



TECHNICAL MEMORANDUM #6

Date: July 31, 2023 Project #: 23021.050
To: Project Management Team (PMT)
From: Kittelson & Associates, Inc.
Project: Curry County Transportation System Plan Update
Subject: Final Tech Memo #6: Alternative Evaluation

INTRODUCTION

This memorandum identifies the transportation system alternatives developed to address gaps and deficiencies identified in the transportation system inventory (see Technical Memorandum #3) and the existing conditions analysis (see Technical Memorandum #4), and the future needs identified in the future (no-build) traffic conditions analysis (see Technical Memorandum #5). This memorandum also identifies the evaluation matrix that will be used to select a preferred alternative for each gap, deficiency, and need, and lay the groundwork for developing the Curry County Transportation System Plan (TSP) update. The information provided in this memorandum will also help address the requirements identified in Oregon Administrative Rule 660-012-020 (Elements of a Transportation System Plan) for establishing a coordinated network of transportation facilities adequate to serve state, regional, and local transportation needs.

ROADWAY NETWORK

The roadway network serves the majority of trips within Curry County across all travel modes. In addition to motorists, pedestrians, bicyclists, and transit riders all rely on the roadway network to access areas locally and regionally. This section summarizes the roadway network alternatives considered for implementation in the rural parts of the county to address gaps, deficiencies, and needs in the roadway network as well as alternatives that will facilitate improvements to the pedestrian, bicycle, and public transit networks.

Functional Classifications

The County's current functional classification plan includes designations for all County owned and maintained facilities, including those in the incorporated cities. As indicated in Technical Memorandum #3, there are some discrepancies between the Federal and County classifications. The following summarizes two alternatives to update the County's functional classification plan.

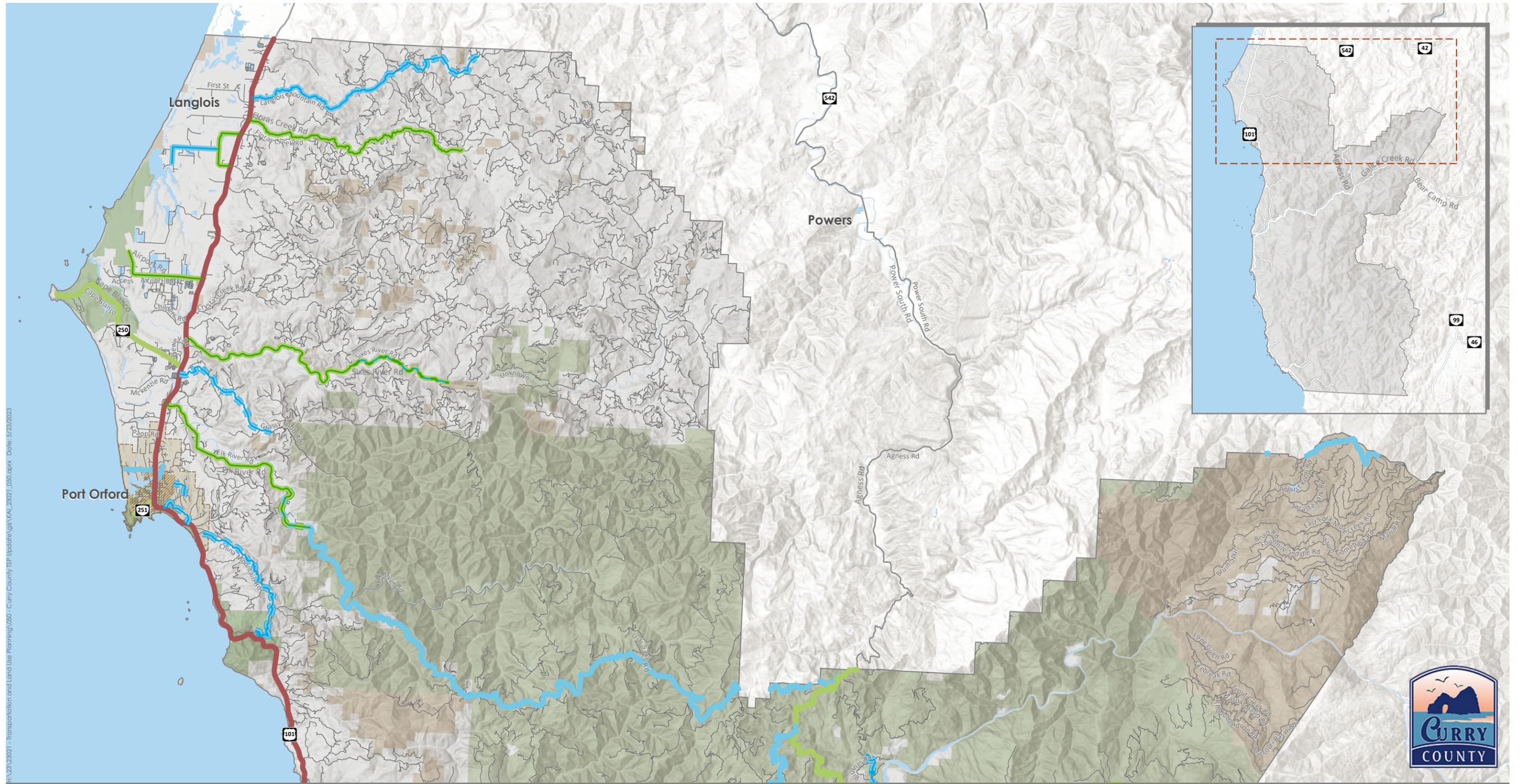
- Align Federal and County functional classifications – As indicated above, there are some discrepancies between the Federal and County classifications. The TSP update should identify changes to the Federal and/or County classifications to ensure they align.
- Consider other functional classification changes where appropriate.

Table 1 summarizes the changes to the Federal and County classifications of County roadways, which are shown in **bold**. Figure 1 illustrates the changes shown in Table 1.

Table 1. Functional Classification Changes

Road	From	To	County Classification	Federal Classification	Proposed County Classification	Proposed Federal Classification
Agness-Illahe Rd	920 Ft S. of Cougar Ln	End County Road	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
Bowman St	Langlois Mountain Rd	1st Street	Residential/ Local	Minor Collector	Under Review	Under Review
Cemetery Loop Rd	US 101 (South End)	Deady St (Port Orford)	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
China Mountain Rd	Noble Dr	Humbug Park Rd	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
E Benham Ln	US 101	Road Narrows #98295	Rural Minor Collector	None	Under Review	Under Review
Elk River Rd	MP 5.58	USFS Boundary	Rural Major Collector	Minor Collector	Rural Major Collector	Major Collector
Grassy Knob Rd	US 101	End of Pavement	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
Grizzly Mountain Rd	City Limits – Bear Mountain Rd	End County Road Sign	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
Langlois Mountain Rd	Bethel Creek Rd	End of County Road	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
N Bank Chetco River Rd	Don Cameron Bridge	USFS Boundary	Rural Minor Collector	Major Collector	Rural Major Collector	Major Collector
Old Coast Rd	Wedderburn Loop Rd	End County Rd / Gate	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
Ophir Rd	US 101 (North End)	MP 0.38	Rural Minor Collector	Major Collector	Rural Minor Collector	Minor Collector
Paradise Point Rd	US 101	End of Pavement	Residential/ Local	Minor Collector	Under Review	Under Review
Parkview Dr	130 Ft East of Vista Ridge Dr	Airport Parking Lot	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
Pedrioli Dr	US 101	House #15500 / End of Road	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
Rainbow Rock Rd	Carpenterville Rd (South End)	Carpenterville Rd (North End)	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
Second St	Jackson St	House #94333	Residential/ Local	Minor Collector	Under Review	Under Review
Sixes River Rd	Milepost 7.0	End of Pavement	Rural Minor Collector	Major Collector	Rural Major Collector	Major Collector
Vista Dr	Old Mill Rd	End of Striping	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
W Hoffeldt Ln	US 101	End of County Road	Rural Minor Collector	None	Under Review	Under Review
Wedderburn Loop Rd	US 101 (South Exit)	US 101 (North Off-Ramp)	Rural Minor Collector	None	Rural Minor Collector	Minor Collector
Zimmerman Ln	US 101	Shopping Center Ave	Rural Major Collector	None	Rural Major Collector	Major Collector

Changes to the County classifications will occur with adoption of the TSP update while changes to the Federal classification will occur following adoption of the TSP update and approval from the Oregon Department of Transportation (ODOT) and Federal Highway Administration (FHWA). Changes to the classifications will change the design standards that apply to the streets and the eligibility for federal funding. The following section describes potential changes to County street design standards.



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Figure 1

**Proposed Functional Classification Changes
Curry County, Oregon**



- | | | |
|--|---|---|
| Current Federal Functional Classification | Current County Functional Classification | Proposed Federal Functional Classification |
| Other Principal Arterial | Rural Minor Arterial | Minor Collector |
| Minor Arterial | Rural Major Collector | Major Collector |
| Major Collector | Rural Minor Collector | Proposed County Functional Classification |
| Minor Collector | | Rural Major Collector |
| No Designation | | |

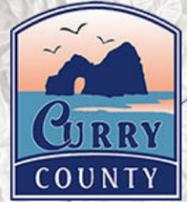
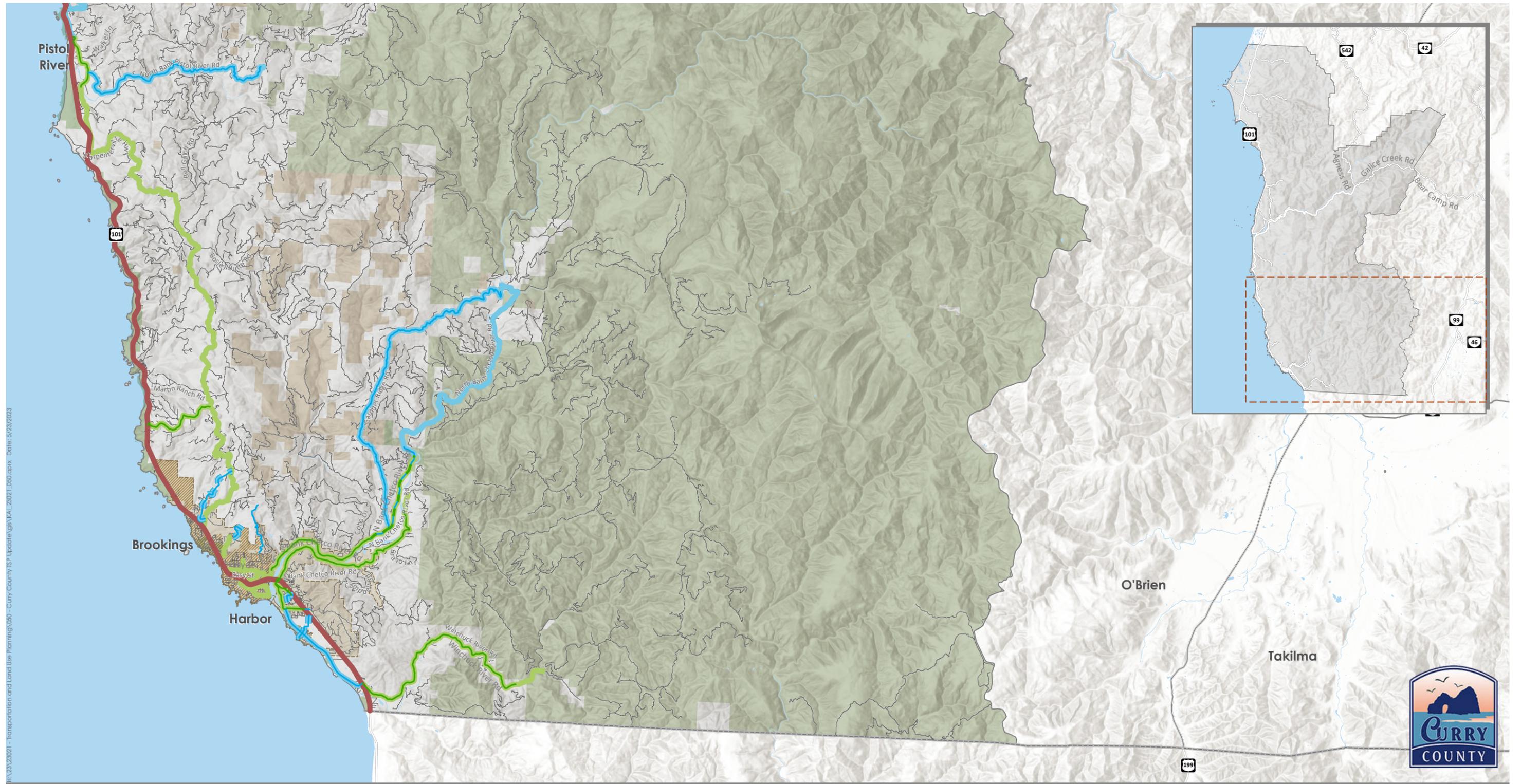


Figure 1

**Proposed Functional Classification Changes
Curry County, Oregon**



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| Current Federal Functional Classification | Current County Functional Classification | Proposed Federal Functional Classification |
| Other Principal Arterial | Rural Minor Arterial | Minor Collector |
| Minor Arterial | Rural Major Collector | Major Collector |
| Major Collector | Rural Minor Collector | Proposed County Functional Classification |
| Minor Collector | | Rural Major Collector |
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Figure 1

**Proposed Functional Classification Changes
Curry County, Oregon**

Roadway Design Standards

The County's current street design standards provide guidance for the development of rural county facilities, including those in the rural unincorporated communities (e.g., Langlois, Agness, Wedderburn, Carpenterville, and Harbor). However, the street design standards summarized in Technical Memorandum #3 (Update System Inventory) revealed that the County's standards do not specify a minimum width for paved shoulders; in turn, much of the County's rural roadway network lacks paved shoulders and many roadways are substandard. This may not appropriately serve the community in terms of motor vehicle safety or the needs of active transportation modes.

Several alternatives to update the County's current streets design standards were considered as described below.

- Update street design standards for County facilities in rural areas to include a minimum paved shoulder width for collectors and arterials.
- Update street design standards for County facilities within incorporated cities to include sidewalks on all streets, bike lanes on arterials and collectors, and the option to provide separation; otherwise, defer to the standards of the incorporated cities.
- Develop street design standards for County facilities in rural unincorporated communities that could include separate pedestrian and bicycle facilities.
- Develop street design standards for State facilities in unincorporated areas that could include shoulders in rural areas and separate pedestrian and bicycle facilities in the rural unincorporated communities.

Roadway Connectivity

Roadway connectivity can improve the overall operations and safety of a roadway network primarily by distributing traffic, but also by providing the community with alternative routes in case of emergencies (e.g., landslides, earthquakes, tsunamis, etc.). The street connectivity inventory summarized in Technical Memorandum #3 (Update System Inventory) showed that US 101 is the primary arterial through Curry County and that the county generally lacks major east-west roadway connections between US 101 and the State highway system to the east (e.g., Interstate 5). Additionally, while some County roadways or other State highways might be present as alternative north-south routes to US 101, their conditions today may not be conducive to serve as alternative routes.

A primary priority of the County is to improve the redundancy and resiliency of its system and this goal could be advanced through increasing roadway network connectivity. The potential functional classification changes described and illustrated in the previous section help to identify major routes throughout the county that could be improved for regular travel. As shown in Figure 2, routes that might be considered as the highest priority for improvements include:

- Elk River Road
- China Mountain Road
- Euchre Creek Road
- Cedar Valley Road
- Edson Creek Road
- N Bank Rogue River Road
- Jerry's Flat Road
- Agness Road
- Bear Camp Road
- Galice Creek Road
- Pistol River Loop
- Carpenterville Highway (OR 255)
- Cape Ferello Road



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- Roadway Connections
- City Limits
- UGB
- BLM Land
- USFS Land
- County Boundary
- State Line



Figure 2

**Roadway Connection Alternatives
Curry County, Oregon**



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- Roadway Connections
- City Limits
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Figure 2

**Roadway Connection Alternatives
Curry County, Oregon**



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- Roadway Connections
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Figure 2

**Roadway Connection Alternatives
Curry County, Oregon**

In order to improve the connectivity between some of these County roads, coordination might be required with the United State Forest Service and Bureau of Land Management (BLM) as they have jurisdiction over some of the roadways that would complete alternative routes. Coordination with neighboring counties might also be required, including Coos, Douglas, and Josephine, to transition improvements across county boundaries.

Pavement Preservation

The pavement conditions inventory summarized in Technical Memorandum #3 (Update System Inventory) showed that most County highways are in “Fair” condition or better, except for:

- Hensley Hill Road – this street in Port Orford has a “Poor” rating for its entire extent.
- Several small sections of roadway in Brookings, Gold Beach, and Port Orford that have “Poor” or “Very Poor” ratings.

In addition, most State highways are in fair condition or better except for the following sections that have a “Poor” or “Very Poor” condition:

- OR 251 for entire extents: Poor
- US 101 from MP 327.88 to MP 330.00 (Gold Beach): Poor
- OR 255 from MP 334.87 to MP 339.68: Very Poor
- US 101 from MP 356.18 to MP 357.87 (Brookings): Poor

The County is expected to continue maintaining pavement conditions along County roadways at fair or better conditions through 2042. There are several options available to the County to address future pavement preservation deficiencies:

- **Pothole repairs** fill holes that have developed along a roadway. There is no broader resurfacing of the roadway and no structural component besides filling in the pothole.
- **Chip seal** combines an asphalt and fine aggregate material layer to repair minor cracks in a roadway and provide a relatively even surface. The technique does not provide any structural strength.
- **Blade patching** applies an asphalt mix over the top of existing pavement with a motor grader or spreader box that spreads and compacts the asphalt.
- **Overlay** consists of layers of cement or asphalt over the existing pavement structure. This process provides structure and is typical in places with minor or modest damage on the existing pavement. The overlay should extend to the edge of pavement so as to not create an edge for bicycles.
- **Crack sealing** uses compressed air to blow/clean cracks in the road, and then a rubberized asphalt emulsion is squirted into the cracks.

ODOT is also expected to continue maintaining pavement conditions along its highways.

Intersection Operations

The intersection operations analysis summarized in Technical Memorandum #5 (Future Baseline No Build) showed that the County’s current transportation network is sufficient to support the forecast traffic volume growth through the year 2042 outside of the incorporated cities, including these study intersections identified for the TSP update:

- US 101 / Floras Creek Road
- US 101 / Sixes River Road
- US 101 / Cape Blanco Highway
- US 101 / Ophir Road
- US 101 / Edson Creek Road-Nesika Road
- US 101 / Pistol River Road
- US 101 / Cape Ferrelo Road
- US 101 / Winchuck River Road

All study intersections are expected to meet their volume-to-capacity (V/C) ratio targets under future year 2042 (no-build) traffic conditions and have adequate vehicle storage to serve the expected future traffic volume queues. Out of these study intersections, US 101 / Winchuck River Road-Ocean View Drive experiences the highest side-street delay. The County might consider monitoring this intersection for future operational needs should they arise.

Given that no operational deficiencies were identified for the County's transportation network in the rural areas, no intersection operations alternatives are presented in this memorandum for evaluation. However, County intersections within the incorporated cities might experience higher congestion and should also be monitored. Further, the traffic safety alternatives presented in the next section identify some key intersections for evaluation.

TRAFFIC SAFETY

Traffic safety plays an important role in determining appropriate solutions for the safety needs identified through previous analyses and public input, particularly in areas where real or perceived safety risks may prevent people from using more active travel modes (e.g., walking, biking, and taking transit). Real or perceived safety risks may reflect the crash history of an area or the physical and/or operational characteristics of the roadways (narrow travel lanes, winding curves, steep grades, high traffic volumes, high travel speeds, excessive heavy vehicles, etc.). Several methodologies have been developed to analyze and identify solutions for addressing traffic safety within an area; many are documented in the Highway Safety Manual (HSM) as well as several other resources developed by ODOT that address safety along roadway segments, at intersections, and for pedestrian and bicyclists.

The following sections summarize the alternatives for the County to consider implementing in its region to address traffic safety along roadway segments, at intersections, and/or for pedestrians and bicyclists. As demonstrated below and in other sections of this memorandum, many of the safety alternatives for roadway segments and intersections overlap with safety alternatives for pedestrians and bicyclists, illustrating that some alternatives address multiple traffic safety issues.

Roadway Segments

The crash analysis summarized in Technical Memorandum #4 (Current Transportation System Operations) identifies 44 roadway segments where the current crash rates exceed the rural highway crash rates of similar facilities across the state. Note that these segments vary in length depending on roadway characteristics and the presence of major intersections. Therefore, some segments are shorter (e.g., less than a quarter of a mile) and other segments are longer (e.g., up to five miles). It is also important to note that based on the reported crash data evaluated in the analysis (January 1, 2017 through December 31, 2021), many of these segments exhibited less than one crash per year, sometimes even only one crash over the five-year study period. As such, the roadway alternatives presented herein are primarily focused on roadway segments that exhibit more frequent crashes, out of the 44 segments, but could be applied to roadways across the County's system that have similar characteristics and crash types.

The crash data for roadway segments with more frequent crashes showed that a majority are considered "roadway departure" crashes. A roadway departure crash occurs after a vehicle crosses an edge line or a center line, or otherwise leaves the traveled way, such as head-on collisions, sideswipes, and run-off-the-road crashes. A variety of possible traffic safety alternatives can be applied along roadway segments to minimize roadway departure crashes. Additionally, the crash data also showed a few roadway segments with more unique crash characteristics

that could benefit from site-specific treatments. Last, through public outreach, there are other roadway segments in need of safety treatments that are also addressed below.

The following sections present systemic and site-specific treatments for the crash deficiencies identified on roadways with higher crash frequencies and the roadways where alternatives could be applied. The potential alternatives include Crash Reduction Factors (CRFs) that ODOT publishes in its CRF list, which help demonstrate the potential crash reduction of each alternative.

Roadway Departure Systemic Treatments

Over 75 percent of the crashes along State and County roadways with crash rates exceeding statewide averages are considered “roadway departure” crashes. ODOT’s CRF list provides numerous systemic treatments for roadway departure crashes, and many could be applied to State and County roadways. Potential alternatives are summarized in Table 2, including the crash types and severities they apply to, their service life, their appropriate context (e.g., rural, urban, or both), and their CRFs. It is possible that implementing more than one of these treatments along a roadway segment could show a greater reduction in crashes, unless treatments are relatively similar (e.g., rumble strips and wider edge line striping).

Table 2. Roadway Departure Systemic Treatments

Treatment	Crash Types	Crash Severities	Service Life	Area Type	CRF	CRF Range
Increase Distance to Rural Roadside Obstacle from 3 to 16 Feet	All	All	20 Years	Rural	22%	22-44%
Flatten Rural Side Slopes	All	All	20 Years	Rural	-	3-15%
Increase Pavement Friction by Installing High Friction Surface Treatment	Wet Road	All	10 Years	Rural or Urban	57%	20-68%
Provide Safety Edge for Rural Pavement Edge Drop-Off	All	All	10 Years	Rural	6%	5-15%
Install Required Chevron Signs on Rural Horizontal Curves (Ballbanking and Revised Speed Riders Included)	Run Off the Road	All Injury (Excludes PDO)	10 Years	Rural	16%	16%
Provide Static Combination Horizontal Alignment/Advisory Curve Warning Sign	All	All Injury (Excludes PDO)	10 Years	Rural or Urban	13%	13-29%
Install Raised or Recessed Pavement Markers	Night	All	10 Years	Rural or Urban	15%	15%
Install Edgeline Striping (Tangent and/or Curve)	Run Off the Road	All	10 Years	Rural	11%	11-13%
Install Centerline Rumble Strips	All	All Injury (Excludes PDO)	10 Years	Rural	12%	9-45%
	Head-On & Sideswipe				45%	45%
Install Shoulder Rumble Strips	Run Off the Road	All	10 Years	Rural or Urban	22%	16-42%
Widen Paved Shoulder by 3 Feet¹	All	All	20 Years	Rural or Urban	18%	6-18%
Upgrade Existing Markings to Wet-Reflective Pavement Markings	Wet Road	All	10 Years	Rural or Urban	14%	14%
Install Wider Edgelines (4 in to 6 in)	All	All	10 Years	Rural	14%	17%

¹ODOT provides other shoulder widening CRFs by 1 and 2 feet. However, many County roads do not include a paved shoulder so the alternative for consideration is the maximum widening to achieve a safer shoulder and move toward the cross section standards from the previous memo section.

Example images for some of these treatments are shown below.



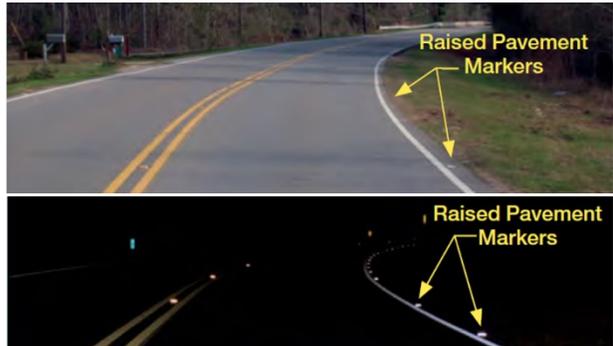
Safety Edge for Rural Pavement Edge Drop-Off
(Source: FHWA)



Chevron Signs on Rural Horizontal Curves
(Source: FHWA)



**Static Combination Horizontal Alignment/
Advisory Curve Warning Sign** (Source: FHWA)



Raised Pavement Markers (Source: FHWA)



Center Line Rumble Strips (Source: FHWA)



Shoulder Rumble Strips (Source: FHWA)



Widened Paved Shoulder (Source: FHWA)



Wider Edge Line Striping (Source: FHWA)

Many of these treatments could be applied to the following roadways in Curry County that have the greatest frequency of roadway departure crashes, depending on their current roadway characteristics. As indicated previously, these treatments could also be applied to other County roadways across the system that have less frequent roadway departure crashes but could still benefit from the improvements.

N Bank Chetco River Road

N Bank Chetco River Road is a two-lane major/minor collector in the southern region of Curry County that runs along the north bank of the Chetco River between US 101 in Brookings and its eastern terminus. While a few miles of this roadway are within the Brookings Urban Growth Boundary (UGB), it has a rural context for its extents. N Bank Chetco River Road has paved



shoulders up to one foot wide closer to the city and as little as no paved shoulders further east. This roadway serves between 300 and 2,800 vehicles per day. It experienced 27 crashes over the five-year study period, between Brookings city limits and mile point 8.5, with the greatest frequency taking place between Yellowbrick Road and mile point 8.5. Seventy-eight (78) percent of the 27 crashes were considered roadway departure crashes.

Jerry's Flat Road

Jerry's Flat Road is a two-lane minor arterial in the central region of Curry County that runs along the south bank of the Rogue River between US 101 in Gold Beach and Agness Road. While approximately half of this roadway is within the Gold Beach UGB, it has a rural context for its extents. Jerry's Flat Road has paved shoulders up to two feet wide closer to the city and as little as no paved shoulders further east. This roadway serves between 300 and 2,500 vehicles per



day. It experienced 15 crashes over the five-year study period, between Gold Beach city limits and Agness, with the greatest frequency between the Gold Beach UGB and Agness Road. Eighty-seven (87) percent of the 15 crashes were considered roadway departure crashes. As identified in previous sections of this memorandum, Jerry's Flat Road could support an alternative east-west route between US 101 and I-5. Potential safety treatments could benefit this purpose.

N Bank Rogue River Road

N Bank Rogue River Road is a two-lane major collector in the central region of Curry County that runs along the north bank of the Rogue River between US 101, in Gold Beach, and Lobster Creek Road. While approximately one mile of this roadway is within the Gold Beach UGB, it has a rural context and lacks paved shoulders. This roadway serves between 400 and 1,800 vehicles per



day. It experienced 16 crashes over the five-year study period, between Gold Beach city limits and Silver Creek Road, with the greatest frequency between Cedar Valley Road and Watson Lane. Sixty-nine (69) percent of the 16 crashes were considered roadway departure crashes. As identified in previous sections of this memorandum, N Bank Rogue River Road could also support an alternative north-south route to US 101. Potential safety treatments could benefit this purpose.

Cedar Valley Road

Cedar Valley Road is a rural two-lane major collector in the central region of Curry County that runs parallel to US 101 between N Bank Rogue River Road, outside of Gold Beach, and Ophir Road. This roadway lacks paved shoulders and serves between 100 and 500 vehicles per day. It also provides access to the Cedar Bend Golf Club. Cedar Valley Road experienced 5 crashes over the five-year study period and 100 percent of them were considered roadway departure crashes. As identified in previous sections of this memorandum, Cedar Valley Road could also support an alternative north-south route to US 101. Potential safety treatments could benefit this purpose.

Elk River Road

Elk River Road is a rural two-lane major/minor collector in the northern region of Curry County that runs southeast from US 101 north of Port Orford. This roadway has paved shoulders between half a foot and one foot wide and serves between approximately 100 and 600 vehicles per day. Elk River Road experienced 7 crashes over the five-year study period and 100 percent of them were considered roadway departure crashes. As identified in previous sections of this memorandum, Elk River Road could also support an alternative north-south route to US 101. Potential safety treatments could benefit this purpose.

US 101

The section of US 101 between Pacific Highland Drive and China Mountain Road is in the



northern region of Curry County, south of Port Orford, and is a two-lane rural other principal arterial. This stretch of highway has paved shoulders that are generally less than four feet wide in the northbound direction and generally range between four and six feet wide in the southbound direction. US 101 in this area traverses Humbug Mountain State Park through various curves and serves approximately 2,500 vehicles per day. This segment of US

101 experienced 37 crashes over the five-year study period and 78 percent of them were considered roadway departure crashes. ODOT identifies this area as a freight pinch point. Potential safety treatments could benefit freight and select alternatives could help mitigate the pinch point.

OR 255

OR 255 (Carpenterville Highway) is a rural two-lane major collector in the southern region of Curry County that runs parallel to US 101 between Brookings and Pistol River. This roadway lacks paved shoulders and serves between approximately 100 and 2,800 vehicles per day. OR 255 experienced 22 crashes over the five-year study period, outside of the Brookings UGB, and over 90 percent of them were considered roadway departure crashes. The highway segments that had the highest crash frequency include:

- Brookings UGB to Whaleshead Road
- Bosley Butte Road to Bull Gulch Road
- Mack Arch Road/US 101 to Pistol River Loop
- US 101 (south) to US 101 (north)

As identified in previous sections of this memorandum, OR 255 could also serve as an alternative north-south route to US 101. Potential safety treatments could benefit this purpose.

Agness-Illahe Road

Agness-Illahe Road is a rural two-lane minor collector in the central region of Curry County, east of Gold Beach, that runs along the west bank of the Rogue River between the communities of Agness and Illahe. This roadway lacks paved shoulders and center line striping and serves approximately 50 to 70 vehicles per day. The segment between Cougar Lane and Billings Road experienced three (3) crashes over the five-year study period and 100 percent of them were considered roadway departure crashes.

Pistol River Loop

Pistol River Loop is a rural two-lane major collector in the Pistol River area between Brookings and Gold Beach that runs parallel to US 101, connecting to the highway north and south of the Pistol River. This roadway lacks paved shoulders and serves under 200 vehicles per day. Although this roadway experienced only one (1) crash over the five-year study period that was considered a roadway departure crash, this facility could serve as a parallel route to US 101 and could benefit from safety improvements.

Other Systemic Treatments

Other crashes along the study roadway segments, particularly US 101, appear to be related to driveways and roadway pull-outs and could benefit from increased signage. Increased signage was also identified as a need by community members.

Site Specific Treatments

Of the 44 roadway segments with crash rates that exceed the rural-highway crash rates for similar facilities, two segments exhibited unique crash characteristics that may require site-specific safety treatments. Those segments and potential safety treatments are presented in the following sections. Furthermore, community members identified other specific sites of safety concern that are included below.

US 101

Two rural sections of US 101 exhibited a high proportion of animal crashes during the study period. These include:

- Cape Ferrelo Road to Martin Ranch Road
 - North of Brookings
 - Two to three lanes with primarily four- to six-foot paved shoulders
 - Serves approximately 3,800 vehicles per day
- Pacific Highland Drive/Reinhart Creek Frontage Road to China Mountain Road
 - South of Port Orford, through the Humbug Mountain State Park area
 - Two to three lanes with primarily four- to six-foot paved shoulders
 - Serves approximately 3,800 vehicles per day

In addition to the systemic roadway departure treatments presented previously in Table 2, these segments of US 101 could also benefit from the animal crash treatments summarized in Table 3.

Table 3. Animal Crash Treatments

Treatment	Crash Types	Crash Severities	Service Life	Area Type	CRF	CRF Range
Install Seasonal Wildlife Warning Signs	All	All	20 Years	Rural	26%	26%
Install Wildlife Detection System	Wildlife	All	20 Years	Rural	87%	87%

Further, these two sections of US 101 were identified by the community as exhibiting unsafe driving conditions during inclement weather:

- Pacific Highland Drive/Reinhart Creek Frontage Road to China Mountain Road
 - South of Port Orford, through the Humbug Mountain State Park area
 - Two to three lanes with primarily four- to six-foot paved shoulders
 - Serves approximately 3,800 vehicles per day
- Cape Sebastian Scenic Corridor
 - South of Gold Beach
 - Two to three lanes with paved shoulder widths varying between less than four feet to greater than six feet
 - Serves approximately 4,000 vehicles per day

In addition to the systemic roadway departure treatments presented previously in Table 2, such as the High Friction Surface Treatment, these segments of US 101 could also benefit from the countermeasures summarized in Table 4.

Table 4. Inclement Weather Treatments

Treatment	Crash Types	Crash Severities	Area Type	CRF	ADT Range
Install Variable Speed Limit Signs	All (Winter Only)	All Injury (Excludes PDO)	Rural	32%	3,672 to 4,255
Install Icy Curve Warning System	All	All	Rural	18%	2,850 to 2,950

Note that these countermeasures are provided by FHWA's Crash Modification Factors (CMF) Clearinghouse due to limited treatments in ODOT's CRF list. Furthermore, community members indicated that ODOT has used other measures in the Humbug Mountain State Park area to warn drivers of inclement weather that were perceived to be effective, including a warning light system. ODOT might consider evaluating and implementing these same treatments.

Further, the community has identified parking conflicts with US 101 that are created by visitors to Secret Beach (MPs 345.36 / 345.77), between Brookings and Pistol River. ODOT should monitor this area and evaluate measures to reduce conflicts between parked cars and the highway, such as restricting parking in the shoulder areas with signage and or barriers, limiting parking duration to encourage turnover, constructing additional parking space, etc.

Last, the community has identified the Samuel Boardman State Scenic Corridor through Boardman State Park as a significant concern. The increasing use of this area by visitors has increased conflicts between people attempting to cross the highway as well as parking on the highway shoulders, and the ingress/egress of the scenic view sites. The State Park is currently conducting participation surveys of these areas recognizing “overuse” without proper accommodations. This area would benefit from caution signage, parking, shoulder widening, etc.

Benham Lane

Benham Lane is an urban two-lane major collector within the Brookings UGB between US 101 and the Brookings harbor. This roadway has bike lanes and sidewalks and serves approximately



2,400 vehicles per day. While this road experienced five (5) crashes over the five-year period and three of them were intersection related in separate locations, two of them were single-vehicle road departure crashes that took place within the horizontal curve and grade between Ocean View Drive and Boat Basin Road. A curve warning and advisory sign is currently provided east of the horizontal curve, so the curve may benefit from the additional treatments summarized in Table 5.

Table 5. Urban Curve Crash Treatments

Treatment	Crash Types	Crash Severities	Service Life	Area Type	CRF	CRF Range
Increase Pavement Friction by Installing High Friction Surface Treatment	Run Off the Road	All	10 Years	Urban or Rural	72%	20-68%
Install Oversized, Doubled Up and/or Fluorescent Yellow Sheeting for Advance Curve Warning Signs	Run Off the Road	All	10 Years	Urban or Rural	20%	20%
Install Advance Curve Warning Flashers (Curve Warning Signs Exist)	Curve	All	10 Years	Urban or Rural	10%	10%
Install Post-Mounted Delineators	Curve Crashes at Night	All	10 Years	Urban or Rural	30%	0-30%

Intersections

The crash analysis summarized in Technical Memorandum #4 (Current Transportation System Operations) showed that no study intersection had an observed crash rate that exceeds the applicable 90th percentile crash rate or critical crash rate – but the US 101 Floras Creek Road intersection is approaching its critical crash rate threshold – and no intersection exhibited an excess proportion of any one crash type. However, the intersections presented in this section either contributed to some of the 44 roadway segments exceeding their crash rates for similar facilities or were identified by community members as needing safety improvements.

Shopping Center Avenue / Zimmerman Lane

Over the five-year study period, this intersection experienced three (3) angle crashes and two (2) turning movement crashes, contributing to Shopping Center Avenue exceeding its expected segment crash rate. This four-leg intersection is located within the Brookings UGB and is approximately 200 feet west of US 101. Zimmerman Lane and the Brookings Harbor Shopping Center driveway are stop-controlled, and Shopping Center Avenue has left-turn lanes on both approaches. Additionally, it appears from the data that most of the reported crashes are drivers entering the intersection from the Brookings Harbor Shopping Center driveway. This intersection may benefit from some of the safety treatments summarized in Table 6.

Table 6. Shopping Center Avenue / Zimmerman Lane Intersection Treatments

Treatment	Crash Types	Crash Severities	Service Life	Area Type	CRF	CRF Range
Right Turn Lane on Single Major Road Approach: Unsignalized Intersection (3- or 4-leg)	All	All	20 Years	Urban or Rural	14	14 - 26%
Right Turn Lane on Both Major Road Approaches: Unsignalized Intersection (3- or 4-leg)	All	All	20 Years	Urban or Rural	26	14 - 26%
Install Roundabout from Minor Road Stop Control	All	All Injury (Excludes PDO)	20 Years	Urban or Rural	82	19 - 82%
Convert to All-Way Stop Control (From Urban 2-Way or Yield Control)	Angle	All	10 Years	Urban	75	18 - 75%
Increase Triangle Sight Distance	All	All Injury (Excludes PDO)	10 Years	Urban or Rural	48	11 - 56%

US 101 / Nesika Road-Edson Creek Road

Over the five-year study period, this intersection experienced one (1) angle crash, one (1) rear-end crash, and one (1) turning movement crash. While these intersection crashes did not contribute to this segment of US 101 exceeding its expected crash rate, community members expressed concern about the behavior of drivers traveling through the intersection on US 101 behind drivers attempting to turn left onto Nesika Road or Edson Creek Road and the frequent near-misses they witness. They also referenced known fatal crashes that have occurred in the past, seemingly prior to the study period. This four-leg intersection is the southern access to the Nesika Beach community north of Gold Beach. Nesika Road and Edson Creek Road are stop-controlled. No turn lanes are provided at any of the intersection approaches today and the intersection is within a 55 mile-per-hour zone on US 101 and Nesika Road. This intersection may benefit from some of the safety treatments summarized in Table 7.

Table 7. US 101 / Nesika Road-Edson Creek Road Intersection Treatments

Treatment	Crash Types	Crash Severities	Service Life	Area Type	CRF	CRF Range
Right Turn Lane on Single Major Road Approach: Unsignalized Intersection (3- or 4-leg)	All	All	20 Years	Urban or Rural	14	14 - 26%
Right Turn Lane on Both Major Road Approaches: Unsignalized Intersection (3- or 4-leg)	All	All	20 Years	Urban or Rural	26	14 - 26%
Left Turn Lane on Single Major Road Approach: Rural, Unsignalized Intersection (3-leg)	All	All	20 Years	Rural	44	33 - 55%
Left Turn Lane on Both Major Road Approaches: Rural, Unsignalized Intersection (4-leg)	All	All	20 Years	Rural	48	47 - 58%
Reduce Intersection Skew Angle (Minor Street Stop-Controlled Intersections Only) on 4-Leg Intersection	All	All	20 Years	Rural	See ODOT CRF List for Details	N/A
Install Flashing Beacons as Advance Warning at Intersections	All	All	10 Years	Urban or Rural	13	10.2 - 13.3%
Increase Triangle Sight Distance	All	All Injury (Excludes PDO)	10 Years	Urban or Rural	48	11 - 56%
Improve Intersection Warning: Stop Ahead Pavement Markings, Stop Ahead Signs, Larger Signs, Additional Stop Signs and/or Other Intersection Warning or Regulatory Signs	All	All	10 Years	Urban or Rural	20% for 1-2 Treatments 25% for 3-4 Treatments 30% for 5-7 Treatments	11 - 55%
Increase retroreflectivity of Stop Signs (reflective strips on sign post optional)	Angle	All	10 Years	Urban or Rural	7	7%
Provide Flashing Beacons at Minor Road Stop Controlled Intersections	Angle	All	10 Years	Urban or Rural	13	5 - 58%
Provide Actuated Flashing Beacons Triggered by Approaching Vehicles at Unsignalized Intersections	All	All	10 Years	Urban or Rural	27	27
Provide "Stop Ahead" pavement markings	All	All	10 Years	Rural	31	31%

US 101 / Del-Cur Supply Co-Op Site Access

The Del-Cur Supply Co-Op located on the east side of US 101 directly south of State Line Road has direct access onto the highway. The lane configurations at the US 101 / State Line Road intersection require that southbound vehicles turning left at the Co-Op site access must yield to oncoming traffic within the southbound travel lane in a 55 miles-per-hour (MPH) speed zone on US 101; no southbound left-turn lane is available today. Through public outreach, community members have indicated that this configuration is problematic and unsafe, and that people will pull into the US 101 / State Line Road northbound left-turn lane against traffic to avoid waiting in the southbound travel lane and causing queues on the highway or experiencing unsafe passing on the right in the shoulder. One turning movement crash was reported at this location over the five-year study period that resulted in minor injuries.

A project has been identified at this location in a previous US 101 planning effort (2017 US 101 Corridor Plan: Chetco River Bridge to Oregon/California Border) that recommends converting the north Del-Cury Supply Co-Op site access on US 101 to right-in/right-out and improving the site access on Stateline Road. The plan also recommends that a center turn lane is constructed along US 101 from Stateline Road to the California border.

Additional Intersections

Other intersections in the County for which the community has identified safety concerns include the following:

- US 101 / Floras Lake Loop Road: concern for the four-lane section approaching the intersection.
- US 101 / Carpenterville Highway and South Mill Exit: concern for mill truck traffic and observed insufficient turning radii for trucks.
- US 101 / N Bank Rogue River Road-Old Coast Road: concern for poor sight lines along the highway; desire for tourist wayfinding regarding fishing in the mouth of the Rogue River.

The County's current (2005) TSP identifies several systemic projects for US 101 that could alleviate the community's concern for these locations. Such projects and additional improvements will be further evaluated through the TSP Update.

Pedestrian and Bicycle

The crash analysis summarized in Technical Memorandum #4 (Current Transportation System Operations) showed that a majority of pedestrian and bicyclist crashes that were reported in Curry County over the five-year study period were primarily centered around the Brookings urban area. Most crashes occurred on city streets or on US 101 in Brookings and the remaining crashes happened on US 101 in the rural areas between incorporated cities. No pedestrian or bicyclist crashes were reported on County roadways. The following pedestrian and bicycle crashes were reported on US 101 in the rural areas:

- Bicycle crash in the Humbug Mountain State Park area south of Port Orford that resulted in minor injuries.
- Bicycle crash near Meyers Creek Road in Pistol River that resulted in severe injuries.
- Bicycle crash near Whaleshead Road north of Brookings that resulted in a fatality.
- Bicycle crash near Seahorse Lane south of Brookings that resulted in minor injuries.
- Pedestrian crash near Itzen Road north of the California Border that resulted in a fatality.

As presented in later sections of this memorandum, the recent Oregon Coast Bike Route Plan makes general and specific recommendations for bicycle facilities along US 101, which could also benefit pedestrians in the rural areas of the corridor. These recommendations have the potential to improve bicycle and pedestrian safety along US 101 and given that they are included as part of an adopted plan, the Curry County TSP will incorporate the recommendations for planning consistency. In support of the more general recommendations for the rural areas, ODOT's CRF List includes crash reduction information associated with installing pedestrian and bicycle facilities, such as enhanced crossing treatments and on-street bike lane/shoulder striping in the rural areas, as summarized in Table 8.

Table 8. Rural Pedestrian and Bicycle Treatments

Treatment	Crash Types	Crash Severities	Service Life	Area Type	CRF	CRF Range
Install Pedestrian Refuge Island	Pedestrian	All	20	Urban or Rural	31	26 - 31%
Install Rectangular Rapid Flashing Beacon (2-Lane Road)	Pedestrian	All	20	Urban or Rural	10	10 - 56%
Install Advance Pedestrian or Bicycle Warning Signs	Pedestrian & Bicycle	All	10	Urban or Rural	5	5 - 15%
Install Bike Lanes	Bicycle	All	20	Urban or Rural	36	0 - 53%
Install Buffered Bike Lanes	Bicycle	All	20	Urban	47	N/A
Install Urban Green Bike Lanes at Conflict Points	Bicycle	All	10	Urban	39	39%
Install Dynamic Speed Feedback Sign for Curves	All	All	10	Rural	5	5%
Install Widen Paved Shoulder by 3 ft.	All	All	10	Urban or Rural	18	6 - 18%

BRIDGES, STRUCTURES, AND CULVERTS

The bridge inventory summarized in Technical Memorandum #3 (Update System Inventory) identified 25 bridges and structures in Curry County's transportation network with sufficiency ratings below 50, as shown in Table 9. A bridge or structure with a sufficiency rating below 50 indicates that the bridge is in poor condition and is eligible for replacement. From Technical Memorandum #5 (Future Baseline No Build), the County includes eight bridges from Table 9 in its six-year (2021-27) Capital Improvement Plan (CIP) to be repaired or replaced. Those bridges are highlighted below. Bridges and structures with sufficiency ratings below 50 that are not listed in the County's CIP should be considered for future repairs and/or replacement. ODOT and the County will continue to monitor the bridge and structure system in the study area.

Table 9. Bridges and Structures in Curry County with Sufficiency Ratings Below 50

Name	ID	Owner	Carries	Crosses	MP	Sufficiency Rating	Current CIP?
Arizona Beach	20962	State Park	Pedestrian Bridge	Myrtle Creek	0.00	Unknown	No
Brush Creek Trail (#2)	21516	State Park	Bike/ Pedestrian	Brush Creek	0.00	Unknown	No
Brush Creek Trail (#1)	21514	State Park	Bike/ Pedestrian	Creek	0.00	Unknown	No
Humbug Mt Trail Bridge	21518	State Park	Bike/ Pedestrian	Trail	0.00	Unknown	No
US 101 Sign Cantilever (SB)	22369	ODOT	Sign Cantilever	US 101	354.97	Unknown	No
US 101 Sign Cantilever (NB)	22373	ODOT	Sign Cantilever	US 101	355.27	Unknown	No
Humbug Day Use Area	19783	State Park	Park Rd	Brush Creek	307.02	Unknown	No
Humbug Mt. Pedestrian Bridge	21005	State Park	Park Rd	Brush Creek	0.00	Unknown	No
Brush Creek Trail Bridge No. 3 (South End)	21515	State Park	Bike/Pedestrian	Brush Creek	0.00	Unknown	No
Ped Brush Creek Humbug Mtn Park Trail	22713	State Park	Humbug Mtn Trail	Brush Creek	0.00	Unknown	No
North Floras Creek	15C26	County	Floras Creek Rd	Floras Creek (N Fork)	8.90	17.1	Yes
Euchre Creek	15C31	County	Ophir Rd (Co. Road 510)	Euchre Creek	0.10	22.9	Yes
Brush Creek	18096	ODOT	US 101	Brush Creek	306.35	29.8	No
Pistol River	15C33	County	Pistol River Loop Rd (Co. Rd 693)	Pistol River	0.30	30.1	Yes
Myrtle Creek	15C15	County	Arizona Ranch Rd (Co. Road 500)	Myrtle Creek	0.30	34.3	Yes
Rogue River	01172	ODOT	US 101	Rogue River	327.70	37.4	No
Hunter Creek	15C010	County	Hunter Creek Rd	Hunter Creek	0.20	37.7	Yes
Winchuck River	09091A	ODOT	US 101	Winchuck River	362.61	42.0	No
N Fork Chetco River	15C14	County	N Bank Chetco River Rd	N Fork Chetco River	5.30	43.1	Yes
Hunters Creek	15C24	County	Hunter Creek Rd	Hunters Creek	0.90	44.3	Yes
Willow Creek	15C12	County	Co. Road 136	Willow Creek (EB)	0.40	44.8	Yes
Floras Creek	09370	ODOT	US 101	Floras Creek	288.50	46.3	No
Elk River	00902C	ODOT	US 101	Elk River	297.37	46.4	No
Bear Trap Creek	02386A	ODOT	US 101	Bear Trap Creek	308.84	47.5	No
Morton Creek	00912	ODOT	US 101	Morton Creek	286.61	48.9	No

NON-MOTORIZED TRANSPORTATION NETWORK

From the inventory and analysis of current pedestrian and bicycle facilities summarized in Technical Memorandum #3 (Update System Inventory) and Technical Memorandum #4 (Current Transportation System Operations), the County's non-motorized transportation network generally lacks facilities for people to walk and bike. The following sections present a variety of pedestrian and bicycle facilities and potential alternatives for the County's consideration.

Pedestrian Facilities

Pedestrian facilities are the elements of the transportation system that enable people to walk safely and efficiently to retail centers, employment centers, and transit stops. They provide opportunities for people to maintain and improve their health while accessing daily needs or recreating. These include facilities for pedestrian movement along key roadways (e.g., shoulders, sidewalks, shared-use paths) and for safe roadway crossings (e.g., crosswalks, crossing beacons, pedestrian refuge islands). Each facility plays an important role in developing a comprehensive pedestrian system.

This section summarizes the alternatives considered for implementation in Curry County to address existing gaps and deficiencies in the pedestrian system. FHWA's Small Town and Rural Multimodal Networks document provided guidance on the pedestrian facilities in a rural context.

Shoulder Walkways

Shoulders on the edge of roadways in a rural context can be enhanced to serve as a functional space for pedestrians to travel in the absence of other facilities with more separation. While gravel shoulders can provide space for able-bodied pedestrians to travel, not all gravel shoulders are level enough for comfortable pedestrian movement. The County's current design standards identify 6-foot gravel shoulders on both sides of minor arterials, 4-foot gravel shoulders on both sides of major collectors, and 2-foot gravel shoulders on both sides of minor collectors, resource/industrial/commercial streets, and residential streets with 11+ dwelling units.



Paved Shoulder (Source: Rural Design Guide)



Pedestrian Lane (Source: Rural Design Guide)

Sidewalk

Sidewalks are the fundamental building blocks of the pedestrian system. They enable people to walk comfortably, conveniently, and safely from place to place. They provide an important means of mobility for people with disabilities, families with strollers, and others who may not be able to travel on an unimproved roadside surface. Sidewalks are usually six- to eight-feet wide and constructed from concrete. They are also frequently separated from the roadway by a curb, landscaping, and/or on-street parking. Sidewalks are widely used in urban areas. Ideally, sidewalks could be provided along both sides of the roadway in a more urbanized setting; however, some areas with physical or right-of-way constraints may require that sidewalk be located on only one side.

Shared-Use Path

Shared-use paths and trails are paved and unpaved facilities that serve pedestrians and bicyclists. Shared-use paths and trails can be constructed adjacent to and parallel to roadways where topography, right-of-way, or other issues do not allow for the construction of sidewalks and bike lanes (side path) or they may be constructed within their own right-of-way. A minimum width of 10 feet is recommended for low-pedestrian/bicycle-traffic contexts; 12 to 20 feet should

be considered in areas with moderate to high levels of bicycle and pedestrian traffic. Shared-use paths and trails can be used to create longer-distance links within and between communities and provide regional connections. Shared-use paths play an integral role in recreation, commuting, and accessibility due to their appeal to users of all ages and skill levels.



Shared-Use Path (Source: Rural Design Guide)



Side Path (Source: Rural Design Guide)

Enhanced Crossings

Enhanced pedestrian crossing facilities enable pedestrians to safely cross streets, railroad tracks, and other transportation facilities. Planning for appropriate pedestrian crossings requires the community to balance vehicular mobility needs with providing crossing locations along the desired routes of walkers. Enhanced pedestrian crossing treatments include:

- Curb extensions
- Raised median islands
- Crosswalk striping
- Crosswalk signs
- Flashing beacons
- Pedestrian signals
- Pedestrian countdown heads
- Leading pedestrian interval

Many of the treatments listed above can be applied together at one crossing location to further alert drivers of the presence of pedestrians in the roadway. Application of these treatments should consider roadway and area context.



Rectangular Rapid Flashing Beacons



Pedestrian Signal

Bicycle Facilities

Bicycle facilities are the elements of the transportation system that enable people to travel safely and efficiently by bicycle. Like pedestrian facilities, they play an important role in a community's health and recreational opportunities and allow people who don't own vehicles to safely travel to destinations. These include facilities along key roadways (e.g., shared lane pavement markings, on-street bike lanes, and separated bike facilities) and facilities at key crossing locations (e.g., enhanced bike crossings). These also include end of trip facilities (e.g.,

secure bike parking, changing rooms, and showers at worksites); however, these facilities are typically addressed through development code requirements. Each facility plays an important role in developing a comprehensive bicycle system.

This section summarizes the bicycle facilities considered for implementation in Curry County to address existing gaps and deficiencies and future needs in the bicycle system. FHWA's Small Town and Rural Multimodal Networks document provided guidance on the development of bicycle facilities in a rural context.

Yield Roadway

A yield roadway is designed to serve pedestrians, bicyclists, and motor vehicle traffic in the same slow-speed, rural travel area. When operating at very-low volumes – generally around 400 vehicles or fewer per day – and at low speeds (<25 mph), pedestrians and bicyclists are comfortable travelling within the travel area of the roadway. Yield roadways are designed with narrow roadway dimensions to prioritize local access and community livability.

Shared-Lane Pavement Markings and Signs

Shared lane pavement markings (often called "sharrows") are not a bicycle facility, but a tool designed to accommodate bicyclists on roadways where bike lanes are not possible or realistic to construct. Sharrows indicate a shared roadway space for cyclists and motorists and are typically centered in the roadway or approximately four feet from the edge of the travel lane and are recommended to be spaced approximately 50 to 250-feet apart dependent on the levels of traffic volumes. Sharrows are suitable on roadways with relatively low travel speeds (<25 MPH) and low ADT (<3,000 ADT).



Advisory Shoulder

Advisory shoulders create usable shoulders for bicyclists on a roadway that is otherwise too narrow to accommodate one. Roads with advisory shoulders accommodate low to moderate volumes of two-way motor vehicle traffic in rural conditions. The motor vehicle lane can only accommodate one vehicle at a time, so motorists may enter the shoulder to safely pass oncoming traffic. Motorists may only enter the shoulder when no bicyclists are present and must overtake these users with caution due to potential oncoming traffic.

Shoulder Bikeways

Shoulder bikeways are the portions of the paved roadway that fall outside of the vehicle travel lanes. Shoulder bikeways typically have no bicycle-specific signage or pavement markings and serve both bicyclists and pedestrians. Buffered shoulders are enhanced versions of conventional shoulders that include an additional striped buffer of typically 2-3 feet between the shoulder and the vehicle travel lane. They are typically located along streets that require a higher level of separation to improve the comfort of bicycling.



Advisory Shoulder (Source: Rural Design Guide)



Buffered Shoulder (Source: Rural Design Guide)

Bike Lanes

On-street bike lanes are striped lanes on the roadway dedicated for the exclusive use of cyclists. Bike lanes are typically placed at the outer edge of pavement (but to the inside of right-turn lanes and/or on-street parking – if adjacent to on-street parking there should be a buffer strip). Bicycle lanes can improve safety and security of cyclists and can provide direct connections between origins and destinations if there is a comprehensive network of bike lanes.

Separated Bike Lanes

There are two common types of separated bike lanes: buffered bike lanes and cycle tracks. Buffered bike lanes are enhanced versions of conventional on-street bike lanes that include an additional striped buffer of typically 2-3 feet between the bicycle lane and the vehicle travel lane and/or between the bicycle lane and the vehicle parking lane. They are typically located along streets that require a higher level of separation to improve the comfort of bicycling. Cycle tracks are bike lanes that are physically separated from motor vehicle travel lanes by a vertical element such as a planter, flexible post, parked car, or a mountable curb. One-way cycle tracks are typically found on each side of the street, like conventional bike lanes, while two-way cycle tracks are typically found on one side of the street.



Bike Lane



Buffered Bike Lane

Shared-Use Paths

See the “Shared-Use Path” solution in the Pedestrian Facilities section above.

Side Path

See the “Side Path” solution in the Pedestrian Facilities section above.

Enhanced Bicycle Crossings

Enhanced bicycle crossing facilities enable cyclists to safely cross streets, railroad tracks, and other transportation facilities. Planning for appropriate bicycle crossings requires the community

to balance vehicular mobility needs with providing crossing locations along the desired routes of cyclists. Enhanced bicycle crossings include:

- **Intersection crossing markings** – These markings indicate a direct path that a bicyclist should take across an intersection. These markings raise awareness and visibility for bicyclists while delineating space for bikes separate from motor vehicles.
- **Median refuge islands** – These features are placed in the center of a street to facilitate crossings at busy streets. Bicyclists only need to navigate across one direction of traffic at a time, and the refuge island provides a protected place to wait in the street before crossing the second direction of traffic.
- **Through bike lanes** – A right turn lane for vehicles creates a right hook conflict for bicyclists traveling straight, either on a shoulder or in a bike lane. Providing a through bike lane (also known as a keyhole bike lane and bicycle pocket) – placing bicycle infrastructure between the through and the right-turning motor vehicle lane – removes the turning conflict. The mixing zone where motor vehicles enter the right-turning lane should be well-signed and striped.
- **Combined bike lane/right turn lane** – Where space may be more constrained or where shoulders exist but no bicycle lanes, a combined bike lane/right turn lane may be an appropriate treatment to avoid right hook conflicts and crashes. A combined lane, with bike pavement markings, raises awareness of bicycles while providing space for bicyclists to safely move through an intersection.
- **Bicycle forward stop bar** – At two-way stop-controlled intersections where the bicycle is on the minor street approach, a bicycle forward stop bar can be placed in front of the motor vehicle stop bar. This treatment shortens crossing distances for bicyclists and improves visibility for bicyclists for traffic approaching from every direction. Placement of the stop bar should not lock pedestrian crossing locations. In urban environments, bike boxes could be another solution.



Skip Striping through Conflict Area



Combined Bike Lane/Right-turn Lane (Source: NACTO)

Pedestrian and Bicycle Alternatives

The results of the Bicycle Level of Traffic Stress (LTS) analysis and Pedestrian Qualitative Multimodal Assessment (QMA) were used to categorize all State highways and selected County roadways in unincorporated Curry County into five categories that reflect the types of bicycle and pedestrian facilities needed to accommodate the majority of users along the roadways. The bicycle LTS and pedestrian QMA analysis results revealed that there are roadways in Curry County with similar characteristics where overlapping alternatives could be appropriate.

Below, recommendations for rural unincorporated areas and urban areas are provided, with recommendations by volume category.

Rural Unincorporated Areas

Within rural unincorporated areas, low volumes, low density, and constrained right-of-way conditions generally lead to paved shoulders or shared roadways for people walking and biking.

Roadways with Under 400 ADT

The majority of county-owned rural roadway segments have a projected average daily traffic (ADT) below 400. Many of these roadways do not provide any sidewalk, bike lanes, or paved shoulders; however, low vehicular volumes make biking fairly comfortable on the road. While the pedestrian QMA analysis showed mostly “Poor” comfort levels, a two- to six-foot paved shoulder will provide comfortable facilities for people walking and biking.

The following alternatives were developed based on the bicycle LTS and pedestrian QMA analysis and will provide adequate facilities for most pedestrians and bicyclists:

- Where room is available, create a two- to six-foot paved shoulder for people walking and biking. Where infeasible, create a shared roadway for pedestrians, bicyclists, and motor vehicles.
- Install bicycle passing lanes on one side of the roadway on steep grades or tight turns where feasible.

Table 10 presents roadways and roadway segments within the rural and unincorporated areas of the county that have under 400 ADT and the facilities that would be required to improve future BLTS and/or pedestrian QMA.

Table 10. Rural Roadways with Under 400 ADT

Roadway	Extents	Alternatives	Change to BLTS	Change to Pedestrian QMA
County Roads				
Gardener Ridge Rd	N Bank Chetco River Rd to MP 17.0	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Pistol River Loop	Hwy 255 to Cape View Loop	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
N Bank Pistol River Rd	Pistol River Loop to MP 8	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Hunter Creek Rd	UGB to Eastern Terminus	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
NF-3680 (Hunter Creek Rd)	Hunter Creek Rd to Agness Rd	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Jerrys Flat Rd	UGB to Eastern Terminus	Add 4' to 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Agness Rd	Lobster Creek Rd to County Boundary	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹
Oak Flat Rd	Agness Rd to Campground Rd	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹
Galice Creek Rd	Agness Rd to County Boundary	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹
Lobster Creek Rd	N Bank Rogue River Rd to Agness Rd	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹

Roadway	Extents	Alternatives	Change to BLTS	Change to Pedestrian QMA
Nesika Beach Rd	Gun Club Rd to US 101	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹
Ophir Rd	US 101 Euchre Creek Rd	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Euchre Creek Rd	Ophir Rd to MP 3	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Elk River Rd	Wagner Ln to County Boundary	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Sixes River Rd	MP 2 to NF-4600	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Airport Rd	US 101 to the airport	Add 4' to 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Floras Lake Loop Rd	US 101 S to US 101 N	Add 2' to 4' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Floras Lake Rd	Floras Lake Loop Rd to lakes End Dr	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Floras Creek Rd	Allen Canyon Loop to S Fork Flores Creek Rd	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Langlois Mountain Rd	US 101 to Bethel Creek Rd	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹
Old County Rd	UGB to Eastern Terminus	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
S Bank Chefco River Rd	UGB to Eastern Terminus	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹
Rainbow Rock Rd	Aqua Vista Ln to Carpenterville Hwy	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹
Grizzly Mountain Rd	UGB to Eastern Terminus	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Old Coast Highway	Wedderburn Loop to US 101	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹
China Mountain Rd	UGB to US 101	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹
Grassy Knob Rd	US 101 to Eastern Terminus	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹
State Highways				
OR 255 (Carpenterville Hwy)	UGB to US 101 N	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹

¹While adding a paved shoulder does increase pedestrian QMA, it does not change the rating to Fair. The segment's high speeds (greater than 40 MPH), lack of lighting, and narrow lanes are other factors that contribute to the low QMA.

Roadways with 400 to 1,500 ADT

Several of the rural roadway segments with 400 to 1,500 ADT lack paved shoulders and/or have speeds exceeding 45 MPH. These roadways have fairly low bicycle LTS scores and pedestrian QMA ratings, but it is possible to create comfortable conditions (defined as bicycle LTS scores of 2 or better and pedestrian QMA ratings of fair or better) with wider shoulders.

The following alternatives were developed based on the bicycle LTS and pedestrian QMA analysis and will provide adequate facilities for most pedestrians and bicyclists.

- Install two- to six-foot shoulders on both sides of the roadway where feasible.
- Install shoulders on one side of the roadway on steep grades or tight turns.

Table 11 presents roadways and roadway segments within the rural and unincorporated areas of the county that have 400 to 1,500 ADT and the facilities that would be required to improve future BLTS and/or pedestrian QMA.

Table 11. Rural Roadways with 400 to 1,500 ADT

Roadway	Extents	Alternatives	Change to BLTS	Change to Pedestrian QMA
County Roads				
Winchuck River Rd	US 101 to MP 7	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Remains at Fair
Winchuck River Rd	MP 5 to Wheeler Creek Rd	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
Oceanview Dr	US 101 to Cedar Ln	Increase paved shoulder to 6'	Remains at BLTS 2	Increases from Poor to Fair
N Bank Chetco River Rd	UGB to Gardner Ridge Rd	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Remains at Poor ¹
N Bank Chetco River Rd	Gardner Ridge Rd to MP 17.5	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Remains at Poor ¹
Cape Ferrelo Rd	US 101 to Hwy 255	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
N Bank Rogue River Rd	MP 0.8 to Lobster Creek Rd	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
Cedar Valley Rd	N Bank Rogue River Rd to Ophir Rd	Add 4' to 5.5' paved shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
Edson Creek Rd	N Bank Rogue River Rd to US 101	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
Nesika Beach Rd	US 101 to Gun Club Rd	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Remains at Poor ¹
Elk River Rd	US 101 to Wagner Ln	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
Sixes River Rd	US 101 to MP 2	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
Floras Creek Rd	US 101 to Allen Canyon Loop	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
Pedrioli Dr	Ocean View Dr to US 101	Add 6' paved shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
State Highways				
OR 250 (Cape Blanco Hwy)	US 101 to Western Terminus	Add 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹

¹While adding a paved shoulder does increase pedestrian QMA, it does not change the rating to Fair. The segment's high speeds (greater than 40 MPH), lack of lighting, and narrow lanes are other factors that contribute to the low QMA.

Urban Areas

Within urban areas, buffered bicycle lanes and sidewalks are generally needed to provide comfortable facilities for people walking and biking.

Roadways with Under 400 ADT

There are a handful of County-owned roadway segments within urban areas that have less than 400 ADT. These facilities generally do not provide paved shoulders, sidewalks, or bike lanes, and have speeds ranging from 25 to 40 MPH. A two- to six-foot paved shoulder is needed to provide comfortable facilities for people walking and biking, as well as a buffered bike lane and/or a sidewalk at select segments.

The following alternatives were developed based on the bicycle LTS and pedestrian QMA analysis and will provide adequate facilities for most pedestrians and bicyclists:

- Where room is available, create a two- to six-foot paved shoulder for people walking and biking. Where infeasible, create shared a roadway for pedestrians, bicyclists, and motor vehicles.
- Install bicycle passing lanes on one side of the roadway on steep grades or tight turns where feasible.
- Install sidewalks and bike lanes on both sides of the roadway where feasible.

Table 12 presents County roadways and roadway segments within the urban areas that have less than 400 ADT and the facilities that would be required to improve future BLTS and/or pedestrian QMA.

Table 12. Urban Roadways with Under 400 ADT

Roadway	Extents	Alternatives	Change to BLTS	Change to Pedestrian QMA
W Hoffeldt Ln	South of Titus Ln to W Hoffeldt Ln	Add 6' bike lane and sidewalk ¹	Remains at BLTS 2	Increases from Poor to Fair
Old County Rd	Pacific Terrace Loop to UGB	Add 7' buffered shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
Parkview Dr	Vista Ridge Dr to Eastern Terminus	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Cemetery Loop Rd	US 101 to US 101	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Vista Dr	Gold Run Rd to Old Mill Rd	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair

¹Sidewalk recommended in the Curry County Transit Development Plan (TDP) to provide easier access to the Coastal Express bus stop at the McKay's Market in Harbor.

Roadways with 400 to 1,500 ADT

Most urban roadway segments with 400 to 1,500 ADT lack shoulders and sidewalks on the roadway. These roadways generally have bicycle LTS scores of 3 or higher and poor pedestrian QMA ratings, but it is possible to create comfortable conditions with wider shoulders and bike lanes. The following alternatives were developed based on the bicycle LTS and pedestrian QMA analysis and will provide adequate facilities for most pedestrians and bicyclists.

- Do nothing – applies to roadways with sufficient shoulder width to accommodate bicycles and pedestrians per the Bicycle LTS and Pedestrian QMA analysis.
- Install two- to six-foot shoulders on both sides of the roadway where feasible.
- Install shoulders on one side of the roadway on steep grades or tight turns.

Table 13 presents the roadways and roadway segments within the urban areas of the county that have 400 to 1,500 ADT and the facilities that would be required to improve future BLTS and/or pedestrian QMA.

Table 13. Urban Roadways with 400 to 1,500 ADT

Roadway	Extents	Alternatives	Change to BLTS	Change to Pedestrian QMA
Jerry's Flat Rd	MP 79 to UGB	Add 7' buffered shoulder	Decreases from BLTS 4 to BLTS 3 ¹	Increases from Poor to Fair
Pedrioli Dr	Western Terminus to Ocean View Dr	Add 2' to 4' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
Rainbow Rock Rd	Carpenterville Hwy to Aqua Vista Ln	Add 7' buffered shoulder	Decreases from BLTS 4 to BLTS 3 ¹	Remains at Poor ²
Wedderburn Loop	US 101 to Doyle Point Rd	No change (maintain 4' to 6' paved shoulder)	Remains at BLTS 2	Remains at Fair
Wedderburn Loop	Doyle Point Rd to Old Coast Hwy	Add 4' to 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair

¹A BLTS of 2 is not possible on a road with speeds greater than 40 MPH in urban segments with no parking. Therefore, as some segments of this roadway have speed limits greater than 40 MPH, a speed limit of 35 MPH across the roadway would be needed to reduce BLTS further.

²While adding a paved shoulder does increase pedestrian QMA, it does not change the rating to Fair. The segment's high speeds (greater than 40 MPH), lack of lighting, and narrow lanes are other factors that contribute to the low QMA.

Roadways with 1,500 to 3,000 ADT

Roadways with 1,500 to 3,000 VPD through urban areas vary in speed (25 to 55 MPH) and in the provision of paved shoulders and bicycle lanes. These roadways currently have a high bicycle level of traffic stress due to the combination of high volumes and lack of dedicated bicycle facilities. The following alternatives were developed based on the bicycle LTS and pedestrian QMA analysis and will provide adequate facilities for most pedestrians and bicyclists.

- Install a 7-foot buffered shoulder on both sides of the roadway where feasible.
- Install sidewalks and bike lanes on both sides of the roadway where feasible.

Table 14 presents the roadways and roadway segments within the urban areas of the county that have 1,500 to 3,000 ADT and the facilities that would be required to improve future BLTS and/or pedestrian QMA.

Table 14. Urban Roadways with 1,500 to 3,000 ADT

Roadway	Extents	Alternatives	Change to BLTS	Change to Pedestrian QMA
Oceanview Dr	Cedar Ln to Olsen Ln	Add 7' buffered shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
Oceanview Dr	Olsen Ln to Benham Ln	Add 7' buffered shoulder	Decreases from BLTS 3 to BLTS 2	Increases from Poor to Fair
S Bank Chetco River Rd	Harbor View Cir to UGB	Add 7' buffered shoulder	Remains at BLTS 3 ¹	Increases from Poor to Fair
N Bank Chetco River Rd	MP 1 to UGB	Add 7' buffered shoulder	Remains at BLTS 3 ¹	Increases from Poor to Fair
Hunter Creek Rd	US 101 to UGB	Add 7' buffered shoulder	Decreases from BLTS 4 to BLTS 3 ¹	Increases from Poor to Fair
Jerrys Flat Rd	US 101 to MP 79	Add 7' buffered shoulder	Decreases from BLTS 3 to BLTS 2	Remains at Fair
N Bank Rogue River Rd	US 101 to MP 0.5	Add 7' buffered shoulder	Decreases from BLTS 3 to BLTS 1	Increases from Poor to Fair
N Bank Rogue River Rd	MP 0.5 to MP 0.8	Add 7' buffered shoulder	Decreases from BLTS 4 to BLTS 3 ¹	Increases from Poor to Fair
W Hoffeldt Ln	W Hoffeldt Ln to US 101	Add 6' bike lane and 6' sidewalk ²	Decreases from BLTS 3 to BLTS 2	N/A

¹Reducing to BLTS 2 would require a reduction of speeds to 35 MPH.

²Sidewalk recommended in the Curry County Transit Development Plan (TDP) to provide easier access to the Coastal Express bus stop at the McKay's Market in Harbor.

Roadways with greater than 3,000 ADT

There are only a few segments of roadway with greater than 3,000 VPD in the county; most already provide an existing sidewalk and/or bike lane. These roadways currently have a lower bicycle level of traffic stress due to the existing facilities, however, increasing the bike lane width can further lower the bicycle level of traffic stress. All roadways currently have a Fair pedestrian QMA score.

Table 15 presents the roadways and roadway segments within the urban areas of the county that have greater than 3,000 ADT and the facilities that would be required to improve future BLTS and/or pedestrian QMA.

Table 15. Urban Roadways with Greater Than 3,000 ADT

Roadway	Extents	Alternatives	Change to BLTS	Change to Pedestrian QMA
Benham Ln	Oceanview Dr to US 101	Keep existing bike lane and sidewalk	Remains at BLTS 2	Remains at Fair
S Bank Chetco River Rd	US 101 to Harbor View Cir	Keep existing sidewalk and add 7' buffered bike lane	Decreases from BLTS 3 to BLTS 2	Remains at Fair
Lower Harbor Rd	Benham Ln to US 101	Keep existing bike lane and add 6' sidewalks ¹ or add a shared-use path	Remains at BLTS 2	Remains at Fair
Shopping Center Ave	W Hoffeldt Ln to Lower Harbor Rd	Increase existing bike lane to a 7' buffered bike lane or add a shared-use path	Decreases from BLTS 3 to BLTS 2	Remains at Fair

¹Sidewalks included in the Curry County Capital Improvement Plan (CIP).

US 101

US 101 is rated as a BLTS 2 throughout Curry County. However, it has a number of segments with a “Poor” pedestrian QMA. The Oregon Coast Bike Route Plan (adopted in 2022) outlines recommendations for bicycle facilities along US 101. General recommendations for urban areas include:

- Road reconfigurations (reallocating roadway lane spacing) to provide room for pedestrian and bicycle facilities;
- Building off-road, shared use paths; and
- Providing alternate routes for segments of US 101 that do not have enough space for comfortable bicycle facilities.

General recommendations for rural areas include:

- Roadway widening to expand shoulder or add bike lanes;
- Rest area pullouts to provide places for people biking to stop and rest; and
- Improved and consistent signage to provide warning signs for all road users and adding flashing beacons.

Within Curry County, specific recommendations include the following:

- **Gold Beach** – Reconfigure the road space on US 101 through Gold Beach to allow six-foot wide bike lanes.
- **Thomas Creek Bridge** – Provide signs leading to bridge that remind people to share the road with people biking; provide flashing beacon lights to indicate when people are biking on the bridge; consider advisory speed signs.
- **Brookings** – Reconfigure roadway space to make space for people biking. Reroute the Oregon Coast Bike Route off US 101 to use Railroad Street between Pacific Avenue and Oak Street.
- **Winchuck River Bridge** – Provide signs leading to bridge that remind people to share the road with people biking; provide flashing beacon lights to indicate when people are biking on the bridge; consider advisory speed signs.

Specific segment recommendations to address pedestrian comfort are outlined in Table 16. Only segments with a pedestrian QMA of “Poor” are included.

Table 16. US 101 Recommendations

Segment of US 101	Recommendation	Change to BLTS	Change to Pedestrian QMA
Longacre Lp to House Rock Rd	Increase paved shoulder to 6'	Remains at BLTS 2	Increases from Poor to Fair
House Rock Rd to Cape Ferrelo Rd	Increase paved shoulder to 6'	Remains at BLTS 2	Remains at Poor ¹
Cape Ferrelo Rd to McDonald Rd	Increase paved shoulder to 6'	Remains at BLTS 2	Increases from Poor to Fair
1.5 mi N of Wilderness Rd to OR 255	Increase paved shoulder to 6'	Remains at BLTS 2	Increases from Poor to Fair
OR 255 to Birdies Ln	Keep 6' paved shoulder	Remains at BLTS 2	Remains at Poor ¹
N of Meyers Creek to Herman Ln	Increase paved shoulder to 6'	Remains at BLTS 2	Increases from Poor to Fair
Bellview Ln to Kissing Rock Rd	Increase paved shoulder to 6'	Remains at BLTS 2	Increases from Poor to Fair
Ophir Rd to 1 mi S of Humbug State Park	Increase paved shoulder to 6'	Remains at BLTS 2	Increases from Poor to Fair
1 mi S of Humbug State Park to N of Humbug Mt Front Rd	Add 6' paved shoulder	Remains at BLTS 2	Increases from Poor to Fair
N of Humbug Mt Front Rd to 0.5 mi NW of Humbug State Park	Increase paved shoulder to 6'	Remains at BLTS 2	Remains at Poor ¹
0.5 mi NW of Humbug State Park to Rocky Point Bridge	Increase paved shoulder to 6'	Remains at BLTS 2	Increases from Poor to Fair
Fir Rd to N Cemetery Loop Rd	Increase paved shoulder to 6'	Remains at BLTS 2	Increases from Poor to Fair
Sixes River Rd to S Floras Lake Loop Rd	Increase paved shoulder to 6'	Remains at BLTS 2	Increases from Poor to Fair
S Floras Lake Loop Rd to Langlois Mountain Rd	Keep existing paved shoulder; add sidewalk ²	Remains at BLTS 2	Remains at Fair
Langlois Mountain Rd to County Boundary	Increase paved shoulder to 6'	Remains at BLTS 2	Increases from Poor to Fair

¹While adding a paved shoulder does increase pedestrian QMA, it does not change the rating to Fair. The segment's high speeds (greater than 40 MPH), lack of lighting, and narrow lanes contribute to the low QMA.

