SEATTLE PUBLIC UTILITIES
SEPA ENVIRONMENTAL CHECKLIST

This SEPA environmental review of Seattle Public Utilities' SW 98th St Outfall Modification Project has been conducted in accord with the Washington State Environmental Policy Act (SEPA) (RCW 43.21C), State SEPA regulations [Washington Administrative Code (WAC) Chapter 197-11], and the City of Seattle SEPA ordinance [Seattle Municipal Code (SMC) Chapter 25.05].

A. BACKGROUND

1. Name of proposed project:

SW 98th St Drainage Modifications

2. Name of applicant:

Seattle Public Utilities

3. Address and phone number of applicant and contact person:

Izzy Schwartz, Project Manager
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4. Date checklist prepared:

January 16, 2019

5. Agency requesting checklist:

Seattle Public Utilities (SPU)

6. Proposed timing or schedule (including phasing, if applicable):

Project construction is scheduled for early spring of 2019 and is anticipated to require up to ten working days.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

There are no future storm drainage additions planned related to this proposal. SPU plans to upgrade Wastewater Pump Station 71 at this location in 2020.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

No environmental information has been prepared or will be prepared.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

There are no known pending applications or proposals related to the affected properties.

10. List any government approvals or permits that will be needed for your proposal, if known.

- City of Seattle street use permits - Seattle Department of Transportation
- Hydraulic Project Approval - Washington State Department of Fish and Wildlife (WDFW)
- Shoreline Substantial Development Permit Exemption (SDCI)

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

SPU plans to make repairs to an existing 18-inch diameter culvert system along SW 98th St and realign and reset the 18-inch diameter outfall. The current outfall is set too low in the seawall and is usually plugged with sand, causing water to back up and flood the intersection of SW 98th St and 51st Ave SW along with several residences. SPU would install a junction box (Type 204B) 150 feet east of the intersection of SW 98th St and 51st Ave SW in the gravel shoulder over the existing 18-inch diameter culvert. SPU would install another junction box (Type 240C) in the center of the street and raise and reset the 18-inch diameter outfall through the seawall. SPU would core a hole through the seawall and place the pipe flush with the back face of the seawall. All work would be constructed from the landward side of the seawall.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The project is within the right of way at the shoreline street end of SW 98th St, starting approximately 150 feet east of centerline of 51st Ave SW and ending at the seawall. This is in the Fauntleroy neighborhood of West Seattle, City of Seattle. Attachments A and B illustrate the project vicinity and location, respectively.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site: *[Check the applicable boxes]*

☒ Flat ☐ Rolling ☐ Hilly ☐ Steep Slopes ☐ Mountainous
☐ Other:

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slope in the project area is approximately 3 percent.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The general geologic condition of the Puget Sound region is a result of glacial and non-glacial activity that occurred over the course of millions of years. Review of the geologic map covering the project location (Troost et al. 2005, available at http://pubs.usgs.gov/of/2005/1252/) indicates the project area is underlain primarily by beach deposits. Beach deposits are a mix of loose sand and gravel deposited or reworked by modern wave action. It is commonly overlain by fill. There may also be a presence of fine drained deposits upstream of the project area. This includes silt and clay, may have sandy interbeds, laminated to massive. However, urban development and buried utility construction at and near the project site over the last 100 years have resulted in a predominance of disturbed native soils/sediments, cut slopes, and large placements of fill material. The project site does not contain any agricultural land of long-term commercial significance.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe:

The project is near a potential slide area (upstream of the project area on 50th Ave SW and SW 98th St) —an environmentally critical area as identified and mapped by the City of Seattle Department of Construction and Inspections. There are no surface indications of instability at this site.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate the source of fill.

Construction would include excavation, grading, and filling necessary to replace the drainage culvert. The total volume of excavation is estimated to be no more than 70 cubic yards; total volume of filling is estimated to be no more than 70 cubic yards. Fill materials would include Type 17 select backfill from SPU stockpiles, asphalt, and concrete. Total area of disturbed ground is estimated to be no more than 1,200 square feet, which is the total area of pavement restoration.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe:

Most of the proposed work is located within existing impervious (paved) areas or adjacent to existing residential development with minimal potential for erosion. Project construction could result in erosion and sedimentation, although this risk is low because the project site is gently sloping or relatively flat; ground disturbance would be minimized; and temporary erosion and sediment control best management practices (BMPs) would be deployed, inspected, and maintained as needed.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The proposed work is in existing paved areas. Paved surfaces damaged by construction would be replaced. There would be no new impervious surfaces.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

No filling or excavation would take place in or near watercourses or wetlands and BMPs would be used to protect the existing stormwater drainage systems and to minimize erosion and sedimentation. BMPs (as identified in the City of Seattle's Stormwater Code SMC 22.800 through 22.808, Director's Rule: 2009-004 SPU/16-2009 DPD, and Volume 2 Construction Stormwater Control Technical Requirements Manual) would be used to manage stormwater runoff, construction disturbance, and erosion as needed during construction. Also, all work would be required to be performed with an approved construction erosion and sedimentation control plan (CESC) and stormwater pollution prevention plan (SWPPP).

2. Air

a. What types of emissions to the air would result from the proposal [*e.g.*, dust, automobile, odors, industrial wood smoke, greenhouse gases (GHG)] during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Construction equipment would include hand-held power tools, gasoline and diesel-powered compressors and generators, and gasoline and diesel-powered vehicles. Due to the combustion of gasoline and diesel fuels, these tools would generate greenhouse gas emissions (GHG) such as oxides of nitrogen and oxides of carbon, as well as particulate matter and smoke, uncombusted hydrocarbons, hydrogen sulfide, and water vapor. Other emissions during construction may include dust. These effects are expected to be localized, temporary, and minimized. The completed project would not generate odors.

The project would produce GHGs in three ways: embodied energy in materials to be installed on the project; energy expended through construction activity (especially as described above); and energy expended during regular operation, maintenance, and monitoring activities throughout the anticipated 50-year lifespan of the installed project.

Total GHG emissions for the project are estimated to be 72.7 metric tons of carbon dioxide emission (MTCO2e). The GHG emissions calculations are shown in Attachment D and summarized in the table below. One metric ton is equivalent to 2,205 pounds.

