Bandon TSP
Final Memorandum #7: Transportation System Improvements

Prepared for
City of Bandon and the Oregon Department of Transportation

March 2024

Parametrix

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Prepared by

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Acknowledgements

Respectfully acknowledging that Bandon is located on the land of the Coquille Indian Tribe and the Confederated Tribes of Siletz Indians. In offering this land acknowledgement, we affirm Indigenous sovereignty, history, and experiences. We commit to engaging in a respectful and successful partnership as a steward of these lands.

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Acronyms and Abbreviations

TSP – transportation system plan

UGB – urban growth boundary

ODOT – Oregon Department of Transportation

BUD – Blueprint for Urban Design

HDM – Highway Design Manual

v/c – volume-to-capacity

LOS – level of service

PLTS – pedestrian level of traffic stress

BLTS – bicycle level of traffic stress

SUP – shared use path

SRTS – Safe Routes to School

ADA – Americans with Disabilities Act

AWSC – all way stop control

TWSC – two way stop control

AADT – annual average daily traffic

1. Introduction

This report identifies and evaluates draft transportation alternatives for the City of Bandon Transportation System Plan (TSP) Update. Draft alternatives consist of transportation improvement projects, strategies, and potential programs to address transportation needs and opportunities in the city. Draft alternatives are evaluated on multiple criteria including TSP goals and objectives, technical analysis of benefits and trade-offs, and planning-level costs to develop recommendations and priorities for the TSP.

The alternatives analysis considers options for all transportation modes within the city: driving, cycling, walking or using a mobility device, transit, and freight. These alternatives consist of a range of different types of investments that can be made to the City's transportation system, such as physical improvements to roads and crossings, strategies for managing visitor traffic and parking, and considering transit service options through town.

Sections 3 through 7 provide planning-level cost estimates based on the experience and professional judgement of the project team. These estimates are presented based on the following scale:

- $: < $100,000
- $$: $100,000 to $500,000
- $$$: $500,000 to $1,000,000
- $$$$: > $1,000,000

2. Key Issues and Needs

Following is a summary of issues and needs derived from the existing and future conditions analysis. For a full description of issues and needs, see Technical Memorandum 4, Existing Conditions, and Technical Memorandum 5, Future Conditions for this project.

2.1 Streets/Bridges

- **Multimodal Conflicts.** U.S. 101 serves as the city's only ODOT-designated freight route and Reduction Review Route, and it is the main north-south connectivity in and out of town. While U.S. 101 is an important thoroughfare in Bandon, it can act as a dividing line within the community due to the high speed and number of vehicles, as well as the width of the roadway. Residential and commercial areas on opposite sides of U.S. 101 can feel disconnected due to difficult highway crossings.
- **Road Connectivity**. Few roads in Bandon connect north-south or east-west. In particular, Bandon's "donut hole," an area that is outside of Bandon city limits but still within the urban growth boundary (UGB), lacks roadway connections.
- **Speeding Issues.** The lane configuration on U.S. 101 widens from two travel lanes to four travel lanes as traffic enters the city at 13th Street (at the south end) and at 2nd Street NE (at the north end); the four-lane section facilitates passing movements, but it also encourages speeding through the center of the city.
- **Pavement Condition.** Unpaved gravel roadways outside of city limits but within the UGB limit connectivity to local destinations and may limit development in these areas.
- **State Design Standards.** U.S. 101 within the Bandon UGB does not meet Oregon Department of Transportation (ODOT) *Highway Design Manual* (HDM) standards in most segments:
  - → The HDM recommends a pedestrian crossing spacing range of 500 to 1,000 feet within the Commercial Corridor context. With the addition of the U.S. 101 crossing at Chicago Avenue SE in 2023, crosswalk spacing from Chicago Avenue SE to Fillmore Avenue is 1,000 feet, and crosswalk spacing from Chicago Avenue SE to 9th Street SW is nearly 1,500 feet. Between OR 42S and Fillmore Avenue, crosswalk spacing is nearly 2,400 feet.
  - → The HDM recommends continuous, buffered sidewalks with space for transit stations within the Commercial Corridor context. Higher traffic volumes and speeds require greater separation between travel lanes and bicycle/pedestrian facilities on the highway to increase safety for all users and to lower levels of traffic stress for people walking and biking. Sidewalks along U.S. 101 generally are not separated from vehicle traffic by a landscape buffer or bike lanes.
  - → The HDM recommends separated bicycle facilities within the Commercial Corridor context. No bike lanes are present on U.S. 101 from OR 42S to 13th Street.
  - → In the Suburban Fringe context, (2nd Street NE to north city limits and 13th Street to south city limits), U.S. 101 does not meet standards for continuous and buffered sidewalks, though separated bicycle facilities are present on the south end of town.
  - → For a full description of HDM standards and where requirements are and are not met on U.S. 101, see Technical Memorandum 4: Existing Conditions.

2.2 Freight

- **Multimodal Conflicts**. Currently, most freight travels on U.S. 101, which is a designated freight route and Reduction Review Route. Freight traffic can present potential conflicts between truck drivers and pedestrians or bicyclists crossing the street.
- **Congestion.** Freight trucks can also cause congestion on U.S. 101, as large trucks turning onto side streets often block multiple lanes of traffic.
- **Additional Connections.** Several industrial sites located along Rosa Road/Fillmore Avenue may benefit from additional roadway connections from U.S. 101 that would allow trucks to avoid passing through the center of Bandon.
- **Loading Zones.** There are currently no designated loading zones in commercial areas such as Old Town; this area in central Bandon along the Coquille River acts as Bandon's downtown area and tourism hub. Trucks will often park in the middle of the street while making deliveries to bars and restaurants in Old Town. Curb management and loading zones will need to be balanced with demand for parking.

2.3 Traffic Operations

- **Mobility Standards.** Roadway mobility standards are based on volume-to-capacity (v/c) ratios. None of the study intersections are expected to operate with a v/c ratio that exceeds its mobility standard.
- **Queue Lengths.** None of the queue lengths exceed the storage length or the space between intersections.
- **Traffic Congestion.** City staff and community members have noted seasonal congestion from tourist traffic. Though actual measured delay is not substantial, congestion occurs during busy summer months. Perceptions of congestion are equally important to consider. During congested periods—particularly when tourism levels are high in the summer—drivers may behave in ways that compromise safety for all roadway users, and delays are especially frustrating for local residents.

2.4 Parking

- **On-Street Parking in Busy Areas.** Parking needs are high in and near Old Town Bandon and Beach Loop Road. On-street parking may be difficult to find in summer months when tourism is high.
- **Parking Limits and Costs.** All on-street parking in Bandon is free and allows unlimited time stays. Time-limited parking could allow higher turnover in popular areas such as Old Town and Beach Loop Road.
- **Availability of Public Parking.** While on-street parking constraints are evident within Old Town Bandon, parking is generally available within a short walking distance. During community representative interviews, several people expressed the opinion that parking is not an issue; drivers may not be able to find parking directly near their destination and may have to walk a block or two, but parking in public off-street lots is available. Basic parking management strategies can help redirect demand into areas with surplus parking while freeing up more convenient, centrally located stalls for higher turnover users.

- **Lack of Parking Signage.** On-street signage and wayfinding to public parking lots is virtually nonexistent. Public parking lots are available but underutilized as a result of the lack of signage.
- **Lack of Comfortable Crossings near Parking.** Several public parking lots are located on the east side of U.S. 101; this requires people to cross the highway to access Old Town. The lack of comfortable, well-marked, visible crossing locations may prevent people from using these parking lots.
- **Support for Parking Strategies.** Participants in community representative interviews generally expressed support for Old Town time-limited parking and wayfinding directing drivers to public parking lots.

2.5 Walking and Bicycling

- **Pedestrian Level of Traffic Stress.** Generally, streets that received a Pedestrian Level of Traffic Stress (PLTS) rating of good or excellent were collectors located within the core area of the city where sidewalks are present and vehicle speeds are low. Roadways with the highest stress rating for pedestrians (PLTS 4) include U.S. 101, Riverside Drive NE, Beach Loop Road, and Fillmore Avenue/Rosa Road south of 11th Street due to a lack of sidewalks and moderate speeds. For a full assessment of PLTS contributing factors, see Technical Memorandum 4, Existing Conditions.
- **Bicycle Level of Traffic Stress.** The Bicycle Level of Traffic Stress (BLTS) analysis showed that generally, less stressful bikeways are located along neighborhood streets with lower speeds, regardless of the presence of designated bicycle facilities. The entire length of U.S. 101 within Bandon City limits was rated as BLTS 4 (most stressful) due to moderate to high speeds, high traffic volumes, no physical separation from traffic, and multiple travel lanes. Bicycle lanes exist along some segments of U.S. 101; they are narrow, unprotected, and disconnected. The curve on U.S. 101 near Old Town has no bike lanes or shoulders, limited sight distance, and fast-moving vehicular traffic. For a full assessment of BLTS contributing factors, see Technical Memorandum 4, Existing Conditions.
- **Street Lighting.** Street lighting outside of Old Town is relatively low. Several streets in Bandon with high levels of pedestrian and cycling use may warrant additional pedestrian-scale lighting. This will have to be balanced with the value of limiting light pollution.

2.5.1 Crossings

- **Crossings on U.S. 101.** As indicated in the safety section and as expressed by community members, safer crossings on U.S. 101 are critical to the city's bicycling and walking network. Many community members stated that safer crossings on U.S. 101 were their top priority.
- **Additional Crossing Locations.** There are relatively few marked and/or enhanced crossings on U.S. 101. Additional pedestrian crossings should be considered on U.S. 101.
- **Enhanced Crossing Treatments.** Enhanced treatments, including pedestrian signalization such as rectangular rapid-flashing beacons, could be considered in areas of high crossing demand such as areas with high volumes of tourist traffic. During community representative interviews, people expressed support for improving crossing options on U.S. 101.
- **Crosswalk Visibility**
  - → **Medians and Enhanced Crosswalks.** Community members expressed a desire for more visible and prominent medians and crosswalks on U.S. 101 to address the safety of

residents and tourists walking to Old Town. Crosswalk visibility enhancements may include high-visibility crosswalks, lighting, signage, and pavement markings.

- → **U.S. 101 and Fillmore Avenue.** Community members stated that for drivers, there are visibility issues at the U.S. 101 and Fillmore Avenue intersection, and it can be difficult to see pedestrians trying to cross.
- → **U.S. 101 – 11th Street to Grand Avenue SE.** The roadway curvature of U.S. 101 from 11th Street to the Face Rock Creamery presents significant visibility issues. People driving at high speeds through this segment may not be able to see pedestrians trying to cross the street. Community members expressed that they felt that this is the most dangerous section of U.S. 101.

2.5.2 Sidewalks

- **Presence of Sidewalks.** During conversations with community representatives, participants generally expressed that sidewalks are mostly present where people want them, though some areas that see lots of pedestrian use could be improved.
- **Separation from Traffic.** With high traffic speeds, lack of consistent bike lanes, and narrow sidewalks, U.S. 101 would benefit from improvements that separate pedestrians from traffic.
- **Local Streets Lack Sidewalks.** With the exception of neighborhoods off of Seabird Drive, most residential areas lack sidewalks entirely. The sidewalk network is largely in place on collector and arterial streets. Sidewalks are inconsistent where present; they are narrow in some places and nonexistent in others.
- **Missing Pedestrian Connections.** Missing connections for people walking or using a mobility device include:
  - → **Connections to parks and natural areas.** Beach Loop Road, a scenic route that connects to several beaches, and Jetty Road, which connects to Bandon South Jetty Park, lack sidewalks, bike lanes, and shoulders. The lack of sidewalks in busy pedestrian areas, including Beach Loop Road, limits pedestrian mobility and causes conflicts between people walking, riding bicycles, and driving.
  - → **11th Street SW.** Sidewalks are present along the north side of the street, but pedestrians would benefit from sidewalks on both sides of the street, as 11th Street SW is one of the few connected east-west roadways in the city. On the west side of U.S. 101, 11th Street SW provides access to popular community destinations such as City Park, the Bandon Community Center, the Sprague Community Theater, and the Bandon Public Library. On the east side of U.S. 101, it provides access to commercial areas and Southern Coos Hospital and Health Center.
  - → **8th Street SW.** This east-west connection from U.S. 101 to Beach Loop Road lacks sidewalks, bike lanes, and shoulders. Destinations along 8th Street SW include Bandon High School, the Bandon Public Library, and Coquille Point Trail.
  - → **Oregon Avenue.** This north-south roadway provides an alternative to walking on U.S. 101 and connects Old Town with destinations along 8th Street SW. Oregon Avenue lacks sidewalks, bike lanes, and shoulders.

2.5.3 Safe Routes to School

- **New Crosswalks.** The 2020 *Safe Routes to School Plan* (City of Bandon 2020) proposes installing new crosswalks at 10 locations near the middle school and high school campus area.
- **Additional Improvements.** The plan calls for curb extensions, curb ramps, and pedestrian crossing signs to facilitate safer walking connections to the schools along Franklin Avenue SW, 9th Street SW, 11th Street SW, and U.S. 101.

2.5.4 Bicycle Facilities

- **Limited Dedicated Bike Facilities**. There are limited dedicated bicycle facilities in Bandon, which impacts the bicycling experience and presents unmet needs for safe bicycle facilities to help residents and visitors access key destinations within the city.
- **Scenic Bikeways**. Special consideration should be given to the lack of bicycle facilities along popular scenic areas, including along Beach Loop Road and the designated Oregon Coast Bike Route.
- **Shared Bike Facilities.** Many local and collector streets in Bandon could be candidates for shared bikeways or shoulder bikeways. There may be a need to provide safe bicycle facilities connecting residential areas to commercial destinations in Bandon. Given the relatively low volume of traffic on the local and collector streets, an emphasis on "neighborhood greenways" may meet the need for a safe and comfortable interconnected bicycle network through and between Bandon's neighborhoods.

2.6 Public Transportation

- **Public Transit.** Bandon's only local public transit service is the Bandon Dial-a-Bus service. There is no fixed route transit service within Bandon. Curry Public Transit provides a fixed route service to cities along the coast.
- **Populations that may Benefit from Public Transportation.** Bandon has a high percentage of older adults, people with disabilities, and low-income households compared to the rest of the state. Access to transportation is an important factor in allowing these populations to access services and live independently.
- **Public Transportation Destinations.** Community destinations that may support additional transit frequency include multifamily housing, senior living facilities, and commercial business hubs such as Old Town Bandon.
- **Bus Amenities.** The bus stop at Ray's Food Place serves the intercity Coastal Express route; the stop lacks dedicated seating or benches and is largely unmarked.

2.7 Emergency Response

- **Tsunami Inundation Zone.** Much of Bandon, including popular community destinations and commercial areas, is within the inundation zone based on analyses by the Oregon Department of Geology and Mineral Industries.
- **Evacuation Route Wayfinding.** Consistent wayfinding for tsunami evacuation routes may be vital in case of a seismic event. It is unclear from this analysis if existing signage is adequate. Projects included in the TSP can explore providing a more connective bicycle and pedestrian

network that supports the safe and efficient movement of community members in the case of an emergency.

2.8 Safety Concerns and Deficiencies

- **Crash Summary.** Crash data from 2016 through 2020 show that in Bandon, most crashes occurred on U.S. 101. During this 5-year period, 94 crashes occurred with crash severities ranging from property damage only to fatality. Two crashes within this period resulted in fatalities. See Figure 2-1 for a map of crashes from 2016 through 2020.
- **Crash Severity.** Of the 94 total car crashes, 57 involved property damage only (no injury), 26 resulted in a possible injury, 7 resulted in a suspected minor injury, 2 resulted in a suspected serious injury, and 2 resulted in fatalities. One crash that resulted in a fatality involved a pedestrian on a roadway curve at U.S. 101 near Chicago Avenue in dark conditions lit by streetlights. The pedestrian was struck while crossing the highway where a crosswalk or median was not present. The other fatal crash involved a person driving. This crash resulted from a rear-end collision at U.S. 101 and W 9th Street where the vehicle occupant fell, jumped, or was ejected from the vehicle. The crash occurred in the late morning hours in dry conditions. Drug use was a factor. For a full summary of crashes, see Technical Memorandum 4, Existing Conditions.
- **Crashes Involving People Walking or Biking.** Analysis focused on crashes involving people walking or cycling shows a total of three crashes; two crashes involved a person walking, while one crash involved a person cycling. One crash involving a pedestrian resulted in a suspected serious injury. The other crash involving a pedestrian occurred on a roadway curve on U.S. 101; the pedestrian was struck while crossing the highway where a crosswalk or median was not present, and the crash resulted in a fatality. The single crash involving a cyclist resulted in a possible injury to the cyclist. All crashes involving people walking or biking occurred on U.S. 101 and may have been caused by visibility issues.
- **Crash Locations.** Crashes tended to cluster along U.S. 101 between 11th Street SW and Filmore Avenue SE. Intersections of particular concern on U.S. 101 include those at 11th Street SW, 9th Street SW, Elmira Avenue SE, and Filmore Avenue SE, and the intersection of OR 42S/2nd Street E and North Avenue. At or near the intersection of U.S. 101 and Fillmore Avenue, 12 crashes occurred. On U.S. 101 between 11th Street SW and 8th Street SW, 17 crashes occurred.
- **Locations for Further Safety Review.** Safety analysis shows that the only intersection that has a crash rate over the 90th percentile crash rate is Beach Loop Road at Seabird Drive. Therefore, this intersection is flagged for safety review. Crash analysis for roadway segments shows the crash rate for OR 42S exceeds the statewide crash rate, and it is flagged for further safety review.

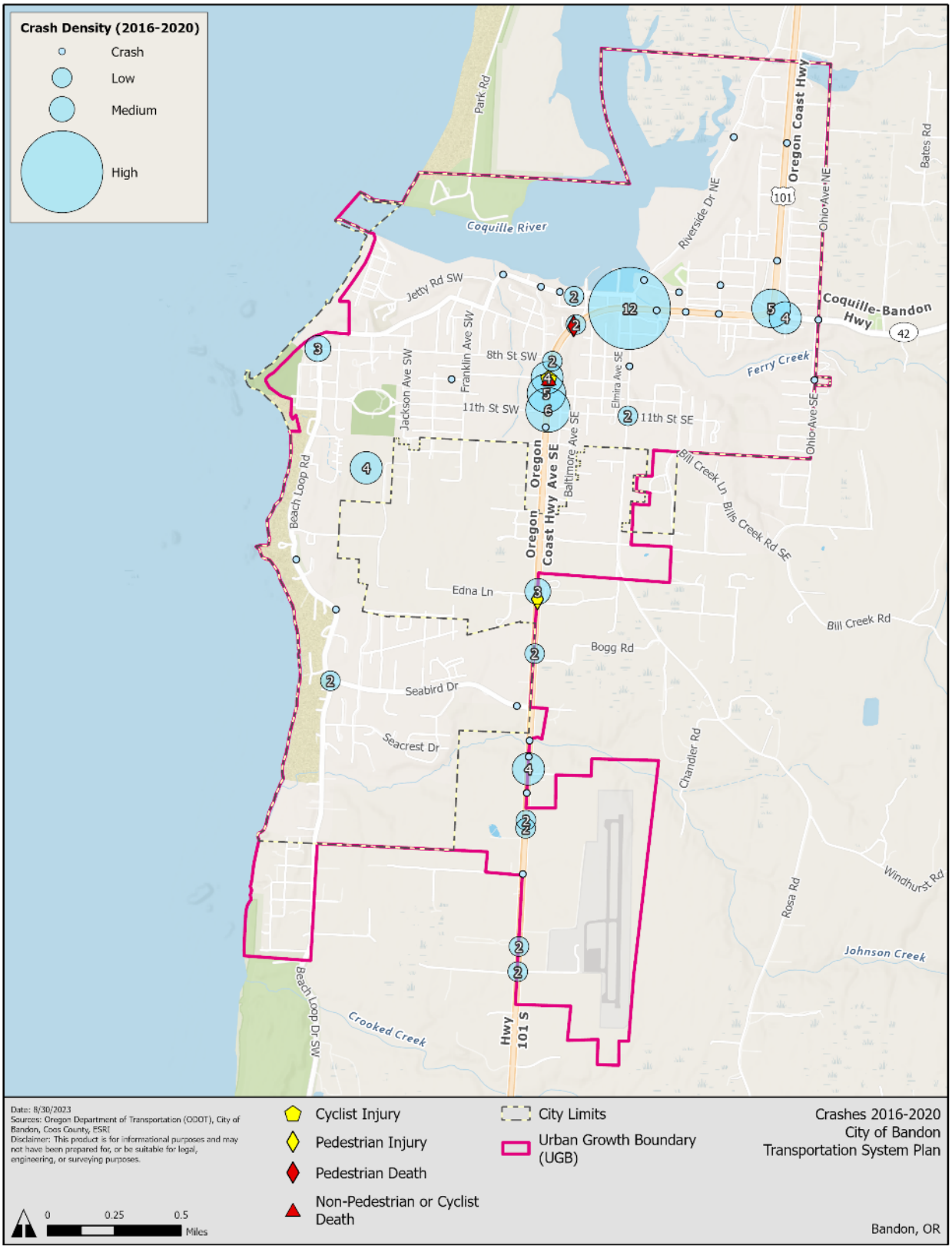


Figure 2-1. Crashes 2016 through 2020

3. Pedestrian Improvements

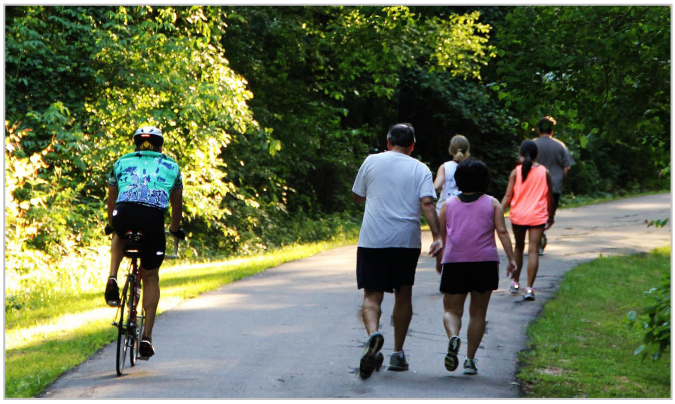
Proposed pedestrian facilities focus on improving the connectivity, safety, access, and comfort of the city's existing pedestrian network. Proposed facilities consider cost-effective options to improve Bandon's pedestrian and bicycling network while acknowledging that not all streets require the same level of facility. Opportunities to develop pedestrian/bike only trails and shared-use paths (SUPs) were assessed with the goal of finding routes that could serve multiple purposes including walking, cycling, and evacuation. These improvements would provide substantial benefits to both pedestrians and bicyclists. Example pedestrian facility types are outlined below. Proposed improvements to Bandon's pedestrian system are illustrated in Figure 3-1 and listed in Table 3-1.

The project team also reviewed the Bandon Safe Routes to School (SRTS) plan (2020) to determine prioritized safety improvements for people walking, biking, rolling, and driving to school. Proposed TSP projects adjacent to the school campus area can target funding opportunities for safety improvements based on their inclusion in the SRTS plan, recognizing that inclusion in the plan demonstrates an unfulfilled need. Recommended improvements for this TSP update prioritize projects at busy locations due to funding constraints in producing the full spectrum of SRTS-recommended improvements.

Note: At this stage of the TSP update, some roadways have multiple potential alternatives for pedestrian and bicycle improvements. Projects referred to as **Proposed Pedestrian and Bicycle Facilities** will include pedestrian and bicycle improvements, potentially combined into a single facility. **Proposed Pedestrian and Bicycle Only Path** refers to a path that provides a bicycle and pedestrian connection where no roadway currently exists, and no future roadway is proposed. These connections would likely be constructed as shared-use paths or unpaved trails.

3.1 Pedestrian Facilities

Shared-Use Paths. SUPs are typically constructed at grade and provide adequate space for use by both pedestrians and bicyclists. SUPs are free from vehicle traffic and generally are set back away from roadways. Usually, SUPs are paved using asphalt or another hard-surface material. SUPs often require significantly more right-of-way than other options, such as sidepaths and walkways, and may be more expensive to construct.



Photograph 3-1. Shared Use Path

Source: National Park Service

Sidewalks. Sidewalks provide a high level of comfort and separation for people walking and using mobility devices. They also are constructed to accessible standards for people who use mobility devices. Sidewalks are more expensive to construct than gravel or hardpacked shoulders.

Sidepaths or Walkways. Sidepaths, or walkways, are typically constructed at grade. These can be delineated with pavement striping or with hard-packed materials such as compacted gravel or turf. Sidepaths are relatively easy to construct and cost-effective. They can be added to roads designated as neighborhood greenways (see Chapter 4, Bicycling Improvements), and they may be appropriate for a small coastal town aesthetic. However, they provide less protection for pedestrians than sidewalks, and may not be Americans with Disabilities Act (ADA)-compliant.

Photograph 3-2. Sidepath or Walkway

Source: Pedsafe

3.2 Crossings

Crossing alternatives address known safety issues at intersection throughout town. Two kinds of crossings are generally considered.

Standard Crossings. Standard crossings refer to basic crossing improvements consisting of pavement markings and signage. Pavement markings generally consist of crosswalk markings, stop bars, and pedestrian crossing signage. Standard crossings are often used in combination with stop signs to control traffic at intersections. Standard crossings are relatively low-cost investments that can have a high impact on pedestrian safety in town.

Photograph 3-3. Enhanced Crossing

Source: ODOT

Enhanced Crossings. Enhanced crossings refer to crossings with a higher level of protection for pedestrians, and can include a range of treatments such as raised crosswalks or speed tables, illuminated signage, curb extensions or bump-outs (either using at-grade treatments such as paint and bollards or grade-separated treatments such as concrete), median refuge islands, and pedestrian-activated flashing beacons. These crossings are more costly than standard marked crossings, but offer a substantially higher level of protection for pedestrians, people using mobility devices, and bicyclists. Enhanced crossings are reserved for locations within the city's transportation system with known safety issues and bottlenecks such as U.S. 101.

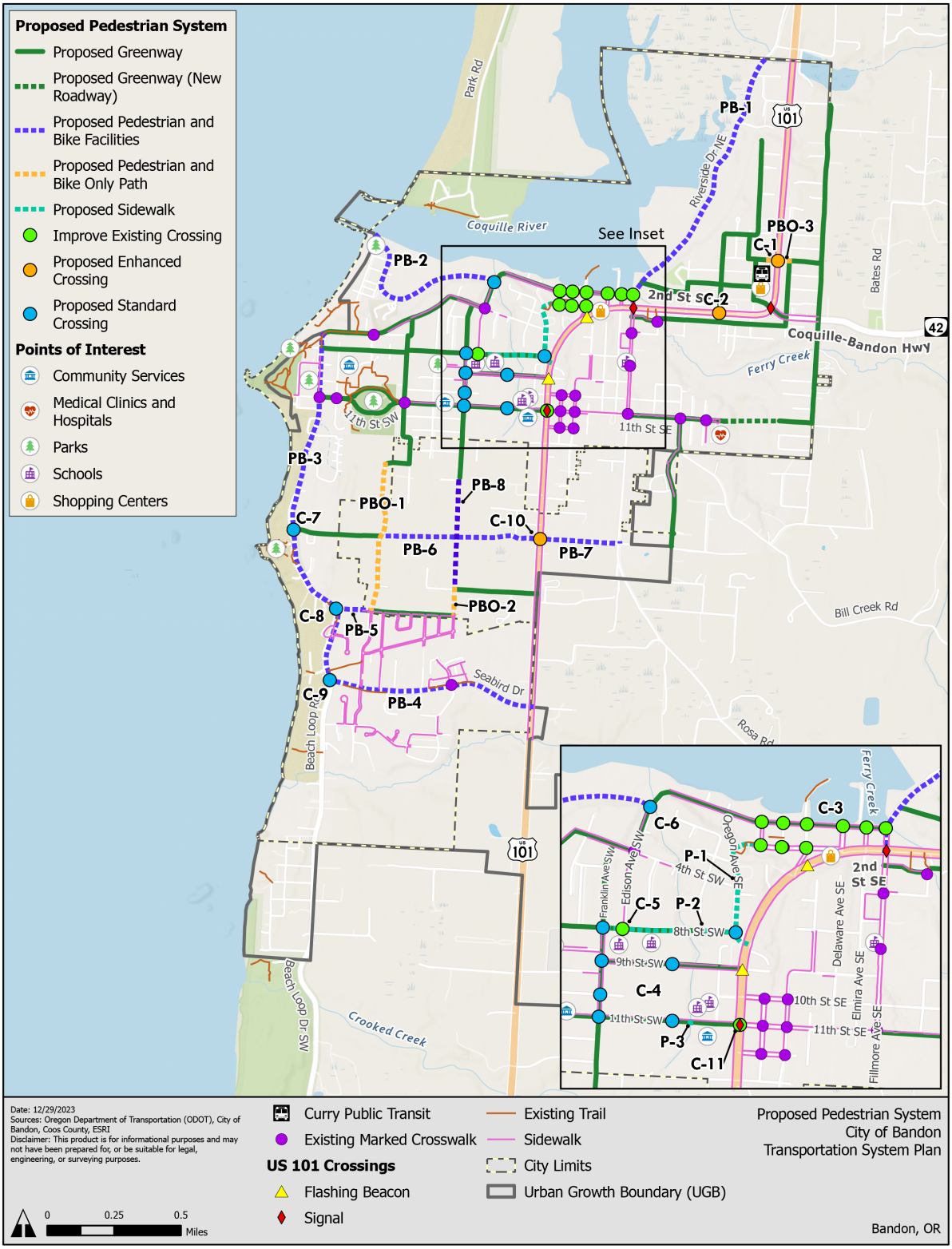


Figure 3-1. Proposed Pedestrian System

Note: All proposed new crossing locations on U.S. 101 are illustrative; exact crossing locations and improvement types would be determined during design after the TSP update is completed.

Table 3-1. Proposed Pedestrian Improvements

Map ID	Pedestrian Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
Proposed Pedestrian and Bicycle Only Connections					
PBO-1	Lincoln-Jackson Avenue Bike/Ped Path ▪ Improve existing unofficial north-south path adjacent to the Donut Hole	▪ Provides a comfortable off-street connection for people biking, walking, or using a mobility device. ▪ Develops new environmentally responsible connections in disconnected areas of town for people walking and biking. ▪ Recognizes and formalizes existing, underdeveloped connection to Bandon City Park and burgeoning southern neighborhoods for people walking and biking ▪ Provides travel alternative to space-constrained Beach Loop Road. ▪ Provides a north-south active transportation option that connects neighborhoods in southwest Bandon and avoids U.S. 101. ▪ May have environmental impacts.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking, riding bikes, and using mobility devices to access Bandon City Park and schools; moderate impact overall.	$$$
PBO-2	Edna Bike/Ped Path ▪ Connection from Carter to Edna/20th Street	▪ Constructs separated shared-use path to increase bicycle accessibility, safety, and ridership. ▪ Provides a car-free connection from neighborhoods north of Seabird Drive to U.S. 101. ▪ Provides multimodal travel alternative for people not wishing to walk or ride bikes on U.S. 101. ▪ May have environmental impacts.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car.	Could increase number of people walking, riding bikes, and using mobility devices to access southern neighborhoods; low to moderate impact overall.	$

Map ID	Pedestrian Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
PBO-3	U.S. 101 to 2nd Street NE (east side) ▪ Connect 2nd Street east of U.S. 101 to U.S. 101	▪ Provides a designated pedestrian and bicycle facility between neighborhoods east of U.S. 101 and key destinations on the west side of U.S. 101 on the north end of town where no connections currently exist. ▪ Recognizes and formalizes existing, underdeveloped connection in an environmentally responsible manner.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase access for people walking, biking, and using a mobility device to Bandon Shopping Center from eastern neighborhoods; moderate impact overall.	$$
Proposed Pedestrian and Bicycle Facilities					
PB-1	Riverside Drive NE – several alternatives possible: ▪ SUP (separated path or boardwalk) ▪ Close northbound lane and add ped/bike facilities ▪ Greenway with traffic calming improvements and sidepath	▪ Adds infrastructure on stressful road to increase safety for people walking or riding bikes and expands multimodal ridership. ▪ Provides increased multimodal access to Old Town Bandon and residences west of U.S. 101. ▪ Proposed facility overlaps with the planned Oregon Coast Bike Route. ▪ Takes advantage of scenic views of the Coquille River. ▪ May have substantial environmental and cultural resource impacts.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase share of people walking, biking, and using a mobility device to reach Old Town Bandon and access the Coquille River; low to moderate impact overall.	$ to $$$$

Map ID	Pedestrian Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
PB-2	Jetty Road ▪ Planned pathway that connects First Street SW in Old Town out to the jetty. This was also planned for the City's Bicycle and Pedestrian Facilities Map. Exact facility type is undefined.	▪ This path is already planned and approved by the City, but it is currently unfunded.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking, riding bikes, and using mobility devices to access Old Town Bandon and the Pacific Ocean; moderate impact overall.	$$
PB-3	Beach Loop Road – several alternatives possible: ▪ SUP (separated path or boardwalk) ▪ Bike lanes and sidewalks ▪ Greenway with sidepath	▪ Provides safer and more comfortable access for people biking, walking, using a mobility device, and driving. ▪ Provides increased multimodal access to residences as well as community and tourist destinations such as Face Rock. ▪ Addresses multimodal conflicts on this heavily used roadway. ▪ May reduce need to park along Beach Loop Road due to new multimodal connection.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking, riding bikes, and using mobility devices to access popular destinations; moderate impact overall.	$$ to $$$$
PB-4	Seabird Drive – several alternatives possible: ▪ SUP (separated path or boardwalk) ▪ Bike lanes and sidewalks ▪ Greenway with sidepath	▪ Adds infrastructure on stressful road to increase safety for people walking or riding bikes and expand multimodal ridership. ▪ Provides safer, more comfortable pedestrian and bicycle facilities for neighborhoods north of Seabird Drive. ▪ Provides an additional pedestrian and bicycling facility between Beach Loop Road and U.S. 101. ▪ Could be constructed in coordination with private development.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking, riding bikes, and using mobility devices to access southern neighborhoods, Beach Loop Road, and U.S. 101; moderate impact overall.	$$ to $$$$

Map ID	Pedestrian Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
PB-5	Beach Loop Road to Carter Street SW ▪ Greenway with sidepath ▪ New roadway connection through future Gravel Point development would include active transportation facilities	▪ Provides neighborhoods north of Seabird Drive with pedestrian and bicycling facilities that connect to Beach Loop Road. ▪ New roadway connection through future Gravel Point development. ▪ Constructed in coordination with private development.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking, riding bikes, and using mobility devices to access southern neighborhoods and Beach Loop Road; low to moderate impact overall.	Potential to be funded by Gravel Point developers.
PB-6	20th Street (Face Rock Drive to U.S. 101) ▪ SUP (separated path or boardwalk) ▪ Bike lanes and sidewalks ▪ Greenway with sidepath Note: These improvements would be contingent on construction of a new roadway.	▪ Provides lower-stress travel alternative to Seabird Drive or 11th Street SW. ▪ Provides increased multimodal access to residences as well as community and tourist destinations such as Face Rock from U.S. 101. ▪ Provides an east-west connection through the Donut Hole. ▪ May have substantial environmental impacts and require wetland mitigation.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking, riding bikes, and using mobility devices to access central and southern neighborhoods and U.S. 101; moderate impact overall.	$$ to $$$$
PB-7	20th Street (U.S. 101 to Fillmore) ▪ SUP (separated path or boardwalk) ▪ Bike lanes and sidewalks ▪ Greenway with sidepath Note: These improvements would be contingent on construction of a new roadway.	▪ Provides increased multimodal access across U.S. 101 for residential neighborhoods on east and west sides of U.S. 101. ▪ Provides a pedestrian and bicycling facility between future developments on the east side of the city and U.S. 101.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car.	Could increase number of people walking, riding bikes, and using mobility devices to access eastern neighborhoods and U.S. 101; low impact overall.	$$ to $$$$

Map ID	Pedestrian Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
PB-8	Franklin Ave SW (Edna Street to 16th Street SW) ▪ SUP (separated path or boardwalk) ▪ Bike lanes and sidewalks ▪ Greenway with sidepath Note: These improvements would be contingent on construction of a new roadway.	▪ Provides north-south travel alternative to Beach Loop Road through the Donut Hole. ▪ Provides increased multimodal access from residences in southwest Bandon to community and tourist destinations such as the library, schools, City Park, and Old Town. ▪ May have substantial environmental impacts and require wetland mitigation.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking, riding bikes, and using mobility devices to access central and southern neighborhoods and community destinations; moderate impact overall.	$$ to $$$$
Proposed Sidewalk Projects					
P-1	Oregon Avenue ▪ Connect existing sidewalks to Monkey Hill path and Old Town	▪ Provides a safer and more comfortable pedestrian connection from the school campus area to Old Town Bandon.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking and rolling to Old Town Bandon; moderate impact overall.	$

Map ID	Pedestrian Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
P-2	8th Street ▪ New sidewalks from Franklin Avenue to Oregon Avenue	▪ Provides a safer and more comfortable pedestrian facility adjacent to the school campus area.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking and rolling to Bandon High School and Harbor Lights Middle School; moderate to high impact overall.	$$
P-3	11th Street ▪ New sidewalk over culvert directly west of Ocean Crest School	▪ Closes a gap in the 11th Street sidewalk network and provides a safer and more comfortable pedestrian facility adjacent to the school campus area.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking and rolling to Bandon High School and Harbor Lights Middle School; moderate to high impact overall.	$$

Map ID	Pedestrian Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
Proposed Sidepath/Walkway Projects					
See bicycle map	Streets with proposed bike greenways ▪ Striped or widened shoulders, hard-packed gravel shoulders, or other sidepath	▪ Greenway treatments could include traffic calming and make walking or using a mobility device safer and more comfortable. ▪ Cost effective; however, these would not necessarily be ADA-compliant.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could increase number of people walking; low to moderate impact overall.	$
Citywide	Local residential streets ▪ Widened shoulders or hard-packed gravel shoulders where feasible	▪ Cost effective; however, these would not necessarily be ADA-compliant	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could increase number of people walking; low impact overall.	$ to $$
Proposed Crossing Improvements					
C-1	Vicinity of U.S. 101/2nd Street NE ▪ New enhanced crossing ▪ Note: All proposed new crossing locations on U.S. 101 are general; exact crossing locations and improvement types would be determined during design after the TSP is completed.	▪ Connects key destinations on either side of U.S. 101 in a location where pedestrians currently cross the highway with no marked crosswalk.	▪ Improves mobility for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking, biking, and rolling between Bandon Shopping Center and eastern neighborhoods; moderate impact overall.	$$ to $$$

Map ID	Pedestrian Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
C-2	Vicinity of U.S. 101/June Avenue ▪ New enhanced crossing ▪ Note: All proposed new crossing locations on U.S. 101 are general; exact crossing locations and improvement types would be determined during design after the TSP is completed.	▪ Decreases distance between existing crossings on U.S. 101 and connects neighborhoods south of U.S. 101 to key destinations north of U.S. 101.	▪ Improves mobility for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking, biking, and rolling between northern and eastern neighborhoods; low to moderate impact overall.	$$ to $$$
C-3	Old Town ▪ Enhance existing crossings with continental striping ▪ Some crossings may be enhanced with additional improvements such as lighting, curb bulb-outs, or other features	▪ Improves visibility of crossings in an area with high pedestrian use.	▪ Improves mobility for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car.	Could increase number of people walking and rolling in Old Town Bandon; low impact overall.	$ to $$
C-4	School Campus ▪ New standard marked crossings adjacent to school campus: → 8th Street/Oregon Avenue → 8th Street/Franklin Avenue → 9th Street midblock crossing → 9th Street/Franklin Avenue → 11th Street midblock crossing → 11th Street/Franklin Avenue	▪ New crossings, as proposed in Bandon's Safe Routes to School Plan, would provide safer street crossings for children walking or biking to school.	▪ Improves mobility for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking and rolling to school; moderate impact overall.	$ to $$

Map ID	Pedestrian Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
C-5	8th Street/Edison Avenue SW ▪ Enhance existing crossing	▪ Improves visibility of crossings in an area with high pedestrian use.	▪ Improves mobility for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car.	Could increase number of people walking and rolling to school; low impact overall.	$ to $$
C-6	Jetty Path/Edison Avenue SW ▪ New standard crossing	▪ Provides safer pedestrian and bicycle access to new Jetty Path facility.	▪ Improves mobility for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking and rolling between Jetty Path and Old Town Bandon; low impact overall.	$
C-7	Beach Loop Road/Face Rock Drive ▪ New standard crossing	▪ Creates a safer and more comfortable crossing for all modes, particularly people walking, bicycling, or using a mobility device on Beach Loop Road.	▪ Improves mobility for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking and rolling in western neighborhoods; low impact overall.	$

Map ID	Pedestrian Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
C-8	Beach Loop Road/Carter Street SW ▪ New standard crossing	▪ Creates a safer and more comfortable crossing for all modes, particularly people walking, bicycling, or using a mobility device on Beach Loop Road.	▪ Improves mobility for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking and rolling in southern neighborhoods; low impact overall.	$
C-9	Beach Loop Road/Seabird Drive ▪ New standard crossing ▪ Increase triangle sight distance for the stop-controlled leg (Seabird Drive)	▪ Creates a safer and more comfortable crossing for all modes, particularly people walking, bicycling, or using a mobility device on Beach Loop Road and Seabird Drive. ▪ 48% reduction in all crashes in all injury severities.	▪ Improves mobility for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking and rolling in southern neighborhoods; low impact overall.	$$
C-10	Vicinity of U.S. 101/20th Street ▪ New enhanced crossing ▪ Note: This crossing would be contingent on construction of a new roadway. ▪ Note: All proposed new crossing locations on U.S. 101 are general; exact crossing locations and improvement types would be determined during design after the TSP update is completed.	▪ With the proposed addition of an east-west collector route and new pedestrian and bicycle facilities, a new crossing of U.S. 101 would likely be required.	▪ Improves mobility for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking and rolling between neighborhoods on both sides of U.S. 101; low to moderate impact.	$$ to $$$

Map ID	Pedestrian Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
C-11	Vicinity of U.S. 101/11th Street ▪ Enhance existing crossing ▪ Install actuated or coordinated flashing beacons as advance warning for signalized intersections ▪ Install advance warning signs (signal ahead)	▪ Improves visibility of crossings in an area with high pedestrian use. ▪ 10% reduction in rear-end crashes at all severities. ▪ 35% reduction in angle crashes at all severities.	▪ Improves mobility for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	Could increase number of people walking and rolling between neighborhoods on both sides of U.S. 101; low to moderate impact.	$$ to $$$
Other Pedestrian Improvement Projects					
Citywide	ADA Ramp Upgrades	▪ Enables access to sidewalks and pedestrian facilities for people using mobility devices.	▪ Increases access for people with disabilities.	Could increase number of people walking and rolling; low to moderate impact overall.	Depends on the number of ramps at each intersection.
N/A	Lighting	▪ Increases visibility of people walking and crossing the street to increase pedestrian safety.	▪ Improves safety for people traveling who lack access to a car.	Could increase number of people walking and rolling; low impact overall.	$$ to $$$

Pedestrian/Bicycle Only Path – A path that provides a bicycle and pedestrian connection where no roadway currently exists and no future roadway is proposed.

Pedestrian/Bicycle Facility – A bike/pedestrian path adjacent to an existing roadway. The exact type, form, and materials have not yet been determined.

$ to $$$$ = indicates cost from least expensive to most expensive; EJ = environmental justice; SUP = shared-use path; VMT = vehicle miles traveled

4. Bicycling Improvements

Figure 4-1 and Table 4-1 summarize draft bicycling improvements, including low-stress neighborhood greenway treatments, standard bike lanes, and investments in off-street shared-use paths.

Note: As noted in Chapter 3, Pedestrian Improvements, at this stage of the TSP update, some roadways have multiple potential alternatives for pedestrian and bicycle improvements. Projects referred to as **Proposed Pedestrian and Bicycle Facilities** will include pedestrian and bicycle improvements. **Proposed Pedestrian and Bicycle Only Path** refers to a path that provides a bicycle and pedestrian connection where no roadway currently exists and no future roadway is proposed. These connections would likely be constructed as shared-use paths or unpaved trails. Example bicycling improvements are detailed below.

Photograph 4-1. Buffered Bike Lane

Source: City of Corvallis

Shared-Use Paths. As described in Chapter 3, Pedestrian Improvements, shared-use paths provide adequate space for use by both pedestrians and bicyclists. These are typically paved using asphalt or some other hard-surface material, and they are generally free from vehicle traffic and set back away from roadways.

Bike Lanes. Bike lanes, typically on the shoulders, provide a dedicated space for people to bike. Bike lanes are visually separated from automobile traffic by striping or pavement markers. A spectrum of improvements is available for bike lanes, ranging from conventional bike lanes with a single painted line to buffered bike lanes as shown in Photograph 4-1 and protected bike lanes with physical separation such as bollards. Bike lanes are intended to be used exclusively for biking without interference from motor vehicles, and they run adjacent to traffic lanes, typically in the same direction as motorized traffic.

Photograph 4-2. Neighborhood Greenway

Source: City of Seattle

Photograph 4-3. Tsunami Wayfinding Evacuation Guidance

Source: Oregon Department of Geology And Mineral Industries

Neighborhood Greenways. Neighborhood greenways are bikeways that provide safe and comfortable travel for people of all ages and abilities. They are instrumental in creating a cost-effective bicycling network on low-traffic streets. Greenways are shared-lane facilities where bike traffic and motorized traffic use the same lane without separation. *Improvements primarily consist of signage and sharrow pavement markings to make navigation easy and to encourage people to walk and bike.* These routes would join with other pedestrian and biking facilities to form a network that is continuous and connected. Wayfinding should include tsunami evacuation information, including the direction to the nearest assembly area.

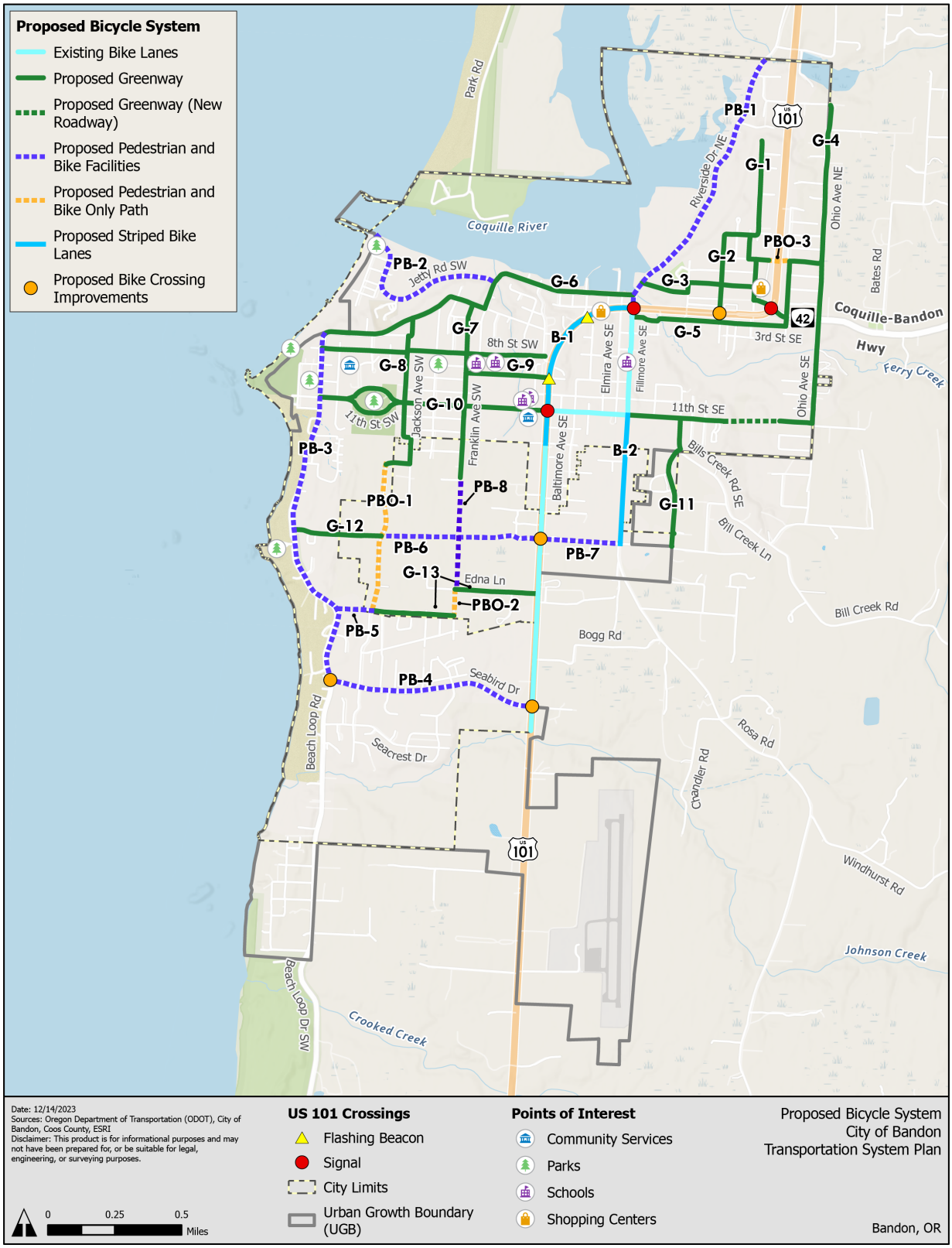


Figure 4-1. Proposed Bicycle System

Table 4-1. Proposed Bicycle Improvements

Map ID	Bicycling Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
Proposed Striped Bike Lanes					
B-1	U.S. 101: Fillmore Avenue SE to 13th Street SW ▪ Stripe bike lanes to increase bicycle accessibility, visibility, safety, and ridership	▪ Provides a direct route with delineated space for people riding bikes on U.S. 101. ▪ Increases visibility of people riding bikes on U.S. 101 to drivers. ▪ Increases visibility of businesses along U.S. 101 to people riding bikes. ▪ May increase feasibility of people riding bikes to school and reduce car traffic during arrival and dismissal hours. ▪ May reduce space dedicated to travel lanes and potentially lower traffic speeds.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; moderate impact overall.	$
B-2	Fillmore Avenue SE/Rosa Road: 11th Street SW to 20th Street SE ▪ Stripe bike lanes to increase bicycle accessibility, visibility, safety, and ridership	▪ Extends existing bike lanes to neighborhoods south of 11th Street SW. ▪ Would connect to future east-west pedestrian/bicycle facility (PB-7). ▪ Increases visibility of businesses along Fillmore Avenue SE/Rosa Road to people riding bikes.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a personal vehicle.	Could encourage more cycling activity and replace some car trips; moderate impact overall.	$

Map ID	Bicycling Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
Proposed Greenway Projects					
G-1	Michigan Avenue NE Greenway ▪ Michigan Ave NE – 4th St NE – Lexington Ave NE – 2nd St NE – Michigan Ave NE – 1st St SE ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Connects neighborhoods on the north end of town to key destinations, including the shopping center and transit stop. ▪ Enhances ease of traveling on lower-traffic roads adjacent to U.S. 101. ▪ Provides multimodal travel alternative for people not wishing to walk or ride bikes on U.S. 101. ▪ Connects to pedestrian/bike only path (PBO-4) and provides a connection across U.S. 101 for people walking and biking.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; low impact overall.	$
G-2	June Avenue NE Greenway ▪ 4th Street NE – June Avenue NE ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Connects neighborhoods on the north end of town to key destinations, including the baseball field and grocery store. ▪ Provides multimodal travel alternative for people not wishing to walk or ride bikes on U.S. 101. ▪ Connects to proposed bike crossing improvement at U.S. 101/June Avenue and provides a connection across U.S. 101 for people walking and biking.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; low impact overall.	$
G-3	Division Street NE Greenway ▪ Division Street NE – Harlem Street – Caroline Street SE ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Connects neighborhoods on the north end of town to key destinations, including the shopping center, transit stop, and Old Town Bandon. ▪ Provides multimodal travel alternative for people not wishing to walk or ride bikes on U.S. 101.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; low impact overall.	$

Map ID	Bicycling Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
G-4	Ohio Avenue NE Greenway ▪ Ohio Avenue NE – 2nd Street NE – North Avenue NE ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Connects neighborhoods on the north end of town to key destinations, including the fitness center and worship center. ▪ Provides multimodal travel alternative for people not wishing to walk or ride bikes on U.S. 101.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; low impact overall.	$
G-5	3rd Street SE Greenway ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Connects neighborhoods to popular destinations, including Face Rock Creamery and existing bike lanes on Fillmore Avenue. ▪ Provides multimodal travel alternative for people not wishing to walk or ride bikes on U.S. 101.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; low impact overall.	$
G-6	1st Street SW Greenway ▪ 1st Street SW – Edison Avenue SW – 4th Street SW – Ocean Drive SW – 7th Street SW ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Connects neighborhoods to popular destinations including Old Town Bandon and the Bandon Coast Walk. ▪ Increases ease of riding bikes to Old Town Bandon and potentially reduces car parking demand during busy season. ▪ Connects to pedestrian/bike facility (PB-2) on Jetty Road SW, extending an east-west route adjacent to the Coquille River for people walking and biking.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; low impact overall.	$
G-7	Franklin Avenue SW Greenway ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Connects neighborhoods to key destinations including Bandon High School, Harbor Lights Middle School, and Ocean Crest School. ▪ Provides a north-south connection through neighborhoods on the west side of town. ▪ Provides multimodal travel alternative for people not wishing to walk or ride bikes on U.S. 101.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a personal vehicle.	Could encourage more cycling activity and replace some car trips; low impact overall.	$

Map ID	Bicycling Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
G-8	Jackson Avenue SW Greenway ▪ Jackson Avenue SW – 13th Street SW – Jackson Road ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Provides a north-south connection through neighborhoods on the west side of town. ▪ Connects neighborhoods to key destinations such as Bandon City Park. ▪ Connects to pedestrian/bike only path (PBO-1) and provides a route for neighborhoods north of Seabird Drive.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; low impact overall.	$
G-9	School Campus Greenway ▪ 8th Street SW Greenway ▪ 9th Street SW Greenway ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Provides direct connection for people walking and biking who live in neighborhoods on the west side of town to Bandon High School, Harbor Lights Middle School, and Ocean Crest School. ▪ May increase the feasibility of people riding bikes to school and reduce car traffic during arrival and dismissal hours. ▪ Connects to striped bike lanes (B-1) on U.S. 101, potentially increasing number of people biking from neighborhoods on north side of town.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; low impact overall	$

Map ID	Bicycling Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
G-10	11th Street SW/SE Greenway ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Provides the longest and most direct east-west connection through neighborhoods on the east and west sides of town. ▪ Uses an existing U.S. 101 crossing. ▪ Connects neighborhoods to key destinations such as Bandon City Park, Coquille Point Trail, Bandon Beach, Bandon High School, Harbor Lights Middle School, Ocean Crest School, Umpqua Bank, and Southern Coos Hospital and Health Center. ▪ Connects to existing bike lanes on 11th Street SE from U.S. 101 to Elmira Avenue SE and to striped bike lanes (B-1) on U.S. 101. ▪ Requires construction of a new roadway across Ferry Creek from approximately June Avenue SE to North Avenue SE.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; moderate impact overall.	$
G-11	Harvard Street SE Greenway ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Provides direct walking and biking connection for residents of new development on the east side of town to key destinations along 11th Street SE.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to and from residential neighborhoods for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; low impact overall.	$

Map ID	Bicycling Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
G-12	Face Rock Drive Greenway ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Provides direct connection for people walking and biking who live in neighborhoods on the west side of town to destinations such as Face Rock State Scenic Viewpoint and Bandon Christian Fellowship. ▪ Connects to pedestrian/bike improvements (PB-3) on Beach Loop Road and increases the number of destinations that can be reached by walking or biking. ▪ Connects to pedestrian/bike only path (PBO-1) and provides a route for neighborhoods north of Seabird Drive. ▪ Connects to pedestrian/bike improvements (PB-6) that extend Face Rock Drive east to 20th Street SW, a crossing of U.S. 101, and pedestrian/bike improvements (PB-7) that formalize and pave an existing trail along 20th Street SE, thus increasing the number of destinations that can be reached by walking or biking.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; low impact overall.	$

Map ID	Bicycling Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
G-13	24th Street SW Greenway ▪ 24th Street SW – Edna – Carter Street SW ▪ Install signage and sharrows to increase bicycle accessibility, visibility, and ridership	▪ Provides a walking and biking connection between neighborhoods on the west side of town. ▪ Provides a direct walking and biking connection to destinations along U.S. 101. ▪ Connects to a new roadway connection / greenway (PB-5) through future Gravel Point development, enhancing connections to Beach Loop Road. ▪ Connects to pedestrian/bike only path (PBO-1) and provides a north-south connection for neighborhoods north of Seabird Drive. ▪ Connects to the Edna Bike/Ped Path (PBO-2) and enhances ease of access to and from U.S. 101.	▪ Improves mobility and increases transportation options for people traveling who lack access to a car. ▪ Increases access to destinations for people who lack access to a car.	Could encourage more cycling activity and replace some car trips; low impact overall.	$

Pedestrian/Bicycle Only Path – A path that provides a bicycle and pedestrian connection where no roadway currently exists and no future roadway is proposed.

Pedestrian/Bicycle Facility – A bike/pedestrian path adjacent to an existing roadway. The exact type, form, and materials have not yet been determined

$ to $$$$ = indicates cost from least expensive to most expensive; EJ = environmental justice; SUP = shared-use path; VMT = vehicle miles traveled

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5. Street System Improvements

5.1 Safety

Safety improvements describe improvements and countermeasures that could be applied to reduce the number of existing crashes, address perceived safety concerns, or mitigate future crash frequency associated with increased future traffic volumes or future roadway projects.

Two key locations were identified as safety concerns during the existing and future conditions analysis:

- **Beach Loop Road at Seabird Drive.** Safety analysis shows that this is the only intersection that has a crash rate over the 90th percentile crash rate.
- **Segment of OR 42S within city limits**. Exceeds the statewide crash rate.

Additional locations where multiple crashes have occurred include the following intersections:

- U.S. 101/11th Street SW
- U.S. 101/9th Street SW
- U.S. 101/Elmira Avenue SE
- U.S. 101/Fillmore Avenue SE
- OR 42S/2nd Street E and North Avenue

Locations with perceived safety concerns, according to public outreach, include the following:

- **U.S. 101/2nd Street SE:** geometric issues with the intersection; open frontage and high-speed turning cars.
- **Riverside Drive:** drivers exceed speed limit; hikers, runners, and bicyclists use this road though it is narrow and winding, with no shoulder and no bike lane.
- **U.S. 101/Oregon Avenue SE:** geometric issues with the intersection; there is a blind curve – people turning left onto Oregon Street from U.S. 101 are looking at traffic and not at pedestrians.
- **Beach Loop Road:** distracted driving; not enough space for people walking, parking, and driving; roadway can get congested and can feel unsafe with pedestrians, people biking, and people driving all sharing a narrow roadway without sidewalks or bicycle facilities.
- **Jetty Road SW:** narrow and curvy roadway, the jetty is a popular destination with no walking or bicycling facilities.
- **U.S. 101 curve:** drivers exceed speed limit; visibility is limited, so drivers can't see people crossing the street.

Areas of pedestrian and cycling safety concerns are mainly concentrated on U.S. 101. Visibility was cited as the main issue in pedestrian and bicycle crashes. Table 5-1 reviews potential safety investments to address these issues. Potential countermeasures were derived from the ODOT *Crash Reduction Factor Manual* (ODOT 2023a). These potential countermeasures are described further as proposed projects in Section 5.3, U.S. 101 Alternatives, and Chapter 3, Pedestrian Improvements.

Table 5-1. Proposed Safety Countermeasures

Safety Improvement	Potential Crash Reduction Improvement/Percentage	Cost Opinion
U.S. 101 General Safety Improvements ▪ Street lighting. South of 11st Street SW and north of OR 42S there is virtually no street lighting on U.S. 101. Lighting at intersections and pedestrian crossing locations is especially important. ▪ Lane reconfiguration. Lane reconfigurations are a proven strategy for improving safety for all users in arterial corridors. See Section 5.3, U.S. 101 Alternatives.	▪ 28% reduction in night crashes at all severities.	$$$$
OR 42S within city limits ▪ Lighting at intersections and pedestrian crossing locations is especially important. ▪ Street lighting and traffic calming are generally recommended to reduce crash rates. Traffic calming investments could include lane narrowing or corner/curb extensions to slow traffic approaching the OR 42S/US 101 intersection.	▪ Roadway within city limits is a small segment; the ODOT *Crash Reduction Factor Manual* (ODOT 2023a) does not provide a specific recommendation that would reduce the crash rate.	$$
U.S. 101/11th Street SW ▪ Install actuated or coordinated flashing beacons as advance warning for signalized intersections. ▪ Install advance warning signs (signal ahead). ▪ See Chapter 3, Pedestrian Improvements (C-11).	▪ 10% reduction is rear-end crashes at all severities. ▪ 35% reduction in angle crashes at all severities.	$
U.S. 101/9th Street SW ▪ Provide flashing beacons at minor-road stop-controlled intersections ▪ Note: Since safety data has been collected, a pedestrian-activated beacon has been installed at this intersection.	▪ 13% reduction in angle crashes at all injury severities.	$
U.S. 101/Filmore Avenue SE ▪ Replace permissive left turns to protected/permissive for U.S. 101. ▪ See Section 5.3, U.S. 101 Alternatives (T-1).	▪ 19% reduction in left-turning crashes at all injury severities.	$
Beach Loop at Seabird Drive ▪ Increase triangle sight distance for the stop-controlled leg (Seabird Drive). ▪ See Chapter 3, Pedestrian Improvements (C-9).	▪ 48% reduction in all crashes in all injury severities.	$$

$ to $$$$ = indicates cost from least expensive to most expensive; ODOT = Oregon Department of Transportation

5.2 Tsunami Evacuation

Evacuation routes are intended to help people move quickly to higher ground that is outside of the tsunami inundation zone. As shown in Figure 5-1, much of Bandon is within the inundation zone. Evacuation routes require consistent wayfinding and signage that are effective in communicating to residents and visitors. Tsunami evacuation signs currently exist throughout Bandon, but it is unclear if the signage is consistent or adequate, and signs are not consistently placed in high-traffic areas. Proper tsunami evacuation routes with adequate signage are critical to ensuring efficient evacuation in the case of a natural disaster. A robust effort to expand existing signage and create comprehensive evacuation procedures may be developed through a new emergency response plan.

TSP projects can also provide opportunities to improve connections to existing and planned evacuation routes including improved trails, paths, and bicycle and pedestrian networks. Federal Emergency Management Agency funding may also be able to be leveraged to aid projects that bolster infrastructure supporting emergency response. Bandon's evacuation route map, developed by the Oregon Department of Geology And Mineral Industries, is shown in Figure 5-1. The project team has indicated areas that may benefit from additional connections with red circles on the map. In particular, the following connections would provide access to high ground or assembly areas in areas where connections may be limited.

- **Neighborhood north of Seabird Drive.** Path from Carter Avenue to Edna Lane.
- **Neighborhood near Haystack Rock.** Path from Vesta Street to Oberman Lane.
- **Neighborhoods at Bandon's northern city limits.** Additional east-west connections.
- **Beach Loop Drive.** Path from Face Rock Road.

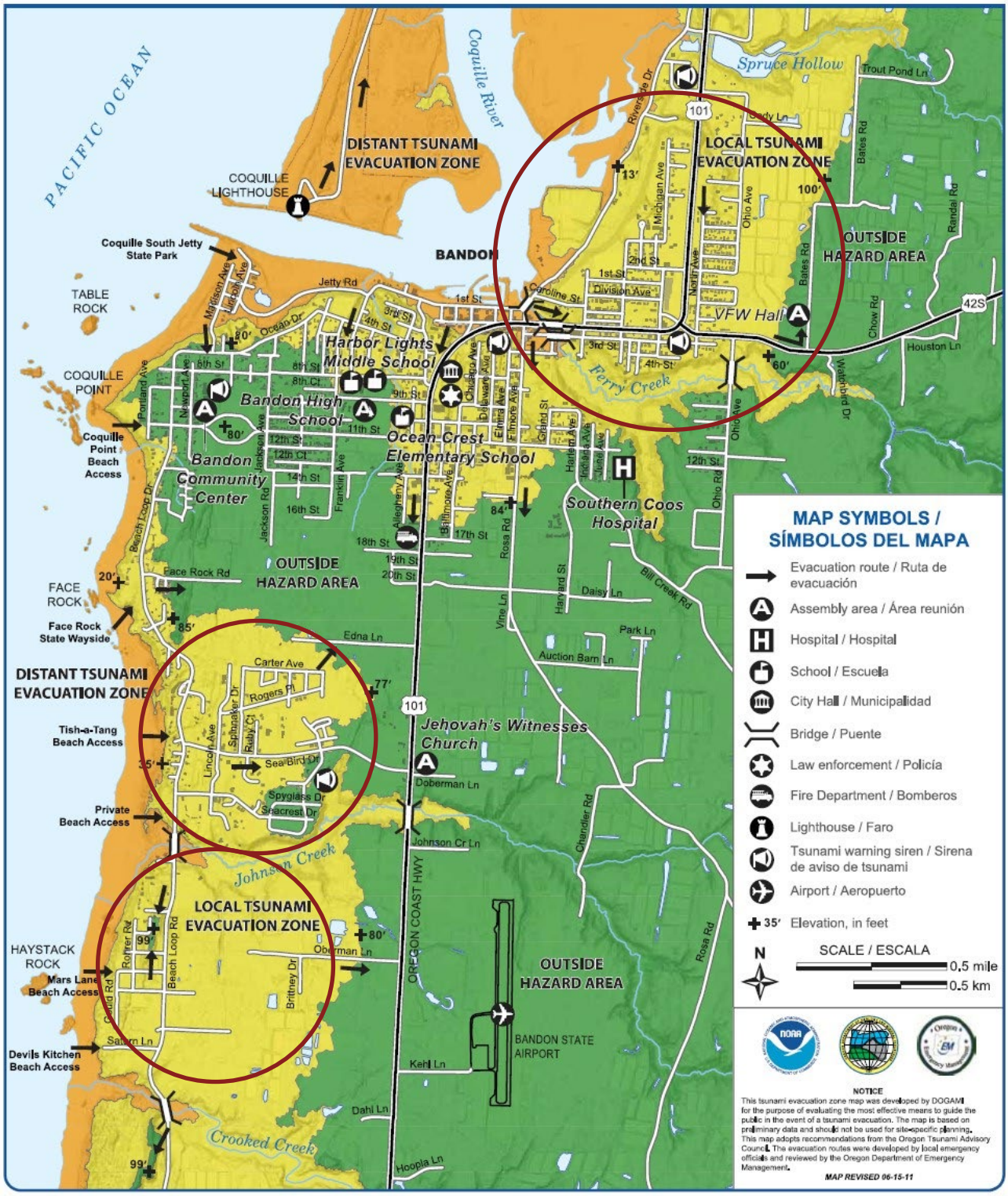


Figure 5-1. Existing Tsunami Evacuation Routes

5.3 U.S. 101 Alternatives

U.S. 101 functions as a critical component of Brandon's transportation system. The ODOT-owned arterial bisects Bandon and is the main north-south route. High volumes of freight and through-traffic use U.S. 101 to travel within and through Bandon; when combined with visitor traffic, U.S. 101 can feel congested to residents. Drivers going over the posted speed limit create safety concerns for other drivers, as well as for people biking, walking, or using a mobility device. Designated crossings of U.S. 101 are widely spaced, which can prompt people walking to make risky attempts to cross the street mid-block or at unmarked intersections. Old Town Bandon, the main commercial district, borders a curved section of U.S. 101 that has seen the highest volume of crashes in Bandon, and which sustained a pedestrian fatality in 2020. The following targeted solutions seek to address these challenges, needs, and issues on U.S. 101.

5.3.1 Considerations

- **Parallel Routes:** While improvements on routes parallel to U.S. 101 can help serve cyclist and pedestrian needs, they do not replace the need for cycling accommodations on U.S. 101 due to the highway's directness and proximity to local destinations. Additionally, ODOT design guidance requires examination and inclusion of bicycling facilities on state highways in urban areas.
- **Passing Lanes:** The existing lane configuration of two lanes outside of city limits and four travel lanes within city limits can facilitate speeding and passing after drivers enter Bandon. There are no passing lanes north or south of Bandon. Adding passing lanes north and south of the city may prevent speeding and passing within city limits. The project team recommends an assessment of passing lanes on U.S. 101 outside of Bandon city limits, regardless of which alternative is chosen for U.S. 101 within Bandon. The ODOT-led *Oregon 42 and U.S. 101 Passing Lanes Study* will identify additional passing opportunities along Oregon 42 and U.S. 101. It will recommend a set of improvements to assist travelers in passing safely and will prioritize the projects for future funding. Some small coastal communities have reduced travel lanes to slow speeds and added sidewalks and bicycle lanes to improve active transportation safety. Because of these necessary improvements, vehicle passing opportunities must now be outside incorporated communities. This study may provide guidance or plans for including additional passing lanes and slow-moving vehicle turn-outs outside of Bandon city limits where feasible.
- **Extent of Improvements:** Approaches to improve mobility and safety on U.S. 101 focus on the section between 13th Street/Alabama Avenue and June Avenue to produce the most tangible increases in safety. However, changes to the lane configuration of U.S. 101 could span a shorter extent than 13th Street/Alabama Avenue to June Avenue. No changes to U.S. 101 cross sections are proposed south of 13th Street or north of OR 42S. These cross sections fall within the Suburban Fringe context of the HDM and largely meet those standards, with the exception of shoulder width and buffer zone. The cross sections' land uses are largely defined by rural and industrial uses and do not provide many destinations for people walking or riding bicycles. As such, bicycle and pedestrian investments will be focused in areas with higher ridership demand and higher potential for an active transportation mode share increase.
- **Pilot Project Demonstration:** If a lane reconfiguration alternative is chosen, a temporary lane reconfiguration may be recommended to demonstrate the benefits, challenges, and outcomes of a lane reconfiguration before investing in higher-cost improvements, and can also be used to gauge public perception of improvements.

- **Landscape Buffers:** For both lane reconfiguration alternatives (Alternatives 2 and 3), a landscape buffer is not provided, because these alternatives are envisioned as a lower-cost restriping effort and not a substantial capital project. Landscape buffers should be provided on both sides of the street for the shared use path alternative (Alternative 4) if it is chosen, per HDM requirements.
- **Beautification:** As a coastal town and tourist destination, the City may consider adding placemaking elements such as landscaping, street lighting, street benches, street art, or other improvements to add beautification elements (see Figure 5-2 and Figure 5-3 for examples) to U.S. 101, which runs through the commercial center of Bandon. Beautification elements could be added to buffer zones or landscape buffers shown in the alternatives below. These elements will require additional investment beyond those described in the alternatives that follow. These improvements will likely require an intergovernmental agreement between the City and ODOT, such that the City will support maintenance of beautification improvements within highway right of way.

Figure 5-2. Sisters Cascade Ave (US 20) Streetscape Project (Source: GreenWorks)

Figure 5-3. U.S. 101 in Florence, OR. (Source: ReVision Florence)
Top: Before
Middle: Rendering
Bottom: After

- **U.S. 101 Ownership:** In all cases, ODOT is the owner of U.S. 101 and as such, ODOT should endorse any alternatives for U.S. 101 that ultimately are included in the updated TSP.
- **U.S. 101 at Seabird Drive:** Based on existing and future conditions traffic analysis conducted as part of the TSP Update, existing and future traffic volumes do not warrant intersection controls at the Seabird/U.S. 101 intersection within the 20-year planning horizon of the TSP. However, if land use and/or zoning assumptions change subsequent to the current TSP

update, a reevaluation of traffic conditions may be warranted to understand whether intersection controls may be necessary at this intersection. If intersection controls are examined in the future, consideration of site distance and the grade of U.S. 101 south of the Seabird intersection will be important to understanding the magnitude of improvements needed to accommodate freight traffic for any future improvement at this location. Finally, ODOT has indicated that separate from the City of Bandon, improvements to Oberman Lane south of the south city limits may be required as part of the discussion around future improvements at Seabird and U.S. 101.

Figure 5-4 through Figure 5-7 illustrate and expand on potential options for future configurations of U.S. 101 between 13th Street/Alabama Avenue and June Avenue**.** Table 5-2 provides an overview of these improvements and discusses general improvements to U.S. 101 throughout Bandon. All proposed improvements are illustrated in Figure 5-9.

Note: These options were developed based on guidance from the ODOT Highway Design Manual (ODOT 2023b) to assess how U.S. 101 should function within Bandon, as well as on the existing and future conditions analysis developed previously. Alternatives will be reviewed by the City, ODOT, and residents before determining a preferred approach. It may be that a preferred approach cannot be determined during the TSP Update process. In this case, the TSP Update may recommend a separate planning process to further refine alternatives and arrive at a preferred approach.

5.3.2 June Avenue to 13th Street/Alabama Avenue

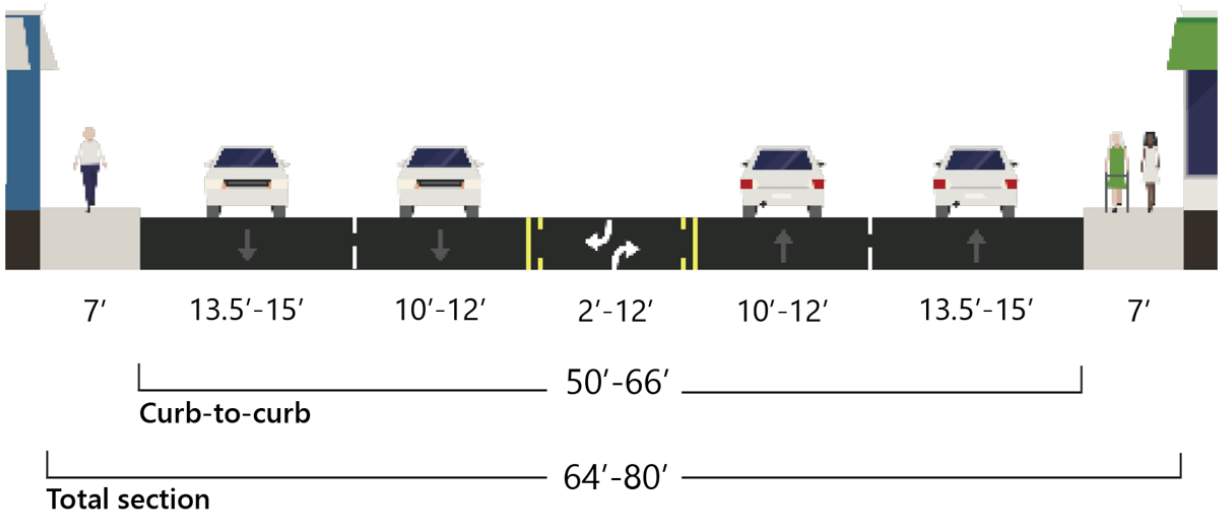


Figure 5-4. U.S. 101 – Existing Configuration

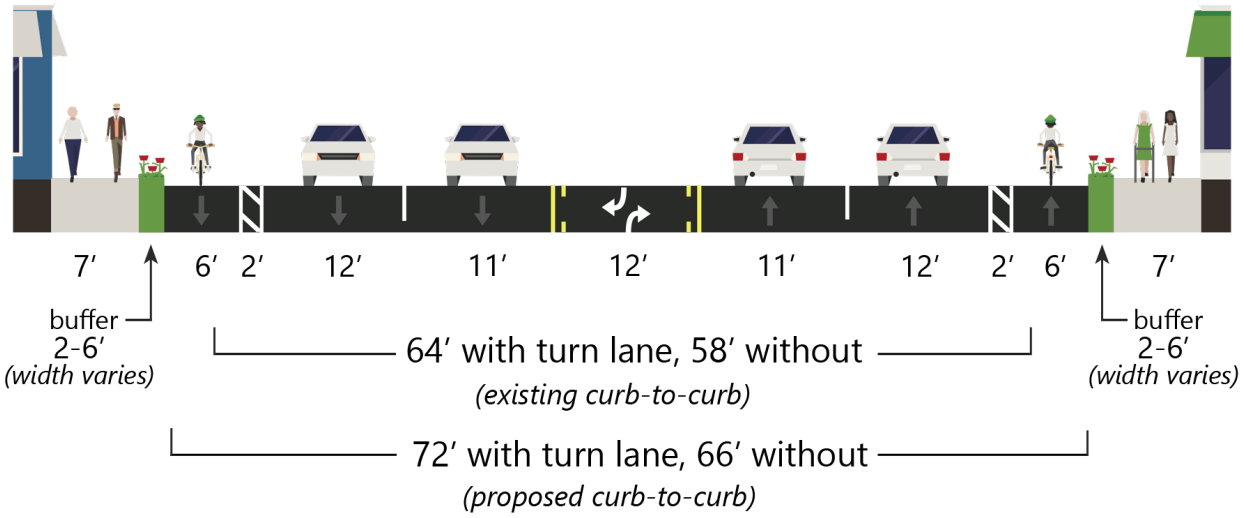


Figure 5-5. U.S. 101 – Alternative 1: Widen Roadway

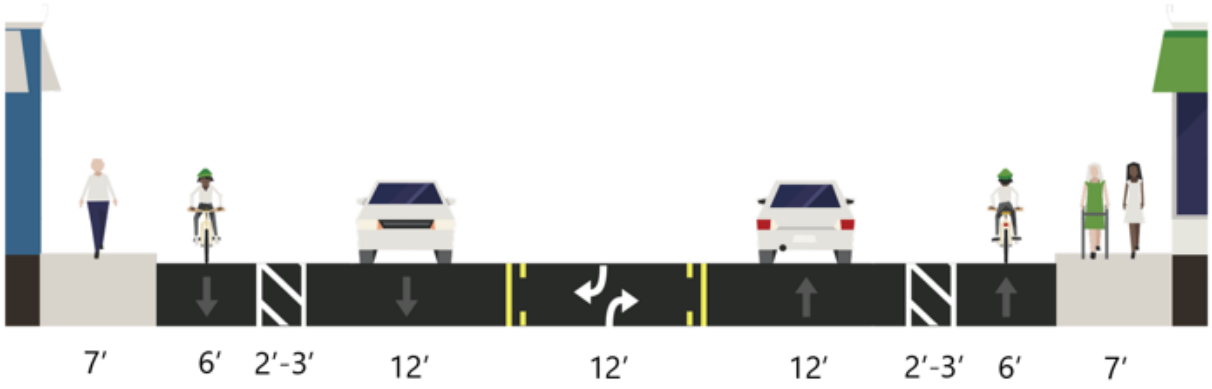
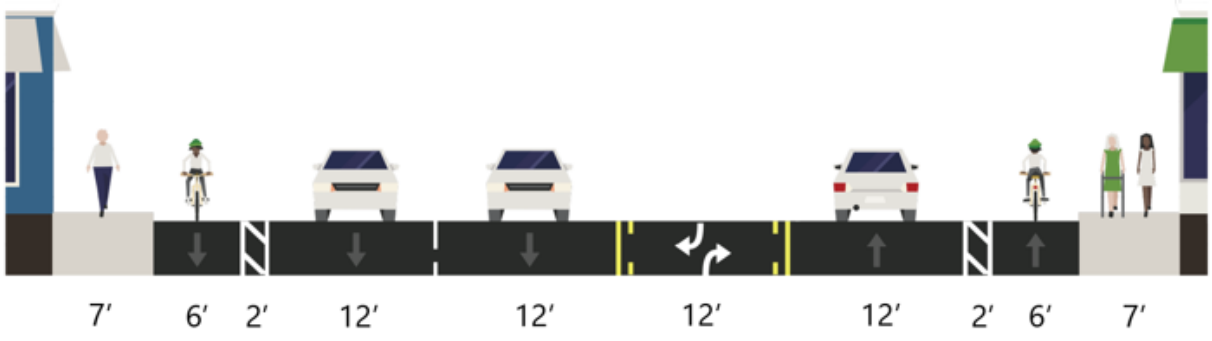


Figure 5-6. U.S. 101 – Alternative 2: Lane Reconfiguration Option A



*Dual travel lanes could be retained either northbound or southbound. Traffic analysis shows that northbound and southbound volumes are similar.

Figure 5-7. U.S. 101 – Alternative 3: Lane Reconfiguration Option B

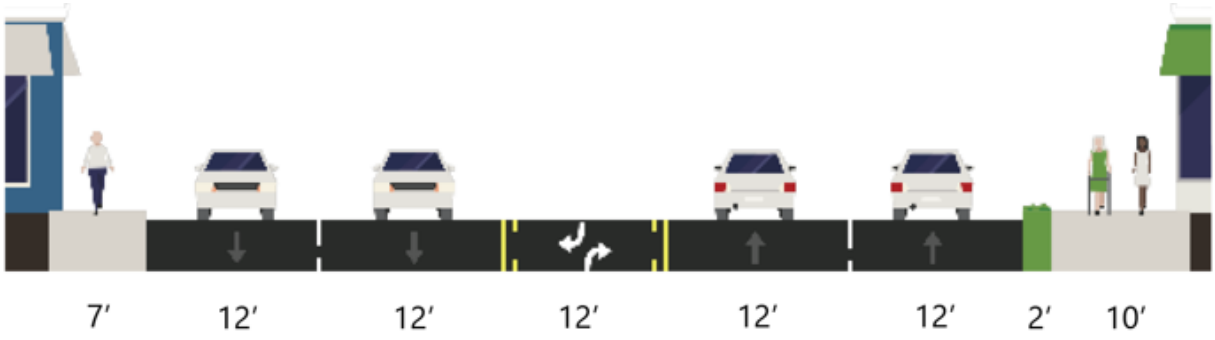


Figure 5-8. U.S. 101 – Alternative 4: Shared-Use Path

Table 5-2. U.S. 101 Improvements

Map ID	Improvement	Benefit or Impact	Alignment with ODOT Standards	Potential Reduction in VMT	Cost Opinion
U.S. 101 Cross Section: June Avenue to 13th Street/Alabama Avenue					
N/A	**Alternative 1:** Widen existing roadway to maintain four travel lanes, one two-way left turn lane, and sidewalks, while adding 6-foot-wide bike lanes with 2-foot-wide buffers.	▪ Provides bicycle/pedestrian facilities that meet HDM guidance. ▪ Requires substantial right-of-way acquisition. Further design feasibility work is required to understand impacts to existing structures within the corridor. ▪ Costly alternative to construct. ▪ Major impacts to property, structures, and business access. May be infeasible due to nature of impacts.	▪ Aligns with ODOT HDM standards	May increase bicycle trips due to buffered bike lanes; moderate impact overall.	$$$$
N/A	**Alternative 2:** Remove one travel lane in each direction, add 6-foot-wide bike lanes with 2-3 foot-wide buffers.	▪ Curb-to-curb width would remain the same. ▪ This cost-effective alternative would not require using additional right-of-way or moving curbs. ▪ Provides dedicated space with additional physical separation between people driving and people riding bikes. ▪ A landscape buffer is not provided with this alternative because it is envisioned as a lower-cost restriping effort and not a substantial capital project. ▪ Reduces conflict points and increases safety. ▪ Signal modifications would be required. ▪ May increase vehicle queues and increase cut-through traffic on side streets due to reduction in travel lanes. ▪ In most cases, traffic operations would worsen somewhat due to reduced capacity for vehicles on the mainline and fewer lanes for the vehicles on the side streets to turn into (if stop-controlled).	▪ Aligns with ODOT HDM standards	May increase bicycle and walking trips due to buffered bike lanes and additional protection for pedestrians. May reduce car trips due to lane reductions; moderate to high impact overall.	$$ to $$$ if a simple restriping. If full road re-pave is required prior to restriping, costs would be significantly higher. Other unknowns include any signal head modifications needed.

Map ID	Improvement	Benefit or Impact	Alignment with ODOT Standards	Potential Reduction in VMT	Cost Opinion
		Traffic operations are forecast to still meet ODOT mobility standards. ▪ The only exception to this is the mainline at the intersection of U.S. 101 & 2nd Street SE/Delaware Avenue SE and the intersection of U.S. 101 & Chicago. Without the lane reconfiguration, the left-turn and through movements share a lane, so through vehicles get stuck behind vehicles turning left. With the lane reconfiguration, the left turns have separate lanes in the two-way left-turn lane, so through vehicles may travel more freely.			
N/A	**Alternative 3:** Remove one travel lane in one direction, add 6-foot-wide bike lanes with 2-foot-wide buffers.	▪ Curb-to-curb width would remain the same. ▪ This cost-effective alternative would not require using additional right-of-way. ▪ Signal modifications would be required. ▪ Provides dedicated space with additional physical separation between people driving and people riding bikes. ▪ A landscape buffer is not provided with this alternative because it is envisioned as a lower-cost restriping effort and not a substantial capital project. ▪ May increase vehicle queues and increase cut-through traffic on side streets due to reduction in travel lanes. ▪ North/south volumes are relatively evenly split on U.S. 101. ▪ Traffic analysis indicates intersection mobility would meet standards. ▪ Would increase safety, although not to the degree of Alternative 2. ▪ Reduced impacts to U.S. 101 vehicle capacity compared to Alternative 2.	▪ Aligns with ODOT HDM standards	May increase bicycle and walking trips due to buffered bike lanes and additional protection for pedestrians. May reduce car trips due to lane reductions; moderate to high impact overall.	$$ to $$$ if a simple restriping. If full road re-pave is required prior to restriping, costs would be significantly higher. Other unknowns include any signal head modifications needed.

Map ID	Improvement	Benefit or Impact	Alignment with ODOT Standards	Potential Reduction in VMT	Cost Opinion
N/A	**Alternative 4:** Widen existing sidewalk on one or both sides of U.S. 101 to 10 feet wide and designate as a shared-use path. Add 2-foot landscape buffer in between path and travel lanes.	▪ Provides raised, physically separated facility for people walking, biking, or using a mobility device that is wider than the existing sidewalk. ▪ Requires right-of-way acquisition. Further design feasibility work is required to understand impacts to existing structures within the corridor, which could be substantial. A 10-foot-wide path would likely have significant property impacts. ▪ Shared-use path would ideally be constructed on both sides of U.S. 101 to facilitate bicycle travel in same direction as traffic. Contraflow bicycle traffic on a single shared-use path is not ideal. ▪ Shared-use paths require a buffer or separation from the roadway. In constrained areas of the corridor, there may not be space available for a buffer. Landscape buffers on both sides of the roadway should be considered for this alternative if it is chosen, per the HDM. ▪ Many access points along the corridor; this alternative would ideally be paired with access management.	▪ Aligns with ODOT HDM standards	May increase bicycle and walking trips due to separated, widened shared use facility; moderate to high impact overall.	$$$$

Map ID	Improvement	Benefit or Impact	Alignment with ODOT Standards	Potential Reduction in VMT	Cost Opinion
Pedestrian Crossings					
C-1	U.S. 101/2nd Street NE ▪ New enhanced crossing ▪ Note: All proposed new crossing locations on U.S. 101 are general; exact crossing locations and improvement types would be determined during design after the TSP update is completed.	▪ See Chapter 3, Pedestrian Improvements.	N/A Note: ODOT does not typically construct 5 lane section enhanced crossings, and construction would require special State Traffic-Roadway Engineer approval. There are currently no sidewalks or ramps in the northwest quadrant and the south side of U.S. 101 has a left turn lane, further complicating this intersection.	May increase number of walking trips due to new connections across U.S. 101; low to moderate impact overall.	$$$
C-2	U.S. 101/June Ave ▪ New enhanced crossing ▪ Note: All proposed new crossing locations on U.S. 101 are general; exact crossing locations and improvement types would be determined during design after the TSP update is completed.	▪ See Chapter 3, Pedestrian Improvements.	N/A Note: ODOT does not typically construct 5 lane section enhanced crossings, and construction would require special State Traffic-Roadway Engineer approval. However, June Avenue would potentially be the intersection where a lane reconfiguration would begin, should one of these alternatives move forward.	May increase number of walking trips due to new connections across U.S. 101; low to moderate impact overall.	$$$

Map ID	Improvement	Benefit or Impact	Alignment with ODOT Standards	Potential Reduction in VMT	Cost Opinion
C-10	U.S. 101/20th Street ▪ New enhanced crossing ▪ Note: This crossing would be contingent on construction of a new roadway. ▪ Note: All proposed new crossing locations on U.S. 101 are general; exact crossing locations and improvement types would be determined during design after the TSP update is completed.	▪ See Chapter 3, Pedestrian Improvements.	N/A	May increase number of walking trips due to new connections across U.S. 101; low to moderate impact overall.	$$$
C-11	U.S. 101/11th Street ▪ Enhance existing crossing	▪ See Chapter 3, Pedestrian Improvements.	N/A	May increase number of walking trips due to new connections across U.S. 101; low to moderate impact overall.	$$$
N/A	Enhance existing crossings on 101	▪ Increases visibility for people driving. ▪ Enhanced crossings would improve safety for all modes, particularly people walking, biking, or using a mobility device.	N/A	May increase number of walking trips due to safer connections; low impact overall.	$ to $$$
Traffic and Safety Improvements					
T-1	U.S. 101/Fillmore ▪ Replace permissive left turns to protected /permissive for U.S. 101	▪ May increase safety of left turns. ▪ 19% reduction in left-turning crashes at all injury severities.	N/A	Minimal	$

Map ID	Improvement	Benefit or Impact	Alignment with ODOT Standards	Potential Reduction in VMT	Cost Opinion
T-2	U.S. 101/2nd Avenue ▪ Public Plaza Alternative (see Section 5.3.4 for more information on this alternative)	▪ Eliminates skew and realigns intersection. ▪ Prevents high-speed westbound drivers from turning onto 2nd Street SE. ▪ Provides continuous sidewalk route from U.S. 101 to Delaware Avenue SE. ▪ Eliminates three to four parking spaces on 2nd Street SE. ▪ Could impact freight mobility and access to 2nd Street SE. ▪ Creates public space that could be used for larger gateway treatment or public plaza.	N/A	Could increase number of people walking, riding bikes, and using mobility devices due to safer crossing of intersection (marked crosswalk and fewer cars entering the intersection).	$$$
T-2	U.S. 101/2nd Avenue ▪ Slip-Lane Alternative (see Section 5.3.4 for more information on this alternative)	▪ Reduces roadway width to slow vehicles turning right onto 2nd Street SE from U.S. 101. ▪ Maintains existing parking. ▪ Minimally impacts freight mobility. ▪ Would provide a channelized pedestrian crossing of 2nd Street SE with a pedestrian refuge island and reduce pedestrian crossing distance.	N/A	Could increase number of people walking, riding bikes, and using mobility devices due to safer crossing of intersection (reduced crossing distance).	$$$
T-3	U.S. 101/Seabird Drive ▪ Add eastbound left-turn lane onto U.S. 101	▪ Increases simplicity of turns for drivers turning left (north) onto U.S. 101. ▪ May decrease delay for drivers turning right (south) onto U.S. 101.	N/A	Minimal/none.	$$
General U.S. 101 Improvements					
N/A	Corridor lighting improvements	▪ Increase safety for people driving and walking. ▪ Increase comfort and visibility for people walking.	ODOT does not require adding lighting on state highways inside city limits.	None.	$$$$
N/A	ADA-compliant curb ramps at all intersections	▪ Improve mobility and access for people using mobility devices.	Compliant curb ramps would adhere to ODOT standards.	Accessible corridors can increase options for people who use mobility devices.	$$$$ for full corridor

$ to $$$$ = indicates cost from least expensive to most expensive; N/A = not applicable; ODOT = Oregon Department of Transportation; TSP = transportation system plan; VMT = vehicle miles traveled

5.3.3 Tradeoffs

Key tradeoffs to consider when evaluating U.S. 101 alternatives include the following:

- Safety benefits
- Traffic/congestion impacts
- Cost and timeline for implementation
- Impacts to properties and businesses
- Ability to test alternative in the near-term with a pilot project demonstration

Alternative 1: Widen Roadway. *Widen existing roadway to maintain four travel lanes, one two-way left turn lane, and sidewalks, while adding 6 foot wide bike lanes with 2-foot-wide buffers*. This alternative would comfortably provide space for people driving, biking, and walking and would maintain the vehicle lane configuration in the corridor as it exists today. However, this alternative has major issues including impacts to properties and structures, changes to business access, and substantial construction costs. This alternative would also require a substantially longer-term timeline to plan, engineer, and construct a project of this scale. The impacts to the corridor may be unacceptable to the community, in addition to the high costs.

Alternative 2: Lane Reconfiguration Option 1. *Remove one travel lane in each direction, add 6 foot wide bike lanes with 2 3 foot wide buffers.* This alternative would reconfigure the existing curb-to-curb roadway space, keeping costs low for this alternative. Adding designated bicycling facilities and increasing the physical distance between people driving and people walking would substantially reduce conflict points and increase safety for all users while helping meet ODOT design standards. The wide buffers included as part of this alternative provide enough space to potentially add vertical separation such as candlesticks, extruded curbs, or beautification elements like planters and landscape buffers, if the City desires. However, this option may increase vehicle queues and cut-through traffic, though traffic analysis indicated there would not be a significant impact to traffic operations. However, this option may have potential traffic impacts during very high demand times and may increase the public perception of congestion. As a primarily restriping-based project, this alternative could be tested with a pilot project before investing in more capital-intensive improvements. This alternative would not provide a buffer between the sidewalks and road as is called for by the HDM.

Alternative 3: Lane Reconfiguration Option 2. *Remove one travel lane in one direction, add 6 foot wide bike lanes with 2-foot wide buffers.* This alternative would also reconfigure the existing curb-to-curb roadway space, keeping costs low for this alternative. The narrower buffers for bicycle lanes in this alternative would not provide as substantial a safety benefit as Alternative 2 and would likely not provide enough room for vertical separation options such as candlesticks, planters, or extruded curb options. As with Alternative 2, this option may increase vehicle queues and cut-through traffic, though traffic analysis indicated there would not be significant impacts to traffic operations. However, this option may also have potential congestion impacts during very high demand times and may increase the public perception of congestion. As a primarily restriping-based project, this alternative could be tested with a pilot project before investing in more capital-intensive improvements. This alternative would not provide a buffer between the sidewalks and road as is called for by the HDM.

Alternative 4: Shared Use Path. *Widen existing sidewalk on one or both sides of U.S. 101 to 10 feet wide and designate as a shared use path. Add 2-foot landscape buffer in between path and travel lanes.* This alternative would provide a safer and more comfortable curbed, off-road, separated facility for people walking and riding bikes, while maintaining the existing vehicle lane configuration. However, due to the constrained space in the corridor, the path would need to be narrower than is typically recommended for a shared use path (which would likely require a design exception in some sections) and would not be able to include a substantial landscape buffer. Even with the constrained width, construction of a shared use path would require right of way acquisition and may have significant impacts to properties.

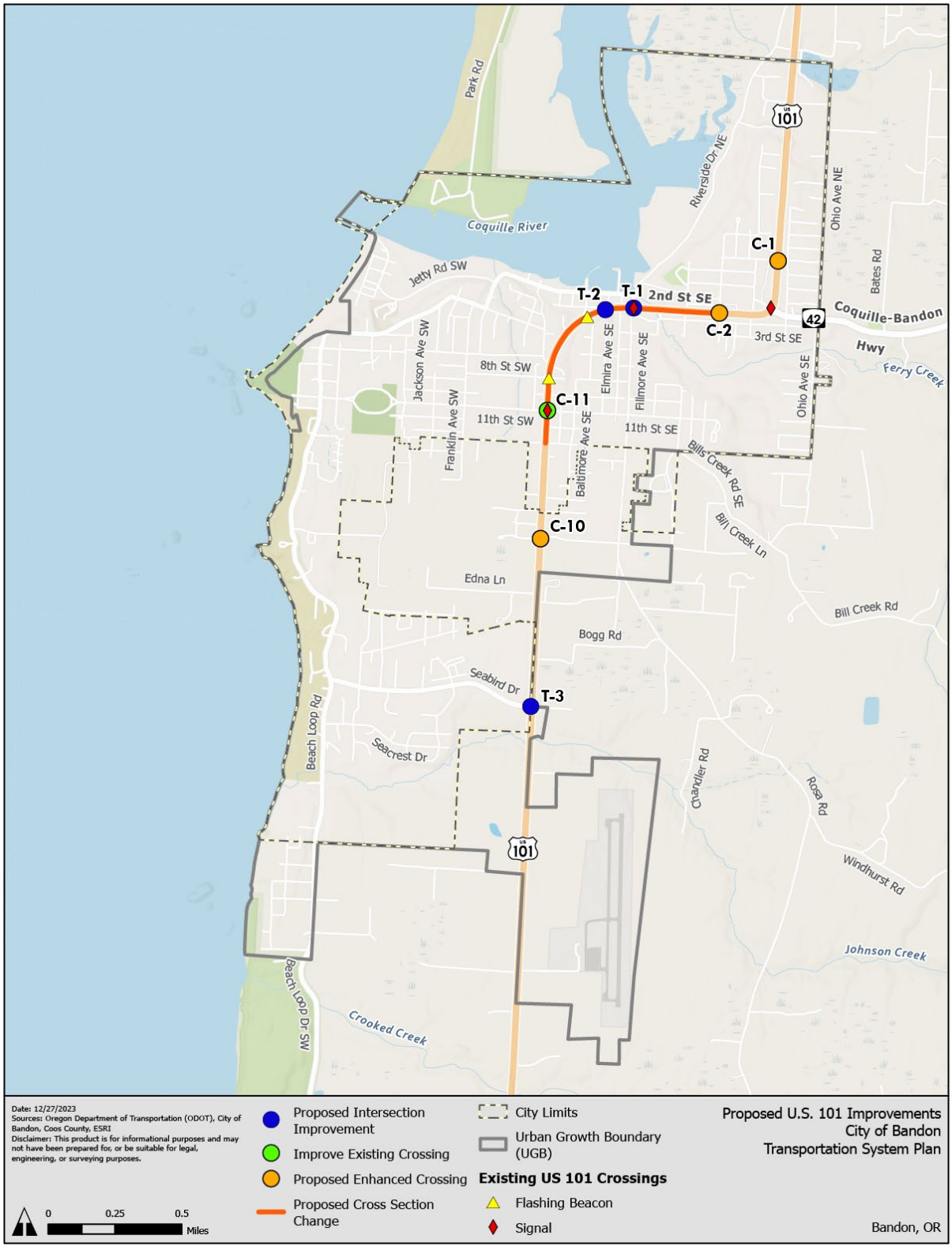


Figure 5-9. Proposed U.S. 101 Improvements

Note: All proposed new crossing locations on U.S. 101 are illustrative; exact crossing locations and improvement types would be determined during design after the TSP update is completed.

5.3.4 U.S. 101/2nd Street SE

The U.S. 101/2nd Street SE intersection is a popular entry point into Old Town Bandon. Residents' concerns coalesce around drivers speeding into Old Town from U.S. 101, creating a more dangerous and unpleasant environment. Two options to slow drivers entering Old Town, increase safety, and potentially increase Old Town commercial activity include the Public Plaza Alternative and Slip-Lane Alternative.

Public Plaza Alternative. This would expand the existing concrete median at the entrance to 2nd Street SE to form a public plaza (see Figure 5-10). This improvement would result in the following:

- Eliminate skew and realign intersection.
- Prevent high-speed westbound drivers from turning onto 2nd Street SE.
- Provide a continuous sidewalk route from U.S. 101 to Delaware Avenue SE.
- Eliminate three to four parking spaces on 2nd Street SE.
- Potentially impact freight mobility and access onto 2nd Street SE.
- Create public space that could be used for a larger gateway treatment or public plaza.

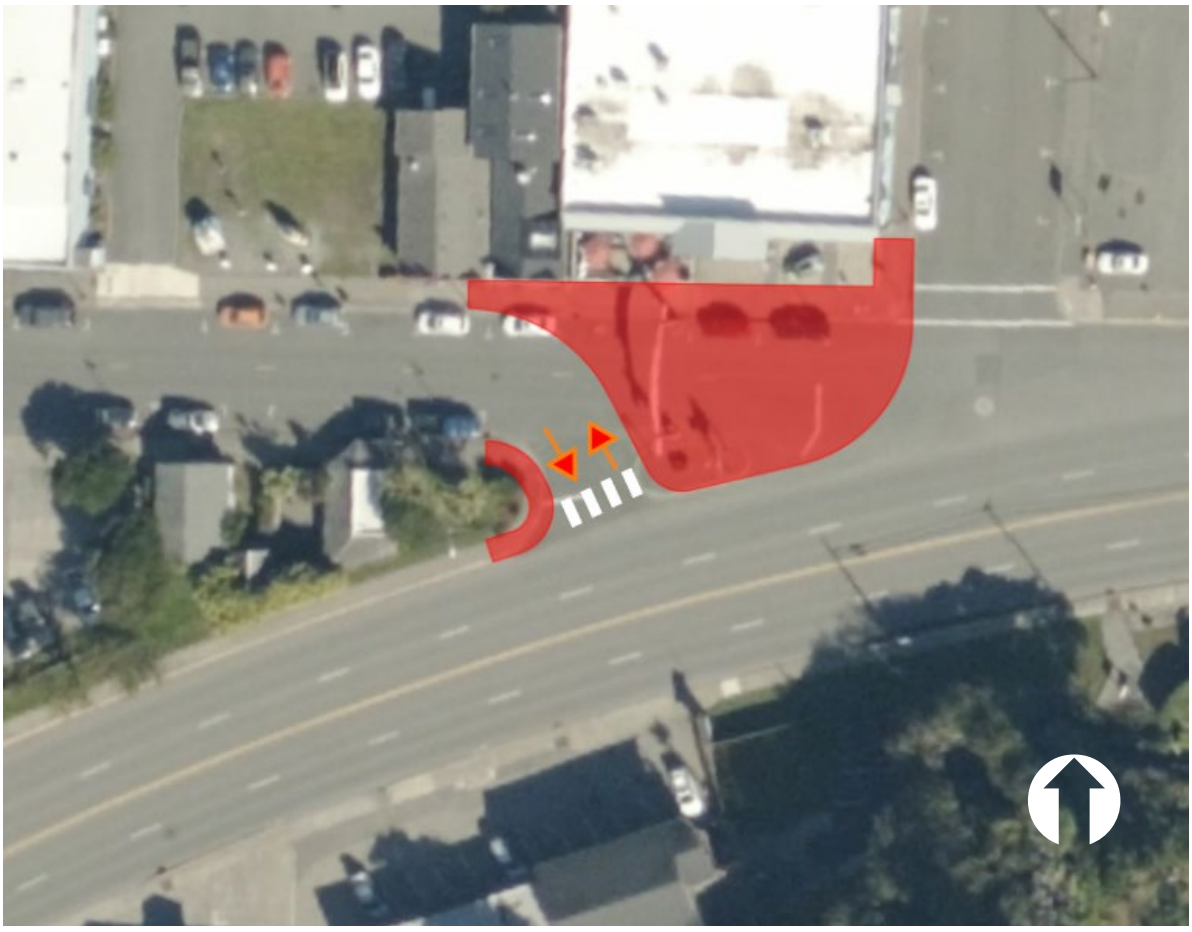


Figure 5-10. U.S. 101/2nd Street SE: Public Plaza Concept

Several lane reconfiguration alternatives are described in this section that if implemented, would affect the exact layout and configuration of the plaza concept. A dedicated right turn lane may be required to avoid traffic and safety impacts on the mainline of U.S. 101 if there were a single through lane westbound at this location.

Slip-Lane Alternative. A more restrained improvement would expand the existing concrete median at U.S. 101/2nd Street SE to form a slip lane (see Figure 5-11). This improvement would result in the following:

- Direct eastbound traffic on 2nd Avenue SE to use the slip lane when turning right onto U.S. 101.
- Reduce roadway width to slow vehicles turning right onto 2nd Street SE from U.S. 101.
- Maintain existing parking.
- Minimally impact freight mobility.
- Provide a channelized pedestrian crossing of 2nd Street SE with a pedestrian refuge island and reduce pedestrian crossing distance.

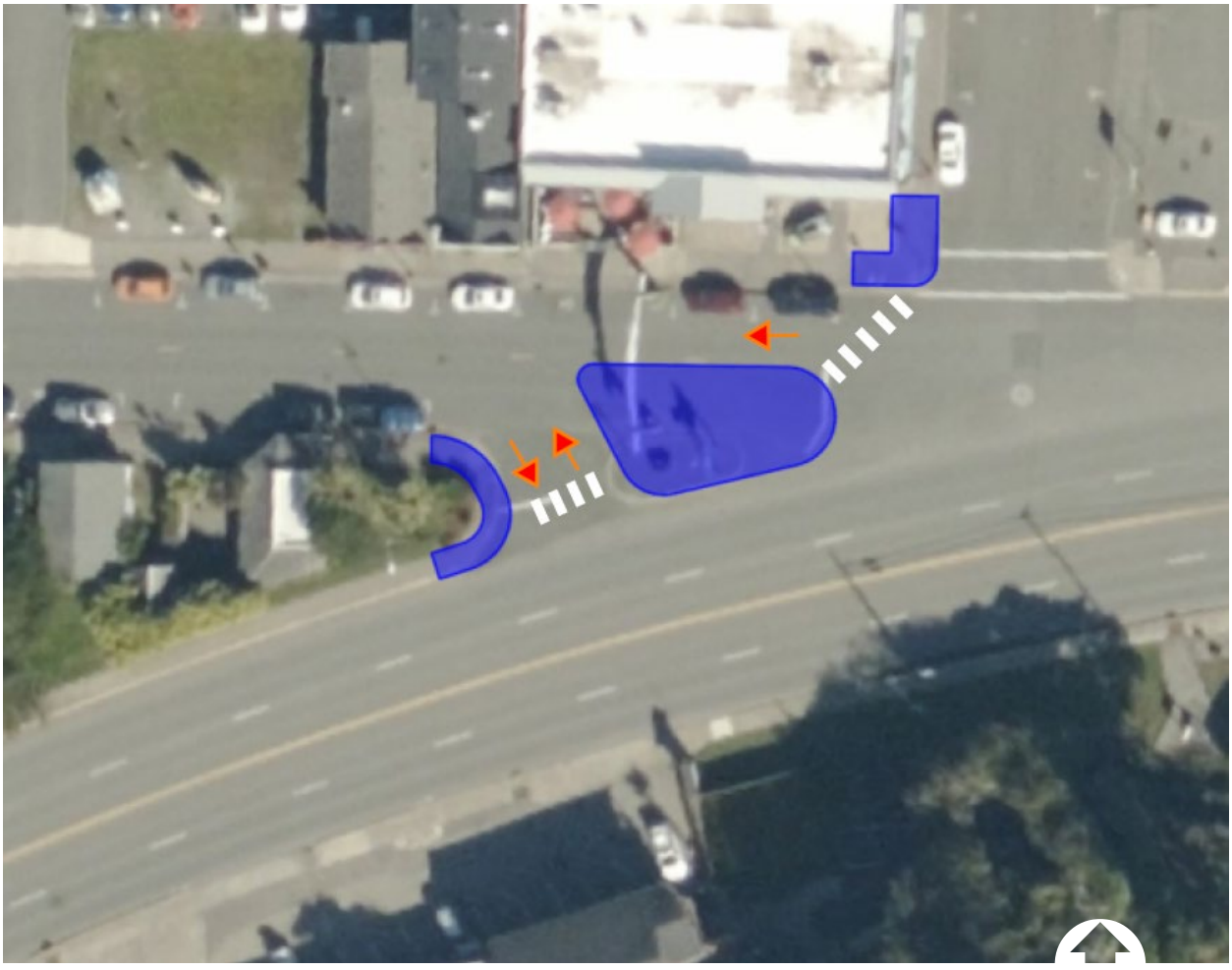


Figure 5-11. U.S. 101/2nd Street SE: Slip-Lane Concept

5.3.5 Traffic Operations Analysis

This section evaluates expected traffic operations of proposed U.S. 101 solutions in the previous sections. The traffic operations analysis is rooted in managing current and future demands on the existing transportation system and maintaining acceptable traffic flow with respect to adopted mobility standards.

State highway mobility standards are based on v/c ratios and were used to evaluate Existing and Year 2045 Future No-Build Conditions. None of the 14 study intersections are expected to exceed mobility standards in Existing Conditions or Year 2045 Future No-Build Conditions.

Level of service (LOS) is another metric that describes how well an intersection operates. Intersections receive a LOS grade from A to F, where LOS A represents the best conditions with minimal delay at the intersection and LOS F represents the worst conditions. The City of Bandon has not adopted LOS standards.

The intersection of U.S. 101 and 2nd Street SE/Delaware Avenue SE (intersection #5) would operate at LOS F in Year 2045 Future No-Build Conditions, and three other intersections would operate at LOS D. Though none of the study intersections would exceed mobility standards for the 30th highest annual hour of traffic (30 HV), during peak tourist season in the summer, congestion has been noted anecdotally by community members in downtown and occasionally on U.S. 101. Additionally, the intersection of U.S. 101 and Seabird Drive has been identified as needing improvements with incoming developments in southwest Bandon. Seabird Drive is one of the few connecting local streets to U.S. 101 in the area, and it would experience almost double the amount of traffic by Year 2045 No-Build Conditions due to the planned development.

Roadway and Intersection Improvements. The proposed roadway and intersection improvements were evaluated for Year 2045 and were compared to mobility standards from Table 1200-1 of the *Highway Design Manual* (ODOT 2023b). Proposed projects should make every effort to meet mobility standards, though there is a design exception process if absolutely necessary. The individual intersection improvements and lane reconfiguration were analyzed using Synchro and Sidra. Volume to capacity ratios, delay, and LOS were reported using the same reports and post-processing methods as Existing Conditions and Year 2045 Future No-Build Conditions. V/c ratios, delay, and LOS are summarized in Table 5-3.

Lane Reconfiguration. The intersections impacted by the U.S. 101 lane reconfiguration alternative were analyzed using Synchro. It was assumed that the signal timing for the signalized intersections would be optimized with the implementation of the U.S. 101 lane reconfiguration. Volume to capacity ratios, delay, and LOS were reported using the same reports and post-processing methods as Existing Conditions and Year 2045 Future No-Build Conditions. V/c ratios, delay, and LOS are summarized in Table 5-3. SimTraffic was used to determine 95th percentile queue lengths, which are summarized in Table 5-4. Note that a three-lane configuration was modeled (corresponding to Lane Reconfiguration Option A in previous sections). Reconfiguration Option B (which retains two travel lanes in one direction) would perform as well or better than Option A.

Traffic reports are available in Appendix A, Synchro, SimTraffic, and Sidra Reports.

Table 5-3. Future Build 2045 Traffic Operations – Alternative 3: Lane Reconfiguration Option A - V/C Ratio, Delay, and LOS

#	Intersection	Control	Existing and Future No-Build Mobility Standard	Future No Build Mainline Operations			Future No Build Side Street Operations			Future Build Mobility Standard	Future Build Mainline Operations			Future Build Side Street Operations			Exceeds Mobility Standard?
				v/c ratio	Delay (s)	LOS	v/c ratio	Delay (s)	LOS		v/c ratio	Delay (s)	LOS	v/c ratio	Delay (s)	LOS	
2	U.S. 101 & 11th Street SW/SE	Signal	v/c < 0.90	0.27	24	C	0.27	24	C	v/c < 0.75	0.43	24	C	0.43	24	C	No
3	U.S. 101 & Oregon Avenue SE	TWSC	v/c < 0.90	0.04	9	A	0.10	17	C	v/c < 0.75	0.04	9	A	0.14	19	C	No
4	U.S. 101 & Chicago Avenue SE	TWSC	v/c < 0.90	0.37	9	A	0.15	24	C	v/c < 0.75	0.11	9	A	0.22	36	E	No
5	U.S. 101 & 2nd Street SE/ Delaware Avenue SE	TWSC	v/c < 0.90	0.44	9	A	0.38	56	F	v/c < 0.75	0.09	9	A	0.43	59	F	No
6	U.S. 101 & Fillmore Avenue SE	Signal	v/c < 0.90	0.47	14	B	0.47	14	B	v/c < 0.75	0.49	18	B	0.62	18	B	No
8	U.S. 101 & 9th Street SW	TWSC	v/c < 0.90	0.02	48	A	0.19	27	D	v/c < 0.75	0.02	9	A	0.30	45	E	No

LOS = level of service; s = seconds; TWSC = two-way stop-controlled; v/c = volume to capacity ratio

Table 5-4. Future Build 2045 - Alternative 2: Lane Reconfiguration Option A - Traffic Operations – Queuing

#	Intersection/Approach	Control	Storage Length (ft)	Future No Build 95th Percentile Queue Length (ft)	Future Lane Reconfiguration 95th Percentile Queue Length (ft)	Exceeds Storage Length?
2	U.S. 101 & 11th Street SW/SE	Signal				
	Eastbound approach		> 1,000	200	175	No
	Westbound approach		200	150	150	No
	Northbound approach		> 1,000	175	325	No
	Southbound approach		260	275	**350**	**Yes**
3	U.S. 101 & Oregon Avenue SE	TWSC				
	Eastbound approach		200	50	75	No
	Northbound approach		240	50	50	No
	Southbound approach		490	25	0	No
4	U.S. 101 & Chicago Avenue SE	TWSC				
	Eastbound approach		900	50	50	No
	Westbound approach		500	25	0	No
	Northbound approach		200	25	25	No
	Southbound approach		250	75	75	No
5	U.S. 101 & 2nd Street SE/Delaware Avenue SE	TWSC				
	Northeastern approach		490	50	100	No
	Southwestern approach		440	25	50	No
	Eastbound approach		270	50	150	No
	Southbound approach		210	75	75	No
6	U.S. 101 & Fillmore Avenue SE	Signal				
	Eastbound approach		440	150	275	No
	Westbound approach		> 1,000	275	650	No
	Northbound approach		420	125	125	No
	Southbound approach		200	150	150	No
8	U.S. 101 & 9th Street SW	TWSC				
	Eastbound approach		200	50	50	No
	Westbound approach		210	50	25	No
	Northbound approach		250	50	50	No
	Southbound approach		240	50	50	No

ft = feet; TWSC = two-way stop-controlled

Traffic Analysis Results

U.S. 101 Alternative 2: Lane Reconfiguration Option A. Evaluation of the lane reconfiguration alternative (Alternative 2) shows that *one of the queue lengths would exceed the storage length or the space between intersections: the southbound approach at U.S. 101 and 11th Street SW/SE (intersection #2).* The 95th percentile queue length is 350 feet, which would back up through the two-way stop-controlled intersection of U.S. 101 and 10th Street SW/SE. *In most cases when testing the lane reconfiguration alternative, traffic operations worsen due to reduced capacity for vehicles on the mainline and fewer lanes for the vehicles on the side streets to turn into (if stop-controlled).* The only exception to this is for the mainline at the intersection of U.S. 101 & 2nd Street SE/Delaware Avenue SE and the intersection of U.S. 101 & Chicago. Without the lane reconfiguration, the left-turn and through movements share a lane, so through vehicles get stuck behind vehicles turning left. With the lane reconfiguration, the left turns have separate lanes in the two-way left-turn lane, so through vehicles may travel more freely.

Roadway and Intersection Improvements. Evaluation of the proposed roadway and intersection improvements shows that *none of the intersections are expected to operate with a v/c ratio that exceeds the mobility standard.* However, while the intersection of U.S. 101 and Filmore does not exceed the standard of v/c < 0.75 for the future year, with a v/c ratio of 0.62, it does begin to approach the standard.

5.3.6 Access Management

5.3.6.1 Standards

Along all segments within the Bandon UGB, U.S. 101 does not meet access spacing standards for a statewide highway. The minimum access spacing is 500 feet according to the ODOT *Oregon Highway Plan* (ODOT 2023c) standards, shown in Figure 5-12. Average access spacing in some areas of U.S. 101—especially between 11th Street SW and OR 42S—is approximately 200 feet. North of OR 42S, access spacing meets standards.

Note: The City of Bandon does not maintain local access standards. Local access management standards are described in Chapter 9, Standards and Targets.

Table 14: Access Management Spacing Standards for Statewide Highways with Annual Average Daily Traffic (AADT) of More Than 5,000 Vehicles

Posted Speed (mph)*	Rural Expressway **	Rural Areas	Urban Expressway ** ***	Urban Areas ****
	Spacing (ft)			
55 or higher	5280	1320	2640	1320
50	5280	1100	2640	1100
40 & 45	5280	990	2640	800
30 & 35	-	770	-	500
25 & lower	-	550	-	350

Figure 5-12. ODOT Access Management Spacing Standards

5.3.6.2 Access Management Strategies

Access management measures limit the number of redundant access points along roadways. This enhances roadway capacity, improves safety, and benefits circulation. Enforcement of the access spacing standards should be complemented with provision of alternative access points. Purchasing right-of-way and closing driveways without a parallel road system or other local access could seriously affect the viability of the impacted properties.

U.S. 101

As noted above, access spacing on U.S. 101 generally does not meet state standards. Revising accesses to the state highway can be a very expensive proposition if taken on by local or state agencies themselves. Taking this into account, the following strategies are recommended:

- Develop and adopt an access management plan for U.S. 101 in collaboration with ODOT. An access management plan would provide a long-term blueprint and guide for moving accesses closer to ODOT standards, and it would provide a mechanism for conversation and agreement with property owners along the highway for managing access.
- As development and redevelopment occurs along U.S. 101, consider how access can be revised, such as closing off open frontages, closing accesses entirely, or consolidating access points. *In all cases, access to properties must be maintained.*

Local

As part of development review, the City should evaluate conditioning a given proposal with the following in order to maintain and/or manage access appropriately and improve safety and operations:

- Provide access only to the lower-classification roadway when multiple roadways abut the property.
- Provide crossover easements on all compatible parcels (considering topography, access, and land use) to facilitate future access between adjoining parcels.
- Issue conditional access permits to developments having proposed access points that do not meet the designated access spacing policy or have the ability to align with opposing driveways.
- Dedicate right-of-way to facilitate the future planned roadway system in the vicinity of proposed developments.
- Install half-street improvements (sidewalks, curb and gutter, bike lanes/paths, or travel lanes) along site frontages that do not have full build-out improvements in place at the time of development.

6. Parking and Demand Management

Demand management strategies can encourage the use of walking, bicycling, public transportation, and other means of transportation in an effort to reduce driving and single-occupancy vehicle trips. Demand management strategies can improve mobility by reducing congestion, improve air quality, and reduce parking demand. Demand management strategies can focus on commuting or can be applied to other contexts, such as addressing the impacts of tourism on Bandon's transportation system.

Parking issues are concentrated in Old Town Bandon and on Beach Loop Road. Parking can be difficult to find during peak tourism seasons. The recommended approach to parking management is to follow a step-wise process that starts with low-cost interventions and moves to higher-cost interventions depending on performance. This includes the following possible steps:

- Maximize the existing supply of parking.
- Manage the existing supply of parking through time limits or other restrictions.
- Invest in options such as a circulator/tourist shuttle to make the best use of satellite parking areas and reduce demand on Old Town parking.
- Introduce parking pricing; this is effective, but it can be controversial and includes up-front costs.
- Develop new parking.

Table 6-1 describes potential parking management strategies, as well as demand management programs that can reduce auto travel in high demand areas as well as in the city overall.

Table 6-1. Parking and Demand Management Improvements

Parking/Demand Management Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
Striped parking on 1st Street SW	▪ Parking on 1st Street SW in the vicinity of Old Town is generally unstriped. Striping stalls is a proven strategy for encouraging more efficient use of parking space.	▪ Supports underserved populations with vehicle access by defining and enhancing availability of limited parking resources.	Minimal impact on VMT.	Low cost if City public works self-performs during annual striping.
Manage existing on-street parking supply in Old Town with time limits in the busiest areas. Time-limited parking requires periodic enforcement to be the most effective.	▪ Time-limited parking (e.g., maximum 2 hours) in areas with high turnover such as on Alabama, Baltimore, and Chicago Avenues can ensure that people can park to access businesses, but that they do not park all day in spots that are most appropriately used by business patrons. ▪ Some stalls should be signed for 15-minute parking or pick up-drop off only to ensure there are spots available for people with short-term parking needs.	▪ Supports proximal business access for people with disabilities. ▪ Supports disadvantaged business owners by increasing speed of pick-ups and deliveries.	Could result in drivers spending less time circling to find parking; moderate impact overall.	$10,000 for signage. 2 hours per week during peak season for staff enforcement.
Provide information to employers about dedicated areas for employee parking.	▪ The City and/or Chamber could collaborate with local business to identify areas where employees would ideally park outside of the immediate Old Town core to ensure most parking is available for people visiting Old Town.	▪ Increases accessibility of businesses to disadvantaged drivers.	Could result in drivers spending less time circling to find parking; moderate impact overall.	Minimal cost.
Large-vehicle parking. Sign parking to indicate where large/long vehicles (e.g., trucks, trailers, or boats) should park to avoid congesting Old Town parking.	▪ Designating certain areas for large-vehicle parking and signing the areas appropriately can reduce the issue of large vehicles taking up multiple parking stalls in key areas.	▪ Increases accessibility of parking stalls near businesses to disadvantaged drivers. ▪ Increases clarity of parking locations for disadvantaged drivers with large vehicles.	Could result in drivers spending less time circling to find parking; low impact overall.	$5,000 for signage.
Circulator shuttle connecting satellite lots (see Chapter 7, Public Transportation Improvements).	▪ Providing designated shuttle-accessible parking areas outside of Old Town could reduce parking demands on Old Town. Satellite locations and shuttle schedule would need to be prominently advertised to be effective.	▪ Provides more low-cost travel options for disadvantaged populations without car access,	Could increase public transit use, resulting in fewer miles driven by car; moderate impact overall.	See Chapter 7, Public Transportation Improvements for costs. Satellite parking would ideally make

Parking/Demand Management Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
				use of existing lots (no new lots).
Beach Loop Road parking management. Develop signage indicating no-parking areas and stripe parking where appropriate (e.g., on side streets).	▪ Signage would help deter illegal parking on Beach Loop Drive, but periodic enforcement is required for this strategy to be most effective. Striping on side streets could make it clear to drivers where parking is allowed and maximize the parking potential of existing curbspace.	▪ Improves safety for people without car access who are walking along Beach Loop Road. ▪ Decreases parking options along Beach Loop Road for disadvantaged populations with car access.	May result in people using alternate modes of travel or carpooling due to reduced parking area; low impact overall.	$10,000 for signage. 2 hours per week during peak season for staff enforcement. Low cost if City public works self-performs during annual striping.
"Know before you go" travel information site/media. Establish program to provide transportation options and parking information to hotel and short-term rental guests prior to arrival in Bandon.	▪ Info on where to park, how to use the local dial-a-ride and rideshare services, walking travel times between key destinations.	▪ Increases awareness of alternative transportation options for guests with disabilities as well as with limited or no car access.	May result in guests using alternative transportation modes; low impact overall.	Staff costs to maintain information and disseminate to hotels and short-term rental owners.

EJ = environmental justice; VMT = vehicle miles traveled

7. Public Transportation Improvements

Presently, Bandon's only local public transit service is the Bandon Dial-a-Bus service with intercity service provided by Curry County Transit (the Bandon stop is at Ray's Food Place). Potential transit improvements and investments are discussed in Table 7-1. There are no natural resource impact concerns associated with the improvements identified below.

Curry County Transit recently completed its *Transit Development Plan (TDP)*. There are no proposed service improvements in Bandon. Some stop improvements are proposed as noted in the table below.

Table 7-1. Public Transportation Improvements

Transit Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
Coastal Express Stop at Ray's Food Place (66 Michigan Avenue NE). Improve signage, consider covered shelter. Included in the Curry County Transit TDP.	▪ Provide a bench in the covered area and provide at least one bike rack.	▪ Supports disadvantaged populations who may not have access to a personal vehicle	▪ Could encourage greater transit use; low impact overall	$
Coastal Express Stop at Ray's Food Place – bike/ped access improvements. Curry County's TDP includes recommended bike/ped access improvements to the existing stop.	▪ Provide bike facilities along 2nd Street NE and 1st Street SE to improve bicycle connectivity. ▪ Improve sidewalk connectivity on the north side of NE 2nd Street. ▪ Improve ADA ramps condition. ▪ Provide crossing opportunities at U.S. 101/NE 2nd Street.	▪ Improves safety for people traveling who lack access to a car. ▪ Increases access to essential destinations for people who lack access to a car and for people with disabilities.	▪ Could increase share of trips to transit taken by walking and biking; low impact overall. ▪ Could reduce parking demand by people who drive to take transit; low impact overall.	<$
Better information about existing services. This could include printed information at key community destinations and better online information on the City's website. This could also include making public transportation information available in multiple languages.	▪ Public feedback indicates that making info about the existing dial-a-bus service and Coastal Express more readily available would reduce barriers to usage.	▪ Increases awareness of existing transit services to disadvantaged populations. ▪ Equitably informs people without access to electronic devices about existing services. ▪ Informs people who speak a language other than English about services available.	▪ Could increase transit ridership; moderate impact overall.	<$

Transit Improvement	Benefit or Impact	Title VI/EJ Population Impact	Potential Reduction in VMT	Cost Opinion
Local Circulator or Tourist Trolley. A local tourist trolley service existed previously. A local circulator shuttle that connects to key destinations such as the downtown area, multifamily housing, and grocery stores could be implemented year-round or seasonally.	▪ A local circulator shuttle or trolley would likely need to be implemented locally in partnership with the Bandon Chamber of Commerce or other partners. ▪ Would require ongoing funding. ▪ Potential benefits include allowing visitors to leave their car at home or place of lodging, reduced parking needs in downtown, or providing better connections to local destinations for local residents.	▪ Provides a way for people without access to a vehicle to reach local essential destinations. ▪ Reduces disadvantaged populations' transportation expenditures.	▪ Could reduce quantity of car trips taken to popular local destinations; moderate impact overall.	Assumes one vehicle and no spares. Purchase vehicle: $400,000 Stop improvements (just signage): $20,000 Operations (10 hours per day, 6 days a week, year-round): $350,000
Rideshare Services. Subsidized rideshare services, such as Uber and Lyft, or other on-demand services may be more beneficial to community members and visitors rather than fixed-route bus service.	▪ Would provide a new option that supplements existing dial-a-ride service. However, these services can be costly to implement, and they would require ongoing funding. ▪ Additionally, the cost-per-ride of these services can be high relative to funding other options such as a local circulator shuttle.	▪ Increases mobility of disadvantaged populations without access to a car. ▪ Increases likelihood of shared trips for disadvantaged populations without access to a car.	▪ Could encourage more carpooling efforts; low impact overall. ▪ Could increase VMT due to drivers' deadhead miles; negative impact overall.	Depends on level of subsidy per ride.

$ to $$$$ = indicates cost from least expensive to most expensive; EJ = environmental justice; TDP = transit development plan; VMT = vehicle miles traveled

7.1 Local Street System

7.1.1 Connectivity and Street Extensions

Figure 7-1 and Table 7-2 illustrate and describe future needed street connections. These connections address needed connectivity through future street connections that increase access and serve development; future street connections are focused on collector and higher-order streets with the knowledge that local street layout will be determined through platting or development.

New collector streets are proposed to serve undeveloped areas within City limits that may be slated for future development. Local street extensions support undeveloped properties and local street connectivity.

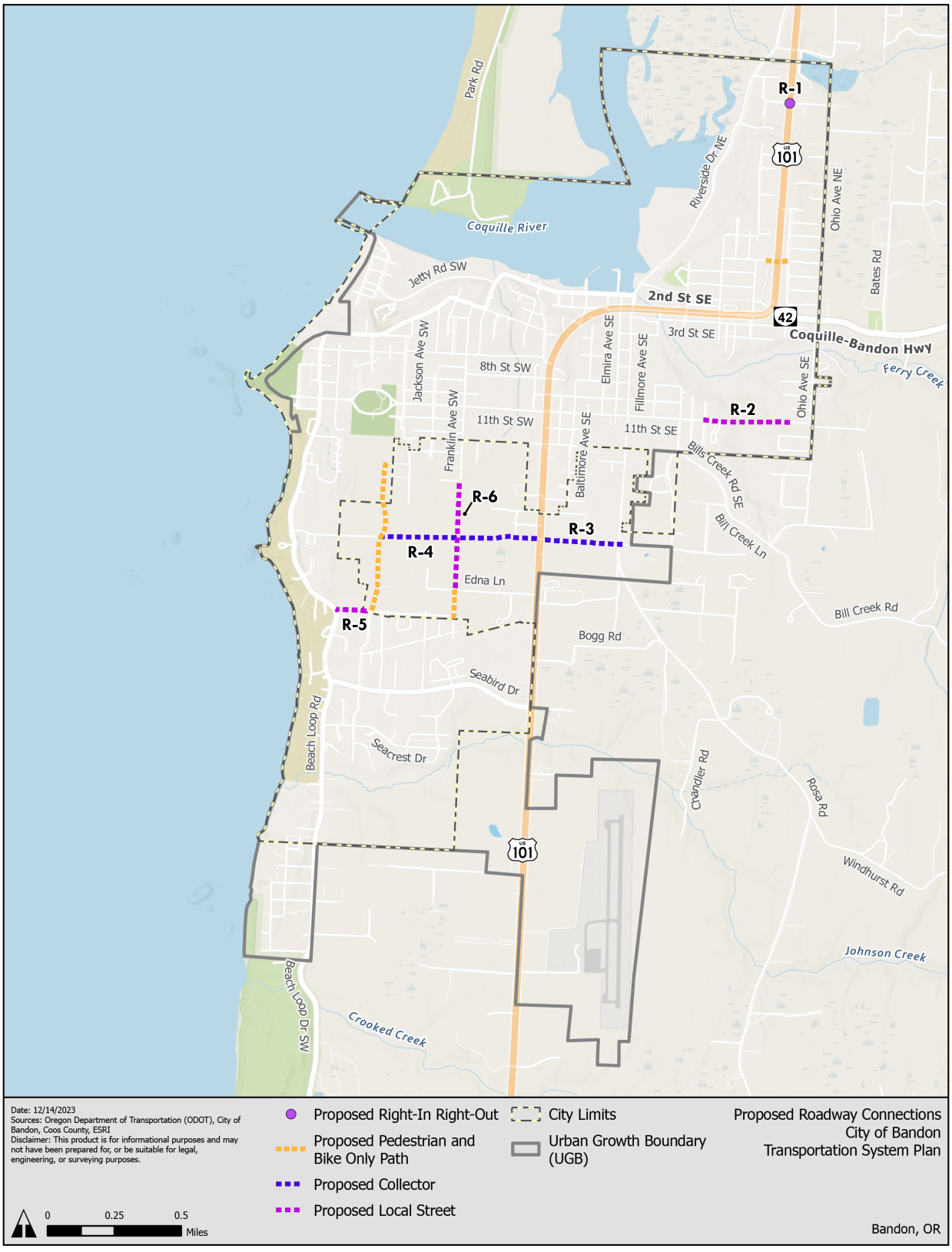


Figure 7-1. Proposed Roadway Connections

Table 7-2. Proposed Roadway Connections

Map ID	Description	Benefit or Impact	Environmental or Cultural Resource Issue	Cost
R-1	Access. 2nd Street NE – right-in right-out from Fahy onto U.S. 101	▪ Would allow neighborhoods east and west of U.S. 101 access to a more direct north-south connection into and out of town.	▪ Minimal impact – roadway previously connected in this location.	$$
R-2	Local Street. 11th Street extension to Ohio Street neighborhood	▪ Would provide an east-west connection for neighborhoods on the east side of town.	▪ Potential environmental and cultural resources in this area. Surveys and mitigation may be required.	$$$$
R-3	Collector. 20th Street east of U.S. 101	▪ Would provide an additional east-west connection from U.S. 101 to neighborhoods on the east side of town. ▪ Would allow large trucks accessing industrial areas to turn off of U.S. 101 earlier, so they could avoid driving through central Bandon.	▪ Potential environmental and cultural resources in this area, though an existing dirt road is present.	$$$$
R-4	Collector. Face Rock to 20th Street	▪ Would provide an additional east-west connection from destinations on the coast (and Beach Loop Road) to U.S. 101. ▪ Could alleviate traffic pressure on the existing roadway system.	▪ Likely environmental and cultural resources in this area, including wetlands. Surveys and mitigation may be required.	$$$$
R-5	Local Street. Beach Loop Road to Carter Street	▪ Would provide an additional east-west connection for neighborhoods north of Seabird Drive and alleviate traffic pressure on Beach Loop Road and Seabird Drive.	▪ Potential environmental and cultural resources in this area. Surveys and mitigation may be required. ▪ Gravel Point developers would likely be responsible for mitigation.	Potential to be funded by Gravel Point developers.
R-6	Local Street: Franklin Ave extension to Edna Street	▪ Would provide an additional north-south connection to community destinations such as the library, schools, City Park, and Old Town from residential areas in southwest Bandon. ▪ Could alleviate traffic pressure on the existing roadway system.	▪ Likely environmental and cultural resources in this area, including wetlands. Surveys and mitigation may be required.	$$$$

Notes:

Where new roadway connections are proposed, pedestrian and bicycle facilities may also be proposed.

R-4 and R-6: exact locations of north-south and east-west street extensions through the Donut Hole will require refined planning studies and wetland delineations, and may be affected by future development.

$ to $$$$ = indicates cost from least expensive to most expensive

7.2 Additional Street System Considerations

Following are additional street system considerations:

- **Signal coordination**. Traffic signal coordination should be implemented on U.S. 101 if/when signal hardware is upgraded.
- **One-way/two-way conversions**. No conversions are proposed.
- **Changes to speed limits or signage**. No speed limit changes are proposed. Speeding is a concern on U.S. 101 especially; U.S. 101 alternatives described above would encourage drivers to adhere closer to the posted speed limit.
- **Systems management and operations strategies**. No specific strategies are proposed.

8. Improvements Evaluation

Table 8-2 shows the evaluation of the projects and programs considered in the previous sections. The technical evaluation aids in selection of the preferred improvements in combination with feedback received from the City, ODOT, other interested parties, and the public.

8.1 Evaluation Criteria

Table 8-1 shows the evaluation criteria developed previously. Each project and program idea is evaluated using a *Consumer Reports*-type scale as follows:

- ● Project meets or fully addresses the criterion.
- ◖ Project partially meets or addresses the criterion.
- ○ Project does not meet or has negative impacts with respect to the criterion.
- N/A Not applicable.

In some cases, there are multiple alternatives for addressing a given transportation issue. The evaluation criteria help to determine which alternatives have the most merit for further consideration in the updated TSP.

Improvements are identified as near-term (0 to 5 years), medium-term (5 to 10 years), and long-term (> 10 years) based on their perceived level of implementation difficulty, as well as on the timing and scale of the need a given project or program addresses.

Table 8-1. Project and Program Evaluation Criteria

Goal	Criterion	Measure
Goal 1. Transportation for All Users	Project enhances multimodal options for people who walk, bike, or use a mobility device, and considers the needs of groups that have difficulty in obtaining transportation because of their age, income, or physical or mental disability.	Qualitative assessment of effects on multimodal access or improved mobility options for low-income residents, elderly populations, youth, or people living with disabilities.
	Project enhances connectivity while maintaining acceptable traffic flow and minimizing delay citywide.	Effects on v/c ratio, LOS, queue lengths, parking, etc.
Goal 2. Economy and Livability	Project supports transportation-disadvantaged populations and avoids disproportionate negative impacts to social, economic, or environmental resources.	Qualitative assessment based on available data.
Goal 3. A System for All Modes	Project enhances connectivity, safety, and comfort of walking and cycling network, improves access to key destinations, and reduces the need for driving	Improvement to cycling or walking network connectivity, including an increase in separated cycling or walking facilities. Improves bike or pedestrian level of traffic stress. Qualitative assessment of project's impact on safety, comfort, or access for people walking, biking, or using a mobility device.
Goal 4. Sustainability	Project avoids impacts to estuary, the shoreline, wetlands, and natural features, as well as cultural resources and archaeological sites.	Qualitative assessment based on potential impacts to important natural resources.
	Project would create new connections to lifeline/evacuation routes or enhance existing.	Qualitative assessment of effects on lifeline/evacuation routes.
Goal 5. Fiscal Responsibility	Project provides high benefits relative to costs.	Cost-benefit assessment.
	Project would likely be eligible for one or more grant programs.	Project's likely consistency with existing grant program goals.

v/c = volume to capacity, LOS = level of service

8.2 Evaluation Table

Table 8-2. Evaluation of Proposed Improvements

Improvement Concept	Planning-Level Cost	Jurisdiction	Enhances Multimodal Options	Minimizes Delay	Walking/ Cycling Improvement	Avoids Environmental and Cultural Impacts	Enhances Lifeline/ Evacuation Routes	Cost- Benefit	Recommendation	Improvement Time Frame: Near-, Medium-, Long-Term
Pedestrian and Bicycling Improvements										
PBO-1: Lincoln-Jackson Avenue Bike/Ped Path	$$$	Bandon	●	◖	●	○	●	●		Medium-term
PBO-2: Edna Bike/Ped Path	$	Bandon	●	◖	●	◖	●	●		Medium-term
PBO-3: U.S. 101 to 2nd Street NE (east side)	$$	ODOT	●	◖	●	◖	●	●		Near-term
PB-1: Riverside: SUP (separated path or boardwalk)	$ to $$$$	Bandon	●	●	●	○	●	○		Long-term
PB-1: Riverside: Close northbound lane and add ped/bike facilities		Bandon	●	○	●	●	●	◖		Medium-term
PB-1: Riverside: Greenway with traffic calming improvements and sidepath		Bandon	◖	○	●	◖	◖	●		Near-term
PB-2: Jetty Road: Planned pathway that connects First Street SW in Old Town out to the jetty	$$	Bandon	●	◖	●	◖	●	●		Near-term
PB-3: Beach Loop Road: SUP (separated path or boardwalk)	$$ to $$$$	Bandon	●	●	●	◖	●	●		Medium-term
PB-3: Beach Loop Road: Bike lanes and sidewalks		Bandon	●	●	●	◖	●	◖		Medium-term
PB-3: Beach Loop Road: Greenway with sidepath		Bandon	◖	◖	●	●	◖	◖		Medium-term
PB-4: Seabird Drive: SUP (separated path or boardwalk)	$$ to $$$$	Bandon	●	◖	●	◖	●	◖		Medium-term
PB-4: Seabird Drive: Bike lanes and sidewalks		Bandon	●	◖	●	◖	●	●		Medium-term
PB-4: Seabird Drive: Greenway with sidepath		Bandon	◖	◖	●	●	◖	◖		Medium-term
PB-5: Beach Loop to Carter: Greenway with sidepath	Potential to be funded by Gravel Point developers.	Bandon	●	◖	●	●	●	●		Medium-term
PB-6: 20th Street (Face Rock to U.S. 101): SUP (separated path or boardwalk)	$$ to $$$$	Bandon	●	●	●	○	●	●		Long-term
PB-6: 20th Street (Face Rock to U.S. 101): Bike lanes and sidewalks		Bandon	●	●	●	○	●	●		Long-term
PB-6: 20th Street (Face Rock to U.S. 101): Greenway with sidepath		Bandon	◖	◖	●	○	◖	◖		Long-term
PB-7: 20th Street (U.S. 101 to Fillmore): SUP (separated path or boardwalk)	$$ to $$$$	Bandon	●	●	●	◖	●	●		Long-term
PB-7: 20th Street (U.S. 101 to Fillmore): Bike lanes and sidewalks		Bandon	●	●	●	◖	●	●		Long-term
PB-7: 20th Street (U.S. 101 to Fillmore): Greenway with sidepath		Bandon	◖	◖	●	◖	◖	◖		Long-term

Improvement Concept	Planning-Level Cost	Jurisdiction	Enhances Multimodal Options	Minimizes Delay	Walking/ Cycling Improvement	Avoids Environmental and Cultural Impacts	Enhances Lifeline/ Evacuation Routes	Cost- Benefit	Recommendation	Improvement Time Frame: Near-, Medium-, Long-Term
PB-8: Franklin Ave SW (Edna to 16th Street): SUP (separated path or boardwalk)	$$ to $$$$	Bandon	●	●	●	○	●	●		
PB-8: Franklin Ave SW (Edna to 16th Street): Bike lanes and sidewalks		Bandon	●	●	●	○	●	●		
PB-8: Franklin Ave SW (Edna to 16th Street): Greenway with sidepath		Bandon	◖	◖	●	○	◖	◖		
Pedestrian Improvements										
P-1: Oregon Avenue: Connect existing sidewalks to Monkey Hill path and Old Town	$	Bandon	●	●	●	◖	●	●		Medium-term
P-2: 8th Street (Franklin to Oregon): Sidewalks	$$	Bandon	●	●	●	◖	●	●		Medium-term
P-3: 11th Street: Sidewalks on culvert	$$	Bandon	●	●	●	○	●	●		Near-term
C-1: U.S. 101/2nd Street NE: New enhanced crossing	$$ to $$$	ODOT, Bandon	●	◖	●	●	●	●		Medium-term
C-2: U.S. 101/June Ave: New enhanced crossing	$$ to $$$	ODOT, Bandon	●	◖	●	●	●	●		Medium-term
C-3: Old Town: Enhance existing crossings	$ to $$	Bandon	●	◖	●	●	●	◖		Medium-term
C-4: School Campus: New standard marked crossings adjacent to school campus	$ to $$	Bandon	●	◖	●	●	●	●		Near-term
C-5: 8th Street/Edison Avenue SW: Enhance existing crossing	$ to $$	Bandon	●	◖	●	●	●	◖		Near-term
C-6: Jetty Path/Edison: New standard crossing	$	Bandon	●	◖	●	●	●	●		Near-term
C-7: Beach Loop Road/Face Rock: New standard crossing	$	Bandon	●	◖	●	●	●	●		Near-term
C-8: Beach Loop Road/Carter Street SW: New standard crossing	$	Bandon	●	◖	●	●	●	●		Medium-term
C-9: Beach Loop Road/Seabird Drive: New standard crossing. Increase triangle sight distance for the stop-controlled leg (Seabird Drive)	$$	Bandon	●	◖	●	●	●	●		Near-term
C-10: U.S. 101/20th Street: New enhanced crossing	$$ to $$$	ODOT, Bandon	●	◖	●	●	●	◖		Medium-term
C-11: U.S. 101/11th Street: Enhance existing crossing	$$ to $$$	ODOT, Bandon	●	◖	●	●	●	◖		Near-term
Enhance existing crossings on U.S. 101	$$ to $$$	ODOT, Bandon	●	◖	●	●	●	◖		Near-term
Citywide ADA ramp upgrades	Depends on the number of ramps at each intersection.	Bandon	●	●	●	●	●	●		Near-term
Pedestrian-scale lighting	$$ to $$$	Bandon	◖	◖	●	●	◖	◖		Medium-term

Improvement Concept	Planning-Level Cost	Jurisdiction	Enhances Multimodal Options	Minimizes Delay	Walking/ Cycling Improvement	Avoids Environmental and Cultural Impacts	Enhances Lifeline/ Evacuation Routes	Cost- Benefit	Recommendation	Improvement Time Frame: Near-, Medium-, Long-Term
Bicycling Improvements										
B-1: U.S. 101 (Fillmore Ave SE to 13th St SW) Striped bike lanes	$	ODOT, Bandon	●	◖	●	●	●	●		Medium-term
B-2: Fillmore Avenue SE / Rosa Road (11th St SW to 20th St SE) Striped bike lanes	$	Bandon	●	◖	●	●	●	●		Medium-term
G-1: Michigan Avenue NE Greenway	$	Bandon	●	◖	●	●	●	●		Near-term
G-2: June Avenue NE Greenway	$	Bando	●	◖	●	●	●	●		Near-term
G-3: Division Street NE Greenway	$	Bandon	●	◖	●	●	●	●		Near-term
G-4: Ohio Avenue NE Greenway	$	Bandon	●	◖	●	●	●	●		Near-term
G-5: 3rd Street SE Greenway	$	Bandon	●	◖	●	●	●	●		Near-term
G-6: 1st Street SW Greenway	$	Bandon	●	◖	●	●	●	●		Near-term
G-7: Franklin Avenue SW Greenway	$	Bandon	●	◖	●	●	●	●		Near-term
G-8: Jackson Avenue SW Greenway	$	Bandon	●	◖	●	●	●	●		Near-term
G-9: School Campus Greenway	$	Bandon	●	◖	●	●	●	●		Near-term
G-10: 11th Street SW/SE Greenway	$	Bandon	●	◖	●	●	●	●		Near-term
G-11: Harvard Street SE Greenway	$	Bandon	●	◖	●	●	●	●		Medium-term
G-12: Face Rock Drive Greenway	$	Bandon	●	◖	●	●	●	●		Medium-term
G-13: 24th Street SW Greenway	$	Bandon	●	◖	●	◖	●	●		Medium-term
Traffic and Safety Improvements										
U.S. 101 General Safety Improvements: Street lighting	$$$	ODOT, Bandon	●	◖	●	◖	◖	●		Medium-term
T-1: U.S. 101/Fillmore Avenue SE: Replace permissive left turns to protected/permissive for U.S. 101	$	ODOT, Bandon	●	○	●	●	◖	●		Medium-term
T-2: U.S. 101/2nd Street SE: Alternative 1: Public Plaza	$$$	ODOT, Bandon	●	○	●	●	◖	◖		Long-term
T-2: U.S. 101/2nd Street SE: Alternative 2: Slip-Lane	$$$	ODOT, Bandon	●	◖	●	●	◖	●		Long-term
T-3: U.S. 101/Seabird Drive: Add eastbound left turn lane onto U.S. 101	$	ODOT, Bandon	◖	●	◖	●	◖	●		Near-term

Improvement Concept	Planning-Level Cost	Jurisdiction	Enhances Multimodal Options	Minimizes Delay	Walking/ Cycling Improvement	Avoids Environmental and Cultural Impacts	Enhances Lifeline/ Evacuation Routes	Cost- Benefit	Recommendation	Improvement Time Frame: Near-, Medium-, Long-Term
Parking and Demand Management										
Striped parking on 1st Street SW.	Low cost if City public works self-performs during annual striping.	Bandon	◐	◐	◐	●	◐	●		Near-term
Manage existing on-street parking supply in Old Town with time limits in the busiest areas. Time-limited parking requires periodic enforcement to be the most effective.	$10,000 for signage. 2 hours per week during peak season for staff enforcement.	Bandon	◐	●	◐	●	◐	◐		Medium-term
Provide information to employers about dedicated areas for employee parking.	Minimal cost.	Bandon	◐	◐	◐	●	◐	●		Near-term
Large-vehicle parking: sign parking to indicate where large/long vehicles (e.g., trucks, trailers or boats) should park to avoid congesting Old Town parking.	$5,000 for signage.	Bandon	◐	◐	◐	●	◐	●		Near-term
Circulator shuttle connecting satellite lots (see Chapter 7, Public Transportation Improvements).	See Chapter 7, Public Transportation Improvements for costs.	Bandon	●	●	◐	●	◐	◐		Medium-term
Beach Loop Road parking management: develop signage indicating no-parking areas and stripe parking where appropriate (e.g., on side streets).	$10,000 for signage. 2 hours per week during peak season for staff enforcement. Low cost if City public works self-performs during annual striping.	Bandon	◐	◐	◐	●	◐	●		Near-term
"Know before you go" travel information site/media: establish program to provide transportation options and parking information to hotel or short-term rental guests prior to arrival in Bandon.	Staff costs to maintain information and disseminate to hotels and short-term rental owners.	Bandon	●	●	◐	●	◐	●		Near-term

Improvement Concept	Planning-Level Cost	Jurisdiction	Enhances Multimodal Options	Minimizes Delay	Walking/ Cycling Improvement	Avoids Environmental and Cultural Impacts	Enhances Lifeline/ Evacuation Routes	Cost- Benefit	Recommendation	Improvement Time Frame: Near-, Medium-, Long-Term
U.S. 101 Corridor Alternatives										
Alternative 1: Widen existing roadway to maintain four travel lanes, one two-way left turn lane, and sidewalks while adding 6-foot-wide bike lanes with 2-foot-wide buffer.	$$$$	ODOT, Bandon	●	●	●	◖	●	○		Long-term
Alternative 2 (Lane Reconfiguration Option A): Remove one travel lane in each direction, add 6-foot-wide bike lanes with 2-3 foot-wide buffer.	$$ to $$$ if a simple restriping. If full road re-pave is required, costs significantly higher.	ODOT, Bandon	●	○	●	●	◖	●		Medium-term
Alternative 3 (Lane Reconfiguration Option B): Remove one travel lane in one direction, add 6-foot-wide bike lanes with 2 foot-wide buffer.	$$ to $$$ if a simple restriping. If full road re-pave is required, costs significantly higher.	ODOT, Bandon	●	◖	●	●	◖	●		Medium-term
Alternative 4: Widen existing sidewalk on one or both sides of U.S. 101 to 10 feet wide and designate as a shared-use path. Add 2-foot landscape buffer in between path and travel lanes.	$$$$	ODOT, Bandon	●	●	●	◖	●	○		Long-term
Note: If a lane reconfiguration alternative is chosen, a temporary lane reconfiguration may be recommended to demonstrate the benefits, challenges, and outcomes of a lane reconfiguration before investing in higher-cost improvements, and can also be used to gauge public perception of improvements.										
Roadway Connections										
R-1: Access: 2nd Street NE – right-in right-out from Fahy onto U.S. 101	$$	ODOT, Bandon	◖	●	◖	●	●	●		Medium-term
R-2: Local Street: 11th Street extension to Ohio Street neighborhood	$$$$	Bandon	◖	●	◖	○	●	●		Long-term
R-3: Collector: 20th Street east of U.S. 101	$$$$	ODOT, Bandon	◖	●	◖	○	●	●		Medium-term
R-4: Collector: Face Rock to 20th Street	$$$$	ODOT, Bandon	◖	●	◖	○	●	◖		Long-term
R-5: Local Street: Beach Loop Road to Carter Street	Potential to be funded by Gravel Point developers.	Bandon	◖	●	◖	○	●	●		Medium-term
R-6: Local Street: Franklin Ave extension to Edna Street	$$$$	Bandon	◖	●	◖	○	●	◖		Long-term

9. Standards and Targets

9.1 Local Street Standards

Table 9-1 shows Bandon's current adopted local street standards. These apply to new or redeveloped local streets.

Table 9-1. City of Bandon Local Street Standards

Street Characteristic	Arterial	Commercial	Collector		Local	
			28 ft Wide	34 ft Wide	Continuous	Cul-de-sac
Right-of-way	80 to 100 ft	60 to 80 ft	60 ft	60 ft	60 ft	60 ft plus cul-de-sac
Vehicular Travel Width	24 to 48 ft	24 ft	28 ft	24 ft	20 ft	20 ft
Travel Lanes	2 or 4, 12 ft each	2, 12 ft each	2, 14 ft each	2, 12 ft each	2, 10 ft each	2, 10 ft each
Parking	0 to 2, 8 ft	2, 8 to 19 ft each	None	None	1, 8 ft	1, 8 ft
Curb and Gutter	Yes	Yes	Yes	Yes	Yes	Yes
Bike Lanes	2, 6 ft	No	No	2, 5 ft	No	No
Sidewalks	2, 8 ft	2, 6 to 8 ft	2, 5 or 6 ft	2, 5 or 6 ft	1, 5 ft (Required) 1, 5 ft (Optional)	1, 5 ft (Required for full length)
Turnaround Radius	N/A	N/A	N/A	N/A	N/A	40 ft
Pavement Width	36 to 76 ft	40 to 62 ft	28 ft	34 ft	28 ft	28 ft
Minimum Pavement Depth	ODOT Standards	3 in	3 in	3 in	2 in	2 in
Minimum Base Rock Depth	ODOT Standards	10 in	10 in	10 in	10 in	10 in

ft = feet; in = inches; N/A = not applicable

Table 9-2 lists potential recommended updates or considerations for the local street standards to reflect the latest best practices in transportation system design and development, considering both American Association of State Highway and Transportation Officials and National Association of City Transportation Officials standards. As no new arterial streets have been identified, the proposed updates to local street standards focus on Commercial, Collector, and Local street classifications.

Table 9-2. Proposed Local Street Standards

Street Characteristic	Commercial		Collector		Local	
	Current	Potential Change	Current	Potential Change	Current	Potential Change
Travel Lane Width	12 ft	No change.	14 ft	Minimum 12-ft lanes.	10 ft	No change.
Parking	2, 8 ft (19 ft long)	Consider changing minimum to one side.	None	No change.	One side, 8 ft, optional two sides	Maximum one side.
Bike Lanes	None	Both sides, 6 ft.	None	Both sides, 6 ft.	None	None, but add sharrows or greenway treatments if part of Neighborhood Greenway system.
Sidewalks	Both sides, 6 to 8 ft	No change.	Both sides, 5 or 6 ft	Both sides, 6 ft minimum.	One side, 5 ft	One side, minimum 6 ft wide. Consider allowing at-grade walkways if there is no curb or gutter.
Provision of Conduits	No standard	At the direction of the city engineer.	No standard	At the direction of the city engineer.	No standard	None.

ft = feet

9.1.1 Access and Roadway Spacing

The City of Bandon does not have local access and roadway spacing standards. Table 9-3 includes proposed standards based on other similar-sized communities.

Table 9-3. Proposed Access and Roadway Spacing Standards

Functional Classification	Maximum Block Size (Street to Street)	Minimum Block Size (Street to Street)	Minimum Driveway Spacing
Commercial	500 ft	300 ft	150 ft
Collector	500 ft	300 ft	150 ft
Local	500 ft	150 ft	50 ft

ft = feet

9.1.2 Traffic Impact Analysis

City code allows for requiring a traffic impact analysis (TIA) at the discretion of City staff. There is no codified TIA requirement. The City should consider adopting more detailed TIA requirements in City code to both support implementation of TSP projects through development and ensure that adequate exactions and mitigation are required of new development to meet transportation demand. These code amendments will be considered during development of Technical Memorandum 10, which will include potential code amendments.

9.1.3 Local Mobility Standards

The City has not adopted mobility standards for local roadways or intersections. There are existing mobility standards for streets intersecting the state system. The City could consider adopting local mobility standards for key intersections within the city that would complement the adoption of the TIA standards noted above. If advanced, LOS D is recommended as a potential standard for all non-U.S. 101 "collector to collector" intersections shown in Figure 9-1 in the Functional Classification section below.

9.2 Local Freight Routes

Local freight routes are listed below. There are no changes to existing local freight routes. However, the narrowing or removal of traffic lanes in several of the proposed U.S. 101 alternatives would be impactful to freight traffic, and would require a meeting with the Mobility Advisory Committee if one of these alternatives are chosen. As new arterial, collector, or commercial streets are developed, these should be considered for designation as local freight routes in Bandon City Code.

- U.S. 101 – entire length through the city; also has state freight route designations
- B. State Route 42S – entire length through the city; also has state freight route designations
- C. 11th Street SE – from U.S. 101 to Klamath Avenue (new hospital site)
- D. Harlem Avenue – from 11th Street SE to city limits at Bill Creek Road
- E. Fillmore Avenue – from 1st Street SE to city limits at Rosa Road
- F. Elmira Avenue – from U.S. 101 to 4th Street SE
- G. 3rd Street SE – from Fillmore Avenue to Grand Avenue
- H. 4th Street SE – from Elmira Avenue to Grand Avenue

9.3 Functional Classification

No functional classification changes are proposed for Bandon's current roadway system. Proposed functional classifications for proposed new roadways are shown in Figure 9-1.

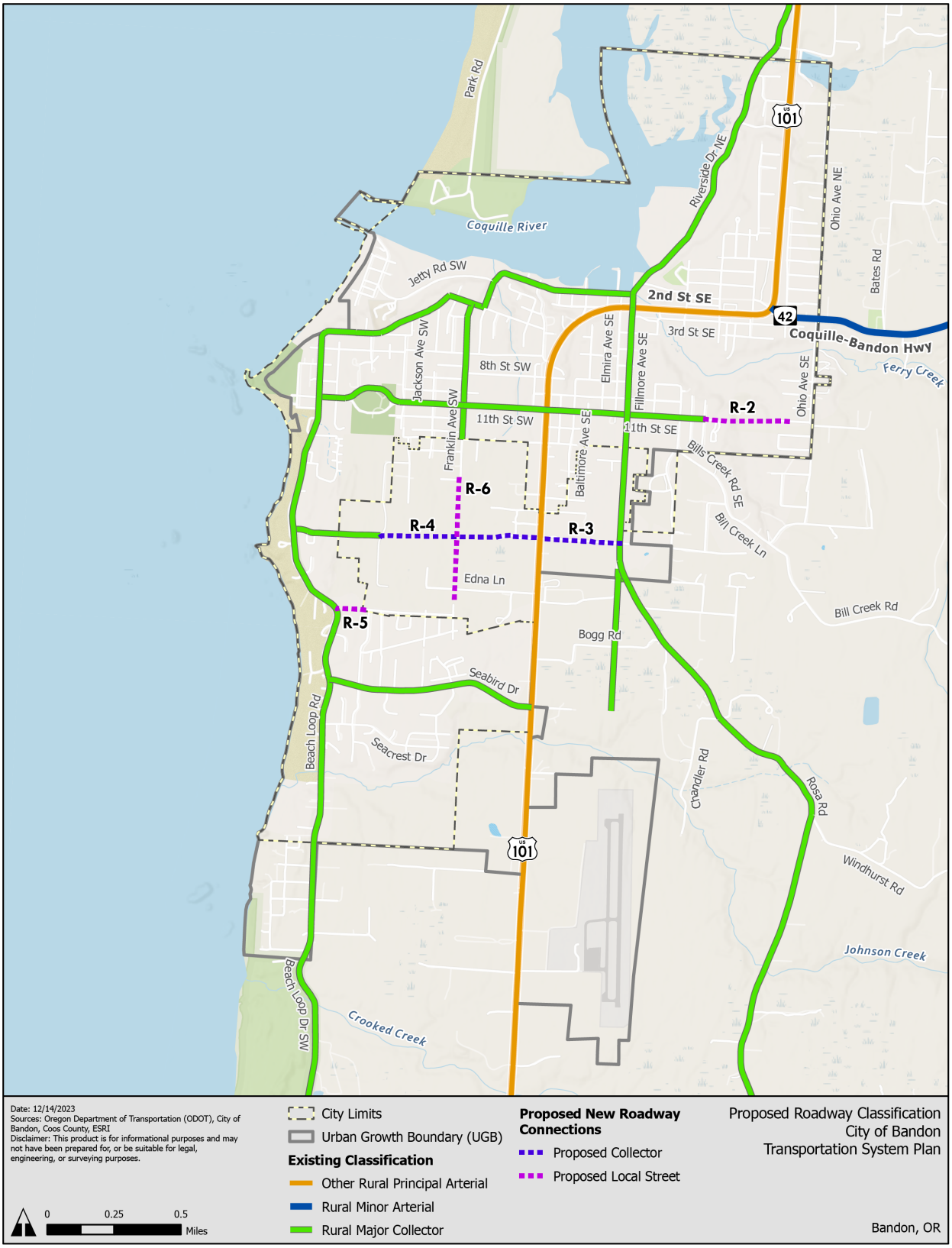


Figure 9-1. Proposed Roadway Classification

10. References

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Appendix A

Synchro, SimTraffic, and Sidra Reports