
**SEATTLE PUBLIC UTILITIES
SEPA ENVIRONMENTAL CHECKLIST**

This SEPA environmental review of Seattle Public Utilities' Sewer Lining Contract 21-2 project (C600687) 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:

Sewer Lining Contract 21-2 Project

2. Name of applicant:

Seattle Public Utilities (SPU)

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

Arnel Valmonte, Project Manager
Seattle Public Utilities
P.O. Box 34018
Seattle, WA 98124-4018
206-305-1793; arnel.valmonte@seattle.gov

4. Date checklist prepared:

May 12, 2022

5. Agency requesting checklist:

Seattle Public Utilities (SPU)

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

Work at the 2 sites (4 pipe segments) is scheduled to start in September 2023. Duration of work at each site is expected to be:

- Segment 13C: 3 days
- Segment 13D: 3 days
- Segment 58A: 2 days
- Segment 58B: 1 day

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

The proposed project would repair existing sanitary sewer, combined sewer, and stormwater drain system pipes using cured-in-place pipe (CIPP) installation on 116 pipe segments in the City of Seattle (SPU project #C600687). Existing pipes range from 8 inches to 24 inches in diameter, with the majority ranging from 8 inches to 12 inches in diameter. For efficiency and due to the repetitive nature of the work across the 116 pipe segments, SPU is bundling the

work into a single public works construction contract and is now conducting this SEPA review on the 4 pipe segments exceeding 12 inches in diameter. If SPU identifies other large-diameter sewer pipes in need of repair using CIPP, SPU would conduct additional SEPA review prior to undertaking that additional work. SPU has determined the 112 sites with pipes 12 inches or less in diameter are exempt from the threshold determination requirements of SEPA as per SMC 25.05.800.X (Utilities).

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 or will be prepared directly related to this proposal.

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 facilities covered by this proposal.

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

All or some of the following permits or approvals would be required:

- Implementation of the proposed work at the 4 sites would require Seattle Department of Transportation (SDOT) Utility Minor Permit and SDOT Street Use Permits
- ECA Exemption (SPU)

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 uses its Sewer Lining Program to resolve small wastewater, and sometimes stormwater, conveyance problems throughout the City of Seattle relatively quickly and with minimal impacts. The Program rehabilitates deteriorated sewer pipes and associated structures located in City-owned street rights-of-way (ROW) or in City easements on private property. Rehabilitation is achieved through installation of CIPP liners in existing sewer and stormwater pipes. Work typically includes traffic control and permitting, public outreach, coordination with other utilities, bypass pumping, pre-installation pipe cleaning and inspection using closed circuit television (CCTV), debris removal, obstruction removal, CIPP installation, reinstatement of active laterals, post-installation CCTV inspection, and restoration of undeveloped areas to pre-construction conditions.

CIPP is a trenchless rehabilitation method that installs a jointless, seamless, pipe-within-a-pipe to repair or rehabilitate existing pipelines. The process involves pulling a felt and resin pipe liner into the pipe to be rehabilitated. Both ends of the liner are then sealed with protective end caps and air pressure is introduced, forcing the liner to expand into place.

The liner is cured using ultraviolet light. In this method, an ultraviolet light train is inserted into the liner. Cameras on the train allow for viewing of the alignment and fit. When proper

placement is confirmed, the ultraviolet light train is activated and drawn through the pipe at a controlled, pre-determined speed of up to six feet per minute. When the CIPP process is complete, lateral pipe connections can be reinstated using a remote-controlled cutting unit or via worker entry into larger diameter pipes.

Generally, CIPP lining is a no-dig operation requiring no excavation. However, minor vegetation removal and excavation may be required to locate and access maintenance holes (MH) and to stage equipment. Where sites are partially in or adjacent to an Environmentally Critical Area (ECA), including wetlands, watercourses, or shorelines, staging would be located as far from the ECA as possible to avoid vegetation impacts and ground disturbance within the ECA or its buffer.

The proposed project includes rehabilitation using CIPP at 116 sites in the City of Seattle. Existing pipes ranges from 8 inches to 24 inches in diameter, with the majority ranging from 8 inches to 12 inches. Each site includes pipe segments of mainline sanitary sewer, combined sewer, or storm drain. For each mainline segment, a CIPP liner would be installed along the entire segment between upstream and downstream MHs. Existing MHs would be used for access during CIPP installation and associated work. No MHs would be altered or replaced as part of this work. This SEPA checklist applies only to the 4 pipe segments (2 sites) exceeding 12 inches in diameter. A summary of each site is provided below.