The project would demolish and remove existing concrete and asphalt surfaces. The estimated volume of replacement asphalt and concrete is approximately 22 cubic yards, which is estimated to embody 60 MTCO2e. Embodied energy in other materials (such as aggregate bedding, pipe material, and so forth) used in this project has not been estimated as part of this SEPA environmental review due to the difficulty and inaccuracy of calculating those estimates.

The project would generate GHG emissions during the construction period through the operation of diesel- and gasoline-powered equipment, and in the transportation of materials, equipment, and workers to and from the site. The estimates provided are based on assumptions for typical numbers of vehicle operations to execute the work; see Attachment D for more information. Construction activities would generate an estimated 10.3 MTCO2e.

The project would also generate GHG emissions through the operation, maintenance, and monitoring of the project. The estimated emissions are based on an assumed life expectancy of 50 years. The estimated average annual GHG emissions generated from operations, maintenance, and monitoring is 2.4 MTCO2e.

SUMMARY OF GREENHOUSE GAS (GHG) EMISSIONS

Activity/Emission Type	GHG Emissions (pounds of CO_2e)[1]	GHS Emissions (metric tons of CO_2e)[1]
Buildings	0	0
Paving	132,277	60
Construction Activities (Diesel)	21,240	9.6
Construction Activities (Gasoline)	1,458	0.7
Long-term Maintenance (Diesel)	5,310	2.4
Long-term Maintenance (Gasoline)	0	0
Total GHG Emissions	160,285	72.7

[1] Note: 1 metric ton = 2,204.6 pounds of CO_2e. 1,000 pounds = 0.45 metric tons of CO_2e

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No off-site sources of emissions or odors are known.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

During construction, impacts to air quality would be reduced and controlled through implementation of federal, state, and local emission control criteria and City of Seattle construction practices. These would include requiring contractors to use BMPs for construction methods, proper vehicle maintenance, and minimizing vehicle and equipment idling.

3. Water

a. Surface:

(1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If so, describe type and provide names. If appropriate, state what stream or river it flows into.

This culvert system conveys stormwater collected from impervious street surfaces and adjacent privately-owned impervious surfaces. The outfall discharges to Puget Sound.

(**2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If so, please describe, and attach available plans.**

Yes, this project is located adjacent to the Puget Sound shoreline. SPU proposes to relocate a drainage line that's within 200 feet of Puget Sound in order to relocate the drainage discharge point to a new location in the existing seawall. The project would use a pump and bypass system to divert existing culvert drainage into the new catch basin when reconnecting to the existing system during construction.

(3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands, and indicate the area of the site that would be affected. Indicate the source of fill material.

No fill or dredge material would be placed in or removed from surface waters or wetlands.

(4) Will the proposal require surface water withdrawals or diversions? If so, give general description, purpose, and approximate quantities if known.

The project would use a pump and bypass system to divert existing culvert drainage into the new catch basin when reconnecting to the existing system.

(5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes, the project lies within the Federal Emergency Management Agency (FEMA) 100-year floodplain. See Attachment B.

(6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No part of the proposed work involves any discharges of waste materials to surface waters. However, several construction activities such as sawcutting, concrete pouring and handling, etc., would generate pollutants that could potentially enter local drainage conveyance systems. Non-sediment pollutants that may be present during construction include:

- Petroleum products including fuel, lubricants, hydraulic fluids, and form oils
- Paints, glues, solvents, and adhesives
- Concrete and concrete washwater
- Chemicals associated with portable toilets.

Procedures to prevent and control pollutants, including hazardous materials such as hydrocarbons and pH-modifying substances, would be described in the project's spill prevention, control, and countermeasures (SPCC) plan.

b. Ground:

(1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No groundwater withdrawals are planned. If dewatering of excavated areas and trenches is necessary during construction, collected water would be managed according to the proposed work's SWPPP. Quantities of water potentially collected by dewatering are unknown. No other ground water withdrawals or discharges are anticipated.

(2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals…; agricultural, *etc.*). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

This project would not discharge waste material from septic tanks or other sources into groundwater.

c. Water Runoff (including storm water):

(1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

During construction, BMPs would be used to protect the existing stormwater drainage system and to minimize erosion and sedimentation. BMPs (as identified in the City of Seattle's Stormwater Code SMC 22.800 through 22.808, Director's Rule: DWW-200 SPU/17-2017 SDCI, and Volume 2 Construction Stormwater Control Technical Requirements Manual) would be used to manage stormwater runoff, construction disturbance, and erosion as needed during construction. Also, all work would be required to be performed with an approved CESC and SWPPP.

The project would use a pump and bypass system to divert the existing culvert flows into the new catch basin when reconnecting to the existing system during construction.

(2) Could waste materials enter ground or surface waters? If so, generally describe.

No part of the proposed work involves any discharges of waste materials to surface or ground waters. However, several construction activities such as sawcutting, concrete pouring and handling, etc., would generate pollutants that could potentially enter local drainage conveyance systems. Non-sediment pollutants that may be present during construction include:

- Petroleum products including fuel, lubricants, hydraulic fluids, and form oils
- Paints, glues, solvents, and adhesives
- Concrete and concrete washwater
- Chemicals associated with portable toilets

Procedures to prevent and control pollutants including hazardous materials, such as hydrocarbons and pH-modifying substances would be described in the project's SPCC plan.

(3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

Once completed, the proposed work would not alter or otherwise affect surface drainage patterns.

d. Proposed measures to reduce or control surface, ground, runoff water, and drainage impacts, if any:

BMPs would be used to protect the existing stormwater drainage system and to minimize erosion and sedimentation. BMPs (as identified in the City of Seattle's Stormwater Code SMC 22.800 through 22.808, Director's Rule: DWW-200 SPU/17-2017 SDCI, and Volume 2 Construction Stormwater Control Technical Requirements Manual) would be used to manage stormwater runoff, construction disturbance, and erosion as needed during construction. Also, all work would be required to be performed with an approved CESC and SWPPP.

4. Plants

a. Types of vegetation found on the site: *[check the applicable boxes]*

☐ Deciduous trees:	☐ Alder	☐ Maple	☐ Aspen	☐ Other: (identify)
☐ Evergreen trees:	☐ Fir	☐ Cedar	☐ Pine	☐ Other: (identify)
☐ Shrubs				
☒ Grass (turf)				
☐ Pasture				
☐ Crop or grain				
☐ Orchards, vineyards, or other permanent crops				
☐ Wet soil plants:	☐ Cattail	☐ Buttercup	☐ Bulrush	☐ Skunk cabbage
☐ Other:				
☐ Water plants**:**	☐ water lily	☐ eelgrass	☐ milfoil	☐ Other: (identify)
☐ Other types of vegetation:				

b. What kind and amount of vegetation will be removed or altered?

