

CLACKAMAS COUNTY BOARD OF COUNTY COMMISSIONERS

Policy Session Worksheet

Presentation Date: October 11, 2016 **Approx Start Time:** 2:30 p.m. **Approx Length:** ½ hour

Presentation Title: The Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan

Department: DTD – Engineering Division

Presenters: Karen Buehrig, Transportation Planning Supervisor and Lori Mastrantonio, Senior Planner

Other Invitees: Barbara Cartmill, DTD Director and Mike Bezner, DTD Assistant Director

WHAT ACTION ARE YOU REQUESTING FROM THE BOARD? No action is required of the Board. This is an information session to update the Board and answer any questions before the public hearing on the *Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan* scheduled for December 7, 2016.

EXECUTIVE SUMMARY: In August of 2014, Clackamas County was awarded a Transportation and Growth Management (TGM) grant from the Oregon Department of Transportation (ODOT) to prepare the Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan. At a May 21, 2015 Business Meeting, the Board of County Commissioners approved an intergovernmental agreement with ODOT to prepare the *Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan (Villages Plan)*.

The purpose of the Villages Plan project is to address the following project elements:

- Identify bicycle and pedestrian needs in the boundary of the Villages at Mt. Hood (including Brightwood, Welches/Wemme, Zig Zag and Rhododendron);
- Develop a Safe Routes to Schools Plan (SRTS) for Welches elementary and middle schools;
- Identify locations for at-grade or grade-separated pedestrian crossings of US 26, and
- Determine if there is an appropriate location for a multi-use path through the project area.

Project Background

The primary outcome of the Villages Plan is to provide transportation choices to support communities along the US 26 corridor within the Villages at Mt. Hood which include the communities of Brightwood, Welches/Wemme, Zig Zag, and Rhododendron.

The project area has a permanent population of approximately 5,000. The communities within the project area primarily serve recreational users from the Portland area and have a mix of uses. The area has a number of lodging facilities, restaurants and other services. There is also a strong community of local residents that access the services and frequently travel up and down the US 26 corridor.

The Villages Plan will promote communities composed of active centers linked by convenient transportation options. Business owners have indicated that visitors using the lodging in many of these communities would like to walk and/or bike to destinations but they are forced to use their cars to access local services because the local roadways are narrow without shoulders or

bikeways. Community members have expressed their desire to walk and/or bike within their communities to access the various destinations. The Villages Plan helps to define where shoulders, bikeways and multi-use paths are most needed and prioritizes identified and needed pedestrian and bikeway improvements.

The Villages Plan recommends prioritized pedestrian and bicycle improvements to increase transportation choices including access to transit (the popular Mt. Hood Express) and provide Safe Routes to the Welches elementary and middle schools.

The public outreach activities included:

- Walking tour and stakeholder interviews
- Interactive website, social media
- Open houses and questionnaire for the public
- Meetings with school staff and community groups

Recommended pedestrian and bicycle improvements include:

- Multi-use paths along US 26; Welches, north and south sides
- US 26 crossing improvements; Welches and Rhododendron
- Strategic/targeted shoulder widening: Barlow Trail Road (Principle Active Transportation Route), Welches Road, E. Salmon River Road, Brightwood Loop Road, etc.
- Transit directional and undercrossing signs; throughout the Villages
- Safe Routes to Welches Schools: pathways, shoulder widening, crosswalks, etc.
- Gateway signs; Brightwood, Welches and Rhododendron
- Place-making enhancements for safe crossing of US 26, e.g. sidewalks, access management, signage, crossing improvements; Welches and Rhododendron

Planning Commission Study Session Input

The Planning Commission overall was supportive of the Villages Plan at their work session on August 22, 2016. One member inquired about equestrian trails in the project area. The Villages Plan does not include recommendations regarding equestrian trail projects. Another question raised was regarding the maintenance of a multi-use path or paths along US 26 and the impacts of snow removal on a path. Maintenance of a multi-use path would need to be coordinated with various entities such as ODOT, Bureau of Land Management, etc. It is likely during heavy snow fall a path may not be useable just as the existing demand paths in the area are not currently useable during a snowy weather event. In addition, consideration of the path construction material would be needed to ensure cost effective maintenance and longevity.

A letter of support was received from “Michele Lamoreaux and Rhododendron CPO Members” on July 10, 2016 especially for a crossing in the Rhododendron area associated with pedestrian environment enhancements such as gateway signage, landscaping, sidewalks and/or lighting.

Plan Adoption

Adoption of the *Villages Plan* would include the following components:

1. **Comprehensive Plan Appendix B**

Appendix B, similar to a bibliography listing publications, includes the various sources and documents used in the preparation of the Comprehensive Plan policies and goals. The amendment package for this project would add the *Villages Pedestrian and Bikeway Implementation Plan* to Appendix B of the Clackamas County Comprehensive Plan.

2. Comprehensive Plan Chapter 5

Chapter 5 of the Comprehensive Plan contains the County's TSP and the 20-year Capital Improvement Plan, which is a list of needed transportation-related projects to address gaps and deficiencies in the network. The 20-Year Capital Project list, as well as the Long Term-Table 5-3(c) and the Regional-Table 5-3(d) will be updated to reflect the projects identified in the Villages Plan.

3. Comprehensive Plan Chapter 10

The Mount Hood Community Plan will be updated with appropriate policies that guide development in consideration of the Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan.

FINANCIAL IMPLICATIONS: None. No new funding is sought in conjunction with the *Villages Plan*. The proposed amendments will only make amendments to the Transportation System Plan (Chapter 5 of the Comprehensive Plan) and Community Plans and Design Plans (Chapter 10 of the Comprehensive Plan).

Is this item in your current budget? YES NO

What is the cost? N/A What is the funding source? N/A

STRATEGIC PLAN ALIGNMENT:

- **How does this item align with your Department's Strategic Business Plan goals?** The Villages Plan aligns with DTD's Strategic Plan Goals of providing plan development and public engagement services to residents, businesses and County decision makers so that people can invest based on a coordinated set of goals and policies that guide future development.
- **How does this item align with the County's Performance Clackamas goals?** This project aligns with the County's Performance Clackamas goals by making a strategic investment in the County's transportation infrastructure. Creating safe facilities within the Villages at Mt. Hood and providing transportation choices for those communities will ensure our system in this part of Clackamas County is available to all citizens. In addition, this project is aligned with the goal of ensuring safe, healthy and secure communities. Many streets in the *Villages Plan* lack dedicated pedestrian and bicycle facilities and ADA compliant facilities. Creating active transportation options that are safe and accessible improves community health by promoting physical activity.

LEGAL/POLICY REQUIREMENTS: This is an information session only.

PUBLIC/GOVERNMENTAL PARTICIPATION: The Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan was prepared with the help of community members and transportation stakeholders. A Community Outreach and Engagement Plan was developed at the beginning of the project in order to provide a framework for engaging stakeholders and members of the public. Stakeholder interviews were organized with community members including the president of the Mt. Hood Chamber and representatives with the Rhododendron CPO, the Resort at the Mountain, US Forest Service and the Bureau of Land Management. In addition, staff interviewed representatives from County Tourism, the president of the Oregon Trucking Association and others. Department staff organized an 11-member Public Advisory Committee (PAC) to review materials and provide input and advice. The PAC met three times during the plan development and included residents and business owners within the Villages at Mt. Hood. A 9-member Technical Advisory Committee (TAC) met four times and helped inform

decisions related to safety and traffic engineering, bicycle and pedestrian infrastructure designs and signage.

Public participation also included two open houses to give community members an opportunity to provide input on the Villages Plan and recommended projects. Over 35 people attended each open house at the Resort at the Mountain. Attendees provided their feedback via surveys, dot exercises and discussion with project team members. Public participation also included an on-line questionnaire, news releases; articles in Citizen News; distribution of project flyers and postings to the project website.

OPTIONS: No action is required.

RECOMMENDATION: None. This is an informational session only.

ATTACHMENTS:

1. The Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan – Draft

SUBMITTED BY:

Division Director/Head Approval _____

Department Director/Head Approval _____

County Administrator Approval _____

For information on this issue or copies of attachments, please contact Lori Mastrantonio @ 503-742-4511

The Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan

PREPARED FOR

Clackamas County
with support from Oregon
Department of Transportation

JUNE 2016



RECOMMENDED DRAFT PLAN



DRAFT

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Acknowledgements

Project Advisory Committee

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Stakeholders Interviewed

Jason Miller, Ski Bowl and Mt. Hood
Adventures
Petre Kakes, Hurricane Racing
Coni Scott, Mt. Hood Chamber
George Wilson, Mt. Hood Bicycle and
Pedestrian Coalition
Nate Seifert, Resort at the Mountain
Teresa Christopherson, Mt. Hood Express
Jeff McCusker, David Moore, Dan Davis,
Bureau of Land Management (BLM)
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The contents of this document do not necessarily reflect views or policies of the State of Oregon.

Table of Contents

Acknowledgements.....	i
Table of Contents.....	1
Executive Summary.....	2
Priority Improvement Category and Costs	3
1 The Villages at Mt. Hood	8
1.1 Why this Plan?	10
1.2 Project Objectives	10
1.3 Planning Process	11
1.4 Planning Context	12
1.5 Types of Transportation System Users	12
2 Proposed Projects in The Villages	13
2.1 Brightwood/Wemme Area (B1-B8)	17
Welches (W1-W17).....	27
Rhododendron (R1-R7).....	42
3 Funding and Grant Opportunities	52
3.1 Federal and State Grants	53
Highway Trust Fund.....	53
State Highway Fund.....	53
Statewide Transportation Improvement Program (STIP).....	53
Federal Lands Access Program Grants.....	54
3.2 State Grants	55
Recreational Trails Program (RTP).....	55
ConnectOregon Program.....	55
Oregon Immediate Opportunity Fund.....	55
Oregon Transportation Infrastructure Bank (OTIB).....	55
Transportation Alternatives-Oregon Bicycle and Pedestrian Program.....	55
All Roads Transportation Safety Program (ARTS).....	56
3.3 Tourism Grants	56
Cycle Oregon Community and Signature Grants.....	56
Travel Oregon Matching Grants.....	56
Clackamas County Tourism & Cultural Affairs Grants.....	57

Appendix Volume I

Appendix 1: Policy and project-related language for Chapters 5 and 10 of the Clackamas County Comprehensive Plan to Implement the Project.

Appendix 2: Public Workshop #1 results and public survey results.

Appendix 3: Additional comments from ODOT

Appendix 4: Stakeholder Interview Summary

Appendix Volume II

Technical Memo #1: Existing Conditions: Needs, Constraints, and Opportunities Memo

Technical Memo #2: Policy Framework and Alternatives Evaluation and Prioritization Criteria (DRAFT)

Technical Memo #3: Welches Safe Routes to School: Infrastructure Projects

Figures

Figure 1 Recommended Improvements in the Villages at Mt. Hood5

Figure 2: Existing Walking Conditions on Welches Road 10

Figure 3. Planning Process 11

Figure 4: Example of recreational users 13

**Figure 5: Brightwood/Wemme Potential Area Improvements for Pedestrians, Bicycle Riders, and
 Transit Users..... 15**

Figure 6: Example of Shoulder Widening..... 17

Figure 7: Mountain Biker in Sandy Ridge Trail System 18

Figure 8: Example of Bike Advisory Sign 19

**Figure 9: The underpass is in good condition but not widely known by recreational riders or even
 residents in the area 22**

Figure 10: Entrance to the US 26 underpass for bicycle riders and pedestrians..... 22

Figure 11: Welches Potential Area Improvements for Pedestrians, Bicycle Riders, and Transit Users ..25

Figure 12: Example of a shared use path 27

Figure 13: Rendezvous Grill on US 26 in the vicinity of Arrah Wanna 30

Figure 14: Example of an advance warning beacon 31

Figure 15: Zig Zag Café on US 26 in the vicinity of Salmon River Road 32

Figure 16: Existing Walking Conditions on Welches Road..... 33

Figure 17: Crossing of Welches Road at The Resort at The Mountain 35

**Figure 18: Rhododendron Potential Area Improvements for Pedestrians, Bicycle Riders, and Transit
 Users 42**

Figure 19: Reduction of conflict points due to access management..... 45

**Figure 20: Combined set of streetscape and crossing improvements within Rhododendron to create a
 safe pedestrian environment 49**

**Figure 21: Example of a contraflow bike lane that allows bicycle riders to ride in the opposite direction
 of vehicular traffic..... 51**

Executive Summary

The Mt. Hood National Forest is one of Oregon’s most scenic and important lands—it provides some of the best recreational opportunities in the state, forest and habitat lands, and is a nationally recognized icon that supports the economy of Oregon. Located 66 miles east of downtown Portland, Mt. Hood

National Forest extends south from the Columbia River Gorge across miles of forested mountains, lakes, and streams encompassing over a million acres. The area serves thousands of recreationalists, tourists and is home to permanent and seasonal residents.

The Villages at Mt. Hood include the communities of Brightwood, Welches/Wemme, Zig Zag, and Rhododendron. The Villages are connected by Highway 26 and other county roadways. For travelers on foot or bicycle, conditions are uncomfortable and not well connected.

- People walk on shoulders that disappear into ditches. They walk in poorly-lit conditions and on dirt footpaths worn along roads over time, which are usually only known to residents.
- Bicycle riding is popular in the scenic area for recreation and to access Sandy Ridge Trail System. Pedestrians, bicycle riders, and cars are packed into roadway lanes with no shoulders, resulting in conflicts.
- Many residents would like to walk and bike for daily needs, but do not feel safe doing so. US 26 bisects The Villages at Mt. Hood, and poses a significant barrier to pedestrian and bicycle crossings.
- Missing directional signage for visitors in the area for both for day trips and overnight stays. Visitors are left to use their cars to go to restaurants and stores.

A well-connected pedestrian and bicycle system would improve the quality of life of residents and allow visitors to leave their car behind when enjoying the area's numerous destinations.

The Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan (the Plan) provides a long-term, prioritized set of pedestrian and bicycle infrastructure improvements to increase transportation choices within The Villages, including access to transit. The infrastructure improvements create a connected pedestrian and bicycle system, integrated with transit, aimed to meet residents' and visitors' daily needs (Figure 1).

The Plan has been guided by the following project objectives:

- Identify bicycle and pedestrian needs within The Villages at Mt. Hood
- Develop a Safe Routes to School Plan for Welches Elementary and Middle School
- Identify potential locations for additional or enhanced US 26 pedestrian crossings. The project team will consider at-grade and grade-separated solutions, or enhancements to the current crossings
- Evaluate the feasibility of a multiuse path in the area

Priority Improvement Category and Costs

This *Implementation Plan* describes all improvements and identifies whether they are low, medium or high priority. Improvements are grouped into the following categories of project types -- multiuse path, crossing treatment, shoulder expansion, safe routes to schools, and streetscape amenities – as described below.



Multiuse Path: A wide path (ideally 12 feet) separated from the roadway and shared by pedestrians, bicycle riders and people who use a mechanical device to help them travel due to a disability.



Crossing Treatment: Painted high-visibility crosswalk which may include a rapid-flashing beacon to warn drivers when people are crossing, as well as additional improvements (decorative streetlamps, curb "bulb-outs" that shorten crossing distances or landscaped paths along the road near crossings) to give drivers advance notice that they are in an area where people will be walking.¹



Shoulder Expansion: Adding or expanding paved shoulders on roadways to provide a space for people to walk or bicycle outside of the travel lane. It is a lower cost alternative to sidewalks that can increase safety.



Safe Routes to School: Projects to better enable school children to walk or bike safely to school such as enhanced crossing treatments or a path that provides an alternative to busy streets.



Streetscape Amenities: Curb extensions, pedestrian-oriented lighting and gateway signs can alert drivers to the presence of pedestrians and improve the pedestrian experience. Other options include directional signs, bike hubs and driver speed feedback signs.

Throughout the Plan cost estimates are provided based on general cost factors. More details on the cost of each proposed improvement can be found in Appendix D. Cost factors range from \$ - \$\$\$\$. The dollar signs equate to:

\$	0 -100,000
\$\$	100,000- 500,000
\$\$\$	500,000- 1 million
\$\$\$\$	Greater than 1 million

¹ Pedestrian treatments, including crossings, will require a traffic engineering investigation/ analysis to determine which treatments are appropriate based on the existing conditions such as vehicular and pedestrian volumes. Approval by the ODOT Region 1 Traffic Engineer or the State Traffic Engineer (STE) would likely be required dependent on proposed treatment type.

