point Street to Redland Road Path Path Point Path Point Path Path Point Path Path Point Path Point Path Path Point Path Path Point Path Path Path Path Path Path Path Pat  |            |                                       |  | project S49.  |              |
| Abernethy Road-Clackamas River Drive Shared-Use Path  Abernethy Road Shared-Use Path  Abernethy Road-Clackamas River Drive Shared-Use Path  Abernethy Road Shared-Use Path  Abernethy Road Shared-Use Path  Abernethy Road Shared-Use Path  Abernethy Road Clackamas River Drive Shared-Use Path  Abernethy Road Shared-Use Path  Abernethy Road to Livesay Road  Clackamas River Drive Shared-Use Path  Abernethy Road Shared-Use Path  Abernethy Road to Livesay Road  Clackamas River Drive Shared-Use Path  Abernethy Road Shared-Use Path  Abernethy Road to Livesay Road  Add a shared-use path on the west side of the Abernethy-Washington extension and on the east side of the Abernethy-Washington extension and on the cast side of the Street  Add a shared-use path on the west side of the Abernethy-Washington extension and on the cast side of the Abernethy-Washington extension and on the cast side of the Street  Add a shared-use path on the west side of the Abernethy-Washington extension and on the cast side of the Washington extension and on the cast side of the Washington extension and on the cast side of the Street  Add a shared-use path on the west/south side of the Street  Add a shared-use path on the west side of the Street  Add a shared-use path on the west side of the Street  Add a shared-use path on the west side of the Street  Add a shared-use path on the west side of the Street  Add a shared-use path on the west side of the Street  Add a shared-use path on the west side of the Street  Add a shared-use path on the west side of the Street  Add a shared-use path on the west side of the Street  Add a shared-use path on the orth side of the Street  Add a shared-use path on the west side of the Street  Add a shared-use path on the west side of the Street  Add a shared-use path on the west side of the Street  Add a shared-use path along the north side of the gully from the Redland-Livesay to Holcomb/Oak Tree intersection  Add a shared-use path along the north side of the gully from the Redland-Livesay to Holcomb/Oak Tree interse | Shared-Use | Path Solutions (see Figure 6)         |  |   |              |
| S2 Abernethy Road Shared-Use Path  S3 OR 99E Shared-Use Path  10th Street to Railroad Avenue  S4 Abernethy Creek Park Shared-Use Path  Abernethy Road-Clackamas River Drive Shared-Use Path  S5 Redland Road Shared-Use Path  S6 Redland Road Shared-Use Path  S7 Forsythe Road Shared-Use Path  S8 Clackamas River Drive Shared-Use Path  S9 Swan-Livesay Shared-Use Path  S9 Redland-Holcomb Shared-Use Path  S10 Redland-Holcomb Shared-Use Path  Holcomb- Forsythe Road Shared-Use Path  S10 Redland-Holcomb Shared-Use Path  Holcomb- Forsythe Road Shared-Use Path  Redland Road Shared-Use Path  S10 Redland-Holcomb Shared-Use Path  Holcomb- Forsythe Road Shared-Use Path  S10 Redland-Holcomb Shared-Use Path  S10 Redland-Holcomb Shared-Use Path  Holcomb- Forsythe Road Shared-Use Path  S10 Redland-Holcomb Shared-Use Path connecting the Redland-Holcomb Shared-Use Path to the Forsythe Road  S10 Shared-Use Path to the Forsythe Road                             | S1         | Main Street Shared-Use Path           | Clackamette Park to 17th Street            | *   | Medium       |
| Abernethy Creek Park Shared-Use Path  Abernethy Road-Clackamas River Drive Shared-Use Path  Abernethy Road Clackamas River Drive Shared-Use Path  Abernethy Road to Clackamas River Drive  Abernethy-Washington extension and on the east side of the Abernethy-Washington Street realignment to Clackamas River Drive  Add a shared-use path on the east side of the Abernethy-Washington Street realignment to Clackamas River Drive  Add a shared-use path on the east side of the Abernethy-Washington Street realignment to Clackamas River Drive  Add a shared-use path on the west/south side of the street  Add a shared-use path on the north side of the street  Add a shared-use path on the north side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path between Swan and Livesay, with a bridge over the gully  Add a shared-use path between Swan and Livesay, with a bridge over the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Add a shared-use path along the north side of the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Add a shared-use path connecting the Redland-Holcomb Shared-Use Path  Boulevard  Add a shared-use path connecting the Redland-Holcomb Shared-Use Path to the Forsythe Road Shared-Use Path Shared-Use Path Shared-Use Path Shared- | S2         | Abernethy Road Shared-Use Path        | Main Street to Redland Road                | street from Main Street to Redland Road. Add a railroad gate at the 17 <sup>th</sup> Street rail crossing. Will require permission for an at-grade pedestrian and | Medium       |
| Abernethy Creek Park Shared-Use Path  Abernethy Road-Clackamas River Drive Shared-Use Path  Abernethy Road to Clackamas River Drive  Abernethy Road to Clackamas River Drive  Abernethy Road to Clackamas River Drive  Add a shared-use path on the east side of the Abernethy-Washington extension and on the east side of the Washington extension and on the east side of the Washington extension and on the east side of the Washington extension and on the east side of the Washington extension and on the east side of the Washington extension and on the east side of the Washington extension and on the east side of the Washington Street realignment to Clackamas River Drive  Add a shared-use path on the west/south side of the street  Add a shared-use path on the north side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path between Swan and Livesay, with a bridge over the gully  Add a shared-use path between Swan and Livesay, with a bridge over the gully  Add a shared-use path along the north side of the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Add a shared-use path connecting the Redland- Holcomb Shared-Use Path to the Forsythe Road Shared-Use Path to the Forsythe Road Shared-Use Path  | S3         | OR 99E Shared-Use Path                | 10 <sup>th</sup> Street to Railroad Avenue | 1   | with project |
| Abernethy Road-Clackamas River Drive Shared-Use Path Drive Abernethy Road to Clackamas River Drive Abernethy-Washington extension and on the east side of the Washington Street realignment to Clackamas River Drive Add a shared-use path on the west/south side of the street Add a shared-use path on the north side of the street  Add a shared-use path on the north side of the street  Add a shared-use path on the north side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path between Swan and Livesay, with a bridge over the gully  Add a shared-use path along the north side of the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Add a shared-use path connecting the Redland-Holcomb Shared-Use Path  Holcomb Boulevard to Forsythe Road  Shared-Use Path to the Forsythe Road  Shared-Use Path to the Forsythe Road  Shared-Use Path to the Forsythe Road   | S4         | Abernethy Creek Park Shared-Use Path  | John Adams Street to 15th Street           | 1   | Low          |
| Forsythe Road Shared-Use Path  Clackamas River Drive to UGB  Clackamas River Drive to UGB  Clackamas River Drive Shared-Use Path  Clackamas River Drive to UGB  Clackamas River Drive Shared-Use Path  OR 213 to Forsythe Road  Add a shared-use path on the north side of the street  Add a shared-use path on the west side of the street  Add a shared-use path on the west side of the street  Add a shared-use path between Swan and Livesay, with a bridge over the gully  Add a shared-use path along the north side of the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Holcomb- Forsythe Road Shared-Use Path  Boulevard  Holcomb Boulevard to Forsythe Road Shared-Use Path to the Forsythe Road Shared-Use Path  Clackamas River Drive to UGB  Add a shared-use path on the north side of the street  Add a shared-use path along the north side of the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Add a shared-use path connecting the Redland-Holcomb Shared-Use Path to the Forsythe Road Shared-Use Path to the Forsythe Road Shared-Use Path  Clackamas River Drive to UGB  Add a shared-use path on the north side of the street  Add a shared-use path connecting the Redland-Holcomb Shared-Use Path to the Forsythe Road Shared-Use Path   | S5         | 1                                     | ,  | Abernethy-Washington extension and on the east side of the Washington Street realignment to   | Medium       |
| S8 Clackamas River Drive Shared-Use Path  S9 Swan-Livesay Shared-Use Path  Redland-Holcomb Shared-Use Path  Bonn Street to Livesay Road  Redland-Holcomb Shared-Use Path  Bonn Street to Livesay Road  Redland Road to Holcomb Boulevard  Bonn Street to Livesay Road  Redland Road to Holcomb Boulevard  Bonn Street to Livesay Road  Add a shared-use path between Swan and Livesay, with a bridge over the gully  Add a shared-use path along the north side of the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Holcomb-Forsythe Road Shared-Use Path  Bonn Street to Livesay Road  Redland Road to Holcomb Boulevard  Add a shared-use path along the north side of the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Add a shared-use path connecting the Redland-Holcomb Shared-Use Path to the Forsythe Road Shared-Use Path to the Forsythe Road Shared-Use Path   | S6         | Redland Road Shared-Use Path          | Abernethy Road to Livesay Road             | _   | Medium       |
| So Swan-Livesay Shared-Use Path Bonn Street to Livesay Road Add a shared-use path between Swan and Livesay, with a bridge over the gully Add a shared-use path along the north side of the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Holcomb- Forsythe Road Shared-Use Path Road Shared-Use Path Connecting the Redland-Holcomb Shared-Use Path to the Forsythe Road Shared-Use Path to the Forsythe Road Shared-Use Path   | S7         | Forsythe Road Shared-Use Path         | Clackamas River Drive to UGB               | -   | Low          |
| S10 Redland-Holcomb Shared-Use Path  Redland Road to Holcomb Boulevard  Holcomb- Forsythe Road Shared-Use Path  Redland Road to Holcomb Boulevard  Holcomb Boulevard to Forsythe Road  Holcomb Shared-Use Path  Redland Road to Holcomb Boulevard  Add a shared-use path along the north side of the gully from the Redland/Livesay to Holcomb/Oak Tree intersection  Add a shared-use path connecting the Redland-Holcomb Shared-Use Path to the Forsythe Road Shared-Use Path  Low   | S8         | Clackamas River Drive Shared-Use Path | OR 213 to Forsythe Road                    | 1   | Medium       |
| S10 Redland-Holcomb Shared-Use Path Boulevard  Redland Road to Holcomb Boulevard  Green intersection  Holcomb Forsythe Road Shared-Use Path  Holcomb Boulevard to Forsythe Road  Holcomb Boulevard to Forsythe Road  Holcomb Shared-Use Path to the Forsythe Road Shared-Use Path  Low   | S9         | Swan-Livesay Shared-Use Path          | Bonn Street to Livesay Road                |   | Low          |
| S11 Path Polcomb Forsythe Road Shared-Use Path Holcomb Boulevard to Forsythe Road Shared-Use Path Holcomb Shared-Use Path Low Shared-Use Path  | S10        | Redland-Holcomb Shared-Use Path       |  | gully from the Redland/Livesay to Holcomb/Oak   | Medium       |
| S12 Redland-Holly Shared-Use Path Redland Road to Holly Lane Add a shared-use path along the east side of the High   | S11        | ·                                     | ,  | Holcomb Shared-Use Path to the Forsythe Road  | Low          |
|  | S12        | Redland-Holly Shared-Use Path         | Redland Road to Holly Lane                 | Add a shared-use path along the east side of the  | High         |

Table 2: Planned Transportation System

| Project # | Project Description                      | Project Extent                                  | Project Elements   | Priority |
|-----------|--|---|--|----------|
|           |  |   | gully between the Redland/Livesay and<br>Holly/Donovan intersection. Will require a bridge<br>over the gully south of Redland Road   |          |
| S13       | Holly Lane Shared-Use Path               | Donovan Road to Maple Lane Road                 | Add a shared-use path on the east side of the street   | High     |
| S16       | Loder-Timbersky Shared-Use Path          | Loder Road to Timbersky Way                     | Add a shared-use path on the east side of the Holly Lane extension between Loder and Timbersky.  | Medium   |
| S17       | Clairmont Drive Shared-Use Path          | Beavercreek Road to UGB                         | Add a shared-use path on the north side of the<br>Clairmont Drive extension between Beavercreek<br>Road and the UGB.   | Medium   |
| S19       | Meyers Road Extension Shared-Use<br>Path | Holly Lane Extension to UGB                     | Add a shared-use path on the north side of the Meyers Road extension between the Holly Lane extension and the UGB.   | Medium   |
| S20       | Timbersky Extension Shared-Use Path      | Pebble Beach Drive to Meadow Lane<br>Extension  | Add a shared-use path on the east side of Beavercreek Road and the north side of the Timbersky Way extension between Pebble Beach Drive and the Meadow Lane Extension Shared-use Path  | Medium   |
| S21       | Meadow Lane Extension Shared-use<br>Path | Old Acres Lane to UGB (north of<br>Loder Road)  | Add a shared-use path on the east side of the Meadow Lane extension from Meadow Lane to the Glen Oak Road extension. Between the Glen Oak Road extension and the UGB (north of Loder Road) the shared-use path will run along the west side of the ridge | Low      |
| S22       | Meyers-Beavercreek Shared-Use Path       | Morrie Drive to Beavercreek Road                | Add a shared-use path under the power lines<br>between Morrie Drive and Beavercreek Road. Will<br>require a portion of the parking lot between Molalla<br>and Beavercreek  | High     |
| S23       | Meyers Road Shared-Use Path              | Meyers-Beavercreek Shared-Use Path<br>to OR 213 | Add a shared-use path on the south side of Meyers<br>Road between the Meyers-Beavercreek Shared-Use<br>Path and the Clackamas Community College<br>Shared-use Path   | Medium   |
| S25       | Falcon-Pompei Shared-Use Path            | Falcon Drive to Naples Street                   | Add a shared-use path between Falcon Drive and<br>Naples Street  | Medium   |
| S26       | Leland Road-Wesley Lynn Park Shared-     | Leland Road to Wesley Lynn Park                 | Add a shared-use path between Leland Road and  | Medium   |

Table 2: Planned Transportation System

| Project # | Project Description                    | Project Extent                       | Project Elements  | Priority |
|-----------|--|--------------------------------------|---|----------|
|           | Use Path                               |                                      | the Wesley Lynn Park Shared-Use Path  |          |
| S27       | Hillendale Park-Leonard Street Shared- | Hillendale Park Shared-Use Path to   | Add a shared-use path along the western boundary  | High     |
| 527       | Use Path                               | Leonard Street                       | of the Clackamas County Red Soils Campus  | riigii   |
|           |  |                                      | Add a shared-use path along the ridge connecting  |          |
| S28       | Beavercreek-Hilltop Shared-Use Path    | Beavercreek Road to Fox Lane         | the Meyers-Beavercreek Shared-Use Path to Hilltop   | Medium   |
|           |  |                                      | Avenue  |          |
|           |  |                                      | Add a shared-use path between Fremont Street and  |          |
| S29       | Fremont-Hiefield Shared-Use Path       | Fremont Street to Hiefield Court     | the Hillendale Park-Leonard Street Shared-Use   | Low      |
|           |  |                                      | Path  |          |
| S30       | Orchard Grove-Hazelnut Shared-Use      | Orchard Grove Drive to Hazelnut      | Add a shared-use path between Orchard Grove   | Medium   |
|           | Path                                   | Court                                | Drive and Hazelnut Court  |          |
| S31       | South End-Deer Lane Shared-Use Path    | Deer Lane to Filbert Drive           | Add a shared-use path between the Deer Lane   | Medium   |
|           |  |                                      | extension and Filbert Drive   |          |
| S32       | Deer Lane Extension Shared-Use Path    | Buetel Road to Deer Lane             | Add a shared-use path on the west side of the Deer  | Medium   |
|           |  |                                      | Lane extension  |          |
| 622       | Buetel-Kolar Shared-Use Path           |                                      | Add a shared-use path on the west/south side of   | т.       |
| S33       |  | Buetel Road to Kolar Drive           | the Deer Lane extension between Buetel Road and<br>Kolar Drive                                    | Low      |
|           |  |                                      | Add a shared-use path on the east/north side of   |          |
| S34       | OR 99E-Buetel Shared-Use Path          | OR 99E to Buetel Road                | the OR 99E-Buetel Road extension  | Medium   |
|           | Canemah-Buetel Road Extension          | 5th Avenue to OR 99E-Buetel Road     |   |          |
| S35       | Shared-Use Path                        | Extension                            | Add a shared-use path connecting Canemah to the OR 99E-Buetel Road Extension Multi-Use Path       | Medium   |
|           | Shared-Ose Path                        | Extension                            |   |          |
| S37       | OR 99E (south of Railroad Avenue)      | Railroad Avenue to UGB               | Add a shared-use path along the north side of the street. Rehabilitate existing boardwalk between | Medium   |
| 337       | Shared-Use Path                        | Kalifoad Avenue to UGB               | South 2 <sup>nd</sup> Street and Hedges Street  | Medium   |
|           |  |                                      | Add a shared-use path from Singer Creek Park to   |          |
| S38       | Singer Creek Park Shared-Use Path      | Singer Creek Park to Electric Avenue | Electric Avenue   | Medium   |
|           |  |                                      | Add a shared-use path from Electric Avenue to   |          |
| S39       | Electric-East Shared-Use Path          | Electric Avenue to East Street       | East Street   | High     |
|           |  |                                      | Add a shared-use path from Hood Street to Warner  |          |
| S40       | Hood-Warner Shared-Use Path            | Hood Street to Warner Street         | Street  | Medium   |
|           |  |                                      | Add a shared-use path on the western edge of the  |          |
| S41       | Beavercreek-Laurel Shared-Use Path     | Beavercreek Road to Laurel Lane      | cemetery, from Beavercreek Road to Laurel Lane  | Medium   |
|           |  |                                      | confecció, from Deaverereck Road to Laurer Laire  |          |

Table 2: Planned Transportation System

| Project #    | Project Description                             | Project Extent  | Project Elements   | Priority |
|--------------|---|---|--|----------|
| S42          | Fox-Hillcrest Shared-Use Path                   | Fox Lane to Hillcrest Street  | Add a shared-use path from Fox Lane to the<br>Mountainview Cemetery  | Medium   |
| S43          | Magnolia-Eluria Shared-Use Path                 | Magnolia Street to Eluria Street  | Add a shared-use path between Magnolia Street<br>and Eluria Street   | Medium   |
| S44          | End of the Oregon Trail Shared-Use<br>Path      | Abernethy Road to east of the<br>Abernethy-Washington Street<br>extension | Add a shared-use path  | Low      |
| S45          | 4 <sup>th</sup> Street Shared-Use Path          | West of Jackson Street to east of<br>Monroe Street                        | Add a shared-use path  | Medium   |
| S46          | John Adams Shared-Use Path                      | 10th Street to west of 11th Street  | Add a shared-use path  | Medium   |
| S47          | Barclay Park Shared-Use Path                    | Jefferson Street to John Adams Street                                     | Add a shared-use path through Barclay Park   | Medium   |
| S48          | Atkinson Park Shared-Use Path                   | 17 <sup>th</sup> Street to 18 <sup>th</sup> Street                        | Add a shared-use path  | Low      |
| S49          | Anchor Way Shared-Use Path                      | 18th Street to Redland Road   | Add a shared-use path on the west side of the street   | Low      |
| S50          | King Elementary School Shared-Use<br>Path       | South End Road to Woodfield Court   | Add a shared-use path along the northern<br>boundary of King Elementary School between<br>Amanda Court and Woodfield Court                                       | Medium   |
| S51          | Chanticleer-Coquille Shared-Use Path            | Chanticleer Drive to Coquille Drive                                       | Add a shared-use path between Chanticleer Drive and Coquille Drive   | Medium   |
| S52          | Linn Avenue Shared-Use Path                     | Electric Avenue to Pearl Street   | Add a shared-use path between Electric Avenue<br>and Pearl Street  | Medium   |
| Street Cross | ing Solutions (see Figure 6)                    |   |  |          |
| C1           | Clackamette Drive Crossing                      | Clackamette Park overflow lot to the Clackamette Park entrance            | Install crosswalk and pedestrian activated flasher on<br>Clackamette Drive   | Medium   |
| C2           | Main Street Crossing                            | I-205 Shared Use Path to south of<br>Main Street                          | Relocate the existing crosswalk on Main Street approximately 175 feet southeast to align with the I-205 Shared Use Path. Install a pedestrian activated flasher. | Low      |
| C3           | Holcomb/Front Family Friendly Route<br>Crossing | Holcomb Boulevard/Front Avenue intersection                               | Install crosswalk and pedestrian activated flasher on<br>Holcomb Boulevard   | Low      |
| C4           | Holcomb/Swan Crossing                           | Holcomb Boulevard/Swan Avenue intersection                                | Install crosswalk and pedestrian activated flasher on<br>Holcomb Boulevard   | Low      |
| C5           | Holcomb Boulevard Shared-Use Path               | Holcomb Boulevard/Oak Tree  | Install crosswalk and pedestrian activated flasher on  | Low      |

