1 Introduction

1.1 Purpose

The purpose of this Transportation Management Plan (TMP) is to address traffic-related impacts of the NW Cornelius Pass Road Project, summarize the proposed traffic control staging and concepts to be used during construction, and document the traffic-related decisions being made during the design phase. This document was developed in general conformance with the Oregon Department of Transportation (ODOT) April 2015 Mobility Procedures Manual which indicates the need to:

- address traffic volumes and congestion, roadway capacity, work zone safety, work performed under traffic, and public frustration with work zones; and
- facilitate consideration of safety and mobility impacts of work zones, and implementation of management strategies to mitigate impacts.

1.2 Introduction

The NW Cornelius Pass Road Project (the “Project”) is located in the northwest part of the Portland, Oregon metropolitan area between US 30 and the Multnomah/Washington County Line, just south of the NW Kaiser Road Intersection. This roadway serves as a commuter link between the St. Helens/NW Portland area and the Washington County employment areas and provides an
alternate hazardous materials (HazMat) route bypassing the HazMat-restricted US 26 Vista Ridge Tunnel.

The NW Cornelius Pass Road has historically shown to have high and severe crash rates. In 2008/2009, the U.S. Department of Transportation Federal Highway Administration (FHWA) collaborated with Multnomah County to conduct a Road Safety Audit and made several safety improvement recommendations. Under the Jobs and Transportation Act of 2009 (JTA), ODOT identified and recommended several safety improvements after conducting a more detailed safety study in 2010. Based on these reports, the 2012 Oregon legislature authorized funding for safety improvements on NW Cornelius Pass Road, with construction funds up to the amount of $3,900,000. The 2018 STIP amended the available construction funding to $3,622,255.

1.3 Project Description

This Project will be administered through the ODOT Local Agency Program for the construction of safety improvements with Resurfacing, Restoration, and Rehabilitation (3R) design criteria conforming to ODOT’s 2012 Highway Design Manual and FHWA’s Manual on Uniform Traffic Control Devices (MUTCD) 2009 Edition with Revision Numbers 1 and 2. Proposed location-specific and corridor-wide improvements include, but are not limited to:

- horizontal curve realignments,
- rumble strip construction,
- shoulder widening,
- restriping,
- installation of roadside barriers,
- guardrail upgrades,
- installation of an aquatic organism passage culvert,
- vegetation clearing to provide a sight distance increase,
- reduction of pavement drop-offs,
- signing upgrades
- grading, and
- erosion control.

2 PROJECT AREA CHARACTERISTICS

2.1 Location

The Project is on NW Cornelius Pass Road in Multnomah County from US 30 at MP 0 continuing south toward the Multnomah/Washington County Line, approximately 5 miles, south of the NW Kaiser Road Intersection. The project area does not fall within one of the five major corridors that have established corridor-level TMPs and delay thresholds, but it does connect the critical route pair US 26 and US 30.
2.2 Location of Other Construction Projects

ODOT is currently conducting a project to widen US 26 from Cornelius Pass Road to 185th Avenue. No conflicts with the Project are anticipated since the construction is expected to be completed by December 2018.

Multnomah County is conducting a project to repair and re-open NW Newberry Road after a landslide undermined a section of the road. No conflict with the project is anticipated since the construction is expected to be completed by Spring 2019. NW Newberry Road is the planned detour route for the Project. If the NW Newberry Road repair project is delayed it could potentially cause delays to the Project construction schedule.

2.3 Existing Roadway Cross-Sections

NW Cornelius Pass Road is an uncurbed, two-lane, two-way roadway with a variable shoulder width. The posted regulatory speed is 45 mph with advisory signs posted at 15 mph to 30 mph for curves. The roadway crosses over the Tualatin Mountains within the project area and is geometrically constrained with a rock cliff on the north side and a ravine at the south end.

2.4 Traffic Volume and Classification Data

The Annual Average Daily Traffic (AADT) volumes recorded in 2006, 2008, 2011, and 2015 for NW Cornelius Pass Road between Skyline Boulevard and Kaiser Road are listed in Table 1 below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Northbound</th>
<th>Southbound</th>
<th>Total</th>
<th>% Heavy Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>6,270</td>
<td>6,300</td>
<td>12,570</td>
<td>N/A^1</td>
</tr>
<tr>
<td>2008</td>
<td>5,350</td>
<td>5,380</td>
<td>10,630</td>
<td>12.7%</td>
</tr>
<tr>
<td>2011</td>
<td>5,760</td>
<td>5,230</td>
<td>10,990</td>
<td>13.5%</td>
</tr>
<tr>
<td>2015</td>
<td>N/A</td>
<td>N/A</td>
<td>11,600</td>
<td>N/A^1</td>
</tr>
</tbody>
</table>

^1 Heavy vehicle data was unavailable

The functional classification of NW Cornelius Pass Road, as identified in American Association of State Highway and Transportation Officials’ (AASHTO) 2011 A Policy on geometric Design of Highways and Streets, is Rural Minor Arterial.

2.5 Local Land Use

Land use along NW Cornelius Pass Road in the project area includes, but is not limited to:

- low density residential;
- rural residential;
- farm/forest; and
- open space.
2.6 Project Stakeholders

The Multnomah County Communications Office and the Murraysmith team have been working with some of the project’s interested parties during design. A Community Advisory Committee (CAC) has been formed to represent some of the key stakeholders. See Appendix A for a list of CAC members and the committee Charter.

The community affairs team will be coordinating with emergency services providers and other interested parties. Murraysmith is also conducting permitting and utility coordination efforts with the following municipality/agency stakeholders:

- Federal Highway Administration (FHWA)
- National Marine Fisheries Service (NMFS)
- U.S. Fish and Wildlife Service (USFWS)
- US Army Corp of Engineers (USACE)
- Oregon Department of State Lands (DSL)
- Oregon Department of Fish and Wildlife (ODFW)
- Oregon Department of Transportation (ODOT)
- Multnomah County
- AT&T/MCI
- PGE/Comcast/ Frontier
- NW Natural
- CenturyLink
- Pohlman Water District

3 FACTORS IMPACTING CONSTRUCTION

3.1 Traffic Impacts

Construction will primarily take place in the shoulder and/or single travel lane with the exception of fish passage culvert installation just north of the NW 8th Avenue intersection. The work will be divided into two stages with separate traffic control and detour plans. Stage I will be the southern section between NW Kaiser Road and NW Skyline Boulevard, and Stage II will be the northern section between NW Skyline Boulevard and US 30. During shoulder work in both stages, single lane closures are anticipated to allow local traffic through while maintaining a safe distance to workers. Shoulder work will include, but is not limited to:

- Barrier/guardrail installation
- shoulder widening and construction of vehicle pull-outs
- vegetation clearing
- signage

During Stage I, NW Cornelius Pass Road will be closed to through traffic between NW Kaiser Road and NW Skyline Boulevard. Traffic will be detoured onto NW Old Cornelius Pass Road, but
northbound traffic could use NW Kaiser Road to NW Brooks Road to NW Skyline Boulevard as an alternate route. Traffic traveling westbound on NW Kaiser Road will particularly need to use the NW Brook Road detour during widening work at the NW Kaiser Road intersection. Neither of these routes can accommodate truck traffic.

During Stage II culvert installation at NW 8th Avenue, a full roadway closure will be required. Short duration roadway closures will also likely be required at the S-curves for pre-splitting of the rock face. This work will occur during the full closure, and local traffic may be stopped for up to 20 minutes while the explosives are detonated and debris is cleaned up sufficiently to allow traffic past. Traffic will be detoured to NW Skyline Boulevard and then NW Newberry Road which run between NW Cornelius Pass Road and US 30. Truck traffic will not be allowed to use this detour.

The Contractor will be required to provide a 35-day notice to the Motor Carrier Transportation Division (MCTD) prior to roadway closures. The roadway will remain partially opened to local traffic only. Traffic impacts are expected, with delays anticipated to be higher when the detours are first introduced. The Project will cause restrictions in freight mobility since trucks cannot be accommodated on the detours.

3.2 Existing Mobility Restrictions

Although NW Cornelius Pass Road is not a designated Oregon Highway Plan (OHP) Freight Route, it connects the critical route pair US 26 and US30 and is identified as a freight connection in Metro’s Regional Freight Plan (June 2010). It is used for hazardous materials transport to bypass the US 26 Vista Ridge Tunnel where hazardous materials are prohibited. During the full road closures, trucks will not be able to use the detour and will need to use an alternate route (discussed below). This will increase travel time and distance, but will likely have better conditions with regard to height, width, length, and weight. There are no additional height, width, length or weight restrictions anticipated after the project is constructed.

The Region Mobility Liaison will be contacted and informed of the project. She will review the plans and draft of this Transportation Management Plan (TMP), and provide comments and specific traffic control requirements which will be reflected in the final traffic control plan. A Mobility Considerations Project Check List has also been completed for this project and can be found in Appendix B. The Check List and Decision Tree Form will be submitted to the MCTD for review and acceptance along with this TMP. The Decision Tree Form is included in Appendix C.

3.3 Available Alternate Routes

Signed detour routes will be utilized during all stages of construction, as discussed above. NW Old Cornelius Pass Road runs parallel to NW Cornelius Pass Road on the west side from south of NW Kaiser Road to NW Skyline Boulevard. NW Brooks Road runs parallel to NW Cornelius Pass Road on the east side from NW Kaiser Road to NW Skyline Boulevard. These routes will be utilized during Stage I, with NW Cornelius Pass Road only open to local traffic. Temporarily signing the intersection of NW Cornelius Pass Road and NW Skyline Boulevard as a four-way stop will be considered as a way to improve safety and traffic flow. Truck traffic will not be allowed on the
detours, because these alternate routes contain corners that do not accommodate truck turning movements.

NW Skyline Blvd. to NW Newberry Road runs from NW Cornelius Pass Road to US 30 and will be utilized as the alternate route to detour traffic during the Stage II full roadway closure for culvert construction at NW 8th Avenue and pre-splitting at the S-curves. During the road closure, NW Cornelius Pass Road will be restricted to local traffic only. Historically, NW Newberry Road has been an effective alternate route used by ODOT for a previous safety project, so no conflicts are expected. To improve safety of this detour route, it is recommended a temporary stop sign be erected at the NW Skyline Boulevard and NW Newberry Road intersection due to the limited stopping sight distance in this area, and that the intersection of NW Cornelius Pass Road and NW Skyline Boulevard continue to be a four-way stop. It is also recommended that the northbound approach at the intersection of NW Cornelius Pass Road and NW Skyline Boulevard be restriped to have a right turn only lane so the right turn movement can be allowed without stopping. The left lane will be used for through and left turning movements. Advanced signing will also be utilized at key intersections to notify drivers of closures and delays and allow them to select other alternate routes to meet their needs. A temporary signal will be erected at the intersection of US 30 and NW Newberry Road to increase intersection capacity for the higher volumes of traffic that will be on NW Newberry Road.

Truck traffic will be required to find their own alternate routes. Outreach and advanced signing on the state highway system will be critical for informing truck drivers of the road closure. This information will be presented at monthly Mobility Carriers meetings, the Contractor will be required to notify the MCTD prior to closing the road, and variable message signs (VMS) and/or portable changeable message signs (PCMS) will be utilized on US 26 and US 30. The VMS’s and PCMS’s will display messages of the upcoming closure one to two weeks prior to the closure, and will continue to notify drivers throughout construction.

The recommended alternate route for trucks traveling between US 30 and US 26 is to utilize I-405. This will increase the trip length by approximately 16 miles compared to using NW Cornelius Pass Road. Trucks hauling hazardous materials that cannot be transported through the Vista Ridge Tunnel on US 26 should utilize I-405 to I-5 to OR217. This route will increase the trip length by approximately 26 miles. These routes are recommended because they utilize highways categorized by the MCTD as generally unrestricted freight and oversize/overweight routes.

Project detour strategies were discussed by ODOT, the County and the design team at a meeting held September 18, 2018. Minutes and materials from this meeting are included in Appendix D.

3.4 Environmental Issues

Several environmentally sensitive areas were identified within the project limits during field reconnaissance. One perennial waterway, one wetland, three wetlands located in roadside ditches, and three other roadside ditches were documented within the project study area. The waterway and wetland are both likely to be regulated by the Department of State Lands (DSL) and the United States Army Corps of Engineers (USACE) as jurisdictional wetlands and waterways of...
the state. The proposed improvements are anticipated to permanently impact just under 0.1 acre of existing delineated wetlands at the 8th Avenue site area. No other wetland impacts are anticipated in the project corridor.

The perennial waterway is a tributary to McCarthy Creek and is reported by the ODFW as a historical habitat for anadromous salmonids, including Steelhead and Coho Salmon. In-water work associated with the culvert replacement on this waterway and project-related changes in surface runoff and/or stormwater management may result in an effect on these listed fish species. The project will be designed to Federal-Aid Highway Program (FAHP) design standards in order to minimize potential impacts to Endangered Species Act (ESA)-listed fish and their habitat. The culvert replacement will be designed for ODFW and NMFS fish passage criteria.

There are several other ESA-listed wildlife and plant species likely within the project study area, but no mapped Critical Habitat. Construction activities, including tree removal and the use of explosives to remove rock at the S-curves, will follow requirements of the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Erosion control measures will include check dams and inlet protection to filter stormwater runoff and prevent sediment from leaving the project area. Sediment barrier and compost blanket will also be used in newly graded areas to help prevent erosion during establishment of new vegetation.

3.5 Seasonal Restrictions

Standard paving, striping and planting season limitations, and the restrictions associated with the Migratory Bird Treaty Act apply to this project. The in-water work window must also be observed for the fish passage culvert replacement at NW 8th Avenue. This project is expected to be able to be completed within all standard seasonal limitations.

3.6 Construction Noise Regulation

Noise Variance – Per Multnomah County Code, Chapter 15: Sheriff, Section 15.265-15.274, a noise variance may be needed through the Sheriff for construction work associated with this project.

3.7 Allowable Lane Closures

Roadway closures will be required to complete this project during all stages of the project, especially fish passage culvert installation. Commercial traffic will be diverted to NW Newberry Road. A temporary roadway diversion with a construction easement is not feasible due to environmental and geometric constraints.

During shoulder work activities, the existing narrow shoulders will generally not allow the safe completion work. Consequently, single lane closures at a minimum will be required to maintain a safe clear distance during shoulder work. Since the road will be closed to through traffic, volumes on NW Cornelius Pass Road are expected to be low. One-lane flagged traffic control will be utilized
as needed for local traffic to pass by active work zones. Allowable road and lane closure specification language will be developed as the project progresses.

4 PROJECT TMP STRATEGIES

4.1 Decision Tree

ODOT’s Decision Tree Form was used to evaluate various work zone concepts, strategies and traffic control devices that may or may not be applicable to the project. The strategy that was evaluated as most applicable is to close the roadway and detour through traffic. During shoulder work, including signage, roadway widening, and guardrail installation, the roadway will be open to local traffic with single lane closures and flagged one-way traffic control. This provides increased clear space between workers and traffic and increases the safety of vehicles navigating around the work zone. The Decision Tree Form is included in Appendix C.

4.2 Staging Plan

The project has been divided into two stages. Stage I will be the southern section between NW Kaiser Road and NW Skyline Boulevard, and Stage II will be the northern section between NW Skyline Boulevard and US 30. Each stage requires a different detour, and Stage II includes culvert replacement work that must be completed during the in-water work window. A draft construction schedule has been created to show one feasible way in which the project can be completed. Stage I is anticipated to be completed in one and-a-half months, and Stage II in approximately two months. The construction schedule is considered a confidential document and is available from the County Project Manager upon request.

The traffic control plan for this project contains detour plans, advanced signing for truck alternate routes, and staged traffic control for the full depth roadway reconstruction locations. Other standard items will be utilized, as required by the Traffic Control Plans Design Manual, as follows:

- Standard Specifications for Construction
- Project-specific Special Provisions
- Pay item schedule
- List of applicable ODOT Standard Drawings

The draft Final Review-level traffic control/detour plan sheets are included in Appendix E.

4.3 Lane Closures

Lane and shoulder closures will be accomplished per the Standard Drawings. It is anticipated that all work except culvert replacement and pre-splitting of the rock face at the S-curves can be accomplished using standard shoulder and single lane closures per the Standard Drawings. These closures will only affect the local traffic, since all through traffic will be detoured onto alternate routes.
5 POTENTIAL MOBILITY ISSUES AND MITIGATION MEASURES

5.1 Traffic Mobility Issues During Construction

Some delays can be expected as a result of road closures. The Contractor will be required to notify the MCTD of lane closures, and Intelligent Transportation Systems (ITS) will be used to display messages to the traveling public to help mitigate potential delays. The following elements have been or are planned to be used for this project to inform motorists:

- Variable Message Signs (VMS’s) to notify the traveling public of the upcoming traffic changes or incidents. Portable Changeable Message Signs (PCMS’s) to identify detours and lane closures.
- Ground mounted signs to alert motorists of traffic changes within the work zone. The traffic control plans have been designed in accordance with the MUTCD and ODOT standard drawings in this regard.
- The project website and public open house to alert motorists of upcoming construction work. Alerting the public ahead of time may lessen the volume of traffic during times when traffic is expected to be slow-moving.

5.2 Stakeholder/Public Input

Public outreach has been an important consideration on this project and has been conducted throughout the alternatives analysis phase. The Community Advisory Committee (CAC) has been informed and consulted on key project objectives and decisions. An open house was held in February 2014, a CAC meeting was made open to the public in January 2017, and a public open house is scheduled for October 2018. Open house summaries are included in Appendix F. Public outreach will continue throughout design, and the public will be notified of construction activities, especially roadway closures, throughout construction. Multnomah County has created a website for this project on the Transportation Road Projects Page to help notify stakeholders at the following address: https://multco.us/roads/cornelius-pass-road-safety-improvements. Multnomah County will continue to update the website with key project milestones and decisions and construction updates.

5.3 Holidays and Special Events

The following table lists the holidays and special events during which closures are not allowed as indicated in the Oregon Standard Specifications for Construction and the Special Provisions:
Table 2: Holidays and Special Events

<table>
<thead>
<tr>
<th>Holiday or Event</th>
<th>Date</th>
<th>Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Year’s Day</td>
<td>January 1, 2019</td>
<td>X</td>
</tr>
<tr>
<td>Memorial Day</td>
<td>May 27, 2019</td>
<td>X</td>
</tr>
<tr>
<td>Independence Day</td>
<td>July 4, 2019</td>
<td>X</td>
</tr>
<tr>
<td>Hood to Coast Relay</td>
<td>August 23-24, 2019</td>
<td>on US 30</td>
</tr>
<tr>
<td>Labor Day</td>
<td>September 2, 2019</td>
<td>X</td>
</tr>
<tr>
<td>Thanksgiving Day</td>
<td>November 28, 2019</td>
<td>X</td>
</tr>
<tr>
<td>Christmas Day</td>
<td>December 25, 2019</td>
<td>X</td>
</tr>
</tbody>
</table>

Key special events that will be considered are the Seattle to Portland bicycle ride and the Hood to Coast Relay. Both events take place on US 30 and cause increased traffic and likely utilize PCMS’s or other traffic control devices on the highway. Adding traffic control devices for a detour and detouring traffic onto this highway during these events is not desirable.

6 TRAFFIC OPERATION AND MITIGATION MEASURES

6.1 Motorist Information

Public information will be important to help the traveling public be aware of construction, detour direction, and lane closures. VMS’s and PCMS’s will be used to notify the traveling public of the upcoming traffic changes. It is expected that traffic control set-ups will be standard but may be in different locations daily or weekly, and a Traffic Control Supervisor (TCS) will be employed to ensure proper placement of traffic control devices and appropriate messaging on electronic signs.

Ground mounted signs will also be in place as applicable to each project area to alert motorists of the upcoming work zone. Temporary signs will be used as part of the traffic control to alert motorists of traffic changes within the work zone. The traffic control set-up will follow FHWA’s MUTCD and ODOT Standard Drawings in this regard.

Newsletters, flyers, social media and the project website will be used to alert motorists of upcoming construction work. Notifying the public ahead of time may lessen the volume of traffic during times when traffic is expected to be slow-moving.

A written notification (Form #734-2357) will be submitted to the ODOT MCTD Freight Mobility Coordinator in advance to notify commercial traffic of upcoming road closures or detours.

6.2 Construction Strategies

Several strategies will be used during construction to reduce impacts of construction on traffic. The following elements have been or are planned to be used for this project to reduce impacts of construction on traffic:
▪ The required TCS will ensure traffic control configurations are set up properly and traffic will not be delayed unnecessarily. The TCS can also play a key role in incident management as it relates to the work zone by making quick decisions on changing the traffic control to help mitigate slowed traffic.

▪ A broad staging plan has been created that allows the Contractor flexibility in planning work within the various project areas.

▪ Flaggers will be utilized to help direct traffic during one-way traffic operations. They will be able to interact with the public to help route traffic around the work zone to minimize conflicts between the public and construction equipment.

7 INCIDENT MANAGEMENT AND EMERGENCY RESPONSE

7.1 Strategies

The County will be consulted regarding their preferences for Incident Management for this project. It is anticipated that they will rely primarily on Emergency Services Providers’ response plans, such as those of the local police and local fire and rescue.

7.2 Communication

Communication is the key element in incident management and emergency response for this project. An emergency is defined as anything that has the potential to harm life, property or the environment. The Agency should provide the “Emergency Communications Plan” (included in Appendix G) with appropriate contact information to the on-site inspector, TCS and contractor so they will be able to appropriately report incidents. This can be provided at the pre-construction meeting or any time prior to the beginning of construction. The County inspector will be the primary person responsible for contacting the appropriate response teams (e.g. ODOT Emergency Operations, local police, local fire and rescue).

8 RECOMMENDED COURSE OF ACTION

Murraysmith Special Provisions and traffic control and detour plan along with applicable ODOT Standard Drawings and used to provide a safe work zone for construction crews and the traveling public. A preliminary construction schedule outlines the work elements and shows that all work can be completed within the time windows required by the Standard Specifications and the Special Provisions. The traffic control plan will help keep motorists, bicyclists, pedestrians, and construction workers safe during the duration of this project. If the contractor proposes a different plan, it will need to be thoroughly reviewed for consistency with Agency Standard Drawings, the Traffic Control Plans Design Manual, and the MUTCD.
Figure 1: Vicinity Map
CORNELIUS PASS ROAD SAFETY IMPROVEMENTS
COMMUNITY ADVISORY COMMITTEE CHARTER

COMMUNITY ADVISORY COMMITTEE PURPOSE
The CAC is established for the purpose of reviewing and providing input to the safety improvement identification and development process. CAC advice will help Multnomah County staff when they select and prioritize improvements within the context of the corridor and budget. The CAC will meet regularly during the design development phase to discuss project progress and comment on project team products.

MEMBERSHIP
The CAC is self-nominated and installed by Multnomah County. It is intended to represent the broad range of community interests relevant to the project. It will be maintained at a size of approximately 15 people to enable active participation.

DUTIES AND RESPONSIBILITIES
Prepare for and attend CAC meetings
Members are expected to participate in up to 4 meetings between November 2013 and July 2014. The project team will work to make meeting agendas and initial materials available for member review at least one week prior to each meeting. Members representing a group should be well informed on their group’s perspectives, needs, issues and processes. Members are expected to support the outreach and involvement program by reporting back to their constituencies and being prepared to comment on their behalf at meetings.

ANTICIPATED MEETING SCHEDULE
Meetings are planned for select months from November 2013 through June 2014 from 6:00 to 8:00 PM at Skyline Elementary. Meeting dates and agendas are:

1. November 13, 2013 – Establish CAC process, provide project overview and update, gather CAC input on project outcomes
3. March 2014* – Discuss and evaluate revised safety solutions proposals
4. June 2014* – Provide input on review draft of Cornelius Pass Road Safety Improvement Plan and Designs
   * March and June meetings will be scheduled at upcoming CAC meetings

MEETING GROUND RULES
The facilitator will help ensure that meetings are productive. If time becomes an issue, it may be necessary to conduct a time check part-way through the agenda to determine if any topics need a follow-up meeting or whether members are willing to stay longer to complete a discussion or decision topic. Meeting summaries will serve as documentation and will be provided to the CAC with the opportunity for comments and corrections.

Members agree to abide by the following:
- Treat each other, staff and guests with respect;
- Listen carefully, seeking to understand each other;
- Raise issues honestly, clearly and early in the process;
- Focus on the subject at hand and help the group stick to the agenda;
- Discuss topics constructively with the aim of solving problems;
- Seek to find unity and common ground;
- Share the air by allowing others to finish completely before speaking oneself and pausing to let others speak once before speaking again oneself;
- Minimize distractions during meetings by putting cell phones on silent mode and avoiding side conversation;
After an absence, read materials from the missed meeting and contact the project team with questions or for a more in-depth briefing;

- Represent their personal views but do not speak for the CAC when engaged in other forums, including contacts with the news media or other stakeholders; and

- Discuss any process concerns with project team to help future meetings and activities work more effectively.

**DECISION-MAKING**

The CAC will strive to make consensus recommendations on the understanding that their recommendations to the County are strengthened by high levels of agreement. Consensus is achieved when all team members believe the best result has been obtained, can live with the solution, and will support the result. Members attending each meeting will constitute a quorum for any determinations made at that meeting. Meeting outcomes are intended to be final unless a majority of the CAC deems it important to reconsider a previous determination. CAC recommendation decisions may be made by majority vote if consensus is deemed unachievable. Committee recommendation decisions will be understood as the most preferred choice by the CAC for the project even if it may not be each individual member’s personal preference.

*Decision expected at each meeting:*

1. November 13, 2013 – Input on proposed solutions and selection criteria
2. January 14, 2014 – Review staff proposed safety solutions and selection criteria
3. March 2014 – Evaluate revised safety solutions and criteria
4. June 2014 – Final review and input of plan designs

**INTER-MEETING CAC COMMUNICATION**

CAC members agree to share their contact information with other CAC members for the sole purpose of enabling communication among members between meetings. CAC and project team members will respect each other’s privacy by not sharing contact information with anyone outside the CAC unless legally required to do so. Inter-meeting communications will be sent to project team contacts below.

**FACILITATION**

The county will provide a facilitator to help plan and moderate meetings. The facilitator will enforce CAC ground rules, provide opportunities for each CAC member to provide input, work with the CAC to reach consensus and manage meeting time.

**ACCESSIBILITY TO THE PUBLIC**

While the primary purpose of the CAC meetings is to provide a forum for the discussion and input from the CAC, meetings will be open to the public for observation. A limited amount of time at each meeting may be reserved for public comment. Interested members of the public are also encouraged to provide comments via the project website - corneliuspass@multco.us. These comments will be shared with all CAC members.

**ACCEPTANCE OF CHARTER**

This charter was adopted by consensus at the January 14, 2014 CAC meeting.

**PROJECT TEAM CONTACTS:**

Mike Pullen, 503-209-4111, mike.j.pullen@multco.us
Sandra Prock P.E, 503-988-5050 X29627, sandra.prock@multco.us
## Cornelius Pass Road Safety Improvements Project

### Community Advisory Committee

10-22-13

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation/Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jason Ascher</td>
<td>Resident (north of Skyline), commuter to Portland</td>
</tr>
<tr>
<td>Kirk Augustin</td>
<td>Resident (north of Skyline), Skyline Grange</td>
</tr>
<tr>
<td>Wayne Bauer</td>
<td>Commuters</td>
</tr>
<tr>
<td>Jan Campbell</td>
<td>Residents (north of Skyline), Skyline Elementary community</td>
</tr>
<tr>
<td>Carol Chesarek</td>
<td>Resident (south of Skyline), Forest Park Neighborhood Association</td>
</tr>
<tr>
<td>Drew Dubois</td>
<td>Emergency Services (Tualatin Valley Fire and Rescue)</td>
</tr>
<tr>
<td>Sarah Hanson</td>
<td>Resident (north of Skyline), commuter to Columbia County, Skyline Elementary community</td>
</tr>
<tr>
<td>Betsy Johnson</td>
<td>Oregon Legislature</td>
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<tr>
<td>Dave Linden</td>
<td>Local business</td>
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<tr>
<td>Tim Love</td>
<td>Commercial trucking</td>
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<tr>
<td>Bruce Penney</td>
<td>Resident (north of Skyline)</td>
</tr>
<tr>
<td>Steve Robertson</td>
<td>Resident (north of Skyline), Skyline Elementary community</td>
</tr>
<tr>
<td>Michele Roy</td>
<td>Resident (south of Skyline), Skyline Elementary community</td>
</tr>
<tr>
<td>Bob Russell</td>
<td>Commercial trucking</td>
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<tr>
<td>George Sowder</td>
<td>Residents (Skyline Ridge Neighbors), Skyline Grange</td>
</tr>
</tbody>
</table>
PROJECT MOBILITY CONSIDERATIONS CHECK LIST

PROJECT NAME: NW Cornelius Pass Road: US 30 – Kaiser Road
KEY NUMBER: 18147
LOCATION: US 30 – Kaiser Road

HIGHWAY NAME: NW Cornelius Pass Road
ROUTE #: n/a
MILE POST #: 0 to 3.95

NOTE 1: This checklist is initiated by a Project Leader or Local Agency Liaison during the project development phase, submitted with the PS&E Package, and provided to the construction project manager when transitioning the project to the construction phase.

NOTE 2: Off-system projects that create a mobility impact on the state system must also comply with PD-16 and this checklist. Project Leaders and Local Agency Liaisons with projects (both on-system and off-system) that have no mobility impacts should check the “No Mobility Impacts” box and sign the checklist (MCTD signature is not required for a “no mobility impact” project) before submitting it with the PS&E package.

NOTE 3: The following link provides detailed guidelines for submitting project information to MCTD for Mobility Considerations Checklist Approval: http://www.oregon.gov/ODOT/MCT/docs/Guidelines%20for%20Submitting%20Project%20Information.pdf

Check all that apply

IMPACT ON MOBILITY:

☐ No Mobility Impacts
☒ Road closure
☐ Weight
☐ Detour
☐ Delays
☐ Width
☐ Lane Closure
☐ Roundabout
☐ Ramp closure
☐ Height
☐ Length

DETOUR REVIEWED FOR:

☒ Length Restrictions
☐ Width Restrictions
☒ Weight Restrictions
☐ Vertical Clearance
☐ Local Events
☐ Special Travel Days

PROJECT MOBILITY RESTRICTION CONSIDERATIONS WORKSHEET

<table>
<thead>
<tr>
<th>Temporary Clearance Considerations</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are there any available options that would eliminate the restriction?</td>
<td>No; the road must be fully closed during construction, and the passenger vehicle detour route cannot support truck traffic.</td>
</tr>
<tr>
<td>2. Are there any available options that would minimize the restriction?</td>
<td>No; the County and design team determined that a full closure to minimize the duration of construction would have the least impact on the public and create the safest work zone.</td>
</tr>
<tr>
<td>3. Are there any available options that would shorten the duration of the restriction?</td>
<td>No; the project duration is already limited.</td>
</tr>
<tr>
<td>4. How will restricted traffic be detoured?</td>
<td>Truck traffic will not have a signed detour, but advanced signing will notify trucks that they must seek an alternate</td>
</tr>
<tr>
<td>Detour Considerations</td>
<td>Notes</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------</td>
</tr>
<tr>
<td>1. Are there any restrictions on the detour route?</td>
<td>Yes; the detour route for passenger vehicles cannot support truck traffic due to tight corners. Truck traffic will need to use US26, I-405, and other routes in the state and interstate highway system.</td>
</tr>
<tr>
<td>2. Is this route being used as a detour for other restricted routes?</td>
<td>No.</td>
</tr>
<tr>
<td>3. How will the detour route affect emergency services response times?</td>
<td>Delays are anticipated since detour routes on Newberry Rd and Old Cornelius Pass road are narrow and expected to be over capacity.</td>
</tr>
<tr>
<td>5. Are there other projects along the proposed detour route which will restrict traffic?</td>
<td>No.</td>
</tr>
<tr>
<td>6. Is there another detour route available if something happens to the proposed detour route?</td>
<td>For passenger vehicles, there are other minor roads such as NW McNamee Rd that could function as a detour in an emergency situation. For trucks, the state and interstate highway system should be used.</td>
</tr>
</tbody>
</table>
## PROJECT MOBILITY COMMUNICATIONS CHECKLIST

<table>
<thead>
<tr>
<th>Y</th>
<th>N</th>
<th>NA</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗</td>
<td>☐</td>
<td>☐</td>
<td>Contacted MCTD Freight Mobility Coordinator: <a href="mailto:MCTDMOBILITYTEAM@odot.state.or.us">MCTDMOBILITYTEAM@odot.state.or.us</a></td>
</tr>
<tr>
<td>✗</td>
<td>☐</td>
<td>☐</td>
<td>Provided MCTD with current copy of TMP/Restriction Summary</td>
</tr>
<tr>
<td>✗</td>
<td>☐</td>
<td>☐</td>
<td>Met with Trucking Industry (if needed)</td>
</tr>
<tr>
<td>✗</td>
<td>☐</td>
<td>☐</td>
<td>Identified which part of the industry is affected by restriction, i.e. annual permit holders vs. single trip permits</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>Project restrictions supported by MCTD &amp; Trucking Industry: attach email(s) indicating MCTD support</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>Additional coordination is required with MCTD</td>
</tr>
<tr>
<td>✗</td>
<td>☐</td>
<td>☐</td>
<td>Provided project information to Region Mobility Liaison</td>
</tr>
<tr>
<td>✗</td>
<td>☐</td>
<td>☐</td>
<td>Worked with the following groups to identify and resolve any potential conflicts: District Maintenance staff, Oregon Bridge Delivery Partners, Local road authorities, Local utilities, Rail Authorities</td>
</tr>
<tr>
<td>✗</td>
<td>☐</td>
<td>☐</td>
<td>Considered impacts of local events and special travel days prior to start of restriction</td>
</tr>
<tr>
<td>✗</td>
<td>☐</td>
<td>☐</td>
<td>Confirm inclusion of local events and special travel days within project <a href="#">Special Provisions</a></td>
</tr>
<tr>
<td>✗</td>
<td>☐</td>
<td>☐</td>
<td>Identified the need for 35 day written notice to MCTD prior to start date of restriction per <a href="#">ODOT Special Provisions, section 00220.03(a)</a></td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>During construction provided 35 day written notice to MCTD prior to start date of restriction</td>
</tr>
</tbody>
</table>

### ADDITIONAL COMMENTS/NOTES
SUBMITTAL INSTRUCTIONS

Project Leaders/Local Agency Liaisons:
☐ Submit signed form and supporting emails to your Region Mobility Liaison at Design Acceptance Phase (DAP).
☐ Re-engage MTCD as needed if there are changes to mobility impacts following DAP.
☐ Update and resubmit form and supporting emails to your Region Mobility Liaison as needed following DAP.
☐ Include a copy of the signed checklist in the PS&E packet submitted to the Office of Project Letting for ODOT bid projects. For LPA certified projects, complete Project Mobility Considerations Checklist and include as part of PS&E Package at the region office with a copy to the Region Mobility Liaison.

Construction/Consultant/LAL Project Managers:
☐ Before making changes during construction that have the potential to adversely affect mobility (i.e. additional restrictions) or run counter to previous agreements made during preliminary design:

☒ As soon as a restriction revision proposal is identified by either the ODOT PM or the Contractor, the PM must engage the contractor, Region Mobility coordinator and any relevant region resources to discuss proposed changes to determine if the change is warranted and supported by the Region.

If supported by Region, Project Managers must:

☐ Engage MCTD to discuss and obtain concurrence with the potential changes before any agreements are made with the contractor

☐ Document MCTD and trucking industry support of any potential new restrictions and provide a copy of the documentation to the Region Mobility Liaison.

SIGNATURES

“This project has been vetted through MCTD and the Freight Industry. Documentation in file and/or attached.”

Note: MCTD signature is not required for a project that has no mobility impacts

<table>
<thead>
<tr>
<th>REGION PROJECT LEADER, LAL, PROJECT MANAGER (PRINT)</th>
<th>SIGNATURE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>MCTD FREIGHT MOBILITY COORDINATOR (PRINT)</th>
<th>SIGNATURE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
### Decision Tree

**Evaluate Separation Opportunities, Other WZ Concepts, WZ Devices**

**NW Cornelius Pass Road: US30 – NW Kaiser Road**

**Project Name (Section)**: NW Cornelius Pass Road

**Gabe Crop, PE (Murraysmith)**

**Carrie Warren, PE (Mult. Co.)**

**Region 1**

**Key No.** K18147

**Contract No.**

**Project Leader / Project Manager**

**Agency Project Manager**

**Highway Project Leader / Project Manager**

**Agency Manager**

**Region**

**Instructions:** For each phase, work through each opportunity on this "decision tree." Add other project-specific decisions as needed. (Add more instructions as needed.)

**Contractor**

**Phase:**

- [ ] 1 - Scoping
- [ ] 2 - Project Initiation to DAP
- [x] 3 - DAP to Final PS&E
- [ ] 4 - Construction

<table>
<thead>
<tr>
<th>Opportunities to Evaluate</th>
<th>Phase</th>
<th>Possible/Viable</th>
<th>Impacts</th>
<th>Stakeholders &amp; Input</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full road closure</strong></td>
<td>2</td>
<td>Yes.</td>
<td>Traffic will be detoured around the project. Delays are likely.</td>
<td>Daily commuters, local residents, and trucks carrying hazardous cargo that is not allowed through the Vista Ridge tunnel.</td>
<td>Full road closures will be required for multiple construction items and project areas. The County has a detour route that is used annually that will be applied to this project.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Yes.</td>
<td>A full closure will be required during installation of the fish passage culvert. Traffic will be detoured around the project. Delays are likely.</td>
<td>Daily commuters, local residents, and trucks.</td>
<td>(D) Full closure will be required during construction of the fish passage culvert. The County has a detour route that is used annually that will be applied to this project. NW Cornelius Pass Rd will be closed to all trucks during construction.</td>
</tr>
<tr>
<td><strong>Partial road closure</strong></td>
<td>2</td>
<td>Yes.</td>
<td>A single direction of the road will need to be closed at a time with two-way flagging, or potentially with that direction following a detour. Delays are likely.</td>
<td>Daily commuters, local residents, and trucks carrying hazardous cargo that is not allowed through the Vista Ridge tunnel.</td>
<td>A single direction of the road will need to be closed for much of the project construction. The open direction can have two-way flagging or remain open while traffic from the closed direction is detoured around the project area.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Yes.</td>
<td>A single direction of the road will need to be closed at a time with two-way flagging for local traffic. Other traffic will be following a detour.</td>
<td>Daily commuters, local residents, and all trucks.</td>
<td>(D) A single direction of the road will need to be closed for much of the project construction. Two-way flagging for local traffic. All other traffic will be following a detour. NW Cornelius Pass Rd will be closed to all trucks during construction.</td>
</tr>
<tr>
<td>Opportunities to Evaluate</td>
<td>Phase</td>
<td>Possible/Viable</td>
<td>Impacts</td>
<td>Stakeholders &amp; Input</td>
<td>Status Recommendation (R) / Decision (D)</td>
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<td>-----------------------------------------</td>
</tr>
<tr>
<td>Full detour</td>
<td>2&amp;3</td>
<td>Yes.</td>
<td>Traffic will be detoured around the project on a route used annually by the County.</td>
<td>Daily commuters, local residents, and trucks.</td>
<td>(D) Full detours will be necessary for multiple construction items and project areas.</td>
</tr>
<tr>
<td>Crossover/on-site diversion</td>
<td>2&amp;3</td>
<td>No.</td>
<td>n/a</td>
<td>n/a</td>
<td>Cross-overs are not applicable to this project.</td>
</tr>
<tr>
<td>Rigid barrier (concrete, steel, temporary guardrail)</td>
<td>2</td>
<td>No.</td>
<td>n/a</td>
<td>n/a</td>
<td>Due to limited roadway and shoulder width, there is likely no space for temporary barrier to be used between the work zone and live traffic.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Yes.</td>
<td>Concrete barrier will be used during the construction of the fish passage culvert. The barrier will be placed in between driveways to maintain local access.</td>
<td>Local residents</td>
<td>(D) Concrete barriers will prevent vehicle from entering the excavated area during the fish passage culvert installation.</td>
</tr>
<tr>
<td>Increased lateral buffer space</td>
<td>2&amp;3</td>
<td>Yes: clear space is limited, but using single lane closures for shoulder work will provide some clear space between traffic and the work zone.</td>
<td>Lane closures with two-way flagging will likely cause delay.</td>
<td>The traveling public, contractor.</td>
<td>(D) There is limited roadway width, shoulder width and space alongside the roadway. Maximizing clear space by working as far from live traffic as possible is encouraged.</td>
</tr>
<tr>
<td>Decrease exposure time</td>
<td>2&amp;3</td>
<td>No.</td>
<td>n/a</td>
<td>n/a</td>
<td>(D) There does not seem to be a clear way to decrease exposure time without specifying means and methods.</td>
</tr>
<tr>
<td>Accelerated contracting strategies</td>
<td>2</td>
<td>Maybe.</td>
<td>n/a</td>
<td>n/a</td>
<td>This will be discussed with the County between the DAP and Advance submittals.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>No.</td>
<td>n/a</td>
<td>n/a</td>
<td>Multnomah County has become a certified local agency and the project will use the County contracting process which is shorter than the ODOT contracting process.</td>
</tr>
<tr>
<td>Opportunities to Evaluate</td>
<td>Phase</td>
<td>Possible/Viable</td>
<td>Impacts</td>
<td>Stakeholders &amp; Input</td>
<td>Status Recommendation (R) / Decision (D)</td>
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<td>-----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Accelerated construction strategies</td>
<td>3</td>
<td>Yes.</td>
<td>There may be noise impacts for nearby residences if strategies involve nighttime work.</td>
<td>The traveling public, contractor.</td>
<td>(R) Accelerated construction strategies like nighttime work and 6-day work weeks will help minimize the duration of the roadway closure and detour.</td>
</tr>
<tr>
<td>Law enforcement overtime</td>
<td>2</td>
<td>Yes: It may be possible to work with local law enforcement to patrol the work zone areas.</td>
<td>Law enforcement presence should not impact construction or mobility, just help enforce safe travel of the public within the work zone.</td>
<td>The traveling public, local law enforcement.</td>
<td>(R) Contacting law enforcement is recommended to help enforce no truck traffic on NW Cornelius Pass Rd.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Yes.</td>
<td>Law enforcement can help ensure trucks do not enter NW Cornelius Pass Road during construction.</td>
<td>The traveling public, local law enforcement and trucks.</td>
<td>(R) Contacting law enforcement is recommended to help enforce no truck traffic on NW Cornelius Pass Rd.</td>
</tr>
<tr>
<td>Radar speed trailers</td>
<td>3</td>
<td>No.</td>
<td>A radar speed trailer would take up space within the narrow shoulder and may impact safety.</td>
<td>The traveling public, local law enforcement and contractor.</td>
<td>(R) Since the project shoulder is narrow, it is not recommended to implement a radar speed trailer unless it becomes evident that speeding is an issue during construction.</td>
</tr>
<tr>
<td>Construction Speed Zone Reduction</td>
<td>2</td>
<td>Yes: Speed Zone Reduction could be considered.</td>
<td>A Speed Zone Reduction might delay traffic unnecessarily and would be difficult to enforce.</td>
<td>Contractor, local law enforcement, the traveling public</td>
<td>(R) It is not recommended to implement a speed zone reduction.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>No.</td>
<td>A Speed Zone Reduction might delay traffic unnecessarily and would be difficult to enforce.</td>
<td>Contractor, local law enforcement, the traveling public</td>
<td>(R) It is not recommended to implement a speed zone reduction.</td>
</tr>
<tr>
<td>Staged construction with temporary widening</td>
<td>3</td>
<td>No.</td>
<td>n/a</td>
<td>n/a</td>
<td>(D) It was decided that widening is not a viable option due to funding restrictions.</td>
</tr>
<tr>
<td>Work at night</td>
<td>3</td>
<td>Yes.</td>
<td>There may be noise impacts for nearby residences if strategies involve nighttime work.</td>
<td>The traveling public, contractor.</td>
<td>(R) Nighttime work will help minimize the duration of the roadway closure and detour.</td>
</tr>
<tr>
<td>Opportunities to Evaluate</td>
<td>Phase</td>
<td>Possible/Viable</td>
<td>Impacts</td>
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</tr>
<tr>
<td>Standard lane closures with channelizing devices</td>
<td>2&amp;3</td>
<td>Yes: Shoulder closures will be allowed if construction can be done off the side of the road, and lane closures will be allowed with flagged two-way traffic in the open lane.</td>
<td>Lane closures with two-way flagging will likely cause delay.</td>
<td>Daily commuters, local residents, and trucks.</td>
<td>(D) Drums and tubular markers will be used to close shoulders and lanes.</td>
</tr>
<tr>
<td>Automated Flagger Assistance Devices (AFAD)</td>
<td>2&amp;3</td>
<td>No.</td>
<td>n/a</td>
<td>n/a</td>
<td>Automated flagging or temporary signals should only be used on roadways with ADT of less than 3,500. Cornelius Pass is much higher, so these systems may not be used.</td>
</tr>
<tr>
<td>Temporary Transverse Rumble Strips (TTRS)</td>
<td>2&amp;3</td>
<td>No.</td>
<td>n/a</td>
<td>n/a</td>
<td>Much of roadway will not be re-paved and temporary rumble strips would damage the existing pavement.</td>
</tr>
<tr>
<td>Smart Work Zone System/Work Zone ITS</td>
<td>2&amp;3</td>
<td>Yes: A Smart Work Zone System will likely not be used, but other types of ITS can be. PCMSs will be set up in advance of work zones, and permanently installed VMSs can be used to convey messages about construction or delays.</td>
<td>Use of ITS during construction should positively impact the public by conveying messages regarding construction activities and potential delays.</td>
<td>ODOT, contractor, the traveling public.</td>
<td>(D) PCMSs and existing permanently installed ITS will be used during construction.</td>
</tr>
<tr>
<td>Public information campaigns</td>
<td>2&amp;3</td>
<td>Yes: The public will be notified of construction activities, especially road closures, so they can be prepared for detours or plan alternate routes.</td>
<td>Public awareness of delays and closures should help minimize driver frustration and allow drivers to plan accordingly. If drivers choose alternate routes, traffic volumes will be reduced, which will thereby reduce delays as well.</td>
<td>The traveling public</td>
<td>(D) Public outreach will be conducted during design and construction.</td>
</tr>
<tr>
<td>Pedestrian Detours (TPAR)</td>
<td>3</td>
<td>No.</td>
<td>n/a</td>
<td>n/a</td>
<td>No pedestrian access will be impacted during this project.</td>
</tr>
<tr>
<td>Other:</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
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</table>
NW Cornelius Pass Road: US 30 - NW Kaiser Road
Key # 18147, PA #28354, WOC #3
Traffic Control and Detour Route Meeting Minutes

September 18, 2018, 1:00 PM to 4:30 PM

Meeting Location: Oregon Dept. of Transportation – Region 1, Room 344
123 NW Flanders
Portland, Oregon 97209

Attendees: Riad Alharithi, Carrie Warren (County), Reem Khaki, Jordan Orser, Tiffany Slauter, Thanh Tran, Maggie Bartley, Kari Sprenger, (ODOT), Gabe Crop, Gwen Montgomery, Tyler Nord (Murraysmith), Wade Scarbrough, Yi-Min Ha (Kittelson)

1) Introductions and Roles
   Attendees briefly introduced themselves and their respective roles.

2) Project Overview
   a) Consultant Project Manager provided a brief background on the project to date, explaining that design was put on hold about a year and half ago due to the landslide on Newberry Road that affected the proposed detour route.
   b) Design schedule - Final Review Plans submittal was previously set for 10/3. Due to discussions at the meeting leading to additional required coordination, and the ODOT Local Agency Liaison’s planned leave, the submittal will be delayed until 10/19. Murraysmith will incorporate this change and provide a revised design schedule (Action item – Tyler Nord). There is a public meeting scheduled for 10/8, and a Motor Carriers meeting on 10/16. Design team will still develop and provide required materials for these meetings. Motor carriers material will be provided on 10/4.

3) Meeting Objectives
   a) Objective of the meeting is to obtain concurrence or direction from ODOT and the County in order to continue development and preparation of the traffic control and detour route concepts to be conveyed at the upcoming public meeting and motor carriers meeting.

4) Construction Schedule and Traffic Control Concept
   a) Briefly discussed the construction schedule, explaining that construction was split into two stages. Stage 1 would happen first and involves construction activities on Cornelius Pass Road between Kaiser Road and Skyline Blvd. Discussion of this stage will be reserved until the end of the meeting. Stage 2 involves construction activities on Cornelius Pass Road between Kaiser Road and US30. Construction at the 8th Ave curves will require a “hard” closure, allowing no access through this area. In order to safely construct improvements in Stage 2, Cornelius Pass will be closed to all through traffic. Contractor will have traffic control measures in place to allow local traffic access. A detour route will be established along Skyline Blvd to Newberry Road.
5) Overview of Traffic Analysis
   a) Kittelson presented their methods for obtaining traffic data, and their assumptions about
driver compliance when using the detour routes. They provided an analysis of each of the
three major intersections along the detour route (Cornelius Pass and Skyline, Skyline and
Newberry, and Newberry and US30).
b) Kittelson provided estimated detour route traffic volumes and identified the critical
movements at the intersections along the detour route.

6) Cornelius Pass and Skyline
   a) The preferred alternative is to provide a stop sign for NB through movements and left
turns, a stop sign for all SB movements (local traffic only), and a stop sign for EB
movements from Skyline. NB right turns and WB movements from Skyline would be
free flow conditions. The design team intends to make these intersection modifications
without temporary widening. If temporary widening is considered, R/W location would
need to be verified.
b) This preferred alternative address the critical turn movements, which are NB right turns
and WB left turns.
c) ODOT Traffic commented that the preferred alternative may cause backups onto Old
Cornelius Pass from Skyline Blvd. Design team will evaluate the intersection of Old
Cornelius Pass and Skyline Blvd and likely make this an all-way stop condition (Action
item: Wade Scarbrough).
d) Another alternative was to provide an all-way stop, but this would result in a very low v/c
ratio for the intersection.

7) Skyline and Newberry
   a) The preferred alternative at this intersection is to prioritize the detour route by making SB
left turns from Skyline onto Newberry and WB right turns from Newberry to Skyline non-
stop controlled. NB skyline would have a stop sign added.
b) This intersection had a higher v/c ratio due to NB skyline movements being affected by
the stop sign, but overall this alternative had the best capacity.
c) Permanent illumination will be provided at this intersection to meet City of Portland
requirements

8) Newberry and US30
   a) Dual left turn lane alternative – design team provided a concept design of how two left
turn lanes from Newberry to US30 could be accommodated. This would require
temporary widening on both sides of Newberry, and reconstruction of the curb return and
ADA curb ramp at the corner. Two left turn lanes would significantly reduce the v/c ratio
of the intersection and the backup of vehicles on Newberry.
b) Single left turn lane alternative – this is the existing condition, and would not require
improvements to the geometry of the roadway.
c) ODOT staff strongly preferred the dual left turn lane option, and stated that ODOT staff in Salem would likely require this. The County wanted to make sure that funding spent on temporary improvements was minimized since that detracted from available funding for permanent improvements. For this reason, the County’s first preference was a single left turn lane, but acknowledged the merits of a dual left turn lane. ODOT commented that they would not retime the signal to give a higher priority to Newberry if there was severe traffic back-ups during the detour.

d) The design team will provide the County with a comparison of the costs associated with both options, and will provide a qualitative estimate of the traffic impacts of the options (Action item: Wade Scarbrough and Gwen Montgomery).

e) Widening or other improvements within the ODOT R/W should be reviewed by an ODOT Roadway representative. During the meeting, mapping was pulled up to confirm that all proposed improvements were within ODOT R/W. ODOT Local Agency Liaison to determine who the appropriate roadway reviewer would be and set up a meeting if widening is pursued (Action item: Reem Khaki).

f) Design vehicles – design vehicles were evaluated for the detour route. A fire truck could be accommodated, but an SU-30 and larger could not navigate many of the tight turns along Newberry or the turns from US30 to Newberry. The design team showed auto-turn figures with the results. For this reason, trucks will not be allowed on the detour route. The ODOT Mobility Coordinator will convey this to Motor Carriers and let them know that alternate routes need to be taken during this Stage 2 construction. ODOT Traffic recommended a sign similar to “No trucks longer than 30ft”.

g) Crosswalks – The group agreed that a temporary crosswalk closure of the south leg of the intersection would be appropriate. If the crosswalk on the south leg were to remain open, push buttons would need to be installed behind the guardrail, or video detection could be used. Crosswalk closure requests can be submitted with the temporary signal requests.

h) Temporary signal – ODOT Traffic indicated it can take between 1 and 3 months to provide review and approval of a temporary signal request, so encouraged the team to submit this soon if possible. Items that should be included in this submittal are a signal warrant analysis for proposed and existing conditions, preliminary signal operations design form, and approximate dates of the temp signals operation (Action item: Wade Scarbrough).

i) ODOT mentioned that vehicles coming down Newberry may have trouble seeing the traffic signal due to sight distance, and that the design team should consider adding advance signal heads (Action item: Wade Scarbrough).

ii) ODOT stated that these changed traffic conditions (i.e. new traffic signal and higher volume of turning movements) would increase the potential for rear-end collisions on US30. Design team should consider advance signage and flashing beacons along US30 (action item: Gwen Montgomery).
NW Cornelius Pass Road: US 30 - NW Kaiser Road  
Key # 18147, PA #28354, WOC #3  
Traffic Control and Detour Route Meeting Minutes

i) ADA ramp - ODOT commented that the existing ADA ramp is likely not compliant since it was constructed several years ago, and that if it was disturbed during construction that it would need to be replaced with dual ramps to match ODOT’s current practice.  
ii) The group discussed the need for a curb ramp here, since there is no pedestrian access route.  The trimet bus stop at this corner appears to be the driving factor for needing a curb ramp.  The design team will coordinate with Trimet to see if an alternate configuration of the bus stop could be used such as a widened at-grade concrete pad, which would eliminate the need for a curb ramp (Action item: Tyler Nord).  ODOT Traffic said they could provide ridership data for the bus stop, which was sent that same day.  
iii) ODOT’s local agency liaison suggested that the team meet with Basil Christopher and an ODOT Salem representative to further discuss impacts to the ADA ramp and restoration requirements (Action item: Reem Khaki and Tyler Nord).

j) Restoration - The intersection will be restored to its existing conditions after construction is complete.  The team agreed that the temporary improvements made should not remain after construction.  Since there is no topographic survey data available for the intersection, special provision language would put the responsibility on the contractor to survey existing conditions and restore them.  This also means that the ADA curb ramp design and construction would not follow ODOT’s typical design process of a detailed curb ramp design and review.  Curb ramp would still be inspected to confirm compliance.  
k) Permits – ODOT local agency liaison will provide the Final Review package to Jim Nelson to begin the process for a permit to operate within ODOT R/W.  The permit may be needed prior to construction, but typically the permit holder would be the contractor.  Design team to work with ODOT to figure out the appropriate permit process (Action item: Tyler Nord and Reem Khaki).

9) Cornelius Pass and US30  
a) ODOT Traffic suggested this signal timing be evaluated during the detour route to reduce the green phase of the left turn movements onto Cornelius Pass and any movements from Cornelius Pass.  Only local traffic will be utilizing these movements.  
b) ODOT requested 2 weeks notice for signal retiming.  Design team will place this requirement in the specs along with contact information (Action item: Tyler Nord).

10) Stage 1 Construction  
a) The design team showed the alternate route concept that was developed for stage 1 construction.  Smaller vehicles would have the option of using these alternate routes, but trucks would be required to stay on Cornelius Pass Road since the alternate routes could not accommodate trucks with the tight corners.  The contractor would need to provide access through the work zone with flaggers and a pilot car for trucks and vehicles that chose not to take the alternate routes.
b) The County raised concern that there would be insufficient space for trucks to get through the work zone if the construction activities took up an entire lane. The design team will evaluate truck turning movements through the Stage 1 construction area to determine if there is enough space for trucks (Action item: Gwen Montgomery).

c) The County suggested that the restrictions on trucks should be extended to include Stage 1 work activities that do not have enough space to accommodate trucks through the work zone. This increase in the current 2.5 month truck restriction would need to be presented to Motor Carriers.

d) County also suggested that improvements restrictive of trucks could be done under a weekend closure.

e) Design team will re-evaluate timeline for construction of improvements at Kaiser Rd intersection since these activities may impact use of the alternate route along Kaiser Rd (Action item: Tyler Nord and Gwen Montgomery).

11) Use of PCMS
   a) County suggested setting up PCMS during the winter months to inform roadway users of the upcoming closures
   b) Design team to include intended messages for PCMS and VMS in the traffic control plan (Action item: Gwen Montgomery).
   c) County’s website could be placed on PCMS along Cornelius Pass Road.

12) Coordination with ODOT’s VMS System
   a) The design team suggested that to raise awareness of the project and the traffic control impacts, ODOT’s VMS system could be used for advanced notification to drivers.
   b) ODOT indicated that there guidelines for VMS messaging is available online
   c) ODOT can use their VMS system up to one week in advance of the closure to notify road users of the upcoming changes.
   d) ODOT requested 2 weeks notice for changing VMS signs. Design team will place this requirement in the specs along with contact information (Action item: Tyler Nord).

13) Miscellaneous Items
   a) ODOT traffic suggested that a high level truck detour route during the closure would be helpful for presenting to Motor Carriers (Action item: Gwen Montgomery).
   b) County would prefer that flagger hours for the project be per hour rather than lump sum
   c) County will evaluate if enforcement officers can be utilized during construction to enforce truck compliance in avoiding the detour route.
   d) Design team will see if there is an “escape route” for trucks that enter the area (Action item: Gwen Montgomery).
US30 and NW Newberry Rd:
Temporary Widening

- 10.5' Shoulder Widening with 1' Shoulder
- 11' Shoulder Widening
- 12' Shoulder Widening
- 11.5' Shoulder Widening
- 134' Shoulder Widening
- 5.5' Shoulder Widening with 1' Shoulder

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Portland, OR 97204-2012
888 SW 5th Ave., Suite 1170

US30 - NW KAISER RD
NW CORNELIUS PASS RD
MIXED USE PROJECT

FIGURE 1
Turning Movements at US30 and NW Newberry Road Intersection - Existing Conditions

US 30 EB to NW Newberry Road SB
Vehicle: SU-40

US 30 EB to NW Newberry Road SB
Vehicle: SU-30
NW Cornelius Pass Road: US 30 - NW Kaiser Road
Key #18147
September 18, 2018

Turning Movements at US30 and NW Newberry Road Intersection - Proposed Temporary Widening

US 30 EB to NW Newberry Road SB
Vehicle: Firetruck with Ladder

US 30 EB to NW Newberry Road SB
Vehicle: School Bus

US 30 EB to NW Newberry Road SB
Vehicle: SU-30
Turning Movements at NW Newberry Road Hairpin Curve
NW Cornelius Pass Road: US 30 – NW Kaiser

Traffic Control and Detour Route Meeting
Traffic Analysis Overview
Volume Development

Existing Volumes
- Based on raw turning movement counts
- Traffic counts captured during Newberry Road closure

Baseline Volumes
- Intended to reflect current traffic conditions with Newberry Road traffic
- Reassigns Newberry Road traffic into the study area

Detour Volumes
- Intended to reflect closure of Cornelius Pass Road
- Volumes entering and departing Cornelius Pass Road were reassigned
- 50% and 70% Detour compliance was developed to reflect range of traffic impact
Baseline Traffic Volumes

Assumptions:
1. Used tube counts on Newberry Road to determine EB and WB traffic.
2. Assume traffic to US 30 comes from Skyline Boulevard.
3. Assume traffic from US 30 goes to Cornelius Pass, and gets proportionally distributed.
Detour Traffic Volumes with 50% Driver Compliance

Assumptions:
1. Remove truck traffic at Cornelius Pass/Skyline Boulevard.
2. Reassigned trips going into and coming from north on Cornelius Pass Road.
3. US 30/Cornelius Pass turning movement counts used to estimate north-south split.
4. To capture range of traffic impacts, 50% and 70% detour compliance volumes were developed.
Detour Traffic Volumes with 70% Driver Compliance

Assumptions:
1. Remove truck traffic at Cornelius Pass/Skyline Boulevard.
2. Reassigned trips going into and coming from north on Cornelius Pass Road.
3. US 30/Cornelius Pass turning movement counts used to estimate north-south split.
4. To capture range of traffic impacts, 50% and 70% detour compliance volumes were developed.
Proposed Temporary Traffic Control Modifications

- **NW Cornelius Pass Road/NW Skyline Boulevard**
  - Stop control on NB and SB approaches, with “EXCEPT RIGHT TURN” plaque on NB approach.
  - Remove stop sign on the WB approach.
  - Restripe NB approach to provide dedicated right-turn lane.

- **NW Skyline Boulevard/NW Newberry Road**
  - Stop control on NB (Skyline) approach.
  - Remove stop sign on westbound (Newberry) approach

- **NW Newberry Road/US 30**
  - Install temporary signal with above ground detection and a protected northbound left-turn phase.
  - Consider temporary widening/striping to provide dual left-turn lanes on Newberry Road approach
# PM Peak Hour Traffic Analysis

<table>
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<th>Intersection</th>
<th>No Temporary Traffic Control Modifications (50% Compliance)</th>
<th>No Temporary Traffic Control Modifications (70% Compliance)</th>
<th>With Temporary Traffic Control Modifications (50% Compliance)</th>
<th>With Temporary Traffic Control Modifications (70% Compliance)</th>
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<tr>
<td>NW Cornelius Pass Rd/NW Skyline Blvd</td>
<td>&gt; 1.00</td>
<td>&gt; 1.00</td>
<td>0.66 (EB)</td>
<td>0.65 (NBL)</td>
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<td>&gt; 1.00</td>
<td>1.56</td>
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<td>&gt; 1.00</td>
<td>1.12 (1LT)</td>
<td>1.29 (1LT)</td>
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<td></td>
<td>0.86 (2LT)</td>
<td>0.97 (2LT)</td>
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1LT = assumes single eastbound left-turn lane  
2LT = assumes dual eastbound left-turn lane
Additional Storage Lane Analysis

- Effective vehicle length = 25 feet
- Cycle length = 110 seconds
- Max Green = 35 seconds
- Lost Time = 2 seconds
- Saturation flow rate = 1,900 vehicle/hour/lane

- Left Turn Arrival Rate (50% Detour) = 21 vehicles/cycle
- Left Turn Arrival Rate (70% Detour) = 27 vehicles/cycle
- Right Turn Arrival Rate = 7 vehicles/cycle
Left-Turn Discharge Rate by Storage Length

Initial Discharge (Two Lanes)  Total Discharge (Two Lanes, then Single Lane)
Left-Turn Arrival Rate by Volume Scenario

- Initial Discharge (Two Lanes)
- Total Discharge (Two Lanes, then Single Lane)
- Left Turn Arrival Rate at 50% Detour
- Left Turn Arrival Rate at 70% Detour
Proposed Storage Length

- Initial Discharge (Two Lanes)
- Total Discharge (Two Lanes, then Single Lane)
- Left Turn Arrival Rate at 50% Detour
- Left Turn Arrival Rate at 70% Detour

Vehicle/Cycle

140 feet

Left Turn Storage Length

0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400

0 5 10 15 20 25 30 35

Kittelison & Associates
NW Cornelius Pass Road: US 30 - NW Kaiser Road
Key #18147
September 18, 2018

Alternate Routes for Stage I Construction

NB alternate route for passenger vehicle traffic from Cornelius Pass Rd
SB alternate route for passenger vehicle traffic from Cornelius Pass Rd

Two way flagged traffic on Cornelius Pass Rd

ROAD WORK AHEAD
BE PREPARED TO STOP
ONE LANE ROAD 1000 FT
ALTERNATE ROUTE TO CORNELIUS PASS RD
TRUCKS USE CORNELIUS PASS RD
ALTERNATE ROUTE TO CORNELIUS PASS RD
ONE LANE ROAD 1000 FT
BE PREPARED TO STOP
ROAD WORK AHEAD

NW Cornelius Pass Rd
NW Old Cornelius Pass Rd
NW Kaiser Rd
NW Skyline Blvd
NW Brooks Rd
NW Cornelius Pass Rd
NW Old Cornelius Pass Rd
NW Kaiser Rd
NW Brooks Rd
STAGE I, STAGING PLAN

TRAFFIC CONTROL LEGEND

000000 STAGE I, PHASE I UNDER CONSTRUCTION
000000 STAGE I, PHASE II UNDER CONSTRUCTION

Notes:

1. During Stage I, Phase I, set up detour route using NW Old Cornelius Pass Rd and maintain access on NW Cornelius Pass Rd for local traffic. Construct all project improvements at NW Kaiser Rd.
2. During Stage I, Phase II, set up detour routes using NW Old Cornelius Pass Rd and NW Brooks Rd and maintain access on NW Cornelius Pass Rd for local traffic. Construct all other project improvements south of NW Skyline Blvd.
3. For detour route details, see shls 2C-X and 2C-K.
4. When necessary for construction, use single lane closures from shl XX and std Drgs. TM XXX.

STAGE I, PHASE I: UNDER CONSTRUCTION
STAGE I, PHASE II: UNDER CONSTRUCTION
TRAFFIC CONTROL LEGEND

UNDER CONSTRUCTION

Notes:
1. Set up detour route using NW Newberry Rd and maintain access on NW Cornelius Pass Rd for local traffic. Construct improvements north of NW Skyline Blvd. For detour route details, see sh. 2C-e thru 2C-X.
2. Set up full closure of NW Cornelius Pass Road during the construction of the fish passage culvert between adjacent driveways to maintain local access. See sh. XX and std. drgs. TMXXX for details.
3. Construct all other project improvements north of NW Skyline Blvd.
4. When necessary for construction, use single lane closure from sh. XX and std. drgs. TMXXX.

REVIEWS: 12-31-2020

TRAFFIC CONTROL PLANS

STAGE II, STAGING PLAN

OREGON DEPARTMENT OF TRANSPORTATION

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PDX \#306-005-0000
STAGE I, PHASE I DETOUR
CORNELIUS PASS RD CLOSED EXCEPT TO LOCAL TRAFFIC BETWEEN NW SKYLINE BLVD AND NW GERMANTOWN RD
LIMITED DURATION

TRAFFIC CONTROL LEGEND

TEMPORARY SIGNAL

DETOUR ROUTE

TEMPORARY SIGN ON TEMPORARY POST

PCMS WITH # TYPE III BARRICADE (R)

NOTES:
1. For road closure details not shown, see Drg. No. TM8400.
2. Two-way traffic detoured to NW Old Cornelius Pass Road.

DETUR PLAN

OREGON DEPARTMENT OF TRANSPORTATION

STAGE I, PHASE II DETOUR
CORNELIUS PASS RD CLOSED EXCEPT TO LOCAL TRAFFIC BETWEEN NW SKYLINE BLVD AND NW KAISER RD
LIMITED DURATION

TRAFFIC CONTROL LEGEND

H  TEMPORARY SIGNAL
O O O NORTHBOUND DETOUR ROUTE
● ● ● SOUTHBOUND DETOUR ROUTE
1  TEMPORARY SIGN ON TEMPORARY POST
PCMS WITH 8' TYPE III BARRICADE (R)

NOTES:
1. For road closure details not shown, see Drg. No. TM640.
2. Northbound traffic detoured to NW Brooks Rd.
3. Southbound traffic detoured to NW Old Cornelius Pass Rd.

18147.tc1 :: Default     10/4/2018  2:54:12 PM      Rachel.Fast
NO.
SHEET
OREGON DEPARTMENT OF TRANSPORTATION
503.225.9010
Portland, OR 97204-2012
888 SW 5th Ave., Suite 1170
MULTNOMAH COUNTY
Reviewed By - Gabriel E. Crop
Designed By - Gwenyth N. Montgomery
Drafted By - Harry C. Marx
DETOUR PLAN
2C-5
STAGE II DETOUR
CORNELIUS PASS RD CLOSED EXCEPT TO LOCAL TRAFFIC BETWEEN US 30 AND NW SKYLINE BLVD
LIMITED DURATION

NOTES:
1. For road closure details not shown, see Org No. TM40.
2. For temp. signal details, see Temporary Signal Plan.
3. See sht. 2C-K for NW Cornelius Pass Rd and NW Skyline Blvd intersection details.
4. See sht. 2C-M for NW Skyline Blvd and NW Newberry Rd intersection details.
5. See sht. 2C-N for NW Newberry Rd and US 30 intersection details.
TRUCK ALTERNATE ROUTE
CORNELIUS PASS RD CLOSED TO ALL TRUCK TRAFFIC
LIMITED DURATION

1. First priority for VMS is incident message. The suggested message is shown in the sign depiction.

NOTES:
Notes:
1. For temp. signal details, see Temporary Signal Plan
2. Remove 80' of WB through the NW Newberry intersection during use of temp. signal.
3. After use of temp. signal, remove all temporary striping and restore existing striping.
4. Remove extg. STOP sign at NW Newberry Rd during use of temp. signal. Replace extg. STOP sign at NW Newberry Rd after use of temp. signal.
5. For Cornelius Pass Rd sign detail, see shc. 2C-X.
6. Cover extg. signs that are in conflict with the detour signage.
7. All dimensions are in inches unless otherwise noted.

TRAFFIC CONTROL LEGEND

- TEMPORARY SIGNAL
- TEMPORARY SIGN ON TEMPORARY POST

- Y: Inst. 4" yellow line
- W: Inst. narrow double no-pass
- S: Inst. 12" white stop bar
- CW: Inst. standard crosswalk
- L-A: Inst. elongated left turn arrow (white)
- L-A: Inst. elongated left turn arrow (white)
- CW: Inst. standard crosswalk

- Remove extg. 4" white broken line
- Remove extg. two-way left turn
- Remove extg. narrow double no-pass
Notes:
1. After detour, remove all temporary striping and restore existing striping.
2. Remove extg. STOP sign at NW Newberry Rd during detour. Replace extg. STOP sign at NW Newberry Rd after detour.
3. For Cornelius Pass Rd sign detail, see shtr. 2C-X.
4. Cover extg. signs that are in conflict with the detour sign.
5. All dimensions are in inches unless otherwise noted.

TRAFFIC CONTROL LEGEND

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<th>Sign</th>
<th>Detail</th>
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<tbody>
<tr>
<td>S</td>
<td>Inst. 12&quot; white stop bar</td>
</tr>
<tr>
<td>R</td>
<td>Inst. 4&quot; white line</td>
</tr>
<tr>
<td>ND</td>
<td>Inst. narrow double no-pass</td>
</tr>
<tr>
<td>YD</td>
<td>Inst. 4&quot; yellow dotted line</td>
</tr>
<tr>
<td>RX</td>
<td>Remove extg. 4&quot; white line</td>
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<tr>
<td>RX</td>
<td>Remove extg. 12&quot; white stop bar</td>
</tr>
<tr>
<td>RX</td>
<td>Remove extg. narrow double no-pass</td>
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<tr>
<td>RX</td>
<td>Remove extg. 12&quot; white stop bar</td>
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</tbody>
</table>

5. All dimensions are in inches unless otherwise noted.

3C-9

TEMPORARY SIGN ON TEMPORARY POST

See 2C-9
STAGE II DETOUR
NW Cornelius Pass Rd and NW Skyline Blvd Intersection

Notes:
1. After detour, remove all temporary striping and restore existing striping.
2. Remove extg. STOP sign at westbound NW Skyline Blvd during detour. Replace extg. STOP sign at westbound NW Skyline Blvd after detour.
3. For Cornelius Pass Rd sign detail, see sh. 2C-X.
4. Cover extg. signs that are in conflict with the detour signing.
5. All dimensions are in inches unless otherwise noted.

TRAFFIC CONTROL LEGEND

- **TYPE III BARRICADE (L)**
- TEMPORARY SIGN ON TEMPORARY SIGN SUPPORT (TSS)
- TEMPORARY SIGN ON TEMPORARY POST
- 28" Tubular markers on 40' max. spacing

- Inst. 8" white line
- Inst. 4" white line
- Inst. elongated left turn arrow (white)
- Inst. elongated right turn arrow (white)
- Inst. elongated right turn straight arrow (white)
- Inst. elongated right turn straight left turn arrow (white)
- 12" white stop bar

RENEWED: 12-31-2020

OREGON DEPARTMENT OF TRANSPORTATION

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TRAFFIC CONTROL PLANS SHEET NO. 2C-10
STAGE II, PHASE I
8TH AVE. RECONSTRUCTION

TRAFFIC CONTROL LEGEND
- UNDER TRAFFIC
- UNDER CONSTRUCTION
- 28" TUBULAR MARKERS
ON 40' MAX. SPACING

ROAD CLOSED

W20-3
48x48
ROAD CLOSED
80 FT

W20-3
48x48
ROAD CLOSED
80 FT

ROAD CLOSED

R11-2
48x30
Type "W1"
(Mount On TSS)

R11-2
48x30
Type "W1"
(Mount On TSS)

R11-2
48x30
Type "W1"
(Mount On TSS)

R11-2
48x30
Type "W1"
(Mount On TSS)

W20-3
48x48
ROAD CLOSED
80 FT

W20-3
48x48
ROAD CLOSED
80 FT

500'

W20-3
48x48
ROAD CLOSED
80 FT

W20-3
48x48
ROAD CLOSED
80 FT

500'

W20-3
48x48
ROAD CLOSED
80 FT

W20-3
48x48
ROAD CLOSED
80 FT

500'

W20-3
48x48
ROAD CLOSED
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W20-3
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ROAD CLOSED
80 FT

W20-3
48x48
ROAD CLOSED
80 FT

500'

888 SW 5th Ave., Suite 1170
Portland, OR 97204-2012
503.225.9010

8283-501

10/4/2018 2:50:13 PM
Rachel Fast

TRAFFIC CONTROL PLANS

RENEW: 12-31-2020

Designed By - Gwenyth N. Montgomery

Reviewed By - Gabriel E. Crop

Drawn By - Damsmith & Montgomery

Oregon Department of Transportation

Multnomah County

Designed by - Damsmith & Montgomery

Drawn by - Harry C. Marx

Oregon

Designed by - Damsmith & Montgomery

Drawn by - Harry C. Marx

Traffic Control Plans

Traffic Control Plans
STAGE II, PHASE II
8TH AVE. RECONSTRUCTION

TRAFFIC CONTROL LEGEND

UNDER TRAFFIC

UNDER CONSTRUCTION

28" TUBULAR MARKERS
ON 40' MAX. SPACING

"8TH" LINE

For profile, see sh. XX-X

Designed By - Gwenyth N. Montgomery

Reviewed By - Gabriel E. Crop

Oregon Department of Transportation

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Portland, OR 97204-2012
503.225.9010

NW Cornelius Pass Rd
US30 - NW Kaiser Rd
Multnomah County

Traffic Control Plans

2C-13

RENEW: 12-31-2020

Designed By - E. Smith & M. Montgomery

Dr. M. Winn

Traffic Control Plans

Detour Road

Dated: 04.04.2011

For Review By: G. E. Crop
STAGE II, PHASE III
8TH AVE. RECONSTRUCTION

"CL" LINE

"8th" LINE

TRAFFIC CONTROL LEGEND

UNDER TRAFFIC
UNDER CONSTRUCTION
8' TUBULAR MARKERS

Designed By - Gwenyth N. Montgomery
Reviewed By - Gabriel E. Crop
Drafted By - Harry C. Marx

OREGON DEPARTMENT OF TRANSPORTATION

888 SW 5th Ave., Suite 1170
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Reviewed By: Gabriel E. Crop
Designed By: Gwenyth N. Montgomery
Drafted By: Harry C. Marx

TRAFFIC CONTROL PLANS

RENEWED: 12-31-2020

Designed By: Gwenyth N. Montgomery


MULTNOMAH COUNTY

"CL" LINE

"8th" LINE

8TH AVE. RECONSTRUCTION UNDER TRAFFIC

UNDER CONSTRUCTION

28" TUBULAR MARKERS

STAGE II, PHASE III
8TH AVE. RECONSTRUCTION

"CL" LINE

"8th" LINE

TRAFFIC CONTROL LEGEND

UNDER TRAFFIC
UNDER CONSTRUCTION
8' TUBULAR MARKERS

Designed By - Gwenyth N. Montgomery
Reviewed By - Gabriel E. Crop
Drafted By - Harry C. Marx

OREGON DEPARTMENT OF TRANSPORTATION

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Portland, OR 97204-2012
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Reviewed By: Gabriel E. Crop
Designed By: Gwenyth N. Montgomery
Drafted By: Harry C. Marx

TRAFFIC CONTROL PLANS

RENEWED: 12-31-2020

Designed By: Gwenyth N. Montgomery

STAGE II, PHASE III
8TH AVE. RECONSTRUCTION

TRAFFIC CONTROL PLAN

RENDEZvous

Designed by: Gwenyth N. Montgomery

503.225.9010

Revised by: Gabriel E. Crop

Reviewed by: Gabriel E. Crop

Oregon Department of Transportation

101 SW Fifth Ave., Suite 1170
Portland, OR 97204-2121

PORTLAND, OREGON

Traffic Control Plans

Sheet 2C-17

Drawn: 12-31-2020

TRAFFIC CONTROL LEGEND

UNDER TRAFFIC

UNDER CONSTRUCTION

28" TUBULAR MARKERS ON 40' MAX. SPACING

503.225.9010

Registered Professional Engineer

murraysmith

NORTHWESTERN NATIONAL BANK

OBO OBO

1025 S.W. Fifth Avenue

10-2018

10-4-18
STAGE II, PHASE I
S-CURVES RECONSTRUCTION

TRAFFIC CONTROL PLAN

- UNDER TRAFFIC
- UNDER CONSTRUCTION

TRAFFIC CONTROL LEGEND:

- Paving limits

DESIGNED BY: Gwenyth N. Montgomery

NORTHWEST NATIVE CORNELLUS PASS RD.

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Portland, OR 97204-2012
503.225.9010

TRAFFIC CONTROL PLANS

RENEWS: 12-31-2020
STAGE II, PHASE I
S-CURVES RECONSTRUCTION
DAYTIME

TRAFFIC CONTROL LEGEND

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N.W. CORNELIUS PASS RD.

US30 - NW KAISER RD
NW CORNELIUS PASS RD:

Designed By - Gwenyth N. Montgomery

Reviewed By - Gabriel E. Crop

Drawn By - Harry C. Marx

Final Review Plan

Renews: 12-31-2020

Designed By - OREGON DEPARTMENT OF TRANSPORTATION

Represented By - murraysmith

RENEW: 12-31-2020

Sheet No. 2C-20
NOTES:
1. For Phase I thru IV, provide single lane closure per shift XX thru XX.
2. For Phase III and IV, open roadway to two-way traffic, during non-working hours.
Modified Safety Improvements Package

Cornelius Pass Road Safety Improvements Project

8th Avenue
Minors curve realignment with shoulder widening
30 mph design speed

S Curves
Reconstruction and realignment between Curves 6 and 7

Curves South of Plainview Road
Signage and sight distance improvements

Kaiser Road
Signage and sight distance improvements

Overall Corridor Safety Treatments

• Signage
• Vehicle pullouts (police, refuge, mailbox, school bus)
• Guard rail and barrier upgrades

• Wildlife crossings MERGED WITH IMPROVEMENTS WHERE POSSIBLE
• Reduce pavement drop-offs
Cornelius Pass Road Safety Improvements Project
Community Advisory Committee Meeting #6 Summary

Meeting 6: January 5, 2017, 6:00–7:30 pm
Skyline Elementary School, 11536 NW Skyline Blvd, Portland, OR 97231

CAC Members in Attendance:
- Wayne Bauer
- Jan Campbell
- Carol Chesarek
- Drew Dubois
- Sarah Hanson
- Bruce Penney
- Senator Betsy Johnson
- Steve Robertson
- George Sowder

CAC Members Not in Attendance:
- Jason Ascher
- Kirk Augustin
- Dave Linden
- Tim Love
- Michele Roy
- Bob Russell

County Staff in Attendance:
- Riad Alharithi, CIP Program Manager
- Daren Taber, MCSO Sheriff
- Mike Pullen, Communications
- Ian Cannon, Transportation Director
- Don Pfister, Dist. 1 Road Maintenance Supervisor
- Carrie Warren, Senior Engineer
- Karyne Kietta, Community Services
- Joanna Valencia, Transportation Planning

Consultants/Partners in Attendance:
- Troy Bowers, Murray, Smith & Associates
- Gabe Crop, Murray, Smith & Associates
- Jessica Pickul, JLA Public Involvement
- April Hasson, JLA Public Involvement

Members of the Public in Attendance Who Signed In:
- Pat Brady, Neighborhood
- Catherine Dalzid, Neighborhood
- Laurel Harroun, Neighborhood
- Joe Kelly, Neighborhood
- Marta Kerly, Neighborhood
- Larry Luethe, Community Safety
- Aaron McKay, Neighborhood
- Michael Murray, Neighborhood
- Michael Newman, Neighborhood
- Sandy Newman, Neighborhood
- Nicki Pierce, Neighborhood
- Tom Pierce, Neighborhood
- Jayme Pohlman, Neighborhood
- Katie Sharon, Neighborhood
- Daniel Scheer, Neighborhood
- Leon Speroff, Neighborhood
- Heather Sturgill, Washington County LUT
- Mark Tesarro, Neighborhood
- Susan Watt, Neighborhood
Welcome, Introductions and Agenda Review
Jessica Pickul of JLA Public Involvement introduced herself as the facilitator and welcomed everyone to the meeting.

Jessica led participant introductions and reviewed the agenda. She mentioned that a lot has happened in the last eighteen months. The purpose of this meeting was to review the safety improvements included in the 30% design and provide an opportunity for committee members and public attendees to ask questions and provide feedback. Jessica further explained the format of the night’s meeting.

Project Update
Mike Pullen of Multnomah County provided background on the project and explained what had happened since the CAC met last. Mike said that ODOT had now restored $3.9 million in funding for the project thanks to the help of Senator Johnson. Mike explained that it took longer than expected to get the design consultant back under contract, but once that happened last March, Murray, Smith & Associates were able to get things moving forward to the 30% design level. He said that once the 30% design package was accepted, the team would work to get to 100% design during 2017, with construction in 2018.

Modified Safety Improvement Package
Gabe Crop of Murray, Smith & Associates reviewed the Modified Safety Improvements Package. Gabe noted the changes since the last CAC meeting: 1) removing shoulder widening at Boyd’s Lower Driveway, 2) removing the flashing vehicle-activated beacons at Kaiser Road, and 3) removing variable message signs (VMS). Gabe then provided more detail about the improvements included in the package.

The curve near 8th Ave. Smooth out the curve where truck rollover accidents have occurred and reduce speed. The team completed additional design work, which resulted in 12 foot lanes and 6 foot shoulders.

- Gabe showed the additional land that would need to be acquired (on slide 10, see Appendix for the complete presentation), stating that a lot of the land shown is for the slope, not the actual roadway. He said there would also be a construction easement that would revert back to the property following construction and conditions would be completely restored.

- A member of the public asked if the curve smoothing affects the dwelling located there. [The design doesn’t affect the house itself, but would require taking some of the land.]

The 8th Ave New Culvert. This is a culvert under the road, along the bottom slope area.
• Gabe showed an example of the approximate size of what the crossing might be, explaining that the end result would likely be a box culvert. In order to construct this, work will need to take place in the in-water work period, during the summertime.

• A closure of Cornelius Pass Rd. will be required in order to complete the work on the culvert. He said it was not yet known how long or when a closure would occur.

• A member of the public asked if the 8th Ave. culvert is the only area requiring right-of-way acquisition. [Correct, this is the only place the designed call for obtaining land.]

• A CAC member asked if the culvert goes under the road. [Yes, an existing culvert was discovered that conveys flows to McCarthy Creek. Because the roadway is being reconstructed and fill material will be used, there is a federal requirement to replace the culvert. The stream requires a fish-friendly channel with a concrete box culvert. This requirement has increased a bit. It also helps address the requests for the wildlife crossing from previous CAC meetings.]

• A CAC member asked what the lines on the design slide represent. [They’re contour lines to illustrate the slope.]

• A committee member asked Gabe to distinguish between local closures and local access and to define residential access. [Residents living to one side would have local access to the north and residents from the other side could have local access to the south. It would mean that residents would have to approach from the south to get to the top of the hill.]

• A CAC member asked whether it would allow enough room for four lanes if more land were obtained. [It is not legally possible to obtain more right-of-way than the project requires.]

• A member of the public asked if the team has done a cost analysis to decide what it would cost to buy the house instead of a portion of the land. [The team had considered this but it appeared to be cost-prohibitive, so they went with this more modest approach.]

Boyd’s Lower Driveway. The designs widen the shoulder, where there was currently a steep drop-off. In this area, cars drive beyond the outside lane as they come around the curve. The designs create more recovery space.

Gabe reminded the group that the team originally would have liked to include shoulder widening with a retaining wall. Unfortunately, this is an area where landslides have occurred and after geotechnical investigation, the team realized they couldn’t mitigate the landslide for this project. In order to do shoulder widening, the team would need to do lightweight fill which costs more. It would cost $1.5 million just for the shoulder widening. For that reason, it became less desirable. Gabe explained that, in the original estimate, the team was hoping to spend $340k in the assessment phase, but is now suggesting it not be moved forward. The benefit-to-cost ratio was less than one.

• A CAC member said a car went off the road at this location last week, and at least a dozen cars a year go off there. It is usually people who are unfamiliar with the road. [That’s why the design team decided to widen the shoulder instead of just adding guardrail.]

• A committee member commented that it is not OK to do nothing. There have to be more cautionary signs.

• A CAC member commented that it doesn’t have to be all-or-nothing. [There may be some barrier-specific things the team can look at.]

• A member of the CAC asked if there is something that can be done to notify drivers when they’re about to go outside of the lane. [Maybe reflectorized guardrail. ODOT will be doing a separate road delineation project adding more reflectors.]

• A committee member asked if the Cornelius Pass project team is going to remove anything from the ODOT road delineation project. [The project team will need to talk with ODOT about how much they’re investing. Generally, it’s relatively low cost and we’ll only remove small amounts.]

• A CAC member mentioned that tearing up reflectors after ODOT has placed them is not a good strategy. [The cost to do so would be less than $10,000.]
A member of the public stated that this project should coordinate with ODOT. [Depending on where they’re at on the delineation project, this project team will be able to coordinate with ODOT.]

S-Curves: The project team recommends straightening out the section of road between the two curves, allowing for transition. Gabe explained that the hill will need a cut on the inside with a 15-foot wide rock catchment and drainage area added. The water would flow off the newly reconstructed section of road and drain towards the rock catchment and drainage area.

This solution will involve some rock blasting in order to make the vertical cut, which will also require closures on Cornelius Pass Rd. The team needs to do more design work before they can say how long it will take.

- A CAC member asked if the project team knows about the landslide in that area to the upper left side of the slide. [Yes, the project team is aware. The team will shift the roadside to the more stable part of the hill. A lot of the previous landslide area was constructed on fill.]
- A CAC member asked if this includes the camber fixes. [The project team is now transitioning it in a way that is much safer.]
- A committee member said they thought the CAC previously discussed sheeting of water across the roadway and ice formation. What is being done to address that? [Gabe stated they should talk about it more so that he can understand the specifics of it.]

Beacons on the top of the S-Curves. The project team is proposing to put in a couple of flashing beacons on the S-curves on the north side of the bottom of the hill and the south side of the top of the hill along with a curve warning sign.

Plainview Road. The team recommends shoulder widening, vegetation clearing and guardrail improvements to improve sight distance. More design work is needed for these solutions.

Kaiser Road. There is an overlap of the sight line with vegetation in the southeast corner at Kaiser Rd. The project team considered installation of part-time restriction signs similar to those at Sheltered Nook Road, but didn’t think it would be as effective, as sightlines on Cornelius Pass Road itself at this location are fairly good and it would probably be too expensive. The team is hoping to do vegetation clearing and hillside grading to improve sight lines for vehicles stopped on Kaiser Rd.
- A CAC member asked how far up the road the clearing extends. [The clearing doesn’t extend much farther than shown. It’s focused at the intersection.]

Corridor-wide improvements. Gabe explained the corridor-wide improvements, listed below:
  a. Variable Message Signs (VMS): Not recommended (more detail included below);
  b. Signage upgrades: Replace and upgrade all signs to current standards (more detail included below);
  c. Vehicle pullouts: For police, refuge, mailbox, school buses;
  d. Guardrail and barrier upgrades (more detail included below);
  e. Wildlife crossings: Where other improvements are located;
  f. Reduce pavement drop-offs: Fill in abrupt edges with aggregate.

Reduce pavement drop-offs. Gabe explained that the drop-offs are throughout the entire corridor, however aggregate may not be needed in all places.
- A CAC member asked what the minimum shoulder width would be. [The paved shoulder width won’t be changed. It’s whatever the existing width is. Any existing drop-offs next to paved areas will get filled with crushed aggregate.]
• A CAC member asked if the pavement is going to be filled in so that a wheel would be able to get back on pavement. [Yes, it would be filled in. One exception could be where we install guardrail.]

Variable message signs (VMS). There are a number of benefits and drawbacks to consider with VMSs. The team looked into placing them in several locations, including placing signs at the north and south ends of Cornelius Pass Road to communicate if there’s a crash, emergency or detours; putting one on Hwy 30 so people could avoid turning off if needed; and placing a sign on the Washington County side, which would require some coordination and wouldn’t capture traffic on Hwy 26. Gabe explained that this could cost $400,000-$500,000, which is a large amount relative to the existing budget and the potential safety benefit isn’t known until the sign is installed. There would also be operational challenges as to ODOT or Washington County ownership, so the project team is recommending not including variable message signs at this time.

• A CAC member inquired about the existing sign on US30 on the Scappoose side of Cornelius Pass Road. They wondered if there is any coordination with Multnomah County that communicates not using Cornelius Pass Rd. when there are issues. [Yes.]

Signage upgrades. The project team plans to do comprehensive sign upgrades throughout the entire corridor so that signs are up to standards. This includes: replacing all existing signs; replacing chevrons with reflective signs; including mile point markers every half mile instead of every mile; installing school bus stop signs; updating all of the curve warning signs; and ensuring the posted speeds are correct. New signs are effective and have a fairly low cost.

Pullouts. The team looked at seven locations, based on where space was available. Pullouts are for emergencies and need to be located in flat areas.

• A CAC member asked if there is a pullout for southbound traffic by Columbia St. near the mailboxes. [No, it’s a function of where the space is available and where additional asphalt could be added.]

Guardrail upgrades: The committee has discussed how guardrail updates are necessary due to an unfortunate fatality. The project team found that guardrail could be justified for a majority of the corridor, but that it may be impractical to install everywhere. Criteria for guardrail was examined for the 30% Design and the team came up with a spectrum that included a range of options by technology and cost. The project team recommends adding 15,000 linear feet, or three miles, of guardrail which will cost approximately $698,000. Guardrail locations are mostly on the east side of road, because there is a slope on most of the west side.

There are technical challenges to installing guardrail on Cornelius Pass Road. One of the key standards is a two-foot minimum space between the rail and striping, which is not necessarily feasible in all locations. Other challenges include not having enough space for proper end-treatments and a potential increase in property damage-only crashes. The project team will carefully consider all of these challenges in the design.

• A CAC member asked about guardrail in the area from Skyline down to the S-curves. [The recommendation would be to not install guardrail from the inside edges of the curve, but still place guardrail in the straight sections. Adding guardrails here is more about improving safety along the steep slope than being on the curve.]

Summary of costs. The project team came up with an alternative cost and Draft DAP (Design Acceptance Package). The total number includes construction, administration and right-of-way acquisition. (The complete summary can be found in the Appendix.)
Recap of schedule. The project is now at 30% Design. The project team will be working on the 90% design package and anticipates having a final design by summer 2017. Construction is anticipated to begin in winter 2017/2018.

Construction detour. Several detour routes are being considered for construction. These include: McNamee Rd., which is what the County uses when there’s a one-day shutdown for striping; and, Newberry Rd., which was suggested by ODOT and might be more truck-friendly. The duration of detours is not yet known.

Public Comment
Susan Watt stressed her concerns about Newberry Rd. being used as a detour route. Newberry Rd. already has size limitations, heavy traffic and a lack of enforcement and she would like to know what the County’s is going to do to address it for this project and beyond. She stated that the Multnomah County Comprehensive Transportation Plan has a statement about maintaining these roads as rural roads.

Laurel Harroun seconded concerns about Newberry Rd., stating that traffic is heavy during mornings and evenings and there is a lot of litter.

Larry Luethe echoed concerns about Newberry Road, saying that people heading north need a turn lane. He referenced drivers can’t turn around when there are bottlenecks on Hwy 30. Drivers on Cornelius Pass Rd., turning on Kaiser Rd. or Brooks Rd. need to slow down to 5 miles an hour to get around the corner. This area is hazardous, particularly needing to turn right when going downhill. He reminded the team to think about businesses and gas trucks when considering closures on Cornelius Pass Rd.

Catherine Delzell lives on Columbia St, which connects to Cornelius Pass and has a blind corner going northbound. In absence of any road straightening, there should be some warning signs. Drivers that attempt to turn onto Columbia St. can easily get rear-ended. The team should consider an advanced warning sign as drivers approach Columbia St.

Marta Kerley stressed the need to reduce speed limits. When curves are straightened, it may encourage people to drive fast.

Mike Murray said that having no place to pull people over was an issue, but that pullouts will be available.

Matt McCarthy said he hopes that reflecting studs and delineators on the insides of the curves will help prevent collisions.

Sandy Newman mentioned the locals take Logie Trail as an alternate route. If there’s a detour, people will bring trucks up Newberry Rd., which has a lack of enforcement.

Niki Pierce mentioned that there is an increase in truck traffic in the area due to construction in Washington County. She asked what will happen to all of the trucks when Cornelius Pass Rd. is shut down.

- A member of the public brought up concerns about trucks carrying hazardous material driving near a culvert that feeds into a creek. They asked if there have been any new
conversations that would allow trucks in the Hwy 26 tunnel. A member of the audience responded that fuel trucks can’t go down Hwy 26, so they have to take 217 to I-5 to get to Linnton. Trucks hauling dirt down to Scappoose do not have other options.

- Another member of the public responded that trucks are paying about $2.50 a mile to drive those roads through the PUC, which is a lot of money to drive this road.

CAC Discussion
Betsy Johnson told the committee that this is a vast improvement from where the project was at the last meeting. She noted that the project was supposed to get more money, but it was given to SE Powell. She’d like the team to consider performance incentives for the contractor to stick to the completion schedule. The Senator said that comments regarding connecting Columbia County Rider to light rail would be welcome, as they’ve had a change of management.

Bruce Penney said that the project has made incredible progress and thanked everyone for their work. A quarter of a million dollars is a lot of money. While he initially proposed the vehicle pullouts, he is now against them for the following reasons:

1) County engineers and the sheriff say they can’t enforce speeds on the curves. Pullouts aren’t going to help. The proposed turnouts already exist and vehicles can pull out on gravel just fine, so paving isn’t needed.
   - Other committee members agreed that there’s no reason to pave them, and that the County plan says not to.
2) Portland Public Schools said they’d like pullouts for buses, but there are no houses near most of the proposed pullouts.
3) Some of the team has worked with the post office to make mail delivery safer and have spent $1,000 to make a pullout. Maybe clustering mailboxes is a solution.
4) Illegal dumping happens at vehicle pullouts.
5) Commuters relieve themselves on pullouts.
6) Shoulders and guardrails are more important. Pullouts are not needed, so reallocate that portion of the budget. Bruce stated that the minimum size of pullouts should be what’s acceptable to the sheriff’s office.

Mike Pullen asked the Sheriff’s deputy if he has looked at any of these pullouts. Sherriff Daren Taber stated that, for speed enforcement on the road, law enforcement needs a pullout they can accelerate from. That way, officers can pull over people who are heading into a curve going 60 mph. As long as the aggregate shoulder is maintained, that is fine and additional paved pullouts aren’t necessary.

Ian Cannon asked if there is a way to prioritize a few pullouts with the Sheriff’s Office. Sheriff Daren Taber said that the northbound pullout and the pullout approaching Hwy 30 would be most used by the sheriff’s office.

Betsy, Jan, Bruce and Carol noted they don’t think the pullouts need to be paved. Mike asked if any CAC members would like to see all seven paved. No one on the committee indicated a preference for paving all the proposed pullouts.

Mike stated there will be another meeting to discuss design and closures.
Carol Chesarek shared several comments with the committee. She said she would like to see what can be done with the current funding of $3.5 million before more funding is considered. She suggested coordinating with West Multnomah Conservation on the 8th Ave. improvements, as they’ve already done stream work. She stressed not to undo restoration that’s already been done. For the box culvert, Carol suggested a raised and short culvert for safe wildlife passage. She suggested that it would be helpful to have some way to tell people when there’s snow and ice and suggested that reflectors shift from blue to white when ice is on the roadway. [Riad stated that these types of reflectors cause difficulty in that they only sense ambient temperature, not pavement temperature, creating a false impression of safety.] Carol acknowledged that there were a lot of comments from the audience about volume of traffic and speeding. She stated that this is not just an issue on Cornelius Pass, but also Newberry and Germantown Rd. She said that funding is needed to do a Transportation Land Management Study. She expressed that single occupancy car trips need to be reduced and that CC Rider has a bus that comes down from Columbia County to connect to PCC. One option would be to get CC Rider to connect to light rail.

Sarah Hanson also shared several comments on the 30% design. She would like to see signs that warn commuters of driveways entering the roadway. She is not familiar with the delineation project and is hoping to get some more information about it. She followed the transportation planning project that the County undertook this year and was shocked by how much the planning group took from the Cornelius Pass Safety project and the result was strange. In the TSP that was adopted the Skyline Blvd. intersection was listed as a medium priority, which she found to be absurd. She emphasized that the County should spend money where people are dying. Sarah encouraged everyone to look at the ratings (on page 106) of the TSP on Multnomah County website. Finally, she would like to see some legislation passed that would allow for photo radar on the pass.

Drew DeBois stated that the Fire Department will need to coordinate closely with the construction team regarding the road closure schedule. The Fire Department will need to know if they have full or partial access, if it’s one or two lanes and will need to base their access needs on call volume. Mike agreed with this.

Jan Campbell suggested a Park and Ride for CC Rider. Wayne Bauer stated that a project has been proposed with CC Rider. He also said that a short-term closure benefits the project because things get done faster, saving construction dollars.

Steve Robertson said it would be nice to find alternatives to single occupancy vehicles. If Washington County is encouraged to expand to six lanes, congestion is going to going to continue to increase.

Gabe provided some additional information on the ODOT rumble strips and delineators. Delineators are typically posts with a small reflector to provide people with a sense of where the road is. They are not embedded in the pavement, but rather sticks that can be flexible or on steel posts with reflectors. More information about these options will be shared with the committee.

**Next Steps and Meeting Close**
Jessica thanked everyone for attending and adjourned the meeting.
Overview

The purpose of the open house was to provide the opportunity for neighbors and stakeholders to learn about the Cornelius Pass Road Safety Improvements Project and to share their views on improvement options.

Fifty-five people signed into the meeting.

Notification

The public was notified using a variety of media. The notification program included:

- Announcement at CAC meeting #2 (1/14)
- Mailing of 1207 invitations to residences and business in project area (1/31)
- News release email to CAC, project list, west county list, media, transportation list (2/12)
- News releases distributed by the Skyline Neighbors Association via list serve
- Flyers mailed to Permit of Entry property owners (2/11)

The meeting was originally to be located at Skyline School; however the venue was changed due to cancellation by Portland Public Schools. Notification of the venue change was sent out 2/14 via news release and emails to CAC members and the project contact list. Signage was posted the night of the meeting at both Skyline School and Skyline Grange.

Information Stations and Materials

The open house was a drop-in style event. Participants led themselves around nine staffed information stations with maps, lists of presented improvements, high-level budgets, lists of other suggestions that have been heard by the project team, and flip charts for recording notes/ideas. Project team members were available at each station to ask questions or collect feedback. Participants were able to offer suggestions and provide feedback via staff, flip charts, and/or comment forms.

Meeting with BPAC

The project team met separately with the Multnomah County Bicycle and Pedestrian Citizen Advisory Committee (BPCAC). A summary of this meeting is included in Appendices E.
Community Feedback

Thirty-one comment forms were received at the open house, and three were returned following the meeting. A copy of the comment form, full responses to open-ended questions, and a summary of other feedback are provided in Appendices A–C. Flip charts notes are attached as Appendix D.

Evaluation Criteria Feedback

The evaluation criteria presented at the meeting were:

A. What is the safety benefit-to-cost ratio of the suggested improvements?
B. Do suggested improvements fit within the project budget?
C. Do the suggested improvements fit the crash data?
D. Do suggested improvements address existing substandard elements?
E. Do the suggested improvements fit within the context of the corridor?
F. Do suggested improvements have the potential for adverse effects to safety, property owners (including right-of-way impacts), the environment or other factors?
G. Do the suggested improvements reflect the priorities expressed by the public and CAC?
H. Are there additional benefits associated with the suggested improvements?

Twenty five people provided feedback about the evaluation criteria. The criteria regarding consideration of adverse effects and responding to public/CAC priorities were rated as the most important (F and G). The criteria regarding considering the context of the corridor, additional safety benefits, and project budget considerations were rated as least important (E, H and B).

Comments included that the evaluation criteria should consider:

- Addressing speed issues
- Safety in bad weather, such as fog, rain, ice, and snow
- The capacity of Cornelius Pass to handle current and future traffic issues

Prioritization Feedback

The project team has identified six “hot spots” along Cornelius Pass Road based on crash data. The Community Advisory Committee (CAC) concurred with the “hot spots” and prioritized them in the following order: S-curves, 8th Ave, Skyline Blvd, Sheltered Nook Rd, Curves South of Plainview Rd, and Kaiser Rd. For the purposes of the open house, the hot spots were grouped into the top three (high priority) and bottom three (lower priority).

The large majority of respondents (26 out of 29 responses) indicated that they agreed with this prioritization.
**Hot Spots Feedback**

Respondents were asked to select their top improvement option for each hot spot, considering the $8m construction budget. Appendix B includes full responses to open-ended questions.

**Sheltered Nook Road**

Presented alternatives:

- No change
- SN1: Left Turn Lane Installation (estimated cost $1.8 million)
- SN2: Sight Distance and Vertical Curve Improvement (estimated cost $560,000)

Alternative SN2 was heavily preferred (17 out of 27 people). Note that one person marked both SN1 and SN2; these were both included in the tally.

Other ideas for improvements included:

- Adding speed control measures
- Putting up a caution sign with flashing lights
- Adding a guard rail at the right turn off of Cornelius Pass Rd onto Sheltered Nook Rd
- Removing the lighted speed sign currently at this location
- Driveway entry sign on Sheltered Nook Rd before the curve from end of Sheltered Nook Rd toward Cornelius Pass Rd

Some people commented that removing the hump and rock wall is a great idea, whereas others expressed concern about future slides if the rock wall or vegetation is disturbed. Some people said that illumination (e.g. street lights) would be beneficial for this area, whereas others were specifically opposed to this. Project staff at this station said that the most commonly heard comment was that the current yellow warning flashers often do not work and that SN1 is not needed if the yellow warning flashers are working properly.

**8th Avenue**

Presented alternatives:

- No change
- 8THAVE1: Signing improvements and clearing for sight distance, within right-of-way (estimated cost $30,000)
- 8THAVE2: Signing, additional clearing, beyond right-of-way, and shoulder widening (estimated cost $120,000)
- 8THAVE3: Minor curve realignment, to 30 MPH, with shoulder widening (estimated cost $490,000)
- 8THAVE4: Major curve realignment, to 35 MPH, with shoulder widening (estimated cost $800,000 to $1.38 million)
Everyone who responded to this question thought something should be done. Alternative 8THAVE3 was the most preferred (12 out of 27 people). Note that five people marked more than one preference which were all included in the tally.

Other ideas for improvements included:
- Additional shoulder around driveways
- Additional signage (including chevron curve arrows, tipping trucks, and indicators of previous accidents at this spot)
- Speed feedback sign

The most common comments on this hot spot included concerns about speed, both current speeding problems and the concern that improvements could cause unintended speed increases. Truck rollovers in this area were also a concern.

**S-curves**

This hot spot has been divided into two areas: the Upper S-curves and Boyd’s Lower Driveway.

Presented alternatives for the Upper S-curves:
- No change
- SC1: Overhead signing (estimated cost $170,000)
- SC2: Overhead signing, striping for truck off-tracking, drainage, transverse rumble strips, and minor shoulder widening (estimated cost $250,000)
- SC3: Overhead signing, striping for truck off-tracking, drainage, cross slope correction and minor realignment between “S” curves (estimated cost $770,000)

Presented alternatives for Boyd’s Lower Driveway:
- No change
- SC4: Improved curve signing, roadside barrier and shoulder widening on outside of curve (estimated cost $340,000)
- SC5: Improved curve signing, excavation to improve sight distance and shoulder widening on inside of curve (estimated cost $550,000 to $960,000)
For the Upper S-curves, SC3 was heavily preferred (15 out of 25 people). For Boyd’s Lower Driveway, SC4 was heavily preferred (12 people). Note that one person marked both SC2 and SC3; both of these have been included in the tally.

Other ideas for improvements included:
- Speed limit change to 20 MPH
- Rumble strips across the road before corners
- Speed feedback signs

A number of comments for this hot spot regarded the problem of truck rollovers in this area.

**Skyline Blvd Intersection**

Presented alternatives:
- No change
- SBR: 2-Lane Roundabout (estimated budget $4.6–5.3 million, depending on orientation)
- SBS: Signalized Intersection (estimated budget $3.7–5.4 million, depending on Skyline design speed)

The responses for this hot spot were roughly evenly split. Out of twenty seven people who responded, thirteen people indicated a preference for the signalized option while eleven people indicated a preference for the two-lane roundabout.
option. Note that one person marked both SNR and SNS, noting support of either option; both of these have been included in the tally. A number of people provided comments that indicated a preferred alternative but did not select a box. These have not been included in the tally.

Other suggestions for improvements included:

- On-demand signal
- Truck pull-out southbound
- Passing/left-turn lane southbound
- Four-lanes with turning lanes
- Extending left turn lane to Skyline Blvd to allow left turn to Plainview Road
- Two east–west lanes with right-turn lane
- Three-lane signal with option to upgrade to five lanes later
- Bicycle lanes
- Speed-control signage
- Unconventional signage to get motorists to drive slower
- More speed enforcement
- Limiting truck traffic
- Slowing the speed limit to 30 MPH in this area
- Right turn lane, northbound to eastbound
- Grade separation
- Flashing light in place of any other improvements
- “Lights on for safety” sign
- Divide Cornelius Pass and create protected turn lanes

Frequent comments:

- Many of those who preferred the signalized option expressed a strong opposition to a roundabout, while the opposite did not seem to be true
- Trucks – concerns included the necessity of trucks to come to full stops at a signal, whether trucks are able to safely use roundabouts, and the possibility of faster moving traffic using this area to pass trucks
- Plainview Grocery Store – many people expressed the desire to support the store’s continued presence; issues included access and land use permitting
- Bicycles and Pedestrians – safe crossings for pedestrians, including school children; specific needs of bicycles

Curves South of Plainview Rd

Presented alternatives:

- No change
- PR1: Improved curve signing and clearing for sight distance (estimated cost $30,000)
- PR2: Improved curve signing, shoulder widening and guardrail upgrades (estimated cost $400,000)
- PR3: Curve realignment to 40 MPH and shoulder widening (estimated cost $1.3 million)

The most often selected option was “no change” for this area (11 out of 29). For those selecting an action option PR1 and PR2 were equally popular with 9 and 8 votes respectively. Note: Two people marked more than one option; all of these responses have been included in the tally.
Kaiser Rd

Presented alternatives:
- No change
- KR1: Improved signing and clearing for sight distance (estimated cost $10,000)
- KR2: Vehicle-activated flashing beacon, similar to Sheltered Nook (estimated cost $40,000)
- KR3: Right turn lane installation (estimated cost $200,000)

KR2 was the preferred improvement option for this area (11 out of 28 responses). Note: Four people marked more than one option; all of these responses have been included in the tallies.

Other suggestions for improvements:
- Left turn lane
- Right turn lane onto Cornelius Pass Rd going toward Skyline Blvd
- Roundabout
- Warning signage for southbound traffic
- Full-time blinking yellow light (possibly vehicle-activated)

The project team at this station said that they heard support for both a right turn and left turn lane, as well as stories about "locals" choosing to travel certain routes based on safety and/or time of day. They also heard visibility at Kaiser Rd is superior to Skyline Blvd at Cornelius Pass Rd.

Overall Corridor Safety Treatments

Presented alternatives:
- OCST1: Corridor wide signing upgrades (estimated cost $270,000)
- OCST2: Vehicle pullouts (speed enforcement) – pave 10 existing wide gravel areas; assumes no earthwork, wall or guardrail (estimated cost $100,000 – $10K/each)
- OCST3: Slow moving vehicle turnouts – northbound and southbound directions; 500 foot length, assumes significant cut/fill, widening and right-of-way impacts (estimated cost up to $1 million – $500K/each)
- OCST4: Corridor wide roadway delineation, including: Reflective pavement markers (estimated cost $5,000), Delineators (estimated cost $10,000), and Durable striping (estimated cost $300,000)
- OCST5: Improve pavement friction at 8th Ave curves, S-curves, and curves south of Plainview Road (estimated cost $260,000)
- OCST6: Corridor wide clear zone upgrades (estimated cost $300,000+)
- OCST7: Illumination at key cluster locations (estimated cost $460,000)
• **OCST8**: Mailbox service turnouts (Cost TBD – need input from USPS)
• **OCST9**: Wildlife crossings (Cost TBD – site specific)

Alternative OCST4 was heavily preferred (16 out of 25 people). Note: One person marked six options rather than the requested three; all of these have been included in the tallies.

Other suggestions for improvements:

- Widen/straighten entire road
- Durable paint for the center line and fog line
- Central area for postal delivery and pickup
- Speed feedback signs with routine maintenance
- More warning lights
- Transverse rumble strips across road before corners
- Transverse striping lines – lines of paint across the road before dangerous sections
- Make Cornelius Pass Rd a safety corridor
- Access for mail and busses
- Paint lines more often
- More vehicle pull-outs
- Better night lighting
- Use some of this to improve Logie Trail
- Shoulder improvements throughout
- Guardrails between Sheltered Nook and Hwy 30 on drop-off side
- Address narrow lanes and lack of shoulder/guardrail between 8th Ave and Hwy 30
- Sensors in the road to provide real-time feedback to commuters about congestion levels
- Automatic sensors that show if the road is freezing
- Painted squares with diminishing spacing along the road to tell drivers to slow down approaching curves
- Metering lights at the county line or adjust timing of stop lights to help space the traffic out
- Express bus or shuttle services to reduce traffic on the road
- Additional signage, including:
  - More signage for unmuffled brakes
  - Signage that families live in the neighborhood
  - Speed limit signs on roads in the N/S direction that intersect with Cornelius Pass
  - Chevron sign <<<< at MP 0.5
  - “Lights on for safety” sign at Hwy 30 intersection
Overall

Speed was often brought up as a concern. A number of people said that safety improvements could cause motorists to drive faster if the road is perceived to be safer or lines of sight are improved. Many people would like to see more speed enforcement in this area. Some also advocated for the use of photo radar, although this is outside the purview of this project.

A number of people expressed the opinion that trucks or bicycles should be limited or banned from Cornelius Pass Rd. However, one of the goals of the project is to increase safety for all road users.

A project staff person said they received positive feedback about low cost, high impact options like upgraded or enhanced signing and striping.

Another staff person said that they had heard some comments from a “commuter” standpoint indicating they wanted “faster” facilities, such as increased speed limits, larger radius corners, passing lanes, truck turn off areas.

A number of people expressed the opinion that safety should be the first priority for the project.

Many community members expressed appreciation for the opportunity to review and provide feedback on project materials. All respondents who answered the question regarding the usefulness of the open house indicated that they found it useful.
Appendix A: Copy of Comment Form

Comment Form

Cornelius Pass Road Safety Improvements Project

Fill in this form and drop it in a comment box or return by mail to:
Sandra Prock, Multnomah County, 1620 SE 190th Avenue, Portland, OR 97233
All forms must be received by Tuesday, February 25.

Materials from the meeting tonight, including display boards and the comment form, are available on the project website:
https://web.multco.us/roads/cornelius-pass-road-safety-improvements

Please give us your name and contact details if you would like to receive project updates.

Name: 
Affiliation (if any): 
Email: 
Address: 
Phone: 

Evaluation Framework

The safety improvements presented tonight are being evaluated using the quantitative and qualitative criteria summarized below. The criteria are not listed in any priority order.

1. Please circle the letter of your top three most important evaluation criteria.
   A. What is the safety benefit-to-cost ratio of the suggested improvements?
   B. Do suggested improvements fit within the project budget?
   C. Do the suggested improvements fit the crash data?
   D. Do suggested improvements address existing substandard elements?
   E. Do the suggested improvements fit within the context of the corridor?
   F. Do suggested improvements have the potential for adverse effects to safety, property owners (including right-of-way impacts), the environment or other factors?
   G. Do the suggested improvements reflect the priorities expressed by the public and CAC?
   H. Are there additional benefits associated with the suggested improvements?

2. Are there any other evaluation items you wish to suggest?

[Signature]
## Hot Spots

The project team has identified six “hot spots” and suggested a range of safety improvements for each, as well as a number of corridor-wide improvements. As you visit each of the stations, please take the time to write down your thoughts or ideas.

The CAC has ranked the hot spots in the following priority groups:

<table>
<thead>
<tr>
<th>High Priority</th>
<th>Lower Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-curves</td>
<td>Sheltered Nook Road</td>
</tr>
<tr>
<td>8th Avenue</td>
<td>Curves South of Plainview Road</td>
</tr>
<tr>
<td>Skyline Boulevard</td>
<td>Kaiser Road</td>
</tr>
</tbody>
</table>

4. Do you agree with these prioritizations?
   - [ ] Yes
   - [ ] No
   If not, why?

<table>
<thead>
<tr>
<th>Hot Spot 1: Sheltered Nook Road (SN)</th>
<th>Hot Spot 2: 8th Avenue (8THAVE)</th>
</tr>
</thead>
</table>
| 5. Considering the $8m construction budget, which one of the presented improvement options do you think would be best?
   - [ ] No change
   - [ ] SN1: Left Turn Lane Installation ($1.8 million)
   - [ ] SN2: Sight Distance and Vertical Curve Improvement ($560,000)
   - [ ] No change
   - [ ] 8THAVE1: Signing improvements and clearing for sight distance, within right-of-way ($30,000)
   - [ ] 8THAVE2: Signing, additional clearing, beyond right-of-way, and shoulder widening ($120,000)
   - [ ] 8THAVE3: Minor curve realignment, to 30 MPH, with shoulder widening ($490,000)
   - [ ] 8THAVE4: Major curve realignment, to 35 MPH, with shoulder widening ($800,000 to $1.38 million)

6. Do you have other ideas for improvement options?
   

7. Do you have anything else to say about this spot?
   

8. Considering the $8m construction budget, which one of the presented improvement options do you think would be best?
   - [ ] No change

9. Do you have other ideas for improvement options?
   

10. Do you have anything else to say about this spot?
11. Considering the $8m construction budget, which one of the presented improvement options do you think would be best? (Select one for each area.)

**Upper S-curves**
- [ ] No change
- [ ] $C1$: Overhead signing ($170,000)
- [ ] $C2$: Overhead signing, striping for truck off-tracking, drainage, transverse rumble strips, and minor shoulder widening ($250,000)
- [ ] $C3$: Overhead signing, striping for truck off-tracking, drainage, cross slope correction and minor realignment between “S” curves ($770,000)

**Boyd’s Lower Driveway**
- [ ] No change
- [ ] $C4$: Improved curve signing, roadside barrier and shoulder widening on outside of curve ($340,000)
- [ ] $C5$: Improved curve signing, excavation to improve sight distance and shoulder widening on inside of curve ($550,000 to $960,000)

12. Do you have other ideas for improvement options?

13. Do you have anything else to say about this spot?

14. Considering the $8m construction budget, which one of the presented improvement options do you think would be best?

- [ ] No change
- [ ] $B8$: 2-Lane Roundabout ($4.6–5.3 million, depending on orientation)
- [ ] $B8$: Signalized Intersection ($3.7–5.4 million, depending on Skyline design speed)

15. Do you have other ideas for improvement options?

16. Do you have anything else to say about the Skyline Boulevard hot spot?

17. Considering the $8m construction budget, which one of the presented improvement options do you think would be best?

- [ ] No change
- [ ] $PR1$: Improved curve signing and clearing for sight distance ($30,000)
- [ ] $PR2$: Improved curve signing, shoulder widening and guardrail upgrades ($400,000)
- [ ] $PR3$: Curve realignment to 40 MPH and shoulder widening ($1.3 million)

18. Do you have other ideas for improvement options?

19. Do you have anything else to say about this spot?

20. Considering the $8m construction budget, which one of the presented improvement options do you think would be best?

- [ ] No change
- [ ] $KR1$: Improved signing and clearing for sight distance ($10,000)
- [ ] $KR2$: Vehicle-activated flashing beacon, similar to Sheltered Nook ($40,000)
- [ ] $KR3$: Right turn lane installation ($200,000)

21. Do you have other ideas for improvement options?

22. Do you have anything else to say about this spot?
Overall Corridor Safety Treatments (OCST)

23. Considering the $8m construction budget, which three of the presented improvement options do you think would be best?

- OCST1: Corridor wide signing upgrades ($270,000)
- OCST2: Vehicle pullouts (speed enforcement) — pave 10 existing wide gravel areas, assumes no earthwork, wall or guardrail ($100,000 – $10K/each)
- OCST3: Slow moving vehicle turnouts — northbound and southbound directions; 500 foot length, assumes significant cut/fill, widening and right-of-way impacts (up to $1 million – $500K/each)
- OCST4: Corridor wide roadway delineation, including:
  - Reflective pavement markers ($5,000)
  - Delineators ($10,000)
  - Durable striping ($300,000)
- OCST5: Improve pavement friction at 8th Ave curves, S-curves, and curves south of Plainview Road ($260,000)
- OCST6: Corridor wide clear zone upgrades ($300,000+)
- OCST7: Illumination at key cluster locations ($460,000)
- OCST8: Mailbox service pullouts (Cost TBD — need input from USPS)
- OCST9: Wildlife crossings (Cost TBD — site specific)

21. Do you have other ideas for improvement options?

22. Do you have anything else to say about the corridor-wide improvements?

Other Input

24. Do you have anything else you would like to say about the project?

Please rate this open house

25. Did you find this open house useful?

- Yes
- No

Do you have any suggestions for improvements?
Appendix B: Full Responses to Open-Ended Questions

Question 2: Are there any other evaluation items you wish to suggest?

Note: Answers that had to do with overall comments were moved to Question 24.

- Maintain current speed limits (except possible at Skyline intersection)
- Will improvements impact the major problem of excessive speed
- Safety in bad weather – fog, rain, ice and snow
- G is #1; C is #2; F is #3
- Mostly agree with criteria.
- Criteria C – Crash data is skewed by certain truckers who have bad records
- Slowing traffic down to accommodate driveways, etc.
- In Criteria F – Right-of-Way impacts was underlined
- Capacity of Cornelius Pass to handle current and future traffic issues and remain a safe two-lane highway both for those driving and those residing in the neighborhoods

Note: No question 3 on comment form

Question 4: Do you agree with the hot spot prioritizations? If not, why?

- Southbound major curve between Sheltered Nook and 8th Ave
- Sheltered Nook should be a high priority
- Skyline Intersection should be ahead of 8th Avenue – otherwise ok
- Agree – the crash site maps justify it
- Sheltered Nook should be a high priority. With heavy dangerous trucks and speeding drivers we take our lives in hand each exit and entry
- Do not agree because the accidents have decreased after the safety improvements have been made
- Agree, but if I lived under Kaiser or Sheltered Nook I’d feel differently
- Add speed as a high priority
- I would add Kaiser Road to the high priorities

Question 6: Do you have other ideas for improvement options for Sheltered Nook Road?

- No other ideas
- Limit truck traffic
- Add a guard rail at right turn off the Pass on to S Nook. Deep drainage on this curve and when trucks riding your tail you make sharper/faster turns or get hit!
- Speed control
- Remove lighted speed sign; it is distracting
- 24/7 flashing yellow light with sign – caution
- Can we have the vertical curve improvement without the sight distance fix?

Question 7: Do you have anything else to say about Sheltered Nook Road?

- Not a problem area
- Speed enforcement
- Removing hump and rock wall is great!
- Full time yellow light over intersection
• Any improvement will make a hot spot on the curve between Sheltered Nook and 8th Ave where no improvements are planned
• No illumination! This means no street lights
• SN2: This is a very important improvement. Taking the hump down and improving sight distance would improve the safety for entering and exiting Sheltered Nook.
  Fixing the existing vehicle-activated flashing light to be 24/7 flashing as a caution to stopped vehicles ahead would be a huge improvement as well.
  Street light - I didn’t see this as an option. It was discussed at the meeting last year, and would be a good idea as it would illuminate the intersection.

Question 9: Do you have other ideas for improvement options for 8th Ave?

• More signs like tipping trucks and chevrons <<<<<<<; keep speed down; have sign with # of tipped trucks on this curve
• Make sure the driveways there have adequate shoulder to safely access
• Do not increase signed speed limit
• Something to slow down the traffic
• Limit truck traffic
• Will 8THAVE2 increase speed?
• Either 8THAVE3 or 8THAVE4

Question 10: Do you have anything else to say about 8th Ave?

• NO! clearing for sigh distance – line of sight is on the road
• Any improvement to 8th Ave will cause a greater likelihood of an accident at the major curve between 8th Ave and Sheltered Nook. It will become a new hot spot.
• Prefer options 1 and 2 – with the addition of a Speed Feedback Sign to alert motorists to their speed – with routine maintenance – they are always broken
• Prefer options 3 or 4 – really needs one or the other!
• By clearing zones, you are increasing speed! This is the OPPOSITE of what is needed!
• Dangerous for children to get off a school bus. It stops at end of road and bus can’t be seen
• Speed enforcement
• 8thAVE1 - lowest cost option but would improve safety

Question 12: Do you have other ideas for improvement options for the S-curves?

• Limit truck traffic
• Make sure that trucking companies with bad records “clean up their act” or be fired
• Rumble strips ACROSS the road before corners
• For SC1 – add rumble strips
• SC3 is a MUST!
• SC2 first choice; SC3 second choice
• Must have design that fixes truck rollovers
• For SC2 – include overhead signage and drainage – do not include other things
• If not SC1 then SC3
• SC3 is a MUST
• Upper S-curves. Can we have the Overhead signing, striping for truck off-tracking, drainage, transverse rumble strips, and cross slope correction as a group?

Question 13: Do you have anything else to say about the S-curves?
• Speed limit = 20 MPH
• Keeping grades and slopes that keep trucks from tipping is critical. For motorists if you make it seem safer, they WILL drive faster!
• N curve camber is wrong
• Seems like much more could be done to improve this section
• Road closures are not acceptable
• Need “speed feedback signs”

Question 15: Do you have other ideas for improvement options for Skyline Blvd intersection?

• Extend left turn lane to Skyline to allow left turn into Plainview. SBR option is a DISASTER PLAN
• Either SBR or SBS with modifications that allow the Plainview Grocery is not impacted – they need direct access to CP Road – not access from Skyline
• Please come and observe this intersection between 7–8 am weekdays. You will see trucks with 30–40 cars trailing them. I don't think a roundabout will work in that situation.
• Do 3-lane light if need more money for 5 lanes later
• No rounds for trucks. PASSING lane on southbound left hand turning lane
• I don't believe that roundabout will work due to the amount of traffic and heavy trucks on Cornelius Pass. There are MANY old drivers that use Skyline and our judgment is not as sharp as we age. I want a signal on demand with 2 lanes east–west with the right lane for right turns and the left lane for traffic turning left or going straight. With signal on demand I don't not mind waiting for 40 to 60 seconds for the light to turn green. Safety is the most important criteria that should be used and the signal option is the safest.
• No speed limit increase
• Grade separation would be best – roundabout next but too expensive.
• Truck pull-out southbound
• Must have option for left-in, left-out at grocery store
• The option of getting drivers to drive slower and be more alert at Skyline needs to be thoroughly explored. Some non-conventional signs need to be developed
• No roundabouts!! They are a disaster
• Limit truck traffic. Concern about trucks stopped on steep inclines
• Speed enforcement
• Line of sight for left turn to Skyline from the west
• No roundabout!! Very bad idea, possibly signals
• No change, no roundabout
• Either SBR or SBS
• Preferred option: On demand signalized intersection

Question 16: Do you have anything else to say about Skyline Blvd intersection?

• Also need right and left turn lanes on Cornelius Pass
• Bicycle lanes
• Prefer roundabout. Considerations: 1) Safety; 2) Power outages; 3) Adverse weather; 4) Trucks would have to come to a full stop on a grade for a light; 5) Delays for Skyline Traffic
• I can't say that I have any problem with existing designs
• Ensure good access to all for Plainview residents
• The S-curves and 8th Ave are the priority – no change at intersection!
• Won't keep the store viable – needs 2 exits
I think either the roundabout or a signal will improve the intersection. Both solutions will be bike/ped crossing at Skyline and CP

Question 18: Do you have other ideas for improvement options for the curves south of Plainview Road?

- Don't straighten – they will just drive faster
- Average speed camera; speed enforcement
- Either “No Change” or “PR1” – 2 responses

Question 19: Do you have anything else to say about the curves south of Plainview Road?

- Not a problem unless you are going fast

Question 21: Do you have other ideas for improvement options for Kaiser Road?

- Left turn lane
- Right turn lane onto Cornelius Pass going toward Skyline Blvd
- Roundabout
- Left turn lane to improve downhill safety
- Either “No Change” or “KR1” – 2 responses

Question 22: Do you have anything else to say about Kaiser Road?

- Full time blinking yellow light
- We are property owners on the NW corner at Kaiser. Currently farming this land and need to know if any improvement would impact us.
- Please make the beacon work – Sheltered Nook does not

Do you have other ideas for overall corridor safety treatments?

- More “speed feedback signs” with a budget for routine maintenance – they are always broken
- Guardrails between Sheltered Nook and Hwy 30 on drop-off side
- OCST4: Think durable paint for center line and fog line
- Central area for postal delivery and pickup

Do you have anything else to say about overall corridor safety treatments?

- The “rumble bumps” have been a great improvement!
- Widen and straightening
- Anything to control and enforce speed
- OCST8 should be considered since it poses a problem for delivery and pick-up by residents. Not highest priority though.
- Ban bicycles from Cornelius Pass
- I don’t know what “improve pavement friction” means in OCST5, or I might have selected that option.

Question 24: Do you have anything else you would like to say about the project?

- Lights on for safety signs at Skyline and Cornelius and at Hwy30 and Cornelius. A driveway entry sign on Sheltered Nook before the curve from end of S Nook toward C Pass
• Skyline & CP have had many improvements, there’s a need to have MORE warning lights there and better night lighting
• More signage for unmuffled brakes on Corn Pass
• Ban bicycles from Cornelius Pass Road. There are roads without semis and other trucks
• Widen C Pass all the way. I’m sure nothing will be done because you’ve spent the majority of the $8m already.
• I feel that the narrow lanes and close proximity of the edge of pavement to the drop off to the creek should be addressed between 8th Ave and Hwy 30. There are a couple of places where there is no guardrail and certainly no room for error.
• Overall the improvements are good. I believe the roundabout is not necessary. Speed enforcement would solve many of the accidents on Cornelius Pass.
• PLEASE plan ahead to put ≤40 MPH speed signs on arterial roads during construction. When Pass is closed (due to accident usually) – Newberry, Skyline, RCR etc. have VERY high volume of fast flowing traffic – we have many driveways, curves, elk, ped and bikes on road wanting space and consideration too.
• There will never be enough money to make this road safer for the careless, ADHD folks, etc. If it seems safer they WILL test the limits.

Please provide the legal “path” and framework for getting ticket photo radar in place on C Pass Rd. Do a cost-benefit analysis that is to be presented to the State, so legislators can see how much could be saved by technology to slow traffic at critical places. This money can be used to get a fleet of photo radar vans throughout the county. Tell the police that their commissioners will HAVE TO have a decision to question state rules against county radar.
• No truck pull overs. Those trucks will never get going again.

Paint lines more often.
Use some of this to improve Logie Trail, e.g. make improvement to pavement on right side going down to Hwy 30. In case of accident it is the only way down to 30.
• I believe police presence on Corn Pass would slow traffic down to legal speed. Speed camera trucks (unmanned) not legal in the county? Make it legal – less expensive than all this above bullshit.

Better signage. Let people know families live in this neighborhood – announce that Cornelius Pass is a safety corridor.
• I understand photo radar may not be “legal” but why not put it there and not prosecute. Just like empty cop cars – maybe enough of a deterrent?
• Shoulder improvements should be made throughout the project so there isn’t a drop off at edge of pavement.
• The project should include speed limit signs on roads in the N/S direction that intersect with Cornelius Pass
• Tunnel curves at 8th Ave must allow safe passage for trucks. Almost all road closures are due to these locations.
• Put a chevron sign <<<<< at the curve where Taja Bellwood went into the stream.

Average speed camera.
Transverse rumble strips across road before corners or transverse striping lines – lines of paint across the road before dangerous sections
• Thank you for involving the community. I was opposed to the roundabout solution but your comparison table of the alternatives convinced me that it is the best choice.
• Why are we hazardous designated – I remember trucks had a lane up Canyon, through the tunnel – it seems at least some of the trucking businesses could use that again and relieve the Pass. With a creek on one side and hill of trees on both sides we who live here worry about fire and destroying the creek from spillage.
• Please listen to the residents!!
• Really appreciate the time, effort and consideration shown by our county employees to partner with the community in listening to ideas re: this big project. Big decision to be made about how and where to spend the money allotted will produce a high quality, long-lasting improvement in our community. Thank you!
• As this area becomes more and more population dense, safety becomes more and more of an issue. Safer improvements will provide a better overall solution in the long run. (i.e. traffic light vs roundabout at Skyline.) Please take into consideration (both for construction and for finished projects) the impact of elevation and adverse weather conditions.
• Help by finding ways to ensure slower speed around major curves and intersections.
• Slide concerns! Environmental concerns r/t amount of cleaning that will be done — w ant to keep scenic look to area.
• Thank you for all your hard work.

Please remember when making your decisions that this is a main road for transfer of all toxic and flammable waste — we who live in the canyon have limited escape access if a fire ignited.

Elimination of one hot spot will make another area a hot spot if speed is not controlled.
• Ban fuel trucks and ALL doubles (dump, transfer, etc.) from CPR. Ideally, ban any truck over 40,000 lbs total weight.
• I really don’t like the way the solutions have been grouped, in many cases there doesn’t appear to be anything linking different proposals, it isn’t clear whether different solution elements are tied together (and why), or if they were just randomly grouped. Some explanation (and a chance for Q&A) would be helpful.

I would like the CAC to have access to the projections for future traffic increases, and also any available information about current traffic counts. That information has been referred to at meetings, but I haven’t seen the actual numbers.

On a related question, do we know where the commuters on Cornelius Pass are coming from/go ing to? Intel has a closely guarded list (which they have shared with City of Hillsboro) that shows where their works are coming from, that might be useful. If lots of folks are coming from Portland via Cornelius Pass, then getting the proposed light rail line along Hwy 26 built sooner might help.

Can we add sensors in the road to provide real-time feedback (via smart phone, etc.) to commuters about congestion levels on Cornelius Pass Road?

Can we add those automatic sensors that show if the road is freezing?

City of Portland has a trial section on Skyline where they’ve used squares painted with diminishing spacing along the road to tell drivers to slow down approaching curves, is there any evidence that measures like that actually work?

Could we add metering lights at the county line to help space the traffic out? I regularly make a left turn from Germantown Road onto Cornelius Pass Road at the evening rush hour. Some nights it is easy, other nights it is nearly impossible. The difference is whether there are breaks in the traffic coming north from West Union on Cornelius Pass Road, which depends on how that stoplight is set to operate, if there is a steady stream of traffic eastbound on Cornelius Pass, or whether there are breaks in that traffic (there isn’t enough westbound traffic to be a problem in the evening). Using metering lights could help create breaks in the traffic that might help folks moving on and off Cornelius Pass Road in other locations.

The idea about using metering lights to create gaps in traffic to make it easier for folks to make left turns onto and off of Cornelius Pass could also apply to adjusting the timing of the stop lights (to create traffic gaps) at Cornelius Pass Road and Hwy 30, as well as the light at West Union Road and Cornelius Pass Road, though I suspect the light at West Union is too far away to help anywhere except maybe the Kaiser Road intersection.

Can we look into adding/promoting express bus or shuttle services to reduce traffic on the road? A lot of these folks are commuting to Intel and other high-tech jobs in Hillsboro. An express bus with a park-and-ride lot might be attractive.

I can’t tell if the proposed fixes match the problem causes in our hot spots. Do we know if the accidents are caused by people turning onto Cornelius Pass vs. off of Cornelius Pass vs. through traffic? I wonder if local residents and the truckers might have some ideas about this.

I don’t like any of the alternatives we’ve seen for the intersection at Skyline. Have we looked at dividing Cornelius Pass and creating protected turn lanes, for example? Again, I don’t know if the accidents here result from folks turning on off Corn Pass, or trying to cross Corn Pass, or??

Last but not least, I’d really like the CAC to have an opportunity for a detailed discussion about the problems and alternatives at each of the hot spot locations, so we can ask questions and brainstorm solutions. Maybe we can’t do all the hot spots as a big group, but small groups could each do one hot spot.

• I think it would be best to try to spread the funding across all hot spots for the most amount of impact along the road. Improved safety at all hot spots would be money well spent.

**Question 25: Did you find this open house useful? Do you have any suggestions for improvements?**

Cornelius Pass Road Safety Improvements Project Open House #1 Summary

Page 19
Comments:

- Useful? Yes and No
- Disappointed in some of the overkill. People need to look at safety instead of being so personal about their wants. There's only so much money to go around and overall public safety should come first.
- No suggestions for improvement
- I was skeptical beforehand. But the graphics and discussions were excellent - effective and worthwhile. Thanks
- Thanks for excellent presentation and engagement with residents
- Thanks for the cookies
- Excellent plan to have "stations". Signage was clear - staff helpful and knowledgeable.
Appendix C: Other Input

Prepared Statement Received at Open House

I would like to see …
More signage!
Near the turns on 8th Avenue where trucks routinely tip, why are there not a few caution signs in each direction warning drivers of this?
I wish the flashing caution sign that is supposed to alert people to potentially stopped left turning traffic at sheltered nook worked. I have never once since it was installed seen it flash, and I have come upon stopped vehicles there. I live on Sheltered Nook and drive Cornelius Pass every day, and I am pretty sure this sign makes the road more dangerous. Why can’t it just flash all the time and say something like “Turning traffic stops ahead 600 ft.” Right now, because it says traffic stopped ahead when flashing, it gives a false sense of security. I have to stop the traffic behind me a few times each day, and it is downright scary watching my rear view mirror praying that people actually stop. I have seen and heard so many accidents at this intersection.
Also I would like to have a right turn lane onto sheltered nook. Painted and marked. There is plenty of room there now but there is a big pothole. Pave it. Paint it.
Another great thing would be no parking signs to the left and right of sheltered nook. People stop here and when that happens it makes it very hard to turn off Sheltered Nook because stopped cars block the view of traffic. People park their cars and trailers to the left and right at Sheltered Nook. This creates a danger to other drivers. People could pull onto Sheltered Nook and park.
Here are some lovely examples of warning signs that I found in a 5 minute search on Google Images. Warning signs seem like something that could potentially give a lot of safety improvement “bang for the buck”

Email received by community member unable to attend open house:
I was not able to go to the meeting recently held at the Skyline Grange, dealing with issues in the area. Here is my opinion on the current issues:

1. I live on Sheltered Nook Rd and see NO REASON to put in a traffic light at Cornelius Pass and Sheltered Nook Rd!!! If feel must do something, put in a flashing light & sign to make drivers on C Pass know driver on S Nook entering onto C Pass.
2. MANY in the area DO NOT want to lose Plain View Store.
3. I don’t see that many cars speed on C Pass. The biggest curve where trucks continue to tip over is an issue. They do drive too fast and warning signs should be posted for trucks!!

Please let ones dealing with these issues know of my added feelings.

Letter received by community member following open house:

February 25, 2014
From: Brian Wm. Lightcap
13342 NW Newberry Rd
Portland, OR 97231

To: Multnomah County Transportation Department
Attn: Sandra Prock
1600 SE 190th
Portland, OR  97333
RE: Cornelius Pass Road

Thank-you for the open house.

Let’s get right to the point. Can we get serious about purchasing and using mobile “ticketing vans” along various spots on Pass road? How about two postings at the approach to Skyline Blvd? Well………seems we learned that the vans can be used in the City of Portland and Linton, but, for some reason, not in unincorporated portions of Counties throughout the State. Why and what’s the resolution? I cross this intersection about 3-4 times and week during both heavy and light traffic hours.

The County Commissioners need enough information so they can decide whether to ask the Oregon Department of Transportation and our legislators that Multnomah County to be given the legal clearance to use ticketing vans in rural areas of the county so they can purchase and position vans equipped to issue citations. I hope that your office include using such vans as a viable alternative and request the Commissioners pass such a resolution that includes taking the necessary steps to have this option accepted by the State of Oregon. It poses to save money, generate money from speeding offenders and keep this as a livable rural neighborhood.

There have been many accidents on Cornelius Pass Rd over the last years, and the safety improvements have made a noticeable difference. The death of a teenager has caused a respectful, emotional and generous response for the families, but also 9.5 million of tax payer’s dollars toward this project. However, the well planned safety construction improvements, including a costly reconstruction of the 2 “S” curves haven’t given the public in this area a sense the investments were the final solution. It’s a sad day when skilled road engineers made, costly, yet excellent improvements at the 2 “s” curves, only to have their skills and our dollars go for naught because of a few truck drivers who just can’t take their driving responsibilities seriously.

There’s a lot of information the public, the Pass committee and the Multnomah County Commissioners need here, and right away, before we all get locked in to a VERY high bill for road improvements, which many feel won’t work anyway, if drivers don’t respect speed limits. So let’s get the attentions of all our legislators, so they can be made aware they have possibly overlooked very practical resolution, for a dangerous, curvy road.

And by the way, how about bicyclists and pedestrians; will they have to go through the road-a-bout or are they going to push some button at a traffic light, stopping traffic for 60 seconds while the bike goes through intersection in 2 seconds. Certain times of the year and time of day bikes are coming thru every few minutes. And, I also ask, for this road and width, “What really is the length of time legally required to allow a bike or pedestrian to pass through the intersection?

Impatience from adult drivers and youthful inexperience will always be the issue and this sure costs the public millions of dollars in road improvements to make safety changes. There may be no amount of dollars that will make a judgmental
public feel the problem will remain mostly solved (except for careless drivers). I will say once again my wife was killed on this road and I nearly died with her. Rather than complaining then or throwing millions on this road in the near future, I and many others whom I heard talking at the February 20 open house, are looking for less expensive, practical solutions for causing drivers to consider their speeding inclinations.

There is a passionate close knit, rural community here who strongly hope to avoid working at cross purposes, alienating one another over this issue, and after it all, STILL not getting handle on speeding. Since most of us don’t pleasure bike in this area, I don’t think anyone has imagined the irritation to bikers and drivers alike over the matter of bike and pedestrian issues. Does this matter have to be addressed and did we see anything at the open house. Let’s forget this all, and try getting a clearance for rural, camera van ticketing, save big bucks, and tackle speeding.

Respectfully,

Brian Lightcap

Summary of phone call received prior to open house:

Resident on Newberry Road requests improvements be made on Newberry Road before work is done on Cornelius Pass Road as he anticipates traffic will shift to Newberry Rd and Germantown Rd when traffic flow is impacted on Cornelius Pass Rd since this is often the situation.

He would like traffic counters to be put out so we can see how much traffic there is on this road. He says it is dangerous for 1 1/2 hours in the AM and PM.

He would like to see speed signs, primarily for the top section of Newberry Road where there is the largest concentration of homes. He recommends 25 mph and commented they are in the City of Portland. He would prefer speed signs for the entire length of the road, and also likes the idea of speed bumps, but does not anticipate these being put in place.

He would also like there to be a police presence to deter people from driving so fast.
Appendix D: Flip Chart Notes from Open House

Sheltered Nook Rd

- Widen lanes – increase width
- Mobile radar/enforcement (1 support mark)
- Lights on for safety – “vehicle lights”
- Leave rock wall – Anchor? Future Slides
  - Trees – how many lost?
  - Maintain existing environment
- Digress for right onto Sheltered Nook
- Guard rail inside right onto Sheltered Nook
- Caution flasher not working – keep flashing 24/7 (6 support marks)
- Install “No Parking” (1 support mark)
- Improved signage
- Street Lights
- Remove Speed Indicator Sheltered Nook

8th Avenue

- Contact with Intel and Nike Corps.
- Education/concern of locals for commuter speeds/danger on Cornelius Pass

S-curves

- North curve – super incorrect? Reverse

Skyline Blvd Intersection

- Right turn lane: Northbound to Eastbound
- Consider truck pull-out (southbound) before intersection (both alternatives).
- Allow left-in at grocery store access

Curves South of Plainview Rd

- Fix drop offs at edge of pavement
- Increased speed limit through curves
- Ban trucks
- Concerned that increased sight distance will promote speeding.

Kaiser Rd

- Support for right turn lane installation
  - Freight/trucks having to slow down
- Visibility at Kaiser is superior to Skyline at Cornelius Pass Rd
- Grades are tricky when icy (downhill).
- Constant flashing sign: vehicles may be stopped ahead vs. vehicle activated
- Small acceleration lane after right turn lane off of Kaiser
- Consider warning traffic coming southbound (i.e. traffic turning onto Kaiser)
• More important to have left turn lane onto Kaiser.

Overall Corridor

• Support for photo radar – county legally cannot use photo radar
• NO ROUDABOUTS
• Mailbox widening support
• Curves between 8th and Sheltered Nook
• Landslides
• Support for Vehicle Pullouts
• Designers drive Cornelius Pass Road
• Chevrons and Taja crash location warning signs
Appendix E: Notes from Meeting with BPAC

Excerpt from draft meeting minutes of the Multnomah County Bicycle and Pedestrian Citizen Advisory Committee (BPCAC) on February 12, 2014. Please note these are draft meeting minutes that have not yet been approved by the BPCAC.

County Engineer, Brian Vincent, provided an update to the BPCAC on the Cornelius Pass Road project. The project is currently in the early design phases with the plan on beginning construction in 2015. The County will need to submit preliminary design documents to ODOT by summer 2014. The project’s Community Advisory Committee (CAC) and the public will soon discuss two design alternatives regarding the intersection of Cornelius Pass Road and Skyline Blvd: a full signal or a roundabout. Both intersection alternatives considered the same assumptions for anticipated traffic generation, a general speed of 20 mph, and the need to handle the numbers and size of large freight vehicles moving through the intersection.

Staff presented the BPCAC with a concept design for the roundabout that shows bicycle lanes merging onto sidewalks as a means to enter and travel through the roundabout, allowing crossing the intersection legs at marked crosswalks. BPCAC members felt that cyclists would not use the sidewalk route and that the design would cause confusion about whether or not cyclists need to dismount to cross in the crosswalks. After the BPCAC meeting, County staff clarified that given the anticipated lower speeds required to move through a roundabout that confident cyclists could chose to take the lane, whereas less confident cyclists would have the option to dismount and use the sidewalk.

Brian shared that the general public favors a signal and not the roundabout. Generally the public has a perception that a roundabout would be too expensive to build out including impacts to existing uses and acquiring all the land necessary to construct.

Other comments the BPCAC had about the signal alternative include:

- If the signal alternative is chosen, would it be possible to have a sensor that catches the cyclists on Skyline Blvd, as well as a pedestrian-activated crossing at the intersections?
- Have there been any comments from the Skyline School community? Staff have not heard from the nearby school however BPCAC members suggest that if improvements are made to the intersection, more kids and parents are more likely to walk or bike to school

Other comments the BPCAC had about the roundabout alternative include:

- Single-lane roundabouts are much friendlier for cyclists traveling through a roundabout.
- BPCAC members questioned what the anticipated speeds will be if 20mph is the posted speed. Brian will look into studies on what observed speeds are like in similar roundabouts but did mention that a design speed of 25mph was used to design the roundabout concept presented.
- BPCAC members also noted that the presence of freight moving through the intersection will likely slow traffic in a positive way.
- Would it be possible to use different colored pavement within the roundabout to increase driver awareness of how different and unique the roundabout is? Would it be possible to include sharrow pavement markings in the lanes? BPCAC members suggested looking into additional traffic calming design measures to help slow traffic through the roundabout.
- BPCAC members asked that in future analysis of the roundabout concept to assume that cyclists will take the lane.
- Sidewalks should still be constructed for less experienced cyclists who may not be as comfortable taking the lane, and for potential use from school kids.
Emergency Communications Plan

Advance communication prevents community problems
Communication is the cornerstone of a successful project. Much advance work has been done on this project to inform the public of impacts they can expect during construction, and to listen to community concerns so Multnomah County can minimize adverse impacts as much as possible. It is important that we keep our commitments and provide advance warning to the community when impacts are expected. This is a daily commitment shared by the project office, contractor and staff from both community and public affairs. In addition, there will be times when an emergency or crisis demands a quick communications response. This plan addresses such unexpected occurrences.

A prompt and accurate response
Prompt dissemination of information ensures that people are informed of what is happening and how they might change their plans to mitigate the event's affect on them. It is also vital because if the County does not tell its story right away, someone else -- a motorist, a witness, someone who potentially has fewer facts -- will tell the story for us.

Accurate information -- even when it is not good news -- lends credibility to the County and its desire to keep the public informed. It goes hand-in-hand with timely communications in allowing the public to make decisions based on the facts available.

Coordination with other agencies before releasing information is critical. All agencies involved in an emergency -- local, state, federal, and private sector partners -- should communicate the same messages. Conflicting messages damage the credibility of all participating agencies. The public may not take appropriate action to protect themselves or others if they receive conflicting information.

The importance of a communications plan
A plan ensures that all pertinent information -- names, phone numbers, key messages, action plan outline, time line, media strategies, etc. -- are in the possession of designated emergency/crisis responders so that response can be prompt, accurate and coordinated.

This emergency communication plan is designed to provide a basic outline for how to respond to some of the emergencies or crises that may occur during the project. It gives clear and systematic directions for establishing a chain of command, prioritizing audiences, developing messages, and delivering them in an organized fashion to a variety of audiences: employees, the media, the public. It is vital that responses be coordinated so that the County, its contractors, subcontractors and jurisdictional partners speak with "one voice" throughout all stages of the crisis and the public does not receive conflicting messages.
**Who is the audience?**
During an emergency, the County has two primary audiences. The first group is the people who need to act to help respond to the emergency: police, fire, medical, HAZMAT. The second group needs information in order to protect/prepare themselves. Included in this group are local businesses, residents, motorists and the media.

**Types/definitions of emergencies/crises**
As stated before, an emergency is anything that has the potential to harm life, property or the environment. Erosion of the public’s confidence in the County on this project is also considered a crisis. The **NW Cornelius Pass Road: US 30 – Kaiser Road Project** has the potential for all four types of emergencies. Emergencies can take many different forms and each requires a different level of response. This plan will address some of the many kinds of emergencies/crises that may occur on this project. Please remember, all emergencies/incidents, big or small require a prompt, accurate and coordinated response.

- **Release of contaminants into the air/water**
The accidental release of contaminants into the air/water (regardless of fault) would be considered an emergency. It has the potential to harm life (human and animal) by contaminating the environment.

- **Unanticipated traffic or pedestrian delays or detours**
Despite everyone’s best efforts to communicate construction impacts on traffic, there will be times when lanes or the road are closed longer than expected. Every effort must be made to avoid these situations. The traffic control plans and contract provisions for closures are included to prevent major traffic disruptions. In the event of an unanticipated traffic delay, it is essential that the project staff work with the contractor to reopen lanes or the road as soon as possible. Liquidated damages may be applied against the contractor for these incidents, but the County needs to maintain safe traffic flow on our roadways. When these incidents occur, the public affairs and community affairs staff need to be involved early in the incident to help coordinate the flow of information through the news media and other information distribution channels.

- **Vehicle accident/incident (non-injury)**
Much of Oregon’s highway and bridge construction takes place "under traffic." This means construction crews share roadway space with thousands of motorists every day. Work-zone wrecks (regardless of fault) would be considered an emergency.

An incident/accident would be defined as any occurrence involving damage to private property or vehicles. This also includes any unplanned incident that delays traffic for 20 minutes or more. Please use good judgment and call if there is any doubt. A minor incident can attract the attention of the public or media.
- **Serious vehicle accident/incident (injury/death)**
  Accidents/incidents resulting in injury/death of motorists, passengers, and construction workers would be classified as extremely serious. If such a situation occurs, prompt notification is critical.

- **All pedestrian/bicycle incidents**
  Pedestrian facilities are defined as either formal sidewalks or informal pathways that appear to be used frequently. Incidents occurring on pedestrian facilities, bicycle lanes or the adjacent roadway (regardless of fault) would be considered an emergency that needs to be reported to the appropriate project authorities, including public and community affairs staff. Closures of pedestrian facilities must be clearly thought through, discussed with public and community affairs and with pedestrian facility authorities. All discussions of closures must include alternate/detour route considerations.

- **Citizen Reports of Incidents**
  Depending on when an incident occurs, the Traffic Management Operations Center (TMOC) or Maintenance Office may be made aware of it before the inspector or construction staff. This is especially true on weekends and outside of regular work hours. While the chances of a serious incident at the site drop dramatically during non-work hours, there is still the potential. Frequently, citizens report relatively simple issues like barrels or signs that have been knocked over or steel plates that have started to move. These issues are not the responsibility of the Maintenance offices and must be dealt with immediately. Once again, a prompt response is crucial.

**Roles and Responsibilities**

The reporting structure and roles/responsibilities are key to a successful emergency communication effort. The following briefly outlines those roles/responsibilities when an incident occurs. Responsible staff and contact information are current as of ____________, 20__:

The on-the-scene inspector notifies the County’s Traffic Management Operations Center, and Project Coordinator ________________, who notifies Project Manager ________________ and Assistant Project Manager ________________, who notifies Community Affairs Manager ________________ and Traffic Manager ________________.

Until further notified, the on-scene inspector will be the main, on-site representative, and will be considered the communication link to key County personnel only. This individual will not talk to the media or general public, or discuss the situation with anyone other than key contractor personnel.

Project Manager ________________ or his designee notifies Area Manager ________________ and Region Manager ________________. TMOC will notify District Manager ________________, and Maintenance/Operations Manager ________________. These individuals, including Community Affairs Manager
and Traffic Engineer will determine lead roles/spokesperson(s). These individuals will also determine the course of action/response to the emergency, identify key messages and further define roles and responsibilities.

Community Affairs Manager will set up the information/command center. Until further notified, this center will be located at .

If deemed necessary, will identify/coordinate a second on-the-scene County representative. He will notify key multi-jurisdictional communication team members as necessary/needed. He will also act as spokesperson and will coordinate any off-site or on-the-scene information/command center, if necessary. Community Affairs Manager will be responsible for notifying businesses, the general public and residents who may be impacted by the incident, and will coordinate any special needs with the incident command staff.

Once a course of action has been determined, Area Manager or his designee will alert the appropriate agencies:

Portland police/fire/rescue
National Marine Fisheries
Oregon Department of Fish & Wildlife
Oregon Department of Environmental Quality
Federal Environmental Protection Agency

The contractor and sub-contractors are employees of the County. They will participate in the emergency response as determined necessary by the County or by contractual obligation. Contract employees will not talk to the media/general public, or discuss the situation with anyone other than with key County personnel.

**Information Sources**

Recorded ODOT highway condition information is available 24 hours a day by dialing 511.

The project hot line number (503) _____-_______ is available 24 hours a day for crisis calls.
# Contact Information

The following people are to be contacted in an emergency situation per the above emergency communications plan:

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