VEGETATIVE STABILIZATION
Permanent and Temporary Seeding, Sodding and Mulching

Site Preparation
Permanent or temporary stabilization shall be completed within (a.) seven calendar dayss to the surface of all sediment control practices such as diversions, grade stabilization structures, berms, dikes, grassed waterways, sediment basins, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and (b.) fourteen days as to all other disturbed or graded areas on the project site.

II. Seedbed Preparation and Seeding Application
The top layer of soil shall be loosened, limed and fertilized by raking, discing or harrowing or other acceptable means before seeding. Flat areas and slopes up to 3 to 1 grade shall be loose and friable to a depth of at least 3 inches. Slopes steeper than 3 to 1 shall have the slopes up to 1-3 inches of loose soil and friable before seeding. Flat areas and slopes up to 3 to 1 grade shall be loose and friable to a depth of at least 3 inches. Slopes steeper than 3 to 1 shall have the top 1-3 inches of soil loose and friable before seeding. Apply seed uniformly with a cyclone seeder, drill cultipacker, seeder or hydroseeder on a firm moist seedbed.

III. Soil Amendments
Lime and fertilize according to soil tests. In lieu of soil test apply the following:
Dolomitic: 2 tons/acre or 92 lbs/1000 sq. ft. (permanent and sodding)
Limestone: 1 ton/acre or 46 lbs/1000 sq. ft. (temporary)
Fertilizer: 10-10-10 or equivalent at 1000 lbs/acre or 23 lbs/1000 sq. ft. (permanent and sodding) 10-10-10 or equivalent at 600 lbs/acre or 15 lbs/1000 sq. ft. (temporary).

IV. Sediment Control Practices Seeding
Seed: 'Kentucky 31' Tall Fescue 60 lbs/acre or 1.38 lbs/1000 sq. ft. and Italian (annual) ryegrass 40 lbs/acre or .92 lbs/1000 sq. ft.
Dates: 2/1 - 10/3 1 5/1 - 8/14 with irrigation

V. Temporary Seeding: Per growing season
Seed: Italian or perennial ryegrass 40 lbs/acre or .92 lbs/1000 sq. ft.
Dates: 2/1 - 4/30 and 8/15 - 11/30
Seed: Millet 40 lbs/acre or .92/1000 sq. ft.
Dates: 5/1 - 8/14

VI. Permanent Seeding
A. Residential and High Maintenance Areas
Seed: Kentucky Bluegrass, 'Plush', 'Birka', 'Parade', 'Vantage', 'Columbia', 'Merion', 'Adelphi', 'South Dakota', 'Kenblue'. Any three varieties at 30 lbs. to make 90 lbs/acre of 2 lbs/1000 sq. ft. and Red Fescue - 'Penniawn' or Jamestown 10 lbs/1000 sq. ft.
Dates: 2/1 - 4/30 and 8/15 - 10/3 1
Seed: 'Kentucky 31' Tall Fescue 220-260 lbs/acre or 5-6 lbs/1000 sq. ft.
Dates: 2/1 - 10/31(5/l - 8/14 Irrigation required)

B. Low Maintenance and Mining Areas
Seed: 'Kentucky 31' Tall Fescue 40 lbs/acre or 1.92 lbs/1000 sq. ft. and 'Interstate' Sericea lespedeza (inoculated) 20 lbs/acre or .46 lbs/1000 sq. ft.
Dates: 2/1 - 4/30 and 8/15 - 10/31

C. General and large Acreage
Seed: 'Kentucky 31' Tall Fescue 60 lbs/acre or 1.38 lbs/f000 sq. ft.
Dates: 2/1 - 10/31

VII. Mulching
All seedings require mulching. Also, use mulch during non-seeding dates until seeding can be done. Mulch shall be unrotted, unchopped small grain straw applied at a rate of 1-1/2 to 2 tons/acre or 70-90 lbs/1000 sq. ft. (2 bales). Mulch materials shall be relatively free of all kinds of weeds and shall be free of prohibited noxious weeds. Spread mulch uniformly mechanically or by hand. Mulch anchoring shall be accomplished immediately after mulch placement to minimize loss by wind or water. This may be done by mulch nettings, mulch anchoring tool, peg and twine or liquid mulch binders.

