



Engineering +  
Environmental

## Biological Assessment

Siuslaw River Bridge Interpretive Wayside (KN 13228)  
Oregon Coast Highway, US-101  
Lane County, Oregon  
HUC 1710020608

Coho Salmon, Oregon Coast ESU  
Critical Habitat for Coho Salmon, Oregon Coast ESU  
Green Sturgeon, Southern DPS  
Brown Pelican

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## Project Team Leader/District Manager Authorization of Conservation and Mitigation Measures

I have reviewed the Siuslaw River Bridge Interpretive Wayside KN 13228 project description for accuracy. I have also reviewed the conservation and mitigation measures for this project. I agree that the conservation and mitigation measures should be incorporated into this project's contract documents or implementation plans (in the case of use of in-house forces) so that ODOT will be in compliance with the Endangered Species Act and other applicable environmental laws and regulations.



\_\_\_\_\_  
[Project Team Leader or District Manager]

(The specific title of the signatory may vary depending on the nature of the project.)

1-8-09

\_\_\_\_\_  
Date

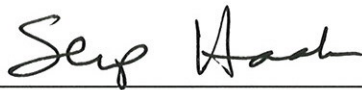


\_\_\_\_\_  
[Construction Project Manager or Consultant Project Manager (CPM)]

(The specific title of the signatory may vary depending on the nature of the project.)

1-8-09

\_\_\_\_\_  
Date



\_\_\_\_\_  
Skip Haak, PBS Engineering + Environmental

(The specific title of the signatory may vary depending on the nature of the project.)

1-15-09

\_\_\_\_\_  
Date

(This signatory sheet must be completed and on file prior to transmittal **by ODOT** to FHWA, NMFS or USFWS.)

## 1.0 INTRODUCTION

The City of Florence proposes to construct an interpretative wayside along the Siuslaw River estuary to enhance recreational opportunities within the City. This biological assessment addresses potential effects this action may have on plant and animal species listed under the federal and state Endangered Species Acts.

### 1.1 Purpose and Need

The purpose of the proposed action is to provide an interpretive wayside for tourists, travelers, and residents to enjoy the scenery and learn the history of the Siuslaw River Bridge. The project will provide a viewing platform at an excellent location for appreciating the scenic structure and interpretive signage for educating the public about its history and the ecological significance of the Siuslaw River estuary.

The project will improve stormwater management at the wayside site by upgrading stormwater treatment. Currently, there are catch basins along Bay Street, with an outfall in the project area that discharges stormwater directly into a clump of vegetation dominated by invasive non-native plants. To improve stormwater treatment, the existing catch basins and outfall will be replaced, a stormwater treatment swale will be constructed, and a wetland area will be constructed downgrade from the swale. Existing native plants will be preserved, non-native invasive species will be removed, and native plants will be installed. A bark path with interpretive signage will educate the public about the functionality and attractiveness of the stormwater improvements. The project will provide a picnic area for visitors as well.

The project will also provide a small parking area under the Siuslaw River Bridge along Bay Street for people visiting the interpretive wayside or the Old Town District of Florence. The parking area will provide two overlooks for viewing the bridge and interpretive signage outlining the history of the bridge and surrounding area.

### 1.2 Background

The original 2006 project design for the Siuslaw Interpretive Wayside Project included the construction of a walkway and viewing platform on piles in the Siuslaw River estuary and a parking area, both directly under the north end of the Siuslaw River Bridge. This design had potential to cause unnecessary impacts to listed species found in the estuary, since piles were to be driven below Mean High Water (MHW). In 2008, the project design was revised, and the wayside site moved east by 120 feet (toward the Old Town District of Florence). The parking area site under the bridge was retained without the viewing platform extending into the river. The new design does not include any construction below MHW, and both the estuary and bridge will be visible from the viewing platform which will be constructed in an upland area.

Through email discussions between the Project Design Team and ODOT (in May and June of this year), it was determined that a Biological Assessment (BA) should be written for the new project site. The purpose of the BA is to address the effect of the Siuslaw River Bridge Interpretive Wayside Project on species listed as endangered or threatened under the federal and state Endangered Species Acts (ESA).

The project is funded, in part, by Federal Highway Administration (FHWA) Scenic Byways Program discretionary funds; the Federal Surface Transportation Program; and state exchange funds committed by the City of Florence. Additional funding is provided

with Oregon State Highway funds, stormwater funds, and City of Florence Urban Renewal Agency funds. Funding from the FHWA and a permit from the U.S. Army Corps of Engineers (USACE) created the federal nexus. The FHWA is the lead federal action agency. The Oregon Department of Transportation (ODOT) will be responsible for the administration of funds, and the City of Florence will oversee the project. A summary of the project is provided in Table 1 below.

**Table 1. Project Summary**

<b>Project Name:</b>	Siuslaw River Bridge Interpretive Wayside
<b>ODOT KN:</b>	KN 13228
<b>Federal Aid Number:</b>	-
<b>Location of Project:</b>	Oregon Coast Highway, in proximity to Mile Post 191
<b>Watershed and HUC Field (5<sup>th</sup> &amp; 6<sup>th</sup>):</b>	1710020608
<b>USGS Quadrangle Map Location:</b>	Florence Quad, Township 18S, Range 12W, Section 34
<b>Size of Action Area:</b>	515 acres
<b>City:</b>	Florence, Oregon
<b>County:</b>	Lane County
<b>Project Staff:</b>	Elisabeth Bowers, PBS Engineering + Environmental Lisa Swanson, PBS Engineering + Environmental
<b>Site Visits:</b>	June 27, 2008
<b>Site Access Permission:</b>	Granted
<b>Current Land Use(s):</b>	Open space, recreation, and tourism
<b>Waterways on Site:</b>	Siuslaw River Estuary
<b>River Mile:</b>	Approximately River Mile 4.6
<b>Prior Correspondence:</b>	No correspondence to date with agencies regarding new wayside site. The following items summarize key communication with NMFS regarding ESA and MSA: <ul style="list-style-type: none"> <li>• November 22, 2004 – NMFS receives letter from USACE requesting EFH consultation under Section 10 of the Rivers and Harbors Act.</li> <li>• February 14, 2005 – NMFS issues completed EFH consultation to USACE.</li> <li>• February 28, 2005 – USACE issues Section 10 permit.</li> <li>• May 12, 2006 – USACE issues revised Section 10 permit for work outside the in-water work window. NMFS consulted regarding effects to EFH.</li> </ul>

In 2003, the City of Florence first proposed constructing the Siuslaw River Bridge Interpretive Wayside on a parcel under the Siuslaw River Bridge. This project received approval from state and federal agencies. An Essential Fish Habitat (EFH) consultation, as required under Section 305 of the Magnuson-Stevens Fishery Conservation and Management Act, was completed by the National Marine Fisheries Service (NMFS) and the consultation document was submitted to the USACE on February 14, 2005 (Appendix A). A permit to construct the walkway and viewing platform was subsequently issued by the USACE on February 28, 2005. Authorization was given by the Oregon Department of Land Conservation and Development (DLCD) as required by the Coastal Zone Management Act (CZMA), and the Department of Environmental Quality (DEQ) issued a 401 Water Quality Certification as required by the Clean Water Act (CWA) (Appendix A).

On May 12, 2006, the USACE approved a modification to the permit, allowing construction to extend through February 15, 2007, as well as an in-water work extension for the 2006 construction season (Appendix A). ODOT completed a project prospectus in late 2006 and determined that the project should be classified as a Class 2 Categorical Exclusion under the National Environmental Policy Act (NEPA) (Appendix A).

Subsequent to receiving these approvals, the City and ODOT agreed to consider relocating the wayside to an alternate site on an undeveloped property approximately 120 feet to the east to minimize project impacts. The City of Florence is currently trying to buy this property for the project. Because the site is not owned by the City, no permit applications have been submitted and no consultations have occurred for the wayside site.

### **1.3 Species and Critical Habitat**

Species listed under the federal Endangered Species Act, proposed for listing, or identified as candidates for listing are presented in Table 2 with information on critical habitat, presence, and potential project effects. State-listed species that have no federal status are discussed in Appendix G.



Table 2. ESA Listed, Proposed, and Candidate Species Considered

Species	ESU/ DPS <sup>1</sup>	Federal Status/ State Status	Critical Habitat	Potential Presence in Project Vicinity?	Project Effects on Species?
<b>FISH</b>					
Coho salmon <i>Oncorhynchus kisutch</i>	Oregon Coast ESU	Threatened/ Endangered	Designated, in the project area	Yes	May affect, not likely to adversely affect
Bull trout <i>Salvelinus confluentus</i>	Columbia River DPS	Threatened/None	Designated, does not include project area	No	No
Green sturgeon <i>Acipenser medirostris</i>	Southern DPS	Threatened/None	Proposed, does not include project area	Yes	May affect, not likely to adversely affect
Oregon chub <i>Oregonichthys crameri</i>	–	Endangered/None	None designated	No	No
<b>WILDLIFE</b>					
Steller sea lion <i>Eumetopias jubatus</i>	Eastern DPS	Threatened/ Sensitive-vulnerable	None designated	No	No
Marbled murrelet <i>Brachyramphus marmoratus</i>	–	Threatened/ Threatened	Designated, does not include project area	No	No
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	Pacific Coast DPS	Threatened/ Threatened	Designated, does not include project area	No	No
Brown pelican <i>Pelecanus occidentalis californicus</i>	–	Endangered/ Endangered	None designated	Yes	May affect, not likely to adversely affect
Short-tailed albatross <i>Phoebastria albatrus</i>	–	Endangered/ Endangered	None designated	No	No
Northern spotted owl <i>Strix occidentalis caurina</i>	–	Threatened/ Threatened	Designated, does not include project area	No	No
Fender's blue butterfly <i>Icaricia icarioides fenderi</i>	–	Endangered/None	Designated, does not include project area	No	No
Oregon silverspot butterfly <i>Speyeria zerene hippolyta</i>	–	Threatened/None	Designated, does not include project area	No	No
Streaked horned lark <i>Eremophila alpestris strigata</i>	–	Candidate/ Sensitive-critical	N/A	No	No
Oregon spotted frog <i>Rana pretiosa</i>	–	Candidate/ Sensitive-critical	N/A	No	No
<b>PLANTS</b>					
Willamette Daisy <i>Erigeron decumbens</i> var. <i>decumbens</i>	–	Endangered/ Endangered	Designated, does not include project area	No	No
Bradshaw's desert parsley <i>Lomatium bradshawii</i>	–	Endangered/ Endangered	None designated	No	No
Kincaid's lupine <i>Lupinus sulphureus</i> ssp. <i>kincaidii</i>	–	Threatened/ Threatened	Designated, does not include project area	No	No
Nelson's checker-mallow <i>Sidalcea nelsoniana</i>	–	Threatened/Threatened	None designated	No	No

<sup>1</sup> ESU = Evolutionarily Significant Unit, DPS = Distinct Population Segment.

## 2.0 PROJECT DESCRIPTION

The Siuslaw Interpretive Wayside Project will construct an observation deck and walkway east of Highway 101, so that tourists and residents can enjoy an excellent view of both the Siuslaw River estuary and the historic Siuslaw River Bridge. A winding bark pathway will be constructed north of the existing tidal wetland on-site. From the pathway, visitors will be able to view wetland enhancements implemented during construction as well as a stormwater treatment swale, installed to treat stormwater originating from catch basins along Bay Street. The existing catch basins will be replaced and improved. The project will also include installation of a picnic area along the walkway and interpretive signage to highlight the historic and ecological value of the area and stormwater management improvements.

A parking area will be constructed under the north end of the Siuslaw River Bridge to support access to the wayside and the Old Town District. The parking area will include two overlooks with interpretive signage highlighting the historical and cultural significance of the bridge and estuary. Construction of the parking area will involve the following activities: clearing and grading to prepare the site, installation of a retaining wall, placement of fill, installation of a two-chamber catch basin with associated piping and outfall to the Siuslaw River, sidewalk construction and paving, and railing and signage installation. At the parking area, utilities will be relocated as part of construction. The Community Access Television (CATV) lines and the Overhead Power (OHP) lines will be reconfigured to support the parking area design (Appendix C).

### 2.1 Project Area and Sequencing

The wayside site is centered at a piece of property located along Bay Street in the Old Town District of Florence on the east side of the Siuslaw River Bridge and U.S. 101 (Figure 1). Both the wayside and parking area sites are located at Township 18 South, Range 12 West, Section 34, W.M. and 124°06'30" longitude, 43°58'00" latitude.

The wayside site includes Tax Lots 101, 107, and 700. The property is a total of 0.45 acres and borders Bay Street on the north and the Siuslaw River estuary on the south. The project area includes a section of roadway within the Bay Street right-of-way, above the northwest edge of the property, where a stormwater pipe and two catch basins will be replaced.

The parking area site is approximately 0.14 acres and is located under the north end of the Siuslaw River Bridge. The parking area will lie primarily between two bridge bents that are south of Bay Street (Figure 1).

Land use in proximity to the project areas is mainly residential and commercial. On the east side of the wayside site, there are several businesses in one building, including the Waterfront Depot Restaurant and dental offices (Appendix B). A vacant lot borders the western property boundary with another business, Coffee Roasters, on the opposite side of the vacant lot. Beyond Coffee Roasters and a neighboring travel business, is the parking area site. On the west side of the parking area site, there is a group of recently-built condominiums.

Construction of the project is intended to begin in fall 2009 and be completed in spring 2010 (Table 3). This construction period coincides with the in-water work period for the Siuslaw River of November 1 to February 15 (ODFW, 2008).

**Table 3. Project Schedule**

<b>Construction Activity</b>	<b>Date</b>
Project Start	November 15, 2009
Clearing & Grubbing	November 16, 2009
Retaining Wall Installation	November 16, 2009
Grading	November 23, 2009
Stormwater System Installation	November 23, 2009
Pile Driving	December 1, 2009
Observation Deck & Walkway	December 7, 2009
Interpretive Path	February 1, 2010
Planting	February 1, 2010
Paving	February 1, 2010
Seeding	March 1, 2010
Project Completion	March 15, 2010

### **2.1.1 Construction Access and Staging**

A single upland staging area at the wayside site will be created and used during construction. If necessary, the staging area will be restored after construction is completed. At the parking area site, staging will occur in the upland portion within the parking area and will be paved as part of construction. BMPs will be installed around the staging areas at both sites to minimize any risk of contamination in the event of a fuel or oil leak.

### **2.1.2 Clearing and Grubbing**

Undesirable vegetation will be removed and existing desirable vegetation will be preserved in place or moved to a more desirable location at both sites. All clearing and grubbing activities will be restricted to areas above MHW. This work will be done with a trackhoe.

Metal debris found at the sites may be removed as part of the project. Because this metal is below MHW, the metal will be removed by hand or by trackhoe during low water.

### **2.1.3 Grading**

After clearing and grubbing are complete, grading will occur at the wayside site along the eastern edge of the project area for the construction of the walkway and along the northern half of the project area for the construction of the stormwater treatment swale, constructed wetland area, and interpretive path. Grading will be accomplished using a trackhoe and compactor and may include the use of fill to reach the desired final elevation and design.

Grading will occur at the parking area site after clearing and grubbing and the installation of a retaining wall is accomplished. To reach final grade, fill will be placed on 0.024 acres of the project area below Highest Mean Tide (HMT, aka High Tide Line). Equipment to perform the work may include a trackhoe, bulldozer, skid steer loader, compactor, and dump truck.

#### **2.1.4 Pile Driving**

Pile driving during construction of the observation deck at the wayside site will be limited to three days in November or December. Approximately six to eight hollow steel piles, each 12 inches in diameter, will be installed. Each pile will be driven to a depth of 30 feet. Pile driving will be done with a vibratory hammer mounted on a crane operating from land. Pile driving will not occur in water; however, piles will be driven below HMT.

#### **2.1.5 Observation Deck and Walkway**

The observation deck will be constructed on the southeast corner of the wayside site. The deck will be constructed on piles. The observation deck platform will be installed above HMT. The observation deck will be constructed out of a wood-polymer lumber (such as "Trex") and will be supported by concrete, steel girders, and/or cedar, as necessary. No pressure-treated wood will be used. A walkway of pavers will be installed along the eastern edge of the site, connecting the observation deck to an existing sidewalk along Bay Street. Construction of the walkway will include minor grading so that the walkway can be installed at an acceptable slope. The observation deck and walkway will comply with the Americans with Disabilities Act (ADA). Access to the observation deck will be gained by parking along Bay Street and following the walkway from the northeast corner of the site along Bay Street. A picnic area will also be installed in the northeast corner of the site on the west side of the walkway. A trackhoe, skid steer, and roller or plate compactor will likely be used for this work.

#### **2.1.6 Interpretive Path**

An interpretive path will be constructed along the western side of the stormwater treatment swale and wind east across the site to the walkway. The path will be constructed with either bark or gravel. A small bridge will carry the path over the stormwater treatment swale. Interpretive signs will be installed along the path to highlight the ecological value of wetlands and native plants in treating stormwater. Interpretive signage will also be installed along the observation deck and walkway to highlight the historical significance of the Siuslaw River Bridge. A trackhoe and skid steer will likely be used for this work.

#### **2.1.7 Stormwater Treatment Improvements**

The project will replace an existing 6-inch diameter stormwater pipe that crosses under Bay Street north of the wayside site with a 12-inch-diameter pipe. This new pipe will be connected to two double-chambered water quality curb inlets, replacing the existing catch basins along Bay Street above the northwestern corner of the site. The curb inlets will serve to settle out oil and grease and particulates from the roadway runoff. The outfall from the catch basin may be enhanced with a rock or concrete drop structure. This construction activity will require cutting the asphalt with a concrete saw, and then using a backhoe to dig up and remove the existing pipe. Once the new pipe is laid, a backhoe, asphalt truck, and plate compactor will be used to replace the subgrade and asphalt. As necessary, debris will be swept by hand or machine to prevent material from washing off-site into the river.

A stormwater treatment swale will be installed downgrade from the outfall. The swale will meander for a length of approximately 100 feet before the stormwater

is discharged into the constructed wetland area. The swale will be seeded and planted. Soils will be reinforced using coir fabric. Once the native plants become established, they will serve to cool and filter the stormwater before it is discharged. The swale will be constructed using a trackhoe.

Downgrade of the stormwater treatment swale, a wetland area will be constructed just north of the existing tidal wetland. Wetland construction will include minor grading and installation of native wetland emergent plant species that can tolerate periodic inundation. The constructed wetland area will be graded so that treated stormwater can flow into the existing wetland at an appropriate rate to sustain its existing hydrologic conditions.

### **2.1.8 In-Water Work**

No work will occur on the sites below MHW except for the removal of old metal debris; however, most of the work at the wayside site will occur below HMT. At the parking area site, the retaining wall, two overlooks, and 0.024 acres of fill will be installed below HMT. All work done below HMT (including the construction of the observation deck, interpretive path, constructed wetland, stormwater treatment swale, and work at the parking area) is considered in-water work, regardless of whether or not work will actually occur while water is present. Although work will be timed to avoid actually working in water, all work below HMT will be conducted during the in-water work window (November 1 – February 15) for the Siuslaw River estuary (ODFW, 2008).

### **2.1.9 New Impervious Surface**

No new impervious surface area will be added at the wayside site. The construction of the parking area will increase impervious surface by 0.14 acres (the total area of the site). After grading is complete, the concrete sidewalks and overlooks, pavers, and asphalt will be installed at the parking area site. Stormwater generated at the parking area will be collected and treated on-site by a two-cartridge StormFilter™ catch basin that will be installed during construction. Stormwater will exit the catch basin through a 10-inch-diameter, storm-drain pipe that will connect to the existing 15-inch stormwater pipe that outfalls to the Siuslaw River below the parking area. The preliminary drawings are included in Appendix C.

## **2.2 Interdependent and Interrelated Actions**

There are no interdependent or interrelated actions associated with this project.

## **2.3 Mitigation and Monitoring**

No actions requiring mitigation are proposed.

## **2.4 Action Area**

The project action area includes all areas where the biological, chemical, or physical environment may be directly or indirectly affected by the project and not merely the immediate area involved in the action (50 CFR 17.11). Most impacts will occur inside the work limits of the project, as shown in the conceptual plan in Appendix C.

Construction noise will extend over land and water beyond the work limits, and there is potential for a small area of the Siuslaw River estuary to be affected by sediment

delivery either during a storm event (in the case of an erosion control BMP failure or before disturbed areas are stabilized) as well as during the first inundation of the project area following construction (a first flush effect). For this project, the effects of noise will be the farthest-reaching impact and will define the limit of the action area (Figure 3). Heavy equipment will be operated during construction, which will generate noise above ambient levels. This equipment will include a vibratory pile driver, with an average maximum noise level of 101 decibel (dB)  $L_{max}$  at 50 feet (WSDOT, 2008). Noise impacts from construction were analyzed using a noise attenuation table (methods described in WSDOT, 2008) to determine the geographic extent of noise above ambient levels. Project-related noise is anticipated to attenuate over land to background noise levels for an urban area (approximately 65 A-weighted decibel (dBA), Cavanaugh and Tocci, 1998; cited in WSDOT, 2008) at a distance of approximately 1,400 feet (Figure 2). Sound attenuates more slowly over water; therefore, project noise will be audible on the southern shore of the Siuslaw River and will not attenuate to background levels until a distance of approximately 3,200 feet from the wayside project area (Figures 2 and 3). It is important to note that these distances make up the zone of effect, specifically when piles are being installed in an event which will take place during three days in December. Other heavy equipment used during the duration of construction will produce an average noise level of 91 dBA and affect a smaller geographic area (a 553-foot radius over land and a 1,002-foot radius over water, as shown in Figure 2). Construction noise, excluding pile driving, will not affect the southern shore of the Siuslaw River.

In addition to noise effects, the project may also have a zone of aquatic effects. Erosion and sediment control BMPs are anticipated to prevent aquatic impacts to the estuary, and any effects from possible failure of a BMP (such as sediment delivery) would be contained very near to the project area. The action area is within the tidal influence of the river, so effects of turbidity may be observed both upstream and down but would be contained within a conservative 300-foot radius of the project area (Figure 2). Turbidity and sediment delivery are concerns only during construction. Following construction, potential adverse effects to the environmental baseline and listed species will be associated with stormwater discharges from the wayside and parking area (see Section 5.2). The zone of aquatic effects for post-construction stormwater is not anticipated to be any greater than that from construction-related actions.

### 3.0 ENVIRONMENTAL BASELINE

#### 3.1 Existing Baseline Conditions

The project areas consist of two parcels of land between Bay Street and the Siuslaw River estuary. Elevations at the site range from below sea level to 10 feet above sea level. The slope is generally oriented north to south from Bay Street down to the intertidal mudflats. Wetland areas exist on the southern half of both properties (Appendices D and H). MHW and Mean Low Water (MLW) are at 2.90 feet above sea level and 2.50 feet below sea level, respectively. There is a catch basin on the northwest edge of the wayside site with an outfall that discharges stormwater into a vegetation clump upgrade of the existing wetland area. At the parking area site, there is an existing catch basin in the northeastern corner of the project area along Bay Street.

The project sites are currently vacant and accessed from Bay Street. Current uses of the sites are recreational, which includes dogwalking, walking, and sightseeing. During the site reconnaissance, several tourists were observed walking along an existing informal

trail along the east side of the wayside site out to the tidal zone to take photographs of the Siuslaw River Bridge.

There are several sets of existing piles at both project sites (Appendix B). These historic piles are located south of the project area in the tidal zone of the estuary. The piles at the wayside site are thought to be the remnants of the Kyle Brothers' warehouses, which were associated with the Kyle Cannery (NMFS, 2005a; Appendix A). Metal debris still on-site provide evidence of historical uses of the site (Appendix B). Piles at the parking area site, along the tidal zone, appear to be the remnants of the falsework used during the original bridge construction.

### **3.2 Fish Species**

Two listed fish species may be found in the action area and have the potential to be affected by the project: Oregon Coast coho salmon and southern DPS green sturgeon. Other sensitive fish species that use the Siuslaw River estuary during a portion of their life cycle include steelhead (Oregon Coast ESU), coastal cutthroat trout, and Pacific lamprey; all are federal species of concern. Chum salmon (Pacific Coast ESU) and fall Chinook salmon (Oregon Coast ESU), which are not warranted for federal listing, are also found in the Siuslaw River estuary. Additionally, the Siuslaw River estuary supports four groundfish and one coastal pelagic species (NMFS, 2005a; Appendix A). These are addressed in the Essential Fish Habitat assessment in Section 8.0. Adults and juveniles of all anadromous fish species found in the Siuslaw River must travel through the estuary during a portion of their life cycle and may pass near the project area.

#### **3.2.1 Siuslaw River Estuary**

The Siuslaw River estuary covers approximately 3,060 acres and has a watershed of approximately 4,560 square miles. It is designated as a Shallow Draft Development estuary under the Oregon Estuary Classification system. The geomorphology of the area is that of a Drowned River Mouth estuary (Ecotrust, 2002; Coastal Atlas, 2007).

The project areas are located within the bay subsystem of the estuary. The bay subsystem is influenced by both the marine and river systems. Bays are generally characterized by a broad channel confined by intertidal land, and the substrate is primarily a mixture of coarse marine sands and fine river-borne silts and clays. Substrate along the project area on the bay front consists of fine river-borne silts and clays deposited by a combination of riverine and tidal forces. This substrate has been consolidated into tidal mudflats along the southern edge of the property. Bays have several diverse habitats including intertidal mudflats, eelgrass beds, algal beds, and tidal wetlands (Ecotrust, 2002). The project areas include intertidal mudflats with algal beds around historic piles, tidal wetland areas, and upland areas.

#### **3.2.2 Water Quality**

The project areas, located approximately at River Mile (RM) 4.6, are within the area of tidal influence that extends to RM 26. Saltwater intrusion in the Siuslaw River extends 17 to 22 miles upriver in the summer months and 5 to 7 miles during the winter months (Ecotrust, 2002). Therefore, the project areas are brackish year-round. The Siuslaw River is listed as an Oregon Department of Environmental Quality (DEQ) 303(d) water quality limited stream for year-round

temperature at the project area. This listing indicates that the Siuslaw River from River Mile 0 to 106 regularly exceeds the 7-day-average maximum temperature of 18.0°C. This standard is based on temperature requirements for salmonid rearing and migration (ODEQ, 2006).

### 3.2.3 Habitat Access and Connectivity

The Siuslaw River system is characterized by a vast network of low-gradient streams extending to the upper reaches of the watershed with few natural barriers. The estuary is relatively narrow and is dominated by several intertidal habitats. The tidal marsh habitat is particularly important to fish species, as it produces much of the food necessary for young migrating salmonids. They are often dissected by tidal channel systems which play an essential role in salmonid life cycles. These tidal channel systems provide both refugia for migrating salmon and the living and decomposing plant material that serves as food for a variety of invertebrates (a primary food source of salmonids; Ecotrust, 2002). Habitat access and connectivity for fish in the estuary is dependant on the quantity of functional tidal marshes and whether or not access has been impeded by riverbank alteration (see Section 3.2.5 for more details).

### 3.2.4 Habitat Elements

Eelgrass (*Zostera marina*) beds are an important part of the estuarine habitat, providing cover and foraging opportunities for many organisms as well as refugia from predation. At the original wayside site below the Siuslaw River Bridge, there had been concern that the construction of a walkway and viewing platform on piles would reduce light penetration and would, therefore, adversely impact any eelgrass communities occurring near the site (NMFS, 2005a; Appendix A). On May 16, 2006, a site visit was conducted to determine the presence of eelgrass at the original wayside site. No eelgrass was found under the north end of the bridge or at the new site proposed for the wayside. The closest significant stand was observed at the Port of Siuslaw boardwalk east of both the original and the current wayside sites along the estuary (Appendix E).

Large woody debris, an important habitat element for juvenile coho, is uncommon along the Florence shoreline; and there is little potential for recruitment, due to urban development within the riparian corridor. Smaller woody debris does occur in the intertidal area and provides some habitat benefit.

### 3.2.5 Channel Conditions and Dynamics

From the mouth of the estuary to the Florence city center, 86 percent of the riverbank has been altered (NMFS, 2005a; Appendix A). Alterations include, but are not limited to, armoring the banks with riprap, construction of dikes, and installation of tide gates. Armoring the banks changes the hydraulic conditions of the channel, thereby causing unnatural channel-forming processes. Over 58 percent of the historical tidal marsh in the Siuslaw River estuary has been diked (Ecotrust, 2002). The dikes and tide gates prevent the natural inundation to the tidal marshes; therefore, tidal channels can no longer be formed or maintained. Salmonids may no longer have access to the tidal marshes in these areas (Ecotrust, 2002).



The upland portion of the wayside site was the historical location of the Florence City Hall (Appendix D). Behind the City Hall, the Kyle Brothers' warehouses were constructed on piles over the water (Appendix D). All of the buildings are now gone, but the remnants of the piles are still present in the intertidal zone.

Both the project sites are currently vacant and include an area of upland along Bay Street transitioning to intertidal wetlands and mudflats toward the water. Shoreline development in the immediate area of the project sites include structures constructed on uplands as well as structures constructed on piles over the water and intertidal zone. Marinas also occur upstream and downstream of the site. The property on the east side of the wayside site has armored the shoreline with riprap. The narrow property to the west is undeveloped. The recently built condominiums on the west side of the parking area site have riprap-armored banks, while the travel company on the east side is built on piles installed in the tidal mudflats.

### 3.2.6 Flow/Hydrology

The mainstem of the Siuslaw River is 109 miles long, and the total length of all the streams in the basin combined is 4,500 miles. The mean annual discharge of the river (according to the Mapleton stream gauge) averages about 1.5 million acre-feet. Highest flows are in December, and lowest flows are in August. Precipitation varies from 55 inches in the eastern portion, 150 inches in the higher elevations of the Coast Range, and 80 to 100 inches per year along the coast. Most of the Siuslaw River basin is underlain by Tyee sandstones that do not have a high water storage capacity. This causes hydrology along the basin to be "flashy," meaning stream gauge heights vary dramatically throughout the year (Ecotrust, 2002). The HMT elevation at the project site during 2007 was 10.5 feet above sea level (Appendix D), as compared the MHW elevation of 2.9 feet above sea level.

### 3.2.7 Watershed Conditions

There are several factors in the Siuslaw River watershed that have impacted salmonid species. Historically, the watershed has been dependent on debris flows and sedimentation that served to maintain the aquatic health of the watershed. Deposition of spawning gravels and large wood provided suitable habitat for salmonids. Through human activity (including stream clearing, clear-cutting, land clearing, livestock grazing, and bank alterations), the conditions of the watershed have changed: slope failure and bank erosion are more common, debris flows carry finer sediments, and there are decreased large wood inputs. In addition, bed erosion or downcutting along much of the lower end of the Siuslaw River basin is occurring. The smothering of spawning gravels by finer sediments, loss of large wood inputs, removal of large wood, and loss of tidal marsh habitat through riverbank alteration poses a threat to salmonid species.

## 3.3 Bird Species

The action area provides habitat for nesting, migrating, and foraging birds. Within the project areas, cover is limited for nesting birds; but the mudflats and wetland areas provide foraging and migration habitat. Several bird species were observed in the project vicinity during the site reconnaissance. Among those noted were gulls (*Larus sp.*), cormorants (*Phalacrocorax sp.*), rock doves (*Columba livia*), house sparrows (*Passer*

*domesticus*), and swallows (*Petrochelidon pyrrhonota* and *Hirundo rustica*). The rock doves and swallows appeared to be nesting on the bridge structure. Aquatic birds found frequently along the estuarine shoreline at Florence include cormorants, geese, mergansers, scoters, grebes, loons, gulls, wading birds (sanderlings, dunlins, killdeer), and ducks (mallards, buffleheads, green-winged teals). Common non-aquatic birds include doves, hummingbirds, woodpeckers, jays, chickadees, thrush species, warblers, sparrows, starlings, and dark-eyed juncos (Audubon, 2007a). Bald eagles are also known to nest along the shoreline (ORNHIC, 2008). Bald eagles are discussed in Appendix G. This species is an Oregon State Threatened species and is of special management concern.

The only federally listed bird species that may be found in the action area is the brown pelican. Habitat relevant to brown pelicans is discussed below.

### **3.3.1 Watershed or Other Relevant Habitat Unit**

The brown pelican uses the Siuslaw River estuary and its associated intertidal habitat. When migrating through the estuary, this species uses roosting habitat and perches for foraging. This type of habitat is abundant in the action area. The estuary near the Old Town District is lined with old piles and piers which provide adequate roosting and feeding habitat (USFWS, 1983).

### **3.3.2 Shelter**

Piles in the vicinity of the project area create a variety of roosting opportunities. Some of these piles are in locations providing shelter from the weather, such as under the Siuslaw River Bridge. The piles at the project area are exposed with no shelter from the weather.

### **3.3.3 Feeding**

The Siuslaw River estuary supports abundant fish; so, food availability is not likely to be a limiting factor for the brown pelican. At the project site, the old historic piers along the bay may provide feeding perches for pelicans.

### **3.3.4 Reproduction**

Brown pelicans present along the Oregon Coast are primarily post-breeding or non-breeding individuals (USFWS, 1983). This species does not reproduce in Oregon; therefore, no nesting habitat is utilized by brown pelicans in the action area.

### **3.3.5 Habitat Connectivity and Migration**

The action area provides stopover habitat for brown pelicans migrating along the Oregon Coast, particularly in the early fall. This species uses the pier pilings in the action area. This habitat will be unaffected by the project.

### 3.4 Plant Species

No listed plant species were found in the project area during the site survey, and none were reported by the ORNHIC within 2 miles of the project area (ORNHIC, 2008). Habitat conditions in the project area are not suitable for any of the listed species identified on the USFWS species list. Each is briefly discussed in Section 4.1.

#### 3.4.1 Watershed or Other Relevant Habitat Unit

For a discussion of the Siuslaw River estuary, refer to Section 3.2.1.

#### 3.4.2 Habitat and Vegetative Community Associations

The project areas include three distinct vegetation communities: an intertidal mudflat with algal beds around the historic piles, a tidal wetland area dominated by herbaceous vegetation, and an upland area with both woody and herbaceous vegetation. The intertidal mudflats and algal beds are exposed during low tides and inundated during high tide.

Herbaceous vegetation borders the mudflat and includes several clumps of ice plant (*Caypobrotus edulis*) at the wayside site. The tidal wetland area, on the west side of the wayside site, includes plant species such as Baltic rush (*Juncus balticus*), gumweed (*Grindelia* sp.), Canada thistle (*Cirsium arvense*), Pacific silverweed (*Potentilla anserina* ssp. *pacifica*), pickleweed (*Salicornia virginica*), seashore saltgrass (*Distichlis spicata*), and tall fescue (*Festuca arundinacea*) (Appendix D). The upland area is at a slightly higher elevation than the wetland area and borders it along the north and east side. This area includes plant species such as Scotch broom (*Cytisus scoparius*), evergreen blackberry (*Rubus laciniatus*), coyote brush (*Baccharis pilularis*), cascara (*Rhamnus purshiana*), Oregon ash (*Fraxinus latifolia*), Pacific crab apple (*Malus fusca*), sword fern (*Polystichum munitum*), sweet vernalgrass (*Anthoxanthum odoratum*), tall fescue, foxglove (*Digitalis purpurea*), rose (*Rosa* sp.), fennel (*Foeniculum vulgare*), and several other grasses and herbs. Woody vegetation on the site is localized around the catch basin outfall (Appendix B). Invasive weeds at the site include foxglove, evergreen blackberry, ice plant, and Scotch broom.

The tidal wetland area at the parking area site includes herbaceous species such as Baltic rush, bentgrass (*Agrostis* sp.), birdsfoot trefoil (*Lotus corniculatus*), gumweed, Pacific silverweed, pickleweed, quackgrass (*Agropyron repens*), reed canarygrass, seashore saltgrass, seaside plantain (*Plantago maritime*), and tall fescue (Appendix H). The upland area of the parking area site includes species such as western red cedar (*Thuja plicata*), Pacific wax-myrtle (*Myrica californica*), butterfly bush (*Buddleja davidii*), English holly (*Illex aquifolium*), Hooker willow (*Salix hookeriana*), salmonberry (*Rubus spectabilis*), Scotch broom, Himalyan blackberry (*Rubus armeniacus*), evergreen blackberry, and an ornamental shrub (*Hebe* sp.). Invasive weeds at the site include quackgrass, reed canarygrass, butterfly bush, English holly, Scotch broom, Himalyan blackberry, and evergreen blackberry.

#### 3.4.3 Soil

The Lane County Soil Survey shows one soil map unit, Waldport-Urban Land Complex, 0 to 12 percent slopes (Map Unit 133C), in the project areas. The Waldport series is not classified as hydric but does have a hydric inclusion

(NRCS, 2007). The Waldport series consists of deep, excessively drained soils on stabilized sand dunes. These soils formed in eolian sand of mixed origin on slopes ranging from 0 to 70 percent.

#### **3.4.4 Hydrology**

Hydrology at both sites is influenced by three water inputs: rainfall, stormwater discharge, and the tides. The project areas are influenced by annual rainfall. The catch basins along the northwest edge of the wayside site discharge stormwater through the stormwater pipe and outfall into the upland area. This stormwater then flows into the tidal wetland area. Hydrology at both sites is influenced by the tides' fluctuation caused by an ocean wave or freshwater surges during extremely high tides (Appendix D). At the parking area site, a retaining wall will be built and fill will be placed so that the parking area remains above water during extreme high tides.

### **4.0 NATURAL HISTORY AND SPECIES OCCURRENCE**

Eighteen fish, wildlife, and plant species listed under the ESA are known to occur within Lane County or have the potential to occur in the County (Table 2). Section 4.1 (below) discusses federally listed species that were determined to be absent from the project vicinity. Oregon Coast coho salmon, Southern DPS green sturgeon, and the brown pelican are then discussed in greater detail as federally listed species with potential to be in the vicinity of the project.

#### **4.1 ESA Listed, Proposed, and Candidate Species Not In Project Vicinity**

Of the 18 species listed under the ESA and potentially found within Lane County, 15 of these species are not found in the action area or project vicinity.

##### **4.1.1 Bull Trout**

Bull trout do not occur in the Siuslaw River or other coastal Oregon watersheds (64 FR 58909). The Columbia River DPS includes 22 recovery units (USFWS, 2002) consisting of watersheds that drain to the Columbia River. The nearest recovery unit to the project is the Willamette River basin (USFWS, 2002). Critical habitat has been designated for this species but does not include the Siuslaw River (70 FR 56212).

##### **4.1.2 Oregon Chub**

The Oregon chub is a small minnow endemic to the Willamette Valley ecoregion and is not found in the Siuslaw River or other coastal watersheds (ODFW, 2005).

##### **4.1.3 Steller Sea Lion**

In Oregon, Steller sea lions occupy two major rookeries (Rogue Reef and Orford Reef along the southern Oregon Coast), one minor rookery (Three Arch Rocks along the northern Oregon Coast), and eight haul-out sites (NMFS, 2007). Most haul-out sites are within the Oregon Islands National Wildlife Refuge off the southern Oregon coast, but Steller sea lions are also found year-round in smaller numbers at Sea Lion Caves (11 miles north of Florence) and at Cape Arago State Park (south of Coos Bay). Though Steller sea lions occur in marine waters along the coast of Lane County, they are not documented as occurring within the Siuslaw watershed (NatureServe, 2007a; NMFS, 2007). The mouth of the Siuslaw River is approximately 11 miles south of the nearest haul-out site. Critical habitat in Oregon has been designated at traditional rookery sites

including Rogue Reef (Pyramid Rock site) and Orford Reef (Long Brown Rock and Seal Rock sites) (58 FR 45269). These sites are more than 50 miles from the Siuslaw River.

#### **4.1.4 Marbled Murrelet**

Marbled murrelets are known to nest in the Siuslaw River watershed (NatureServe, 2007b; USFWS, 1997); however, suitable habitat does not exist in the vicinity of the project area. During the breeding season (April 1 – September 15; USDI, 2003), murrelets may fly over the project area on their way to nesting territories east of Florence. Designated critical habitat for marbled murrelets occurs in the upper Siuslaw watershed approximately 3 miles east of the project areas (61 FR 26256).

#### **4.1.5 Western Snowy Plover**

The project area lies within the Pacific Coast DPS of the western snowy plover (58 FR 12864; Csuti et al., 2001). Snowy plovers have been recorded breeding at nine sites along the Oregon Coast (USFWS, 2001a). The mouth of the Siuslaw River is located between two recovery units identified by the USFWS in the Western Snowy Plover Recovery Plan (USFWS, 2001a). Wintering snowy plovers are found along the coast in the Florence area and small numbers are recorded each year by the Christmas Bird Count (Audubon, 2007b). The project area does not provide suitable habitat for the western snowy plover which nests and winters on sandy coastal beaches and dunes (usually within approximately 300 feet of water). The project area is located approximately 1.75 miles from the ocean at its nearest point and does not include coastal beaches or dunes. Critical habitat has been designated for this species, but does not include the project area (64 FR 68507). The nearest snowy plover critical habitat unit is located approximately 6 miles north of the project.

#### **4.1.6 Short-Tailed Albatross**

Historical range of the short-tailed albatross in North America was from the Bering Strait to California, but these seabirds have been extirpated from most of their range and are now found breeding only in the western Pacific Ocean near Japan and Taiwan and possibly in Hawaii (NatureServe, 2007c).

#### **4.1.7 Northern Spotted Owl**

Northern spotted owls in Oregon successfully breed in late-successional mixed coniferous forests usually dominated by Douglas fir (57 FR 1796; Csuti et al., 2001). The species prefers large forest stands with multiple layers and a closed canopy (55 FR 26114). The ORNHIC does not report any spotted owl occurrences within 2 miles of the project site (ORNHIC, 2008). Critical habitat was designated for this species January 15, 1992, (57 FR 1796) and revised August 13, 2008 (73 FR 47326). The nearest designated critical habitat is located approximately 5 miles east of the project areas (73 FR 47326). No large trees occur in the action area, and no suitable habitat for northern spotted owls is found in the project vicinity.

#### **4.1.8 Streaked Horned Lark**

The project vicinity is outside the current and historical range of the streaked horned lark (Pearson & Altman, 2005; NatureServe, 2007d). In Oregon, this

species has recently been found breeding along the lower Columbia River and in the Willamette Valley from Portland to Eugene (Pearson & Altman, 2005). Wintering larks are found in the Willamette Valley, with fewer birds along the Columbia River (Pearson & Altman, 2005). Some may also winter on the Southern Oregon Coast (Coos County) and, irregularly, on the Northern Oregon Coast (Pearson & Altman, 2005).

#### **4.1.9 Oregon Spotted Frog**

The Oregon spotted frog is highly aquatic, avoids dry uplands, is rarely found far from permanent quiet water, and usually occurs at the grassy margins of streams, lakes, ponds, springs, and marshes (58 FR 27260; Csuti et al., 2001). It was formerly abundant in the Willamette Valley but has apparently been nearly extirpated west of the Cascades in Western Oregon and Washington and from most locations in the Cascades and northeastern California (58 FR 27260). All surviving Oregon populations are found at higher elevations from the crest and east slope of the Cascade Mountains.

#### **4.1.10 Fender's Blue Butterfly**

The Fender's blue butterfly was historically widely distributed in upland prairie habitats throughout the Willamette Valley (65 FR 3875). The primary host plant for Fender's blue butterfly is the Kincaid's lupine (65 FR 3875). The project areas are outside the historical range for both species. Critical habitat has been designated for Fender's blue butterfly and Kincaid's lupine in the Willamette Valley near Eugene (71 FR 63862).

#### **4.1.11 Oregon Silverspot Butterfly**

The Oregon silverspot butterfly occurs at disjunct sites along the Pacific Coast from Del Norte County, California, north to Long Beach Peninsula, Washington (USFWS, 2001b). The species is currently known to occur at only six sites, in three distinct but sometimes co-occurring ecosystem types: montane/grasslands, marine terraces and headlands, and stabilized dunes (USFWS, 2001b). The nearest extant population of silverspot butterflies is at Rock Creek-Big Creek approximately 10 miles north of the project areas. One area of critical habitat has been designated for this species approximately 14 miles north of the project areas (45 FR 44935). The Oregon silverspot butterfly is not known to occur in the vicinity of the project, and no suitable habitat occurs within the action area.

#### **4.1.12 Willamette Daisy**

The Willamette daisy occupies native wetland prairie habitat in the low, flat regions of the Willamette Valley (71 FR 63862). Currently, populations occur at 18 sites distributed over an area between Grand Ronde and Goshen, Oregon. Critical habitat has been designated for this species in the Willamette Valley (71 FR 63862; Oregon Flora Project and Native Plant Society of Oregon, 2005). The project areas are outside the range of the Willamette daisy and its designated critical habitat.

#### **4.1.13 Bradshaw's Desert Parsley**

Bradshaw's desert parsley is endemic to the southern portion of Washington and the central and southern portions of the Willamette Valley in Oregon. Bradshaw's

desert parsley occupies native wetland prairie habitat in the low, flat regions of the Willamette Valley and is not found in the coastal eco-region (53 FR 38448; Oregon Flora Project and Native Plant Society of Oregon, 2005). The project areas are outside the range of Bradshaw's desert parsley.

#### **4.1.14 Kincaid's Lupine**

Kincaid's lupine was historically widely distributed in upland prairie habitats throughout the Willamette Valley (65 FR 3875). It is the primary host plant for Fender's blue butterfly discussed above (65 FR 3875). The project areas are outside the historical range of Kincaid's lupine. Critical habitat has been designated for Fender's blue butterfly and Kincaid's lupine in the Willamette Valley, near Eugene, many miles from the project areas (71 FR 63862).

#### **4.1.15 Nelson's Checker-Mallow**

Nelson's checker-mallow is endemic to the Willamette Valley and Coast Range. A population of Nelson's checker-mallow, which is suspected to have been introduced, has also been found at a disturbed site in the Washington Coast Range approximately 56 miles north of the closest Oregon population. Existing populations of this species is found in remnant patches of native prairie habitat: along roadsides, fencerows, and old cemeteries. Nelson's checker-mallow has not been found within the Siuslaw River basin (NatureServe, 2008). Critical habitat has not been designated (58 FR 8241).

### **4.2 Coho Salmon, Oregon Coast ESU**

Coho salmon, Oregon Coast ESU, was listed as threatened and its designated critical habitat published in the Federal Register on February 11, 2008 (73 FR 7816). This listing took effect on May 12, 2008.

#### **4.2.1 Site-Specific Biological Requirements and Project Context**

The first salmon cannery was established in the Siuslaw River basin in 1877 along the Siuslaw estuary (Ecotrust, 2002). The remains of this include the old historic piles along the south side of the wayside site. Coho salmon runs in the 1990s averaged 4,000 fish which is less than 5 percent of the historical average based on estimates from the turn-of-the-century cannery industry. The decline of coho salmon is due primarily to over-harvesting and habitat degradation, but bird and mammal predation and hatcheries may have played a part as well (Ecotrust, 2002).

The lower Siuslaw River is a rearing and migration corridor for Oregon Coast coho salmon (ORNHIC, 2008). The ODFW reports that the Siuslaw is the largest coho producing basin in the mid coast (ODFW, 2005). Coho use the intertidal habitat in the action area on a year-round basis for migration and rearing (NMFS, 2005a). Adult coho salmon may be migrating through the project area to upstream spawning areas in late fall to winter during the construction window. Juveniles are present within the Siuslaw River estuary primarily during outmigration from February through June, with a peak in mid-May (NMFS, 2005a).

Coho forage on aquatic invertebrates and, during migration, larger coho smolts feed on chum fry and Chinook juveniles when available (Ecotrust, 2002). The

tidal wetlands within the project areas are above MHW; therefore, these wetlands will be accessible to coho only when high tides exceed the average high tide (i.e., MHW). There are no tidal channels at either site.

#### **4.2.2 Site-Specific Critical Habitat Availability and Project Context**

The Siuslaw River estuary is listed as critical habitat for coho salmon (73 FR 7816). Specific primary constitute elements (PCEs) found at the project areas include rearing, migration, and estuarine habitat. At the wayside site, rearing and migration habitat is provided along the intertidal zone by aquatic vegetation (algal beds) and shading from the historic piles. Shade is provided at the parking area site by historic piles on the east side and the bridge. Besides the piles and shade provided by the bridge, cover is provided by various woody debris in the intertidal area (Appendix B). These features provide protection from predation for juveniles and adult coho. These features can also help migrating coho avoid high flows. The project areas provide a suitable estuarine habitat with an unobstructed floodplain, where juvenile and adult coho can transition between freshwater and saltwater (73 FR 7816).

#### **4.2.3 Site-Specific Limiting Factors for Recovery**

The Oregon Coast Coho Conservation Plan for the state of Oregon names stream complexity as the primary limiting factor for the recovery of the Oregon Coast ESU coho salmon (ODFW, 2007). The type of habitat most limiting coho in this ESU is high-quality, over-winter, rearing habitat. Few Oregon Coast coho over-winter in the Siuslaw River estuary. High-quality, over-winter, rearing habitat is habitat that can produce over-winter survival rates that allow spawning coho to replace themselves at a rate of 3 percent smolt to adult survival. High-quality, over-winter, rearing habitat in the Siuslaw River estuary is characterized by a diversity of features including floodplain connectivity, large wood, pools, and tidal wetlands and channels (ODFW, 2007). At the project areas, stream complexity is limited to algal beds, historic piles, shade created by the piles and bridge, and woody debris in the intertidal zone. Tidal wetlands exist at the sites, but these wetlands are only accessible during above-average high tides. Also, there are no tidal channels at either site.

The secondary limiting factor for Oregon Coast ESU coho salmon is water quality (ODFW, 2007). As discussed in Section 3.2.2, the Siuslaw River is listed as an ODEQ 303(d) water quality limited stream for year-round temperature at the project areas. This indicates that the water temperature at the site regularly exceeds levels required for salmonid rearing and migration (ODEQ, 2006).

### **4.3 Green Sturgeon, Southern DPS**

The Southern Distinct Population Segment (DPS) of green sturgeon (*Acipenser medirostris*) was federally listed as "Threatened" on April 7, 2006 (71 FR 17757). This DPS consists of green sturgeon that spawn in the Sacramento River of California (Adams et al., 2002, 2005; ODFW, 2005). Green sturgeon migrate north from their spawning rivers and concentrate in coastal estuaries, particularly the Columbia River estuary and coastal Washington estuaries, during the late summer and early fall (Moyle et al., 1992, cited in Adams et al., 2002). The ORNHIC reports that green sturgeon



adults and juveniles may be present year-round in the Siuslaw River estuary but are considered rare (ORNHIC, 2008). The Siuslaw Watershed Assessment (Ecotrust, 2002) does not list them as a species occurring in the basin. Both Northern and Southern DPS green sturgeon are known to occur in coastal Oregon bays and estuaries, and population boundaries are not clearly understood (ODFW, 2005); therefore, green sturgeon occurring in the Siuslaw River estuary could be from either DPS. In the proposed rule for Southern DPS green sturgeon critical habitat, the NMFS states that “The presence of Southern DPS green sturgeon is likely (based on limited records of confirmed Northern DPS fish or green sturgeon of unknown DPS), but not confirmed” within the Siuslaw River estuary (73 FR 52084).

#### **4.3.1 Site-Specific Biological Requirements and Project Context**

The Siuslaw River is not a documented spawning area (NMFS, 2005b; ODFW, 2005). Little is known about the life history of green sturgeon. They spend much of their lives in nearshore marine environments but are highly migratory and found in the lower reaches of coastal Oregon rivers (ODFW, 2005). Southern DPS green sturgeon individuals may potentially be found in the action area during the late summer and early fall but are not expected to be in the area during the in-water work window (November 1 – February 15) when construction will take place. Therefore, they will not be exposed to any direct effects of the action and only potential indirect effects may occur.

#### **4.3.2 Site-Specific Critical Habitat Availability and Project Context**

Critical habitat was proposed for Southern DPS green sturgeon on September 8, 2008 (73 FR 52084). The Siuslaw River estuary has not been proposed as critical habitat.

#### **4.3.3 Site-Specific Limiting Factors for Recovery**

The principal threat to green sturgeon in the Southern DPS is the reduction of spawning area to a single population in the Sacramento River of California and the impassable barriers blocking sturgeon access to historical spawning habitat on this river (NMFS, 2005b). Other threats include insufficient flows and increased temperatures in spawning rivers, juvenile entrainment, exotic species, poaching, contaminants, and local harvest. The proposed wayside project will not affect any of these factors limiting green sturgeon recovery.

### **4.4 Brown Pelican**

The brown pelican (*Pelecanus occidentalis*) is listed as endangered throughout its range—except for on the Atlantic Coast of the U.S., Florida, and Alabama. This species has recently been proposed for delisting due to population recovery (February 20, 2008; 73 FR 9407).

#### **4.4.1 Site-Specific Biological Requirements and Project Context**

Brown pelicans found along the Oregon Coast are primarily post-breeding or non-breeding individuals from the Southern California/Mexico population that migrate north along the Pacific Coast primarily during the spring and summer (USFWS, 1983). Pelicans have been observed roosting on pier piling remnants in the project vicinity. We contacted Roy Lowe, Project Manager of the Oregon Coast National Wildlife Refuge and local coordinator of the pelican program in the USFWS Newport office, to gain site-specific information regarding potential

brown pelican use of the project areas (Lowe, 2007). He indicated that brown pelicans are seen primarily in September and October, as they are migrating south, with nearly all birds gone by November. The Audubon Christmas Bird Count (CBC) for Florence has recorded brown pelicans in only 3 years during the 13-year period of 1993 – 2005 (Audubon, 2007b). Only one or two individuals were counted. In 2007, an unusually high number of brown pelicans (5 individuals) were recorded (Audubon, 2007c). The Lane County Audubon Society occasionally reports winter sightings of pelicans in their online field notes (Lane County Audubon Society, 2007), but these are infrequent.

#### **4.4.2 Site-Specific Critical Habitat Availability and Project Context**

No critical habitat has been designated for the brown pelican.

#### **4.4.3 Site-Specific Limiting Factors for Recovery**

This species has been proposed for delisting throughout its range, because the population has completely recovered to historical levels (73 FR 9407). The USFWS has identified factors most likely to affect brown pelican population levels, and these key demographic characteristics include those that affect reproduction over a period of several years (such as disturbance of nest sites, contaminants, and availability of prey; 73 FR 9407). The proposed interpretive wayside and parking area will not affect brown pelican reproduction through any of these factors.

## **5.0 ANALYSIS OF EFFECTS OF THE ACTION**

The project may have direct and indirect effects on Oregon Coast ESU coho salmon, its designated critical habitat, and Southern DPS green sturgeon. Direct effects to the brown pelican are unlikely, but indirect effects may occur.

### **5.1 Direct Effects**

Short-term direct effects of the project on ESA-listed fish species may result from exposure to increased turbidity and Total Suspended Solids (TSS). All life stages of fish that may be exposed to these effects during construction will be capable of moving out of the area. Adult coho salmon may be migrating through the project areas to upstream spawning areas during the beginning of the construction window (which is scheduled from November 1, 2009, to February 15, 2010). Juvenile coho are present within the Siuslaw River estuary primarily from February through June, though individuals may be rearing in the action area at any time of year. When asked about juvenile coho presence in the Siuslaw River estuary during the winter construction window, the local ODFW fish biologist, Derek Wilson, stated that juveniles are not expected to be present in November or December when pile driving will occur (Wilson, 2007). Construction of the project will occur during the ODFW in-water work window when the fewest coho juveniles are present in the Siuslaw River. Green sturgeons are unlikely to be present in the Siuslaw River estuary during construction. They are considered rare (ORNHIC, 2007) and are most likely to be in Coastal river estuaries during the late summer and early fall (Adams et al., 2002).

Ground disturbance during construction has the potential to result in sediment delivery to the river, if there is heavy rainfall or flooding of the site due to riverine or ocean wave surges. At the wayside site, ground disturbance will occur in the southeast corner during pile-driving and construction of the observation deck, along the east side during the

construction of the walkway, and in the northwest corner during replacement of the stormwater pipe and construction of the stormwater treatment swale and interpretive path. At the parking area site, ground disturbance will occur during the installation of the retaining wall and grading of the parking area and during installation of the catch basin and stormwater outfall. A sediment release into the estuary would cause a short-term increase to ambient turbidity, and TSS, and would temporarily degrade water quality. Erosion and sediment control BMPs will be designed and used during construction to minimize any sediment release during ground disturbance.

The operation of heavy equipment below MHT and in the riparian zone will temporarily increase the potential for hazardous materials to enter sensitive areas including the river and adjacent wetlands. BMPs and minimization measures will be implemented to avoid impacts to water quality and sensitive areas from chemicals and other pollutants delivered through stormwater runoff, equipment operation and maintenance, and other pathways. These measures and BMPs are outlined in Section 6.0 below.

No direct effects to the brown pelican are anticipated, because they are not likely to be in the vicinity of the project areas during construction. Also, no habitat for the brown pelican will be removed by the project.

## 5.2 Indirect Effects

Following construction of the interpretive wayside, there will be a net improvement to the water quality of stormwater discharged to the Siuslaw River estuary. Currently, runoff from 0.9 acres of Bay Street flows untreated through the wayside project area to the River. Following construction, runoff from the 0.9 acres, plus the 0.14 acres of the new parking area (1.04 total acres), will be treated prior to discharge to the River. Parking lots and roadways are important sources of toxic pollutants in urban stormwater (Greenstein et al., 2004; Hecht et al., 2007; Pitt et al., 1995; WSDOT, 2005, cited in WSDOT, 2008). Copper and zinc concentrations in runoff originating from parking areas and roadways regularly exceeds EPA aquatic life criteria (EPA, 2006) and, for dissolved copper, the concentrations at which sublethal adverse effects are observed in juvenile salmonids (see review in Hecht et al., 2007). Total and dissolved metals in stormwater (including copper, zinc, cadmium, and lead) are priority toxic pollutants (EPA, 2006) that are known to adversely affect fish at low levels (Fresh et al., 2005; Hecht et al., 2007; Mebane, 2006; NMFS, 2008).

At the wayside site, the project proposes to capture the currently untreated stormwater runoff from Bay Street in two, double-chambered, oil/water-separating, water quality, curb inlets. This partially treated stormwater will discharge to a constructed stormwater treatment swale, then travel through a constructed wetland, before flowing through a natural wetland and tidal mudflat to the River.

This treatment train will filter out pollutants, attenuate flows, cool runoff, and increase stormwater infiltration over existing conditions. The stormwater treatment swale is expected to remove approximately 81 percent of TSS, 51 percent of total copper, and 71 percent of total zinc (EPA, 1999a). As the stormwater flows through the constructed wetland, an additional 67 percent of TSS, 41 percent of copper, and 45 percent of zinc is expected to be removed (EPA, 1999b). According to data from the International Stormwater BMP database (Geosyntec Consultants and Wright Water Engineers, Inc., 2008a,b), biofilters (including vegetated swales) remove approximately 41 percent of dissolved copper and 56 percent of dissolved zinc. Removal performance for

constructed wetlands was not reported in the BMP database. Infiltration in the stormwater treatment swale and constructed wetland is anticipated to contribute to removal of dissolved metals.

The effectiveness of the treatment train will be reduced if high water levels inundate any portion of the constructed wetland or stormwater treatment swale. The engineer designing the treatment BMPs estimates that the swale will be inundated during a winter storm event every few years but not on a regular basis, and the wetlands will be inundated only during the highest tides of the year (Irvin, 2008).

At the wayside site, both the constructed wetland and most of the stormwater treatment swale are located below HMT but well above MHW. At this location, MHW is 2.94 and HMT is 6.94 NGVD. It would take a 10.5-foot-high tide (referenced to Mean Lower Low Water [MLLW = -3.56 NGVD]) to reach the HMT line. Based on the 2008 NOAA tide predictions for Florence (NOAA 2008), the highest tide of the year will reach 8.3 feet (2.2 vertical feet below the HMT). There are 7 high tides, greater than or equal to 8 feet, predicted during the months of November and December 2008; 31 high tides, greater than or equal to 7.5 feet, are predicted throughout the year. Inundation of the constructed wetland and stormwater treatment swale will occur very infrequently. The increased and thorough stormwater treatment at the wayside site will provide long-term improvements to Siuslaw River water quality near and downstream of the project area.

The improvements at the wayside site will be partially offset by the addition of new impervious surface at the parking area site. The parking area will add 0.14 acres of impervious asphalt and concrete surface. All stormwater runoff from these new impervious surfaces will be captured and treated. The project will install a two-cartridge StormFilter® catch basin with ZPG filter media (a mixture of zeolite, perlite, and granular-activated carbon) to treat the runoff. Runoff leaving the catch basin will enter the existing 15-inch stormwater pipe under the parking area, then outfall to the estuary through the existing stormwater outfall. The proposed StormFilter® was designed to treat stormwater with a maximum flow of 0.067 cubic feet per second (cfs). Flows greater than this maximum-flow rate would pass the overflow baffle to the discharge pipe; thus, bypassing the filter media. The StormFilter® is designed to remove sediments, metals, and other roadway pollutants from stormwater. This treatment method will reduce pollutants of concern in the runoff, but will not eliminate them entirely.

The performance of the StormFilter® catch basin with the ZPG filter media was verified in tests conducted in cooperation with the EPA in 2004 (NSF International and Earth Tech, Inc., 2004). In these tests, influent and effluent samples were analyzed for TSS, metals, nutrients, and other water-quality parameters. In the test situation, the StormFilter® treated runoff collected from a 0.19-acre portion of a highway surface and was designed to treat runoff with a maximum flow rate of 0.29 cfs. Over the course of all 15 storm events tested, the StormFilter® reduced the loads of TSS by 46 percent, total copper by 59 percent, and total zinc by 64 percent (Table 4). Dissolved copper and zinc were only reduced by 16 percent and 17 percent, respectively.

Performance has been analyzed for a variety of common stormwater BMPs based on the large set of BMP-monitoring data in the International Stormwater Best Management Practices Database (Geosyntec Consultants and Wright Water Engineers, Inc., 2008a,b). These analyses determined that media filters (including, but not limited to, the StormFilter®) significantly reduce levels of many pollutants (including total and dissolved

zinc, total and dissolved lead, total copper, and TSS) but did not reduce levels of dissolved copper (Geosyntec Consultants and Wright Water Engineers, Inc., 2008a,b). Average total copper was reduced by 30 percent, average total zinc was reduced by 59 percent, and dissolved zinc was reduced by 26 percent. In contrast to the EPA verification data for the StormFilter®, the BMP database showed an increase in average dissolved copper concentrations in the effluent averaged from all media filter BMPs. Table 5 shows the median of average influent and effluent concentrations for copper, zinc, and TSS.

