

## MR 1-9 Storm Drainage Summary

Kumar Residence  
4034 85<sup>th</sup> Avenue SE  
Mercer Island, WA 98040

6,172 SF Impervious  
Detention Proposed

January 11, 2022

Co-authored by  
Stephenie Seawall  
Duffy Ellis, P.E.



General:

This site's new and replaced impervious area is **ABOVE 5,000** sf, site is subject to minimum DOE requirements MR1-9 identified below.

<b>MR1</b> = Preparation of Storm Water Site Plans	See C2.0 Drainage Plan
<b>MR2</b> = Construction Storm Water Pollution Prevention Plan	See C1.0 TESCP in plan set.
<b>MR3</b> = Source Control of Pollution	See C1.0 for erosion control measures recommended to mitigate erosion and sediment discharge from site during construction phase.
<b>MR4</b> = Preservation of Natural Drainage Systems and Outfalls	Project does not have much of a "natural drainage system" or outfall to utilize. Manmade detention and manmade storm pipe will be utilized on this urban lot.
<b>MR5</b> = On-site Stormwater Management	A manmade stormwater BMP (ie detention) is proposed to mitigate peak release rates from this lot. Permeable paver surface driveway proposed.
<b>MR6</b> = Runoff Treatment	N/A: PGIS area = <b>620</b> SF, less than the threshold of 5,000 sf for runoff treatment

<b>MR7</b> = Flow Control	Detention proposed. See planset for sizing and design
<b>MR8</b> = Wetlands Protection	N/A – no wetlands in vicinity
<b>MR9</b> = Operations and Maintenance	See maintenance for Detention Pipe

Background:

This residential lot is located west of Mercer Island high school on 85<sup>th</sup> Ave SE in the north quadrant of Mercer Island. Subject redevelopment project entails removing the existing house and hardscape areas making way for a new house. Chris Luthi is the architect; Aspen Homes is the builder. Both veterans on Mercer Island projects.

The site and area slope toward the west (85<sup>th</sup> Avenue SE) at an average grade of 9%. Our storm design plan proposes that all stormwater from roof and driveway discharge into a detention pipe in the north side yard. Mitigated runoff from the detention pipe will discharge to the existing storm pipe in front of the house with a new catch basin. See C2.0 sheet for design. See C4.0 for detention details and profile.

Soils and Infiltration Feasibility:

Soil is mapped on geology maps as “Qvt” on the “Geologic Map of Mercer Island”, which is your typical vashon lodgement till soil (Type C) that is common in the Puget Sound region. The project site is mapped as “infiltrating LID facilities may be feasible and soil has moderate infiltration potential” on the “Low-impact development infiltration feasibility on Mercer Island” map.

**MR5 = On-site Stormwater Management**

The List Approach (using List #2) selection process was applied to site to evaluate feasibility of BMP’s (reference 2019 DOE Manual):

Lawn and Landscaped Areas:

- **Post-Construction Soil Quality and Depth in accordance with BMP T5.13 in Chapter 5 of Volume V of the DOE Manual:**  
Compost-Amended Soil is required and proposed

Roof Surface BMP Evaluation:

- **Full Dispersion:**  
Infeasible due to lack of 100 LF flowpath
- **Downspout Full Infiltration:**  
Not proposed due to mapped till soil

- **Bio-retention / Raingarden:**  
Not proposed due to mapped till soil. The concern would be chronic standing water due to the dense soils characterized as hydraulically restrictive.
- **Downspout Dispersion:**  
Infeasible due to lack of downhill flowpath length (25 LF for gravel-filled trench, 50 LF for splash-block) available to property lines.

**PTC (flow-through trench):**

Not proposed due to mapped till soil. The bottom of any PTC facility would be within 5' of a hydraulically restrictive layer, ref. SWES D5-03.2.3.

Other Hard Surfaces (i.e. Driveway):

