2009
WASHINGTON STATE
Joint Aquatic Resources Permit Application (JARPA) Form [help]

US Army Corps of Engineers ®
Seattle District

AGENCY USE ONLY

Date received:

Agency reference #: _____

Tax Parcel #(s): _____

_____

_____

USE BLACK OR BLUE INK TO ENTER ANSWERS IN WHITE SPACES BELOW.

Part 1–Project Identification

Unique project information that makes it easy to identify. [help]

1a. Unique Project Identifier Number (UPI #) [help] • Don't have one yet? Get one at http://www.epermitting.wa.gov or call the Washington Governor's Office of Regulatory Assistance at (800) 917-0043.
058931-09-01
1b. Project Name (Examples: Smith's Dock or Seabrook Lane Development) [help]
Boulevard Over-Water Walkway Geotechnical Investigation

Part 2–Applicant

The person or organization responsible for the project. [help]

2a. Name (Last, First, Middle) and Organization (if applicable)			
Gina Gobo Austin, City of Bellingham Parks and Recreation Department			
2b. Mailing Address (Street or PO Box)			
3424 Meridian Street			
2c. City, State, Zip			
Bellingham, Washington 98225			
2d. Phone (1)	**2e.** Phone (2)	**2f.** Fax	**2g.** E-mail
(360) 778-7000	(360) 778-7014	(360) 778-7001	GAustin@cob.org

Part 3–Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b. of this application.) [help]

3a. Name (Last, First, Middle) and Organization (if applicable)			
Derek Koellmann, Anchor QEA, LLC			
3b. Mailing Address (Street or PO Box)			
1605 Cornwall Avenue			
3c. City, State, Zip			
Bellingham, Washington 98225			
3d. Phone (1)	**3e.** Phone (2)	**3f.** Fax	**3g.** E-mail
(360) 733-4311 x221	(360) 303-4106	(360) 733-4312	dkoellmann@anchorqea.com

Part 4–Property Owner(s) [help]

Contact information for people or organizations owning the property(ies) where the project will occur. [help]

☐ Same as applicant. (Skip to Part 5.)

☐ Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)

☐ There are multiple property owners. Complete the section below and use JARPA Attachment A for each additional property owner.

4a. Name (Last, First, Middle) and Organization (if applicable)			
Washington State Department of Natural Resources (WDNR), Aquatic Resources Division (Lease #22-084455)			
4b. Mailing Address (Street or PO Box)			
P.O. Box 47027			
4c. City, State, Zip			
Olympia, WA 98504-7027			
4d. Phone (1)	**4e.** Phone (2)	**4f.** Fax	**4g.** E-mail
(390) 902-1100	( )	(360) 902-1786	ard@dnr.wa.gov

Part 5–Project Location(s)

Identifying information about the property or properties where the project will occur. [help]

☐ There are multiple properties or project locations (e.g., linear projects). Complete the section below and use JARPA Attachment B for each additional property.

5a. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5n.) [help]

The project area is located on state-owned aquatic lands managed by WDNR (Lease #22-084455) and located waterward of Boulevard Park in the City of Bellingham.

5b. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [help]

Bellingham, Washington 98225

5c. County [help]

Whatcom County

5d. Provide the section, township, and range for the project location. [help]

¼ Section	Section	Township	Range
SW/SE	36	38N	2E

5e. Provide the latitude and longitude of the project location. [help]

- Example: 47.03922 N lat. / -122.89142 W long

48.735519 N lat. / -122.331931 W long

5f. List the tax parcel number(s) for the project location. [help]

- The local county assessor's office can provide this information.

The property is located on WDNR tidelands (Lease #22-084455) and does not have a tax parcel number.

5g. Indicate the type of ownership of the property. (Check all that apply.) [help]

☒ State Owned Aquatic Land ☐ Tribal ☐ Private

☐ Other publicly owned (federal, state, county, city, special districts like schools, ports, etc.)

5h. Contact information for all adjoining property owners, lessees, etc. (If you need more space, use JARPA Attachment C.) [help]

Name	Mailing Address	Tax Parcel # (if known)
City of Bellingham, Parks and Recreation Department	3424 Meridian St. Bellingham, Washington 98227	Boulevard Park
Burlington Northern Santa Fe Railway	3017 Lou Menk Drive Fort Worth, Texas 76131-2800	BNSF Railroad Line
Port of Bellingham	P.O. Box 1677 Bellingham, Washington 98227-1677	Cornwall Avenue Landfill
WDNR	P.O. Box 47027 Olympia, Washington 98504-7027	Aquatic Lands Lease #22-084455

5i. Is any part of the project area within a 100-year flood plain? [help]

☐ Yes ☒ No ☐ Don't know

5j. Briefly describe the vegetation and habitat conditions on the property. [help]

The geotechnical investigation is to be performed on submerged aquatic lands located on the eastern shore of Bellingham Bay. The project area consists of navigable waterways and shallow submerged aquatic lands (see Sheet 1). Shoreline vegetation in the project area is degraded and mostly hindered by shoreline modifications including rip rap. Bellingham Bay marine vegetation includes macroalgae species such as sea lettuce (*Ulva fenestrata*), and other various species. Eelgrass (*Zostera marina*) is also present in the project area (Grette and Associates 2009).

Bellingham Bay provides habitat to a variety of marine species. These species include macro-invertebrates, fish species including bottom fish and pelagic species, and marine mammals. Endangered Species Act (ESA) listed fish species that are documented to exist in the project area include Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*), Puget Sound steelhead (*O. mykiss*), and bull trout (*Salvelinus confluentus*). Migratory bird species can also be found utilizing the area throughout the year.

5k. Describe how the property is currently used. [help]

The geotechnical investigation will be conducted in submerged aquatic land that is utilized by transient vessels for migration and moorage. Recreational opportunities in the project area include kayaking, swimming, and recreational boating.

5l. Describe how the adjacent properties are currently used. [help]

The property north of and adjacent to the project area is the former Georgia Pacific property (Cornwall Landfill), which is currently being redeveloped into a multi-use property to include a marina and contain commercial, residential, light industry, maritime, and recreational uses. East of the project area is a railway. The property south of and adjacent to the project area is Boulevard Park, a popular recreational location for local residents and tourists. Bellingham Bay is located west of and adjacent to the project area.

5m. Describe the structures (above and below ground) on the property, including their purpose(s). [help]

The only structures that exist within the project area include a derelict pier at the south end of the project area, a sunken vessel, and unused and deteriorated piling dispersed along the shoreline. The proposed geotechnical boring activities will not impact these structures.

5n. Provide driving directions from the closest highway to the project location, and attach a map. [help]

From Interstate 5 (I-5) northbound take exit 253 toward Lakeway Dr. Merge onto King St. and turn right at Lakeway Dr. Turn slightly right onto East Holly Street. Turn left at Cornwall Avenue and drive straight for approximately 0.7 miles to access the north side of the project area.

Part 6–Project Description

6a. Summarize the overall project. You can provide more detail in 6d. [help]

The City of Bellingham proposes to conduct a geotechnical investigation in Bellingham Bay in anticipation of future development of an over-water walkway structure. The investigation includes conducting six subsurface geotechnical borings in the proximity of the proposed walkway for use in design and permitting, as shown in Sheet 2. The over-water walkway is proposed to span from the south end of the former Cornwall Landfill site to the north end of Boulevard Park and will be permitted separately from these geotechnical borings.

6b. Indicate the project category. (Check all that apply.) [help]

☐ Commercial ☐ Residential ☐ Institutional ☐ Transportation ☒ Recreational
☐ Maintenance ☐ Environmental Enhancement

6c. Indicate the major elements of your project. (Check all that apply.) [help]

☐ Aquaculture	☐ Culvert	☐ Float	☐ Road
☐ Bank Stabilization	☐ Dam / Weir	☒ Geotechnical Survey	☐ Scientific Measurement Device
☐ Boat House	☐ Dike / Levee / Jetty	☐ Land Clearing	☐ Stairs
☐ Boat Launch	☐ Ditch	☐ Marina / Moorage	☐ Stormwater facility
☐ Boat Lift	☐ Dock / Pier	☐ Mining	☐ Swimming Pool
☐ Bridge	☐ Dredging	☐ Outfall Structure	☐ Utility Line
☐ Bulkhead	☐ Fence	☐ Piling	
☐ Buoy	☐ Ferry Terminal	☐ Retaining Wall (upland)	
☐ Channel Modification	☐ Fishway		

☐ Other: _____

6d. Describe how you plan to construct each project element checked in 6c. Include specific construction methods and equipment to be used. [help]

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year flood plain.

Geotechnical Investigation

The following equipment will be used in conducting the geotechnical investigation:

- Anchored barge
- Track mounted drill rig
- 38.5-inch outside diameter hollow-stem auger
- 2-inch outside diameter split spoon or Shelby tube
- 140-pound hammer

Soil samples are to be collected by a hollow-stem auger. Over-water auger locations will be placed using a track-mounted drill rig positioned in the center of the flexi-float barge. A 38.5-inch outside diameter hollow-stem auger will be advanced into the sediment to the top of the depth interval of interest. After the target depth is reached, sediment will be collected by advancing a 2-inch outside diameter decontaminated split spoon or Shelby tube using a 140-pound hammer dropped 18 inches.

During split spoon penetration, the number of blows required to advance the spoon in 6-inch increments will be recorded as a measure of soil density using the Standard Penetration Test. This test is an approximate measure of soil density and consistency. This test employs a standard 2-inch outside diameter split-spoon sampler. Using a 140-pound hammer, free falling 30 inches, the sampler is driven into the soil for 18 inches. The number of blows required to drive the sampler the last 12 inches is the Standard Penetration Resistance. This resistance, or blow count, measures the relative density of granular soils and the consistency of cohesive solids. The blow counts are plotted on boring logs at their respective sample depths. Field crew personnel will record field conditions and drive notes on-site on a standard boring log.

Once soil cores have been obtained, the hollow-stem auger will be pulled back up to the barge. The drill cuttings remaining on the auger will be collected and scooped into drums for off-site disposal. All geotechnical borings will be backfilled with bentonite to the sediment surface. Soil core samples will be sealed, refrigerated, and shipped via truck to a nearby lab for further analysis.

It is anticipated that the drill crew will need approximately 1 week, depending on site and weather conditions, to complete the borings, which includes mobilizing and demobilizing to and from the site. Gary Wesson of Wesson and Associates, Inc. (see Appendix A) has been consulted regarding the geotechnical borings and will be present during the geotechnical investigation. The work will be performed during September 2009.

All work will be conducted in Bellingham Bay adjacent to the east shoreline. According to the Federal Emergency Management Agency (FEMA) Whatcom County Flood Insurance Rate Maps (FIRMs) the project will not occur within a 100-year flood plain (2007).

6e. What are the start and end dates for project construction? (month/year) [help]

- If the project will be constructed in phases or stages, use JARPA Attachment D to list the start and end dates of each phase or stage.

Start date: September 21, 2009 End date: October 1, 2009 ☐ See JARPA Attachment D

6f. Describe the purpose of the work and why you want or need to perform it. [help]

The purpose of the geotechnical investigation is to support the design and permitting of an over-water walkway that will span from the south end of the former Cornwall Landfill site to the north end of Boulevard Park over Bellingham Bay WDNR-owned tidelands (Lease #22-084455). The over-water walkway itself will be permitted separately from these geotechnical borings.

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [help]

$10,000

6h. Will any portion of the project receive federal funding? [help]

- **If yes**, list each agency providing funds.

☒ Yes ☐ No ☐ Don't know

Federal Enhancement Grant for Over-Water Walkway – Department of Transportation

Part 7–Wetlands: Impacts and Mitigation

☐ Check here if there are wetlands or wetland buffers on or adjacent to the project area.
(If there are none, skip to Part 8.)

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [help]

☒ Not applicable

No wetlands or wetland buffers are located on or adjacent to the project area.

7b. Will the project impact wetlands? [help]

☐ Yes ☒ No ☐ Don't know

7c. Will the project impact wetland buffers? [help]

☐ Yes ☒ No ☐ Don't know

7d. Has a wetland delineation report been prepared? [help]

- **If yes**, submit the report, including data sheets, with the JARPA package.

☐ Yes ☒ No

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [help]

- **If yes**, submit the wetland rating forms and figures with the JARPA package.

☐ Yes ☐ No ☐ Don't know

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [help]

- **If yes**, submit the plan with the JARPA package.

☐ Yes ☐ No ☒ Not applicable

7g. Use the table below to list the type and rating of each wetland that will be impacted; the extent and duration of the impact; and the type and amount of compensatory mitigation proposed. If you are submitting a compensatory mitigation plan with a similar table, you may simply state (below) where we can find this information in the mitigation plan. [help]

Activity causing impact (fill, drain, excavate, flood, etc.)	Wetland type and rating category[1]	Impact area (sq. ft. or acres)	Duration of impact[2]	Proposed mitigation type[3]	Wetland mitigation area (sq. ft. or acres)

[1] Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package.

[2] Indicate the time (in months or years, as appropriate) the wetland will be measurably impacted by the activity. Enter "permanent" if applicable.

[3] Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)

Page number(s) for similar information in the mitigation plan, if available: _____

7h. For all filling activities identified in 7g., describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland. [help]

No wetlands or wetland buffers are located on or adjacent to the project area.

7i. For all excavating activities identified in 7g., describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed. [help]

No wetlands or wetland buffers are located on or adjacent to the project area.

7j. Summarize what the compensatory mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan. [help]

No wetlands or wetland buffers are located on or adjacent to the project area.

Part 8–Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, "waterbodies" refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [help]

☒ Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment. [help]

☐ Not applicable

The contractor will implement the following best management practices (BMPs) to avoid and minimize impacts to fish and aquatic life:

- Drilling equipment will be checked daily, well-maintained, and kept in good repair to prevent lubricants, grease, and any other deleterious materials from entering the water.
- Geotechnical boring will occur within the allowed marine/estuarine work window set in place by the U.S. Army Corps of Engineers (Corps) for the following species:
  - Salmon – July 2 to March 2
  - Bull Trout – July 16 to February 15
  - Forage Fish – June 15 to October 14 (surf smelt [*Hypomesus pretiosus*] are present year-round and a local area habitat biologist will be contacted to determine the extent of monitoring requirements for this species)
- Water and drilling fluids will be contained to the immediate location of the moon-pool. No mixing of processed water and surface waters will take place. In addition, the contractor will have absorbent materials onboard the barge for use under the drill in case of drips, as well as oil booms in the unlikely event of a spill.
- Prior to commencing drilling, the drill crew will have proper spill and containment measures in place.
- All known eelgrass areas will be avoided during geotechnical activities.

8b. Will your project impact a waterbody or the area around a waterbody? [help]

☒ Yes ☐ No

8c. Summarize impact(s) to each waterbody in the table below. [help]

Activity causing impact (clear, dredge, fill, pile drive, etc.)	Waterbody name	Impact location[1]	Duration of impact[2]	Amount of material to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
Geotechnical boring	Bellingham Bay	Subsurface	1 week	Sediment will be removed for geotechnical studies	Less than 100 sq. ft. temporary impact

[1] Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain.

[2] Indicate the time (in months or years, as appropriate) the waterbody will be measurably impacted by the work. Enter "permanent" if applicable.

8d. Have you prepared a mitigation plan to compensate for the project's adverse impacts to non-wetland waterbodies? [help]

- **If yes**, submit the plan with the JARPA package.

☐ Yes ☒ No ☐ Not applicable

8e. Summarize what the compensatory mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

- If you already completed 7j., you do not need to restate your answer here. [help]

No compensatory mitigation plan was prepared for this project, as the geotechnical investigation is anticipated to have a negligible effect to Bellingham Bay and associated species.

8f. For all activities identified in 8c., describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [help]
No fill will be placed as part of the project.
8g. For all excavating or dredging activities identified in 8c., describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed. [help]
No excavation or dredging activities will be conducted as part of the geotechnical explorations.

Part 9–Additional Information

Any additional information you can provide helps the reviewer(s) understand your project.

9a. If you have already worked with any government agencies on this project, list them below. [help]

Agency Name	Contact Name	Phone	Most Recent Date of Contact
Corps	Randel Perry	(206) 764-6985	08/31/2009
City of Bellingham	Steve Sundin	(360) 778-8300	08/28/2009
Washington Department of Fish and Wildlife (WDFW)	Brian Williams	(360) 466-4345 x250	09/01/2009
WDNR	Terry Carten	(360) 856-3500	04/20/2009

9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 on the Washington Department of Ecology's 303(d) List? [help]

- **If yes,** list the parameter(s) below.
- If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at: http://www.ecy.wa.gov/programs/wq/303d/.

☐ Yes ☒ No

Bellingham Bay within the project area is not identified in Part 7 or Part 8 of the Washington Department of Ecology's 303(d) List.

9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [help]

- Go to http://cfpub.epa.gov/surf/locate/index.cfm to help identify the HUC.

Strait of Georgia Watershed – 17110002

9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [help]

- Go to http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm to find the WRIA #.

WRIA 1

9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [help]

- Go to http://www.ecy.wa.gov/programs/wq/swqs/criteria.html for the standards.

☒ Yes ☐ No ☐ Not applicable

9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation? [help]

- If you don't know, contact the local planning department.
- For more information, go to: http://www.ecy.wa.gov/programs/sea/sma/laws_rules/173-26/211_designations.html.

☐ Rural ☒ Urban ☐ Natural ☐ Aquatic ☒ Conservancy ☒ Other _____

9g. What is the Washington Department of Natural Resources Water Type? [help]

- Go to http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest Practices Water Typing System.

☒ S ☐ F ☐ Np ☐ Ns

9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help]

- **If no**, provide the name of the manual your project is designed to meet.

☐ Yes ☒ No The project will not generate stormwater.

Name of manual: Not applicable

9i. If you know what the property was used for in the past, describe below. [help]

The property in which the geotechnical investigation will be conducted was historically used as a navigation channel and a vessel moorage area.

9j. Has a cultural resource (archaeological) survey been performed on the project area? [help]

- **If yes**, attach it to your JARPA package.

☒ Yes ☐ No – see Appendix A – *An Assessment of the Probable Archaeological Potential of the Pattle Point Trestle Walkway Project Area, Boulevard Park, Bellingham, Washington* (Wesson & Associates 2009) and Appendix B – *Initial Cultural Resources Evaluation* (Landau 2009)

9k. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [help]

Federal ESA listed species that occur in project area that may be affected by the proposed work include:

- Puget Sound Chinook salmon (*Onchorhynchus tshawytscha*) – Threatened (National Marine Fisheries Service)
- Steelhead trout (*O. mykiss*) – Threatened (National Marine Fisheries Service)
- Bull trout (*Salvelinus confluentus*) – Threatened (U.S. Fish and Wildlife Service)

Any effects to ESA listed species from the geotechnical borings are anticipated to be short term in nature, negligible, and discountable.

9l. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [help]

According to the WDFW Priority Habitats and Species List maps, the project area is located in a priority Estuarine Zone and includes potential surf smelt (*Hypomesus pretiosus*) and sand lance (*Ammodytes hexapterus*) spawning habitat at the north end of Boulevard Park. Priority species that might be affected by the proposed work include two priority harbor seal (*Phoca vitulina*) haul-out sites, chum salmon (*Oncorhynchus keta*), coho salmon (*O. kisutch*), cutthroat salmon (*O. clarkii clarkii*), pink salmon (*O. gorbuscha*), and sockeye salmon (*O. nerka*)species. Documented priority Pacific herring (*Clupea harengus pallasi*) holding areas, Dungeness crab (*Cancer magister*), and Pandalid shrimp (*Pandalidae* spp.) are all located within 1 mile west of the project area. Priority aquatic vegetation and macroalgae species include eelgrass and turf algae (*Endocladia muricata*).

Any effects to WDFW priority habitats and species from the geotechnical borings are anticipated to be short term in nature, negligible, and discountable.

Part 10–Identify the Permits You Are Applying For

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at http://apps.ecy.wa.gov/opas/.
- Governor's Office of Regulatory Assistance at (800) 917-0043 or help@ora.wa.gov.

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [help]

- For more information about SEPA, go to www.ecy.wa.gov/programs/sea/sepa/e-review.html.

☐ A copy of the SEPA determination or letter of exemption is included with this application.

☐ A SEPA determination is pending with _____ (lead agency). The expected decision date is _____.

☐ I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.)

- Submit the Fish Habitat Enhancement Project form with this application. The form can be found at http://www.epermitting.wa.gov/Portals/_JarpaResourceCenter/images/default/fishenhancement.doc

☒ This project is exempt (choose type of exemption below).

☒ Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?

This project is exempt per Washington Administrative Code (WAC) 197-11-800 section 17 – Information collection and research. The section states that basic data collection, research, resource evaluation, requests for proposals and the conceptual planning of proposals shall be exempt (2009). This activity complies with all requirements included in this section.

☐ Other: _____

☐ SEPA is pre-empted by federal law. [help]

10b. Indicate the permits you are applying for. (Check all that apply.) [help]

LOCAL GOVERNMENT

Local Government Shoreline permits:

☐ Substantial Development ☐ Conditional Use ☐ Variance

☒ Shoreline Exemption Type (explain): The shoreline exemption type per the City of Bellingham 2009 Final Draft Shoreline Master Program 22.05.20(B) Section (m) – Site exploration and investigation activity. This section states that:

Site exploration and investigation activities that are prerequisite to preparation of an application for development authorization under this Program, if:

i. The activity does not interfere with the normal public use of surface waters;

ii. The activity will have no significant adverse impact on the environment including but not limited to fish, wildlife, fish or wildlife habitat, water quality and aesthetic values;

iii. The activity does not involve the installation of any structure, and upon completion of the activity the vegetation and land configuration of the site are restored to conditions existing before the activity;

iv. A private entity seeking development authorization under this section first posts a performance bond or provides other evidence of financial responsibility to the Administrator to ensure that the site is restored to preexisting conditions;

v. The activity is not subject to the permit requirements of RCW 90.58.550

This activity complies with all requirements included in this section.

Other city/county permits:

☐ Floodplain Development Permit ☐ Critical Areas Ordinance

STATE GOVERNMENT
Washington Department of Fish and Wildlife: ☒ Hydraulic Project Approval (HPA) ☐ Fish Habitat Enhancement Exemption
Washington Department of Ecology: ☐ Section 401 Water Quality Certification
Washington Department of Natural Resources: ☐ Aquatic Resources Use Authorization
FEDERAL GOVERNMENT
United States Department of the Army permits (U.S. Army Corps of Engineers): ☐ Section 404 (discharges into waters of the U.S.) ☒ Section 10 (work in navigable waters) (Nationwide Permit 6)
United States Coast Guard permits: ☐ General Bridge Act Permit ☐ Private Aids to Navigation (for non-bridge projects)

Part 11–Authorizing Signatures

Signatures required before submitting the JARPA package.

11a. Applicant Signature (required) [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. HA (initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. HA (initial)

T M Austin
Applicant

9/2/09
Date

11b. Authorized Agent Signature [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Authorized Agent

9/2/09
Date

11c. Property Owner Signature (if not applicant) [help]

I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

Property Owner

Date

18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years or both.

If you require this document in another format, contact The Governor's Office of Regulatory Assistance (ORA). People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341.
ORA publication number: ENV-019-09

REFERENCES

City of Bellingham (City). 2009. Final Draft Shoreline Master Program. Prepared by the City of Bellingham Planning Commission on June 2009.