**Table 4. Analytical Data and Sum of Loads (SOL) Reduction Results for StormFilter® with ZPG media filter. (Adapted from NSF International and Earth Tech, 2004).**

Parameter	Units	Inlet Range	Outlet Range	SOL Reduction
TSS	mg/L	29 – 780	20 – 380	46 %
Total Copper	µg/L	15 – 440	7.0 – 140	59 %
Dissolved Copper	µg/L	<5 – 58	<5 – 42	16 %
Total Zinc	µg/L	77 – 1,400	28 – 540	64 %
Dissolved Zinc	µg/L	26 – 360	16 – 160	17 %

**Table 5. Median of Average Influent and Effluent Concentrations of Media Filter Stormwater BMPs. (Adapted from Geosyntec Consultants and Wright Water Engineers, Inc., 2008a,b).**

Parameter	Units	Median of Avg. Influent Concentration			Median of Avg. Effluent Concentration		
		Median	LCL <sup>1</sup>	UCL <sup>2</sup>	Median	LCL <sup>1</sup>	UCL <sup>2</sup>
TSS	mg/L	43.27	27.25	59.58	15.86	9.74	21.98
Total Copper	µg/L	14.57	10.87	18.27	10.25	8.21	12.29
Dissolved Copper	µg/L	7.75	4.55	10.96	9.00	7.28	10.72
Total Zinc	µg/L	92.34	52.29	132.40	37.63	16.80	58.46
Dissolved Zinc	µg/L	69.27	37.97	100.58	51.25	29.04	73.46

<sup>1</sup> Lower confidence limit of 95% confidence interval.

<sup>2</sup> Upper confidence limit of 95% confidence interval.

In order to calculate an approximation of the difference between pre-project and post-project inputs of TSS and total and dissolved copper and zinc to the Siuslaw River estuary, we used a load concentration calculator program developed by WSDOT (WSDOT, 2006). This calculator does not differentiate between the pollutant removal capacity of different BMPs and, therefore, overestimates pollutant removal for some parameters and underestimates it for others (i.e., the model's reduction factor for removal of dissolved copper [-34%] overestimates removal from the StormFilter® [-16%] but underestimates removal from the stormwater treatment swale and treatment train [>41%]). However, it provides a general way to measure how pollutant loads and concentrations in stormwater discharge are affected by retrofitting existing impervious areas for treatment and by creating new treated impervious surface. These calculations indicate a net reduction in TSS and total and dissolved zinc and copper post-project (Table 6).

**Table 6. Load Concentration Calculations for Stormwater Runoff from the Siuslaw River Bridge Interpretive Wayside Project (Calculations from WSDOT, 2006).**

<b>LOAD RATES</b>	<b>TSS</b>	<b>Total Zinc</b>	<b>Dissolved Zinc</b>	<b>Total Copper</b>	<b>Dissolved Copper</b>
Mean annual load from UNTREATED surfaces (lbs/acre)	565	1.1	0.4	0.2	0.053
Mean annual load from TREATED surfaces (lbs/acre)	45	0.28	0.2	0.065	0.035
<b>PROJECT TOTAL</b>					
Annual effluent load from existing impervious surfaces prior to project (lbs)	508.50	0.99	0.36	0.18	0.05
Annual effluent load from new and existing impervious surfaces after project (lbs)	46.80	0.29	0.21	0.07	0.04
Net Change in pollutant loads between pre- and post-project conditions	-461.70	-0.70	-0.15	-0.11	-0.01
<b>CONCENTRATIONS</b>	<b>TSS (mg/L)</b>	<b>Total Zinc (µg/L)</b>	<b>Dissolved Zinc (µg/L)</b>	<b>Total Copper (µg/L)</b>	<b>Dissolved Copper (µg/L)</b>
Expected pollutant concentrations for UNTREATED runoff	93	174	62	31	7.6
Expected pollutant concentrations for TREATED runoff	6.4	40	27	7	5
Pollutant concentration for runoff PRE-project	93.00	174.00	62.00	31.00	7.60
Pollutant concentration for runoff POST-project	6.40	40.00	27.00	7.00	5.00
Net Change in pollutant concentration between pre- and post-project conditions	-86.60	-134.00	-35.00	-24.00	-2.60

It is important to relate the expected effluent concentrations back to the potential effects to coho salmon. The EPA National Recommended Water Quality Criteria for aquatic life protection are shown in Table 7. Based on the WSDOT calculations and the StormFilter® verification study, the concentration of dissolved copper in the treated runoff exiting both the wayside and parking area sites is expected to be approximately 5.0 µg/L, with a range from <5.0 µg/L to 42 µg/L. These values are above the saltwater criteria. Studies have shown sublethal effects of copper to coho salmon at levels less than 2.0 µg/L (see Hecht et al., 2007) while lethal effects to juveniles are reported at 21 to 22 µg/L (Mudge et al., 1993). The concentration of dissolved zinc in the treated effluent is expected to be approximately 27 µg/L, with a range of 16 µg/L to 160 µg/L. This expected concentration of dissolved zinc is well below the saltwater criteria; however, the upper end of the range exceeds the criteria.

Little data are available on the effects of dissolved metals on fish in estuarine and marine waters. Protection possibly afforded by higher salinity and hardness is not clear-cut, and there remains uncertainty whether free copper ( $\text{Cu}^{2+}$ ) is the sole species of copper responsible for adverse effects seen in salmonids (NMFS, 2007). Furthermore, there is currently no accepted means of assessing potential adverse effects associated with the discharge of dissolved metals to saltwater environments. Therefore, the analysis presented in this BA references the EPA saltwater criteria, which is the only accepted standard at this time.

Both the WSDOT calculator and the EPA verification study likely overestimate the pollutant loads and concentrations delivered to the river from the project areas, since the data are based on highway runoff. Traffic use of the surfaces contributing stormwater runoff to the project areas will be much lower than for highways and will result in less automobile-generated pollutants. At the wayside area, runoff will also be dissipated as it flows through the natural wetland before entering the estuary. The small size of the parking area, and its location directly under the bridge, will also result in lower loads of dissolved metals than predicted above. Though the actual load of dissolved copper is expected to be very low from the project areas, the concentrations of dissolved copper in the treated runoff will likely exceed the sublethal effects threshold. Even with an overall reduction in copper delivery to the estuary following the project, the stormwater runoff from both project areas will continue to contribute sublethal concentrations of copper to the estuary.

The anticipated concentrations of dissolved copper in the stormwater runoff represent the quality of the water exiting the treatment facilities (i.e., in the parking area discharge pipe prior to entering the existing stormwater outfall pipe, and of the runoff dispersed from the constructed wetland). Actual exposure of coho to these concentrations of copper depends on the amount of dilution in the receiving water and the presence of coho in the immediate vicinity during runoff events. As soon as the stormwater runoff enters the estuary, it will be rapidly diluted. Only fish that are in the immediate vicinity of the parking area outfall during a runoff event are likely to be exposed to potentially toxic concentrations of dissolved copper.

The highest yearly precipitation for Florence occurs during the months of November, December, and January. These are the months when stormwater runoff is most likely to be discharged to the estuary and also when the highest tides occur. Due to the combined effects of increased runoff and high water levels, these are the months when there is the highest potential for exposure of fish to pollutants in stormwater runoff. Few juvenile coho are present in the estuary during the months of November, December, and January. The potential for storm events decreases as juvenile coho presence increases in the estuary beginning in February. Any juveniles rearing in or migrating through the shallow intertidal area at the location of the outfalls may encounter sub-lethal concentrations of dissolved copper during a storm event. Adults migrating through the action area during storm events will be in deeper water, away from the shallows where mixing and dilution occurs.

**Table 7. National Recommended Water Quality Criteria for Dissolved Copper and Zinc  
(Adapted from EPA, 2006).**

Parameter	Units	Freshwater		Saltwater	
		CMC <sup>1</sup>	CCC <sup>2</sup>	CMC <sup>1</sup>	CCC <sup>2</sup>
Dissolved Copper	µg/L	13*	9*	4.8	3.1
Dissolved Zinc	µg/L	120*	120*	90	81

<sup>1</sup> Criterion maximum concentration (the acute criterion).

<sup>2</sup> Criterion continuous concentration (the chronic criterion).

\* The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. The value given here corresponds to a hardness of 100 mg/L CaCO<sub>3</sub>. See EPA 2006 for calculations for other hardness values.

Though the project will not eliminate pollutants from the stormwater runoff entering the estuary from the project areas and will degrade conditions in the immediate vicinity of the parking area outfall, it will retrofit an area 6.4 times the size of the new impervious area created; thereby, improving water quality over existing conditions. Water quality is listed as a secondary limiting factor for the recovery of the Oregon coast ESU of coho in the Oregon Coast Coho Conservation Plan (ODFW, 2007). Any water quality improvements will benefit coho salmon and its critical habitat, green sturgeon, brown pelicans, and many other species that use the Siuslaw River estuary.

### 5.3 Effect of the Proposed Action on Tribal Resources or Interests

To date, an archeological survey has not been performed at either site. Arrow Coyote, a representative of the Confederate Tribes of the Coos, Lower Umpqua, and Siuslaw Indians has been to the wayside site. At that time, she did not express any objections to the project (Appendix D). On July 29, 2008, Elisabeth Bowers spoke with Wilbur E. TERNYIK who had contact with Arrow Coyote. He stated that her letter was forthcoming (TERNYIK, 2008). According to the Draft Project Prospectus (dated November 21, 2006), an archeological survey had not been accomplished for the original project site but would be required. A tribal representative had requested to be present during ground disturbance, the cost of which would be provided by the tribe (Appendix A).

## 6.0 AVOIDANCE, MINIMIZATION, AND CONSERVATION MEASURES

The project has been designed to avoid and minimize adverse environmental effects. The design avoids impacts to wetlands in the project areas, work below MHW, and disturbance of intertidal mudflats. These actions, coupled with BMPs presented below, minimize the likelihood of any adverse effect to listed species:

- No work will occur below the Mean High Water elevation.
- No impervious surface will be created at the wayside site. Pavers allowing infiltration will be used for the walkway and bark or gravel will be used for the interpretive path.
- Work below the Highest Measured Tide elevation will occur during the ODFW recommended in-water work window (November 1 to February 15).
- There will be no impacts to existing wetlands.



- Existing invasive plants on both sites will be removed; desirable native plants will be preserved to the greatest extent practicable; and site restoration will include the installation of a variety of suitable native vegetation (including wetland emergent, forb, grass, tree, and shrub species).
- Erosion and sediment control BMPs will be designed for the project area and installed before ground disturbance commences. During construction, BMPs will be maintained and adjusted to site conditions to ensure that there are no sediment releases during construction activities.
- Construction impacts will be confined to the minimum area necessary to complete the project.
- All excavated materials will be removed to an upland location where they cannot enter any water body, unless designated as fill or directed by the Engineer.
- All fueling and maintenance of equipment will occur more than 150 feet from the nearest wetland, waterbody, or unprotected catchbasin, except cranes, pile drivers, drill rigs, large trackhoes, and stationary equipment (e.g., generators and pumps) will be excluded from this requirement. If fueling of equipment is not possible more than 150 feet from the river, then fueling shall be done within a spill containment area, approved by the Engineer. Stationary equipment shall include full-time containment systems. Containment measures shall be implemented when fueling and maintaining cranes, pile drivers, drill rigs, and other large less-mobile equipment.
- Vehicles and equipment stored within 150 feet of the river and associated wetlands shall be located within an area designated to prevent fuel and other potentially hazardous materials from entering any waterway, wetland, or restricted work area.
- All equipment to be used for construction activities shall be cleaned and inspected prior to arriving at the project site, to ensure no potentially hazardous materials are exposed, no leaks are present, and the equipment is functioning properly.
- Construction equipment will be inspected daily to ensure there are no leaks of hydraulic fluids, fuel, lubricants, or other petroleum products.
- Project operations shall cease under high-flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage. The contractor shall evacuate any areas used for staging or storage and all materials (including any temporary road materials), equipment and fuel shall be removed if flooding of the area is expected to occur within 24 hours.
- Two existing catch basins along Bay Street will be replaced with double-chambered water quality curb inlets, which will remove particulates, oil, and grease before the stormwater is discharged onto the wayside site.
- A stormwater treatment swale and wetland area will be constructed at the wayside site below the stormwater pipe outfall to filter and cool the water before it is discharged into

the existing tidal wetlands. The stormwater treatment swale will meander for a length of 100 feet.

- Stormwater generated from new impervious surfaces at the parking area will be captured and treated with a StormFilter®.
- All disturbed soils at the project areas will be stabilized by seeding, planting, or paving.
- Project structures will be designed to deter piscivorous birds from perching on them.
- The observation deck will be constructed of “Trex” decking and steel piles to reduce chemical contamination of the waterway and sediment.
- Washing of concrete-mixer trucks will not be permitted on-site, and concrete will not be spilled or dumped on the site.
- The staging area for the parking area site will be created in the upland construction area to prevent additional disturbance of habitat.
- Interpretive signage will be installed at the wayside site to educate the public on the ecological value of the estuarine habitat to aquatic and terrestrial organisms as well as the value of stormwater treatment. Signage will be provided at the parking area site that educates the public on the history of the area, including information about the cannery and bridge. Signage will also be installed to deter littering and to encourage visitors to stay on trails, in order to prevent future impacts to the site.

## 7.0 FINDING OF EFFECT

### 7.1 Coho Salmon, Oregon Coast ESU

The proposed actions of the Siuslaw River Bridge Interpretive Wayside project **may affect**, but are **not likely to adversely affect** Oregon Coast coho salmon.

Though work will occur below HMT, no work will be conducted when the project area is flooded. Construction will occur during the ODFW in-water work window, when the fewest number of coho salmon are present in the estuary. Coho adults will be present in the action area during the first half of the construction window; but few, if any, juveniles are anticipated to be present during construction. Erosion and sediment control BMPs will prevent or minimize sediment delivery to the estuary. Coho will benefit from improved stormwater treatment upon completion of the project.

The proposed actions of the Siuslaw River Bridge Interpretive Wayside project **may affect**, but are **not likely to adversely affect**, Oregon Coast coho salmon designated critical habitat.

The project will result in long-term improvements to water quality that will benefit the coho critical habitat in the estuary. Though habitat modifications will occur below HMT, no work will occur below MHW. PCEs in the action area will not be negatively altered. Habitat below HMT will be modified by construction of the stormwater treatment swale, constructed wetland, path, and viewing platform at the wayside site and by installation of the retaining wall and a portion of the parking area at the parking lot site. These areas

are all above MHW. Though the small viewing platform will have a slight negative effect on critical habitat, the habitat will be improved on the remainder of the wayside site due to installation of the supporting piles. The addition of impervious surfaces at the parking area will contribute a small amount of pollutants to the estuary; however, the project will result in a net reduction of pollutants entering critical habitat due to the stormwater treatment train provided at the wayside site. As described above, sediment inputs will be avoided or minimized; any effects from sediment delivery to the estuary are anticipated to be insignificant, because work will occur when the area is not flooded and the total area of disturbance is small.

## 7.2 Green Sturgeon, Southern DPS

The proposed actions of the Siuslaw River Bridge Interpretive Wayside project **may affect**, but are **not likely to adversely affect**, Southern DPS green sturgeon.

Green sturgeon are rare in the Siuslaw River estuary, and Southern DPS green sturgeon have not been confirmed. Their potential for exposure to project effects is discountable.

The proposed actions of the Siuslaw River Bridge Interpretive Wayside project **will not destroy or adversely modify** Southern DPS green sturgeon proposed critical habitat.

Critical habitat for southern DPS green sturgeon has not been proposed in the action area.

If southern DPS green sturgeon critical habitat is designated prior to completion of this project, a provisional effect determination for critical habitat is the following: A **no effect** determination is warranted for southern DPS green sturgeon critical habitat because it has not been proposed in the action area.

## 7.3 Brown Pelican

The proposed actions of the Siuslaw River Bridge Interpretive Wayside project **may affect**, but are **not likely to adversely affect**, the Brown Pelican.

Brown pelicans are not likely to be in the action area during construction. No roosting or perching habitat will be removed by the project. Improved water quality in the estuary may provide a slight benefit to this species.

## 8.0 ESSENTIAL FISH HABITAT CONSULTATION

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 requires federal agencies to consult with NMFS on all actions or proposed actions authorized, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). This section addresses potential project effects to EFH.

### 8.1 Identification of Essential Fish Habitat

Estuaries along the Oregon Coast include habitat designated as EFH for various life stages of the following groundfish, coastal pelagic, and Pacific salmon species (NMFS, 2005a; PFMC, 1998a, 1998b, 1999):

**Groundfish Species**

Leopard shark (Southern Oregon only)	<i>Triakis semifasciata</i>
Southern Shark	<i>Galeorhinus zyopterus</i>
Spiny Dogfish	<i>Squalus acanthias</i>
California Skate	<i>Raja inornata</i>
Spotted Ratfish	<i>Hydrolagus colliei</i>
Lingcod	<i>Ophiodon elongates</i>
Cabezon	<i>Scorpaenichthys marmoratus</i>
Kelp Greenling	<i>Hexagrammos decagrammus</i>
Pacific Cod	<i>Gadus macrocephalus</i>
Pacific Whiting (Hake)	<i>Merluccius productus</i>
Black Rockfish	<i>Sebastes maliger</i>
Bocaccio	<i>Sebastes paucispinis</i>
Brown Rockfish	<i>Sebastes auriculatus</i>
Copper Rockfish	<i>Sebastes caurinus</i>
Quillback Rockfish	<i>Sebastes maliger</i>
English Sole	<i>Pleuronectes vetulus</i>
Pacific Sanddab	<i>Citharichthys sordidus</i>
Rex Sole	<i>Glyptocephalus zachirus</i>
Rock Sole	<i>Lepidopsetta bilineata</i>
Starry Flounder	<i>Platichthys Stellatus</i>

**Coastal Pelagic Species**

Pacific Sardine	<i>Sardinops sagax</i>
Pacific (Chub) Mackerel	<i>Scomber japonicus</i>
Northern Anchovy	<i>Engraulis mordax</i>
Jack Mackerel	<i>Trachurus symmetricus</i>
California Market Squid	<i>Loligo opalescens</i>

**Pacific Salmon Species**

Chinook Salmon	<i>Oncorhynchus tshawytscha</i>
Coho Salmon	<i>Oncorhynchus kisutch</i>

Only cabezon, English sole, Pacific sanddab, starry flounder, northern anchovy, Chinook salmon, and coho salmon are likely to be within the action area in the Siuslaw River estuary (NMFS, 2005a).

**8.2 Description of the Proposed Action**

The Siuslaw Interpretive Wayside Project will construct an observation deck and walkway east of Highway 101 with a bark pathway and picnic area. Stormwater improvements will also be constructed on the site. A parking area will be constructed downstream of the wayside site under the north end of the Siuslaw River Bridge. A full description of the proposed action is found in Section 2.0.

**8.3 Project Effects to Essential Fish Habitat**

Potential adverse effects of the proposed action on EFH include: short-term degradation of water quality from increased turbidity and suspended solids during construction; short-term degradation of water quality from chemical contamination during construction; and long-term degradation of water quality at the parking area outfall location. The project will result in a long-term benefit to overall water quality in the estuary due to improvements in stormwater treatment at the wayside site. These effects to EFH are discussed in Section 5.0.

#### 8.4 Essential Fish Habitat Conservation Measures

The following measures will be implemented to minimize the potential adverse effects on EFH:

- No work will occur below the Mean High Water elevation.
- No impervious surface will be created at the wayside site. Pavers will be used for the walkway and bark or gravel will be used for the interpretive path.
- Work below the Highest Measured Tide elevation will occur during the ODFW recommended in-water work window (November 1 to February 15).
- There will be no impacts to existing wetlands.
- Existing invasive plants on both sites will be removed; desirable native plants will be preserved to the greatest extent practicable; and site restoration will include the installation of a variety of suitable native vegetation (including wetland emergent, forb, grass, tree, and shrub species).
- Erosion and sediment control BMPs will be designed for the project area and installed before ground disturbance commences. During construction, BMPs will be maintained and adjusted to site conditions to ensure that there are no sediment releases during construction activities.
- Two existing catch basins along Bay Street will be replaced with double-chambered water quality curb inlets which will remove particulates, oil, and grease before the stormwater is discharged onto the wayside site.
- A stormwater treatment swale and wetland area will be constructed at the wayside site below the stormwater pipe outfall to filter and cool the water before it is discharged into the existing tidal wetlands. The stormwater treatment swale will meander for a length of 100 feet.
- Stormwater generated from new impervious surfaces at the parking area will be captured and treated with a StormFilter®.
- All disturbed soils at the project areas will be stabilized by seeding, planting, or paving.
- Project structures will be designed to deter piscivorous birds from perching on them.
- The observation deck will be constructed of “Trex” decking and steel piles to reduce chemical contamination of the waterway and sediment.
- Washing of concrete mixer trucks will not be permitted on-site and concrete will not be spilled or dumped on-site.
- The staging area for the parking area site will be created in the upland construction area to prevent additional disturbance of habitat.
- Interpretive signage will be installed at the wayside site to educate the public on the ecological value of the estuarine habitat to aquatic and terrestrial organisms as well as the value of stormwater treatment. Signage will also be installed to deter littering and to encourage visitors to stay on trails, in order to prevent future impacts to the site.

## 8.5 Conclusion and Effect Determination

Due to the potential for short-term water quality degradation during construction and long-term pollutant delivery to EFH from the parking area stormwater outfall, we find that:

- The project **may adversely affect** EFH for salmon.
- The project **may adversely affect** EFH for groundfish species.
- The project **may adversely affect** EFH for coastal pelagic species.

Despite these potential adverse effects, the project will result in long-term improvements to water quality that will benefit EFH in the Siuslaw River estuary. The project will result in a net reduction of pollutants entering EFH due to the stormwater treatment improvements provided at the wayside site. Sediment inputs will be avoided or minimized; any effects from sediment delivery to the estuary are anticipated to be insignificant, because work will occur when the area is not flooded and the total area of disturbance is small.

## 9.0 REFERENCES

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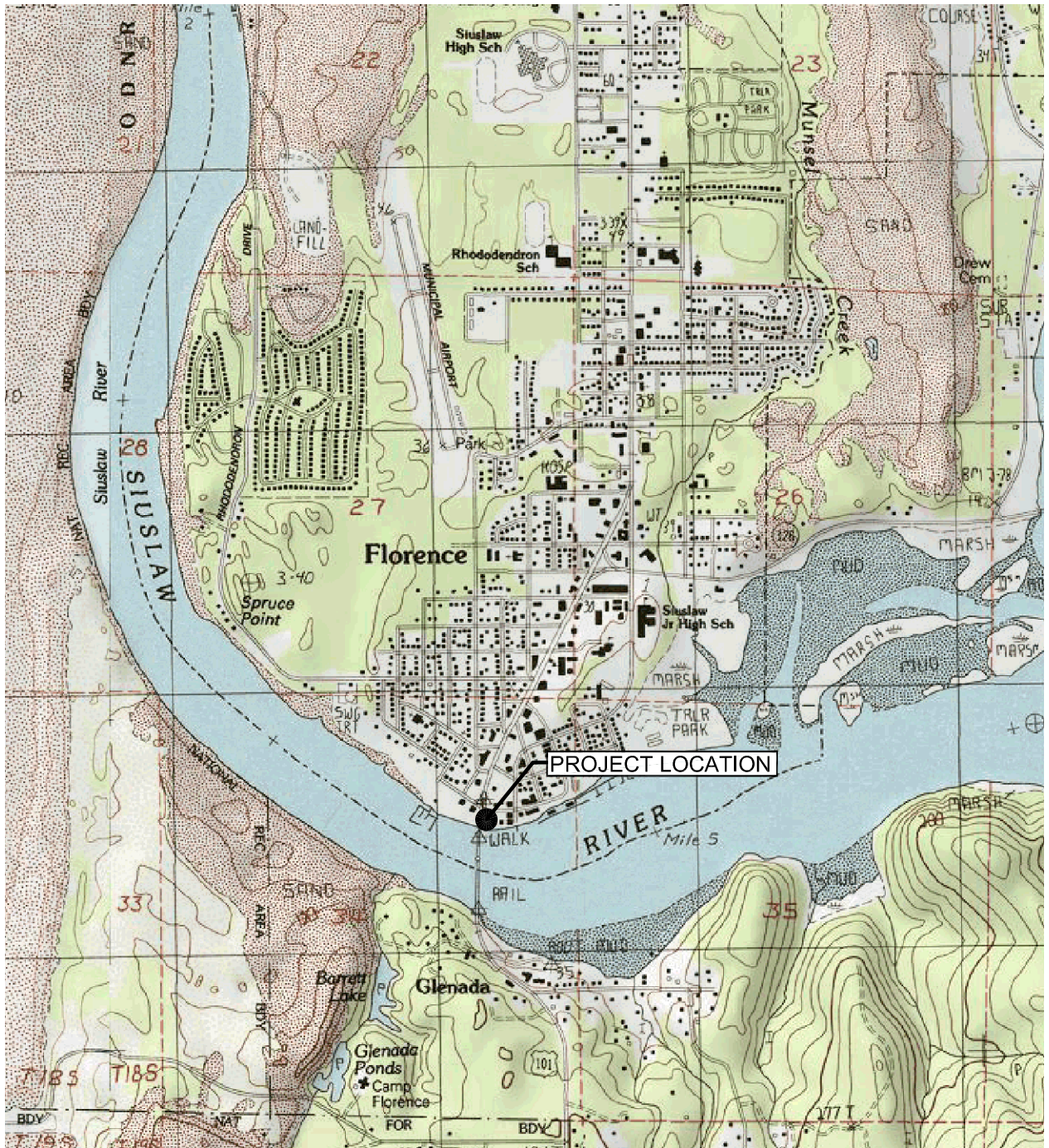
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## **FIGURES**

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Site Vicinity Map  
Action Area Map  
Project Noise Attenuation

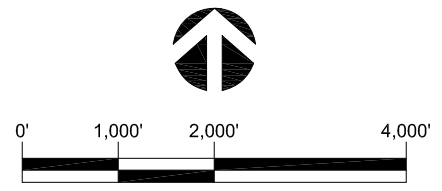
L:\VANCOUVER\75000175091\_SiuslawEast\dwg\75091.000\_aquatic effect.dwg Dec 16, 2008 08:57am robertw



SOURCE: USGS FLORENCE QUADRANGLE, OR 1978, PHOTO REVISED 1984.



OREGON



SCALE: 1" = 2,000'

PREPARED FOR: BRANCH ENGINEERING



PROJECT #: 75091.000  
DATE: DEC 2008

**SITE VICINITY MAP**  
TAX LOTS 101, 107, AND 700  
FLORENCE, OREGON

FIGURE  
**1**

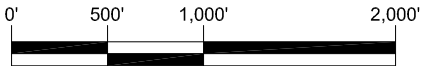


LIMIT OF PILE DRIVING NOISE:  
 1,400' OVER LAND NORTH OF RIVER,  
 3,200' OVER WATER AND LAND SOUTH OF RIVER

PROJECT AREAS

AQUATIC EFFECT LIMIT: 300'

LIMIT OF GENERAL CONSTRUCTION NOISE:  
 553' OVER LAND, 1,002' OVER WATER



APPROXIMATE SCALE: 1" = 1,000'

PREPARED FOR: BRANCH ENGINEERING



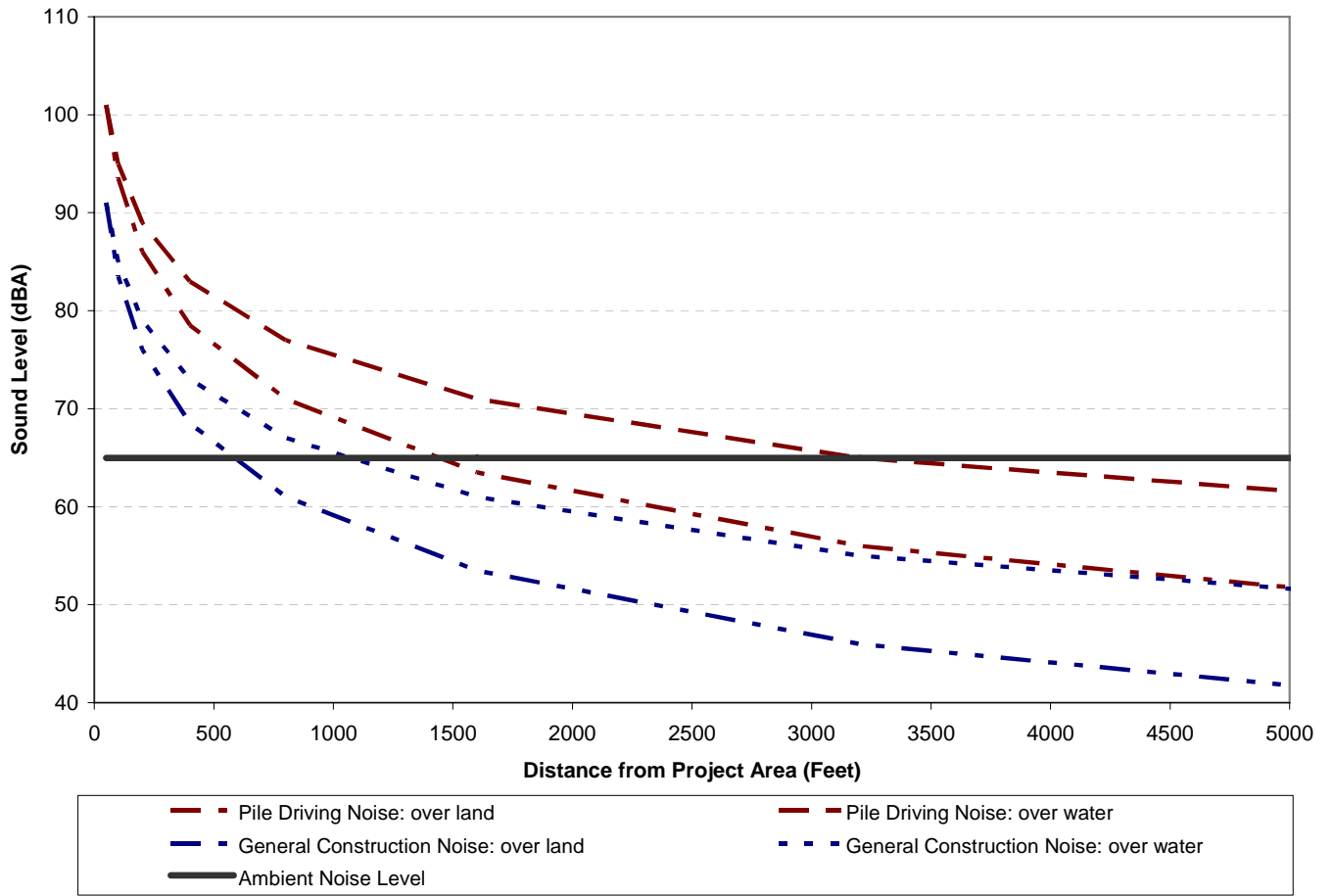
PROJECT #  
 75091.000  
 DATE  
 DEC 2008

**ACTION AREA**  
 TAX LOTS 101, 107, AND 700  
 FLORENCE, OREGON

FIGURE

**2**

L:\VANCOUVER\7500\75091\_Situs\law\East\dwg\75091.000\_aquatic\_effect.dwg Dec 16, 2008 08:59am



PREPARED FOR: BRANCH ENGINEERING



PROJECT #  
75091.000  
DATE  
DEC 2008

### PROJECT NOISE ATTENUATION

TAX LOTS 101, 107, AND 700  
FLORENCE, OREGON

FIGURE  
**3**

---

## **APPENDIX A**

Consultation History





# Oregon

Theodore R. Kulongoski, Governor

Department of Transportation  
Transportation Building  
355 Capitol St. NE, Rm. 301  
Salem, OR 97301-3871

FILE CODE:

**DATE:** 1/26/2007

**TO:** Marta Steele, ODOT Region 2, STIP Coordinator  
Donna Hinze, ODOT Region 2, REC  
Ted Keasey, ODOT Region 2, Project Leader  
Richard Beck, REC Team Leader  
Michelle Eraut, FHWA Environmental Coordinator  
Richard Dunlap, ODOT, R/W Operations Manager  
David Goodwin, ODOT, Sr. Acoustical Specialist  
Bruce Johnson, ODOT, State Bridge Engineer  
Thomas Lauer, ODOT, State Roadway Engineer  
Martin Loring, ODOT, Division Administrator  
June Starkey, ODOT, PCS/PDWP Coordinator  
Brenda Zuniga, ODOT, Federal Aid Programmer  
Marina Orlando, ODOT Env. Services  
Central Files

**FROM:** Rebecca Littau, Geo-Environmental Section *Re*

**SUBJECT:** **Project Environmental Classification: Class 2**  
**Siuslaw River Bridge Interpretive Wayside (Florence)**  
**Lane County**  
**Key No. 13228**  
**Signed 1/21/07**

Attached is the signed Part 3 from Federal Highway Administration.

**ORENDORFF Cindy**

**From:** Eraut, Michelle [Michelle.Eraut@fhwa.dot.gov]  
**Sent:** Sunday, January 21, 2007 9:40 AM  
**To:** HINZE Donna L; BOESEN Anthony  
**Cc:** ORENDORFF Cindy; DeCleva, Ed  
**Subject:** Key # 13228 Siuslaw River Bridge Interpretive Wayside (Florence)

FHWA has reviewed and signed this project environmental classification. It will be mailed to Cindy on Monday or Tuesday. The following note is included on the signed document:

FHWA will require resolution of the following before subsequent phases are authorized:

1. Final project elements (Bay Street sidewalk, additional parking).
2. Wetland assessment/impacts/permits required (Section 10).
3. Estuarine impact assessment/eel grass impacts.
4. Stormwater treatment requirements.
5. ESA (NMFS consultation).
6. 106 (Archy survey, historic FOE **\*consult with FHWA prior to an adverse effect determination\***).
7. 4(f) – historic.
8. Phase 1 haz mat survey.

Michelle Eraut

Environmental Program Manager

Oregon Division - Federal Highway Administration

530 Center St., NE, Suite 100

Salem, OR 97301

(503) 587-4716

(503) 399-5838 (Fax)

1/22/2007



**Oregon**  
Theodore R. Kulongoski, Governor

Department of Transportation  
Region 2  
455 Airport Road SE Building B  
Salem, OR 97301-5395

RECEIVED

DEC 18 2006

FHWA  
OREGON DIVISION

FILE CODE:

December 15, 2006

Michelle Eraut, Environmental Specialist  
Federal Highway Administration  
The Equitable Building, Suite 100  
530 Center Street NE  
Salem, OR 97301

**Project Environmental Classification**  
**Siuslaw River Bridge Interpretive Wayside (Florence)**  
**Lane County**  
**Key 13228**

Attached for your review and approval are three copies of the project environmental classification document for the subject project. The Region Environmental Coordinator states on the Part 3 that this project is an action that is "not specifically listed in 771.117 (c), however, additional wayside parking along Bay St. may be considered under (d) 1." It is our opinion that the entire project is appropriately classified as a Class 2, Categorical Exclusion, according to the 1978 Council on Environmental Quality Guidelines. Your concurrence is requested.

If you have questions regarding the Part 3, please contact Molly Cary at 503/986-6924, or via e-mail at [Molly.A.Cary@odot.state.or.us](mailto:Molly.A.Cary@odot.state.or.us). If you have questions about this submission, please let me know. My telephone number is 503/986-2651 and e-mail is [Debby.L.Corey@odot.state.or.us](mailto:Debby.L.Corey@odot.state.or.us).

Upon your concurrence, please return one copy of the FHWA-signed PEC to:

Cindy Orendorff  
ODOT Geo-Environmental  
355 Capitol Street NE, Rm 301  
Salem, OR 97301-3871

Thank you.

Debby Corey  
ODOT Region 2

c: Ted Keasey



# DRAFT PROJECT PROSPECTUS

Part 1 Project Request (Page 1 of 3)

Section: Siuslaw R. Bridge Interpretive Waysides (Florence)				Region: 2	Area: Area 5	Key Number: 13228	Jurisdiction: Local
State Highway No.: 0009	Highway Name: OREGON COAST			Mile Point From: 190.84	To: 191.26	District: 05	
<input checked="" type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural	City: Florence	MPO: N	Within UGB <input type="checkbox"/> Yes <input type="checkbox"/> No	County: Lane	Road/Street Name:		
Route No.: US-101	NHS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	HPMS: FC: 14	Applicant (If Other Than State): City of Florence			

US Congressional District: 4		State Senate District: 05		State Rep. District: 09	
Cost Estimates (x \$1,000)		Project Components		Right Of Way	
Preliminary Engineering	\$59	Grading	X	Files (#)	0
Right of Way		Paving	X	Hectares (#)	0.000
Utility Reimbursement		Structures		Relocations (#)	0
		Signing	X	Acquisitions (#)	0
Roadway	\$200	Signals		Easements (#)	0
Structures		Illumination	X	Work By: State / Consultant / Applicant	
Signals				Preliminary Engineering (S,C,A)	C
Illumination	\$10			Construction Engineering (S,C,A)	C
Temporary Protection	\$10			Right Of Way Descriptions (S,C,A)	
Constr. Contingencies	\$46			Right Of Way Acquisitions (S,C,A)	
Constr. Engineering	\$60	Project Categories		Constructed By	
		Environmental Class (1,2,3,PCE)	2	<input checked="" type="checkbox"/> Contract	<input type="checkbox"/> County Force
		Design Category (1-7)	07	<input type="checkbox"/> State Force	<input type="checkbox"/> Other
<b>Total CE and Construction:</b>	\$326	Work Type Code (1-13)	06	<input type="checkbox"/> City Force	
<b>Total Estimate:</b>	\$385	Primary STIP Work Type:	SCENBY		
Recommended Let Date By Federal Fiscal Year (Quarter-Year):			3rd Qtr 2004		

PE Fund: Q970	R/W Fund:	UR Fund:	CE-CN Fund: Q970
PE EA:	R/W EA:	UR EA:	CE-CN EA:

Item	Existing	Proposed	Item	Existing	Proposed
Travel Lanes #	2	2	Average Daily Traffic YR	2002	2002
Structures #	1	1	Throughway Y/N	Y	Y
Signals #	0	0			
Bike Way Y/N	Y	Y			
Average Daily Traffic #	12900	12900			



# DRAFT PROJECT PROSPECTUS

Part 1 Project Request (Page 2 of 3)

Key Number: 13228	Jurisdiction: Local
----------------------	------------------------

Section:  
Siuslaw R. Bridge Interpretive Waysides (Florence)

Region:  
2

Area:  
Area 5

District:  
05

## Define The Problem:

The opportunities for the public to view and learn about the historic Siuslaw River Bridge and the area cultural history are limited.

## Describe Proposed Solution - Attach Sketch Map:

Construct a wayside at the northern end of the bridge and provide interpretive signing.

Prepared By:

Date:

O.T.C. Approval Date:

Program Year:

Approved Funding Amount:

X

(07-2001)

Project Status:

STIP Approved

Friday, December 8, 2006



# DRAFT PROJECT PROSPECTUS

Part 1 Project Request (Page 3 of 3)

Key Number: 13228	Jurisdiction: Local
Region: 2	District: 05

Section:  
Siuslaw R. Bridge Interpretive Waysides (Florence)      Area: Area 5

## Project Justification

The proposed project will provide improved visual and physical access to scenic, historic, cultural, natural and recreational resources of the Florence area of the Pacific Coast National Scenic Byway.

The northern wayside will be constructed on ODOT right-of-way under the Siuslaw River Bridge, and will feature the bridge itself, both its historic and engineering features. Part of the northern Interpretive Wayside is a pier extending into the river with interpretive signage about the river, and harvesting seafood.

## Additional Information For Projects Requested By Local Jurisdictions

**Responsible Local Office To Be Contacted For The Following Activities:**  
(Contact/Office)

	(Contact/Office)	(Phone)
1. Public Hearing / Citizen Involvement	Jan Nieberlein	541-997-3437
2. Environmental / Planning	Wendy Farley	541-997-3437
3. Pre-Engineering	_____	_____

**This Official Request is From:**

Jurisdiction Name: <u>City of Florence</u>	and/or _____
Represented By: <u>Roger Bennett, City Manager</u>	By: _____
Represented By: _____	By: _____
	By: _____

**Applicable Intergovernmental Agreements:**

IGA Number:	Jurisdiction Name:	Agreement Date:
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

## Administrative Recommendation



# DRAFT PROJECT PROSPECTUS

Part 2 Project Details (Page 1 of 2)

Key Number: 13228	Jurisdiction: Local
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Section: Siuslaw R. Bridge Interpretive Waysides (Florence)	Region: 2	Area: Area 5	District: 05
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Enter: S - State C - Consultant A - Applicant E - Existing N - No

ACTIVITY RESPONSIBILITIES				PERMITS and CLEARANCES					
Surplus Property	N	Signs (Permanent)	C	Storm Sewer	C	Airport Clearance	N	Wetlands	N
Citizen's Advisory	A	Striping (Permanent)	C	Landscaping	C	Land Use Actions/Permits	A	Endangered Species	N
Photogrammetry	N	Project Signing	C	Irrigation	C	Flood Plain	CA	Hazmat	N
Reconnaissance Survey	N	Detour	N	Borrow Source	N	Building	A	Historic Resource	A
Public Hearing	A	Illumination	C	Material Source	N	Corps Engrs/DSL Removal/Fill	N	DEQ Indirect Source Air	N
Field Survey	C	RR Crossing	N	Disposal Source	N	Coast Guard	A	DEQ Non-Point Source Water	C
Vicinity Map	C	RR Protection	N	Local Agreement	S	Geology and Minerals	C	Archaeology Survey	CA
Soils/Geotech Investigation	C	RR Separation	N	Sensitive Land	CA	Signal Warrants	N	Noise Study	N
Hydraulic Study	N	RR Encroachment	N	Value Engineering	N	Utilities (see below)	C	Section f(4)	C
Utility Coordination	C	Utility Verif Vert Horiz	N						

<b>Right-Of-Way</b>					List of Utilities: Central Lincoln PUD, Qwest		
Right-Of-Way Liaison	N	Access Control (Y/N)	Curr Y	Prpsd Y			
<b>Acquisitions</b>			<b>Relocations</b>				
Simple No.	Complex No.	Business No.	Residential No.		Design Standards ODOT	Design Speeds	Exception (Y/N)
0	0	0	0				N

Suggested Base Design					
Item	New Work Surface (mm)	Over Existing Surface (mm)	Item	New Work Surface (mm)	Over Existing Surface (mm)
To be determined					

Structures									
Structure	Length	Width	Height	Cost	Structure	Length	Width	Height	Cost

Approved Area Manager	Date
X <i>Erik M. Harris</i>	<i>12-15-06</i>



# DRAFT PROJECT PROSPECTUS

Part 2 Project Details (Page 2 of 2)

Key Number: 13228	Jurisdiction: Local
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Section: Siuslaw R. Bridge Interpretive Waysides (Florence)	Region: 2	Area: Area 5	District: 05
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### Segment or Alternative 1:

Comment on Segment or Alternative: Parking Areas

#### Existing (below)

Units in: Comment on Existing:

Bike Path	Side-Walk	Curb Type	Parking	Shoulder/Bikelane	Lane 3	Lane 2	Lane 1	Median	Lane 1	Lane 2	Lane 3	Shoulder/Bikelane	Parking	Curb Type	Side-Walk	Bike Path

#### Proposed (above)

Units in: M Comment on Proposed: Parking Areas

### Segment or Alternative 2:

Comment on Segment or Alternative:

#### Existing (below)

Units in: Comment on Existing:

Bike Path	Side-Walk	Curb Type	Parking	Shoulder/Bikelane	Lane 3	Lane 2	Lane 1	Median	Lane 1	Lane 2	Lane 3	Shoulder/Bikelane	Parking	Curb Type	Side-Walk	Bike Path

#### Proposed (above)

Units in: Comment on Proposed:

### Segment or Alternative 3:

Comment on Segment or Alternative:

#### Existing (below)

Units in: Comment on Existing:

Bike Path	Side-Walk	Curb Type	Parking	Shoulder/Bikelane	Lane 3	Lane 2	Lane 1	Median	Lane 1	Lane 2	Lane 3	Shoulder/Bikelane	Parking	Curb Type	Side-Walk	Bike Path

#### Proposed (above)

Units in: Comment on Proposed:

### Segment or Alternative 4:

Comment on Segment or Alternative:

#### Existing (below)

Units in: Comment on Existing:

Bike Path	Side-Walk	Curb Type	Parking	Shoulder/Bikelane	Lane 3	Lane 2	Lane 1	Median	Lane 1	Lane 2	Lane 3	Shoulder/Bikelane	Parking	Curb Type	Side-Walk	Bike Path

#### Proposed (above)

Units in: Comment on Proposed:





# DRAFT PROJECT PROSPECTUS

## Part 3 Project Environmental Classification

Project Classification	
<input type="checkbox"/>	Class 1 DEIS FEIS
<input checked="" type="checkbox"/>	Class 2 Categorical Exclusion
<input type="checkbox"/>	Programmatic Categ. Exclusion
<input type="checkbox"/>	Class 3 EA Revised EA

Project Name:	Bridge No.	County:	Reg:	Area:	Key Number:	Jurisdiction:
Siuslaw R. Bridge Interpretive Waysides (Florence)	#01821E	Lane	2	Area 5	13228	Local
					District:	05

**1) Provide a brief description of the Project**

This Prospectus Part 3 is a revision of the 2003 prospectus of the same key number. Project has been downscaled and elements have changed.

This project will construct an interpretive wayside on ODOT right-of-way under the northern end of the Siuslaw River Bridge #01821E, a 1936 National Register of Historic Places listed bridge. The project is planned to be located on the waterfront between the Siuslaw River and Bay Street, Florence, Lane County. This project will provide a walkway under the bridge, extending out on piers, between the bridge bents, into the water, with interpretive signage about the historic bridge. A sidewalk may be constructed from the existing sidewalk along Bay Street, down to the water on the west edge of the property, however, it is not currently in the draft plans. Additional parking is proposed between the bents south of Bay St., and a restroom, depending on sufficient funding, may be proposed north of Bay Street near the bridge stairs and on a section of existing parking lot.

The project is bordered on the east by existing parking lot and retail building, and on the west by a condominium project under construction. The area under the bridge has some existing improvements for landscaping and parking. A sandy area extends from the sidewalk along Bay St. to the water, with sections of wetland grasses and himilayan blackberry. The Siuslaw River has existing historic piers remaining.

Florence Quad, Township 18S, Range 12W, Section 34

**2) Estimated Right-of-Way Impacts (Including Easements, Number of Parcels, Acreage, and Improvements)**

No right-of-way purchase is anticipated. A permit will be required for improvements on ODOT right-of-way where the interpretive wayside project is planned.

**3) Estimated Traffic Volume, Flow Pattern and Safety Impacts (Including Construction Impacts, Detours, etc.)**

The ADT on the US 101 above the project is 12,900. ADT on Bay Street is not available.

**4) Estimated Land Use and Socioeconomic Impact (Including Consistency with Comprehensive Plan)**

The proposed wayside at the north end of the Siuslaw River Bridge is inside the urban growth boundary, with area designated as Old Town District/commercial. No Goal 5 resources are known to be present in the project area. The project conforms with statewide planning goals and rules.

Project is located within the coastal zone. Per Terri Harding, ODOT Planner, the Coastal Zone Management Act is implemented by Oregon cities that have adopted comprehensive plans, which Florence has. Harding was not able to determine whether any exceptions for the project are required to their coastal regulations. Wendy Farley, City of Florence, indicates that a project on the abutting property did not require any exceptions, however, she will verify for this project.

A city building permit may be required for construction of a restroom, no other city permits are anticipated. An ODOT permit for use of right-of-way will be required.

This wayside project will not disrupt an established community or affect neighborhood character. The project is located in Old Town, is supported by surrounding merchants, and is valued as an additional point of interest for tourists. The project will provide increased access to view the historic McCullough bridge and provide historic interpretation to visitors.

This project will not affect affect minority, elderly, handicapped, low income, transit-dependent, or other specific interest group, nor cause building displacements. It will however, provide access, including ADA accessibility, under the bridge that was not previously available.

**5) Estimated Wetlands, Waterways and Water Quality Impacts**

US Fish and Wildlife Wetlands Online Mapper indicates no wetlands in the area under the bridge. Wetlands are mapped east and west of the bridge, coded E2EMN. Within the water, the map indicates coding of E1UBL. No hydric soils are indicated in the NWI Online Mapper. Area was coded as



# DRAFT PROJECT PROSPECTUS

## Part 3 Project Environmental Classification

Project Classification	
<input type="checkbox"/>	Class 1 DEIS FEIS
<input checked="" type="checkbox"/>	Class 2 Categorical Exclusion
<input type="checkbox"/>	Programmatic Categ. Exclusion
<input type="checkbox"/>	Class 3 EA Revised EA

Project Name:		Bridge No.	County:	Reg:	Area:	Key Number:	Jurisdiction:
Siuslaw R. Bridge Interpretive Waysides (Florence)		#01821E	Lane	2	Area 5	13228	Local
							District:
							05

Waldport-Urban Land Complex 0-12% slopes (133C). Potential wetland vegetation was observed in limited areas of the site. A wetlands survey is required.

There are no designated Goal 5 water resources in the project area. The site up to Bay St., is within the FEMA 100-year Special Flood Hazard Area. Project improvements are above highest measured tide, with the exception of piers supporting the walkway. The Siuslaw River which provides habitat to listed salmonid species and Green sturgeon, is on the DEQ 303(d) list for multiple parameters. Due to new impervious surface, proximity to the Siuslaw River, listed species, and the 303(d) list, the project team will need to evaluate water quality impacts and treatment.

Siuslaw River is considered a navigable waterway in the project area. US Corps of Engineers ODOT liaison, indicates that a Section 10 permit may be required due to the inwater walkway structure. Liaison further indicates that treated timbers should not be used and a steel grate-type walkway is suggested to prevent shading of the water and shelter for predators. Consultation with NMFS was also advised.

### 6) Estimated Biological & Threatened & Endangered Species Impacts

ORNHIC reports nest boxes on dock pilings in "Old Town" for Purple martin (*Progne subis*), designated as a federal species of concern and state species of concern. Siuslaw River contains listed and species of concern Coho Salmon, Steelhead, Chum Salmon, and Green sturgeon per ORNHIC. ODFW inwater work charts also indicate the presence of Chinook salmon, fall run, along with cutthroat trout.

Contact ODFW liaison Martin 9/22/06 indicates the species list provided from ORNHIC looks correct. The only additional concern for evaluation would be to determine the presence of eel grass which provides habitat. ODFW may also be concerned about impacts to shellfish.

Input from ODOT biologist Testa indicates that the area is likely used by sea lions. In addition, birds nest on the piles/dolphin piles, and this would place restrictions on any pile removal if required during March - September.

Contact with Corps liaison Yballe indicates that treated wood should not be used for the project. The Corps prefer steel grating for the sidewalk to minimize the presence of predators and to minimize shade.

Biologist must evaluate project area and species impacts for a Biological Assessment. Consultation with NMFS is necessary.

### 7) Estimated Archaeology and Historical Impacts

The general area has high potential for archaeological resources. Known sites are within a few hundred meters of the project. Although the project site is on previously disturbed ground, additional disturbance will be necessary for project construction. An archaeological survey will be required, with part of the survey to be conducted at lowest tide.

Input from ODOT Archaeologist Roedel indicates that the project area has not been previously examined for archaeological resources; however, two archaeological sites and one burial are recorded within the vicinity of the project area. Roedel requests that the City retain an archaeologist to conduct an archaeological assessment.

Roedel adds that a tribal representative has requested to be present to monitor during ground disturbing activities, with monitoring cost to be covered by the Tribe. Roedel will require coordination and advance notice with construction staff to schedule the monitor.

The project is proposed to be located under the National Register listed, McCullough designed bridge over the Siuslaw River. Interpretation is planned as part of the project highlighting the history of the river and its importance in the development of Old Town Florence. Since the project centers around the bridge, potential effects to the bridge related to parking, sidewalks, and the walkway/pier will need to be evaluated. ODOT bridge preservation unit and Region 2 geologist will also assess project effects to the structure of the bridge. ODOT Cultural Resources Specialist will evaluate the project area, proposed project effects to the bridge, and will provide Section 106 Finding of Effect and



# DRAFT PROJECT PROSPECTUS

## Part 3 Project Environmental Classification

Project Classification	
<input type="checkbox"/>	Class 1 DEIS FEIS
<input checked="" type="checkbox"/>	Class 2 Categorical Exclusion
<input type="checkbox"/>	Programmatic Categ. Exclusion
<input type="checkbox"/>	Class 3 EA Revised EA

Project Name:	Bridge No.	County:	Reg:	Area:	Key Number:	Jurisdiction:
Siuslaw R. Bridge Interpretive Waysides (Florence)	#01821E	Lane	2	Area 5	13228	Local
					District:	05

potential 4(f) analysis documentation.

### 8) Estimated Park, Visual Impacts and 4(f) Potential

The project is located on right-of-way for an All American Road, the Pacific Coast Scenic Biway. The project is also located under the National Register listed Siuslaw River Bridge. As part of the project, additional parking and a pier out into the water will be constructed, and interpretation about the bridge will be installed. A Cultural Resources Specialist will evaluate any effects to the setting of the historic bridge.

The historic Siuslaw River Bridge designed by C.B. McCullough over the Siuslaw River, is within the project area. The project will be evaluated by ODOT Cultural Resources Specialist. The wayside is intended to provide an opportunity for interpretation about the bridge.

### 9) Estimated Air, Noise and Energy Impacts

The project area is designated as "attainment" for all criteria pollutants. Temporary increases in pollutant emissions are expected during construction and special provisions for dust control measures, if needed, will be applied. No significant or long-term air quality impacts are expected as a result of this project. An air quality study is not warranted. No additional review or work regarding air quality is required, unless project scope or design changes are proposed.

There are no roadway associated noise issues identified with the project. There will be no changes to the alignment of Bay St. However, the project will bring more visitors to the location, provide some additional parking, and restroom facilities. A condominium complex is currently being constructed on the property immediately west of the project area.

Per ODOT Noise Specialist Goodwin, given the current project scope, a traffic noise study is not required for this project. Should the design of the project significantly change, a traffic noise study might become necessary.

Project may increase traffic volume somewhat as parking will be provided and the wayside is intended to attract travelers.

### 10) Estimated Hazardous Materials Impacts

There will be drilling and excavation performed as part of this project and hazardous materials could potentially be encountered.

Within a quarter mile there is: City of Florence stormwater/sewage, permitted facility at 794 Rhododendron Dr.; Texaco Bulk Facility at 399 Nopal Avenue, listed as a confirmed release with no cleanup data; Safeway Fuel #0363 at 670 Hwy 101 N with underground storage tanks. US West Communications at 1385 7th St, is indicated as a hazardous waste generator, however, no reports of waste streams.

Input from ODOT Hazmat Specialist onsite for another project inspection, indicates that the construction site located just west (the condo site development) had a 10-yard refuse bin that was filled with scrap metal, and contractors were excavating an exploratory trench along the water front to see what other unknown materials might be encountered in preparation for utility installation. ODOT Hazmat also noted the bridge goes right over the salmon cannery that was present in the 1930s (located on the Sanborn Maps). This cannery had a machine shop located about where the current condo development is pulling out all of the scrap metal. A Phase 1 investigation is required.

### 11) Preliminary Identification of Potential Areas of Critical Concern and Controversial Issues

- ODOT Bridge Preservation Unit and Region 2 Geo-Hydro unit must approve technical studies and structural design for wayside improvement project.
- ODOT Project Key 14007 involves work in the same area, including ADA sidewalk construction. Coordination will be required to eliminate conflicts in design and construction between this local agency project and the ODOT project (coordination with Candice Stich, PL).



## DRAFT PROJECT PROSPECTUS

### Part 3 Project Environmental Classification

Project Classification	
<input type="checkbox"/>	Class 1 DEIS FEIS
<input checked="" type="checkbox"/>	Class 2 Categorical Exclusion
<input type="checkbox"/>	Programmatic Categ. Exclusion
<input type="checkbox"/>	Class 3 EA Revised EA

Key Number: 13228	Jurisdiction: Local
	District: 05

Project Name: Siuslaw R. Bridge Interpretive Waysides (Florence)	Bridge No. #01821E	County: Lane	Reg: 2	Area: Area 5
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#### 12) Documentation Requirements

Document drafts to be provided to ODOT for technical review and concurrence. ODOT will processing SHPO and biology final documents to regulatory agencies.

SHPO archaeological clearance including Phase 1 or Programmatic Agreement Memo. SHPO historic clearance, including Finding of Effect and potential 4(f) document (ODOT task)

Estuarine Impact Assessment/Wetlands Assessment

Biological Assessment

Corps/DSL Permit

Phase 1 Hazmat assessment

ODOT District 5 permit (Application and Permit to Occupy or Perform Operations Upon a State Highway)

#### 13) Estimated Pre-Construction Activity Impacts (drilling, survey work, etc.)

Drilling in estuarine area for footings and piers will be required.

Provide copy of geotechnical report to ODOT geologist for review. Comments from ODOT region geologist indicates that Mean Low Water Elev. = 2.50 Feet, Mean High Water Elev. = 2.90 Feet, Top of deck Elev. = 4.55 Feet For each of these three measurements what was the benchmark used by the consultant? What is highest measured tide? Independently of the benchmark used, it appears that during the 100-year flood (10 Feeg NGVD) the walkway would be under water. We do not know from the drawings provided what datum was used in calculating the water elevations. Are the walkways and decks designed to be submerged? Will they survive impacts from logs and debris?

#### 14) Preliminary Identification of Public/Stakeholder Concerns

- Local businesses are supportive of the wayside project.
- ODOT is a stakeholder, as the project is located on ODOT right-of-way, and there are concerns about maintainance access to the bridge, and for the protection of the structural integrity of the historic bridge. There is also another project under development by ODOT in a portion of the area planned for the wayside. A cathodic protection project is also anticipated in the next few years. Conflicts in right-of-way use and work sequencing will need to be resolved.



# DRAFT PROJECT PROSPECTUS

## Part 3 Project Environmental Classification

Project Classification	
<input type="checkbox"/>	Class 1 DEIS FEIS
<input checked="" type="checkbox"/>	Class 2 Categorical Exclusion
<input type="checkbox"/>	Programmatic Categ. Exclusion
<input type="checkbox"/>	Class 3 EA Revised EA

Project Name: Siuslaw R. Bridge Interpretive Waysides (Florence)	Bridge No. #01821E	County: Lane	Reg: 2	Area: Area 5	Key Number: 13228	Jurisdiction: Local
					District: 05	

### Env-Cat Exclusions

A "Categorical Exclusion" (Class 2) is a category of actions which does not individually or cumulatively have a significant environmental effect (40 CFR 1508.4, 23 CFR 771.115).

The NEPA context of "significant" is defined at 40 CFR 1508.27 in order to determine whether a U.S. DOT project is excluded from preparation of an Environmental Assessment (EA) or Environmental Impact Statement (EIS).

Please answer the following questions:

#### Categorical Exclusions

#### **23 CFR 771.117(a) - Would the project involve any of the following effects:**

Y N U N/A

1 Induce significant impacts to planned growth or land use for an area?

Y N U N/A

2 Require relocation of significant numbers of people?

Y N U N/A

3 Have a significant impact on any natural, cultural, recreational, historic or other resources?

Y N U N/A

4 Involve significant air, noise, or water quality impacts?

Y N U N/A

5 Have significant impacts on travel patterns?

#### **23 CFR 771.117(b) - Would the project involve unusual circumstances such as:**

Y N U N/A

1 Significant environmental impacts?

Y N U N/A

2 Substantial controversy on environmental grounds?

Y N U N/A

3 Significant impacts to properties protected by Section 4(f) of the DOT Act or Section 106 of the National Historic Preservation Act?

Y N U N/A

4 Inconsistencies with any federal, state, or local law, requirements or administrative determination relating to the environmental aspects of the project?

If you answered "YES" to one or more of the above questions, you likely DO NOT have a Class II project. If you answered "UNKNOWN" to one or more of the above questions, you MAY NOT have a Class II project.

In either of these cases, you should discuss the NEPA classification with an Environmental Manager, the REC Program Coordinator, the NEPA Program Coordinator, and/or the FHWA Environmental Coordinator prior to classifying the project of the Prospectus Part 3.

If you answered "NO" to ALL of the above questions, the project is likely a Class II Action.\*



# DRAFT PROJECT PROSPECTUS

## Part 3 Project Environmental Classification

Project Classification	
<input type="checkbox"/>	Class 1 DEIS FEIS
<input checked="" type="checkbox"/>	Class 2 Categorical Exclusion
<input type="checkbox"/>	Programmatic Categ. Exclusion
<input type="checkbox"/>	Class 3 EA Revised EA

Key Number:	Jurisdiction:
13228	Local

Project Name:	Bridge No.	County:	Reg:	Area:	District:
Siuslaw R. Bridge Interpretive Waysides (Florence)	#01821E	Lane	2	Area 5	05

Type of Categorical Exclusions:

Y N U N/A

A. Is the proposed action specifically listed under 23 CFR 771.117 (c)?

If "YES" please identify what:

Action is not specifically listed under 23 CR 881.117(c), however the project will construct a pedestrian walkway under the bridge and reconstruct sidewalk along Bay St. which might be considered under (c) 3.

Y N U N/A

B. Is the proposed action specifically listed under 23 CFR 771.117 (d)?

If "YES" please identify what:

Action is not specifically listed under 23 CFR <sup>77</sup>881.117(c), however, additional wayside parking along Bay St. may be considered under (d) 1.

\*While Class 2 actions do not require preparation of an EA or EIS, they may yet require additional environmental analysis of impacts to the natural and built environment.

Some 23 CFR 771.17 (d) list Class II actions may require a NEPA type process to facilitate coordination with regulatory agencies and stakeholder involvement.

Prepared By: <i>[Signature]</i>	FHWA or State Official Approval: <i>Michelle Evans</i>
Date: <i>11/21/06</i> Revised: <input checked="" type="checkbox"/>	Phone Number: <i>503-986-2829</i> Date: <i>January 21, 2007</i> Phone Number: <i>503/587-4716</i>

*FHWA will require resolution of the following, before subsequent phases are authorized:*

- 1) Final project elements (Bay Street sidewalk, additional parking).*
- 2) Wetland assessment/impacts/permits required (Section 10).*
- 3) Estuarine impact assessment/eel grass impacts.*
- 4) Stormwater treatment requirements.*
- 5) ESA (NMFS consultation).*
- 6) 106 (Archy survey, historic FOE \* consult with FHWA prior to an adverse effect determination\*).*
- 7) 4(f) - historic.*
- 8) Phase I haz mat study.*

**REGION ENVIRONMENTAL CHECKLIST  
ATTACHMENT TO PART 3 (PROJECT ENVIRONMENTAL CLASSIFICATION)**

<b>Project:</b> Siuslaw R. Bridge Interpretive Waysides (Florence)	<b>Key No:</b> 13228
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**Instructions:**

This checklist should be completed and attached to the Part 3. It will provide information to assist in appropriately classifying projects. A "Yes" answer indicates areas of concern, a "No" answer indicates no concerns, and UNK indicates that you didn't check into that area. The primary intent of the checklist is to ensure these items have been considered, and where appropriate, researched. When something of potential impact is found, explain in the appropriate section of the Part 3. If you have any questions, please call (503) 986-3477. The receptionist will transfer you to the appropriate resource person for assistance.

