MEMO #2: BASELINE ASSUMPTIONS AND INVENTORY (REVISED)

Date: August 13, 2021

To: Carolyn Johnson/City of Coos Bay; Virginia Elandt/ODOT Region 3

From: David Evans and Associates, Inc.

Subject: City of Coos Bay Front Street Blueprint: Baseline assumptions and inventory (Revised)

Draft Memorandum #2 provides the baseline assumptions and existing inventory to be used in the Coos Bay Front Street Blueprint ("Project") study. The inventory summarized in this memorandum includes the existing land use, street network, bicycle and pedestrian network, public transit services, natural resources and environmental barriers, and water, rail, and pipeline facilities in the study area.

Study Area

The Front Street Blueprint project study area is shown in Figure 1. This is an industrial and commercial area within the City of Coos Bay, bounded on the west by US 101 and on the east by the active Marshfield Channel on the bay. The northern boundary is in line with Ivy Street and the southern boundary is in line with E Market Avenue.

Figure 1: Project Study Area

Existing Land Uses

Existing land uses in the study area are a mix of waterfront-dependent, industrial, and commercial. Many parcels have a long history of industrial use, and not all uses are dependent on water access. The south half of the study area is more intensively developed than the north half. A rail line bisects Front Street, and many trucks park along both sides of Front, particularly in the south and middle of the study area. Businesses on the west side of Front Street are oriented toward US 101, with their main entrances and signs on that side. Memo 1: Inventory and Conditions Analysis describes comprehensive plan and zoning designations in the study area. The Coos Bay Comprehensive Plan land use designations and Zoning designations surrounding the Project study area are illustrated in Figure 2 and Figure 3.

The urban growth boundary (UGB) for Coos Bay largely coincides with city limits, with some undevelopable water and wetland areas shown outside city limits, but within the UGB.

In Coos Bay, the Coos Bay watershed occupies the majority of land in the south of the city. Public and institutional uses occupy significant land in Coos Bay, which is the home to Southwestern Oregon Community College and Bay Area Hospital. Areas of both medium-density residential and industrial land remain undeveloped in Coos Bay.

Water-dependent uses:

- Sause Brothers Ocean Towing
- Coos Bay Towboat
- Knutson Towboat and Diesel & Machine
- Reddy Ice

Industrial and auto-related uses, not water-dependent

- Koontz Machine and Welding
- Front Street Auto Body
- U-Haul
- Chevron gas station

Service and retail uses:

- Certified Public Accountant
- Seaboard Properties (real estate)
- Front Street Community Bike Works/Bicycle Liberation Front (bicycle shop)
- Front Street Provisioners (restaurant)
- Marshfield Mercantile (retail)
- Wayne’s Color Center (paint store)
- Coos History Museum
- Marshfield Sun Printing Museum

Major vacant properties:

- Coos Bay Iron Works
- Coos Bay Village mixed use development site

Vacant land and buildings surround the two museums. The City of Coos Bay Economic Opportunity Analysis Final Report (June 17, 2009) identifies several of the large parcels within the study area as buildable lands on the Buildable Lands Inventory Map/Inventory of Suitable Employment Lands. According to the 2010 comprehensive plan, as of 2009, there were approximately 1116 acres of undeveloped land city-wide, 170 acres of which were vacant commercial and industrial land. Taking suitability factors, such as environmental constraints, such as flooding, wetlands, tsunami inundation, and steep slopes into consideration, there were approximately 81 acres of net vacant buildable industrial and commercial land within the Urban Growth Boundary (UGB).

Figure 2. Coos Bay Comprehensive Plan

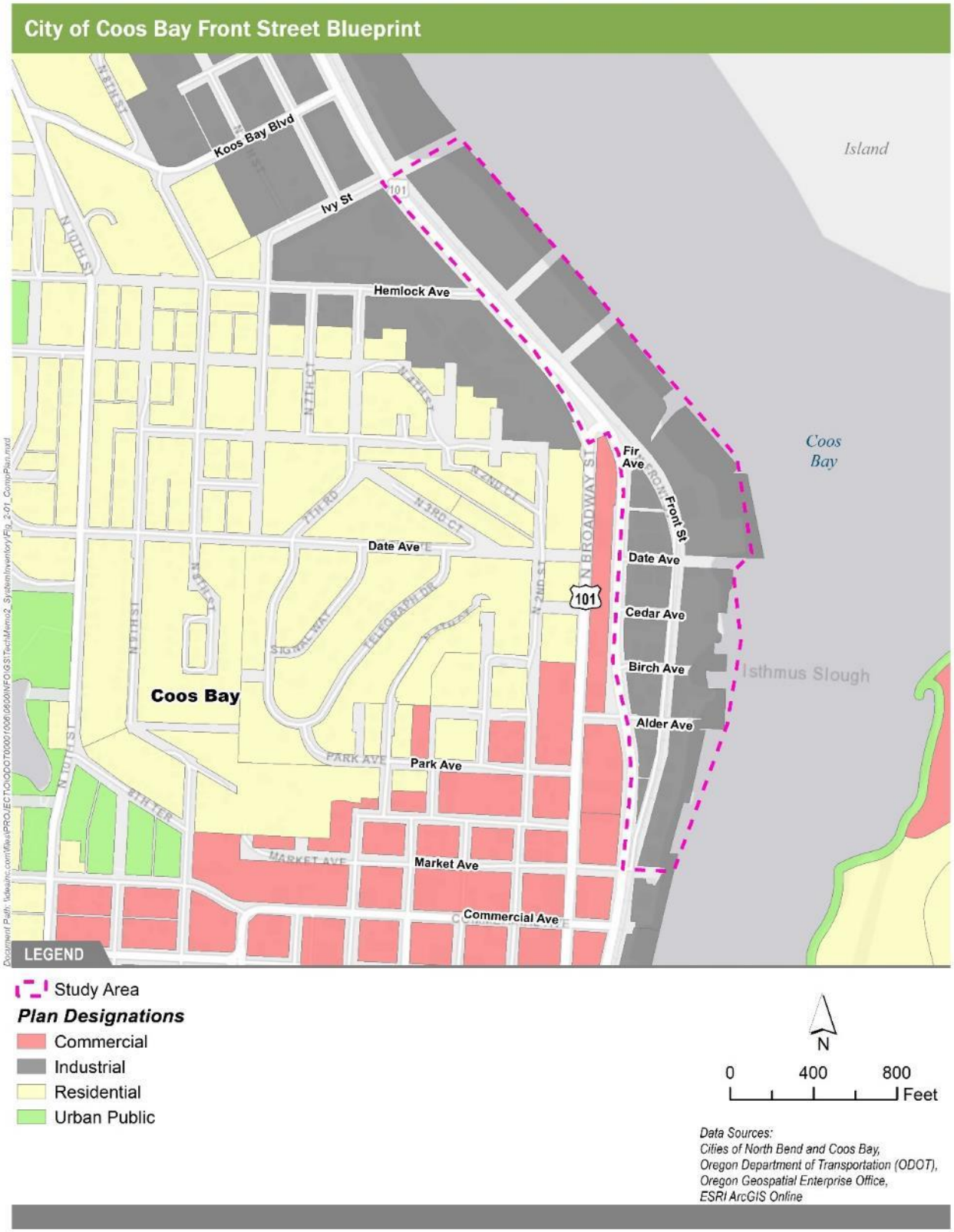
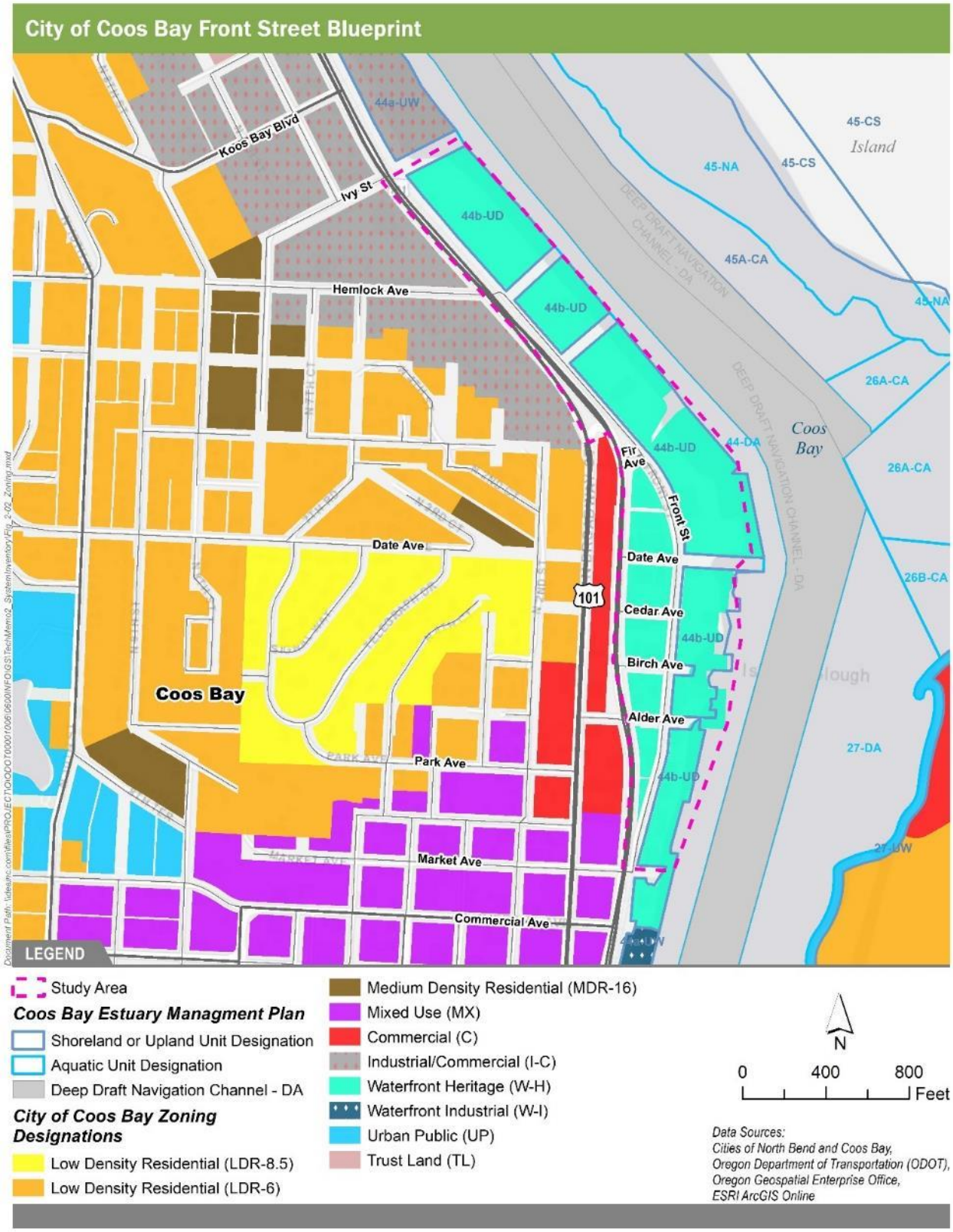


Figure 3. Coos Bay Zoning Designations



Existing Street Network

This section includes an inventory of the street systems within the Project study area. The street network within the Project study area includes the entire length of N Front Street and the following cross streets from south to North: E Market Avenue, Alder Avenue, Birch Avenue, Cedar Avenue, Date Avenue, Fir Street.

Jurisdictions

All roads within the Front Street Blueprint study area except US 101 are under the jurisdiction of the City of Coos Bay. US 101, which forms the western boundary of the study area is under the jurisdiction of Oregon Department of Transportation (ODOT). Roadway jurisdictions in the project study area are summarized in Table 1 and illustrated in Figure 4.

Functional Classification

The street system is classified in a system based on the purpose, design, and function. The functional classification system ensures that the street network is planned and designed to support the surrounding land use access and transportation needs. There are five roadway functional classifications according to the City of Coos Bay Transportation System Plan: Principal Arterial, Minor Arterial, Major Collector, Minor Collector, and Local Street.

Within the project study area, Front Street is classified as a Local Street, US 101 is a Principal Arterial, and all other streets are classified Local Streets. The Functional Classification designations for the study area are summarized in Table 1 and illustrated in Figure 5.

Number of Lanes

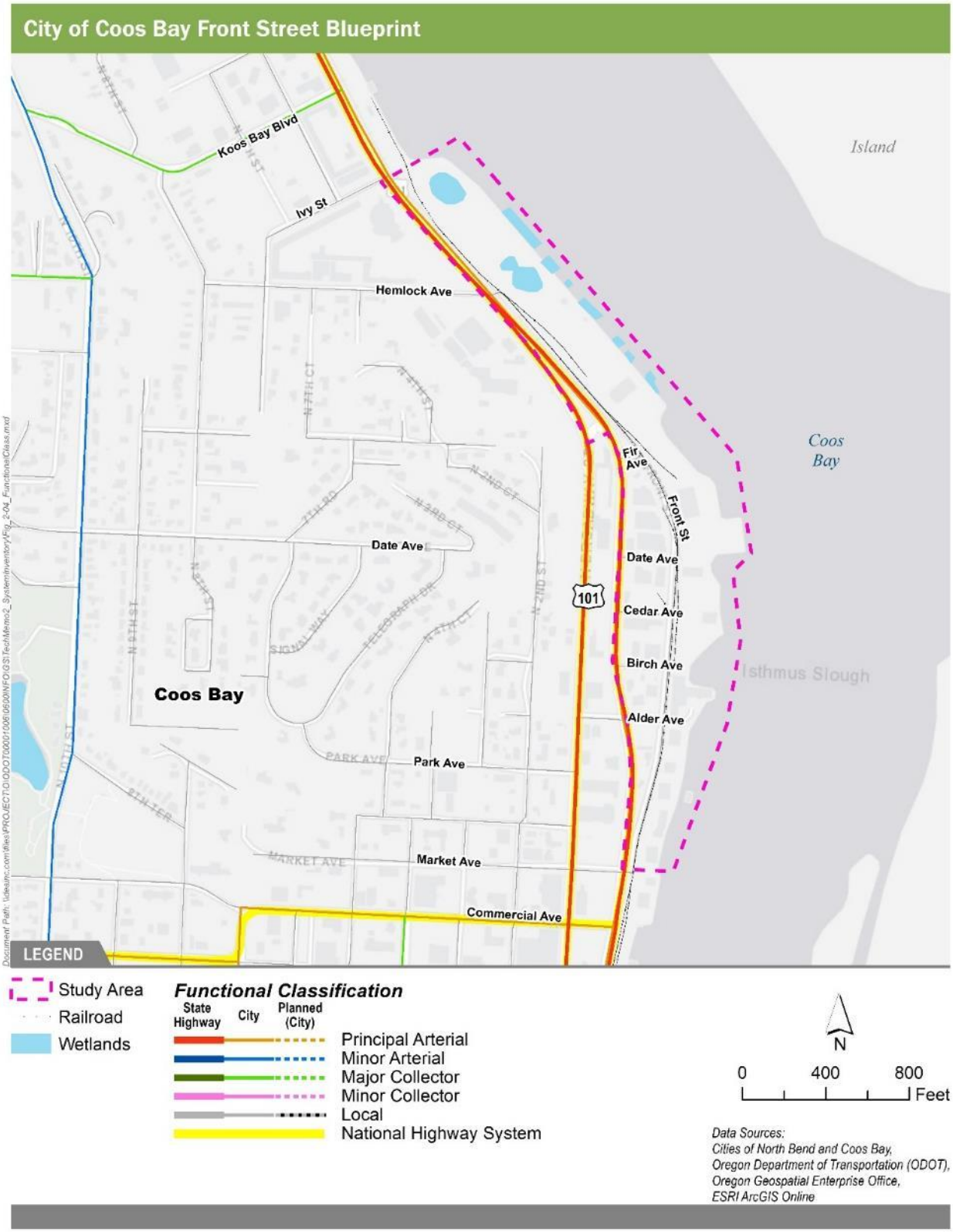
Within the study area, Front Street is a two-lane street, as are all local streets that intersect Front Street. US 101 northbound is a two-lane, one-way street from Market Avenue to Fir Avenue; from Fir Avenue to Ivy Street, US 101 is a bi-directional, five-lane street with two general travel lanes in each direction and a continuous center left-turn lane. The number of lanes for study area roads are summarized in Table 1.

Table 1: Street Network Inventory

Road	Road Jurisdiction	Functional Classification	Number of Lanes
N Front Street	Coos Bay	Local	2
US 101 northbound (Market Ave to Fir Ave)	ODOT	Principal Arterial	2 (one way)
US 101 (Fir Ave to Ivy St)	ODOT	Principal Arterial	5
Fir Avenue	Coos Bay	Local	2
Date Avenue	Coos Bay	Local	2
Cedar Avenue	Coos Bay	Local	2
Birch Avenue	Coos Bay	Local	2
Alder Avenue	Coos Bay	Local	2
Market Avenue	Coos Bay	Local	2

Figure 4. Roadway Jurisdiction

Figure 5. Functional Classification



Pavement Condition

The City of Coos Bay's *2015 Pavement Condition Survey and Asset Management Plan* provides a detailed review of Pavement Condition Index (PCI) scores for City-maintained roadways. According to the plan, Front Street had a PCI of 79. Coos Bay's *2015 Pavement Condition Survey and Asset Management Plan* established PCI levels for when a street's PCI becomes critical for repair. These thresholds are summarized in Table 2 below.

Table 2: Pavement Condition Critical Thresholds by Functional Classification

Functional Classification	Critical Condition (PCI)
Asphalt Concrete (AC) Streets	
Principal Arterial	55
Minor Arterial	55
Principal Arterial	55
Principal Arterial	55
Portland Cement Concrete (PCC) - All	10

Source: **City of Coos Bay's *2015 Pavement Condition Survey and Asset Management Plan, pg. 8***

Speed Limits

Speed limits are not currently posted along Front Street or along the cross streets in the study area. According to Oregon State statutes, speed zone standards of 20 mph in businesses districts shall be observed where there are no posted speeds.

