SEATTLE PUBLIC UTILITIES
SEPA ENVIRONMENTAL CHECKLIST

This SEPA environmental review of Seattle Public Utilities' Cathodic Protection Improvements 2021 Package 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:

Cathodic Protection Improvements 2021 Package

2. Name of applicant:

Seattle Public Utilities (SPU)

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

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4. Date checklist prepared:

June 22, 2021

5. Agency requesting checklist:

SPU

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

Construction is scheduled to start in July 2022 and conclude in August 2023.

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

SPU routinely engages in cathodic protection system maintenance, repair, and minor modification work. SPU also periodically undertakes major upgrades and expansions of the cathodic protection system. Ongoing maintenance and repair and future upgrade and expansion activities are not addressed in this checklist, and are addressed in separate SEPA documents as appropriate.

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

No additional environmental information has been prepared directly related to this proposal. Environmental information such as wetland delineation reports and geotechnical investigations will be prepared if required as a condition of obtaining required city, county, state, or federal permits.

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.

Besides the proposed work, there are no known pending applications or proposals related to the facilities covered by this proposal.

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

For some project sites, one or more of the following government agency permits may be needed to perform this work:

Local jurisdiction reviews/permits:

- Electrical/Electric Wiring Permit
- Environmentally Critical Areas Review/Approval/Exemption
- Right-of-way Construction Permit
- Right-of-way Permit (Franchise Utility)
- Special Use Permit
- Street/Right-of-way Use Permit
- Temporary Use/Revocable Use Permit

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.

Overview

SPU owns and maintains large-diameter, buried steel water transmission pipelines that convey treated drinking water from the City of Seattle's Tolt and Cedar River Municipal Watersheds to customers in the City of Seattle and surrounding area. Buried steel pipelines without good external coating will corrode on the exterior through electrochemical processes. The rate of corrosion is largely dependent on electrochemical properties of the soils around the pipeline and on the presence of moisture/groundwater. Steel pipelines typically corrode by random pitting, which leads to an increasing incidence of small leaks as corrosion progresses. Maintaining the integrity of water transmission pipelines is, therefore, critical for reliability of supply service.

Such corrosion can be prevented by a variety of methods developed to slow or reverse the electrochemical processes that cause corrosion. These methods are collectively referred to as "cathodic protection." An existing network of cathodic protection sites (collectively referred to in this Checklist as the cathodic protection system) provides corrosion protection for SPU's water transmission pipelines. One of the cathodic protection techniques used in the cathodic protection system is impressed current. Impressed current systems slow or reverse the electrochemical corrosion process by continually applying a small electrical charge from an

external power source onto the buried steel pipeline. The system consists of buried anodes connected via a copper header cable to a direct current (DC) power source. The low voltage DC power is provided by a transformer-rectifier installed at the cathodic protection site. Anodes can be installed either: 1) as a group within a single deep well groundbed, consisting of a one-foot diameter vertical hole 50 to 350 feet or more deep backfilled with conductive carbonaceous material called coke breeze to improve performance and life of the anodes; or 2) in a distributed groundbed, with each anode buried in a one-foot wide well up to 15 feet deep and backfilled with coke breeze. The choice of groundbed type and size depends on the application, location, and soil resistivity. Once installed, the anodes are electrically connected to the cathodic protection system header cable. No direct connections are made to the water transmission pipeline during installation of new or replacement impressed current anodes. However, a complete circuit will be completed though separate direct wire connections from the transformer-rectifier to the transmission pipeline. Most impressed current systems require replacement after about 25. This Checklist presumes the proposed work would have a serviceable lifespan of 25 years.

Proposed Project Work

The proposed project would provide impressed current cathodic protection to approximately 60 miles of older steel pipelines with limited or no external coating. The cathodic protection system improvements would occur at six locations—five in in the City of Seattle and one in the City of Renton. The proposed work includes both rehabilitation of depleted/damaged existing systems as well as the addition of new systems and is anticipated to require up to 70 working days. Attachment A is a map of the greater Seattle area with the locations of the six sites proposed for cathodic protection system improvements. Attachment B includes more detailed maps of each of the six project sites. Descriptions of the specific work proposed are provided here:

<u>Site 47 (modification): Cedar Ave S and Beacon Way S, City of Renton</u>

Work would install approximately 100 feet of #2 header cable from the existing rectifier across Cedar Ave S and connect to the existing header cable to achieve anode circuit separation across Cedar Ave S. The work would require replacing two roadway concrete panels for open cut construction or directional drilling across Cedar Ave S.

<u>Site 24 (new): Federal Ave E and E Howe St, City of Seattle</u>

Work would install a new rectifier and deep well near the intersection of Federal Ave E and E Howe St to protect 1,500 feet of 42-inch diameter pipeline in severely corrosive soils. New test stations would be installed on the pipeline 750 feet north and 500 feet south of the rectifier.

<u>Site 30 (new): 18th Ave E and E Harrison St, City of Seattle</u>

Work would install a new deep well and new rectifier to protect a minimum of 1,000 feet of riveted steel pipe installed in 1923 in very corrosive soils. New test stations would be installed on the pipeline 750 feet north and 500 feet south of the rectifier.

