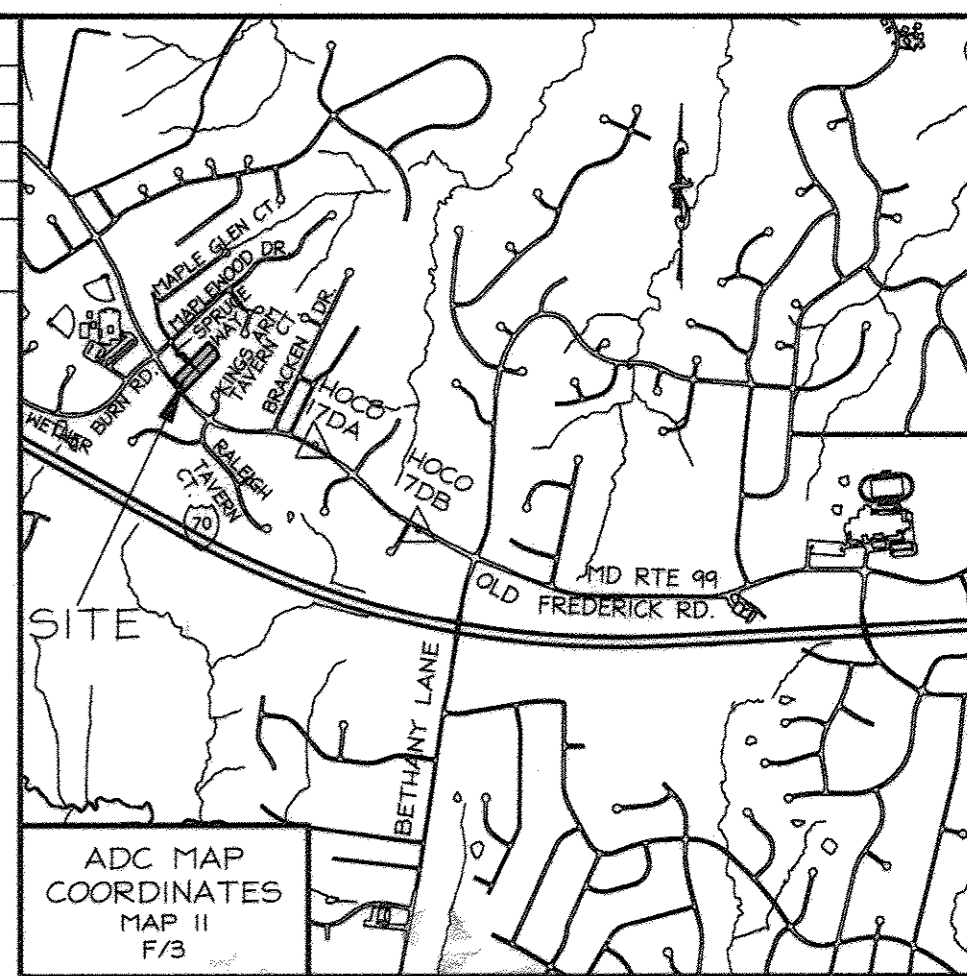


NO.	TITLE
1	Site Development Plan and Landscape Plan
2	Grading, Sediment Control and Soils Plan
3	Sediment Control & Construction Notes & Details
4	Stormwater Management Notes, Details & Landscape Schedule, Notes & Details