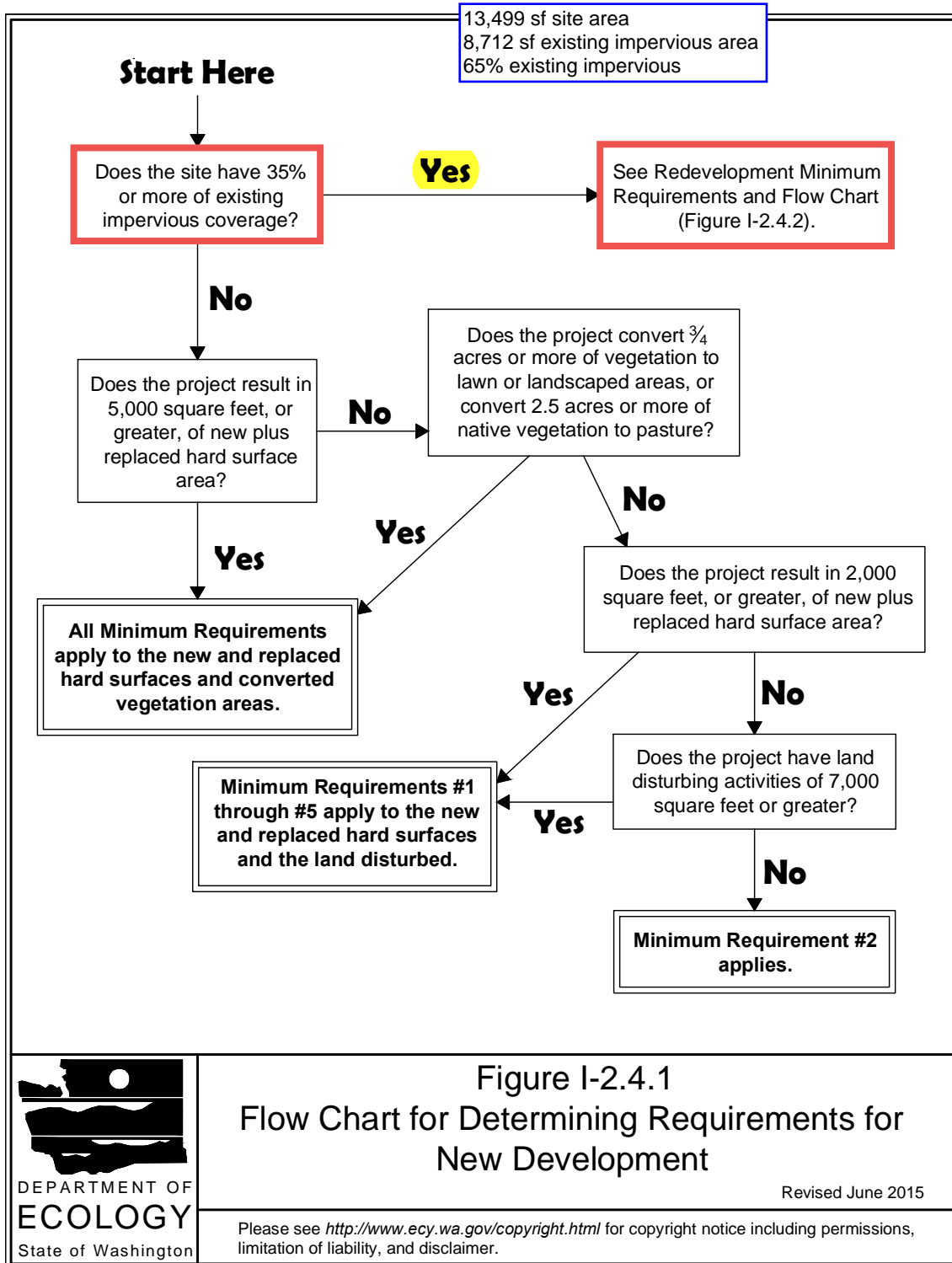
- **Full Dispersion serving driveway:**  
A minimum native vegetative flowpath length of 100 lineal feet is not achievable. (ref: table D9.2)
- **Permeable Pavement Driveway:**  
Proposed by architect. We support use of permeable on this project given the following reasons:
  1. There is positive slope driveway from new garage to ROW. That means there is no water migration toward the new garage or house.
  2. The driveway surface area is only 390 sf
  3. Driveway grade is a moderate 5%
  4. Despite anticipated till soils, one would can reasonably assume the paver system trap water in the underlying clean rock reservoir stratum and slowly infiltrate into the ground for many Puget sound low rain fall drizzle.
  5. Reviewing the DOE based infeasibility list, there is no apparent infeasibility item on list that stood out to me.

### **Attachments**

- Impervious Area Spreadsheet
- DOE Flowchart for Determining Requirements for New Development pointing to redevelopment
- DOE Flowchart for Determining Requirements for Re-Development showing MR1-9
- Geologic Map of Mercer Island
- Mercer Island Infiltration Potential Map
- Maintenance Standards for detention pipe, sourced from 2019 DOE SWMMWW

Impervious Area Spreadsheet		
Kumar Residence - 4034 85th Avenue SE, Mercer Island, WA 98040		
Gross Site area	13,499	sf
	0.310	acres
Existing Impervious Area	8,712	sf
total existing impervious area =	8,712	sf
total existing vegetated area =	4,787	sf
Proposed Impervious Area (on-site)		
Proposed house roof	3,276	sf
Proposed gazebo roof	361	sf
Proposed pool/hardscape, exposed	2,154	sf
Proposed driveway, on-site, exposed	381	sf
total on-site proposed =	6,172	sf
total new + replaced impervious =	(2,540)	sf
new impervious area =	(2,540)	sf
total proposed vegetated area =	7,327	sf