<u>Site 97 (new): 22nd Ave E and E Howe St, City of Seattle</u>

Install a new deep anode ground bed system and rectifier to protect a minimum of 1,500 feet of lock-bar steel pipe installed in 1930 in very corrosive soils. A new test station would be installed on the pipeline 750 feet south and 500 feet north of the rectifier.

Site 98 (new): 20th Ave S and S College St, City of Seattle
Work would install a new deep anode ground bed system and rectifier to protect a minimum of 1,250 feet of riveted steel pipe installed in 1923 in very corrosive soils. New test stations would be installed on the pipeline 750 feet south and 500 feet north of the rectifier.

Site 99 (new): 20th Ave S and S Horton St, City of Seattle
Work would install a new deep anode ground bed system and rectifier to protect a minimum of 1,250 feet of riveted steel pipe installed in 1923 in very corrosive soils. New test stations would be installed on the pipeline 500 feet south and 750 feet north of the rectifier.

Once the cathodic protection system improvements are installed, excavated areas would be backfilled and areas of surface disturbance would be restored in-kind. When the excavated area is in a developed street right-of-way, damaged or demolished street panels, curbs, sidewalks and traffic aprons would be restored. Parking strip vegetation and vegetation in other areas would also be restored. Pavement restoration within SPU rights-of-way may be completed by other agencies or businesses responsible for pavement restoration after the project is complete.

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 proposed work would be undertaken at six sites, five of which are in the City of Seattle and one of which is in the City of Renton:

- City of Renton (Site 47)
- City of Seattle (Sites 24, 30, 97, 98, and 99)

All sites are in City of Seattle street rights-of-way or SPU right-of-way.

Attachment A is a map of the greater Seattle area with the locations of the six sites proposed for cathodic protection system improvements. Attachment B includes more detailed maps of each of the six project sites.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site:

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

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

All project sites are in flat terrain.

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. Geologic mapping for Seattle and the surrounding region (Troost et al. 2005, available at http://pubs.usgs.gov/of/2005/1252/) indicate the project area is underlain by Vashon glacial till, advance outwash, and other glacial deposits. Advance outwash consists of - well-sorted sand and gravel that was transported by meltwater channels emanating from the toe of the advancing glacier and subsequently overridden by the glacier. Glacial till is a mix of poorly sorted silt, sand, and sub-rounded to well-rounded gravels and cobbles that are transported by the glacier and deposited under the ice resulting in a very dense to over consolidated deposit.

National Cooperative Soils Survey data published by the US Department of Agriculture National Resources Conservation Service (NRCS) indicate that native soils at the project sites predominantly consist of gravelly, sandy, and silt loams in the Alderwood, Kitsap, Barneston, Puget, Tokul, and Snohomish soil classification series (NRCS Web Soil Survey, found at https://websoilsurvey.sc.egov.usda.gov). However, urban development and buried utility construction at and near most of the project sites over the last 100 years have resulted in a predominance of disturbed native soils/sediments, cut slopes, and large placements of fill material.

Any disturbance of soils at these sites for project work would be associated with excavation required to accomplish the proposed cathodic protection system improvements and would be short-term. Excavations would be backfilled upon the completion of cathodic protection system work as part of site restoration. No project sites occur within agricultural land of commercial significance.

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

The sites are on flat terrain. None of the sites are in areas known to have indications or a history of unstable soils, as documented by King County iMap (http://gismaps.kingcounty.gov/iMap/), Washington Department of Natural Resources Geologic Information Portal (https://geologyportal.dnr.wa.gov/#natural_hazards), and the Seattle Department of Construction and Inspections GIS web map (https://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0cf908e2241e9c2).

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. There would be approximately 100 cubic yards of excavation and 3,500 square feet of affected area for all six sites. Fill materials may include native excavated material (if suitable), conductive coke breeze, sand, crushed rock, asphalt, and concrete. Excess unsuitable excavated materials would be exported from work sites and properly disposed at a location approved in advance by SPU.

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

Erosion and sedimentation could occur as a result of construction activities, although the risk is low because all project sites are flat; ground disturbance would be minimized; and temporary erosion and sediment control best management practices (BMP) 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)?

Existing paved and vegetated surfaces damaged or demolished by construction would be restored. The proposed work would not result in any increase in impervious surfaces.

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

BMPs consistent with the applicable local jurisdiction's stormwater management regulations and construction standard requirements would be used to manage construction disturbance and stormwater runoff, and minimize erosion and sedimentation. All project construction work would be performed in accordance with an approved temporary erosion and sedimentation control (TESC) plan. The placement and maintenance of site stormwater BMPs and TESC measures would be performed by, or under the supervision of, a Certified Erosion and Sedimentation Control Lead (CESCL), consistent with the project's storm water 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.

Emissions may occur from equipment at the site, such as vactor trucks, excavators, and dump trucks. Emissions would include carbon monoxide, reactive organic gases, and nitrogen oxide. Also, airborne dust particles may result from construction activities. Upon completion of construction activities, emissions related to the work would cease. Estimates of greenhouse gas emissions, presented as total metric tons of carbon dioxide (MTCO2e) are noted below. Refer to Attachment C for more detailed calculations.

Table 1. Summary of Greenhouse Gas (GHG) Emissions for Cathodic Protection Improvements Construction, Operation, and Maintenance

Activity/Emission Type	GHG Emissions (pounds of CO_2e)[1]	GHS Emissions (metric tons of CO_2e)[1]
Buildings	0	0
Paving	2,023,815	918
Construction Activities (Diesel)	112,466	51
Construction Activities (Gasoline)	39,852	18.1
Long-term Maintenance (Diesel)	5,310	2.4
Long-term Maintenance (Gasoline)	0	0
Total GHG Emissions	**2,181,443**	**989.5**

[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 that would affect the project 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.

Additionally, project construction would be accomplished using City vehicles and heavy equipment. These vehicles would be operated consistent with City of Seattle Mayor's Executive Order 2018-02 which directs all City departments, including SPU, to carry out specific activities to reduce vehicle emissions, including "right-sizing" vehicles in the City fleet to ensure the most efficient vehicles are used to perform City functions, incorporating use of electric and fossil-fuel free vehicles in project construction, and prohibiting the idling of City vehicles.

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.

None of the sites are in or near surface water bodies.

(**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.**

None of the proposed work would require work over, in, or adjacent to surface water bodies or wetlands.

(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 material would be placed in or removed from surface water or wetlands.

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

The proposed work would not require surface water withdrawals or diversions.

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

No project sites lie within a 100-year floodplain.

(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.

The project does not propose any discharges of waste materials to surface waters. However, several construction activities such as 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

Procedures to prevent and control pollutants, including hazardous materials such as hydrocarbons and pH-modifying substances, would be described in the spill prevention, control, and countermeasures (SPCC) plan to be prepared as part of the project's SWPPP and submitted to SPU for review and approval.

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 deep wells and trenches is necessary during construction, collected water would be managed according to the SPCC plan. Quantities of water potentially collected by dewatering are unknown. No other ground water withdrawals or discharge 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.

Areas of ground surface disturbed for project construction would be restored, and the project would not create any new impervious surfaces that would create stormwater runoff. During project construction, vegetation clearing and

ground disturbance activities could result in short-term, temporary changes to drainage patterns and an increased potential for sedimentation and erosion at the

project site. BMPs consistent with the applicable local jurisdiction's stormwater management regulations and construction standard requirements would be used to protect the existing stormwater drainage system, manage construction disturbance and stormwater runoff, and minimize erosion and sedimentation.

(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

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

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

The proposed work would not alter or otherwise affect drainage patterns.

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

Areas of ground disturbed for project construction would be restored, and the project would not create any new impervious surfaces that would create stormwater runoff. During project construction, vegetation clearing and ground disturbance activities could result in short-term, temporary changes to drainage patterns and an increased potential for sedimentation and erosion at the project site. BMPs consistent with the applicable local jurisdiction's stormwater management regulations and construction standard requirements would be used to protect the existing stormwater drainage system, manage construction disturbance and stormwater runoff, and minimize erosion and sedimentation. Placement and maintenance of site stormwater BMPs and TESC measures would be required to be performed by, or under the supervision of, a CESCL, consistent with the project's SWPPP.

4. Plants

a. Types of vegetation found on the site:

☒ Deciduous trees:	☒ Alder	☒ Maple	☐ Aspen	☒ Other: (various)
☒ Evergreen trees:	☒ Fir	☒ Cedar	☒ Pine	☒ Other: (various)
☒ 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: ornamental plantings				

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

All project sites are in developed street and utility rights-of-way consisting mostly of impervious surfaces that include features such as paved streets, paved shoulders, curbing, gutters, ditches, sidewalks, and driveway aprons. The remaining areas within street rights-of-way are predominantly vegetated with lawn, and ornamental landscape plantings. On some project sites, publicly and/or privately planted street trees are located sporadically in the right-of-way landscape.

Most of the proposed work in transportation and utility rights-of-way would affect paved surfaces outside of street tree canopy drip-lines. However, construction at some sites may remove planted grass and other ornamental vegetation, which would be restored upon completion of construction. The proposed work would limit plant removal, pruning, and other vegetation disturbance to the minimum required to accomplish project construction.

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

According to a review of the Washington Department of Natural Resources Natural Heritage Program's document called "Sections that Contain Natural Heritage Features, Current as of January 12, 2021" (available at www.dnr.wa.gov), there are no documented occurrences of sensitive, threatened, or endangered plant species at or near any of the project sites. All project sites have previously been intensively disturbed by development and redevelopment and have been extensively excavated, filled, paved, or occupied by street, utility, and other constructed features.

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 vegetation disturbance to the minimum required for project site construction. Construction limits would be clearly and physically delineated by protective construction fencing to prevent unauthorized trespass and collateral damage to nearby vegetation. Most of the proposed work in transportation rights-of-way would affect paved surfaces outside of

street tree canopy drip-lines. However, construction at some sites would remove planted grass and other ornamental vegetation, which would be restored upon completion of construction.

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

A review of information maintained by the King County Noxious Weed Program (available at King County iMap interactive online mapping program, http://gismaps.kingcounty.gov/iMap/) identified no further documented occurrences of noxious weeds on or near project sites.

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:

Birds: ☐ Hawk ☐ Heron ☐ Eagle ☒ Songbirds
☒ Other: Expected birds include those typical of urbanized portions of the greater Seattle area, including songbirds and crows.

Mammals: ☐ Deer ☐ Bear ☐ Elk ☐ Beaver
☒ Other: Expected mammals include those typical of urbanized portions of the greater Seattle area, including raccoons, squirrels, and rodents.

Fish: ☐ Bass ☐ Salmon ☐ Trout ☐ Herring
☐ Shellfish ☐ Other:

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

A review of the Washington State Department of Fish and Wildlife's Priority Habitats and Species on the Web online database visited on April 28, 2021 (available at http://apps.wdfw.wa.gov/phsontheweb/), found that no federal- and state-listed species are identified as having a documented occurrence, or a potential to occur, on or near the project sites.

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

The Seattle area 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, South America.

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

The proposed work would limit plant removal and other vegetation disturbance to the minimum required for construction. Construction limits would be clearly and physically delineated by protective construction fencing to prevent unauthorized trespass and collateral damage to nearby vegetation or environmentally sensitive habitats. All removed turf and planting strip vegetation would be restored. Project work would be performed in accordance with the applicable water quality regulations and construction BMPs established for the jurisdiction(s) in which the work is located.

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 the county (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.*

Small amounts of electrical energy from the existing regional grid would be used to meet the constructed project's energy needs for cathodic protection.

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

No. 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:

Project construction would be accomplished using City vehicles and heavy equipment. These vehicles would be operated consistent with City of Seattle Mayor's Executive Order 2018-02 which directs all City departments, including SPU, to carry out vehicle fuel consumption reduction activities, including "right-sizing" vehicles in the City fleet to ensure the most efficient vehicles are used to perform City functions and prohibiting the idling of City vehicles.

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 as a result of either 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.

None of the project sites are known to have environmental contamination. However, it is possible that contamination of soil or groundwater associated with past uses or activities on or near a site may be present.

(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 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 at the project sites during the operating life of the cathodic protection systems.

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

Possible fire or medic services could be required during proposed cathodic protection system expansion activities, as well as possibly during operation of the cathodic protection systems. However, the cathodic protection systems would not demand higher levels of special emergency services than already exist at the project sites.

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

During construction, the contractor would use standard operating procedures and BMPs identified in the City of Seattle's Stormwater Code and Manual (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. Construction work at project sites located outside the City of Seattle would implement construction pollution prevention and control BMPs consistent with local jurisdiction requirements. SPU work crews and/or contractors would be required to develop and implement a SPCC plan to control and manage spills during construction, as part of the project's SWPPP.

Soils discovered to be contaminated from previous land uses or affected 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 of Seattle staff.

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.

During construction, short-term noise would be generated at the project sites from construction equipment (for example truck traffic, backhoe, grader, etc.). Short-term noise impacts would end upon the completion of work at each site. The completed project would generate no additional noise from equipment used for operation or maintenance.

Noise-generating construction work would be limited to the allowable maximum levels provided by City code (SMC 25.08.425) for work within the City of Seattle, or the limits established in the local noise regulations established for sites located in other jurisdictions. In general, it is expected most noise-generating construction activities would occur between the hours of 7 a.m. and 6 p.m. on weekdays. However, on occasion, work at a project site may need to occur after hours or on weekends. In cases where project work is required outside of the hours allowed outright in local jurisdiction noise regulations, SPU would seek a noise variance or exemption consistent with the local jurisdiction noise regulations applicable for each project site.

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

Construction of the project would comply with the requirements of applicable noise control laws and regulations addressing maximum noise levels, and the days/hours during which noise-generating construction work is allowed, including the Washington State Noise Control Act of 1974 (70.107 RCW), the implementing Maximum Environmental Noise Level regulations adopted by the Washington State Department of Ecology (Chapter 173-60 WAC), City of Seattle Noise Control regulations (SMC Chapter 25.08), and/or other local jurisdiction noise ordinances and regulations as applicable for each project site.

In addition, SPU and its contractors are required to comply with the Washington Industrial Safety and Health Act of 1973 (Chapter 49.17 RCW) and implement Hearing Loss Prevention regulations adopted by the Washington Department of Labor and Industries (Chapter 296-817 WAC) to limit project construction worker noise exposure. Some actions taken to achieve this, while employed primarily to limit construction worker noise exposure, may also help reduce or mitigate overall noise levels emanating from the project sites, and may include such measures as pre-planning site work to minimize the magnitude and duration of on-site construction operations and to allow for selection of the quietest/smallest equipment able to do the job, installing noise mufflers on engines and high pressure air exhausts, utilizing temporary barriers and equipment covers, and ensuring construction equipment is

properly maintained by changing seals, lubricating machinery contact surfaces, and replacing worn parts.

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.

Current land use at the project sites is predominantly low-density single-family residential. The proposed work would be located in improved public transportation rights-of-way or SPU right-of-way. The proposed work could result in short-term, temporary street lane and sidewalk closures, and/or route detours for streets or sidewalks that would be experienced by individuals who live, work, or visit destinations on or near project sites.

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 sites have not recently been used as working farmlands or working forest lands. Therefore, no conversion of these land uses would occur.

(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 project sites do not have surrounding farm or forests lands.

c. Describe any structures on the site.

Project work would be located in improved public transportation rights-of-way or SPU right-of-way. There are no existing structures in areas directly affected by project construction. However, there are numerous structures located near the project sites.