Site 13:

- Segment C: Install CIPP liner in mainline combined sewer between MHs 015-149 and 015-148. Subject pipe is a 297-foot segment of 15 inch diameter reinforced concrete pipe (RCP) located below the travel lanes of NE 55th St between 30th Ave NE and 31st Ave NE.
- Segment D: Install CIPP liner in mainline combined sewer between MHs 015-148 and 015-126. Subject pipe is a 295 foot segment of 15 inch diameter RCP below the travel lanes of NE 55th St between 29th Ave NE and 30th Ave NE.

Site 58:

- Segment A: Install CIPP liner in mainline sanitary sewer between MHs 225-253 and 225-252. Subject pipe is a 130 foot segment of 24 inch diameter RCP below the travel lanes of Midvale Ave N and the sidewalk on N 107th St between an alley near Aurora Ave N and Midvale Ave N.
- Segment B: Install CIPP liner in mainline sanitary sewer between MHs 225-252 and 225-251. Subject pipe is a 35-foot segment of 24 inch diameter RCP below the sidewalk and into the travel lanes near the entrance to the alley near Aurora Ave N.

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.

A vicinity map depicting the general location of the project sites is included as Attachment A. Attachment B lists the physical address for the general vicinity of each site and provides the nearest upstream and downstream MH numbers. All project sites are in the City of Seattle and in street rights-of-way.

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)?

The surface slope at site 13 is 10% and the surface slope at site 58 is 3%.

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 sites are underlain primarily by Vashon till and recessional outwash deposits. 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. Recessional outwash consists of well sorted sand and gravel that was transported by glacial meltwater as the glacier receded. However, urban development in this part of the City over the last 100 years has resulted in a predominance of disturbed native soils/sediments, cut slopes, and placements of fill material throughout the project site and immediately surrounding area. Surficial soils consist of placements of fill material. No soils are expected to be removed as part of the project.

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

The Seattle Department of Construction and Inspections (SDCI) GIS map (<https://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0cf908e2241e9c2>) indicates:

- Site 13D is near Steep Slope/Buffer area (ECA1), but the work zone is outside the ECA and the buffer of 15 feet.

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.

Excavation, fill, or grading associated with the proposed work is not planned as all MHs to be used for this work are flush with the existing paved surface.

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

All 4 pipe segments are in existing impervious (paved) areas with minimal potential for erosion. Ground disturbance and vegetation trimming would be limited to that required for construction staging and access. Such areas would be situated in existing paved areas wherever possible. Erosion and sedimentation could occur as a result of project construction, although this risk is low because the project sites are paved, flat or relatively flat, and temporary erosion and sediment control BMPs would be deployed, inspected, and maintained as needed. Disturbed areas would be restored to their near-original conditions. Damaged and demolished pavements would be restored as required by SDOT.

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

All 4 pipe segments are in existing impervious (paved) areas. Existing paved surfaces damaged by construction would be repaired as required by SDOT. The proposed work would neither increase nor decrease 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 shorelines, watercourses, or wetlands and best management practices (BMPs) would be used to protect the existing stormwater drainage systems and to minimize erosion and sedimentation. A temporary erosion and sedimentation control plan would be prepared and implemented. BMPs as identified in the City of Seattle's Stormwater Code SMC Title 22, Subtitle VIII, relevant City of Seattle Director's Rules, and Volume 2 Construction Stormwater Control Manual would be used to manage stormwater runoff, construction disturbance, and erosion during construction.

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.

During construction, emissions would occur from vehicles and mobile and stationary equipment that combust gasoline and diesel fuels, such as crew vehicles, trucks, and construction equipment. Those emissions would include oxides of nitrogen, carbon monoxide, particulate matter and smoke, uncombusted hydrocarbons, hydrogen sulfide,

carbon dioxide, and water vapor. Emissions during construction could also include fugitive dust.

In certain CIPP applications, installation generates fumes from curing of resin (mainly styrene, but possibly including very minor amounts of acetone, benzene, chloroform, isopropylbenzene, methylene chloride, methyl ethyl ketone, N-propylbenzene, 1,2,4-trimethylbenzene [TMB], 1,3,5-TMB), and other substances (see Section B7, Environmental Health).

This proposal would generate greenhouse gas (GHG) emissions through construction activity only. Total GHG emissions for the project are estimated to be about 3 metric tons of carbon dioxide emission (MTCO₂e). GHG emission calculations are shown in Attachment C and summarized in the table below. One metric ton is equal to 2,205 pounds. Though not calculated, SPU anticipates the CIPP method would emit fewer GHGs compared to traditional open cut and backfill pipe replacement methods.

This project would generate GHG emissions during the maximum estimated 9 working day construction period through the operation of diesel- and gasoline-powered equipment and to transport materials, equipment, and workers to and from the project sites. Because project construction methods were not completely known at the time this checklist was prepared, the estimates provided here are based on daily vehicle operation times for the maximum estimated project duration (9 working days); actual times may be less. Estimates are also based on typical transportation and construction equipment used for this type of work.

