

SEATTLE PUBLIC UTILITIES
SEPA ENVIRONMENTAL CHECKLIST

This SEPA environmental review of Seattle Public Utilities' Melrose/I-5 Storm Drain Crossing Rehabilitation Project has been conducted in accord with the Washington State Environmental Policy Act (SEPA) (RCW 43.21C), State SEPA regulations [Washington Administrative Code (WAC) Chapter 197-11], and the City of Seattle SEPA ordinance [Seattle Municipal Code (SMC) Chapter 25.05].

A. BACKGROUND

1. Name of proposed project:

Melrose/I-5 Storm Drain Crossing Rehabilitation Project

2. Name of applicant:

Seattle Public Utilities (SPU)

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

Katie Wilson, Project Manager
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4. Date checklist prepared:

August 23, 2021

5. Agency requesting checklist:

Seattle Public Utilities

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

Construction is scheduled to start in August 2022 and conclude in September 2022 and is anticipated to require 57 working days.

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

SPU currently has no plans for future additions or expansions related to the proposed project.

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. The Seattle Department of Transportation's (SDOT) proposed Melrose Promenade Project is designed to provide an improved walking and biking experience between Roy and Pike streets along Melrose Ave. SDOT's proposed improvements include relocation of loading and parking zones, creation of bike lanes, and installation of cross walks and curb ramps. Construction would begin late 2021 and conclude mid-2022. SPU's proposed Melrose/I-5 project is within one of the parking zone relocation sections of SDOT's project. If Melrose Promenade is in construction when Melrose/I-5 begins work, SPU and SDOT would coordinate their respective projects.

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:

- King County Industrial Waste Discharge Permit
- SDOT Street Use Permit and/or Minor Utility Permit
- Washington State Department of Transportation (WSDOT) Utility Accommodation 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.

SPU's Pipe Rehabilitation Program replaces, rehabilitates, and repairs SPU's wastewater and drainage pipes based on asset criticality and condition. The Program's established condition assessment process identified a large-diameter sewer main crossing under Interstate 5 (I-5) was in deteriorated condition (Attachment A). Large sections of the pipe's asphalt liner are eroded or missing and there are also several stretches of compacted, settled deposits and 2 sections (each about 50 linear feet) showing pipe sag. Due to the challenging profile (multiple bends in horizontal and vertical alignments), this storm drain was determined to be a critical asset with a high consequence of failure. This drainage main serves as a single outlet for a roughly 480-acre drainage basin that drains most of Seattle's Capitol Hill neighborhood.

This project would rehabilitate 316-linear feet of a 58-inch wide by 36-inch high flat-bottomed arched corrugated metal pipe storm drain (Attachment B). This pipe section would be lined with a centrifugally cast concrete pipe liner (CCCPL) and accessed from inside the pipe using existing maintenance holes (MH). CCCPL is a pipe rehabilitation technology where an application head centrifugally applies thin coats of fiber-reinforced cementitious material (Portland cement-based binder with a complex formulation of pozzolans, admixtures, crystalline-forming minerals, rheological admixtures, and reinforcing fibers) to the inside of a pipe. Prior to installation, the pipe would be cleaned and CCTV'd to remove all debris, identify defects, and repair infiltrations and voids. During the liner application process, the application head is retracted using a hydraulic winch set at the properly calculated speed to insure uniform thickness. The result is a thin-walled concrete liner that tightly adheres to the inside of the pipe. The work would require potentially by-passing flows to allow lining work to proceed.

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.**

This project would rehabilitate a storm drain buried under I-5 in the City of Seattle, King County, Washington (Attachment A). The pipe would be lined from upstream MH D040-016 to downstream MH D036-058 (Attachment B). Upstream staging areas at MH D040-016 would be on City of Seattle street right-of-way near 1740 Melrose Ave. That work area near MH D040-016 may include the sidewalk and street parking or bike lane on the west side and the southbound lane of Melrose Ave if needed. Upstream MH D040-016 is just west of the west shoulder of Melrose Ave in WSDOT right-of-way on a narrow, vegetated and steep embankment sandwiched between Melrose Ave and the I-5 northbound on-ramp from Olive Way. Access to MH D040-016 would be from Melrose Ave.

Downstream MH D036-058 is in the travel lane of Howell St in City of Seattle street right-of-way, centered between the 2 east-most lanes of Howell St. The open-topped portion of I-5's High Occupancy Vehicle 9th Ave and Pike St exit ramp structure with vertical walls is immediately east of Howell St. Howell St and the exit ramp are separated by an approximately 6-foot-wide sidewalk and guardrail. The work area near MH D036-058 may include the east sidewalk and the 2 east-most travel lanes of Howell St. Staging areas outside the travel lanes are limited to the 6-foot-wide sidewalk on the east side, a street parking shoulder on the west side of Howell St, and the Court Pl alley to the west. A parking shoulder is not present on the east side of Howell St.

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 subject storm drain is buried under I-5 on- and off-ramps to I-5, Melrose Ave, and Howell St. Retaining walls are located between Melrose Ave and the Olive Way on-ramp and between the 9th Ave/Pike St off-ramp and southbound I-5. Steep slopes (approximately 45%) are located above these retaining walls. The overall ground-surface slope from Melrose to Howell is approximately 15%.

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 site is 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 portions of the project area are in Steep Slope and Steep Slope buffer Environmentally Critical Areas (ECA). SDCI also maps a Known Slide ECA east of the intersection of Howell St and Yale Ave.

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.

The project would not require excavation.

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

Access to the vegetated area would be by foot traffic and hand-carried equipment. Therefore, the project would have minimal surficial ground-disturbance impact. The project anticipates approximately 500 square feet of surficial ground-disturbance in previously disturbed transportation right-of-way adjacent to Melrose Ave. Minimal erosion and sedimentation may occur as a result of this minor ground disturbance.

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 an increase in impervious surfaces.

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

BMPs consistent with the City of Seattle's stormwater management regulations and construction standard requirements would be used to manage construction disturbance and stormwater runoff to minimize erosion and sedimentation. All project construction work would be performed in accordance with an approved temporary erosion and sedimentation control (TESC) plan. Placement and maintenance of site stormwater best management practices (BMP) 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 Stormwater Pollution Prevention Plan (SWPPP).

2. Air

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

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 related to approximately 50,000 lbs of powdered geopolymer material that would be used to line the subject pipe. This powdered material is mechanically mixed with water on-site and then sprayed on the inside of the storm drain. Direct contact with this material may cause skin, eye and/or respiratory irritation. Workers would be trained on proper material handling practices and responses in the event of exposure. Workers would wear appropriate personal protective equipment (PPE) during construction.

Greenhouse gas emissions are characterized as 'direct' (emissions from sources owned or controlled by the reporting entity) and 'indirect' (emissions from sources that are a consequence of the reporting entity, but which occur at sources owned or controlled by another entity [e.g., electricity purchased to operate facilities and equipment and embodied emissions associated with the manufacture of purchased materials]). This Checklist provides information on potential for new or increased direct greenhouse gas emissions resulting from project construction. Indirect construction-related (embodied) emissions associated with placement of a concrete liner have not been estimated as part of this environmental review due to the difficulty of accurately calculating those emissions. The completed project would have no GHG or other air emissions.

Construction would generate greenhouse gas emissions during the estimated 57 working-days via the operation of diesel- and gasoline-powered equipment and the transport of materials, equipment, and workers to and from the site. Because project construction methods were not completely known at the time this Checklist was prepared, estimates provided here are based on daily vehicle operation times for the estimated 57 working-day duration; actual times may be less. The project's direct greenhouse gas emissions related to construction are presented as total metric tons of carbon dioxide (MTCO_{2e}), calculated in Attachment C, and summarized in Table 1. Total greenhouse gas emissions for the project are estimated to be about 18.2 metric tons of carbon dioxide emission (MTCO_{2e}), where 1 metric ton is equal to approximately 2,205 pounds.

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)	26,550	12
Construction Activities (Gasoline)	13,510.8	6.2
Long-term Operation/ Maintenance (Diesel)	0	0
Long-term Operation/Maintenance (Gasoline)	0	0
Total GHG Emissions	40,060.8	18.2

¹ Note: 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.

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 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.

The site is not 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.**

The project site is not 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.**

The project does not propose any discharges of waste materials to surface waters. Due to the location of the downstream MH on an arterial, the work would be planned such that a vac-truck can be in place for flows less than 5 gpm. If flows greater than 5 gpm are anticipated, then a settling tank would be used prior to discharge to the combined sewer. However, several construction activities such as concrete pouring and handling and so forth 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. A King County Wastewater Discharge Permit would be in place with staging for a settling tank in case the runoff volume is more than the volume that a vac-truck can contain.

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 using wells or well points 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.**

No site disturbance is anticipated. Runoff is not anticipated to be altered due to the scope of work.

- (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 concrete curing within the pipe 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.**

There is no site disturbance 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. During construction, the project anticipates approximately 500 square feet of surficial ground-disturbance in previously disturbed transportation right-of-way adjacent to Melrose Ave. BMPs consistent with the City of Seattle'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. Disturbed ground and vegetation would be restored as directed by WSDOT.

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 checked="" type="checkbox"/> Other: Japanese Zelkova
<input type="checkbox"/> Evergreen trees:	<input type="checkbox"/> Fir	<input type="checkbox"/> Cedar	<input type="checkbox"/> Pine	<input type="checkbox"/> Other:

Shrubs
 Grass (turf)
 Pasture
 Crop or grain
 Orchards, vineyards, or other permanent crops
 Wet soil plants: Cattail Buttercup Bulrush Skunk cabbage
 Other:
 Water plants: water lily eelgrass milfoil Other: (identify)
 Other types of vegetation:

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

The downstream staging area is limited to paved street right-of-way and would not impact vegetation. The upstream staging area adjacent to Melrose Ave is in WSDOT right-of-way mostly covered with invasive Himalayan blackberry (*Rubus bifrons*). The project anticipates approximately 500 square feet of surficial ground-disturbance in this previously disturbed transportation right-of-way. Blackberries would need to be cleared and trimmed to allow equipment access. Disturbed vegetation would be restored as directed by WSDOT. Existing trees would be protected.

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

According to the Washington Department of Natural Resources (WDNR) Natural Heritage Program’s document called “Sections that Contain Natural Heritage Features, Current as of January 12, 2021” (accessed at www.dnr.wa.gov), there are no documented occurrences of sensitive, threatened, or endangered plant species in this Section. 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. The project site has been intensively disturbed by development and redevelopment over the last 100 years and has been extensively excavated, filled, paved, or occupied by street and other built structures. There is no habitat for threatened or endangered plants. 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. 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 is in transportation rights-of-way 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.

The King County Noxious Weed Program (available at King County iMap interactive online mapping program, <http://gismaps.kingcounty.gov/iMap/>) identifies tansy ragwort

(*Senecio jacobaea*) and diffuse knapweed (*Centaurea diffusa*) north of the project site. Both of those species are B-designate noxious weed species in King County.

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:

The Washington Department of Fish and Wildlife Habitat and Species map (July 2021) for the project area indicates the site is within a known historic occurrence of western pond turtle (*Actinemys marmorata*), a State-listed endangered species. Extant populations of western pond turtle are known from only a handful of locations in Washington, none of which are in or close to the City of Seattle. The site is known to be (but not mapped as being) within the habitat of bald eagle (*Haliaeetus leucocephalus*) and great blue heron (*Ardea herodias*)—priority species in Washington. There are no known nest sites for these species in or near the project site.

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. 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 shrubs would be restored as required. 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.**

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.

7. Environmental Health

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

Small amounts of materials likely to be present during construction include gasoline and diesel fuels, hydraulic fluids, oils, lubricants, solvents, paints, and other chemical products. A spill of one of these chemicals could potentially occur during construction due to equipment failure or worker error. No site disturbance is anticipated. The pipe would be sealed from the inside such that no excavation of soils is anticipated.

Emissions during construction could also include fugitive dust related to approximately 50,000 lbs of powdered geopolymer material that would be used to line the subject pipe. This powdered material is mechanically mixed with water on-site and then sprayed on the inside of the storm drain. Direct contact with this material may cause skin, eye and/or respiratory irritation. Workers would be trained on proper material handling practices and responses in the event of exposure. Workers would wear appropriate personal protective equipment (PPE) during construction.

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

No known 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.**

Construction activities such as concrete pouring and handling and so forth, 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

Other than the powdered geopolymer material used to line the subject pipe (discussed above), no toxic or hazardous chemicals would be stored, used, or produced at any time at the site.

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

Workers would conduct the proposed work by entering the pipe system. 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. A standby emergency responder crew would be notified prior to entering the pipe and proper safety equipment would be used. Prior to conducting the work, the Contractor would be required to submit a health and safety plan that includes confined space entry and work procedures.

- (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, City of Seattle Director's Rule SDCI 17-2017/SPU DWW-200, 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. To ensure workers are not exposed to unsafe concentrations of gases or vapors or harmful substances that can be present in stormwater, flows would be bypassed around the work area as needed to facilitate construction. Workers would wear appropriate personal protective equipment (PPE) during construction.

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 57 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 (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 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 the project site is predominantly large, multifamily residential buildings and businesses. The proposed work would be in improved public transportation rights-of-way. The 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?

The project area has not recently been used as working farmlands or forest lands.

(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 area does not have surrounding farm or forest lands.

c. Describe any structures on the site.

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

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?

The upstream construction area(s) are zoned:

- MR(M) – multifamily residential
- NC3-75M – Mixed Use residential and commercial development

The downstream construction area is zoned:

DMC 240/290-440 – Downtown commercial and residential

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

Upstream construction area

- Neighborhood commercial and high-density multifamily

Downstream construction area

- Downtown

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

The project is not in a Shoreline Master Program district.

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

SDCI GIS mapping

(<https://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0cf908e2241e9c2>) indicates portions of the project area are in Steep Slope and Steep Slope buffer ECAs. SDCI also notes a Known Slide ECA east of the intersection of Howell St and Yale Ave.

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 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:

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

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. No new above-ground structures would be 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:

If disturbed, parking strip vegetation and vegetation in other areas would be restored as required.

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 streetlights are proposed or required. If the construction contractor elects to work after-dark, the contractor or SPU may deploy portable lights that temporarily produce light and glare at the discretion and approval of SDOT Inspectors.

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 the contractor elects to work after-dark, portable lighting would be adjusted as feasible to minimize glare. 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 and a designated future bike path in the project location 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. In addition, SPU would take the following measures to avoid or reduce projects impacts on recreation activities:

- Coordinate all project work affecting public streets, sidewalks, parks, and trails in advance with the SDOT
- Comply with required SDOT Street Use Permits issued for the project
- Ensure safe pedestrian and bicycle routes are maintained at all times consistent with approved street use permits, and traffic control plans; and
- Place temporary project signs along affected streets and sidewalks prior to project construction to provide residents with advance notice regarding temporary street, sidewalk, and trail 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 commercial buildings over 45 years old located in the vicinity of the project site, most of which have not been evaluated for cultural/historic significance. 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 July 14, 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 (<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.

Proposed work would not affect buildings or known cultural resources. The project is in areas that have been previously disturbed to construct the existing drainage infrastructure and other unrelated developments along utility or public transportation rights-of-way. The project anticipates approximately 500 square feet of surficial ground-disturbance in previously disturbed transportation right-of-way, which minimizes chances of encountering contextually significant archaeological materials. An inadvertent discovery plan would be onsite and in effect during all ground-disturbing activities.

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.

Melrose Ave is classified By SDOT as a non-arterial roadway, meaning it is intended for local access use only. The section of Howell St where MH D036-058 is located is classified as a principal arterial and a principal transit route. No public transit routes are indicated along the portion of Melrose Ave near upstream MH D040-016. SDOT is planning a street improvement project on Melrose Ave; at the time SPU's project goes into construction the current parking lane may have been converted to a bike lane. Because MH D036-058 is in street right-of-way, street closures and traffic control would be required for access to downstream MH D036-058.

- 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 downstream project site is served by multiple public transit agencies/services, including King County Metro bus service and Sound Transit bus service. The nearest transit stop is within a few dozen feet of the MH. The project would require that bus stops be temporarily closed or moved.

- 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?**

Project construction would generate approximately 350 vehicle round-trips due to workers and materials being transported to and from the site during the total 57 working day construction period. 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 generate additional vehicle round trips beyond what would normally be generated by the operation and maintenance of this asset.

- 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 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, if any:**

None
 Electricity Natural gas Water Refuse service
 Telephone Sanitary sewer Septic system
 Other: fiber optics; communications

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

The proposed project is anticipated to enhance the life and serviceability of a critical storm drain asset and would continue to 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.