The project site is confined to street right-of-way consisting mostly of impervious surfaces, including asphalt and concrete travel lanes (with no curb, gutter, or ditches) and driveway aprons. The remaining area within the right-of-way is gravel shoulders or planted with lawn grasses. Adjacent private parcels consist mostly of impervious surfaces (i.e., roofs, driveways, patios), with pervious areas covered by lawn, landscaping, and trees. Publicly and privately planted street trees are located sporadically in the right-of-way landscape.

The proposed work would affect paved surfaces in the street right-of-way outside of street tree canopy drip-lines. No trees or shrubs would be removed; however, project construction would damage or destroy grassy vegetation, including mown turf. The project is confined to the right-of-way area. Turfgrass in the planting strip would be taken out during construction but would be replaced during the restoration process.

c. List threatened or endangered species known to be on or near the site.

A search of the Washington Department of Natural Resources (WDNR) Natural Heritage Program database was conducted for listed species in the project area; no species were identified in the project area (http://data-wadnr.opendata.arcgis.com/). No federally-listed endangered or threatened plant species or State-listed sensitive plant species are known to occur within Seattle's municipal limits. The project site has been intensively

disturbed by development and redevelopment over the last 100 years and has been extensively excavated, filled, paved, or occupied by street, utility, and other constructed features. There is no habitat for threatened or endangered plants.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

The proposed work would limit plant removal, pruning, and other disturbance to that required for project construction. Project construction would not remove any trees or shrubs, but would damage or destroy turf. All damaged turf would be restored as directed by the Seattle Department of Transportation.

e. List all noxious weeds and invasive species known to be on or near the site.

No noxious weeds or invasive plant species are known to be at the project site.

5. Animals

a. List any birds and other animals that have been observed on or near the site or are known to be on or near the site: *[check the applicable boxes]*

Birds:	☒ Hawk	☒ Heron	☒ Eagle	☒ Songbirds
☒ Other: crow, pigeon				
Mammals:	☐ Deer	☐ Bear	☐ Elk	☐ Beaver
☒ Other: possum, raccoon, squirrel				
Fish:	☐ Bass	☒ Salmon	☐ Trout	☐ Herring
☐ Shellfish	☒ Other: sand lance			

b. List any threatened or endangered species known to be on or near the site:

The project is located adjacent to Puget Sound. Endangered Species Act (ESA)-listed aquatic species known to use Puget Sound are Chinook salmon (*Oncorhynchus tshawytscha,* Threatened), steelhead trout (*Oncorhynchus mykiss*, Threatened), and bull trout (*Salvelinus confluentus*, Threatened). Designated critical habitat for Chinook salmon and bull trout is located adjacent to the project site in the Puget Sound nearshore.

Based on a check of the Washington Department of Fish and Wildlife's "Priority Habitat Species on the Web" database on November 2, 2018 the Pacific Sand Lance is known to have a breeding area on the beach near the project site. The project site is known to be (but not mapped as being) within the habitat of great blue heron (*Ardea herodias*)—a priority species in Washington.

c. Is the site part of a migration route? If so, explain.

Seattle is located within the migratory route of many birds and other animal species and is part of the Pacific Flyway, a major north-south route of travel for migratory birds in the Americas extending from Alaska to Patagonia. Also, Puget Sound is an important water migration route for many animal species.

d. Proposed measures to preserve or enhance wildlife, if any:

The proposed work would limit plant removal, pruning, and other disturbance to that required for project construction. Project construction would not remove any trees or shrubs, but would damage or destroy turf or other herbaceous planting strip vegetation. All damaged turf would be restored as directed by the Seattle Department of Transportation. No construction activities would be conducted from the beach.

e. List any invasive animal species known to be on or near the site.

King County lists the European starling, house sparrow, Eastern gray squirrel, and fox squirrel as terrestrial invasive species for this area (http://www.kingcounty.gov/services/environment/animals-and-plants/biodiversity/threats/Invasives.aspx).

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, *etc.*

No energy would be required to meet the constructed project's energy needs.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The proposed project does not involve building structures or planting vegetation that would block access to the sun for adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

There are no conservation features or proposed measures to reduce or control energy impacts because there would be no such impacts.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe:

Small amounts of materials likely to be present during construction include gasoline and diesel fuels, hydraulic fluids, oils, lubricants, solvents, paints, and other chemical products. A spill of one of these chemicals could potentially occur during construction due to equipment failure or worker error. Though unlikely, contaminated soils, sediments, or groundwater could also be exposed during excavation. If disturbed, contaminated substances could expose construction workers and potentially other individuals in the vicinity through blowing dust, stormwater runoff, or vapors.

(1) Describe any known or possible contamination at the site from present or past uses.

The project site is not known to have had industrial or commercial land uses that may have resulted in contamination of soil materials.

(2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There are no known hazardous chemicals or conditions that might affect project development and design.

(3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Construction activities such as sawcutting, concrete pouring and handling, etc., would generate pollutants that could potentially enter local drainage conveyance systems. Non-sediment pollutants that may be present during construction include:

- Petroleum products including fuel, lubricants, hydraulic fluids, and form oils
- Paints, glues, solvents, and adhesives
- Concrete and concrete washwater
- Chemicals associated with portable toilets

No toxic or hazardous chemicals would be stored, used, or produced at any time during the operating life of the constructed project.

(4) Describe special emergency services that might be required.

No special emergency services would be required during construction or operation of the project. Possible fire or medic services could be required during project construction, as well as possibly during operation of the completed project. However, the completed project would not demand higher levels of special emergency services than already exist at the project location.

(5) Proposed measures to reduce or control environmental health hazards, if any:

The construction contractor would be required to develop and implement a SPCC to control and manage spills during construction. During construction, the contractor would use standard operating procedures and BMPs identified in the City of Seattle's Stormwater Code (SMC 22.800 through 22.808 and Director's Rule DWW-200 SPU/17-2017 SDCI) and Construction Stormwater Control (Volume 2) to reduce or control any possible environmental health hazards. Soils contaminated by previous land uses or by spills during construction would be excavated and disposed of in a manner consistent with the level and type of contamination, in accordance with federal, state and local regulations, by qualified contractor(s) and/or City staff.