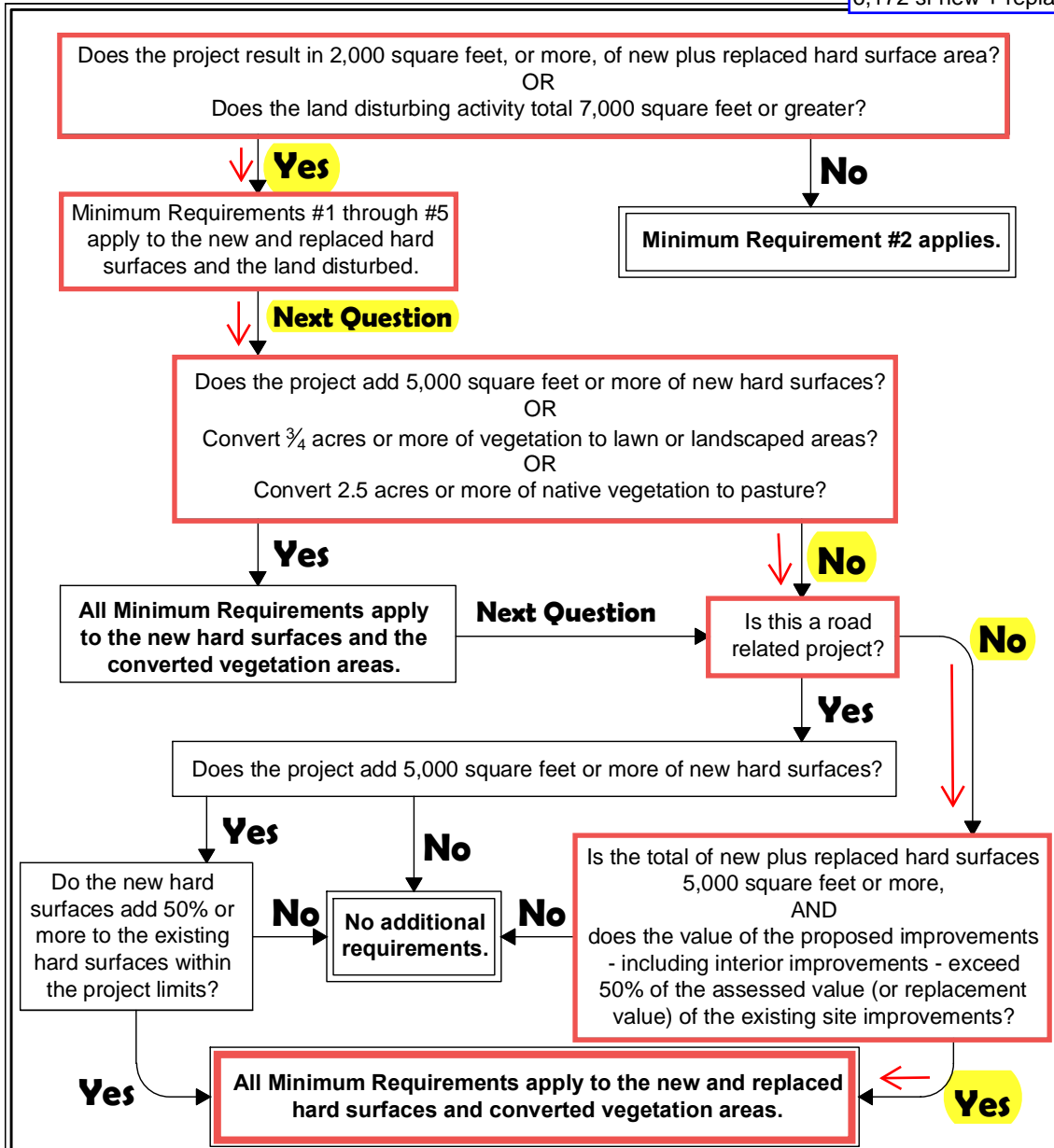
**Figure I-2.4.1 Flow Chart for Determining Requirements for New Development**



4034 85th Avenue SE  
Mercer Island, WA 98040

**Figure I-2.4.2 Flow Chart for Determining Requirements for Redevelopment**

13,499 sf site area  
 (2,540) sf new impervious area  
 6,172 sf new + replaced impervious area



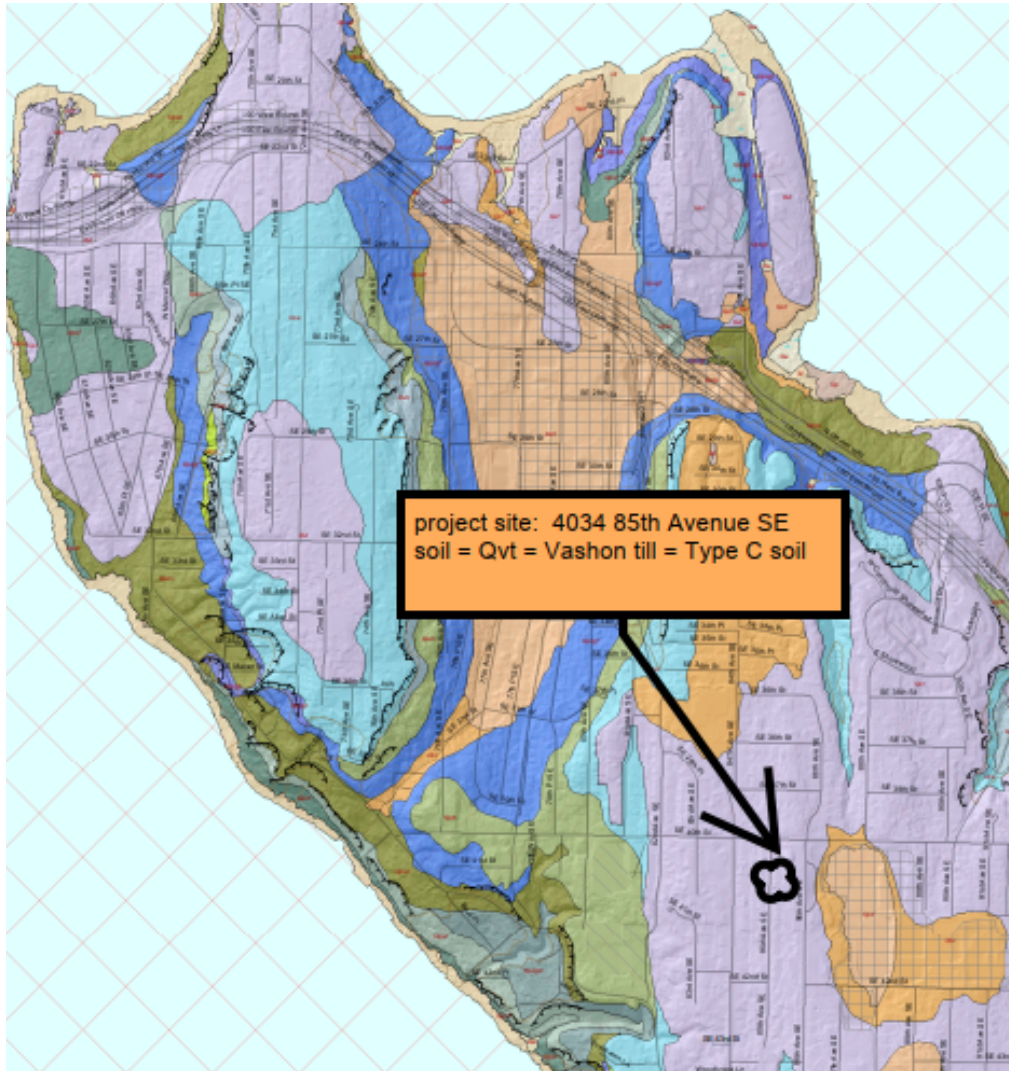
**Figure I-2.4.2  
 Flow Chart for Determining Requirements for Redevelopment**

Revised June 2015

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4034 85th Avenue SE  
 Mercer Island, WA 98040

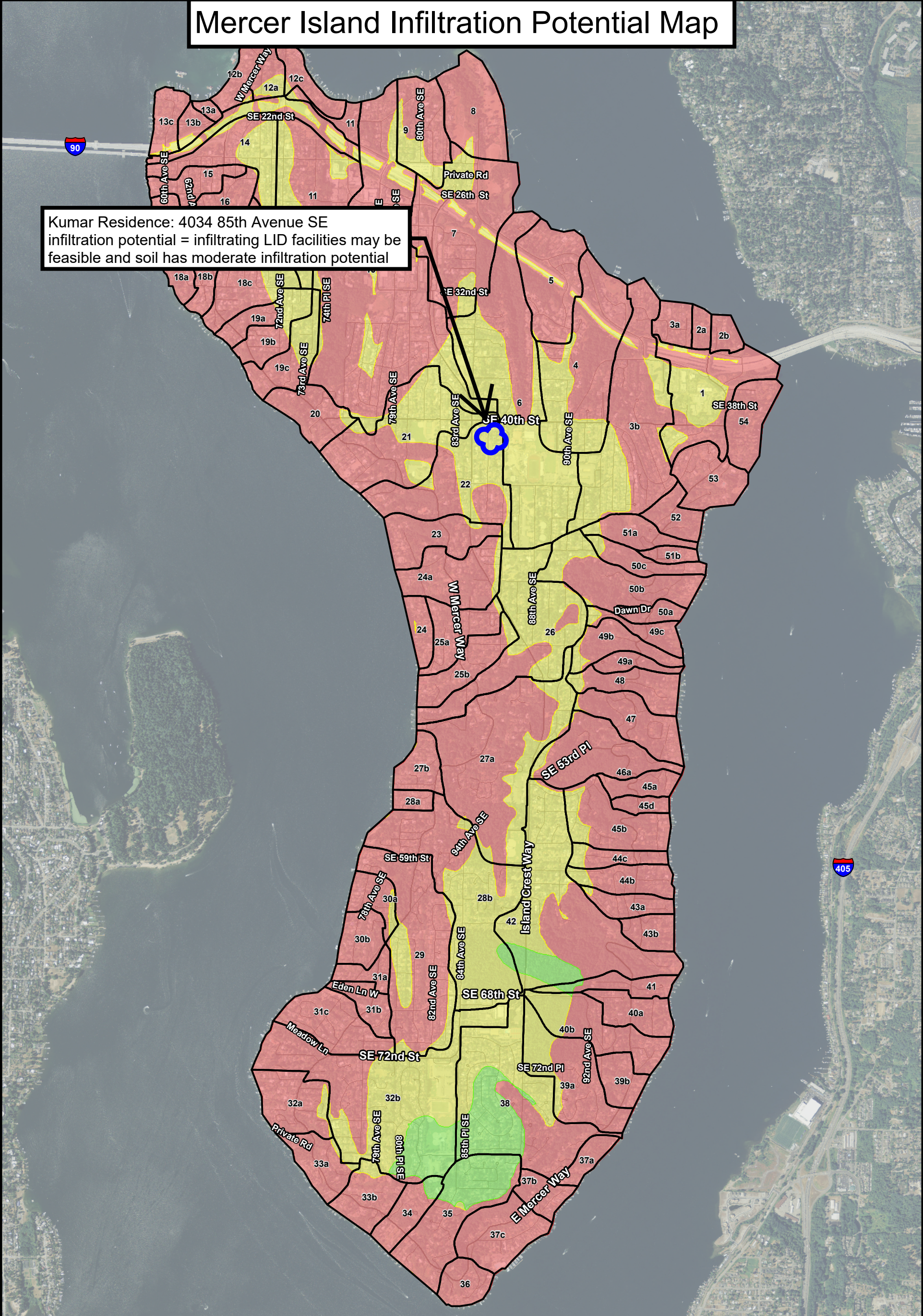
# Mercer Island Geologyl Map





# Mercer Island Infiltration Potential Map

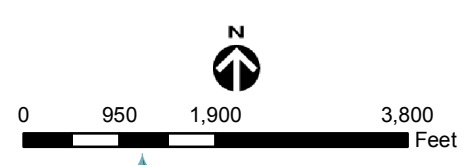
Kumar Residence: 4034 85th Avenue SE  
 infiltration potential = infiltrating LID facilities may be feasible and soil has moderate infiltration potential



## Legend

- Infiltrating LID facilities may be feasible, and soil has high infiltration potential
- Infiltrating LID facilities may be feasible, and soil has moderate infiltration potential
- Infiltrating LID facilities are not permitted
- Storm drainage basin

Figure 3. Low impact development infiltration feasibility on Mercer Island.



\* Map is intended to be used for planning purposes only. Site-specific analysis is required prior to design and construction of LID facilities.



# Maintenance Standards - Detention

sourced from 2019 DOE Manual

**Table V-A.3: Maintenance Standards - Closed Detention Systems (Tanks/Vaults)**

Maintenance Component	Defect	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
Storage Area	Plugged Air Vents	One-half of the cross section of a vent is blocked at any point or the vent is damaged.	Vents open and functioning.
	Debris and Sediment	Accumulated sediment depth exceeds 10% of the diameter of the storage area for 1/2 length of storage vault or any point depth exceeds 15% of diameter. (Example: 72-inch storage tank would require cleaning when sediment reaches depth of 7 inches for more than 1/2 length of tank.)	All sediment and debris removed from storage area.
	Joints Between Tank/Pipe Section	Any openings or voids allowing material to be transported into facility. (Will require engineering analysis to determine structural stability).	All joint between tank/pipe sections are sealed.
	Tank Pipe Bent Out of Shape	Any part of tank/pipe is bent out of shape more than 10% of its design shape. (Review required by engineer to determine structural stability).	Tank/pipe repaired or replaced to design.
	Vault Structure Includes Cracks in Wall, Bottom, Damage to Frame and/or Top Slab	Cracks wider than 1/2-inch and any evidence of soil particles entering the structure through the cracks, or maintenance/inspection personnel determines that the vault is not structurally sound. Cracks wider than 1/2-inch at the joint of any inlet/outlet pipe or any evidence of soil particles entering the vault through the walls.	Vault replaced or repaired to design specifications and is structurally sound. No cracks more than 1/4-inch wide at the joint of the inlet/outlet pipe.

**Table V-A.3: Maintenance Standards - Closed Detention Systems (Tanks/Vaults) (continued)**

Maintenance Component	Defect	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
Manhole	Cover Not in Place	Cover is missing or only partially in place. Any open manhole requires maintenance.	Manhole is closed.
	Locking Mechanism Not Working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts into frame have less than 1/2 inch of thread (may not apply to self-locking lids).	Mechanism opens with proper tools.
	Cover Difficult to Remove	One maintenance person cannot remove lid after applying normal lifting pressure. Intent is to keep cover from sealing off access to maintenance.	Cover can be removed and reinstalled by one maintenance person.
	Ladder Rungs Unsafe	Ladder is unsafe due to missing rungs, misalignment, not securely attached to structure wall, rust, or cracks.	Ladder meets design standards. Allows maintenance person safe access.
Catch Basins	See <a href="#">Table V-A.5: Maintenance Standards - Catch Basins</a>	See <a href="#">Table V-A.5: Maintenance Standards - Catch Basins</a>	See <a href="#">Table V-A.5: Maintenance Standards - Catch Basins</a>

**Table V-A.4: Maintenance Standards - Control Structure/Flow Restrictor**

Maintenance Component	Defect	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
General	Trash and Debris (Includes Sediment)	Material exceeds 25% of sump depth or 1 foot below orifice plate.	Control structure orifice is not blocked. All trash and debris removed.
	Structural Damage	Structure is not securely attached to manhole wall. Structure is not in upright position (allow up to 10% from plumb). Connections to outlet pipe are not watertight and show signs of rust. Any holes - other than designed holes - in the structure.	Structure securely attached to wall and outlet pipe. Structure in correct position. Connections to outlet pipe are water tight; structure repaired or replaced and works as designed. Structure has no holes other than designed holes.
Cleanout Gate	Damaged or Missing	Cleanout gate is not watertight or is missing. Gate cannot be moved up and down by one maintenance person. Chain/rod leading to gate is missing or damaged. Gate is rusted over 50% of its surface area.	Gate is watertight and works as designed. Gate moves up and down easily and is watertight. Chain is in place and works as designed. Gate is repaired or replaced to meet design standards.
Orifice Plate	Damaged or Missing	Control device is not working properly due to missing, out of place, or bent orifice plate.	Plate is in place and works as designed.
	Obstructions	Any trash, debris, sediment, or vegetation blocking the plate.	Plate is free of all obstructions and works as designed.
Overflow Pipe	Obstructions	Any trash or debris blocking (or having the potential of blocking) the overflow pipe.	Pipe is free of all obstructions and works as designed.
Manhole	See <a href="#">Table V-A.3: Maintenance Standards - Closed Detention Systems (Tanks/Vaults)</a>	See <a href="#">Table V-A.3: Maintenance Standards - Closed Detention Systems (Tanks/Vaults)</a>	See <a href="#">Table V-A.3: Maintenance Standards - Closed Detention Systems (Tanks/Vaults)</a>
Catch Basin	See <a href="#">Table V-A.5: Maintenance Standards - Catch Basins</a>	See <a href="#">Table V-A.5: Maintenance Standards - Catch Basins</a>	See <a href="#">Table V-A.5: Maintenance Standards - Catch Basins</a>



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Instructions

This is a template for a simplified Construction Stormwater Pollution Prevention Plan ("Construction SWPPP"). If "No" is the answer to one or more of the statements on the first page of Section A of this submittal package, then a full Construction SWPPP is required and the project does not qualify for the use of the Small Project Construction SWPPP Narrative template. If the project is less than the thresholds on the first page of Section A of this submittal package, then Minimum Requirement #2 still applies, but this section (Section B) or a full construction SWPPP is not required. You should include your Construction SWPPP in your contract with your builder. A copy of the Construction SWPPP must be located at the construction site or within reasonable access to the site for construction and inspection personnel at all times.

### General Information on the Existing Site and Project

Describe the following in the Project Narrative box below (attach additional pages if necessary):

- Nature and purpose of the construction project
- Existing topography, vegetation, and drainage, and building structures
- Adjacent areas, including streams, lakes, wetlands, residential areas, and roads that might be affected by the construction project
- How upstream drainage areas may affect the site
- Downstream drainage leading from the site to the receiving body of water
- Areas on or adjacent to the site that are classified as critical areas
- Critical areas that receive runoff from the site up to one-quarter mile away
- Special requirements and provisions for working near or within critical areas
- Areas on the site that have potential erosion problems

Project Narrative:



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Construction SWPPP Drawings

Refer to the general Drawing Requirements in Stormwater Management Manual for Western Washington (SWMMWW) Volume I, Chapter 3.

### Vicinity Map

Provide a map with enough detail to identify the location of the construction site, adjacent roads, and receiving waters.

### Site Map

Include the following (where applicable):

- |  |   |
|--|---|
| <input type="checkbox"/> Legal description of the property boundaries or an illustration of property lines (including distances) on the drawings.          | <input type="checkbox"/> Final and interim grade contours as appropriate, drainage basins, and the direction of stormwater flow during and upon completion of construction. |
| <input type="checkbox"/> North arrow.  | <input type="checkbox"/> Areas of soil disturbance, including all areas affected by clearing, grading, and excavation.  |
| <input type="checkbox"/> Existing structures and roads.  | <input type="checkbox"/> Locations where stormwater will discharge to surface waters during and upon completion of construction.  |
| <input type="checkbox"/> Boundaries and identification of different soil types.  | <input type="checkbox"/> Existing unique or valuable vegetation and vegetation to be preserved.   |
| <input type="checkbox"/> Areas of potential erosion problems.  | <input type="checkbox"/> Cut-and-fill slopes indicating top and bottom of slope catch lines.  |
| <input type="checkbox"/> Any on-site and adjacent surface waters, critical areas, buffers, flood plain boundaries, and Shoreline Management boundaries.    | <input type="checkbox"/> Total cut-and-fill quantities and the method of disposal for excess material.  |
| <input type="checkbox"/> Existing contours and drainage basins and the direction of flow for the different drainage areas.                                 | <input type="checkbox"/> Stockpile; waste storage; and vehicle storage, maintenance, and washdown areas.  |
| <input type="checkbox"/> Where feasible, contours extend a minimum of 25 feet beyond property lines and extend sufficiently to depict existing conditions. |   |