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?

<u>City of Renton</u>
Site 47: Residential R-8

<u>City of Seattle</u>
Site 24: Residential Single Family (SF 5000)
Site 30: Residential Single Family (SF 5000) west of 18th Ave E and Low-rise Multifamily 1 east of 18th Ave E
Site 97: Residential Single Family (SF 5000)
Site 98: Residential Single Family (SF 5000)
Site 99: Residential Single Family (SF 5000)

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

City of Renton
Site #47: Residential Medium Density

City of Seattle
Site 24: Single Family Residential
Site 30: Single Family Residential and Urban Residential Village
Site 97: Single Family Residential
Site 98: Single Family Residential
Site 99: Single Family Residential

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

None of the project sites are located in Shoreline Master Program jurisdictions.

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

Noe of the project sites are located in an environmentally critical area.

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 not impact existing and projected land uses and plans. Street use and right-of-way permits would be obtained, as necessary.

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

No measures are proposed because there are no agricultural or forest lands of long-term commercial significance on or near the project sites.

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?

Most project work would occur at or below ground level. Proposed rectifiers are typically configured as two-foot wide by four-foot long by four-foot high electrical cabinets located above ground and mounted on concrete pads.

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:

Parking strip vegetation and vegetation in other areas would be restored.

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 contractor or SPU 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?

Sidewalks along all sites allow for informal recreation such as walking, jogging, and cycling. Roadways at all the sites allow for informal recreation such as biking. Site 24 is

more than 260 feet west of Lake View Cemetery. Site 30 is located more than 300 feet west of Pendleton Miller Playfield. Site 97 is more than 600 feet northeast of Interlaken Park.

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

The proposed work would not permanently displace any existing recreational uses. Project construction activities could result in short-term, temporary parking and access impacts, such as temporary street closures or detours affecting vehicle, bike and pedestrian routes/access. SPU would ensure that safe pedestrian and vehicle access is maintained at all times consistent with approved traffic control plans as part of the permitting processes.

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

For the recreational sites listed under section B.12.a. of this checklist, short-term, temporary parking and access impacts, such as temporary street closures or detours affecting vehicle, bike and pedestrian routes/access, may be necessary. SPU would coordinate all project work affecting recreational sites in advance with the local jurisdiction. SPU would attempt to make any necessary closures and detours as brief as possible. Notifications through advance placement of temporary 'no parking' signs would provide local residents with 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 numerous residential and other structures over 45 years old located near each project site, most of which have not been evaluated for cultural/historic significance. However, no buildings or structures would be disturbed by the project. Otherwise, no known cultural/historic resources are located on or near the project sites.

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 the information sources listed in section B.13.c of this checklist, there are no additional archaeological or cultural resources beyond those listed in section B.13.a that have been documented to exist on or near the project sites.

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 any project sites are located on or near properties listed, or documented to be eligible for listing, on federal, state, or local cultural/historical registers, the project sites were checked against the following registers on April 28, 2021:

- Washington Information System for Architectural & Archaeological Research Data (WISAARD) maintained by the Washington State Department of Archaeology and Historic Preservation (https://wisaard.dahp.wa.gov/)
- King County and City Landmarks List maintained by the King County Historic Preservation Program, (https://www.kingcounty.gov/~/media/services/home-property/historic-preservation/documents/resources/T06_KCLandmarkList.ashx?la=en)
- Landmark List, and Map of Designated Landmarks, maintained by the City of Seattle, Department of Neighborhoods, accessed April 28, 2021 (http://www.seattle.gov/neighborhoods/programs-and-services/historic-preservation/landmarks/landmarks-map)

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. The proposed work is typically located in areas that have been previously disturbed to construct the existing water mains and other unrelated developments along utility or public rights-of-way. This reduces the chance of encountering contextually significant archaeological materials. Work would be conducted using a Monitoring and Inadvertent Discovery Plan for cultural resources. Work crews would be trained to recognize archaeological materials should they be discovered. Should evidence of either historic or prehistoric cultural artifacts or human remains 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.

See Attachment B for information regarding the public streets and highways serving or adjacent to the project sites.

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 project site are served by multiple public transit agencies/services, including King County Metro bus service and Sound Transit bus service. Availability and level of service near project sites varies by site.

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

The completed project would neither create nor eliminate any parking spaces, although there may be temporary parking closures. The specific timing and duration of parking closures are not known at this time, but such closures would comply with relevant policies and requirements administered by the respective agencies with local jurisdiction.

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 proposed work would restore all demolished and damaged street panels, curbs, and traffic aprons. Pavement restoration within SPU right-of-way may be completed by other agencies or businesses responsible for pavement restoration after the project is complete. Parking strip vegetation would also be restored. 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 project does not use, or occur in the immediate vicinity of, 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?

Construction of the proposed work would generate an estimated 775 round trips. Maintenance of the completed project would require two vehicle round trips annually over the works serviceable lifespan of 25 years.

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 is not expected to 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:

Standard construction signs and flagging would be used to ensure worksite safety and reduce any temporary transportation impacts. Access for emergency-response vehicles would be maintained at all times. Project work at each site would comply with the applicable construction traffic management requirements administered by the respective agencies with local jurisdiction.

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:

☐ None
☒ Electricity ☒ Natural gas ☒ Water ☒ Refuse service
☒ Telephone ☒ Sanitary sewer ☒ Septic system
☐ Other
The proposed project would provide corrosion protection for SPU's water transmission pipelines.

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.

☒ **None**

The proposed cathodic protection system improvements are anticipated to enhance the life and serviceability of critical drinking water transmission mains and would be owned, operated, and maintained by SPU. During construction, this proposed work is not expected to interrupt, relocate, or reconstruct other utilities. 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 and recycling containers in front of an adjacent neighbor's house on garbage pick-up days. No other interruptions to regular utility services are expected during construction.

C. SIGNATURE

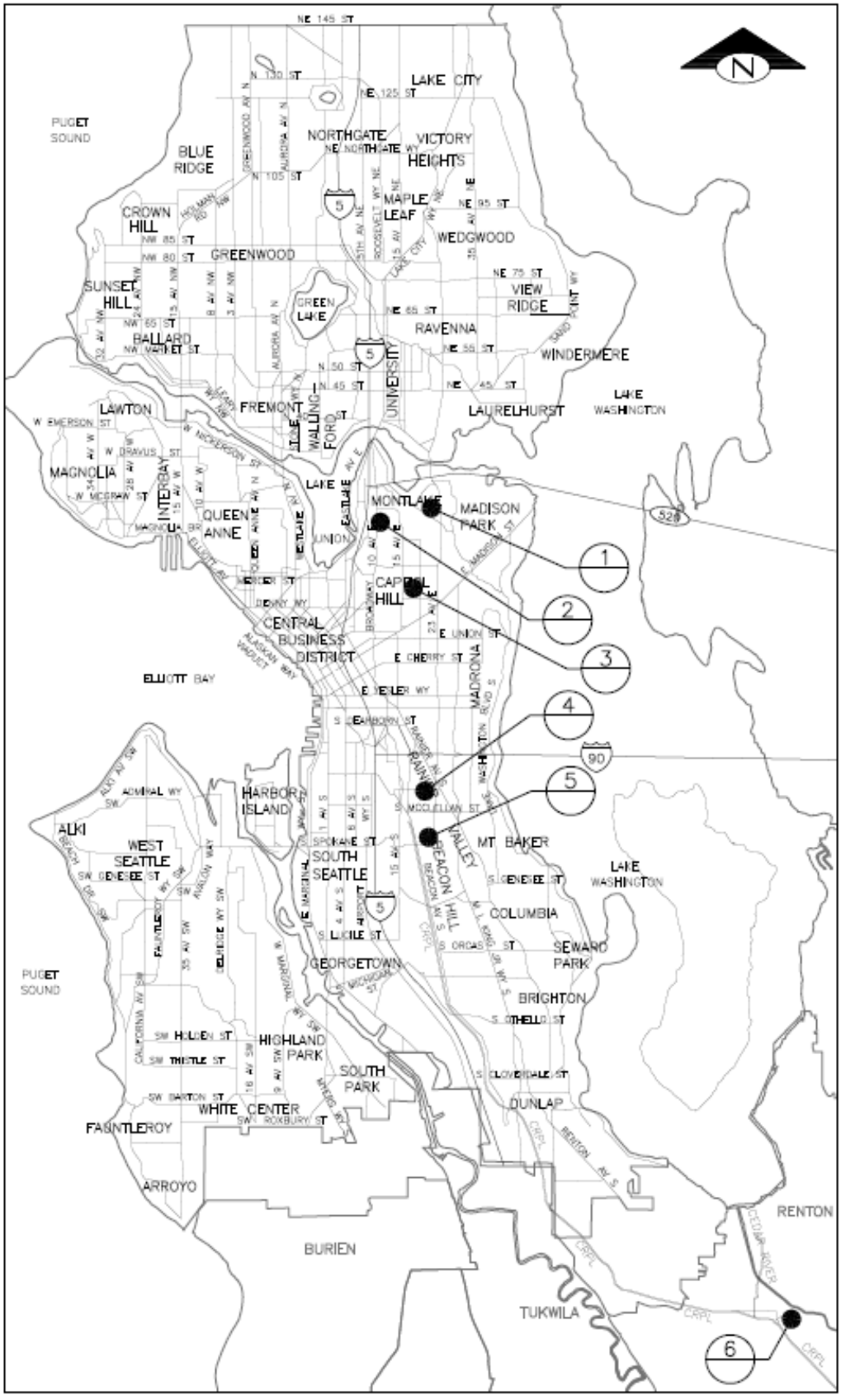
The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Josh Campbell Digitally signed by Josh Campbell Date: 2021.06.22 11:16:27 -07'00'

