



NOTES:

- See Std. Plans GSI-05a and b for plan view. See Std. Plan GSI-04 for transition zone requirements.
- 24-inch minimum required where adjacent to parking.
- Geomembrane liner per SWMM BMP L630 and shall be PVC with a minimum thickness of 30 mils and in accordance with ASTM D7176. Seams shall be waterproof. Liner to create a watertight installation to top of freeboard. Prepare subgrade for liner per Engineer. Liner specification may vary based on site conditions.
- Penetrations through facility liner shall be watertight and shall prevent preferential flow into utility trenches (e.g. water stop, trench block, or trench collar), as appropriate.
- Provide geotextile under PVC liner to protect liner from sharp rocks if recommended by liner manufacturer. Geotextile per liner manufacturer.
- Liner secured at top and/or keyed per manufacturer. All seams to be sealed and waterproof per manufacturer and all penetrations to be booted. Liner shall be installed and seamed to create a watertight installation to top of freeboard.
- Plantings per Std. Plan GSI-20a and plans.
- Plantings adjacent to parking shall be selected and spaced to allow pedestrian access to vehicles.
- Sizing and design of facility per SWMM BMP L630.
- Freeboard depth varies (2-inches or 6-inches) depending upon size of drainage area. For freeboard, ponding and overflow depth, see SWMM BMP L630.
- Underdrain bedding per WSDOT 9-03.12(4) Gravel Backfill for Drains.
- Overflow type depends on project design. See Std. Plan GSI-13 or GSI-14. Alternate overflow type may be allowed.
- Side slopes steeper than 3:1 may be approved if overall facility depth is less than 3 feet from top of mulch to top of facility.
- Inlet elevation to be above freeboard elevation.

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CITY OF TACOMA
BIORETENTION SECTION
WITH LINER AND UNDERDRAIN
STANDARD PLAN NO. GSI-03c