US 101 has a posted speed limit of 30 mph along the north-south couplet portion adjacent to the study area; it changes to 45 mph where the couplet becomes a five-lane arterial and intersects with Front Street/Hemlock Avenue in the northern part of the study area.

Stop Control Devices

There are eight STOP Sign-controlled intersections in the study area as summarized in Table 2. There are currently no signalized intersections within the study area. A new traffic signal is planned for the intersection of US 101 & Hemlock Avenue and is expected to be constructed in 2021.

Table 3: Intersection Control Devices

Intersection	Type of Control
US 101/Ivy St	STOP Sign
US 101/Front St/Hemlock Ave	STOP Sign
Fir St/Front St	STOP Sign
Date Ave/Front St	STOP Sign
Cedar Ave/Front St	STOP Sign
Birch Ave/Front St	STOP Sign
Alder Ave/Front St	STOP Sign
US 101/Market Ave/Front St	STOP Sign

Railroad Crossings

The Coos Bay rail line runs along a significant portion of N Front Street within the study area. As summarized in Table 3 below and illustrated in Figure 6, there are eight railroad crossings where rail line intersects local streets. One of these is a private crossing, while the rest are at-grade crossings along Front Street.

Table 4: Railroad Crossings

ODOT Crossing No.	Type	Intersecting Street	ROW Owner
CO-767.72	Mainline at Grade	Hemlock Ave/Front St	Oregon International Port of Coos Bay
CO-767.79 P	Mainline at Grade	(Former) US Plywood Central Dock Rd	Oregon International Port of Coos Bay
CO-768.02	Mainline at Grade	Fir St at Front St	Oregon International Port of Coos Bay
CO-768.05	Mainline at Grade	Date Ave at Front St	Oregon International Port of Coos Bay
CO-768.10	Mainline at Grade	Cedar Ave at Front St	Oregon International Port of Coos Bay
CO-768.14	Mainline at Grade	Birch Ave at Front St	Oregon International Port of Coos Bay
N/A	Mainline at Grade	Alder Ave at Front St	Oregon International Port of Coos Bay
CO-768.30	Mainline at Grade	Market St at Front	Oregon International Port of Coos Bay

Source: ODOT TransGIS

Parking

On-street parking is available along Front Street on both sides with a few exceptions near business driveways and loading areas. Similarly, on-street parking is available along the side streets—Date Avenue, Cedar Avenue, Birch Avenue, Alder Avenue—within the study area. There is no on-street parking along US 101 adjacent to the study area. The on-street parking in the study area is unmarked.

The City of Coos Bay's on-street parking inventory indicates that there are approximately 1,557 feet of on-street parking along the east side of Front Street between Fir Avenue and Market Avenue, 880 feet on the west side of Front Street between Fir Avenue and Market Avenue, and 772 feet along the side streets of Date Avenue, Cedar Avenue, Birch Avenue, and Alder Avenue. The city's engineering design standards in Chapter 18.15.010 of the Coos Bay Municipal Code stated that the minimum length of an on-street parking stall shall be 20 feet. Based on this information and taking into account the location of breaks due to driveways and intersections, it is estimated that there are approximately 75 on-street parking stalls on the east side of Front Street between Fir Avenue and Market Avenue, 39 on the west side of Front Street between Fir Avenue and Market Avenue, and 34 along the side streets of Date Avenue, Cedar Avenue, Birch Avenue, and Alder Avenue for a total of 148 on-street parking stalls in the study area between Fir Avenue and Market Avenue. This estimate is based on a parking stall length of 20 feet as stated in the Coos Bay engineering design standards. Larger vehicles such as RVs or large trucks may reduce the amount of on-street parking availability.

The available on-street parking inventory and approximate curb length are summarized in Table 5 and illustrated in Figure 6.

Table 5: Intersection Control Devices

Location	Total Curb Length of Available On-Street Parking	Approximate Number of Stalls (at 20' per Stall)
Front Street east side curb (between Fir Avenue and Market Avenue)	1,557 feet	75
Front Street west side curb (between Fir Avenue and Market Avenue)	880 feet	39
Side Streets (Date Avenue, Cedar Avenue, Birch Avenue, Alder Avenue)	772 feet	34
Total (Between Fir Avenue and Market Avenue)	**3,209 feet**	**148**

A new public parking lot is planned by the City of Coos Bay to be constructed in 2021/2022 on the west side of Front Street between Date Avenue and Cedar Avenue. This new parking lot is proposed to have 47 parking spaces with additional amenities such as bike racks, trash and recycling bins, wayfinding, and lighting. Vehicle access for this parking lot is planned on Date Avenue and Cedar Avenue. As part of this planned parking lot, continuous sidewalk will be constructed along Front Street between Date Avenue and Cedar Avenue. This new public parking lot may affect the amount of on-street parking along its frontage on Date Avenue, Cedar Avenue, and Front Street.

Driveways

Based on a visual inspection of online street mapping programs, there are approximately 18 to 20 driveways on the east side of Front Street and about five driveways along with several loading docks on the west side on Front Street. Most of these driveways are closely spaced and may not meet the access spacing standards in the Coos Bay Engineering Standards.

Culverts

There are two culverts at the northern portion of the study area near the intersection of US 101 at Front Street/Hemlock Avenue. The culvert locations along with rail crossings are illustrated in Figure 7.

Streetlights, Stormwater Mainlines, and Sanitary Sewer Mainlines

Streetlights, stormwater mainlines, and sanitary sewer mainlines locations are illustrated in Figure 8.