As required by the Washington Department of Labor and Industries (WAC 296-843), a Health and Safety Plan would be prepared by SPU or SPU's contractor prior to work commencing. The plan would address proper employee training, use of protective equipment, contingency planning, and secondary containment of hazardous materials.

b. Noise

(1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Noises that exist in the area would not affect the project.

(2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise levels in the vicinity of project construction would temporarily increase during construction. Short-term noise from construction equipment would be limited to the allowable maximum levels of applicable laws, including the City of Seattle's Noise Control Ordinance [SMC Chapter 25.08.425—Construction and Equipment Operations]. Within the allowable maximum levels, SMC 25.08 permits noise from construction equipment between the hours of 7 a.m. and 10 p.m. weekdays, and 9 a.m. and 10 p.m. weekends and legal holidays. It is expected that construction would take no more than ten working days to complete. The completed project would generate no additional noise from equipment used for operation or maintenance.

(2) Proposed measures to reduce or control noise impacts, if any:

Construction equipment would be muffled in accordance with the applicable laws. SMC Chapter 25.08 (which prescribes limits to noise and construction activities) would be enforced while the project is being constructed and during operations, except for emergencies.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The proposed work would be located in improved public right-of-way used for vehicle and pedestrian travel and parking. Adjacent property uses are single-family residential (some of which may contain home-based occupations).

The project would not affect current land uses on nearby or adjacent properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

The project site has not been recently used for agricultural or forest land purposes.

(1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?

The proposed work would neither be affected by nor affect surrounding working farm or forest land normal business operations because there are no such operations at or near the project site.

c. Describe any structures on the site.

The proposed work is associated with existing buried drainage culverts located in improved public right-of-way used for vehicle and pedestrian travel and parking. Adjacent property uses are single-family residential (some of which may include space for home-based occupations). Utilities are located in the street rights-of-way.

d. Will any structures be demolished? If so, what?

The project would not demolish any aboveground structures.

e. What is the current zoning classification of the site?

Residential, Single-family 5,000 (SF 5000)

f. What is the current comprehensive plan designation of the site?

Single Family Residential Area

g. If applicable, what is the current shoreline master program designation of the site?

The project site is in a Shoreline Management district associated with Puget Sound. The shoreline environment designations for this site are Urban Residential for the dry land area located above (landward) of the mean higher high water (MHHW) line, and Conservancy Recreation for the submerged land area located below (waterward) of the MHHW line.

h. Has any part of the site been classified as an "environmentally critical" area? If so, specify.

The project site is located in a potential liquefaction area and flood-prone area, environmentally critical areas as identified and mapped by the Seattle Department of Construction and Inspections.

i. Approximately how many people would reside or work in the completed project?

No people would reside or work in the completed project.

j. Approximately how many people would the completed project displace?

The project would not displace any people.

k. Proposed measures to avoid or reduce displacement impacts, if any:

There would be no displacement impacts.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The project would be compatible with existing and projected land uses and plans.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

There are no nearby agricultural and forest lands of long-term commercial significance.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

The proposed project would not construct any housing units.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

The proposed project would not eliminate any housing units.

c. Proposed measures to reduce or control housing impacts, if any:

No measures are proposed because there would be no housing impacts.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas? What is the principal exterior building material(s) proposed?

All constructed structures would be buried.

b. What views in the immediate vicinity would be altered or obstructed?

No views would be altered or obstructed.

c. Proposed measures to reduce or control aesthetic impacts, if any:

No such measures are proposed because there would be no aesthetic impacts.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

The constructed project would not produce light or glare. No new street lights are proposed or required. During construction, if an emergency situation calls for after-dark work, the construction contractor may deploy portable lights that temporarily produce light and glare.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

The project would not create light or glare.

c. What existing off-site sources of light or glare may affect your proposal?

There are no existing off-site sources of light and glare that would affect the proposal.

d. Proposed measures to reduce or control light and glare impacts, if any:

No measures are needed to reduce or control light and glare impacts because no impacts would occur. If an emergency requires after-dark work during construction, portable lighting would be adjusted as feasible to minimize glare.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

The project site is located in a shoreline street end that was designated for the preservation of shoreline public access by the Seattle City Council on 9/23/1996 (Seattle City Council Resolution No. 29370). The City of Seattle Street Ends Program is managed by the Seattle Department of Transportation (SDOT). Current shoreline public access features at the site include a bench and a shoreline public view sign.

In addition, the proposed work is located in a street right-of-way that provides opportunities for informal recreational activities such as dog-walking, walking, jogging, and bicycling.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The proposed work would not permanently displace any existing recreational uses. Access to the street end would be limited during construction, but SPU would require the construction contractor to maintain safe pedestrian and vehicle access at all times. Temporary closures or detours affecting vehicle and pedestrian routes/access may be required.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Temporary closures or detours affecting vehicle and pedestrian routes/access may be required. The project would attempt to make those closures and detours as brief as possible. Project notifications through website updates, emails, and mailings would provide affected residents with limited advance notice regarding temporary street and sidewalk closures and detours.

13. Historic and Cultural Preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

There are no places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site. To determine if National Register or State of Washington Heritage properties are in or adjacent to the project area, the project location was checked against the following registers on January 14, 2019:

- City of Seattle Landmarks http://www.cityofseattle.net/neighborhoods/preservation/landmarks_listing.htm
- Washington Heritage Register and National Register of Historic Places and WISAARD database https://dahp.wa.gov/historic-preservation/find-a-historic-place

While the WISAARD database indicates numerous historic property reports have been submitted for various structures near the project location, none of these registers recorded any places or objects formally listed on, or proposed for, national, state, or local preservation registers on or adjacent to the project location. No architectural inventory is required for this project because no structures would be demolished or altered.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

According to WISAARD, there are no such cultural resources at or near the project site. All ground disturbance and excavation would occur in existing street right-of-way that has been disturbed previously by installation of underground utility infrastructure.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the Department of Archaeology and Historic Preservation, archaeological surveys, historic maps, GIS data, *etc.*

To determine if National Register or Washington Heritage properties are in or adjacent to the project site, the project location was checked against the following registers on January 14, 2019:

Washington Heritage Register and National Register of Historic Places: http://www.dahp.wa.gov/historic-register

WISAARD database: https://dahp.wa.gov/historic-preservation/find-a-historic-place

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

The proposed work would not affect buildings or known cultural resources. Only portions of SPU's drainage system would be affected. None of those objects are considered historically or culturally import. Also, the proposed work is located on previously disturbed and filled upland area. The work's location on previously disturbed and filled ground reduces the chance of encountering contextually significant archaeological materials. Work crews would be trained to recognize archaeological materials should they be discovered. Should evidence of cultural artifacts or human remains, either historic or prehistoric, be encountered during excavation, work in that immediate area would be suspended and the find would be examined and documented by a professional archaeologist. Decisions regarding appropriate mitigation and further action would be made at that time.

14. Transportation

a. Identify public streets and highways serving the site or affected geographic area, and describe proposed access to the existing street system. Show on site plans, if any.

The project would occur on existing, improved street right-of-way for SW 98th St.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The proposed project would not affect public transportation. The nearest bus stop (Route 116) is located on SW Brace Point Drive & Wildwood Pl, approximately 0.75 miles from the project location.

c. How many additional parking spaces would the completed project or nonproject proposal have? How many would the project or proposal eliminate?

Because the proposed work involves open trenching in the street right-of-way, construction would require temporary closures of parking as well as travel lanes. Parking associated with street right-of-way is currently on-street, free parking managed by the City of Seattle. During construction, there may be no or restricted parking on one or both sides of these streets. Project construction would temporarily eliminate up to approximately 10 on-street public parking spaces adjacent to the construction zone to accommodate contractor vehicles, mobilization, construction, and local and through access. Generally, however, there are ample on-street parking spots available elsewhere at the project site and most nearby residences have their own off-street parking. The specific timing and duration of parking and lane closures are not known at this time, but such closures would comply with relevant policies administered by the respective cities as part of their street use permitting process. The completed project would neither create nor eliminate any parking spaces.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

The project would restore all demolished and damaged street panels and traffic aprons to pre-construction conditions or better. No new roads or streets would be constructed as part of the project.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The proposed project would not use or occur near water, rail, or air transportation.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

Project construction would generate about 60 vehicle round-trips due to workers and materials being transported to and from the site during the estimated total 10 workday construction period. Most of those trips would occur during business hours (between 7

am and 6 pm) on weekdays (Mondays through Fridays) but trips may occur at other times including weekend days. The completed project would generate an estimated total of 50 vehicle round-trips related to the on-going routine operation, maintenance, and monitoring over the project's 50-year lifespan. Numbers of vehicular trips and peak volumes are not expected to change because of the completed project.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

The proposal would not interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area.

h. Proposed measures to reduce or control transportation impacts, if any:

The following measures would be used to reduce or control transportation impacts:

- SPU would require the construction contractor to submit a traffic control plan for approval and enforcement by SPU and the Seattle Department of Transportation.
- SPU would conduct public outreach before and during project construction to notify residents, local agencies, King County Metro, and other stakeholders of work progress and expected disruptions or changes in traffic flow.
- Access for emergency-response vehicles would be maintained at all times.
- Through access and vehicle access to private properties may not be available at all times during construction, but temporary closures would be minimized, and detour routes would be properly and clearly signed.
- Alternative routes for pedestrians, bicyclists, and those with disabilities would be identified and clearly signed.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

The project would not create an increased need for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any.

No impacts on public services are anticipated and no mitigation measures are proposed.

16. Utilities

a. Check utilities available at the site, if any: *[check the applicable boxes]*

☐ None
☒ Electricity ☒ Natural gas ☒ Water ☒ Refuse service
☒ Telephone ☒ Sanitary sewer ☐ Septic system
☒ Other: stormwater drainage; power; cable

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

The completed project is anticipated to enhance the life and serviceability of a section of the City of Seattle's stormwater drainage conveyance system and would be owned, operated, and maintained by SPU. Construction is not expected to interrupt, relocate, or reconstruct other utilities such as sewer, water services, or natural gas. However, inadvertent damage to underground utilities could occur during construction. While such incidents do not occur frequently, they could temporarily affect services to customers served by the affected utility while emergency repairs are made. In addition, some residents may need to place their curbside garbage/recycling containers in front of an adjacent neighbor's house on garbage pick-up days. No other construction-related interruptions to utility services are expected.

C. SIGNATURE

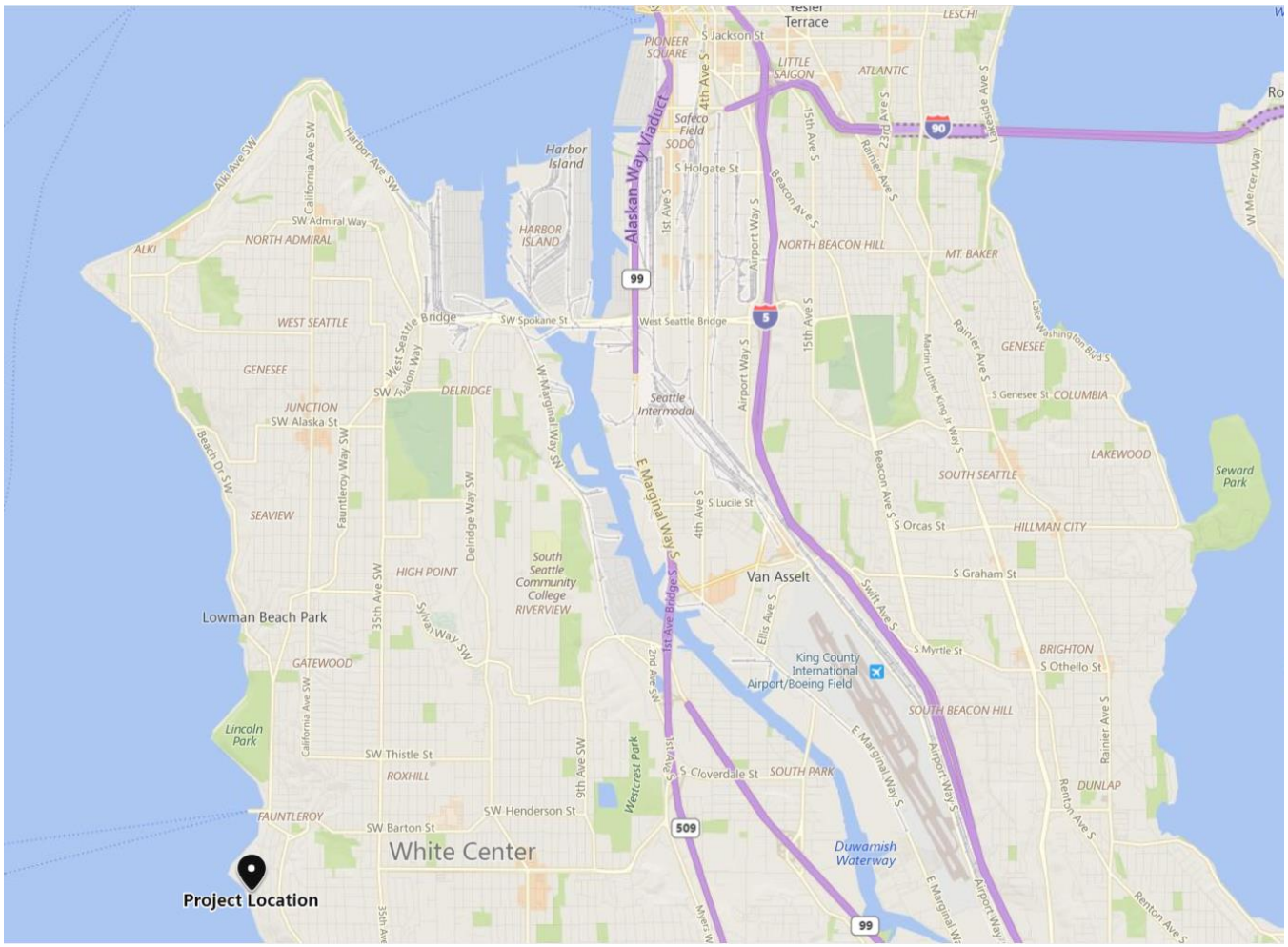
The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____ Date: 1/16/19

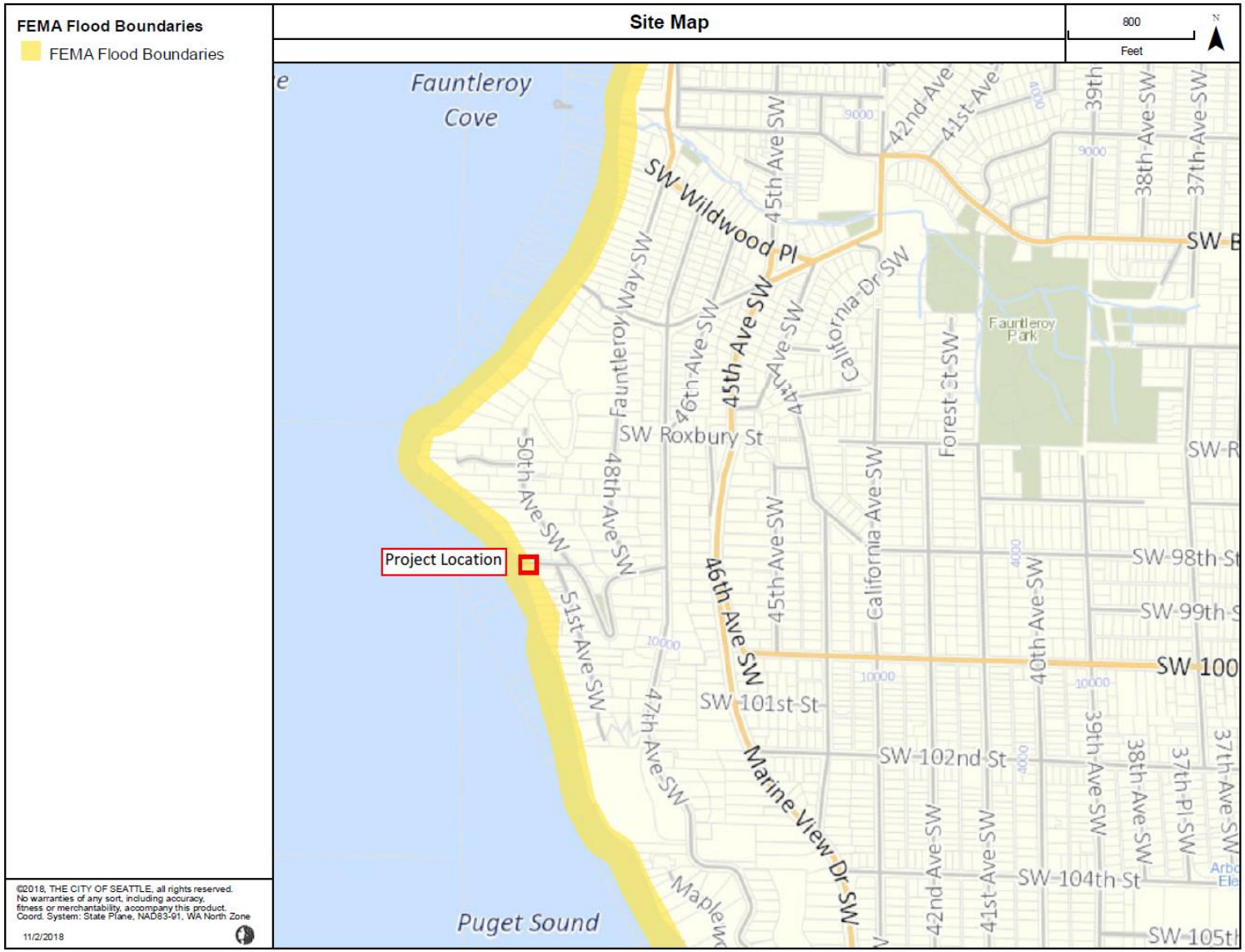
Izzy Schwartz
Project Manager

Attachment A – Vicinity Map
Attachment B – Site Map
Attachment C – Photographs
Attachment D – Greenhouse Gas Emissions Worksheet

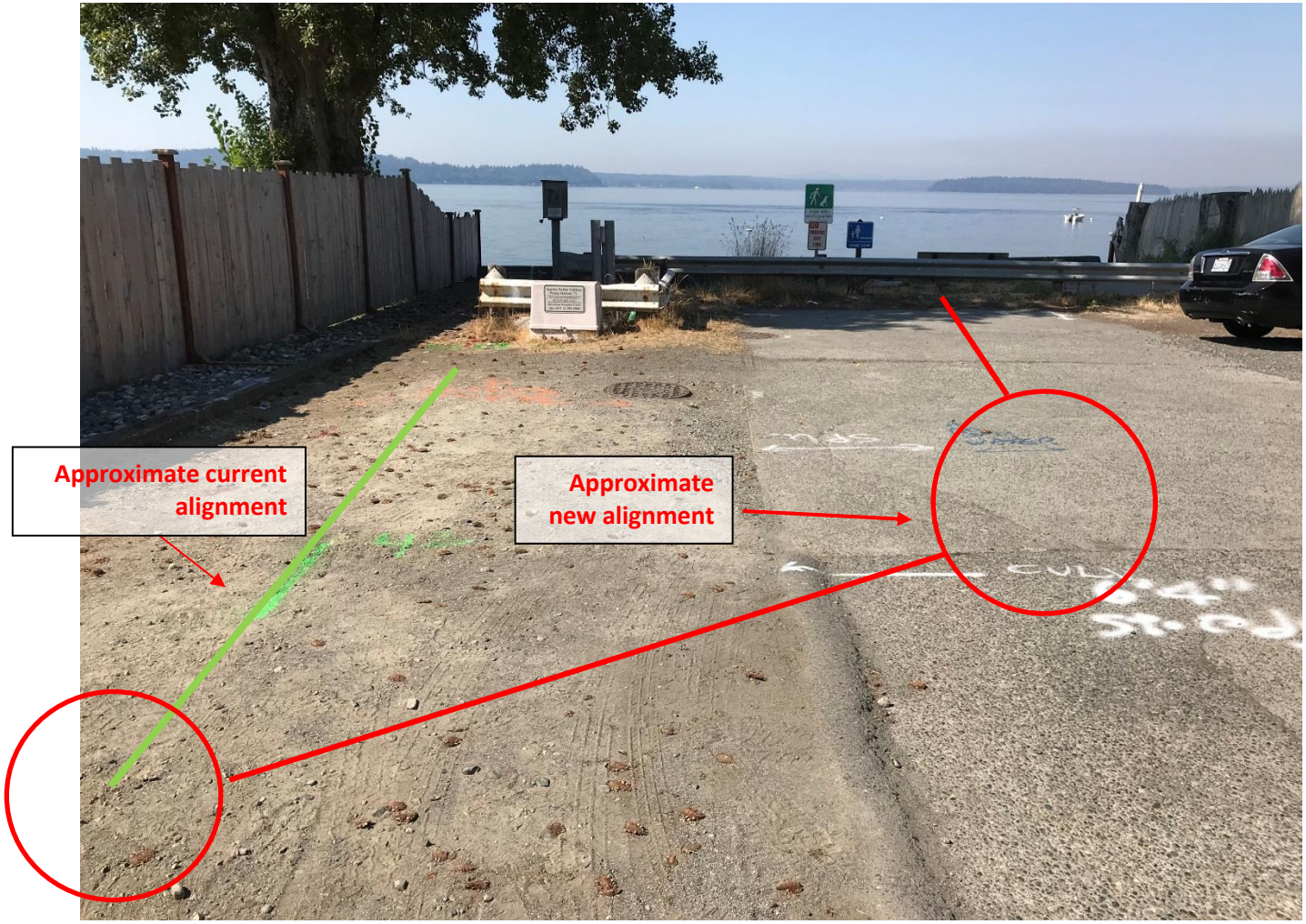
Attachment A – Vicinity Map

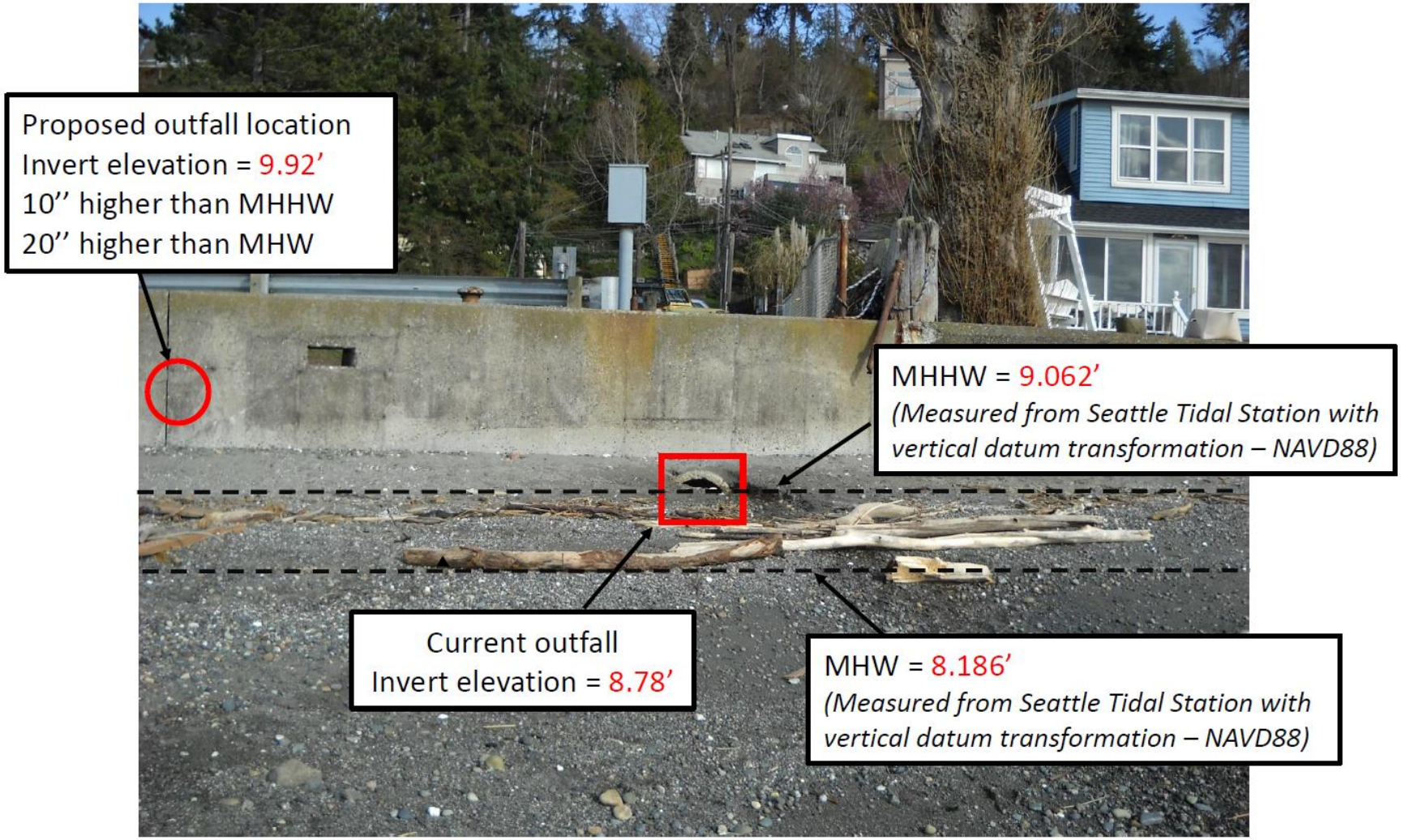


Attachment B – Site Map



Attachment C – Photographs




Proposed outfall location
Invert elevation = 9.92'
10'' higher than MHHW
20'' higher than MHW
MHHW = 9.062'
(Measured from Seattle Tidal Station with vertical datum transformation – NAVD88)
Current outfall
Invert elevation = 8.78'
MHW = 8.186'
(Measured from Seattle Tidal Station with vertical datum transformation – NAVD88)

Attachment D – Greenhouse Gas Emissions Worksheet

Section I: Buildings						
			Emissions Per Unit or Per Thousand Square Feet ($MTCO_2e$)			
Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Embodied	Energy	Transportation	**Lifespan Emissions ($MTCO_2e$)**
Single-Family Home	0		98	672	792	**0**
Multi-Family Unit in Large Building	0		33	357	766	**0**
Multi-Family Unit in Small Building	0		54	681	766	**0**
Mobile Home	0		41	475	709	**0**
Education		0.0	39	646	361	**0**
Food Sales		0.0	39	1,541	282	**0**
Food Service		0.0	39	1,994	561	**0**
Health Care Inpatient		0.0	39	1,938	582	**0**
Health Care Outpatient		0.0	39	737	571	**0**
Lodging		0.0	39	777	117	**0**
Retail (Other than Mall)		0.0	39	577	247	**0**
Office		0.0	39	723	588	**0**
Public Assembly		0.0	39	733	150	**0**
Public Order and Safety		0.0	39	899	374	**0**
Religious Worship		0.0	39	339	129	**0**
Service		0.0	39	599	266	**0**
Warehouse and Storage		0.0	39	352	181	**0**
Other		0.0	39	1,278	257	**0**
Vacant		0.0	39	162	47	**0**
					TOTAL Section I Buildings	**0**

Section II: Pavement						
						Emissions ($MTCO_2e$)
Pavement (sidewalk, asphalt patch)						
Concrete Pad (50 $MTCO_2e$/1,000 sq. ft. of pavement at a depth of 6 inches)		1,200 sq ft, 6 inches thick (22 CY				**60**
					TOTAL Section II Pavement	

Section III: Construction	
	Emissions ($MTCO_2e$)
(See detailed calculations below)	
TOTAL Section III Construction	**10.3**

Section IV: Operations and Maintenance	
	Emissions ($MTCO_2e$)
