

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

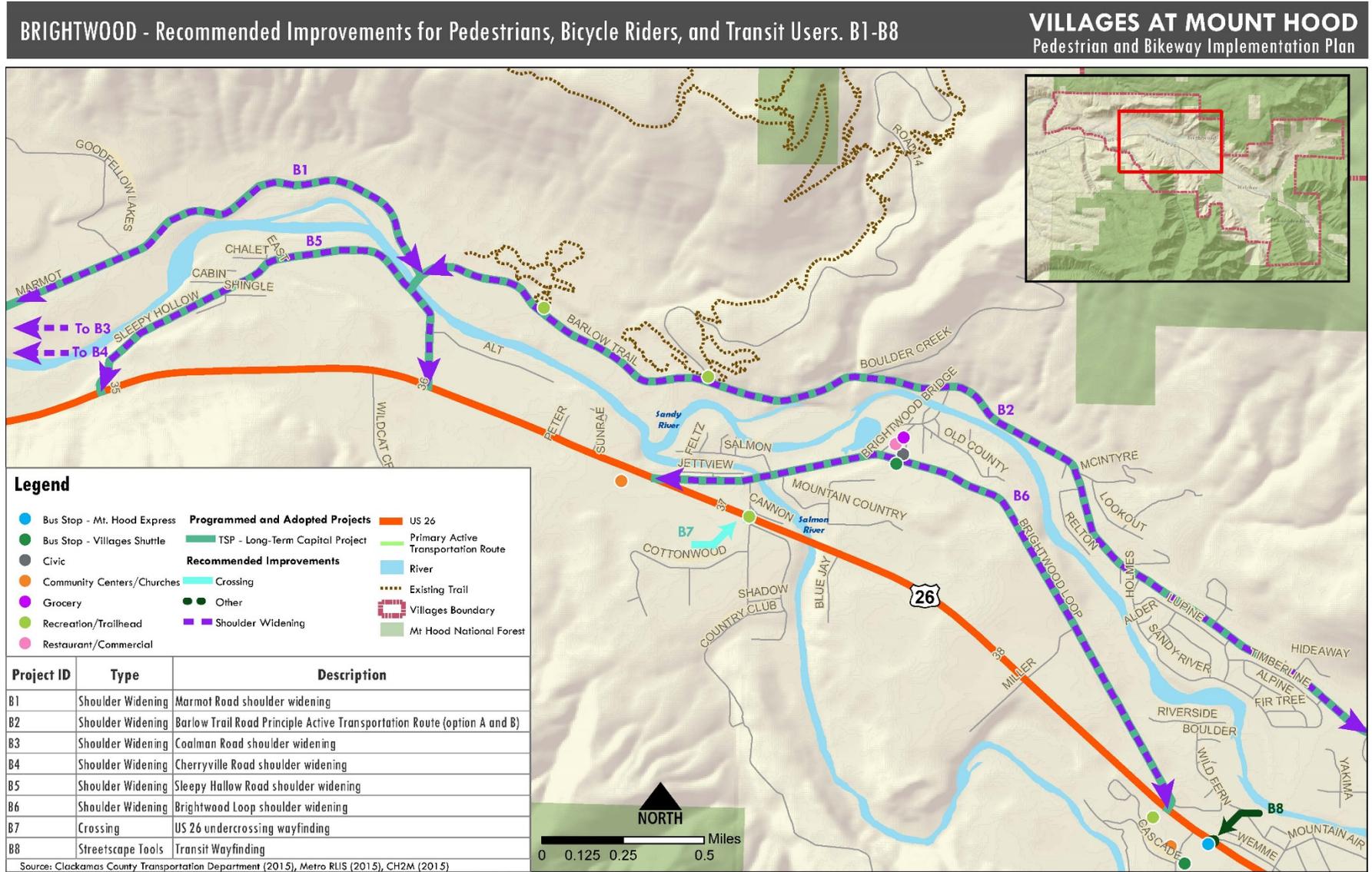
2 Proposed Projects in The Villages

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.

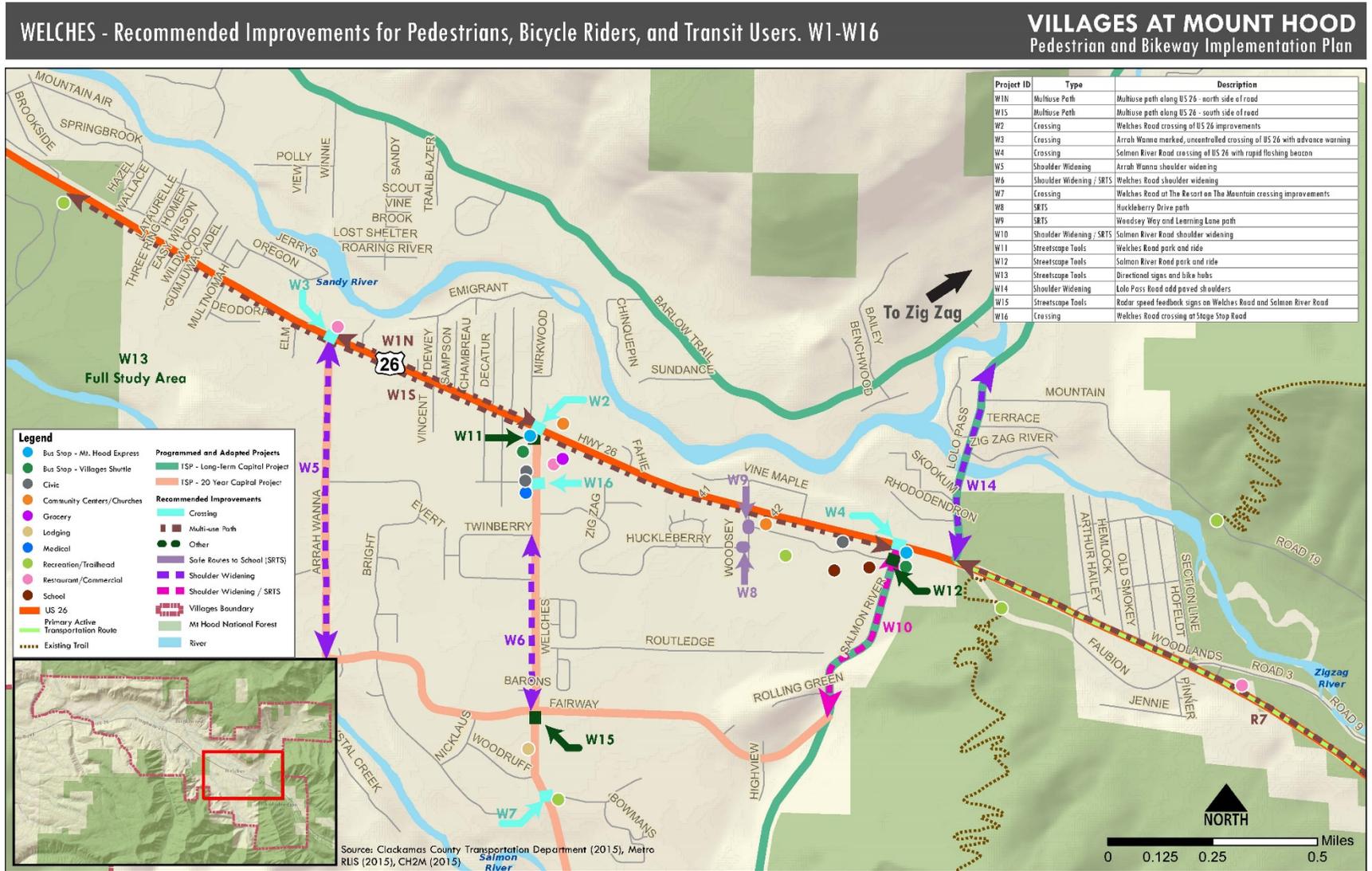
Benefits: Underutilization of RV parking allows for easy bus circulation and provides all-day parking for vehicles. The location just off US 26 makes the area an attractive spot to advertise the park-and-ride capability. Calling attention to the park-and-ride could attract riders traveling to the stop 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.

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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
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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.

<p>Public Feedback and Discussion</p> <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>Project Team Response</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>
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	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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W17: Driver Speed Feedback Signs on Welches Road, Salmon River Road, lower Lolo Pass Road, and US 26 in the vicinity of Rhododendron *High Priority \$*

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.

