

**DRAFT ENVIRONMENTAL IMPACT STATEMENT
SR 520 BRIDGE REPLACEMENT AND HOV PROGRAM**

MAY 2010

SR 520 Pontoon Construction Project

Description of Alternatives and Construction Techniques Discipline Report



THE INFORMATION IN THIS REPORT IS ACCURATE; HOWEVER, THE PONTOON CONSTRUCTION PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT IS THE SOURCE OF THE MOST CURRENT PROJECT INFORMATION AND ANALYSIS.

SR 520 Pontoon Construction Project Draft Environmental Impact Statement

Description of Alternatives and Construction Techniques Discipline Report

Prepared for

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Abbreviations and Acronyms

CTC	Concrete Technology Corporation, Inc.
Ecology	Washington State Department of Ecology
EIS	environmental impact statement
GIS	geographic information system
HOV	high-occupancy vehicle
IDD #1	Port of Grays Harbor Industrial Development District #1
MHHW	mean higher high water
MLLW	mean lower low water
MTCA	Model Toxics Control Act
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
SR	State Route
WSDOT	Washington State Department of Transportation

Glossary

Aggregate	Granular materials used in construction, including but not limited to sand, gravel, and crushed stone that, when mixed with water and Portland cement, produce concrete.
Bedding material	Material used to surround a pipe from the bottom of the trench foundation surrounding and extending above a pipe.
Berm	Mount or wall of earth, in this case used to protect a site from wave action.
Biofiltration swale	A best management practice that uses vegetation (typically grass) to provide basic treatment of stormwater runoff.
Chitosan	Chitosan is a fiber-like product made from ground shrimp shells that can be used as an additive in the filtration process to remove phosphorus, heavy minerals, and oils from water.
Cross pontoon	The deepest draft (up to 18 feet) pontoons slightly shorter than longitudinal pontoons (approximately 240 feet long by 75 feet wide), cross pontoons are placed perpendicular to the longitudinal pontoons at each end of the bridge in the final bridge alignment and support half of each eastside and westside transition span as it connects the column supported roadway to the floating bridge.
Supplemental stability pontoons	The smallest pontoons (approximately 90 feet long and 50 feet wide) that attach on either side of a longitudinal pontoon at key points along the bridge to provide stability to the floating structure.
Fly ash	A residue generated when coal is burned that is used to supplement or replace some of the Portland cement used in concrete production; it is known as a “cement extender.”
Longitudinal pontoon	Largest pontoons (approximately 360 feet. long by 75 feet wide) that are connected end to end in a linear fashion when placed in the bridge alignment.
MLLW	The average of the lowest of the two low tides each day on a 19-year cycle.
Portland cement	The most common type of cement used as the binding agent in concrete.

Riprap	Rocks, large rock fragments, or other hard material used to armor shorelines against erosion.
Silica fume	A very fine form of silica, which is a chemical compound known for its hardness and used as a supplement in concrete production. Adding silica fume improves the concrete strength in general as well as its bonding strength.

1. Range of Alternatives

This chapter presents the alternatives evaluated in the Draft Environmental Impact Statement (EIS), including two build alternatives and the No Build Alternative, provides an overview of the proposed actions, and describes the general characteristics of the build alternative sites.

What alternatives are WSDOT evaluating in the Draft EIS?

The Draft EIS evaluates the following three alternatives:

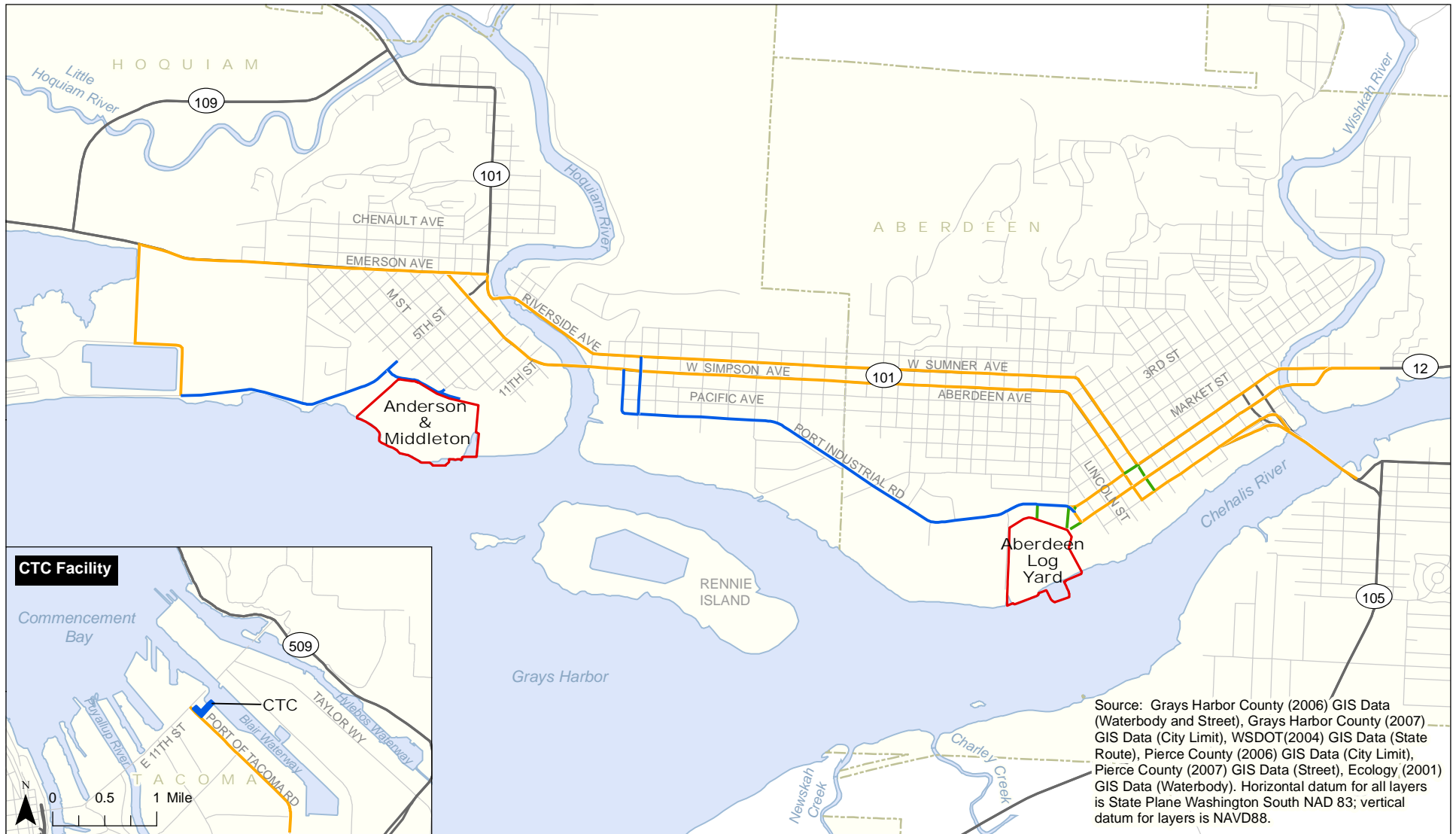
- Construction of a casting basin and pontoons at the Anderson & Middleton Alternative site in Hoquiam, Washington (Exhibit 1)
- Construction of a casting basin and pontoons at the Aberdeen Log Yard Alternative site in Aberdeen, Washington (Exhibit 1)
- No Build Alternative

Each build alternative would include the following actions:

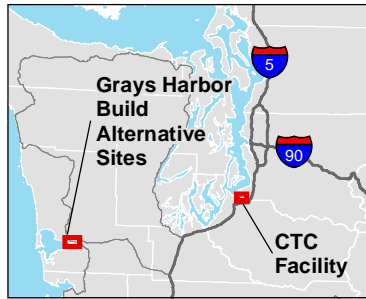
- Constructing a new casting basin facility in Grays Harbor
- Constructing the 33 pontoons needed to replace the existing capacity of the Evergreen Point Bridge
- Potentially using the existing Concrete Technology Corporation, Inc. (CTC) casting basin facility in Tacoma to construct some of the 33 pontoons (Exhibit 2)
- Storing and/or mooring the 33 pontoons built by this project
- Maintaining the Grays Harbor casting basin facility while it is owned and operated by the Washington State Department of Transportation (WSDOT)

The build alternatives do *not* include the following actions:

- Constructing additional pontoons needed for the I-5 to Medina: Bridge Replacement and High-Occupancy Vehicle (HOV) Project
- Transporting pontoons built at the CTC facility to Lake Washington
- Transporting pontoons built at the Grays Harbor facility out of Grays Harbor
- Outfitting pontoons with roadway structure



Source: Grays Harbor County (2006) GIS Data (Waterbody and Street), Grays Harbor County (2007) GIS Data (City Limit), WSDOT (2004) GIS Data (State Route), Pierce County (2006) GIS Data (City Limit), Pierce County (2007) GIS Data (Street), Ecology (2001) GIS Data (Waterbody). Horizontal datum for all layers is State Plane Washington South NAD 83; vertical datum for layers is NAVD88.



- Proposed project haul route common to all project sites
- Proposed project haul route: Aberdeen Log Yard
- Proposed project haul route: Anderson & Middleton
- Build Alternative Site
- CTC facility limits
- City limits

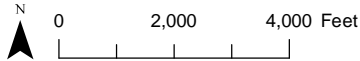


Exhibit 1. Alternatives Vicinity Map with Proposed Truck Haul Routes

Pontoon Construction Project