1. Prepared By: Donna L. Hinze
  2. Phone Number: 503-986-2829
  3. Date: 9/15/2006
  4. Applicable Bridge Number: #01821E
  5. A brief description of the project: This Prospectus Part 3 is a revision of the 2003 prospectus of the same key number. Project has been downscaled and elements have changed.
- This project will construct an interpretive wayside on ODOT right-of-way under the northern end of ... (More)

**Air Quality**

- |   |   |
|---|---|
| <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | 6 Is project in an air quality non-attainment or maintenance area?  |
| <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | CO  |
| <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | PM10  |
| <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | 7 Is project missing from:  |
| <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | STIP  |
| <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | RTP   |
| <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unk <input checked="" type="radio"/> N/A | MTIP  |
|   | Comment:  |
| <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | 8 Does the project involve adding lanes, signalization, channelization, and/or alignment changes?   |
|   | Comment: Two-way traffic on Bay Street is currently divided by a bridge pier and surrounding island. Lanes could be restriped to provide a safer access to the wayside parking. |

**Archaeology**

- |   |  |
|---|--|
| <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | 9 Are archaeologically sensitive areas potentially affected (confluence of rivers, headlands, coves, overlooks, etc.)?   |
|   | Comment: There are bluffs or overlooks in the area. The general area has high potential for archaeological resources. Known sites are within a few hundred meters of the project. Although the project site is on previously disturbed ground, an archaeological survey will be needed.                            |
|   | Per ODOT Archaeologist Roedel, the project area has not been previously examined for archaeological resources; however, two archaeological sites and one burial are recorded within about 1,500 feet of the project area. Roedel advises the City retain an archaeologist to conduct an archaeological assessment. |
| <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | 10 Will the project entail disturbance of previously undisturbed ground? (Farmed land is not considered disturbed)   |
| <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | 11 Does project entail new ground disturbances?  |
|   | Comment: New disturbance will occur to install a restroom, sidewalk, parking area, and a pier with viewing platform out into the Siuslaw River.  |

**Biology**

- |   |   |
|---|---|
| <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | 12 Does contact with local ODFW liaison biologist indicate any ISSUES?  |
|   | Name of ODFW liaison and comments: Contact ODFW liaison Art Martin indicates the the species list provided from ORNHIC looks correct. The only additional concern for evaluation would be for the presence of eel grass which provides habitat. |
| <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | 13 Is there any local knowledge of federal terrestrial (plant or animal) T&E or candidate species in the area?  |
|   | Comment: ORNIC reports next boxes for Purple martin (Progne subis) on dock pilings in "Old Town", however, Purple martin is designed as a federal species of concern and state species of concern. No T&E or candidate species are noted.       |
| <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unk <input type="radio"/> N/A | 14 Is there any local knowledge of state terrestrial (plant or animal) T&E or candidate species in the area?  |

**REGION ENVIRONMENTAL CHECKLIST  
ATTACHMENT TO PART 3 (PROJECT ENVIRONMENTAL CLASSIFICATION)**

<b>Project:</b> Siuslaw R. Bridge Interpretive Waysides (Florence)	<b>Key No:</b> 13228
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Comment: ORNHIC reports nest boxes for Purple martin (*Progne subis*) on dock pilings in "Old Town", however Purple martin is designated as a federal species of concern and state species of concern. No T&E or candidate species are noted.

- Yes  No  Unk  N/A
- 15 Are any Federal Aquatic T&E Species present?  
 Comment: Coho Salmon, OR Coast ESU, pop. 3 (*Oncorhynchus kisutch*) is federally designated as Listed-Threatened.  
 Steelhead, OR Coast ESU, winter run, pop. 31 (*Oncorhynchus mykiss*) is federally designated as a candidate species.  
 Chum Salmon, Pacific Coast ESU, pop. 4 (*Oncorhynchus keta*) is not federally listed for Lane County, but is Listed-Threatened in Clatsop, Columbia and Multnomah Counties).  
 Green sturgeon, year-round (*Acipenser medirostris*) noted by ORNHIC as in Siuslaw Bay and estuary, specifically near Florence, is a federal species of concern.
- Yes  No  Unk  N/A
- 16 Are any State Aquatic T&E Species present?  
 Comment: No stated listed Threatened-Endangered species.  
 Coho Salmon, OR Coast ESU, pop. 3 (*Oncorhynchus kisutch*) is state designated as a species of concern.  
 Steelhead, OR Coast ESU, winter run, pop. 31 (*Oncorhynchus mykiss*) is a state sensitive species.  
 Chum Salmon, Pacific Coast ESU, pop. 4 (*Oncorhynchus keta*) is a state species of concern.  
 Green sturgeon, year-round (*Acipenser medirostris*) has no state status.
- Yes  No  Unk  N/A
- 17 Does the project occur on or adjacent to BLM or USFS land?
- Yes  No  Unk  N/A
- 18 Does contact with local BLM or USFS biologists indicate any issues?  
 Name of BLM or USFS biologist and comments: Not applicable.
- 19 What are the results from a Natural Heritage Database search? Results are noted above.
- 20 If impacts to a waterway are possible, what are the aquatic resources i.e. (fish presence or absence, distribution etc.) at or immediately downstream of the project location?  
 Comment: Siuslaw River contains Coho Salmon, Steelhead, Chum Salmon, and Green sturgeon. StreamNet does not indicate the project area as critical habitat.
- 21 Confirmed ODFW preferred in-water work period(s) for project area? (List if applicable): November 1 - February 15 for Siuslaw Bay/Estuary area  
 July 1 - Sept 15 for Siuslaw River  
 Need to check how APE is designated.
- 22 List any streams impacted by project:
- Yes  No  Unk  N/A
- 23 Are there any culverts within the project limits which will be worked on and will trigger the Oregon State Fish Passage Statute (ORS 509.585)?  
 Comment: No culverts in the project area.
- Yes  No  Unk  N/A
- 24 Are there any culverts within the project limits that are on the ODFW priority list for replacement/retrofit?  
 Comment: No culverts in the project area.
- Yes  No  Unk  N/A
- 25 Is the creek or river classified as Essential Salmonid Habitat by the Oregon Department of State Lands?
- Yes  No  Unk  N/A
- 26 Any known noxious weed populations in the area?  
 Comment: Himalayan blackberry observed.

**Energy:**

- Yes  No  Unk  N/A
- 27 Does project affect energy use as a result of changes to traffic patterns or volumes, or involve speed zone changes?  
 Comment: Project may increase traffic volume somewhat as parking will be provided and the wayside is intended to attract travelers.

**Geology:**

- Yes  No  Unk  N/A
- 28 Does discussions with Region Geologist indicate any major concerns?  
 Comment: Region geologist indicates that Mean Low Water Elev. = 2.50 Feet, Mean High Water Elev. = 2.90 Feet, Top of deck Elev. = 4.55 Feet For each of these three measurements what was the benchmark used by the consultant? What is highest measured tide? Independently of the benchmark used, it appears that during the 100-year flood (10 Feeg NGVD) the walkway would be under water. We do not know from the drawings provided what datum was used in calculating the water elevations. Are the walkways and decks designed to be submerged? Will they survive impacts from logs and debris?
- Yes  No  Unk  N/A
- 29 Will ODOT owned/permitted material sources be offered for this project?



**REGION ENVIRONMENTAL CHECKLIST  
ATTACHMENT TO PART 3 (PROJECT ENVIRONMENTAL CLASSIFICATION)**

<b>Project:</b> Siuslaw R. Bridge Interpretive Waysides (Florence)	<b>Key No:</b> 13228
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- Yes  No  Unk  N/A 30 Is drilling / exploration anticipated?  
 Comment: Drilling will be required for piers. City to determine whether Biological Assessment and permits are required prior to exploratory drilling. Surveys for archaeology, threatened and endangered plants, and wetlands must be complete prior to exploratory drilling.

**Hazardous Materials:**

- Yes  No  Unk  N/A 31 Does a search of the DEQ's hazmat databases indicate any sites in the API?  
 Comment: Wendy - (503) 686-7838 x269 Nothing in database
- Yes  No  Unk  N/A 32 Does a search of the State Fire Marshal's hazmat databases indicate any sites in the API?  
 Comment: No listings for Bay Street, Florence, in the State Fire Marshal's database.
- Yes  No  Unk  N/A 33 Will R/W Acquisition(s) include gas stations, repair facilities, industrial sites, landfills or any other non-residential facilities that may have used or stored hazardous materials?  
 Comment: No R/W acquisition, however, the project area is located on a former cannery site.
- Yes  No  Unk  N/A 34 Will R/W Acquisition(s) include residential or industrial home oil tanks (above or below ground)?  
 Comment: Not applicable.
- Yes  No  Unk  N/A 35 Are ground disturbances anticipated (excavation / drilling, etc.) near known or potential hazmat sites?  
 Comment: There will be drilling and excavation but not near any known hazmat sites.
- 36 Check the following for adjacent or nearby sites listed in the DEQ & Fire Marshal Databases:  
 Yes  No  Unk  N/A UST  
 Yes  No  Unk  N/A Spill listed by State Fire Marshal  
 Yes  No  Unk  N/A RCRA Generator  
 Yes  No  Unk  N/A Solid Waste  
 Yes  No  Unk  N/A TSD  
 Yes  No  Unk  N/A Leaking UST  
 Yes  No  Unk  N/A DEQ Environmental Cleanup Site Information (ECSI) listed site  
 Yes  No  Unk  N/A Other  
 List any occurrence on the above items: Within a quarter mile there is a City of Florence stormwater/sewage permitted facility at 794 Rhododendron Dr.  
 Texaco Bulk Facility at 399 Nopal Avenue is listed as a confirmed release with no cleanup data.  
 Safeway Fuel #0363 at 670 Hwy 101 N has underground storage tanks.  
 US West Communications at 1385 7th St, is indicated as a hazardous waste generator, however, no reports of waste streams.  
 Other facilities listed have completed cleanups.

**Historical:**

- Yes  No  Unk  N/A 37 Does any city/county comprehensive plan list any buildings/items in the project area as Goal 5 resources?  
 Comment: Contact with Wendy Farley, Associate Planner and Interim Planning Director (541-997-8237) indicates no Goal 5 resources.
- Yes  No  Unk  N/A 38 Will there be any impacts to known historic resources either listed or determined eligible for the National Register of Historic Places according to the National Register Information System?  
 Comment: National Register listed 1936 Siuslaw River Bridge is in the project area. Impacts to bridge will be evaluated by ODOT Cultural Resources Specialist.
- Yes  No  Unk  N/A 39 Are any buildings in the project area thought to be 50 years or older?  
 Comment: No buildings directly adjacent to the project area appear to be 50 years old or older.
- Yes  No  Unk  N/A 40 Are any apparent / unique / suspect structures of possible historical interest?  
 Comment: There are old piers in the water in the project area. Local source indicated the historical presence of a cannery.
- Yes  No  Unk  N/A 41 Are there any Historic District/trails/bridges/railroads?  
 Comment: Siuslaw River Bridge is a National Register listed bridge.
- Yes  No  Unk  N/A 42 Was the SHPO historic database consulted?  
 Comment: There are a number of listings for Florence, many associated with the historic bayfront area and on North Fork Rd. The bridge is listed in the SHPO database.

**Land Use / Planning:**

**REGION ENVIRONMENTAL CHECKLIST**  
**ATTACHMENT TO PART 3 (PROJECT ENVIRONMENTAL CLASSIFICATION)**

<b>Project:</b> Siuslaw R. Bridge Interpretive Waysides (Florence)	<b>Key No:</b> 13228
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- Yes  No  Unk  N/A 43 Is the project identified in local Transportation System Improvement Plan?  
 Comment: Project is identified in the local Comprehensive Plan. Florence does not have an MTIP.
- Yes  No  Unk  N/A 44 Does the project need permit or land use actions from local jurisdictions?  
 Comment: No land use action. Depending on design, a building permit could be required for the restroom construction, however, restroom may be dropped from this project. A use permit will be required from ODOT.
- Yes  No  Unk  N/A 45 Is the project outside of a jurisdiction's UGB?  
 Comment: Project is within the urban growth boundary.
- Yes  No  Unk  N/A 46 Does project cross or touch a jurisdiction's UGB?  
 Comment: Northern wayside is inside the UGB
- Yes  No  Unk  N/A 47 Does Coastal Zone Management Act apply?  
 Comment: Project is located within the coastal zone. Per Terri Harding, ODOT Planner, the Coastal Zone Management Act is implemented by Oregon cities that have adopted comprehensive plans, which Florence has. In general, Oregon has adopted coastal management goals and requirements for cities and counties that exceed the federal requirements. Harding was not able to ask city staff whether or not any exceptions for the project are required to their coastal regulations.
- Response from Wendy Farley, City of Florence, indicated that exception(s) to the CSMA were not required, given that a project on an abutting property was reviewed under the same criteria and no exceptions were required. She will check to confirm no exceptions are required.
- Yes  No  Unk  N/A 48 Are areas of Forest or EFU zoning impacted by the project?  
 Comment: No Forest or EFU zoning in the area.
- Yes  No  Unk  N/A 49 Are other protected resources (i.e. estuary, wetlands, greenways, etc.) impacted by the project?  
 If Yes, list: No protected resources per Wendy Farley.
- Yes  No  Unk  N/A 50 Does the project impact areas designated by NRCS as "High-Value Farmland?"  
 Comment: Not applicable.
- Yes  No  Unk  N/A 51 Will the project result in the conversion of prime farmland, unique farmland, or land of statewide or local importance as defined by Farmland Protection Policy Act (FPPA)?  
 Comment: Not applicable.
- 52 List Comprehensive Plan designations being impacted: Old Town District
- 53 List zoning designations being impacted: Old Town District and commercial
- Yes  No  Unk  N/A 54 Does project have potential to improve multi-modal transportation options (rail, bus, bicycle paths, pedestrian walkways, etc.)?  
 Comments: Not applicable.
- 55 Region Planner's opinion that the project conforms with:  
 (If NOT Explain): Emailed Terri Harding 9/13/06.  
 Transportation Planning Rule  
 Comment: Terri Harding, ODOT Planner, indicates that she believes the project will comply with the Transportation Planning Rule as implemented by the City of Florence.
- Yes  No  Unk  N/A Statewide Planning Goals  
 Comment: Terri Harding, ODOT Planner, indicates that she believes the project will comply with the Statewide Planning Goals as implemented by the City of Florence.
- Yes  No  Unk  N/A Comprehensive Plan and/or Transportation System Improvement Plan (county/city or both). Requests for this information should be directed to local ODOT planning staff. Request should be made via email.  
 Comment: Terri Harding was unable to reach City of Florence due to "phone tag" to assure that the city's comprehensive plan designates the project site for, or what development permits are required.

**Noise:**

- Yes  No  Unk  N/A 56 Will there be any shift in horizontal or vertical alignment? If so, amount of shift:  
 Horizontal: Not applicable. Roadway will not be realigned, but access to a parking area will be created from Bay Street.  
 Vertical:
- Yes  No  Unk  N/A 57 Does project increase the number of through travel lanes? (See Project Components screen)

<b>Project:</b> Siuslaw R. Bridge Interpretive Waysides (Florence)	<b>Key No:</b> 13228
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Number of existing lanes: Not applicable.

Number of proposed lanes:

Yes  No  Unk  N/A 58 Is this a new roadway located on a new alignment?

Comment: Not applicable.

Yes  No  Unk  N/A 59 Are there any known noise problems / complaints?

Comment: No known noise problems, but a condominium is being construction next to the proposed wayside area.

Yes  No  Unk  N/A 60 Will this project result in the removal of topographical features which currently shield receptors?

Comment: There are no topographical features to be affected.

61 Approximate number of buildings / activity areas within 61 meters (200 feet) of proposed right of way line:

Commercial: 5

Industrial:

Public:

Residences: 12

Schools:

Churches:

Parks:

**Section 4(f) Potential:**

Yes  No  Unk  N/A 62 Are any parks, wildlife refuges, historic buildings, recreational areas, etc., impacted?  
 If yes, explain: The historic Siuslaw River Bridge designed by C.B. McCullough over the Siuslaw River, is within the project area. The project will be evaluated by ODOT Cultural Resources Specialist. The wayside is intended to provide an oppportunity for interpretation about the bridge.

**Section 6(f) Potential:**

Yes  No  Unk  N/A 63 Were Land & Water Conservation Funds used to acquire parks, or make improvements, etc.?  
 If yes, explain: Not applicable.

**Socioeconomics:**

Yes  No  Unk  N/A 64 Do building displacements appear key to economy / neighborhood?  
 Comment: Not applicable.

65 Number of building displacements?

66 General use of adjacent land:

Yes  No  Unk  N/A Residential

Yes  No  Unk  N/A Commercial

Yes  No  Unk  N/A Farm/Range

Yes  No  Unk  N/A Public

Yes  No  Unk  N/A Other

If other, explain:

67 Estimate of number of people living adjacent to project: 0-30

68 Estimate of number of people working adjacent to project: 0-30

Yes  No  Unk  N/A 69 Does this project divide or disrupt an established community, or affect neighborhood character or stability?  
 Comment: This project will not disrupt an established community or affect neighborhood character.

The project is located in Old Town and is supported by surrounding merchants.

Yes  No  Unk  N/A 70 Does this project affect minority, elderly, handicapped, low income, transit-dependent, or other specific interest group?

Comment: The project will provide increased access to view the bridge.

**Visual:**

Yes  No  Unk  N/A 71 Is the project on a designated state or federal scenic route?  
 If Yes, indicate the designation (National Scenic Byway, All-American Road, ORegon Scenic Byway, Oregon Tour Route, or Oregon Memorial Drive): Project is on right-of-way of the Pacific Coast Scenic Biway

**REGION ENVIRONMENTAL CHECKLIST**  
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- (US101), an All American Road.
- Yes  No  Unk  N/A 72 Does the Oregon Forest Practices Act apply?  
 If Yes, indicate whether restrictions apply to operation of power driven machinery or to harvest/clearing on private property or ODF lands: No forest zoning or forest resources.
- Yes  No  Unk  N/A 73 Are major cuts/fills associated with this project?  
 Comment: Minor fill may be associated with base for parking and sidewalk.
- Yes  No  Unk  N/A 74 Are bridges or large retaining walls anticipated?  
 Comment: No retaining walls are anticipated at this time.
- Yes  No  Unk  N/A 75 Does project affect river segments or lakes designated as Oregon Scenic Waterways?  
 If Yes, will work occur within 1/4 mile of the bank of the Oregon Scenic Waterway: Not applicable.
- Yes  No  Unk  N/A 76 Does project affect waterways designated as National Wild and Scenic Rivers?  
 If Yes, list the classification (e.g., Recreation):  
 : Not applicable.

**Waterways / Water Quality:**

- Yes  No  Unk  N/A 77 Does city / county comp plan list any water resources as Goal 5 resources?  
 Comment: Per conversation with Wendy Farley, Associate Planner, there are no designated Goal 5 resources.
- Yes  No  Unk  N/A 78 Is the project within FEMA 100-year flood plain?  
 Comment: Yes, project area up to Bay St. is within the FEMA 100-year Special Flood Hazard Area Inundated by 100-year Flood. (Map 4I039C1428F)
- Yes  No  Unk  N/A 79 Is the project within FEMA regulated floodway?  
 Comment: Project is outside of the FEMA regulated floodway.
- Yes  No  Unk  N/A 80 Will a water quality limited stream be impacted?  
 Comment: Siuslaw River in the project area is listed in the Oregon 2004/2006 Integrated Report for the following. Year around - alkalinity, ammonia, chloride, dissolved oxygen, fecal coliform, phosphate, and temperature. It is also listed undefined - habitat modification.
- Yes  No  Unk  N/A 81 Will any active wells be impacted?  
 Comment: Not applicable.
- 82 Select range of ADT: 750 <> 30,000  
 Comment: No recent study available for ADT on Bay Street as it has not be warranted for any nearby project, per Wendy Farley, City of Florence 11/13/06.
- Yes  No  Unk  N/A 83 Are there navigable waterway(s) within the project area?  
 Comment: Siuslaw River is considered a navigable waterway at the project location. Pier/walkway extends approximately 70 ft into the water.
- Yes  No  Unk  N/A 84 Will new impervious surface be added within the project limit?  
 Comment:
- Yes  No  Unk  N/A 85 Will new impervious surface area be >= 1,000 sq. meters?  
 Comment: Amount of new impervious surface will need to be calculated.
- Yes  No  Unk  N/A 86 Are any irrigation districts impacted?  
 Comment: Not applicable.
- Yes  No  Unk  N/A 87 Are there T&E aquatic species in the receiving water?  
 Comment: Coho Salmon, OR Coast ESU, pop. 3 (Oncorhynchus kisutch) is federally designated as Listed-Threatened.  
 Steelhead, OR Coast ESU, winter run, pop. 31 (Oncorhynchus mykiss) is federally designated as a candidate species.  
 Chum Salmon, Pacific Coast ESU, pop. 4 (Oncorhynchus keta) is not federally listed for Lane County, but is Listed-Threatened in Clatsop, Columbia and Multnomah Counties).  
 Green sturgeon, year-round (Acipenser medirostris) noted by ORNHIC as in Siuslaw Bay and estuary, specifically near Florence, is a federal species of concern.
- Yes  No  Unk  N/A 88 Is there an existing storm drain system?  
 Comment: Stormwater grates were observed along Bay Street.

**Wetlands**

**REGION ENVIRONMENTAL CHECKLIST  
ATTACHMENT TO PART 3 (PROJECT ENVIRONMENTAL CLASSIFICATION)**

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Yes  No  Unk  N/A    89 Does National Wetlands Inventory Maps, Local Wetlands Inventory Maps, and/or ODOT Salmon Resource & Sensitive Area Database show any potential wetlands in the project area?  
Comment: US Fish and Wildlife Wetlands Online Mapper indicates no wetlands in the area under the bridge. Wetlands are mapped east and west of the bridge, coded E2EMN. Within the water the map indicates coding of E1UBL.

Yes  No  Unk  N/A    90 Do soil survey conservation maps indicate hydric soils in project area?  
Comment: No hydric soils are indicated in the NWI Online Mapper. Area was coded as Waldport-Urban Land Complex 0-12% slopes (133C).

Yes  No  Unk  N/A    91 Do local Comprehensive Plans show any wetlands as protected resources?  
Comment: Not applicable.

Yes  No  Unk  N/A    92 Is riparian or wetland vegetation evident from visual inspection?  
Comment: Both riparian and wetland vegetation is present in pockets of the project area, primarily on downslope.

**Permits: (Note: If answer if "Unknown" please explain in comment box below)**

Comment:

Yes  No  Unk  N/A    US Corps of Engineers Section 404

Yes  No  Unk  N/A    US Corps of Engineers Section 10 (tidal waters)

Yes  No  Unk  N/A    DSL Removal and Fill

Yes  No  Unk  N/A    DEQ Indirect Source (Air)

Yes  No  Unk  N/A    DOGAMI

Yes  No  Unk  N/A    Coast Guard

Yes  No  Unk  N/A    Local Jurisdiction National Pollutant Discharge Elimination System (NPDES)

Yes  No  Unk  N/A    Rail Division

Other: - ODOT District 5 permit (Application and Permit to Occupy or Perform Operations Upon a State Highway)

**Clearances: (Note: If answer is "Unknown" please explain in comment box below)**

Comment:

Yes  No  Unk  N/A    State and/or Federal Endangered Species Act

Yes  No  Unk  N/A    State Historic Preservation Office (Historic)

Yes  No  Unk  N/A    State Historic Preservation Office (Archaeological)

Yes  No  Unk  N/A    FHWA Noise

Yes  No  Unk  N/A    Air Conformity

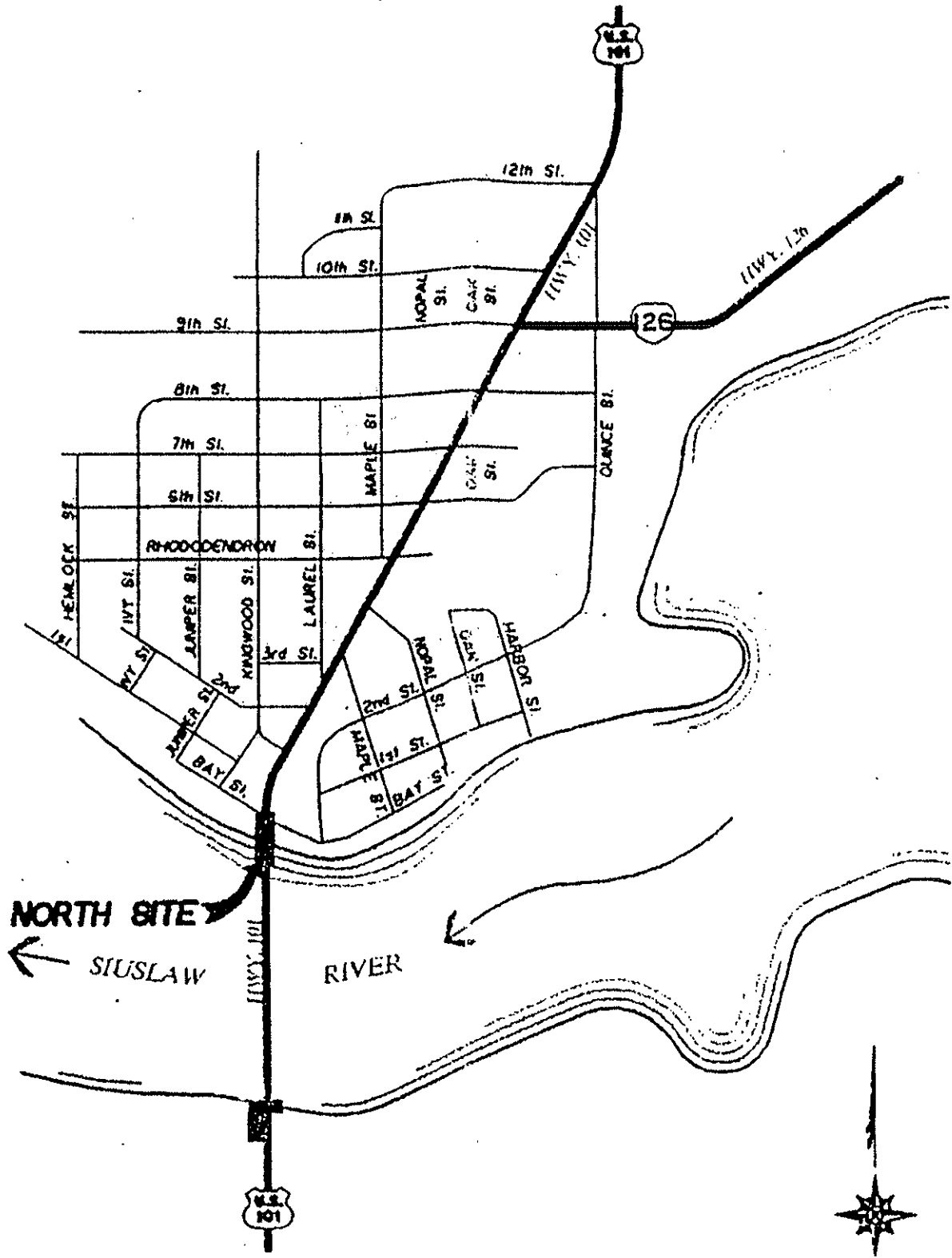
Yes  No  Unk  N/A    DEQ Commercial / Industrial Noise Regulation

Yes  No  Unk  N/A    Hazmat Materials Clearance

Yes  No  Unk  N/A    ODOT Erosion Control Plan

Yes  No  Unk  N/A    ODOT Rail Division Order (Is any portion of the project within 500' of a railroad in any direction?)

<b>Prepared by:</b>	<b>Phone Number:</b> 503-986-2829	<b>Date:</b> 11-21-2006
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**VICINITY MAP**

SCALE: NONE



FEB 17 2005

**UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration**

NATIONAL MARINE FISHERIES SERVICE  
Northwest Region  
7600 Sand Point Way N.E., Bldg. 1  
Seattle, WA 98115

Refer to NMFS No.:  
2004/01721

February 14, 2005

Mr. Lawrence Evans  
U.S. Army Corps of Engineers  
Attention: Michele E. Hanson  
Portland District, Eugene Field Office  
1600 Executive Parkway, Suite 210  
Eugene, Oregon 97401-2156

Re: Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat  
Consultation for the City of Florence Public Viewing Platform Project, Siuslaw River,  
Lane County, Oregon (Corps No.: 200400737)

Dear Mr. Evans:

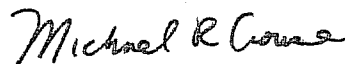
The enclosed document contains an essential fish habitat (EFH) consultation prepared by the National Marine Fisheries Service (NMFS) pursuant to Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and its implementing regulations (50 C.F.R. Part 600) on the effects of issuing a permit under Section 10 of the Rivers and Harbors Act to authorize the construction of a public viewing platform extending into the Siuslaw River in Florence, Oregon.

As required by Section 305(b)(4)(A) of the MSA, our consultation includes six conservation recommendations to avoid, minimize, or otherwise offset potential adverse effects to EFH. Section 305(b)(4)(B) of the MSA requires Federal agencies to provide a detailed written response to NMFS within 30 days after receiving these recommendations. If the response is inconsistent with the recommendations, the Corps must explain why the recommendations will not be followed, including the justification for any disagreements over the effects of the action and the recommendations. In response to increased oversight of overall EFH program effectiveness by the Office of Management and Budget, NMFS established a quarterly reporting requirement to determine how many conservation recommendations are provided as part of each EFH consultation and how many are adopted by the action agency. Therefore, in your statutory reply to the EFH portion of this consultation, we ask that you clearly identify the number of conservation recommendations accepted.



Please direct any questions you may have regarding this consultation to Bridgette Lohrman, Natural Resource Specialist, in the Lower Columbia River/Oregon Coast Habitat Branch of the Oregon State Habitat Office, 503.230.5422.

Sincerely,



F<sup>EE</sup>  
D. Robert Lohn  
Regional Administrator



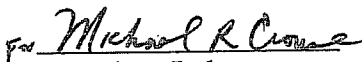
Magnuson-Stevens Fishery Conservation and  
Management Act  
Essential Fish Habitat Consultation

City of Florence Public Viewing Platform Project,  
Siuslaw River, Lane County, Oregon  
(Corps No.: 200400737)

Agency: U.S. Army Corps of Engineers

Consultation  
Conducted By: National Marine Fisheries Service,  
Northwest Region

Date Issued: February 14, 2005

Issued by:   
D. Robert Lohn  
Regional Administrator

NMFS No.: 2004/01721

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## INTRODUCTION

On November 22, 2004, the National Marine Fisheries Service (NMFS) received a letter from the U.S. Army Corps of Engineers (Corps) requesting essential fish habitat (EFH) consultation on the effects of issuing a permit under Section 10 of the Rivers and Harbors Act. The request was made pursuant to Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). The Corps determined the project may adversely affect EFH for Chinook salmon, coho salmon, groundfish species, and coastal pelagic species.

## MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

### EFH Background

The MSA, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires the inclusion of EFH descriptions in Federal fishery management plans. In addition, the MSA requires Federal agencies to consult with NMFS on activities that may adversely affect EFH.

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting the definition of EFH, 'waters' include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate. 'Substrate' includes sediment, hard bottom, structures underlying the waters, and associated biological communities. 'Necessary' means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and 'spawning, breeding, feeding, or growth to maturity' covers a species' full life cycle (50 C.F.R. 600.110).

Section 305(b) of the MSA (16 U.S.C. 1855(b)) requires that:

Federal agencies must consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH;

- NMFS shall provide conservation recommendations for any Federal or state activity that may adversely affect EFH;
- Federal agencies shall, within 30 days after receiving conservation recommendations from NMFS, provide a detailed response in writing to NMFS regarding the conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NMFS, the Federal agency shall explain its reasons for not following the recommendations.
- The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur

outside EFH, such as upstream and upslope activities, that may have an adverse effect on EFH. Therefore, EFH consultation with NMFS is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

### **Identification of EFH**

Pursuant to the MSA, the Pacific Fisheries Management Council (PFMC) has designated EFH for Federally-managed fisheries within the waters of Washington, Oregon, and California. Designated EFH for groundfish and coastal pelagic species encompasses all waters from the mean high water line, and upriver extent of saltwater intrusion in river mouths, along the coasts of Washington, Oregon, and California, seaward to the boundary of the U.S. exclusive economic zone (EEZ) (200 miles/370.4 kilometers) (PFMC 1998a, 1998b). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other waterbodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC 1999), and longstanding, naturally-impassable barriers (*i.e.*, natural waterfalls in existence for several hundred years) (PFMC 1999). In estuarine and marine areas, designated salmon EFH extends from the nearshore and tidal submerged environments within state territorial waters out to the full extent of the EEZ offshore of Washington, Oregon, and California, north of Point Conception to the Canadian border (PFMC 1999).

Detailed descriptions and identifications of EFH are contained in the fishery management plans for groundfish (PFMC 1998a), coastal pelagic species (PFMC 1998b), and Pacific salmon (PFMC 1999). Casillas *et al.* (1998) provides additional detail on the groundfish EFH habitat complexes. Assessment of the potential adverse effects to these species' EFH from the proposed action is based, in part, on these descriptions and on information provided by the Corps.

The proposed project location includes habitat which has been designated as EFH for various life stages of 20 species of groundfish, five coastal pelagic species, and two species of Pacific salmon (Table 1).

### **Proposed Action**

For purposes of this consultation, the proposed action is the issuance of a permit by the Corps under Section 10 of the Rivers and Harbors Act to the City of Florence to construct a public viewing platform extending into the Siuslaw River at river mile 4.3.

**Table 1.** Species with designated EFH in the Estuarine EFH Composite in the State of Oregon

<b>Groundfish Species</b>	
Leopard Shark (southern OR only)	<i>Triakis semifasciata</i>
Southern Shark	<i>Galeorhinus zyopterus</i>
Spiny Dogfish	<i>Squalus acanthias</i>
California Skate	<i>Raja inornata</i>
Spotted Ratfish	<i>Hydrolagus colliei</i>
Lingcod	<i>Ophiodon elongates</i>
Cabezon	<i>Scorpaenichthys marmoratus</i>
Kelp Greenling	<i>Hexagrammos decagrammus</i>
Pacific Cod	<i>Gadus macrocephalus</i>
Pacific Whiting (Hake)	<i>Merluccius productus</i>
Black Rockfish	<i>Sebastes maliger</i>
Bocaccio	<i>Sebastes paucispinis</i>
Brown Rockfish	<i>Sebastes auriculatus</i>
Copper Rockfish	<i>Sebastes caurinus</i>
Quillback Rockfish	<i>Sebastes maliger</i>
English Sole	<i>Pleuronectes vetulus</i>
Pacific Sanddab	<i>Citharichthys sordidus</i>
Rex Sole	<i>Glyptocephalus zachirus</i>
Rock Sole	<i>Lepidopsetta bilineata</i>
Starry Flounder	<i>Platichthys stellatus</i>
<b>Coastal Pelagic Species</b>	
Pacific Sardine	<i>Sardinops sagax</i>
Pacific (Chub) Mackerel	<i>Scomber japonicus</i>
Northern Anchovy	<i>Engraulis mordax</i>
Jack Mackerel	<i>Trachurus symmetricus</i>
California Market Squid	<i>Loligo opalescens</i>
<b>Pacific Salmon Species</b>	
Chinook Salmon	<i>Oncorhynchus tshawytscha</i>
Coho Salmon	<i>Oncorhynchus kisutch</i>

The viewing platform will be T-shaped, with a 101-foot long by 7-foot wide pier walkway capped by a 20-foot long by 26-foot wide viewing deck area. The structure will be part of the City of Florence Scenic Byway Wayside Interpretive Site beneath the Siuslaw River Bridge, in Florence, Oregon. The proposed pier will be supported on fourteen 12-inch diameter steel pilings driven into the bed of the Siuslaw River using a vibratory hammer and wood block via a barge-mounted pile driver. Initial construction, including the bolting of the steel girders to the pilings and the placement of temporary planking, will be done from the barge. All subsequent construction will occur from the planking. The walking surface of the pier will be constructed of

synthetic 'Trex' 2-inch by 6-inch decking spaced 5/16 of an inch apart to allow sunlight to penetrate to the water's surface.

Approximately 92 cubic yards (cy) of sand fill will be used to create the upland staging area which, post pier construction, will be paved and asphalted for a 3,000 square-foot parking lot.

### **Conservation Measures**

Conservation measures are incorporated into the project design to reduce adverse effects to EFH. These measures include:

1. In-water work will occur within the Oregon Department of Fish and Wildlife (ODFW) recommended in-water work window of November 1 to February 15 (ODFW 2000).
2. All work will be conducted from a floating barge to reduce direct impact on the silty substrate.
3. All pile driving will be completed within three days, minimizing the amount of disturbance time to EFH.
4. The platform will be constructed of 'Trex' decking and steel piles to reduce chemical contamination of the waterway and sediment.
5. The number of steel piles required for the project has been minimized by increasing the spacing between structural members.
6. Washing of concrete mixer trucks will not be permitted onsite and concrete will not be spilled or dumped onsite.
7. Stormwater runoff from the asphalt and concrete parking lot will be treated using an oil-water filter separator before flowing into the stormwater drainage system.
8. The staging area will be created in an upland location to prevent potential contamination of EFH.

### **Description of the Action Area**

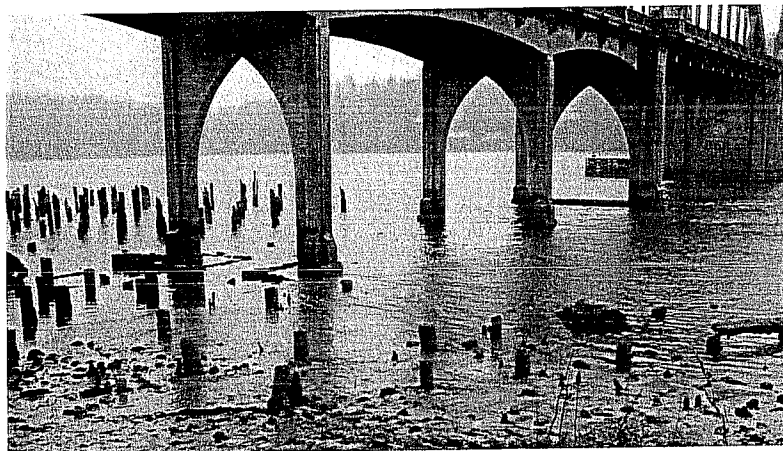
The action area includes those areas to be affected directly or indirectly by the Federal action and not merely the immediate (project area) involved in the proposed action. The direct effects occur at or beyond the project site based on the potential for upstream or downstream effects (*e.g.*, increases in suspended sediment [turbidity], chemical contamination) in the action area. Indirect effects may occur at or beyond the project site when the proposed action leads to additional activities that contribute to aquatic habitat degradation. For this consultation, the action area includes the Siuslaw River at river mile (RM) 4.3 including the riverbed, riverbank, water column, and the proposed adjacent upland parking lot, extending 150 feet upstream and 300 feet downstream.

The proposed project is located in the 4,197 acres of the Siuslaw estuary (Figure 1). The project is located within the estuarine tidal influence that is known to extend to RM 26, however, saltwater intrusion generally extends 17 to 22 miles upriver during the summer, and only 5 to 7 miles during winter months. It is situated on the banks of the city of Florence, which has a population of 7,000 people. The city was recently rated as the top location in the United States

to retire (Newport News-Times 2004). With a growing retirement community mirrored by an increase in tourism, housing pressure and community development are key pressures in the estuary on aquatic health and fish habitat. The shoreline at the project site and downriver has been significantly altered from a natural state due to commercial and residential growth. Approximately 20,000 feet of the lower Siuslaw riverbank has been hardened using riprap to slow or stop erosion from damaging private property. This indicates that 86% of the riverbank from the mouth to the city center has been altered in some way with the majority of these projects occurring from the project site, downriver to the mouth.

The lower portion of the Siuslaw River (below RM 5.7) is not listed as an Oregon Department of Environmental Quality 303(d) water quality limited waterbody. However, the estuary has lost a minimum of 58% of its tidal marsh habitat and the amount of change in eelgrass habitat since the 1987 Oregon Estuary Plan Book was published by the Oregon Department of Land Conservation and Development is unknown (EcoTrust 2002). The Estuary Plan Book designates the project area as having seagrass/algae beds that constitute 11.1% of the total estuarine habitat at the time.

**Figure 1.** The Siuslaw River at RM 4.3, looking at the location of the viewing pier underneath Siuslaw River bridge.



### **Effects of Proposed Actions**

The following effects analysis focuses primarily on habitat-related effects as they relate to salmon, as Chinook and coho salmon use the intertidal habitat in the action area on a year-round basis. Although rearing and migration of Chinook and coho salmon occurs year-round, juvenile outmigration occurs from February through June, with a peak in mid-May. Groundfish species in the action area are likely limited to cabezon, English sole, Pacific sanddab, and starry flounder. Northern anchovy is the only likely coastal pelagic species in the action area.

Likely potential adverse effects of the proposed action on EFH include: (1) Short-term degradation of water quality, *i.e.*, increased turbidity, chemical contamination, and increased sound; and (2) long-term reduction in light penetration.

**Water Quality - Turbidity and Suspended Solids.** The proposed project will have a short-term adverse effect on EFH by increasing ambient turbidity and total suspended solids (TSS) in the water column. This alteration of EFH will likely have a range of impacts to EFH species in the action area. Elevated total suspended solids (TSS) conditions have been reported to enhance cover conditions, reduce piscivorous fish/bird predation rates, and improve survival. Elevated TSS conditions have also been reported to cause physiological stress, reduce growth, and adversely affect survival. Of key importance in considering the detrimental effects of TSS on fish are the frequency and the duration of the exposure, not just the TSS concentration. At concentrations of 53 to 92 parts per million (ppm) (24 hours) macroinvertebrate populations were reduced (Gammon 1970). Concentrations of 250 ppm (1 hour) caused a 95% reduction in feeding rates in juvenile coho salmon (Noggle 1978). Concentrations of 1200 ppm (96 hours) killed juvenile coho salmon (Noggle 1978). Concentrations of 53.5 ppm (12 hours) caused physiological stress and changes in behavior in coho salmon (Berg 1983). The proposed construction activities, *i.e.*, pile driving, are likely to impact EFH by temporarily increasing turbidity and TSS which may trigger similar responses from EFH species in the action area. However, to reduce these adverse affects to EFH, the applicant has proposed to conduct all work from a floating barge to reduce direct impact on the silty substrate, to complete pile driving within three days, and to conduct work within the ODFW-recommended in-water work window of November 1 through February 15. By implementing these conservation measures, the effect of construction activities to EFH will be reduced.

**Water Quality - Chemical Contamination.** As with all construction activities, accidental release of fuel, oil, and other contaminants may occur. Operation of heavy equipment requires the use of fuels and lubricants which, if spilled in the stream channel or riparian area, can injure or kill aquatic organisms. Petroleum-based contaminants, such as fuel, oil, and some hydraulic fluids, contain poly-cyclic aromatic hydrocarbons (PAHs) which can be acutely toxic to salmonids at high levels of exposure and can also cause chronic lethal and acute and chronic sublethal effects to aquatic organisms (Neff 1985). Pile driving equipment will be used from the floating barge and other construction equipment will be used from the planking construction above the water, thus, there is potential for accidental spills into the river which would cause degradation of the nearshore EFH water quality. An upland staging area will be created in the adjacent parking lot for storage and staging of all equipment to prevent potential contamination of EFH. In addition, due to the short time frame which the pile driver will be needed (three days), it will not need to be re-fueled, thus will eliminate a potential vector for chemical contamination of EFH.

In addition to the construction of the viewing pier, a parking lot will be created to access the pier. A parking area of 50 feet by 60 feet will be paved with asphalt and will have a concrete sidewalk approach. Due to the increased vehicle traffic from this viewing pier and the proximity of the parking area to the river, chemical contamination of EFH from motor oil or gasoline is likely. To reduce this impact, all stormwater from the parking area and sidewalk will be directed to a two-chamber catch basin with an oil-water filter separator before flowing into a 15-inch diameter stormwater pipe. The treatment of this stormwater will reduce the effect of pollutants on EFH, however, information was not provided to determine what storm event the catch-basin is designed to handle and no monitoring or maintenance plan was included.



**Water Quality – Pile Driving and Sound Pressure Waves.** Pile driving will cause an adverse effect on EFH due to the increase in sound pressure waves and levels of sound in the water column. From this degradation of the ambient state of the water column, it is likely to injure, or kill, salmonids and finfish in the action area (Caltrans 2001, Longmuir and Lively 2001, Stotz and Colby 2001). Radiating sound pressure waves alternately compress and decompress water molecules, which will alternately compress and decompress the swimbladder and other organs. Injuries associated directly with pile driving can include: internal hemorrhaging, inflated abdomen, and rupture of the swimbladder and body wall (Caltrans 2001, Abbott and Bing-Sawyer 2002). Sound pressure levels (SPL) 100 decibels (dB) above the threshold for hearing likely are sufficient to damage the auditory system in many fishes (Hastings 2002). Sound waves in excess of 190dB may be fatal to fish, however 155dB may be sufficient to stun small fish (Hanson *et al.* 2003). In the marine environment, Feist (1991) and Feist *et al.* (1992 and 1996) have demonstrated that pile driving has tangible effects on salmonids. They concluded salmonids may detect pile driving sound within a radius of 1,800 feet of the sound source and pile driving operations may affect the general behavior and distribution of salmonids.

Vibratory hammers are commonly used to drive piles into the substrate. A vibratory hammer uses a combination of a stationary, heavy weight and vibration, in the plane perpendicular to the long axis of the pile. Vibratory hammers produce sounds of lower intensity, with a rapid repetition rate. When exposed to sounds which are similar to those of a vibratory hammer, fishes consistently displayed an avoidance response (Enger *et al.* 1993, Dolat 1997, Knudsen *et al.* 1997, Sand *et al.* 2000), and did not habituate to the sound, even after repeated exposure (Dolat 1997, Knudsen *et al.* 1997).

The high SPLs caused by pile driving would alter the EFH such that it is likely salmonids and finfish in the action area would be injured or displaced. This response could in turn result in fish abandoning predator refugia or local foraging areas, temporarily increasing risks of predation, or diminishing foraging opportunities. The applicant proposes to complete the driving of fourteen steel piles during the ODFW-recommended in-water work window of November 1 to February 15 and will use a vibratory hammer which will lessen, but not eliminate, the intensity and severity of sound pressure waves and sound levels on EFH.

**Reduction in Light Penetration.** The proposed viewing platform will occur below the Siuslaw River Bridge, thus further limiting light penetration into the water column. Limited light penetration alters EFH by reducing the capability of aquatic vegetation to photosynthesize and by potentially increasing refugia for predators of juvenile salmon and finfish. The loss of light penetration can cause long-term impacts to nearshore submerged vegetation, including eelgrass (Dillon 1971; Phillips 1972; Stout 1976; Thayer *et al.* 1975; Backman and Barilotti 1976; Dennison 1979; Dennison and Alberte 1982). At the project location, it is still unclear as to whether eelgrass does occur. The Oregon Estuary Plan Book (DLCD, 1987) indicates the presence of eelgrass in the project area, however the applicant states that there is 'not an abundance of aquatic vegetation.' During a site visit, this discrepancy could not be resolved because of high tides.

Limiting light also can have an affect on predator/prey relationships, fish behavior, and habitat function (Carrasquero 2001). Overwater structures create light/dark interface conditions, *i.e.*, shadows that allow ambush predators to remain in darkened areas (barely visible to prey) and watch for prey to swim by against a bright background (high visibility). In addition to piscivorous predation, in-water structures (tops of pilings) also provide perching platforms for avian predators such as double-crested cormorants (*Phalacrocorax auritis*) (Kahler *et al.* 2000), which may lead to a feeding frenzy at the project site. The proposed project will create an overwater structure of 1,227 square feet above the Siuslaw River. The EFH at the project site is already light-limited from the Siuslaw River Bridge, thus this project will further shade the substrate and water column and potentially cause adverse effects to aquatic vegetation and rearing or resting habitat for salmon and finfish.

### **EFH Conservation Recommendations**

Pursuant to Section 305(b)(4)(A) of the MSA, NMFS is required to provide EFH conservation recommendations to Federal agencies regarding actions which may adversely affect EFH. NMFS issues the following EFH conservation recommendations for the City of Florence Public Viewing Pier Project.

1. Based on DLCD (1987), the project site is in an area that supports eelgrass beds. The information provided by the Corps and the project applicant was insufficient to conclude that eelgrass is absent in the immediate project area. NMFS therefore recommends a pre-project survey to ascertain whether the project site or the surrounding area supports eelgrass. Because tidal cycles are not optimal during the winter months, this survey may be either a field survey, or a literature survey that is more robust than the information submitted to NMFS on November 22, 2004.
2. If the Corps determines that eelgrass is present in the project area, NMFS recommends that grating be installed in the pier decking to allow sufficient light penetration to support aquatic vegetation. In this region, there are approximately two high tides and two low tides per day. The average of the lower of the two high tides is referred to as Mean Low High Water (MLHW). For portions of the pier that extend over areas that are inundated by water at MLHW, 18 to 24 inches of grating should be incorporated into the decking for every four feet of length. An alternate plan to allow a similar amount of light penetration may be acceptable, if developed in coordination with NMFS.
3. Pilings should be fitted with devices to prevent perching by piscivorous birds species.
4. Due to the anticipated increase in human traffic at the project site, include signage to educate the public on the natural resource value of the estuary to aquatic and terrestrial organisms. Also, include signage deterring littering into the estuary from the public viewing pier.
5. Design a monitoring and maintenance plan for the stormwater catch-basin to ensure it is functioning properly in order to prevent an overflow of unfiltered water into the Siuslaw River estuary.

6. Remove existing pilings in the project area which are likely treated with creosote and leaching contaminants into EFH.

### **Statutory Response Requirement**

Federal agencies are required to provide a detailed written response to NMFS' EFH conservation recommendations within 30 days of receipt of these recommendations [50 C.F.R. 600.920(j)(1)]. The response must include a description of measures proposed to avoid, mitigate, or offset the adverse effects that the activity has on EFH. If the response is inconsistent with the EFH conservation recommendations, the response must explain the reasons for not following the recommendations, including the scientific justification for any disagreements over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects.

In response to increased oversight of overall EFH program effectiveness by the Office of Management and Budget, NMFS established a quarterly reporting requirement to determine how many conservation recommendations are provided as part of each EFH consultation and how many are adopted by the action agency. Therefore, in your statutory reply to the EFH portion of this consultation, we ask that you clearly identify the number of conservation recommendations accepted.

### **DATA QUALITY ACT DOCUMENTATION AND PRE-DISSEMINATION REVIEW**

Section 515 of the Treasury and General Government Appropriations Act of 2001 (Public Law 106-554) ('Data Quality Act') specifies three components contributing to the quality of a document. They are utility, integrity, and objectivity. This section of the EFH consultation addresses these Data Quality Act (DQA) components, documents compliance with the DQA, and certifies that this Opinion has undergone pre-dissemination review.

**Utility:** This EFH consultation on the City of Florence Public Viewing Platform Project, in Florence, Oregon, concludes that the action will adversely affect EFH for Pacific salmon, groundfish complex species, and northern anchovy. Pursuant to the MSA, NMFS provided the Corps with conservation recommendations to conserve EFH. The intended users of these consultations are the Corps and the applicant. The City of Florence and the American public will benefit from the consultation.

Individual copies were provided to the above-listed entities. This consultation will be posted on the NMFS Northwest Region website (<http://www.nwr.noaa.gov>). The format and naming adheres to conventional standards for style.

**Integrity:** This consultation was completed on a computer system managed by NMFS in accordance with relevant information technology security policies and standards set out in Appendix III, 'Security of Automated Information Resources,' Office of Management and

Budget Circular A-130; the Computer Security Act; and the Government Information Security Reform Act.

**Objectivity:**

**Information Product Category:** Natural Resource Plan.

**Standards:** This consultation and supporting documents are clear, concise, complete, and unbiased; and were developed using commonly accepted scientific research methods. They adhere to published standards including the MSA implementing regulations regarding EFH, 50 C.F.R. 600.920(j).

**Best Available Information:** This consultation and supporting documents use the best available information, as referenced in the Literature Cited section. The analyses in this EFH consultation contain more background on information sources and quality.

**Referencing:** All supporting materials, information, data and analyses are properly referenced, consistent with standard scientific referencing style.

**Review Process:** This consultation was drafted by NMFS staff with training in MSA implementation, and reviewed in accordance with Northwest Region ESA quality control and assurance processes.

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**DEPARTMENT OF THE ARMY**  
CORPS OF ENGINEERS, PORTLAND DISTRICT  
EUGENE FIELD OFFICE  
1600 EXECUTIVE PARKWAY, SUITE 210  
EUGENE, OREGON 97401-2156

REPLY TO  
ATTENTION OF:

February 28, 2005

Operations Division  
Regulatory Branch  
Corps No. 200400737

Ms. Linda Sarnoff  
City of Florence  
250 Highway 101  
Florence, Oregon 97439-7628

Dear Ms. Sarnoff:

On November 5, 2004, the U.S. Army Corps of Engineers (Corps) received a request from the city of Florence (City) for Department of the Army (DA) authorization to perform work in or affecting a navigable water of the United States. Pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), the City is hereby authorized by the Secretary of the Army to construct a 101-foot long by 7-foot wide pier walkway with a 20-foot long by 26-foot wide viewing pier deck area over the Siuslaw River as part of the City's Scenic Byway Wayside Interpretive site. The project site is at Mile 4.3 in Florence, in Lane County, Oregon.

Please be aware that Oregon Coast (OC) coho salmon are proposed for listing as threatened under the Endangered Species Act (ESA). A decision on the listing status of OC is due in 2005. In-water project components not completed by this date may be subject to the consultation requirements of Section 7 of the ESA.

Please note this permit does not obviate the need to obtain other Federal, state, or local authorization required by law. Please be aware this permit does not authorize the discharge of dredged or fill material below the high water line of the Siuslaw River estuary.

Recent changes in Corps regulations have established a process through which you may object to certain terms and conditions of this permit, and ask that the permit be modified accordingly. Please see the enclosed Notification of Administrative Appeal Options and Process and Request for Appeal (Enclosure 1) for further information about that process.

Upon completion of the permitted work or activity, please fill out the enclosed Compliance Certification (Enclosure 2) and submit it to this office at the letterhead address. If the permitted work or activity is not carried out by the expiration date of this permit, you should note this fact on the Compliance Certification and submit it to this office.



The work is shown on the attached drawings (Enclosure 3) and subject to the enclosed General and Special Conditions (Enclosure 4). The Oregon Department of Land Conservation and Development (DLCD) has provided their Certification and Concurrence Conditions (Enclosure 5). You must also comply with these conditions.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

Richard W. Hobernicht  
Colonel, Corps of Engineers  
District Engineer

Enclosures

Copy Furnished:

Oregon Department of State Lands (Field)  
Oregon Department of Environmental Quality (Svetkovitch)  
Oregon Department of Land Conservation and Development (Bacchieri)  
NOAA Fisheries (Tehan w/ attachments)  
Branch Engineering (Fabricant)

## NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

**Applicant:** City of Florence

**File Number:** 200400737

**Date:** February 28, 2005

**Attached is:**

See Section below

XX	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

**SECTION I -** The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/ceowo/reg> or Corps regulations at 33 CFR Part 331.

**A: INITIAL PROFFERED PERMIT:** You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT:** You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice. Also, see Section II.

**E: PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

**REASONS FOR APPEAL OR OBJECTIONS:** (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record. If you believe you have additional information pertinent to an approved jurisdictional determination {see Part D} with which you disagree, that new information should first be sent to the Portland District for reconsideration. Following the District's reconsideration, the approved jurisdictional determination can still be appealed as noted in Part D)

**ADDITIONAL INFORMATION:** The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:

U.S. Army, Corps of Engineers  
Portland District Office  
CENWP-OP-GA (ATTN: Jim Goudzwaard, Wetland Specialist)  
P.O. BOX 2946  
Portland, OR 97208-2946

If you decide to appeal an action under Parts B, C or D above, send a copy of each page to:

U.S. Army, Corps of Engineers  
Omaha Regional Office  
CENWD-MR (ATTN: Mores Bergman, Review Officer)  
15265 West Center Road  
Omaha, NE 68144-3871

**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number:
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## Compliance Certification

**Project County:** Lane

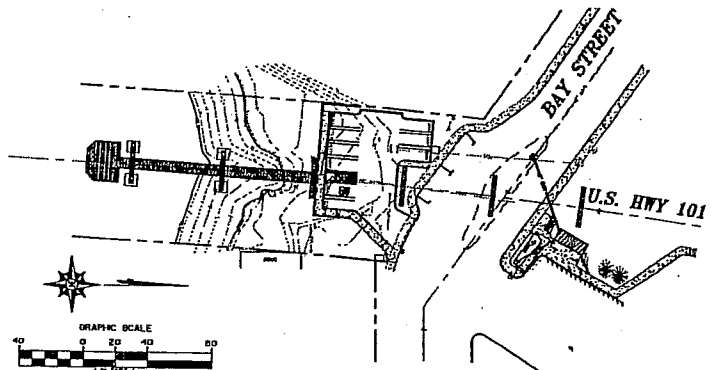
**Permit Number:** 200400737

**Date of Issuance:** February 28, 2005

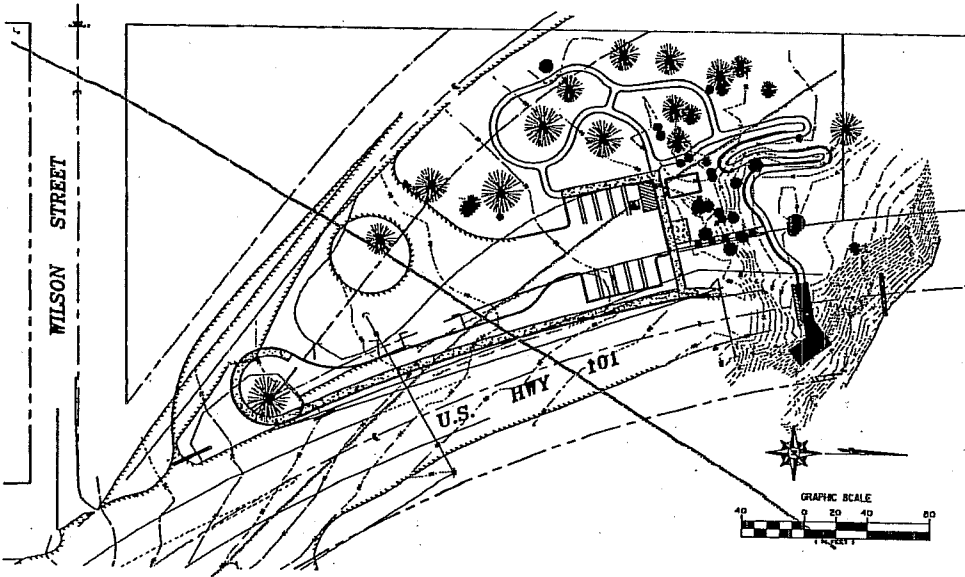
**Name of Permittee:** City of Florence  
City's Scenic Byway Wayside  
Interpretive Site

I hereby certify that the work authorized by the above referenced permit, has been completed in accordance with the terms and conditions of the said permit, and that required mitigation was completed in accordance with the permit conditions, except as described below.

\_\_\_\_\_  
Signature of Permittee



NORTH SITE - Project Site



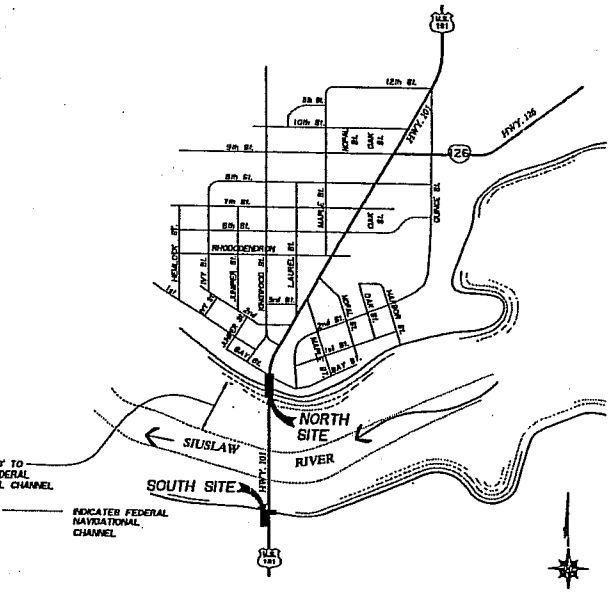
SOUTH SITE

**CONSULTANTS**

CIVIL AND STRUCTURAL ENGINEERING  
**Branch Engineering, Inc.**  
 510 Fifth Street  
 Springfield, Oregon 97477  
 (541)746-0527 FAX (541)746-0369

LANDSCAPE DESIGN  
**DLA DOUGHERTY LANDSCAPE ARCHITECTS**  
 474 Willamette Street, Suite 305  
 Eugene OR 97401 • 541-683-5503

SURVEY:  
**WOBBE & ASSOCIATES, INC.**  
 510 KINGWOOD ST./ P.O. BOX 3093  
 FLORENCE, OR 97439



**VICINITY MAP**  
SCALE: NONE

**SHEET INDEX**

SHEET No.	TITLE
COVER	COVER SHEET
C1	NORTH SITE EXISTING CONDITIONS AND DEMOLITION PLAN
C2	NORTH SITE SITE PLAN
C3	NORTH SITE GRADING, DRAINAGE AND UTILITY PLAN
C4	SOUTH SITE EXISTING CONDITIONS AND DEMOLITION PLAN
C5	SOUTH SITE SITE PLAN
C6	SOUTH SITE GRADING AND DRAINAGE PLAN
C7	SOUTH SITE U.S. HIGHWAY 101 STRIPING PLAN
C8	DETAILS
LA1	NORTH SITE LANDSCAPE PLAN
LA2	SOUTH SITE LANDSCAPE PLAN
01	NORTH SITE VIEWING DECK ELEVATION
02	NORTH SITE VIEWING DECK FRAMING
03	SOUTH SITE VIEWING DECK ELEVATION
04	SOUTH SITE VIEWING DECK FRAMING
05	SOUTH SITE VIEWING DECK
06	VIEWING DECK DETAILS

**FOR REVIEW ONLY  
NOT FOR CONSTRUCTION**

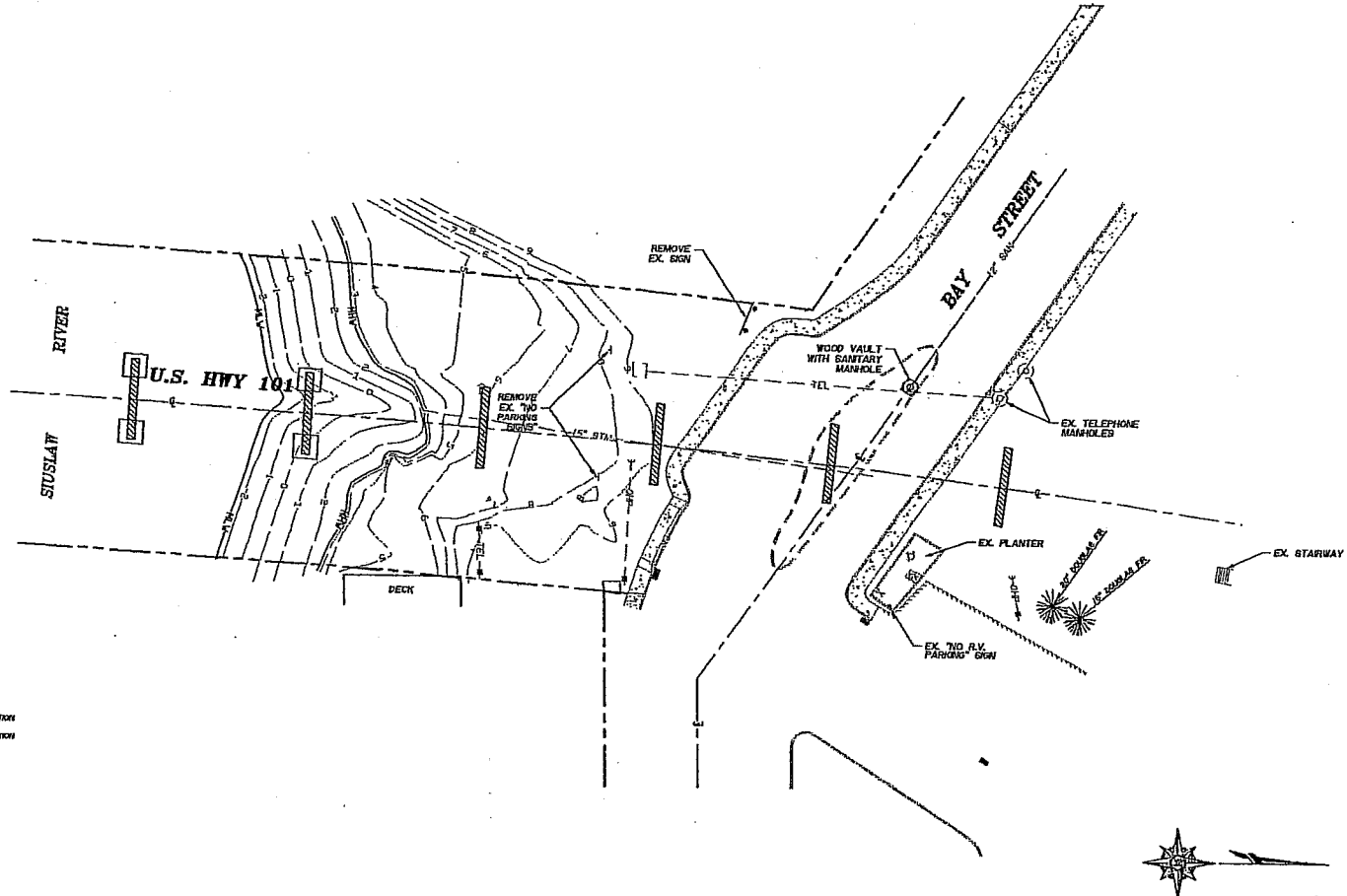
DATE	REVISIONS

CLIENT:	CITY OF FLORENCE P.O. BOX 340 FLORENCE, OR 97439
DESCRIPTION:	COVER SHEET
PROJECT TITLE:	

Branch Engineering, Inc.	510 FIFTH STREET SPRINGFIELD, OREGON 97477 (541)746-0527
DESIGNER:	RY
CHECKED BY:	
PROJECT NUMBER:	01-001A
SHEET NO.:	COVER



**LEGEND**

- RIGHT-OF-WAY
- - - EXISTING CURB
- EXISTING ASPHALT PAVING
- CHP EX OVERHEAD POWER LINE
- TEL EXISTING TELEPHONE LINE
- EXISTING CONTOUR ELEVATION
- CHW ORDINARY HIGH WATER ELEVATION
- CLW ORDINARY LOW WATER ELEVATION
- ☉ HYDRANT
- ☉ CATCH BASIN
- ☉ MANHOLE
- SIGN
- ⊗ WATER METER
- ⊗ WATER VALVE
- ⊗ POWER POLE
- ⊗ GUY WIRE
- ☀ EVERGREEN TREE
- ☁ VEGETATION
- ▨ SIDEWALK
- ▨ GRAVEL
- ▨ EXISTING CONCRETE PER



**FOR REVIEW ONLY  
NOT FOR CONSTRUCTION**

DATE	REVISION	DESCRIPTION

CLIENT: CITY OF FLORENCE  
P.O. BOX 340  
FLORENCE, OR 97439

DESCRIPTION: NORTH SITE - EXIS' AND DEMOLITION P

CONDITIONS

SEALS: [Professional Engineer Seal] [Professional Surveyor Seal]

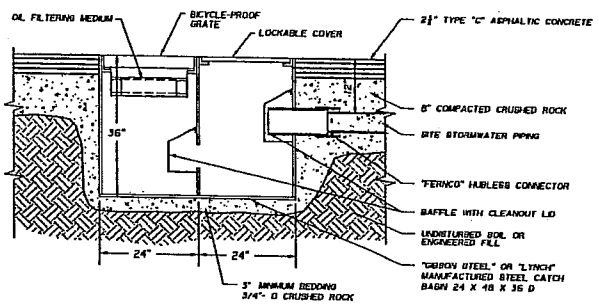
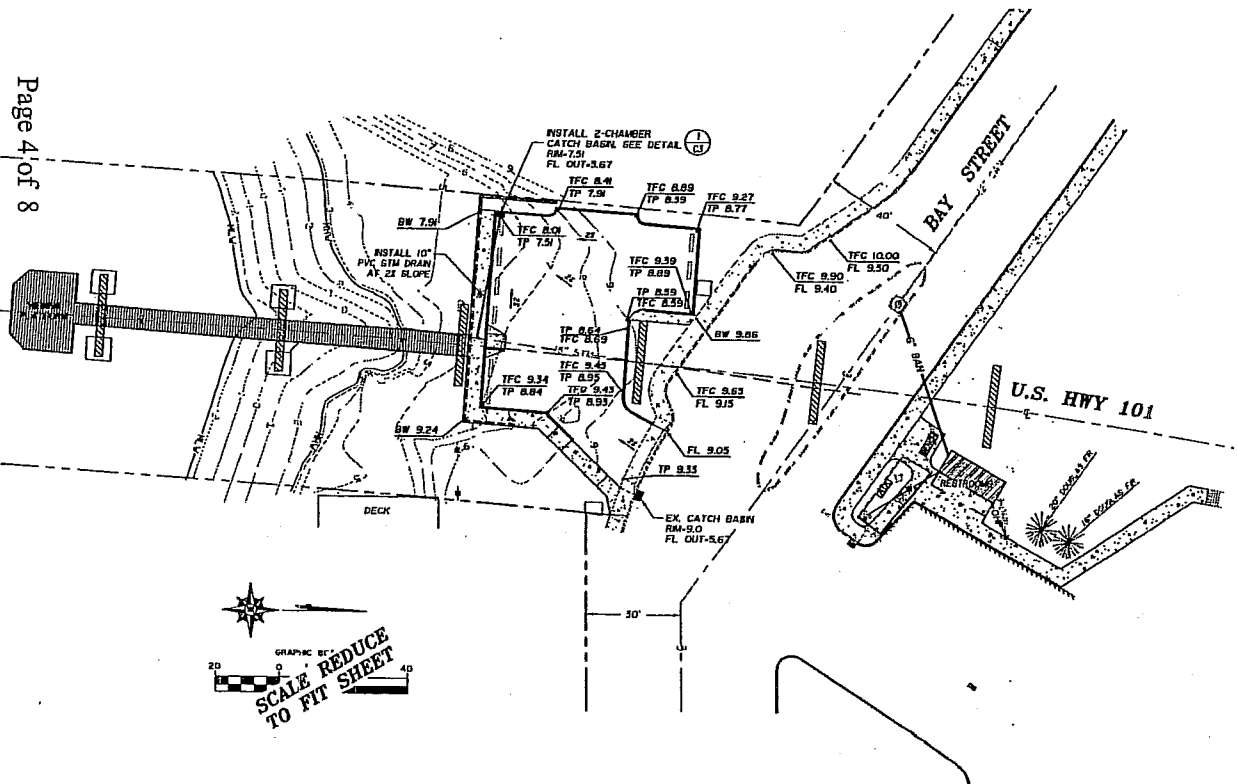
Branch Engineering, Inc.  
310 Ninth Street  
Birmingham, Oregon 97477  
(503) 446-0077 FAX (503) 446-0888

PROJECT: SIUSLAW RIVER BRIDGE

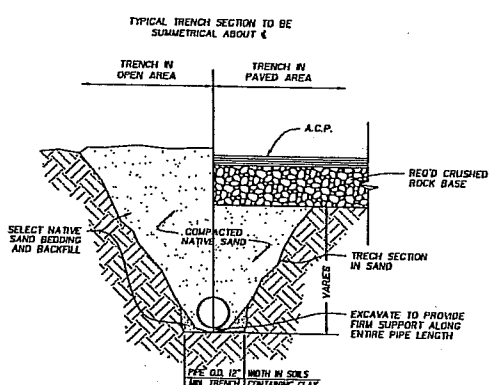
DATE	MARCH 2, 2004
SCALE	AS NOTED
DRAWN BY	ARS
DESIGNER	RT
CHECKED BY	
PROJECT NUMBER	01-001A
SHEET NO.	C1



LEGEND			
---	PROPERTY LINE	□	PROPOSED WATER METER
====	PROPOSED VERTICAL CURB	⊙	EXISTING WATER VALVE
----	EXISTING CURB	⊙	EXISTING POWER POLE
----	APPROXIMATE LOCATION OF EXISTING WATER LINE	⊙	EXISTING FIRE HYDRANT
---	PROPOSED WATERLINE	⊙	EXISTING CATCH BASIN
---	EXISTING SANITARY SEWER	⊙	EXISTING MANHOLE
---	PROPOSED SANITARY SEWER	⊙	PROPOSED CONCRETE
---	EXISTING STORM DRAIN SEWER	⊙	EXISTING CURB ALLEY
---	PROPOSED STORM DRAIN SEWER	⊙	PROPOSED TWO CHAMBER CATCH BASIN
---	DEVELOPER PROPOSED PERVIOUS/ IMPERVIOUS STORMWATER RUNOFF PATTERN	⊙	EXISTING EVERGREEN TREE
---		---	ADPHALIC CONCRETE PAVING
---		---	BACK OF WALK
---		---	FLOW LINE
---		---	MEAN HIGH WATER
---		---	MEAN LOW WATER
---		---	OVER HEAD POWER LINES
---		---	PROPOSED TOP OF PAVEMENT
---		---	TOP OF CURB



1 TWO CHAMBER CATCH BASIN DETAIL NOT TO SCALE



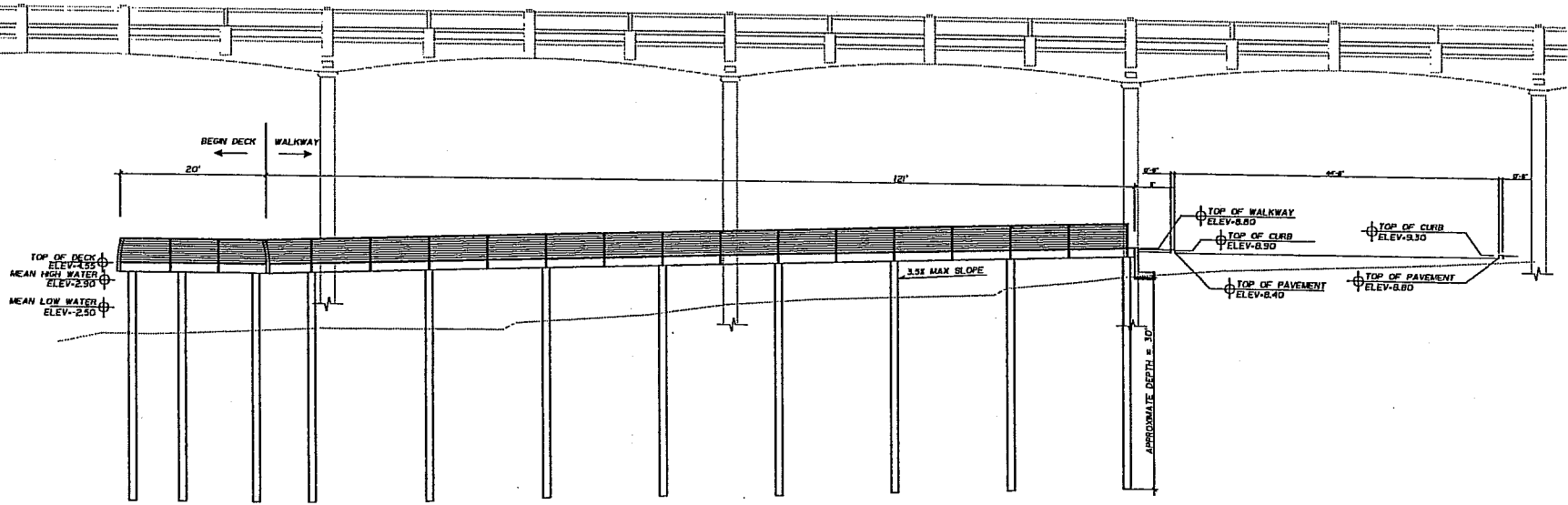
2 TYPICAL TRENCH SECTION NOT TO SCALE

FOR REVIEW ONLY  
NOT FOR CONSTRUCTION

REVISIONS	DATE	BY
CLIENT: CITY OF FLORENCE P.O. BOX 340 FLORENCE, OR 97439 DESCRIPTION: NORTH SITE GRADING, DRAINAGE AND UTILITY PLAN		
Branch Engineering, Inc. 2333 W. Main Street Springfield, Oregon 97477 (541) 748-0037		
PROJECT TITLE: Siuslaw RI BRIDGE		
DATE	MARCH 2, 2004	
SCALE	AS NOTED	
DRAWN BY	ARS	
DESIGNER	RT	
CHECKED BY		
PROJECT NUMBER	01-001A	
SHEET NO.	C3	

Enclosure (3)





**SCALE REDUCE  
TO FIT SHEET**

**ELEVATION**  
SCALE: 1/8"=1'-0"

DATE	REVISION DESCRIPTION	BY

CLIENT:  
**CITY OF FLORENCE**  
P.O. BOX 340  
FLORENCE, OR 97439

DESCRIPTION:  
**NORTH SITE VIEWING DECK**



**Branch Engineering, Inc.**  
310 4th Street  
Springfield, Oregon 97477  
(541)746-0089

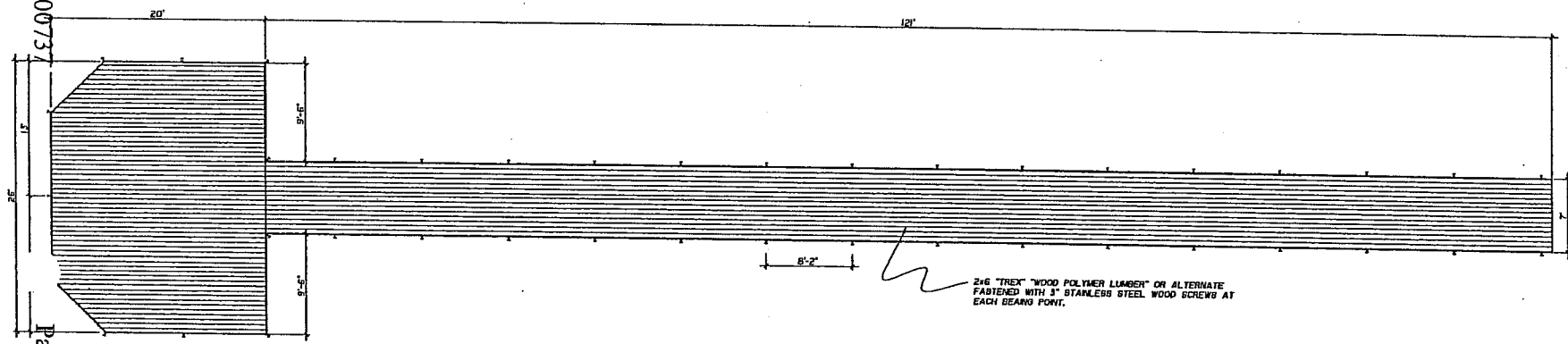
PROJECT TITLE:  
**STUSLAW RIVER BRIDGE**

DATE	1 MARCH 20
SCALE	AS NOTED
DRAWN BY	GPW
DESIGNER	RF
CHECKED BY	
PROJECT NUMBER	01-001A

SHEET NO.  
**S1**  
OF \_\_\_ SHEET(S)

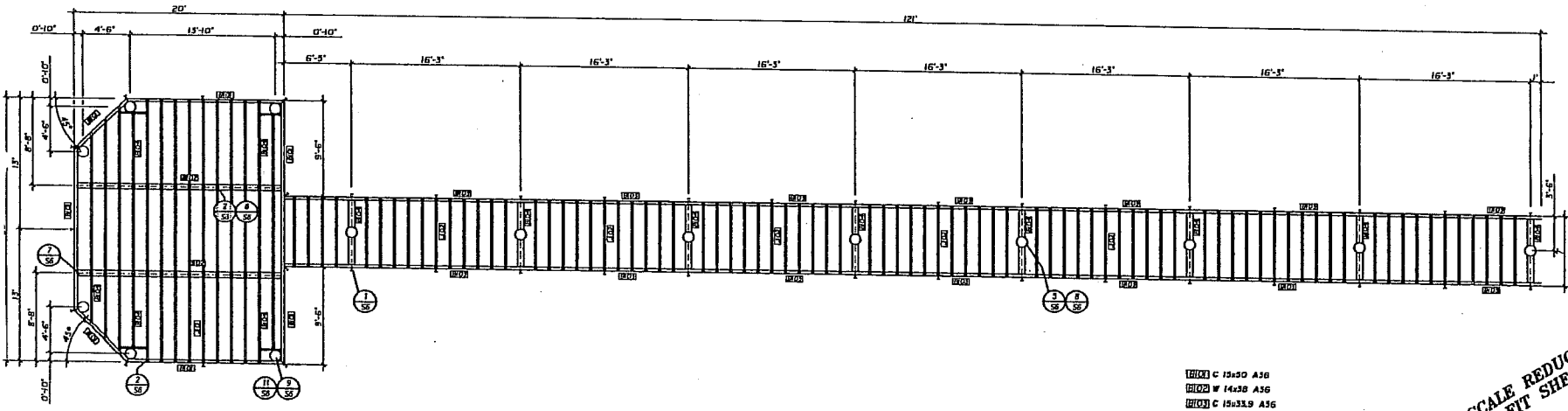
Enclosure (3)

**DECKING PLAN**  
SCALE: 3/16"=1'-0"



2x6 "TREX" WOOD POLYMER LUMBER OR ALTERNATE FASTENED WITH 3" STAINLESS STEEL WOOD SCREWS AT EACH BEAM POINT.

**FRAMING PLAN**  
SCALE: 3/16"=1'-0"



- [100] C 10x50 A36
- [102] W 14x30 A36
- [103] C 10x33.9 A36
- [104] C 10x40 A36
- [202] 2x12 HF #2 PT
- [203] 2x10 HF #2 PT

**SCALE REDUCE TO FIT SHEET**

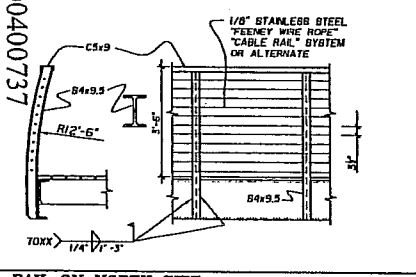
DATE	REVISION DESCRIPTION	BY

CLIENT: <b>CITY OF FLORENCE</b> P.O. BOX 340 FLORENCE, OR 97439	DESCRIPTION: NORTH SITE VIEWING DECK
--	---

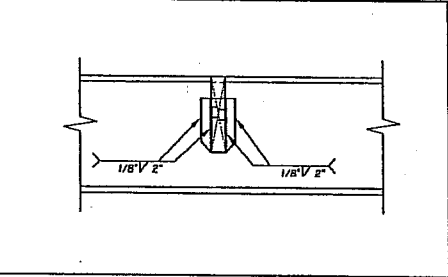


Branch Engineering, Inc. 510 Fifth Street Florence, OR 97439 (541)746-0857	PROJECT TITLE: <b>SILUSLAW R. BRIDGE</b>
---	---

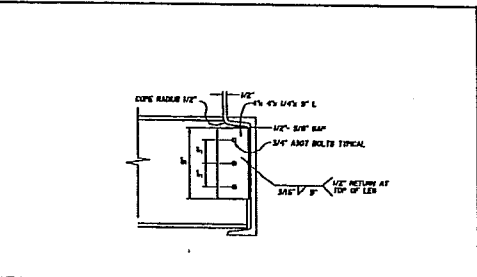
DATE	1 MARCH 2004
SCALE	AS NOTED
DRAWN BY	GFW
DESIGNER	RF
CHECKED BY	
PROJECT NUMBER	01-001A
SHEET NO.	<b>S2</b>
OF SHEET(S)	



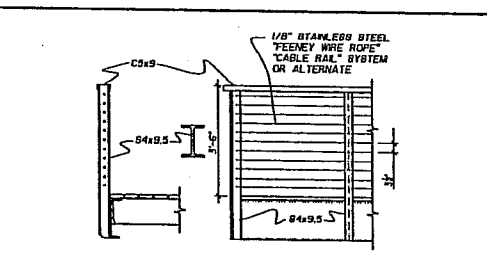
1 RAIL ON NORTH SITE  
SCALE: 1/2" = 1'-0"



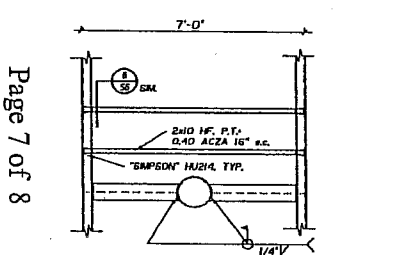
2 JOIST HANGER  
SCALE: 1/2" = 1'-0"



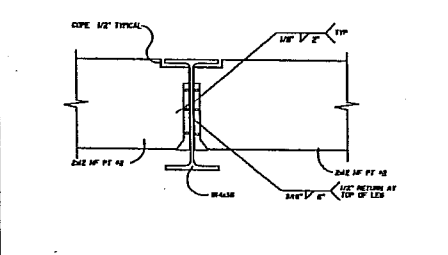
3 BEAM CONNECTION  
SCALE: 1 1/2" = 4'-0"



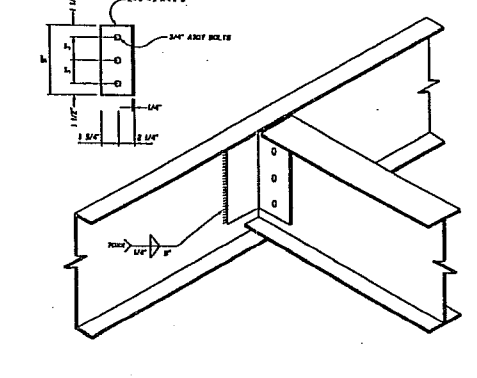
4 RAIL ON SOUTH SITE  
SCALE: 1/2" = 1'-0"



5 PILE CONNECTION PLAN DETAIL AT NORTH SITE WALKWAY  
SCALE: 1/2" = 1'-0"



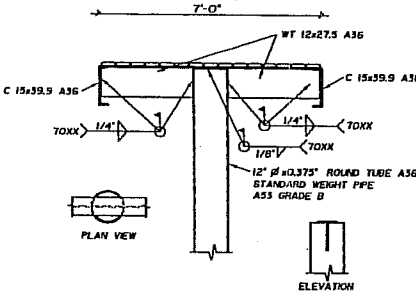
6 JOIST CONNECTION  
SCALE: 1 1/2" = 4'-0"



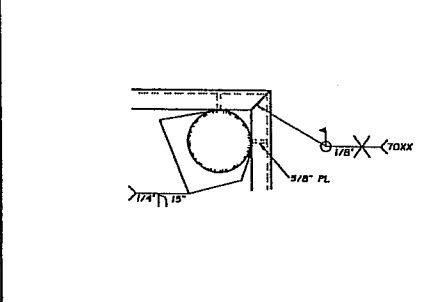
7 TYPICAL BEAM TO BEAM CONNECTION  
SCALE: 1/2" = 4'-0"

**NOTES:**

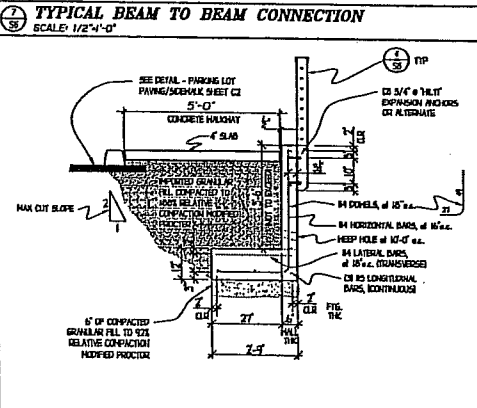
- All steel framing and connections to be hot dipped galvanized.
- Areas where galvanizing has been removed due to field cutting to be coated with Zinc Chromate.
- All wood framing to be pressure treated with Q-40 Ammoniacal Copper Zinc Arsenate (ACZA) and to be applied to Western Wood Products Institute's best management practices for the use of treated wood in aquatic environments.
- Pile Installation: Pile depth to approximate. Pile depth to be provided in accordance with geo-technical report, when available. Piles to be installed by driving method. No jacking or vibratory method permitted. Segment piles to be joined by 3/8" full penetration welds.
- Special Inspections: Special inspections required for all structural welds. Continuous special inspections required for all full penetration welds.



8 K CONNECTION ELEVATION DETAIL AT NORTH SITE WALKWAY  
SCALE: 1/2" = 1'-0"

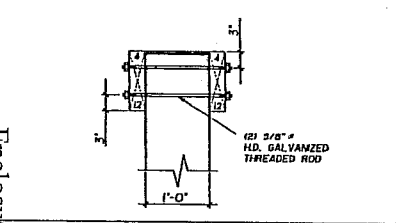


9 RIM GRIDER TO COLUMN PLAN  
SCALE: 1" = 1'-0"

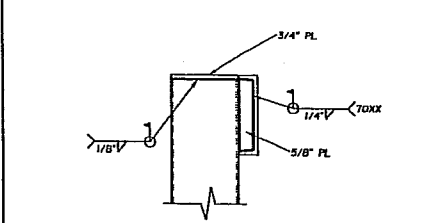


**NOTES:**

- USE GRADE 60 REINFORCING BARS
- CONCRETE MINIMUM COMPRESSIVE STRENGTH 2000 PSI FOR STRUCTURAL DESIGN
- PROVIDE 2000 PSI FOOTING 2000 PSI WALL
- 4" SLUMP, TOLERANCE 1/2"



10 PILE CONNECTION ELEVATION DETAIL AT SOUTH SITE WALKWAY  
SCALE: 1" = 1'-0"



11 RIM GRIDER TO COLUMN DETAIL  
SCALE: 1" = 1'-0"

12 RETAINING WALL NORTH SITE  
SCALE: 1/2" = 4'-0"

SCALE REDUCE TO FIT SHEET

DATE	
REVISION DESCRIPTION	
BY	

CLIENT: CITY OF FLORENCE  
P.O. BOX 340  
FLORENCE, OR 97439

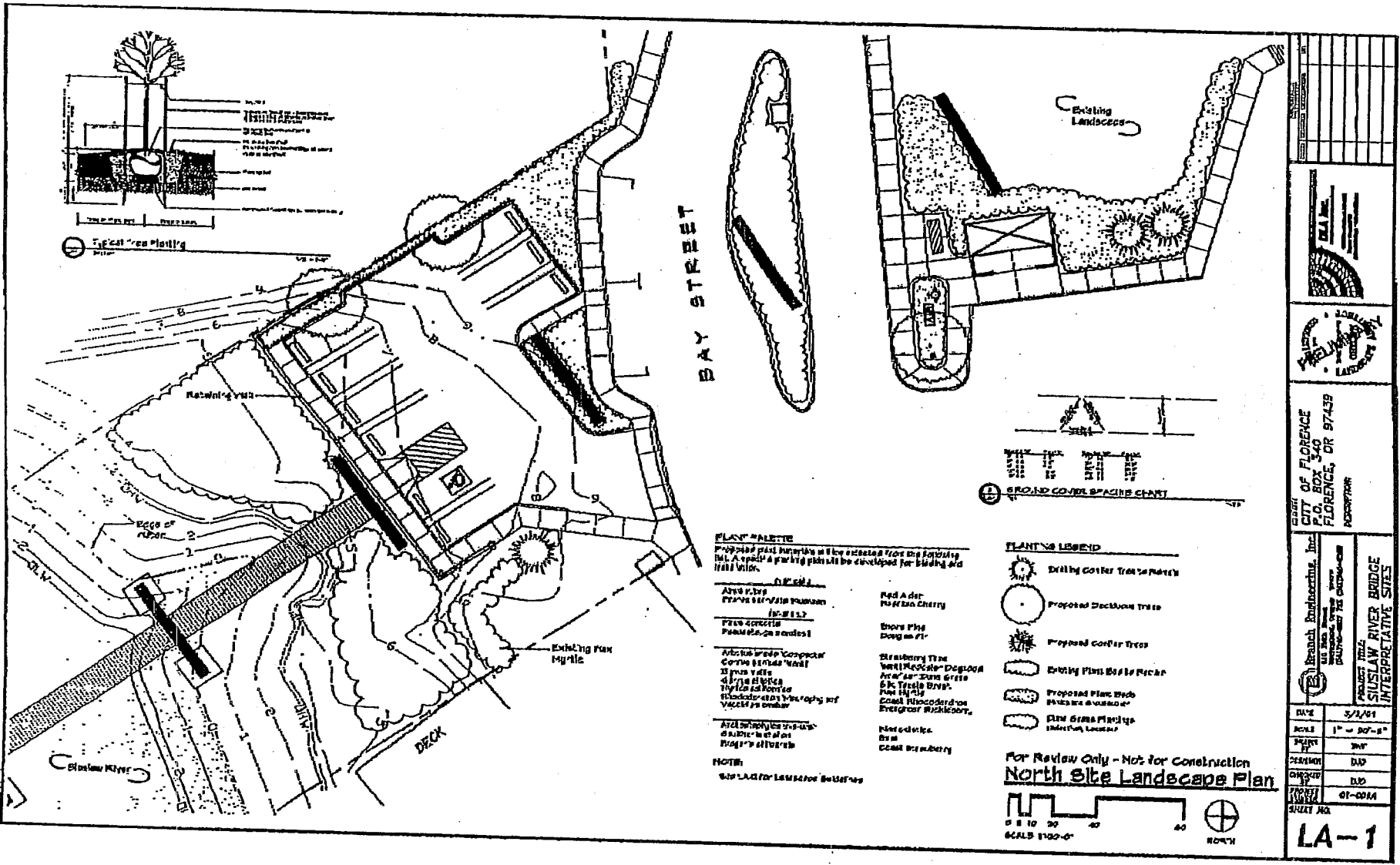
DESCRIPTION: VIEWING DECK DETAILS



Branch Engineering, Inc.  
310 Third Street, Suite 100  
Florence, OR 97439  
Phone: (541)748-0857 Fax: (541)748-0599

PROJECT TITLE: SIUSLAW RIVER BRIDGE

DATE	1 MARCH 2004
SCALE	AS NOTED
DRAWN BY	GPW
DESIGNER	RF
CHECKED BY	
PROJECT NUMBER	01-001A
SHEET NO.	S6
OF SHEETS	(3)



CIVIL ENGINEER DAVID M. BRANCH 12345 MAIN STREET SEASIDE, OREGON 97138	
CITY OF FLORENCE P.O. BOX 340 FLORENCE, OR 97439	
PROJECT TITLE: <b>STUSLAW RIVER BRIDGE INTERPRETIVE SITES</b>	
DATE	5/1/01
SCALE	1" = 30'-0"
DRAWN BY	DMB
CHECKED BY	DMB
DATE	5/1/01
PROJECT NO.	01-001A
<b>LA-1</b>	

## Oregon Department of Land Conservation and Development (DLCD) Conditions for Compliance with the Coastal Zone Management Act

1. **AQUACULTURE:** For projects involving commercial aquaculture cultivation, authorization for projects in Oregon's coastal zone under this Nationwide Permit is valid only if the applicant has obtained authorization when required from the Oregon Department of Agriculture for use of state submerged and submersible lands for aquaculture purposes.
2. **BANK STABILIZATION:**
  - a. Land use management practices and other non-structural methods of bank stabilization shall be preferred. The project design shall avoid or minimize the placement of rock or other hard materials and maximize the use of vegetation and organic materials such as rootwads and willow cuttings.
  - b. Projects shall be designed to meet the following conditions:
    - (1) No material is placed in excess of the minimum needed for erosion protection of the existing bankline. Placement of fill including riprap or other bank stabilization materials to reclaim lands to pre-flooding, erosion contours, or the pre-existing ordinary high water mark is not authorized.
    - (2) The bank stabilization activity occurs along no more than 250 feet of streambank. Bank stabilization projects utilizing only rootwads, willow cuttings, or other vegetative materials with no riprap materials are not subject to this length threshold.
    - (3) No material is placed in any special aquatic site, including wetlands.
    - (4) Materials and placement will be designed to the extent possible to withstand expected normal and high stream flows and shall not result in changes to stream gradients.
    - (5) The project does not include retaining walls, bulkheads, gabions, or similar vertical structures.
    - (6) Bank stabilization materials shall not include materials such as broken concrete, asphalt, tires, wire, steel posts, or similar materials. Any riprap material shall be clean, durable, angular rock that is predominately course or heavy-duty material.
    - (7) Riparian plantings shall be included in the project design unless the permittee can demonstrate that they are not practicable.
3. **FISH PASSAGE:** The permittee shall ensure that activities authorized by nationwide permit will not restrict the passage of aquatic life. Activities requiring the placement of culverts, diversion structures, or changes to channel morphology must be designed to be consistent with fish passage standards developed by the Oregon Department of Fish & Wildlife (ODFW) and National Marine Fisheries Service (NMFS) entitled *Oregon Department of Fish & Wildlife Guidelines and Criteria For Stream- Road Crossings*<sup>1</sup>.
4. **FISH SCREENING:** Where applicable, fish screening will meet the current standards developed by the ODFW and NMFS.

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<sup>1</sup> See ODFW website at [http://www.dfw.state.or.us/ODFWhtml/InfoCntrFish/Management/stream\\_road.htm](http://www.dfw.state.or.us/ODFWhtml/InfoCntrFish/Management/stream_road.htm).

5. **FLOODWAYS:** No fill or development shall occur within a designated floodway.
6. **HEAVY EQUIPMENT USE:** Heavy equipment shall be operated from the bank and not placed in the stream unless specifically authorized. In-stream work may be authorized by the U.S. Army Corps of Engineers (Corps) if necessary in the interest of safety or due to site conditions that prohibit work from the bank. Heavy equipment in wetlands must be placed on mats or other measures must be taken to minimize damage to wetland resources.
7. **IN-WATER WORK PERIODS:** All in-water work including temporary fills or structures shall occur within the ODFW's recommended period for in-water work (as specified in the most current version of *Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources*<sup>2</sup> [Guidelines]). Exceptions to the recommended time periods require specific approval from the Corps. The Corps will generally coordinate exceptions to the Guidelines with the ODFW and/or NMFS. On tribal lands, the Corps will coordinate exceptions with the Environmental Protection Agency (EPA).
8. **INSPECTION OF PROJECT SITES:** The permittee shall allow a representative of the Oregon Coastal Management Program to inspect the authorized activity and site to confirm compliance with coastal zone management conditions. A request for access to the site will normally be made sufficiently in advance to allow a property owner or representative to be onsite with the agency representative making the inspection.
9. **LIMITED COASTAL WETLANDS:** Permanent loss i.e., from placement of fill, water diversion, mechanized land clearing, or other methods, of salt marsh or other estuarine wetlands, bogs or fens, mature forested wetlands, or Goal 5<sup>3</sup> or 17<sup>4</sup> protected wetlands is not authorized. Contact the applicable local government planning department to determine if protected Goal 5 or 17 wetlands are present in the project area. For other listed wetland types, see also Portland District Guidance regarding "Special Areas of Concern<sup>5</sup>."
10. **LOCAL COMPREHENSIVE PLANS:** Authorization for projects in Oregon's coastal zone under any nationwide permit is valid only if the proposed project is consistent with or not subject to the applicable local comprehensive plan and implementing land use regulations. Permits or other authorizations must be obtained when required from the applicable local government before work is initiated under any nationwide permit.

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<sup>2</sup> See ODFW website at [http://www.dfw.state.or.us/ODFWhtml/InfoCntrHbt/0600\\_inwtrguide.pdf](http://www.dfw.state.or.us/ODFWhtml/InfoCntrHbt/0600_inwtrguide.pdf).

<sup>3</sup> Goal 5: National Resources, Scenic and Historic Areas, and Open Spaces. (Oregon Statewide Planning Goals & Guidelines) see <http://www.lcd.state.or.us/goalpdfs/goal05.pdf>.

<sup>4</sup> Goal 17: Coastal Shorelands. (Oregon Statewide Goals & Guidelines) see <http://www.lcd.state.or.us/goalpdfs/goal17.pdf>.

<sup>5</sup> See [https://www.nwp.usace.army.mil/op/g/res\\_agency/Wetlands.htm](https://www.nwp.usace.army.mil/op/g/res_agency/Wetlands.htm)

11. **RESTORATION/MITIGATION SITES:** The permittee shall ensure that activities authorized by nationwide permit will not negatively impact and/or revert wetlands or waterways to upland, via fill, removal, drainage, or other methods in either previous habitat restoration or compensatory mitigation sites.
12. **RIPARIAN VEGETATION PROTECTION AND RESTORATION:** Riparian vegetation in the project area shall be protected from disturbance to the maximum extent practicable during work. Any disturbed areas shall be restored with native vegetation and temporarily fenced or otherwise protected from damage until the vegetation is established.
13. **STATE LANDS/REMOVAL-FILL LAW:** Authorization for projects in Oregon's coastal zone under any nationwide permit is valid only if the proposed project is consistent with or not subject to the state statutes for state lands and removal-fill in waters of the state. Permits or other authorizations must be obtained when required from the Oregon Department of State Lands (DSL) before work is initiated under any nationwide permit.
14. **STREAMBED PROTECTION:** Permanent loss of wetted streambed in fish-bearing waters is not authorized. Other impacts to streambeds should be avoided or minimized to ensure the project will not result in more than minimal environmental impact to coastal zone resources.
15. **STREAM CHANNELIZATION OR RELOCATION:** Neither stream channelization nor stream relocation is authorized.
16. **UPLAND DISPOSAL:** All excess materials will be taken to a suitable upland location for disposal. The material shall be placed in a location and manner that prevents their discharge into waterways or wetlands. (Exception for discharges authorized under Nationwide Permit No. 16 (Return Waters from Upland Contained Disposal Areas)).

**Water Quality:** DLCD considers compliance with Department of Environmental Quality (DEQ)-imposed water quality conditions to be necessary to ensure compliance with the water quality components of the Oregon Coastal Management Program.

**Section 401 Water Quality Certification**  
**Part A- General Conditions**

1. **Duration of Certification-** This 401 WQC shall remain in effect until the RGP expires or the NWP categories it covers are again considered for re-issue and certification as part of a Nationwide package.
2. This section 401 Water Quality Certification does not authorize any site preparation activity for development or placement of water control structures in tidal waters or wetlands adjacent to tidal waters.
3. **Turbidity Control:** The following conditions relating to turbidity shall be observed:
  - a. Except as allowed in Condition 3(b) or 3(c) [below], the authorized work shall not cause turbidity of affected waters to exceed natural background turbidity by 10 percent, measured 100 feet downstream from the activity causing turbidity.
  - b. For projects in streams where the gradient is less than or equal to 2 percent (rise/run), monitoring shall take place at no less than 4-hour intervals during active, in-water work. Where erosion control measures specified in General Condition 4 of this WQC have been implemented, the turbidity standard specified in General Condition 3(a) may be exceeded for a maximum of 1 (one) monitoring interval per 24-hour work period.
  - c. For projects in streams where the gradient is greater than 2 percent (rise/run), monitoring shall take place at no less than 2-hour intervals during active, in-water work. Where erosion control measures specified in General Condition 4 of this certification have been implemented, the turbidity standard specified in General Condition 3(a) may be exceeded for a maximum of 2 (two) hours.
  - d. For projects impacting streams, water quality monitoring points shall be established at an undisturbed site representing background conditions

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approximately 100-feet upstream from the point of permitted work, and at a point approximately 100-feet downstream from the point of permitted activity in the visible plume, if one is present. Other monitoring locations may be authorized by the Corps if access is problematic. A turbidimeter is recommended for measuring; however, visual gauging is acceptable. If measured visually, turbidity that is visible over background is considered an exceedance of the standard.

- e. The person(s) conducting the monitoring shall be responsible for immediately notifying the permit holder or the permit holder's on-site representative of any exceedance of the turbidity standard and shall keep a record of the exceedance. If a 10 percent exceedance of the background level occurs at 100 feet below the project site, turbidity control measures shall be improved or additional controls shall be implemented until the turbidity standard is met. Monitoring shall continue at prescribed compliance intervals. If exceedances caused by the permitted activity occur during two consecutive measurements, the activity causing the turbidity shall stop until appropriate abatement techniques bring the project back into compliance.

4. **Erosion Control:** The applicant is referred to DEQ's *Oregon Sediment and Erosion Control Manual*, April 2005. The following erosion control measures (and others as appropriate) or comparable measures as specified in an NPDES 1200-C permit (if required) shall be implemented:

- a. Filter bags, sediment traps or catch basins, vegetative strips, berms, Jersey barriers, fiber blankets, bonded fiber matrices, geotextiles, mulches, wattles, sediment fences, or other measures used in combination shall be used to prevent movement of soil from uplands into waterways or wetlands;
- b. An adequate supply of materials needed to control erosion must be maintained at the project construction site;
- c. To prevent stockpile erosion, use compost berms, impervious materials or other equally effective methods, during rain events or when the stockpile site is not moved or reshaped for more than 48 hours;
- d. Erosion control measures shall be inspected and maintained daily, or more frequently as necessary, to ensure their continued effectiveness and shall remain in place until all exposed soil is stabilized;
  - i. If monitoring or inspection shows that the erosion and sediment controls are ineffective, mobilize work crews immediately to make repairs, install replacements, or install additional controls as necessary.
  - ii. Remove sediment from erosion and sediment controls once it has reached 1/3 of the exposed height of the control.
- e. Unless part of the authorized permanent fill, all construction access points through, and staging areas in, riparian or wetland areas shall use removable pads or mats to prevent soil compaction. However, in some wetland areas under dry summer conditions, this requirement may be waived upon approval by the Corps.

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- f. Dredged or other excavated material shall be placed on upland areas with stable slopes to prevent materials from eroding back into waterways or wetlands;
- g. Sediment from disturbed areas or able to be tracked by vehicles onto pavement shall not be allowed to leave the site in amounts that would reasonably be expected to enter waters of the state and impair water quality. Placement of clean aggregate at all construction entrances, and other Best Management Practices (BMPs) such as truck or wheel washes if needed, will be used when earth moving equipment will be leaving the site and traveling on paved surfaces; and,
- h. Existing stormwater inlets or catch basins located downslope of the work area must be protected with sediment control measures to prevent debris and turbid flows from reaching waters of the state.

5. **Deleterious Materials:** The following conditions relating to control of hazardous, toxic and waste materials shall be observed:

- a. **Treated Wood: Ineligibility-** Projects which use chemically treated wood that will contact surface or ground water or that will be placed over water where it will be exposed to abrasion require individual, site specific review and are, therefore, not certified by this 401 WQC.
- b. Projects that require removal of chemically treated wood must:
  - i. Ensure that no treated wood debris falls into waters of the State. If treated wood debris falls into waters of the State, it must be removed immediately.
  - ii. Dispose of all treated wood debris removed during a project, including treated wood pilings, at an upland facility approved for hazardous materials of this classification. Do not leave a treated wood piling in the water or stacked on the streambank.
- c. Biologically harmful materials and construction debris including, but not limited to: petroleum products, chemicals, cement cured less than 24 hours, welding slag and grindings, concrete saw cutting by-products, sandblasted materials, chipped paint, tires, wire, steel posts, asphalt and waste concrete shall not be placed in waterways or wetlands. Authorized fill material must be free of these materials. The applicant must remove all foreign materials, refuse, and waste from the project area.
- d. An adequate supply of materials needed to contain deleterious materials during a weather event must be maintained at the project construction site.
- e. Machinery refueling shall not occur in waterways or wetlands or their riparian areas. Refer to General Condition 6 for refueling specifics.

6. **Spill Prevention and Staging Activities:** Fuel, operate, maintain, and store vehicles and construction materials in areas that minimize disturbance to habitat and prevent adverse effects from potential fuel spills.

- a. Limit staging areas to the minimum size necessary to complete the project. To reduce the staging area and potential for contamination, ensure that

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- only enough supplies and equipment to complete a specific task will be stored on-site.
- b. Complete vehicle staging, cleaning, maintenance, refueling, and fuel storage in a vehicle staging area placed 150 feet or more from any waters of the State, unless this distance is not appropriate because of the following site conditions:
    - i. Physical constraints that make this distance not feasible (e.g., steep slopes, rock outcroppings).
    - ii. Natural resource features would be degraded as a result of this setback.
    - iii. Equal or greater spill containment and effect avoidance if staging area is less than 150 feet of any waters of the State.
  - c. If staging areas are within 150 feet of any waters of the State, full containment of potential contaminants shall be provided to prevent soil and water contamination, as appropriate.
  - d. Inspect all vehicles operated within 150 feet of any waters of the State daily for fluid leaks before leaving the vehicle staging area. Repair any leaks detected in the vehicle staging area before the vehicle resumes operation. Document inspections in a record that is available for review on request by the appropriate Regulatory Authorities.
  - e. Before operations begin and as often as necessary during operation, steam clean (or an approved equal) all equipment that will be used below bankfull elevation until all visible external oil, grease, mud, and other visible contaminants are removed.
  - f. Diaper all stationary power equipment (e.g., generators, cranes, stationary drilling equipment) operated within 150 feet of any waters of the state to prevent leaks, unless other suitable containment is provided to prevent potential spills from entering any waters of the state.
  - g. An adequate supply of materials (such as straw matting/bales, geotextiles, booms, diapers, and other absorbent materials) needed to control erosion and/or to contain deleterious materials during a weather event must be maintained at the project construction site.

7. **Spill Reporting:** Project-related spills that enter waters of the state or onto land with a potential to enter waters of the state shall be reported to the Oregon Emergency Response System (OERS) at 800-452-0311.

8. **Construction Process Water:** Water from any construction site may not be discharged directly to an unpermitted stormwater system, or to any other conveyance system leading directly to a water of the state. Adverse effects to water quality from construction water with pollutants (e.g., concrete washout, hydromilling, pumping for work area isolation, vehicle wash water, drilling fluids) must be avoided:

- a. **Process water containment-** Design, build, and maintain facilities to collect and treat all construction discharge water, including any contaminated water produced by drilling, using the best available technology applicable to site conditions. Provide treatment to remove debris, nutrients, sediment,

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- petroleum hydrocarbons, metals, and other pollutants likely to be present. An alternative to treatment is collection and proper disposal offsite;
- b. **Drilling Discharge-** All drilling equipment, drill recovery and recycling pits, and any waste or spoil produced, will be completely isolated, recovered, then recycled or disposed of to prevent entry into waters of the state. Recycling using a tank instead of drill recovery/recycling pits, is preferable;
  - c. When drilling is completed, attempts will be made to remove the remaining drilling fluid from the sleeve (e.g., by pumping) to reduce turbidity when the sleeve is removed.
9. **Fish Avoidance:** Minimize water quality impacts and adverse effects to fish species from in-water work activities.

- a. **Timing of In-water Work-** All work below the OHW elevation, or bankfull elevation, including temporary fills or structures, shall occur within the time periods recommended by Oregon Department of Fish and Wildlife (ODFW) for in-water work specified in the most current version of Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources. Any exception to the Guidelines shall require specific approval from the Corps after consultation with ODFW, and where required, USFWS and/or National Marine Fisheries Service (NMFS, NOAA Fisheries).
- b. **Cessation of Work-** Cease project operations under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize turbidity or other resource damage as a result of the exposed project area.
- c. **Fish Passage-** Provide passage for any adult or juvenile migratory fish species present in the project area during and after construction, for the life of the project, and as approved in writing by the appropriate resource and regulatory agencies including ODFW, USFWS, and NMFS. Upstream passage is not required during construction if it did not previously exist.
- d. **Isolation of In-water Work Area-** If adult or juvenile fish are reasonably certain to be present, if spawning habitats are reasonably likely to be impaired (e.g. work area is within 300 feet or as required by ODFW), or as needed to protect beneficial uses, complete isolation of the work area from the active flowing stream using inflatable bags, geo blocks, sandbags, sheet piling, or similar materials, is required unless otherwise approved in writing by the appropriate Regulatory Authorities. The applicant is referred to DEQ's *Oregon Sediment and Erosion Control Manual*, April 2005, for isolation techniques.

10. **Site Restoration: Riparian and Wetland Vegetation Protection and Restoration-** Vegetation associated with waters of the state, including wetlands, is absolutely essential in preserving and enhancing water quality. In many cases this includes vegetation on adjacent upland buffer areas. Therefore riparian, wetland, and shoreline vegetation in the project area shall be protected from unauthorized disturbance, or, if authorized work results in unavoidable disturbance, shall be restored and enhanced. The applicant must *Section 401 Water Quality Certification for the RGP covering Nationwide categories suspended by implementation of the SPGP*

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protect or restore habitat access, water quality, production of habitat elements, channel conditions, flows, watershed conditions, and other ecosystem processes that form and maintain productive habitats.

Preparation and implementation of a Site Restoration Plan may be required to ensure that all habitats and accesses (e.g., streambanks, soils, large woody material, and vegetation) disturbed by the project are restored.

- a. Site Restoration Plan Requirements- Consistent with OAR 141-085-0171, when impacts to existing vegetation are anticipated as a result of the proposed activities, and the impacts will not require mitigation because they are considered temporary, the applicant must provide a rehabilitation plan for temporary impacts which includes the following:
  - i. Existing and proposed contours.
  - ii. Existing physical and biological characteristics, including vegetation.
  - iii. Geomorphology and habitat features of stream or other open waters.
  - iv. Areas of temporary impacts associated with construction staging and access.
  - v. Restoration goals and objectives necessary to restore lost functions.
  - vi. A planting plan appropriate to the geographic area which demonstrates how the applicant will replace or enhance riparian vegetative function.
  - vii. A plan to control exotic invasive vegetation;
  - viii. An irrigation plan, including water supply source, if necessary.
- b. General Conditions relating to site disturbance:
  - i. All exposed soils must be stabilized during and after construction to prevent erosion and sedimentation.
  - ii. All disturbed areas shall be returned to original ground contours at project completion.
  - iii. There shall be no operation of equipment such that machinery drives into the water. Work must be conducted from the top of the bank or in the dry.
  - iv. No removal of vegetation shall occur outside the construction corridor or project footprint.
  - v. At project completion soil exposed by construction activity must be stabilized by mulching and native vegetative plantings/seeding. Sterile grass may be used instead of native vegetation for temporary sediment control. If soils are to remain exposed more than seven days after completion of the permitted work, they must be covered with erosion control mats, or an equally effective erosion control technique until vegetative stabilization is achieved.
  - vi. Woody vegetation removed or destroyed as a result of project construction shall be replaced at a rate of 2:1 with native trees and shrubs or as appropriate to the geographic area within the first

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planting season after project completion, consistent with OAR 141-085-0171.

- vii. There shall be 80% survival of planted trees and shrubs, and 80% cover of planted or naturally recruited native herbaceous cover for 5 years following planting.
- viii. Failure to comply with site restoration requirements may result in additional compensatory mitigation.

c. General Considerations:

- i. Streambank shaping. Restore damaged streambanks to a natural slope, pattern and profile suitable for establishment of permanent woody vegetation, unless precluded by pre-project conditions (e.g., a natural rock wall).
- ii. Revegetation. Replant or reseed each area requiring revegetation before the end of the first planting season following construction. Use a diverse assemblage of species native to the project area or region, unless approved in writing by the appropriate Regulatory Authorities. Impacted streambank vegetation shall be replaced to the line of non-aquatic vegetation. Restored vegetation in adversely affected wetlands shall extend to the upland limits of the wetland area.
- iii. Pesticides. No pesticides, including herbicides, will be allowed within 150 feet of waters of the State or a greater distance as determined by current case law. Mechanical, hand, or other methods may be used to control weeds and unwanted vegetation.
- iv. Fertilizer. Do not apply surface fertilizer within 50 feet of any stream channel, unless approved in writing by the appropriate Regulatory Authorities.
- v. Fencing. Install wildlife-friendly fencing as necessary to prevent access to revegetated sites by livestock or unauthorized persons.
- vi. Source of Materials. Obtain boulders, rock, woody materials and other natural construction materials used for the project outside the bankfull elevation and at least 150 feet from any waters of the State, except for native materials obtained from within the project footprint to be stockpiled and reused on site.
  - (1) If possible, leave native materials where they are found.
  - (2) If native materials (e.g., downed wood) are damaged or destroyed, replace them with a functional equivalent during site restoration.
  - (3) Stockpile all large wood, native vegetation, weed-free topsoil, and native channel material displaced by construction for use during site restoration in-channel, in the riparian area, or in adjacent uplands, as appropriate.
- d. Rehabilitation Plan Contents. Use of the following design elements, while discretionary, may lead to more successful rehabilitation efforts.
  - i. Design Considerations. These guidelines may be used to develop a design plan and to aid in restoration goal assessment. While no single element is sufficient to measure success, the intent is that

these features should be present within reasonable limits of natural and management variation:

- (1) Bare soil spaces that approximate the size and dispersal pattern of pre-existing conditions;
- (2) Soil movement, such as active rills or gullies and soil deposition around plants or in small basins, is absent or slight and local;
- (3) If areas with past erosion are present, they are completely stabilized and healed;
- (4) Plant litter is well distributed and effective in protecting the soil with few or no litter dams present;
- (5) Native woody and herbaceous vegetation, and germination microsites, are present and well distributed across the site;
- (6) Vegetation structure is resulting in rooting throughout the pre-existing, available soil profile;
- (7) Plants have normal, vigorous growth form, and a high probability of remaining vigorous, healthy and dominant over undesired competing vegetation;
- (8) Streambanks have less than 5% exposed soils with margins anchored by deeply rooted vegetation or coarse-grained alluvial debris.

11. Projects employing sumps or dry wells for groundwater discharge must conform to OAR 340-044-050. Contact Barbara Priest, DEQ, at 503-229-5945 for more information.

12. DEQ reserves the option to modify, amend, or revoke this 401 WQC for any or all activities or categories of activities, in the event that:

- a. New information indicates that the certified activities are having a significant adverse impact on state water quality or aquatic resources;
- b. State water quality standards, criteria, or beneficial uses are amended through rulemaking; or,
- c. A proposed activity is necessitated by natural or human caused events which result in sudden structural damage threatening human health and safety and determined by the Corps or DEQ to be an emergency.

## **Section 401 Water Quality Certification Part B- Activity Specific Conditions**

1. **Streambank Stabilization and Protection-** Avoid and minimize adverse effects to natural stream and floodplain function by limiting streambank protection actions to those that are not expected to have long-term adverse effects on aquatic habitats. Whether these actions will also be adequate to meet other streambank protection objectives depends on the mechanisms of streambank failure operating at site- and reach-scale.

- a. **Ineligibility-** The following streambank stabilization activities are not certified by this 401 WQC:
- i. Any streambank stabilization project equal to or greater than 250 continuous linear feet of bank disturbance;
  - ii. Any streambank stabilization project that involves the placement of more than 1 cubic yard of rock per linear foot below the OHW;
  - iii. Permanent placement of material in wetlands adjacent to a stabilization project;
  - iv. Placement of toe rock in constructed stream channel trenches where bioengineering is not a feature of the project [unless specified below in c., ii., (1) through (5) below];
  - v. Placement of new vertical structures such as retaining walls, bulkheads, gabions or similar structures.
- b. **Choice of Techniques-** The following bank protection techniques are approved for use individually or in combination:
- i. Woody plantings and variations (e.g., live stakes, brush layering, fascines, brush mattresses).
  - ii. Herbaceous cover, where analysis of available records (e.g., historical accounts and photographs) shows that trees or shrubs did not exist on the site within historic times, primarily for use on small streams or adjacent wetlands.
  - iii. Deformable soil reinforcement, consisting of soil layers or lifts strengthened with fabric and vegetation that are mobile ('deformable') at approximately two- to five-year recurrence flows.
  - iv. Coir logs (long bundles of coconut fiber), straw bales, and straw logs used individually or in stacks to trap sediment and provide growth medium for riparian plants.
  - v. Bank reshaping and slope grading, when used to reduce a bank slope angle without changing the location of its toe, increase roughness and cross-section, and provide more favorable planting surfaces.
  - vi. Floodplain roughness (e.g., floodplain tree and large woody debris rows, live siltation fences, brush traverses, brush rows, and live brush sills) used to reduce the likelihood of avulsion in areas where natural floodplain roughness is poorly developed or has been removed.
  - vii. Floodplain flow spreaders, consisting of one or more rows of trees and accumulated debris used to spread flow across the floodplain.
  - viii. Flow-redirection structures known as barbs, vanes, or bendway weirs, when designed as follows, and as otherwise approved in writing by the appropriate Regulatory Authorities.
    - (1) No part of the flow-redirection structure may exceed bank full elevation, including all rock buried in the bank key.
    - (2) Build the flow-redirection structure primarily of wood or otherwise incorporate large wood at a suitable elevation in an exposed portion of the structure or the bank key. Placing



the large woody debris near streambanks in the depositional area between flow direction structures to satisfy this requirement is not approved, unless those areas are likely to be greater than 3 feet in depth, sufficient for target-species rearing habitats.

- (3) Fill the trench excavated for the bank key above bankfull elevation with soil and topped with native vegetation.
- (4) The maximum flow-redirection structure length will not exceed 1/4 of the bankfull channel width.
- (5) Place rock individually without end dumping, unless approved in writing by the appropriate Regulatory Authorities.
- (6) If two or more flow-redirection structures are built in a series, place the flow-redirection structure farthest upstream within 150 feet or 2.5 bankfull channel widths, from the flow-redirection structure farthest downstream.
- (7) Include woody riparian planting as a project component.

c. **Use of Large Wood and Rock-** Whenever possible, use large wood as an integral component of streambank protection treatments. Avoid or minimize the use of rock, stone, and similar materials.

- i. Large wood will be intact, hard, and undecayed to partly decaying with untrimmed root wads to provide functional refugia habitat for fish. Use of decayed or fragmented wood found lying on the ground or partially sunken in the ground is not acceptable.
- ii. Rock may be used instead of wood for the following purposes and structures. The rock may not impair natural stream flows into or out of secondary channels or riparian wetlands. Whenever feasible, place topsoil over the rock and plant with woody vegetation.
  - (1) As ballast to anchor or stabilize large woody debris components of an approved bank treatment.
  - (2) To fill scour holes, as necessary to protect the integrity of the project, if the rock is limited to the depth of the scour hole and does not extend above the channel bed.
  - (3) To construct a footing, facing, head wall, or other protection necessary to prevent scouring or downcutting of, or slope erosion or failure at, an existing structure (e.g., culvert, utility line, roadway or bridge support) to be repaired.
  - (4) To construct a flow-redirection structure as described above.
  - (5) In projects maintaining existing transportation related structures when an ODOT or other registered professional engineer identifies rock alone as the only effective method due to site specific geotechnical or hydraulic concerns.

2. **Stormwater Management for RGP activities involving impervious surfaces**

*Stormwater discharges to waters of the state must not violate state water quality standards, including Oregon Administrative Rule (OAR) 340-041-0004, the Antidegradation Policy for Surface Water.*

**Post-Construction Stormwater Management Plans:** Levels of post-construction stormwater management planning for the RGP 401 WQC are determined by project scope, location, and reasonable expectation that increased pollutant loads will enter waters of the state. Making a determination as to level of detail required in a stormwater plan is described by the following tiered system:

- a. *Description of Tiers-* to determine appropriate level of post-construction stormwater management planning necessary, use one of the following:
- i. *Tier 1 Project-* A project located within a community permitted under a National Pollutant Discharge Elimination Strategy (NPDES) Phase I or II Municipal Separate Storm Sewer System (MS4) and discharging to the municipal system. If the applicant does not plan to discharge into the permitted municipal system, they must use Tier 2 or Tier 3;
  - ii. *Tier 2 Project-* Outside MS4 areas, and total site disturbance less than one acre, and no increase in pollutant loads or increased runoff to waters of the state;
    - A. New and associated impervious area less than or equal to 500 square feet; maintenance of existing structures which qualify for RGP A (Maintenance); or projects which qualify for RGP J (Single Family Housing); or,
    - B. Site development activities with new and associated impervious area greater than 500 square feet.If the applicant is uncertain of effects or is unable to demonstrate that increased stormwater resulting from the project will have minimal effect on pollutant loads in waters of the state, they should use Tier 3;
  - iii. *Tier 3 Project-* Outside MS4 areas, and total site disturbance one acre or greater;
    - A. New and associated impervious area less than or equal to 500 square feet; or,
    - B. New and associated impervious area greater than 500 square feet.
- b. *Documentation Required-* The above described Projects, Tiers 1, 2, and 3, require the following documentation to demonstrate that post construction stormwater will be managed to attain compliance with state water quality standards. Failure to provide the documentation described below removes the project from eligibility for certification under this 401 WQC.

- i. *Tier 1 Projects*- Require documentation from the MS4 Phase I/II municipality that post construction stormwater discharged from the project site will be accepted into the municipal system, or a statement from the applicant that a request has been submitted to the municipality to accept project stormwater. Projects may receive a conditional permit from the Corps which will become final only with proof of approval of stormwater acceptance by the Phase I/II municipality.
- ii. *Tier 2A and Tier 3A Projects*- The applicant must submit a post-construction *Stormwater Management Plan* (the applicant is referred to the DEQ *Stormwater Management Plan Submission Guidelines for Removal/Fill Permit Applications Which Involve Impervious Surfaces*). It is anticipated that stormwater plans for Tier 2A and Tier 3A projects will entail a short narrative paragraph and a rudimentary drawing which include the following elements or justification for those elements which may not be applicable:
  - (1) A site sketch or plan view drawing indicating the drainage flow directions, and discharge locations, contours or spot elevations (preferably both) showing direction of stream and surface flow and location and size of proposed facilities (e.g., parking lots, driveways, buildings, or roads) and nearest downstream waterbody, other physical features of the site, and the location and type of construction and post-construction BMPs;
  - (2) BMPs –
    - a. A description of proposed BMPs and a summary of their anticipated operation to insure adequate capacity, proper function, and appropriate design for the site such that quality, quantity, and seasonality of pre-construction hydrologic conditions are mimicked to the maximum extent practicable, based on stormwater anticipated to be generated due to project-related impervious surfaces and delivered to waters of the state. See local jurisdiction regulations and accepted stormwater manuals for detention and capacity requirements;
    - b. A BMP implementation schedule, operation and maintenance plan, and designation of a party or agency with documentation of their agreement for responsibility for post-construction BMP maintenance; and,
    - c. A plan for removal, recycling and disposal of temporary BMPs which are not intended for post-construction use; or in lieu of (2) a, b, & c,
    - d. Reference to implementation of a programmatic process developed to achieve these expectations, and acknowledged by DEQ as adequately addressing pollution control or reduction through basin-wide post-construction stormwater management practices.

- (3) If engineered structural BMPs are incorporated into the post construction stormwater management plan they must be prepared and stamped by an Oregon registered Professional Engineer (PE).
  - (4) The applicant must submit a copy of the *Stormwater Management Plan* to both the Corps and DEQ.
- iii. *Tier 2B & Tier 3B Projects*- It is anticipated that stormwater plan narrative and drawings for Tier 2B and Tier 3B projects will be more detailed and specific than stormwater plans for Tier 2A and Tier 3A projects. An initial, conceptual plan which describes intended stormwater management but lacks engineering or specifics, is acceptable for a complete application. Projects may receive a conditional permit from the Corps which will become final only with submittal and approval of the final plan which must include the following elements:
- (1) The applicant must submit a post-construction *Stormwater Management Plan* which includes all requirements stated in *Tier 2A & Tier 3A Projects* (1) through (4) above; additionally,
  - (2) The *Stormwater Management Plan* must contain calculations for the amount of stormwater generated from new impervious surfaces resulting from site construction using one of the DEQ-accepted Stormwater Manuals (see *Reference Section, attached*);
  - (3) The applicant must obtain an NPDES 1200-C or 1200-CA permit from DEQ or it's designated agent, if soil disturbance occurs over one acre or more during construction activities (including but not limited to clearing, grading, stockpiling, filling, earthwork, excavation, development, building, demolition, and other ground disturbing or denuding activities). See new application guidance for the NPDES General Storm Water Discharge Permits, 1200-CA for municipalities and 1200-C for others at:  
<http://www.deq.state.or.us/wq/wqpermit/StormWaterFeesTable.htm>
  - (4) The NPDES 1200-C or 1200-CA permit must be retained on-site during construction, and the applicant must follow all requirements in the permit.

### Reference Links

DEQ Guidance Document for Preparation of the NPDES Storm Water Pollution Control Plan 2004

[http://www.deq.state.or.us/nwr/SWPCP\\_Guidance\\_2004.pdf](http://www.deq.state.or.us/nwr/SWPCP_Guidance_2004.pdf)

DEQ Best Management Practices for Stormwater Discharges Associated with Industrial Activities 2001

<http://www.deq.state.or.us/nwr/Industrial%20BMPs.pdf>

*Section 401 Water Quality Certification for the RGP covering Nationwide categories suspended by implementation of the SPGP*  
Page 15

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DEQ Guidance Document for Preparation of the NPDES Storm Water Pollution Control Plan 1997

<http://www.deq.state.or.us/wq/wqpermit/SWGuidance.pdf>

DEQ Recommended Best Management Practices for Stormwater Discharge 1997

<http://www.deq.state.or.us/wq/wqpermit/StormWaterBMPs.pdf>

DEQ Stormwater Management Guidelines - Underground Injection Control (UIC) Program 1998

<http://www.deq.state.or.us/wq/groundwa/swmqmtguide.htm>

DEQ Erosion and Sediment Control Manual 2005 (during construction)

<http://www.deq.state.or.us/wq/wqpermit/ESCMannual.htm>

DEQ Biofilters: Guidance on Bioswales, Filter Strips, and Constructed Wetlands 2003

<http://www.deq.state.or.us/nwr/Biofilters.pdf>

\* Eastern Washington Manual Chapter 5

<http://www.ecy.wa.gov/pubs/0410076.pdf>

\* City of Portland Manual Chapter 2

<http://www.portlandonline.com/bes/index.cfm?c=35122>

\* Western Washington Manual Volume 5

<http://www.ecy.wa.gov/pubs/9915.pdf>

\* Clean Water Services Manual Appendix B & E

<ftp://ftp.cleanwaterservices.org/Web/ConstructionStandards/0409%20D&C%20Standards%20Manual.pdf>

\* King County Surface Water Design Manual

<http://dnr.metrokc.gov/wlr/dss/manual.htm>

Low Impact Development: Technical Guidance Manual for Puget Sound 2005

[http://www.psat.wa.gov/Publications/LID\\_tech\\_manual05/lid\\_index.htm](http://www.psat.wa.gov/Publications/LID_tech_manual05/lid_index.htm)

Guidelines and Resources for Implementing Soil Depth & Quality BMP T.5.13

WDOE Western Washington Stormwater Manual 2002

[http://compostwashington.org/PDF/SOIL\\_MANUAL.pdf](http://compostwashington.org/PDF/SOIL_MANUAL.pdf)

EPA Fact Sheets

<http://www.epa.gov/owm/mtb/mtbfact.htm>

EPA Urban Stormwater Best Management Practices Study Report

[http://www.epa.gov/waterscience/stormwater/usw\\_c.pdf](http://www.epa.gov/waterscience/stormwater/usw_c.pdf)

*Section 401 Water Quality Certification for the RGP covering Nationwide categories suspended by implementation of the SPGP*

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Stormwater Manager's Resource Center Manual - Design Examples  
<http://www.stormwatercenter.net/>

\* DEQ accepted post-construction stormwater management manuals

3. **Stormwater Conditions during authorized activities-** *The following conditions apply to all applicable projects authorized by the RGP:*
- a. The applicant must provide and implement a post-construction stormwater management plan consistent with the tiering strategy contained in Activity Specific Condition #2; and,
  - b. All impacts to wetlands must be mitigated, including those impacts resulting from implementing a BMP, consistent with OAR 141-085-0176.
4. **Stream and Wetland Restoration-**
- a. **Ineligibility-** Any project employing artificial grade controls or water regulation devices such as concrete structures, dams, stop logs, full spanning weirs, or similar devices intended to alter natural hydrology is not certified by this 401 WQC.
  - b. Heavy equipment working in wetlands must be placed on mats, or other measures shall be taken to minimize disturbance to fragile wetland soils and habitat.
  - c. Every effort must be made to conduct channel construction, restoration, and stabilization activities in the "dry", e.g. berms which isolate the area from flow-through must be left in place on both the upstream and downstream ends during earth moving and construction activities. All disturbed areas of the bed and banks of channel restoration projects should be stabilized with biodegradable geotextile material before re-watering the project. When the stream is delivered to the newly constructed section, the breaching sequence is downstream breach first, then upstream to help minimize erosion of disturbed soils.
5. **Utility Lines-**
- a. This WQC does not authorize the construction of substations or permanent access roads for utility lines in waters of the state including wetlands.
  - b. All stream crossings must be made perpendicular to the bankline, or nearly so, and at the narrowest, or least sensitive, portion of the wetland or riparian corridor.
  - c. Directionally bored stream crossings:
    - i. **Drilling Discharge-** All drilling equipment, drill recovery and recycling pits, and any waste or spoil produced, will be completely isolated, recovered, then recycled or disposed of to prevent entry into waters of the state. Recycling using a tank instead of drill recovery/recycling pits, is preferable;
    - ii. In the event that drilling fluids unavoidably enter a water of the state, the equipment operator must stop work, immediately initiate containment measures and report the spill to the Oregon

Colonel O'Donovan  
Page 18

- Emergency Response System at 800.452.0311. Prior to cleanup, plans must be submitted and approved by the regulatory agencies;
- iii. When drilling is completed, attempts will be made to remove the remaining drilling fluid from the sleeve (e.g., by pumping) to reduce turbidity when the sleeve is removed; and,
- iv. An adequate supply of materials needed to control erosion and/or to contain drilling fluids must be maintained at the project construction site.
- d. Utility lines through wetlands must first be fitted with trench plugs to avoid dewatering wetlands.
- e. See *Part A- General Condition 10* regarding site restoration.

**6. Piling Placement and Removal:** Avoid adverse effects to aquatic habitats during placement or removal of temporary or permanent piling.

- a. Immediately place removed piling onto an appropriate dry storage site.
- b. Attempt to remove the entire temporary or permanent piling.
- c. If chemically treated wood piles are to be removed using a vibratory hammer, ensure that holes are capped as the pile is removed in order to contain any undecomposed chemicals which have pooled beneath the substrate and may tend to escape upon extraction of the pile due to being less dense than the surrounding water.
- d. Ensure any treated wood piling to remain submerged is broken, cut, or pushed at least 3 feet below the sediment surface.
- e. Fill and cover holes left by each treated timber piling removed with clean, native substrates that match surrounding streambed materials.

**7. Site Preparation-** In addition to Stormwater Management, *Part b* above, the following conditions also apply:

- a. Project applications must be complete and account for total impacts at build-out regardless of construction phasing. Projects may not be phased to avoid exceeding threshold limitations of 0.5 acres of wetland impact or 1000 cubic yards of material removal or fill;
- b. Projects are ineligible for authorization under the RGP if individual lot impacts within full developments are not accounted for; and,
- c. Impacts to wetlands and waters of the state for a project are additive relative to the thresholds for eligibility.

**8. Water Control Structures-** See General Conditions.

If the applicant is dissatisfied with the conditions contained in this certification, you may request a hearing before the Environmental Quality Commission. Such request must be made in writing to the Director of DEQ within 20 days of the mailing of this certification.



**DEPARTMENT OF THE ARMY**  
CORPS OF ENGINEERS, PORTLAND DISTRICT  
EUGENE FIELD OFFICE  
1600 EXECUTIVE PARKWAY, SUITE 210  
EUGENE, OREGON 97401-2156

REPLY TO  
ATTENTION OF:

May 12, 2006

Operations Division  
Regulatory Branch  
Corps No. 200400737

Ms. Linda Sarnoff  
City of Florence  
250 Highway 101  
Florence, Oregon 97439-7628

Dear Ms. Sarnoff:

This letter responds to the April 25, 2006, modification request from the City of Florence's (City) consultant, Branch Engineering. On February 28, 2005, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), the City was authorized by the Secretary of the Army to construct a 101-foot long by 7-foot wide pier walkway with a 20-foot long by 26-foot wide viewing pier deck area over the Siuslaw River as part of the City's Scenic Byway Wayside Interpretive site, as described in the attached drawing (Enclosure 1). The project site is at Mile 4.3 in Florence, in Lane County, Oregon.

On January 24, 2006, the Corps modified the City's permit to extend the time limit to complete this work to February 15, 2007. On April 25, 2006, the Corps received a request from the City through their agent, Branch Engineering, Inc., to further modify the permit to allow a geo-technical boring to be completed along the bank of the river at low tide. During low tide, one drill rig will be positioned on the bank to obtain a ten to twelve-inch diameter subsurface boring to approximately 30 feet of depth. It is anticipated the auger hole will self-fill due to its inherent composition; however, if necessary, clean sand will be removed from an adjacent location above the high tide line and applied to the hole to restore the area to pre-construction contours. The work will be completed within one tide cycle. The request includes an extension of the preferred in-water work window to allow in-water work during May 2006.

The Corps' consultation with the National Marine Fisheries Service (NMFS) under the Section 305 of Magnuson-Stevens Fishery Conservation and Management Act concluded on February 14, 2005, with receipt of Conservation Recommendations from NMFS. The recommendations were made special conditions of the City's Letter of Permission. The Corps consulted with NMFS regarding the City's request for an extension of the in-water work window and the survey activities. The NMFS concurred, the project changes are consistent with their evaluation of the proposed action provided the project is completed in the manner described above.



This letter verifies that your project is authorized under the terms and limitations of Regional General Permit (RGP) Category B (Survey Activities) (Enclosure 2). Your activities must be conducted in accordance with the conditions found in the Portland District Regional Conditions (Enclosure 3), the 2002 Nationwide Permit and Replacement Regional General Permit General Conditions (Enclosure 4). You must also comply with the Conditions of the Oregon Department of Environmental Quality (DEQ) Certification (Enclosure 5), the Oregon Department of Land Conservation and Development (DLCD) Compliance Conditions (Enclosure 6), and the project specific conditions lettered (a) through (c) below. **Failure to comply with any of the listed conditions could result in the Corps initiating an enforcement action.**

a. You shall notify the Regulatory Branch with the date activities authorized in waters of the U.S. are scheduled to begin. Notification shall be sent by email to [cenwp.notify@usace.army.mil](mailto:cenwp.notify@usace.army.mil) or mailed to the following address:

U.S. Army Corps of Engineers  
CENWP-OD-GC  
Permit Compliance, Lane County  
P.O. Box 2946  
Portland, Oregon 97208-2946

The subject line of the message shall contain the name of the county in which the project is located followed by the Corps of Engineers permit number.

b. All in-water work shall occur within the in-water work window from **November 1 to February 15**. For the 2006 season, the in-water window is extended to allow drilling of a core sample from May 3 to May 30. Exceptions require written approval from the Corps.

c. Following completion of the boring, the drilling site will be restored to pre-construction contours. If necessary to adequately restore the site, clean sand will be removed from an adjacent upland area above the high tide line to fill the boring hole.

The Corps takes this opportunity to remind you that Special Condition 6.a. (1) of the City's Letter of Permission requires you to complete a survey for eel grass beds prior to any in-water work. The intent of this condition is to minimize the potential for adverse effects to an important aquatic resource. Based on recent phone conversations with your engineering consultant, Mr. Rene Fabricant, a survey will be completed in May and prior to beginning the geotechnical boring.

We direct your attention to the Portland District Regional Conditions (Enclosure 3) that requires the transfer of this permit if the property is sold, and General Condition No. 14 of the 2002 Nationwide Permit and Replacement Regional General Permit Conditions (Enclosure 4) that requires you to submit a signed certificate when the work is completed. A "Compliance Certification" is provided (Enclosure 7).

This authorization does not obviate the need to obtain other permits where required. Permits, such as those required from the Oregon Department of State Lands (ODSL) under Oregon's Removal /Fill Law, must also be obtained before work begins.

This verification is valid for a period of two years from the date of this letter unless the RGP expires, is modified, reissued, or revoked prior to that date. This RGP is scheduled to be modified, reissued, or revoked in January 2008. If you commence or are under contract to commence this activity before the date the RGP expires, is modified, or revoked, you will have 12 months from the date of the modification or revocation to complete the activity under the present terms and conditions of the current RGP.

If you have any questions regarding this RGP verification, please contact Ms. Michele E. Hanson at the letterhead address, by telephone at (541) 465-6878, or email [michele.e.hanson@usace.army.mil](mailto:michele.e.hanson@usace.army.mil).

Sincerely,

Judy L. Linton  
Acting Chief, Regulatory Branch

Enclosures

Copy Furnished:

Oregon Department of State Lands (Otsyula)  
Oregon Department of Environmental Quality (Cyril)  
Oregon Department of Land Conservation and Development (Bacchieri)  
Consultant (Branch Engineering, Inc. /Fabricant)

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**APPENDIX B**  
Site Photographs



PHOTO 1: Facing south across the project area along the east side at high tide. Existing path is approximate location of the proposed walkway.



PHOTO 2: Facing southwest at the approximate location of the proposed observation deck near low tide.



PHOTO 3: Facing northeast near southwest corner of project area. Tidal wetlands and upland vegetated area in foreground and Bay Street and storefronts in background.



PHOTO 4: Facing east looking across tidal wetlands from west side of project area. Waterfront Depot restaurant in background.



PHOTO 5: At southwest corner of project area facing north.



PHOTO 6: Metal debris along intertidal zone.



PHOTO 7: Algal beds around existing historic piles.



PHOTO 8: Facing west along the north side of the project area and Bay Street. Existing stormwater pipe across Bay Street discharges into dense upland vegetation on left.



PHOTO 9: Existing stormwater pipe outfall.



PHOTO 10: Dense upland vegetation at outfall. Vegetation includes native and non-native invasive species.



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**APPENDIX C**

Conceptual Plan

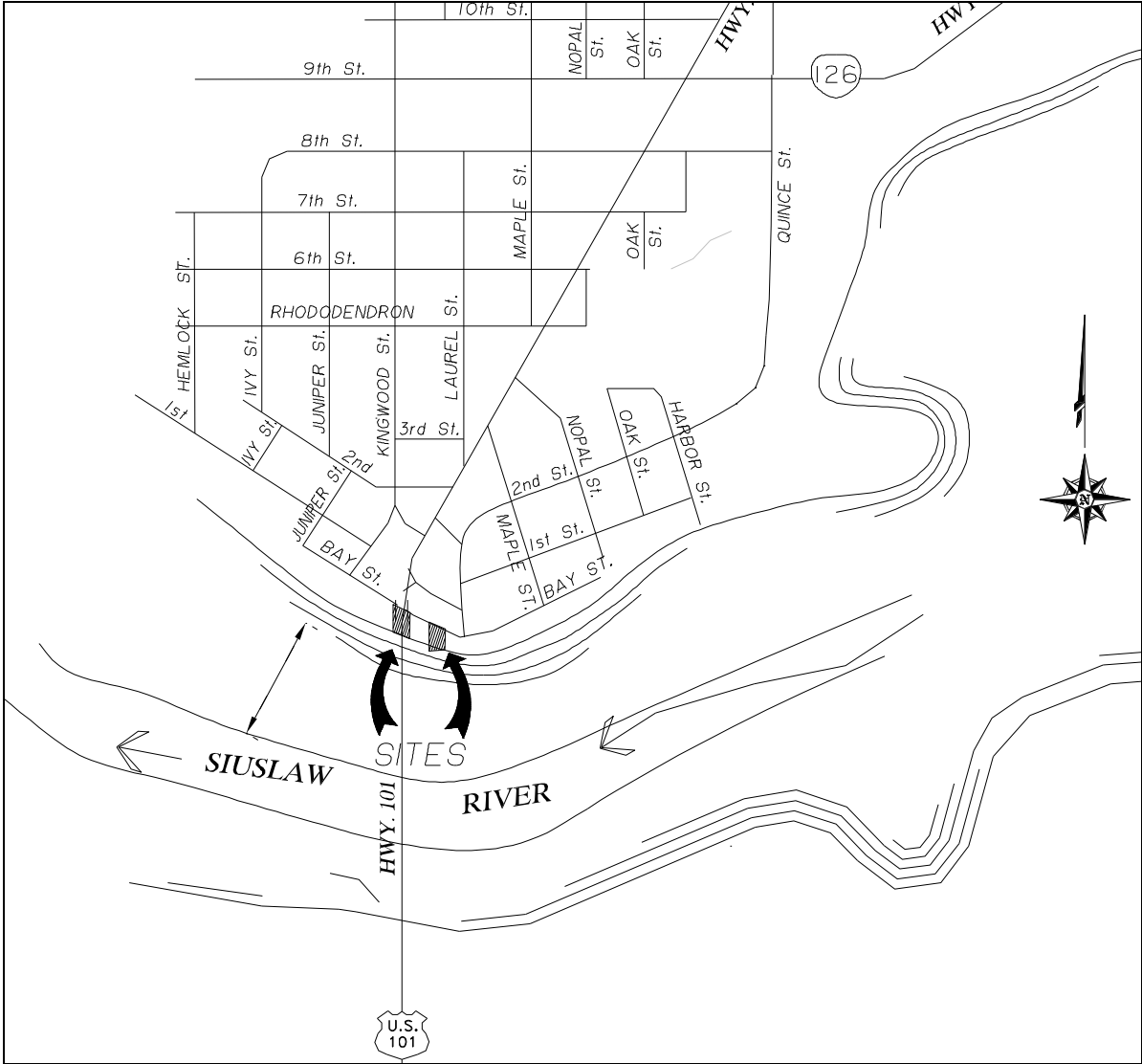
# SCOPE OF WORK: Siuslaw River Bridge Interpretive Wayside

September 16, 2008

## **PURPOSE:**

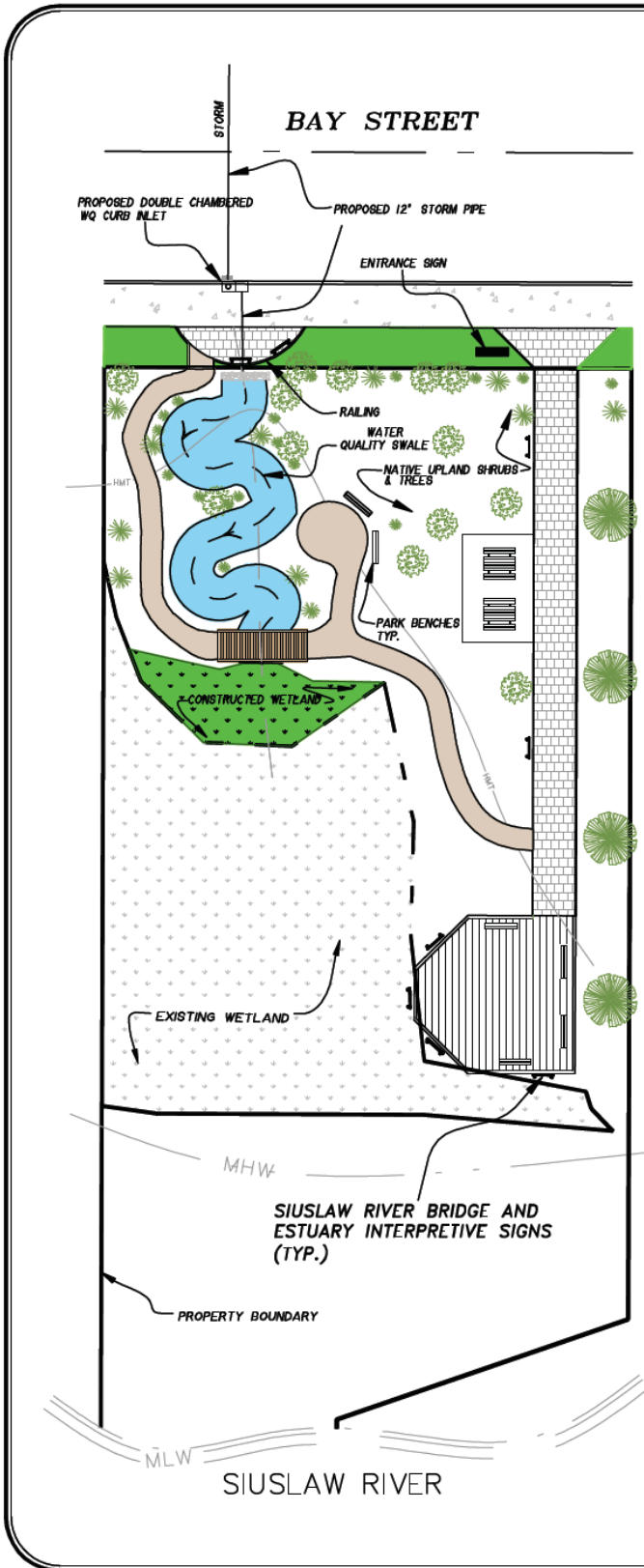
The Siuslaw River Bridge Interpretive Wayside will provide a scenic wayside for tourists, travelers, and residents to enjoy the scenic splendor of the historic Siuslaw River Bridge and surrounding area. The park will provide a viewing platform at a location excellent for observing and admiring the historic structure. The park will include interpretive signing to introduce visitors to the history of the bridge and surrounding area as well as highlight the ecological value of the estuary. A winding bark pathway will wind past existing tidal wetlands, through constructed wetland enhancements, past a stormwater treatment swale. Interpretive signing will introduce the visitor to stormwater in our built environments and demonstrate how efforts to improve stormwater quality can be both functional and attractive. A picnic area will provide travelers an attractive respite to enjoy a lunch before moving on.





Vicinity Map

**SIUSLAW RIVER BRIDGE  
INTERPRETIVE WAYSIDE  
CONCEPTUAL PLAN  
FLORENCE, OREGON  
APRIL 18, 2008**



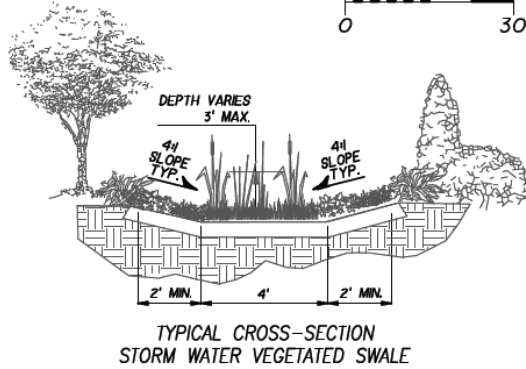
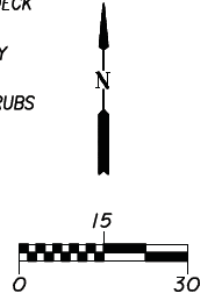
**LEGEND**

EXISTING CONDITIONS

- EXISTING WETLANDS
- HMT- HIGHEST MEASURED TIDE LINE APPROX EL. 7' NGVD (ACOE/DSL JURISDICTION LINE)
- MHW- MEAN HIGH WATER LINE
- MLW- MEAN LOW WATER LINE
- EXISTING DRAINAGE DITCH
- EXISTING CATCH BASIN

PROPOSED IMPROVEMENTS

- CONSTRUCTED WETLANDS
- INTERPRETIVE SIGN
- PICNIC BENCH
- FOOT BRIDGE
- BARK/GRAVEL INTERPRETIVE PATH
- STORMWATER TREATMENT SWALE
- OBSERVATION DECK
- PAVER WALKWAY
- PROPOSED SHRUBS



SHEET 1 OF 1  
PROJECT No. 01-001A



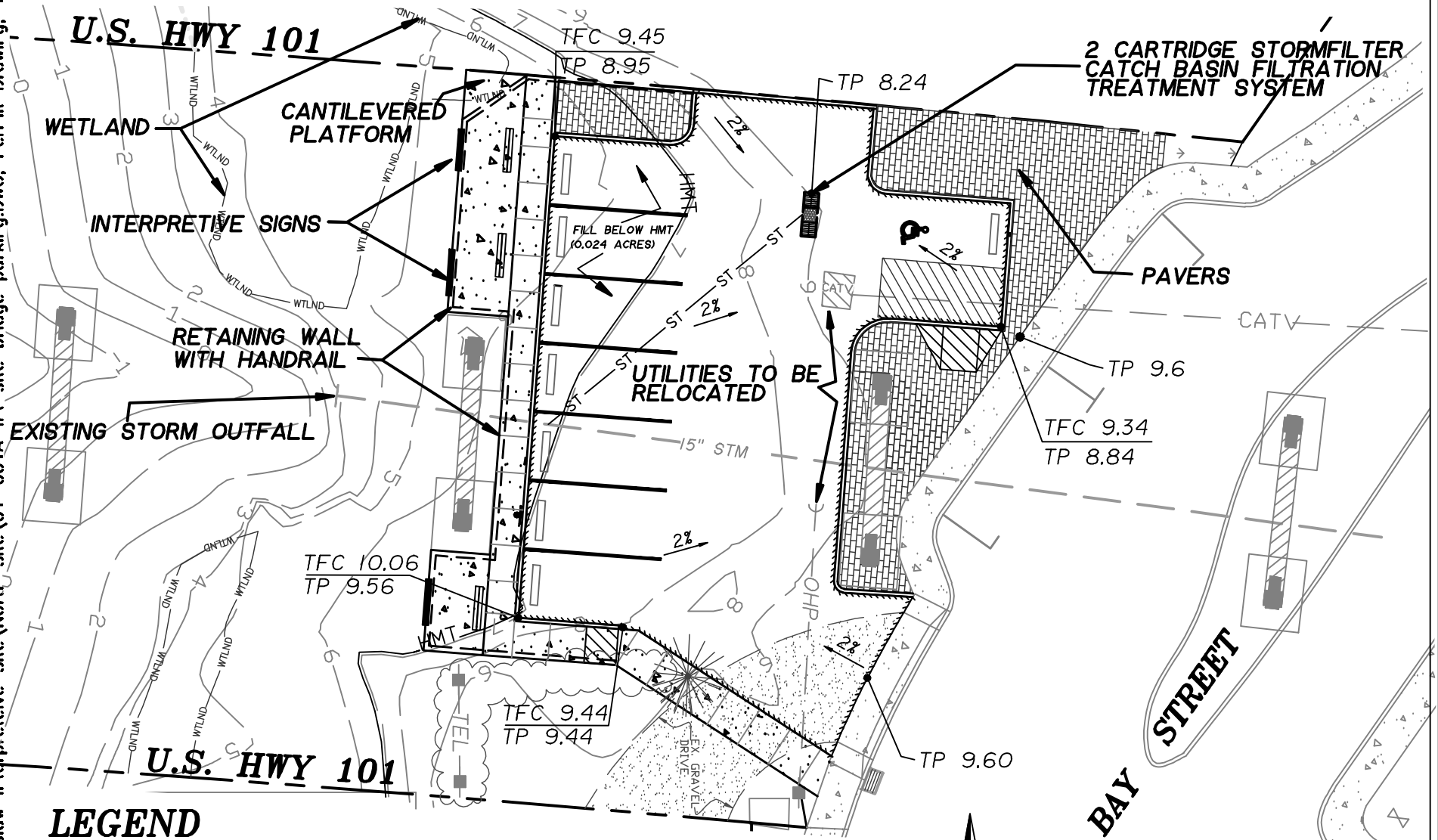
Branch Engineering, Inc.

In addition to the main overlook area, a small parking area will also be created under the bridge to serve the park and provide additional parking for those interested in visiting old town Florence. The area is currently overgrown with blackberries. The improvements will provide parking in addition to two small overlook areas for viewing the bridge. Benches will be provided at the overlooks and some interpretive signage will be provided at the overlooks. Some possible topics of the signage will be an explanation of construction of the Siuslaw river bridge and the nearby historical Cannery site.



# SIUSLAW RIVER BRIDGE INTERPRETIVE WAYSIDE: PARKING AREA CONCEPTUAL PLAN: OCTOBER 22, 2008

2001\01-001a Siuslaw Interpretive Site\North Site\01-001a-1\1 site bridge parking.DWG, Permit Drawing, 10/22/08



## LEGEND

- RIGHTS-OF-WAY
- EXISTING CURB
- 2- EXISTING CONTOUR
- HMT — HIGHEST MEASURED TIDE EL 6.91
- TFC 9.43 PROPOSED TOP FACE OF CURB
- TP 8.93 PROPOSED TOP OF PAVING
- BW 8.93 PROPOSED BACK OF SIDEWALK

- EXISTING SIDEWALK
- PROPOSED SIDEWALK
- PROPOSED INTERPRETIVE SIGN
- EXISTING CONCRETE BRIDGE PIER
- SIDEWALK RAMP
- RETAINING WALL



BENCHMARK: S198  
VERTICAL DATUM: NGVD29

**PERMIT DRAWING**

PG 1 OF 1



**Branch Engineering, Inc.**  
BRANCH PROJ. # 01-001A

## **JURISDICTIONAL WATERWAYS/WETLANDS:**

### **Interpretive Area**

Most of the site is lower than the Highest Measured Tide (HMT) and consequently is within the jurisdictional area of the Siuslaw River regulated by the Oregon Department of State Lands and Army Corp of Engineers. No work will be below Mean Low Water which would require a lease from the state of Oregon. No wetlands will be impacted and additional wetlands will be created with the project.

Interpretive signing will highlight the value of wetlands and illustrate how the wetland area was enhanced and enlarged. Much of the park will be constructed near the HMT and will be constructed appropriately in the event the tide inundates the area. The Walkway and Observation deck will be located above the HMT so visitors will always have safe access to the walkway and deck.



### **Parking Area**

To construct the parking area a retaining wall will be constructed and most of the site filled 1 to 3 feet. A portion of the site lies below Highest Measured Tide (HMT)

and will require permits from ACOE and DSL. The existing wetland will be impacted very slightly. The parking area will lie entirely above HMT so the parking area will stay out of tidal inundation and the stormwater filters will work properly.

### **LANDSCAPING:**

The park will utilize native plantings throughout the park. Interpretive signing will highlight the benefits of using native plants. Invasive species will be removed. It is expected that a number of shrubs and small trees would be appropriate for the site. No landscaping is planned for the parking area

### **STORMWATER TREATMENT:**

The old catch basins in Bay Street will be replaced with new water-quality double-chambered oil/water separating curb inlets. These will settle out some particulates and retain oil and grease runoff from the streets. The stormwater from these catch basins will outflow to a stormwater treatment swale. The outlet may be enhanced with an attractive rock and or concrete drop structure. The swale will meander for approximately 100 feet, a sufficient length to treat the stormwater. As the stormwater works its way through the channel thickly vegetated with native plant species, the sediment will settle out, bacteria and other pollutants will be filtered out, and the water will be cooled prior to being discharged to the wetland. An observation walkway will cross the swale so visitors can observe the cleansing process.

The stormwater runoff from the parking area will be treated using a 2 cartridge Stormfilter catch basin filtration system. This is a currently accepted BMP under DEQ guidelines. All runoff from newly created impervious area will be treated and discharged to the existing 15" storm pipe that runs through the site





## **DECK AND WALKWAY:**

The Deck and Walkway will be constructed out of plastic composite decking such as Trex decking and will be supported by concrete, metal, and/or cedar as necessary. No pressure treated wood will be used onsite.

## COST ESTIMATE: \$995,100

A breakdown of the project cost estimate is tabulated below.

### Schedule A: Construction Cost: Interpretive Area

<b>Item No.</b>	<b>Description</b>	<b>Estimated Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Price</b>
1	<b>Mobilization, Bonds and Insurance</b>	1	Lump Sum	\$13,700	\$13,700
2	<b>Project Funding Signboard</b>	1	Each	\$1,000.00	\$1,000
3	<b>Entrance Sign</b>	1	Each	\$2,000.00	\$2,000
4	<b>Temporary Traffic Control</b>	1	Lump Sum	\$1,500.00	\$1,500
5	<b>Double Chambered Curb Inlet</b>	2	Lineal Feet	\$2,500.00	\$5,000
6	<b>12" Storm Pipe( inc trenching . Backfill)</b>	65	Lineal Feet	\$65.00	\$4,225
7	<b>Asphalt Trench Patch</b>	3	Tons	\$200.00	\$600
8	<b>Stormwater Treatment Swale</b>	2000	square foot	\$3.50	\$7,000
9	<b>River Rock, Artistic Features</b>	1	Lump Sum	\$5,000.00	\$5,000
10	<b>Bark Material</b>	20	Cubic Yard	\$20.00	\$400
11	<b>Geotextile</b>	1000	square foot	\$0.15	\$150
12	<b>Earthwork (Clearing, grading, compaction)</b>	1	Lump Sum	\$3,000.00	\$3,000
13	<b>Brick Walkway</b>	950	Square Foot	\$8.00	\$7,600
14	<b>Observation Deck (inc railing)</b>	800	square foot	\$55.00	\$44,000
15	<b>Wetland Planting</b>	475	Square Foot	\$2.00	\$950
16	<b>Interpretive Signs</b>	10	Each	\$1,500.00	\$15,000
17	<b>Picnic Tables</b>	2	Lump Sum	\$1,500.00	\$3,000
18	<b>Benches</b>	4	Lump Sum	\$1,000.00	\$4,000
19	<b>Boardwalk</b>	100	square foot	\$26.00	\$2,600
20	<b>Landscaping</b>	1	Lump Sum	\$10,000.00	\$10,000
21	<b>Erosion Control</b>	1	Lump Sum	\$2,500.00	\$2,500
22	<b>Restoration and Cleanup</b>	1	Lump Sum	\$2,000.00	\$2,000
<b>Schedule A Construction Cost Total</b>					<b>\$135,225</b>

**Schedule B: Construction Cost: Parking Area**

<b>Item No.</b>	<b>Description</b>	<b>Estimated Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Price</b>
1	Mobilization, Bonds and Insurance	1	Lump Sum	\$14,250	\$14,250
2	Project Funding Signboard	1	Each	\$1,000.00	\$1,000
3	Entrance Sign	1	Each	\$2,000.00	\$2,000
4	Temporary Traffic Control	1	Lump Sum	\$5,000.00	\$5,000
5	Stormfilter	1	Lineal Feet	\$15,000.00	\$15,000
6	8" Storm Pipe( inc trenching . Backfill)	50	Lineal Feet	\$20.00	\$1,000
7	Asphalt Paving	70	Tons	\$150.00	\$10,500
8	Earthwork (Clearing, grading, fill)	225	Cubic Yard	\$15.00	\$3,375
9	Pavers	1075	Square Foot	\$10.00	\$10,750
10	Retaining Wall	150	Lineal Feet	\$180.00	\$27,000
11	Railing	150	Lineal Feet	\$100.00	\$15,000
12	Concrete sidewalk	1000	Square Foot	\$7.50	\$7,500
13	Benches	3	each	\$1,500.00	\$4,500
14	Erosion Control	1	Lump Sum	\$1,500.00	\$1,500
15	Striping	1	Lump Sum	\$750.00	\$750
16	Curb	245	Lineal Feet	\$10.00	\$2,450
17	Utility Relocation	1	Lump Sum	\$15,000.00	\$15,000
18	Interpretive Sign	3	Each	\$1,500.00	\$4,500
19	Restoration and Cleanup	1	Lump Sum	\$1,500.00	\$1,500
<b>Schedule B Construction Cost Total</b>					<b>\$142,575</b>

**Schedule C: Right of Way Cost**

<b>Item No.</b>	<b>Description</b>	<b>Estimated Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Price</b>
1	Land acquisition: including acquisition fees	1	Lump Sum	\$490,000.00	\$490,000
<b>Schedule B: Total</b>					<b>\$490,000</b>

**Schedule D: Environmental and Permitting Costs**

<b>Item No.</b>	<b>Description</b>	<b>Estimated Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Price</b>
1	<i>Biological Assessment/Wetland Delineation</i>	1	Lump Sum	\$5,000.00	\$5,000
2	<i>Phase 1 Investigation</i>	1	Lump Sum	\$2,000.00	\$2,000
3	<i>Archaeological Survey</i>	1	Lump Sum	\$3,000.00	\$3,000
4	<i>Stormwater Management Plan</i>	1	Lump Sum	\$6,000.00	\$6,000
5	<i>Historical Survey</i>	1	Lump Sum	\$3,000.00	\$3,000
6	<i>Joint Permit Application preparation/administration</i>	1	Lump Sum	\$12,000.00	\$12,000
<b>Schedule C: Total</b>					<b>\$31,000</b>

**Schedule E: Design and Construction Engineering**

<b>Item No.</b>	<b>Description</b>	<b>Estimated Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Price</b>
1	<i>Preliminary Design Engineering</i>	1	Lump Sum	\$10,000.00	\$10,000
2	<i>Final Design Engineering</i>	1	Lump Sum	\$14,000.00	\$14,000
3	<i>Contract Documents and Specifications</i>	1	Lump Sum	\$6,000.00	\$6,000
4	<i>Contract Administration and Construction Engineering</i>	1	Lump Sum	\$6,050.00	\$6,050
<b>Schedule D Engineering</b>					<b>\$36,050</b>

**Schedule F: Total Cost**

<i>Total All Schedules</i>	<b>\$834,850</b>
<i>Contingency (15%)</i>	\$125,228
<b>Total Cost</b>	<b>\$960,088</b>

**PROJECT FUNDING**

The estimated project cost of \$960,088 is planned to be funded with \$305,420 of Federal Scenic Byways Program discretionary funds and \$250,676 of Federal STP Funds. The city has committed an additional \$206,496 of state Exchange Funds to this project. An additional \$32,170 of Oregon State Highway Funds has been contributed to this project. The balance of the project costs are planned to be funded

with Urban Renewal Funds in the amount of \$85,238 and Stormwater Funds in the amount of \$80,000.

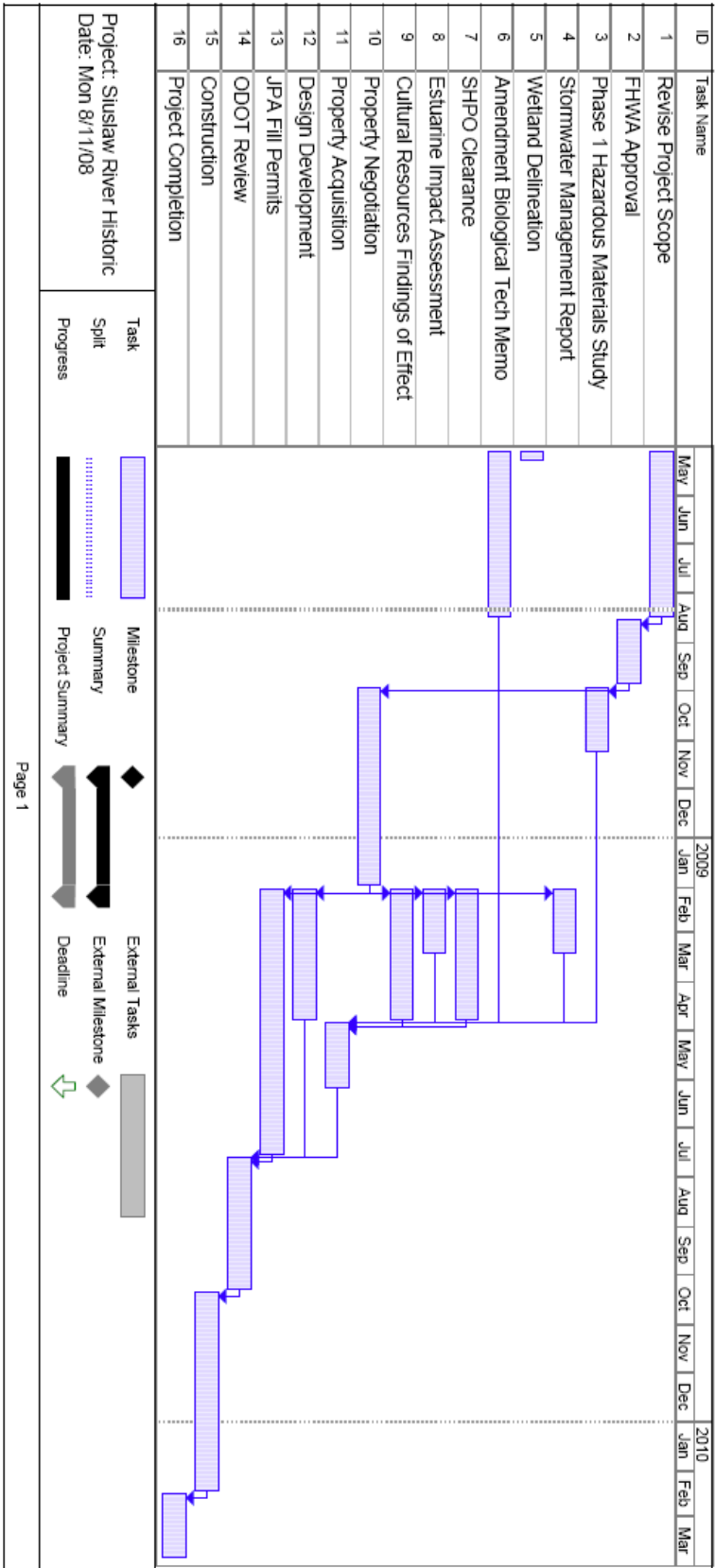
The property acquisition is likely to consume most of the federal STP and state highway funding committed to this project along with 20 percent of the remaining Scenic Byways Funds and two-thirds of the city's available State Fund Exchange dollars. The remaining Scenic Byways Funds should paritally fund the estimated construction costs. The remaining costs to complete the project are planned to be funded with revenue bonds supported by the Florence Urban Renewal District and City Stormwater Funds and as a last resort funding choice are allocated to the project contingency and construction cost at this time.

***Project Right of Way and Construction Funding Sources***

	<b>ROW,</b>	<b>Construction, Eng., environ/permitting, Cont.</b>	<b>Current Balance</b>
Fund Exchange Funds	\$171,496	\$35,000	\$206,496
Federal Scenic Byway Funds	\$62,370	\$243,050	\$305,420
State Fund Contribution	\$32,170		\$32,170
Federal STP Funds 2007	\$76,255		\$76,255
Federal STP Funds 2008	\$89,421		\$89,421
Federal STP Funds 2009 (est)	\$58,200	\$26,800	\$85,000
Florence Urban Renewal Agency		\$85,238	\$85,238
Florence Stormwater Funds		\$80,000	\$80,000
<b>Totals:</b>	<b>\$490,000</b>	<b>\$470,088</b>	<b>\$960,088</b>

**TIME SCHEDULE**

The project is planned for construction during the in water work period for the Siuslaw River between November 15, 2009 and February 15, 2010. A more detailed project schedule is included in the following Gantt Chart. Project completion and final close out is anticipated in the spring of 2010.



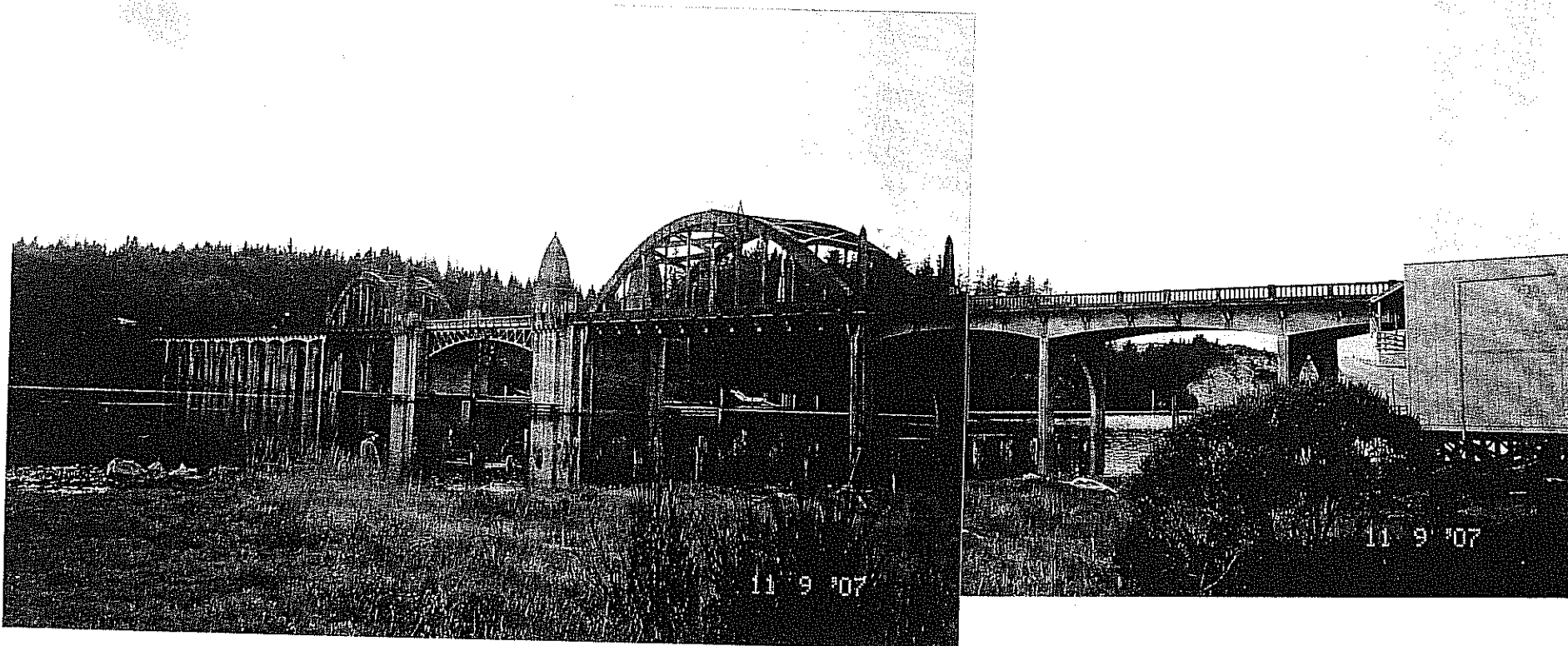
**APPENDIX D**

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Wetland Delineation Report for Interpretive Wayside Site

**WETLAND INVESTIGATION & DELINEATION REPORT  
FOR  
CITY OF FLORENCE**

**BARNETT FAMILY BAY STREET PROPERTY  
18-12-34-1-4. TL 101, 107 & 700**



**Prepared by: Wilbur E. & Matthew J. TERNYIK  
Wetland, Beaches & Dunes Consultants**

**Surveyed by: Wobbe & Associates**



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**WETLAND INVESTIGATION & DELINEATION REPORT**

**BARNETT FAMILY BAY STREET PROPERTY**

**18-12-34-1-4, TL 101, 107, & 700**

**FLORENCE, LANE COUNTY, OREGON**

---

**Prepared for: City of Florence  
250 Highway 101  
Florence, Oregon 97439**

**Prepared by: Wetland Consultants  
Wilbur E. & Matthew J. TERNYK  
P.O. Box 1190  
Florence, Oregon 97439**

**Surveying by: Wobbe & Associates  
Gene Wobbe  
P.O. Box 3093  
Florence, Oregon 97439**

**November 2007**

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4.0 Wetland Delineation Methods.....	4-5
4.1 Wetland Delineation Results.....	5
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### Sections:

- Site Information
- Rainfall Record
- Field Data Sheet
- Photos
- Maps:
  - Location Map
  - Tax Lot Map
  - Local Wetland Inventory Map
  - County soil survey Map
  - Wetland Delineation Map

## **1.0 INTRODUCTION**

This jurisdictional investigation and delineation report was conducted at the request of the City of Florence. The Barnetts, owners of the property, gave permission to conduct the study on their property. The purpose being to delineate all jurisdictional wetlands and Waters of the United States and Oregon under the Army Corps of Engineers 1987 Wetland Delineation Manual Guidelines. This delineation report information will be used first in negotiations between the City of Florence and the owners for possible purchase. Later by the City of Florence, if they gain possession, to plan for a U.S Highway 101 Bridge View Park in cooperation with Oregon Department of Transportation.

## **2.0 SITE LOCATION**

As shown on the location map this site is located on the south side of Bay Street. It currently is a vacant parcel with no improvements. As the delineation map and Lane County Tax Lot Map illustrate it runs south from Bay Street into the tidal area of Lower Siuslaw River. Driving south on U.S. Highway 101 you turn left at the U.S. Highway Bridge, then turn right for one block, right again and it is located just west of the Waterfront Depot. On the west is a vacant lot next to the Siuslaw Coffee Roasters. Legal Description is as follows, 18-12-34-1-4, Tax Lots 101, 107 & 700, Longitude 124°06'30", Latitude 43°58 '00".

## **2.1 HISTORIC SITE INFORMATION**

This site in historic times, several decades, was a portion of early Florence City Hall. Behind this building was Kyle Brothers Warehouses on pilings over the river. To the east was another long warehouse extending out into the river, then a historic building used as a sporting goods store that burned down. Beyond that to the east were the original Florence Hotel and the Ferry slip used before the Highway 101 Bridge was built. Evidence of prior uses exists on the site today. Note the heavy iron equipment debris and historic pilings.

### **3.0 CURRENT SITE CONDITIONS**

The site is currently in an unimproved condition with all historic buildings removed several decades ago. As shown in the photo section the site is mainly flat from the Bay Street sidewalk to the Mean High Water line (MHW) and then slopes south into the Siuslaw River. The site offers an unobstructed view of the east side of the famous McCulloch designed U.S. Highway 101 Bridge.

The parcel consisting of three tax lots total 0.45 of an acre in size. The entire property was used as the study area for this delineation project. There currently is a City of Florence Bay Street drainage basin and pipe discharging untreated stormwater directly onto the property 27 feet east of the northwest corner boundary stake. This water then flows through the upland portion where it discharges into the salt marsh.

### **3.1 TOPOGRAPHY**

With the exception of the delineated upland portion the wetland area is basically a flat high salt marsh to a raised riverbank just before you reach the river. The only remnants of former manmade improvements are the deteriorated pilings shown in the photo section.

### **3.2 HYDROLOGY**

Hydrology source to this site comes from two natural inputs and one manmade source.

- 1) The entire site is subject to seasonal annual rainfall with no tidal influence on the upland portion.
- 2) The manmade Bay Street catch basin and direct pipe and outlet under the sidewalk (no treatment or trash screen) water flows directly into upland portion and then into the high marsh wetland.
- 3) Tidal hydrology only in extreme high tides, freshwater or ocean wave surge. No actual river flow or tidal erosion at this time.

### **3.3 Soils**

Soils are mapped by U.S. Department of Agriculture, Natural Resource Conservation Service (USDA) September 1989, see Soil Survey of Lane County Area, Oregon, page 144.

#### **Waldport-Urban land complex, 0 to 12 % slopes (Map Unit 133C)**

##### **Inclusions: Netarts fine sand and Yaquina loamy fine sand**

Urban land consist of areas where the soils are largely covered by concrete, asphalt, buildings, or other impervious surfaces that obscure or alter the soils so that identification is not feasible. Included in this unit are small areas of Netarts and Yaquina soils.

Included areas make up about 10 percent of the total acreage.

### **3.4 VEGETATION**

The following mixture of plant species exist within the study area site.

#### **Shrubs**

	<b>Indicator Status</b>
Cascara ( <i>Rhamnus purshiana</i> )	FAC-
Coyote brush ( <i>Baccharis pilularis</i> )	UPL
Cutleaf blackberry ( <i>Rubus laciniatus</i> )	FACU+

#### **Herbs, Forbs, and Grasses**

Baltic rush ( <i>Juncus balticus</i> )	FACW+
Canadian thistle ( <i>Cirsium arvense</i> )	FACU+
Fat-hen saltbrush ( <i>Atriplex patula</i> )	FACW
Tall fescue ( <i>Festuca arundinacea</i> )	FAC-
Pacific silverweed ( <i>Potentilla pacifica</i> )	OBL
Pickleweed ( <i>Salicornia pacifica</i> )	OBL
Seashore saltgrass ( <i>Distichlis spicata</i> )	FAC+
Sweet vernalgrass ( <i>Anthoxanthum odoratum</i> )	FACU
Sword fern ( <i>Polystichum munitum</i> )	FACU

#### **Noxious or Invasive Species**

Blackberry ( <i>Rubus laciniatus</i> )
Ice plant <i>Caypobrotus edulis</i> )
Scotch broom ( <i>Cytisus scoparius</i> )

### **3.5 RARE OR ENDANGERED SPECIES**

The Siuslaw River is a Class 1 Salmon stream with runs of both Coho and Chinook.

Other than that there are no rare or endangered species are listed in the vicinity. There will be no obstruction to fish passage or impact of the delineated tidal wetlands.

### **3.6 CULTURAL RESOURCES**

Due to the total change of this site my early man there is no evidence of early native Indian use of the site. Arrow Coyote of the Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians has been on the site with no objections. Her letter is forthcoming.

### **4.0 WETLAND DELINEATION METHODS USED**

The entire investigation was conducted according to required format contained in the Corps of Engineers (COE) Manual for Identification of Delineation of Jurisdictional Wetlands (1987). Vegetation is classified according to the National List of Plant Species that occur in wetlands, NW (Region 9), U.S. Fish & Wildlife Service/Biological Report 88 and 1993 Supplement. Soil moisture content, matrix color and the presence of mottle and/or gleying were recorded. Soil hue, value, and chroma were determined using the Munsel Soil Color Chart.

When conducting the routine onsite determination of a wetland, the first action taken is the collection of published data (National Wetland Inventory, NRCS County Soil Survey, and Precipitation Records) and a topographic map of the site if possible. After review of the data a reconnaissance of the site is done, paying close attention to inventory wetland locations, drainages, depressions, and hydrophytic vegetated areas. Upon location of possible wetland areas they are flagged with orange Wetland Boundary tape.

When the reconnaissance is finished these possible wetland areas are then investigated further by use of paired plots and the three-way test (hydrophytic plants, hydric soils and hydrology). The wetland boundaries may be adjusted based on the results of the data collected. Some wetlands investigated may be used as a representative wetland for other wetlands with similar characteristics in the area. Some observation points are located in

certain areas to show conditions and reason for separation of wetlands. All information was recorded on onsite data sheets.

#### **4.1 WETLAND DELINEATION RESULTS**

Within the field investigation of the wetland boundary, surveyed by Gene Wobbe we identified a total of 0.10 of an acre of jurisdictional tidal wetlands. This wetland area is part of a larger similar classification wetland to the west, also a private parcel. The following wetland classifications are Cowardin E2EMI and HGM of EFR. Upland area size is 0.25 of an acre, with river tidally influenced being 0.10 of an acre making a total study area amount 0.35 of an acre.

#### **4.2 FINAL CONCLUSIONS & RECOMMENDATIONS**

Due to identified high marsh wetland portion adjacent to the Siuslaw River lower estuary we recommend long term protection; possibly in conjunction with the adjoining property owners to the west. The quality of the city owned drainage pipe from Bay Street in the center of the parcel may be a legal problem. There is a significant flow of untreated water from Bay Street entering the high salt marsh area. Large pieces of buried iron should be removed from the wetland areas.

#### **5.0 CONSULTANT DISCLAIMER**

We believe the services performed for this study site investigation were conducted with the level of care and skill ordinarily exercised in our area of expertise. The data presented in this report is believed to be representative of conditions at the site. The conclusions are professional opinions in accordance with current standards of professional practice and no warranty is expressed or implied.

#### **5.1 DSL CONCURRENCE DECISION STATEMENT**

This report documents the investigation, best professional judgment and conclusions of the investigator. It is correct and complete to the best of my knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and

used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.



## REFERENCES:

Environmental Laboratory, 1987, *Corps of Engineers Wetlands Delineation Manual*, Technical Report & 87-1, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS

Federal Interagency Committee for Wetland Delineation, 1989, *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish & Wildlife Service, and U.S.D.A. Soil Conservation Service, Washington, D.C. Cooperative technical publication 238pp.

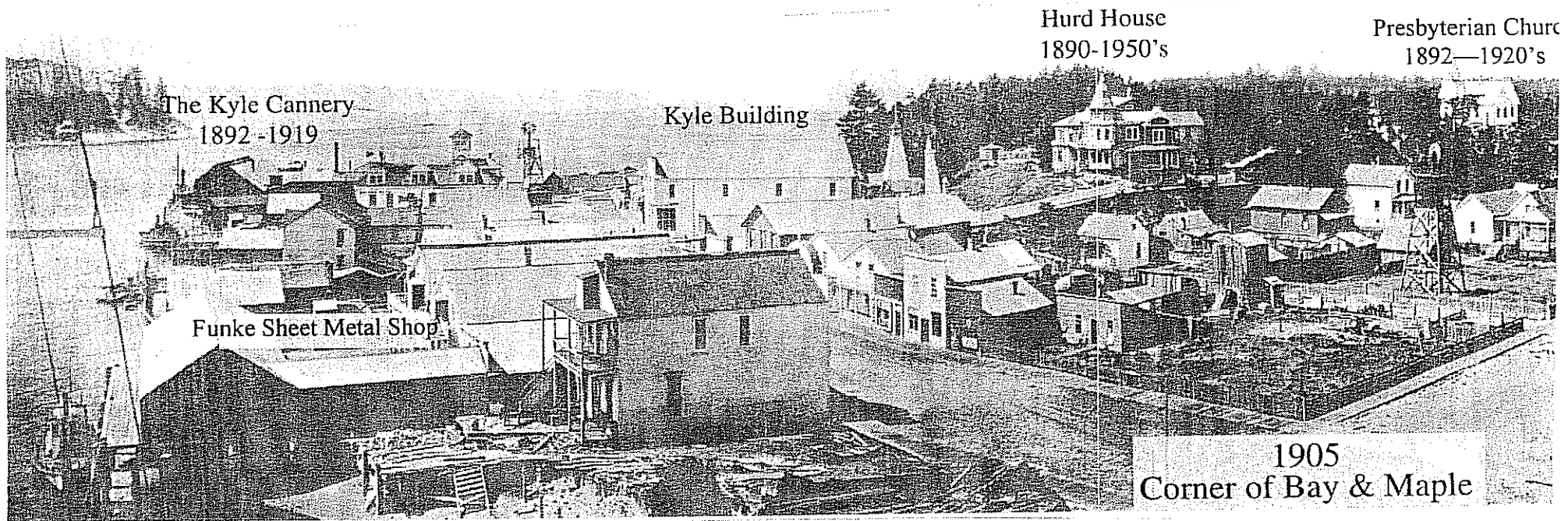
Kollmorgan Corporation, 1994 Edition, *Munsel Soil Color Charts*. Macbeth Division of Kollmorgan Instruments Corporation, Newburgh, NY

Reed, P.B. 1988 *National List of Plant Species that Occur in Wetlands: Northwest (Region 9)*, U.S. Fish and Wildlife Service, Biological Report 88 (26.9) 89 pp.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) *Soil Survey of Lane County Area, Oregon (1989)*, Washington D.C.

Florence Local Wetlands Inventory (1996), Pacific Habitat Services, Inc.