Figure 6. Parking Inventory

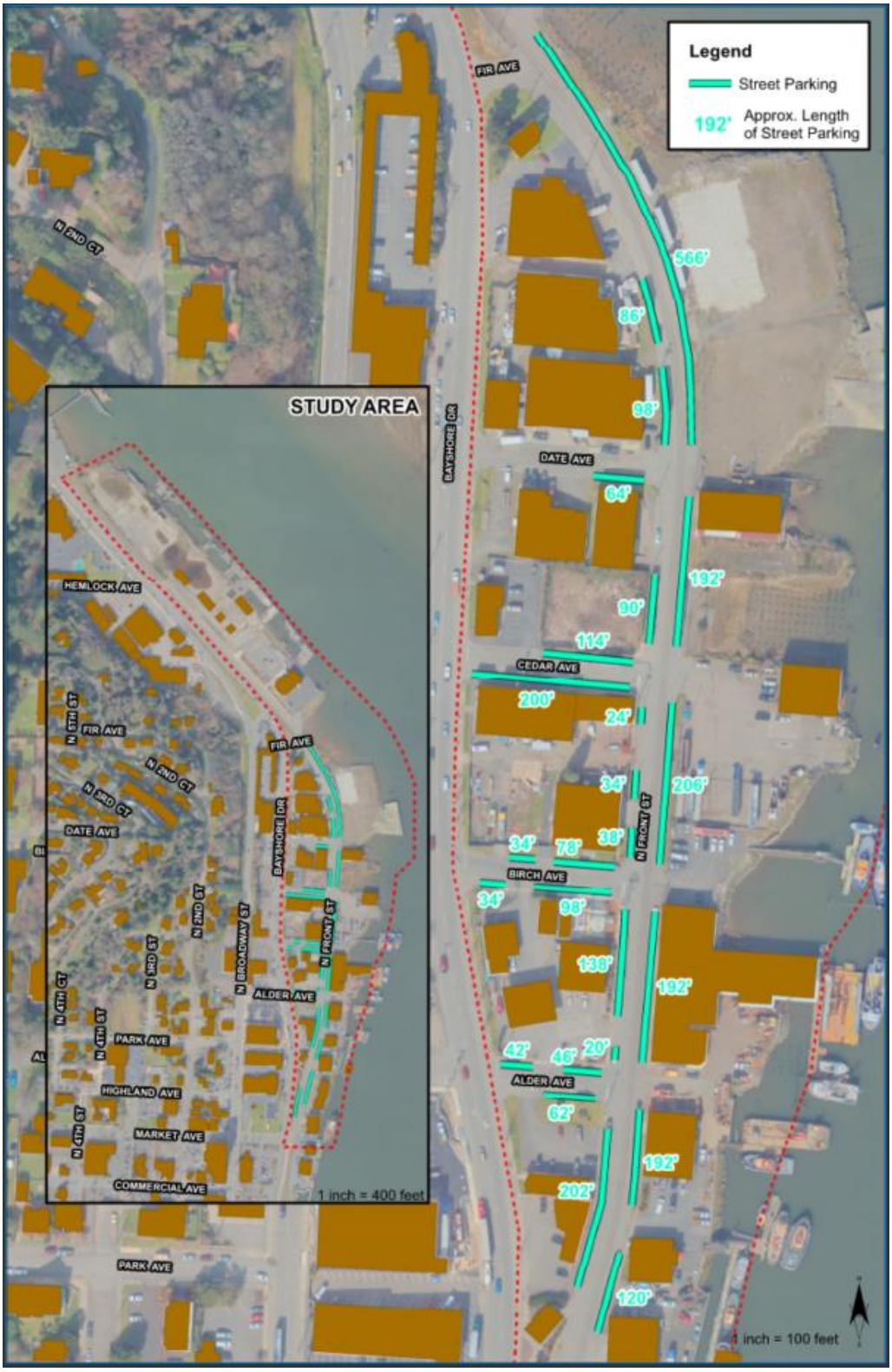


Figure 7. Culverts and Rail Crossings

Figure 8. Streetlights, Stormwater Mainlines, and Sanitary Sewer Mainlines

Existing Bicycle and Pedestrian Facilities

This section provides an inventory of the pedestrian and bicycle network in Project study area.

Pedestrian Network

Based on a visual inspection of online street mapping program, there is existing curb-tight sidewalk on both sides of Front Street south of the intersection with Birch Avenue; north of Birch Avenue, sidewalks are generally missing on both sides until the Coos History Museum which has complete sidewalk along its frontage on the east side of Front Street. On the cross streets, there appears to be sidewalk on at least one side. Conditions of the existing sidewalks vary; there are some areas with brand new sidewalk and others with older sidewalks and sidewalks that are impeded by utility poles.

There are no marked crosswalks in the study area. Legal crossing locations exist at each intersection. According to ODOT data, there are ADA curb ramps near the intersections of US 101 with most of the cross streets—Alder, Birch, Cedar, Date, Fir, and Front St/Hemlock Ave—in the study area; although these ADA ramps are identified as in "Poor" condition. Based on a visual inspection of online street mapping program, there are two ADA curb ramps at the intersection of Front Street at Market Avenue.

Bicycle Network

There are no dedicated bicycle facilities in the Project study area. The current bicycling network in the study area is on-street, shared lanes with motor vehicles. As such, the condition and surface type of bike facilities is equivalent to pavement conditions for the streets on which they exist. The Coos Bay TSP identifies US 101 adjacent to the study area as having "Future Type II (Striped)" bicycle facilities in the Bicycle Route Plan. US 101 in the vicinity of the study area is not part of the Oregon Coast Bike Route.

Existing Public Transit Services

Coos County Area Transit (CCAT) is the main public transit provider in the City of Coos Bay and surrounding areas. CCAT provides local public transportation services to the City of Coos Bay, including two fixed-route Bay Area Loop routes, intercity service to connections communities across the county including Coos Bay, North Bend, Charleston, Coquille, Myrtle Point, and Powers. CCAT also provides a Dial-A-Ride paratransit program with curb-to-curb service for people with disability who cannot use the fixed route service.

Within the study area, based on ODOT TransGIS data, CCAT operates a "Weekend Express" route that connects downtown Coos Bay and downtown North Bend via the length of Front Street with one stop just north of Market Avenue and one stop at the Coos History Museum. At the time of writing, this service is suspended due to the Coronavirus pandemic.