(See detailed calculations below)	
TOTAL Section IV Operations and Maintenance	**2.4**

TOTAL GREENHOUSE GAS (GHG) EMISSIONS FOR PROJECT ($MTCO_2e$)	**72.7**

Attachment D – Greenhouse Gas Emissions Worksheet, continued

Section III Construction Details		
Construction: Diesel		
Equipment	**Diesel (gallons)**	**Assumptions**
Excavator	560	80 hours x 7 gallons/hour (345 hp engine)
Dump Truck	240	20 round trips x 60 miles/round trip ÷ 5 mpg
Subtotal Diesel Gallons	800	
GHG Emissions in lbs CO_2e	21,240	26.55 lbs CO_2e per gallon of diesel
GHG Emissions in metric tons CO_2e	9.6	1,000 lbs = 0.45359237 metric tons

Construction: Gasoline		
Equipment	**Gasoline (gallons)**	**Assumptions**
Pick-up Trucks or Crew Vans	60	10 workdays x 3 trucks x 2 round-trip/day x 20 miles/round-trip ÷ 20 mpg
Subtotal Gasoline Gallons	60	
GHG Emissions in lbs CO_2e	1458	24.3 lbs CO_2e per gallon of gasoline
GHG Emissions in metric tons CO_2e	0.7	1,000 lbs = 0.45359237 metric tons

Construction Summary		
Activity	**CO_2e in pounds**	**CO_2e in metric tons**
Diesel	21,240	9.6
Gasoline	1,458	0.7
Total for Construction	22,698	**10.3**

Section IV Long-Term Operations and Maintenance Details		
Operations and Maintenance: Diesel		
Equipment	**Diesel (gallons)**	**Assumptions**
Vactor Truck (maintenance)	200	50 events (once annually for 50 years) x 20 miles/round-trip x 1 round-trip/event ÷ 5 mpg
Subtotal Diesel Gallons	200	
GHG Emissions in lbs CO_2e	5,310	26.55 lbs CO_2e per gallon of diesel
GHG Emissions in metric tons CO_2e	2.4	1,000 lbs = 0.45359237 metric tons

Operations and Maintenance: Gasoline		
Equipment	**Gasoline (gallons)**	**Assumptions**
	na	na
Subtotal Gasoline Gallons	0	
GHG Emissions in lbs CO_2e	0	24.3 lbs CO_2e per gallon of gasoline
GHG Emissions in metric tons CO_2e	0	1,000 lbs = 0.45359237 metric tons

Operations and Maintenance Summary		
Activity	**CO_2e in pounds**	**CO_2e in metric tons**
Diesel	5,310	2.4
Gasoline	0	0
Total Operations and Maintenance	5,310	**2.4**