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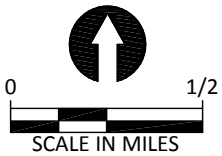
JARPA SHEETS

DIRECTIONS TO SITE:
- FROM INTERSTATE 5 (I-5) TAKE EXIT 253
- TURN RIGHT AT LAKEWAY DRIVE (0.4 MILES)
- TURN SLIGHT RIGHT ONTO EAST HOLLY STREET (0.5 MILES)
- TURN LEFT AT CORNWALL AVENUE (0.7 MILES)



VICINITY AND PROJECT AREA MAP

PURPOSE: PROVIDE WATERFRONT AND BEACH ACESS	NAME: BOULEVARD OVER-WATER WALKWAY GEOTECHNICAL INVESTIGATION	PROPOSED: GEOTECHNICAL BORINGS
DATUM: LAT 48°74' N, LONG 122°33' W WA STATE PLANE NORTH (NAD83) S-T-R: SEC36 T38N R2E		IN: BELLINGHAM COUNTY OF: WHATCOM STATE: WASHINGTON
ADJACENT PROPERTY OWNERS: CITY OF BELLINGHAM, PORT OF BELLINGHAM, BNSF	SITE LOCATION ADDRESS: DNR AQUATIC TIDELANDS BELLINGHAM, WA 98225	DATE: AUGUST 2009 SHEET: 1 OF 2

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SCALE IN FEET

LEGEND:

BL-01 PROPOSED BORING LOCATIONS

WALKWAY OPTION 1

APPROXIMATE EELGRASS LOCATION

SITE PLAN

PURPOSE: PROVIDE WATERFRONT AND BEACH ACESS DATUM: LAT 48°74' N, LONG 122°33' W WA STATE PLANE NORTH (NAD83) S-T-R: SEC36 T38N R2E ADJACENT PROPERTY OWNERS: CITY OF BELLINGHAM, PORT OF BELLINGHAM, BNSF	NAME: BOULEVARD OVER-WATER WALKWAY GEOTECHNICAL INVESTIGATION SITE LOCATION ADDRESS: DNR AQUATIC TIDELANDS BELLINGHAM, WA 98225	PROPOSED: GEOTECHNICAL BORINGS IN: BELLINGHAM COUNTY OF: WHATCOM STATE: WASHINGTON DATE: AUGUST 2009 SHEET: 2 OF 2

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APPENDIX A
AN ASSESSMENT OF THE PROBABLE ARCHAEOLOGICAL POTENTIAL OF THE PATTLE POINT TRESTLE WALKWAY PROJECT AREA, BOULEVARD PARK, BELLINGHAM, WASHINGTON

APPENDIX 9
An Assessment of the Probable Archaeological Potential of the Pattle Point Trestle Walkway Project Area, Boulevard Park, Bellingham, Washington
by Wesson & Associates, Inc.
July 2009

AN ASSESSMENT OF THE PROBABLE ARCHAEOLOGICAL POTENTIAL OF THE PATTLE POINT TRESTLE WALKWAY PROJECT AREA, BOULEVARD PARK, BELLINGHAM, WASHINGTON

By

GARY C. WESSEN, Ph.D. and TIM WAHL

Prepared for

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By

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15028 24th Avenue SW
Burien, Washington 98166

July 2009

MANAGEMENT SUMMARY[1]

The Pattle Point Trestle Project Area has some potential to contain archaeological resources. Having recognized this, however, it is likely that the range of such resources which may be present is relatively limited. The most likely archaeological resources to be present are structural remains representing the old Northern Pacific Railroad trestle (and its associated track) and the Bellingham Bay (later the E. K. Wood) Mill. Archaeological deposits representing either of the latter - - or other early historic activities - - are also possible, but they are considered to be relatively unlikely. Similarly, prehistoric archaeological deposits are also possible, but they are also considered to be relatively unlikely. If prehistoric deposits are present in the project area, they are most likely to be associated with hunting, fishing, and/or other economic activities which were conducted along the shoreline in this area during the last ca. 3,000 to 5,000 years. The presence of deposits representing large and longstanding villages, cemeteries, or cultural activities which occurred significantly earlier than ca. 5,000 years ago is unlikely.

The Pattle Point Trestle Project Area, and its immediate vicinity, have been disturbed by a variety of both natural and historic cultural affects and the latter have probably impacted the archaeological resources here. The structural remains thought most likely to be present are likely to be relatively durable objects. Nevertheless, features such as old pilings and concrete supports may be broken and/or damaged in other ways. It is also possible that some such objects could have been incorporated into more recent structures in the project area. Having expressed the view that the potential for archaeological deposits being present appears to be limited, we should add that, if such deposits are present, they are likely to be disturbed. If intact archaeological deposits are present in the project area, they are likely to be either deeply buried or located in places that are at least slightly removed from the infrastructure of the railroad and the mill. Given these conditions, we suspect that most of the archaeological resources which may be found in the project area are unlikely to be eligible for listing with the National Register of Historic Places.

Overall, this review of the Pattle Point Trestle Project Area suggests that its archaeological potential is probably limited and that potentially significant archaeological resources are relatively unlikely to be present here. Nevertheless, it is important to emphasize that these are not the conclusions of a direct archaeological inspection of the project area. They are judgments based upon a literature review and prior experience in the northern Puget Sound basin. While we believe that the archaeological potential of the project area is probably limited, this finding of limited potential should not be used as a basis to dismiss the possibility that archaeological resources might be present.

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1 Conclusions and recommendations in this report represent Wessen's opinions. In order to avoid potential conflicts of interest, Wahl, an employee of the City of Bellingham Parks and Recreation Department, makes no recommendation at present concerning any particular actions regarding the assessment or monitoring of possible archaeological resources located in the Pattle Point Trestle Project Area. Wahl is not employed as a cultural resource professional or historian by City Parks, but he has conducted several previous Bellingham waterfront historical studies for other parties as a researcher and historian.

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INTRODUCTION

The City of Bellingham's Parks/Design & Development Division has contracted with Reid Middleton, Inc. to assist in the planning and implementation of proposed improvements to the Pattle Point Trestle at the southern end of Boulevard Park. One aspect of the planning for this effort is an assessment of the Pattle Point Trestle Project Area's archaeological potential. To this end, Reid Middleton has requested that Wessen & Associates, Inc. make the required archaeological assessment.

This document describes the background, goals, methods, and findings of our assessment of archaeological potential of the Pattle Point Trestle Project Area.

2 BACKGROUND

Appropriate areas of background consideration for this presentation include the basic character of the Pattle Point Trestle Project Area and its environmental, cultural, and archaeological settings.

2.1 Project Area

The Pattle Point Trestle Project Area is a long narrow corridor that spans a small embayment at the southern end of Boulevard Park, in the southwestern portion of Bellingham, Washington (see Figure 1). Specifically, it is located in the northwestern quarter of Section 1, Township 37 North, Range 2 East. The trestle itself is a 525 by 16 foot wooden structure oriented approximately northeast-southwest (see Figure 2). The project area includes the structure and the immediate vicinity of small abutments at each end. Thus, the project area occupies an area of approximately 555 by 20 feet.

The Pattle Point Trestle was originally built as a railroad trestle and was later converted to an overwater segment of the Coast Millennium Trail, a multi-use trail that runs along the shoreline of Boulevard Park connecting the Fairhaven District to Downtown Bellingham. First use of the route as a trail occurred in the 1980s and a significant renovation of the trestle structure was undertaken in 1991. The Parks/Design & Development Division now wishes to make a number of additional improvements to it. Many of the proposed actions will only effect the upper portion of the trestle structure, but some ground-disturbing activities are also planned. The latter include: removal and replacement of the trestle's southernmost timber frame bent, removal of the trestle's northernmost timber frame bent, and removal and replacement of the trestle's two existing abutments. The most extensive ground disturbances are associated with the removal and replacement of the abutments. Each new abutment will be 30 feet long and 16 feet wide. Ground disturbances up to a depth of approximately 5 feet are anticipated in these areas. The total volume of the excavation at the north abutment will be approximately 67 cubic yards; the south abutment excavation will be approximately 80 cubic yards. These actions will be largely confined to terrestrial sediments at the northern and southern ends of the trestle, although some disturbance to the immediately adjacent beach deposits will also occur. A much smaller ground disturbance is planned at the trestle's southernmost timber frame bent. A layer of rock which will support the new bent at this location will require the excavation of a 16 by 6 foot trench to a depth of approximately 1 foot. This action will occur on the beach.

Figure 1 The location of the Pattle Point Trestle Project Area, Boulevard Park, Bellingham, Washington.

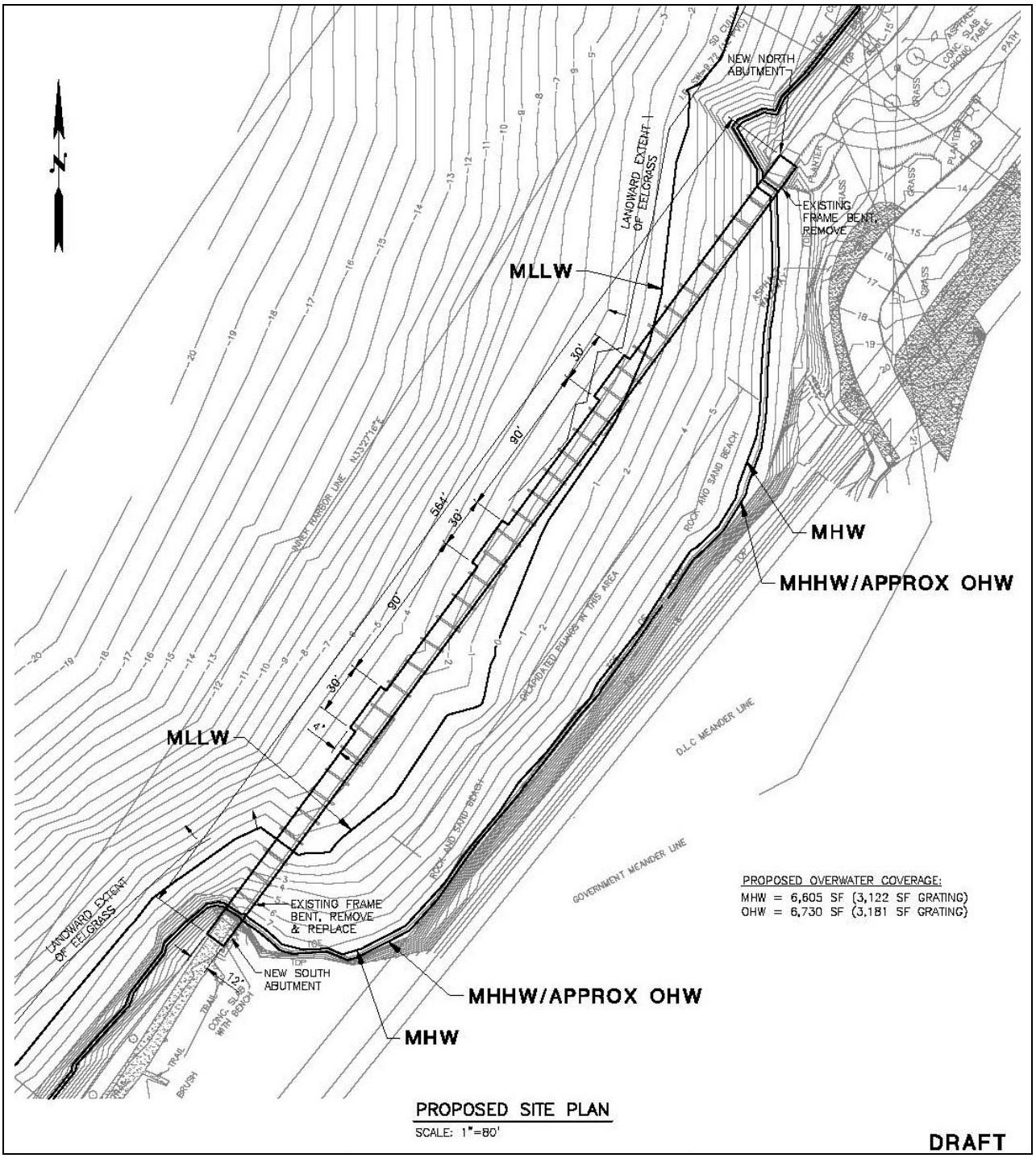

Figure 2 The Pattle Point Trestle Project Area, Boulevard Park, Bellingham, Washington.

2.2 Environmental Setting

The Pattle Point Trestle Project Area includes a portion of the intertidal zone in a small embayment on the south side of Pattle Point and limited areas on the headlands at the northern and southern ends of this embayment. The general vicinity has had a considerable history of industrial and other disturbance (see Section 2.3.2), and thus, at least some of the present landforms are probably not natural. The headland surfaces at the ends of the project area have probably received the most extensive modifications and are now approximately 15 feet above sea level (MLLW). Trestle pilings begin on the beach surface at an elevation of approximately 7 feet above sea level and, at its lowest point, extend into an area which is approximately 3 feet below sea level. Prior to development, we suspect that this area had a relatively steep rocky high bank shoreline marked by occasional bedrock exposures. There do not appear to be any surface fresh water resources in or near the project area today. While there may be closer seeps or very small streams, the nearest significant source we are aware of is Padden Creek, approximately 3,000 feet to the south.

The entire project area is underlain by Chuckanut Formation sandstone and bedrock exposures of this material are exposed at Pattle Point and elsewhere in the immediate vicinity (Easterbrook and Rahm 1971). Early historic records indicate that bedrock outcrops were much more conspicuous in this area, and that much of this material has been removed during various industrial developments (Wahl 2009). The headland surfaces at each end of the embayment are mantled with what Goldin (1992: Map 44) describes as an Squalicum – Urban Land Complex soil. This is a soil mapping unit that includes an intricate mosaic of Everett, Chuckanut, Labounty, Squalicum, Sehome, and Whatcom series soils. Typically, areas mapped with this classification are approximately 50% Squalicum gravelly sandy loams and complex mixtures of some or all of the remaining soil types. All are relatively deep, moderately well to well drained soils that have developed in a combination of alluvium and/or colluvium, volcanic ash, glacial till, glacial outwash, and sandstone. All tend to have a high gravel fraction. Squalicum – Urban Land Complex soils are common in this part of Whatcom County. A considerable amount of historic fill material is known to be present in Boulevard Park and there is reason to believe that such material may be present on one, or both, of the headlands in the project area (Wahl 2003 and 2009). The beach below the headlands is unlikely to contain fill deposits. The beach is a gravel-cobble surface. This suggests that it is probably subject to relatively high wave energy at some times and that significant erosion of the shoreline has occurred here.

Vegetation in the immediate vicinity of the project area has been extensively altered by historic activities. The area at the northern end of the trestle is now a landscaped portion of Boulevard Park. It contains maintained lawns, ornamental plantings, and relatively young second growth trees. The area at the southern end of the trestle is less maintained and stands of invasive brushy plants such as Himalayan blackberry (*Rubus discolor*) are present. Prior to historic development, upland areas probably supported a dense nearshore coastal forest dominated by trees such as Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), and western red cedar (*Thuja plicata*). The understory was probably thick and plants such as sword fern (*Polystichum munitum*) would have been well represented. We have not determined when the original forest vegetation was removed from the area, but we are confident that this occurred sometime prior to 1900. Thus, the native vegetation of the project area and its immediate vicinity has been absent for more than a century.

It should be noted that a small remnant of a native plant community which may be indicative of the late prehistoric Pattle Point shoreline vegetation is present in the rocky meadow openings on the sea bluff just to the north of Boulevard Park. This meadow remnant includes chocolate lily (*Fritillaria lanceolata*), Columbia lily (*Lilium columbianum*), and a species of grassland saxifrage. Other scattered native species including beaked hazel (*Corylus cornuta*) and blue elder (*Sambucus cerulea)* persist along the nearby shoreline and suggest a landscape with openings encouraged by prehistoric land management practices and featuring breaks in the original forest canopy.

Finally, while this discussion of the project area's environmental setting has focused on its current conditions, it is also worthwhile to briefly consider the character of past environments here. All of Whatcom County was covered by the Puget Lobe of the Cordilleran Ice Sheet in the Late Pleistocene, but this area was probably ice free by ca. 12,000 to 14,000 years ago (Porter and Swanson 1998). A recent reconstruction of Late Pleistocene and Holocene sea level history for southwestern British Columbia suggests that the project area may have been significantly below sea level until sometime between ca. 13,500 and 11,500 years ago and then relative sea levels lower than the modern stand probably characterized much of the Early and Middle Holocene period (Gowan 2007). The modern sea level has probably been in place for approximately the last ca. 3,000 to 5,000 years. Thus, the project area may have been a shoreline area briefly ca. 12,000 years ago, but it was probably at least somewhat interior to the shore for much of the following 7,000 to 9,000 years. While there have been significant changes in the vegetation of this region during the Holocene, pollen data suggests that forest communities much like those of the early historic period have probably been present in western Whatcom County for the last ca. 3,500 to 5,000 years (Whitlock 1992). In sum, environmental conditions in and near the Pattle Point Trestle Project Area have probably approximated those of the early historic period for much of the second half of the Holocene. A more open (i.e., less forested) landscape was probably present prior to that time.

2.3 Cultural Setting

The cultural setting of the Pattle Point Trestle Project Area includes both the Native American and Euro-American use of the vicinity. The following sections briefly consider each.

2.3.1 The Native American Presence

The late prehistoric and early historic Native American occupants of western Whatcom County were members of a broad grouping of peoples referred to as the Coast Salish. Coast Salish peoples are widespread in Western Washington and southwestern British Columbia and are divisible into a number of smaller regional groups. The people of the Whatcom, northwestern Skagit, and San Juan County areas are considered to be members of the Central Coast Salish (Suttles 1990). They are distinguished from their neighbors by the language they speak: Lkungen, as opposed to the Lushootseed spoken by other local Salish groups further to the south. They also differ in their pursuit of a distinctive subsistence and settlement system which traditionally placed a heavy emphasis upon exploiting the marine resources, particularly the reef-netting of sockeye salmon, within their traditional territory.

The Central Coast Salish people have often been divided into a number of tribal groups, but it is worthwhile to note that such tribal groups may be historic phenomena and the term "tribe" may not be directly applicable to the pre-contact inhabitants of the area. Most types of economic, political and social affiliation appear to have focused on local lineal groups (i.e., families). Family control of resource collection localities and ownership of the rights to ceremonial properties such as dances, songs, titles, and masks was the rule. The historic tribal groups most frequently mentioned in southwestern Whatcom County include the Lummi, Samish and Noo-wha-ah Indians.

There appears to be very little ethno-historical information about the Pattle Point Trestle Project Area and its general vicinity. We know that the Lummi People occupied much of the land to the north during historic times and that the Samish and Noo-wha-ah lands were mostly to the south. There is no clear agreement regarding the boundary between these territories. Indeed, there is even reason to believe that such boundaries have probably changed over time (Allen 1976). Stern (1934) places the southern boundary of Lummi Territory a few miles to the south of Chuckanut Creek (approximately 4 to 5 miles to the south of the project area). Suttles (1951) places the southern boundary of Lummi Territory just to the north of Chuckanut Creek (approximately 2.5 mile to the south of the project area). Sampson (1972) places the northern boundary of Noo-wha-ah Territory well to the north of Chuckanut Creek. Thus, at least two of these three sources place the project area within Lummi Territory.

There are also a few very limited references to yet another Native American group in the vicinity of the project area. Wahl (2003) notes that at least one account from an Indian Agent and oral traditions from some of the first Euro-American settlers in the Bellingham Bay area make reference to a group referred to as the Mamosee who occupied the southern part of the Bellingham Bay shoreline in the vicinity of what is now Fairhaven and Boulevard Park. The Mamosee people were largely gone by the 1850s and little is known about them. As such, the specific details of their territory and relationships with neighboring groups is largely unknown.

None of the above sources, nor any other source we are aware of, specifically describes Native American settlements - - or other activities by Indian people - - either within, or close to, the Pattle Point Trestle Project Area. Most of the closest Lummi settlements which we are aware of were located farther to the north and west on Hale Passage and the tributaries of today's Nooksack River. Suttles (1951:34) identifies a number of early historic Lummi villages and smaller seasonal camps on the west side of Bellingham Bay, on Portage Island, and on Lummi Island, all 5 to 7 miles to the west. He also noted a Lummi settlement at the mouth of Squalicum Creek, approximately 2.5 miles to the northwest, but was uncertain whether this community predated the early historic period. The closest reported settlement to the south was a seasonal camp on the north side of Chuckanut Bay, approximately 2 miles away. Suttles (1951:42) attributes this settlement to the Samish Indians, people who may have had an association with the Noo-wha-ah.

While this discussion may appear to suggest there were no Native American settlements at, or close to the Pattle Point Trestle Project Area, it is likely that this appearance is - - at least in part - - a reflection of incomplete ethnographic data. Sixteen prehistoric archaeological sites have been identified within 2 miles of the project area (see Section 2.4), many of which are concentrated near the mouth of Padden Creek and in the vicinity of Chuckanut Bay. This density of sites is not suggested by the ethnographic data and argues that at least one or more unreported late prehistoric or early historic settlements were probably present in the vicinity.

2.3.2 The Euro-American Presence

The earliest known Euro-American activities in the general vicinity of the Pattle Point Trestle Project Area are associated with Bellingham Bay (Carhart 1926, Edson 1968). The first European to enter the area was probably Jose Narvaez, sailing for Francisco Eliza, who briefly visited Bellingham Bay in 1791. The following year Galiano and Valdez inspected and mapped Bellingham Bay in greater detail, and were shortly followed by a boat crew under Joseph Whidbey, dispatched from Birch Bay by George Vancouver. The Spaniards first named the adjoining body of water "Gaston Bay", although the Vancouver expedition gave it the persisting name "Bellingham Bay" on its charts. The name honored Sir William Bellingham, an associate of Vancouver's in the British Navy. The first US land claimant on Bellingham Bay was William Pattle, who arrived in 1852. Additional became established in the next few years and several communities, including Whatcom, Sehome, Bellingham, and Fairhaven, were present along the eastern shore of the bay by the 1880s (Scott and Turbeville III 1983). The smaller communities gradually merged to become the modern City of Bellingham in 1904.

William Pattle and two associates, James Morrison and John Thomas, all filed Donation Land Claims in the vicinity of Boulevard Park and pursued an early interest in coal mining in this area (Griffin 2007 and Wahl 2009). The Pattle Point Trestle Project Area is located on the northern part of the Morrison DLC and Pattle's DLC began approximately 300 feet further to the north. Pattle's home was located approximately 450 feet northeast of the project area. Pattle, Morrison, and Thomas briefly operated a coal mine at Easton Cove, approximately 500 feet to the southwest of the project area and they had a small wharf at Pattle Point, not far from Pattle's home. The venture was not successful, however, and it was largely abandoned by the early 1860s.

The next phase of developments in this area began with the construction of the Bellingham Bay Mill at Pattle Point in the early 1880s (Griffin 2007 and Wahl 2009). The mill changed hands twice in the following years. It saw its largest operations during the first two decades of the 20th Century, at which time it was known as the E. K. Wood Lumber Company Mill. It was destroyed by a fire in 1925. While some of the mill complex was built on land here, much of it was constructed atop pilings which extended out over the water. At least some of the mill infrastructure was located in the small embayment spanned by the Pattle Point Trestle. It is likely that the first significant filling of tidelands in the Boulevard Park area began while the mill operated.