Liquid mulch binder shall be rapid curing cutback asphalt applied at a rate of 200 gal/acre or 5 gal. Per 1000 sq. ft. Slopes 8 feet or more high use 348 gal/acre or 8 gal/1000 sq. ft.

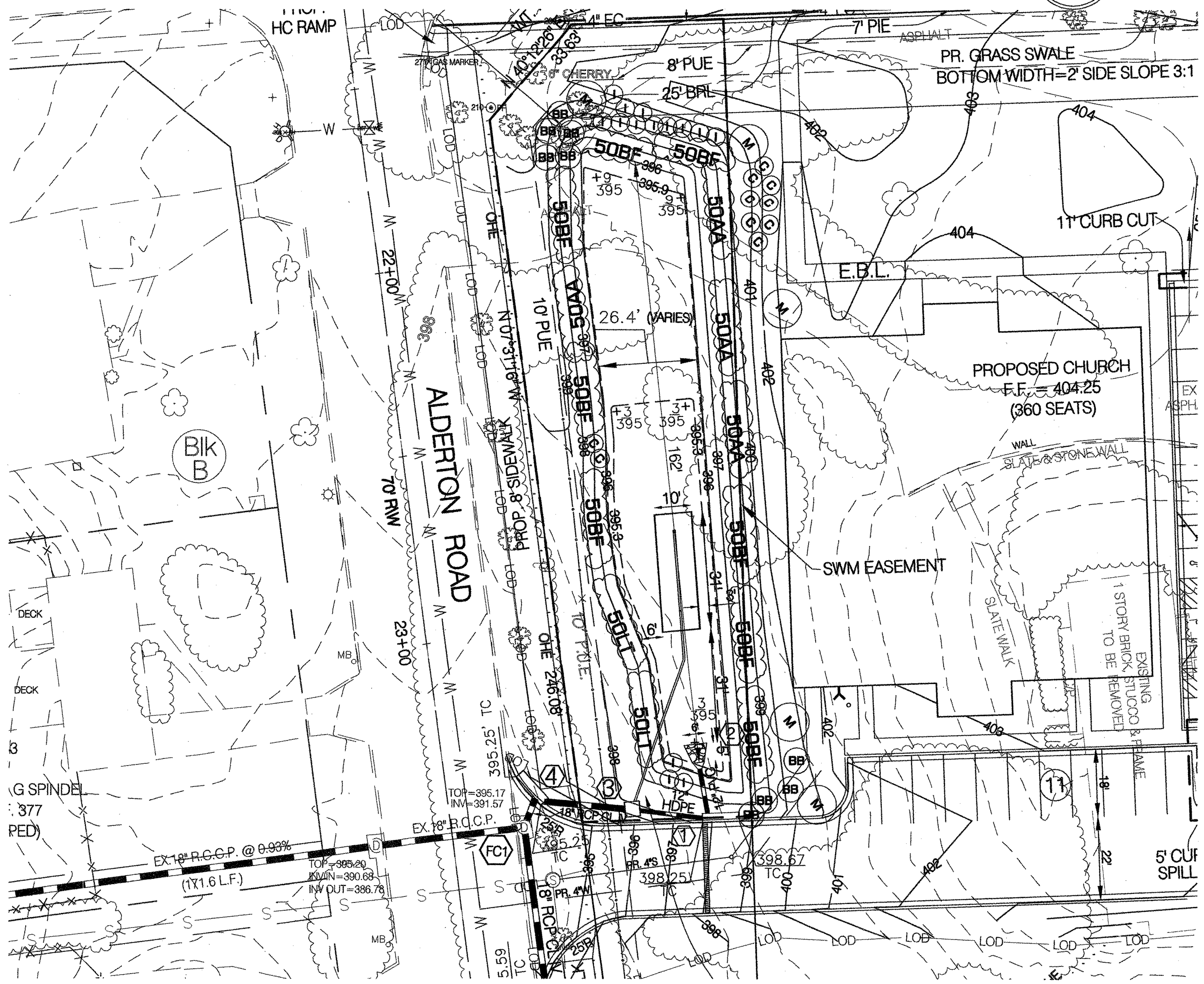
VIII. Sodding
Class of turfgrass sod shall be Maryland or Virginia State certified, or Md. Or Virginia State approved sod. Sod shall be harvested, delivered and installed within a period of 36 hours. Sod is to be laid with the long edges parallel to the contour with staggered joints with all ends tightly abutting and not over lapping. Sod shall be rolled and thoroughly watered within eight hours of installation. Daily watering to maintain 4 inch depth of moisture for the first week is required in the absence of rainfall. Sod is not to be applied on frozen ground.