### Temporary and Permanent BMPs

Include the following on site map (where applicable):

- |   |  |
|---|--|
| <input type="checkbox"/> Locations for temporary and permanent swales, interceptor trenches, or ditches.                                      | <input type="checkbox"/> Details for bypassing off-site runoff around disturbed areas.   |
| <input type="checkbox"/> Drainage pipes, ditches, or cut-off trenches associated with erosion and sediment control and stormwater management. | <input type="checkbox"/> Locations of temporary and permanent stormwater treatment and/or flow control best management practices (BMPs).   |
| <input type="checkbox"/> Temporary and permanent pipe inverts and minimum slopes and cover.   | <input type="checkbox"/> Details for all structural and nonstructural erosion and sediment control (ESC) BMPs (including, but not limited to, silt fences, construction entrances, sedimentation facilities, etc.) |
| <input type="checkbox"/> Grades, dimensions, and direction of flow in all ditches and swales, culverts, and pipes.                            | <input type="checkbox"/> Details for any construction-phase BMPs or techniques used for Low Impact Development (LID) BMP protection.   |
| <input type="checkbox"/> Locations and outlets of any dewatering systems.   |  |



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 1: Preserve Vegetation / Mark Clearing Limits

The goal of this element is to preserve native vegetation and to clearly show the limits of disturbance.

This element **does not** apply to my project because:

The site was cleared as part of clearing activity that is subject to an enforcement action and is re-vegetated. Restoration may be necessary to comply with Critical Area Regulations or NPDES requirements. Buffer Zones-BMP C102 may apply if Critical Areas exist on-site and buffer zones shall be protected.

Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the best management practices (BMPs) you will use:

The perimeter of the area to be cleared shall be marked prior to clearing operation with visible flagging, orange plastic barrier fencing and/or orange silt fencing as shown on the SWPPP site map. The total disturbed area shall be less than 7,000 square feet. Vehicles will only be allowed in the areas to be graded, so no compaction of the undeveloped areas will occur.

Additional Comments:

Check the BMPs you will use:

C101 Preserving Natural Vegetation

C102 Buffer Zones

C103 High Visibility Fence



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 2: Construction Access

The goal of this element is to provide a stabilized construction entrance/exit to prevent or reduce or sediment track out.

This element **does not** apply to my project because:

The driveway to the construction area already exists and will be used for construction access. All equipment and vehicles will be restricted to staying on that existing impervious surface.

Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the BMPs you will use:

A stabilized construction entrance will be installed prior to any vehicles entering the site, at the location shown on the SWPPP site map.

Additional Comments:

Check the BMPs you will use:

C105 Stabilized Construction Entrance / Exit

C106 Wheel Wash

C107 Construction Road / Parking Area Stabilization



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 3: Control Flow Rates

The goal of this element is to construct retention or detention facilities when necessary to protect properties and waterways downstream of development sites from erosion and turbid discharges.

This element **does not** apply to my project because:

Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the BMPs you will use:

Flow rates will be controlled by using SWPPP Element 4 sediment controls and BMP T5.13 Post-Construction Soil Quality and Depth if necessary.

Additional Comments:





# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 4: Sediment Control

The goal of this element is to construct sediment control BMPs that minimize sediment discharges from the site.

This element **does not** apply to my project because:

The site has already been stabilized and re-vegetated.

Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the BMPs you will use:

Sediment control BMPs shall be placed at the locations shown on the SWPPP site map

Additional Comments:

Check the BMPs you will use:

C231 Brush Barrier

C233 Silt Fence

C235 Wattles

C232 Gravel Filter Berm

C234 Vegetated Strip



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 5: Stabilize Soils

The goal of this element is to stabilize exposed and unworked soils by implementing erosion control BMPs.

This element **does not** apply to my project because:

Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the BMPs you will use:

Exposed soils shall be worked during the week until they have been stabilized. Soil stockpiles will be located within the disturbed area shown on the SWPPP site map. Soil excavated for the foundation will be backfilled against the foundation and graded to drain away from the building. No soils shall remain exposed and unworked for more than 7 days from May 1 to September 30 or more than 2 days from October 1 to April 30. Once the disturbed landscape areas are graded, the grass areas will be amended using BMP T5.13 Post-Construction Soil Quality and Depth. All stockpiles will be covered with plastic or burlap if left unworked.

Additional Comments:

Check the BMPs you will use:

- C120 Temporary & Permanent Seeding
- C122 Nets & Blankets
- C124 Sodding
- C131 Gradient Terraces
- C235 Wattles
- C121 Mulching
- C123 Plastic Covering
- C125 Topsoil / Composting
- C140 Dust Control



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 6: Protect Slopes

The goal of this element is to design and construct cut-and-fill slopes in a manner to minimize erosion.

This element **does not** apply to my project because:

No cut slopes over 4 feet high or slopes steeper than 2 feet horizontal to 1 foot vertical, and no fill slopes over 4 feet high will exceed 3 feet horizontal to 1 foot vertical. Therefore, there is no requirement for additional engineered slope protection.

Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the BMPs you will use:

Additional Comments:

Check the BMPs you will use:

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> C120 Temporary & Permanent Seeding | <input type="checkbox"/> C205 Subsurface Drains | <input type="checkbox"/> C207 Check Dams  |
| <input type="checkbox"/> C204 Pipe Slope Drains             | <input type="checkbox"/> C206 Level Spreader    | <input type="checkbox"/> C208 Triangular Silt Dike (Geotextile-Encased Check Dam) |



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 7: Protect Permanent Drain Inlets

The goal of this element is to protect storm drain inlets during construction to prevent stormwater runoff from entering the conveyance system without being filtered or treated.

This element **does not** apply to my project because:

- The site has open ditches in the right-of-way or private road right-of-way.
- There are no catch basins on or near the site.
- Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the BMPs you will use:

- Catch basins on the site or immediately off site in the right-of-way are shown on the SWPPP site map. Storm drain inlet protection shall be installed.

Additional Comments:

Check the BMPs you will use:

- C220 Storm Drain Inlet Protection



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 8: Stabilize Channels and Outlets

The goal of this element is to design, construct, and stabilize on-site conveyance channels to prevent erosion from entering existing stormwater outfalls and conveyance systems.

This element **does not** apply to my project because:

Construction will occur during the dry weather. No storm drainage channels or ditches shall be constructed either temporary or permanent. A small swale shall be graded to convey yard drainage around the structure using a shallow slope; it shall be seeded after grading and stabilized.

Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the BMPs you will use:

A wattle shall be placed at the end of the swale to prevent erosion at the outlet of the swale.

Additional Comments:

Check the BMPs you will use:

C202 Channel Lining     C207 Check Dams     C209 Outlet Protection     C235 Wattles



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 9: Control Pollutants

The goal of this element is to design, install, implement and maintain BMPs to minimize the discharge of pollutants from material storage areas, fuel handling, equipment cleaning, management of waste materials, etc.

This element **does not** apply to my project because:

Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the BMPs you will use:

Any and all pollutants, chemicals, liquid products and other materials that have the potential to pose a threat to human health or the environment will be covered, contained, and protected from vandalism. All such products shall be kept under cover in a secure location on-site. Concrete handling shall follow BMP C151.

Additional Comments:

Check the BMPs you will use:

C151 Concrete Handling

C152 Sawcutting and Surfacing Pollution Prevention

C153 Material Delivery, Storage, and Containment

C154 Concrete Washout Area



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 10: Control De-watering

The goal of this element is to handle turbid or contaminated dewatering water separately from stormwater.

This element **does not** apply to my project because:

No dewatering of the site is anticipated.

Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the BMPs you will use:

Additional Comments:

Check the BMPs you will use:

C203 Water Bars

C236 Vegetated Filtration

C206 Level Spreader



# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 11: Maintain Best Management Practices

The goal of this element is to maintain and repair all temporary and permanent erosion and sediment control BMPs to assure continued performance.

*Describe the steps you will take:*

- Best Management Practices or BMPs shall be inspected and maintained during construction and removed within 30 days after the City Inspector or Engineer determines that the site is stabilized, provided that they may be removed when they are no longer needed.

### Element 12: Manage the Project

The goal of this element is to ensure that the construction SWPPP is properly coordinated and that all BMPs are deployed at the proper time to achieve full compliance with City regulations throughout the project.

If it **does** apply, describe the steps you will take and select the BMPs you will use:

The Construction SWPPP will be implemented at all times. The applicable erosion control BMPs will be implemented in the following sequence:

- 1. Mark clearing limits
- 2. Install stabilized construction entrance
- 3. Install protection for existing drainage systems and permanent drain inlets
- 4. Establish staging areas for storage and handling polluted material and BMPs
- 5. Install sediment control BMPs
- 6. Grade and install stabilization measures for disturbed areas
- 7. Maintain BMPs until site stabilization, at which time they may be removed

Additional Comments:





# CITY OF MERCER ISLAND

## SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

### Element 13: Protect Low Impact Development BMPs

The goal of this element is to protect on-site stormwater management BMPs (also known as “Low Impact Development BMPs”) from siltation and compaction during construction. On-site stormwater management BMPs used for runoff from roofs and other hard surfaces include: full dispersion, roof downspout full infiltration or dispersion systems, perforated stubout connections, rain gardens, bioretention systems, permeable pavement, sheetflow dispersion, and concentrated flow dispersion. Methods for protecting on-site stormwater management BMPs include sequencing the construction to install these BMPs at the latter part of the construction grading operations, excluding equipment from the BMPs and the associated areas, and using the erosion and sedimentation control BMPs listed below.

*Describe the construction sequencing you will use:*

Additional Comments:

*Select the BMPs you will use:*

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> C102 Buffer Zone | <input type="checkbox"/> C103 High Visibility Fence | <input type="checkbox"/> C231 Brush Barrier |
| <input type="checkbox"/> C233 Silt Fence  | <input type="checkbox"/> C234 Vegetated Strip       |   |