The construction of railroads along the Bellingham Bay shoreline also began to impact the vicinity of the project area during the late 19th and early 20th Centuries (Griffin 2007 and Wahl 2009). The first railroad grade in the area was built in 1889 or 1890. Originally built as the Fairhaven and Southern Railroad, it was soon acquired by the Great Northern Railroad. This alignment, just to the east of the project area, still exists and is now the Burlington Northern & Santa Fe Railroad mainline through the Bellingham area. Of more immediate relevance to the project area, the Bellingham Bay and Eastern Railroad built a track across the Pattle Point area in 1901. The latter included a trestle across the small embayment south of the point, here referred to as the Pattle Point Trestle. The Bellingham Bay and Eastern Railroad was purchased by the Northern Pacific Railroad in 1904 and the Northern Pacific used this route until at least the 1940s. It is likely that the Pattle Point Trestle structure was modified at least once during this period. The abandoned railroad grade - - including the trestle - - began to be used as public trail in the 1980s and a significant renovation of the trestle itself occurred in 1991. We have not

documented the specific details of the renovation at that time, but it is likely that extensive alterations to the structure were made.

In sum, the current Pattle Point Trestle represents an altered version of a structure first built to accommodate a railroad track in 1901. Whether, and to what extent, original structural elements are still present is not clear at this time.

A final aspect of the history of the project area worthy of comment is the extensive historic disturbance which has occurred here. Our review of early historic maps, drawings, and photographs indicates that higher portions of the Pattle Point area have been graded and substantially lowered and that tidelands in the vicinity of the point have been filled. Indeed, much of the northern half of Boulevard Park appears to have been built upon fill materials which were deposited here between the 1920s and the 1960s. Our knowledge of the history of filling within the headland portions of the Pattle Point Trestle Project Area is less complete, but it appears likely that at least some fill materials are present in these areas as well.

2.4 Archaeological Setting

The history of archaeological research in the northern Puget Sound Basin begins shortly before the beginning of the 20th Century, but the vast majority of such activities have occurred during the last 50 years. The earliest efforts were associated with the American Museum of Natural History's Jessup North Pacific Expedition, and these resulted in what are essentially reconnaissance reports of prehistoric cultural resources by Harlan Smith and Gerald Fowke (1901), and Smith (1907). Smith and Fowkes noted the presence of shell middens sites on the northern part of Bellingham Bay, but they provided very little information about them. Writing shortly later, Albert Reagan (1917) also identified several midden sites on the northern part of Bellingham Bay, but he also offered few details about any of these places. After Smith, Fowke, and Reagan, there were virtually no further archaeological studies in western Whatcom County until the early 1970s. At that time, Garland Grabert and his students at Western Washington University initiated a wide-ranging survey and excavation studies in this area. Grabert was active for more than 20 years and, directly or indirectly, had a role in the recording of more than 100 sites in Whatcom County. Grabert's replacement at Western Washington University, Sarah Campbell, remains active in the archaeology of this region today. Most of the recorded archaeological sites in western Whatcom County are shell middens associated with the modern marine shoreline. These sites probably represent late prehistoric to early historic settlements. Present in lesser numbers are grave sites, petroglyph (rock art) sites, and lithic sites. Only a small percentage of Whatcom County's sites have been dated with radiometric techniques and most of the latter are from a few hundred to a few thousand years old. Nevertheless, assessments of site age based upon stylistic comparisons, suggest that some Whatcom County sites are probably much older.

There are no recorded archaeological sites either within, or in the immediate vicinity of, the Pattle Point Trestle Project Area. The closest known sites are located to the south and west. The closest prehistoric sites include both shell midden deposits and lithic sites thought to be associated with either the lowermost portion of the Padden Creek Channel, or the marine shoreline of Bellingham Bay, approximately 0.6 to 0.7 mile to the southwest. Most of these sites were recorded by Garland Grabert and/or his students in the 1970s. Unfortunately, none of these sites have been subjects of study - - beyond their initial recording - - and thus, very little is known about them. None of the sites appear to represent the ethno-historically reported Native

American villages. A small number of historic archaeological sites representing Euro-American activities have also been recorded on or near the Bellingham Bay shoreline. The closest of these is an array of old log pilings, approximately 1 mile to the northeast, which are thought to represent the mid to late 19th Century Bellingham Bay Coal Company wharf.

The absence of recorded archaeological sites in or near the project area must be seen in light of the fact that there have been no previous surveys here[2]. Despite this, however, there have been at least two efforts which addressed the archaeological potential of the Boulevard Park area (Dugas and Larson 1999 and Kanaby et al. 2009). Both studies relied upon a combination of cultural and environmental data to make projections regarding where archaeological resources are likely to be present. Curiously, the two studies came to very different conclusions. Amy Dugas and Lynn Larson prepared an overview of approximately 16 miles of Bellingham Bay shoreline in 1999. A major goal of their effort was to identify high, moderate, and low probability areas for archaeological and historic resources. A number of high and moderate potential areas were identified, but none of the latter are in, or close to, Boulevard Park. The closest moderate and high potential areas they identified are in the lower Padden Creek area, approximately 0.7 mile to the southwest. In contrast, the study recently prepared by Kara Kanaby and her associates was an initial evaluation of the potential of Boulevard Park, undertaken as part of the planning effort for several proposed park improvements (including the Pattle Point Trestle work being considered here). Their study does not reference the earlier Dugas and Larson (1999) work and concludes that the Boulevard Park area has a high probability of containing both prehistoric and historic archaeological resources.

3 RESEARCH DESIGN

The activities described in this report represent a limited program of study designed to offer an assessment of the probable archaeological potential of the Pattle Point Trestle Project Area. The research design for the effort included both a clear statement of goals and an identified set of appropriate methods.

3.1 Goals

The goals of this study were to investigate the probable archaeological potential of the Pattle Point Trestle Project Area and offer recommendations regarding how the proposed trestle improvement actions can be undertaken without adversely impacting potentially significant archaeological resources. To these ends, we specifically planned to examine what kinds of archaeological resources might be present, where within the project area they were likely to be found, and what their likely condition might be. It should be emphasized, however, that this study is not an archaeological survey of the project area. Rather, it is essentially an archival exercise intended to document the context of the project area, and to offer guidance for the design of an archaeological survey.

2 There are no reported archaeological surveys of this area, but it seems likely that Grabert - - and/or some of his students - - undertook at least an informal inspection of the Boulevard Park area. If this is correct, we can conclude that they found nothing of interest, since no sites were recorded.

3.2 Methods

The work plan for this study was basically to collect and review relevant background information for the project area, compare it to regional patterns in the distribution of archaeological resources, and then offer informed opinions about what conditions are likely to be the case in the Pattle Point Trestle Project Area. Relevant background information for the study includes the modern and earlier environmental conditions, local ethnographic and historic land use history, prior archaeological research, and the details of proposed ground-disturbing actions in the project area. While much of the effort was conducted as a literature review, important additional information was obtained by direct communication with the City of Bellingham's Parks/Design & Development Division, Reid Middleton, and other knowledgeable local individuals. Insights into regional patterns in the distribution of archaeological resources were obtained from literature addressing the northern Puget Sound basin and nearby areas in southwestern British Columbia.

4 ARCHAEOLOGICAL POTENTIAL OF THE PROJECT AREA

The methods identified in Section 3.2 provided a basis for suggesting the probable archaeological potential of the Pattle Point Trestle Project Area. The review considered both prehistoric and historic archaeological resources and, since there are important differences between them, each will be considered separately below.

4.1 Prehistoric Archaeological Resources

We believe that the potential for prehistoric archaeological resources in the Pattle Point Trestle Project Area is relatively low. The area was most likely to have attracted prehistoric cultural activity when it was a shoreline setting close to Bellingham Bay. Environmental data indicates that there were two intervals when this occurred: a relatively brief period ca. 12,000 years ago and during the last ca. 3,000 to 5,000 years. The project area was under either water or glacial ice prior to ca. 12,000 years ago and was an at least somewhat more interior location during the period between the two intervals. While we think it likely that at least some degree of cultural activity did occur here during these two intervals, we also think that both its relatively exposed character and the apparent absence of a surface fresh water source made it relatively unattractive for occupation. Certainly, much more attractive locations are located in the general vicinity (e.g., the mouth of Padden Creek). We therefore think that evidence of large or long-standing prehistoric residential occupations is particularly unlikely. The presence of cemeteries also seems unlikely. If prehistoric archaeological materials are present in the project area, they are most likely to reflect hunting, fishing, and/or other economic activities which were conducted along the shoreline here. Evidence of occupation is most likely to represent brief seasonal camping episodes associated with the latter. Such sites are unlikely to be either large or deep. If such sites are present, they are far more likely to represent the more recent of the two shoreline intervals (i.e., the last ca. 3,000 to 5,000 years). The latter is a much longer interval, it occurred at a time when the prehistoric population of the area was probably much greater, and its relatively recent time frame increases the likelihood that cultural materials deposited here have survived.

It should also be noted that different portions of the project area probably have significantly different potentials. Prehistoric archaeological materials, if present, are most likely to be found on the headlands above the beach, at the ends of the trestle. Prehistoric archaeological materials within the beach deposits immediately below the trestle are not impossible, but we believe that they are much less likely here. While prehistoric archaeological deposits in intertidal and subtidal settings are known to occur on the southern Northwest Coast, they are generally encountered at some depth below the beach surface (Easton 1993). Given the relatively shallow character of the ground disturbances which have been proposed for the intertidal portion of the project area, such deposits seem unlikely to be exposed, even if they are present.

Finally, we add that, if prehistoric archaeological deposits are present in the project area, they are likely to be disturbed. We have already indicated our view that the headlands above the beach are the portions of the project area most likely to contain such materials. Recall, however, that these areas are both small and have been extensively disturbed. Both are within the alignment of the old Northern Pacific Railroad grade. They were clearly disturbed when the railroad was built and may have been impacted further when the tracks were removed and the present Coast Millennium Trail was developed. Thus, any prehistoric archaeological deposits in the headland portions of the project area are likely to be disturbed, unless they occur at some depth below the surface here.

4.2 Historic Archaeological Resources

The potential for historic archaeological resources in the Pattle Point Trestle Project Area is high, although the range of such resources may not be great. This area is known to be in the immediate vicinity of a number of 19th and early 20th Century built features and we believe that evidence of at least some of them are likely to be present within, or close to, the project area. The most obvious of these is the trestle itself. While it has been modified on at least one occasion, we think that there is a relatively high probability that elements of the original structure are still present in the area. These could include old pilings, concrete supports, and/or other objects associated with the trestle. We also know that buildings, and possibly other structures, associated with the Bellingham Bay (later E. K. Wood) Mill were located quite close to the trestle prior to 1925. At least some of the latter were built on pilings over the water in this area. It is likely that old pilings and/or other features associated with the mill are still present and some of these may be found within the project area. In both cases, we suspect that archaeological materials will be present largely - - or exclusively - - as structural features. The presence of archaeological deposits seems less likely. William Pattle's original (ca. 1853) home site and a small wharf were present in the Pattle Point area, but our land use history reconstruction indicates that both were relatively small features which were probably located a short distance to the north. It is unlikely that evidence of either will be encountered in the project area.

Similar to the case with prehistoric archaeological materials, we suspect that historic archaeological resources are also unevenly distributed in the project area. The distribution of historic archaeological resources, however, is likely to be different from that of the prehistoric materials. Most of the structural features representing the trestle and the mill are likely to be encountered on the beach - - rather than the headlands - - portion of the project area. While historic archaeological materials may also be present on the headlands, the limited extent of the project area on these landforms significantly reduces the potential for exposing things there. The

most likely historic archaeological materials to be encountered on the headlands are structural features associated with the trestle and/or the railroad grade which formerly crossed it. It should also be noted that, if historic fill sediments are present on the headlands, it is possible that cultural materials could be present within this matrix. While we believe that large numbers of cultural materials are very unlikely, but the presence of at least some specimens within the fill deposits would not be unusual. Historic cultural materials are most likely to be encountered in the fill sediments, but prehistoric cultural materials could also be present. Cultural materials encountered in fill deposits in the project area do not represent an archaeological site in the project area. Rather, they are re-deposited materials which originated elsewhere and were brought to the project area at some time in the past. It is very unlikely that the original source of such materials can be reconstructed.

The earlier observation about the likely condition of prehistoric archaeological deposits in the project area also has some relevance here. Indeed, the widespread historic disturbance to this area is likely to have impacted any archaeological deposits which might be present. This condition may be less important in the case of the historic archaeological resources, however, as we believe that the most likely historic resources to be present will be structural features rather than archaeological deposits.

5 DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The Pattle Point Trestle Project Area has some potential to contain archaeological resources. Having recognized this, however, it is likely that the range of such resources which may be present is relatively limited. The most likely archaeological resources to be present are structural remains representing the old Northern Pacific Railroad trestle (and its associated track) and the Bellingham Bay (later the E. K. Wood) Mill. Archaeological deposits representing either of the latter - - or other early historic activities - - are also possible, but they are considered to be relatively unlikely. Similarly, prehistoric archaeological deposits are also possible, but they are also considered to be relatively unlikely. If prehistoric deposits are present in the project area, they are most likely to be associated with hunting, fishing, and/or other economic activities which were conducted along the shoreline in this area during the last ca. 3,000 to 5,000 years. The presence of deposits representing large and longstanding villages, cemeteries, or cultural activities which occurred significantly earlier than ca. 5,000 years ago is unlikely.

The Pattle Point Trestle Project Area, and its immediate vicinity, have been disturbed by a variety of both natural and historic cultural affects and the latter have probably impacted the archaeological resources here. The structural remains thought most likely to be present are likely to be relatively durable objects. Nevertheless, features such as old pilings and concrete supports may be broken and/or damaged in other ways. It is also possible that some such objects could have been incorporated into more recent structures in the project area. Having expressed the view that the potential for archaeological deposits being present appears to be limited, we should add that, if such deposits are present, they are likely to be disturbed. If intact archaeological deposits are present in the project area, they are likely to be either deeply buried or located in places that are at least slightly removed from the infrastructure of the railroad and the mill. Given these conditions, we suspect that most of the archaeological resources which may be found in the project area are unlikely to be eligible for listing with the National Register of Historic Places.

Overall, this review of the Pattle Point Trestle Project Area suggests that its archaeological potential is probably limited and that potentially significant archaeological resources are relatively unlikely to be present here. Nevertheless, it is important to emphasize that these are not the conclusions of a direct archaeological inspection of the project area. They are judgments based upon a literature review and prior experience in the northern Puget Sound basin. While we believe that the archaeological potential of the project area is probably limited, this finding of limit potential should not be used as a basis to dismiss the possibility that archaeological resources might be present. We believe that a direct archaeological inspection - - with at least limited subsurface testing of those areas where ground disturbance is planned - - is appropriate. Specifically, it is important to dig at least a single small test pit at, or close to, each of the proposed new abutment locations and the southernmost timber frame bent. Test pits should be dug to the maximum depth of the proposed impact at each location. In this regard, background information indicates that historic fill deposits may be present at one or both of the abutment locations. Fills elsewhere in the Boulevard Park area are known to contain a significant quantity of construction debris and such materials could be present at either abutment location. If so, construction debris could make sampling of these areas difficult and it may prove necessary to work from the depositional profiles exposed along the margins of each abutment. The results of this testing should then be used to determine whether construction monitoring, or other archaeological resource protection measures are warranted.

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APPENDIX B
INITIAL CULTURAL RESOURCES EVALUATION

TECHNICAL MEMORANDUM

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

TO: Shannon M. Kinsella, P.E., Reid Middleton, Inc.

FROM: Kara M. Kanaby, Linda Naoi Goetz, Douglas F. Tingwall, and Thomas C. Rust, Ph.D.

DATE: March 27, 2009

RE: INITIAL CULTURAL RESOURCES EVALUATION
PHASE I - BOULEVARD PARK SHORELINE & OVERWATER WALKWAY PROJECT
CITY OF BELLINGHAM
BELLINGHAM, WASHINGTON

INTRODUCTION

The City of Bellingham (City) and Port of Bellingham (Port) are in the process of redeveloping various portions of the Bellingham Waterfront. As part of the redevelopment, the City is preparing a feasibility study as part of the Phase I - Boulevard Park Shoreline & Overwater Walkway project. Proposed improvements to Boulevard Park include an overwater walkway between Boulevard Park and the Cornwall Avenue Landfill site, and removal of a timber wharf structure, pier, pilings, and riprap. In addition, the existing park trail would be relocated in several areas to allow better pedestrian access, and public restrooms would be added at three locations. The proposed project area is located in Section 1 of Township 37 North, Range 2 East and Section 36 of Township 38 North, Range 2 East. The funding for the Boulevard Park Shoreline & Overwater Walkway project derives from two sources. The Boulevard Park Overwater Walkway portion will be receiving federal funding through the Washington State Department of Transportation (WDSOT) Local Programs and is subject to cultural resource evaluations under Section 106 of the National Historic Preservation Act (NHPA 36 CRF 800). The remaining portions of the project will be funded by the City of Bellingham and are subject to cultural resource evaluations under the Revised Code of Washington (RCW 27.44 and 27.53).

Landau Associates was retained by Reid Middleton, Inc. (Reid Middleton) to provide a cultural resources evaluation for the initial phase of the project. This technical memorandum summarizes the cultural resources previously recorded in the vicinity of the project, the historical context of Boulevard Park, and the results of our project area reconnaissance. Recommendations for future cultural resource assessment activities are also included in this technical memorandum.

APPROACH

A Landau Associates archaeologist researched cultural resource records on file at the Washington State Department of Archaeology and Historic Preservation (DAHP) for this preliminary feasibility study.

Our staff also examined relevant archaeological, ethnohistorical, and historical reports. This information assisted Landau Associates in understanding the cultural history of the project area and facilitated identification of potential culturally sensitive areas. Areas of cultural sensitivity are composed of regional landform and vegetation community types where prehistoric, ethnohistoric, or historic period resources have been observed, such as Indian and Euro-American settlement and resource procurement sites.

Two Landau Associates cultural resource specialists conducted a pedestrian reconnaissance of the project area on March 21, 2008. The reconnaissance consisted of walking the length of the proposed project area and noting areas where prehistoric or historic cultural resources may be present.

PREVIOUSLY RECORDED CULTURAL RESOURCES

Cultural Resource Assessments

Currently, no fieldwork has been conducted within the project area to test for the presence of archaeological resources. Twenty-nine cultural resource assessments have been conducted within a 2-mile radius of the project area resulting in the identification of 19 archaeological sites. Archaeologists conducted nine of these studies for development projects, which identified one new cultural resource and redocumented another (Blumen Consulting 2008; ERCI 2005, 2006; Hovezak 2006, NWAA 2005; Reid et al. 2006; Shong and Miss 2004, 2005, 2006). Archaeological monitoring of the Harris Square development identified site 45WH732, the remains of the Mennig & Co. Saloon located at the southeast corner of Harris Avenue and 9th Street in the Fairhaven District (Shong and Miss 2004). Previously recorded site 45WH47 was encountered during subsurface testing of private property and is discussed in further detail below (ERCI 2005).

Four cultural resource assessments have been conducted for transportation-related projects located within a 2-mile radius of the project area (Earley 2006; Hovezak 2007; Luttrell 2005a,b; Piper 2007). No cultural resources were identified in any of the cultural resource reports.

Archaeologists have conducted nine cultural resources studies for recreation-related projects within a 2-mile radius of the project area (Hale et al. 2004, 2005; Shong et al. 2005; Wessen 2005a,b,c,d, 2006, 2007). Six of these investigations identified archaeological sites 45WH725, 45WH726, and 45WH735 (Hale et al. 2004; Shong et al. 2005; Wessen 2005a,b, 2006, 2007). These sites are discussed in further detail in the next section of this memorandum.

Four cultural resource assessments were conducted for various environmental or natural resource-related projects (Croes et al. 1996; Dugas and Larson 1999; Gillis and Larson 2004; and Gilpin 2007a). Archaeologists identified one archaeological site, 45WH769, during the Post Point Lagoon Restoration project survey (Gilpin 2007a,b). This site is discussed in further detail in the next section of this memorandum.

Three cultural resources reports have been conducted for utility-related projects (DeJoseph and Hicks 2006; King 1992; NWAA 2004). No cultural resources were identified in any of the cultural resource reports.

Archaeological Sites

Review of the records at DAHP revealed that 19 archaeological sites have been previously recorded within a 2-mile radius of the project area and are outlined below in increasing distance from the project area. The locations of archaeological sites should not be revealed to the public because they are protected from unauthorized disturbance. As previously discussed, no fieldwork has yet been conducted within the project area to test for the presence of archaeological resources; however, the historical context of Boulevard Park and certain fill materials known to be present within the project area are discussed in a subsequent section of this technical memorandum.

One archaeological site is located within an approximately 0.25-mile radius of the project area. The site (45WH762) has been identified as the Bellingham Bay Coal Company's Wharf consisting of two historic docks/wharves (Stilson 2007).

Located between 0.25 and approximately 1 mile of the project area are four archaeological sites. Site 45WH60 is located in a small embayment, which is now a filled tidal area. Archaeologists observed scattered shell and fire-cracked rock at this site (Grabert 1975). As mentioned previously, site 45WH732 has been identified as the remains of the Mennig & Co. Saloon located at the southeast corner of Harris Avenue and 9th Street in the Fairhaven District (Shong 2004; Shong and Miss 2004). The third site (45WH41) has been identified as a shell midden lying on a sandpit that has been buried by a landfill. Archaeologists noted that utility pits contained more than a meter of shell, fire-modified rock, and black midden earth (Grabert 1972). Finally, site 45SH71 has been identified as an open prehistoric camp with scattered artifacts. The artifacts were identified as three cobble choppers (Edris and Walker 1970).

Two sites (45WH47 and 45WH56) are located between 1 and 1.25 miles from the project area. Archaeologists identified site 45SH47 as a shell midden in 1973; a projectile point and bone fragments were also noted. The site was rerecorded in 2005 and archaeologists noted pockets of both disturbed and intact areas of shell midden with fire-modified rock and shell fragments. In addition, a historic component of fill was identified (Bush and Ferry 2005; Grabert and Gaston 1973). Site 45WH56 has been identified as a possible shell midden near a lagoon. Archaeologists noted basalt flakes and historic trash (Gaston and Swanson 1974).

Eleven archaeological sites have been identified between approximately 1.50 and 2 miles from the project area. Seven of these sites (45WH50, 45WH54, 45WH55, 45WH763, 45WH740, 45WH735, and 45WH769) have been identified as shell middens. Artifacts associated with 45WH50 included a greenstone

adze, shell midden deposits, and a Euro-American burial from a shipwreck victim from the 1890s to early 1900s (Grabert 1974). Site 45WH54 is a shell midden located on Teddy Bear Cove, an extension of Chuckanut Bay (Anonymous n.d.). Site 45WH55 has been identified as a dense shell midden in a cutbank with choppers, net sinker, adze fragment and agate core (Gaston and Swanson 1974). Site 45WH763 has been identified as a precontact shell midden with fire-modified rock and lithic debitage (Campbell and Meidinger 2006). Site 45WH740 has been identified as an area of shell midden deposits and associated deposits of fire-cracked rock (Wessen 2005e). At another site, chipped stone debitage, shell, mammal bone, and fire-cracked rock were observed on a modern floodplain of Little Squalicum Creek close to the shoreline of Bellingham Bay (Wessen 2005a). The site (45WH735) has been identified as a shell midden with an historic component and is located on an upland bluff between Whatcom Creek and its former tidelands (Hale et al. 2004; Reid and Hillegas 2005). A later survey and evaluation of the site notes that the shell midden contained steamer clam, horse clam, basket cockle, blue mussel, and Olympia oyster. Archaeologists identified fire-cracked rock and a saw-cut mammal bone below the shell midden (Wessen 2005b). Site 45WH769 has been identified as a pre-contact shell midden that contains fish, bird, and mammal remains, fire-modified rock, and shell fragments (Gilpin 2007b).

The remaining five sites are located approximately 2 miles from the project area and include petroglyph, railroad grade, and camp sites. Two sites (45WH77 and 45WH78) are identified as petroglyphs. The petroglyph identified for 45WH78 was a stylized eye and it was noted that it was possibly aboriginal (Jacques and Pflanzer 1977a). The petroglyph identified for site 45WH77 was described as a lizard carved circa 1967 (Jacques and Pflanzer 1977b). Site 45WH76 has been identified as an open camp with cobble choppers and core tools (Jacques and Pflanzer 1977c). Site 45WH725 has been identified as the Interurban Railway Grade and Hibridge (Wessen 2005f). Archaeologists first recorded site 45WH726 as an isolated find, but later investigation revealed the presence of what has been identified as a pre-contact camp located on a terrace above Little Squalicum Creek, approximately 200 meters north of the Bellingham Bay shoreline (Claborn 2004; Stevenson and Shong 2005). Flaked stone tools and fire-cracked rock were observed 30 centimeters (cm) below ground surface (BGS) (Stevenson and Shong 2005).

Historic Properties

A total of ten historic structures and two historic districts (Fairhaven and Sehome Historic Districts), listed on the Washington Heritage Register (WHR) and the National Register of Historic Places (NRHP), are located within a 1-mile radius of the project area. None of these properties are directly adjacent to the project area and would not be affected by any project activities.

BOULEVARD PARK HISTORICAL CONTEXT

The Euro-American history of Boulevard Park began in 1852 when two Americans, Henry Roeder and Russell Peabody, became the first to settle and open up a sawmill in what was to become Bellingham (Griffin 2007). Three Hudson Bay employees, William Pattle, James Morrison, and John Thomas, also claimed land along Bellingham Bay. William Pattle's Donation Land Claim (DLC) is a part of the southern end of Boulevard Park. The goal of Pattle, Morrison, and Thomas was to take advantage of the coal outcropping on Morrison's DLC and ship the coal to San Francisco; however, Thomas died and Morrison and Pattle did not continue with the coal mining endeavor.

Pattle's and Morrison's DLCs were eventually purchased by Edward Eldridge and W. Erastus Bartlett. The town of Fairhaven was already laid to the north, and in 1883 Eldridge and Bartlett platted the town of Bellingham. Eventually Fairhaven and Bellingham would merge and become one town. The land that was to become Boulevard Park was used by several different types of industries including lumber mills, a salmon cannery, wharves, the railroad, and a gas works (Griffin 2007).

An examination of historic Sanborn fire insurance maps of Bellingham indicates the presence of the Eldridge and Bartlett lumber mill at Pattle Point, near the southern end of Boulevard Park. The mill structures, as well as its railroad tracks, were located on pilings over the water (Griffin 2007; Sanborn 1890). The map shows the sawmill, log booms, boarding house, as well as two dwellings and a stable (Griffin 2007; Sanborn 1890). The Eldridge and Bartlett lumber mill became the E.K. Wood Lumber Company by 1904 and various structures associated with the lumber mill were located in what is now Boulevard Park. The E.K. Wood Lumber Company extended 1,200 feet along the current park's southern shoreline and westward 400 feet into the waters of Bellingham Bay. The pile-supported lumber wharf stretched 800 feet north-south and extended into deep water to accommodate sailing ships (Griffin 2007, Sanborn 1904).

In addition to the E.K. Wood Lumber Company and its rail line, the Whatcom Company Gas Works, residential dwellings, and the former Northern Pacific Railroad roundhouse were all located in what is now Boulevard Park.

The existing Cornwall Avenue Landfill site was historically the site of the Bellingham Bay Improvement Company Saw and Planing mill (Sanborn 1904). The Bellingham Bay Improvement Company started in 1888 and partially burned in 1898, but was rebuilt soon after the fire and featured a 1,200-ft-long wharf (Bellingham Parks Department Historic Plaque n.d.).

In 1890, the Bellingham Bay Gas Company (Gas Works) was formed and was built on the bluff overlooking Bellingham Bay. The 1904 Sanborn map shows three dwellings near the Gas Works, a coke shed, gas holders, barrel sheds, a storage shed, and a purifier (Griffin 2007; Sanborn 1904). The 1913 Sanborn map shows that the dwellings that were located in the vicinity of the Gas Works had either been

demolished or were vacant, the location of one of the gas holders had been moved, and the barrel sheds removed and the area filled in. The Gas Works was in operation until 1956, and several buildings from the Gas Works still remain in Upper Boulevard Park. The foundation for one of the gas tanks has been incorporated into a picnic and observation shelter for Boulevard Park, and a small brick building with a switchboard on the second floor that was used for storage still remains in the park (Griffin 2007; Sanborn 1904, 1913).

The 1913 Sanborn map shows an expanded E.K. Wood Company Saw and Planing Mill at Pattle Point. A steam turbine building was constructed sometime after 1904 and before preparation of the 1913 Sanborn map; this structure now houses the coffee shop located in Lower Boulevard Park (Griffin 2007). The E.K. Wood Company Saw and Planing Mill burned in 1925 and the area was then used as a cow pasture. After the fire and up until the City of Bellingham bought the property, old pilings associated with the E.K. Wood Company could be seen in the intertidal area. The mill's former location was later filled with demolition debris from the City of Bellingham. A history of Boulevard Park states that when the Fairhaven Hotel was demolished in 1955, the debris was disposed in what is now Boulevard Park. During the creation of the park, fill dirt was brought in to cover the debris (Griffin 2007). The 1913 Sanborn map indicates that by that time the dwellings and the former Northern Pacific Railroad roundhouse had been removed, certain modifications had been made to portions of the railroad tracks and the shoreline along Boulevard Park.

The 1913 Sanborn map indicates that the Bellingham Bay Improvement Company Saw and Planing mill had changed to the Bloedel Donovan Lumber Mill. In addition, various buildings associated with the Bloedel Donovan Lumber Mill were present (Sanborn 1913; 1913[1950]). In 1947, the Port of Bellingham acquired the Bloedel Donovan Mill site, and the area where the mill once stood is now known as the Cornwall Avenue Landfill site that contains municipal solid waste and other waste materials (Landau Associates 2009a).

The concept of creating a waterfront park in the project area began in 1973, when the various properties that now make up Boulevard Park were being considered for development and citizens were concerned about the possibility of the view of Bellingham Bay being blocked. In 1973, the Rotary Club of Bellingham became involved with the creation of a park, and in 1981, Boulevard Park was dedicated (Griffin 2007).

PEDESTRIAN RECONNAISSANCE

Linda Naoi Goetz and Kara Kanaby of Landau Associates conducted a pedestrian reconnaissance of the project area on March 21, 2008. The reconnaissance consisted of walking the length of the project area, including the southern end of Boulevard Park, and noting areas where prehistoric or historic cultural resources could be present. Although the majority of the park has been landscaped and soil profiles were not

consistently visible during the reconnaissance, soils adjacent to the walkway at the southern end of the park were visible in a cutbank at low tide. Historic debris, including a lens of tar and scattered brick fragments, are located within the sediment profile and on the beach. In addition, vertical wood posts, the remains of various pier supports, were observed throughout the intertidal areas of the park, as well as in the water near where the proposed overwater walkway would be constructed between the north end of Boulevard Park and the south end of the Cornwall Avenue Landfill. A reconnaissance of the landfill area was not possible because the area was fenced and locked.

Geotechnical borings conducted for another project within Boulevard Park indicate that a thin layer (approximately 5 ft BGS) of fill is underlain by wood debris mixed with silt and sand to a depth of more than 23 ft BGS. Silty, clayey sand with shell fragments was recorded by geologists below the fill to a depth of 25 ft BGS. The wood debris may have derived from historical use of the area by logging mills (Herrenkohl and Otten 2007). A Remedial Investigation/Feasibility Study (RI/FS) of the Cornwall Avenue Landfill site (Landau Associates 2009a), at the northern end of the project area, indicates that the property supported sawmill operations from about 1888 to 1946, when the City of Bellingham deposited municipal solid waste on the site until 1965. A layer of soil fill covers the landfill. In the southern end of the landfill, the soil is approximately 2 ft thick, landfill deposits are about 15 ft thick, and sawdust and wood debris are also about 15 ft thick. Glaciomarine drift, silty clay with gravel and marine shells, is overlain by silt deposited by the Nooksack River; these geologic units appear below the historic and modern fill described above.

As noted previously, the majority of Boulevard Park has been landscaped with grass lawns and sparse plantings of evergreen trees and deciduous shrubs. The South Bay Trail, extending north from Boulevard Park, continues northward along a terrace overlooking the proposed overwater walkway and the Cornwall Avenue Landfill. Evergreen trees, deciduous shrubs, and a variety of undergrowth grow densely along the trail. Red-flowering currant (*Ribes sanguineum*) was observed during the reconnaissance. Coast Salish groups used this resource as a winter food after its berries were boiled, dried, and formed into cakes (Moerman 1998).

RECOMMENDATIONS FOR FUTURE WORK

Regulatory Compliance

The DAHP database indicates the presence of 19 archaeological sites located within an approximately 2-mile radius of the project area, the majority of which are prehistoric shell middens. These sites are located to the north and south of the project area in proximity to Bellingham Bay. The closest site is less than ¼ mile from the project area. In addition, the historical use of the Boulevard Park area for early settlement and industrial purposes, as well as the Cornwall Avenue Landfill site for sawmilling and refuse deposition, could potentially include the deposition of historic archaeological materials. The project area is

distributed across an area that historically represented a beach zone situated between adjacent uplands and a narrow intertidal zone. In addition to what is known of the historical waterfront development within the area, this setting also represents the kind of area that native groups utilized and inhabited prehistorically and historically (Nelson 1990; Suttles and Lane 1990). Native use of beach zones for resource procurement and habitation is not only attested in ethnographic and historic accounts of local Coast Salishan tribes but is also demonstrated by the presence of several of the aforementioned archaeological sites (45WH41, 45WH56, 45WH60, 45SH47, and 45SH71) distributed in similar coastal settings within a 1.25 mile radius of the current project area. Therefore, because the proposed project is located in an area considered to have a high probability for both prehistoric and historic cultural resources, there is a possibility that such archaeological materials could be encountered during ground-disturbing activities within the Boulevard Park project area. The geotechnical data and historical documentation demonstrate that portions of the project area are underlain by fill associated with 19th through 20th century civic development and commercial activities. The fill within Boulevard Park was derived from demolition debris from various areas within the City of Bellingham subsequent to the fire in 1925 that destroyed the E.K Wood Lumber Mill. In addition, during the construction of Boulevard Park, fill soil was brought in to cover the demolition debris.

Since it is not unusual to find archaeological materials that predate and postdate a fill deposit in which they are distributed and the derivation of the historical fill within the project area is unknown, there is a potential for encountering redeposited archaeological materials within fill (Rothschild and Rockman 1982; Tingwall and Goetz 2007). Four of the five previously mentioned prehistoric sites (45WH41, 45WH56, 45WH60, 45SH47) that are located within a 1.25-mile radius of the project area either occurred beneath areas that had been previously disturbed and capped with fill or exhibited disturbed contexts in association with fill. Therefore, both prehistoric and historic archaeological materials can occur in fill contexts having been removed from their original location and redeposited within area fill area. Depending on where the demolition debris and fill soil was derived from and its thickness, the possibility exists that prehistoric to historic archaeological materials could occur within redeposited contexts within fill areas and primary contexts in areas of relatively undisturbed sediment.