Figure 1 Recommended Improvements in the Villages at Mt. Hood

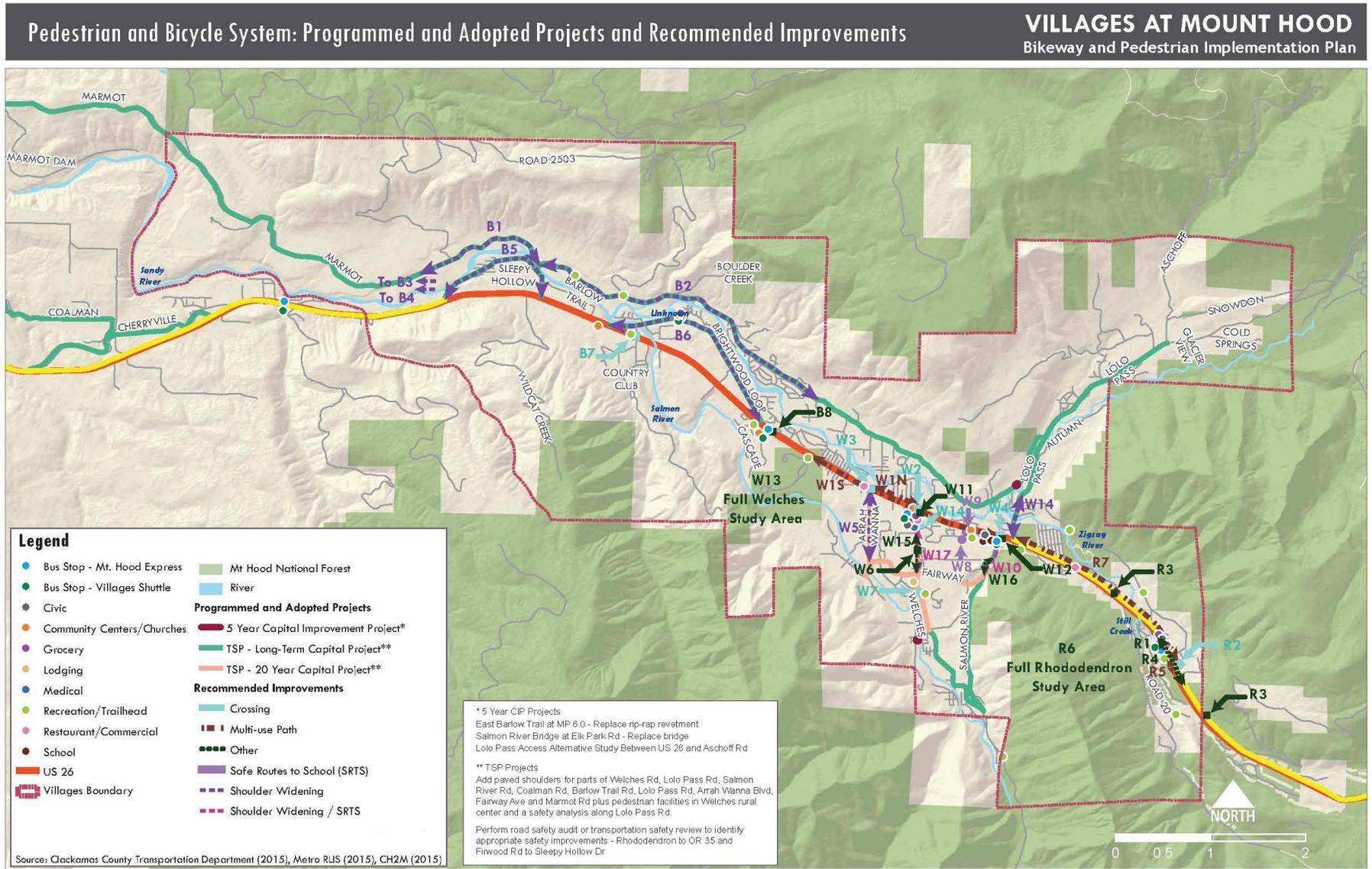


Table 1 Summary of Proposed Improvements

Project Description	Cost	Improvement Category
High Priority Recommended Improvements		
B2: Barlow Trail Road Principal Active Transportation Route (Option A and B) Strategically construct widened shoulders on Barlow Trail Road from Sleepy Hollow Road to Lolo Pass Road	\$\$\$\$	
B6: Brightwood Loop Shoulder Widening Widen Brightwood Loop shoulder to 4 feet on each side from US 26 to US 26 (full extent)	\$\$	
B7: US 26 Undercrossing Directional Signs Provide directional signage to direct bicycle riders and pedestrians to an existing undercrossing of US 26	\$	
W1S: Multiuse Path along US 26 Construct a multiuse path along US 26, along the south side, between the Wildwood Recreation Site and Salmon River Road.	\$\$	
W6: Welches Road Shoulder Widening and Multiuse Path Widen shoulders and/or develop a multiuse path on Welches Road, with a priority between Fairway Avenue and Huckleberry Drive, and extending to US 26	\$\$	
W9: Woodsey Way and Learning Lane Path Construct path along Woodsey Way that connects to the existing sidewalk on Cedar Hill Terrace and add crossing enhancements.	\$	
W15: Driver Speed Feedback Signs On US 26 on Welches Road, Salmon River Road, lower Lolo Pass Road and in the vicinity of Rhododendron	\$	
W1N: Multiuse Path along US 26 Construct a multiuse path along the north side of US 26 between Arrah Wanna Road and Welches Road	\$\$	
W4: Salmon River Road Crossing of US 26 Enhance crossing through a treatment such as the installation of a rectangular rapid flashing beacon at the Salmon River Road crossing of US 26	\$	
W7: Welches Road at The Resort at the Mountain Crossing Improvements Enhance existing crossing by adding advance warning signs and a split rapid flash beacon	\$	
W13: Directional Signs and Bike Hubs Enhance pedestrian and bicycle accessibility within the area with the strategic placement of directional signage and bike hubs.	\$	
R4: Pedestrian Accommodation along US 26 in Rhododendron Install curbs, sidewalk, and gutter to accommodate pedestrians along US 26 in Rhododendron	\$\$	

Project Description	Cost	Improvement Category
<p>R1: Consolidate and Define Driveways in Rhododendron</p> <p>Consolidate and define driveways within Rhododendron through access management</p>	\$\$	
<p>R2 Enhanced Crossing of US 26 in Rhododendron</p> <p>Install a treatment such as marked, continental style crosswalk in Rhododendron on US 26 with a rapid flashing beacon to alert drivers</p>	\$	
<p>R3: Rhododendron Gateway Sign</p> <p>Install gateway signs in advance of Rhododendron in both directions of US 26</p>	\$	
<p>R5: Bicycle Facility for Trail Connection</p> <p>Construct a bicycle facility (multiuse path or other design) to connect Pioneer Bridle Trailhead to Rhododendron, particularly the Mt. Hood Express stop.</p>	\$	
<p>W14: Lolo Pass Road Paved Shoulders</p> <p>Widen shoulders to 4 feet along Lolo Pass Road, with a priority between Barlow Trail Road and US 26</p>	\$\$	
<p>W10: Salmon River Road Shoulder Widening</p> <p>Add paved shoulders or a path to Salmon River Road between US 26 and Fairway Avenue</p>	\$\$	
<p>R6: Directional Signage and Bike Hub in Rhododendron</p> <p>Install directional signage to highlight the presence of Mt. Hood Express transit stops and a bicycle hub in Rhododendron</p>	\$	
Medium Priority Recommended Improvements		
<p>B1: Marmot Road Shoulder Widening</p> <p>Widen the Marmot Road shoulder to 4 feet on each side from The Villages boundary to Barlow Trail Road</p>	\$\$\$\$	
<p>B8: Transit Park and Ride Direction Signage</p> <p>Provide directional signage at Hoodland Senior Center Park and Ride</p>	\$	
<p>W2: Crossing Improvements on US 26 at Welches Road</p> <p>Construct sidewalk and relocate pedestrian activation buttons to be ADA compliant at Welches Road crossing of US 26</p>	\$	
<p>W3: Arrah Wanna Boulevard Crossing of US 26</p> <p>Create an uncontrolled crossing of US 26 at Arrah Wanna Road, with a continental style crosswalk</p>	\$	
<p>W5: Arrah Wanna Shoulder Widening</p> <p>Add a 4-foot-wide paved shoulder along each side of Arrah Wanna Boulevard</p>	\$\$	

Project Description	Cost	Improvement Category
<p>W11: Welches Road Park and Ride</p> <p>Pave and formalize the Welches Road Mt. Hood transit stop location to create a park and ride</p>	\$	
<p>W12: Salmon River Road Park and Ride</p> <p>Pave and formalize the Salmon River Road Mt. Hood transit stop location to create a park and ride</p>	\$	
<p>W13: Directional Signage and Bike Hubs</p> <p>Enhance pedestrian and bicycle accessibility with the strategic placement of directional signage and bike hubs</p>	\$	
Low Priority Recommended Improvements		
<p>B3: Coalman Road Shoulder Widening</p> <p>Widen the Coalman Road shoulder to 4 feet on each side from The Villages boundary to Baty Road</p>	\$\$\$	
<p>B4: Cherryville Road Shoulder Widening</p> <p>Widen the Cherryville Road shoulder to 4 feet on each side from The Villages boundary to US 26</p>	\$\$\$	
<p>B5: Sleepy Hollow Road Shoulder Widening</p> <p>Widen the shoulder of Sleepy Hollow Road</p>	\$\$	
<p>W8: Huckleberry Drive Path</p> <p>Formalize demand-path connecting Huckleberry Drive and Woodsey Way to create direct Safe Routes to Schools path</p>	\$	
<p>R7: Multiuse Path between Lolo Pass Road and Rhododendron</p> <p>Further evaluate the feasibility of a multiuse path/bike route between Lolo Pass Road and Rhododendron</p>	\$\$\$	
<p>W16: Welches Road Crossing at Stage Stop Road</p> <p>Further evaluate the potential for a high visibility crosswalk across Welches Road at Stage Stop Road</p>	\$	

1 The Villages at Mt. Hood

Visitors enjoy fishing, camping, boating, hiking, hunting, mountain biking, skiing and other snow sports in the winter. Popular destinations include Timberline Lodge and Ski Resort, Lost Lake, Trillium Lake, Rock Creek Reservoir and portions of the Old Oregon Trail. In addition, Mt. Hood offers two other major ski resorts, Ski Bowl and Mt. Hood Meadows. Preserving the pristine nature of Mt. Hood is important to Oregon's environment, identity and collective legacy.



The project area includes communities along the US 26 corridor in Clackamas County, Oregon in the vicinity of Mt. Hood. The major populated areas include the communities of Brightwood, Welches/Wemme, Zig Zag, and Rhododendron. Together, these areas are recognized as The Villages at Mt. Hood.

The Villages at Mount Hood, are home to over 5,000 permanent residents and 15,000 seasonal residents. The surrounding area serves thousands of recreational users every year—estimated at over 85,000 to the Mt. Hood area.

Residents and visitors alike enjoy the area’s beauty and recreational opportunities.

US 26 is the primary travel route connecting the communities, and local roads serve important circulation needs. US 26 is classified as a state highway and National Freight Route, and is part of the National Highway System (NHS). This high-volume section of US 26 connects the Portland metropolitan area with Central Oregon. Generally, US 26 in this area is five lanes with two vehicle travel lanes in each direction and a shared center turn lane. The roadway has wide shoulders that serve pedestrian and bicycle circulation. The roadway serves local needs as well as through travel, with average daily traffic between 15,800 vehicles at the western end of the project area (near Hoodland Senior Center in Welches) and 8,500 vehicles at the eastern end (near Rhododendron).

The Wildwood Recreation Site and the Sandy Ridge Trail System (a mountain biking trail system), managed by the Bureau of Land Management (BLM), are within the study area and have large numbers of visitors in the summer and fall. Several trailheads for camping and hiking in the Mt. Hood National Forest and study area contribute to higher traffic volumes on US 26 and collector and arterial roads, particularly during weekends and summer months. In the winter, snow sports enthusiasts contribute to increased weekend through-traffic while visiting snow parks east of the project area.

Who lives in the Villages?

- 4.5% of population are youths (10-19)
- 18.9% of population are older adults (65+)
- 8.1% of population are low-income
- 10.2% of population have an ambulatory disability
- 98.6% of population identify as White, 1.4% identify as two or more races

1.1 Why this Plan?

The current pedestrian and bicycle network is poorly connected. People walk on shoulders that disappear into ditches or are poorly lit. Many use dirt footpaths worn along roads over time and only known to residents. At open houses, many residents cited bicycling as one of the ways they move around Mt. Hood, and bicycling is also popular in the scenic area for recreation and to access the Sandy Ridge Trail System. Pedestrians, bicycle riders and motorists often share roadway lanes with no shoulders, leading to conflicts. Many residents would like to walk and bike more for their daily needs, but do not feel safe doing so. Crossing US 26, the highway bisecting the Villages, is a significant barrier to pedestrian and bicycle travel.

The area hosts significant numbers of visitors, both for day trips and overnight stays. There is no directional signage for visitors who wish to walk or bike and they are left to use their cars to go to restaurants and stores. A well-connected pedestrian and bicycle system would support the quality of life of residents and allow visitors to leave their car behind when enjoying the area's numerous destinations.

The Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan also provides an important update to the Clackamas County Mt. Hood Community Plan, which was adopted in 1976. The Plan considers changes to land use to support proposed transportation investments and further supports project needs identified in the Clackamas County Transportation System Plan. The Plan provides a long-term, prioritized set of pedestrian and bicycle infrastructure improvements aimed at increasing transportation choices within The Villages, including access to transit. The infrastructure improvements create a connected pedestrian and bicycle system, integrated with transit, aimed to meet residents' and visitors' daily needs.

1.2 Project Objectives

Clackamas County received a grant through the Oregon Department of Transportation's Transportation and Growth Management (TGM) program to define solutions. The Plan has been guided by the following project objectives:

- Identify bicycle and pedestrian needs within The Villages at Mt. Hood
- Develop a Safe Routes to School Plan for Welches Elementary and Middle School
- Identify potential locations for additional or enhanced US 26 pedestrian crossings. The project team will consider at-grade and grade-separated solutions, or enhancements to the current crossings
- Evaluate the feasibility of a multiuse path in the area

The long-term, pedestrian and bikeway system proposed in this Plan meets these objectives within a 20-year timeframe.



Figure 2: Existing Walking Conditions on Welches Road

Project Advisory Committee (PAC)

The PAC included:

- neighborhood representatives
- local pedestrian and bicycle advocates
- local business owners
- community volunteers
- agency-based technical advisors

Technical Advisory Committee

The TAC included representatives from:

- Clackamas County Engineering and Planning
 - US Forest Service
 - Oregon Department of Transportation
 - Mt Hood Express
 - Clackamas County Tourism
-

It is important to note that while funds do not currently exist to implement proposed projects, the Plan provides a foundation from which Clackamas County, agency partners and other stakeholders can seek funding through programs or grants. The existence of a well-supported, prioritized, community-driven plan provides credibility and heft to grant and program applications.

The Plan has several improvements for US 26. All US 26 improvement projects are subject to ODOT review and approval.

1.3 Planning Process

Stakeholders within The Villages at Mt. Hood communities contributed to the development of the Plan, as have technical staff at every stage. A public advisory committee, made up of stakeholders from the community, and a technical advisory committee, made up of Clackamas County and other agency staff, reviewed and advised development of the Plan. In addition, two public workshops were held to gain public feedback on proposed projects, their priority and the draft Plan.

The advisory committees and public workshop attendees provided substantive feedback on the projects, including design elements and prioritization, which is reflected in this Plan. Section 3 provides details about each project, and includes a short summary of public feedback regarding individual project proposals.

