# Method 4: Pipe, Culvert, and Outfall Installation,

# Removal and Replacement

**Project Title:**

**Project CIP Number:**

*See Section 3 of the SBE, Method 4 for a complete description of the activity and conservation measures for this method. You need this information to fill out this form.*

Pipe, Culvert, and Outfall Installation, Removal and Replacement

1. Identify methods that will be used:

Pipe  Installation  Removal  Removal and replacement

Culvert  Installation  Removal  Removal and replacement

Outfall  Installation  Removal  Removal and replacement

Slip line pipe

Directional drill

Protection of underground pipe or casing protect pipe

Extension of pipe or outfall

1. Identify work, if any, that will occur below the OHW or MHHW line:
2. Identify which document was used to assist in design of culvert to facilitate fish passage:

NMFS’ Anadromous Salmonid Passage Facility Design document.

WDFW’s manual Design of Road Culverts for Fish Passage.

Other:

4, Will any bed or fill material be used during installation of culvert or pipe (for pipe to rest on, or to cover pipe)?  No  Yes

If yes, provide the amount of fill:       yd3

5. Will habitat mix be used to fill any interstitial spaces resulting from installation of bed or fill material  No  Yes

If yes, provide the amount of fill:       yd3

6. If working in a tidal area, will all work be conducted at low tide  No  Yes

7. Can work be finished within one tidal cycle  No  Yes

If not, will work be phased so work is complete during each low tide cycle  No  Yes

8. Provide additional information (if any) on this construction method

Conservation Measures

The following table contains the conservation measures identified for Method 4. The table only provides a brief summary of the conservation measures. Please see Section 4 of the SBE for a complete description of each conservation measure. To get programmatic coverage by the Corps and Services for projects using this method, all conservation measures identified below must be included with the project (see Section 10 of the SBE). If, for some reason, a conservation measure is not applicable, or will not be used, you MUST provide a reason the conservation measure is not applicable or will not be used in the “Provide additional information” section below. Provide any additional conservation measures that may be implemented but are not listed. These may be found in Section 4: Conservation Measures of the SBE or in the City Standard Specifications.

| **Conservation Measures** | **Description** | **Included in**  **Project?** |
| --- | --- | --- |
| 1 | Approved work windows |  |
| 2 | Onsite Temporary Erosion and Sediment Control Plan |  |
| 3 | Onsite Spill Prevention and Control Plan |  |
| 4 | Maintain a spill kit onsite |  |
| 12 | Use sediment barriers to prevent erosion and sediment from entering waterbodies |  |
| 13 | Keep erosion control materials onsite to respond to emergencies |  |
| 14 | Use curb inlet sediment traps and geotextile filters to capture sediment before it leaves the site |  |
| 15 | Clean equipment that will work below the OHW or MHHW lines or in riparian or shoreline areas |  |
| 16 | Fuel equipment in staging areas |  |
| 17 | Onsite oil absorbing floating booms |  |
| 18 | Use vegetable-based hydraulic fluid when equipment operates in sensitive areas |  |
| 30 | Develop a TDP for any dewater lasting more than 1 day |  |
| 78 | Other chemicals will be subject to Tier 1 chemical applications exemptions and will require approval from the Seattle Parks and Recreation IPM coordinator and the Office of Sustainability and Environment |  |

Please provide any additional information on Conservation Measures used or not used for this Method: