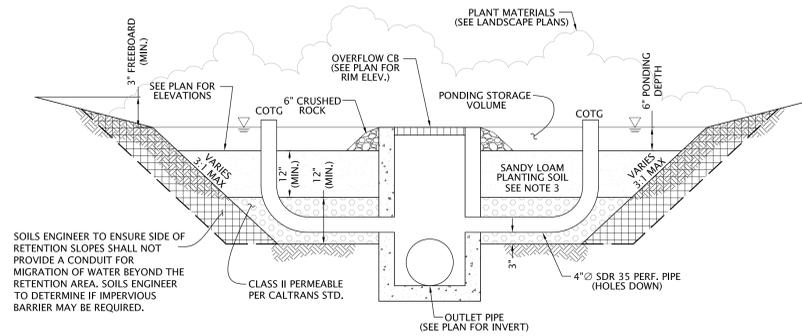


TREATMENT TRIBUTARY AREAS AND TREATMENT METHODS



- BIOTREATMENT AREAS SHALL BE CONSTRUCTED UNDER THE OBSERVATION OF THE SOILS ENGINEER.
- SOIL AT BOTTOM OF RETENTION AREA SHALL HAVE A MINIMUM PERCOLATION RATE OF 5 INCHES/HOUR AND A MAXIMUM PERCOLATION RATE OF 10 INCHES/HOUR. IN-SITU TESTING SHALL BE CONDUCTED TO VERIFY THAT THE MATERIAL MEETS THE PERCOLATION REQUIREMENTS.
- SINCE THE NATIVE SOILS DO NOT SUPPORT THE ABOVE MENTIONED PERCOLATION RATES, ENGINEERED SOIL SHALL BE INSTALLED, IT SHALL BE COMPOSED OF THE FOLLOWING: 50% CONSTRUCTION SAND, 20-30% TOPSOIL WITH LESS THAN 5% MAXIMUM CLAY CONTENT AND 20-30% LEAF COMPOST. ENGINEERED SOIL SHALL BE IMPORTED AND SUBJECT TO OBSERVATION AND TESTING BY THE SOILS ENGINEER.
- NO BARK MULCH SHALL BE PLACED IN THE BIOTREATMENT AREA.
- PERK RATE SHALL BE VERIFIED BY SOILS ENGINEER.
- SOIL MIX SHALL CONSIST OF 50% CONSTRUCTION SAND, 20-30% TOPSOIL WITH LESS THAN 5% MAXIMUM CLAY CONTENT, AND 20-30% ORGANIC LEAF COMPOST WITH AN INFILTRATION RATE OF 5-10 INCHES/HOUR.

BIOTREATMENT AREA DETAIL
N.T.S.

BIOTREATMENT MAINTENANCE

INSPECTION ACTIVITIES	SUGGESTED FREQUENCY
<ul style="list-style-type: none"> INSPECT AFTER SEEDING AND AFTER FIRST MAJOR STORMS FOR ANY DAMAGES. 	POST-CONSTRUCTION
<ul style="list-style-type: none"> INSPECT FOR SIGNS OF EROSION, DAMAGE TO VEGETATION, CHANNELIZATION OF FLOW, DEBRIS AND LITTER, AND AREAS OF SEDIMENT ACCUMULATION. PERFORM INSPECTIONS AT THE BEGINNING AND END OF THE WET SEASON. ADDITIONAL INSPECTIONS AFTER PERIODS OF HEAVY RUNOFF ARE DESIRABLE. 	SEMI-ANNUAL
<ul style="list-style-type: none"> INSPECT VEGETATION ALONG SIDE SLOPES FOR EROSION AND FORMATION OF RILLS OR GULLIES, AND SAND/SOIL BED FOR EROSION PROBLEMS. 	ANNUAL
MAINTENANCE ACTIVITIES	SUGGESTED FREQUENCY
<ul style="list-style-type: none"> MOW IF GRASS IS PLANTED. TO MAINTAIN A HEIGHT OF 3-4 INCHES, FOR SAFETY, AESTHETIC, OR OTHER PURPOSES. LITTER SHOULD ALWAYS BE REMOVED PRIOR TO MOWING. CLIPPINGS SHOULD BE COMPOSTED. IRRIGATE BIOTREATMENT AREAS DURING DRY SEASON (APRIL THROUGH OCTOBER) OR WHEN NECESSARY TO MAINTAIN THE VEGETATION. PROVIDE WEED CONTROL, IF NECESSARY TO CONTROL INVASIVE SPECIES. 	AS NEEDED (FREQUENT, SEASONALLY)
<ul style="list-style-type: none"> REMOVE LITTER, BRANCHES, ROCKS BLOCKAGES AND OTHER DEBRIS AND DISPOSE OF PROPERLY. REPAIR ANY DAMAGED AREAS WITHIN A CHANNEL IDENTIFIED DURING INSPECTIONS. EROSIONS RILLS OR GULLIES SHOULD BE CORRECTED AS NEEDED. BARE AREAS SHOULD BE REPLANTED AS NECESSARY. 	SEMI-ANNUAL
<ul style="list-style-type: none"> CORRECT EROSION PROBLEMS IN THE SAND/SOIL BED OF DRY BIOTREATMENT AREAS. PLANT AN ALTERNATIVE GRASS SPECIES IF THE ORIGINAL GRASS COVER HAS NOT BEEN SUCCESSFULLY ESTABLISHED. RESEED AND APPLY MULCH TO DAMAGED AREAS. 	ANNUAL (AS NEEDED)
<ul style="list-style-type: none"> REMOVE ALL ACCUMULATED SEDIMENT THAT MAY OBSTRUCT FLOW THROUGH THE BIOTREATMENT AREAS. SEDIMENT ACCUMULATING NEAR CULVERTS AND IN CHANNELS SHOULD BE REMOVED WHEN IT BUILDS UP TO 3 IN. AT ANY SPOT, OR COVERS VEGETATION, OR ONCE IT HAS ACCUMULATED TO 10% OF THE ORIGINAL DESIGN VOLUME. REPLACE THE GRASS AREAS DAMAGED IN THE PROCESS. ROTTOTILL OR CULTIVATE THE SURFACE OF THE SAND/SOIL BED OF DRY BIOTREATMENT AREAS IF THE BIOTREATMENT AREAS DOES NOT DRAW DOWN WITHIN 48 HOURS. 	AS NEEDED (INFREQUENT)

IMPERVIOUS/PERVIOUS AREA TABLE

EXISTING	AREA (S.F.)	% TOTAL
IMPERVIOUS	540577	93.4
PERVIOUS	37895	6.6
TOTAL	578472	100.0
C-FACTOR	0.86	

PROPOSED	AREA (S.F.)	% TOTAL
IMPERVIOUS	430278	74.4
PERVIOUS	148194	25.6
TOTAL	578472	100.0
C-FACTOR	0.75	

BIOTREATMENT AREA CALCULATIONS

BIOTREATMENT AREA	IMPERVIOUS AREA (SQ. FT.)	IMPERVIOUS AREA (ACRES)	*REQUIRED TREATMENT AREA (SQ. FT.)	ACTUAL TREATMENT AREA (SQ. FT.)
(A)	54305	1.25	2172	2200
(B)	54866	1.26	2195	2200
(C)	46300	1.06	1852	2095
(D)	27903	0.64	1116	1260
(E)	29420	0.68	1177	1200
(F)	53623	1.23	2145	2210
(G)	81855	1.88	3274	3595
(H)	82006	1.88	3280	3750
TOTAL	430278	9.88	17211	18510

*REQUIRED BIOTREATMENT AREA IS 4% OF THE IMPERVIOUS AREA WITHIN THE CONTRIBUTING WATERSHED AREA.



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A Planning Department Submittal for
COMMONWEALTH CORPORATE CENTER
151 Commonwealth Drive
Menlo Park, California 94025

The **SOBRATO** Organization

DATE	DESCRIPTION
11.23.11	PLANNING DEPARTMENT SUBMITTAL
07.20.12	PLANNING DEPARTMENT SUBMITTAL

PRELIMINARY
STORMWATER
MANAGEMENT PLAN
C3.0

PROJECT NO: A11089-2