Table 2: Planned Transportation System

| Project # | Project Description  | Project Extent  | Project Elements   | Priority |
|-----------|--|---|--|----------|
|           | Crossing   | Terrace intersection  | Holcomb Boulevard  |          |
| C6        | Holcomb/Winston Crossing   | Holcomb Boulevard/ Winston Drive intersection   | Install crosswalk and pedestrian activated flasher on<br>Holcomb Boulevard                           | Low      |
| C7        | Redland Road Shared-Use Path<br>Crossing                               | Redland Road/Livesay Road intersection  | Install crosswalk and pedestrian activated flasher on Redland Road                                   | Medium   |
| C8        | Holly Lane Shared-Use Path Crossing                                    | Holly Lane/Donovan Road intersection  | Install crosswalk and pedestrian activated flasher on<br>Holly Lane                                  | Low      |
| C9        | Maple Lane Road Shared-Use Path<br>Crossing                            | Maple Lane Road/Holly Lane<br>intersection  | Install crosswalk and pedestrian activated flasher on<br>Maple Lane Road                             | Medium   |
| C10       | Thayer Road Shared-Use Path Crossing                                   | Thayer Road/Holly-Thayer Shared-<br>Use Path intersection                             | Install crosswalk and curb extensions on Thayer<br>Road  | Low      |
| C12       | Beavercreek Road/Pebble Beach Drive<br>Shared-Use Path Crossing        | Beavercreek Road/ Pebble Beach<br>Drive intersection                                  | Install crosswalk and pedestrian activated flasher on<br>Beavercreek Road                            | Low      |
| C13       | Meyers Road Extension/Loder Road<br>Extension Shared-Use Path Crossing | Meyers Road Extension/Loder Road Extension intersection                               | Install crosswalk and pedestrian activated flasher on Meyers Road                                    | High     |
| C14       | Glen Oak Road Shared-Use Path<br>Crossing                              | Glen Oak Road/Loder Road<br>Extension intersection                                    | Install crosswalk and curb extensions on Glen Oak<br>Road  | Low      |
| C15       | Meyers Road Shared-Use Path Crossing                                   | Meyers Road/Moccasin Way intersection   | Install crosswalk and pedestrian activated flasher on Meyers Road                                    | Medium   |
| C16       | Clairmont Way Family Friendly Route<br>Crossing                        | Clairmont Way/Eastborne Drive intersection  | Install pedestrian activated flasher at the existing crosswalk on Clairmont Way near Eastborne Drive | Medium   |
| C17       | Leland Road Family Friendly Route<br>Crossing                          | Leland Road/Reddaway Avenue intersection  | Install pedestrian activated flasher at the existing crosswalk on Leland Road at Reddaway Avenue     | Medium   |
| C18       | Meyers Road Family Friendly Route<br>Crossing                          | Leland Road/Hiefield Court<br>intersection  | Install crosswalk and pedestrian activated flasher on Leland Road                                    | Low      |
| C19       | Warner Milne Road Shared-Use Path<br>Crossing                          | Warner Milne Road/ Hillendale Park-<br>Leonard Street Shared-Use Path<br>intersection | Install crosswalk and pedestrian activated flasher on<br>Warner Milne Road                           | High     |
| C20       | Hampton Drive Family Friendly Route<br>Crossing                        | Central Point Road/Hampton Drive intersection   | Install crosswalk and pedestrian activated flasher on<br>Central Point Road                          | Medium   |
| C21       | Hazelnut Court Family Friendly Route<br>Crossing                       | Central Point Road/ Hazelnut Court intersection                                       | Install crosswalk and curb extensions on Central Point Road  | Medium   |
| C22       | Deer Lane Extension Shared-Use Path                                    | South End Road/Deer Lane  | Install crosswalk and pedestrian activated flasher on  | Low      |

Table 2: Planned Transportation System

| Project #   | Project Description   | Project Extent   | Project Elements  | Priority |  |  |  |
|-------------|---|--|---|----------|--|--|--|
|             | Crossing  | Extension intersection                                 | South End Road  |          |  |  |  |
| C23         | Buetel Road/Deer Lane Extension<br>Shared-Use Path Crossing | Buetel Road/Deer Lane Extension intersection           | Install crosswalk and pedestrian activated flasher on Buetel Road   | Medium   |  |  |  |
| C24         | Filbert Drive Family Friendly Route<br>Crossing             | South End Road/Filbert Drive intersection              | Install crosswalk and pedestrian activated flasher on South End Road                                      | High     |  |  |  |
| C25         | Warner Parrot/Boynton Family Friendly<br>Route Crossing     | Warner Parrot Road/Boynton Street intersection         | Install crosswalk and pedestrian activated flasher on<br>Warner Parrot Road                               | High     |  |  |  |
| C26         | South End/Amanda Family Friendly Route Crossing             | South End Road/Amanda Court intersection               | Install pedestrian activated flasher at the existing crosswalk on South End Road at Amanda Court          | High     |  |  |  |
| C27         | OR 99E/Buetel Extension Shared-Use<br>Path Crossing         | OR 99E/Buetel Road Extension intersection              | Install crosswalk and pedestrian activated flasher on OR 99E  | Low      |  |  |  |
| C28         | AV Davis Road Crossing                                      | Linn Avenue/AV Davis Road intersection                 | Install a pedestrian activated flasher at the existing crosswalk on Linn Avenue at AV Davis Road          | Medium   |  |  |  |
| C29         | Holmes/Leonard Family Friendly Route<br>Crossing            | Holmes Lane/Leonard Street intersection                | Install crosswalk and pedestrian activated flasher on<br>Holmes Lane                                      | High     |  |  |  |
| C30         | Barclay Hills Drive Crossing                                | Molalla Avenue/Barclay Hills Drive intersection        | Install a pedestrian activated flasher at the existing crosswalk on Molalla Avenue at Barclay Hills Drive | Low      |  |  |  |
| C31         | Park Drive Crossing   | Linn Avenue/Park Drive intersection                    | Install a pedestrian activated flasher at the existing crosswalk on Linn Avenue at Park Drive             | Medium   |  |  |  |
| C32         | Electric Avenue Family Friendly Route<br>Crossing           | Linn Avenue/Electric Avenue                            | Install crosswalk and pedestrian activated flasher on Linn Avenue   | Medium   |  |  |  |
| C33         | JQ Adams/5 <sup>th</sup> Family Friendly Route<br>Crossing  | 5 <sup>th</sup> Street/JQ Adams Street<br>intersection | Install crosswalk and pedestrian activated flasher on 5th Street  | Low      |  |  |  |
| C34         | Jackson/7 <sup>h</sup> Family Friendly Route<br>Crossing    | 7th Street/Jackson Street intersection                 | Install crosswalk and pedestrian activated flasher on 7th Street  | Medium   |  |  |  |
| C36         | Jerome Street Crossing                                      | OR 99E/Jerome Street                                   | Install crosswalk and pedestrian activated flasher on OR 99E in Canemah                                   | High     |  |  |  |
| Family-Frie | Family-Friendly Routes (see Figure 4 or 5)                  |  |   |          |  |  |  |
| FF1         | John Adams Family Friendly Route                            | Abernethy Road to Abernethy Creek<br>Park              | Add sidewalks on both sides of the street. Add wayfinding and shared lane markings                        | Low      |  |  |  |
| FF2         | Front Avenue Family Friendly Route                          | Forsythe Road to Holcomb<br>Boulevard                  | Add sidewalks on the east side of the street. Add wayfinding, traffic calming and shared lane markings    | Medium   |  |  |  |

Table 2: Planned Transportation System

| Project # | Project Description   | Project Extent  | Project Elements  | Priority |
|-----------|---|---|---|----------|
| FF3       | Cleveland Street Family Friendly Route                              | Apperson Boulevard to Swan Avenue                                 | Add sidewalks on both sides of the street. Add wayfinding and shared lane markings  | Medium   |
| FF4       | Jacobs-Beemer Family Friendly Route                                 | Holcomb Boulevard to Redland-<br>Holcomb Shared-Use Path          | Add sidewalks on both sides of the street. Add wayfinding and shared lane markings  | Low      |
| FF5       | Glen Oak-Chanticleer Drive Family<br>Friendly Route                 | Glen Oak Road to Chanticleer Drive                                | Add wayfinding and shared lane markings. Includes street extensions between Glen Oak Road and Chanticleer Place, and Chanticleer Place and Chanticleer Drive.           | Low      |
| FF6       | Coquille-Beavercreek Road Family<br>Friendly Route                  | Coquille Drive to Beavercreek Road                                | Add wayfinding and shared lane markings. Route via Turtle Bay Drive, Torrey Pines Drive and Pebble Beach Drive.   | Low      |
| FF7       | Falcon Drive Family Friendly Route                                  | Gaffney Lane to Falcon-Pompei<br>Shared-Use Path                  | Add sidewalks on both sides of the street. Add wayfinding and shared lane markings  | Low      |
| FF8       | Pompei Drive-Naples Street Family<br>Friendly Route                 | OR 213 to Falcon-Pompei Shared-<br>Use Path                       | Add wayfinding and shared lane markings. Route<br>via Sebastian Way, Pompei Drive, Sandra Loop and<br>Naples Street   | Low      |
| FF9       | Hillendale Park to Gaffney Lane<br>Elementary Family Friendly Route | Hillendale Park to Gaffney Lane<br>Elementary Shared-Use Path     | Add sidewalks on both sides of the street. Add<br>wayfinding and shared lane markings. Route via<br>Eastborne Way, Clairmont Way, Wassail Lane, and<br>Roseberry Avenue | Low      |
| FF10      | Frontier Parkway Family Friendly Route                              | Wesley Lynn Park to Meyers-<br>Beavercreek Shared-Use Path        | Add sidewalks on both sides of the street. Add<br>wayfinding and shared lane markings. Route via<br>Frontier Parkway and Morrie Drive                                   | Medium   |
| FF11      | Hiefield Court Family Friendly Route                                | Leland Road to Hillendale Park-<br>Leonard Street Shared-Use Path | Add sidewalks on both sides of the street. Add wayfinding and shared lane markings  | Medium   |
| FF12      | Hilltop Avenue Family Friendly Route                                | Fox Lane to Beavercreek-Hilltop<br>Shared-Use Path                | Add sidewalks on both sides of the street. Add<br>wayfinding and shared lane markings. Route via<br>Hilltop Avenue and Fox Lane   | Low      |
| FF14      | McCord-Leland Family Friendly Route                                 | Orchard Grove Drive to Fremont<br>Street                          | Add sidewalks on both sides of the street. Add<br>wayfinding, traffic calming and shared lane<br>markings. Route via Pease Road, Tidewater Street<br>and Fremont Street | Medium   |
| FF15      | Orchard Grove Family Friendly Route                                 | Orchard Grove-Hazelnut Shared-Use                                 | Add wayfinding and shared lane markings. Route  | Medium   |

Table 2: Planned Transportation System

| Project # | Project Description                                     | Project Extent  | Project Elements  | Priority |
|-----------|---|---|---|----------|
|           |   | Path to McCord Road   | includes Orchard Grove Drive  |          |
| FF16      | Central Point-South End Family<br>Friendly Route        | Central Point Road to South End<br>Road   | Add wayfinding and shared lane markings. Route includes Filbert Drive, Hazel Grove Drive, Hazelnut Avenue, Geranium Place and Kolar Drive   | Medium   |
| FF17      | Deer Lane Family Friendly Route                         | Rose Road to South End-Deer Lane<br>Shared-Use Path                                       | Add sidewalks on both sides of the street. Add wayfinding, traffic calming and shared lane markings. Route via Deer Lane.   | Medium   |
| FF18      | Rose-Amanda Family Friendly Route                       | Rose Road to Amanda Court   | Add sidewalks on both sides of the street. Add wayfinding, traffic calming and shared lane markings. Route via Madrona Drive, Lafayette Avenue, Lawton Road, Netzel Street and Amanda Court. Route includes Madrona Drive extension to Rose Road                                      | Medium   |
| FF21      | Canemah Family Friendly Route                           | Old Canemah Park to Cemetery<br>Road  | This site is located within the Canemah National Register District. Add wayfinding and shared lane markings. Add a walking path on one side of the street, if approved by the Historic Review Board. Route via 5th Avenue, Blanchard Street, 4th Avenue, Ganong Street and 3rd Avenue | Low      |
| FF22      | Tumwater-South 2 <sup>nd</sup> Family Friendly<br>Route | Waterboard Park to Tumwater-4 <sup>th</sup><br>Shared-Use Path to McLoughlin<br>Promenade | Add sidewalks on both sides of the street. Add wayfinding and shared lane markings. Route via Tumwater Drive, South 2 <sup>nd</sup> Street and Waterboard Park Road   | Low      |
| FF24      | Leonard-Bell Family Friendly Route                      | Williams Street to northern terminus<br>of Bell Court                                     | Add sidewalks on both sides of the street. Add<br>wayfinding and shared lane markings. Route via<br>Leonard Street and Bell Court   | Low      |
| FF25      | Hillcrest-Magnolia Family Friendly<br>Route             | Fox-Hillcrest Shared-Use Path to<br>Magnolia-Eluria Shared-Use Path                       | Add sidewalks on both sides of the street. Add<br>wayfinding and shared lane markings. Route via<br>Mountainview Cemetery, Hilda Street, Duane<br>Street, Barclay Hills Drive and Magnolia Street.  | Low      |
| FF26      | Warner-Holmes Family Friendly Route                     | Kamm Street to Holmes Lane  | Add sidewalks on both sides of the street. Add<br>wayfinding and shared lane markings. Route via<br>Warner Street and Prospect Street   | Low      |
| FF27      | Electric-5th Family Friendly Route                      | Electric-East Shared-Use Path to  | Add sidewalks on both sides of the street. Add  | Medium   |

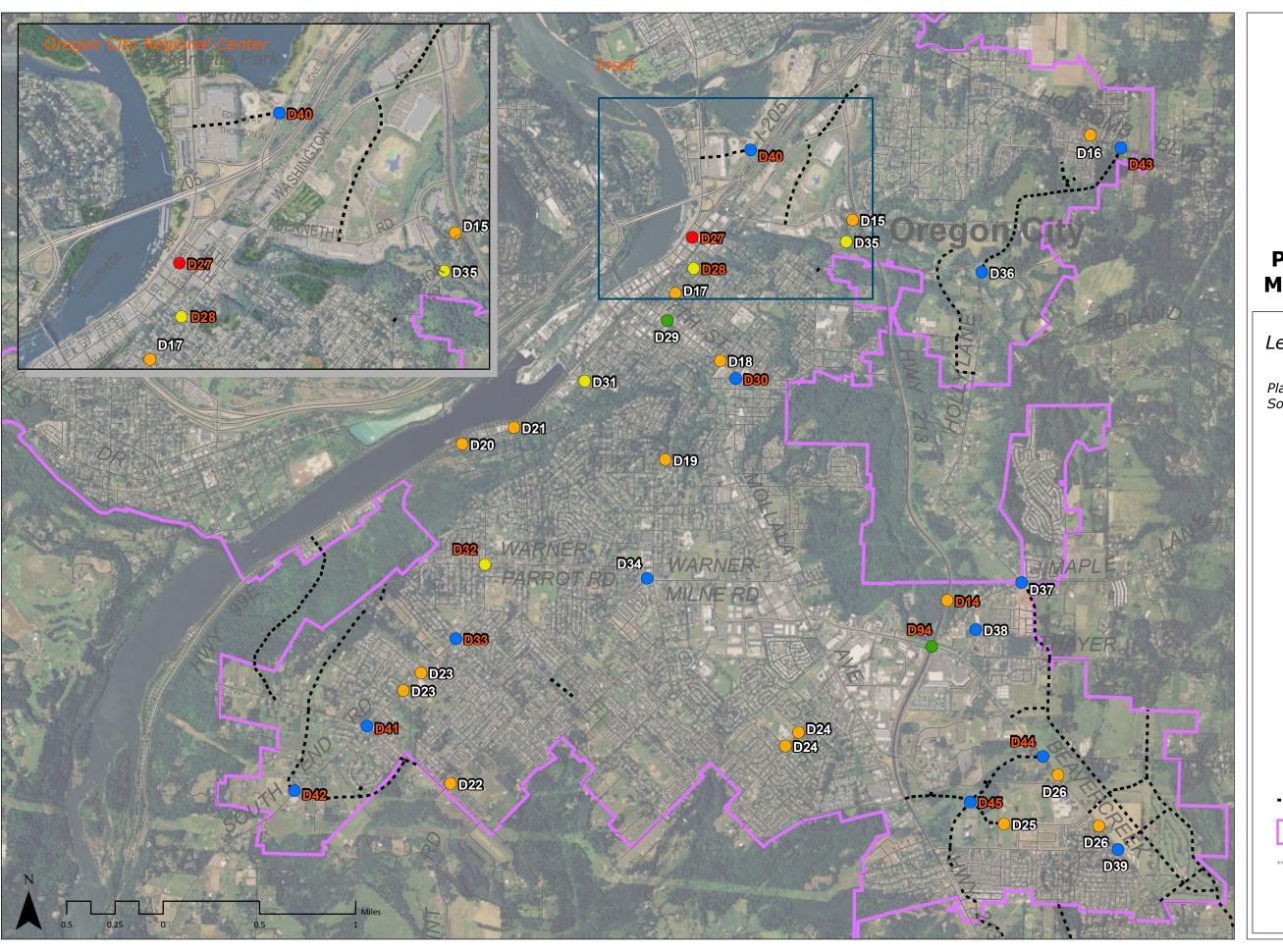
Table 2: Planned Transportation System

| Project # | Project Description                                  | Project Extent                          | Project Elements                                | Priority |
|-----------|--|---|---|----------|
|           |  | 4 <sup>th</sup> /5 <sup>th</sup> Street | wayfinding and shared lane markings. Route via  |          |
|           |  |   | East Street, 4th Street and Jackson Street      |          |
| FF28      | Eluria Street Family Friendly Route                  | Division Street to Pearl Street         | Add sidewalks on both sides of the street. Add  | Low      |
|           |  |   | wayfinding and shared lane markings             |          |
|           |  |   | Complete sidewalk gaps. Add wayfinding, traffic |          |
| FF29      | Jackson Street Family Friendly Route                 | 5th Street to 17th Street               | calming and shared lane markings. Route via JQ  | Low      |
|           |  |   | Adams Street, 6th Street and Jackson Street     |          |
| FF30      | 9th -Lincoln Street Family Friendly Route            | Division Street to John Adams Street    | Complete sidewalk gaps. Add wayfinding, traffic | Low      |
|           |  |   | calming and shared lane markings                |          |
| FF31      | 4 <sup>th</sup> Street Family Friendly Route         | Jackson Street to McLoughlin            | Add wayfinding and shared lane markings         | Medium   |
|           |  | Promenade                               |   |          |
| FF32      | John Adams-Jefferson Street Family<br>Friendly Route | Waterboard Park Road to 15th Street     | Complete sidewalk gaps. Add wayfinding and      | Medium   |
|           |  |   | shared lane markings                            |          |
| FF33      | 18th Street Family Friendly Route                    | Anchor Way Shared-Use Path to           | Complete sidewalk gaps. Add wayfinding and      | Low      |
|           |  | McLoughlin Avenue                       | shared lane markings                            |          |

**Citywide and Programmatic Improvements**: Several types of bicycle and pedestrian needs in Oregon City are not related to specific corridors, but pertain to city policy or conditions found in widespread locations. The improvement alternatives listed in Table 3 below address these types of bicycle and pedestrian needs.

Table 3: Citywide and Programmatic Improvements

| Name   | Description   |
|--|---|
| Family Friendly Routes                                 | Program to systematically implement the Neighborhood Greenway network on a yearly basis   |
| Sidewalk Infill Program                                | Capital program to systematically design and construct missing sidewalks along prioritized pedestrian routes. Provide sidewalks on local, residential streets that lead to roadways with transit service.   |
| Develop Bicycle and<br>Pedestrian Design<br>Guidelines | Develop bicycle and pedestrian design guidelines that establish preferred designs that represent best practices. Key treatments include pedestrian crossing design and bicycle accommodation at intersections (i.e. bike boxes, bicycle detection, etc.). |
| ADA/Curb Ramp Upgrade<br>Program                       | Upgrade curb ramps and eliminate gaps in ADA access along prioritized pedestrian routes near key destinations.  |
| Pedestrian Wayfinding<br>Signage                       | Pedestrian wayfinding tools can include signs and walking maps indicating walking routes to destinations and transit stops, as well as digital applications for smart phones.   |
| Bicycle Parking Program                                | Implement bicycle rack design and placement standards; review development applications for compliance; coordinate with sidewalk installation by developments or in city projects.   |
| Bike Lane Re-striping<br>Schedule                      | Develop a bike lane re-striping schedule.   |
| Bicycle Wayfinding Signage                             | Implement a bicycle wayfinding signage program to assist bicyclists in choosing comfortable routes and to help visiting bicyclists navigate through the city.   |
| Stop Here For Pedestrians signage                      | Add Stop Here For Pedestrians signage at existing and new crosswalks. State standards require installation of a stop line in advance of the crosswalk to use this sign.   |
| Bicycle/Pedestrian<br>Connections to Transit           | Coordinate infrastructure upgrades near transit stops and park and rides to improve access and amenities targeted at increasing ridership.  |
| Repaving policy  | Ensure repaving projects extend the full width of the road, including the full shoulder or bike lane.   |
| Streetscape Enhancements                               | Develop projects to create a pedestrian buffer zone on key pedestrian routes, including those that provide access to transit. Streets that would benefit from a buffer zone include Molalla Ave and Warner Milne Rd.                                      |
| Safe Routes to Schools<br>Curriculum                   | Leverage ODOT Safe Routes Program with local investment to bring Safe Routes curriculum to all area K-8 schools.  |





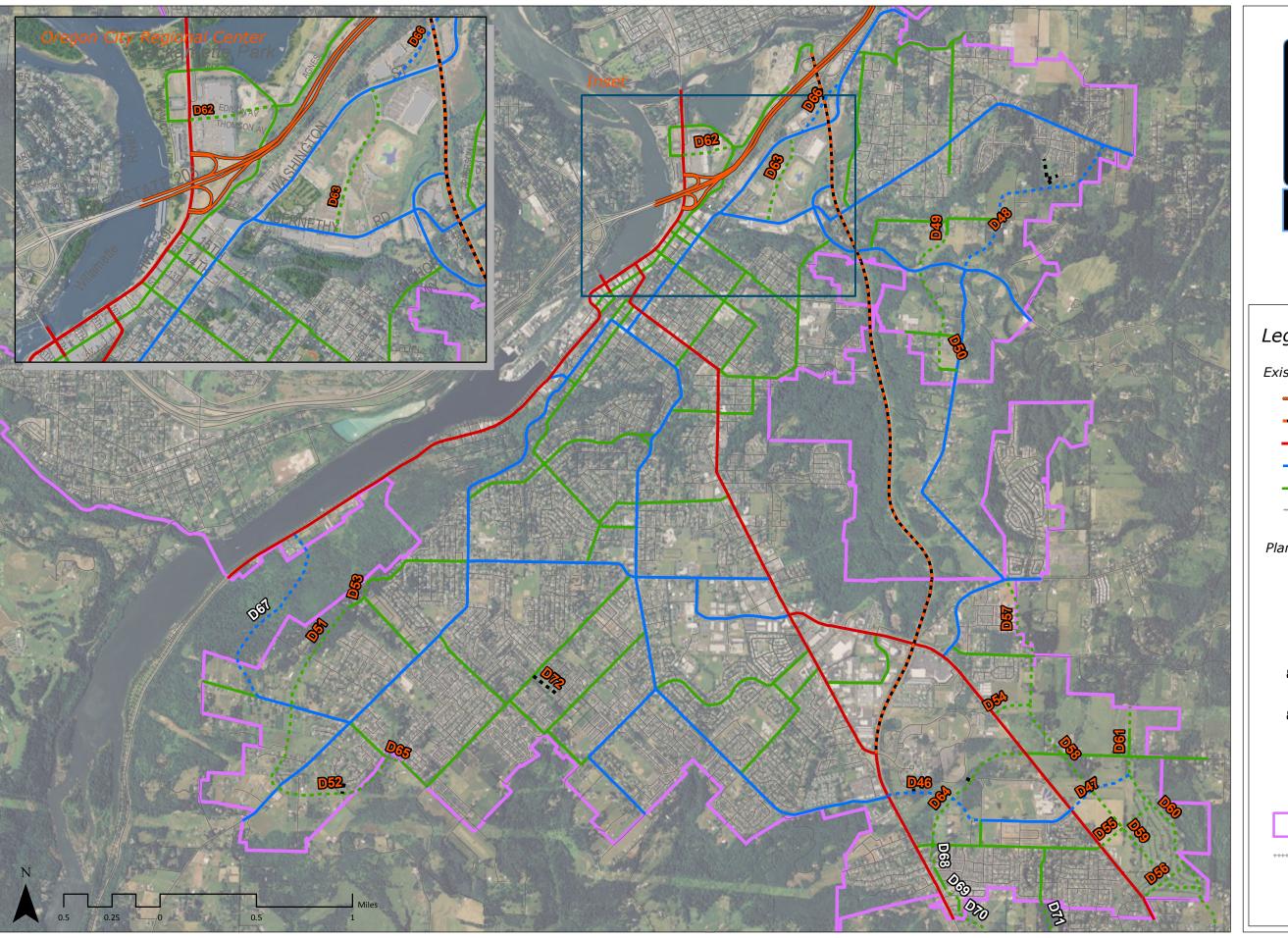
# Planned Intersection Management Solutions

### Legend

Planned Intersection Management Solutions

- Planned Traffic Signal
- Planned All-way Stop Control
- Planned Roundabout
- Planned Turn Lane
- Planned Transportation System Management and Operations (TSMO)
- Financially Constrained System Project # (See Table 1)
- Planned Transportation System Project # (See Table 2)

- •••• Planned Street Extension
- Urban Growth Boundary
- ----- Railroad





# Planned Street Extensions

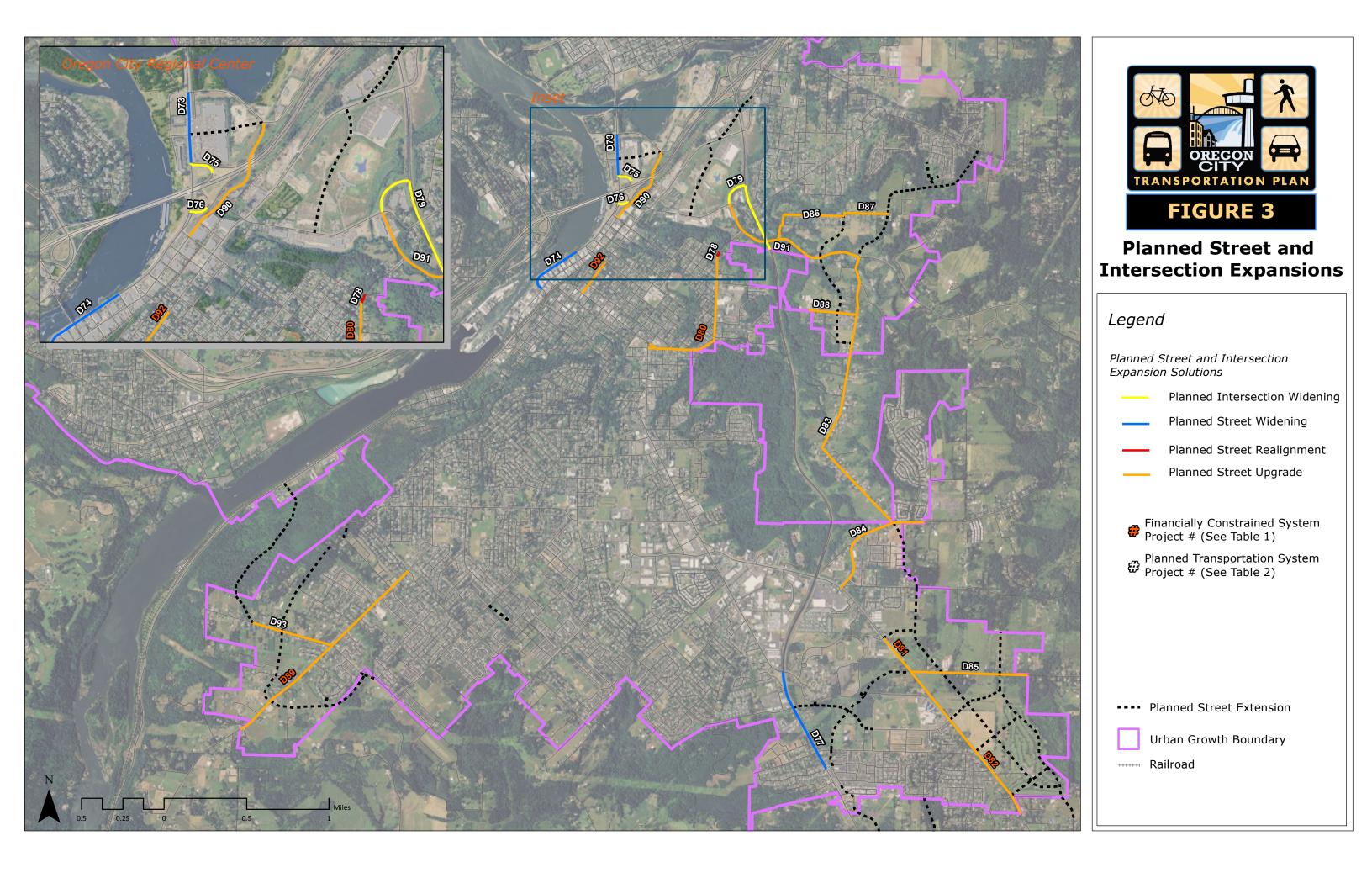
## Legend

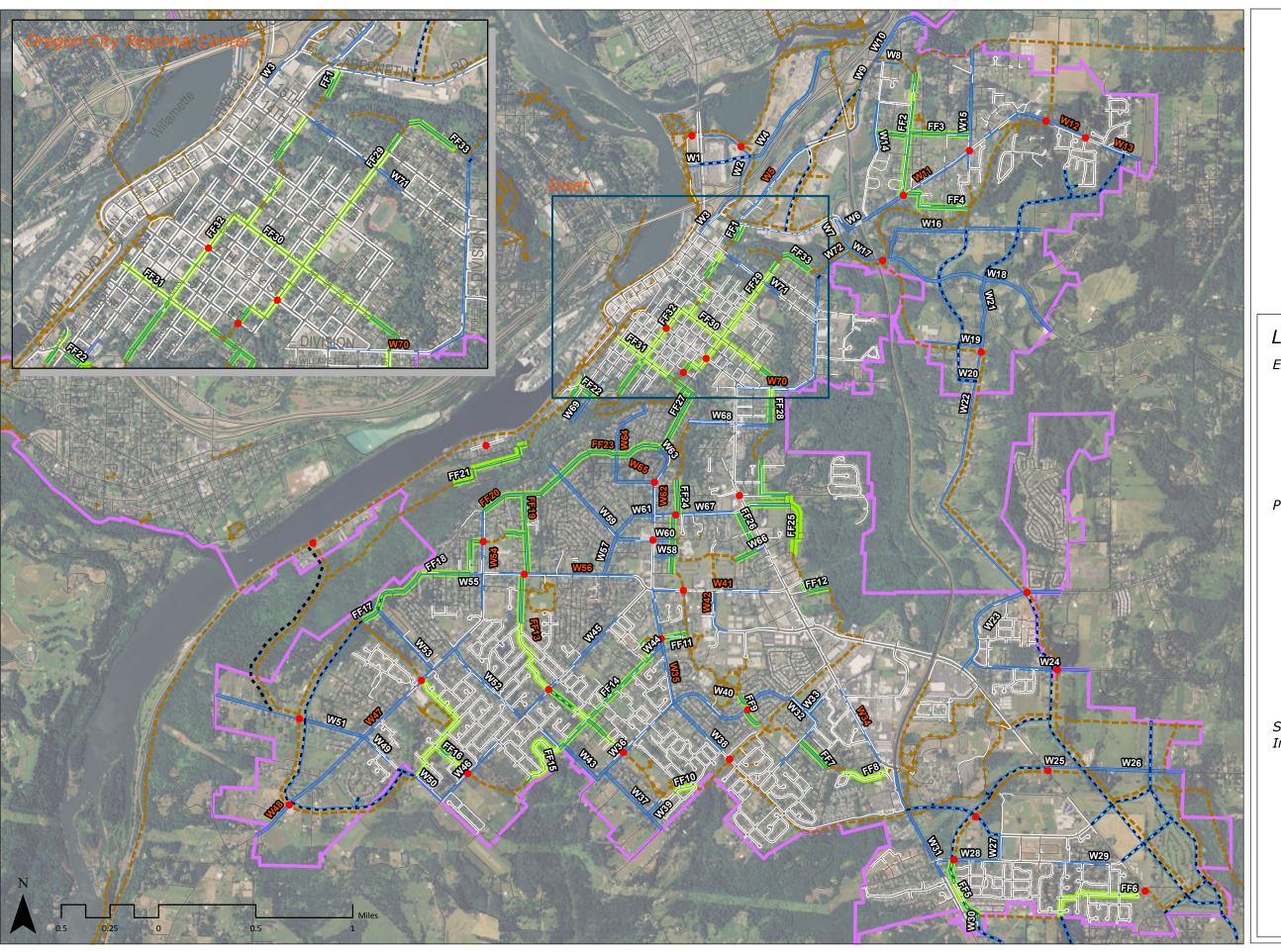
Existing Functional Classification

- Freeway
- **Expressway**
- Major Arterial
  - Minor Arterial
- Collector
- Local Roadway

#### Planned Street Extensions

- ---- Planned Minor Arterial
- --- Planned Collector
- •••• Planned Local Street
- Financially Constrained System Project # (See Table 1)
- Planned Transportation System Project # (See Table 2)
- Urban Growth Boundary
- ----- Railroad







# **Walking Solutions**

### Legend

Existing Streets

- Existing Sidewalk
- Planned Sidewalk Infill-One Side of Street
- Planned Sidewalk Infill-Both Sides of Street

Planned Street Extensions

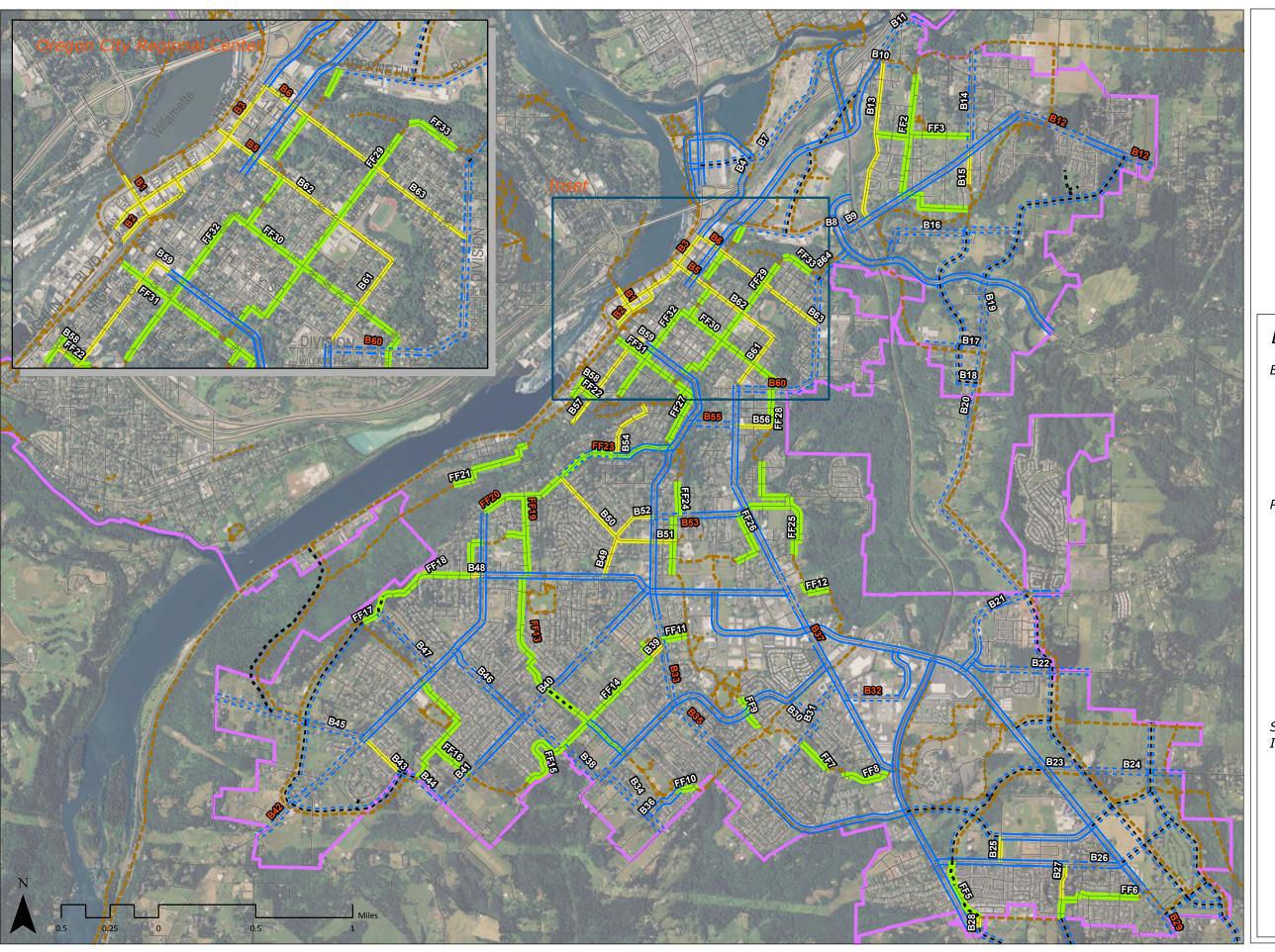
- --- Planned Street Extension
- Planned Street Extension with Sidewalk on one Side
- Planned Street Extension with Sidewalks on both Sides