Embodied energy and associated GHG emissions in materials used in this project have not been estimated as part of this SEPA environmental review due to the difficulty and inaccuracy of calculating such estimates.

During project operation, the project is not expected to result in increased GHG emissions as compared with pre-project levels, as the pipes rehabilitated using CIPP installation are not expected to require maintenance for approximately 50 years.

Table 1. Summary of Greenhouse Gas (GHG) Emissions

Activity/Emission Type	GHG Emissions (pounds of CO ₂ e) ¹	GHS Emissions (metric tons of CO ₂ e) ¹
Buildings	0	0
Paving	0	0
Construction Activities (Diesel)	3,823.2	1.7
Construction Activities (Gasoline)	2,624.4	1.2
Long-term Operation/ Maintenance (Diesel)	0	0
Long-term Operation/Maintenance (Gasoline)	0	0
Total GHG Emissions	6,447.6	2.9

¹Note: 1 metric ton = 2,204.6 pounds of CO₂e. 1,000 pounds = 0.45 metric tons of CO₂e

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

There are no off-site sources of emissions or odors that would affect this proposal.

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 standard federal, state, and local emission control criteria and City of Seattle construction practices. These would include requiring contractors to use best available control technologies, ensure proper vehicle maintenance, and minimize 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.**

None of the 4 pipe segments is 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.**

None of the 4 pipe segments are in 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.**

No, the project proposes to discharge to the sanitary sewer and does not propose any discharges of waste materials to surface waters.

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.

- (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 to 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.

No site disturbance is anticipated. The completed project would not alter existing stormwater drainage patterns.

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

There would be no waste materials from the project that could enter surface or ground waters.

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

No site disturbance is anticipated. 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:

The project would not create any new impervious surfaces that would create stormwater runoff. No adverse impacts to surface, ground, or runoff water are anticipated. Best management practices, as identified in the applicable BMPs identified in the City of Seattle’s Stormwater Code SMC Title 22, Subtitle VIII, relevant City of Seattle Director’s Rules, and Volume 2 Construction Stormwater Control Manual, would be used as needed to control erosion and sediment transport from and to the project site during construction.

4. Plants

a. Types of vegetation found on the site:

<input checked="" type="checkbox"/> Deciduous trees:	<input type="checkbox"/> Alder	<input type="checkbox"/> Maple	<input type="checkbox"/> Aspen	<input type="checkbox"/> Other: Japanese zelkova
<input checked="" type="checkbox"/> Evergreen trees:	<input type="checkbox"/> Fir	<input type="checkbox"/> Cedar	<input type="checkbox"/> Pine	<input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Shrubs				
<input checked="" type="checkbox"/> Grass				
<input type="checkbox"/> Pasture				

<input type="checkbox"/>	Crop or grain				
<input type="checkbox"/>	Orchards, vineyards, or other permanent crops				
<input checked="" type="checkbox"/>	Wet soil plants:	<input type="checkbox"/> Cattail	<input checked="" type="checkbox"/> Buttercup	<input type="checkbox"/> Bulrush	<input type="checkbox"/> Skunk cabbage
<input type="checkbox"/>	Other:				
<input type="checkbox"/>	Water plants:	<input type="checkbox"/> water lily	<input type="checkbox"/> eelgrass	<input type="checkbox"/> milfoil	<input type="checkbox"/> Other:
<input type="checkbox"/>	Other types of vegetation:				

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

All 4 pipe segments are in paved street rights-of-way, including sidewalks. Work at these sites would not alter or remove vegetation. Vegetation damaged by construction, staging, or access would be restored to pre-project conditions.

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 (WDNR) Natural Heritage Program’s document called “Sections that Contain Natural Heritage Features, Current as of July 15, 2021” (accessed at www.dnr.wa.gov), there are no documented occurrences of sensitive, threatened, or endangered plant species in or near the work sites. No federally listed endangered or threatened plant species or State-listed sensitive plant species are known to occur within the municipal limits of the City of Seattle.

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. The proposed work is in transportation rights-of-ways and would affect paved surfaces outside of street tree canopy drip-lines.

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

All 4 pipe segments are in unvegetated paved street rights-of-way, including sidewalks. The King County Noxious Weed Program (available at King County iMap interactive online mapping program, <http://gismaps.kingcounty.gov/iMap/>) identifies no noxious weeds at or near any of the 4 pipe segments.