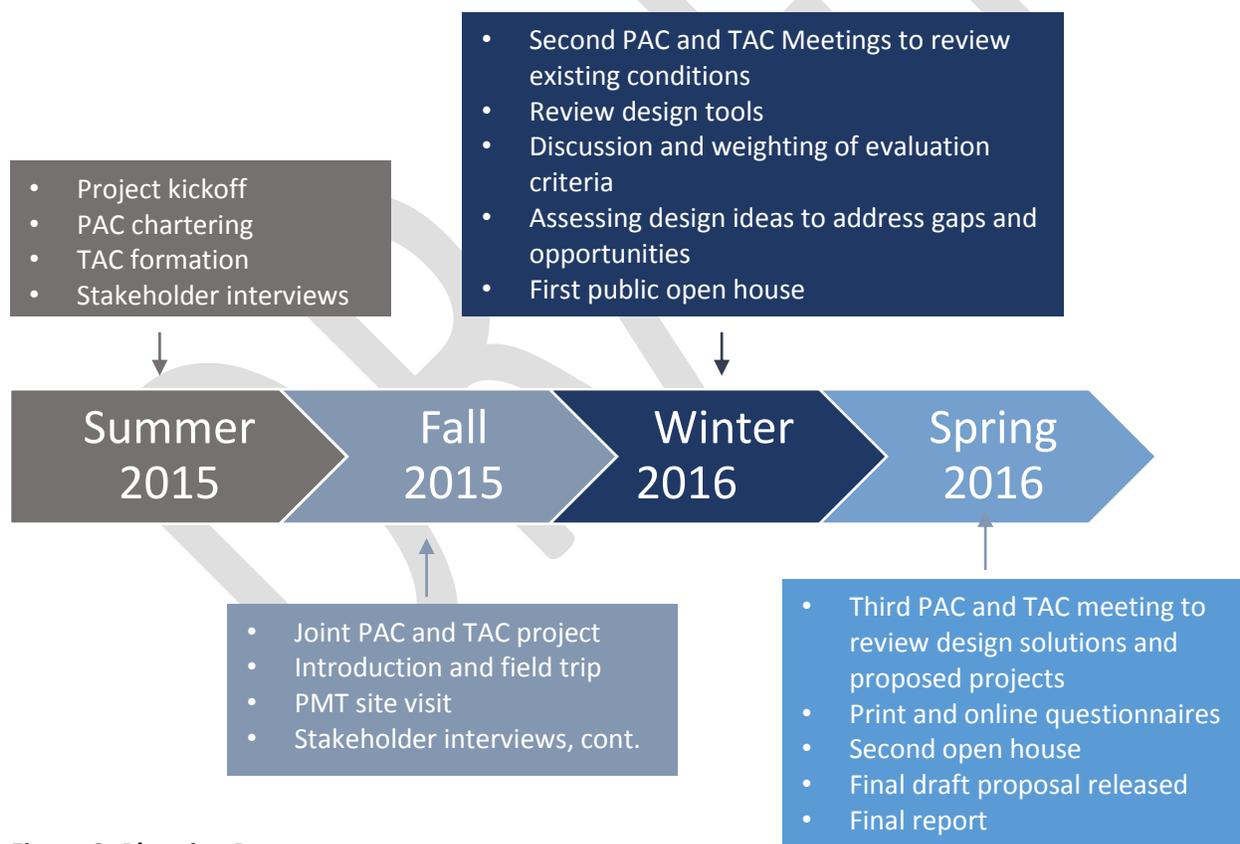


Figure 3. Planning Process

1.4 Planning Context

The Plan builds upon and recommends implementation of several plans.

- The *Clackamas County Active Transportation Plan* (ATP) identifies key active transportation routes connecting destinations and communities in Clackamas County, both rural and urban. The Clackamas County ATP identifies Barlow Trail Road within the project area as a principal active transportation route. The *Implementation Plan* provides more detail for implementation of Barlow Trail Road as a principal active transportation route.
- The 15-year *Mt. Hood Multi-Modal Transportation Plan*, with a planning time horizon of 2014-2029, is a multi-jurisdictional plan created to improve safety for all highway users and expand travel options along the Mt. Hood Highway Corridor. While the plan does not call for any projects specifically in The Villages at Mt. Hood, it does call for expansion of pedestrian and bicycle options integrated with transit, and of multimodal directional signage within Mt. Hood. The *Implementation Plan* further describes the intent of the Mt. Hood Multi-Modal Plan with complementary projects.

The *Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan* will be used to update the Mt. Hood Community Plan and Chapter 10 of the Clackamas County Comprehensive Plan. The Mt. Hood Community Plan provides land use and transportation guidance for The Villages at Mt. Hood, such as a facilitating pedestrian movement across US 26 within Rhododendron. The *Implementation Plan* also provides an update to Chapter 5: Transportation System Plan (TSP) of the Clackamas County Comprehensive Plan. Prioritized projects from this Plan will include improvements for pedestrians, bicycle riders and transit users. The projects will be integrated into the prioritized list of projects for the countywide TSP.

Priority

Priority indicates how important the improvement is to implementing a pedestrian and bicycle system.

- High – very important
 - Medium – important
 - Low – somewhat important
-

1.5 Types of Transportation System Users

Descriptions of area improvements state what type of users would benefit from the improvement. It is important to note that throughout the public involvement process, the team learned many individuals often fall into multiple categories of users. For example, many residents also recreate in the area regularly and find the recreational opportunities a great benefit to living within the community.

- **Residents:** Residents want to walk and bicycle safely within their own community. In particular, low-income and zero-car households may have less access to auto travel and rely on transit, walking or riding a bicycle to meet their daily needs. Important destinations for residents include food markets, schools, medical offices and community centers or churches. Crossings and improvements along US 26 would be most heavily used by residents.
- **Transit Riders:** Mt. Hood Express and The Villages at Mt. Hood Shuttle serve both commuters and recreational users. Bus stops are not typically served by sidewalks or marked crossings. Pedestrians and bicycle riders rely on road shoulders and demand paths on US 26 to access bus stops. Two bus stops (at Welches Road and E Salmon River Road) are near crosswalks on US 26.
- **Lodgers:** Visitors staying at local area inns, resorts and vacation rentals may drive up to the area, but prefer to walk or bicycle during their stay. Many guests like to park their vehicles and enjoy the scenery by walking to area restaurants, stores or recreation attractions. These users may benefit from improved pedestrian and bicycle facilities and directional signage that link lodgings and commercial areas.
- **School Children/Older Adults:** These groups are particularly vulnerable as they may have slower reflexes, use mobility devices and need more time to cross roadways. The Welches Elementary

School, Middle School, area parks and the Hoodland Senior Center are common destinations. Sidewalks, separated paths and crossings would particularly benefit these user groups.

- **Recreational Visitors:** Mt. Hood is a common destination for both road cyclists and mountain bikers. Many recreational users ride through The Villages at Mt. Hood while traveling recreational routes advertised by Travel Oregon, Clackamas County Tourism and local cycling groups. These users often prefer to ride roads away from US 26 to avoid heavy and fast-moving vehicles. Improvements to roadway shoulders, particularly those designated by the Clackamas County Transportation Plan, would improve the experience of these users.



Figure 4: Example of recreational users

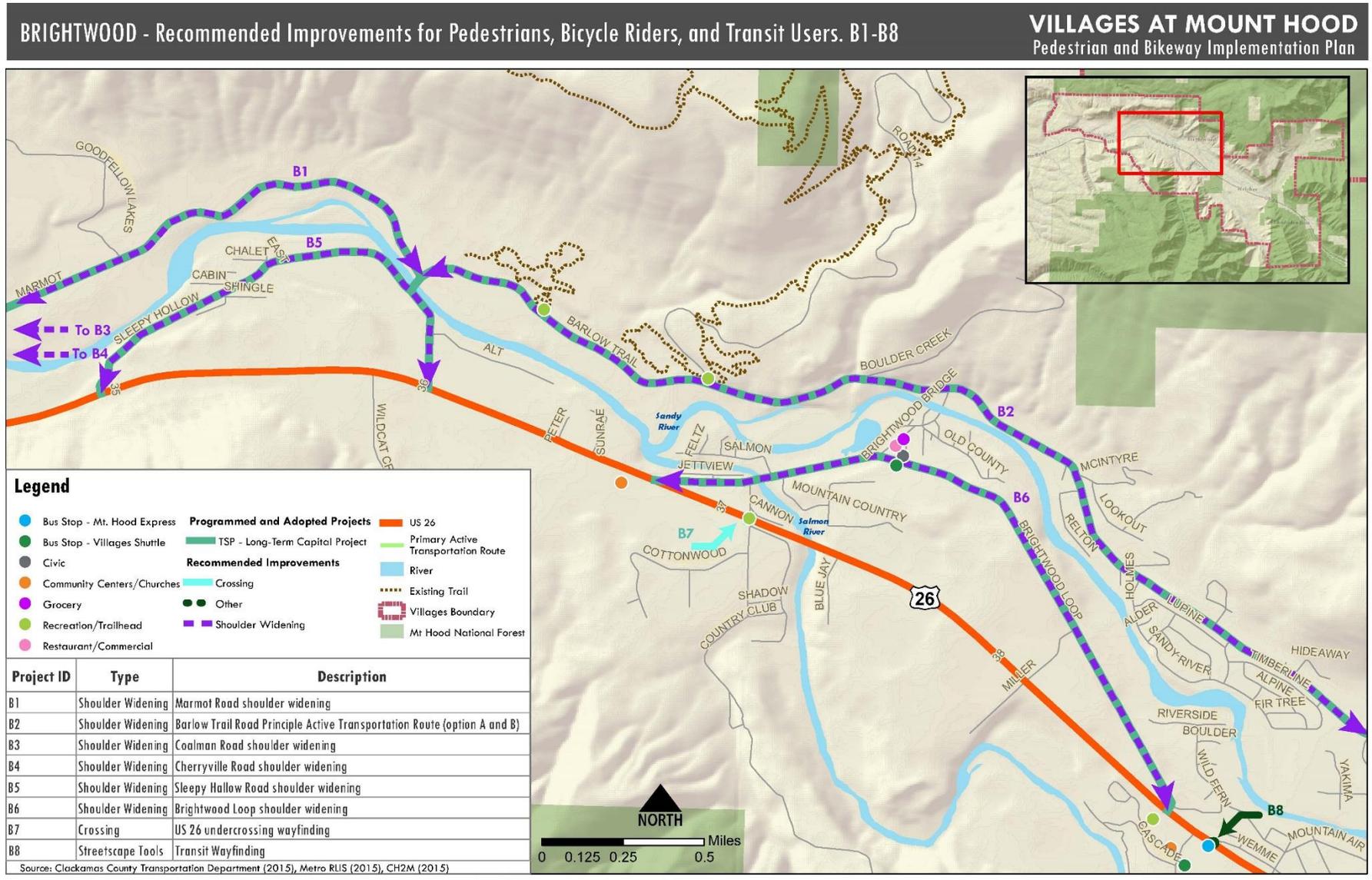
2 Proposed Projects in The Villages

Projects proposed in the *Implementation Plan* reflect an analysis of existing conditions that considered the needs, opportunities and constraints within the existing pedestrian and bicycle system. Community stakeholders and PAC members helped define needs related to walking and bicycling, and defined the system values such as safety, access and safe routes to school.

PAC members, TAC members and the general public validated and augmented the team's assessment of needs, opportunities and constraints during Public Workshop #1. Following analysis of existing walking and bicycling conditions, the project team created a series of improvement projects to address needs, opportunities and gaps.

This section describes the background and need for each area improvement, the recommended improvement, any alternatives considered and dismissed, feedback from the public, committees and team, an order-of-magnitude cost factor, and priority for the improvement. Projects are grouped by geography in the communities of Brightwood/ Wemme, Welches, and Rhododendron.

Figure 5: Brightwood/Wemme Potential Area Improvements for Pedestrians, Bicycle Riders, and Transit Users



2.1 Brightwood/Wemme Area (B1-B8)

Clackamas County identified projects in its Transportation System Plan (CCTSP) that reflect many of the same priorities identified by the PAC, TAC and public. These include adding paved shoulders to Marmot Road, Barlow Trail Road, Coalman Road and Arrah Wanna Boulevard.



B1: Marmot Road shoulder widening *Medium Priority* *\$\$\$\$*
Potential Improvement Recommendation: Widen Marmot Road shoulder to 4' on each side from The Villages boundary to Barlow Trail Road.

Marmot Road is classified as a Clackamas County Active Transportation Route in the County's Active Transportation Plan (CCATP), but lacks a facility adequate for pedestrians or bicyclists. The cross-section of Marmot Road is comprised of one 10 to 11-foot travel lane in each direction with a 0 to 1-foot wide shoulder that is lacking fog lines defining the shoulder.

Marmot Road needs a widened shoulder to provide an adequate facility for pedestrians and bicycles. Adding paved shoulders to Marmot Road is identified as project #3167 in the CCTSP as a Long-term Capital Project. This project is also in accordance with the CCATP. Marmot Road is classified as a Minor Arterial. The standards in the CCTSP dictate that a typical section include a 6-foot bike lane and 6-foot pedestrian facility on each side of the street. Tight right-of-way constraints preclude this level of improvement in the near term.

Improvement Description: Add a 4-foot-wide paved shoulder along each side of Marmot Road with advisory signing to alert drivers to the presence of bicyclists and pedestrians along the route (Figure 6).

Benefits: Provide pedestrian and bicycle access to key destinations including the Sandy Ridge Trail, Brightwood Post Office, Brightwood Store, Brightwood Tavern and The Villages at Mt. Hood Shuttle Stop. It would benefit both residents and recreational users.



Figure 6: Example of Shoulder Widening

Considered and Not Recommended: Bike lanes, pedestrian paths and multiuse paths -- each would require additional right-of-way and construction expense not justified by the current level of use.

Public Feedback and Discussion

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority.



B2: Barlow Trail Road Principal Active Transportation Route (Option A and B)
High Priority A - \$\$\$\$ and B - \$\$\$

Barlow Trail Road is classified as a Clackamas County Principal Active Transportation Route, but lacks a facility adequate for pedestrians or bicyclists. The cross-section of Barlow Trail Road is comprised of a single 11-12-foot travel lane in each direction with a total paved width varying between 22-25 feet,

leaving little to no shoulder for pedestrian and bicycle use. Residential development along Barlow Trail Road would be served by improvements to this route.

The preferred improvement to Barlow Trail Road would be a shared path to separate bikes and pedestrians from vehicular traffic. Adding paved shoulders to Barlow Trail Road is identified in the CCTSP as a Long-term Capital Project (#3166). This project is also in accordance with the CCATP. STRAVA data, voluntarily recorded by riders tracking their riding performance, demonstrates Barlow Trail Road is one of the most popular area bicycle routes, and provides a parallel through route to US 26 (Appendix B). The Sandy Ridge mountain bike trail system is accessed by bicycle riders off of Barlow Trail Road.

It is unlikely that funding could be secured for a path; therefore, a widened shoulder to provide adequate space for pedestrians and bicyclists is recommended. Barlow Trail Road is classified as a Minor Arterial which per the CCTSP is a typical section that includes a 6-foot bike lane and 6-foot pedestrian facility on each side of the street. Tight right-of-way constraints, trees and drainage ditches preclude this level of improvement.

Improvement Description Option A

Strategically add a 4-foot wide shoulder from Sleepy Hollow Road to Lolo Pass Road in key areas to facilitate walking and bicycle riding.

Determining strategic, spot improvements requires a topographic survey to determine sight-distance limitations. Criteria for future projects to use to determine key locations at which a widened shoulder would best serve bicycle riders are:

- Areas where bicycle riders face a steep uphill section, which requires survey and or as-built records
- Areas of limited sight-distance around a curve or up a hill



Figure 7: Mountain Biker in Sandy Ridge Trail System

Benefits: Provide pedestrian and bicycle access to key destinations including the Sandy Ridge Trail, Brightwood Post Office, Brightwood Store, Brightwood Tavern and The Villages at Mt. Hood Shuttle Stop. The project benefits both residents and recreational users.

Improvement Description Option B

Widen the Barlow Trail Road shoulder to 4 feet on each side from Sleepy Hollow Road to Lolo Pass Road with advisory signing to alert drivers to the presence of bicyclists and pedestrians along the route.



Figure 8: Example of Bike Advisory Sign

Residential development, which is more predominant along Barlow Trail Road, would be served by improvements to this route.

As previously mentioned, Barlow Trail Road is classified as a Principal Active Transportation Route and bicycle tourism is being promoted along this route. These factors along with the greater residential development led to this recommendation. Some signage does exist on the road and additional signage is recommended due to the heavier usage of the route. Residents and recreational users would all

benefit from these improvements.

This level of improvement has right-of-way constraints, cost constraints and potential objections from residents along Barlow Trail Road.

Benefits: Provide a continuous space for pedestrians and bicycle riders and access to key destinations including the Sandy Ridge Trail, Brightwood Post Office, Brightwood Store, Brightwood Tavern and The Villages at Mt. Hood Shuttle Stop. It would benefit both residents and recreational users.

Considered and Not Recommended: Bike lanes, pedestrians and multiuse paths. The tight right-of-way and construction expense eliminated these facilities from consideration in the near-term. It is recommended that any proposed projects avoid impacts to the ditches running parallel to Barlow Trail Road as this would greatly increase construction costs.

Public Feedback and Discussion	Project Team Response
<p>Public feedback included that Barlow Trail Road is too narrow for cars, bicycles and pedestrians, but is used by all. It is a primary route for bicycle riders and provides access to the Sandy Ridge Trail System. There are concerns with volumes and speeds of truck traffic in and out of the gravel pit off Barlow Trail Road. Some requested consideration of a separated path instead of shoulder widening. The public preferred Option B, full shoulder widening instead of spot treatment, but acknowledged the need to evaluate its feasibility.</p>	<p>In response to public feedback, this Plan recommends a phased approach beginning with Option A. Targeted shoulder widening in critical areas (in places with sight distance issues or an uphill section) will be built first. Later phases will include full widening throughout the entirety of the corridor. The improvement will meet shoulder standards of 4 feet.</p>



B3: Coalman Road Shoulder Widening

Low Priority \$\$\$

Potential Improvement Recommendation: Widen Coalman Road shoulder to 4' on each side from The Villages boundary to Baty Road.

Coalman Road, classified as a collector according to the CCTSP, has one 11-foot travel lane in each direction and no paved shoulder. Coalman Road is outside the project boundary, but was included in the Existing Conditions Memorandum, and adding paved shoulders to Coalman Road is project #3039 in the Long-Term Capital Project list in the CCTSP. The CCTSP shows the typical section for a collector 6-foot bike lane and 6-foot pedestrian facility on each side of the street. Tight right-of-way constraints, trees and drainage ditches preclude this level of improvement in the near term.

Improvement Description: Adding a 4-foot wide paved shoulder along each side of Coalman Road. Due to its location outside the study area and lower vehicle volumes, this project is a lower priority.

Benefits: Provide pedestrian and bicycle access to key destinations, including the Sandy Ridge Trail, Brightwood Post Office, Brightwood Store, Brightwood Tavern and The Villages at Mt. Hood Shuttle Stop. Improvements would primarily serve residents.

Public Feedback and Discussion

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority.



B4: Cherryville Road Shoulder Widening

Low Priority \$\$\$

Project Recommendation: Widen Cherryville Road shoulder to 4' on each side from The Villages boundary to US 26.

Cherryville Road, classified as a collector according to the CCTSP, has one travel lane in each direction and no paved shoulder. While improvements to Cherryville Road are not included in the CCTSP, they are recommended in this Plan to provide connectivity from Coalman Road to US 26. Tight right-of-way, trees and drainage ditches are challenges for any level of improvement.

Improvement Description: Add a 4-foot-wide paved shoulder along each side of Cherryville Road. The added space for pedestrians and bicycles would be beneficial, but the location and low volumes of users make it a lower priority for near-term improvement.

Benefits: Provide pedestrian and bicycle access to key destinations including the Sandy Ridge Trail, Brightwood Post Office, Brightwood Store, Brightwood Tavern and The Villages at Mt. Hood Shuttle Stop. Improvements would primarily serve residents.

Public Feedback and Discussion

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority.



B5: Sleepy Hollow Road Shoulder Widening

Medium Priority \$\$

Potential Improvement Recommendation: Widen Sleepy Hollow Road shoulder to 4' on each side from US 26 to US 26 (full extent).

Sleepy Hollow Road, classified as a collector according to the CCTSP, has one travel lane in each direction and no paved shoulder. Improvements to Sleepy Hollow Road are not included in the CCTSP. Tight right-of-way constraints, trees and drainage ditches are challenges for any level of improvement.

Improvement Description: Add a 4-foot-wide paved shoulder along each side of Sleepy Hollow Road. Traffic analysis did not support any improvements to Sleepy Hollow Road, based on vehicle traffic volumes being too low; however, feedback from the PAC and TAC contributed to this recommendation.

Benefits: Provide pedestrian and bicycle access to key destinations including the Brightwood Post Office, Brightwood Store, Brightwood Tavern. Improvements would primarily serve residents.

Public Feedback and Discussion

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority. Within the pedestrian and bicycle system, Sleepy Hollow Road provides connections to other system facilities, such as Barlow Trail Road. This greater level of connectivity compared to other shoulder-widening improvements led to a medium priority ranking for the project.



B6: Brightwood Loop Shoulder Widening

High Priority \$\$

Potential Improvement Recommendation: Widen Brightwood Loop shoulder to 4' on each side from US 26 to US 26 (full extent).

Brightwood Loop, classified as a collector according to the CCTSP, has one travel lane in each direction and no paved shoulder. Improvements to Brightwood Loop are not included in the CCTSP, however the business cluster and transit stop are key destinations. The connection to Barlow Trail Road also elevates the need for improvements. Tight right-of-way constraints, trees and drainage ditches are challenges for any level of improvement.

Improvement Description: Add a 4-foot-wide paved shoulder along each side of Brightwood Loop.

Traffic analysis did not support any improvements; however, feedback from the PAC and TAC contributed to this recommendation. Improvements at the intersections along Brightwood Loop would provide access to the business cluster on Brightwood Loop.

Benefits: Provide pedestrian and bicycle access to key destinations including the Mt Hood Express bus stop, Brightwood Post Office, Brightwood Store and Brightwood Tavern. Residents and recreational users would all benefit from the recommended improvements.

Public Feedback and Discussion

The public expressed moderate to high level support for this improvement, had no specific changes and ranked this improvement higher than others due to the connections to destinations and other system facilities offered via Brightwood Loop.



B7: US 26 Undercrossing Directional Signs

High Priority \$

Improvement Recommendation: Provide informational/ directional signage to direct pedestrians and bicycle riders to an existing undercrossing of US 26



Figure 9: The underpass is in good condition but not widely known by recreational riders or even residents in the area



Figure 10: Entrance to the US 26 underpass for bicycle riders and

There is an undercrossing of US 26 at Salmon River that is vastly underused primarily due to the lack of knowledge of its existence.

Potential Improvement: Directional signage to the undercrossing on Barlow Trail Road, US 26 and within the vicinity to help direct bicycle riders and pedestrians to the undercrossing of US 26 accessed via Country Club Road. Directing bicycle riders to the undercrossing would allow those eastbound on the south side of US 26 to cross grade-separated, and access Brightwood Loop and Barlow Trail Road. Signage at intersections along Brightwood Loop and Barlow Trail Road would provide information on how to access key destinations.

Benefits:

Bicycle riders eastbound on US 26 and trying to cross US 26 to access Brightwood Loop or Barlow Trail Road, for a parallel through route or because they have a destination on those roads, would benefit from knowing about this undercrossing. Use of the undercrossing instead of crossing at-grade on US 26 has tremendous safety benefits and directional signage is relatively low cost. Residents in the area would also benefit from the under crossing and could use it as a walking path. The improvement has potential to benefit bicycle riders and pedestrians, with recreational or access purposes.

Public Feedback and Discussion

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority due to the relative ease of implementation and low cost.



B8: Transit Park and Ride Directional Signage

Medium Priority \$

Potential Improvement Recommendation: Provide directional signage at Hoodland Senior Center Park and Ride.

No signage currently marks the transit stop and the park-and-ride location at the Hoodland Senior Center. This stop is primarily used by residents.

Improvement Description: Adding signage along US 26 and onsite for the transit stop at the Hoodland Senior Center.

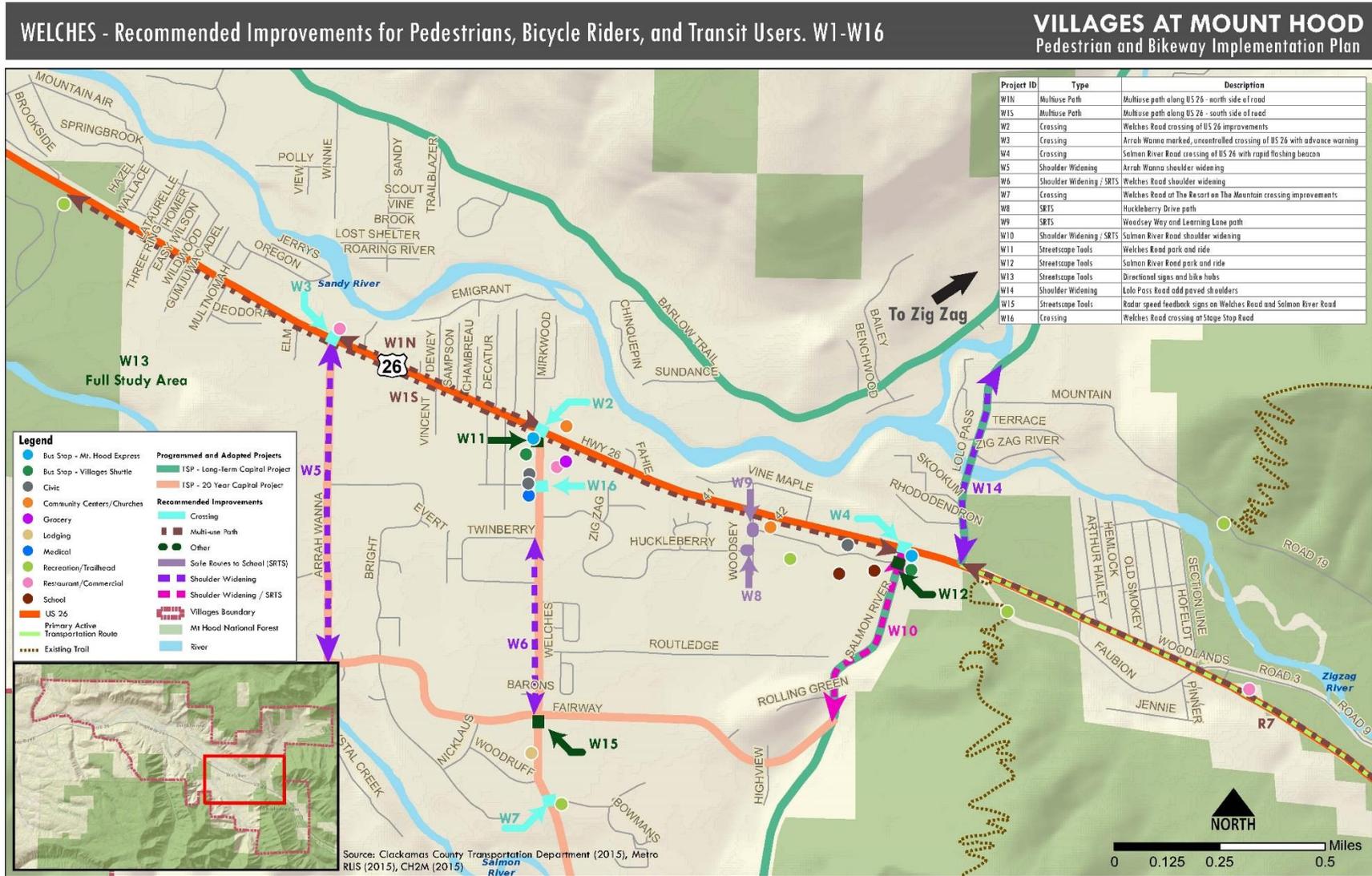
Benefits: Underutilization of RV parking allows for easy bus circulation and provides all-day parking for vehicles. The location just off US 26 makes the area an attractive spot to advertise the park-and-ride capability. Calling attention to the park-and-ride could attract riders traveling to the stop by car from a broader area. This addition would benefit transit users in the area, who are primarily residents.

Public Feedback and Discussion

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements as a higher priority.

DRAFT

Figure 11: Welches Potential Area Improvements for Pedestrians, Bicycle Riders, and Transit Users





W1S: Multiuse Path along US 26

High Priority \$\$

Improvement Recommendation: Construct a multiuse path along US 26, along the south side, between the Wildwood Recreation Site and Salmon River Road. This improvement is the recommended near-term phase of building an eventual path network to connect the full length of The Villages – from Brightwood to Rhododendron.

A dirt path, which has been worn down by pedestrians, parallels US 26 along the south side between Arrah Wanna and Salmon River Road. This area has the greatest concentration of destinations within the study area. Pedestrians regularly use the informal dirt paths to access destinations. The existing condition is not up to standard and uncomfortable for pedestrians because they are walking in marginal areas on uneven surfaces. Bike lanes on US 26 are provided for bicycle riders, but most riders find riding adjacent to high speeds and high traffic volumes intimidating and forgo riding their bicycle.

Improvement Description: Formalize the existing demand path to a multiuse path facility for bicycle riders and pedestrians. The preferred width for a multi-use path is 12 feet with 2-foot shoulders; however, 10 feet could be used as a minimum width where there are right-of-way constraints. Projects located on ODOT facilities are subject to ODOT review and approval.



Figure 12: Example of a shared use path

A multiuse path in this location could be concrete, asphalt or permeable pavement. Concrete is the most expensive option, however it lasts longer and requires less maintenance. Permeable pavement requires maintenance twice a year (sweeping to remove debris and moss), however any concerns with water runoff and stormwater are greatly reduced because water does not collect on or run-off the surface. Permeable pavement should be evaluated as a possible approach when the project is being developed with consideration given to environmental priorities as well as ease of maintenance. For estimating purposes, concrete construction was calculated.

Although there are currently no plans to widen US 26, these pedestrian and bicycle improvements should be preserved if US 26 is ever widened. Likewise, during project development, the multiuse path should be located outside of potential future widening areas.

The paved section of US 26 is 73 feet wide. Analysis of US 26 right-of-way shows that available right-of-way for the entire extent of the path is 100 to 150 feet, providing ample room for a path on the south side. During project development, the site would need to be surveyed to determine precise right-of-way availability. It is likely the path would be able to be constructed within existing right-of-way; therefore, adjacent property owners would not have a liability for maintenance.

Benefits: Residents, transit users, lodging users, recreational users, and any wheeled users who cannot navigate uneven dirt surfaces, such as wheelchair users and bicycle riders, would have better access to shopping, lodging, restaurants and transit stops.

Public Feedback and Discussion	Project Team Response
<p>Of all of the proposed improvements, this project received the strongest support from the public and the highest priority. During the public workshop, attendees expressed concern for adjacent property owners' liability and called for greater lighting in the area in conjunction with a path. Workshop attendees also suggested some type of physical barrier from traffic.</p>	<p>This is the top priority. Analysis demonstrates ample available right-of-way for path construction (geometric survey would be required for a precise assessment during project development). With the ability to construct the path within right-of-way, adjacent property owners would not have liability for the path. However, this Plan recommends property owners be consulted during the project development process, and community advocates for the path could help during these discussions.</p> <p>Pedestrian lighting has been added as an element of the improvement.</p> <p>A maintenance agreement for the path will be evaluated by partner agencies.</p>



W1N: Multiuse Path along US 26

High Priority \$\$

Improvement Recommendation: Construct a multiuse path along US 26, the north side, between Arrah Wanna Boulevard and Welches Road. Like Project W1S, this improvement is the recommended near-term phase of building an eventual path network to connect the full length of The Villages – from Brightwood to Rhododendron.

A dirt path, worn down by pedestrians accessing business clusters off US 26 in Wemme and Welches, parallels US 26 along the north side between Arrah Wanna and Welches Road. Most destinations are on the south side of US 26, and this improvement would provide access to the crosswalk and signal at Welches Road. The existing path is not up to standards and uncomfortable for pedestrians because they are walking in marginal areas on uneven surfaces. Bike lanes on US 26 are provided, but most riders find riding adjacent to high speeds and high traffic volumes intimidating and forgo riding their bicycle.

Potential Improvement

Formalize this demand path to a multi-use path for bicyclists and pedestrians. The preferred width for a multiuse path is 12 feet with a 2-foot shoulder; however 10 feet could be used as a minimum width where right-of-way constraints exist. The design would be subject to ODOT approval.

Similarly to the south side path, concrete has been used for estimating purposes.

Although there are currently no plans to widen US 26, these pedestrian and bicycle improvements should be preserved if US 26 is later widened. Likewise, during project development, the multiuse path should be located outside of potential future widening areas.

The paved section of US 26 is 73 feet wide. Analysis of US 26 right-of-way shows that available right-of-way for the entire extent of the path is 100 to 150 feet, providing ample room for a path on the south side. During project development, the site would need to be surveyed to determine precise right-of-way availability. It is likely the path would be able to be constructed within existing right-of-way; therefore, adjacent property owners would not have a liability for maintenance.

Benefits

Residents, transit users, lodging users, recreational users and any wheeled users who cannot navigate uneven dirt surfaces, such as wheelchair users and bicycle riders, would have better access to shopping, lodging, restaurants, and transit stops.

<p>Public Feedback and Discussion</p> <p>Of all of the improvements, this improvement received the second highest support, second to the south path. During the public workshop, attendees expressed the same concerns as they did for the south path: adjacent property owners' liability, greater lighting in the area in conjunction with a path, and the desire for some type of physical barrier.</p>	<p>Project Team Response</p> <p>This Plan ranks this improvement as the second top priority. Right-of-way analysis demonstrates ample right-of-way for path construction (geometric survey would be required for a precise assessment during project development). With the ability to construct the path within right-of-way, adjacent property owners would not have liability for the path. However, the Plan recommends property owners be consulted during the project development process.</p> <p>Pedestrian lighting has been added as an element of the improvement.</p>
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W2: Crossing Improvements on US 26 at Welches Road *Medium Priority* \$

Potential Improvement Recommendation: Construct sidewalk and relocate pedestrian activation buttons to be ADA compliant at Welches Road Crossing of US 26.

There is a signal at the Welches Road intersection. The signal controls and intersection grading need improvements to meet current standards. The existing ramp facilities appear to be compliant with Americans with Disabilities Standards (ADA), however each corner should be surveyed.

The project team reviewed signal timing and used the crosswalks. Neither demonstrated a need to adjust signal timing and pedestrian crossing times are adequate.

Improvement Description

Construct sidewalk between ADA ramps on the northwest and northeast corners of the intersection. Coupled with multiuse paths recommended above, this signal would become more safely and comfortably accessible by pedestrians and bicycle riders. Relocate pedestrian activation buttons and add pedestrian countdown controls to each corner. Topographically survey the existing ADA ramps to ensure their compliance with applicable standards.

Benefits

Enhanced pedestrian access to key destinations at the intersection with US 26 for residents, lodging users, transit users, and recreational users. Those in wheelchairs would benefit from compliance with ADA standards. Improved connectivity to the recommended multiuse path paralleling US 26.

<p>Public Feedback and Discussion</p> <p>The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority.</p>
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Potential Improvement Recommendation: Create an uncontrolled crossing of US 26 at Arrah Wanna Boulevard, with a continental style crosswalk.



Figure 13: Rendezvous Grill on US 26 in the vicinity of Arrah Wanna

A cluster of restaurants is located in the vicinity of Arrah Wanna Boulevard intersection with US 26. The number of restaurants and businesses at this location create pedestrian demand to cross at this location.

Improvement Description

Install a continental style crosswalk, accompanied by roadway and streetscape improvements.

Drivers respond to visual cues along the roadway more so than marked signs.

Visual cues that indicate to drivers that pedestrians may be present or crossing are sidewalks and curbs, clearly defined driveways, pedestrian scale lighting and curb extensions to narrow the visual roadway width. Additional cues such as buildings adjacent to the roadway with parking in the rear further emphasize an orientation towards pedestrians. Using a toolkit of streetscape elements added over time can contribute to a more safe and pleasant pedestrian environment.

To reduce conflicts and traffic, backage roads for property and parking access are recommended. Based on mapping data, geographic constraints would not limit construction of backage roads; however geometric survey would be required to precisely evaluate the possibility. This Plan recommends any crossing of US 26 to be implemented in conjunction with these streetscape elements. The crossing itself would be controlled with a high visibility treatment such as a rectangular rapid flashing beacon and continental style crosswalk.

Figure 23 demonstrates how these elements would come together to create a pedestrian-oriented environment and safer crossing conditions. Implementation of the range of improvements requires partnership and support from various agencies such as ODOT and the BLM. A collaborative effort would need to be undertaken to apply for grants and leverage redevelopment as it occurs.

ORS 366.215 states the Oregon Transportation Commission may not permanently reduce the vehicle-carrying capacity of an

Creating a Pedestrian Environment for US 26 Crossings

Drivers respond to visual cues more so than signs. A streetscape that cues drivers to the presence of pedestrians creates a safer crossing environment. This Plan presents a toolkit of elements that could be combined to accompany a crossing of US 26.

- Sidewalks and curbs
 - Consolidated and clearly defined driveways
 - Pedestrian scale lighting
 - Curb extensions or bulb-outs
 - Gateway signs at the entrance of a village
 - A crosswalk with rapid flashing beacons and a refuge island for pedestrians
 - Install temporary speed detectors so drivers know how fast they are driving and if they are over the limit
-

identified freight route; US 26 is a freight route. This regulation requires that 26 feet of clear space be maintained on the roadway. Right-of-way is wide enough to accommodate this required clear space in conjunction with a continental style crossing with a pedestrian refuge island.

Benefits

Providing a marked crosswalk to key destinations at the intersection with US 26 would benefit residents, lodging users and recreational users. Improved connectivity to the recommended multiuse path paralleling US 26.

Public Feedback and Discussion

The public supports crossings of US 26; however, this particular crossing received modest support relative to other projects within the Welches area, and relative to other proposed locations for US 26 crossings described in this plan.



W4: Salmon River Road Crossing of US 26 *High Priority* \$

Improvement Recommendation: Install an enhanced crossing using treatments such as a rectangular rapid flashing beacon at the Salmon River Road crossing of US 26.



Figure 14: Example of an advance warning beacon

An uncontrolled crossing of US 26 at Salmon River Road, marked by a continental style crosswalk, provides access to a Mt. Hood Express transit stop, schools and other destinations including the Lions Club. Transit riders regularly use this crosswalk to access transit stops. Although the school does not encourage students to cross US 26, there are numerous events at the school that increase the potential for vulnerable users to cross US 26 at this location.

Improvement Description

Install an enhanced crossing, such as a rectangular rapid flashing beacon at the Salmon River Road crossing of US 26.

Change visual cues to drivers through streetscape improvements, such as sidewalks and curbs, few and clearly defined driveways, pedestrian-scale lighting and curb extensions to narrow the visual roadway width. Additional cues such as buildings adjacent to the roadway with parking in rear further emphasize an orientation towards pedestrians.

Considered but Not Recommended

An under or overcrossing was ruled out for several reasons. Placement of the entrance and exit would be considerably setback from US 26, due to the required clearances for each structure. Pedestrians seek the shortest path, and under and overcrossings require out-of-direction travel. They also create points of isolation, and people can have concerns for their personal safety, especially at night or with low use. The very high cost for such structures would be difficult to justify given the limited potential of crossing use.

A High-intensity Activated Crosswalk (HAWK) was considered. However, pedestrian counts conducted for the traffic analysis showed the pedestrian volumes did not justify this level of improvement.

Benefits

Enhanced existing marked crosswalk to residential areas, Welches Elementary and Middle Schools (as a community activity hub), and transit stops, at the intersection with US 26 for residents, lodging users, transit users, and recreational users. Improved connectivity to the recommended multiuse path paralleling US 26.



Figure 15: Zig Zag Café on US 26 in the vicinity of Salmon River Road

Public Feedback and Discussion	Project Team Response
<p>PAC members were in strong support of this crossing because Welches is the largest population center within The Villages at Mt. Hood. Welches Elementary and Middle Schools on Salmon River Road are an activity hub within the community. The nearby firehouse also acts as neighborhood hub. A crossing enhancement at Salmon River Road is most helpful if a path connection is created on the north side of US 26 to Lolo Pass Road, which would provide a needed connection to residential areas along Lolo Pass Road.</p>	<p>The project team recognizes the importance of this crossing due to the nearby confluence of activity hubs and population centers. This crossing is a high priority, but is proposed to follow a proposed crossing improvement in Rhododendron based on Rhododendron’s existing roadway and development characteristics that have more pedestrian-oriented streetscape elements. Installing a crosswalk and flashing beacon in Rhododendron would serve immediate pedestrian needs, while also training drivers to expect crossings in The Villages on US 26.</p>



W5: Arrah Wanna Shoulder Widening *Medium Priority* \$\$
Potential Improvement Recommendation: add a 4’ wide paved shoulder along each side of Arrah Wanna Boulevard between US 26 and Fairway Avenue.

Arrah Wanna Boulevard is classified as a collector according to the CCTSP. The facility has one travel lane in each direction and no paved shoulder, with total roadway width varying from 18 to 21 feet. Improvements to Arrah Wanna Boulevard are not included in the CCTSP; however, feedback from the PAC and TAC contributed to this project recommendation to add a paved shoulder along each side between US 26 and Fairway Avenue. PAC and TAC members noted that the boulevard serves many residential neighborhoods.

Improvement Description: Add a 4-foot-wide paved shoulder along each side of Arrah Wanna Boulevard.

Benefits: Provide pedestrian and bicycle access to key destinations including the restaurant cluster at the intersection with US 26 for residents, transit users and recreational users . Provide connectivity to the recommended multiuse path paralleling US 26 and recommended crossing improvement.

Public Feedback and Discussion

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority.



W6: Welches Road Shoulder Widening and Multiuse Path

High Priority \$\$

Improvement Recommendation: Widen shoulders and/or develop a multiuse path on Welches Road. The improvement should span from US 26 to Fairway Avenue.

The shoulder along Welches Road is narrow or nonexistent and pedestrians have to cross from side to side to find space to walk along the road. Options providing pedestrian and bicycle access considered including a multiuse path, a widened shoulder or a combination. The CCTSP shows adding paved shoulders in the Long-Term Capital Projects list (#3056).

Welches Road is a key to providing Safe Routes to School and safe access to popular destinations. Many pedestrians use this roadway because of the density of residences and lodging along Welches, and the commercial cluster, including the largest supermarket in the Villages, at the intersection of Welches Road and US 26.

Improvement Description

Install a multiuse path, a widened shoulder or a combination of each. The long-term vision for Welches Road is to have a multiuse path along at least one side to provide separation between cars, and pedestrians and bicycles. While greater separation of users is preferred, widened shoulders may be an appropriate interim measure until a multiuse path can be built.

Shoulder-widening on Welches Road is particularly needed between Fairway Avenue and Huckleberry Drive. This segment of roadway is important for providing Safe Routes to Schools. The widened shoulder should be expanded to US 26, connecting residents and visitors along Welches Road to destinations and shopping on US 26.



Figure 16: Existing Walking Conditions on Welches Road

Benefits

Provide better access to shopping, lodging, restaurants and transit stops at the US 26 intersection for residents, transit users, lodging users, recreational users, school children and any wheeled users who cannot navigate ditches and uneven surfaces, such as wheelchair users.

Public Feedback and Discussion	Project Team Response
<p>The improvement received strong support during the public workshop at a level equal with the multiuse paths along US 26. This corridor serves as a primary connection to destinations on US 26, but existing shoulders for walking or bicycling disappear into ditches.</p> <p>Community members expressed a desire to go beyond expanded shoulders to propose a multiuse path along Welches Road.</p> <p>A short multiuse path along Welches Road built as part of a private development was referenced as an example of a pleasant path. A future multiuse path should connect to the existing private path.</p> <p>Workshop attendees additionally urged the team to consider illumination because the area is extremely dark from tree cover. This limits the visibility of pedestrians and bicyclists.</p>	<p>This Plan recommends a multiuse path where feasible, and widened shoulders elsewhere. Reviewing mapping data, the right-of-way on Welches Road varies between 50 and 75 feet, with most places between 60 and 65 feet. The public expressed a preferences for a west side path; however it appears right-of-way is more available on the east side of the roadway. Based on mapping data, right-of-way may need to be acquired north of Fairway.</p> <p>PAC members have already started talking with property owners advocating for the project and gaining support. Continued efforts by community leaders will help project development. Geographic surveys will need to be conducted during project development to precisely understand the availability of right-of-way.</p> <p>The project recommends lighting that is cast down and in accordance with night sky ordinances. The lights should be illuminated during day and night.</p> <p>Finally, secure bike parking can be placed at the nearby trailheads for the Old Salmon River Trail and others. This would complement a multiuse path and widened shoulders, and create multimodal access to the trails.</p>



W7: Welches Road at The Resort at the Mountain

High Priority \$

Crossing Improvements

Improvement Recommendation: Enhance existing crossing by adding advance warning signs and a split rapid flash beacon.

The Resort at The Mountain on Welches Road has constructed a painted crosswalk to provide connections between their lodging and the golf, spa and event facilities. Visitors, staff and residents frequently cross at the crosswalk. Although the crossing is in place, it is in an area of poor sight distance due to both horizontal and vertical curves in the road—the crossing is just north of a large hill.

Improvement Description

Improve the visibility of the crossing by adding advance warning signs and a split rapid flash beacon. Split flashing beacons offer flashing warnings both at the site of the crosswalk and down the approaching roadway to provide advance warning. On Welches Road, the beacon would need to be placed on the hill south of the crossing to provide drivers with advance warning where their sight distance is limited. Low level lighting at the crosswalk should also be considered to provide increased visibility for pedestrians.



Figure 17: Crossing of Welches Road at The Resort at The Mountain

Benefits

Benefit to residents, school children, recreational users, lodging users and staff. Based on site visits and public input, this is one of the most popular non-US 26 pedestrian crossing locations within the study area.

Public Feedback and Discussion

This project received strong support from the PAC and lower support during the public open house. Given the mixed support and the existence of a marked crosswalk now, the improvement is a high priority because it is a safety feature for a location with frequent pedestrian crossings.



W8: Huckleberry Drive Path

Low Priority \$

Potential Improvement Recommendation: Formalize demand-path connecting Huckleberry Drive and Woodsey Way to create direct Safe Routes to Schools path.

Huckleberry Drive offers direct access from Welches Road to the Welches Elementary and Middle Schools (via Woodsey Way and Learning Lane). Currently, a gap exists between Woodsey Way and Huckleberry Drive. In place of sidewalks, pedestrians - primarily school children - have worn a dirt path.

Improvement Description

Formalize a demand-path connection to connect a 20 to 30-foot gap between Huckleberry Drive and Woodsey Way. The path would be a Safe Routes to Schools improvement, providing access to the school away from US 26, and ideally would be a minimum of 10 feet wide and constructed with permeable pavement. Ownership of right-of-way along the route is unknown, and is likely private. County investments cannot be made on private property, requiring any improvements be made by the owner or other partnerships with the approval of the property owner.

Benefits

The location is in a fairly dense residential area and close to Welches Elementary and Middle Schools. The connection would primarily benefit residents and school children, and is already being informally used as an alternative to US 26.

Public Feedback

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority. The existing path is safe for walking, and due to the unknown ownership status of the area, the improvement was ranked as a low priority.



W9: Woodsey Way and Learning Lane Path

High Priority \$

Potential Improvement Recommendation: Construct path along Woodsey Way that connects to the existing sidewalk on Cedar Hill Terrace and add crossing enhancements.

Path improvements on Woodsey Way would provide a continuation of the proposed trail on Huckleberry Drive, and connect to the existing sidewalk between Cedar Hill Terrace and Woodsey Way. As the potential path continues on Woodsy Way, it would reach an intersection at Learning Lane, which provides direct access to the schools and the ball fields to the west of the school buildings. Learning Lane is not a County-owned facility, so the County would have to collaborate with the owners to implement proposed improvements.

Improvement Description

A proposed path along Learning Lane on the north side of the road to avoid conflicts with parking and access to sports fields. A crossing of Learning Lane to the school facilities is best placed at the west end of the observed parking areas. Learning Lane is owned by the school district, which would therefore be responsible for implementation.

To make this route complete and safe for school children to use, a painted crosswalk with advance signing should be considered at the intersection of Huckleberry Drive and Welches Road as a Safe Routes to Schools improvement. A path along the west side of Welches Road between Rutledge and Twinberry with a painted crossing at Twinberry Loop would provide access to the school children in these developments.

More secure bicycle parking at the schools would support the staff and students who bicycle to school. Existing bicycle parking at the school is dilapidated and should be replaced with staple-style racks.

Benefits

This project would benefit residents and primarily school children in one of the densest residential areas of the study area. Crossing enhancements would improve the visibility of school children walking and bicycling, and would reduce conflicts amongst modes.

Public Feedback

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority.



W10: Salmon River Road Shoulder Widening

High Priority \$\$

Potential Improvement Recommendation: Add paved shoulders or a path to Salmon River Road between US 26 and Fairway Ave.

Salmon River Road is classified as a minor arterial, and lacks pedestrian and bicycle facilities, particularly for school access. Both Welches Elementary and Middle Schools are located on Salmon River Road. Adding paved shoulders to Salmon River Road between US 26 and Welches Road is project #3052 in the CCTSP Long-Range Capital Projects.

Improvement Description

Widened shoulders between US 26 and Fairway Avenue. In the longer-term, a multiuse path along the roadway is preferred.

Benefits

Provide optimal access to schools and the Mt. Hood Express bus stop for residents, transit riders and school children.

Public Feedback and Discussion

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority.



W11: Welches Road Park and Ride

Medium Priority \$

Potential Improvement Recommendation: Pave and formalize existing Welches Mt. Hood Transit Stop location to create a park and ride.

The Mt. Hood Express transit stop is in the southwest corner of the Welches Road/US 26 intersection in an empty gravel lot owned by the Resort at the Mountain. This could provide an ideal location for a park and ride facility. Signage along US 26 alerting recreational users to the presence of the stop could increase awareness of the transit service.

Improvement Description

The County should partner with the Resort at the Mountain to pave the empty lot at the Mt. Hood Express Welches transit stop. Formalize the lot with delineated parking to create a park and ride and provide directional signage for transit users.

Benefits

This project would benefit transit riders, residents, lodging users, and recreational users, by allowing them to drive and park to access transit.

Public Feedback and Discussion

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority.



W12: Salmon River Road Park and Ride

Medium Priority \$

Potential Improvement Recommendation: Formalize Mt. Hood Express Salmon River Road stop with delineated parking and directional signage for a park and ride.

A Mt. Hood Express stop is located along the east side of Salmon River Road just south of US 26 and directly across from Welches Middle School. This stop is located on a County-owned parcel and also has ample space for a park and ride facility. The riders that utilize this stop are mostly commuters along with some recreational users.

Improvement Description

Formalize the Mt. Hood Express Salmon River Road stop with delineated parking and directional signage to create a park and ride.

Benefits

This project would primarily benefit transit users, including commuters and some recreational users.

Public Feedback and Discussion

The public and PAC expressed general support for this improvement, had no specific changes and ranked other improvements at a higher priority.



W13: Directional Signs and Bike Hubs

Medium Priority \$

Potential Improvement Recommendation: Enhance pedestrian and bicycle accessibility within the area with the strategic placement of directional signage and bike hubs.

With the addition of the various pathways and widened shoulders, signage is key to directing users to bicycle/pedestrian/safe routes to schools and key destinations within the area. Bike hubs would provide bicycle amenities in the area, such as secure sheltered parking, a bench, basic bike tools and other amenities that support bicycle riding. Directional signs and bike hubs support economic development and tourism goals for the area.

Improvement Description

Locate directional signs along US 26, Barlow Trail Road and at each major intersection. Add signs providing direction to the transit stops and park and rides.

Add bike hubs at key locations along US 26 to better allow long-distance bicycle riders to stop and patronize businesses. Potential locations for a bike hub within the Plan study area include the plaza at the Hoodland Shopping Center and the business cluster in Rhododendron. Bike hubs could also be located elsewhere throughout the US 26 corridor and bicycling destinations, such as the Sandy Ridge Trail System.

Bike hubs would at least have high-security, covered bike parking that could also be functional art. Other features could include a water fountain (where feasible), loaner locks or built-in locks, seating, pump, simple bicycle repair tools and directional signage to destinations within the area. Bike hubs can be designed with a consistent look for community branding.

Benefits

Directional signs and bike hubs would support bicycle tourism and economic development goals for the area, and would provide convenience and recreational opportunities for residents.

Public Feedback and Discussion

The public and some members of the PAC expressed strong support for this improvement, and suggested branding efforts to emphasize the corridor as a ride that is welcoming to visitors.



W14: Lolo Pass Road Paved Shoulders *High Priority* **\$\$**

Potential Improvement Description: Widen shoulders to 4' along Lolo Pass Road. The highest priority is between US 26 and Barlow Trail Road.

Although Lolo Pass Road does have an 1-2-foot shoulder, it is classified as a minor arterial and needs improved pedestrian and bicycle facilities. Adding paved shoulders to Lolo Pass Road is project #3048 in the CCTSP and is also noted in the ATP.

A safety analysis is also included in the CCTSP. A traffic signal warrant analysis for the intersection with US 26 completed as part of this study determined that, although a signal is warranted on US 26, it is not warranted on Lolo Pass Road. Per guidance in the Manual on Uniform Traffic Control Devices (MUTCD) and results from ODOT’s Preliminary Signal Warrant Analysis worksheet, a traffic signal warrant is not met. The warrant volumes must be met on both approaches to be considered for a controlled intersection.

Improvement Description

Widen existing 1-2-foot shoulders to 4-foot shoulders along Lolo Pass Road.

Benefits

This project would benefit residents in the area for their walking and bicycle riding needs, and benefit recreational bicycle riders. STRAVA data, a smartphone tool primarily used by bicycle riders to track their riding and post information to social media, show that Lolo Pass Road is often used as a bicycle riding route.

Public Feedback and Discussion	Project Team Response
<p>This improvement received strong support in the public workshop, nearly equal to paths along US 26 and Welches Road. Lolo Pass Road is a well-used bicycling route and provides access to many residential areas.</p> <p>The public expressed concern that the improvement will be expensive.</p>	<p>Currently the entire roadway alignment of Lolo Pass Road is being evaluated as part of the Lolo Pass Road Alternatives Analysis due to its periodic washouts. The Plan recommends integrating a shoulder-widening project with the recommended improvements from the Lolo Pass Road Alternative Analysis.</p>

	Priority for shoulder widening is between US 26 and Barlow Trail Road, which is often used by bicycle riders and pedestrians.
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W15: Driver Speed Feedback Signs on *High Priority \$*
Welches Road, Salmon River Road, lower Lolo Pass Road, and US 26 in the vicinity of Rhododendron

Residents have described the presence of traffic with speeds above posted speed on both Welches Road and Salmon River Road. Permanent radar speed feedback signs would help with compliance of posted speed limits by making drivers aware of their travel speed. They are typically mounted on a speed limit sign and visually display drivers’ real-time speeds as they pass. Drivers see how fast they are actually driving compared to the posted speed limit.

Improvement Description: Mount permanent radar speed feedback signs to keep drivers aware of their speeds and the need to slow down, especially near schools.

Benefits: Better speed limit compliance from motor vehicle drivers.

<p>Public Feedback and Discussion</p> <p>This improvement received strong support in the public workshop. Participants added lower Lolo Pass Road as an additional location for a temporary radar speed feedback signs.</p>	<p>Project Team Response</p> <p>The County has a waiting list for radar speed feedback signs to be deployed and will add this location to the list. The highest priority location for a temporary radar speed feedback signs is on US 26 in the vicinity of Rhododendron.</p>
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W16: Welches Road Crossing at Stage Stop Road *Low Priority \$*
Further evaluate the potential for a high visibility crosswalk across Welches Road at Stage Stop Road

This project was proposed by community members over the course of two open house events. Residents describe Stage Stop Road as a popular crossing location because it serves the Hoodland Shopping Center on the east side of the street and the Post Office, Welches Library and other community destinations on the west side of the street. The proximity of Stage Stop Road to the stoplight at US 26 may pose a potential issue if the crosswalk results in significant vehicle queueing unseen to vehicles turning onto Welches Road from US 26. A formal traffic and queueing analysis would be conducted in advance of installing crossing treatments.

Improvement Description: Paint a high visibility continental-style crosswalk on Welches Road at Stage Stop Road, accompanied by pedestrian advance warning signs.

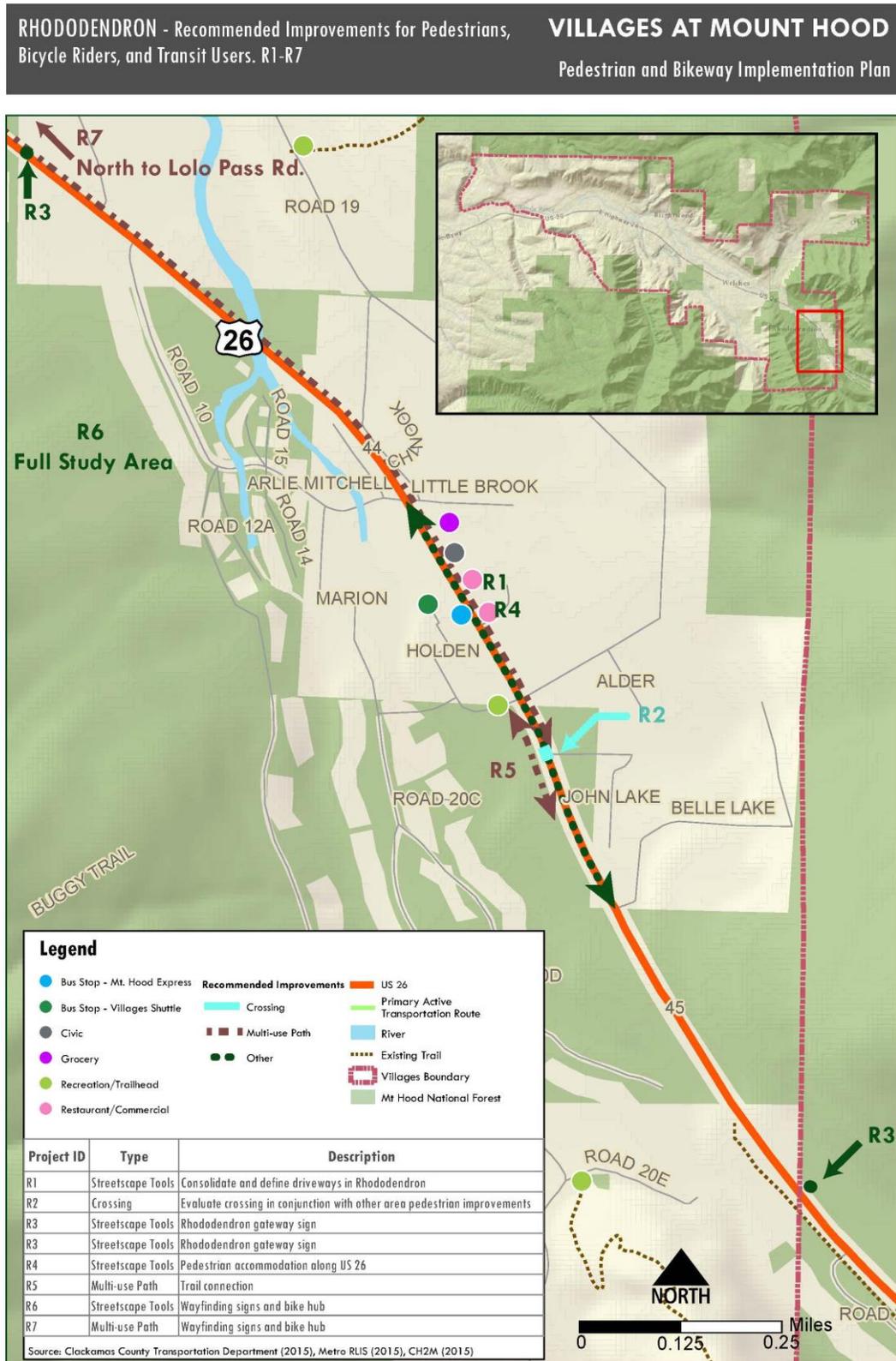
<p>Public Feedback and Discussion</p> <p>This improvement was initiated at the request of local residents who identified Stage Stop as a place where a high number of crossings currently take place. The team has added the crossing to the list of proposed</p>
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project solutions while noting that a formal queuing study will need to take place due to the proximity to the stoplight at US 26.

DRAFT

Rhododendron (R1-R7)

Figure 18: Rhododendron Potential Area Improvements for Pedestrians, Bicycle Riders, and Transit Users



Various destinations are located along both sides of US 26 through Rhododendron, including restaurants, a market, and a bicycle and winter sport rental shop. The area has few defined access points, which allows vehicles to enter along much of US 26 and pedestrians to cross US 26 at undefined points inconsistently. The lack of access management creates a challenging condition that will require a series of improvements to achieve a safe pedestrian and bicycle environment.

Within Rhododendron, this Plan recommends a series of improvements to change visual cues to better indicate to drivers they are entering an area with active pedestrian and bicycle use. Those improvements are:

- 1) access management,
- 2) US 26 crossing improvement,
- 3) a gateway treatment to cue drivers that they are entering a developed area, and
- 4) a path with buffered landscape along US 26.



R1: Consolidate and Define Driveways in Rhododendron

High Priority \$\$

Improvement Recommendation: Consolidate and define driveways within Rhododendron through access management.

The current condition, with no access management, allows vehicles to enter and leave the roadway at any location instead of only at intersections and driveways. As shown in Figure 22, creating specific access points decreases points of conflict between vehicles and pedestrians and bicyclists. The diagram below shows that allowing one access point instead of two drops the total potential conflict points from 32 to 8. While the Plan does not recommend installing a non-permeable median, limiting driveways on US 26 within Rhododendron would create more predictable traffic patterns, add gaps in traffic and provide opportunities for pedestrians to cross US 26 at a desired location.

- Vehicle/Vehicle Conflicts
- ▲ Bicycle/Vehicle Conflicts
- Pedestrian/Vehicle Conflicts

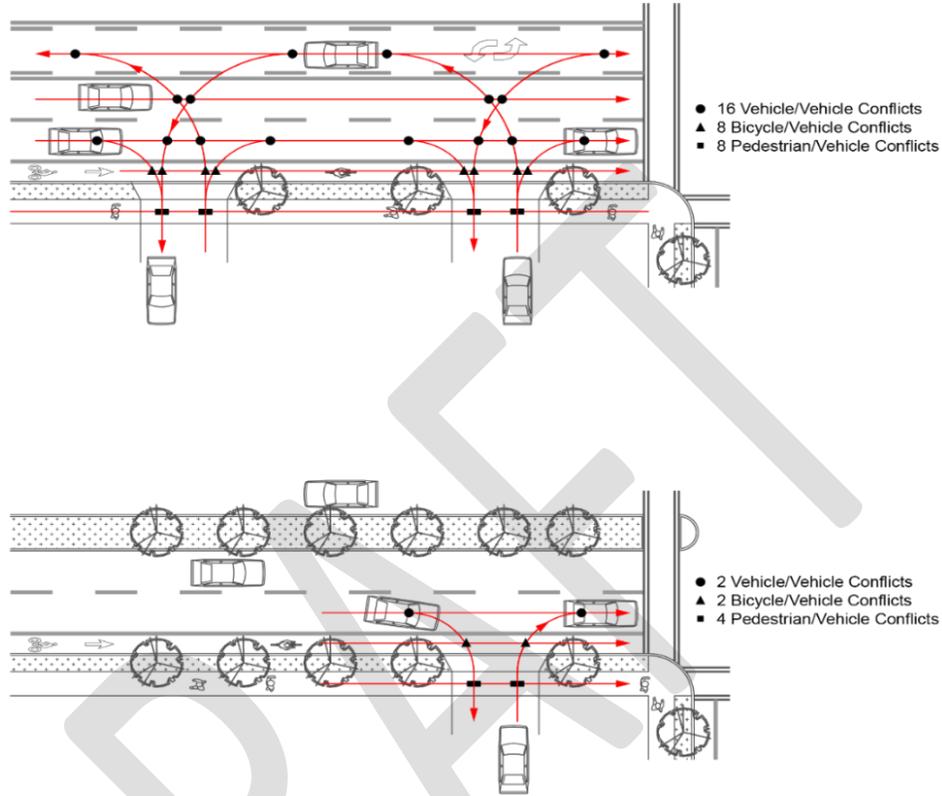


Figure 19: Reduction of conflict points due to access management

Improvement Descriptions

Consolidate and define driveways within Rhododendron through access management, which would provide definition of driveways and intersections. The driveway(s) could be defined by breaks in a landscape buffer, by colored paved driveways, or by stamped concrete or pavers delineating the path across a driveway.

Land owners may be more open to negotiating access points if the state provides a path for pedestrians and bicycle riders in front of their parcel as an incentive. The path would enhance their property, while access management would enhance the transportation system. This would require outreach to affected property owners.

Benefits

Reducing the number of conflict points for pedestrians and drivers would benefit residents, lodging users, recreational users and transit riders.

Public Feedback and Discussion

Feedback during the public workshop was supportive of this project and agreed this improvement could be introduced with other pedestrian-oriented improvements.



R2: Enhanced Crossing of US 26 in Rhododendron

High Priority \$

Potential Improvement Recommendation: Install a marked, continental style crosswalk in Rhododendron on US 26 with enhanced crossing features such as a rapid flashing beacon to alert drivers. Install in conjunction with R1 streetscape improvements and access management practices.

Rhododendron has commercial uses on the north and south side of US 26, and during site visits pedestrians of many types, mothers with children, recreational users, transit riders, were observed crossing the street. Mt. Hood Express transit stops are on either side of US 26, and the service reports that transit riders often cross US 26 to access a market or food. The crossing would service regional bus riders whose service stops at the Dairy Queen, allowing riders a half-hour to be in town. The proposed improvements are in accordance with recommendations in the Mt. Hood Community Plan, which call for the “development of crosswalks, signals [...] to facilitate movement across Highway 26”.

ODOT’s greatest concern when placing a crosswalk on US 26 is safety. A crossing alone does not provide drivers with visual cues necessary for them to recognize the need to slow and watch for pedestrians.

For this reason, a crossing of US 26 in Rhododendron would need to be developed in conjunction with other changes to the streetscape of US 26 to change driver cues and alert them that they are entering an area with pedestrians.

To this end, a crossing would be evaluated with sidewalks, curb, and gutter, which formalize the pedestrian realm, provide opportunities for bulb-outs to narrow the roadway width, managed access points, and a pedestrian refuge island for any crossing. Decorative illumination at a pedestrian scale, which is cast down to protect the night sky would also emphasize the presence of pedestrians.

Mt. Hood Express transit stops are also located in Rhododendron. The stop for eastbound riders is located on the south side of US 26 in a pull-off area onto a property leased by SkiBowl. The stop for westbound travels is located in the plaza parking lot across the street. There is a small sign for the eastbound stop but no signage exists for the westbound stop.

Improvement Description: A painted, continental style crosswalk on US 26 placed within Rhododendron, with enhancements such as a rapid flashing beacon to further emphasize the presence of a crossing.

Considered but Not Recommended

An under or overcrossing was considered and ruled out for several reasons.

- Placement of the entrance and exit for both an under and overcrossing would be considerably setback from US 26, due to the clearances for each structure required.
- Pedestrians seek the shortest path, and under and overcrossings require out-of-direction travel.
- They also create points of isolation, and people can have concerns for their personal safety, especially at night or with low use.
- The cost for such structures is very high, and given the limited potential of crossing use, this cost would be difficult to justify in a competitive environment.

How will sidewalks and Multiuse Paths on US 26 be integrated?

- 1) Create a multiuse path using concrete, permeable pavement or other low maintenance material.
- 2) Install curbs and access management/consolidate driveways and add landscaped buffer.
- 3) Buildout full sidewalk. Priority areas for sidewalk buildout are in the vicinity of a US 26 crossing and more intense development.

A High-intensity Activated Crosswalk (HAWK) was considered, however pedestrian counts conducted for the traffic analysis showed that pedestrian volumes did not justify this level of improvement.

Benefits

A marked, continental style crosswalk would provide access across US 26 for users to access the transit stops on both sides. Transit riders, residents, lodging users, and recreational users would all benefit from a marked crosswalk on US 26 in Rhododendron.

Public Feedback

The public strongly supported this improvement, and recognized the streetscape improvements to US 26 that would need to occur to emphasize the presence of pedestrians.



R3: Rhododendron Gateway Sign

High Priority \$

Potential Improvement Recommendation: Install gateway signs in advance of Rhododendron in both the eastbound and westbound direction of US 26.

The posted speed along US 26 through Rhododendron is 40 mph. However, actual speeds exceed that. US 26 is a major east-west route and traffic calming mechanisms such as speed bumps are not feasible. Currently, US 26 is enclosed with trees and forest both east and westbound on US 26 in advance of Rhododendron. It can seem like Rhododendron suddenly appears to drivers. Instead, this project recommends a gateway treatment leaving and entering Rhododendron to alert drivers that they are entering a developed area. A gateway treatment, along with pedestrian crossing signage and the access management improvements, would alert drivers and encourage them to slow down because they are entering a place with commercial uses and pedestrian and bicycle crossings.

Improvement Description: Install a gateway sign to provide drivers a visual cue and alert them that they are entering an area with commercial uses and pedestrian and bicycle crossings.

Benefits: Gateway signage alerts drivers that they are entering a place and could help slow traffic speeds. This would benefit transit riders, residents and recreational users.

Public Feedback	Project Team Response
<p>This improvement received strong support during the public workshop. Attendees suggested that each village have a gateway sign to enhance driver awareness of the communities and the presence of pedestrians.</p>	<p>A gateway sign in Rhododendron, alongside other streetscape improvements, is a high priority. Other locations for gateway signs are Brightwood and Welches. Gateway signs must meet local and state standards. The most likely source of funds for these improvements is grant funding.</p>



R4: Pedestrian Accommodation along US 26 in Rhododendron High Priority \$\$

Potential Improvement Recommendation: Install curbs, sidewalk, and gutter along US 26 in Rhododendron.

While no pedestrian facility exists within Rhododendron, the area has several commercial uses and transit stops that attract pedestrian use, which is not well accommodated. A pedestrian facility along US 26 through Rhododendron would provide access to the transit stops and the businesses along the highway. It would also cue drivers they are entering a location with increased pedestrian activity as well as facilitate access to the businesses along the highway.

Improvement Description

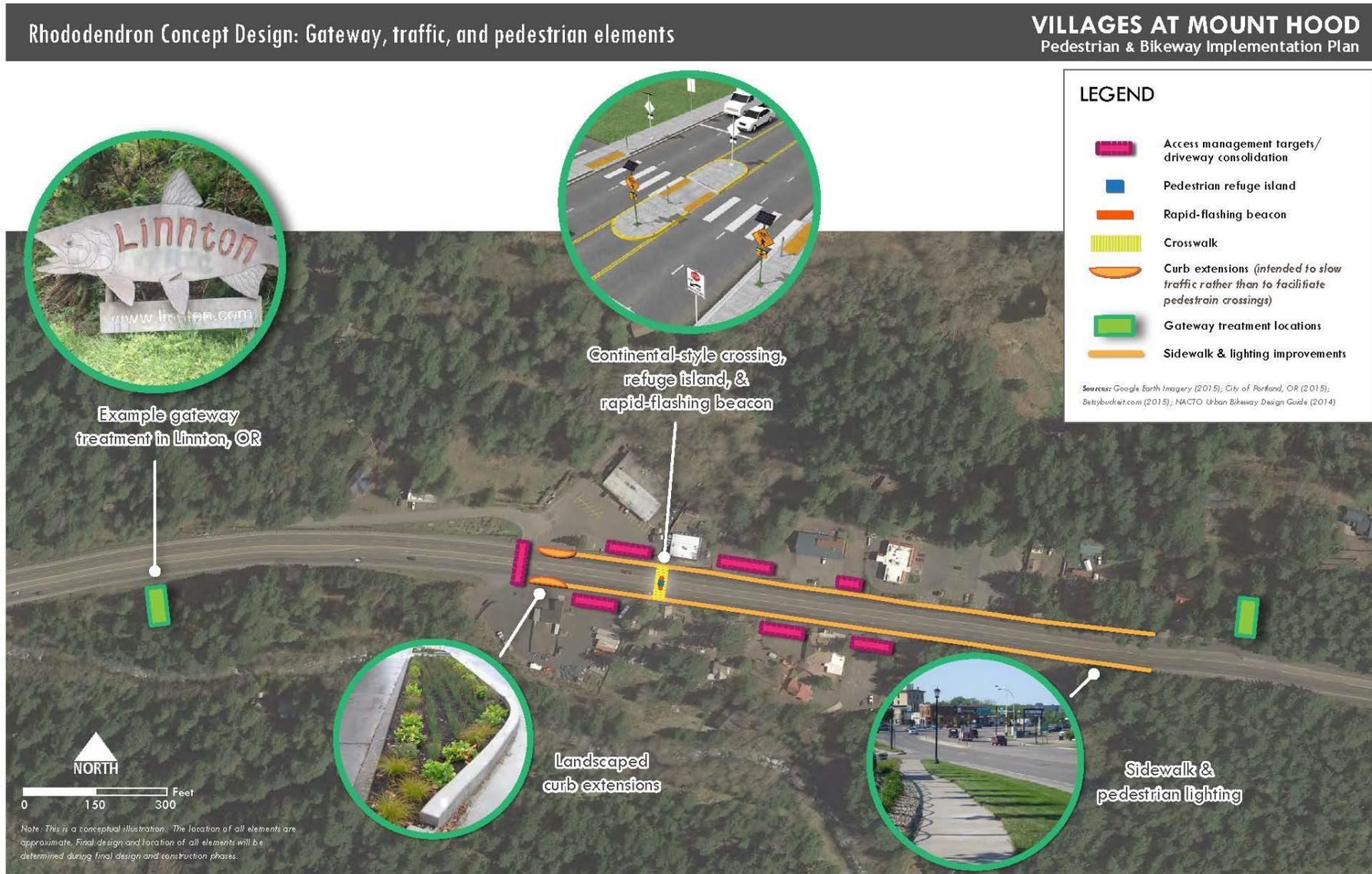
A crossing in conjunction with:

- Sidewalks, curbs and gutter
- Pedestrian-oriented illumination
- Pedestrian refuge island
- Managed access points (driveways)

Benefits: Safety, and drawing the attention of drivers to the presence of pedestrians -- Pedestrian sidewalk, curb and gutter provide visual cues to drivers that they are entering a place with pedestrians. Sidewalks can be ADA accessible and compliant. Sidewalks provide an opportunity to construct bulb-outs, which narrow the roadway width and further emphasize the presence of pedestrians.

Public Feedback	Project Team Response
<p>The public strongly supported this improvement, and recognized the streetscape improvements to US 26 would emphasize the presence of pedestrians and a pedestrian-oriented environment. Several business owners in Rhododendron began a conversation about how to grow support for the set of improvements among other stakeholders in the area.</p>	<p>A continental style crossing on US 26 with rapid flashing beacons can be part of a pedestrian-oriented environment that includes sidewalks, bulb-outs, gateways signs and lighting, which together create a stronger sense of a pedestrian-oriented environment.</p>

Figure 20: Combined set of streetscape and crossing improvements within Rhododendron to create a safe pedestrian environment





R5: Bicycle Facility for Trail Connection

High Priority \$

Potential Improvement Recommendation: Construct a bicycle facility (contraflow lane or multiuse path) to connect Pioneer Bridle Trailhead to Rhododendron, particularly the Mt. Hood Express stop.

Currently, mountain bikers descend down the Pioneer Bridle Trail toward the Mt. Hood Express Transit Stop. The Mt. Hood Express acts a shuttle for bicycle riders who loop between SkiBowl and Rhododendron. At the trail’s end, mountain bikers must either cross US 26 twice in a short distance or ride the wrong way westbound on the US 26 shoulder to access the stop. No direct connection exists between the trailhead and the Mt. Hood Express transit stop.

With the existing condition, cyclists are riding westbound along the eastbound shoulder of US 26. Existing right-of-way narrows from 90 feet to 80 feet as US 26 continues east out of Rhododendron; however, a path that provides room for two-way cyclists and pedestrians should be considered. Since right-of-way appears to be limited in this area, the available width for this facility is likely to be constrained. A typical shared facility is preferred to be 12’ wide but it is unlikely there is adequate space in this location. It may be worth considering a separated 4’ lane for contraflow cyclists with eastbound cyclists and pedestrians sharing a 4’-5’ lane. An 8’ facility has been assumed for cost estimating purposes. Note, posted speeds are reduced to 40mph in this area, which creates safer conditions for a contraflow bike lane.

A contraflow bike lane would be subject to ODOT approval and may require a design exception.

Improvement Description: A separated bicycle facility to provide for contra-flow cyclists on the south side of US 26 for approximately 300 feet.

Benefits: This would benefit recreational users, residents who wish to easily access the trail, and transit users who are also recreational users.



Figure 21: Example of a contraflow bike lane that allows bicycle riders to ride in the opposite direction of vehicular traffic

Public Feedback and Discussion

This improvement received moderate support from attendees at the public workshop, with no discussion of modifications. Support stems from the growing practice of the contraflow riding by recreationalists accessing the Mt. Hood Express transit stop.



R6: Directional Signs and Bike Hub

High Priority \$

Potential Improvement Recommendation: Install directional signs to highlight the presence of the Mt. Hood Express transit stops and a bicycle hub.

Transit stops are located on both sides of US 26. Clear signage is needed to alert riders to the location of the stops.

Businesses are also located along both sides of US 26 and this is an ideal stopping location for recreational bicyclists. A bike hub would encourage bicyclists to stop by providing amenities and a safe

place to secure their bike. Directional signage would direct visitors and recreational users between Rhododendron businesses and recreational areas.

Improvement Description: Install directional signs to alert users to the presence of the Mt. Hood Express stops, and a bicycle hub to better accommodate recreational bicycle rider use in Rhododendron. Recreational bicycle rider use is significant in Rhododendron due to the proximity to mountain biking trails.

Benefits: This would benefit recreational users, particularly bicycle riders, and transit users who are also often recreational users at this location.

Public Feedback

The public were generally supportive of this improvement and provided no suggestions for modification.



R7 Multiuse Path between Lolo Pass Road and Rhododendron Low Priority \$

Potential Improvement Recommendation: Further evaluate the feasibility of a multiuse path/bike route between Lolo Pass Road and Rhododendron.

US 26 is the only route that provides a continuous connection through The Villages at Mt. Hood. Presently, pedestrians and bicycle riders use US 26 to travel between Welches and Rhododendron, which can be uncomfortable to most pedestrians and bicycle riders due to the high volumes and high speed of traffic in adjacent lanes. A multiuse path offers increased comfort and protection.

Improvement Description: Construct a multiuse path along US 26 right-of-way that connects Lolo Pass Road to Rhododendron.

Benefits: An opportunity for pedestrians and bicycle riders to travel with separation from vehicles between Lolo Pass Road and the developed areas of Rhododendron.

Public Feedback and Discussion

This improvement received strong support in the public workshop and from the PAC. Attendees recommended considering use of Road 19, which is currently unpaved and has deep ruts caused by the removal of culverts.

Project Team Response

ODOT prefers the path to be set back from US 26; however, Road 19 is out-of-direction. Road 19 is owned by the Mt. Hood Forest Service, and would require further coordination and project evaluation. The project would provide a connection between the US 26 crossing at Salmon River Road, and points north and east.

3 Funding and Grant Opportunities

The recommended improvements do not have a funding source. A combination of agencies, such as ODOT, Clackamas County and BLM, or one agency may seek grant opportunities to implement improvement projects. Private entities alone or in partnership with agencies may also seek grant opportunities. Those improvement projects that are already programmed within the Transportation

System Plan (TSP) and have funding are noted as part of the background description of each improvement.

3.1 Federal and State Grants

Highway Trust Fund

Revenues to the federal Highway Trust Fund (HTF) are comprised of motor vehicle fuel taxes, sales taxes on heavy trucks and trailers, tire taxes and annual heavy truck use fees. HTF funds are split into two accounts – the highway account and transit account. Funds are appropriated to the states annually based on allocation formulas in the adopted transportation authorization legislation.

Most federal grant monies are distributed by the Oregon Transportation Commission (OTC) through the Statewide Transportation Improvement Program (STIP). The application process for federal funds is described below. Funds are limited and the grants process is competitive.

State Highway Fund

State funds are distributed by the Oregon Transportation Commission (OTC). Revenues to the fund are comprised of fuel taxes, vehicle registration and title fees, driver's license fees and the truck weight-mile tax. State funds may be used for construction and maintenance of state and local highways, bridges and roadside rest areas. State law requires that a minimum of 1% of all highway funds be used for pedestrian and bicycle projects in any given fiscal year. However, cities and counties receiving state funds may "bank" their pedestrian and bicycle allotment for larger projects. Funds are limited and the grants process is competitive.

Statewide Transportation Improvement Program (STIP)

The STIP, the 4-year capital improvement program for transportation in Oregon, provides a schedule and identifies funding for projects throughout the state. Projects included are generally "regionally significant" and are prioritized by Metropolitan Planning Organizations and Area Commissions on Transportation (ACTs). All regionally significant state and local projects, as well as all federally-funded projects and programs, must be included in the STIP. About 80 percent of STIP projects use federal funds, most of which originate from federal programs. This includes the Surface Transportation Program (STP), Transportation Alternatives Program (TAP) and National Highway Performance Program (NHPP) funding for preservation and improvement of the National Highway System. In recent years Oregon has combined several types of available federal funds to create a statewide grant program called "Regional Flexible Funds." These competitive grants are awarded every two years towards bicycle, pedestrian, transit and Transportation Demand Management (TDM) projects proposed to be included in the STIP.

In previous STIPs Oregon DOT organized available federal funds into six program categories: modernization, safety, preservation, bridge, operations and special programs. Starting with the 2015-2018 STIP, ODOT divided the funding pools into two broad categories: "Fix it" and "Enhance." "Fix it" projects are those that preserve and maintain the current transportation system; "Enhance" projects are those that enhance, expand or improve the transportation system. The main purpose behind this reorganization is to allow maximum flexibility to fund projects that reflect community and state values and needs, rather than those that fit best into prescriptive program definitions. More information on the STIP can be found at <http://www.oregon.gov/ODOT/TD/STIP/Pages/default.aspx>.

Applicable “Fix-it” activities include:

- Bridges (state-owned)
- High risk rural roads
- Illumination, signs and signals
- Safety

Applicable “Enhance” activities include:

- Bicycle and/or pedestrian facilities on or off the highway right-of-way
- Most projects previously eligible for Transportation Enhancement funds, now called Transportation Alternatives Program (TAP)
- Bike/Ped, Transit, TDM projects eligible federal STP and CMAQ funds
- Safe Routes to School (infrastructure projects)

The application process for projects for the 2018-2021 STIP is virtually complete as of this writing, but future STIPs will continue to use this new funding arrangement. There is now one application for “Enhance” projects with ODOT making a determination of which funding mechanism is most appropriate for individual projects. “Fix it” projects will be selected through a collaborative process between ODOT and ACTs. It should be noted that this reorganization of funding programs does not represent a fundamental change in the types of projects that will be funded through the STIP.

Eligibility

Only certain roadways are eligible to receive federal funds – generally those with federal functional classification as “major collector” and higher. However, STIP projects are also funded by other sources, meaning many streets in The Villages are likely eligible under either the “Fix it” or “Enhance” categories described above.

An additional step the county or local school district could take to improve the likelihood of funding through the “Enhance” side of the STIP is to complete a *Safe Routes to School Action Plan*. These plans detail specific programmatic actions as well as capital improvements that improve the walking and cycling environment around and between schools. Completing an Action Plan will help those projects near or adjacent to schools receive “Enhance” funding. More information about the Safe Routes to School program and Action Plans can be found at <http://oregonsaferoutes.org/>.

Federal Lands Access Program Grants

The Villages at Mt. Hood are uniquely qualified to obtain Federal Lands Access Program grants because of their proximity to federal lands (Mt. Hood National Forest) and proven track record of creating partnerships. The Mt. Hood Express transit service was expanded using a Federal Lands Access Program grant. The Federal Lands Access Program (Access Program) was established in 23 U.S.C. 204 to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The Access Program supplements State and local resources for public roads, transit systems and other transportation facilities, with an emphasis on high-use recreation sites and economic generators.

Eligible activities are:

- Transportation planning, research, engineering, preventive maintenance, rehabilitation, restoration, construction and reconstruction of Federal lands access transportation facilities located on or adjacent to, or that provide access to, Federal land, and—
 - adjacent vehicular parking areas;
 - acquisition of necessary scenic easements and scenic or historic sites;
 - provisions for pedestrians and bicycles;
 - environmental mitigation in or adjacent to Federal land to improve public safety and reduce vehicle-caused wildlife mortality while maintaining habitat connectivity;

- construction and reconstruction of roadside rest areas, including sanitary and water facilities; and
- other appropriate public road facilities, as determined by the Secretary.
- Operation and maintenance of transit facilities.
- Any transportation project eligible for assistance under title 23 of the United States Code that is within or adjacent to, or that provides access to, Federal land.

