BENTON COUNTY
TRANSPORTATION SAFETY ACTION PLAN

DRAFT

DATE: September 22, 2025

TO: Project Team

FROM: John Bosket, PE; Christian Galiza, EI | DKS Associates

SUBJECT: Benton County Transportation Safety Action Plan
Multimodal Corridor Solutions

Project #25003-000

This memorandum documents recommended projects and strategies to improve safety for people biking along select "multimodal corridors" in north and south Benton County. These recommendations are intended to complement the High Priority Projects also included as part of the Transportation Safety Action Plan (TSAP).

INTRODUCTION

During the 2019 update to Benton County's Transportation System Plan (TSP), it was acknowledged that further study was needed to identify solutions for mitigating conflicts between freight traffic and vulnerable users, specifically people walking and biking, on key corridors. The corridors of interest, shown in Figure 1, include Independence Highway and Springhill Drive in the northern end of the county and Bellfountain Road and Fern Road towards the south.

This issue and potential solutions to improve safety are being explored as part of this TSAP.

CORRIDOR CONDITIONS

For the multimodal corridors of interest, the project team analyzed transportation-related data (e.g., traffic volumes, speeds, crash data) and conducted interviews with affected parties to better understand how these corridors are being used, the safety hazards experienced, and the types of solutions that should be considered. Key findings are summarized below.

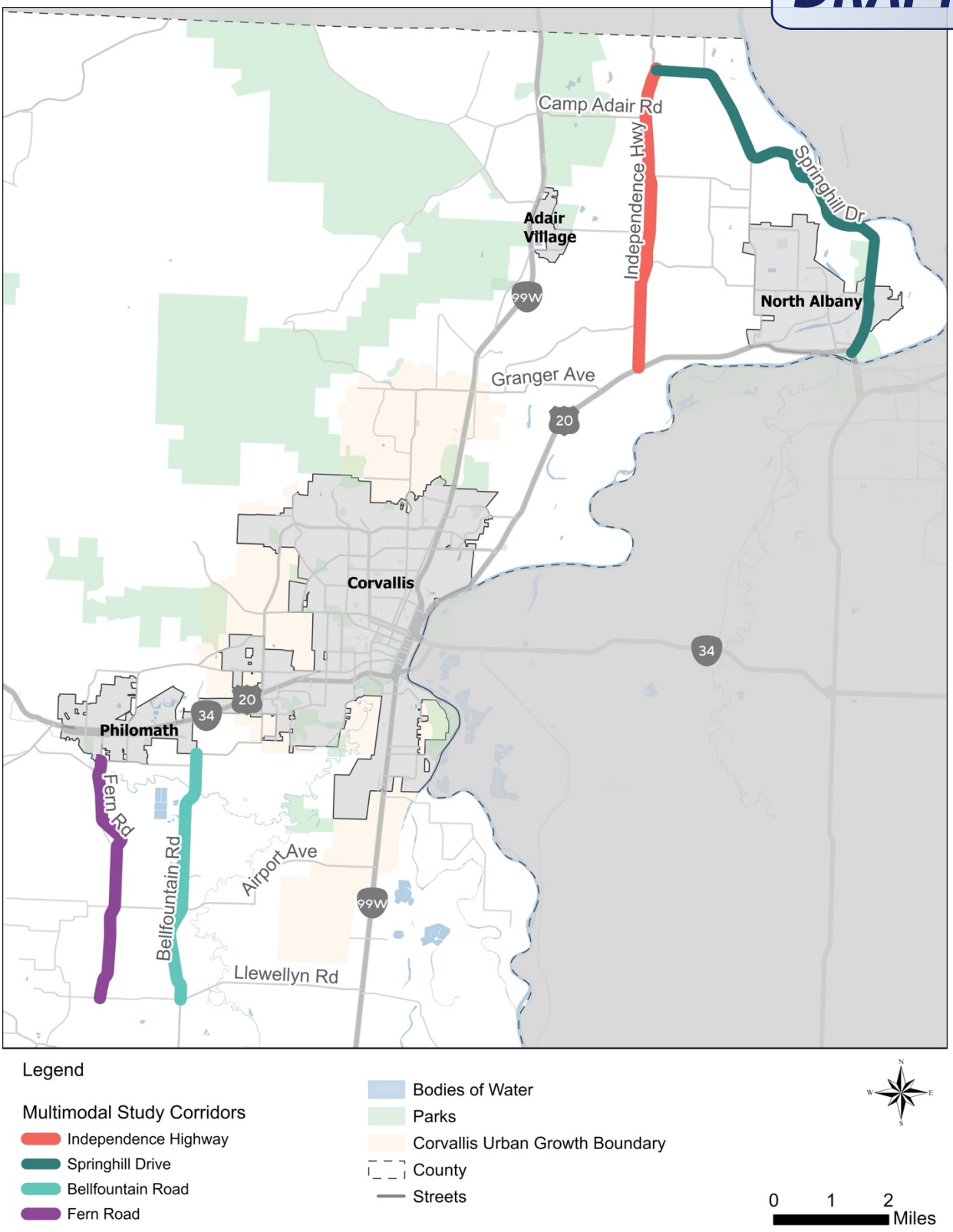

FIGURE 1. MULTIMODAL CORRIDORS OF INTEREST

Independence Highway is classified by Benton County as a minor arterial and is governed by Basic Rule.[1] Within the county, it is a nearly six-mile long, two-lane road with mostly narrow shoulders (shoulders have been widened from Metge Avenue to Ryals Avenue). It provides a parallel alternative to OR 99W west of the Willamette River, connecting US 20 and OR 22 and providing access to cities such as Adair Village and Independence, as well as to the Coffin Butte Landfill which is a major destination for truck traffic. A summary of traffic volumes, observed speeds, and crash characteristics is provided in Table 1.

TABLE 1. INDEPENDENCE HIGHWAY USAGE CHARACTERISTICS

TRAFFIC VOLUMES	3,500 - 4,000 vehicles per day
TRUCK VOLUMES	900 trucks per day*
SPEED (85TH PERCENTILE)	63 mph
CRASH HISTORY (2018-2022)	○ 34 crashes (5 resulting in serious injury) ○ 21 crashes involved a vehicle leaving the roadway ○ 8 crashes were speed-related ○ 3 crashes involved a truck

Note: speed and volume data collected in December 2024

* Travel on Independence Highway by Knife River rock trucks was greater than normal when the counts were obtained.

Springhill Drive is classified by Benton County as a major collector and has a posted speed of 55 mph. The rural segment from the North Albany city limits to Independence Highway is approximately six miles long and has two lanes with narrow shoulders and several horizontal curves. Unlike Independence Highway, which provides regional connectivity, Springhill Drive primarily serves the area north of Albany, though it has been used at times as an alternate route to Independence Highway. A summary of traffic volumes, observed speeds, and crash characteristics is provided in Table 2.

[1] Travel on all public streets and highways in Oregon is subject to the "basic speed rule" as described under ORS 811.100. The basic speed rule states that a motorist must drive at a speed that is reasonable and prudent at all times.

TABLE 2. SPRINGHILL DRIVE USAGE CHARACTERISTICS

TRAFFIC VOLUMES	3,000 - 3,500 vehicles per day
TRUCK VOLUMES	100 trucks per day
SPEED (85TH PERCENTILE)	59 mph
CRASH HISTORY (2018-2022)	○ 63 crashes (6 resulting in serious injury) ○ 32 crashes involved a vehicle leaving the roadway ○ 2 crashes involved people biking

Note: speed and volume data collected in December 2024

Bellfountain Road is classified by Benton County as a minor arterial and has a posted speed of 50 mph from 0.5 miles north of Airport Road to Greenberry Road (MP 2.91 to MP 6.19), with the other segments governed by Basic Rule. It is a two-lane roadway, and north of Airport Avenue the paved shoulders are sufficiently wide for bicycle travel. However, south of that point, the shoulders are narrow (generally 1-foot wide or less). Bellfountain Road is approximately 17.5 miles long, parallels OR 99W, and provides access to Monroe, Philomath, and many rural communities in between. It is also used to access recreational destinations. A summary of traffic volumes, observed speeds, and crash characteristics is provided in Table 3.