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:	<input checked="" type="checkbox"/> Hawk	<input checked="" type="checkbox"/> Heron	<input checked="" type="checkbox"/> Eagle	<input checked="" type="checkbox"/> Songbirds
<input checked="" type="checkbox"/> Other:	crow, pigeon, gull			
Mammals:	<input type="checkbox"/> Deer	<input type="checkbox"/> Bear	<input type="checkbox"/> Elk	<input type="checkbox"/> Beaver
<input checked="" type="checkbox"/> Other:	possum, raccoon, squirrel			
Fish:	<input type="checkbox"/> Bass	<input type="checkbox"/> Salmon	<input type="checkbox"/> Trout	<input type="checkbox"/> Herring
<input type="checkbox"/> Shellfish	<input type="checkbox"/> Other:			

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

A check of the Washington Department of Fish and Wildlife's "Priority Habitat Species on the Web" database on March 23, 2022, identifies Site 58 (both pipe segments) as being within an occurrence polygon for the State-listed Sensitive species, little brown bat (*Myotis lucifugus*).

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

The Seattle area is in 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. Project work would be performed in accordance with applicable City of Seattle water quality regulations and construction BMPs.

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.

No energy would be required to meet the constructed project's energy needs, beyond the energy already utilized for the existing sewer and storm systems. The completed project would not require energy.

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, mainly to support vehicle and construction equipment, include gasoline and diesel fuels, hydraulic fluids, oils, lubricants, but also may include 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. If disturbed, contaminated substances could expose construction workers and potentially other individuals in the vicinity through blowing dust, stormwater runoff, or vapors.

CIPPs are manufactured using either thermal curing (hot water or steam) or photo curing [ultraviolet (UV) light] methods. The proposed CIPP work at all sites would use UV light to cure the resin. The photo curing installation process uses liners impregnated with a mixture of unsaturated polyester resins and other compounds that cures upon exposure to UV light. Once the liner has been exposed to UV light, the liner hardens inside the existing deteriorated pipe to create a new pipe-within-a-pipe.

Because UV curing CIPP technology is relatively new, limited research has been conducted regarding its potential chemical emissions into the air or water during installation or released into water after installation. Because chemical emissions resulting from use of this technology are poorly known, environmental effects related to Environmental Health are difficult to evaluate. However, concerns regarding chemical emissions into the environment by both thermal and UV curing CIPP technologies have been identified as possible or confirmed worker safety, public safety, and environmental issues. For UV-cured CIPP installations, a variety of organic compounds such as carcinogens, endocrine-disrupting compounds, and hazardous air pollutants have been found, including phenol, styrene, dibutyl phthalate, and possibly ozone.

Except for styrene, the total maximum exposures for these and other hazardous or potentially hazardous compounds released into the environment by the proposed work are unknown and have not been evaluated for purposes of this SEPA environmental review. For styrene, photo-curing methods are generally acknowledged to result in lower styrene emissions than thermal curing methods. Styrene has been determined by the federal government to be “a reasonably anticipated carcinogen.” Though SPU anticipates that total maximum exposures resulting from the UV-curing process would be on the order of a few ppm at each site, at most, during a period of several hours. This exposure is well below the Occupational Safety and Health Administration’s (OSHA) established regulatory styrene exposure limit (Permissible Exposure Limit [PEL]) of 100 ppm for healthy adult workers in the workplace (8 hours per day, 5 days per week). OSHA’s air regulatory exposure limit for styrene is not protective of infants, children, or immuno-compromised individuals who would be more susceptible to chemical toxicity. Based on risk assessments by the United States and the Netherlands, the International Toxicity Estimates for Risk (ITER) values for styrene for these susceptible populations range from 20 to 25 ppm.

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

No contamination of soil or groundwater has been identified. The project does not involve excavation.

(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.

Chemicals and pollutants that may be present during construction include:

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

No toxic or hazardous chemicals would be stored, used, or produced at any time.

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

No special emergency services such as confined space rescue 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 Spill Plan 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 Title 22, Subtitle VIII, relevant City of Seattle Director's Rules, and Volume 2 Construction Stormwater Control Manual to reduce or control any possible environmental health hazards. In addition, a spill response kit will be maintained at each site during construction work at that site, and all project site workers would be trained in spill prevention and containment consistent with the City of Seattle's Standard Specifications for Road, Bridge, and Municipal Construction.

Additionally, workers would be required to follow State of Washington safety standards for entry and work in confined spaces (WAC Chapter 296-809), which includes requirements for atmospheric testing in a confined space structure prior to entry and work in the structure. SPU workers operating and maintaining the

completed project would be required to follow requirements of SPU's Confined Space Safety Program, which implements requirements of WAC Chapter 296-809.

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 near 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 7 p.m. weekdays, and 9 a.m. and 7 p.m. weekends and legal holidays. SPU expects construction would require 9 working days. Any expected construction outside of these noise windows, the construction contractor will be required to apply for noise and work variances through the City of Seattle.

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

Construction of the project would comply with 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 (70A.20 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 applicable noise ordinances and regulations.

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 construction worker noise exposure. Actions taken to achieve this, while used primarily to limit construction worker noise exposure, may also help reduce or mitigate overall noise levels emanating from the project sites and may include pre-planning site work to minimize magnitude and duration of on-site construction operations; selecting the quietest/smallest equipment able to do the job; installing noise mufflers on engines and high pressure air exhausts; using 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 project sites are predominantly large, multifamily residential buildings and businesses. The proposed work would be in improved public transportation rights-of-ways. Proposed work could result in short-term, temporary street/bike 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 the project.

- 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 non-forest use?**

None of the 4 pipe segments are in areas that have recently been used as working farmlands or forest lands. The project would not result in any land use conversion.

- (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 any of the project sites.

- c. Describe any structures on the site.**

The project involves existing, buried sewer and stormwater infrastructure and other utilities in improved street rights-of-way and utility easements. Other structures in the vicinity of project sites include street signs and utility poles, residential/business structures, and fences, and are not associated with the project.

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

The project would not demolish above-ground structures.

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

Site 13:

- Pipe segment C is Multi-Family LR1 (Residential, Multi-family, Lowrise 1)
- Pipe segment D is Commercial/Mixed Use NC2 NC2P-55 (Neighborhood Commercial 2 and Pedestrian-Designated Zones)

Site 58:

- Pipe segments A and B are Commercial/Mixed Use NC2 NC2-55 (Neighborhood Commercial)

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

Site 13: Mixed-Use residential and commercial and multifamily residential
Site 58: Mixed-Use residential and commercial

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

None of the 4 pipe segments are in a Shoreline Management District.

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

The Seattle Department of Construction and Inspections (SDCI) GIS map (<https://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0cf908e2241e9c2>) indicates:

- Site 13D is near Steep Slope/Buffer area (ECA1), but the work zone is outside the ECA and the typical buffer of 15 feet.
- Site 58 is in a Flood Prone Area (ECA6).

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. No measures are required to ensure the proposal is 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. No measures are required to reduce or control impacts to 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 structures are buried. Above-ground structures would not be modified or constructed.

- 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 completed 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 the contractor elects to work after-dark, portable lighting would be adjusted as feasible to minimize glare. A lighting plan will be at the discretion and approval of SDOT Inspectors.

12. Recreation

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

Sidewalks in the project locations allow for informal recreation such as walking, jogging, and cycling. Roadways affected by the proposed work allow for recreational activity such as walking, jogging, and cycling.

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

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

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

The project may have short-term, temporary impacts to parking, vehicle access, and recreational activity due to temporary travel lane and/or street closures or detours. Project notifications through website updates, emails, and mailings would provide affected residents with advance notice regarding temporary 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.

No buildings or structures would be disturbed by the project. The project was checked against the registers listed in Item B.13.c below. None of these registers recorded any places or objects listed on, or proposed for, national, state, or local preservation registers located on or adjacent to the project.

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 Item B.13.c below, there are no such cultural resources at or near the project site. The Washington State Department of Archaeology and Historic Preservation's Landscape Predictive Model indicates the project is in an area of Moderate and High Risk for discovery of cultural resources.

- 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 the project is on or near properties listed, or documented to be eligible for listing, on federal, state, or local cultural/historical registers, the project location was checked against these registers on February 18, 2022:

- 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 (<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 and involve no ground-disturbing activity. Only portions of SPU's existing sewer and stormwater systems would be affected. None of those objects are considered historically or culturally important. Additionally, the proposed work is located on previously disturbed and filled upland areas. The project's location on previously disturbed and filled ground and avoidance of ground-disturbing activity eliminate any likelihood of encountering contextually significant archaeological materials.

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.**

All 4 pipe segments are in existing public street rights-of-way. Staging areas would be within 200 feet of each MH on existing street ROW or utility easements where possible. Street closures and traffic control would be required for access to MHs located in the street ROW.

- 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 require nor affect public transit.

- c. How many additional parking spaces would the completed project or non-project 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 SDOT.

- 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).**

No streetscape work is planned because no site disturbance is anticipated.

- 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 non-passenger vehicles). What data or transportation models were used to make these estimates?**

Construction at both sites (4 pipe segments) would require approximately 50 round trips. Most of those trips would occur during business hours (between 7 a.m. and 6 p.m.) on weekdays (Mondays through Fridays). The completed project would not require additional maintenance and inspections trips beyond those which currently occur.

- 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 both sites would comply with applicable construction traffic management requirements administered by SDOT.

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:

- | | | | |
|--|--|---|--|
| <input type="checkbox"/> None | | | |
| <input checked="" type="checkbox"/> Electricity | <input checked="" type="checkbox"/> Natural gas | <input checked="" type="checkbox"/> Water | <input checked="" type="checkbox"/> Refuse service |
| <input checked="" type="checkbox"/> Telephone | <input checked="" type="checkbox"/> Sanitary sewer | <input type="checkbox"/> Septic system | |
| <input checked="" type="checkbox"/> Other: cable, fiber optics | | | |

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.

During CIPP installation to the sanitary and combined sewer pipes, sewer service would be interrupted for brief periods to install and then disconnect a bypass around the affected feeder main. SPU would notify affected residents and businesses by issuing Service Disruption Notices (in the form of door hangers) at least 48 hours before those outages occur. No new utilities are being proposed. No interruptions of other utilities or services are anticipated during construction.

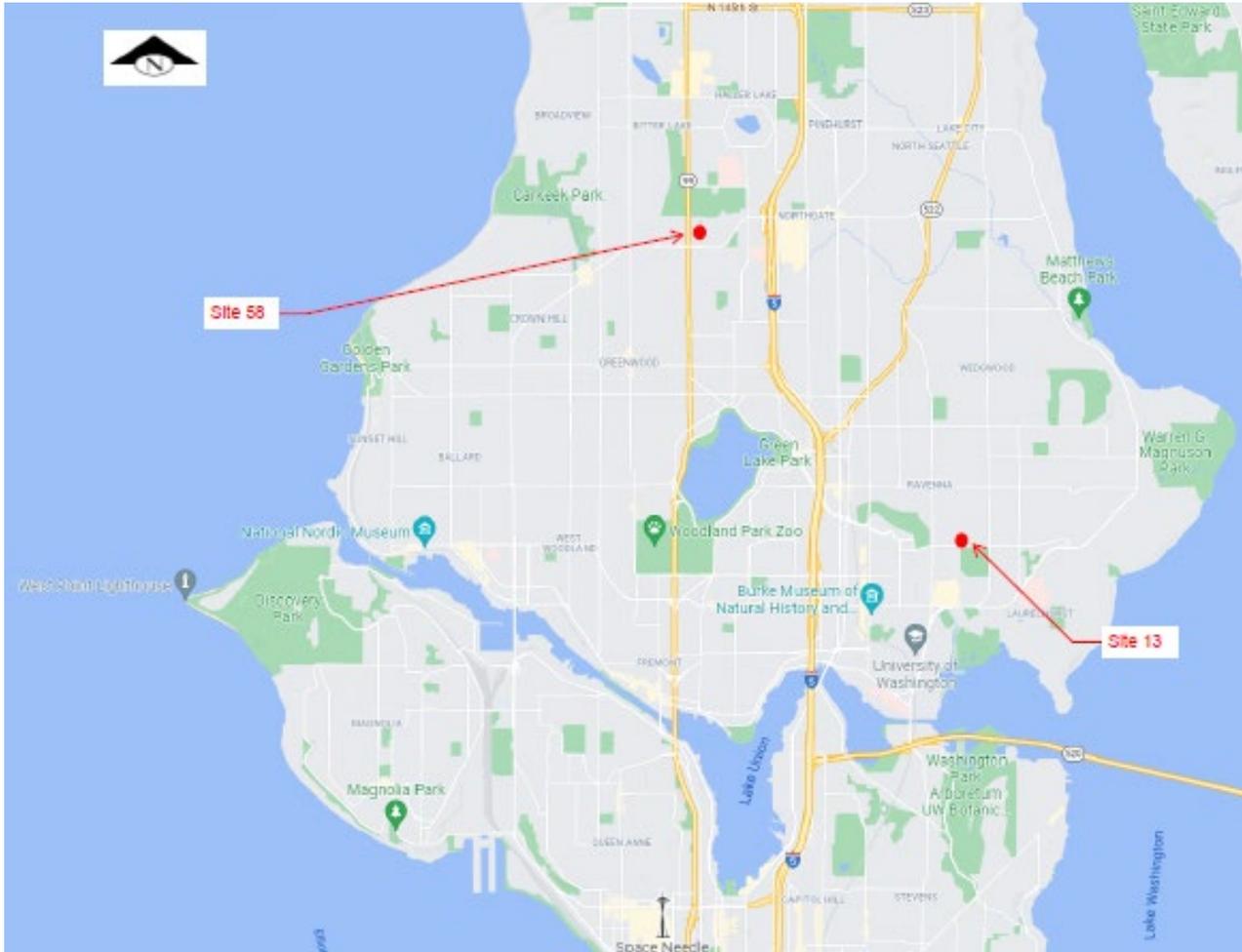
C. SIGNATURE

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

Signature: _____
Arnel Valmonte, Project Manager

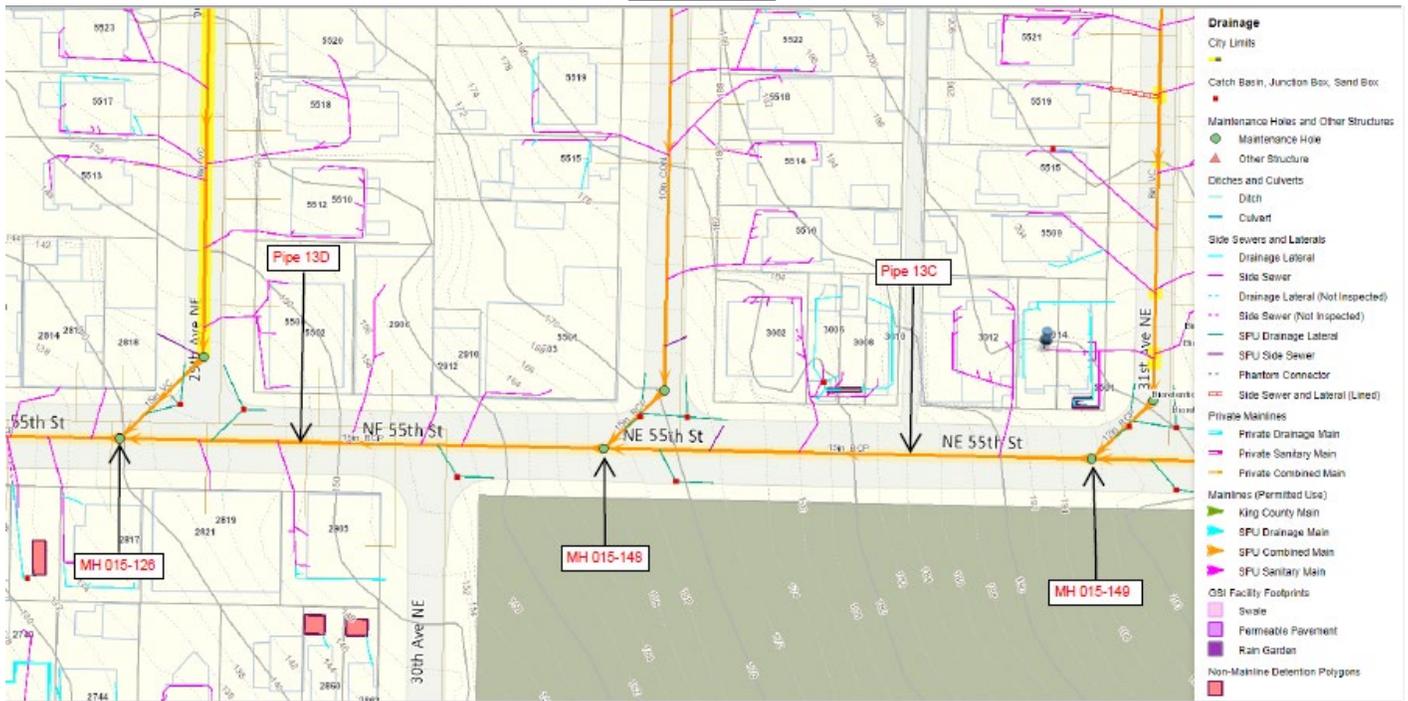
- Attachment A: Vicinity Map
- Attachment B: Project Site Maps
- Attachment C: Greenhouse Gas Emissions Worksheet