Oregon National Heritage Information Center, Portland, Oregon (List of ESA noted within the vicinity of the site)



The Kyle Cannery  
1892-1919

Kyle Building

Hurd House  
1890-1950's

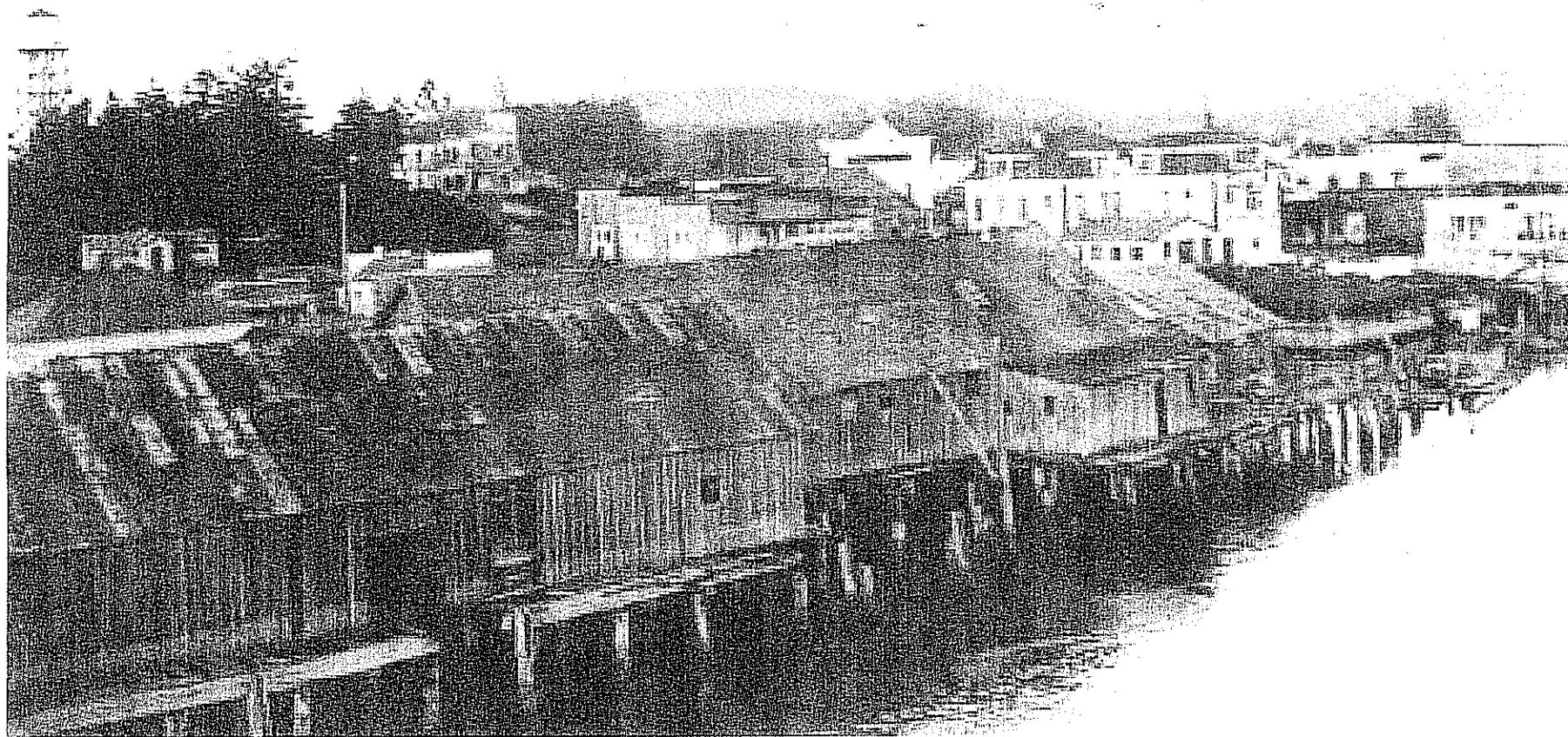
Presbyterian Church  
1892—1920's

Funke Sheet Metal Shop

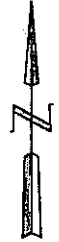
1905  
Corner of Bay & Maple

Historic Photo of Bay Street in Florence, Oregon

1927



**AERIAL MAP - 2005**  
**FLORENCE, LANE COUNTY, OREGON**



BARNETT FAMILY  
PROPERTIES

N.E. 1/4, SEC. 34, T18S, R12W, W.M.

TL'S #101, #107, #700

FLORENCE, LANE COUNTY, OREGON

TITLE 10  
CHAPTER 17

OLD TOWN DISTRICT

SECTION

- 10-17-1 Purpose
- 10-17-2 Permitted Buildings and Uses
- 10-17-3 Buildings and Uses Permitted Conditionally
- 10-17-4 Lot and Yard Provisions
- 10-17-5 Site and Development Provisions
- 10-17-1 Purpose: The Old Town District is intended to provide an area for small-scale, pedestrian oriented, mixed land uses that are appropriate in an area related to, or along a waterfront, and that are consistent with the character of Old Town. It is also intended to encourage restoration, revitalization and preservation of the District.
- 10-17-2 Permitted Buildings and Uses
- a. auction sales located entirely within a structure
  - b. auditoriums
  - c. banks
  - d. barber and beauty shops
  - e. bed and breakfast establishments
  - f. boat and motor sales, rental and repair
  - g. building maintenance service
  - h. catering service
  - i. clubs, lodges and meeting halls
  - j. eating and drinking establishments (except drive-in)
  - k. community centers
  - l. confectionary/ice cream with or without fountain
  - m. day care
  - n. health studios
  - o. interior decorators studios
  - p. laundries, laundry services and dry cleaners
  - q. locksmith shop
  - r. marinas
  - s. mortuaries
  - t. theaters and movie theaters
  - u. museums and art galleries
  - v. newspaper offices
  - w. newsstands
  - x. non-motorized river-related recreation businesses
  - y. offices for the following:
    - accountants
    - attorneys
    - licensed health care practitioner
    - engineers, architects, landscape architects, surveyors and those engaged in the practice of drafting or graphics
    - general administration
  - z. parking areas, public or private
  - aa. parking garages, public or private
  - bb. parks
  - cc. photography and artist studios
  - dd. planned unit development
  - ee. public buildings and facilities similar to other permitted uses such as offices, auditoria, meeting halls, community centers, museums and galleries, etc.
  - ff. Residential units as defined below:

In Area A shown on the map on the following page, residential units are a permitted use, provided that a dwelling does not occupy the front 25' of a building's ground floor facing the principal commercial street, except that one 6' wide (or as required by ADA) separate entrance to the residential use may be allowed off the principal commercial street at the ground floor. Existing residences remain grandfathered until such time as a conversion is made to commercial use.

In the remaining area of the Old Town District, residential units except for single family dwellings are permitted subject to remaining requirements of the District. Existing residences are grandfathered.

FCC 10-8 provides for expansion of up to 25% for a pre-existing, non-conforming use. In the event of damage or destruction of a non-conforming building or use, the structure may be restored to the use which existed at the time of the damage or destruction. Any restoration must conform to the Uniform Building Code. Such restoration must commence within 6 months of the damage or destruction and continue to completion. The Planning Commission may grant a 6 months extension to this time period.

- gg. retail sales located primarily within buildings
- hh. schools, public or private
- ii. shoe repair shops
- jj. tailor shops
- kk. telephone, telegraph and internet services
- ll. travel agencies
- mm. upholstery: automobile, boat and furniture
- nn. wharves, piers and docks
- oo. wholesale seafood buyers
- pp. woodworking shops, provided that all activities are carried on within a building or buildings
- qq. accessory buildings and uses normal and incidental to the buildings and uses permitted in this section
- rr. other buildings and uses determined to be similar to those listed in this section, and which do not have a different or more detrimental effect upon adjoining areas than those buildings and uses specifically permitted.

10-17-3 Buildings and Uses Permitted Conditionally  
The Planning Commission, subject to the procedures and conditions set forth in Chapter 4 of this Title, may grant a conditional use permit for the following:

- a. Churches, except rescue missions or temporary revivals
- b. Condominiums
- c. Hotels, motels
- d. Motorized river-related recreation businesses
- e. Multiple family dwellings including townhouses, clusters and apartments
- f. Public buildings and facilities not included as permitted uses
- g. Single family residences
- h. Taxi stands, depots
- i. Water dependent and water related uses consistent with the historic and/or waterfront character

10-17-4 Lot and Yard Provisions

- A. Lot area: The lot area shall be a minimum of 1500 square feet.
- B. Lot dimensions: The minimum lot width shall be 25'.
- C. Lot coverage: The Design Review Board may allow up to ninety percent (90%) lot coverage by buildings and other impervious surfaces.
- D. Yard regulations:
  - a. For Area A shown on the map on the following page, yards shall be as follows:
    - Front yards: Building fronts may vary from 0' to 10' setback from the front property line. Ten percent (10%) of the frontage, or a minimum of 6', may be utilized for

pedestrian walkways connecting to interior parking lots or for river viewing areas. Upper story windows, balconies, benches and tables may encroach into the sidewalk area as long as a minimum 8' wide pedestrian way is maintained within the sidewalk area.

- Side yards: Buildings may be zero lot line, provided that all UBC requirements are met. In each block, there will be at least one opening for public access to interior parking lots and/or to new or existing public viewing areas of the Siuslaw River.

- Rear Yards: On all lots except for single family dwellings, rear yards may vary from zero lot line to 10' depending on site specific conditions such as surrounding uses, rear yards on surrounding lots, rear yard amenities proposed, connection to interior parking lots and landscaping requirements.

b. For all other yards in the Old Town District, the following shall apply:

- Front yards may vary from 0' – 15', depending on site specific conditions such as front yards on surrounding uses, distance from Bay Street, proposed use relative to the need to be closer to the sidewalk for pedestrian convenience, and building height and design.

- Side yards may vary from 0' – 10' depending on site specific conditions such as surrounding uses, side yards on surrounding uses, the proposed use, the need for pedestrian and/or vehicular access to interior parking lots, need to provide for views, or to provide for or preserve landscaping or mature trees.

- Rear yards: On all lots except for single family dwellings, rear yards may vary from 0' – 10' depending on site specific conditions such as surrounding uses, rear yards on surrounding lots, rear yard amenities proposed, connection to interior parking lots, landscaping requirements, including need to preserve landscaping or mature trees. For single family dwellings, rear yards shall be a minimum of 10'.

10-17-5

#### Site and Development Provisions

A. Building or Structural Height Limitations: The maximum height for buildings abutting the bay side of Bay Street between Nopal Street and the Siuslaw River Bridge shall be 2 stories or 28'. The maximum height for all other buildings in the District shall be 3 stories or 38'. The building facade and roofline shall be designed to provide architectural interest and avoid façades that propose large expanses of straight planes with little or no architectural relief, or inclusion of architectural features which are not in character with Old Town.

The Planning Commission/Design Review Board may allow building heights of up to 4 stories or 50' in any area in the District except for properties abutting either side of Bay Street between Nopal Street and the Siuslaw River Bridge provided that:

- a. The building has an approved fire extinguishing system
- b. The building is in scale with and/or complements surrounding structures
- c. The building will contain mixed uses with retail at the street level.
- d. The building facade and roof line are designed to provide architectural interest and avoid a façade which proposes large expanses of straight planes with little or no architectural relief, or inclusion of architectural features which are not in character with Old Town.
- e. The site has physical constraints/opportunities which are best addressed by a taller building.

B. Access: ADA approved access must be provided to all floors of buildings and structures as required by the UBC.

C. Parking and Loading Spaces: Parking spaces may be located on-street in front of the front yard of the lot, and/or may be located in an interior parking lot within the block or in an off-site lot. Parking may not be located in any front yard. Parking for residential units may be specifically designated within any parking area. Site specific, individual parking areas or lots will not be approved unless no other alternative exists. The number of parking spaces as provided in Chapter 3, Title 10 shall be used as a guideline when determining parking needs. The Planning Commission may grant parking under a temporary arrangement if an interior or off-site parking lot is planned and approved, but not yet constructed, and/or may require a non-remonstrance agreement where applicable.

Bike racks shall be located either in the interior parking lot or by an entrance. Bike racks may not be located in the required 8' minimum pedestrian walkway.

D. Vision Clearance: All development shall comply with Sections 10-1-4 and 10-2-4 of this title.

E. Signs: Where a building abuts the sidewalk, only awning, projecting, window and wall signs are permitted. Size and placement shall conform to the standards of the Sign Code, Section 10-26 of the City Code. Signs may not be internally illuminated. Use of readerboard signs is subject to approval as part of Design Review.

F. Fences, Hedges, Walls and Landscaping:

a. Landscaping: A minimum of ten percent (10%) landscaping is required. The calculation of the required minimum may include street trees installed and maintained by an applicant, planters and window boxes which are the property of the applicant/owner, as well as plantings within courtyard areas. All landscaping included within the 10% calculation must be installed and maintained by the applicant or his/her successors.

b. Walls, Fences and Hedges: Interior parking lots may be separated from rear courtyards by walls, fences and/or hedges 4' in height or less. Eating establishments may separate outdoor eating areas from parking areas and adjacent buildings or structures by a fence, wall or hedge not to exceed 6' in height. Pedestrian walkways may be separated from abutting uses by plantings or fences which allow visual surveillance of the walkway and surrounding areas.

G. Lighting: Street lighting and lighting of interior parking lots and walkways shall conform to the following lighting standards:

- Light fixtures shall conform to the lighting styles in the Architectural Guidelines.
- Lighting shall be pedestrian scaled.
- Light fixtures shall be placed to allow adequate illumination for safe pedestrian movement. Lighting plans shall show the illumination fields for each fixture.
- Wiring for historic light fixtures shall be placed underground.
- Other overhead wiring shall be placed underground, where possible.

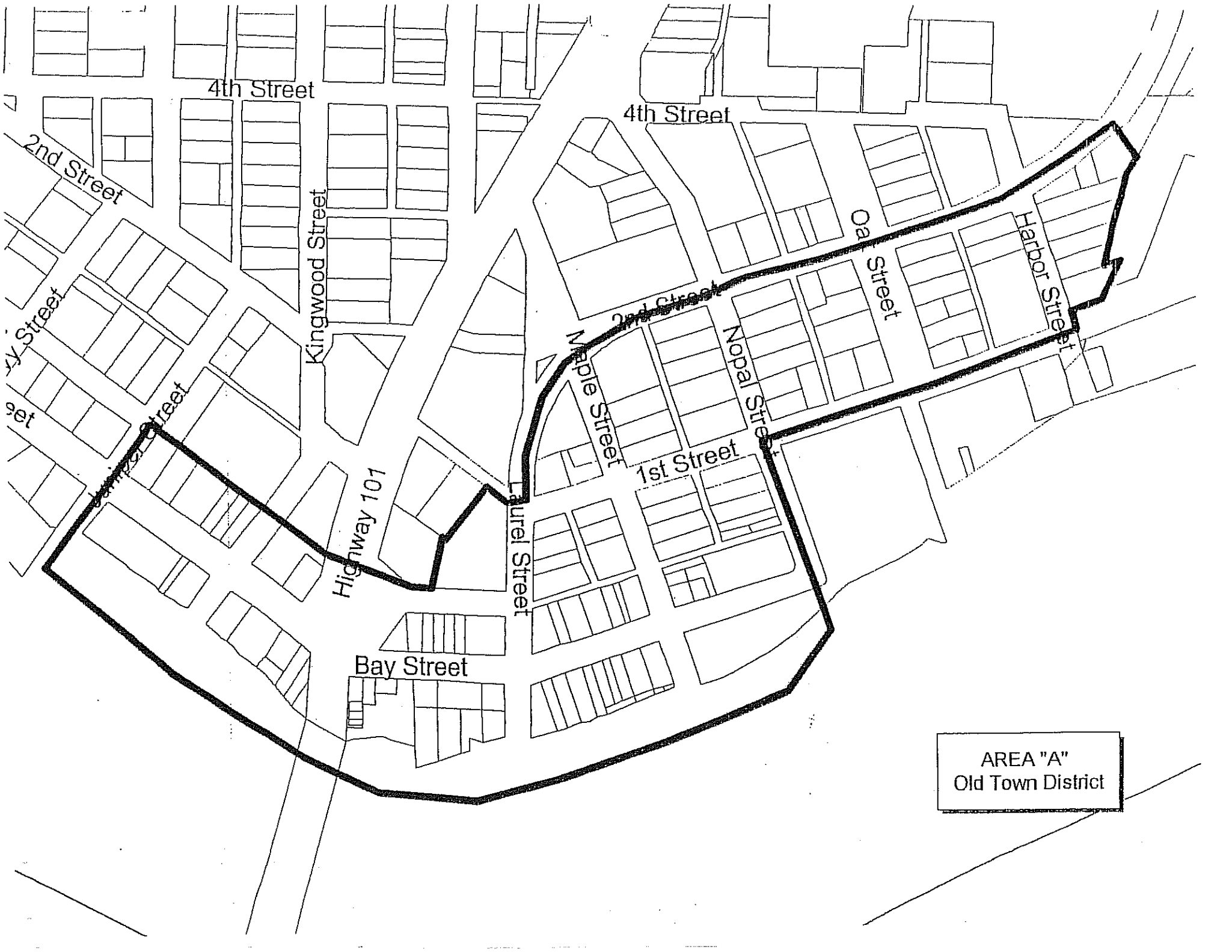
H. Trash Enclosures: At least one trash receptacle shall be provided on site. Dumpsters or similar utilitarian trash receptacles shall be screened with a solid fence or wall not less than 5' in height. Trash receptacles for pedestrians shall have a consistent design in order to provide consistency in street furniture.

I. Design Review: All uses except single family and residential duplex units in the Old Town District whether permitted or conditional uses, shall be subject to design review (FCC 10-6) to insure compatibility and integration with the character of the district and to encourage revitalization. Architectural design shall be reviewed against Downtown Architectural Guidelines to determine compatibility with the character of the district.

The Official Zoning Map is amended as shown on Attachment "A". Parcels described as Map No. 18-12-34-12, Tax Lots 8300 and 8400 are rezoned from Waterfront District to Restricted Residential District.

Amended by Ordinance No. 3, Series 2003, effective April 17, 2003





4th Street

4th Street

2nd Street

Kingwood Street

Oak Street

Harbor Street

1st Street

Nopal Street

Nopal Street

Highway 101

Laurel Street

1st Street

Bay Street

AREA "A"  
Old Town District

# RAINFALL RECORD

Florence, Lane County, Oregon

Date: March 2007

Precipitation

October - 1	0.02
October - 2	0.22
October - 3	0.20
October - 4	0
October - 5	0
October - 6	0.10
October - 7	0.12
October - 8	0
October - 9	0.28
October - 10	0.10
October - 11	0
October - 12	0
October - 13	0
October - 14	0
October - 15	0.02
October - 16	0.73
October - 17	0.29
October - 18	1.56
October - 19	0.64
October - 20	0
October - 21	0
October - 22	0
October - 23	0
October - 24	0
October - 25	0
October - 26	0
October - 27	0
October - 28	0
October - 29	0
October - 30	0
October - 31	0

87' ROUTINE ONSITE DETERMINATION METHOD

Wetland # 1

OBS.PT.# 1

Plant community: UPLAND

Field Investigator(s) Wilbur E. and Matthew J. Temyk

Project/Site: N.E. 1/4, SEC 34, T18S, R12W, W.M. TL's #101, 107, & 700 Date: 10-8-07

Applicant Owner: Barnett family State: OR County: LANE

22486 Linda Ann CRT OBS location: UPLAND RISE

Cupertino, CA 95014 N.E. OF WETLAND #1 N.W. PORTION

Do normal environmental conditions exist? Yes  No  (If no, explain)

Has the vegetation, soils, and /or hydrology been significantly disturbed? Yes  No

Explain: FORMER HISTORIC BRAY STREET FRONTAGE / HISTORIC CITY HALL LOCATION

VEGETATION			5' Rad. <input checked="" type="checkbox"/>	4' <sup>2</sup>	M <sup>2</sup>
Dominant Species	Status	% Cover	Dominant Species	Status	% Cover

Tree Stratum Herb Stratum

Total Cover: \_\_\_\_\_ Total Cover: 50

- |          |   |
|----------|---|
| 1. _____ | 1. <u>POLYSTECHUM MUNITUM FACW 80 *</u> |
| 2. _____ | 2. <u>ANTHOXANTHUM ODORATUM FACW 20</u> |
| 3. _____ | 3. _____                                |
| 4. _____ | 4. _____                                |

Sapling/Shrub Stratum

Total Cover: 50

- |           |  |
|-----------|--|
| 5' to 10' | 1. <u>BACCHARIS PILULARIS wpl 40 *</u> |
|           | 2. <u>RUBUS LACINATUS FACW 60 *</u>    |
|           | 3. _____                               |
|           | 4. _____                               |
|           | 5. _____                               |

Percent Dominant Species that are OBL, FACW, and/or FAC 100 0 \* = Dominants 0 of 3

Criteria Met? Yes \_\_\_\_\_ No  Other Notable Species: T-CIRCULUM ARVENSE (4')

SOILS

Map Unit Name: OLD FILL / SILT LOAM Drainage Class: \_\_\_\_\_

Is the soil on hydric soils list: Yes \_\_\_\_\_ No  Undetermined

\* POWDERY DRY

Soil is a histosol? Yes \_\_\_\_\_ No  Histic epipedon? Yes \_\_\_\_\_ No  Gleyed? Yes \_\_\_\_\_ No

Depth	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
-------	--------------	-----------------------	-------------------	---------	-----------

0 to 10" 2.5Y 4/3 \_\_\_\_\_ SCL, L GRANULAR - ROOTS / BARK / GLASS FRAGMENTS

Hydric Soil Indicators:

- |  |   |
|--|---|
| <input type="checkbox"/> Sulfidic Odor                                 | <input type="checkbox"/> Listed on Hydric Soils List            |
| <input type="checkbox"/> Redox. features (w/in 10")                    | <input type="checkbox"/> Concretions/ Nodules (w/ in 3"; > 2mm) |
| <input type="checkbox"/> High organic content in surface (sandy soils) |   |
| <input type="checkbox"/> Organic streaking (in Sandy Soils)            |   |
| <input type="checkbox"/> Organic pan ( in sandy soils)                 |   |

Criteria Met? Yes \_\_\_\_\_ No  Rationale: \_\_\_\_\_

HYDROLOGY

Recorded data

- Recorded Data available  Aerial Photos  Stream Gauge  other
- No Recorded Data Available

Field Data

Is ground surface inundated? Yes \_\_\_\_\_ No  Surface water depth: \_\_\_\_\_

Is the soil saturated? Yes \_\_\_\_\_ No  Depth to free standing water in pit/soil probe hole: NONE

Primary Hydrology Indicators: \_\_\_\_\_ Secondary Hydrology Indicators (2 or more required): \_\_\_\_\_

- |   |   |
|---|---|
| <input type="checkbox"/> Inundated              | <input type="checkbox"/> Oxidized Root Channels (upper 12") |
| <input type="checkbox"/> Saturated in upper 12" | <input type="checkbox"/> Water-stained Leaves               |
| <input type="checkbox"/> Water Marks            | <input type="checkbox"/> Local Soil Survey                  |
| <input type="checkbox"/> Drift Lines            | <input type="checkbox"/> FAC-Neutral test                   |
| <input type="checkbox"/> Sediment Deposits      | <input type="checkbox"/> Drainage Patterns                  |
| <input type="checkbox"/> Moist                  |   |

\* 2' ELEVATION CHANGE

Criteria Met? Yes \_\_\_\_\_ No

Jurisdictional Determination : Is this a wetland? Yes \_\_\_\_\_ No  Rationale: THE THREE WETLAND CRITERIA HAVE NOT BEEN MET.

87' ROUTINE ONSITE DETERMINATION METHOD

Wetland # 1

OBS.PT.# 1A

Plant community: WETLAND

Field investigator(s) Wilbur E. and Matthew J. Terylk

Project/Site: N.E. 1/4, SEC 34, T18S, R12W, W.M. TL's #101, 107, & 700 Date: 10-8-07

Applicant Owner: Barnett family State: OR County: LANE

22486 Linda Ann CRT OBS location: IN WETLAND N.E.

Cupertino, CA 95014 PORTION

Do normal environmental conditions exist? Yes  No  (If no, explain)

Has the vegetation, (soils) and/or hydrology been significantly disturbed? Yes  No

Explain: FORMER HISTORIC BAY STREET FRONTAGE USE/ HISTORIC CITY HALL LOCATION

VEGETATION			5' Rad. <input checked="" type="checkbox"/>	4' <sup>2</sup>	M <sup>2</sup>
Dominant Species	Status	% Cover	Dominant Species	Status	% Cover
Tree Stratum			Herb Stratum		
Total Cover: _____			Total Cover: <u>100</u>		
1. _____			6" 1. <u>DICTYCHIS SPICATA</u>	<u>FACW</u>	<u>50 *</u>
2. _____			3" 2. <u>SALICORNIA PACIFICA</u>	<u>OBL</u>	<u>20 *</u>
3. _____			1 1/2' 3. <u>JUNCUS BALTICUS</u>	<u>FACW</u>	<u>20 *</u>
4. _____			6" 4. <u>ATREPLEX PATULA</u>	<u>FACW</u>	<u>10</u>
Sapling/Shrub Stratum			5. _____		
Total Cover: _____			6. _____		
1. _____			7. _____		
2. _____			8. _____		
3. _____			9. _____		
4. _____			10. _____		
5. _____					

Percent Dominant Species that are OBL, FACW, and/or FAC 100 100 \* = Dominants 3 of 3

Criteria Met? Yes  No  Other Notable Species: T-POTENTILLA PACIFICA (OBL)

SOILS

Map Unit Name: LOAMY FINE SAND Drainage Class: \_\_\_\_\_

Is the soil on hydric soils list: Yes  No  Undetermined

Soil is a histosol? Yes  No  Histic epipedon? Yes  No  Gleyed? Yes  No

Depth	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
<u>0T4"</u>	<u>10YR 3/2</u>			<u>POSS, L</u>	<u>GRANULAR - FINE ROOTS/OBL/BARK</u>
<u>4" to 4.5"</u>	<u>2.5Y 3/2</u>			<u>L, F.S.</u>	<u>GRANULAR - LAR FINE ROOTS</u>
<u>4.5" to 10"</u>	<u>2.5Y 3/1</u>			<u>SILT.C.</u>	<u>SUB BLOCKY - FINE ROOTS / FINE / RUSTY</u>
<u>10" to 18"</u>	<u>2.5Y 4/3</u>			<u>S.S.</u>	<u>GRANULAR - ROOTS / ORZ'S</u>

Hydric Soil Indicators:

- Sulfidic Odor
- Redox. features (w/in 10")
- High organic content in surface (sandy soils)
- Organic streaking (in Sandy Soils)
- Organic pan ( in sandy soils)
- Listed on Hydric Soils List
- Concretions/ Nodules (w/ in 3"; > 2mm)

Criteria Met? Yes  No  Rationale: \* ASSUME HYDRIC

HYDROLOGY

Recorded data

- Recorded Data available
- Aerial Photos
- Stream Gauge
- other
- No Recorded Data Available

Field Data

Is ground surface inundated? Yes  No  Surface water depth: \_\_\_\_\_

Is the soil saturated? Yes  No  Depth to free standing water in pit/soil probe hole: 24"

Primary Hydrology Indicators: \_\_\_\_\_ Secondary Hydrology Indicators (2 or more required):

- Inundated
- Saturated in upper 12"
- Water Marks
- Drift Lines
- Sediment Deposits
- Oxidized Root Channels (upper 12")
- Water-stained Leaves
- Local Soil Survey
- FAC-Neutral test
- Drainage Patterns
- Moist LOWBR 18"

Criteria Met? Yes  No  \* TIDAL INFLUENCE (INCOMMENSURABLE) TIDE

Jurisdiction Determination: Is this a wetland? Yes  No  Rationale: THE THREE WETLAND CRITERIA HAS BEEN MET.

87' ROUTINE ONSITE DETERMINATION METHOD

Wetland # 1

OBS.PT.# 2

Plant community: UPLAND

Field Investigator(s) Wilbur E. and Matthew J. Terynik

Project/Site: N.E. 1/4, SEC 34, T18S, R12W, W.M. TL's #101, 107, & 700 Date: 10-8-07

Applicant Owner: Barnett family State: OR County: LANE

22486 Linda Ann CRT OBS location: EAST OF S.E. PORTION

Cupertino, CA 95014 OF WETLAND #1

Do normal environmental conditions exist? Yes  No  (If no, explain) \_\_\_\_\_

Has the vegetation, soils, and /or hydrology been significantly disturbed? Yes  No

Explain: FORMER HISTORIC BAY STREET FRONTAGE USE / HISTORIC CITY HALL LOCATION

VEGETATION			5' Rad.	4' <sup>2</sup> X	M <sup>2</sup>
Dominant Species	Status	% Cover	Dominant Species	Status	% Cover
Tree Stratum			Herb Stratum		
Total Cover: _____			Total Cover: <u>100</u>		
1. _____			1. <u>FESTUCA ARUNDINACEA FAC</u>		<u>100 *</u>
2. _____			2. _____		
3. _____			3. _____		
4. _____			4. _____		
Sapling/Shrub Stratum			5. _____		
Total Cover: _____			6. _____		
1. _____			7. _____		
2. _____			8. _____		
3. _____			9. _____		
4. _____			10. _____		
5. _____					

Percent Dominant Species that are OBL, FACW, and/or FAC 100 \_\_\_\_\_ \* = Dominants 0 of 1

Criteria Met? Yes \_\_\_\_\_ No  Other Notable Species: \_\_\_\_\_

SOILS

Map Unit Name: HISTORIC FILL / FINE SAND Drainage Class: \_\_\_\_\_

Is the soil on hydric soils list: Yes \_\_\_\_\_ No  Undetermined \_\_\_\_\_

Soil is a histosol? Yes \_\_\_\_\_ No  Histic epipedon? Yes \_\_\_\_\_ No  Gleyed? Yes \_\_\_\_\_ No

\* Jumbled SOIL

Depth	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
<u>0 TO 10"</u>	<u>10YR 3/1, 3/2</u>			<u>L, F.S.</u>	<u>GRANULAR - ROOTS / GRAVEL / GLASS FRAG.</u>
<u>10" TO 16"</u>	<u>10YR 3/2, 5/3</u>			<u>F.S.</u>	<u>GRANULAR - METAL FRAG. 2" / 1" GLASS / GRAVEL FRAG.</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Hydric Soil Indicators:

- \_\_\_ Sulfidic Odor
- \_\_\_ Redox. features (w/in 10")
- \_\_\_ High organic content in surface (sandy soils)
- \_\_\_ Organic streaking (in Sandy Soils)
- \_\_\_ Organic pan ( in sandy soils)
- \_\_\_ Listed on Hydric Soils List
- \_\_\_ Concretions/ Nodules (w/ in 3"; > 2mm)

Criteria Met? Yes \_\_\_\_\_ No  Rationale: \_\_\_\_\_

HYDROLOGY

Recorded data

- \_\_\_ Recorded Data available
- \_\_\_ Aerial Photos
- \_\_\_ Stream Gauge
- \_\_\_ other
- \_\_\_ No Recorded Data Available

Field Data

Is ground surface inundated? Yes \_\_\_\_\_ No  Surface water depth: \_\_\_\_\_

Is the soil saturated? Yes \_\_\_\_\_ No  Depth to free standing water in pit/soil probe hole: NONE

Primary Hydrology Indicators: \_\_\_\_\_ Secondary Hydrology Indicators (2 or more required): \_\_\_\_\_

- \_\_\_ Inundated
- \_\_\_ Saturated in upper 12"
- \_\_\_ Water Marks
- \_\_\_ Drift Lines
- \_\_\_ Sediment Deposits
- \_\_\_ Oxidized Root Channels (upper 12")
- \_\_\_ Water-stained Leaves
- \_\_\_ Local Soil Survey
- \_\_\_ FAC-Neutral test
- \_\_\_ Drainage Patterns
- \_\_\_ Moist

\* 2' ELEV. CHANGE

Criteria Met? Yes \_\_\_\_\_ No

Jurisdictional Determination : Is this a wetland? Yes \_\_\_\_\_ No  Rationale: THE THREE WETLAND

CRITERIA HAVE NOT BEEN MET

87' ROUTINE ONSITE DETERMINATION METHOD

Wetland # 1

OBS.PT.# 2A

Plant community: WETLAND

Field investigator(s) Wilbur E. and Matthew J. Terylk

Project/Site: N.E. 1/4, SEC 34, T18S, R12W, W.M. TL's #101, 107, & 700 Date: 10-8-07

Applicant Owner: Barnett family State: OR County: LANE

22486 Linda Ann CRT OBS location: IN SOUTHEAST PORTION

Cupertino, CA 95014 OF WETLAND #1

Do normal environmental conditions exist? Yes  No  (If no, explain) \_\_\_\_\_

Has the vegetation, (soils), and/or hydrology been significantly disturbed? Yes  No

Explain: FORMER HISTORIC BAYSIDE FRONTIERS USE / HISTORIC CITY HALL LOCATION

VEGETATION			5' Rad. <input checked="" type="checkbox"/>	4' <sup>2</sup>	M <sup>2</sup>
Dominant Species	Status	% Cover	Dominant Species	Status	% Cover
<b>Tree Stratum</b>			<b>Herb Stratum</b>		
Total Cover: _____			Total Cover: <u>80</u>		
1. _____			2' 1. <u>JUNCUS BALTICUS</u>	<u>FACW+</u>	<u>25</u>
2. _____			2' 2. <u>FESTUCA ARUNDINACEA</u>	<u>FAC-</u>	<u>38</u>
3. _____			6" 3. <u>SALEICORNIA PACIFICA</u>	<u>OBL</u>	<u>25</u>
4. _____			6" 4. <u>DICTYCHLES SPICATA</u>	<u>FAC+</u>	<u>13</u>
<b>Sapling/Shrub Stratum</b>			5. _____		
Total Cover: _____			6. _____		
1. _____			7. _____		
2. _____			8. _____		
3. _____			9. _____		
4. _____			10. _____		
5. _____					

Percent Dominant Species that are OBL, FACW, and/or FAC 100 67% = Dominants 2 of 3

Criteria Met? Yes  No  Other Notable Species: T-ADRIPEX PATULA (FACW)

SOILS

Map Unit Name: Loamy fine sand Drainage Class: \_\_\_\_\_

Is the soil on hydric soils list? Yes  No  Undetermined

Soil is a histosol? Yes  No  Histic epipedon? Yes  No  Gleyed? Yes  No

Depth	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
<u>0 to 3"</u>	<u>10YR 3/1</u>			<u>fine to med</u>	<u>granular - fine roots</u>
<u>3 to 5"</u>	<u>2.5Y 3/2</u>			<u>S.S.</u>	<u>granular - fine roots</u>
<u>3.5 to 8"</u>	<u>2.5Y 3/1</u>			<u>silty, L</u>	<u>sub. blocky - roots / ORL / CLASS FINE</u>
<u>8 to 16"</u>	<u>2.5Y 4/3</u>	<u>5YR 4/6 Cmp</u>		<u>S.S.</u>	<u>granular - roots / ORZ 1/3</u>

- Hydric Soil Indicators:
- Sulfidic Odor  Listed on Hydric Soils List
  - Redox. features (w/in 10")  Concretions/ Nodules (w/ in 3"; > 2mm)
  - High organic content in surface (sandy soils)
  - Organic streaking (in Sandy Soils)
  - Organic pan (in sandy soils)

Criteria Met? Yes  No  Rationale: \* ASSUME

HYDROLOGY

Recorded data:  Recorded Data available  Aerial Photos  Stream Gauge  other  
 No Recorded Data Available

Field Data: Is ground surface inundated? Yes  No  Surface water depth: \_\_\_\_\_  
Is the soil saturated? Yes  No  Depth to free standing water in pit/soil probe hole: NONE

- Primary Hydrology Indicators: Secondary Hydrology Indicators (2 or more required):
- Inundated  Oxidized Root Channels (upper 12")
  - Saturated in upper 12"  Water-stained Leaves
  - Water Marks  Local Soil Survey
  - Drift Lines  FAC-Neutral test
  - Sediment Deposits  Drainage Patterns  Moist

\* TIDAL INFLUENCE (INCOMMUNAL FEED)

Criteria Met? Yes  No

Jurisdictional Determination: Is this a wetland? Yes  No  Rationale: THE THREE WETLAND CRITERIA HAVE BEEN MET.

Photo 1

by Matthew J. Ternyik

10/06/07



Location: Barnett property on Bay Street in Florence, Oregon. Looking northeast towards Bay Street; illustrating upland conditions Wetland 1, OBS Pt. 1. Note dominance of upland vegetation.

Photo 2

by Matthew J. Ternyik

10/06/07



Location: Barnett property on Bay Street in Florence, Oregon. Looking north at wetland conditions at Wetland 1, OBS Pt. 1a in northwest portion of site. Dominant vegetation is *Distichlis spicata* and *Salicornia pacific*.

Photo 3

by Matthew J. TERNYK

10/06/07



Location: Barnett property on Bay Street in Florence, Oregon. Looking southeast portion, illustrating upland conditions at Wetland 1 OBS Pt. 2. Note dominance of *Alta fescue* and mowed grass in the back ground.

Photo 4

by Matthew J. TERNYK

10/06/07



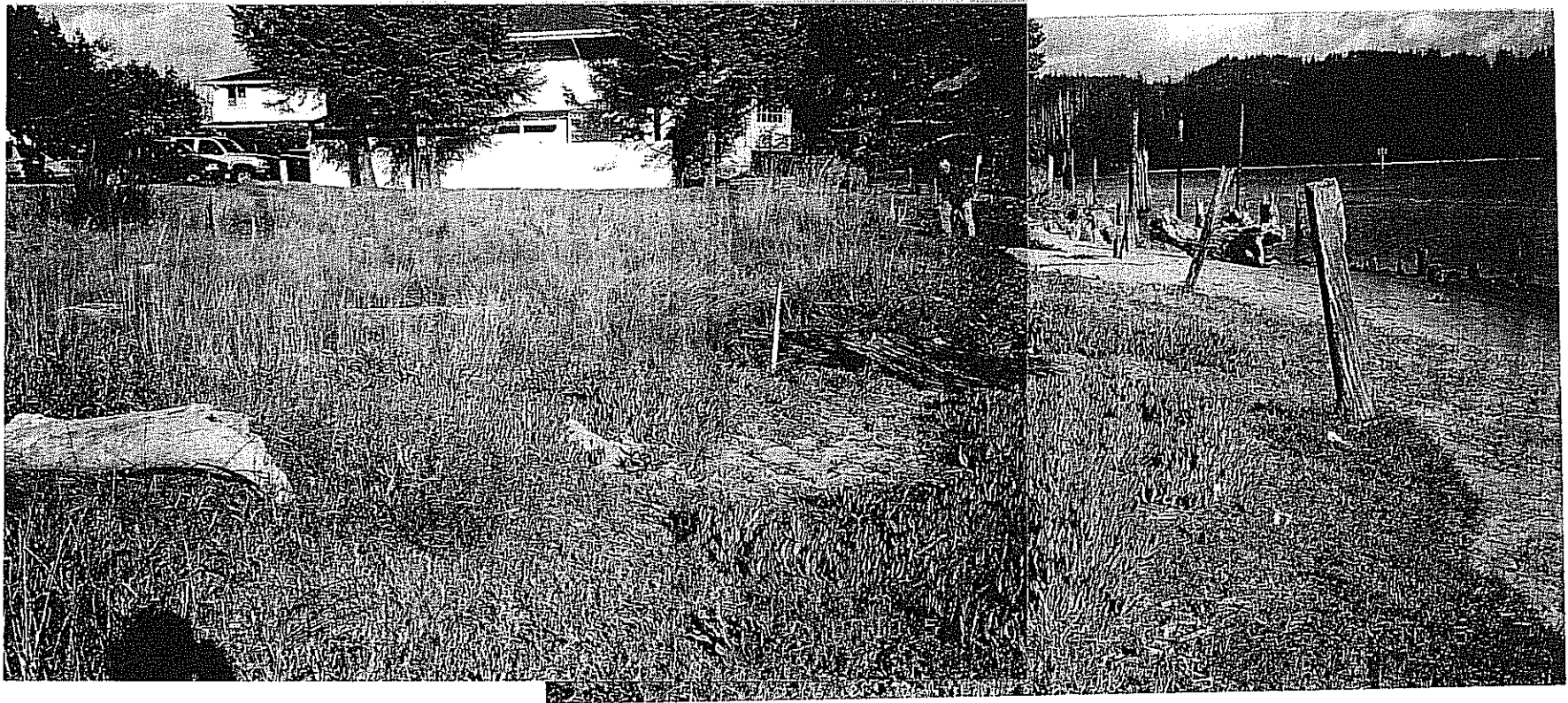
Location: Barnett property on Bay Street in Florence, Oregon. Looking southeast at wetland conditions at Wetland 1, OBS Pt. 2a; with a mixture of *Alta fescue*, *Juncus balticus* and *Distichlis spicata*.



Photo 5

by Matthew J. Ternyik

10/-5/07



Location: Barnett property on Bay Street in Florence, Oregon. Looking east from Erskine property to south portion of Wetland 1 over Siuslaw River edge. Note stand of *Carpobretus* species and *Salicornia pacifica* (listed Oregon invasive species that usually freeze out. White stakes denote study area site south boundary

Photo 6

by Wilbur E. TERNYIK

10/29/07



Location: Barnett property on Bay Street in Florence, Oregon. Looking north over City of Florence Bay Street stormwater drain; on south side of Bay Street. Located 27 feet east of Barnett property northwest corner marker.

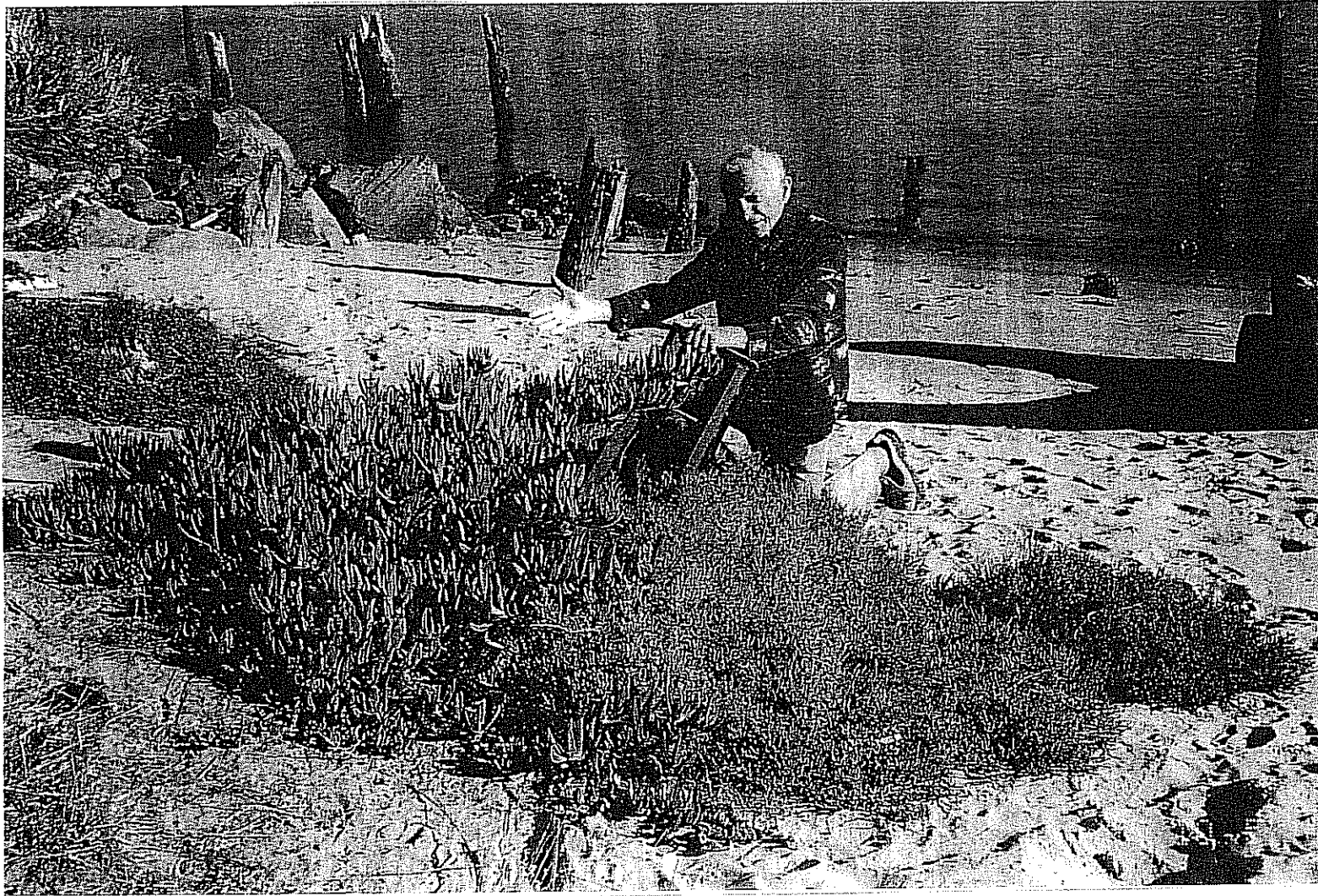
Photo 7

by Wilbur E. TERNYIK

10/29/07



Location: Barnett property on Bay Street in Florence, Oregon. Looking north down into outlet of concrete drain pipe. This untreated water flows directly into the Barnett property upland, then into the wetlands.



Location: Barnett property on Bay Street in Florence, Oregon. Looking southeast at Wilbur Ternyik and a combination of Highway ice plant (*Carpobrotus* spp.) and *Salicornia pacifica*. Also notice a very heavy iron debris that is sanded in and needs to be removed.

Photo 9

by Wilbur E. Ternyik

11/25/07



Location: Barnett property on Bay Street in Florence, Oregon. Looking south from Bay Street sidewalk over the Barnett property on left side of the line. Water on right is the adjoining Erskine property with some tidal intrusion into high salt marsh area (10.5 High Tide).

Photo 10

by Wilbur E. Ternyik

11/25/07



Location: Location: Barnett property on Bay Street in Florence, Oregon. Looking from northwest corner over wetland portion of the property. Zero tidal water intrusion behind the red line. 10.5 high tide the highest tide for 2007

Photo 11

by Wilbur E. TERNYK

11/25/07



Location: Barnett property on Bay Street in Florence, Oregon. Looking northwest over wetland portion of Barnett property high marsh area. Zero tidal water intrusion despite 10.5 high tide.

Photo 12

by Wilbur E. TERNYK

11/25/07



Location: Barnett property on Bay Street in Florence, Oregon. Looking west from southeast corner down along the true highest tide line of this date. No ocean wave surge or river flooding influence.

**LOCATION MAP  
FLORENCE, LANE COUNTY, OREGON**

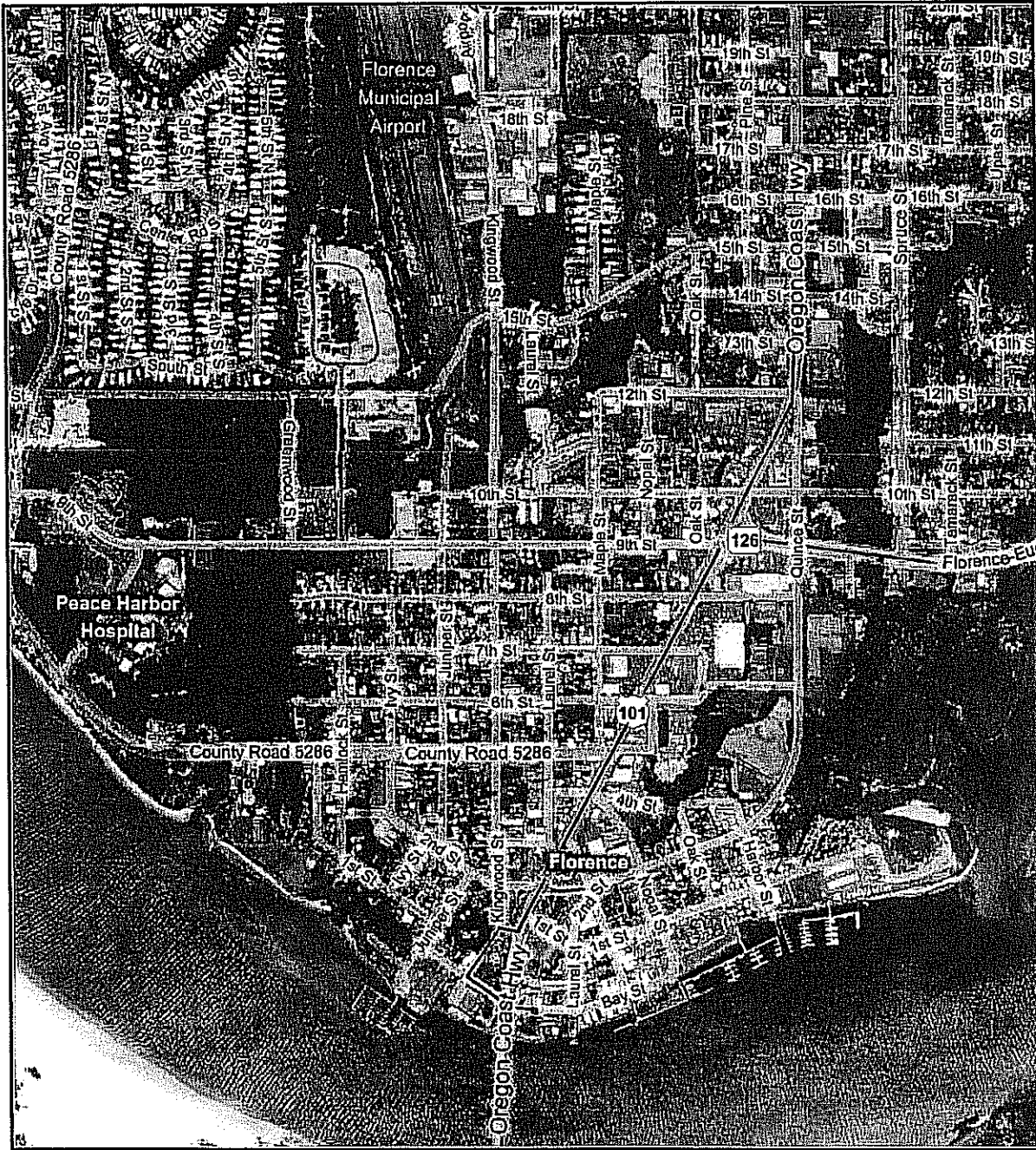


Image courtesy of U.S.G.S.

SCALE  
1" TO 1500'

BARNETT FAMILY  
PROPERTIES

N.E. 1/4, SEC. 34, T18S, R12W, W.M.

TL'S #101, #107, #700

FLORENCE, LANE COUNTY, OREGON



LANE COUNTY

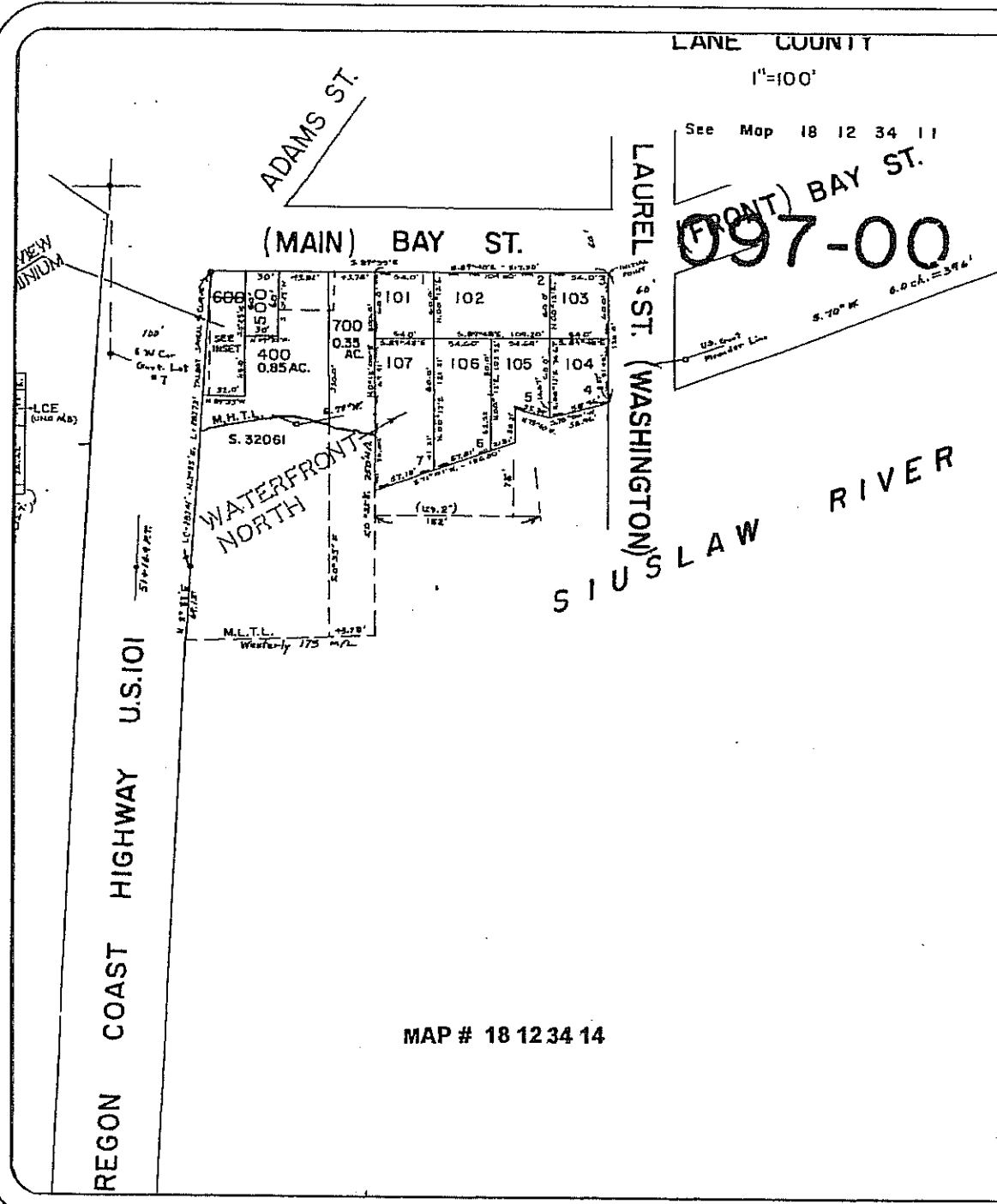
1"=100'

See Map 18 12 34 11

097-00

### TAX LOT MAP

TL's #101, #107, #700



BARNETT FAMILY  
PROPERTIES

N.E. 1/4, SEC. 34, T18S, R12W, W.M.

TL's #101, #107, #700

FLORENCE, LANE COUNTY, OREGON

MAP # 18 12 34 14

REGON COAST HIGHWAY U.S.101

WATERFRONT NORTH

S I U S L A W R I V E R

ADAMS ST.

(MAIN) BAY ST.

LAUREL ST. (WASHINGTON)

(FRONT) BAY ST.

S. 32061

M.L.T.L.

Westerly 175'

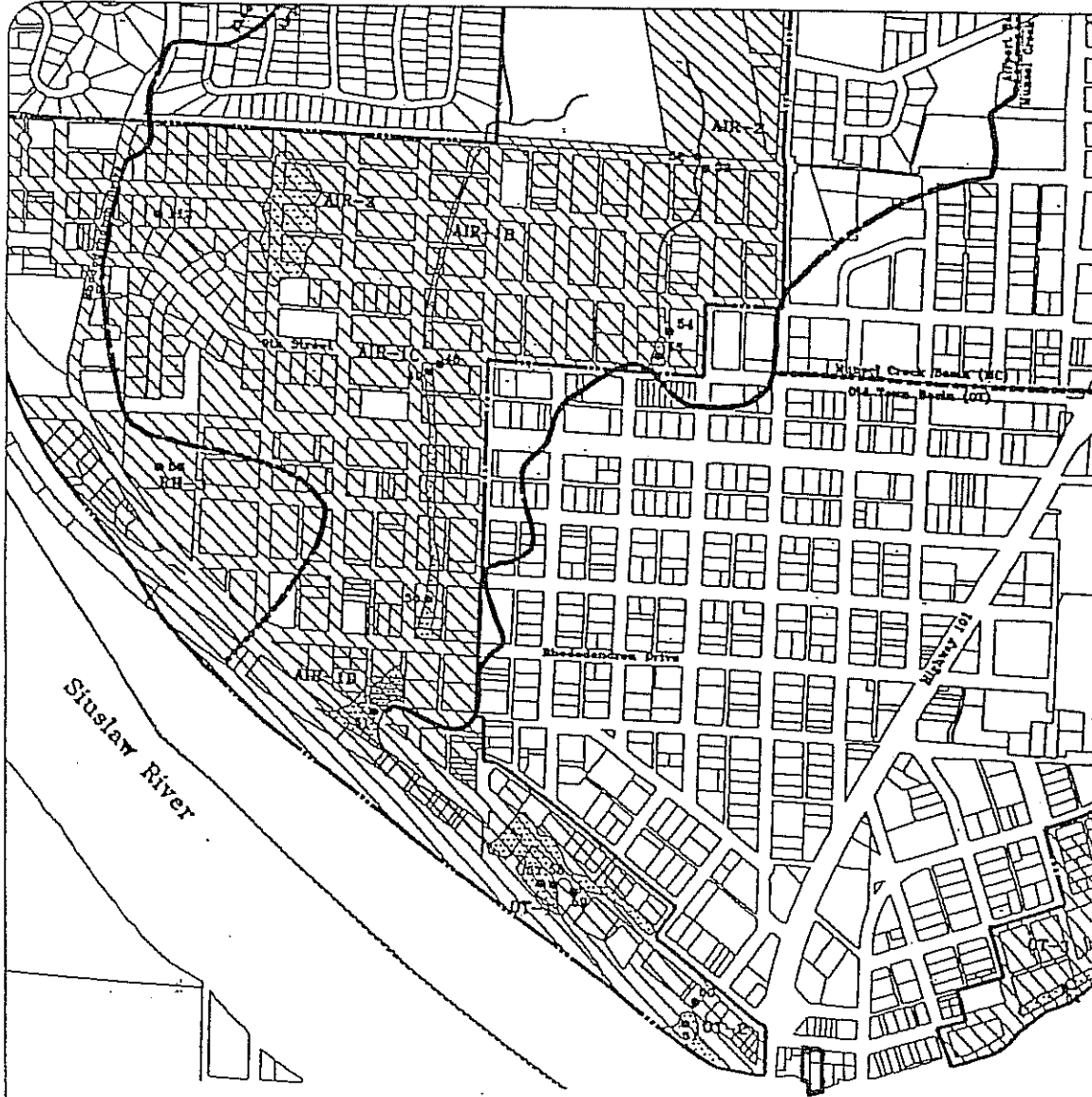
STAIRCASE

100' E.W.C. Govt. Lot #7

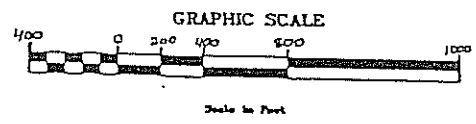
NEW UNION

LCE (this Map)

# LOCAL WETLAND INVENTORY MAP



⑥	Sample site	[Diagonal lines /]	Wetland area
SIL-3	Wetland code	[Diagonal lines \]	On Site Wetland Inventory
-----	Watershed boundary	[Diagonal lines /]	Prior Wetland Delineation
-----	Project boundary	—	Drainage



BARNETT FAMILY  
 PROPERTIES  
 N.E. 1/4, SEC. 34, T18S, R12W, W.M.  
 TL's #101, #107, #700  
 FLORENCE, LANE COUNTY, OREGON



# SOILS MAP

## Soils

133 C Waldport-Urban Land Complex  
0 to 12% slopes



BARNETT FAMILY  
PROPERTIES

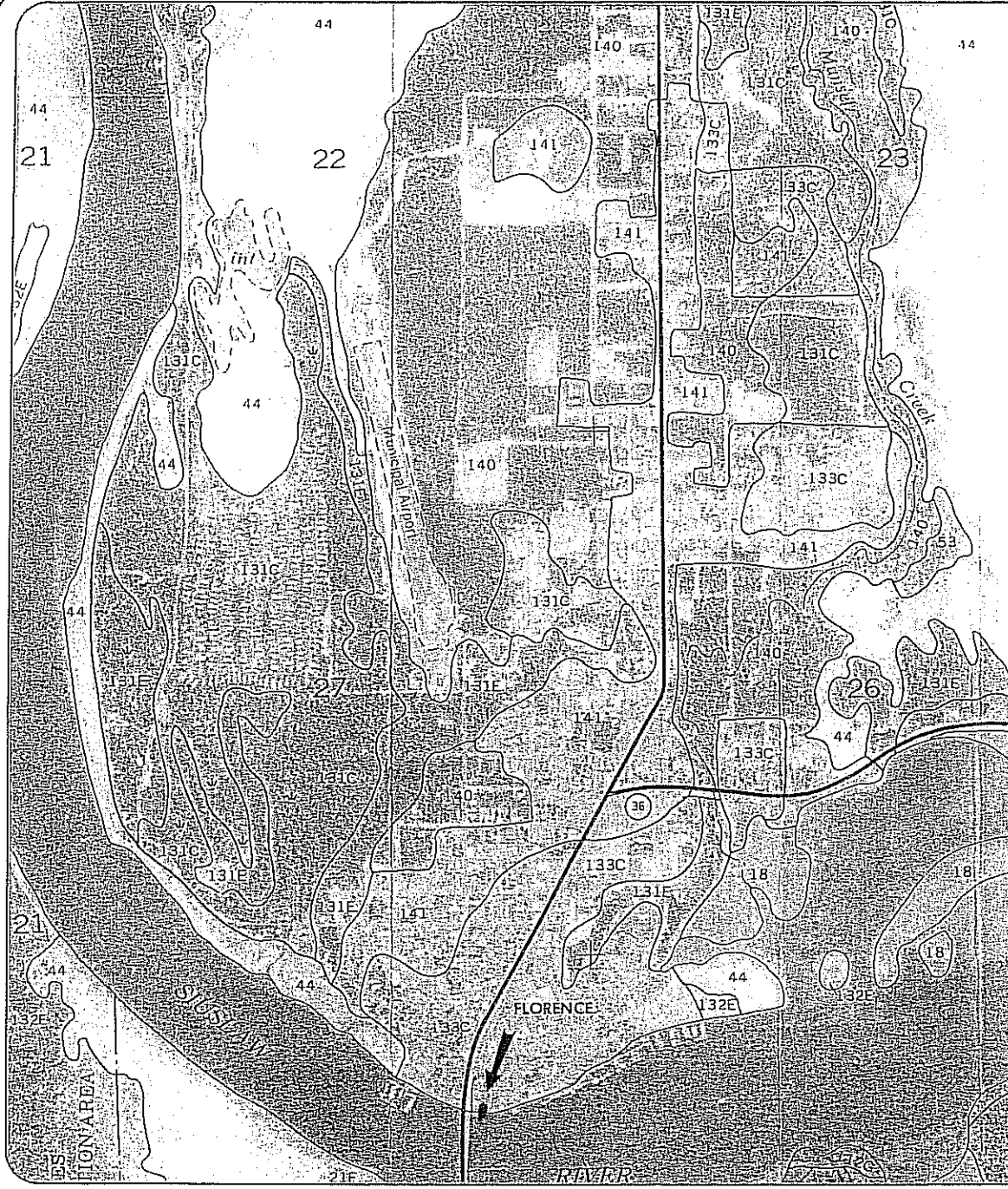
N.E. 1/4, SEC. 34, T18S, R12W, W.M.

TL's #101, #107, #700

FLORENCE, LANE COUNTY, OREGON

**SCALE**

1" = 2000'



Prepared By: Matthew J. Teryik

LEGEND

⊙# = PHOTO LOCATION/NUMBER/DIRECTION

○OBS # = OBSERVATION POINT/LOCATION/NUMBER

WETLAND 

LONGITUDE 124°06'30"

LATITUDE 43°58'00"

**BAY STREET**

ε

40'

WETLAND DELINEATED BY  
WILBUR E. AND MATTHEW J. TERNYIK  
WETLANDS, BEACHES AND DUNES CONSULTANTS

**SITE ACREAGE 0.35 AC**  
(TO MHW)

**TOTAL SITE ACREAGE 0.45 AC**  
(TO MLW)

**WETLAND ACREAGE 0.10 AC**

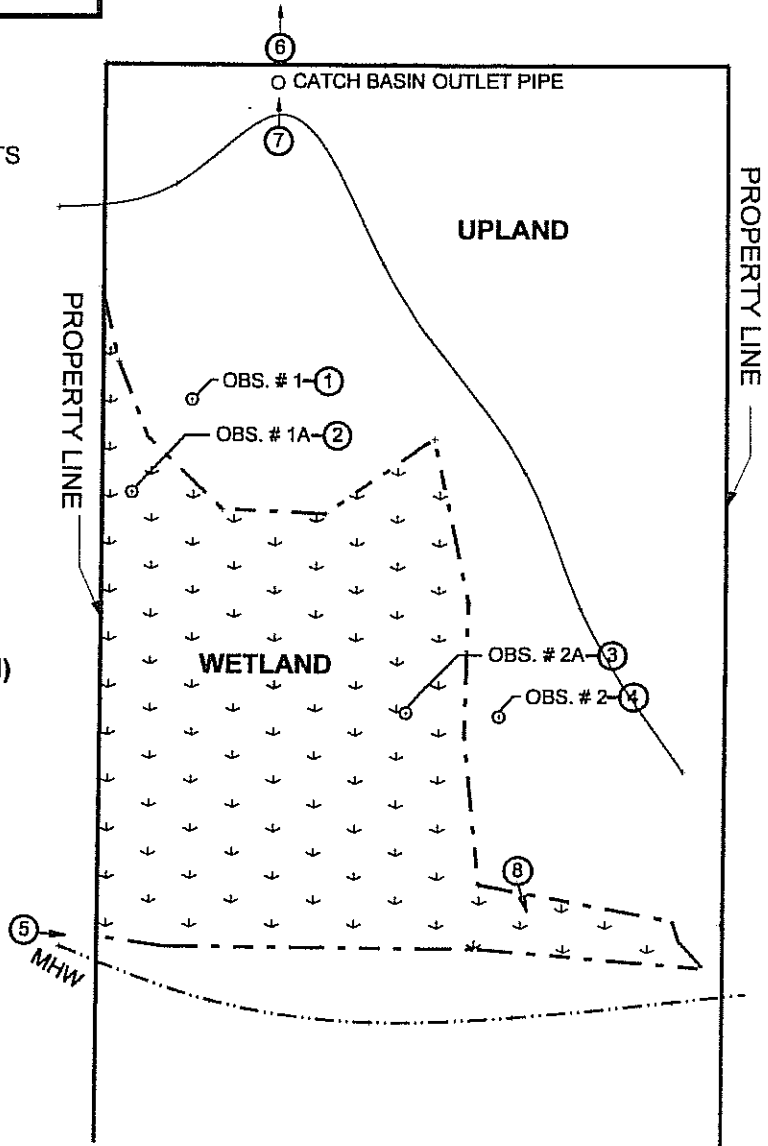
**UPLAND ACREAGE 0.25**  
(TO MHW)

**INTERTIDAL ACREAGE 0.10 AC**  
(FROM MHW TO MLW)

**WETLAND CLASSIFICATION**

**COWARDIN E2EM1**

**HGM EFR (Estuarine Fringe, River - Sourced)**



OK.

JULY 31,

**EUGENE M.**

**1093**

P.L.S. EXPIRATION DATE: 8-31

G:\DC\DC2007\0728 Wet Land

## **APPENDIX E**

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Eelgrass Survey Report

# WAVE BEACH GRASS NURSERY

---

WETLAND BEACHES & DUNES CONSULTANTS  
WILBUR E. TERNYIK  
MATTHEW J. TERNYIK

WETLAND DELINEATIONS  
DUNE MANAGEMENT  
SITE INVESTIGATIONS  
MITIGATION DESIGN  
PLANT MATERIALS

P.O. BOX 1190  
FLORENCE, OR  
97439-0059

PH. 541-997-2401  
FX. 541-997-6039

ONL #168093

E-mail: [ternyik1@hotmail.com](mailto:ternyik1@hotmail.com)

May 18, 2006

Linda Sarnoff  
Community Development Director  
City of Florence  
250 Hwy 101  
Florence, OR 97439

Re: Initial Siuslaw estuary *Zostora* locations

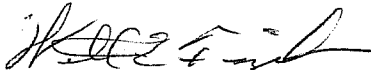
Dear Linda:

As you requested on 5/16/06 we visited sites in the lower Siuslaw estuary where *Zostora* formerly existed. Added to this list was the Highway 101 bridge location. All sites visited were on the north side of the river.

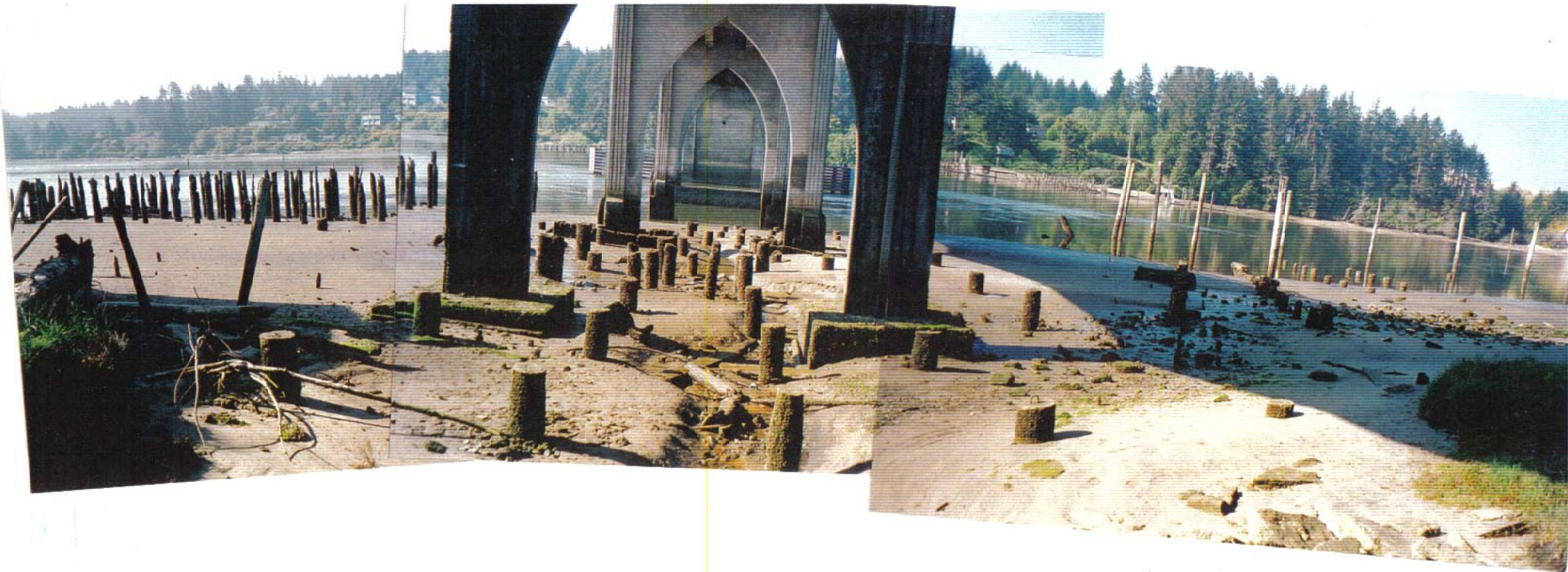
As the enclosed photos show there was only one site where significant stands of *Zostora* exist today. Our field inspection was done on a minus low tide.

There is zero *Zostora* under the Highway 101 bridge area. Out going tide velocity due to restricted passage presents it from growing at this location. The only significant *Zostora* stands are just below the Port of Siuslaw Boardwalk. Large areas where it formerly was located are now gone. *Zostera* comes and goes with a whole set of conditions that affects its survival. Further study by boat is needed.

Sincerely,



Wilbur E. Ternyik  
Wetland Consultant

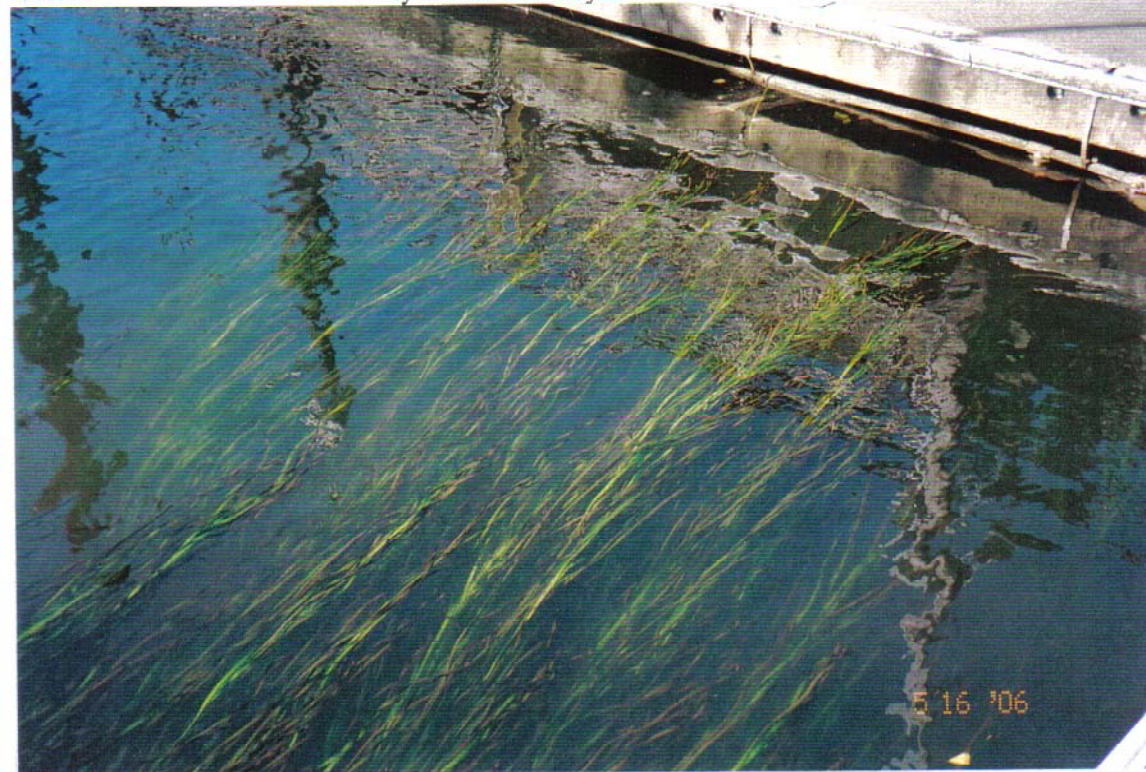


Location: North side of Highway 101 Bridge; looking south to under side of bridge. Note zero evidence of *Zostera* above and below the bridge.

Photo 2

by Wilbur E. Ternyik

5/16/06



Location: Port of Siuslaw commercial fishing boat moorage. Dense stand of *Zostera* just out board of north walkway.

Photo 3

by Wilbur E. Ternyik

5/16/06



Location: Port of Siuslaw commercial fishing boat moorage. Looking north from same walkway. *Zostera* stand just up river.

Photo 4

by Wilbur E. TERNYK

5/16/06



Location: Port of Siuslaw commercial fishing boat moorage. Looking SE from Boardwalk at Zostora areas shown in photos 2 & 3.

Photo 5

by Wilbur E. TERNYK

5/16/06



Location: Port of Siuslaw commercial fishing boat moorage. Same as photo 4 only further upstream. More Zostora beds growing in still water conditions.

Photo 6

by Wilbur E. TERNYIK

5/16/06



Location: Looking over mud flats just east of Port of Siuslaw property. Similar conditions but no Zostora.

Photo 7

by Wilbur E. TERNYIK

5/16/06



Location: Cushman Store looking downstream. Former Zostora beds now gone .



Photo 8

by Wilbur E. TERNYIK

5/16/06



Location: Lower Siuslaw estuary near Wild Winds Subdivision site. Right elevation and salinity but no *Zostora*.

Photo 9

by Wilbur E. TERNYIK

5/16/06



Location: Port of Siuslaw Boardwalk float area. *Zostora* and juvenile ?

## **APPENDIX F**

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Species Lists



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Oregon Fish and Wildlife Office

2600 SE 98<sup>th</sup> Avenue, Suite 100

Portland, Oregon 97266

Phone: (503) 231-6179 FAX: (503) 231-6195

June 5, 2008

Subject: Lists of threatened and endangered species that may occur in selected Oregon counties

### To Whom It May Concern:

This letter accompanies a species list(s) downloaded from our website (<http://www.fws.gov/oregonfwo/Species/Lists/RequestList.asp>), which shows threatened and endangered species that may occur within the area of your proposed project. The species list(s) fulfills the requirement of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems on which they depend may be conserved. Under section 7(a)(1) and 7(a)(2) of the Act and pursuant to 50 CFR 402 *et seq.*, Federal agencies are required to utilize their authorities to carry out programs which further species conservation and to determine whether projects may affect threatened and endangered species, and/or designated critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (NEPA) (42 U.S.C. 4332 (2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to the Biological Assessment be prepared to determine whether they may affect listed and proposed species or critical habitats. Recommended contents of a Biological Assessment are described in Enclosure A, as well as 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that threatened and endangered species and/or designated critical habitat may be affected by the project, the agency is required to consult with the Service following the requirements of the regulations that implement the Act (50 CFR 402).

The county species list(s) includes a list of candidate species under review for listing and those species that the Service considers "species of concern." Candidate species have no protection under the Act but are included for consideration as it is possible candidates could be listed prior to the completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.



If a proposed project may affect only candidate species or species of concern, you are not required to perform a Biological Assessment or evaluation or consult with the Service. However, the Service recommends minimizing impacts to these species to the extent possible in order to prevent potential future conflicts. Therefore, if early evaluation of the project indicates that it is likely to adversely impact a candidate species or species of concern, your agency may wish to request technical assistance from this office.

If your project includes communications or cell towers, you should be aware that migratory birds, another of our Trust Resources, can suffer significant mortality from collisions with towers. Further information on this issue can be obtained from the following web sites: <http://migratorybirds.fws.gov> (Click on “issues”), and <http://www.towerkill.com>. Please refer to the recently approved Service Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers (<http://www.fws.gov/migratorybirds/issues/towers/comtow.html>). We recommend its application to relevant projects. We also recommend the tower site evaluation form (found on the guidance webpage), which you may find useful in helping to determine the effects of your proposed project to endangered species and migratory birds.

The bald eagle (*Haliaeetus leucocephalus*) has recovered and was removed from the Federal List of Endangered and Threatened Wildlife and Plants in 2007. The bald eagle occurs in all Oregon counties, and the species continues to be protected under the Bald and Golden Eagle Protection Act. For more information on bald eagles, and for the Service’s “National Bald Eagle Management Guidelines,” please visit the Service’s regional webpage devoted to the bald eagle (<http://www.fws.gov/pacific/eagle/>).

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to investigate opportunities for incorporating conservation of threatened and endangered species into project planning processes as a means of complying with the Act. Please include a copy of this letter and any species lists downloaded from our website with any request for consultation or correspondence about your project that you submit to our office. If you have questions regarding your responsibilities under the Act, please contact Kevin Maurice at (503) 231-6179. For questions regarding listed salmon and steelhead trout, please contact NOAA Fisheries Service, 525 NE Oregon Street, Suite 500, Portland, Oregon 97232, (503) 230-5400.

Enclosure A

## **RESPONSIBILITIES OF FEDERAL AGENCIES UNDER SECTION 7(a) and (c) OF THE ENDANGERED SPECIES ACT**

### **SECTION 7(a) Consultation/Conference**

Section 7(a) of the Act requires:

1. Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;
2. Consultation with the U.S. Fish and Wildlife Service (Service) when a Federal action may affect a listed endangered or threatened species or designated critical habitat to insure that any action authorized, funded or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of designated critical habitat. The process is initiated by the Federal agency after it has determined if its action may affect a listed species; and
3. Conference with the Service when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat.

### **SECTION 7(c) Preparation of a Biological Assessment**

Section 7(c) of the Act requires Federal agencies or their designees to prepare a Biological Assessment (BA) for construction projects.<sup>1</sup> For actions that are not construction projects, we recommend that a biological evaluation similar to a BA be prepared to evaluate the effects of the proposed project on listed and proposed species and critical habitats. The purpose of the BA or biological evaluation is to identify listed and proposed species which are likely to be affected by a proposed project. The process is initiated by a Federal agency by requesting a list of threatened and endangered species and critical habitats. The BA or biological evaluation should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the species list, the accuracy of the species list should be informally verified with the Service. No irreversible commitment of resources is to be made during the preparation of the BA which would foreclose reasonable and prudent alternatives to jeopardy to listed species. Planning, design, and administrative actions may be taken; however, no construction may begin.

A biological assessment or biological evaluation should include the following information:

#### **1. Description of proposed action (project).**

Describe the following and attach any relevant maps, diagrams, or designs;

- **Who** is proposing the action?
- **Where** is the action? Be as specific as possible. Include maps, county, township, range, stream, and any other pertinent information.
- **What** is the proposed action? Describe what is planned, the objectives of the action, include designs, diagrams, and best management practices applied, etc.
- **How** is the action going to be implemented? Give specific details, such as what type

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<sup>1</sup>A construction project (or other undertaking having similar physical impacts) is a major Federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332. (2)c).

of equipment is used, how the action area will be accessed, etc.

- **When** will the action be implemented?

## **2. Description of listed and proposed species and critical habitat, status, distribution and habitat use by the species in the project area.**

Identify which listed, proposed and candidate species and critical habitats may potentially be affected (beneficially or adversely) by the action. Describe how the species use the project area. Assistance with this information can be obtained from local offices of the Service.

## **3. Description of the action area.**

Describe all areas affected by the proposed project. The action area refers to the area directly or indirectly affected by the proposed action; this area will usually be larger than the project footprint. Include on-site inspection or survey data, views of recognized experts (e.g., ODFW), and literature reviews.

## **4. Effects of the proposed action on listed and proposed species and designated or proposed critical habitat.**

Describe in detail the effects of the action on the species and their habitats including direct and indirect effects, as well as effects that are interrelated and interdependent effects. Summarize your analysis of all project effects.

## **5. Description of measures to minimize effects to listed species, and proposed project monitoring.**

Describe methods to be used to avoid, minimize and correct adverse short and long-term effects. Describe what will be monitored, who will monitor and the frequency of monitoring.

## **6. Determination of effect.**

Clearly state your final effects determination for each listed and proposed species and designated and proposed critical habitat. Effects determinations may be:

- no effect
- may affect, not likely to adversely affect (appropriate for actions that have only beneficial, insignificant, or discountable effects)
- may affect, likely to adversely affect (appropriate for actions with effects to listed species or designated critical habitat that are not entirely insignificant, discountable or wholly beneficial)

## **7. Attachments.**

Attachments should include all relevant information supporting the above categories such as maps, project design, drawings, specifications, pollution control plan, photos of project site and adjacent area, site survey data, and literature cited.

For more information on consultation under section 7 of the Endangered Species Act, visit the Service's national consultation website at <http://www.fws.gov/endangered/consultations/index.html>.

**FEDERALLY LISTED, PROPOSED, CANDIDATE SPECIES  
AND SPECIES OF CONCERN  
UNDER THE JURISDICTION OF THE FISH AND WILDLIFE SERVICE  
WHICH MAY OCCUR WITHIN LANE COUNTY, OREGON**

**LISTED SPECIES**

**Birds**

Marbled murrelet	<i>Brachyramphus marmoratus</i>	CH T
Western snowy (coastal) plover	<i>Charadrius alexandrinus nivosus</i>	CH T
Brown pelican	<i>Pelecanus occidentalis</i>	E
Short-tailed albatross	<i>Phoebastria albatrus</i>	E
Northern spotted owl	<i>Strix occidentalis caurina</i>	CH T

**Fish**

***Inland:***

Oregon chub	<i>Oregonichthys crameri</i>	E
Bull trout	<i>Salvelinus confluentus</i>	CH T

**Invertebrates**

***Insects:***

Fender's blue butterfly	<i>Icaricia icarioides fenderi</i>	CH E
Oregon silverspot butterfly	<i>Speyeria zerene hippolyta</i>	CH T

**Plants**

Willamette daisy	<i>Erigeron decumbens var. decumbens</i>	CH E
Bradshaw's desert parsley	<i>Lomatium bradshawii</i>	E
Kincaid's lupine	<i>Lupinus sulphureus ssp. kincaidii</i>	CH T
Nelson's checker-mallow	<i>Sidalcea nelsoniana</i>	T

**PROPOSED SPECIES**

**None**

No Proposed Endangered Species	PE
No Proposed Threatened Species	PT

**CANDIDATE SPECIES**

**Birds**

Streaked horned lark	<i>Eremophila alpestris strigata</i>
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**Reptiles and Amphibians**

***Inland:***

Oregon spotted frog	<i>Rana pretiosa</i>
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**SPECIES OF CONCERN**

**Mammals**

Pallid bat	<i>Antrozous pallidus pacificus</i>
White-footed vole	<i>Arborimus albipes</i>

**FEDERALLY LISTED, PROPOSED, CANDIDATE SPECIES  
AND SPECIES OF CONCERN  
UNDER THE JURISDICTION OF THE FISH AND WILDLIFE SERVICE  
WHICH MAY OCCUR WITHIN LANE COUNTY, OREGON**

Red tree vole  
Townsend's western big-eared bat  
California wolverine  
Silver-haired bat  
Long-eared myotis bat  
Fringed myotis bat  
Long-legged myotis bat  
Yuma myotis bat  
Camas pocket gopher

*Arborimus longicaudus*  
*Corynorhinus townsendii townsendii*  
*Gulo gulo luteus*  
*Lasionycteris noctivagans*  
*Myotis evotis*  
*Myotis thysanodes*  
*Myotis volans*  
*Myotis yumanensis*  
*Thomomys bulbivorus*

**Birds**

Northern goshawk  
Western burrowing owl  
Black tern  
Olive-sided flycatcher  
Black oystercatcher  
Harlequin duck  
Yellow-breasted chat  
Acorn woodpecker  
Lewis' woodpecker  
Mountain quail  
Band-tailed pigeon  
Oregon vesper sparrow  
Purple martin

*Accipiter gentilis*  
*Athene cunicularia hypugaea*  
*Chlidonias niger*  
*Contopus cooperi*  
*Haematopus bachmani*  
*Histrionicus histrionicus*  
*Icteria virens*  
*Melanerpes formicivorus*  
*Melanerpes lewis*  
*Oreortyx pictus*  
*Patagioenas fasciata*  
*Pooecetes gramineus affinis*  
*Progne subis*

**Reptiles and Amphibians**

Northern Pacific pond turtle  
Coastal tailed frog  
Oregon slender salamander  
Northern red-legged frog  
Foothill yellow-legged frog  
Cascades frog  
Southern torrent (seep) salamander

*Actinemys marmorata marmorata*  
*Ascaphus truei*  
*Batrachoseps wrighti*  
*Rana aurora aurora*  
*Rana boylei*  
*Rana cascadae*  
*Rhyacotriton variegatus*

**Fish**

Green sturgeon  
Malheur mottled sculpin  
Pacific lamprey  
Coastal cutthroat trout

*Acipenser medirostris*  
*Cottus bairdi ssp.*  
*Lampetra tridentata*  
*Oncorhynchus clarki ssp*

**Invertebrates**

***Insects:***

Tombstone Prairie farulan caddisfly  
Tombstone Prairie oligophlebodes caddisfly  
Insular blue butterfly  
One-spot rhyacophilan caddisfly

*Farula reaperi*  
*Oligophlebodes mostbento*  
*Plebejus saepiolus insulanus*  
*Rhyacophila unipunctata*

**Plants**

Pink sand-verbena  
Crenulate grape fern  
Cliff paintbrush  
Cold-water corydalis

*Abronia umbellata ssp. breviflora*  
*Botrychium crenulatum*  
*Castilleja rupicola*  
*Corydalis aquae-gelidae*



**FEDERALLY LISTED, PROPOSED, CANDIDATE SPECIES  
AND SPECIES OF CONCERN  
UNDER THE JURISDICTION OF THE FISH AND WILDLIFE SERVICE  
WHICH MAY OCCUR WITHIN LANE COUNTY, OREGON**

Willamette Valley larkspur  
Peacock larkspur  
Wayside aster  
Shaggy horkelia  
Thin leaved peavine  
Frye's Limbella  
Snake River goldenweed  
Whitetop aster  
Henderson's checker-mallow  
Hitchcock's blue-eyed grass

*Delphinium oreganum*  
*Delphinium pavonaceum*  
*Eucephalus vialis*  
*Horkelia congesta ssp. congesta*  
*Lathyrus holochlorus*  
*Limbella fryei*  
*Pyrrocoma radiata*  
*Sericocarpus rigidus*  
*Sidalcea hendersonii*  
*Sisyrinchium hitchcockii*

**DELISTED SPECIES**

**Birds**

American Peregrine falcon  
Bald eagle

*Falco peregrinus anatum*  
*Haliaeetus leucocephalus*

CH

**Definitions:**

Listed Species: An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future.

Proposed Species: Taxa for which the Fish and Wildlife Service or National Marine Fisheries Service has published a proposal to list as endangered or threatened in the Federal Register.

Candidate Species: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.

Species of Concern: Taxa whose conservation status is of concern to the U.S. Fish and Wildlife Service (many previously known as Category 2 candidates), but for which further information is still needed. Such species receive no legal protection and use of the term does not necessarily imply that a species will eventually be proposed for listing.

Delisted Species: A species that has been removed from the Federal list of endangered and threatened wildlife and plants.

**Key:**

E Endangered  
T Threatened  
CH Critical Habitat has been designated for this species  
PE Proposed Endangered  
PT Proposed Threatened  
PCH Critical Habitat has been proposed for this species

**Notes:**

**FEDERALLY LISTED, PROPOSED, CANDIDATE SPECIES  
AND SPECIES OF CONCERN  
UNDER THE JURISDICTION OF THE FISH AND WILDLIFE SERVICE  
WHICH MAY OCCUR WITHIN LANE COUNTY, OREGON**

Marine & Anadromous Species: Please consult the National Marine Fisheries Service (NMFS) (<http://www.nmfs.noaa.gov/pr/species/>) for marine and anadromous species. The National Marine Fisheries Service (NMFS) manages mostly marine and anadromous species, while the U.S. Fish and Wildlife Service manages the remainder of the listed species, mostly terrestrial and freshwater species.

\*Gray Wolf: On February 27, 2008, the Service published a final rule that established a distinct population segment and delisted the gray wolf in the northern Rocky Mountains (which includes a portion of Eastern Oregon, east of the centerline of Highway 395 and Highway 78 north of Burns Junction and that portion of Oregon east of the centerline of Highway 95 south of Burns Junction). Any wolves found west of this line in Oregon are still listed as endangered [see 73 FR 10514]. Gray wolves in Oregon are still State-listed as endangered, regardless of location.

## Endangered and Threatened Species Under NMFS' Jurisdiction

### List of Mammal Species under NMFS' Jurisdiction

(E = "["endangered"](#)"; T = "["threatened"](#)"; F = "["foreign"](#)"; n/a = not applicable\*)

#### Marine Mammals (21 listed "["species"](#))

Manatees and sea otters are also listed under the ESA, but fall under the jurisdiction of the U.S. Fish and Wildlife Service.

Species	Year Listed	Status	<a href="#">Critical Habitat*</a>	<a href="#">Recovery Plan*</a>
<b><a href="#">Cetaceans</a></b>				
• <a href="#">blue whale</a> ( <i>Balaenoptera musculus</i> )	1970	E	n/a	<a href="#">final</a>
• <a href="#">bowhead whale</a> ( <i>Balaena mysticetus</i> )	1970	E	n/a	no
• <a href="#">Chinese River dolphin / baiji</a> ( <i>Lipotes vexillifer</i> )	1989	E (F)	n/a	n/a
• <a href="#">fin whale</a> ( <i>Balaenoptera physalus</i> )	1970	E	n/a	<a href="#">draft</a>
• <a href="#">gray whale</a> (1 listed DPS) ( <i>Eschrichtius robustus</i> )				
o Western North Pacific	1970	E	n/a	no
• <a href="#">Gulf of California harbor porpoise / vaquita</a> ( <i>Phocoena sinus</i> )	1985	E (F)	n/a	n/a
• <a href="#">humpback whale</a> ( <i>Megaptera novaeangliae</i> )	1970	E	n/a	<a href="#">final</a>
• <a href="#">Indus River dolphin</a> ( <i>Platanista minor</i> )	1991	E (F)	n/a	n/a
• <a href="#">killer whale</a> (1 listed DPS) ( <i>Orcinus orca</i> )				
o Southern Resident	2005	E	<a href="#">final</a>	<a href="#">final</a>
• <a href="#">North Atlantic right whale</a> ( <i>Eubalaena glacialis</i> ) original listing as "northern right whale" -	2008 1970	E E	<a href="#">final</a>	<a href="#">final</a>
• <a href="#">North Pacific right whale</a> ( <i>Eubalaena japonica</i> ) original listing as "northern right whale" -	2008 1970	E E	<a href="#">final</a>	<a href="#">final</a>
• <a href="#">sei whale</a> ( <i>Balaenoptera borealis</i> )	1970	E	n/a	no
• <a href="#">Southern right whale</a> ( <i>Eubalaena australis</i> )	1970	E (F)	n/a	n/a
• <a href="#">sperm whale</a> ( <i>Physeter macrocephalus</i> )	1970	E	n/a	<a href="#">draft</a>

## Pinnipeds

• <a href="#">Caribbean monk seal</a> ( <i>Monachus tropicalis</i> )	1979	E	n/a	no
• <a href="#">Guadalupe fur seal</a> ( <i>Arctocephalus townsendi</i> )	1985	T (F)	n/a	n/a
• <a href="#">Hawaiian monk seal</a> ( <i>Monachus schauinslandi</i> )	1976	E	<a href="#">final</a>	<a href="#">final</a>
• <a href="#">Mediterranean monk seal</a> ( <i>Monachus schauinslandi</i> )	1970	E (F)	n/a	n/a
• <a href="#">Saimaa seal</a> ( <i>Phoca hispida saimensis</i> )	1993	E (F)	n/a	n/a
• <a href="#">Steller sea lion</a> (2 listed DPSs) ( <i>Eumetopias jubatus</i> )				
o Eastern	1990	T	<a href="#">final</a>	<a href="#">final</a>
o Western	1997	E	<a href="#">final</a>	<a href="#">final</a>
<i>original listing -</i>	1990	T		

\* **NOTE:** Critical habitat and recovery plans are not required for foreign species; critical habitat is also not required for species listed prior to the 1978 ESA amendments that added critical habitat provisions.

## List of Turtle Species under NMFS' Jurisdiction

(E = "endangered"; T = "threatened"; n/a = not applicable\*)

### Marine Turtles (8 listed "species")

Recovery plans for marine turtles are developed and implemented by NMFS and USFWS; the plans have been written separately for turtles in the Atlantic and Pacific oceans (and East Pacific for the green turtle) rather than for each listed species.

Species	Year Listed	Status	Critical Habitat*	Recovery Plan*
<ul style="list-style-type: none"> <li>• <a href="#">green turtle</a> (2 listed populations**) (<i>Chelonia mydas</i>) <ul style="list-style-type: none"> <li>○ Florida &amp; Mexico's Pacific coast breeding colonies</li> <li>○ all other areas</li> </ul> </li> </ul>	1978	E	<a href="#">final</a>	<a href="#">final</a>
<ul style="list-style-type: none"> <li>• <a href="#">hawksbill turtle</a> (<i>Eretmochelys imbricata</i>)</li> </ul>	1970	E	<a href="#">final</a>	<a href="#">final</a>
<ul style="list-style-type: none"> <li>• <a href="#">Kemp's ridley turtle</a> (<i>Lepidochelys kempi</i>)</li> </ul>	1970	E	n/a	<a href="#">final</a>
<ul style="list-style-type: none"> <li>• <a href="#">leatherback turtle</a> (<i>Dermochelys coriacea</i>)</li> </ul>	1970	E	<a href="#">final</a>	<a href="#">final</a>
<ul style="list-style-type: none"> <li>• <a href="#">loggerhead turtle</a> (<i>Caretta caretta</i>)</li> </ul>	1978	T	n/a	<a href="#">final</a>
<ul style="list-style-type: none"> <li>• <a href="#">olive ridley turtle</a> (2 listed populations**) (<i>Lepidochelys olivacea</i>) <ul style="list-style-type: none"> <li>○ Mexico's Pacific coast breeding colonies</li> <li>○ all other areas</li> </ul> </li> </ul>	1978	E	n/a	<a href="#">final</a>
	1978	T	n/a	<a href="#">final</a>

\* **NOTE:** Critical habitat and recovery plans are not required for foreign species; critical habitat is also not required for species listed prior to the 1978 ESA amendments that added critical habitat provisions.

\*\* These populations were listed before the 1978 ESA amendments that restricted population listings to "distinct population segments of vertebrate species."

**List of Fish Species under NMFS' Jurisdiction**

(E = "endangered"; T = "threatened"; F = "foreign"; n/a = not applicable\*)

**Marine and Anadromous Fish (34 listed "species")**

Species	Year Listed	Status	Critical Habitat*	Recovery Plan*
<ul style="list-style-type: none"> <li>• <a href="#">Atlantic salmon</a> (1 listed DPS) (<i>Salmo salar</i>) <ul style="list-style-type: none"> <li>○ Gulf of Maine</li> </ul> </li> </ul>	2000	E	no	<a href="#">final</a>
<ul style="list-style-type: none"> <li>• <a href="#">Chinook salmon</a> (9 listed ESUs) (<i>Oncorhynchus tshawytscha</i>) <ul style="list-style-type: none"> <li>○ <a href="#">California coastal</a></li> <li>○ <a href="#">Central Valley spring-run</a></li> <li>○ <a href="#">Lower Columbia River</a></li> <li>○ <a href="#">Upper Columbia River spring-run</a></li> <li>○ <a href="#">Puget Sound</a></li> <li>○ <a href="#">Sacramento River winter-run</a></li> <li>○ <a href="#">Snake River fall-run</a></li> <li>○ <a href="#">Snake River spring/ summer-run</a></li> <li>○ <a href="#">Upper Willamette River</a></li> </ul> </li> </ul>	1999**	T	<a href="#">final</a>	<a href="#">in process</a>
	1999**	T	<a href="#">final</a>	<a href="#">in process</a>
	1999**	T	<a href="#">final</a>	<a href="#">in process</a>
	1999**	E	<a href="#">final</a>	<a href="#">final</a>
	1999**	T	<a href="#">final</a>	<a href="#">final</a>
	1994**	E	<a href="#">final</a>	<a href="#">in process</a>
	1992**	T	<a href="#">final</a>	<a href="#">in process</a>
	1992**	T	<a href="#">final</a>	<a href="#">in process</a>
	1999**	T	<a href="#">final</a>	<a href="#">in process</a>
<ul style="list-style-type: none"> <li>• <a href="#">chum salmon</a> (2 listed ESUs) (<i>Oncorhynchus keta</i>) <ul style="list-style-type: none"> <li>○ <a href="#">Columbia River</a></li> <li>○ <a href="#">Hood Canal summer-run</a></li> </ul> </li> </ul>	1999**	T	<a href="#">final</a>	<a href="#">in process</a>
	1999**	T	<a href="#">final</a>	<a href="#">final</a>
<ul style="list-style-type: none"> <li>• <a href="#">coho salmon</a> (4 listed ESUs) (<i>Oncorhynchus kisutch</i>) <ul style="list-style-type: none"> <li>○ <a href="#">Central California coast</a></li> <li>○ <i>original listing -</i></li> <li>○ <a href="#">Lower Columbia River</a></li> <li>○ <a href="#">Oregon coast</a></li> <li>○ <a href="#">Southern Oregon &amp; Northern California coasts</a></li> </ul> </li> </ul>	2005**	E	<a href="#">final</a>	<a href="#">in process</a>
	1996**	T		
	2005**	T	in process	<a href="#">in process</a>
	2008	T	<a href="#">final</a>	
	1997**	T	<a href="#">final</a>	<a href="#">in process</a>
<ul style="list-style-type: none"> <li>• <a href="#">green sturgeon</a> (1 listed DPS) (<i>Acipenser medirostris</i>) <ul style="list-style-type: none"> <li>○ southern DPS</li> </ul> </li> </ul>	2006	T	no	no
<ul style="list-style-type: none"> <li>• <a href="#">Gulf sturgeon</a> (<i>Acipenser oxyrinchus desotoi</i>)</li> </ul>	1991	T	<a href="#">final</a>	<a href="#">final</a>
<ul style="list-style-type: none"> <li>• <a href="#">shortnose sturgeon</a> (<i>Acipenser brevirostrum</i>)</li> </ul>	1967	E	n/a	<a href="#">final</a>

• <a href="#">sockeye salmon</a> (2 listed ESUs) ( <i>Oncorhynchus nerka</i> )					
○ <a href="#">Ozette Lake</a>	1999**	T	<a href="#">final</a>	<a href="#">in process</a>	
○ <a href="#">Snake River</a>	1991**	E	<a href="#">final</a>	<a href="#">in process</a>	
• <a href="#">smalltooth sawfish</a> (1 listed DPS) ( <i>Pristis pectinata</i> )					
○ U.S. portion of range	2003	E	no	<a href="#">draft</a>	
• <a href="#">steelhead trout</a> (11 listed DPSs) ( <i>Oncorhynchus mykiss</i> )					
○ <a href="#">Puget Sound</a>	2007	T	no	no	
○ <a href="#">Central California coast</a>	1997**	T	<a href="#">final</a>	<a href="#">in process</a>	
○ <a href="#">Snake River Basin</a>	1997**	T	<a href="#">final</a>	<a href="#">in process</a>	
○ <a href="#">Upper Columbia River</a>	2006**	T	<a href="#">final</a>	<a href="#">final</a>	
original listing -	1997**	E			
○ <a href="#">Southern California</a>	1997**	E	<a href="#">final</a>	<a href="#">in process</a>	
○ <a href="#">Middle Columbia River</a>	1999**	T	<a href="#">final</a>	<a href="#">in process</a>	
○ <a href="#">Lower Columbia River</a>	1998**	T	<a href="#">final</a>	<a href="#">in process</a>	
○ <a href="#">Upper Willamette River</a>	1999**	T	<a href="#">final</a>	<a href="#">in process</a>	
○ <a href="#">Northern California</a>	2000**	T	<a href="#">final</a>	<a href="#">in process</a>	
○ <a href="#">South-Central California coast</a>	1997**	T	<a href="#">final</a>	<a href="#">in process</a>	
○ <a href="#">California Central Valley</a>	1998**	T	<a href="#">final</a>	<a href="#">in process</a>	
• <a href="#">totoaba</a> ( <i>Totoaba macdonaldi</i> )	1979	E (F)	n/a	n/a	

\* **NOTE:** Critical habitat and recovery plans are not required for foreign species; critical habitat is also not required for species listed prior to the 1978 ESA amendments that added critical habitat provisions.

\*\* All Pacific salmonid listings were revisited in 2005 and 2006. Only the salmonids whose status changed as a result of the review will show the revised date; for all others, only the original listing date is shown. For more information on the listing history, please click on the link for each ESU/DPS.

## List of Invertebrate and Plant Species under NMFS' Jurisdiction

(E = "[endangered](#)"; T = "[threatened](#)")

### Marine Invertebrates (3 listed "[species](#)")

Species	Year Listed	Status	<a href="#">Critical Habitat*</a>	<a href="#">Recovery Plan*</a>
• <a href="#">elkhorn coral</a> ( <i>Acropora palmata</i> )	2006	T	<a href="#">proposed</a> [pdf]	no
• <a href="#">staghorn coral</a> ( <i>Acropora cervicornis</i> )	2006	T	<a href="#">proposed</a> [pdf]	no
• <a href="#">white abalone</a> ( <i>Haliotis sorenseni</i> )	2001	E	<a href="#">not prudent</a> [pdf]	<a href="#">draft</a>

### Marine Plants (1 listed "[species](#)")

Species	Year Listed	Status	<a href="#">Critical Habitat*</a>	<a href="#">Recovery Plan*</a>
• <a href="#">Johnson's seagrass</a> ( <i>Halophila johnsonii</i> )	1999	T	<a href="#">final</a>	<a href="#">final</a>

\* **NOTE:** Critical habitat and recovery plans are not required for foreign species; critical habitat is also not required for species listed prior to the 1978 ESA amendments that added critical habitat provisions.



## List of Candidate, Proposed, and Delisted Species under NMFS' Jurisdiction

### Candidates for Listing (14 candidate "[species](#)")

Species	Year	Federal Register notice
<ul style="list-style-type: none"> <li>• <a href="#">Atlantic salmon</a> (<i>Salmo salar</i>)                             <ul style="list-style-type: none"> <li>○ Gulf of Maine (other populations in streams and rivers in Maine outside the range of 2006 the listed Gulf of Maine DPS); anadromous</li> </ul> </li> </ul>	2006	<a href="#">71 FR 61022</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">Atlantic sturgeon</a> (<i>Acipenser oxyrinchus oxyrinchus</i>)</li> </ul>	2006	<a href="#">71 FR 61022</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">bearded seal</a> (<i>Erignathus barbatus</i>)</li> </ul>	2008	<a href="#">73 FR 16617</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">bocaccio</a> (<i>Sebastes paucispinis</i>)                             <ul style="list-style-type: none"> <li>○ Puget Sound</li> </ul> </li> </ul>	2008	<a href="#">73 FR 14195</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">canary rockfish</a> (<i>Sebastes pinniger</i>)                             <ul style="list-style-type: none"> <li>○ Puget Sound</li> </ul> </li> </ul>	2008	<a href="#">73 FR 14195</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">cusk</a> (<i>Brosme brosme</i>)</li> </ul>	2007	<a href="#">72 FR 10710</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">greenstripe rockfish</a> (<i>Sebastes elongatus</i>)                             <ul style="list-style-type: none"> <li>○ Puget Sound</li> </ul> </li> </ul>	2008	<a href="#">73 FR 14195</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">Pacific eulachon/smelt</a> (<i>Thaleichthys pacificus</i>)                             <ul style="list-style-type: none"> <li>○ WA, OR, and CA</li> </ul> </li> </ul>	2008	<a href="#">73 FR 13185</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">Pacific herring</a> (<i>Clupea pallasii</i>)                             <ul style="list-style-type: none"> <li>○ Southeast Alaska</li> </ul> </li> </ul>	2008	<a href="#">73 FR 19824</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">redstripe rockfish</a> (<i>Sebastes proriger</i>)                             <ul style="list-style-type: none"> <li>○ Puget Sound</li> </ul> </li> </ul>	2008	<a href="#">73 FR 14195</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">ringed seal</a> (<i>Phoca hispida</i>)</li> </ul>	2008	<a href="#">73 FR 16617</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">ribbon seal</a> (<i>Histiophoca fasciata</i>)</li> </ul>	2008	<a href="#">73 FR 16617</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">spotted seal</a> (<i>Phoca largha</i>)</li> </ul>	2008	<a href="#">73 FR 16617</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">yelloweye rockfish</a> (<i>Sebastes ruberrimus</i>)                             <ul style="list-style-type: none"> <li>○ Puget Sound</li> </ul> </li> </ul>	2008	<a href="#">73 FR 14195</a> [pdf]

### Proposed for Listing (2 proposed "[species](#)")

Species	Year Proposed	Status
<ul style="list-style-type: none"> <li>• <a href="#">black abalone</a> (<i>Haliotis cracherodii</i>)</li> </ul>	2008	<a href="#">proposed endangered</a> [pdf]
<ul style="list-style-type: none"> <li>• <a href="#">beluga whale</a> (1 proposed DPS) (<i>Delphinapterus leucas</i>) <ul style="list-style-type: none"> <li>o Cook Inlet</li> </ul> </li> </ul>	2007	<a href="#">proposed endangered</a> [pdf]

**Delisted Species** (1 delisted "[species](#)")

Species	Year Listed	Year Delisted	Status
<ul style="list-style-type: none"> <li>• <a href="#">gray whale</a> (1 delisted DPS) (<i>Eschrichtius robustus</i>) <ul style="list-style-type: none"> <li>o Eastern North Pacific</li> </ul> </li> </ul>	1970	1994	<a href="#">Delisted from ESA</a> [pdf]; remains protected under MMPA

## **APPENDIX G**

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State Listed Species

## Bald Eagle

The Bald eagle is designated as a Threatened species in the State of Oregon and is protected under the Oregon ESA. Bald eagles are present in the vicinity of the project year-round. The ORNHIC reports a bald eagle nest within 2 miles of the project area (ORNHIC 2008). This nest is located across the river from the project area, more than 1,000 feet away where there is suitable habitat for bald eagle nesting. The nest may be in line of sight from portions of the project area. The project area lies along the highly developed shoreline of the city of Florence, where large trees suitable for bald eagle perching are limited. However, there are areas of mature and middle-aged forest across the river from the project area that provide appropriate perching and nesting habitat. Here there are large conifers and patches of mature forest stands and middle-aged forest stands (Ecotrust 2002).

Wintering eagles may be present in the Florence area during construction. Low numbers of eagles are observed yearly during the Christmas bird count (Audubon 2007); however, the ORNHIC did not report any wintering concentrations of eagles or communal winter night roosts within 2 miles of the project site (ORNHIC 2008).

The Siuslaw River Bridge Interpretive Wayside project will comply with the National Bald Eagle Management guidelines published by the USFWS in May 2007 (USFWS 2007). According to these guidelines, activities such as those associated with construction of the interpretive wayside should be conducted at a minimum distance of 660 feet from a bald eagle nest. Pile driving for installation of the viewing pier will be conducted using a vibratory hammer and will occur during three days in December, prior to the beginning of the eagle breeding season in January. The remaining construction activities will occur in the winter from November 1 through February 15, and may overlap the eagle breeding season, but according to the guidelines, will occur at a far enough distance from suitable eagle nesting and foraging habitat that eagles will not be disturbed.

## Pink sand-verbena

Pink sand-verbena, *Abronia umbellata ssp. breviflora*, is designated as an Endangered species in the State of Oregon. It was historically found along the Pacific coast from northern California to British Columbia. Today it is reported to have fewer than 20 extant occurrences in Oregon and California. In 2000, two plants were found on Vancouver Island, B.C., Canada, but it has not been confirmed as to whether these are *Abronia umbellata ssp. breviflora* or *Abronia umbellata ssp. acutalata*. *Abronia umbellata ssp. breviflora* is limited to unstabilized coastal sand dunes (NatureServe 2008b). Since there are no coastal sand dunes on the project site, the project will have no potential to affect this species.

## References

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- ORNHIC (Oregon Natural Heritage Information Center). 2008. Database search results for rare, threatened, and endangered species occurrences in the vicinity of township 18S, Range 12W, Section 34, WM. Oregon State University Institute for Natural Resources. Portland, Oregon. June 26, 2008.
- USFWS (U.S. Fish and Wildlife Service). 2007. National Bald Eagle Management Guidelines. U.S. Fish and Wildlife Service. May 2007.

**APPENDIX H**

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WETLAND DELINEATION REPORT FOR PARKING AREA SITE



Engineering +  
Environmental

# **Wetland Delineation Report**

Siuslaw River Bridge Interpretive Wayside  
Florence, Oregon

Prepared for:  
Branch Engineering  
Springfield, Oregon

September 2007  
PBS Project No: 75032.000

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## 1.0 INTRODUCTION

Branch Engineering contracted with PBS Engineering + Environmental (PBS) to delineate wetlands at the site proposed for the Siuslaw River Bridge Interpretive Wayside in Florence, Oregon. This wetland delineation has been performed in compliance with accepted standards for professional wetland biologists and applicable federal, state and local ordinances. The wetland boundaries described in this report represent PBS's best professional judgment based on the circumstances and site conditions encountered at the time of this study. The final determination of the wetland boundary and required setback and buffer will be made by local, state, and federal jurisdictions.

## 2.0 SITE DESCRIPTION

### 2.1 Project Location

The property is in the City of Florence, Lane County, Oregon, on the north bank of the Siuslaw River under the Siuslaw River Bridge (Highway 101) between the Siuslaw River and Bay Street (Figures 1 and 2). The project will be located within the Oregon Department of Transportation (ODOT) right-of-way. The site is in Section 34, Township 18S, Range 12W, Willamette Meridian (Figure 2). The approximate center of the property is at latitude 43° 57' 57.04" N and longitude 124° 06' 28.64" W. The site is within the lower Siuslaw River subwatershed of the Siuslaw River.

### 2.2 Site Description

The project site is located below the Siuslaw River Bridge within the Siuslaw River Estuary at river mile 4.3. The Siuslaw River Bridge is a double-leaf bascule drawspan flanked by two reinforced concrete tied arches, identical to those used in the original Alsea Bay Bridge. The drawspan is 140 feet long and both arches are 154 feet long. The total length of the bridge is 1,568 feet. The bridge includes four Art Deco-style obelisks, which house mechanical equipment and living quarters for the bridge operator. The bridge was designed by Conde McCullough and built by the Mercer-Fraser Company. The bridge opened in 1936.

The project site is approximately 10,300 square feet in size and is bordered on the north by Bay Street, on the east by a business, and on the west by condominiums currently under construction. The business was constructed sometime during the 1980s. Based on historical aerial photographs, lands adjacent to bridge have been developed since at least 1939. The site extends south into the Siuslaw Estuary.

#### 2.2.1 Soils

The Lane County Soil Survey shows one soil map unit, Waldport-Urban Land Complex, 0 to 12 percent slopes, in the study area identified for this project (Figures 3 and 4). The Waldport soil is not classified as hydric but does have a hydric inclusion (NRCS 2007).

The Waldport Series consists of deep, excessively drained soils on stabilized sand dunes. These soils formed in eolian sand of mixed origin on slopes ranging from 0 to 70 percent. Typically, the surface layer is covered with about 3 inches of leaves, needles, and twigs. The surface layer is typically about 5 inches thick and consists of very dark gray (10YR 3/1) and very dark grayish brown (10YR 3/2) fine sand. The substratum (to 60 inches or more) is yellowish brown (10YR 5/4) fine sand.

### 2.2.2 Vegetation

The project site includes three distinct areas: a mudflat with no vegetation, an area dominated by herbaceous vegetation, and an area dominated by woody vegetation. The mudflat is within the intertidal portion of the estuary. It is exposed during low tides and inundated during high tide. Herbaceous vegetation borders the mudflat and separates the mudflat from the woody vegetation along Bay Street. The herbaceous area includes both wetland and upland areas. Plant species include Baltic rush (*Juncus balticus*), bentgrass (*Agrostis sp.*), birds-foot trefoil (*Lotus corniculatus*), gumweed (*Grindelia sp.*), meadow barley (*Hordeum brachyantherum*), Pacific silverweed (*Potentilla anserina ssp. pacifica*), pickleweed (*Salicornia virginica*), quackgrass (*Elymus repens*), reed canarygrass (*Phalaris arundinacea*), seashore saltgrass (*Distichlis spicata*), seaside plantain (*Plantago maritima*), and tall fescue (*Festuca arundinacea*). The woody vegetation along Bay Street includes western red cedar (*Thuja plicata*), Pacific wax-myrtle (*Myrica californica*), butterfly bush (*Buddleja davidii*), English holly (*Ilex aquifolium*), Hooker willow (*Salix hookeriana*), salmonberry (*Rubus spectabilis*), Scotch broom (*Cytisus scoparius*), Himalayan blackberry (*Rubus armeniacus*), and evergreen blackberry (*Rubus laciniatus*).

### 2.2.3 Topography

The project area consists of one parcel between Bay Street and the Siuslaw River Estuary below the Siuslaw River Bridge. Elevation at the site ranges from below sea level to 10 feet above sea level. The slope is generally oriented north to south from Bay Street down to the mudflats. Near the southern edge of the vegetated area there is a slight dip in elevation where a wetland area has formed (Appendix E). Mean High Water (MHW) and Mean Low Water (MLW) are at 2.90 feet above sea level and 2.50 feet below sea level, respectively. A 15-inch diameter stormwater outfall is at the center of the site (Appendix B).

## 3.0 DELINEATED WETLANDS

PBS biologists investigated the entire property for wetlands and waters of the state. Two wetlands were delineated during the investigation adjacent to the Siuslaw Estuary. Both have a Cowardin class of estuarine intertidal emergent (E2EM). The project site also includes an area of intertidal mud flats, which have a Cowardin class of estuarine intertidal unconsolidated shore (E2US). The wetlands were labeled "A" and "B". Wetlands A and B are approximately 1,370 and 270 square feet, respectively. Approximately 520 square feet of Wetland A is located between the western property boundary and the toe of the fill slope on the adjacent property. The Siuslaw Estuary borders the southern boundary of the wetlands.

### Hydrology

The hydrology for these wetlands is fed by precipitation, groundwater, and surface water from the adjacent estuary. Both wetlands have a hydrogeomorphic (HGM) classification of Estuarine Fringe Embayment (EFB) and border open water or mud flats depending on the tide. No inundation or saturation of soils was observed, but drift carried by tidal action was present in both wetlands and oxidation around live roots was present in some areas. These two indicators plus the FAC-neutral test were used to demonstrate the presence of wetland hydrology.

Groundwater in the area generally flows from north to south. Well logs show groundwater in the area varying from 3 to 30 feet below the ground surface (Branch Engineering 2007). Likewise, a geotechnical investigation found groundwater at 3 feet below ground surface (Branch Engineering 2007).

The wetlands are regularly inundated by tidal action. The highest tide during the fieldwork was 5.7 feet. High tides from late winter to mid summer 2007 commonly exceeded the highest tide during the fieldwork (Table 1). The highest monthly tides from late winter to mid summer 2007 were 1.5 to 2.1 feet higher than the highest tide during the fieldwork (Table 1).

### **Soils**

Soils appeared to have been disturbed by tidal action or past activities on the site. The size of the shrubs and trees along Bay Street indicates that any disturbance to uplands occurred many years ago. However, disturbance by tidal action may have occurred in the recent past. Indicators of past disturbance included crushed rock, bits of plastic, and pieces of woody debris below the ground surface.

**Table 1: Tides for the Siuslaw River at Florence exceeding 6.0 and 6.5 feet from late winter to mid summer 2007.**

Month	Highest Tide (feet) <sup>1</sup>	Number of Tides <sup>2</sup>	
		≥ 6.0 feet	≥ 6.5 feet
February	7.5	36 (33%)	23 (21%)
March	7.7	31 (26%)	20 (17%)
April	7.8	23 (20%)	12 (10%)
May	7.7	30 (17%)	14 (12%)
June	7.6	20 (17%)	13 (11%)
July	7.2	21 (18%)	17 (14%)

Source: NOAA Tides and Currents.

<sup>1</sup> Tidal heights are referenced to mean lower low water and are not directly comparable with topographic elevations.

<sup>2</sup> Percentages were calculated by dividing the number of tides with predicted heights exceeding the 6.0 or 6.5 feet by the number of tides during the month.

The observed soils were different than those mapped for the site. Soils on the site are dominated by sand; however, areas of silt loam and subsurface organic layers were also present. Prior disturbance to the site, historical activities on adjacent properties, and tidal action have no doubt contributed to the variability of the soils at the project site. The soils near Bay Street were dry and varied from a thick layer of sand to sand underlain by crushed rock. These soils possessed no hydric soil indicators. Soils in the wetland plots included layers of mucky peat or silt loam. Hydric soil indicators of these soils included high organic content and low chroma matrix. Redox concentrations were present in most plots but they were not used as indicators of hydric soils. The soil matrix color for the sand was olive brown (2.5Y 4/3), which was consistent across the site. The soil matrix color for the mucky peat and silt loam was very dark gray (10YR 3/1), very dark gray brown (10YR 3/2), and dark gray brown (10YR 4/2). The redox concentration color was yellowish-red (5YR 4/6).

### **Plant Community**

The plant communities in the wetlands contained only a few species. The principal species within the wetlands were pickleweed (*Salicornia virginica*), Baltic rush (*Juncus balticus*), seashore saltgrass (*Distichlis spicata*), Pacific silverweed (*Potentilla anserina* ssp. *pacifica*), seaside plantain (*Plantago maritima*), and gumweed (*Grindelia* sp.).

### **Adjacent Upland, Wetland Boundary and Rationale for Delineation**

Adjacent uplands had distinctly different soils and vegetation. Drift lines provided some evidence of the presence of water on the site, but they did not provide definitive evidence of sufficient hydrology during the growing season. Therefore, the combination of soils and plant indicators were used to define the wetland boundary. The typical upland soils were either excessively well drained (e.g., entirely sand) or possessed no hydric soil indicators (e.g., low matrix chroma, redox concentrations, or high organic content). Plant species along the upland edge of the wetland included reed canarygrass (*Phalaris arundinacea*), quackgrass (*Elymus repens*), tall fescue (*Festuca arundinacea*), giant vetch (*Vicia nigricans* ssp. *gigantea*), Hooker willow (*Salix hookeriana*), Italian ryegrass (*Lolium multiflorum*), meadow barley (*Hordeum brachyantherum*), curly dock (*Rumex crispus*), and bentgrass (*Agrostis* sp.). In some cases, the plant species observed in the upland plots met the vegetation criterion. In these cases, however, the soils clearly did not meet the soils criterion. Because the site commonly receives over 75XXX inches of rainfall a year and water from the estuary, the presence of wetland species in the adjacent uplands is not unexpected.

#### **3.1 Wetland A**

Wetland A is approximately 1,370 square feet and lies in the southwest corner of the project site. Approximately 520 square feet of Wetland A is on the adjacent property to the west. The wetland begins at an eroded bank nearest the water. The topography rises gradually to the north with an occasional small depression where water could collect. A steep bank near the western property boundary forms one edge of the wetland. This bank appears to have been created by placing fill on the adjacent property. Vegetation within the wetland was distinctly different from the upland vegetation and characteristic of intertidal estuarine wetlands of Oregon.

#### **3.2 Wetland B**

Wetland B is approximately 270 square feet and lies in the southeast corner of the project site. The wetland begins at an eroded bank nearest the water. The topography rises gradually to the north. The business adjacent to the eastern property boundary has been constructed on piles, so no separation exists between the wetland and the adjacent property. No vegetation was present on the adjacent property except at the very margins where sunlight could reach the ground. Vegetation in Wetland B was dominated by the same species observed in Wetland A.

#### **3.3 Site Alterations Pertaining to Waters and Wetlands**

Construction of the Siuslaw River Bridge and other activities (e.g., installing a stormwater line) may have previously altered waters and wetlands at the project site. Examination of soils at the site detected crushed rock below the soil surface, suggesting filling associated with the bridge or stormwater line construction or other activity. However, any potential alteration to waters and wetlands at the site are old based on the size and condition of vegetation.

## 4.0 METHODS

The subject property was examined for wetlands and waters of the US and state. Wetlands were delineated using the Routine Determination Method for delineating wetlands described in the US Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987). Preliminary preparation prior to the on-site investigation consisted of collecting and reviewing existing data and information that included the following:

- National wetland inventory map
- Lane County local wetland inventory map
- Lane County soil survey and hydric soils list
- Lane County tax lot information

Data were recorded for six sample plots. Sample plots were established until paired samples (one wetland and one non-wetland) were obtained to accurately determine the location of the wetland boundary. Plot locations were chosen to best represent each wetland and the adjacent upland. Many of the plot locations were informed by anecdotal soil samples, which identified the transition between hydric and non-hydric soils. Changes in plant community were also used to determine the location of sample plots.

Other criteria, such as topography and visible hydrologic indicators, were also used to determine the location of the wetland boundary. Photographs were taken to document site conditions at each wetland (Appendix B). The wetland boundary and sample plots were marked in the field using pink wire flags. Wetland boundary flags were labeled with sequential numbers. Sample plots were labeled with SP (an abbreviation for sample plot) and a sequential number.

### 4.1 Soils

Soil profile holes were dug to assess the soil characteristics and the presence of subsurface hydrology. Soil colors, texture, and presence of redoximorphic features were recorded and hydric soils were determined using the indicators described in the 1987 Manual. Munsell Soil Color Charts (Munsell Color 2000) was used to determine the color of the soil matrix and redoximorphic features. The sample point locations were selected to best characterize the conditions at the site.

### 4.2 Hydrology

Visible observations of surface and subsurface hydrology were noted on the data sheets. No saturated soils or free water were observed at the sample points.

### 4.3 Vegetation

Vegetation was characterized for the uplands and wetlands and recorded at each sample point. PBS biologists made visual estimates of percent cover of each species occurring at a sample plot within a 3-foot radius of each sample point.

Dominant species were determined using the 50/20 rule. Dominant plant species for each stratum are those that cumulatively make up the most abundant 50 percent, plus any additional species with 20 percent or more cover. The wetland indicator status for each dominant plant species was used to determine the presence or absence of a wetland (hydrophytic) plant community based on the wetland plant list for Region 9 (Reed 1988, 1993). The indicator status describes how likely a species is to be found in wetlands (Appendix C).

## 5.0 COMPARISON TO EXISTING WETLAND INVENTORY

The National Wetland Inventory (NWI) shows an estuarine/marine wetland on either side of the Siuslaw River Bridge within the project area (Figure 6). The Local Wetland Inventory (LWI) for Lane County does not show any wetlands within the project area (Figure 6).

## 6.0 MAPPING METHOD

A professional land surveyor surveyed the sample plot locations and wetland boundaries.

## 7.0 FIELD WORK

Skip Haak and Elisabeth Bowers conducted fieldwork on July 19 and 20, 2007. The fieldwork included collecting sample plot data, observing and documenting general site conditions, flagging the wetland boundaries, and taking photographs.

## 8.0 CLIMATE AND RECENT PRECIPITATION

Lane County features three unique climate zones: the Willamette Valley, Coast, and Cascade Mountains. The project site is located within the Oregon Coast Zone.