TABLE 3. BELLFOUNTAIN ROAD USAGE CHARACTERISTICS

TRAFFIC VOLUMES	2,000 - 2,500 vehicles per day
TRUCK VOLUMES	450 trucks per day
SPEED (85TH PERCENTILE)	63 mph
CRASH HISTORY (2018-2022)	○ 40 crashes (3 resulting in serious injury) ○ 15 crashes involved a vehicle leaving the roadway

Note: speed and volume data collected in December 2024

Fern Road is classified by Benton County as a major collector and is governed by Basic Rule. From Chapel Drive to Llewellyn Road, Fern Road is just under 4.5 miles long and has two lanes with narrow shoulders. Being a shorter road segment, it is primarily used for local access. A summary of traffic volumes, observed speeds, and crash characteristics is provided in Table 4.

TABLE 4. FERN ROAD USAGE CHARACTERISTICS

TRAFFIC VOLUMES	1,500 - 2,000 vehicles per day
TRUCK VOLUMES	300 trucks per day
SPEED (85TH PERCENTILE)	52 mph
CRASH HISTORY (2018-2022)	○ 12 crashes (1 resulting in a fatality) ○ 6 crashes involved a vehicle leaving the roadway

Note: speed and volume data collected in December 2024

AFFECTED PARTY FEEDBACK

The project team conducted seven interested party interviews to gather qualitative feedback from key users of the transportation system, focusing on the four multimodal corridors. Interviews were conducted between March and June 2025, and included discussions with:

- Independent Community Club
- Republic Services
- North Albany Neighborhood Association
- Mid-Valley Bicycle Club
- Marvin Gilmour, Farmer
- Starker Forests
- Stokes Construction

Summaries of feedback received for each corridor is provided below.

INDEPENDENCE HIGHWAY

Freight-specific:

- Heavy freight activity includes hauling to Knife River (rock trucks) and Republic Services.
- Marvin Gilmour noted that gravel spills are a problem, and he personally avoids Independence Hwy due to poor visibility and challenges seeing divider lines at night.
- Republic Services reported this corridor as one of their more challenging routes because its narrow shoulders and lanes offer limited space for their large service trucks, often forcing them to stop for oncoming traffic and bikes.

- Starker Forests noted that recent truck traffic related to Coffin Butte Quarry overwhelmed this corridor in recent years.

Bike-specific:

- Mid-Valley Bicycle Club riders almost unanimously avoid Independence Highway due to safety concerns, including high vehicle speeds, narrow shoulders, aggressive truck drivers, and a general lack of bike infrastructure.
- Multiple riders reported being run off the road by service trucks.
- Republic Services acknowledged the lack of space for both trucks and bikes and suggested widening shoulders as a priority.

SPRINGHILL DRIVE

Freight-specific:

- Narrow lanes, limited shoulders, and curves create conflicts for larger vehicles and complicate sightlines.
- Freight use on Springhill Drive is limited compared to other corridors but present, including garbage trucks and occasional logging trucks.
- Starker Forests noted some log trucks may use Springhill Drive when traveling between Polk County and Eugene.
- Republic Services uses Springhill Drive; drivers noted the need for wider shoulders to safely accommodate both trucks and cyclists.

Bike-specific:

- Mid-Valley Bicycle Club members described Springhill Drive as dangerous for biking due to narrow shoulders, poor sightline at curves, truck traffic, and fast-moving vehicles.
- Some riders prefer to avoid Springhill Drive entirely, or only ride certain segments during off-peak hours, though one rider suggested it has potential as a future multimodal corridor if improved.
- Riders emphasized the need for wider shoulders, separated paths, or buffered bike lanes to improve safety.
- North Albany residents also expressed concerns for pedestrians and cyclists due to increased development, lack of sidewalks, and speeding.

BELLFOUNTAIN ROAD

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Freight-specific:

- Bellfountain Road is heavily used by the timber industry for log truck hauling (Starker Forests, Thompson Timber [identified by Starker], and Stokes Construction contractors).
- Preferred over OR 99 for direct access to mills and forest sites west of Philomath.
- Drivers reported limited shoulders, narrow lanes, and roadway departures as ongoing safety concerns.
- Truck drivers noted poor visibility for cyclists around curves.

Bike-specific:

- Mid-Valley Bicycle Club riders described Bellfountain Road as a mixed experience: some sections have 5-foot shoulders, but others have none.
- Riders prefer sections with shoulders but often avoid areas with no shoulders due to truck traffic and high speeds.
- Log trucks passing at high speeds create dangerous air drafts that destabilize cyclists.
- Several riders recommended Bellfountain Road as a high priority for shoulder widening or buffered bike lanes.
- Some suggested diverting cyclists to alternate routes like Chapel Drive or potential rail-to-trail conversions. Chapel Drive was noted as a good example of safety improvements for cyclists.

FERN ROAD

Freight-specific:

- Fern Road sees frequent use by logging, construction, farm equipment, and heavy-haul freight vehicles.
- Stokes Construction's facility is located directly on Fern Road, making it a key route for their operations.
- Narrow lanes, soft shoulders, poor pavement conditions, and street ruts that force trucks toward opposing lanes were cited as major concerns for freight.

- Truck drivers and residents shared poor road surface conditions have resulted in near collisions and traffic accidents due to hydroplaning exacerbated by road ruts.
- North Albany residents noted significant safety concerns at intersections (especially at Fern Road & Airport Avenue and Fern Road & Llewellyn Road), citing poor sightlines and stop sign violations.
- Stokes Construction and Starker Forests reported stressful, tight intersections at Fern Road & Airport Avenue and Fern Road headed into or out of Philomath at both 13th Street intersections (Main Street and Applegate Street).

Bike-specific:

- Independent Community Club and Mid-Valley Bicycle Club members reported frequent close calls for bicyclists and described drivers attempting unsafe passes, particularly on curves where sightlines are poor.
- The narrowness, hills, blind curves, and freight volumes make Fern Road highly stressful for cyclists. Widening shoulders, adding bike lanes or separated paths, and improving driver education were key recommendations.
- Fern Road is sometimes seen as slightly preferable to Bellfountain Road for some riders due to fewer log trucks, but still unsafe.
- Mid-Valley Bicycle Club also noted that Fern Road doesn't go far enough for many cyclists.

RECOMMENDED SOLUTIONS

One corridor was selected in each of the two areas to focus improvements on to make the most of limited resources. The selection of these corridors was informed by usage characteristics, affected party feedback, and the ability to leverage other planned projects or existing infrastructure. In the north area, Springhill Drive was chosen, and in the south area, Bellfountain Road was chosen.

The following sections describe the recommendations for each corridor.

SPRINGHILL DRIVE

Springhill Drive has slightly lower traffic speeds and volumes compared to Independence Highway, which is often avoided by people biking as much as possible. Also, there are higher volumes of trucks on Independence Highway, though trucks commonly use Springhill Drive as well. A High Priority Project that would widen the shoulders on Independence Highway is recommended as part of this TSAP, which would improve comfort and safety for all users. Therefore, Springhill Drive is the recommended corridor for multimodal safety improvements, which would be compatible with High Priority Project recommendations targeting speeding and roadway/lane departure crashes.

The recommendations to improve biking safety on Springhill Drive include shoulder widening and improving driver awareness that people biking may be on the road. Full shoulder widening for the entire six-mile corridor would be costly and would take a longer time to fund and construct. Therefore, as an alternative or interim measure, targeted shoulder widening is recommended to provide intermittent areas where people biking can move out of the travel lane. When prioritizing locations for shoulder widening, the following conditions should be considered:

- Where obtaining needed right-of-way is feasible
- Where environmental and geographic constraints are not prohibitive
- In curves, where sight lines are most limited and lane departures are more common
- Where crashes have been more common (i.e., in curves)
- Opportunities to construct longer, continuous segments rather than many short sections to minimize transitions and surprises

When widening shoulders, consideration should also be given to improving the ability to enforce traffic laws by providing spaces wide enough to pull over vehicles or pads where enforcement vehicles can park to monitor conditions.

As a lower-cost solution that could be implemented sooner, it is also recommended that a radar-activated bicycle warning system be implemented. Similar systems have been used for bridges and tunnels that detect when a bicycle enters the area and activates a warning system (e.g., flashing beacons, messages) to alert drivers that a bicycle may be in the roadway ahead. The warning stays activated for a time that is determined to be sufficient for the cyclist to have passed through the designated area. Such a warning system may be of particular benefit for the curved areas where sightlines are limited and a driver may come upon a cyclist in the lane unexpectedly.

Both of these recommendations complement the countermeasures included in the High Priority Project for Springhill Drive, though the locations of dynamic speed feedback signs in curves, which are intended to address speeding and roadway/lane departure crashes, will need to be coordinated with a plan for installing the radar-activated bicycle warning system to avoid conflicts. It also possible that these two countermeasures could be installed at the same time.

Springhill Drive Multimodal Improvements (Independence Highway to Albany UGB)

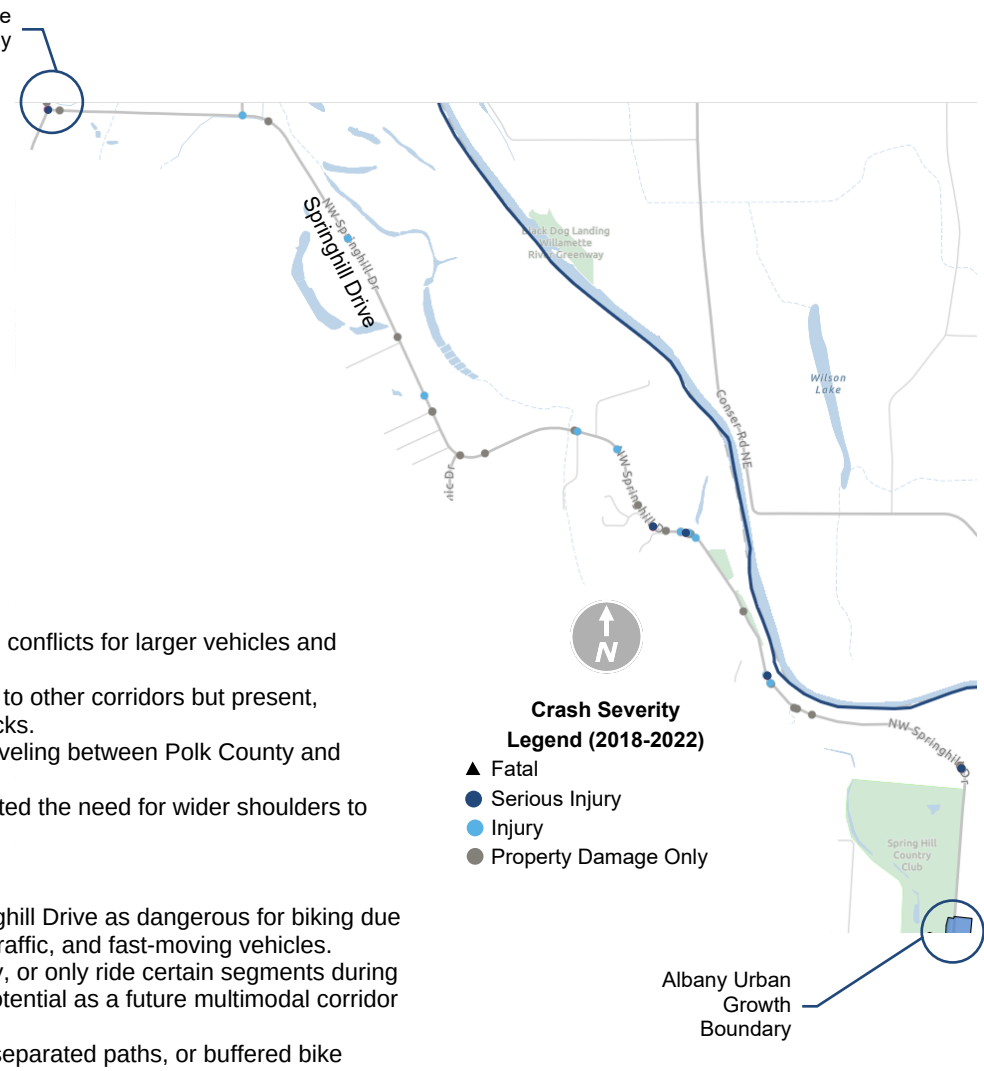
This multimodal corridor project improves safety for people biking through a combination of targeted shoulder widening and a dynamic warning system to alert drivers that bicycles may be in the roadway. This allows for a two-phased approach, where the lower-cost warning system could be implemented in the near term and the shoulder widening could be implemented as funding allows.

Context and Crash History

This 6-mile segment of Springhill Drive is a two-lane roadway that is relatively flat throughout with several curves and a posted speed of 55mph. Sight lines through the curves can be limited, which can create hazardous situations for people biking.

CRASH CHARACTERISTICS (2018-2022)

- 63 total crashes
- 6 resulted in serious injury
- 32 involved a vehicle leaving the roadway
- 2 involved people biking



HIGHLIGHTS OF FEEDBACK RECEIVED

Freight-specific:

- Narrow lanes, limited shoulders, and curves create conflicts for larger vehicles and complicate sightlines.
- Freight use on Springhill Drive is limited compared to other corridors but present, including garbage trucks and occasional logging trucks.
- Some log trucks may use Springhill Drive when traveling between Polk County and Eugene.
- Republic Services uses Springhill Drive; drivers noted the need for wider shoulders to safely accommodate both trucks and cyclists.

Bike-specific:

- Mid-Valley Bicycle Club members described Springhill Drive as dangerous for biking due to narrow shoulders, poor sightline at curves, truck traffic, and fast-moving vehicles.
- Some riders prefer to avoid Springhill Drive entirely, or only ride certain segments during off-peak hours, though one rider suggested it has potential as a future multimodal corridor if improved.
- Riders emphasized the need for wider shoulders, separated paths, or buffered bike lanes to improve safety.
- North Albany residents also expressed concerns for pedestrians and cyclists due to increased development, lack of sidewalks, and speeding.

Proposed Countermeasures

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Emphasis Areas and Equity Consideration

These safety improvements would occur in an area of the county with a low percentage of disadvantaged residents (per the ODOT Social Equity Index tool).

Emphasis Areas addressed: Roadway and Lane Departure, Risky Behaviors (Speeding), Bicycles

Countermeasures

ID#	COUNTERMEASURE	CRASH REDUCTION FACTOR	2025 COST
7754[A]	**Widen shoulder on roadways with narrow shoulders.** Increase the shoulder width to 6 feet, consistent with the County standard cross-section for minor arterials. As an alternative to full shoulder widening, targeted widening may be applied at segments where feasible. This can provide turnouts for cyclists.	18% (for all crash types and severities)[A]	$2.9 million (targeted shoulder widening assumes 25% of all shoulders)
N/A[B]	**Radar-activated dynamic warning system for bicycles in roadway.** Install radar devices or inductive loop system to detect cyclists riding along the segment near/on horizontal curves. This triggers a flashing sign, making this system dynamic, and is lit when a cyclist is detected to alert drivers of the presence of cyclists actively using the road.	N/A[B]	$140,000 per dynamic warning system assembly
		Total Cost:	**$3.04 million**

[A]This countermeasure is a solution from the Crash Modification Factors Clearinghouse (CMF ID #7754).

[B]This countermeasure is a solution used in a rural area with active cyclists and is used to enhance safety for cyclists and vehicles sharing the same roadways. This solution does not yet have a crash reduction factor according to the Crash Modification Factors Clearinghouse. Source: https://ruraltransportation.org/dynamic-warning-systems-enhance-safety-for-cyclists-and-vehicles-on-scenic-roadways/

Right: Example of dynamic warning system (source: Dynamic Warning System to Alert Motorists to the Presence of Bicyclists, https://westerntransportationinstitute.org/wp-content/uploads/2016/09/CNMBikeWarningOverview4-18.pdf

Related Planned Projects

None

Potential Funding Sources

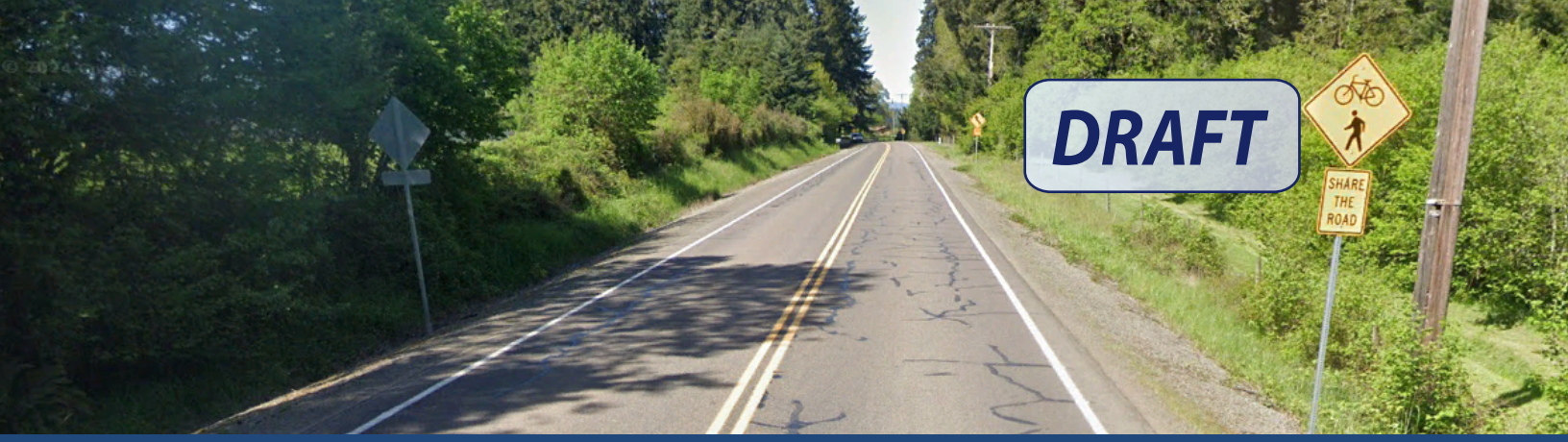
- Safe Streets and Roads for All (SS4A) Program (USDOT)
- All Roads Transportation Safety (ARTS) Program (ODOT)

BELLFOUNTAIN ROAD

Bellfountain Road serves higher volumes of traffic and experiences higher speeds than Fern Road but is generally the corridor that people driving trucks and people biking prefer to be on. The section of Bellfountain Road north of Airport Avenue has wider shoulders, which are appreciated by all users, and the TSP includes a future project to construct a shared-use path along Bellfountain Road from Chapel Drive to Alpine Road. Therefore, it is recommended that the County continue to invest in Bellfountain Road as a multimodal corridor.

The recommendations to improve biking safety on Bellfountain Road include continuation of the shoulder widening from Airport Avenue to Llewellyn Road and construction of the shared-use path proposed in the TSP from Chapel Drive down to Llewellyn Road as a first phase. However, considering the cost of the shared-use path, this may need to be constructed in two phases to reach Llewellyn Road.

As an alternative to constructing the shared-use path on Bellfountain Road, consideration could be given to relocating this planned path to the former Bailey Branch rail line to the east, where the County purchased the right-of-way with the intent to maintain it for future rail use. While some circumstances may have changed that could warrant reconsideration of the future use of this right-of-way for a shared-use path, County Commissioners would still need to weight that option against other potential uses and legal issues regarding the use of the land may need to be resolved.



Bellfountain Road Multimodal Improvements (Plymouth Drive to Llewellyn Road)

This multimodal corridor project improves safety for people biking by extending the wider shoulders north of Airport Avenue down to Llewellyn Road and implementing the planned shared-use path from the Transportation System Plan.

Context and Crash History

The section of Bellfountain Road from Plymouth Drive to Llewellyn Road is approximately 4.5 miles long. It is a two-lane roadway that is relatively flat throughout and has a posted speed of 50 mph. Shoulders of sufficient width for biking are present north of Airport Avenue, but they are very narrow south of that.

CRASH CHARACTERISTICS (2018-2022)

- 40 total crashes
- 3 serious injury crashes
- 15 crashes involved a vehicle leaving the roadway

HIGHLIGHTS OF FEEDBACK RECEIVED

Freight-specific:

- Bellfountain Road is heavily used by the timber industry for log truck hauling.
- Preferred over OR 99 for direct access to mills and forest sites west of Philomath.
- Drivers reported limited shoulders, narrow lanes, and roadway departures as ongoing safety concerns.
- Truck drivers noted poor visibility for cyclists around curves.

Bike-specific:

- Mid-Valley Bicycle Club riders described Bellfountain Road as a mixed experience: some sections have 5-foot shoulders, but others have none.
- Riders prefer sections with shoulders but often avoid areas with no shoulders due to truck traffic and high speeds.
- Log trucks passing at high speeds create dangerous air drafts that destabilize cyclists.
- Several riders recommended Bellfountain Road as a high priority for shoulder widening or buffered bike lanes.
- Some suggested diverting cyclists to alternate routes like Chapel Drive or potential rail-to-trail conversions. Chapel Drive was noted as a good example of safety improvements for cyclists.

Proposed Countermeasures

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Emphasis Areas and Equity Consideration

These safety improvements would occur in an area of the county with a low percentage of disadvantaged residents (per the ODOT Social Equity Index tool).

Emphasis Areas addressed: Roadway and Lane Departures, Bicycles

Countermeasures

ID#[A]	COUNTERMEASURE	CRASH REDUCTION FACTOR[A]	2025 COST
N/A	**Install Shared-use Path.** Shared-use paths allow the separation of bicycles and pedestrians form the roadway along rural facilities.	N/A	$8.8 million
7754[A]	**Widen shoulder on roadways with narrow shoulders.** Increase the shoulder width to 6 feet, consistent with the County standard cross-section for minor arterials. As an alternative to full shoulder widening, targeted widening may be applied at segments where feasible. This can provide turnouts for cyclists.	18% (for all crash types and severities)[A]	$9 million (applied to both sides of the roadway)
		Total Cost:	**$17.8 million**

[A]This countermeasure is a solution from the Crash Modification Factors Clearinghouse (CMF ID #7754).

Example of shared used path. Source: https://www.txdot.gov/content/txdotoms/us/en/manuals/des/rdw/chapter-18-bicycle-facilities-/18-4-bikeway-types/18-4-8-rural-bikeway-types-.html

Related Planned Projects

From the 2019 Transportation System Plan

AT-233 Bellfountain Road Shared-use Path
Between Alpine Road and Chapel Drive

Potential Funding Sources

- Safe Streets and Roads for All (SS4A) Program (USDOT)
- Better Utilizing Investments to Leverage Development (BUILD) / RAISE Program (USDOT)
- Community Paths Program (ODOT)