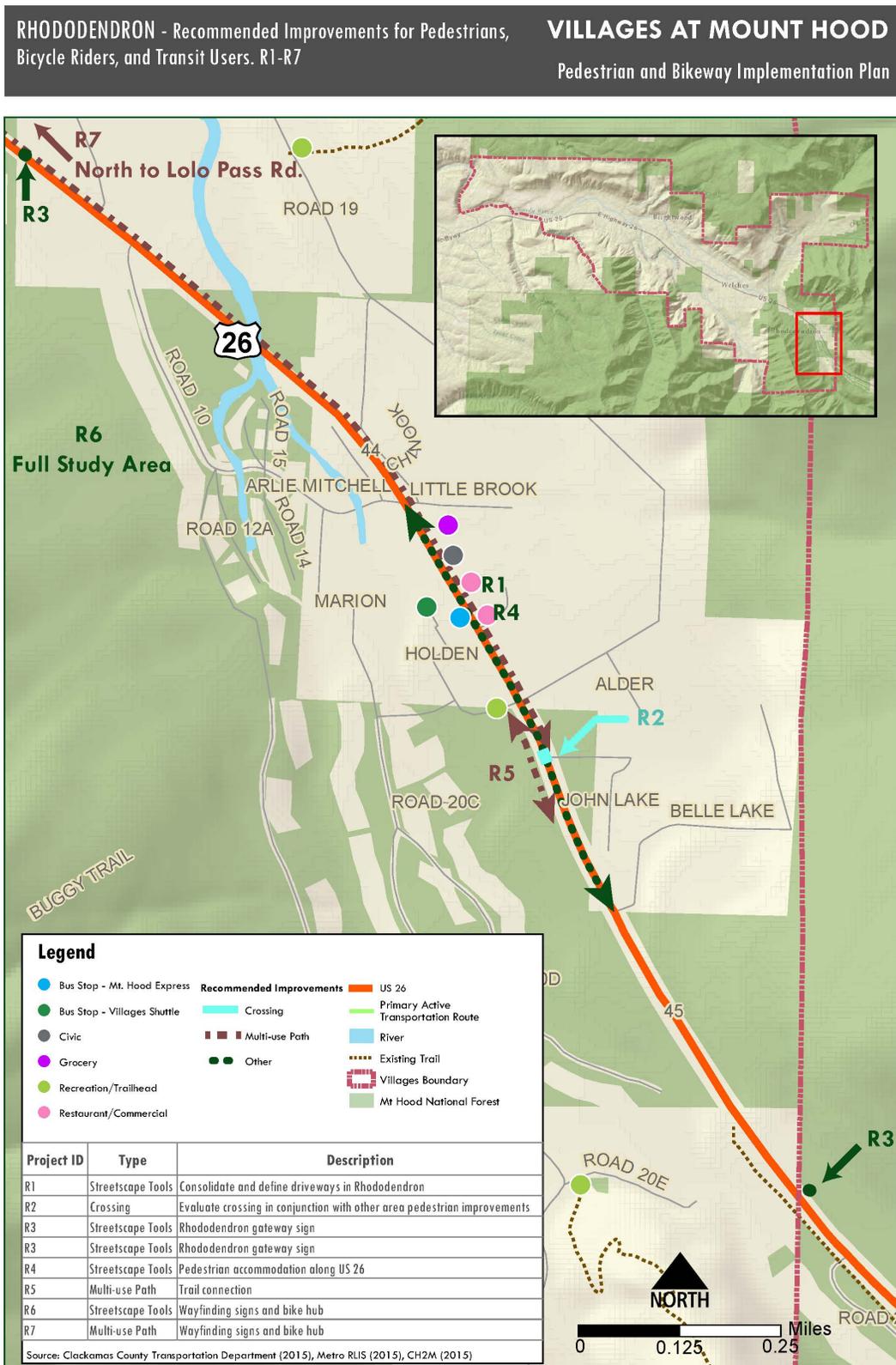
Improvement Description: Mount permanent radar speed feedback signs to keep drivers aware of their speeds and the need to slow down, especially near schools.

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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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

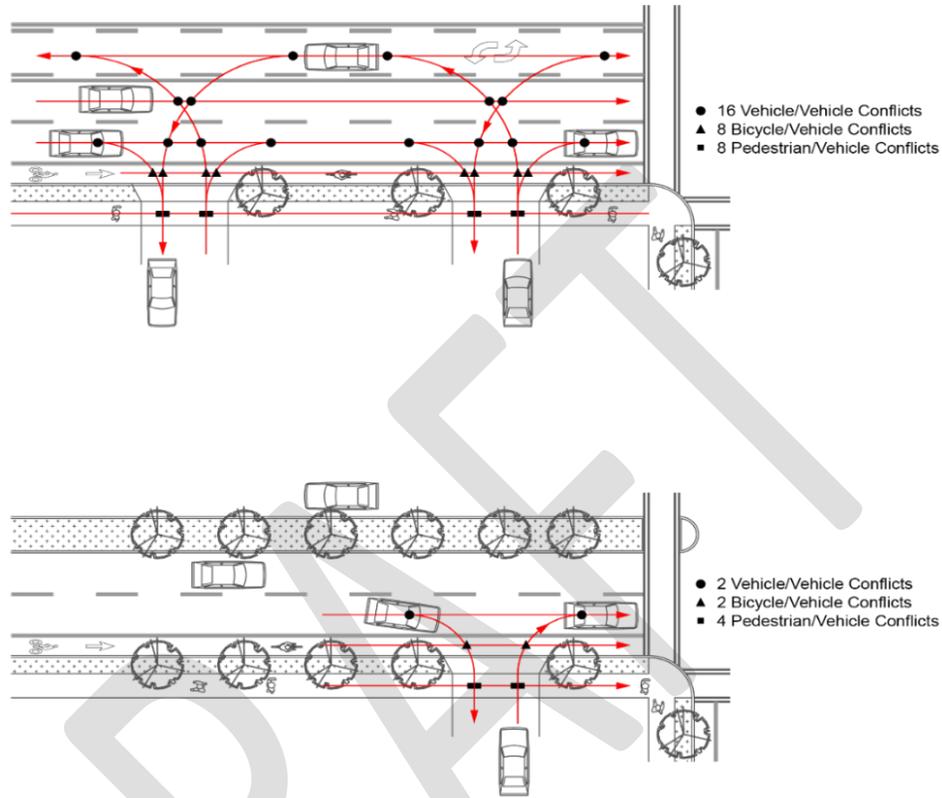


Figure 19: Reduction of conflict points due to access management

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

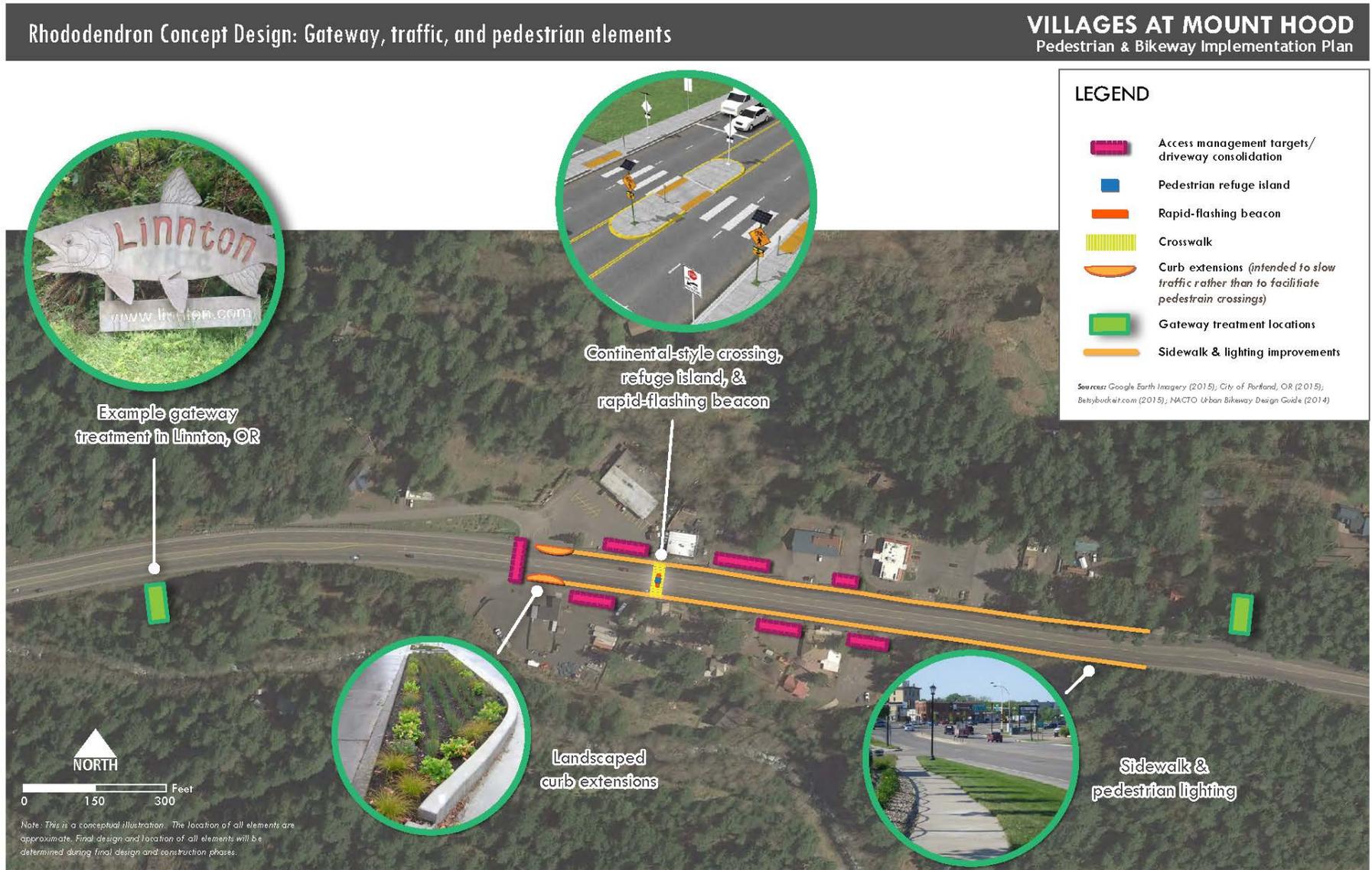
A crossing in conjunction with:

- 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

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	Project Team Response
<p>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.</p>	<p>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.</p>