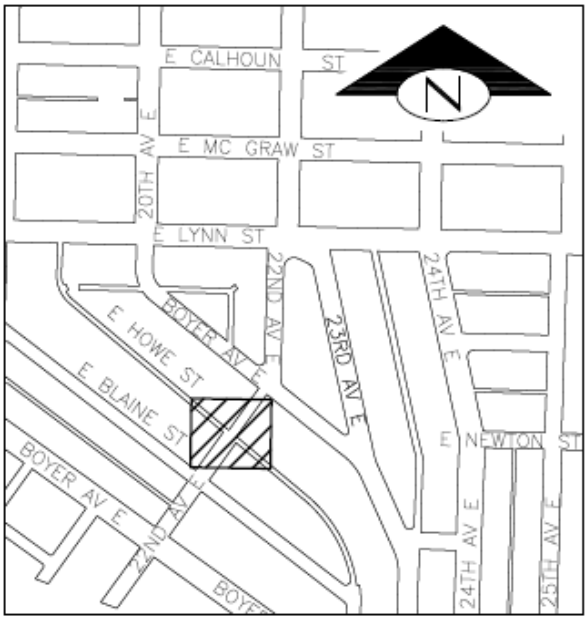
Josh Campbell
Project Manager

Attachment A – Vicinity Map (map of greater Seattle area showing project sites)
Attachment B – Project Sites (includes individual project site maps)
Attachment C – Greenhouse Gas Emissions Worksheet

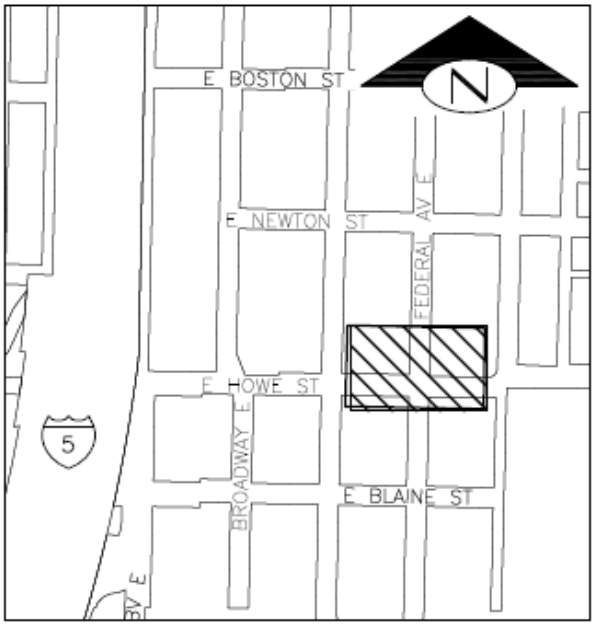
Attachment A – Vicinity Map. The Numbers refer to Cathodic Protection Sites in Attachment B.



Attachment B: Project Sites



CITY OF SEATTLE
CP SITE 97 1



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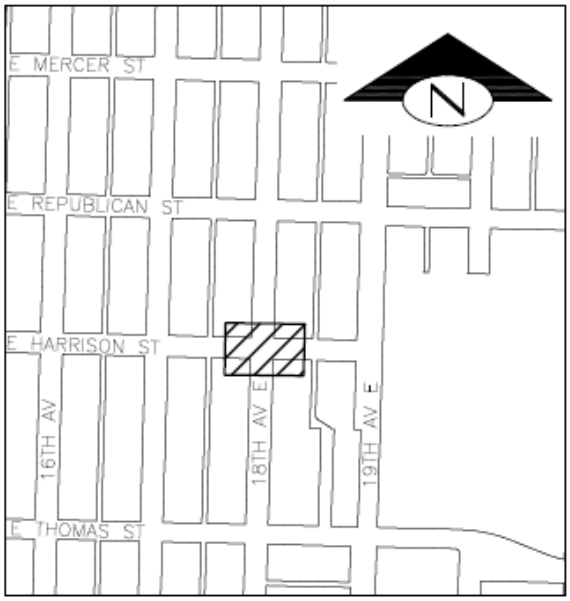

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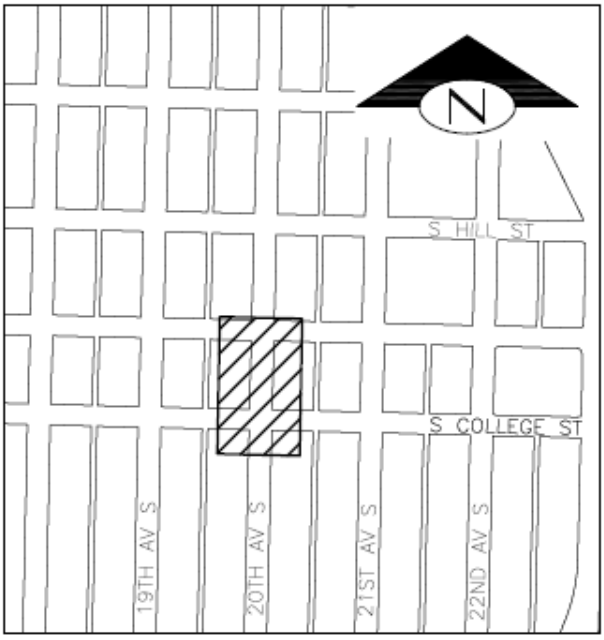