²Sidewalk provided as per the Curry County Transit Development Plan (TDP) to provide easier access to the Coastal Express bus stop at the Langlois Public Library and Langlois Store.

PUBLIC TRANSIT NETWORK

Public transit can provide important connections to destinations for people that do not drive or bike and can provide an additional option for all transportation system users for certain trips. Public transit also links to walking, bicycling, or motor vehicle trips: users can walk to and from transit stops and their homes, shopping or workplaces, people can drive to park-and-ride locations to access a bus, or people can bring their bikes on transit vehicles and bicycle from a transit stop to their final destination.

Transit service in the County is led by Curry Public Transit, the regional transit agency serving Curry County. While not directly responsible for transit service, the County is the land use

authority in rural and unincorporated areas and fixed-route service is dependent on having the land use and densities that can support service. The County can plan for transit supportive land use patterns and support future transit viability by designing and building streets that will comfortably accommodate transit stops and include the right-of-way that could allow for transit stops to be located as close as possible to important destinations. The County can also require transit-related improvements through the development approval process, consistent with recommendations in the TSP and in coordination with the transit agency. At a minimum, a transit stop should be well-signed and have a comfortable space to wait. Benches and shelters that protect transit riders from the weather can improve user comfort and secure bicycle parking near bus stops can provide transit riders with the option to leave their bicycle at one trip-end instead of bringing it on the bus.

The Curry County Transit Development Plan (TDP) outlined key service and capital recommendations in the short-, medium-, and long-term. A summary of the service recommendations is provided in Table 17. Key recommendations that could help improve the Transit Qualitative Multimodal Assessment (QMA), organized by criteria, are presented below.

Frequency and On-Time Reliability

The TDP calls for increasing the service hours of Coastal Express and Dial-A-Ride in the medium-term by adding an additional morning northbound trip and an additional northbound and southbound afternoon trip. This will increase frequency by one to two trips per day. While the rating would still be “Poor” as the headways will still be greater than one hour, transit service will be improved.

Schedule Speed & Travel Time

The TDP recommends increasing coordination between the Coastal Express and Dial-A-Ride services to minimize waiting time for those transferring between the services. In addition, coordination between CPT and other providers in the area is recommended to facilitate easy transfers to northern California, Coos County and beyond. These recommendations will decrease travel time for trips made using multiple transit services.

In addition, the service plan details a number of recommendations that will add service in Curry County, which will allow for new trips. Adding new service will expand access to transit for Curry County residents and help facilitate trips by transit for those who are unable to drive, bike, or walk. These recommendations include adding a Brookings Circulator in the short-term and a Gold Beach circulator in the long term; expanding Dial-A-Ride to Port Orford in the short-term; adding service to Crescent City in the short-term; formalizing a Langlois Public Library stop in the short-term; and adding a Coastal Express stop at the Southwestern Oregon Community College in the long-term.

Table 17. CPT Service Recommendations

Timeline	Recommendation	Description	Notes
Short-Term (2025)	Port Orford Dial-A-Ride	New Dial-A-Ride service in Port Orford (9 hours/day)	N/A
	Coordination of Dial-A-Ride with Coastal Express	Coordinate Dial-A-Ride services with Coastal Express arrivals in Brookings, Gold Beach, and Port Orford	This recommendation would not incur additional costs; connections to/from the Coastal Express would be prioritized at certain times of the day
	Inter-County Service Coordination	Coordinate with other providers to improve efficiency by reducing transfer times and distances, while coordination with cities and Coos County can improve rider access to bus stops.	Coordination is part of normal administrative costs. However, if schedule changes are needed to improve coordination that require increasing service hours, costs would increase.
	Langlois Library Stop	Make the Langlois Public Library, which is currently a flag stop, a formal stop on the Coastal Express route. A flag stop is a location where riders can 'flag' down a bus, although there is no formal stop	-Provide CPT bus stop sign -Install bus stop shelter -Provide trash cans near the stop -Provide at least one bike rack
	Staff Capacity and Transition	Increase the number of staff employed by CPT, including bus operators and administrative staff. Develop a transition plan for the current manager of CPT.	Fill vacant positions that are already budgeted; staff costs for new or expanded service are part of the operating cost assumption for those services.
	Marketing & Advertising	Improve marketing and advertising by providing maps and/or brochures	Uses existing marketing budget
	Service to Crescent City	Coordinate with RCTA to provide service	Uses existing administration budget
Mid-Term (2030)	Brookings Circulator	A local route that would serve the commercial and residential land uses in Brookings and Harbor (13 hours/day).	N/A
	Increased Service Hours of Coastal Express and Dial-A-Ride	Adding an additional run (morning) to the Coastal Express will help to increase frequency and meet unmet needs. Providing more services increases the number of trip types that transit can serve and helps address identified local and regional transit gaps.	N/A
	Bus Stop Improvements including Weather-Resistant Bus Shelters	Improve shelters at stops in Curry County (Port Orford, Gold Beach, Brookings, and both stops in Harbor).	N/A
	Marketing & Advertising	Continue marketing activities.	Uses existing marketing budget
Long-Term (2035)	Gold Beach Circulator	A local route that would serve the commercial and residential land uses within Gold Beach (13 hours/day) and/or provide additional service between Gold Beach and Brookings/Harbor between Coastal Express trips.	N/A
	Add Stop at Southwestern Oregon Community College (SWOCC)	Provide services to SWOCC by adding a transit stop at or near the campus.	Topographic constraints make it difficult to provide pullouts and shelters on US 101; campus access road and parking lot configuration make it difficult to provide an on-campus stop.
	Marketing & Advertising	Continue to improve marketing and advertising in the long run.	Uses existing marketing budget

Transit Stop Amenities and Connecting to Pedestrian & Bicycle Network

The TDP’s capital plan calls for the following facility improvements:

- Continued coordination with Coos County Area Transit (CCAT) on a mobility hub at the VA Clinic/Safeway stop in North Bend. While this hub will be located in Coos County, it will facilitate trips into and out of Curry County and connections to services beyond CPT.
- Replacing existing shelters with weather-resistant shelters in the medium-term, as well as adding weather-resistant shelters to stops with no existing shelters where budget and space allows.
- Providing a number of bus stop improvement recommendations, including bike lane and sidewalk connectivity. Table 18 outlines the bus stop improvements within the County; all are within UGBs except for the Langlois stops.

Table 18. CPT Bus Stop Recommendations

Stop	Short-term Improvements	Medium- and Long- term Improvements
Langlois Public Library	-Provide CPT bus stop sign to indicate bus stop location -Install bus stop shelter -Provide trash cans near the stop -Provide at least one bike rack	-Provide sidewalks and bike lanes along US-101 and Waller Lane to provide easy access to the stop for pedestrians and bicyclists -Install street lighting at the bus stop
Langlois Store	-Install bench/waiting area -Provide trash cans near the stop -Provide at least one bike rack	-Provide sidewalks and bike lanes (northbound) along US-101 to provide easy access to the stop for pedestrians and bicyclists -Install street lighting at the bus stop
Ray’s Food Place, Port Orford	-Provide CPT bus stop sign to indicate bus stop location -Provide at least one bike rack at the bus stop	-Provide sidewalks and bike lanes along 15th Street to improve pedestrian and bicycle connectivity -Improve ADA ramps condition -Provide crossing opportunities across US-101
Ray’s Food Place, Gold Beach	-Provide trash cans near the stop -Provide at least one bike rack	-Provide bike lanes along US-101, 6th Street and nearby streets to improve bicycle connectivity to the stop -Improve ADA ramps conditions
5th Street/Bankus Park, Brookings	-Provide trash cans in parking lot near the stop -Provide at least one bike rack	-Provide bike lanes along 5th Street to provide access to bicyclist to the bus stop -Install street lighting at the bus stop
Chevron Station, Harbor	-Provide CPT bus stop sign to indicate bus stop location -Install bus stop shelter with benches if ridership warrants -Provide trash cans near the stop -Provide at least one bike rack	-Provide bike lanes along Hoffeldt Lane and Zimmerman Lane to improve bicycle connectivity -Improve sidewalk connectivity along Hoffeldt Lane and Zimmerman Lane
McKay’s Market, Harbor	-Provide CPT bus stop sign to indicate bus stop location -Install bus stop shelter with benches if warranted -Provide trash cans near the stop -Provide at least one bike rack	-Provide bike lanes along Hoffeldt Lane and Zimmerman Lane to improve bicycle connectivity -Improve sidewalk connectivity along Hoffeldt Lane and Zimmerman Lane -Improve ADA ramps condition
Rancheria, Smith River	-Provide CPT bus stop sign to indicate bus stop location -Coordinate with Redwood Coast Transit and the Tolowa Tribe on need for a bus stop shelter -Provide at least one bike rack	-Provide bike lanes along N Indian Road -Improve ADA ramps condition -Provide crossing opportunities across US-101

EVALUATION MATRIX

An evaluation matrix was developed to assist in the selection of a preferred alternative for each transportation deficiency. The matrix includes several criteria that reflect the TSP goals and objectives identified in Technical Memorandum #1 (Goals and Objectives, and Evaluation Criteria), as well as discussions with County and ODOT staff. The criteria include mobility, cost, safety, land use, and environmental impacts. Each criterion falls within one or more of the TSP goals. The criteria are designed to be qualitative and used to provide a quick comparison of the alternatives to select the one that best fits with the goals and objectives of the plan. Table 19 presents the alternatives evaluation criteria.

Table 19. Alternatives Evaluation Matrix

Objective	Evaluation Criteria	
Mobility		
Motor Vehicle	Will the project help relieve congestion or reduce v/c?	Yes / Unknown/ No
Freight	Will the project improve freight movement or intermodal connectivity?	Yes / Unknown/ No
Ped/Bike	Does the project help encourage active transportation (walk, bike, transit)?	Yes / Unknown/ No
Cost		
Cost Estimate	What is the Rough Order of Magnitude (ROM) cost estimate?	High / Med / Low
Existing Funding	Is there currently funding available to complete this project?	Yes / Unknown/ No
Potential Funding	Is it likely that the project will leverage alternate funding?	Yes / Unknown/ No
Safety		
Identified Need	Will the project address an existing safety issue?	Yes / Unknown/ No
Crash Reduction	Does the project have a Crash Modification Factor (CMF) of < 1.0?	Yes / Unknown/ No
Safety Conflicts	Does the project reduce conflict points between modes?	Yes / Unknown/ No
Land Use		
Economic Development	Does this project provide/improve access to an area identified for future growth?	Yes / Unknown/ No
Consistency	Is the project consistent with the comprehensive land use plan?	Yes / Unknown/ No
Compliance	Is the project supportive of County and/or State land use goals?	Yes / Unknown/ No
Environmental Impacts		
Environmental Impact	Will the project impact an environmentally sensitive area?	Yes / Unknown/ No
Neighborhood Impact	Will the project impact an area with high concentrations of Title VI or Environmental Justice (EJ) populations?	Yes / Unknown/ No
Mode Choice	Will the project improve mode choice in an area with high concentrations of Title VI or Environmental Justice (EJ) populations?	Yes / Unknown/ No