CIVIL ENGINEERING SOLUTIONS

MR 1-5 Storm Drainage Summary

2720 Residence

2720 71st Avenue SE
Mercer Island, WA 98040

3,619 SF (NEW & REPLACED Impervious)

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Checked by Duffy Ellis, PE

General:
This site's new and replaced impervious area is below 5,000 sf, site is subject to minimum requirements MR1-5 identified below.

MR1 = Preparation of Storm Water Site Plans	See C2.0 Drainage Plan
MR2 = Construction Storm Water Pollution Prevention Plan	See C1.0 Erosion Control (TESCP) Plan in plan set.
MR3 = Source Control of Pollution	See C1.0 for erosion control measures recommended to mitigate erosion and sediment discharge from site during construction phase.
MR4 = Preservation of Natural Drainage Systems and Outfalls	Yes. All runoff from significant impervious areas will be tight lined to proposed storm extension in 71st Ave SE.
MR5 = On-site Stormwater Management	No BMPs are proposed for this project
MR6 = Runoff Treatment	N/A - PGIS 366 sf (less than 5,000 sf)
MR7 = Flow Control	N/A (Fee-In-Lieu is being proposed)
MR8 = Wetlands Protection	N/A
MR9 = Operations and Maintenance	N/A

Background:
A new house is proposed at subject address. Existing structures will be removed. All runoff will be captured and piped to the northwest corner of the property where it will meet a proposed storm drain extension in 71st Avenue SE.

Soils and Infiltration Feasibility:
This site is in a "moderate infiltration potential" area according to the Mercer Island Infiltration Feasibility Map, however we are proposing to tightline all of the stormwater to the proposed storm extension in 71st Avenue SE.

Proposed On-site Stormwater management:
The List Approach (List #1) selection process was applied to site:

Lawn and Landscaped Areas:

- Post-Construction Soil Quality and Depth in accordance with Chapter D5 of Bellevue SWES and BMP T5.13 in Chapter 5 of Volume V of the DOE Manual. Compost-Amended Soil is required.

Roofs:

- Full Dispersion:
  Infeasible due to lack of 100 LF flowpath

- Downspout Full Infiltration:
  Not recommended because there is no room to incorporate this on the low side of the house.

- Raingarden:
  Not recommended because there is no room to incorporate this on the low side of the house.

- Downspout Dispersion:
  Not recommended because there is no room to incorporate this on the low side of the house.

- Perforated Stub-Out Connection:
  Not recommended because there is no room to incorporate this on the low side of the house.

Other Hard Surfaces:

- Full Dispersion:
  Infeasible due to lack of 100 LF flowpath

- Permeable Pavement:
  Not recommended with driveway sloping towards the new house.

- Raingarden:
  Not recommended because there is no room to incorporate this on the low side of the house.

- Sheet Flow/Concentrated Flow Dispersion:
  No room given setback requirements.