IX. Maintenance
A. Irrigation - when soil moisture deficient irrigate to prevent loss of stand of protection vegetation.
B. Repairs - if stand is inadequate for erosion control, overseed and fertilize using half of the rates originally applied. If stand is over 60% damaged, reestablish following original rates and procedures.

Note: Use of this information does not preclude meeting all of the requirements of the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control Vegetative Practices or SCS Standards and Specifications for Critical Area Planting (MD-342).

SAND FILTER LANDSCAPE PLAN

SCALE: 1" = 20'

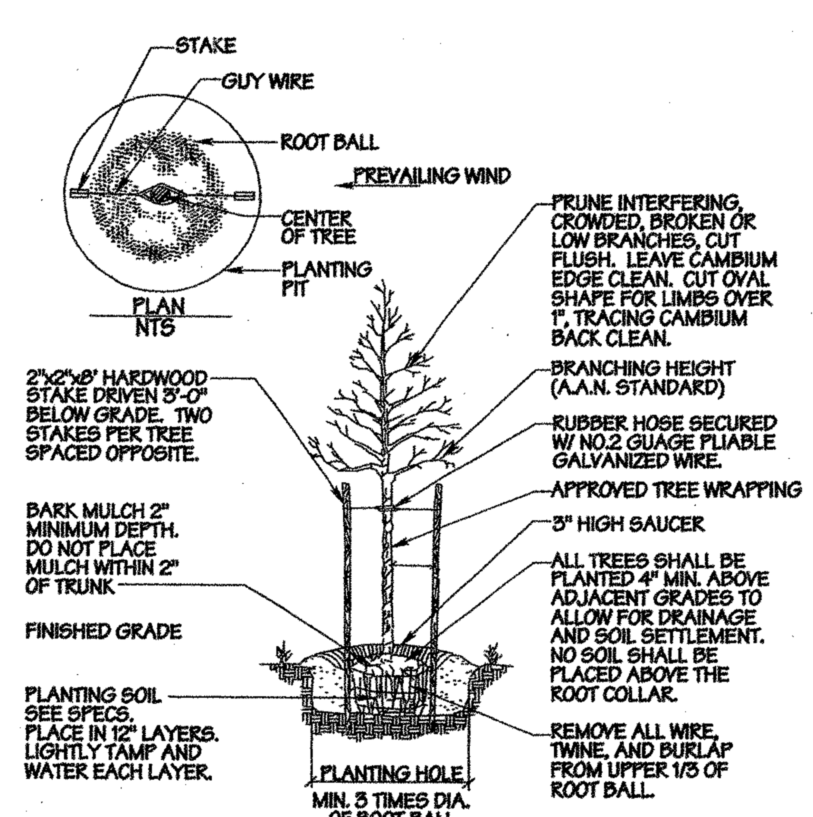


LEGEND

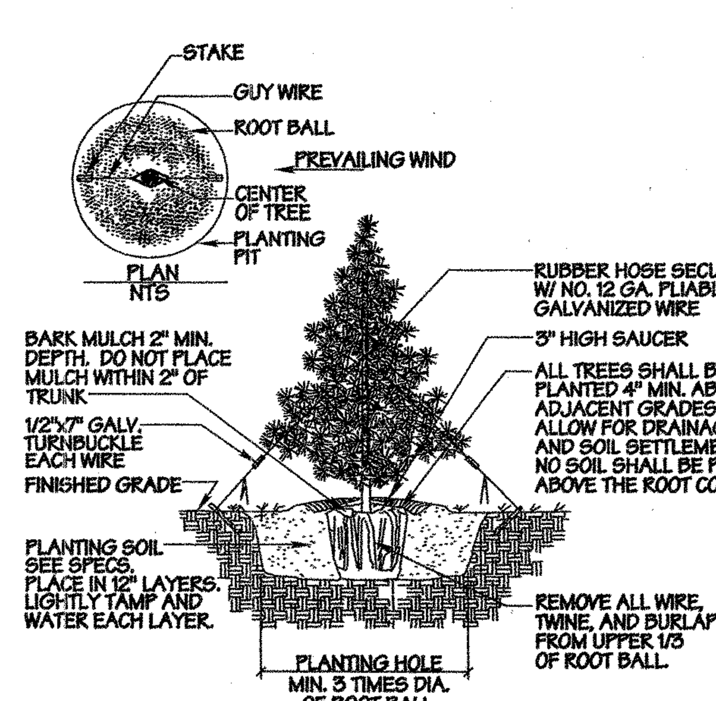
Existing 2' Contour	– – – – –
Existing 10' Contour	—— ——
Proposed Contour	————
Stormdrain Pipe	▬▭▬
Existing Tree Line	︵︵︵
Tree Save - Limit of Disturbance	—— TS—LOD ——
Limit of Disturbance	—— LOD —— LOD —— LOD —— LOD ——
Ex. Fence	—— X —— X —— / —— // ——

PLANT LIST

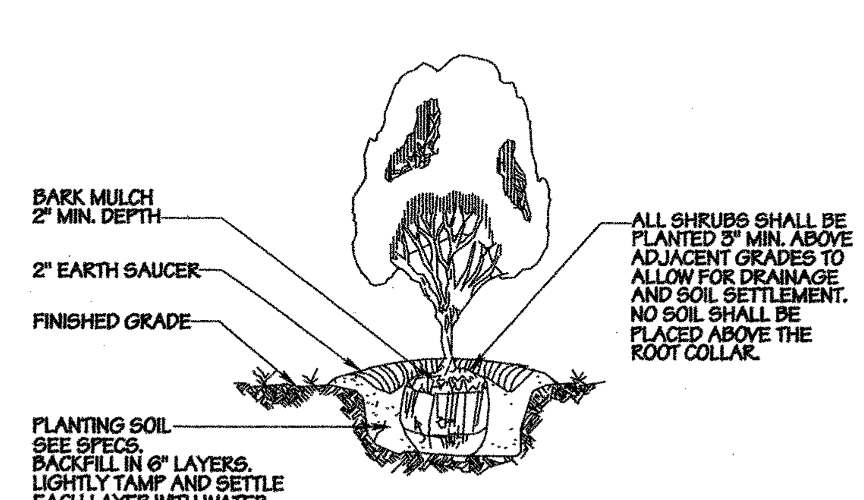
SYMBOL	QTY.	BOTANICAL / COMMON NAME	SIZE	REMARKS
M	5	Magnolia virginiana / Sweetbay	5'-6' high	B & B
BB	09	Cephalanthus occidentalis / Buttonbush	12-18" high	Container
C	10	Clethra alnifolia / Sweet Pepperbush	12-18" high	Container
I	14	Ilex verticillata / Winterberry	12-18" high	Container
BF	100	Iris versicolor / Blue Flag	Bare root	12"o.c.
AA	150	Peltandra virginica / Arrow arum	Bare root	18"o.c.
LT	100	Saururas cernuus / Lizard's Tail	Bare root	18"o.c.



TYPICAL SMALL TREE PLANTING DETAIL
(2" CALIPER OR LESS)
NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



TYPICAL SHRUB PLANTING DETAIL
NOT TO SCALE

OWNER / APPLICANT:
Mircale Temple Assembly of God
2457 Linden Lane
Silver Spring, MD 20910
301-868-5900

"MISS UTILITY"
FOR LOCATION OF UTILITIES CALL
1-800-257-7777 48 HOURS IN ADVANCE
OF ANY WORK IN THIS VICINITY.

MONTGOMERY COUNTY MARYLAND
DEPARTMENT OF PERMITTING SERVICES
WATER RESOURCES SECTION

STORMWATER MANAGEMENT FACILITY LANDSCAPING GUIDELINES

July 2005

In accordance with Montgomery County Executive Regulation 7-02AM, all above ground stormwater management facilities in Montgomery County shall be landscaped to improve their aesthetics, enhance water quality and improve wildlife habitat. The intent of this requirement is to insure that these structures are developed in a manner that will yield the greatest environmental and amenity benefit to the community.