The CCAT Myrtle Point Connector travels US 101 adjacent to the study area connecting Coquille, Myrtle Point, and Powers in the south to Lakeside and Hauser to the north. This route is illustrated in Figure 9.

Curry Public Transit offers a connecting service, Coastal Express, from Coos Bay to the communities of Bandon, Port Orford, Gold Beach, Brookings, Harbor and Smith River. The Coastal Express operates Monday through Saturday and provides service three times daily in the morning, mid-day, and early afternoon. This route is illustrated in Figure 10.

Figure 9. Intercity Express

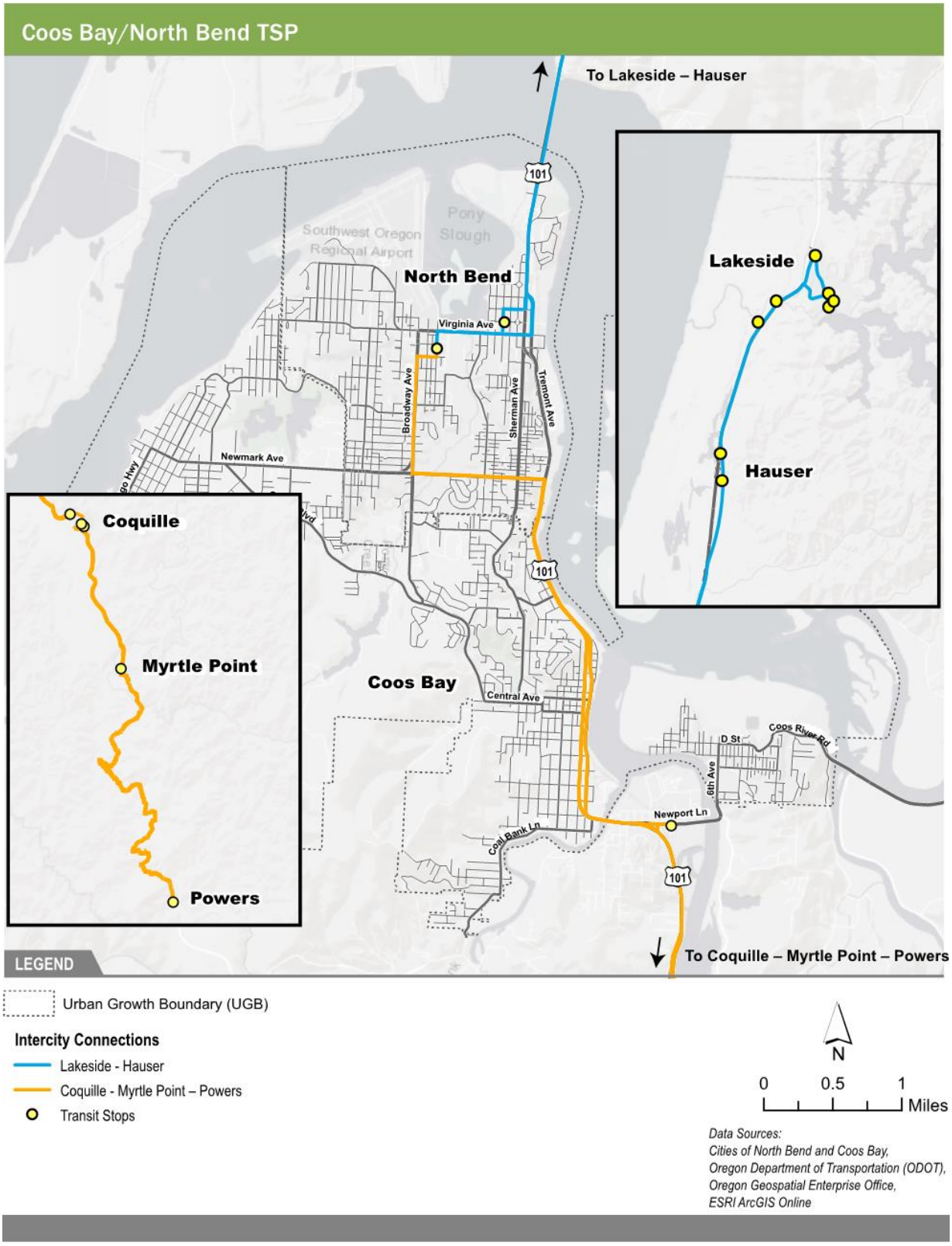
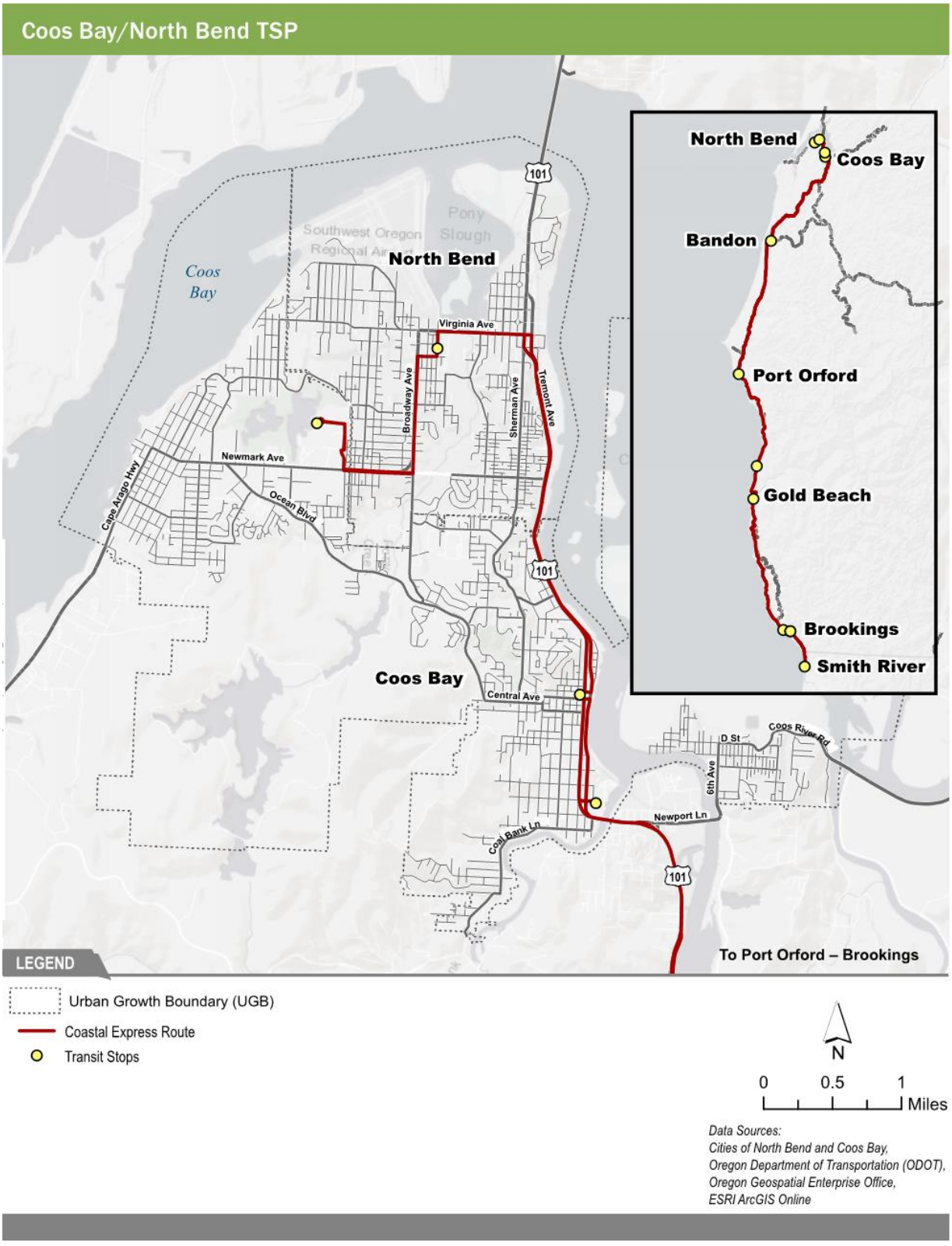