Landau Associates recommends that before ground-disturbing activities associated with project construction occur, consultation by the lead agency with affected tribal groups and DAHP, as well as subsurface testing for archaeological materials and evaluation of any historical buildings or structures adjacent to the project area, be conducted. Consultation and assessments should be conducted in accordance with federal and state guidelines mentioned previously. As mentioned previously, the Boulevard Park Overwater Walkway is receiving funding from WSDOT Local Programs and is subject to Section 106 of the National Historic Preservation Act. The remainder of the project is receiving funding from the City of Bellingham and is subject to the Revised Code of Washington, or the Washington State Governor's Executive Order 05-05, as appropriate.

Potential Anticipated Finds

The presence of 19 archaeological resources previously recorded within a 2-mile radius of the project area indicate that the probability for encountering prehistoric artifacts appears to be high (Gilpin 2007a,b; Hale et al. 2004; Shong et al. 2005; Wessen 2005b, 2006, 2007). The project area also has the potential to yield cultural materials associated with historic lumber mills, gas works, railroads, wharves, trestles, and other features associated with Euro-American settlement (Griffin 2007; Sanborn 1904, 1913). There is less of a potential for encountering late Pleistocene to early Holocene prehistoric occupations within the project area because the former shoreline was subsequently inundated by sea level rise. There is still a likelihood, however, for encountering later prehistoric and ethnohistoric occupation sites consisting of human burials, shell middens, stone and bone tools, and evidence of features such as post molds, cooking pits, hearths, fire-cracked rock, oxidation, charcoal, or soil stains.

Historical artifacts that might be encountered during ground disturbing activities consist of several categories: structural, transportation, commercial/industrial, and domestic/personal. Much of the artifacts could include late 19th to early 20th century materials from lumber mills, gas works, railroad transportation, and residential debris or refuse.

Structural items would be composed of materials used to build the lumber mills, the gas works, or residential structures such as vertical wooden posts and pilings, concrete and/or stone pier foundations, sheet metal, logs, wood or brick cladding, plaster, flat glass, railings, fuses, wiring, ceramic and/or metal pipes, nails, underground storage tanks, corrugated metal, nuts, and bolts.

Transportation items would include wagon or automobile parts, as well as railroad ties, tracks, and spikes.

Commercial/industrial items associated with the lumber mills and gas works would include remnants of wood or log piles, coal, clinker, pipes, and wiring.

Domestic/personal items dumped as refuse could include such artifacts as: appliances, light bulbs, household or culinary ceramics, glass bottles and containers, tin cans and metal containers, metal utensils, botanical and faunal remains, toiletries, toilets, bathtubs, furniture, coins, clothing, shoes, stove parts, smoking pipes, cookware, toys, figurines, cosmetic cases and cosmetic product packaging (including perfume and cream bottles and jars), medical supplies (poison and medicine bottles, pill tins), tobacco tins, ink bottles, oil and gas cans, and other domestic and commercial items. These domestic items may reflect changes in gender or ethnic and cultural group ratios over time. In addition, soil stains and/or discolorations may be present from rotting vegetation, historical or modern fires, wood remnants, rust remnants, or anthropogenic carbonaceous horizons.

A recommendation for additional work is provided below according to the work in each of the areas. There is no way to determine which specific types of prehistoric to ethnohistoric archaeological sites described previously may be encountered in each of the areas. The potential types of historical archaeological materials occurring within each of the areas are based upon a review of Sanborn Fire Insurance maps dating between 1904 and 1950. The significance of any resources found and mitigation requirements, if any, are dependent upon the nature and quantity of the materials recorded during the recommended subsurface testing and/or monitoring and cannot be predicted in this feasibility study.

Boulevard Park Shoreline & Overwater Walkway Project

Area I: Shoreline at Pattle Point Trestle

Recommendations for enhancements for this area include relocating the trail back from the edge of the top of the embankment where feasible, grading the slope back to the flatter slope, and supplementing the upper back area with additional gravels and woody debris. In addition, rip-rap drift sills would be placed on either side of the enhanced beach area to gravel fill in place. Possible additional enhancement in the area includes possible removal of the existing timber structure.

The relocation of the trail, grading of the slope, and the addition of rip-rap drift sills and the possible removal of the existing timber structure has the potential for encountering prehistoric archaeological deposits. For the relocation of the trail and the grading of the slope, no more than 25 shovel probes supplemented with manual bucket augers would be placed at 10-meter intervals and excavated to the depth of proposed ground disturbance to determine the presence of archaeological deposits. A shovel probe would also be excavated to the depth of ground disturbance for each of the riprap drift sills. The most likely historical resources that would be identified in this area would be that affiliated with the Northern Pacific Railroad.

Area 2: Area Between North Abutment of Pattle Point Trestle and Coffee Shop

Recommendations for enhancement for this area include moving a portion of the trail and providing an improved public access point to the beach located at the small embayment south of the current structure. For the relocation of the trail, no more than 8 shovel probes would be placed at 10-meter intervals along the length of the proposed trail. If ground-disturbance will occur to improve the public access point to the beach, then no more than 4 additional shovel probes will be placed at 10 meter intervals.

Area 3: Central Area at Existing Building

Recommendations for enhancement for this area include maintaining the riprap shoreline; however, it is recommended that the current concrete slabs and concrete riprap be removed to enhance the environment

at this section of the shoreline. In addition, measures to protect the toe of the existing concrete wall and access stairs to prevent scouring and undermining of these structures is recommended in the form of placing larger riprap at the base of the walls.

If the removal of riprap impacts undisturbed sediment or fill, then no more than 5 shovel probes excavated to the depth of proposed ground disturbance could be placed at 10-meter intervals along the upper edge of the existing riprap to search for archaeological deposits. The most likely historical archaeological material that would be encountered in this area would be affiliated with the E.K. Wood Lumber Company Saw and Planing Mill structures. In addition, monitoring would be recommended for the removal of the existing riprap.

Area 4: Shoreline Area North of Existing Building to Existing Condemned Pier

Recommendations for enhancement of this area include maintaining a riprap shoreline with a pocket beach access area in the small embayment by the existing path to the parking lot. A small pocket beach access with drift sills on each side would provide improved beach access for both pedestrians and small hand-launched vessels. If ground-disturbance will occur to improve the small pocket beach access, then shovel probes will be placed at 10-meter intervals. If the removal of riprap and installation of drift sills associated with the pocket beach access impacts undisturbed sediment or fill, then no more than 18 shovel probes excavated to the depth of proposed ground disturbance could be placed at 10-meter intervals along the upper edge of the existing riprap to search for archaeological deposits. The most likely historical archaeological material that would be encountered in this area would be affiliated with the E.K. Wood Lumber Company Saw and Planing Mill structures. In addition, monitoring would be recommended for the removal of the existing riprap.

Area 5: North Side of the Park Area-Timber Wharf Structure

The recommendations for enhancement for this area include removing the timber wharf structure and placing a new path on the upland area which may result in the removal of some trees. The existing shoreline could be graded back with only minor riprap or supplemental upper beach gravel fills. The proposed improvements in this area, if they impact undisturbed sediment or fill, would require no more than 5 shovel probes excavated at 10-meter intervals to the depth of ground disturbance. If trees will be removed, then monitoring of the tree removal is recommended.

The wharf is nearing the end of its design life and the existing pier structure that extends from the wharf is currently condemned. The remaining remnants of the timber wharf and pier and the existing pilings are historical cultural resources associated with the E.K. Wood Lumber mill and former railroad that were

built on trestles. Prior to the removal of the wharf, pier, and pilings, background research and the recordation of these resources on a DAHP site form and the determination of significance would need to be made.

Area 6: Beach Area North of the Stairwell

Recommendations for enhancement of this area include improving the public beach access by removing the riprap, a provision for additional backshore gravel beach, selective placement of woody debris, and planting to provide backshore stabilization. A total of 6 shovel probes spaced at 10-meter intervals would be recommended for this location. Each would extend no deeper than the depth of ground disturbance if it impacts fill and or undisturbed areas. The removal of the riprap in this are should be monitored for any archaeological deposits that could be uncovered during the riprap removal. The most likely historical resources that would be identified in this area would be that affiliated with the Great Northern Railroad Main Line.

Area 7: North Embankment along Railroad Tracks

Recommendations for enhancement of this area include maintaining the riprap shoreline as required to protect the existing railroad tracks. In addition, the potential exists for removing the old timber pilings. The existing pilings are historical cultural resources associated with the E.K. Wood Lumber Mill and former railroad that were built on trestles. Background research and documentation of the extant wharf, pier, and pilings would be recommended to determine their significance prior to their removal. The most likely historical resources that would be identified in this area would be that affiliated with the Great Northern Railroad Main Line.

Pattle Point Trestle Renovation

The renovation of the Pattle Point Trestle will include the removal of the existing trestle superstructure, the removal and replacement of the trestle's two existing abutments, the removal and replacement of the trestle's treated-timber cross bracing, selective removal and replacement of the trestle's timber pile caps, and the installation of a replacement trestle superstructure. The current trestle is an approximately 510-ft-long overwater segment of a multi-use trail, was constructed in the 1890s to accommodate trains, and was refurbished in 1991 to its current configuration. At a minimum, background research is recommended to determine if this structure has already been documented on a DAHP Historic Property Inventory Form and whether it is eligible for inclusion in the NRHP or Washington Heritage Register. Consultation between the project proponent and DAHP would be recommended to determine, in the absence of prior documentation, to what degree the original structure was modified during the 1991 renovation and whether it would still need to be documented as a result.

The removal of the concrete abutments will necessitate the temporary removal of existing soil and riprap at each end of the trestle. In addition, approximately 308 square feet of shoreline will be graded at each end of the trestle. Depending on the depth of ground disturbance for the approximately 308 square feet of grading at each end of the trestle, two (2) shovel probes spaced at 10-meter intervals will be placed in the location of each of the two respective abutments to search for archaeological deposits. If the depth of ground disturbance will exceed 3 ft (1 meter), manual bucket augers may be used to obtain a greater depth. The removal of the concrete abutments, soil, and riprap should be monitored for archaeological deposits that could be uncovered during ground disturbance.

Boulevard Park Overwater Walkway

An approximately 2,360-ft-long overwater segment of a multi-use trail from Boulevard Park to the Cornwall Avenue Landfill is being proposed by the City of Bellingham Parks and Recreation Department. The proposed work includes the removal of an existing timber pier, the removal of five existing, isolated, treated timber piles, the installation of two concrete abutments, the installation of 98 steel or concrete piles, and the installation of the walkway superstructure.

During a bathymetric survey conducted for this project, old logs, marine piles, and a sunken vessel were observed (Landau Associates 2009b). If the overwater walkway cannot be aligned to avoid impacting the sunken vessel and certain marine piles, then an assessment of these resources would need to be conducted in compliance with NHPA Section 106 to determine their age and significance before they are disturbed by project activities. Documentation of the sunken vessel would require underwater photos of the historic property, background research to determine its historical affiliation, and documentation on a DAHP site form. Background research and an assessment would also be recommended for the five, existing, treated timber piles prior to their removal for the project.

Based on information provided by the City, coring for the proposed removal and replacement of the Boulevard Park Overwater Walkway in areas over water is not feasible for logistical reasons and health and safety concerns. With respect to the latter point, studies have determined the presence of mercury within the mud.

Prior to the installation of the concrete abutments, approximately 480 square feet of shoreline will be graded. Up to three (3) shovel probes will be placed at 10-meter intervals to search for archaeological deposits. If the depth of ground disturbance will exceed 3 ft (1 meter), manual bucket augers may be used to obtain sediment samples from a greater depth. It is recommended that the installation of the concrete abutments be monitored. Riprap will be placed over an approximately 300 square foot area at each end of the walkway.

CONCLUSIONS

In addition to the subsurface testing, continuous construction monitoring is recommend based on the location of the project in a high probability area. If the City does not have an Unanticipated Discovery Plan, one should be drafted and be placed as an appendix to the cultural resources survey report prior to the start of any construction related activities.

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