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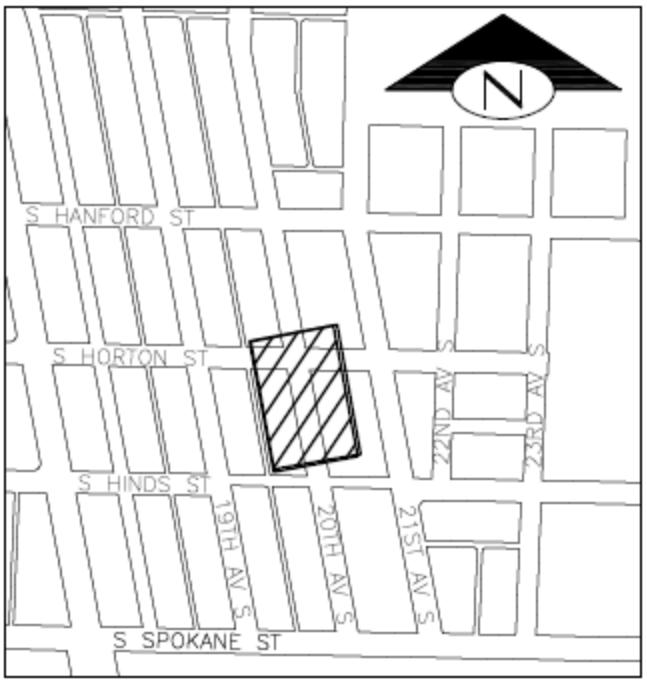

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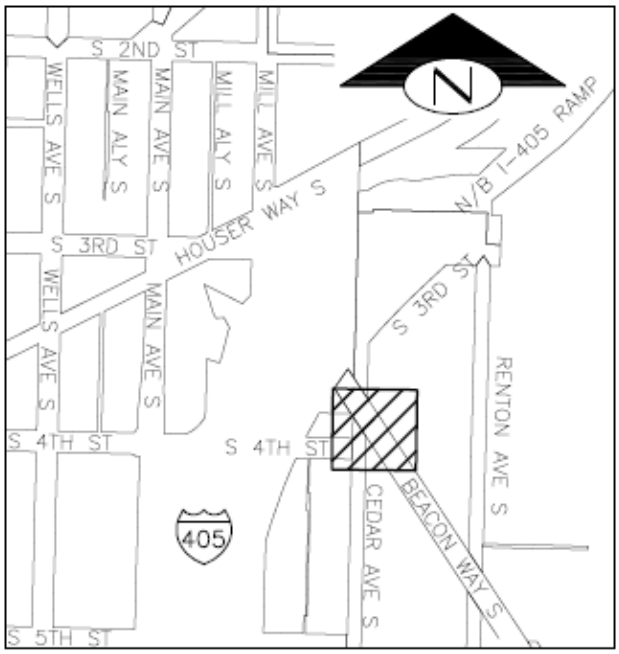

CITY OF RENTON
CP SITE 47 6

Attachment C – Greenhouse Gas Emissions Worksheet

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions Per Unit or Per Thousand Square Feet ($MTCO_2e$) 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, panels, asphalt patch)		17.66				883
Concrete Pad (50 $MTCO_2e$/1,000 sq. ft. of pavement at a depth of 6 inches)		0.7				35
					TOTAL Section II Pavement	**918**

Section III: Construction

	Emissions ($MTCO_2e$)
(See detailed calculations below)	
TOTAL Section III Construction	**69.1**

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 ($MTCO_2e$)	**989.5**

Attachment C – Greenhouse Gas Emissions Worksheet (continued)

Section III Construction Details		
Construction: Diesel		
Equipment	**Diesel (gallons)**	**Assumptions**
Front end loader	3,010	430 hours x 7 gallons/hour (345 hp engine)
Vibratory / Static Roller	32	40 hours x 0.8 gallons/hour (185 hp engine)
Asphalt paver	450	100 hours x 4.5 gallons/hour (80 hp engine)
Asphalt truck (8 cubic yard/load)	80	10 round trips x 40 miles/round trip ÷ 5 mpg
One flatbed truck	300	20 round trips x 75 miles/round trip ÷ 5 mpg
One dump truck (prob. no pups due to limited work area) (10 cubic yard/load and backhauling)	300	25 round trips x 60 miles/round trip ÷ 5 mpg
Street sweeper	64	80 hours x 0.8 gallons/hour (185 hp engine)
Subtotal Diesel Gallons	4,236	
GHG Emissions in lbs CO_2e	112,466	26.55 lbs CO_2e per gallon of diesel
GHG Emissions in metric tons CO_2e	51	1,000 lbs = 0.45359237 metric tons

Construction: Gasoline		
Equipment	**Gasoline (gallons)**	**Assumptions**
Pick-up trucks or crew vans	1,400	70 working days x 10 trucks x 1 round-trip/day x 40 miles/round-trip ÷ 20 mpg
Misc. hand equipment	240	40 working days x 10 hours x 2 pieces of equipment x 0.3 gal/hour
Subtotal Gasoline Gallons	1,640	
GHG Emissions in lbs CO_2e	39,852	24.3 lbs CO_2e per gallon of gasoline
GHG Emissions in metric tons CO_2e	18.1	1,000 lbs = 0.45359237 metric tons

Construction Summary		
Activity	**CO_2e in pounds**	**CO_2e in metric tons**
Diesel	112,466	51
Gasoline	39,852	18.1
Total for Construction	152,318	**69.1**

Section IV Long-Term Operations and Maintenance Details		
Operations and Maintenance: Diesel		
Equipment	**Diesel (gallons)**	**Assumptions**
Maintenance Operation (truck)	200	50 events (twice annually for 25 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 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