Attachment A: Vicinity Map

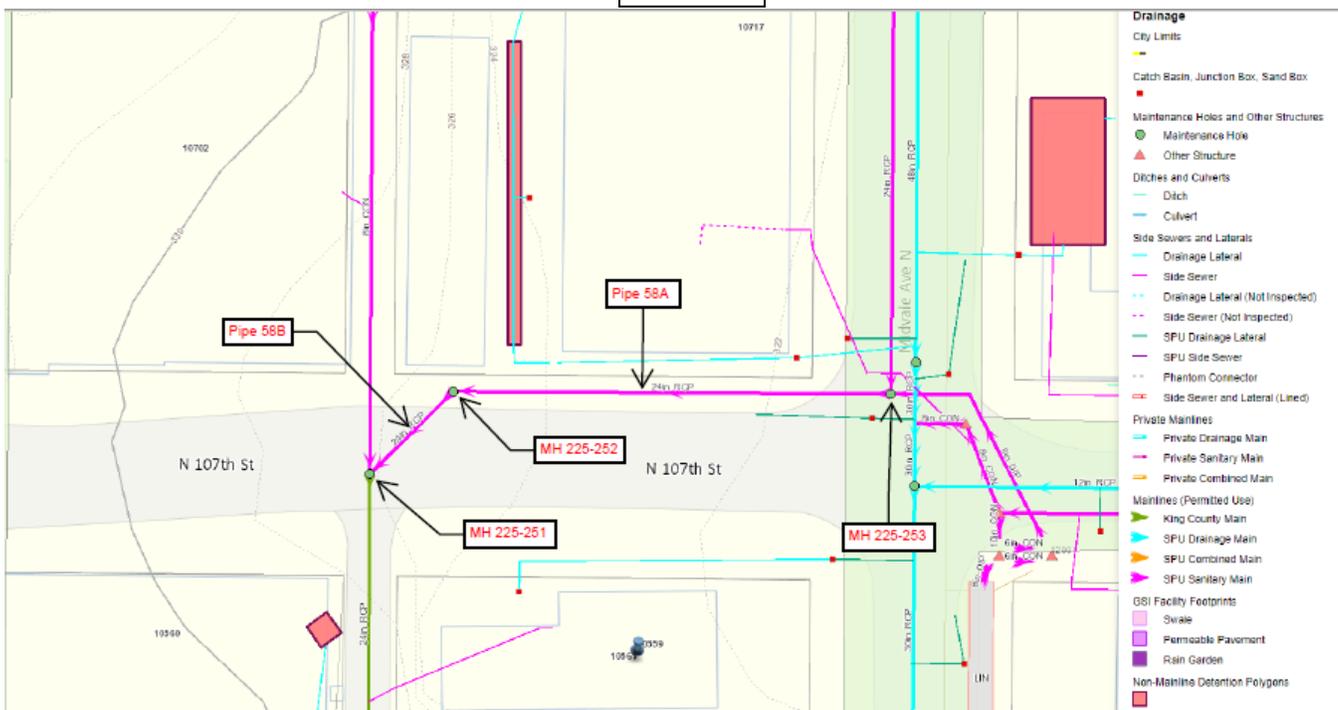


Attachment B: Project Site Maps

Site 13



Site 58



Attachment C: Greenhouse Gas Emissions Worksheet

Section I: Buildings						
			Emissions Per Unit or Per Thousand Square Feet (MTCO₂e)			
Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Embodied	Energy	Transportation	Lifespan Emissions (MTCO ₂ e)
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 (MTCO₂e)
Pavement (sidewalk, panels, asphalt patch)		0				0
Concrete Pad (50 MTCO ₂ e/1,000 sq. ft. of pavement at a depth of 6 inches)		0				0
TOTAL Section II Pavement						0

Section III: Construction	
(See detailed calculations below)	Emissions (MTCO₂e)
TOTAL Section III Construction	2.9

Section IV: Operations and Maintenance	
(See detailed calculations below)	Emissions (MTCO₂e)
TOTAL Section IV Operations and Maintenance	0

TOTAL GREENHOUSE GAS (GHG) EMISSIONS FOR PROJECT (MTCO₂e)	2.9
---	------------

Attachment C: Greenhouse Gas Emissions Worksheet (continued)

Section III Construction Details		
Construction: Diesel		
Equipment	Diesel (gallons)	Assumptions
1 large Vactor Truck	36	9 working days x 1 round trip (RT) per working day x 1 vehicle x 20 miles/round-trip ÷ 5 mpg
1 refrigeration truck	36	9 working days x 1 RT/day x 1 vehicle x 20 miles/round trip ÷ 5 mpg
1 installation rig w/ compressor and bypass pump	36	9 working days x 1 RT/day x 1 vehicle x 20 miles/round trip ÷ 5 mpg
1 supporting installation box truck	36	9 working days x 1 RT/day x 1 vehicle x 20 miles/round trip ÷ 5 mpg
Subtotal Diesel Gallons	144	
GHG Emissions in lbs CO₂e	3,823.2	26.55 lbs CO ₂ e per gallon of diesel
GHG Emissions in metric tons CO₂e	1.7	1,000 lbs = 0.45359237 metric tons

Construction: Gasoline		
Equipment	Gasoline (gallons)	Assumptions
Pick-up trucks or crew vans (2)	18	9 working days x 1 RT/day x 2 vehicles x 20 miles/round-trip ÷ 20 mpg
Misc. hand equipment (2)	90	9 working days x 10 hours/day x 2 pieces of equipment x 0.5 gal/hour
Subtotal Gasoline Gallons	108	
GHG Emissions in lbs CO₂e	2,624.4	24.3 lbs CO ₂ e per gallon of gasoline
GHG Emissions in metric tons CO₂e	1.2	1,000 lbs = 0.45359237 metric tons

Construction Summary		
Activity	CO ₂ e in pounds	CO ₂ e in metric tons
Diesel	3,823.2	1.7
Gasoline	2,624.4	1.2
Total for Construction	6,447.6	2.9

Section IV Long-Term Operations and Maintenance Details		
Operations and Maintenance: Diesel		
Equipment	Diesel (gallons)	Assumptions
Maintenance Operation (truck)	0	
Subtotal Diesel Gallons	0	
GHG Emissions in lbs CO₂e	0	
GHG Emissions in metric tons CO₂e	0	

Operations and Maintenance Summary		
Activity	CO ₂ e in pounds	CO ₂ e in metric tons
Diesel	0	0
Gasoline	0	0
Total Operations and Maintenance	0	0