3.2 State Grants

Recreational Trails Program (RTP)

This federal funding program is administered by the Oregon Parks and Recreation Department. RTP funding is intended for recreational trail projects, and can be used for acquiring land and easement and building new trails. Grant funds pay up to 80 percent of project costs while project sponsors must match project costs by at least 20 percent. Funding varies greatly from year to year, with about \$1.3 million awarded state-wide in 2011 and \$2.1 million in 2010. Approximately \$1.5 million in state-wide funds were available in 2014. Funds are limited and the grants process is competitive. More information can be found at <http://www.oregon.gov/oprd/grants/Pages/trails.aspx>.

ConnectOregon Program

ConnectOregon provides grants and loans for non-highway transportation projects, backed by bonds on state lottery proceeds. \$43 million in bonds were authorized for the most recent biennium. The program funds rail, port/marine, aviation and transit projects. In addition, the Legislature made bicycle and pedestrian projects that are not eligible for State Highway Funds eligible to compete for ConnectOregon funding. Funds are limited and the grants process is competitive. More information on this program can be found at <http://www.oregon.gov/ODOT/TD/TP/pages/connector.aspx>.

Oregon Immediate Opportunity Fund

This fund supports economic development in Oregon through construction and improvements of streets and roads. Funds are discretionary and may only be used when other sources of financial support are unavailable or insufficient. The objectives of the Opportunity Fund are providing street or road improvements to influence the location, relocation or retention of a firm in Oregon, providing procedures and funds for the OTC to respond quickly to economic development opportunities, and providing criteria and procedures for the Oregon Economic and Community Development Department (OECD), other agencies, local government and the private sector to work with ODOT in providing road improvements needed to ensure specific job development opportunities for Oregon, or to revitalize business or industrial centers. More information can be found at <http://www.oregon.gov/ODOT/TD/TP/Plans/IOF.pdf>.

Oregon Transportation Infrastructure Bank (OTIB)

OTIB is a statewide revolving loan fund available for highway projects on major collectors or higher classifications and bicycle or pedestrian access projects on highway right-of-way. Applications are accepted at any time. More information can be found at <http://www.oregon.gov/ODOT/cs/fs/Pages/otib.aspx>.

Transportation Alternatives-Oregon Bicycle and Pedestrian Program

The Transportation Alternatives-Oregon Bicycle and Pedestrian Program is a combined funding grant supported by federal TAP funds and state Bicycle/Pedestrian grant funds, and administered by ODOT on a 2-year funding cycle. ODOT combined these formerly separate solicitations in 2012 as part of the STIP Enhance process. Projects and activities that are eligible for this program include bicycle/pedestrian

facilities, scenic beautification, historic preservation and environmental mitigation. For more information about these grants, see http://www.oregon.gov/ODOT/TD/AT/Pages/TE_OBPAC.aspx.

All Roads Transportation Safety Program (ARTS)

ARTS is a new funding program beginning in 2017 to reduce the instance of fatalities and serious injuries on all public roads statewide. ARTS grant funds are paid by federal Highway Safety Improvement Program (HSIP) funds and will be awarded by ODOT on a 4-year cycle. At least half of the funding will be required to be spent on safety improvements to systemically reduce risks along a roadway or corridor. The ARTS program consists of three areas for systemic improvements: Roadway Departure, Intersection, and Pedestrian and Bicycle. Some funding may also be used on safety mitigation measures at locations where there is documented crash risks.

A total of \$166 million is available statewide for the program during this time period, with regional allocations based on the proportion of fatalities and serious injuries that occurred within the ODOT region during the previous five years. A local match of 7.78 percent will be required for projects that spend HSIP funds. For more information about these grants, see <http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/Pages/ARTS.aspx>.

3.3 Tourism Grants

Cycle Oregon Community and Signature Grants

Cycle Oregon directs any proceeds from its events to the Cycle Oregon Fund to support projects and programs throughout Oregon in three key areas:

- Community projects
- Bicycle tourism and safety
- Environmental conservation and historic preservation

Eligibility

- Applicants must be a government agency or have 501(c)(3) tax-exempt status or have a qualified fiscal sponsor (i.e., a sponsoring and eligible tax-exempt organization).
- Applicants must have submitted required evaluation reports for all prior grants from the Oregon Community Foundation;
- The request must be at least \$500;
- Projects scheduled for the current grant cycle year;
- Only complete proposals will be considered.

Cycle Oregon's signature grants are determined by Cycle Oregon's board of directors. Signature grants have provided important funding to catalyze or conclude an important project that has statewide impact. For more information about these grants, see <http://cycleoregon.com/cycle-oregon-fund/granting-procedures/>.

Travel Oregon Matching Grants

This program makes awards available to eligible applicants for projects that contribute to the development and improvement of local communities throughout the state, to support Travel Oregon's mission of 'a better life for Oregonians through strong, sustainable local economies'.

Communities, visitor associations and tourism-related organizations are invited to apply for funding. An applicant may apply for a grant of \$2,500 – 100,000 per project and may apply for multiple projects during a cycle; however, each project requires its own application. Applicants must match the grant amount awarded, dollar for dollar. Up to 50% of the match may be in-kind.

Eligibility

- Applicants must have a Federal Tax Identification Number
- Projects should target the development of tourism infrastructure or strategic collaborative marketing initiatives that align with local, regional or statewide efforts and increase the likelihood of visitation from outside the local area
- Partnerships with local, regional, and statewide tourism organizations, economic development, government organizations and/or tourism-related businesses are encouraged

For more information, see <http://industry.traveloregon.com/industry-resources/matching-grants-program/oregon-tourism-commission-matching-grants-program/eligibility/>

Clackamas County Tourism & Cultural Affairs Grants

Tourism Development Grants are made possible through Transient Room Tax Collections within Clackamas County. Clackamas County Tourism & Cultural Affairs strives to increase overnight stays and encourage visitors to linger longer in Clackamas County by serving as the primary destination resource for trip planning resulting in destination visits and by working in partnership to develop and enhance local tourism assets.

Project Objectives and Eligibility

Funding is intended for infrastructure and capital projects that coincide with CCTCA's strategic priorities. Applications should reflect tourism best practices, innovation, collaboration and business ideas with strong commercial potential for the local economy. Grant recipients should be able to demonstrate enhanced experiences for visitors to Clackamas County through projects that build on the area's unique strengths and contribute to setting the region at the forefront of a competitive marketplace.

Funding Strategic Priorities

- Create and/or Enhance Tourism Assets
- Enhance Marketing and Promotion Efforts through New Technologies and Mediums
- Build and Strengthen Partnerships and Coalitions to Increase Collaboration
- Build and Strengthen Public and Private Partnerships
- Develop New Tourism Products, Markets and Packages
- Focus on at least one of the Three Pillars of Clackamas County Tourism:
 - Outdoor Recreation
 - Agri-tourism
 - Cultural/Heritage Tourism

Budget

\$200,000 in total funds was available for in FY 2015-16. The minimum request considered per project is \$5,000 with a maximum of \$100,000 awarded for a single grant. A maximum of one grant project per organization per cycle will be awarded. For more information, see https://www.mthoodterritory.com/Scripts/tiny_mce/jscripts/tiny_mce/plugins/filemanager/files/Document_Center/devgrantover1516.pdf

DRAFT

Clackamas County Board of County Commissioners

Policy Session

The Villages at Mt. Hood Pedestrian & Bikeway Implementation Plan

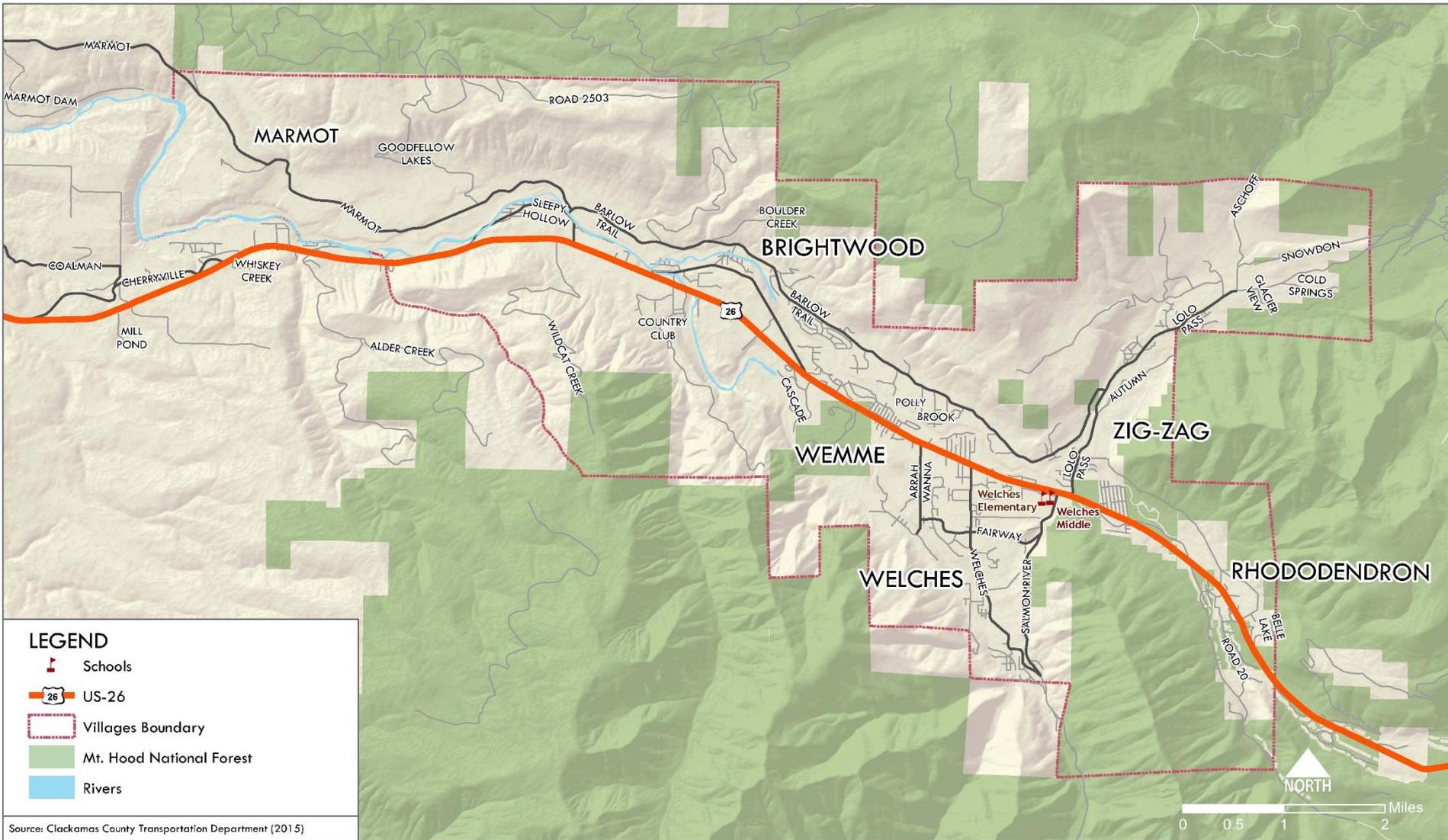
October 11, 2016; 1:30 pm
Development Services Building
2051 Kaen Road, Oregon City



The Project

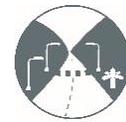
- **The area:** Communities of Brightwood, Welches/Wemme, Zig Zag and Rhododendron, connected by US 26 and county roadways
- **The need:** Uncomfortable and poorly connected bicycle and pedestrian pathways
 - Narrow or non-existent shoulders
 - Poorly-lit shoulders or footpaths
 - Bicyclists forced into lanes with motorized traffic
 - Communities bisected by US 26, which is a significant crossing barrier
 - Lack of directional signage
- **The solution:** A long-term, prioritized set of pedestrian and bicycle infrastructure improvements to increase transportation choices, including access to transit





Why this project? *Regional needs*

- Support projects of regional significance
 - ODOT's US 26 Multi-Modal Plan findings show need for:
 - safety improvements
 - better transit and access to transit
 - safe pedestrian crossings at strategic places in the Villages
 - Received TGM grant to study needs
- Update Mount Hood Community Plan, 1976
 - Encourages crosswalks, signals, etc. in Rhododendron
 - Current policy relates to development of shuttle bus system to serve ski areas



Why this project? *Local needs*

- Community supports:
 - Safe bike/ped travel, multi-use path
 - Increased transit service
 - More choices, including better connection through Mt. Hood Express
 - Resident and visitor access to area destinations
 - Tourism
- Opportunity for Safe Routes to School (SRTS) Plan
- Aligns with county TSP and ATP
 - Barlow Trail Rd is a Principal Active Transportation Route
 - Several TSP projects in area, including shoulder-widening



Project objectives

- Identify bicycle and pedestrian needs in Brightwood, Wemme/Welches, Zig Zag and Rhododendron
- Develop a *Safe Routes to School Plan (SRTS)* for Welches Elementary and Middle School
- Identify locations for additional or enhanced US 26 pedestrian crossings, including at-grade and grade-separated
- Evaluate the feasibility of a multi-use path



Process

- The study

- Reviewing state and county plans and policies
- Analyzing safety issues
 - conditions of roads, paths, crossings
 - pedestrian and bicycle needs
- Gathering data on existing conditions
- Developing project analysis criteria



- The outreach

- Walking tours and stakeholder interviews
- Interactive website, social media
- Open houses and questionnaires for the public
- Meetings with school staff and community groups

Advisory committees

Project Advisory Committee (PAC)

- Neighborhood representatives
- Local pedestrian and bicycle advocates
- Local business owners
- Community volunteers
- Agency-based technical advisors

Technical Advisory Committee (TAC)

- County Engineering
- County Planning
- US Forest Service
- Oregon Department of Transportation (ODOT)
- Mt Hood Express
- County Tourism



Brightwood

- Barlow Trail Road Principal Active Transportation route
- Undercrossing and transit directional signs
- Strategic/targeted shoulder-widening
 - Marmot Rd
 - Coalman Rd
 - Cherryville Rd
 - Sleepy Hollow Rd
 - Brightwood Loop Rd



Welches

- US 26 multi-use paths
 - On south side between Wildwood Recreation site and E. Salmon River Rd
 - On north side between Arrah Wanna Blvd and Welches Rd
- US 26 crossing improvements
- Shoulder-widening at Welches Rd & E. Salmon River Rd.
- Crossing improvements at Welches Rd & the Resort
- Speed feedback signs on Welches Rd., E. Salmon River Rd., Lower Lolo Pass Rd



Welches: Safe Routes to School Plan

- County partnership with Welches elementary and middle schools to create action plan



- Identifies challenges and barriers that keep children from walking and biking to school
 - Includes recommended projects/improvements to make walking and biking to schools safer
- Though most students will continue to be bused to school ...
 - It's challenging for students to safely connect to their schools
 - Schools are the center of community activities
 - Community sees need to link activity centers and schools with everyone, including students

Welches: Safe Routes to School Projects



- Evaluation of school signs
- Multi-use path from Huckleberry Dr to Woodsey Wy
- Pedestrian and bicycle facilities
- Crosswalks
- Bike parking facilities for the schools
- Student education about safe street crossings, walking, riding school buses, bicycles, etc.

Rhododendron

- Pedestrian crossing improvements
- Curb/gutter/sidewalks
- Access management plan/
driveway consolidation
- Multi-use path between Lolo Pass Rd
and Rhododendron
- Gateway and transit signs



Objectives and Results

- Identify bicycle and pedestrian needs

- ✓ Evaluated barriers to walking and biking
- ✓ Recommend 6 crossing improvements
- ✓ Recommend 8 shoulder-widening improvements



- Develop a *Safe Routes to School Plan (SRSP)*

- ✓ Evaluated barriers to walking and biking to the schools
- ✓ Recommend several ped facilities and improved crossings



- Identify locations for additional or enhanced US 26 crossings

- ✓ Evaluated existing and potential crossings
- ✓ Recommend 3 additional crossings and improvements to existing crossing

- Evaluate feasibility of a multi-use path along US 26

- ✓ Evaluated locations for multi-use paths
- ✓ Recommend 2 high priority multi-use path locations
- ✓ Majority of multi-use path is within ODOT right-of-way

Plan Adoption Elements

1. Comprehensive Plan Appendices

- Add the Villages at Mt. Hood Pedestrian & Bikeway Implementation Plan to Appendix B

2. Comprehensive Plan Chapter 5: Transportation System Plan

- Update TSP Project Tables

3. Comprehensive Plan Chapter 10: Community Plans and Design Plans

- Update the Mount Hood Community Plan with appropriate policies that guide development in consideration of the Villages at Mt. Hood Pedestrian & Bikeway Implementation Plan.

The Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan

PREPARED FOR

Clackamas County

with support from Oregon
Department of Transportation

JUNE 2016



RECOMMENDED DRAFT PLAN



Thank You!