Figure 10. Coastal Express



Natural Resources and Environmental Barriers

Historic Resources

The OPRD Historic Sites Map shows 14 sites within the study area: 10 have been determined to be not eligible, 1 has been demolished, 2 are eligible, and 1 is eligible and listed. Historic resources in the study area are summarized in Table 6 and illustrated in Figure 11.

Waterways and wetlands

The National Wetlands Inventory maps several wetlands within the study area. A 0.12-acre Estuarine and Marine Wetland habitat on parcel 25S13W26CA 201 (between Date Avenue and Cedar Avenue) is classified as a E2USN (System Estuarine [E], Subsystem Intertidal [2], Class Unconsolidated Shore [US], Water Regime Regularly Flooded [N]). There are nine Freshwater Pond habitats on parcels 25S13W26BB 400 through 405 and 499, and 25S13W26BD 101. They are classified as a PUBHx (System Palustrine [P], Class Unconsolidated Bottom [UB], Special Modifier Excavated by humans [x]). (USFWS 2021)

The wetlands inventory surrounding the study area is illustrated in Figure 12.

Federal Emergency Management Agency floodplain mapping

The study area is on FEMA Panels 41011C0189F and 41011C0327E. The study area is mapped as being in a Special Flood Hazard Area Zone AE, with the Base Flood Elevation of 13 feet. The Base Flood has a one percent change of being equaled or exceeded in any given year. The Base Flood Elevation is the water-surface elevation of the one-percent annual chance flood. Mandatory flood insurance purchase requirements and floodplain management standards apply to Zone AE. (FEMA 2014 and 2018)

Federal regulations require that all new construction and substantial improvements “have the lowest floor (including basement) elevated to or above the base flood level or, (ii) together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water….” The City may approve development that increases the water surface elevation of the base flood by more than one foot, if the City applies for a conditional FIRM revision, fulfills the requirements, and receives the approval of the Federal Insurance Administrator. (44 CFR § 60.3 (c) Flood plain management criteria for flood-prone areas)

Tsunami

The study area is within the tsunami inundation boundary. (DOGAMI 1995) It is mapped as a distant tsunami area, where a tsunami typically would take four hours or more to come ashore with time for an official warning and evacuation to safety. (DOGAMI 2020)

The FEMA Floodplain and tsunami inundation zone surrounding the study area are illustrated in Figure 13.

Table 6: Historic Resources

Name	Address	Eligibility	Date	Resource ID
Marshfield Sun Printing Plant	1049 N Front St	Eligible - significant/listed	1895	34452
Coos Bay Iron Works	896 N Front St	Eligible - significant	c. 1900	649953
Logger Supplies Warehouse	1000 N Bay Shore Dr	Eligible - contributing	c. 1920	649943
W.G. Webster brick building	318 N Front St	Demolished	c.1880	649956

Source: OPRD/SHPO 2021

Water, Rail and Pipeline

The Oregon International Port of Coos Bay (Port) has a major deep-draft coastal harbor with approximately two million tons of cargo crossing the bar annually, making the Coos Bay harbor the busiest seaport in Oregon. It incudes six marine terminals with seven deep-draft berths and a variety of barge facilities.

Responsibilities of The Port

- The non-federal sponsor to maintain the federal navigation channel that provides access to the private marine terminals, and includes the jetties at the mouth of Coos Bay, the channel leading to the Charleston Marina, and the deep draft channel that provides access to the upper portions of Coos Bay, approximately 15 miles from the bay entrance.
- Owns and operates the Charleston Marina and the Charleston Shipyard, which serve a large commercial fishing fleet, and the Charleston Marina RV Park.
- Owns several marine industrial sites (none are currently used for cargo movements) as well as properties in the North Spit, East Bay and Upper Bay areas of Coos Bay which are zoned for recreational use and activity and environmental mitigation.
- Owns and operates the Coos Bay Rail Line (CBRL), an approximately 134-mile freight rail line from Danebo Junction (in west Eugene) to Coquille, to which it restored full service in 2013.

Port-Related Facilities

Three Port-related facilities are just north of the Front Street study area, between Ivy Street and Kingwood Avenue, and maintaining access to them needs to be considered in the Front Street Blueprint:

- The Port Dolphin Terminal—a utility and work dock (berth and floating pier) with lights for in-water loading of outbound logs.
- The United States Army Corps of Engineers moorage—a utility and work dock for government vessels with a fixed and a floating dock and lights, water, electrical, and fuel lines.
- The U.S. Coast Guard Cutter Orcas homeport—a wooden pier, floating dock, and gravel parking lot with concrete pad and storage.

Recently Completed Port Projects

None of the recently completed Port projects are within or near the study area—they are in Charleston.

Current Major Port Projects

- Coos Bay Channel Modification Project. The Port is currently in the engineering and design phase to deepen and widen the Federal navigation channel from -37' depth and 300' width to -45' depth and 450' width from the channel entrance to river mile 8.2 in order to facilitate future economic development and accommodate the growing global fleet.
- The United States Army Corps of Engineers' 2021 workplan includes $34.65 million for repairs to the North Jetty, including the addition of approximately 120 to 150 feet in jetty length, stabilization of the head of the jetty, and addition of rock to the jetty's trunk and root to further stabilize the structure. (OIPCB 2021)
- CBRL tunnel rehabilitation. Nine tunnels along the line.
- CBRL bridge rehabilitation. Multiple bridges along the line.

The Jordan Cove Energy Project is a proposed $10 billion project that includes a liquified natural gas export terminal on the North Spit and 230 miles of pipeline. In February 2021, the National Oceanic and Atmospheric Administration upheld the Oregon Department of Land Conservation and Development's decision that the project fails to demonstrate consistency with Coastal Zone Management Act. (Rue 2020) In January 2021, the Federal Energy Regulatory Commission upheld Oregon Department of Environmental Quality's May 2019 denial without prejudice of the project's 401 Water Quality Certification (ODEQ 2020). Without these approvals, the project cannot proceed, and therefore the outcome and timing are unknown.

Figure 11. Historic and Cultural Resources

Figure 12. Environmental Resources

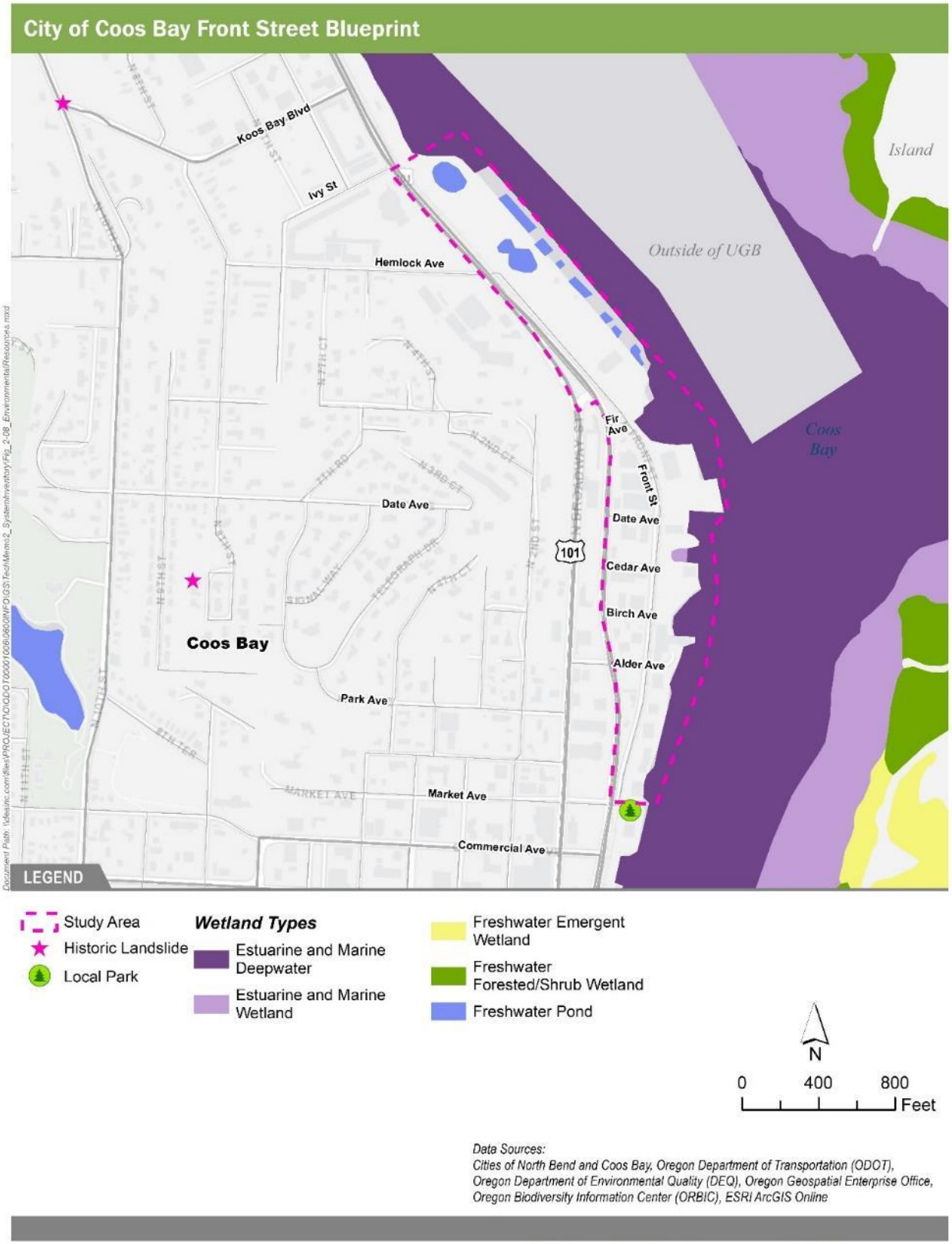


Figure 13. Tsunami Evacuation Zones