Design Objectives

At a minimum, the entire stormwater management easement shall be landscaped. At least 40% of the plantable area of the easement shall be planted to vegetation other than turf grass. The following objectives should be considered when choosing the types of plants and their placement, in order to:

1. Assure aesthetic compatibility with the community
2. Enhance water quality
3. Provide wildlife habitat

Plantable area is defined as all areas that can be landscaped with vegetation other than grass. **All other areas will be clearly delineated on the landscape plan, and must be planted in turf grass.** These other areas include: MD 378 embankments and stormwater management easement access areas. Public utility rights-of-way are not considered plantable unless permission has been granted by the responsible utility.

A detailed landscape plan of the stormwater management parcel must be included as part of the sc/swm plan submittal. The plan must be prepared by a Landscape Architect registered in the State of Maryland.

Design Criteria

Landscaping shall enhance the aesthetic appeal of the facility. The facility should blend with the overall landscaping of the site.

The facilities must be designed with irregular, naturalistic curved outlines. Rectangular is not natural.

On MD-378 facilities:

1. No trees or shrubs will be allowed anywhere on the embankment, within 15 ft. of either toe of the embankment, or within 25 ft. of the riser.
2. Plantings are encouraged around private storm drain outfalls.
3. Only groundcovers which meet MD 342 Critical Area Stabilization shall be planted on the embankment. Tall groundcovers make maintenance inspections difficult.
4. Planting trees above the Cpv water surface elevation is encouraged. Limited tree planting may be allowed below the Cpv water surface elevation, with the understanding that this area may flood for long periods if the pond is not properly maintained, and the trees may not survive.
5. Landscaping shall not impede the flow of water in the facility or impede the function of the facility.
6. See MD 378 for further details pertaining to pond design.

On Non MD-378 facilities:

1. Mulched planting islands are permitted on the embankment. These islands can be planted with perennials, ornamental grasses or small shrubs (less than 5 ft mature height), and will cover no more than 30% of the embankment surface area. No running type vegetation will be allowed in these islands.
2. Plantings are allowed within 15 ft of the toe of the dam.
3. Plantings are not allowed within 15 ft of the riser or low flow orifice.
4. No perforated pipes are allowed within the mature tree canopy zone.
5. Except for the planting islands, the remainder of the embankment shall meet MD 342 Critical Area Stabilization.
6. No vegetation will be planted in the sand filter.
7. No woody vegetation will be planted in the grass filter above the sand filter.
8. Limited tree planting may be allowed below the 2 year water surface elevation or the water quality elevation, with the understanding that this area may flood for long periods if the pond is not properly maintained, and the trees may not survive.
9. Landscaping shall not impede the flow of water in the facility or impede the function of the facility.

Trees are not permitted on slopes greater than 3:1 within the stormwater easement.

Slopes steeper than 3:1 anywhere in the easement shall be stabilized according to MD 342 Critical Area Stabilization. No slopes greater than 2:1 are allowed.

Invasive species are not permitted. See appendix A.

No landscaping shall obstruct any maintenance access to the facility.

Choose plant materials that can also supply food and cover for native birds, insects, and mammals wherever possible.

Trees and shrubs shall be selected for the anticipated soil wetness and ponding frequency.

Trees and shrubs should be planted around the perimeter of wet ponds or wetland ponds and at inflow points to help reduce thermal impacts. Ornamental grasses and other tall perennials can be used at outfalls to reduce thermal impacts.

Wildflower meadows are permitted. When used on embankments, the grass component of the wildflower mix shall be doubled and the slopes shall be no steeper than 5:1. Annual inspection is encouraged to check for erosion and woody growth. For greatest wildlife benefit, once yearly mowing should occur in late winter.

Stormwater facilities must have irregular outlines to blend naturally into the environment and provide more aesthetic appeal. Rectangular is not natural.

Vegetation should be planted thickly enough to hold the soil, shade out weeds, and be aesthetically pleasing. Native plants are encouraged, but not required.

Trees shall be a minimum of 2" caliper, shrubs shall be minimum 3 gal. size and herbaceous material shall be a minimum of 1 gal. size.

The soil within the easement area shall be loosened to a depth of three to five inches. Topsoil shall be spread to a depth of four to eight inches. The addition of topsoil will allow plants to become established faster, and will help insure quicker and more complete stabilization.

The Forest Conservation easement and the Stormwater management easement may not overlap. Forest Conservation easements are allowed within the Stormwater management parcel, exclusive of the easement.

The landscape plan shall be included as part of the asbuilt plan, and must be certified by a registered landscape architect.

Substitutions and modifications from the approved landscape plan must be approved by MCDPS prior to implementation. This includes plant substitutions, changes in the number of plants, and revised planting locations.

Appendix A

Invasive Species

Scientific Name	Common Name	Growth Habit
Acer platanoides	Norway Maple	Tree
Acer pseudoplatanus	Sycamore Maple	Tree
Ailanthus altissima	Tree of Heaven	Tree
Ampelopsis brevipedunculata	Porcelain Berry	Vine
Berberis thunbergii	Japanese Barberry	Shrub
Catalpa sp.	Catalpa	Tree
Celastrus orbiculatus	Oriental Bittersweet	Vine
Coronilla varia	Crown Vetch	Herbaceous
Eleagnus angustifolium	Russian Olive	Shrub
Eleagnus umbellata	Autumn Olive	Shrub
Eulalia viminеus	Beefsteak Mint	Herbaceous
Euonymus alatus	Winged Euonymus	Shrub
Euonymus fortunei	Climbing Euonymus	Vine
Hedera helix *	English Ivy	Vine
Ligustrum sp.	Privet	Shrub
Lonicera sp.	Bush Honeysuckles	Shrub
Lonicera japonica	Japanese Honeysuckle	Vine
Lysimachia nummularia	Moneywort	Herbaceous
Lythrum sp.	Purple Loosestrife	Herbaceous
Morus alba	White Mulberry	Tree
Myoston aquaticum	Moneywort	Herbaceous
Paulownia tomentosa	Empress Tree	Tree
Phellodendron amurense	Amur Cork Tree	Tree
Phragmites australis	Wild Reed	Herbaceous
Phyllostachys sp.	Bamboo	Herbaceous
Prunus avium	Sweet Cherry	Tree
Pueraria lobata	Kudzu	Vine
Rhamnus cathartica	Common Buckthorn	Shrub
Rhamnus frangula	European Buckthorn	Shrub
Rubus illecebrosus	Strawberry-Raspberry	Shrub
Rubus phoenicolasius	Wineberry	Shrub
Spiraea japonica	Japanese Spirea	Shrub
Symphoricarpos orbiculatus	Coralberry	Shrub
Typha sp.	Cattail	Herbaceous
Vinca minor *	Periwinkle	Vine
Wisteria floribunda	Wisteria	Vine
Wisteria sinensis	Chinese Wisteria	Vine

* use with caution. May be used in areas such as parking lot islands where it is not likely to spread.

STATE OF MARYLAND · MICHAEL S. NAGY · NO. 520 · REGISTERED LANDSCAPE ARCHITECT

MCDPS APPROVED FOR:

Stormwater Management: SF/FS/INF/BR(S)
4-5-2011
Reviewed Date 4/5/11
Approved Date
230470
SM FILE #

Sediment Control Technical Requirements:
4-5-2011
Reviewed Date 4/5/11
Approved Date

Administrative Requirements:
4-5-2011
Reviewed Date
233735
SEDIMENT CONTROL PERMIT #

NOTE
MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

THIS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 8231
Expiration Date: 11/28/11 .

STATE OF MARYLAND · CHANDER S. DHALWALA · No. 8231 · PROFESSIONAL ENGINEER

Chander S. Dhalwala, P.E. Maryland Registration No. 8231 — 3/14/2011 Date

RDA ENGINEERING CO. INC.
ENGINEERS
LAND PLANNERS
LAND SURVEYORS
14603 MAIN STREET – UPPER MARLBORO, MD. 20772
UPPER MARLBORO (301)627-3100 (301)952-8200
PRINCE FREDERICK (301)855-9500 (410)535-8600

REVISIONS

JOB NO.	W - 685
SCALE:	AS SHOWN
DESIGNED BY:	RH
DRAWN BY:	MARTIN
CHECKED BY:	CSD
DATE:	APRIL 2008

STORM DRAIN AND STORMWATER MANAGEMENT PLAN
SAND FILTER LANDSCAPE SHEET
MIRACLE TEMPLE ASSEMBLY OF GOD
(13th) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND