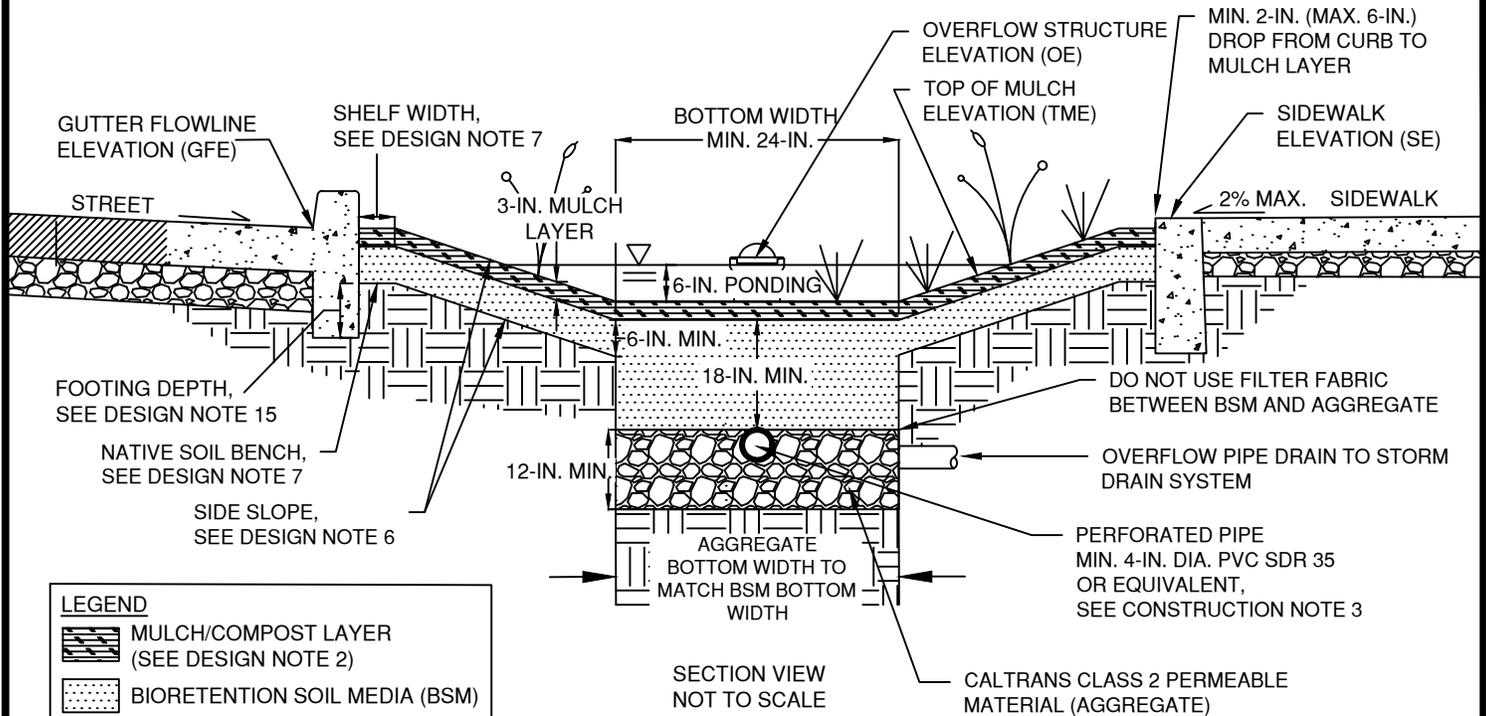


**STREET SIDE WITH CURB AND GUTTER  
TYPICAL SECTION VIEW**

**SIDEWALK SIDE  
TYPICAL SECTION VIEW**



**LEGEND**

-  MULCH/COMPOST LAYER (SEE DESIGN NOTE 2)
-  BIORETENTION SOIL MEDIA (BSM)
-  AGGREGATE
-  NATIVE SOIL
-  ASPHALT PAVEMENT
-  CONCRETE

**CONSTRUCTION NOTES**

1. MAINTAIN UNDISTURBED NATIVE SOIL BENCH TO SUPPORT ADJACENT SIDEWALK AND STREET. SEQUENCE WORK TO CONSTRUCT CURBS BEFORE EXCAVATING BIORETENTION AREA FOR AGGREGATE AND BSM.
2. SCARIFY SUBGRADE A MINIMUM OF 6-IN. WITHIN BIORETENTION FACILITY BEFORE INSTALLING BIORETENTION AREA AGGREGATE AND BSM. DO NOT COMPACT SUBGRADE, AGGREGATE OR BSM.
3. INSTALL PERFORATED PIPE WITH HOLES FACING DOWN. SLOPE TO DRAIN TOWARD OVERFLOW STRUCTURE/PIPE.
4. DO NOT WORK WITHIN BIORETENTION AREA DURING RAIN OR UNDER WET CONDITIONS.
5. KEEP HEAVY MACHINERY AND CONSTRUCTION MATERIALS OUTSIDE BIORETENTION AREA LIMITS.
6. STORMWATER SHALL BE DIRECTED AWAY FROM BIORETENTION AREA UNTIL CONSTRUCTION IS COMPLETE.
7. AN APPROVED PRE-MIXED BSM SHALL BE INSTALLED. BSM MAY BE SUBJECT TO TESTING.
8. CITY INSPECTOR WRITTEN APPROVAL REQUIRED AT ALL KEY STAGES IDENTIFIED ON CITY STORMWATER TREATMENT FACILITIES INSPECTION CHECKLIST.
9. DRIP IRRIGATION RECOMMENDED. SPRAY HEAD IRRIGATION SYSTEM SHALL BE POSITIONED TO AVOID DIRECT SPRAY INTO OUTLET STRUCTURES OR CURB CUT INLETS.
10. NO FERTILIZER SHALL BE ADDED.

**GREEN INFRASTRUCTURE STANDARD DETAILS**  
ADAPTED FROM LIDI CASQA PROPOSITION 84 GRANT

**SLOPE-SIDED BIORETENTION FACILITY**

**CITY OF SAN PABLO  
PUBLIC WORKS DEPT.**  
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PREPARED BY: JIMMY ZHOU    VERSION: 10/16/2024

APPROVED BY:  01/23/25  
PUBLIC WORKS DIRECTOR / CITY ENGINEER    DATE

**GI-1**

SHEET 1 OF 2

**DESIGN NOTES**

1. BIORETENTION FACILITIES TO MEET CONTRA COSTA CLEAN WATER PROGRAM STORMWATER C.3 GUIDEBOOK GUIDELINES.
2. BIORETENTION SOIL MEDIA (BSM), MULCH AND PLANT SELECTION TO FOLLOW CONTRA COSTA CLEAN WATER PROGRAM STORMWATER C.3 GUIDEBOOK. NO TREES SHALL BE PLANTED IN BIORETENTION FACILITIES.
3. PROVIDE SPOT ELEVATIONS AT CURB CUT INLETS AND OVERFLOW STRUCTURES ON CIVIL PLANS (TME, OE, GFE, SE).
4. LONGITUDINAL ELEVATION SHALL BE SLOPED AT A MAXIMUM OF 4% OR WITH WRITTEN EXCEPTION FROM CITY ENGINEER.
5. CONCRETE CHECK DAMS SHALL BE PLACED FOR EVERY 4-IN. TO 6-IN. OF LONGITUDINAL ELEVATION CHANGE (DETAIL GI-5).
6. SIDE SLOPE 4:1 (H:V) PREFERRED, 3:1 MINIMUM WITH SHELF OR WITH WRITTEN EXCEPTION FROM CITY ENGINEER.
7. SHELF WIDTH SHOULD BE SAME WIDTH AS NATIVE SOIL BENCH BELOW. FOR INSTALLATIONS IN NEW STREETS, MINIMUM SHELF WIDTH IS 12-IN. OR WITH EXCEPTION FROM CITY ENGINEER. FOR INSTALLATIONS IN EXISTING STREETS, SHELF WIDTH MAY BE DECREASED WITH AN INCREASED FOOTING DEPTH OF THE BIORETENTION CURB AND GUTTER.
8. BIORETENTION FACILITY DESIGN SHALL OPTIMIZE THE FLAT BOTTOM DIMENSIONS TO MAXIMIZE THE FUNCTIONAL AREA OF THE FACILITY. MINIMUM 2-FT. WIDE FLAT BOTTOM OR WITH WRITTEN EXCEPTION FROM CITY ENGINEER.
9. DEPTH OF AGGREGATE DETERMINED BY SITE SPECIFIC REQUIREMENTS. MINIMUM DEPTH OF 12-IN. UNLESS HYDROMODIFICATION IS REQUIRED. HYDROMODIFICATION DEPTH PER WRITTEN APPROVAL BY CITY ENGINEER.
10. SLOPE PERFORATED PIPES AND OTHER UNDERDRAIN PIPES TOWARD THE OVERFLOW STRUCTURE OR CLEANOUT. OVERFLOW STRUCTURE AND CLEANOUT SHALL DRAIN TO STORM DRAIN SYSTEM.
11. DO NOT USE FILTER FABRIC BETWEEN BSM AND AGGREGATE.
12. PROVIDE A MINIMUM OF ONE CLEAN-OUT/OBSERVATION PORT IN EACH FACILITY.
13. CURB CUT INLET PER DETAIL GI-3.
14. CURB AND GUTTER PER DETAIL GI-4.
15. FOR BIORETENTION FACILITIES ADJACENT TO PARKING LOTS, CURB STOPS (BUMPER) ARE REQUIRED. PARKING LOT BIORETENTION FACILITIES WITHOUT CURB STOPS ARE REQUIRED TO FOLLOW "STREET SIDE WITH CURB AND GUTTER TYPICAL SECTION VIEW" STANDARD.
16. LOCATE CURB CUTS AND GUTTER MODIFICATIONS TO AVOID ACCESSIBILITY CONFLICTS (E.G. LOCATE OUTSIDE OF CROSSWALKS). PROVIDE PEDESTRIAN CROSSINGS THROUGH BIORETENTION FACILITIES AS APPROPRIATE.
17. BIORETENTION FACILITIES TO AVOID UTILITY CONFLICTS. CONSULT WITH CITY ENGINEER TO ADDRESS UTILITY CONFLICTS IF NEEDED.

 	<b>GREEN INFRASTRUCTURE STANDARD DETAILS</b> <small>ADAPTED FROM LIDI CASQA PROPOSITION 84 GRANT</small>		<b>CITY OF SAN PABLO PUBLIC WORKS DEPT.</b> 1000 GATEWAY AVE 2ND FLOOR SAN PABLO, CA 94806 TEL: (510) 215-3060
	<b>SLOPE-SIDED BIORETENTION FACILITY</b>		
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