Wet winters, relatively dry summers, and mild temperatures throughout the year characterize the coastal zone. The area's heavy precipitation results from moist air masses moving off the Pacific Ocean, especially during winter months. Mean high temperatures for Honeyman State Park, located three miles south of Florence, range from 50.7°F in January to 69.5°F in August. Mean low temperatures range from 37.9°F in January to 51.1°F in August. Precipitation levels are considered normal when they fall between values for which there is a 30% chance of more than that amount and a 30% chance of less than that amount (Table 2). From October 2006 through June 2007, precipitation was below normal six of the nine months (Table 2). Only precipitation during November 2006 and February and March 2007 was at or above normal. Daily precipitation totals for July prior to the fieldwork are listed in Table 3.

**Table 2: Monthly precipitation data for Honeyman State Park, Oregon.**

Month	Precipitation (inches)			
	Recorded Totals	1971-2000		Average
		30% chance will have		
		Less than	More than	
October-06	1.94	2.94	6.51	5.34
November-06	17.68	7.72	12.84	10.85
December-06	7.97	8.28	14.07	11.84
January-07	6.53	6.84	12.49	10.40
February-07	10.54	6.28	10.31	8.73
March-07	7.29	6.58	10.34	8.83
April-07	3.33	3.75	6.45	5.42
May-07	0.93	2.22	4.54	3.74
June-07	0.84	1.36	2.94	2.42
July-07	0.53	month to date		0.92

**Table 3: Daily precipitation totals for Florence for July prior to and during fieldwork.**

<b>Date</b>	<b>Precipitation (in.)</b>
July 1	0.00
July 2	0.00
July 3	0.00
July 4	0.00
July 5	0.00
July 6	0.00
July 7	0.00
July 8	0.00
July 9	0.00
July 10	0.00
July 11	0.17
July 12	0.00
July 13	0.00
July 14	0.00
July 15	0.05
July 16	0.00
July 17	0.00
July 18	0.37
July 19	0.15
July 20	0.30

Source: Roger Cunningham, Florence, Oregon.

## 9.0 RESULTS AND CONCLUSIONS

### 9.1 Summary

The entire property was investigated for the presence of wetlands. Two wetlands were delineated on the site and have a total area of approximately 1,120 square feet on the property. The Siuslaw Estuary borders the southern boundary of the wetlands. Depending on the tide, the area along the southern boundary is either open water or tidal mudflat. The wetland boundary is based on the presence of wetland plant communities, wetland soils, and hydrologic indicators within the wetland, and conditions in adjacent areas lacking indicators of one or more of the wetland criteria.

### 9.2 Growing Season

The Natural Resources Conservation Service (NRCS) defines the growing season as that portion of the year when soil temperatures at 20 inches below the soil surface are equal to or greater than biological zero (41°F or 5°C). When soil temperature data are not available, current national guidance for delineation of wetlands is to use the closest and best available weather station data to estimate the length of the growing season. Current national guidance calls for use of the period with a 50% probability of an air temperature of 28°F or higher (Environmental Laboratory 1987).

Based on the 28°F standard and climatic data for Honeyman State Park, the growing season is approximately 317 days at least 50% of the time, extending from February 2 to December 15 (NRCS 2007). Plants in the study area were actively growing at the time of the site visit in July 2007.

### 9.3 Regulatory Context

Wetlands and streams that are tributary to navigable waters are regulated as “Waters of the United States” by the US Army Corps of Engineers (Corps) under § 404 of the Clean Water Act. The Oregon Department of State Lands (DSL) regulates waters and wetlands, navigable and non-navigable, for the purposes of the Removal-Fill Law as “waters of the state” (OAR 141-090-0005 to 0055). The Corps regulates fill in and discharges to waters of the US. DSL regulates both fill and excavation in waters of the state where the activity exceeds 50 cubic yards.

### 10.0 DISCLAIMER

This report documents the investigation, best professional judgment and conclusions of PBS Engineering and Environmental. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk until it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.

### 11.0 RESTRICTIONS

This report is for the exclusive use of the client for design of the development as described in our proposal for this particular project and is not to be relied upon by other parties. It is not to be photographed, photocopied, or similarly reproduced in total or in part without the expressed written consent of the client and PBS Engineering and Environmental.

Respectfully submitted,

A handwritten signature in black ink that reads "Skip Haak". The signature is written in a cursive, flowing style.

Skip Haak  
Senior Scientist



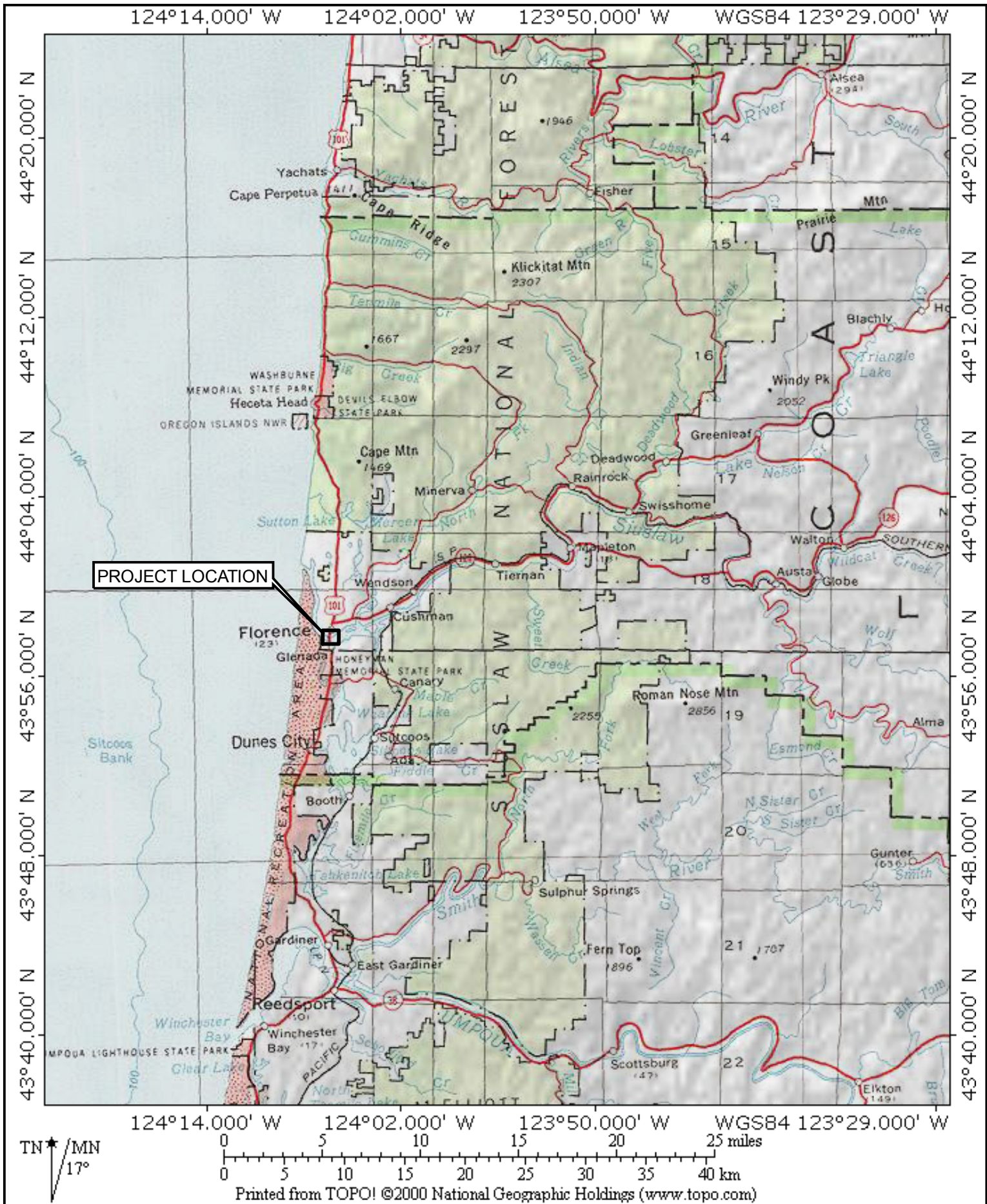
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## **FIGURES**

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Project #  
75032.000

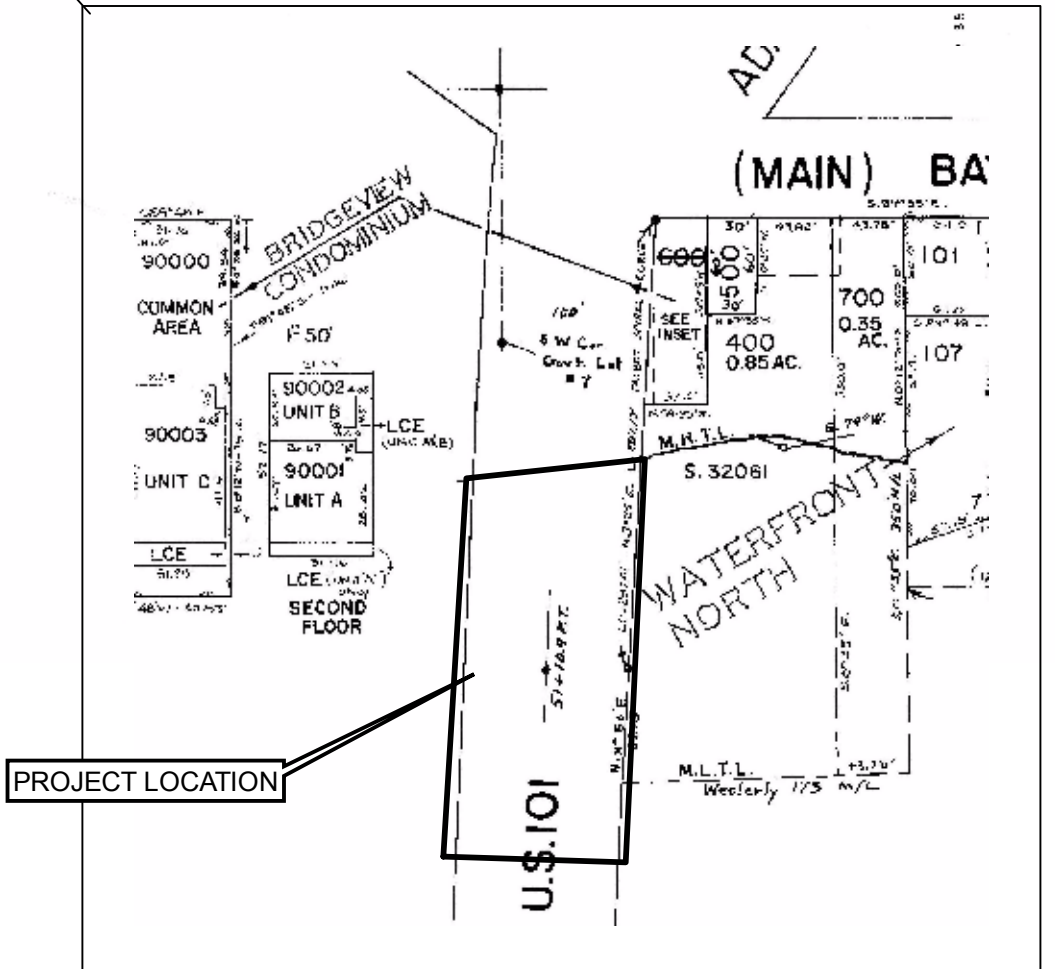
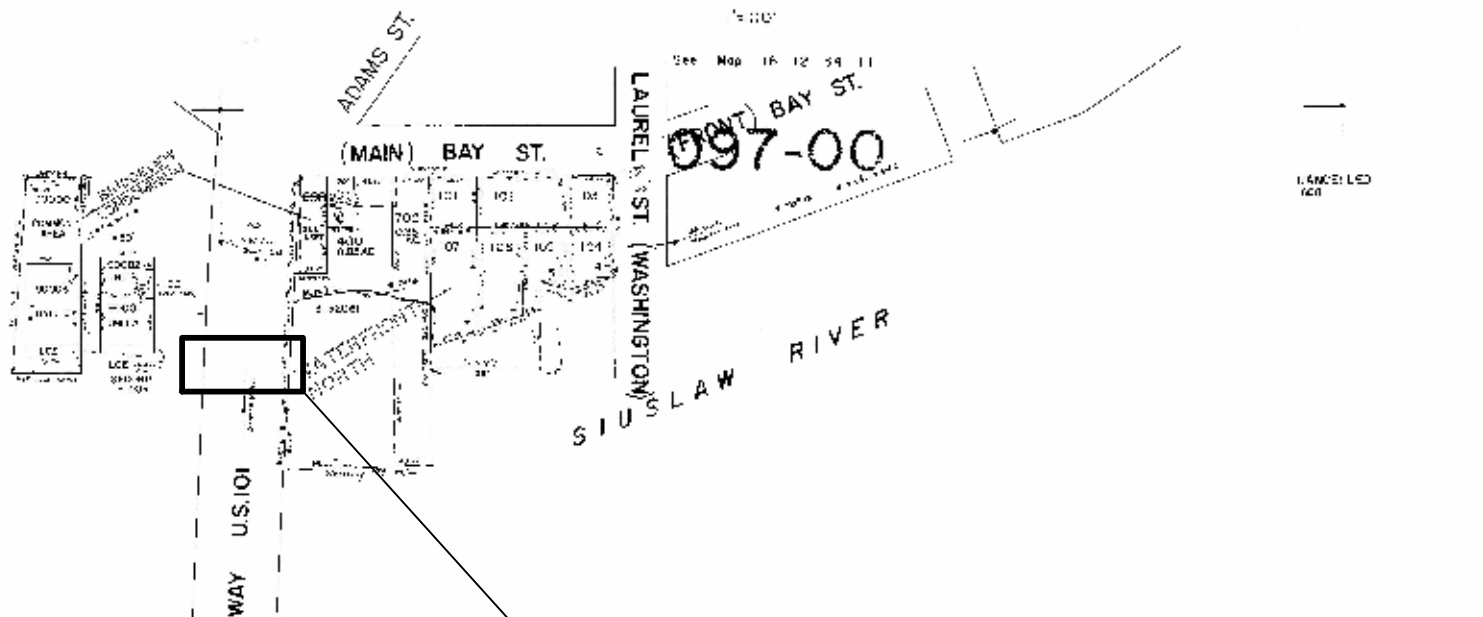
Date:  
AUGUST 2007

PROJECT LOCATION  
Siuslaw River Bridge Interpretive Wayside  
Florence, Oregon

FIGURE  
**1**

SE 1/4 NE 1/4 Sec 34 T18 S. R.12 W.W.M.  
LANE COUNTY

18 12 34 | 4  
FLORENCE



SOURCE: www.ormap.org. Tax Lot Map 18123414



Project #  
75032.000

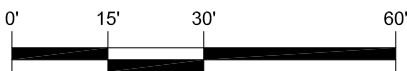
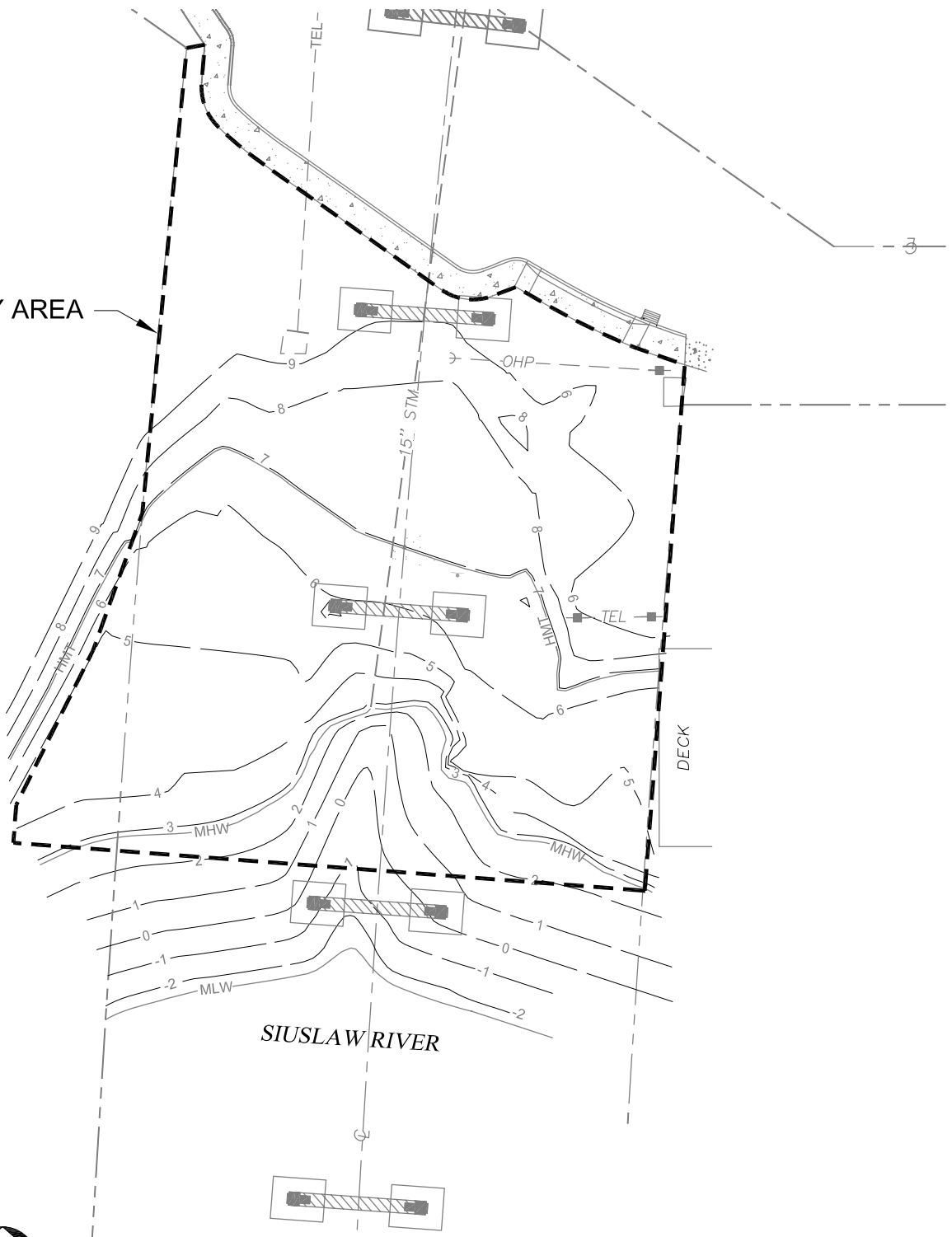
Date:  
AUGUST 2007

TAX LOT MAP  
Siuslaw River Bridge Interpretive Wayside  
Florence, Oregon

FIGURE  
2

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STUDY AREA



SCALE: 1" = 30'

PREPARED FOR: BRANCH ENGINEERING

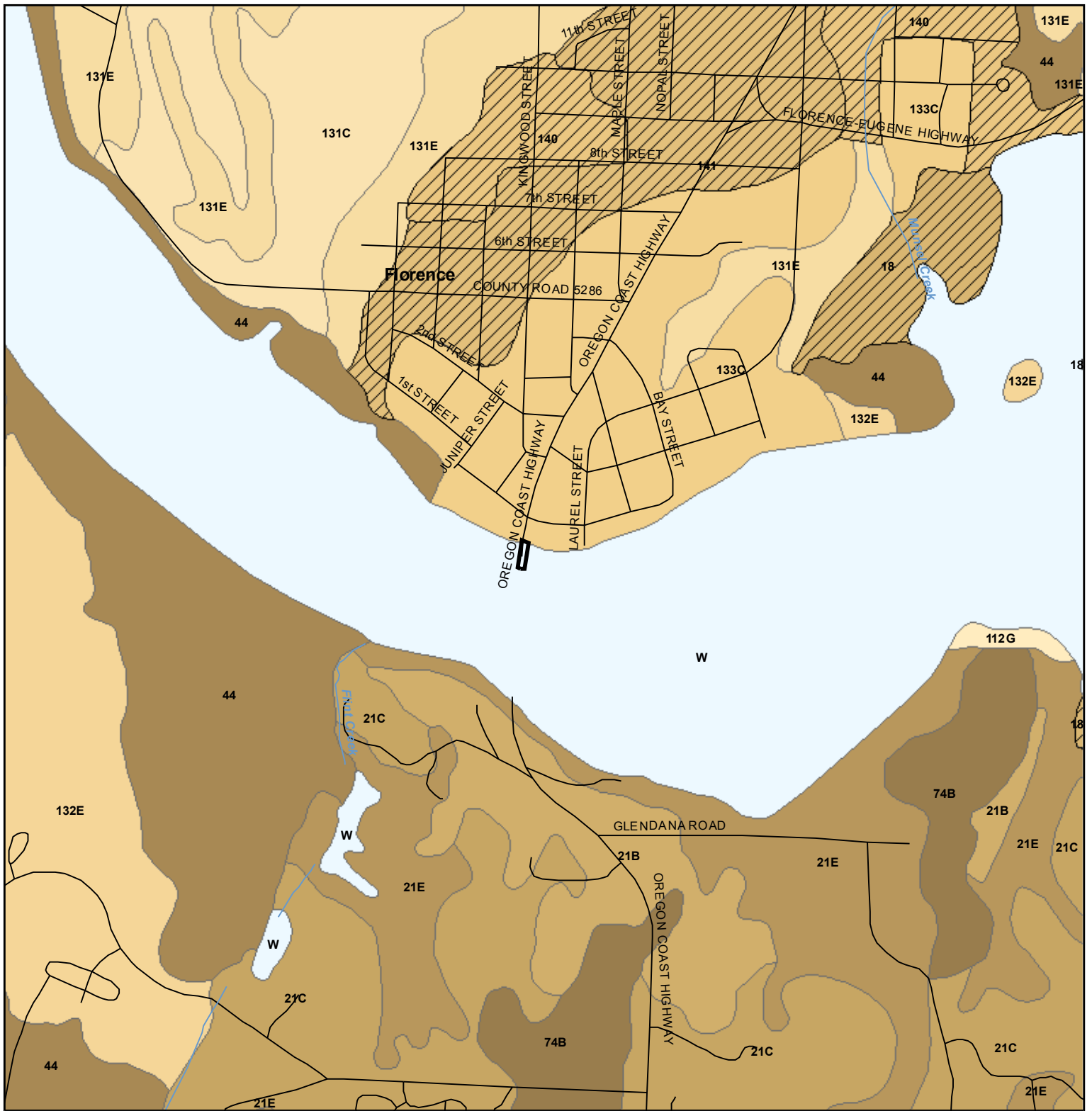


PROJECT #:  
75032.000

DATE:  
SEPT. 2007

**STUDY AREA**  
SIUSLAW RIVER BRIDGE INTERPRETIVE WAYSIDE  
FLORENCE, OREGON

FIGURE  
**3**



SOURCE: Lane County Soil Survey, Sheet #??

Project Location

Hydric Soils

112G - Preacher-Bohannon-Slickrock Complex, 50 to 75 Percent Slopes

131C - Waldport Fine Sand, 0 to 12 Percent Slopes

131E - Waldport Fine Sand, 12 to 30 Percent Slopes

132E - Waldport Fine Sand, Thin Surface, 0 to 30 Percent Slopes

133C - Waldport-Urban Land Complex, 0 to 12 Percent Slopes

140 - Yaquina Loamy Fine Sand

141 - Yaquina-Urban Land Complex

18 - Brallier Variant Muck

21B - Bullards-Ferrello Loams, 0 to 7 Percent Slopes

21C - Bullards-Ferrello Loams, 7 to 12 Percent Slopes

21E - Bullards-Ferrello Loams, 30 to 60 Percent Slopes

44 - Dune Land

74B - Lint Silt Loam, 0 to 7 Percent Slopes

W - Water



0 500 1,000  
Feet



Project #:  
75032.000

Date:  
AUGUST 2007

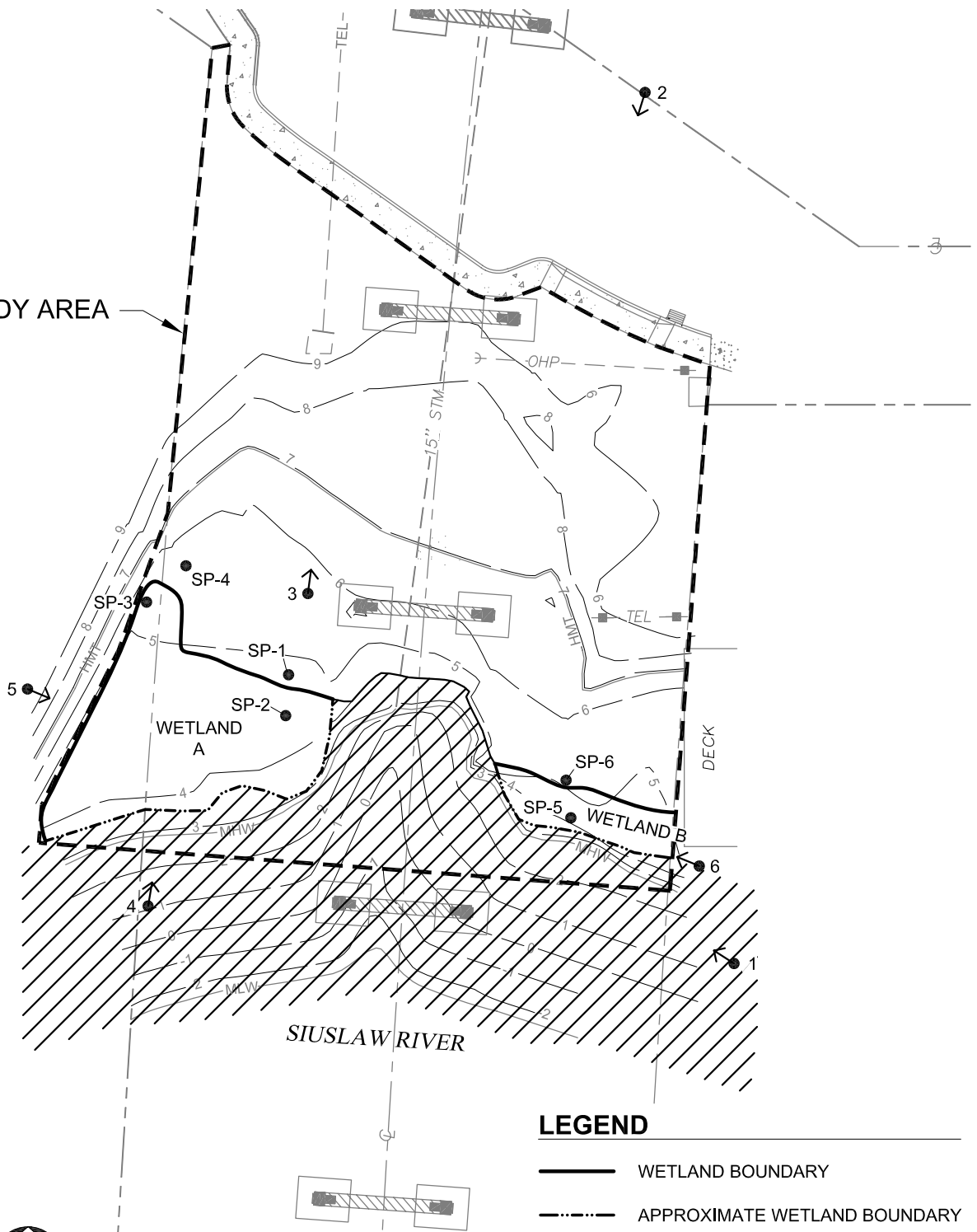
LANE COUNTY SOIL SURVEY  
Siuslaw River Bridge Interpretive Wayside  
Florence, Oregon

FIGURE

4

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STUDY AREA



**LEGEND**

- WETLAND BOUNDARY
- APPROXIMATE WETLAND BOUNDARY
- INTERTIDAL MUDFLAT
- SP-1 ● DATA PLOT
- ↖ 1 PHOTO POINT

PREPARED FOR: BRANCH ENGINEERING



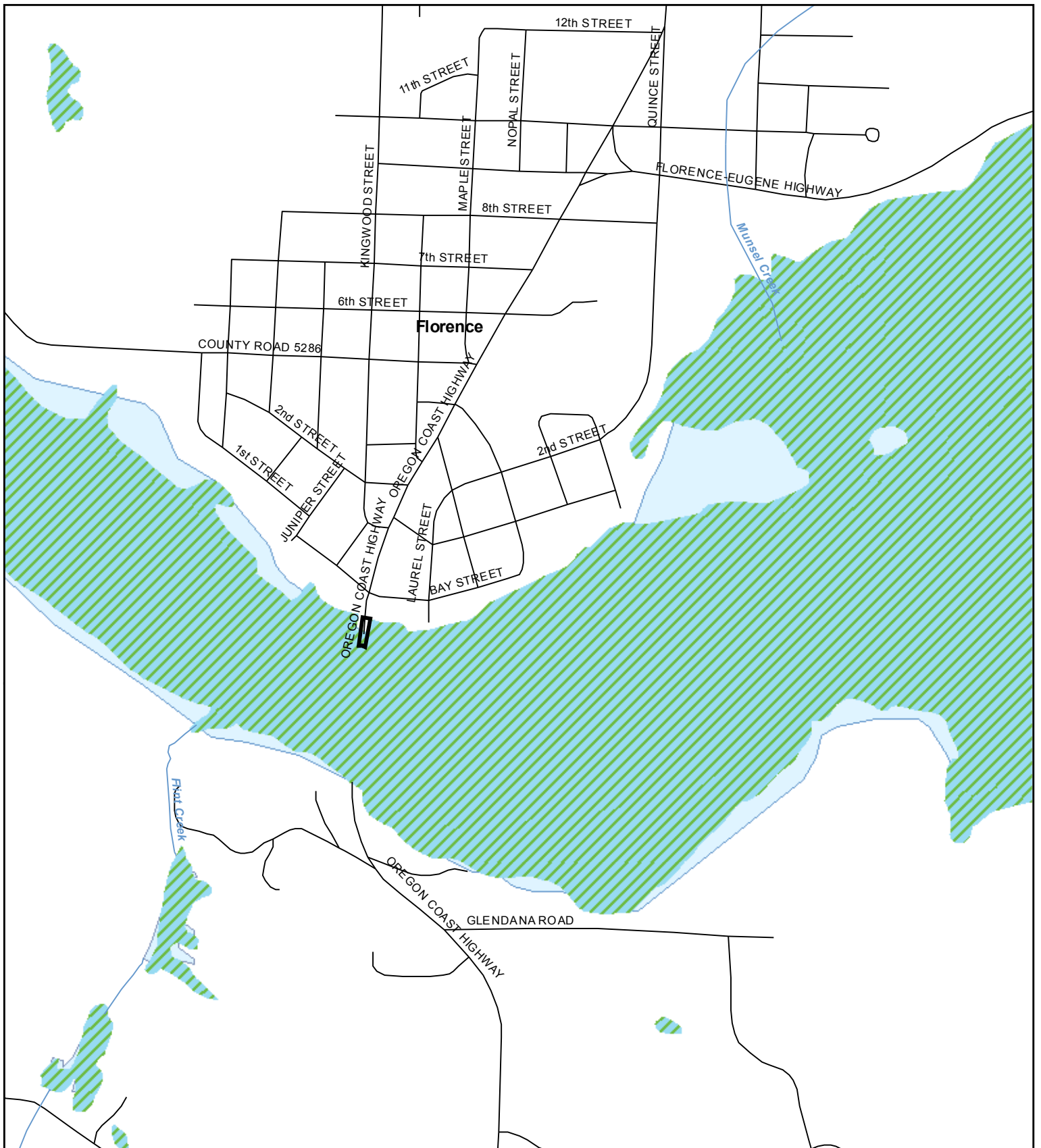
PROJECT #:  
75032.000

DATE:  
SEPT. 2007

**WETLAND DELINEATION MAP**  
 SUISSLAW RIVER BRIDGE INTERPRETIVE WAYSIDE  
 FLORENCE, OREGON

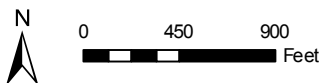
FIGURE  
**5**





SOURCE: U.S. Fish & Wildlife Service National Wetland Inventory GIS Data (Florence Quad). Local Wetland Inventory from Lane County GIS Files.

- Project Location
- Local Wetland Inventory
- National Wetland Inventory
- Streams
- Roads



Project #:  
75032.000

Date:  
AUGUST 2007

LOCAL and NATIONAL WETLAND INVENTORY  
Siuslaw River Bridge Interpretive Wayside  
Florence, Oregon

FIGURE  
**6**

## **APPENDIX A**

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Data Forms



**ROUTINE WETLAND DETERMINATION DATA FORM**  
(1987 Corps Wetlands Delineation Manual)

<b>Project/Site:</b> Siuslaw River Bridge Interpretive Wayside <b>Applicant/Owner:</b> City of Florence <b>Investigator:</b> Skip Haak/Beth Bowers	<b>Date:</b> 7/19/07 <b>County:</b> Lane <b>City:</b> Florence <b>State:</b> OR <b>S/T/R:</b> Sec 34, T18S, R12W
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the site a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain:	<b>Community ID:</b> <b>Transect ID:</b> <b>Plot Location:</b> <b>Plot ID: SP-1</b>

**VEGETATION** (for strata, indicate T=tree; S=shrub/sapling; H=herb; V=vine)

Dominant Plant Species	Stratum	Raw % Cover	Rel. % Cover	Indicator	Dominant
<i>Phalaris arundinacea</i>	H	25	33	FACW	<input checked="" type="checkbox"/>
<i>Juncus balticus</i>	H	15	20	FACW+	<input checked="" type="checkbox"/>
<i>Elymus repens</i>	H	25	33	FAC-	<input checked="" type="checkbox"/>
<i>Festuca arundinacea</i>	H	10	13	FAC-	<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

**Hydrophytic Vegetation Indicators** Percent of Dominant Species that are OBL, FACW or FAC: **67%**  
 Check all indicators that apply, and explain below:

<input checked="" type="checkbox"/> >50% of Dominants OBL, FACW, or FAC	<input type="checkbox"/> Physiological or Reproductive Adaptations
<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation or saturation	<input checked="" type="checkbox"/> Personal knowledge of regional plant communities
<input type="checkbox"/> Morphological Adaptations	<input type="checkbox"/> Wetland Plant Database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Other (explain):

**Hydrophytic vegetation present?**     Yes  No  
 Rationale/Remarks:

**HYDROLOGY**

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Based on: SCS soil survey Recent Weather:		
<b>Field Observations:</b> Depth of inundation: <b>None</b> Depth to free water in the pit: <b>None</b> Depth to saturated soil: <b>None</b> Check all that apply and explain below: <input type="checkbox"/> Recorded Hydrologic Data Available <input type="checkbox"/> Stream Gauge Data <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other	<b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12" <input type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	<b>Secondary Indicators:</b> (2 or more required) <input checked="" type="checkbox"/> Oxidation Around Live Roots in Upper 12" <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Hydrology Data <input type="checkbox"/> FAC-Neutral Test of Vegetation
<b>Wetland hydrology present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Rationale/Remarks: Tidal area along Siuslaw Estuary		

**SP-1**

**SOILS**

Map Unit Name (Series and Phase): Waldport-Urban Land Complex, 0 to 12 percent slopes Map Unit No.:133C  
 Taxonomy (Subgroup): Mixed, isomesic Typic Udipsamments

Drainage Class: **Excessively drained**

Listed on National or Local Hydric Soils List  Has Hydric Soil Inclusions

Field observations confirm mapped type?  Yes  No If No, Explain: Matrix color differed from series description

Depth (inches)	Horizon	Matrix colors (Munsell moist)	Mottle colors (Munsell moist)	Mottle Abundance size and contrast	Texture, concretions, structure, etc.
0-2	O				Fine organic debris
2-9	A	<b>2.5Y 4/3</b>			Sand
9-14	A	<b>2.5Y 4/3</b>	<b>5YR 4/6</b>	Many/Med/Prom	Sand
14-18+		<b>10YR 3/2</b>	<b>5YR 4/6</b>	Common/Med/Prom	Silt loam, hard, moist

**Hydric Soil Indicators:** (check all that apply)

- |   |   |
|---|---|
| <input type="checkbox"/> Histosol                                 | <input type="checkbox"/> Matrix Chroma $\leq$ 2 with Distinct or Prominent Mottles in Upper 10" |
| <input type="checkbox"/> Histic Epipedon                          | <input type="checkbox"/> Mn or Fe Concretions (>2 mm in top 3 inches)                           |
| <input type="checkbox"/> Sulfidic Odor                            | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils                   |
| <input type="checkbox"/> Aquic or Peraquic Moisture Regime        | <input type="checkbox"/> Organic Streaking in Sandy Soils                                       |
| <input type="checkbox"/> Reducing Soil Conditions (positive test) | <input type="checkbox"/> Listed on Hydric Soils List, Matches Soil Profile                      |
| <input type="checkbox"/> Gleyed or Low Chroma ( $\leq$ 1) Matrix  | <input type="checkbox"/> Other (Explain):   |

**Hydric soils present?**  Yes  No

Rationale/Remarks: Does not match any of the sandy soil hydric indicators. Redox concentrations present but greater than 6" below surface.

**Wetland Determination**

Hydrophytic vegetation present?  Yes  No      Is the sampling point within a wetland?  Yes  No  
 Hydric soils present?  Yes  No  
 Wetland hydrology present?  Yes  No

**Rationale/Remarks**

Although hydrology may be provided at times by tidal action, the soils do not indicate wetland conditions. This plot was on the edge of the wetland. Pits dug a couple feet landward included only dry sand without any redox concentrations and a predominance of upland vegetation.



**ROUTINE WETLAND DETERMINATION DATA FORM**  
(1987 Corps Wetlands Delineation Manual)

<b>Project/Site:</b> Siuslaw River Bridge Interpretive Wayside <b>Applicant/Owner:</b> City of Florence <b>Investigator:</b> Skip Haak/Beth Bowers	<b>Date:</b> 7/19/07 <b>County:</b> Lane <b>City:</b> Florence <span style="float:right"><b>State:</b> OR</span> <b>S/T/R:</b> Sec 34, T18S, R12W
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the site a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain:	<b>Community ID:</b> <b>Transect ID:</b> <b>Plot Location:</b> <b>Plot ID: SP-2</b>

**VEGETATION** (for strata, indicate T=tree; S=shrub/sapling; H=herb; V=vine)

Dominant Plant Species	Stratum	Raw % Cover	Rel. % Cover	Indicator	Dominant
<i>Salicornia virginica</i>	H	60	60	OBL	<input checked="" type="checkbox"/>
<i>Distichlis spicata</i>	H	40	40	FACW	<input checked="" type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

**Hydrophytic Vegetation Indicators** Percent of Dominant Species that are OBL, FACW or FAC: **100%**  
 Check all indicators that apply, and explain below:

<input checked="" type="checkbox"/> >50% of Dominants OBL, FACW, or FAC	<input type="checkbox"/> Physiological or Reproductive Adaptations
<input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation or saturation	<input type="checkbox"/> Personal knowledge of regional plant communities
<input type="checkbox"/> Morphological Adaptations	<input type="checkbox"/> Wetland Plant Database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Other (explain):

**Hydrophytic vegetation present?**     Yes  No  
 Rationale/Remarks:

**HYDROLOGY**

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Based on: SCS soil survey Recent Weather:		
<b>Field Observations:</b> Depth of inundation: <b>None</b> Depth to free water in the pit: <b>None</b> Depth to saturated soil: <b>None</b> Check all that apply and explain below: <input type="checkbox"/> Recorded Hydrologic Data Available <input type="checkbox"/> Stream Gauge Data <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other	<b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12" <input type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	<b>Secondary Indicators:</b> (2 or more required) <input type="checkbox"/> Oxidation Around Live Roots in Upper 12" <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Hydrology Data <input checked="" type="checkbox"/> FAC-Neutral Test of Vegetation
<b>Wetland hydrology present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Rationale/Remarks: Tidal area along Siuslaw Estuary. Plot at mean high water line.		

**SP-2**

**SOILS**

Map Unit Name (Series and Phase): Waldport-Urban Land Complex, 0 to 12 percent slopes Map Unit No.:133C  
 Taxonomy (Subgroup): Mixed, isomesic Typic Udipsamments  
 Drainage Class: **Excessively drained**  
 Listed on National or Local Hydric Soils List  Has Hydric Soil Inclusions  
 Field observations confirm mapped type?  Yes  No If No, Explain: Matrix color and mucky peat layer differed from series description

Depth (inches)	Horizon	Matrix colors (Munsell moist)	Mottle colors (Munsell moist)	Mottle Abundance size and contrast	Texture, concretions, structure, etc.
0-4		<b>2.5Y 4/3</b>			Sand, moist
4-9		<b>10YR 3/1</b>			Mucky peat
9-14		<b>2.5Y 4/3</b>	<b>5YR 4/6</b>	Common/Med/Prom	Sand
Piling					

**Hydric Soil Indicators:** (check all that apply)

<input type="checkbox"/> Histosol	<input type="checkbox"/> Matrix Chroma $\leq$ 2 with Distinct or Prominent Mottles in Upper 10"
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Mn or Fe Concretions (>2 mm in top 3 inches)
<input type="checkbox"/> Sulfidic Odor	<input checked="" type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils
<input type="checkbox"/> Aquic or Peraquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Reducing Soil Conditions (positive test)	<input type="checkbox"/> Listed on Hydric Soils List, Matches Soil Profile
<input type="checkbox"/> Gleyed or Low Chroma ( $\leq$ 1) Matrix	<input type="checkbox"/> Other (Explain):

**Hydric soils present?**  Yes  No  
 Rationale/Remarks:

**Wetland Determination**

Hydrophytic vegetation present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the sampling point within a wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric soils present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Wetland hydrology present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

**Rationale/Remarks**



**ROUTINE WETLAND DETERMINATION DATA FORM**  
(1987 Corps Wetlands Delineation Manual)

<b>Project/Site:</b> Siuslaw River Bridge Interpretive Wayside <b>Applicant/Owner:</b> City of Florence <b>Investigator:</b> Skip Haak/Beth Bowers	<b>Date:</b> 7/19/07 <b>County:</b> Lane <b>City:</b> Florence <span style="float:right"><b>State:</b> OR</span> <b>S/T/R:</b> Sec 34, T18S, R12W
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the site a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain:	<b>Community ID:</b> <b>Transect ID:</b> <b>Plot Location:</b> <b>Plot ID: SP-3</b>

**VEGETATION** (for strata, indicate T=tree; S=shrub/sapling; H=herb; V=vine)

Dominant Plant Species	Stratum	Raw % Cover	Rel. % Cover	Indicator	Dominant
<i>Potentilla anserina</i>	H	50	100	OBL	<input checked="" type="checkbox"/>
<i>Bare ground</i>		50			<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

**Hydrophytic Vegetation Indicators** Percent of Dominant Species that are OBL, FACW or FAC: **100%**  
 Check all indicators that apply, and explain below:

<input checked="" type="checkbox"/> >50% of Dominants OBL, FACW, or FAC	<input type="checkbox"/> Physiological or Reproductive Adaptations
<input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation or saturation	<input type="checkbox"/> Personal knowledge of regional plant communities
<input type="checkbox"/> Morphological Adaptations	<input type="checkbox"/> Wetland Plant Database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Other (explain):

**Hydrophytic vegetation present?**     Yes  No  
 Rationale/Remarks: Bare ground covered by woody debris deposited by tidal action.

**HYDROLOGY**

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Based on: SCS soil survey Recent Weather:		
<b>Field Observations:</b> Depth of inundation: <b>None</b> Depth to free water in the pit: <b>None</b> Depth to saturated soil: <b>None</b> Check all that apply and explain below: <input type="checkbox"/> Recorded Hydrologic Data Available <input type="checkbox"/> Stream Gauge Data <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other	<b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12" <input type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	<b>Secondary Indicators:</b> (2 or more required) <input checked="" type="checkbox"/> Oxidation Around Live Roots in Upper 12" <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Hydrology Data <input checked="" type="checkbox"/> FAC-Neutral Test of Vegetation
<b>Wetland hydrology present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Rationale/Remarks: Tidal area along Siuslaw Estuary. Drift debris present. Lower topography. Moist soil. Appears to collect water during high tide.		

**SP-3**

**SOILS**

Map Unit Name (Series and Phase): Waldport-Urban Land Complex, 0 to 12 percent slopes Map Unit No.:133C

Taxonomy (Subgroup): Mixed, isomesic Typic Udipsamments

Drainage Class: **Excessively drained**

Listed on National or Local Hydric Soils List

Has Hydric Soil Inclusions

Field observations confirm mapped type?  Yes  No If No, Explain: Matrix color and silt loam layer differed from series description

Depth (inches)	Horizon	Matrix colors (Munsell moist)	Mottle colors (Munsell moist)	Mottle Abundance size and contrast	Texture, concretions, structure, etc.
0-1		<b>2.5Y 4/3</b>			Sand
1-10		<b>10YR 3/1</b>			Silt loam, high organics
10-18+		<b>2.5Y 4/3</b>	<b>5YR 4/6</b>	Many/Med/Distinct	Sand, organic materials

**Hydric Soil Indicators:** (check all that apply)

Histosol

Matrix Chroma  $\leq 2$  with Distinct or Prominent Mottles in Upper 10"

Histic Epipedon

Mn or Fe Concretions (>2 mm in top 3 inches)

Sulfidic Odor

High Organic Content in Surface Layer of Sandy Soils

Aquic or Peraquic Moisture Regime

Organic Streaking in Sandy Soils

Reducing Soil Conditions (positive test)

Listed on Hydric Soils List, Matches Soil Profile

Gleyed or Low Chroma ( $\leq 1$ ) Matrix

Other (Explain): Sandy Soils Indicator S1

**Hydric soils present?**  Yes  No

Rationale/Remarks: Soils appear to have been disturbed some time in the past. Plastic and organic layers unexpectedly found below ground surface.

**Wetland Determination**

Hydrophytic vegetation present?  Yes  No

Is the sampling point within a wetland?  Yes  No

Hydric soils present?  Yes  No

Wetland hydrology present?  Yes  No

**Rationale/Remarks**





**ROUTINE WETLAND DETERMINATION DATA FORM**  
(1987 Corps Wetlands Delineation Manual)

<b>Project/Site:</b> Siuslaw River Bridge Interpretive Wayside <b>Applicant/Owner:</b> City of Florence <b>Investigator:</b> Skip Haak/Beth Bowers	<b>Date:</b> 7/19/07 <b>County:</b> Lane <b>City:</b> Florence <span style="float:right"><b>State:</b> OR</span> <b>S/T/R:</b> Sec 34, T18S, R12W
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the site a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain:	<b>Community ID:</b> <b>Transect ID:</b> <b>Plot Location:</b> <b>Plot ID: SP-4</b>

**VEGETATION** (for strata, indicate T=tree; S=shrub/sapling; H=herb; V=vine)

Dominant Plant Species	Stratum	Raw % Cover	Rel. % Cover	Indicator	Dominant
<i>Phalaris arundinacea</i>	H	10	17	FACW	<input type="checkbox"/>
<i>Vicia gigantea</i>	H	50	83	NOL	<input checked="" type="checkbox"/>
<i>Salix hookeriana</i>	T	60	100	FACW	<input checked="" type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

**Hydrophytic Vegetation Indicators** Percent of Dominant Species that are OBL, FACW or FAC: **50%**  
 Check all indicators that apply, and explain below:

<input type="checkbox"/> >50% of Dominants OBL, FACW, or FAC	<input type="checkbox"/> Physiological or Reproductive Adaptations
<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation or saturation	<input type="checkbox"/> Personal knowledge of regional plant communities
<input type="checkbox"/> Morphological Adaptations	<input type="checkbox"/> Wetland Plant Database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Other (explain):

**Hydrophytic vegetation present?**     Yes  No  
 Rationale/Remarks:

**HYDROLOGY**

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Based on: SCS soil survey Recent Weather:		
<b>Field Observations:</b> Depth of inundation: <b>None</b> Depth to free water in the pit: <b>None</b> Depth to saturated soil: <b>None</b> Check all that apply and explain below: <input type="checkbox"/> Recorded Hydrologic Data Available <input type="checkbox"/> Stream Gauge Data <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other	<b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12" <input type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	<b>Secondary Indicators:</b> (2 or more required) <input type="checkbox"/> Oxidation Around Live Roots in Upper 12" <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Hydrology Data <input checked="" type="checkbox"/> FAC-Neutral Test of Vegetation
<b>Wetland hydrology present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Rationale/Remarks: No indicators. Higher elevation. Soil dry.		

**SP-4**

**SOILS**

Map Unit Name (Series and Phase): Waldport-Urban Land Complex, 0 to 12 percent slopes Map Unit No.:133C  
 Taxonomy (Subgroup): Mixed, isomesic Typic Udipsamments

Drainage Class: **Excessively drained**

Listed on National or Local Hydric Soils List  Has Hydric Soil Inclusions

Field observations confirm mapped type?  Yes  No If No, Explain: Matrix color differed from series description

Depth (inches)	Horizon	Matrix colors (Munsell moist)	Mottle colors (Munsell moist)	Mottle Abundance size and contrast	Texture, concretions, structure, etc.
0-9		<b>2.5Y 4/3</b>			Sand
9-18+		<b>2.5 Y 3/2</b>			Loamy sand

**Hydric Soil Indicators:** (check all that apply)

- |   |   |
|---|---|
| <input type="checkbox"/> Histosol                                 | <input type="checkbox"/> Matrix Chroma $\leq$ 2 with Distinct or Prominent Mottles in Upper 10" |
| <input type="checkbox"/> Histic Epipedon                          | <input type="checkbox"/> Mn or Fe Concretions (>2 mm in top 3 inches)                           |
| <input type="checkbox"/> Sulfidic Odor                            | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils                   |
| <input type="checkbox"/> Aquic or Peraquic Moisture Regime        | <input type="checkbox"/> Organic Streaking in Sandy Soils                                       |
| <input type="checkbox"/> Reducing Soil Conditions (positive test) | <input type="checkbox"/> Listed on Hydric Soils List, Matches Soil Profile                      |
| <input type="checkbox"/> Gleyed or Low Chroma ( $\leq$ 1) Matrix  | <input type="checkbox"/> Other (Explain):   |

**Hydric soils present?**  Yes  No

Rationale/Remarks:

**Wetland Determination**

Hydrophytic vegetation present?  Yes  No      Is the sampling point within a wetland?  Yes  No  
 Hydric soils present?  Yes  No  
 Wetland hydrology present?  Yes  No

**Rationale/Remarks**



**ROUTINE WETLAND DETERMINATION DATA FORM**  
(1987 Corps Wetlands Delineation Manual)

<b>Project/Site:</b> Siuslaw River Bridge Interpretive Wayside <b>Applicant/Owner:</b> City of Florence <b>Investigator:</b> Skip Haak/Beth Bowers	<b>Date:</b> 7/19/07 <b>County:</b> Lane <b>City:</b> Florence <span style="float:right"><b>State:</b> OR</span> <b>S/T/R:</b> Sec 34, T18S, R12W
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the site a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain:	<b>Community ID:</b> <b>Transect ID:</b> <b>Plot Location:</b> <b>Plot ID: SP-5</b>

**VEGETATION** (for strata, indicate T=tree; S=shrub/sapling; H=herb; V=vine)

Dominant Plant Species	Stratum	Raw % Cover	Rel. % Cover	Indicator	Dominant
<i>Salicornia virginica</i>	H	90	90	OBL	<input checked="" type="checkbox"/>
<i>Distichlis spicata</i>	H	10	10	FACW	<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

**Hydrophytic Vegetation Indicators** Percent of Dominant Species that are OBL, FACW or FAC: **100%**  
 Check all indicators that apply, and explain below:

<input checked="" type="checkbox"/> >50% of Dominants OBL, FACW, or FAC	<input type="checkbox"/> Physiological or Reproductive Adaptations
<input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation or saturation	<input type="checkbox"/> Personal knowledge of regional plant communities
<input type="checkbox"/> Morphological Adaptations	<input type="checkbox"/> Wetland Plant Database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Other (explain):

**Hydrophytic vegetation present?**     Yes  No  
 Rationale/Remarks:

**HYDROLOGY**

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Based on: SCS soil survey Recent Weather:		
<b>Field Observations:</b> Depth of inundation: <b>None</b> Depth to free water in the pit: <b>None</b> Depth to saturated soil: <b>None</b> Check all that apply and explain below: <input type="checkbox"/> Recorded Hydrologic Data Available <input type="checkbox"/> Stream Gauge Data <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other	<b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12" <input type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	<b>Secondary Indicators:</b> (2 or more required) <input type="checkbox"/> Oxidation Around Live Roots in Upper 12" <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Hydrology Data <input checked="" type="checkbox"/> FAC-Neutral Test of Vegetation
<b>Wetland hydrology present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Rationale/Remarks: Tidal area along Siuslaw Estuary. Low-lying edge next to slope leading to water. Appears to be inundated at high tide.		

**SOILS**

Map Unit Name (Series and Phase): Waldport-Urban Land Complex, 0 to 12 percent slopes Map Unit No.:133C  
 Taxonomy (Subgroup): Mixed, isomesic Typic Udipsamments  
 Drainage Class: **Excessively drained**  
 Listed on National or Local Hydric Soils List  Has Hydric Soil Inclusions  
 Field observations confirm mapped type?  Yes  No If No, Explain: Matrix color and mucky peat layer differed from series description

Depth (inches)	Horizon	Matrix colors (Munsell moist)	Mottle colors (Munsell moist)	Mottle Abundance size and contrast	Texture, concretions, structure, etc.
0-3		<b>2.5Y 4/3</b>			Sand
3-9		<b>10YR 4/2</b>			Mucky peat with sand
9-14		<b>2.5Y 4/3</b>	<b>5YR 4/6</b>	Many/Coarse/Prom	Sand
Piling					

**Hydric Soil Indicators:** (check all that apply)

- |   |   |
|---|---|
| <input type="checkbox"/> Histosol                                 | <input type="checkbox"/> Matrix Chroma $\leq$ 2 with Distinct or Prominent Mottles in Upper 10" |
| <input type="checkbox"/> Histic Epipedon                          | <input type="checkbox"/> Mn or Fe Concretions (>2 mm in top 3 inches)                           |
| <input type="checkbox"/> Sulfidic Odor                            | <input checked="" type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils        |
| <input type="checkbox"/> Aquic or Peraquic Moisture Regime        | <input type="checkbox"/> Organic Streaking in Sandy Soils                                       |
| <input type="checkbox"/> Reducing Soil Conditions (positive test) | <input type="checkbox"/> Listed on Hydric Soils List, Matches Soil Profile                      |
| <input type="checkbox"/> Gleyed or Low Chroma ( $\leq$ 1) Matrix  | <input type="checkbox"/> Other (Explain):   |

**Hydric soils present?**  Yes  No

Rationale/Remarks: Organic layer near surface. Soils distinctly moist, near saturation.

**Wetland Determination**

Hydrophytic vegetation present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the sampling point within a wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric soils present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Wetland hydrology present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

**Rationale/Remarks**



**ROUTINE WETLAND DETERMINATION DATA FORM**  
(1987 Corps Wetlands Delineation Manual)

<b>Project/Site:</b> Siuslaw River Bridge Interpretive Wayside <b>Applicant/Owner:</b> City of Florence <b>Investigator:</b> Skip Haak/Beth Bowers	<b>Date:</b> 7/19/07 <b>County:</b> Lane <b>City:</b> Florence <span style="float:right"><b>State:</b> OR</span> <b>S/T/R:</b> Sec 34, T18S, R12W
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the site a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explain:	<b>Community ID:</b> <b>Transect ID:</b> <b>Plot Location:</b> <b>Plot ID: SP-6</b>

**VEGETATION** (for strata, indicate T=tree; S=shrub/sapling; H=herb; V=vine)

Dominant Plant Species	Stratum	Raw % Cover	Rel. % Cover	Indicator	Dominant
<i>Lolium multiflorum</i>	H	10	11	NOL	<input type="checkbox"/>
<i>Hordeum brachyantherum</i>	H	5	6	FACW-	<input type="checkbox"/>
<i>Elymus repens</i>	H	10	11	FAC-	<input type="checkbox"/>
<i>Festuca arundinacea</i>	H	35	39	FAC-	<input checked="" type="checkbox"/>
<i>Agrostis sp.</i>	H	30	33	FAC-	<input checked="" type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

**Hydrophytic Vegetation Indicators** Percent of Dominant Species that are OBL, FACW or FAC: **0%**  
 Check all indicators that apply, and explain below:

<input type="checkbox"/> >50% of Dominants OBL, FACW, or FAC	<input type="checkbox"/> Physiological or Reproductive Adaptations
<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation or saturation	<input type="checkbox"/> Personal knowledge of regional plant communities
<input type="checkbox"/> Morphological Adaptations	<input type="checkbox"/> Wetland Plant Database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Other (explain):

**Hydrophytic vegetation present?**     Yes  No  
 Rationale/Remarks: Assume *Agrostis sp.* FAC-. General species composition suggests upland site.

**HYDROLOGY**

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Based on: SCS soil survey Recent Weather:		
<b>Field Observations:</b> Depth of inundation: <b>None</b> Depth to free water in the pit: <b>None</b> Depth to saturated soil: <b>None</b> Check all that apply and explain below: <input type="checkbox"/> Recorded Hydrologic Data Available <input type="checkbox"/> Stream Gauge Data <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other	<b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12" <input type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	<b>Secondary Indicators:</b> (2 or more required) <input type="checkbox"/> Oxidation Around Live Roots in Upper 12" <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Hydrology Data <input type="checkbox"/> FAC-Neutral Test of Vegetation
<b>Wetland hydrology present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Rationale/Remarks: Tidal area along Siuslaw Estuary; however, higher in elevation so frequency of inundation likely less.		

**SOILS**

Map Unit Name (Series and Phase): Waldport-Urban Land Complex, 0 to 12 percent slopes Map Unit No.:133C  
 Taxonomy (Subgroup): Mixed, isomesic Typic Udipsamments

Drainage Class: **Excessively drained**

Listed on National or Local Hydric Soils List  Has Hydric Soil Inclusions

Field observations confirm mapped type?  Yes  No If No, Explain: Soil texture differed from series description

Depth (inches)	Horizon	Matrix colors (Munsell moist)	Mottle colors (Munsell moist)	Mottle Abundance size and contrast	Texture, concretions, structure, etc.
0-13		<b>10YR 3/2</b>			Silt loam with some sand & organics
13-18+		<b>10YR 4/2</b>	<b>5YR 4/6</b>	Many/Med/Prom	Silt loam, some sand

**Hydric Soil Indicators:** (check all that apply)

- |   |   |
|---|---|
| <input type="checkbox"/> Histosol                                 | <input type="checkbox"/> Matrix Chroma $\leq 2$ with Distinct or Prominent Mottles in Upper 10" |
| <input type="checkbox"/> Histic Epipedon                          | <input type="checkbox"/> Mn or Fe Concretions (>2 mm in top 3 inches)                           |
| <input type="checkbox"/> Sulfidic Odor                            | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils                   |
| <input type="checkbox"/> Aquic or Peraquic Moisture Regime        | <input type="checkbox"/> Organic Streaking in Sandy Soils                                       |
| <input type="checkbox"/> Reducing Soil Conditions (positive test) | <input type="checkbox"/> Listed on Hydric Soils List, Matches Soil Profile                      |
| <input type="checkbox"/> Gleyed or Low Chroma ( $\leq 1$ ) Matrix | <input type="checkbox"/> Other (Explain):   |

**Hydric soils present?**  Yes  No

Rationale/Remarks: All possible indicators of wetland hydrology below root zone.

**Wetland Determination**

Hydrophytic vegetation present?  Yes  No      Is the sampling point within a wetland?  Yes  No  
 Hydric soils present?  Yes  No  
 Wetland hydrology present?  Yes  No

**Rationale/Remarks**

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**APPENDIX B**

Site Photographs



PHOTO 1: View of project site under bridge looking northwest. Condominiums west of the site are visible in background. Business east of the site is visible at right edge of photograph.



PHOTO 2: View of the project site from Bay Street.





PHOTO 3: Sandy soil found in upland area.



PHOTO 4: View of Wetland A at low tide.



PHOTO 5: View of upland boundary of Wetland A. Wetland B is visible in background.



PHOTO 6: View of Wetland B.

## **APPENDIX C**

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Plant List and Wetland Indicator Status

**Plant List for Siuslaw River Bridge Interpretive Wayside – July 2007**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Indicator Status</b>
<i>Agrostis</i> sp.	bentgrass	—
<i>Buddleja davidii</i>	Butterfly bush	NOL
<i>Cytisus scoparius</i>	Scotch broom	NOL
<i>Distichlis spicata</i>	Seashore saltgrass	FACW
<i>Elymus repens</i>	Quackgrass	FAC-
<i>Festuca arundinacea</i>	Tall fescue	FACU-
<i>Grindelia</i> sp.	Gumweed	—
<i>Hordeum brachyantherum</i>	Meadow barley	FACW
<i>Ilex aquifolium</i>	English holly	NOL
<i>Juncus balticus</i>	Baltic rush	OBL
<i>Lolium multiflorum</i>	Italian ryegrass	NOL
<i>Lotus corniculatus</i>	Birdsfoot trefoil	FAC
<i>Myrica californica</i>	Pacific wax myrtle	FACW
<i>Phalaris arundinacea</i>	Reed canarygrass	FACW
<i>Plantago maritima</i>	Seaside plantain	FACW+
<i>Potentilla anserina</i> ssp. <i>pacific</i>	Pacific silverweed	OBL
<i>Rubus armeniacus</i>	Himalayan blackberry	FACU-
<i>Rubus laciniatus</i>	Evergreen blackberry	FACU+
<i>Rubus spectabilis</i>	Salmonberry	FAC
<i>Rumex crispus</i>	Curly dock	FACW
<i>Salicornia virginica</i>	Pickleweed	OBL
<i>Salix hookeriana</i>	Hooker willow	FACW-
<i>Thuja plicata</i>	Western red cedar	FAC
<i>Vicia nigricans</i> var. <i>gigantea</i>	Giant vetch	NOL

**US Fish and Wildlife Service Plant Indicator Status (Reed 1988, Reed 1993)**

<b>Indicator Status<sup>1</sup></b>	<b>Definition</b>
Obligate Wetland (OBL)	Occur almost always (estimated probability > 99%) under natural conditions in wetlands.
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability 67% -99%), but occasionally found in non-wetlands.
Facultative (FAC)	Equally likely to occur in wetlands or non-wetlands (estimate probability 34% - 66%).
Facultative Upland (FACU)	Usually occur in non-wetlands, but occasionally found in wetlands (estimated probability 1%-33%).
Obligate Upland (UPL)	May occur in wetlands in another region, but occur almost always (estimated probability >99%) under natural conditions in non-wetlands in the region specified.
No Indicator Status (NI)	Insufficient information exists to assign an indicator status.
Not Listed (NL)	Not on the National List in any region.

<sup>1</sup>A plus sign (+) after the indicator status category means that the plant is more likely to be adapted to wet conditions than the category indicated. A minus sign (-) means the plant is less likely to be adapted to wet conditions than the category indicated.