Shared Walking and Biking Improvements (See Figure 7)

- Planned Family Friendly Route
- Street Crossing Improvement
- --- Planned Shared-Use Path (Conceptual)
- Existing Shared-Use Path
- Urban Growth Boundary





# **Biking Solutions**

### Legend

Existing Streets

Existing Bike Lanes

Planned Bike Lane-One Side of Street

Planned Bike Lanes-Both Sides of Street

#### Planned Street Extensions

•••• Planned Street Extension

Planned Street Extension with

Bike Lane on one Side

Planned Street Extension with Bike Lanes on both Sides

Financially Constrained System Project # (See Table 1)

Planned Transportation System Project # (See Table 2)

Shared Walking and Biking Improvements (See Figure 7)

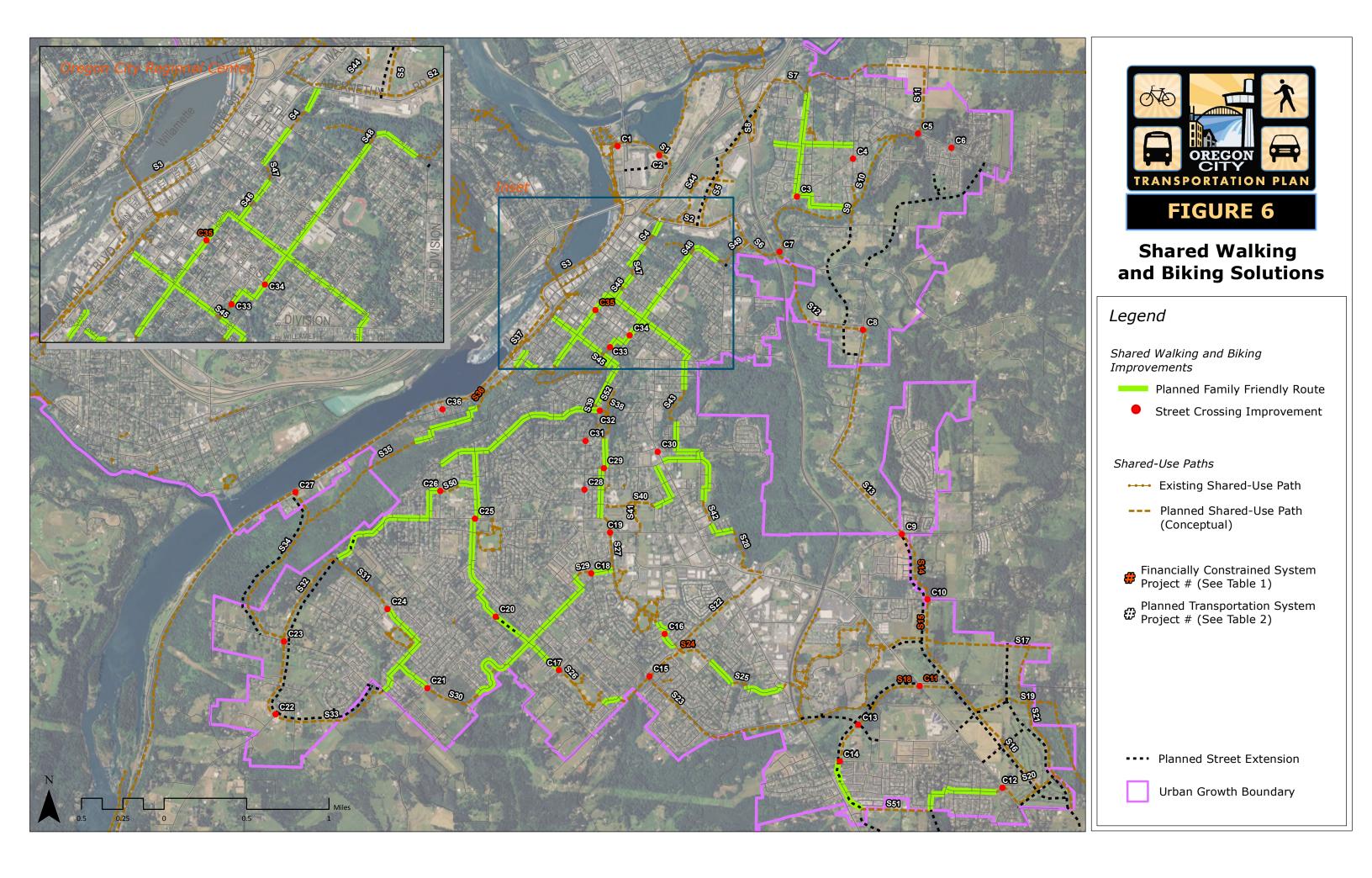
Planned Family Friendly Route

Street Crossing Improvement

--- Planned Shared-Use Path (Conceptual)

Existing Shared-Use Path

Urban Growth Boundary





# **City of Oregon City**

625 Center Street Oregon City, OR 97045 503-657-0891

### **Staff Report**

File Number: 12-118

Agenda Date: 9/18/2012 Status: Agenda Ready

To: Transportation Advisory Committee Agenda #:

From: Interim Public Works Director John Lewis File Type: Report

SUBJECT:

McLoughlin Neighborhood Stop Sign Request

#### **RECOMMENDED ACTION (Motion):**

Move to direct City staff to install two additional stop signs and associated striping at the intersection of John Adams Street and 6th Street making the intersection a four-way stop.

From: John M. Lewis

To: <u>John M. Lewis</u>; "Bill Daniels"

Cc: "damonmabee@comcast.net"; Tim Powell; Kathy Griffin

Subject: RE: Stop sign request at 6th and John Adams Date: Tuesday, August 14, 2012 6:33:52 PM

#### Hello Bill.

This stop sign installation issue is progressing. In terms of process I want this issue to go before the Transportation Advisory Committee. I'm reluctant but ready to recommend the installation of the stop signs to the TAC. We will add this as a TAC agenda item for the September 18, 2012 meeting agenda. Please plan to attend or send someone from the neighborhood to speak on behalf of the request.

This recommendation is a struggle for me because the signs are not warranted and I don't believe it to be a safety issue. I have also heard from the Fire District concern for the new stop signs asserting delayed response. Yet I also see at least two other nearby intersections where the City has installed a 4-way stop and the warrants would be even less in those locations.

I also understand how John Adams Street drivers are now confused at this location because of the crosswalks, we have many community events at the Carnegie, the Carnegie is now a library and I have heard from the Library Director and Community Services Director that they think a 4-way stop is less confusing and would be their preference. I also don't think the intersection or the nearby intersections will be any less safe by adding the new signs.

So I want a TAC motion to install the signs before installation. I'll make that recommendation on September 18<sup>th</sup>.

Thanks again and call me if you have any related questions.



John M. Lewis, P.E.
Interim Public Works Director
City of Oregon City
PO Box 3040
122 S Center Street
Oregon City, Oregon 97045
503.657.8241 phone
503.650.9590 fax
jmlewis@orcity.org
www.orcity.org

From: John M. Lewis

Sent: Friday, August 03, 2012 8:41 AM

To: 'Bill Daniels'

**Cc:** 'damonmabee@comcast.net'; Tim Powell **Subject:** Stop sign request at 6th and John Adams

Good morning Bill. I'll be away from the office for a few days next week so I wanted to give you a quick update. I still plan to contact you with my final recommendation to the City Manager before the meeting on the 15<sup>th</sup>.

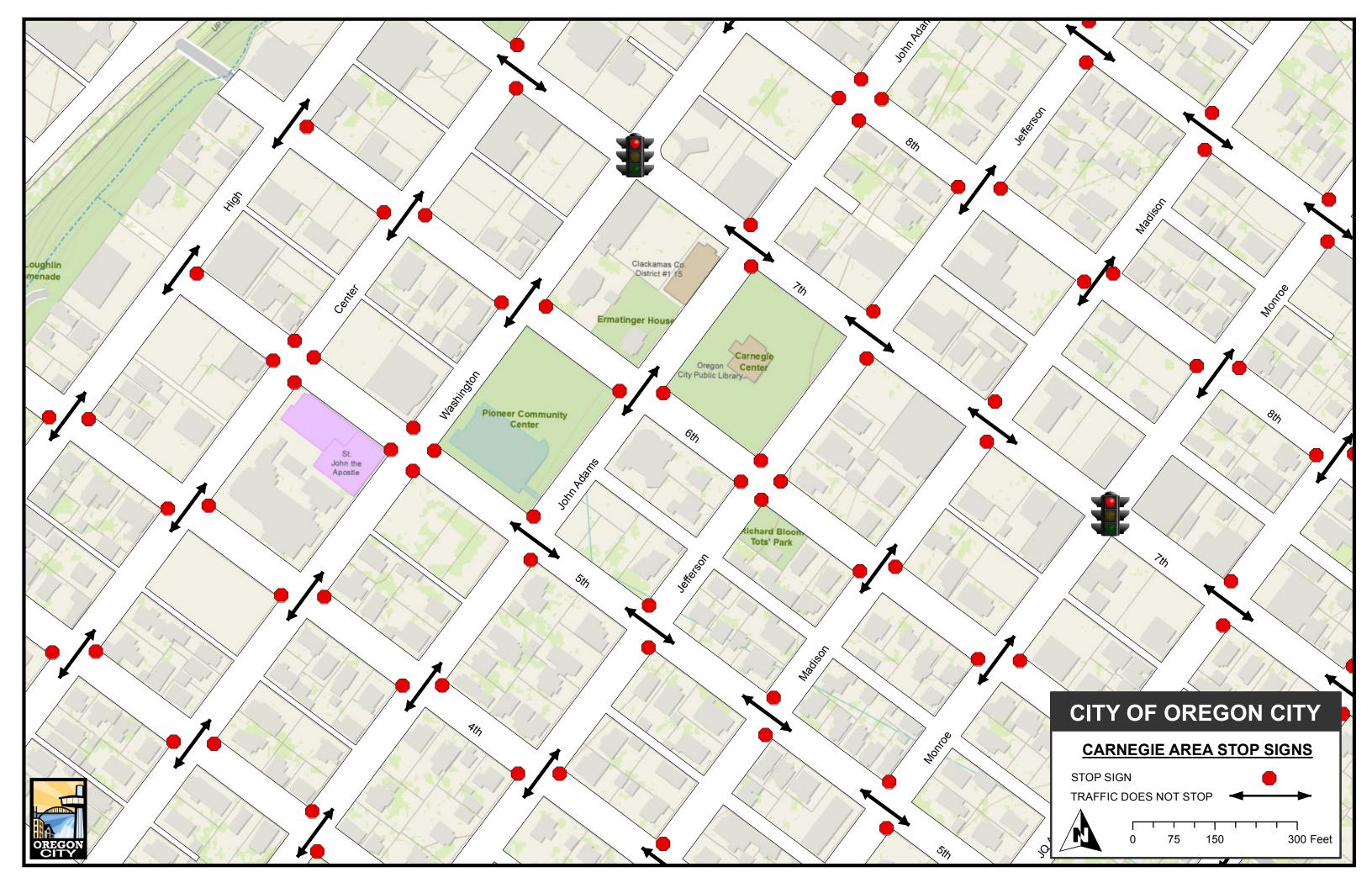
I have asked a couple key staff to take a new look at your request. Given in 2010 the City's Traffic Engineer Consultant submitted a report recommending against the additional stop signs at John Adams, I want to take the time and effort to re-consider this issue from the event center perspective. There is merit to the concern that we do so many community events that the streets (6<sup>th</sup> and John Adams) around the Carnegie seem to perform both like a courtyard and a street.

I have also attached a copy of the improvement map from the City's Five Year Street Reconstruction Report. This report has been presented at a variety of Neighborhood, CIC, City Commission, meetings and which you very well may have attended. This information is on the City's website too. Anyway, you will see the paving work for Center Street and Washington Street is scheduled for 2013. We also have some utility work to complete in these areas too. Nancy and I spoke of the neighborhoods desire for these projects back in May 2012. From the email correspondence I have on my end she was going to provide, Damon Mabee and Tim Powell (and I thought you) with the City's plans for striping coordination with the paving projects. These crosswalks are a fairly significant costs and doing them twice in such a short time is not a good use of City funds. I don't have a copy of the email between Nancy and you folks but I understood this information was shared.

I hope this helps and please share this with your neighborhood. Thanks Bill.



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#### REPLINGER & ASSOCIATES LLC

TRANSPORTATION ENGINEERING

December 13, 2010

Ms. Nancy Kraushaar, PE City of Oregon City PO Box 3040 Oregon City, OR 97045

SUBJECT: REVIEW OF PEDESTRIAN CROSSINGS AND TRAFFIC CONTROL AT THE

INTERSECTIONS OF JOHN ADAMS STREET WITH 6<sup>TH</sup> AND 7<sup>TH</sup> STREETS

Dear Nancy:

In response to your request, I have reviewed the existing pedestrian crossings and traffic control at the intersections of John Adams Street with 6<sup>th</sup> and 7<sup>th</sup> Streets.

#### BACKGROUND INFORMATION ON MARKED AND UNMARKED CROSSWALKS

Since one intersection currently has both unmarked and marked crosswalks and the installation of a marked crosswalk has been suggested at the other, it is worth reviewing information about marked and unmarked crosswalks including results of safety information.

First, it is important to recognize that under Oregon law, crosswalks exist on each approach at intersections whether they are marked or not. A crosswalk does not exist only when action has been taken to formally close the crosswalk and it is posted with "CROSSWALK CLOSED."

The most definitive study on the pedestrian safety issue is probably the report commissioned by the Federal Highway Administration and undertaken by the University of North Carolina's Highway Safety Research Center. Safety Effects of Marked versus Unmarked Crosswalks at Uncontrolled Locations: Final Report and Recommended Guidelines was published in August 2005. The study, conducted by Charles V. Zegeer and others, involved five years of pedestrian crashes at 1000 marked and 1000 unmarked crosswalks. The study included various road types, speeds, and volumes. The study concluded "that on two-lane roads, the presence of a marked crosswalk alone at an uncontrolled location was associated with no difference in pedestrian crash rate, compared to an unmarked crosswalk."

The report also explains that for two-lane roads, "The results for unmarked crosswalks show the only statistically significant effect to be for pedestrian volume." This means that increases in pedestrian volumes are likely to result in more crashes involving pedestrians, but the rate of crashes involving pedestrians would be the same.

The study also assessed the crash severity and concluded "Crash severity did not differ significantly between marked and unmarked crosswalks on two-lane roads."

Ms. Nancy Kraushaar, PE December 13, 2010 Page 2

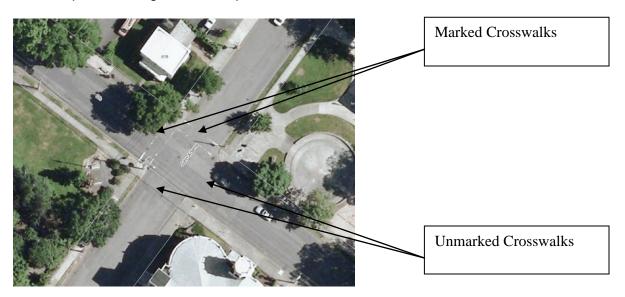
The study differentiated between two-lane roads and wider roads with varying speeds. The results summarized above are only those associated with two-lane roads, which are relevant to this analysis.

#### **JOHN ADAMS AND 6TH STREET**

#### **Existing Conditions**

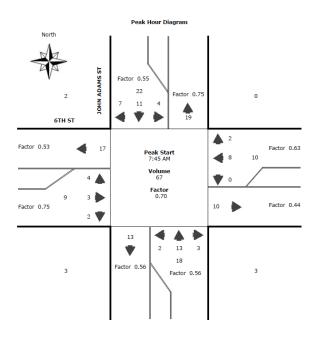
The existing intersection is governed by two-way stop control. John Adams Street is the through street; 6th Street is the minor street. The statutory speed on both streets is 25 miles per hour.

Marked crosswalks are provided on the north John Adams Street approach and on the west 6th Street approach. Neither of the other approaches features a marked crosswalk, but under Oregon law, both are still considered to be crosswalks. The crossing distances were measured to be approximately 30 feet across each approach. Sight distance was restricted only by vehicles parked using on-street spaces.

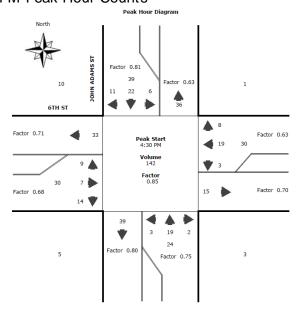


Observations were conducted at the intersections during different times on different days. In addition, traffic volume counts were conducted at the intersection during the two-hour AM peak period and the two-hour PM peak period. The volumes are shown in the figures below.

### AM Peak Hour Counts



#### PM Peak Hour Counts



Ms. Nancy Kraushaar, PE December 13, 2010 Page 4

#### The Issues

The issues of pedestrian accessibility and safety have been raised by area residents. One suggestion for change is the installation of STOP signs on all four approaches.

#### **Analysis**

Traffic volumes are low with the combined vehicle volumes on all four approaches totaling 59 during the AM peak hour and 123 during the PM peak hour. Total pedestrian volumes at the intersection were 8 during the AM peak hour and 19 during the PM peak hour. During the AM peak period, traffic volumes on John Adams Street are approximately twice those on 6<sup>th</sup> Street. During the PM peak hour, the volumes on the two streets are approximately equal. A two-way stop is appropriate for these volumes and the orientation with 6<sup>th</sup> Street approaches having the STOP signs is the better choice.

Using an average walking speed of 4 feet per second, the pedestrian crossing time is less than 8 seconds. Using a slow walking speed of 3 feet per second, the time needed for a pedestrian to cross the intersection on any of the approaches is 10 seconds. The average interval of arrival of motor vehicles, based on the total volume entering the intersection, is far greater than the time it takes for a pedestrian to cross.

The rate of arriving vehicles does not cause pedestrians to be delayed significantly. The arrival rate of vehicle traffic is so low that pedestrians will seldom need to wait before crossing. Travel speeds are generally low.

#### **Conclusions and Recommendations**

Four-way stop control is not warranted by conditions at the intersection. The volumes are low and no other physical conditions are apparent that would make a four-way stop appropriate. Installing STOP signs on John Adams Street would do little if anything to improve pedestrian accessibility or safety. Four-way stop-control would increase delay for vehicles without any significant benefit for other users.

Both vehicle volumes and pedestrian volumes are low enough that marked crosswalks are probably not needed and, as described above, result in no significant safety benefit. There is no reason to remove the existing markings or to mark the crosswalks on approaches that currently have unmarked crosswalks.

Improving sight distance is one action where pedestrian safety and comfort might be enhanced. During multiple site visits, on-street parking was observed to occur within a few feet of the crosswalks. Parking of vehicles near the crosswalks can significantly reduce the sight triangles, causing pedestrians to enter the roadway to see around parked vehicles to observe on-coming traffic. Posting the curb for a distance of approximately 30 feet from each crosswalk on each approach would significantly improve sight distance for pedestrians and motorists.

I recommend establishing No Parking zones for a distance of approximately 30 feet from the crosswalk on all four approaches to the intersection to improve sight distance for motorists and pedestrians.

#### JOHN ADAMS AND 7TH STREET

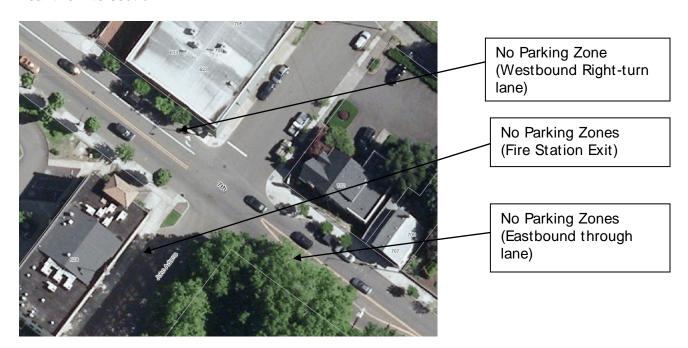
#### **Existing Conditions**

The existing intersection is governed by two-way stop control. 7<sup>th</sup> Street is the through street; John Adams Street is the minor street. The statutory speed on both streets is 25 miles per hour.

Marked crosswalks are not provided on any approach. Pedestrian crossing distances were also measured to be approximately 30 feet for each approach.

Parking is provided on the north side of 7<sup>th</sup> Street to the east of John Adams Street and on the south side of 7<sup>th</sup> Street to the west of John Adams Street. Parking is provided on both sides of John Adams Street north of 7<sup>th</sup> Street and on the east side of John Adams Street to the south of 7<sup>th</sup> Street. Sight distance was restricted only by vehicles parked using on-street parking spaces.

Traffic volumes were not obtained for this evaluation, but it is evident that volumes are far higher on 7<sup>th</sup> Street than they are John Adams Street. Observations were conducted at various times on different days to assess the level of pedestrian activity and the frequency of parking near the intersection.



#### The Issues

The issues of pedestrian accessibility and safety have been raised by area residents. Suggestions for changes have included installation of a marked crosswalk.

#### **Analysis**

Traffic volumes are high enough that pedestrians can encounter significant delays during the peak hours while waiting safe opportunities to cross 7<sup>th</sup> Street or for motorists to yield. The presence of a traffic signal one block to the west at 7<sup>th</sup> Street and Washington Street does provide some breaks in eastbound traffic, but not as many as might be expected because of high turn volumes. Left turns from southbound Washington Street to eastbound 7<sup>th</sup> Street combine with eastbound through volumes on 7<sup>th</sup> Street at Washington Street and result in a fairly consistent stream of traffic on 7<sup>th</sup> Street at John Adams Street during peak hours.

The suggestion for a marked crosswalk at this location has been raised by area residents. As explained in the introductory portion of this letter, studies do not suggest there would be a safety benefit from the installation of a marked crosswalk across 7<sup>th</sup> Street.

At the intersection of 7<sup>th</sup> Street and John Adams Street, perhaps the most difficult aspect of pedestrians' crossings is the lack of good sight distance. Sight distance is particularly poor for eastbound motorists and pedestrians seeking to cross from the southwest corner to the northwest corner of the intersection (from the fire station to the Singer Hill Cafe). This limitation on sight distance occurs when cars are parked on the south side of 7<sup>th</sup> Street to the west of John Adams Street. The photo below illustrates the sight distance issue.



Ms. Nancy Kraushaar, PE December 13, 2010 Page 7

The east side of the intersection has better sight distance because parking is provided in inset bays and the existence of a "bulb-out" that slightly reduces crossing distance and provides a place on the curb for pedestrians that is more in line with motorists' sight lines. The photo below illustrates the inset parking and the bulb-out. Note that even if the parking space nearest the intersection were occupied, pedestrians would be more visible to motorists and pedestrians could better see on-coming cars.



Improving sight distance for the crosswalk on the west side of the intersection could be accomplished by removal of some of the existing on-street parking on the south side of 7<sup>th</sup> Street west of John Adams Street. As noted above, this parking appears to be fairly regularly occupied. With low volumes of pedestrians at this location, the loss of a convenient, well-used parking space could be controversial. The removal of one parking space would allow better sight distance allowing pedestrians to stay on the curb while watching for on-coming traffic from the west and allowing the motorists to more readily see pedestrians waiting to cross.

A better, but far more expensive, solution to signing and marking a section of curb as a noparking zone would be installation of a bulb-out similar to that already in place on the northeast corner of the intersection. It would improve sight distance and shorten the crossing distance. A schematic of a bulb-out that requires removal of one on-street space and shortens the crossing distance is illustrated below. Another advantage of a solution involving a bulb-out is that it would allow installation of a pedestrian warning sign in an advantageous location. Because of the presence of on-street parking in this block, there is currently no good option for the installation of a pedestrian warning sign.



#### **Conclusions and Recommendations**

I do not recommend installation of a marked crosswalk for a number of reasons. As explained in the introductory part of this letter, the installation of a marked crosswalk has not been shown to significantly improve pedestrian safety. The pedestrian volumes are relatively low and, for those uncomfortable crossing at this intersection, a marked crosswalk is located one block away at the signalized intersection of 7<sup>th</sup> Street and Washington Street.

Removal of one parking space on the south side of 7<sup>th</sup> Street immediately west of John Adams Street would improve sight distance for pedestrians viewing on-coming, eastbound traffic on 7<sup>th</sup> Street and allow motorists to more readily see pedestrians on the corner. Installation of a bulb-out similar to that on the existing one on the northeast corner of the intersection would be a nice feature to improve the pedestrian environment. That would be an expensive installation, in part because of the presence of a storm drain. A bulb-out would be worth considering as part of a larger project, but it would be hard to justify as an independent project due to cost.

I recommend removal of one parking space on the south side of 7<sup>th</sup> Street immediately west of John Adams Street and the installation of an appropriate No Parking sign.

Ms. Nancy Kraushaar, PE December 13, 2010 Page 9

Thanks for letting me be of service to you on this analysis. If you have any questions or need any further information, please contact me at <a href="mailto:replinger-associates@comcast.net">replinger-associates@comcast.net</a>.

Sincerely,

John Replinger, PE

Principal

Oregon City\2010\JohnAdamscrosswalks121310.docx

John Replinger



# **City of Oregon City**

625 Center Street Oregon City, OR 97045 503-657-0891

### **Staff Report**

File Number: 12-126

Agenda Date: 9/18/2012 Status: Agenda Ready

To: Transportation Advisory Committee Agenda #:

From: Interim Public Works Director John Lewis File Type:

**SUBJECT:** Trolley Usage



625 Center Street Oregon City, OR 97045 503-657-0891

## **Staff Report**

File Number: 12-125

| <b>Agenda Date:</b> 9/18/2012 Sta | tus: Agenda | Ready |
|-----------------------------------|-------------|-------|
|-----------------------------------|-------------|-------|

To: Transportation Advisory Committee Agenda #:

From: File Type:

SUBJECT:

**Upcoming Events** 

## **EVENTS**:

September 18, 2012 - 9:00 AM - Downtown Streetscape Improvemenets Ribbon Cutting Ceremony

September 26, 2012 - 8:00 PM - Singer Falls Re-Lighting Event

October 12-15 - Arch Bridge Celebration and Re-Opening

October 19, 2012 - OCHS Homecoming Parade (anticipate road closures)

October 24, 2012 - 10:00 AM - Grand Opening of the Jughandle Project

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THURSDAY SEPTEMBER 13TH



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Oregon City Home » Willamette Falls Festival and Bridge Opening!



Title: Willamette Falls Festival and Bridge Opening!

Date/Time: Friday, October 12, 2012 (All day) - Sunday, October 14, 2012 (All day)

Location: Arch Bridge, Hwy 43 in Oregon City/West Linn

#### Details:



Join the festivities starting Friday, October 12th on and around the soon-to-be-opened Hwy 43 Arch Bridge between Oregon City and West Linn. There will be 3 days of fun and activities, including walking access to the bridge, before vehicles are permitted to cross starting at 5am Monday October 15th.

The events list is below, or go to willamettefallsfestival.com for more information.

#### Friday, October 12th — "An Evening of Arts and Culture"

- 5-9:00pm Ripple Effect Arts Walk (Runs through-out 3-Day Festival)
- 5:00pm Geocache Challenge (Runs through-out 3-Day Festival)
- 5-9:00pm West Linn/Oregon City Business Showcase (Vendor booths along 8th St)
- 5:30pm March of the Bands Oregon City/West Linn High Schools Festival Kick-off
- 6:00pm Bridge open to the Public for walking (Runs through-out 3-Day Festival)
- 6:00pm Willamette Falls Locks Benefit Dinner at the Museum of the Oregon Territory

#### Saturday, October 13th — "Family Fun Day"

- 9am-9pm Bridge open to the Public for walking (Runs through-out 3-Day Festival)
- 9am Geocache Challenge (Runs through-out 3-Day Festival)
- 9am-2pm Artisan Farmers' Market at the Event Main Tent
- 9am-3pm Interactive Public Sculpture Project at West Linn side of bridge
- 9am-3pm Plein Air Painting Demonstrations on the bridge
- 10am-4pm Trolley Heritage Tour explore heritage sites and open houses along a 1-hour trolley loop
- 10am-6pm Ripple Effect Arts Walk- (Runs through-out 3-Day Festival)
- 11am/12pm/1pm/3pm Speakers, Authors & Experts at the Museum of the Oregon Territory and Event Main Tent
- 2-7pm Grand Ronde Tribal Encampment with Native American drumming, dancing and craft demonstrations at Clackamette Park
- 3:00pm Great Performances- local bands live on stage at the Event Main Tent



## Search the Site











#### Latest News

2012 Movies in the Park Oregon City Riverfront Projects Highlighted on PBS

Two-Way Circulation and Parking Changes on Main Street

Parking realignment makes way for two-way traffic in historic downtown

Singer Hill is now open!



## **Upcoming Events**

Saturday Farmers Market Sat, Sep 15th 9:00am Saturday Farmers Market Sat, Sep 22nd 9:00am Saturday Farmers Market Sat, Sep 29th 9:00am

View City Calendar



#### **Department Services**

Chamber of Commerce Citizen Requests Community Grant Programs RSS Feeds



#### Department Documents

2012 Movies in the Park Community Grant Programs HWY 43 Arch Bridge Shuttle Schedule for 2012

Master Plans

Parks and Recreation Master Plan

- 5-6pm Lighted boat flotilla & Sunset Drumming/Dancing
- 7:30pm Falls Film Premier Invited Guests at the Museum of the Oregon Territory
- 8:00pm Fireworks over the Willamette River

#### Sunday, October 14th "Get Active Day"

- 9:00am Family 5K Fun Run Register online or at Clackamette Park
- 9:00am Fun-athlon (paddle, pedal, run)- Register online or at Clackamette Park
- 9:00am Geocache Challenge- (Runs through-out 3-Day Festival)
- 10am-3pm Ripple Effect Arts Walk- (Silent auction ends at 3pm)
- 10am-3pm Trolley Heritage Tour explore local heritage sites along a 1-hour trolley loop
- 1:00pm Renewal of Wedding Vows Ceremony on the Bridge
   2:00pm Ceremonial Bridge Opening on the Bridge
- 2:30pm First Across the Bridge Parade walkers, bikes and antique cars
   3:00pm Renewal Reception/After Party at Pacific Crest Ballroom
- 3-10pm Bridge open to the Public for walking Monday, October 15th
- 5:00am Bridge open to all vehicle traffic



Willamette Falls Festival website







Popular Links
Calendar

**Online Services** 

Site Information

Site designed by aHa Consulting

City of Oregon City | 625 Center Street | Oregon City, OR 97045 | (503)657-0891 | M-F 8AM-5PM



625 Center Street Oregon City, OR 97045 503-657-0891

## **Staff Report**

File Number: 12-124

Agenda Date: 9/18/2012 Status: Agenda Ready

To: Transportation Advisory Committee Agenda #:

From: Interim Public Works Director John Lewis File Type:

SUBJECT:

99E Foot Bridge Evaluation



625 Center Street Oregon City, OR 97045 503-657-0891

## **Staff Report**

File Number: 12-123

Agenda Date: 9/18/2012 Status: Agenda Ready

To: Transportation Advisory Committee Agenda #:

From: Interim Public Works Director John Lewis File Type:

SUBJECT:

Downtown Oregon City Parking Information



625 Center Street Oregon City, OR 97045 503-657-0891

## Legislation Details (With Text)

File #: 12-103 Version: 1 Name: Downtown Parking

Type: Report Status: Agenda Ready

File created: 9/5/2012 In control: City Commission Work Session

On agenda: 9/11/2012 Final action:

Title: Downtown Parking

**Sponsors:** Mike Conrad

Indexes:

Code sections: Attachments:

Date Ver. Action By Action Result

#### **Title**

**Downtown Parking** 

## **Body**

A local retailer suggested free parking on Friday's.

Staff supports free parking during the bridge reopening celebration on October 12, 2012. Staff is unable to recommend additional free parking days with the exception of weekends and legal holidays for the following reasons:

Free parking is inconsisitent with the parking study
Promotes and/or encourages employee abuse
Caters to those patronizing the court house, or other county services
Customer confusion
Budget impacts, parking revenue suports many projects

## **Downtown Parking Facts**

# Response to Downtown Parking Concerns/Complaints September 13, 2012

Parking in Downtown Oregon City has been an issue for years if not decades. Downtown Oregon City cannot expand as a result of the Willamette River to the west and the bluff to the east. The following is a list of steps that have been taken to mitigate problems:

## Recommendations implemented as a result of the Downtown Parking Study adopted in August, 2010 (http://www.orcity.org/citymanager/downtown-parking-study):

- 25 permit stalls relocated out of the core area;
- Added to parking supply by restriping permit zone and adding spaces in the north end;
- Permit pricing evaluated and increased;
- The Juror Pass Program was eliminated;
- Core area parking has been transitioned to shorter duration parking;
- Long-term parking meters relocated to north end;
- Transitioned Clackamas County Corrections parking out of the right-of-way;
- Parking rates and fine amounts revised;
- Relocated brown zone parking permit users to private/public parking lots out of the core area;
- Installed directional and informational signage;
- Communications piece added including an on-line suggestion box.

# Impacts of the Downtown Circulation Refinement Plan adopted in November 2010 (http://www.orcity.org/node/2832/):

- Both the study and its implementation were completed with input from downtown merchants.
- It will take time for everyone to get familiar with the changes related to the two-way traffic conversion. In part, the change to allow two-way travel on most streets downtown was made to reduce confusion and to double the amount of drive-by trips for increased merchant exposure.
- Side streets that were converted from one-way to two-way were impacted where diagonal parking was removed and replaced with parallel parking. To help mitigate impacts, parking was increased on Main Street.
- Resulted in a net loss of parking of less than 5 spaces.

## **Temporary construction related-impacts:**

- The ODOT bridge closure began Jan 15, 2010 and is scheduled to reopen October 15, 2012;
- Downtown streetscape improvements from 5th to 10th Streets in 2011 and 2012 have caused temporary parking restrictions;

• As mentioned above, the implementation of the new circulation pattern and new streetscape improvements resulted in a net loss of parking spaces of less than five.

## **ADA Parking Issues:**

- Oregon City enforces state law with regards to ADA parking unlike some other
  jurisdictions that are more lenient. The purpose is to free up approximately forty long
  term parking spaces for short term parking;
- Oregon City has a two-stage warning system for visitors/customers displaying a placard but not following parking rules.
  - 1. <u>First warning</u> is a citation on the vehicle that is written as a warning. A sticker is placed on the citation advising that Oregon City is unable to extend additional privileges at the parking meter and to contact Code Enforcement or the DMV for additional information.
  - 2. <u>Second warning</u> is a citation. The placard holder may bring the citation to Code Enforcement where the parking rules are explained as they relate to placards, a copy of the state law is provided and the citation is then converted to a warning.
- Should a legal placard holder receive two warnings, a third step is to issue a citation for the cost of the meter in the amount of either \$1 or \$2 (the cost of the maximum stay at the meter vs. the \$20 "Expired Meter" or "Failure to Display" citation).
- There is a proliferation of ADA placards being used inappropriately and there is very little to prevent anyone from applying for a placard provided they can get a doctor to sign off on the paperwork. The actual placard is issued free of charge by DMV.
   Oftentimes (but not every instance) the City discovers improperly used placards such as:
  - 1. Parking even when the ADA represented placard holder is not with them;
  - 2. Using expired placards;
  - 3. Using a placard for a deceased placard holder;
  - 4. In a vehicle that doesn't match the placard information. In all of the aforementioned instances, citation recipients are given the opportunity to defend themselves.
- Downtown parking is more accessible than ever before. The increased fine amount is helping to prevent many employees from occupying two spaces, their permit space and at the meter. The odds of finding a space in front of or near the business to be patronized are better than ever.
- Code Enforcement working with the building department to identify existing parking lots and notifying owners of ADA accessibility laws. The result will be more ADA accessible parking spaces in the private lots of the businesses being patronized.

## Other parking considerations:

- Parking is available at the top of the elevator on and near High Street. Most of the parking is limited to two-hours.
- There have been recent discussions between the City and County to find solutions for parking. One expensive option would be for the County to build a parking structure to

- accommodate the large number of people that visit the courthouse each day which has a significant impact on the available parking in the core area.
- Parking availability varies depending on the day of the week and time of day; trips that can be scheduled should be scheduled during less busy days. For instance in the summer, Wednesday afternoons are busy as a result of the Farmers Market.

 $P:\ \ \ P:\ \ \ Parking\ Response.docx$ 



625 Center Street Oregon City, OR 97045 503-657-0891

## **Staff Report**

File Number: 12-121

Agenda Date: 9/18/2012 Status: Agenda Ready

To: Transportation Advisory Committee Agenda #:

From: Interim Public Works Director John Lewis File Type:

## SUBJECT:

Holcomb Boulevard Sidewalk Grant Application Update



## Department of Transportation

Active Transportation Section 555 13th St NE Salem, OR 97301-6867

Nancy J.T. Kraushaar, PE > John Lewis
City of Oregon City
PO Box 3040
Oregon City, OR 97045

RE: TE-OBPAC Combined Solicitation 2012 – Notice of Intent Selection Results
Holcomb Boulevard Bicycle Pedestrian Enhancement

We are pleased to inform you that your proposed project (above) has advanced to Stage Two, the application and scoping phase of the combined solicitation process. Congratulations! Now the hard work begins.

You will soon be contacted by ODOT Active Transportation staff to schedule site visits and to provide information about the stage two application and related project scoping. During site visits and project review meetings in August and early September, ODOT will assist (where needed) in refining the scope, schedule and budget of your project and determining what endorsements, commitments, and other coordination you need to complete or obtain for your application. The application form will be provided in September, after the initial site visits and scoping are complete. Your completed application will be due December 13, 2012.

ODOT received 155 Notices of Intent. The TE-OBPAC advisory committees selected 64 to advance to Stage Two. We expect to award funding to between 25 and 30 projects. Please note that the Transportation Enhancement (TE) program is affected by the recent passage of federal transportation legislation, MAP-21. It's too early to know how the changes will affect this project solicitation, but we do expect changes. We are awaiting program guidance from the Federal Highway Administration and decisions by the Oregon Transportation Commission. We will keep you informed of these developments.

Again, congratulations on advancing to Stage 2. Please contact us if you have any questions.

Sincerely,

Pat Fisher

TE Program Manager

(503) 986-3528

Pedestrian and Bicycle Program Manager

(503) 986-3555

# NOTICE OF INTENT Section 1: Project Summary

| ADDITOAN   | T Other of Oweners Other                    | 1-20                       |                                    |  |  |  |
|--|---|----------------------------|------------------------------------|--|--|--|
| APPLICAN   | ,     | 011                        | Name IT Knowskaan D.E.             |  |  |  |
| Agency   | City of Oregon City                         | Contact                    | Nancy J.T. Kraushaar, P.E.         |  |  |  |
| Address  | P. O. Box 3040                              | Title                      | City Engineer/Public Works         |  |  |  |
| =  | Oregon City, Oregon 97045                   | Telephone                  | 503.496.1545                       |  |  |  |
|  |   | Email                      | nkraushaar@orcity.org              |  |  |  |
|  | CANT (if any)                               |                            |                                    |  |  |  |
| Name   |   | Contact                    |                                    |  |  |  |
| Address  |   | Title                      |                                    |  |  |  |
|  |   | Telephone                  |                                    |  |  |  |
|  |   | Email                      |                                    |  |  |  |
| PROJECT  | NAME  |                            |                                    |  |  |  |
|  | Boulevard Bicycle Pedestrian Enh            | ancement                   |                                    |  |  |  |
| MANAGE OF THE  |   | V-0                        | Pagin/andpaints)                   |  |  |  |
|  | (Name of road, street, trail or property; C |                            |                                    |  |  |  |
| HOICOMD  | Boulevard; Oregon City; Winston             | טו. וט סטענו               | i Swan Ave.                        |  |  |  |
| PROBLEM  | STATEMENT— summary (3 lines max             | <b>(.)</b>                 |                                    |  |  |  |
| The proje  | ect will provide missing bicycle/ped        | estrian facil              | ities along historic Barlow Trail. |  |  |  |
| Construc   | tion will improve safety and access         | s to Holcom                | b Elem. School and provide         |  |  |  |
| access to  | the last transit stop and commerc           | ial areas to               | residents NE of school.            |  |  |  |
| PROPOSE  | D SOLUTION — summary (3 lines max.          | .)                         |                                    |  |  |  |
| Construc   | t sidewalks, bicycle lanes, crossing        | s and insta                | II lighting.                       |  |  |  |
|  |   |                            |                                    |  |  |  |
|  |   |                            |                                    |  |  |  |
| TYPE of FI   | JNDS REQUESTED (mark one or more)           |                            |                                    |  |  |  |
|  |   | Ilitica within a           | blic road right of way             |  |  |  |
|  | unds—must be for bicycle/pedestrian faci    |                            | iblic road right-of-way            |  |  |  |
|  | Funds—project size must be \$225,000 c      |                            |                                    |  |  |  |
| will acc   | cept State or Federal funds, or a combinat  | ion                        |                                    |  |  |  |
| ESTIMATE   | D PROJECT SIZE                              | <del></del>                |                                    |  |  |  |
| MI ass th  | an \$500,000 🔲 \$80                         | 0,001 to \$1.2             | million                            |  |  |  |
|  |   | re than \$1.2 m            |                                    |  |  |  |
|  |   | ι <del>ς</del> ιπαπ φτ.2 π | IIIIIOTT                           |  |  |  |
| CERTIFICA  | ATION                                       |                            |                                    |  |  |  |
| Loortifu tha   | t City of Oregon City [applicant agency]    | eupporte the r             | proposed project, has the local    |  |  |  |
|  |   |                            |                                    |  |  |  |
| authority to pledge matching funds, and has the legal authority to apply for State or Federal funds. I |   |                            |                                    |  |  |  |
| further certify that matching funds are available or will be available for the proposed project.       |   |                            |                                    |  |  |  |
|  |   |                            |                                    |  |  |  |
| Signature  | 205 King harris                             | Date 06                    | 106/2012                           |  |  |  |
|  | My Keanshoan                                | 1                          |                                    |  |  |  |
| 0  |   |                            |                                    |  |  |  |
| Printed Na   | me Nancy J.T. Kraushaar, P.E.               | Title Cit                  | y Engineer/Public Works Director   |  |  |  |
|  | Time y train and an analysis and a          | <b>O</b>                   | ,                                  |  |  |  |
| 1  |   |                            |                                    |  |  |  |

## Project Elements (mark all boxes that apply to the <u>major elements</u> of the proposed solution)

| Bicycle and/or Pedestrian   |   | TE Activity other than Bicycle/Pedestrian  |   |  |
|---|---|--|---|--|
| <ul><li>☑ Sidewalks</li><li>☑ Bike Lanes</li><li>☑ Street Crossing</li><li>☑ Shared-Use Path</li></ul>  |   | ☐ Property Acquisition ☐ Scenic easement ☐ Abandoned RR Corridor ☐ Scenic or Historic Site |   |  |
| <ul> <li>□ Bicycle/Pedestrian Bridge</li> <li>☑ Spot Safety Improvement</li> <li>□ Safety/Education Activity</li> <li>☑ Signing, Lighting, Wayfing</li> <li>☑ New Section or Extension</li> <li>☑ Connection to transit or or</li> <li>□ Other <u>[describe]</u></li> </ul>     | (non-construction)<br>ding<br>□ ☑ In-fill | ☐ Inventory, control and ☐ Landscaping and othe ☐ Historic Preservation,                   | removal of outdoor advertising er scenic beautification or Rehabilitation and Operation buildings, structures or facilities |  |
| Relation to Adopted Plans   |   |  |   |  |
| Ivno of Dian  | Dolation to Dlan                          |  |   |  |
| Type of Plan  | Relation to Plan                          | Davida/Cita Conneista  | Consend Condon Police   |  |
| _   | Relation to Plan  Project-Specific        | Route/Site Specific  | General Goal or Policy  |  |
|   |   | Route/Site Specific  | General Goal or Policy  |  |
| <ul><li></li></ul>  |   | Route/Site Specific  | General Goal or Policy  |  |
| <ul><li></li></ul>  |   | Route/Site Specific  | General Goal or Policy  |  |
| <ul><li></li></ul>  |   | Route/Site Specific  | General Goal or Policy  |  |
| <ul> <li>         ☐ Comprehensive Plan         ☐ Resource Mgmt. Plan         ☐ Trans. System (TSP)         ☐ Bicycle/Pedestrian     </li> </ul>   |   | Route/Site Specific  | General Goal or Policy  |  |
| <ul> <li>☑ Comprehensive Plan</li> <li>☐ Resource Mgmt. Plan</li> <li>☑ Trans. System (TSP)</li> <li>☑ Bicycle/Pedestrian or Trails Master Plan</li> </ul>  |   | Route/Site Specific  | General Goal or Policy  |  |
| <ul> <li>Comprehensive Plan</li> <li>Resource Mgmt. Plan</li> <li>Trans. System (TSP)</li> <li>Bicycle/Pedestrian or Trails Master Plan</li> <li>Corridor or Byway Plan</li> </ul>  |   | Route/Site Specific  | General Goal or Policy  |  |
| <ul> <li>Comprehensive Plan</li> <li>Resource Mgmt. Plan</li> <li>Trans. System (TSP)</li> <li>Bicycle/Pedestrian or Trails Master Plan</li> <li>Corridor or Byway Plan</li> <li>[other plan name]</li> </ul>   | Project-Specific                          | Route/Site Specific  | ervices contributed by  |  |
| <ul> <li>Comprehensive Plan</li> <li>Resource Mgmt. Plan</li> <li>Trans. System (TSP)</li> <li>Bicycle/Pedestrian or Trails Master Plan</li> <li>Corridor or Byway Plan</li> <li>[other plan name]</li> <li>Coordination Issues</li> <li>Project located in MPO jump</li> </ul> | Project-Specific                          | □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □  | ervices contributed by or co-applicant  |  |

## **Applicant and Co-Applicant Information**

| Lead Applicant Co-Applicant   |                                      |  |                                      |                        |                     |         |
|---|--------------------------------------|--|--------------------------------------|------------------------|---------------------|---------|
| Type of Applicant   | Certified Local Agency               |  |                                      | Certified Local Agency |                     |         |
|   | State, Local or Tribal—non-certified |  | State, Local or Tribal—non-certified |                        |                     |         |
|   | ☐ Federal Agency                     | Federal Agency   |                                      | Federal Agency         |                     |         |
|   | _                                    | ,  |                                      | Private Organization   |                     |         |
| Projects in progress with ODOT Funds                                    | Award Year C                         | On time  | Delayed                              | Award Year             | On time             | Delayed |
| ☐ TE Program ☐ Bike-Ped Grant   | 2010                                 |  |                                      |                        |                     |         |
| ☐ <u>[program name]</u> ☐ <u>[program name]</u> ☐ <u>[program name]</u> |                                      |  |                                      |                        |                     |         |
| N/A none  |                                      |  |                                      |                        |                     |         |
| Ownership Status of   | project site or rigi                 | ht-of-way  | 1                                    |                        |                     |         |
| Fully owned by application  | ant                                  | □N   | eed agreem                           | ent with ODOT o        | r other public      | agency  |
| Don't know  |                                      | N  | eed to acqui                         | re property or ea      | sements             |         |
| Partners and Contrib  | outors                               |  |                                      |                        |                     |         |
| Agency or Organization  | Type of Partic                       | cipation   |                                      |                        |                     |         |
| City of Oregon City   | Financial Contribution               |  | Use of Propo                         | <i></i>                | f Time<br>tribution |         |
| ☐ Financi<br>Contrib  |                                      |  | Use of Propo                         | <i></i>                | f Time<br>tribution |         |
| Matching Funds  |                                      |  |                                      |                        |                     |         |
| Anticipated Source  | Type of Match                        | 1  |                                      |                        |                     |         |
| City of Oregon City   |                                      | <ul><li></li></ul>   |                                      |                        |                     |         |
|   | Cash Avail                           | ☐ Cash Available Now ☐ Future Cash ☐ Certified Agency Staff Time |                                      |                        |                     |         |
|   | ☐ Donated P                          | Donated Property Donated Construction Materials                  |                                      |                        |                     |         |

## **Environmental Issues**

|  | Potential Impact or<br>Mitigation<br>Needs evaluation.<br>May need a report,<br>finding, permit or<br>concurrence | Minor Impact or<br>No-Adverse Effect<br>May need concurrence<br>letter or programmatic<br>approval. | N/A or<br>No Effect<br>Not relevant due<br>to type of work or<br>lack of ground<br>disturbance. | Don't<br>Know |
|--|---|---|---|---------------|
| Wetlands or Floodplain   |   |   | $\boxtimes$   |               |
| Stream Encroachment  |   |   | $\boxtimes$   |               |
| Endangered Species   |   |   |   |               |
| Other Fish and Wildlife<br>Issues (Habitat,<br>Migration, Nesting) |   |   |   |               |
| Cultural & Historic<br>Resources                                   |   |   |   |               |
| Public Park or Wildlife<br>Refuge                                  |   |   |   |               |
| Hazardous Materials  |   |   | $\boxtimes$   |               |
| Noise and Air Quality  |   |   |   |               |
| Project Readiness  |   |   |   |               |
| Project will expand, exte  | end or augment a trans  | sportation project already i  | n development.  |               |
| Similar scope of work su   | uccessfully completed   | in a previous phase or pre  | vious project nearby.   |               |
| [Other Readiness Factor  |   |   |   |               |
| Activity   | St  | atus  |   |               |
|  |   | Started Co  | ompleted Not Neede  | b             |
| Planning and public involve  | ment process  |   |   |               |
| Surveying  |   |   |   |               |
| Environmental Permit or Cle  | earances  |   |   |               |
| Project design by ODOT sta<br>Local Agency or a pre-quali          |   | Started Co  | ompleted Not Neede  | d             |
|  |   | Started Co  | ompleted Not Neede  | d             |
| Coordination with ODOT Re  | egion staff   |   |   |               |
| Coordination with Railroad   |   |   |   |               |

## Section 2: Narrative

Do not exceed the allowed space for each section.

## PROBLEM STATEMENT

Describe the problem, need or opportunity that compels this request for funding. Is it access or connectivity, safety? Economic or tourism development? Health promotion? Focus on WHY the project is needed, not a description of WHAT work is proposed.

The focus of this project is to convert trips that are currently made by school buses or autos to pedestrian or bicycle trips. Holcomb Blvd. is part of the historic Barlow Trail. It is designated as a minor arterial and is bordered by a ditch. Safety concerns are too great to allow children to walk or bike to school. There are 275 homes above and across from Holcomb Elementary School and 77 homes below for a total of 352 homes which lack bicycle/pedestrian connectivity. The school is a local destination for education, sporting events, after-school activities and public meetings, but lacks access for many of its students and residents that live within a mile of the facility. Currently, the only safe way to this destination is to take a school bus or drive. Because of the lack of bicycle/pedestrian facilities, the last transit stop on the route is not accessible to residents living in the 275 homes past the transit stop. The lack of facilities also discourages bicycle/pedestrian trips made to the local store. Interpretive signs along the Barlow Trail will be installed this summer. Improvements to the bicycle/pedestrian system will help connect Oregon City to its historic past while promoting local tourist activities.

## PROPOSED SOLUTION

Describe the proposed or potential solution. Describe any alternative solutions that will be considered or that have already been considered and rejected. .

Continue to implement the various phases of the Holcomb Boulevard Pedestrian Enhancement Concept Plan and TSP projects by constructing bike lanes, sidewalks, lighting, pedestrian crossings, safety improvement such as rapid flashing beacons, and school zone signs when bicycle/pedestrian warrants are met.

## (A) SYSTEM BENEFIT

How does the project support existing bikeway or walkway systems?

Does it serve more than one mode of travel, or provide connection between different modes?

How will this project extend or complete a transportation system, or improve connectivity? Will it improve transportation safety—indirectly or by correcting conditions at a key location?

This project will extend the current bicycle/pedestrian systems and allow access to public transit. In addition, it will provide access to the primary destination for the neighborhood, Holcomb Elementary School. The current roadway is classified as a minor arterial; by installing these improvements safety will be vastly improved. With current volumes and speeds walking or bicycling for school-age children is not an option and many adults choose not to walk or bike because of the safety concerns. In addition, this system inprovement will provide walking and bicycle access to the six Barlow Trail interpretive signs which will be installed this summer. When constructed, this project will connect to an existing system and complete the multi-modal transportation system for this area of Oregon City.

## (B) COMMUNITY BENEFIT

How does the project support or promote the following assets in the community or area: Livability. Economic stability/development. Long-term employment. Healthy, active lifestyles.

How does it promote environmental quality, conservation/use of sustainable energy? How does it improve safety for pedestrians, bicyclists, or other system users? What types of land use will be served (commercial, residential, industrial, schools, parks, major employers)?

This project will aid in providing economic stability by providing access to transit and jobs. It will promote healthy activities by eliminating some busing to Holcomb Elementary School and provide walking and bicycle access to the school, playground and sports fields. The primary land uses that will be served by these improvements will be the school, residential homes and historic interpretive signs in the Holcomb Boulevard corridor.

The project will also facilitate public meetings and neighborhood events held at the school. Completing this project will also provide safe access to the commercial district including the neighborhood grocery store.

## (C) USER BENEFIT

What is the potential daily use of the project? How was that usage determined? What segments of the population will benefit? Does this include transportation-disadvantaged groups such as minorities, disabled, elderly, and youth? How does the project expand transportation choices? What are the important improvements over current conditions?

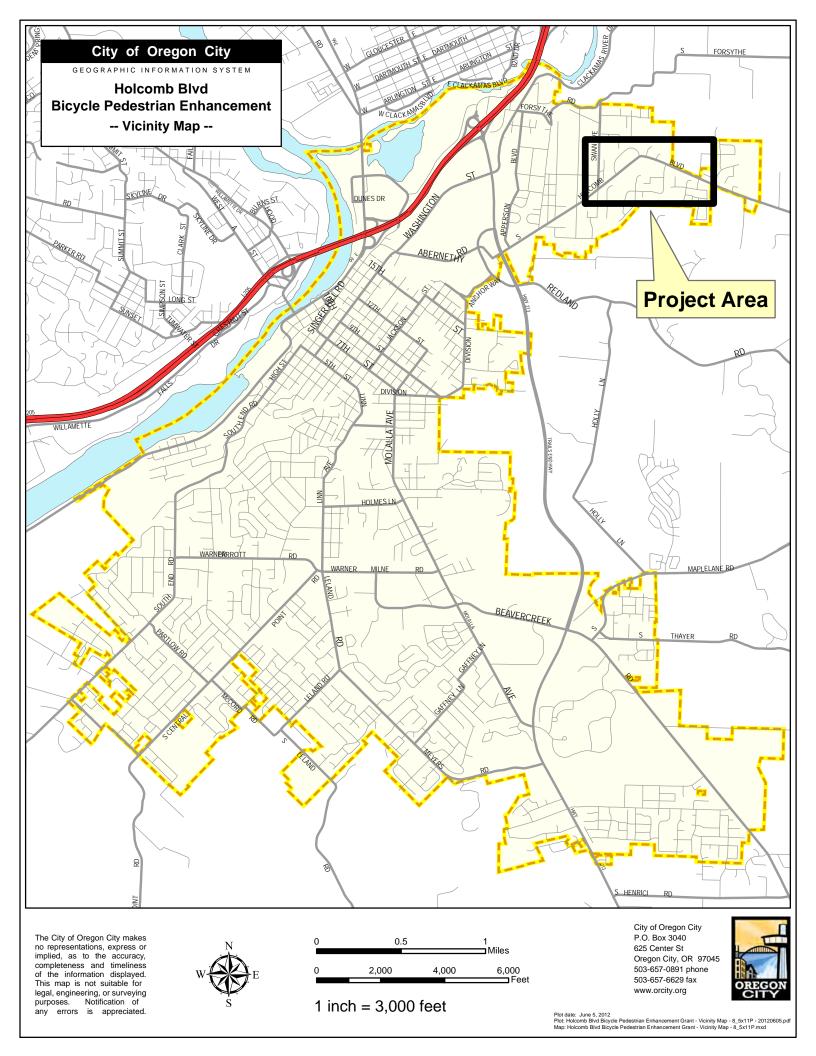
The project would be used daily by students traveling to Holcomb Elementary School because they would no longer require busing. Currently the only transportation choices that most of the residents in the project area utilize is to drive or be bused to Holcomb Elementary School even though students live less than a mile from the school. Residents that are currently cut off from the rest of the neighborhood would no longer have to rely on vehicles to access the Park Place neighborhood. The last transit stop is adjacent to the school and the installation of sidewalks and bicycle lanes would benefit all age groups including transportation disadvantaged groups to access public transit to travel to jobs or shopping. Current conditions do not allow for walking or bicycling in a safe environment. Improvements would provide a safe environment and would increase alternate travel modes other than the automobile.

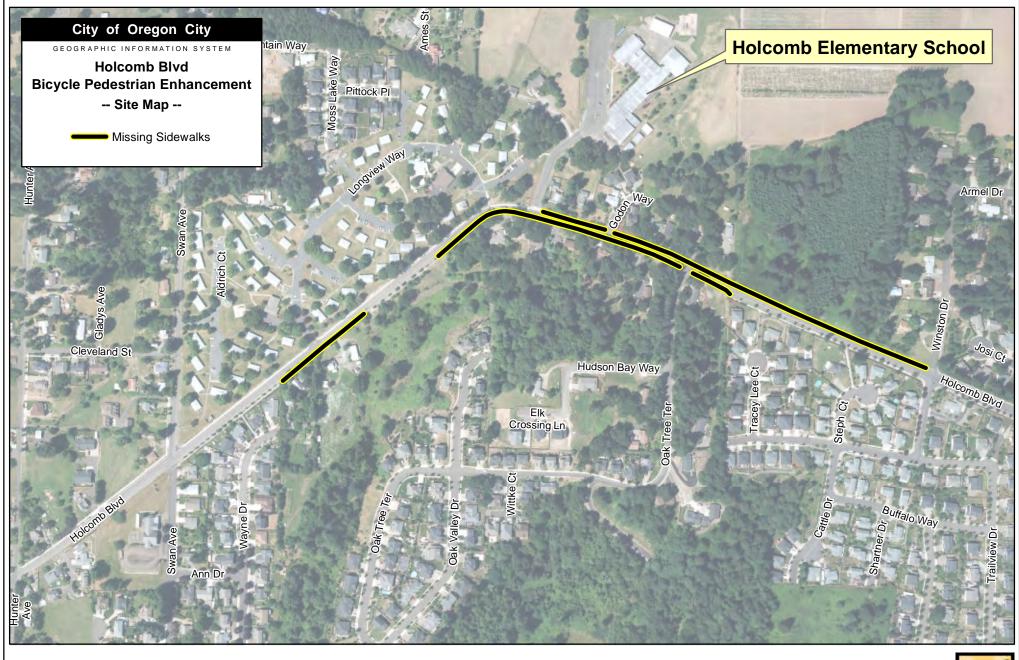
## (D) IMPORTANCE and NEED

What is the project's priority within the agency or community, and how is that documented? How is it addressed in adopted plans or policies—consistent, supporting or implementing? Discuss the project's urgency and need in terms of problems or lost opportunities that arise if it is not funded, and how it will be funded if this request is not successful.

This is an important community project and has its own planning document adopted in 2005 by Ord. 05-1003, the Holcomb Boulevard Pedestrian Enhancement Concept Plan. The project is also identifed in the City's TSP. Much of the area is already developed and the only way that the entire project will be funded is through grant funding. There is a clear need to construct the missing sidewalk/bicycle lanes. This is not just a simple sidewalk infill project as it is located on a minor arterial, part of a historic corridor, provides access to an elementary school, will reduce bus trips while also connecting to public transit and commercial land uses. At this time, 4 adjacent property owners have indicated their willingness to donate up to 10' of ROW for the purpose of installing this pedestrian facility. The Park Place NA is currently talking to the remaining landowners to ask for donations of additional needed ROW. If this request is not successful the only way to construct this project will be to continue to seek grant funding.

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The City of Oregon City makes no representations, express or implied, as to the accuracy, completeness and timeliness of the information displayed. This map is not suitable for legal, engineering, or surveying purposes. Notification of any errors is appreciated.



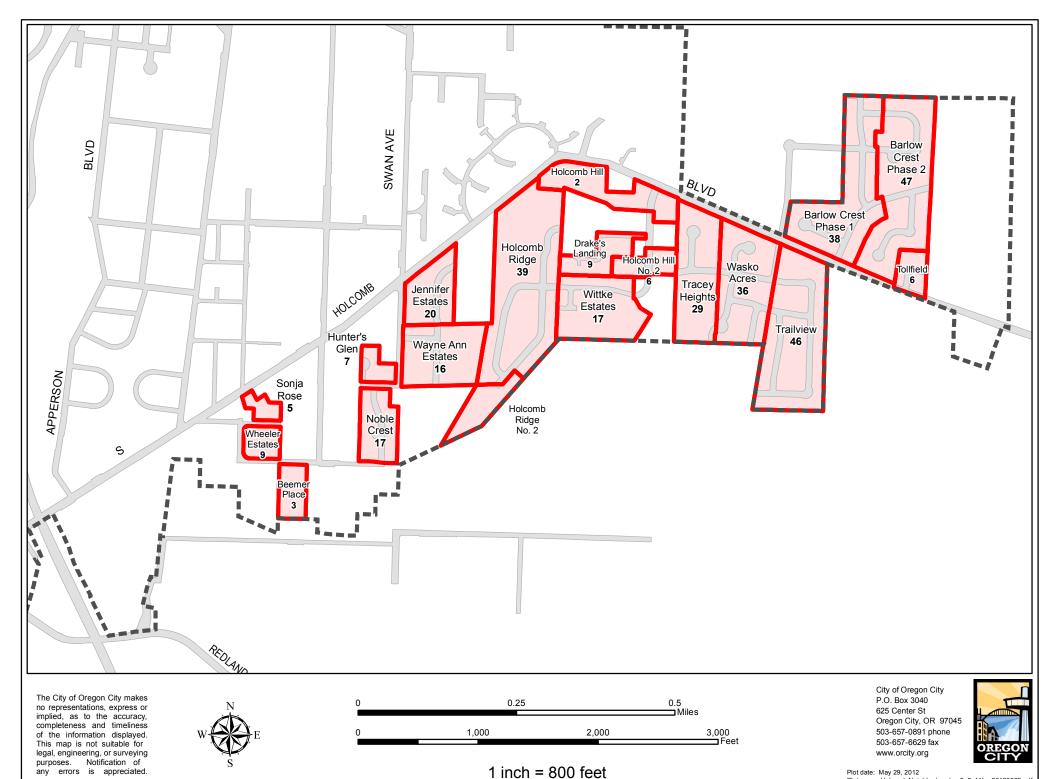
0 500 1,000 1,500

1 inch = 400 feet

City of Oregon City P.O. Box 3040 625 Center St Oregon City, OR 97045 503-657-0891 phone 503-657-6629 fax www.orcity.org



Plot date: June 5, 2012 Plot: Holcomb Blvd Bicycle Pedestrian Enhancement Grant - Site Map - 8\_5x11P - 20120605.pdf Map: Holcomb Blvd Bicycle Pedestrian Enhancement Grant - Site Map - 8\_5x11P.mxd



Plot date: May 29, 2012 Plot name: Holcomb Neighborhoods - 8\_5x11L - 20120529.pdf Map name: Holcomb Neighborhoods - 8\_5x11L.mxd



625 Center Street Oregon City, OR 97045 503-657-0891

## **Staff Report**

File Number: 12-120

Agenda Date: 9/18/2012 Status: Agenda Ready

To: Transportation Advisory Committee Agenda #:

From: Interim Public Works Director John Lewis File Type:

## SUBJECT:

Pavement Cut Standards - Presentation Scheduled for City Commission 9/19/12



625 Center Street Oregon City, OR 97045 503-657-0891

## **Staff Report**

File Number: 12-107

Agenda Date: 9/19/2012 Status: Agenda Ready

To: City Commission Agenda #:

From: Interim Public Works Director John Lewis File Type: Resolution

#### SUBJECT:

Resolution No. 12-29: Adopting City Of Oregon City Public Works Pavement Cut Standards And Standard Drawings

#### RECOMMENDED ACTION (Motion):

Staff recommends that the City Commission approve Resolution No. 12-29 Pavement Cut Standards and Drawings.

#### **BACKGROUND:**

At the September 5, 2012 Commission meeting the City Commission approved the first reading of Ordinance No. 12-1006. Tonight the City Commission will consider approval of the the second reading of Ordinance No. 12-1006 that requires pavement cut restoration to meet the City's new pavement cut standards in a separate agenda item. This resolution is related because it will adopt the new pavement cut standards that provide the basis for restoration requirements mandated by the ordinance. Adopting these standards by a resolution, as opposed to an ordinance, allows future updates to become effective upon Commission consent without multiple readings.

This pavement cut standard establishes restoration requirements based on the age and classification (arterial, collector, or local) of the street in which the pavement cut will be made. It creates higher restoration requirements in all roads. It especially targets roads with new pavement or higher traffic by requiring replacement of the top lift of pavement beyond the excavation area to the edge of the travel lane or edge of the pavement. It is the goal of this standard to provide long-lasting pavement repairs at the least possible overall cost to both utility companies and taxpayers/ratepayers.

Public Works will administer and enforce this standard under its Right of Way Permit and charge an additional \$25 fee to cover its administrative cost.

It should be noted that copies of the pavement cut standard and drawings are included in the first reading for Ordinance No. 12-1006 for informational purposes. The standards and drawings included with this report are the same and will become the final adopted Pavement Cut Standards with the approval of this resolution.

## **RECOMMENDED ACTION (Motion):**

Staff recommends that the City Commission approve Resolution No. 12-29 Pavement Cut Standards and Drawings.

File Number: 12-107

## **BACKGROUND:**

At the September 5, 2012 Commission meeting the City Commission approved the first reading of Ordinance No. 12-1006. Tonight the City Commission will consider approval of the the second reading of Ordinance No. 12-1006 that requires pavement cut restoration to meet the City's new pavement cut standards in a separate agenda item. This resolution is related because it will adopt the new pavement cut standards that provide the basis for restoration requirements mandated by the ordinance. Adopting these standards by a resolution, as opposed to an ordinance, allows future updates to become effective upon Commission consent without multiple readings.

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Public Works will administer and enforce this standard under its Right of Way Permit and charge an additional \$25 fee to cover its administrative cost.

It should be noted that copies of the pavement cut standard and drawings are included in the first reading for Ordinance No. 12-1006 for informational purposes. The standards and drawings included with this report are the same and will become the final adopted Pavement Cut Standards with the approval of this resolution.

#### **RESOLUTION NO. 12-29**

## A RESOLUTION ADOPTING A CITY OF OREGON CITY PUBLIC WORKS PAVEMENT CUT STANDARDS AND STANDARD DRAWINGS

**WHEREAS**, the City of Oregon City ("City") has jurisdiction and exercises regulatory management over all public rights-of-way within the City under authority of the City Charter and state law; and

**WHEREAS**, Title 12.04.100 of the Oregon City Municipal Code ("OCMC") governing activities occurring within public right-of-way authorizes the City Commission to adopt street construction specifications by resolution; and

**WHEREAS**, the City finds it necessary to implement higher restoration standards for pavement cuts within public rights-of-way in the interest of maximizing the pavement service life and minimizing maintenance costs.

## NOW, THEREFORE, OREGON CITY RESOLVES AS FOLLOWS:

**Section 1.** The Public Works Pavement Cut Standard, coupled with Public Works Standard Drawings 532, 533 and 534, attached hereto as Exhibit A is hereby adopted to apply to all pavement cuts within the public rights-of-way.

**Section 2.** In addition to the applicable fee for obtaining a Right-of-Way Permit, the City will collect an additional twenty-five dollar fee.

**Section 3.** The effective date of the Pavement Cut Standards shall be 30 days following final enactment.

Approved and adopted at a regular meeting of the City Commission on the 19<sup>th</sup> day of September 2012.

|   | DOUG NEELEY, Mayor                |
|---|-----------------------------------|
| Attested to this 19 <sup>th</sup> day of September 2012 | Approved as to legal sufficiency: |
| Nancy Ide, City Recorder                                | City Attorney                     |

# CITY OF OREGON CITY PUBLIC WORKS PAVEMENT CUT STANDARD

**RESOLUTION NO. 12-29** 

ADOPTED: SEPTEMBER 19<sup>TH</sup>, 2012

**EFFECTIVE: OCTOBER 19TH, 2012** 

PREPARED BY

PUBLIC WORKS DEPARTMENT

122 S Center Street

PO Box 3040

Oregon City, Oregon 97045

Telephone: (503) 657-8241

**Engineering Division** 

# CITY OF OREGON CITY PUBLIC WORKS PAVEMENT CUT STANDARD

#### INTRODUCTION

Pavement cuts are a necessary operation and cannot be avoided. Utilities need to serve new customers and repair existing facilities. There is a common good for all utilities to be placed in the public right-of-way. All parties shall strive to reduce the burden to the taxpayer/ratepayer, and damage to the roadways.

Studies conducted by multiple groups and organizations have determined that poorly restored pavement cuts cause permanent structural and functional damage increasing maintenance costs, future rehabilitation costs and produce a rough ride. If realized, the increased costs and rough ride are a burden for the taxpayer/ratepayer.

The pavement beyond the trench may be weakened by sagging which results from loss of lateral support. Heavy construction traffic also weakens the area adjacent to the trench. Studies have shown that the pavement life may be reduced by pavement cuts. Poorly constructed patches tend not to last through the life of the existing road and fail prematurely when there is a lack of good construction techniques used when backfilling and compacting. This causes an additional burden to maintenance departments and taxpayers/ratepayers. A poorly constructed pavement cut usually requires repair before the road needs to be resurfaced. Studies also reveal that patch areas probably require thicker overlays compared to the rest of the pavement in the area. This also results in higher costs to the taxpayer/ratepayer.

## **PURPOSE**

The purpose of this standard is to establish a uniform approach to pavement cuts and street repair applicable to utilities and other contractors working in the public rights-of-way. The goal of this standard is to provide long lasting pavement repairs at the least possible overall cost to both utilities and taxpayers/ratepayers.

## APPLICABLE STANDARDS AND SCOPE

This document supplements the Oregon City design and construction standards/drawings. All work and materials shall conform to the applicable Oregon Standard Specifications for Construction published by the Oregon Department of Transportation and modified by the City of Oregon City. This Pavement Cut Standard document pertains to the base aggregate, and asphalt and cement concrete sections for pavement patches only. For trench backfill requirements, see Oregon City Standard Drawing SD (No. 313). Requirements typical for pavement repair work associated with pavement cuts are described below.

#### **DEFINITIONS**

City: City of Oregon City.

**City Engineer:** City Engineer, or designee (Engineers, Inspectors, Project Managers, Field Personnel) representing the City of Oregon City.

Full Depth: Thickness of asphalt from top of asphalt to base aggregate.

**Interim Patch:** A temporary patch including two inches of hot mixed asphalt concrete (HMAC).

**Length of Patch:** The patch dimension parallel to the roadway.

**New Roadway:** Any roadway that has had a qualifying pavement treatment in the permitted excavation location that is less than or equal to three years.

**ODOT:** Oregon Department of Transportation

**Travel Lane:** Travel lane location shall be determined based on striping, where present. Where there is no striping, the travel lane width shall be twelve feet from the road centerline. Where the edge of the travel lane width is within four feet from the edge of pavement, the travel lane shall extend to the edge of the pavement.

**Length of Patch:** The patch dimension parallel to the roadway.

**Permanent Patch:** The final pavement repair as part of the current permitted job.

**Permittees:** The utility company or other entity who submits an application for a permit to conduct construction operations in the public right-of-way. The Permittee's contractor will be held to the requirements of the permit.

**Qualifying Pavement Treatment:** Preventative maintenance treatments such as slurry sealing and microsurfacing along with other rehabilitation methods such as overlays, grind/inlays and reconstruction constitute qualifying treatments that will re-start the tier timelines. Minor street maintenance such as spot repairs and crack sealing will not restart the tier timeline.

**Tier:** Grouping by age of street with respect to the most recent qualifying pavement treatment. Because the City keeps records of the year, but not exact dates on which pavement treatments are applied, the date of a given qualifying treatment will be assumed to be July 1<sup>st</sup> of the applicable year.

**Travel Lane:** Travel lanes shall be established based on striping, where present. Where there is no striping, the travel lane width shall be twelve feet from the road centerline.

The travel lane width shall extend to the edge of pavement if it is within four feet from the edge of pavement.

**Width of Patch:** The patch dimension perpendicular to the roadway.

## PAVEMENT RESTORATION REQUIREMENTS

The City of Oregon City hereby establishes a tiered pavement cut standard system based on the date of the last qualifying pavement treatment applied to a pavement. The standard will be in effect for any City roadway from the time a qualifying pavement treatment was applied. The applicable standards are described below and specific replacement requirements are shown in Oregon City Standard Drawing No. 526, 527, and 528.

- 1. <u>Moratorium Standard</u>: Pavement cuts will only be allowed on an emergency basis. No planned or permitted cuts will be allowed when this standard applies. If pavement cutting is necessary for emergencies, cuts shall be full depth and extend one foot beyond the nominal trench edge longitudinally and transversely. Two inch minimum thickness grind and inlay paving shall extend the full width of an established travel lane and to the curb line or edge of pavement.
- 2. <u>Full Standard</u>: Pavement cuts shall be full depth and extend one foot beyond the nominal trench edge longitudinally and transversely. Two inch minimum thickness grind and inlay paving shall extend the full width of an established travel lane. There shall be no gaps that are less than four feet from the edge of pavement.
- 3. <u>Modified Standard</u>: Pavement cuts shall be full depth and extend one foot beyond the nominal trench edge longitudinally and transversely. Two inch minimum thickness grind and inlay paving shall extend beyond the wheel path to the middle of the travel lane. There shall be no gaps that are less than four feet from the edge of pavement.
- 4. <u>T-Cut Standard</u>: Pavement cuts shall be full depth and extend 1-foot beyond the nominal trench edge longitudinally and transversely.

Applicable standards based on Tier (number of years since last qualifying pavement treatment) and City Street Classification is established in the following table:

TABLE 1- RESTORATION REOUIREMENTS BY CLASSIFICATION AND TIER

| Street Classification    | Tier 1 (≤ 3 years) | Tier 2<br>(3-6 years) | Tier 3 (> 6 years) |
|--------------------------|--------------------|-----------------------|--------------------|
|                          | Moratorium         |                       |                    |
| Arterial Streets         | Standard           | Full Standard         | Full Standard      |
|                          | Moratorium         |                       |                    |
| <b>Collector Streets</b> | Standard           | Full Standard         | Modified Standard  |
|                          | Moratorium         |                       |                    |
| <b>Local Streets</b>     | Standard           | Full Standard         | T-Cut Standard     |

**Note:** Proposals to deviate from the standards described above will require approval in advance by the City.Engineer. See exemption process described below. During the permit review process, the City Engineer will determine the applicable standard based on the above table.

#### **PERMITS**

- 1. As part of obtaining a Right-of-Way permit per OCMC 12.04, Permittee shall provide the proposed street cut information as requested by the Public Works department. A street cut form will be provided by the City. The City Engineer will determine the restoration requirements in accordance with this Standard. The Permittee shall provide the City Engineer 24 hours notice prior to completing final restoration to allow for inspection.
- 2. If the City Engineer determines, in his / her discretion, that previous violations of these Standards exist, future construction work may be disallowed until the Permittee has fulfilled all obligations. Written notification by the City Engineer will be sent prior to this action.
- 3. The Permittee shall notify the City Engineer of existing problems with the adjacent roadway to a proposed patch. Every effort will be made to leverage both utility and City dollars for street improvements.

#### **RESPONSIBLE PARTY**

The Permittee shall be responsible for all construction and warranty requirements of this standard even when the work is done by a Permittee retained contractor.

## **GENERAL REQUIREMENTS**

- 1. Materials:
  - a. All patching materials and construction requirements not addressed in this document shall conform to the City's Standards.
  - b. Level 2, ½ inch Dense PG 64-22 HMAC shall be used for all permanent asphalt restoration.
- 2. Patching:
  - a. Longitudinal cuts that extend through multiple tier classifications require discussion with the City Engineer to determine the appropriate patching approach. In principle, each road section will be patched according to the applicable standard and tier in which it is ranked; however the City retains the right to require higher level tier at its discretion.
  - b. For all full depth asphalt repairs, the minimum asphalt thickness shall be four inches thick, or match the existing depth of asphalt, whichever is greater.

- c. All HMAC lifts shall be compacted to 92% of the maximum theoretical density per AASHTO T-209 (Rice Density).
- d. Existing base rock disturbed within full depth asphalt repairs shall be recompacted prior to paving. For trench backfill requirements, see Oregon City Standard Drawings (No. 313).
- e. All cold-planed surfaces shall be swept and kept clean at all times. All coldplaned materials shall be removed and disposed off-site at the cost of the Permittee.
- f. If a patch exceeds seventy percent of an existing patch, the entire existing patch shall be replaced.
- g. The minimum dimension of the patch parallel to the road shall be eight feet. If any part of the excavation, patch or damaged area intrudes into an adjacent lane, that lane shall also be replaced in accordance with the tiered chart and Oregon City standard drawings.
- h. New patches adjacent to any existing patch shall be extended to the existing patch line where possible. If patch lines cannot be combined, a minimum gap of four feet shall be provided between patches.
- i. When two or more patches on the same project are created within fifteen feet of each other, they shall be incorporated into a single patch at the expense of the Permittee. Anytime more than two patches are required within a 350-foot longitudinal area, the Permittee shall notify the City Engineer to determine if cost sharing is an option to expand the pavement repair/replacement area.
- j. Pavement cuts shall be straight, clean and parallel/perpendicular pavement cuts with respect to the roadway will be allowed. No jagged, broken or undermined edges will be allowed.
- k. All pavement overcuts shall be sealed using an ODOT approved edge sealing tack material and clean sand blanket.
- 1. The top lift of asphalt for all repairs with a length that exceeds twenty feet and width that exceeds eight feet shall be placed using a paving machine with a screed or an asphalt spreader box.
- m. The completed surface of all courses shall be of uniform texture; smooth, uniform as to crown and grade and free from defects. The completed surface of the wearing course shall not vary more than 1/4 inch from the lower edge of a ten foot straightedge placed parallel to the centerline. Tolerance exceptions and corrective measures due to existing roadway conditions or other reasons must be approved by the City Engineer.
- n. All areas outside of the travel lanes or shoulders that are affected by the work shall be restored to their original condition.

#### 3. Traffic Control:

a. Permittee shall follow the Oregon Temporary Traffic Control Handbook and erect and maintain traffic control per the most recent edition of the Manual of Uniform Traffic Control Devices (MUTCD) and Oregon State modification to the MUTCD. The Permittee shall submit a traffic control plan for review and approval by the City.

- b. All existing traffic control markings will be replaced as soon as possible after permanent paving is completed.
- c. Temporary markings for lane lines and stop lines shall be in place prior to the roadway opening for traffic.
- d. All remaining temporary striping will be completed within seven days of new pavement completion and shall be maintained by Permittee until permanently restored.
- 4. Emergency Repairs: The City will allow a Permittee to make emergency repairs provided a more reasonable alternative does not exist. Permittee shall make every reasonable effort to restore the roadway quickly. Permittee shall notify the City Engineer of emergency repairs not later than the next business day.

## SPECIAL REQUIREMENTS FOR CHIP SEAL AND CONCRETE ROADS

- 1. Chip sealed roads shall be rehabilitated according to construction requirements for asphalt roads as outlined in this document.
- 2. All concrete road cuts shall be pre-approved before beginning work (except in the case of an emergency situation). Concrete roads shall require full panel replacement unless approved otherwise by the City Engineer. All concrete joints shall require an approved tie bar and dowel retrofit. Depth of concrete replacement shall match the existing thickness or shall be in accordance with City Standards whichever is greater. Care shall be made not to undermine the existing panels. If the adjacent panels are disturbed or damaged, they also shall be replaced at the discretion of the City Engineer. All joints shall be sealed with an approved material. Where concrete roads are overlaid with asphalt, the concrete shall be replaced as described above and asphalt portion of the cut shall be constructed according to the pavement standard.

#### **EXCEPTIONS**

This section identifies exceptions to the pavement restoration requirements for the activities listed below. The general and special restoration requirements shall still apply.

- 1. Valve and manhole repairs shall be exempt from the patching requirements of this standard. Valve and manhole patching requirements shall be in accordance with City Standards. All warranty and construction requirements shall be met. No longitudinal construction joints shall be allowed in the wheel path.
- 2. Potholing to find utilities shall be exempt from patching requirements of this standard. To be exempt, cuts shall be less than two-foot square with no longitudinal joints in the wheel path and shall be backfilled with controlled density or other approved fill from six inches above the utility to six inches below bottom of asphalt. Round cuts are preferred.

## NEW DEVELOPMENT

This standard is a minimum standard applicable to all cuts made in existing roadways. For new development, additional requirements may apply. Contact the Public Works Department Development Services Division for specific additional requirements.

## TEMPORARY PAVEMENT RESTORATION

Pavement shall be restored with temporary patches before the road is reopened to traffic as defined below. The Permittee shall maintain the temporary patch until the patch has been permanently restored. Gravel surfacing is not acceptable as a temporary patch.

- 1. **Immediate Patch:** An immediate patch may be used to open the roadway to traffic. Immediate patches may include the use of steel plates with signs or be a minimum of two-inch thick cold mix asphalt on two inches thick crushed surfacing. Immediate patches will only be allowed while work is being completed and shall be replaced with an interim or permanent patch within days after placement. Steel plates shall be pinned and ramped with cold mix asphalt.
- 2. **Interim Patch:** When a permanent patch cannot be completed within days of an immediate patch, an interim patch shall be used to keep the roadway open to traffic. Interim patches shall be a minimum of two-inch thick HMAC on 2-inch thick crushed surfacing. Interim patches shall be replaced with a final patch within 30 days after placement.

## **TESTING & WARRANTY REQUIREMENTS**

- 1. Asphalt density testing to meet 92% maximum theoretical density per AASHTO T-209 (Rice Density) shall be performed by the Permittee. A minimum of one density test shall be formed for each patch. For patches longer than 300 feet in length, at least one test shall be completed per every 300 linear feet.
- 2. Base rock density testing within the trench limits to meet 95% maximum dry density per AASHTO T-180 shall per performed by the Permittee prior to paving. A minimum of one density test shall be formed at top of rock for each patch prior to paving. For patches longer than 300 feet in length, at least one test shall be completed at the top of rock per every 300 linear feet.
- 3. Pavement restoration on roadways under all pavement cut standards will have a warranty period of two years. The patch shall be repaired if necessary until the warranty has passed.
- 4. All warranties will become void if the road receives a qualifying pavement treatment within the patching limits.

- 5. For road cuts performed by a Permittee using its internal capability, that Permittee or assignee will be responsible for repairs required during the warranty period.
- 6. All warranty work requires that a City inspector be on site. The Permittee shall be required to coordinate inspection with the City Engineer.
- 7. The following defects identified by the City Engineer shall be covered by warranty:
  - a. Sunken pavement patches greater than or equal to one-quarter inch (measured by a ten-foot straight edge).
  - b. Surface raveling or oxidation due to deficiencies with the asphalt material.
  - c. Poor workmanship.
  - d. Inadequate compaction per City standards.

## 8. Notice of Repairs

- a. If emergency repairs are needed due to safety concerns, the Permittee shall immediately upon contact make such repairs from time of verbal notice by the City Engineer. Such notice shall be reduced to writing and transmitted to the Permittee within two business days.
- b. For non-emergency repairs on arterial or collector streets, the Permittee shall have forty-eight hours in which to make such repairs from time of verbal notice by the City Engineer. For residential streets, the Permittee shall have up to seven days to make such repairs.
- c. The City Engineer may provide for repairs not completed within the specified timeframes above. The City Engineer shall give notice of noncompliance to the Permittee within two business days. Repairs involving public safety may be made without notice. Permittee will be assessed all costs associated with the repairs. The costs shall be based on actual costs or the average bid items for comparable projects for the year preceding, plus fifteen percent overhead fees. If repairs are made other than seam sealing to the warranted patch, a new warranty will be implemented for the new patch.

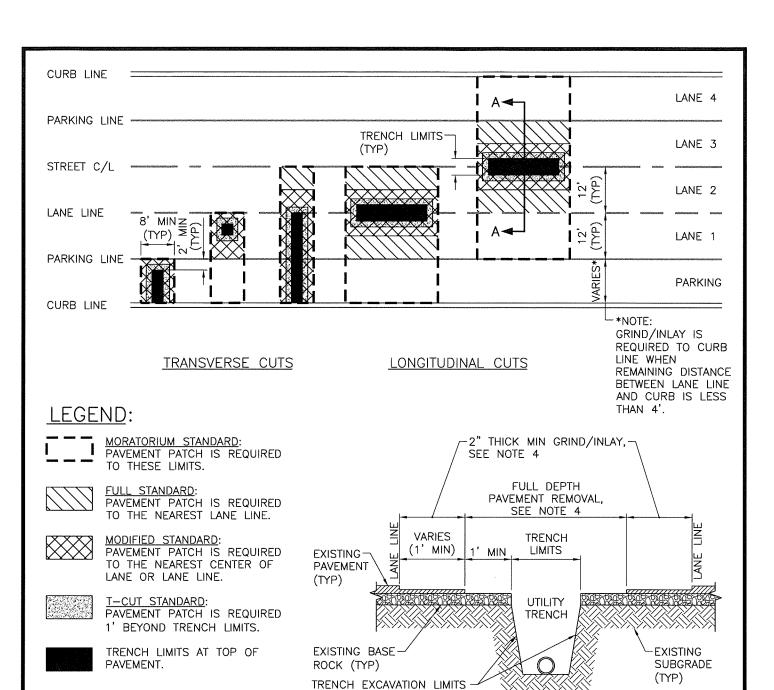
## **COMPLIANCE**

- 1. As part of the notice of noncompliance, the City Engineer will include a notice to comply within five working days or all future permits may be denied until the problems have been corrected. A meeting shall be arranged with the City Engineer and a plan of action to prevent future noncompliance shall be presented before issuance of any new permits.
- 2. An appeal can be applied for in writing to the City Engineer.
- 3. Noncompliance Activities include:
  - a. Failure to take out a permit.
  - b. Failure to maintain temporary patches.
  - c. Failure to make permanent repairs.

- d. Failure to make emergency repairs.
- e. Failure to make warranty repairs.
- f. Failure to inform the City Engineer of asphalt completion date.
- g. Failure to follow traffic control measures, as required.

## **EXEMPTIONS**

- a. General. A waiver or exemption from the moratorium standards restoration requirements may be granted if the City Engineer determines that impacts to vehicle, bicycle, and/or pedestrian traffic would negate the public benefit of this standard.
- b. Capital Improvement Areas. A waiver of the moratorium and full standards restoration requirements may be granted for cutting within roads that are identified within the Oregon City Capital Improvement Plan for resurfacing in that year pursuant to the waiver request provisions below.
- c. City Owned Projects. City projects will be subject to testing and warranty requirements that are established under the applicable public procurement contracts and are exempt from the testing and warranty requirements of this Standard.
- c. Waiver Request. Permittees may seek a waiver of certain Standard requirements as follows:
  - 1. Permittee shall submit a waiver request to the City Engineer identifying the proposed project, the impact the project will have on the roadway, the timeline for completion and explaining how all alternative solutions including avoidance have been exhausted.
  - 2. A meeting with the City Engineer to discuss the project may be required and additional information may be requested from the City.
  - 3. The City Engineer may attach conditions of approval when granting a waiver that may require additional restoration of the area affected and/or special inspections, the cost of which shall be borne by the Permittee.



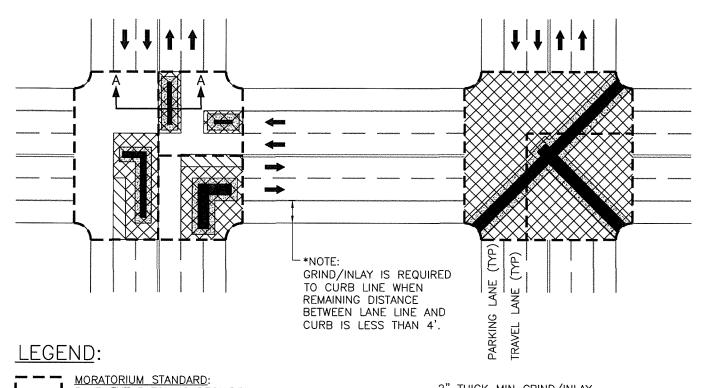
## NOTES:

- 1. ALL PAVEMENT PATCH JOINTS SHALL BE SEALED.
- 2. ALL CUTS TO BE PERPENDICULAR TO DIRECTION OF TRAVEL.
- 3. PAVEMENT REPLACEMENT IS REQUIRED TO THE NEXT ADJACENT CURB, PARKING, OR LANE LINE WHENEVER A TRENCH OR DISTURBANCE OF ASPHALT OR SUPPORT MATERIAL EXTENDS BEYOND SUCH LINE.
- 4. FOR STREETS WITH EXISTING AC THICKNESS OF 4" OR LESS, COMPLETE FULL DEPTH AC REMOVAL TO PAVING LIMITS AND REPLACE WITH MINIMUM 4" OF AC.

| DRAWN<br>ENGR. | D.K.H.<br>G.E.C. |         |                                |       | N.T.S.      |
|----------------|------------------|---------|--------------------------------|-------|-------------|
| REV.           | DATE             | APPR.   | Public Works Standard Drawings | DATE  | AUGUST 2012 |
|                |                  |         | PAVEMENT CUT STANDARD,         | APPR. | JML         |
|                | TYPICAL LAYOUT   | DWG. NO | o. <b>532</b>                  |       |             |

(SEE DWG NO. 313 FOR BACKFILL REQUIREMENTS)

SECTION A-A



PAVEMENT PATCH IS REQUIRED TO THESE LIMITS (MINIMUM ONE QUARTER OF INTERSECTION)

**FULL STANDARD:** PAVEMENT PATCH IS REQUIRED TO THE NEAREST LANE LINE

MODIFIED STANDARD: PAVEMENT PATCH IS REQUIRED TO THE NEAREST CENTER OF LANE OR LANE LINE



T-CUT STANDARD: PAVEMENT PATCH IS REQUIRED 1' BEYOND TRENCH LIMITS



TRENCH LIMITS AT TOP OF

**PAVEMENT** 

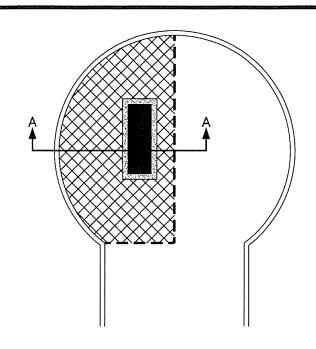
#### 2" THICK MIN GRIND/INLAY, -SEE NOTE 4 FULL DEPTH PAVEMENT REMOVAL, SEE NOTE 4 **VARIES TRENCH** (1' MIN) LIMITS 1' MIN EXISTING-**PAVEMENT** (TYP) UTILITY **TRENCH** EXISTING BASE **EXISTING SUBGRADE** ROCK (TYP) (TYP) TRENCH EXCAVATION LIMITS -(SEE DWG NO. 313 FOR BACKFILL REQUIREMENTS)

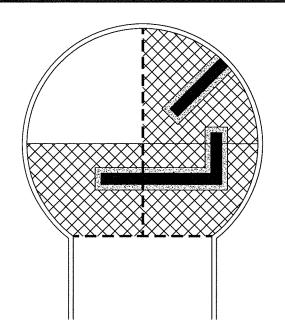
SECTION A-A

NOTES:

- 1. ALL PAVEMENT PATCH JOINTS SHALL BE SEALED.
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- 4. FOR STREETS WITH EXISTING AC THICKNESS OF 4" OR LESS. COMPLETE FULL DEPTH AC REMOVAL TO PAVING LIMITS AND REPLACE WITH MINIMUM 4" OF AC.

| DRAWN<br>ENGR. | Dillin |               | City of Oregon City            | SCALE N.T.S.     |
|----------------|--------|---------------|--------------------------------|------------------|
| REV.           | DATE   | APPR.         | Public Works Standard Drawings | DATE AUGUST 2012 |
|                |        |               | PAVEMENT CUT STANDARD,         | APPR.            |
|                |        | INTERSECTIONS |                                | DWG. NO. 533     |





## LEGEND:

MORATORIUM STANDARD:
PAVEMENT PATCH IS REQUIRED
TO THESE LIMITS (MINIMUM ONE
HALF OF CUL—DE—SAC).



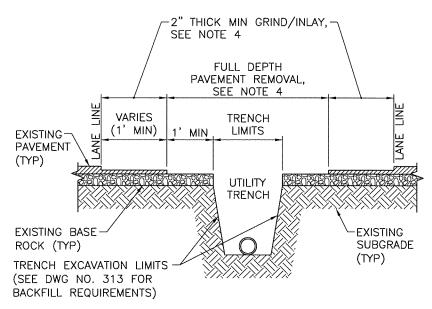
FULL & MODIFIED STANDARDS: PAVEMENT PATCH IS REQUIRED TO THESE LIMITS (MINIMUM ONE QUARTER OF CUL-DE-SAC).



T-CUT STANDARD:
PAVEMENT PATCH IS REQUIRED
1' BEYOND TRENCH LIMITS.



TRENCH LIMITS AT TOP OF PAVEMENT.



SECTION A-A

## **NOTES:**

- 1. ALL PAVEMENT PATCH JOINTS SHALL BE SEALED.
- 2. ALL CUTS TO BE PERPENDICULAR TO DIRECTION OF TRAVEL.
- 3. FOR STREETS WITH EXISTING AC THICKNESS OF 4" OR LESS, COMPLETE FULL DEPTH AC REMOVAL AND REPLACE WITH MINIMUM 4" OF AC.

| DRAWN<br>ENGR. | AWN D.K.H. GR. G.E.C.       |       | City of Oregon City            |               | N.T.S.      |
|----------------|-----------------------------|-------|--------------------------------|---------------|-------------|
| REV.           | DATE                        | APPR. | Public Works Standard Drawings | DATE          | AUGUST 2012 |
|                | PAVEMENT CUT STANDARD,      |       | APPR.                          |               |             |
|                | CUL-DE-SACS (LOCAL STREETS) |       | DWG. N                         | o. <b>534</b> |             |