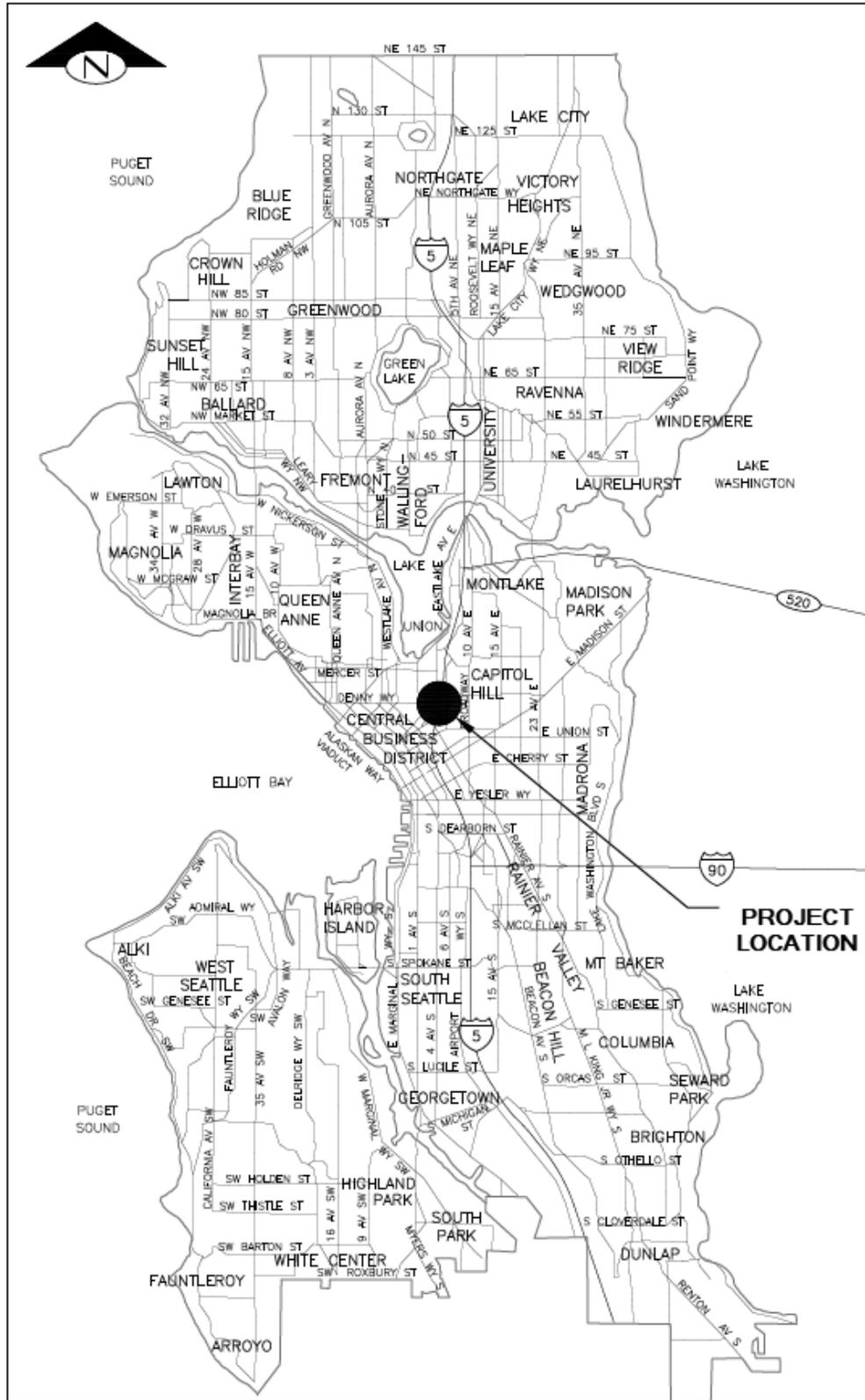
C. SIGNATURE

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

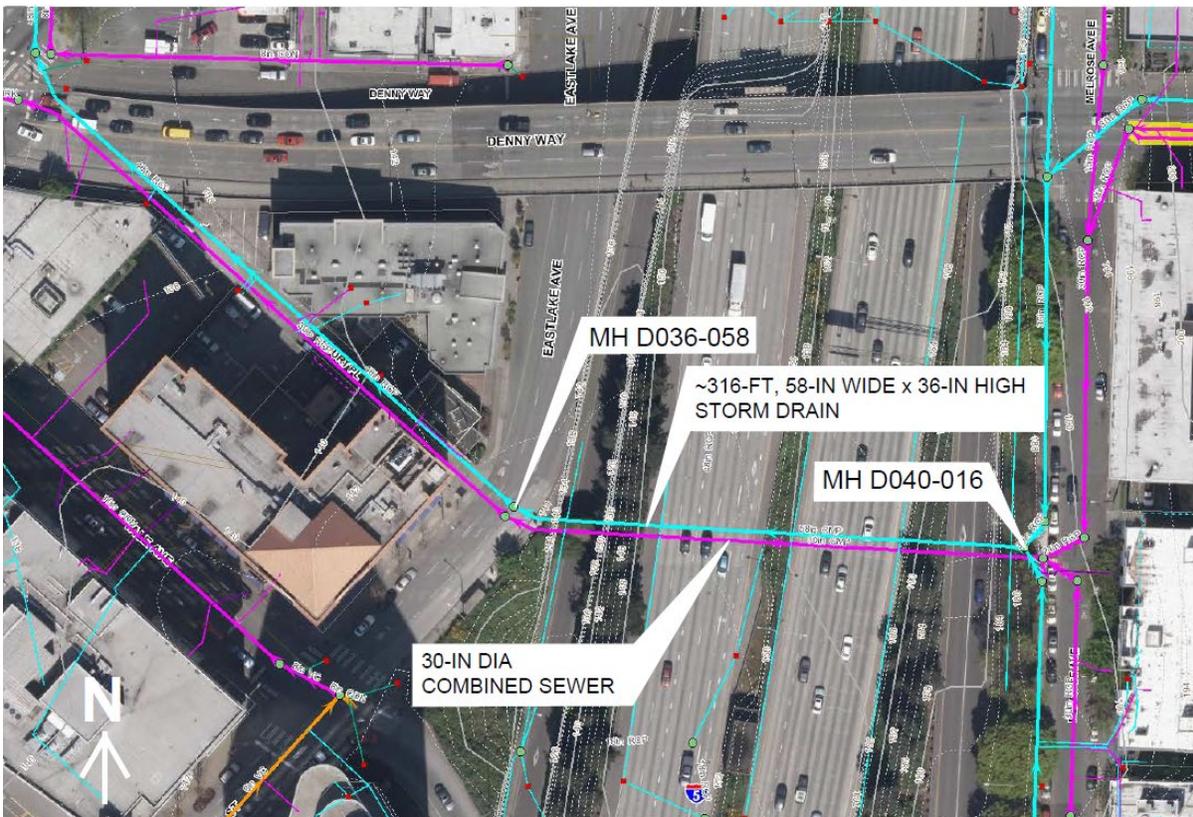
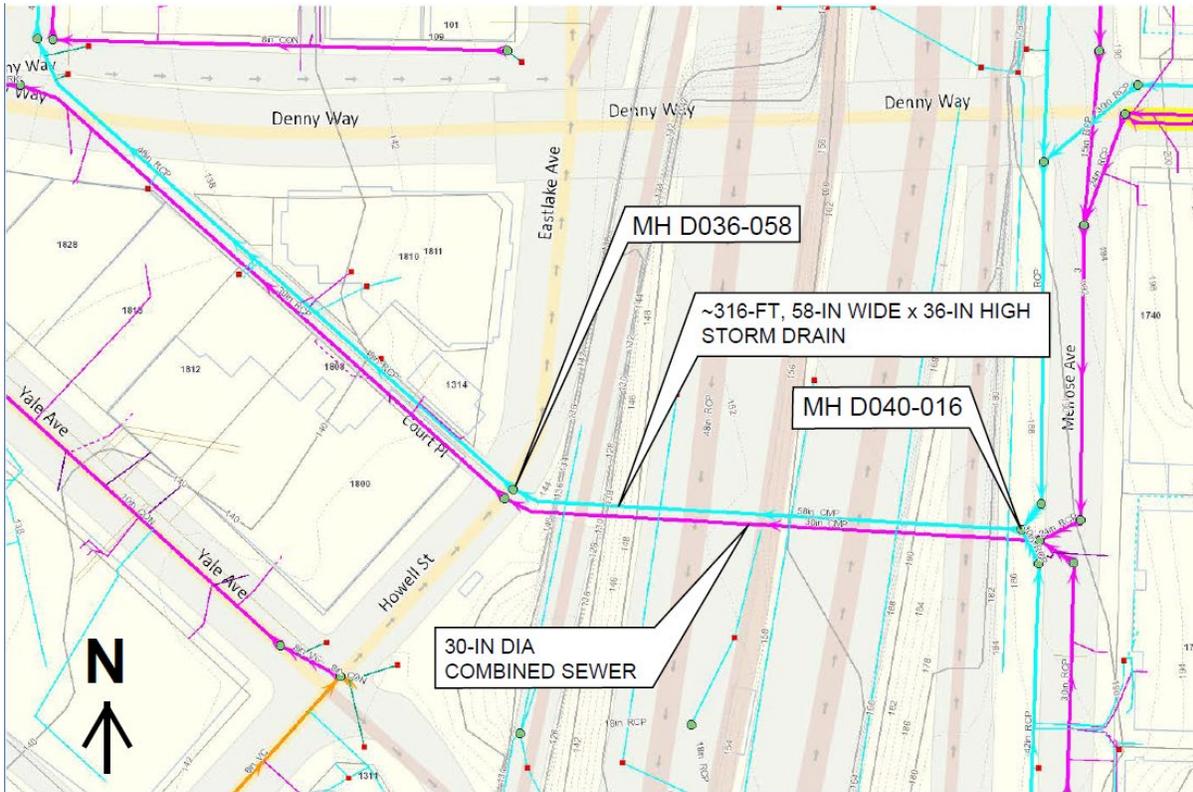
Signature: _____
Katie Wilson, Project Manager

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

Attachment A: Vicinity Map



Attachment B: Project Site



**Melrose/I-5 Storm Drain Crossing Rehabilitation
SEPA Environmental Checklist**

Attachment C: Greenhouse Gas Emissions Worksheet

Section I: Buildings						
			Emissions Per Unit or Per Thousand Square Feet (MTCO _{2e})			
Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Embodied	Energy	Transportation	Lifespan Emissions (MTCO _{2e})
Single-Family Home	0		98	672	792	0
Multi-Family Unit in Large Building	0		33	357	766	0
Multi-Family Unit in Small Building	0		54	681	766	0
Mobile Home	0		41	475	709	0
Education		0.0	39	646	361	0
Food Sales		0.0	39	1,541	282	0
Food Service		0.0	39	1,994	561	0
Health Care Inpatient		0.0	39	1,938	582	0
Health Care Outpatient		0.0	39	737	571	0
Lodging		0.0	39	777	117	0
Retail (Other than Mall)		0.0	39	577	247	0
Office		0.0	39	723	588	0
Public Assembly		0.0	39	733	150	0
Public Order and Safety		0.0	39	899	374	0
Religious Worship		0.0	39	339	129	0
Service		0.0	39	599	266	0
Warehouse and Storage		0.0	39	352	181	0
Other		0.0	39	1,278	257	0
Vacant		0.0	39	162	47	0
TOTAL Section I Buildings						0

Section II: Pavement						
						Emissions (MTCO _{2e})
Pavement (sidewalk, panels, asphalt patch)		0				0
Concrete Pad (50 MTCO _{2e} /1,000 sq. ft. of pavement at a depth of 6 inches)		0				0
TOTAL Section II Pavement						0

Section III: Construction						
						Emissions (MTCO _{2e})
(See detailed calculations below)						
TOTAL Section III Construction						18.1

Section IV: Operations and Maintenance						
						Emissions (MTCO _{2e})
(See detailed calculations below)						
TOTAL Section IV Operations and Maintenance						0

TOTAL GREENHOUSE GAS (GHG) EMISSIONS FOR PROJECT (MTCO_{2e})						18.2
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Attachment C: Greenhouse Gas Emissions Worksheet (continued)

Section III Construction Details		
Construction: Diesel		
Equipment	Diesel (gallons)	Assumptions
1 large Vactor Truck	400	10 working days x 10 round-trips (1 RT per working day) x 1 vehicle x 20 miles/round-trip ÷ 5 mpg
6 Support Vehicles (cargo and flatbed trucks)	600	20 round trips x 6 vehicles x 25 miles/round trip ÷ 5 mpg
Subtotal Diesel Gallons	1,000	
GHG Emissions in lbs CO₂e	26,550	26.55 lbs CO ₂ e per gallon of diesel
GHG Emissions in metric tons CO₂e	12	1,000 lbs = 0.45359237 metric tons

Construction: Gasoline		
Equipment	Gasoline (gallons)	Assumptions
Pick-up trucks or crew vans (4)	456	57 working days x 4 vehicles x 1 round-trip/day x 40 miles/round-trip ÷ 20 mpg
Misc. hand equipment (2)	100	10 working days x 10 hours x 2 pieces of equipment x 0.5 gal/hour
Subtotal Gasoline Gallons	556	
GHG Emissions in lbs CO₂e	13,510.8	24.3 lbs CO ₂ e per gallon of gasoline
GHG Emissions in metric tons CO₂e	6.2	1,000 lbs = 0.45359237 metric tons

Construction Summary		
Activity	CO ₂ e in pounds	CO ₂ e in metric tons
Diesel	26,550	12
Gasoline	13,510.8	6.2
Total for Construction	40,060.8	18.2

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