GENERAL NOTES

- The contractor shall notify the Department of Public Works / Bureau of Engineering / Construction Inspection Division at 410-313-1880 at least five (5) working days prior to the start of work.
- The subject property is zoned R-20 per the 2/2/04 Comprehensive Zoning Plan.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done.
- The topography shown hereon is taken from a field run topographic survey with two (2) foot contour intervals prepared by LDE, Inc. in April 2004.
- The boundary shown hereon is based on a field run boundary survey by LDE, Inc., dated April, 2004.
- These Coordinates are based on NAD 83, Maryland State Plane Coordinate System, as projected from Howard County control stations 17D4 & 17D5. Station values taken from Maplewood Overlook Lots 1 thru 3 Plat #14346. Sta. 17D4 N 594510.845 E 1351641.146 Sta. 17D5 N 594529.556 E 1352722.586
- Any damage to the County's right-of-way shall be corrected at the developer's expense.
- For driveway entrance details refer to the Howard County Design Manual, Volume IV, Standard Detail R-6.06.
- Site Analysis Data Chart:
 - Owner: Wayne and Denise Smoot and Helen Smoot
 - Subdivision: Maplewood Overlook, Lots 4 - 7
 - Plot No.: 18443
 - Deed References: Lot 4 - 10676/630, Lot 5 - 10329/625, Lot 6 - 10676/636, Lot 7 - 10676/633
 - Purpose Note: The purpose of this site development plan is to provide construction documents for the development of lots 4 & 7 and the relocation of the existing driveways for lots 4 & 5. Additionally, this plan is designed to provide construction details for the proposed stormwater management facilities.
 - Total Project Area: 2.22 ± Acres
 - Limit of Disturbed Area: 1.40 ± Acres
 - Present Zoning: R-20
 - Total number of units allowed: 1 per lot, 4 total (two (2) existing, two (2) proposed)
 - Open Space: Met via payment of a fee-in-lieu in the amount of \$1500.00, as required by the current Subdivision and Land Development Regulations. (F-05-179)
 - Previous Submittals: F-05-176, WP-00-73, F-00-188, F-00-111, WP-04-131, F-05-179.
- All areas shown on this plan are ±, more or less.
- Stormwater management for this subdivision will be met through infiltration trenches and rooftop disconnect credits, as approved under F-05-179. A stormwater management developer's agreement was previously signed on 12-12-2017. The developer's agreement has been amended and extended for SDP-09-42. Surety amounts remain unchanged from those originally posted under F-05-179.
- For flag or pipestem lots, refuse collection, snow removal and road maintenance are provided to the junction of the flag or pipestem and road right-of-way line and not onto the pipestem lot driveway.
- Driveways shall be provided prior to residential occupancy to insure safe access for fire and emergency vehicles per the following minimum requirements:
 - Width 12 ft. (16 ft. if serving more than one (1) lot.)
 - Surface - 6 inches of compacted crusher run base with tar and chip coating
 - Minimum grade: maximum 12% on any grade change and minimum of 4% turning radius.
 - Structures (culverts/bridges) capable of supporting 25 gross tons (H25 loading)
 - Drainage elements - capable of safely passing 100 year flood with no more than 1.0 foot depth over driveway surface.
- Structure clearances - minimum 12 feet.
- Maintenance sufficient to insure all weather use.
- The maintenance agreement for the shared driveway was recorded with plot no. 18443 (L. 5103 F. 298)
- There are existing dwellings on lot 4 & 5 to remain. No new buildings, extensions or additions to the existing dwellings are to be constructed at this time. The zoning regulations require.
- The wetland delineation for this property was completed by LDE, Inc. in January, 2004. No wetlands were found onsite, as approved under F-05-179.
- Landscaping surety for this subdivision was previously posted under a developer's agreement in the amount of \$3,300.00 for F-05-179. This developer's agreement has been amended and extended for SDP-09-42. Surety amounts remain unchanged from those originally posted under F-05-179.
- This project is exempt from the requirements of Section 16.1200 of the Howard County Code for Forest Conservation because a fee-in-lieu of providing onsite afforestation in the amount of \$7,187.40 was submitted with this subdivision plan, waiver petition application or building permit application.
- In accordance with approved WP-04-031, the common driveway is permitted to have Nine (9) users. The existing common driveway must be reconstructed in accordance with the private access place standards. However, no Private Access Place agreement will be required. Additionally, the subject waiver approval requires that the existing lot 4 & 5 driveways that access Old Frederick Road be removed. Lots 4 & 5 will derive vehicular access from the common driveway out Spruce Way.
- Water and Sewer (Contract No. 24-3717-D) service to lots 6 & 7 will be granted under the provisions of Section 10.122B of the Howard County Code. Lots 4 & 5 presently are connected to public water and sewer. The lot 4 & 5 WIC's and SUC's shall remain.
- Public water and sewage allocation will be granted for lots 6 & 7 at the time of issuance of the building permits if capacity is available at that time.
- In accordance with Section 12B of the Howard County Zoning Regulations, bay windows, chimneys or exterior stairways not more than 16 feet in width may project not more than 10 feet into the front or rear yard setback.
- The 65dBA noise contour line drawn on this plan is advisory as required by the Howard County Design Manual, Volume 11, Chapter 5, revised February, 1992 and cannot be used to exactly locate the 65dBA noise exposure. The 65dBA noise line was established by Howard County to alert developers, builders and future residents that areas beyond this threshold may exceed generally accepted noise levels established by the U.S. Department of Housing and Urban Development.
- The existing driveways for lots 4 & 5 (Old Frederick Road) shall be abandoned and removed. The Owner/Developer shall contact Ms. Andrea Abend, SHA District 7 Utilities Office at 301-624-8116 to obtain access permit to perform work within the SHA R/W relating to the removal of existing driveways along MD. Route 99 for Lots 4 and 5. This area shall be seeded and mulched in accordance with comments from the MD State Highway Administration. Proof that these driveways have been abandoned has been submitted to the Department of Planning and Zoning with the submission of the mylars of this SDP for signature approval. Access to Lots 4 and 5 will be onto Spruce Way and new addresses shall be assigned to these lots. The new addresses are shown in the address chart on this sheet.
- The existing well which once served the existing house on Lot 4 (previously Lot 1) has been sealed and abandoned by a licensed Well Driller and verification has been submitted to the Health Department.
- Both the existing and proposed dwellings have inside water meter settings.
- The asphalt and stone from the WIC's is to be removed from the existing driveways on lot 4 and 5 shall not be stockpiled onsite, but shall be trucked offsite to the Howard County Landfill or other approved disposal site.



VICINITY MAP
1" = 2000'

BENCHMARKS
Sta. 17D4 N 594510.845 E 1351641.146
Sta. 17D5 N 594529.556 E 1352722.586

LEGEND

	EXISTING CONTOURS
	PROPOSED CONTOURS
	SOILS DIVIDE
	EX. TREELINE
	PRO. TREELINE
	TREE PROTECTION FENCE
	DRAINAGE FLOW ARROWS
	PROPOSED PAVING
	EXISTING PAVING
	EXISTING PAVING TO BE REMOVED
	ROOF LEADER
	INFILTRATION TRENCH
	PROPOSED TREE
	EXISTING TREE
	SILT FENCE
	EROSION CONTROL MATTING
	LIMIT OF DISTURBANCE
	STABILIZED CONSTRUCTION ENTRANCE
	UNMITIGATED 65dBA NOISE LINE
	EXISTING EASEMENTS

LOT 4 STORM WATER MANAGEMENT

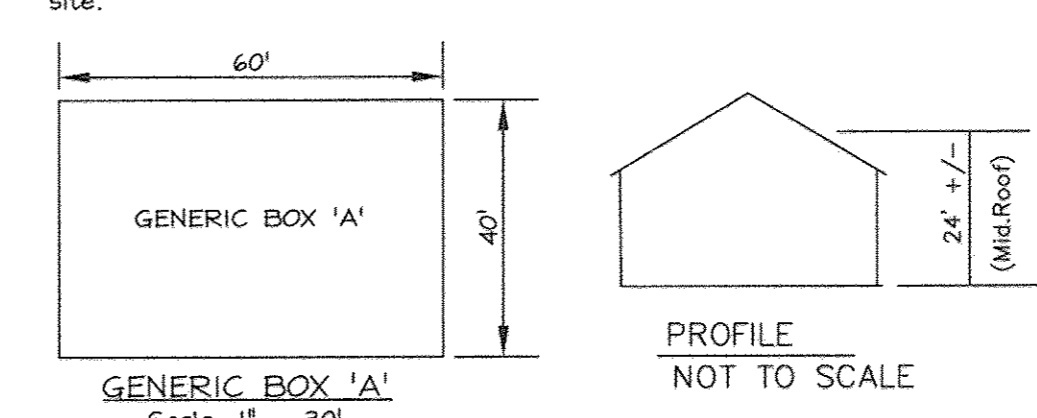
- PROPOSED IMPROVEMENTS: 3436 SQ. FT.
- HOUSE PATIOS: 2372 SQ. FT.
- PROPOSED DRIVE: 1264 SQ. FT.
- PERCENT IMPERVIOUS: 14%
- SOILS GROUP: B(1/18)
- PE: 1.0 INCH
- ESD VOLUME REQUIRED: 303 C.F.
- VOLUME PROVIDED: 556 C.F. (INFILTRATION TRENCHES)

WP-18-054 ALTERNATIVE COMPLIANCE REQUEST GRANTED 12-1-2017

WITH THE FOLLOWING CONDITIONS:

- A REDLINE REVISION MUST BE SUBMITTED (APPROVED 12-12-2017) AND STORM WATER MANAGEMENT DESIGN SHALL BE REQUIRED BASED ON CURRENT E.S.D. REGULATION ON REDLINE.
- ADDITIONAL PERMIT SHALL BE APPLIED FOR CONSTRUCTION OF IMPROVEMENTS TO LOT 6 WITHIN 1 YEAR BY DECEMBER 1, 2018 OR SDP 09-09-042 WILL EXPIRE AND A NEW SITE DEVELOPMENT PLAN WILL BE REQUIRED.
- REPLACE THE 3 RED MAPLES IN POOR HEALTH WITH 3 RED MAPLES OF 2" CALIBER ON THE SOUTHWEST PROPERTY CORNER & 2 NATIVE SHADE TREES OF 2" CALIBER IN THE VICINITY OF THE REMOVED SPREADHILL TREE. THIS PLANTING WILL BEING LOT 6 INTO COMPLIANCE WITH THE LANDSCAPING ON SDP 09-09-042. THIS REDLINE REFLECTS THE REPLACEMENT OF 3 RED MAPLES & NO OTHER TREES TO BE REMOVED.

NOTE: ANY PROPOSED HOUSE THAT DOES NOT FIT WITHIN GENERIC BOX 'A' OR WHOSE FOOTPRINT EXCEEDS 2,400 SQ. FT. MAY BE SUBJECT TO ADDITIONAL STORMWATER MANAGEMENT REQUIREMENTS.



MODEL MATRIX

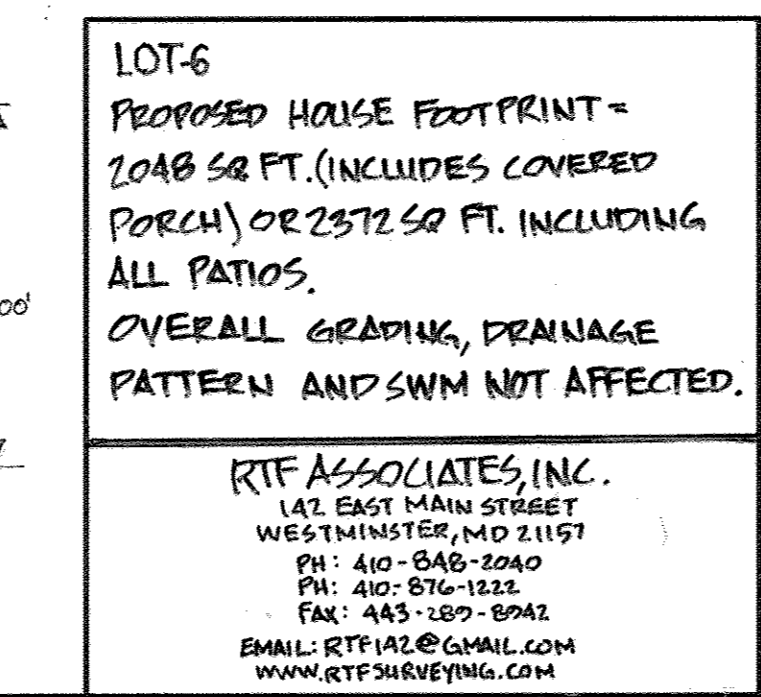
LOT NO.	GARAGES	BASEMENT EXITS		
	Front Entry	Side Entry	Areaway	Walkout
6	No	Yes	Yes	No
7	Yes	No	Yes	No

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. 19184, EXPIRES 12/31/11.

SIGNED: *Bruce D. Burton*
BRUCE D. BURTON
DATE: 8/16/09

REVISIONS

No.	Date	Description
1	May, 2010	Revise infiltration trench #1 location and elevations / Show as-built elevations for all private SWM facilities and private fee turn around.
2	6/1/2011 LDE, INC.	REVISE HOUSE MODEL LOT 7 / REVISE LOT GRADING LOT 7
3	6/26/12 LDE	REVISE GRADING DRIVEWAY DRIVEWAY CULVERT, BLOCK 3 WALL, INFILTRATION TRENCH
4	12/1/2017 RTE ASSOC.	REVISE HOUSE MODEL LOT 6, CONSTRUCTION FOOTPRINT LESS THAN APPROVED GENERIC BOX & WP-18-054



DEVELOPER'S / BUILDER'S CERTIFICATION

I certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I further certify that upon completion a Letter of Landscape Installation, accompanied by an executed One Year Guarantee of Plant Materials will be submitted to the Department of Planning and Zoning.

Wayne Smoot
8-26-09
8-26-09

Signature of Developer / Builder
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
9/14/09
9-17-09
9-18-09

Chief, Division of Land Development
9-17-09
9-18-09

Director, DEP.

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 21072, EXPIRATION DATE: 8/31/2012 (REVISION (A) ONLY)

SIGNED: *John E. Lemmerman*
JOHN E. LEMMERMAN
DATE: 12-20-17

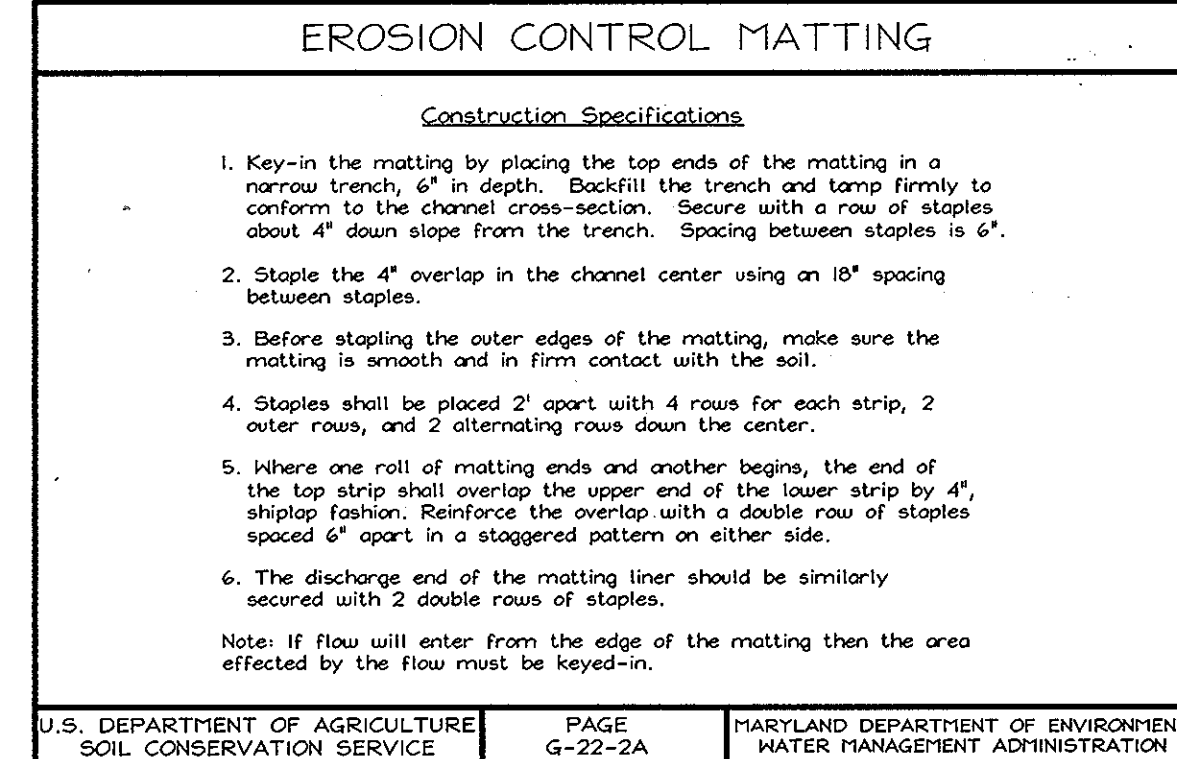
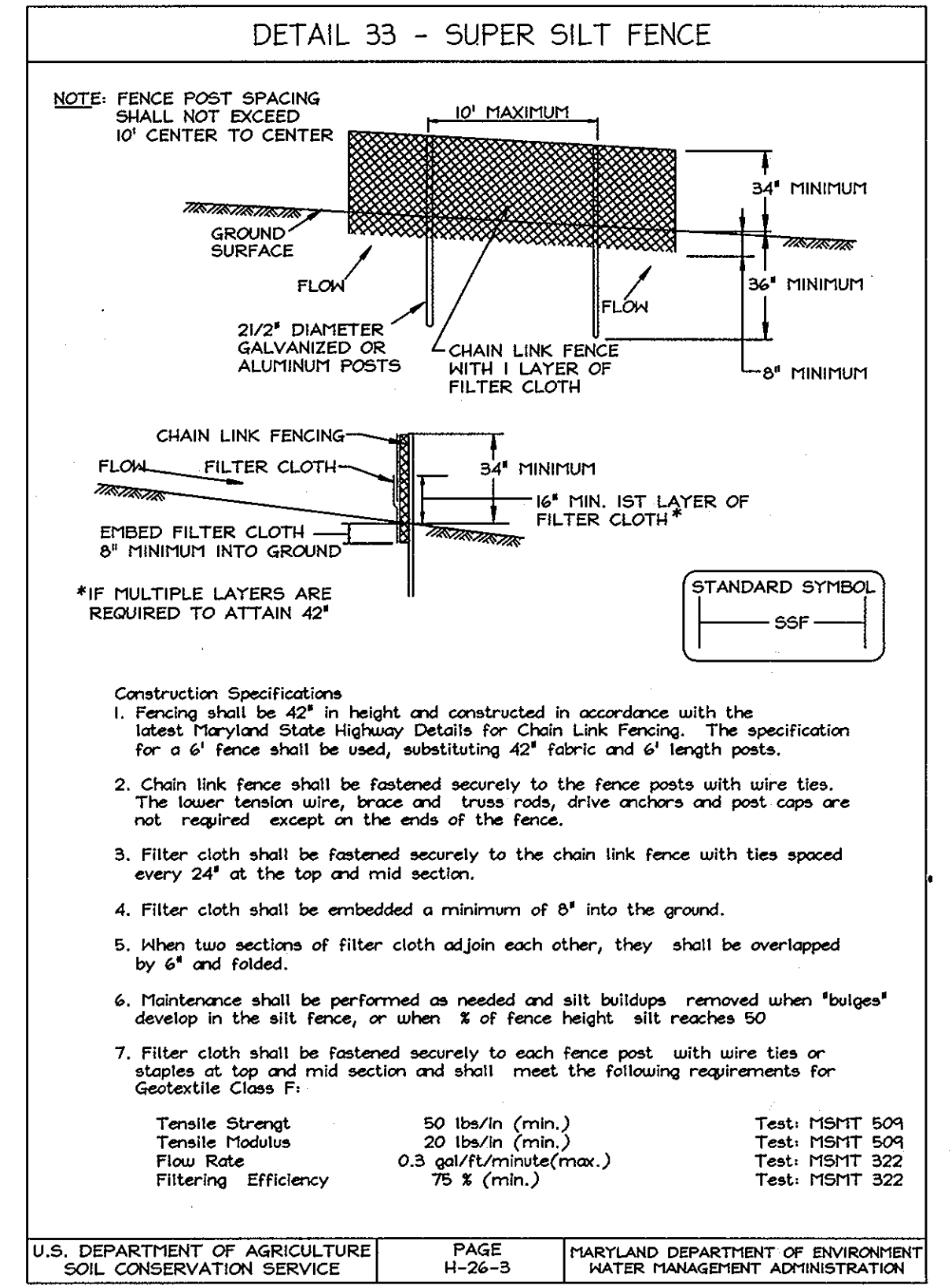
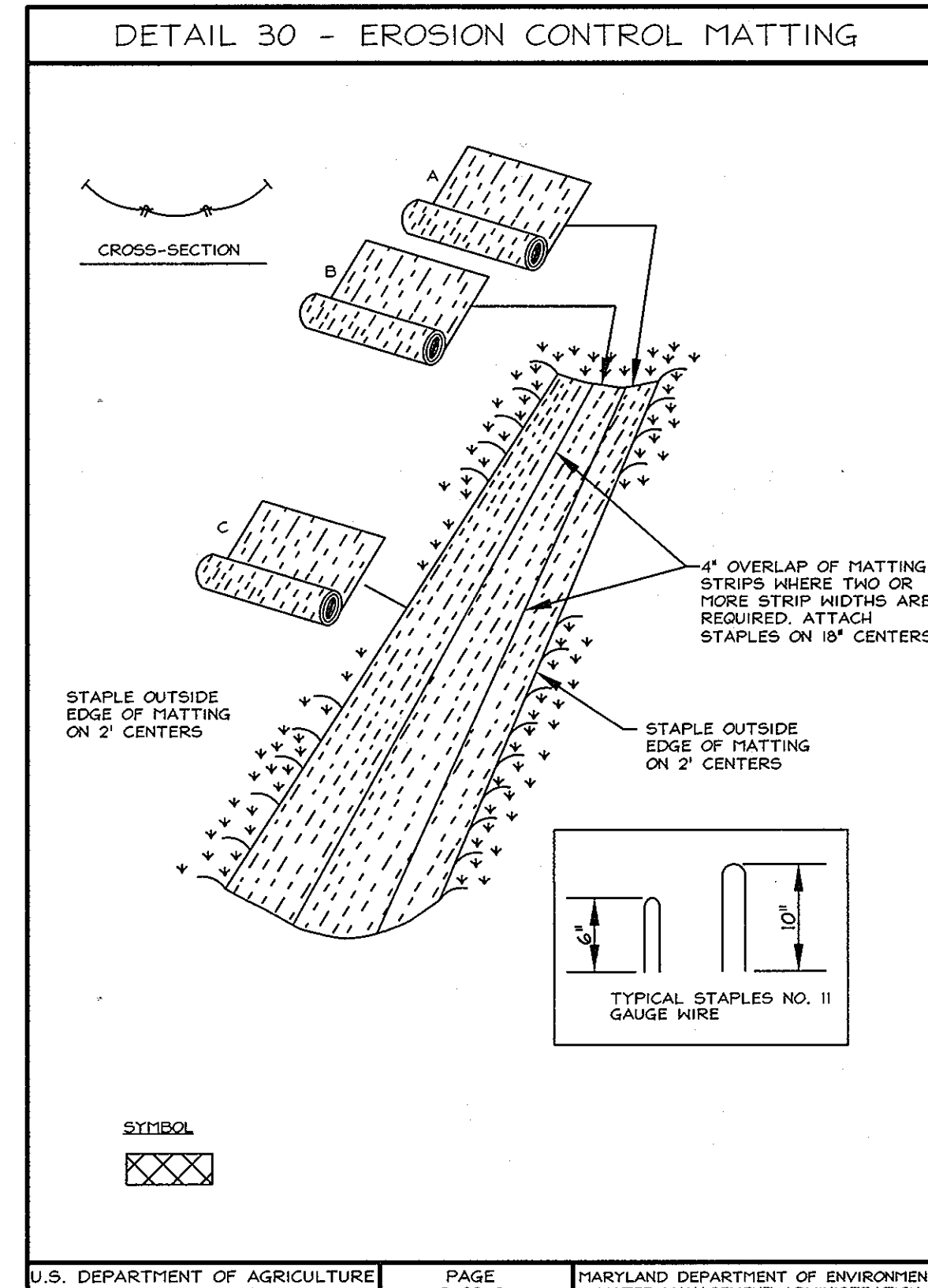
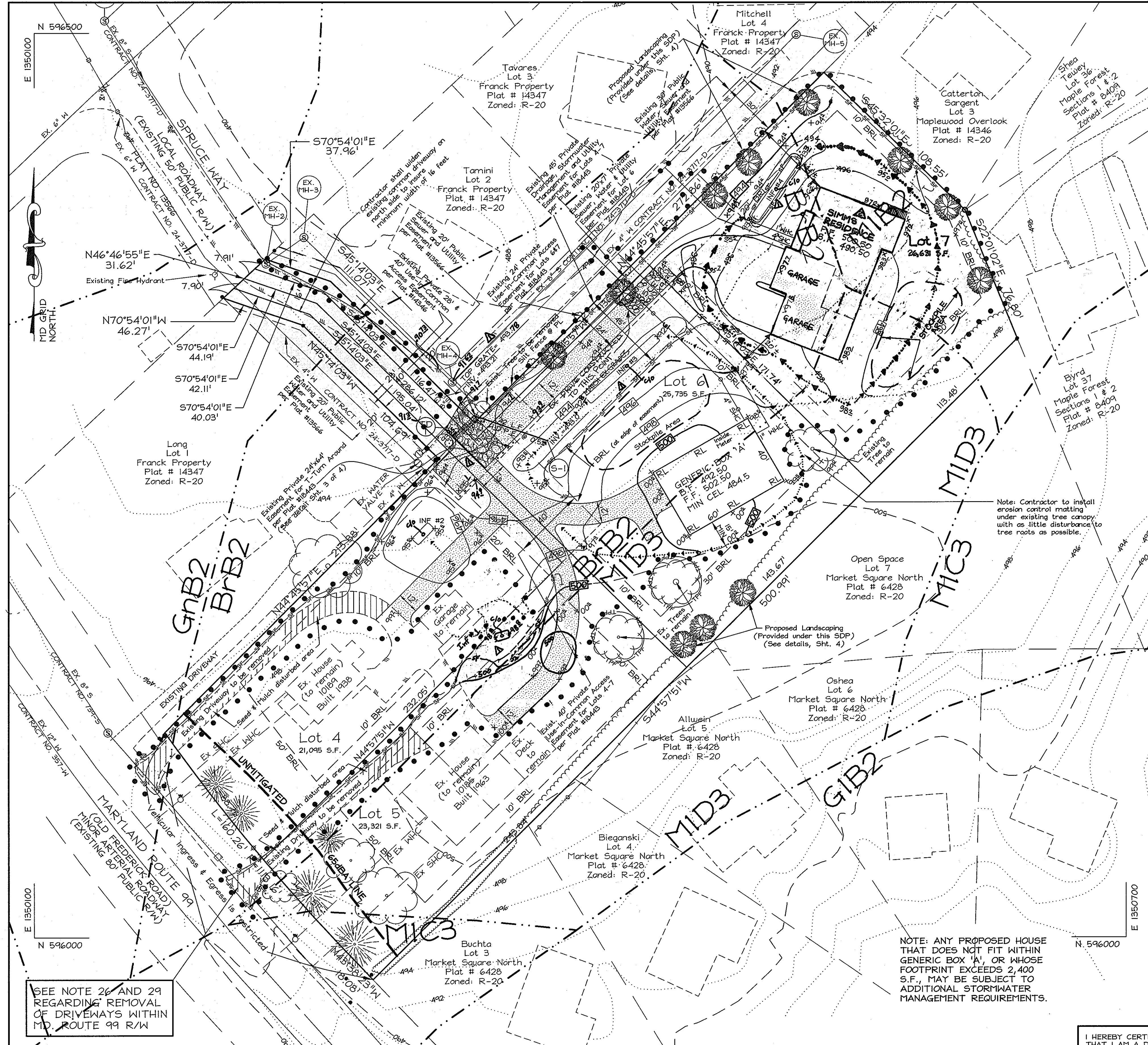
ADDRESS CHART

Lot No.	Street Address
4	10189 SPRUCE WAY
5	10185 SPRUCE WAY
6	10174 SPRUCE WAY
7	10178 SPRUCE WAY

Subdivision Name: MAPLEWOOD OVERLOOK
Sect./Area: N/A
Lot No.: 4, 5, 6 & 7
Plat Ref.: 18443
Grid No.: 7
Zoning: R-20
Tax Map No.: 17
Election District: 2nd
Census Tract: 602100

LDE Inc.
Engineers, Surveyors, Planners
9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045
(410) 715-1070 - (301) 896-3424 - FAX (410) 715-9340

DESIGNED	S.D.H.	SCALE
SITE DEVELOPMENT PLAN AND LANDSCAPE PLAN		1" = 30'
MAPLEWOOD OVERLOOK		
LOTS 4 - 7		
PLAT NO. 18443		
DRAWN	G.D.W.	DRAWING
PROPOSED SINGLE FAMILY DETACHED UNITS ON LOTS 6 & 7 AND RELOCATED USE-IN-COMMUN DRIVEWAY/STORMWATER MANAGEMENT FOR EXISTING DWELLINGS ON LOTS 4 & 5		1 OF 4
CHECKED	B.D.B.	JOB NO.
Tax Map No. 17 - Grid No. 7 - Parcel 731 2nd Election District - Howard County, Maryland Previous Submittals: F00-176, WP00-73, F00-188, F00-111, WP04-131, F05-179		08-004
DATE	OWNER/DEVELOPER:	FILE NO.
8/2009	Helen V. Smoot 10176 Old Frederick Road Ellicott City, Maryland 21042	SDP-09-42



SUPER SILT FENCE

Design Criteria

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H-26-3A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NOTE: THE ASPHALT AND STONE THAT IS REMOVED FROM THE EXISTING DRIVEWAYS ON LOTS 4 AND 5 SHALL NOT BE STOCKPILED ONSITE, BUT SHALL BE TRUCKED OFFSITE TO THE HOWARD COUNTY LANDFILL OR OTHER APPROVED DISPOSAL SITE.

NOTE: SILT FENCE IS TO BE REPLACED BY "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

NOTE: ANY PROPOSED HOUSE THAT DOES NOT FIT WITHIN GENERIC BOX 'A', OR WHOSE FOOTPRINT EXCEEDS 2,400 S.F., MAY BE SUBJECT TO ADDITIONAL STORMWATER MANAGEMENT REQUIREMENTS.

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. 19184, EXPIRING 03/31/11.

SIGNED: *BRUCE D. BURTON* 8/26/09
 BRUCE D. BURTON

SOILS LEGEND

HYDROLOGIC SOIL GROUP	SOIL SYMBOL	DESCRIPTION	REMARKS
B	GIB2	Glenelg Loam, 3% - 8% slopes, moderately eroded.	
B	M1C3	Manor loam, 8% - 15% slopes, Severely eroded.	
B	M1D3	Manor loam, 15% - 25% slopes, Severely eroded.	
C	BrB2	Brandywine loam, 3% - 8% slopes, Moderately eroded.	
C	GnB2	Glenville silt loam, 3% - 8% slopes, Moderately eroded.	

LDE Inc.
 Engineers, Surveyors, Planners
 9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045
 (410)715-1070 - (301)596-3424 - FAX(410)715-9340

DESIGNED: S.D.H.
 DRAWN: G.D.W.
 CHECKED: B.D.B.
 DATE: 8/2009

GRADING, SEDIMENT CONTROL AND SOILS PLAN
MAPLEWOOD OVERLOOK
 LOTS 4 - 7
 PLAT NO. 18443
 PROPOSED SINGLE FAMILY DETACHED UNITS ON LOTS 4 & 7 AND RELOCATED USE-IN-COMMON DRIVEWAY/STORMWATER MANAGEMENT FOR EXISTING Dwellings ON LOTS 4 & 5

SCALE: 1" = 30'
 DRAWING: 2 OF 4
 JOB NO.: 08-004
 FILE NO.: SDP-09-42

Tax Map No. 17 - Grid No. 7 - Parcel 731
 2nd Election District - Howard County, Maryland
 Previous Submittals: F90-176, WFO-73, F00-188, F00-111, WFO-131, F-05-179

OWNER/DEVELOPER:
 Helen V. Smoot
 10176 Old Frederick Road
 Ellicott City, Maryland 21042

Wayne A. Smoot
 Denise L. Smoot
 10182 Old Frederick Road
 Ellicott City, Maryland 21042

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cheryl Deussen 9/1/09
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Cheryl Deussen 9-17-09
 CHIEF, DIVISION OF LAND DEVELOPMENT

Thomas S. Buttle 9-18-09
 DIRECTOR, DEP.

DEVELOPER'S / BUILDER'S CERTIFICATION

I certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I further certify that upon completion a Letter of Landscape Installation, accompanied by an executed One Year Guarantee of Plant Materials will be submitted to the Department of Planning and Zoning.

Wayne S. Smoot 8-26-09
 SIGNATURE OF DEVELOPER / BUILDER

John R. Roberts 9/9/09
 HOWARD SOIL CONSERVATION DISTRICT

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

BRUCE D. BURTON 8/26/09
 SIGNATURE OF ENGINEER

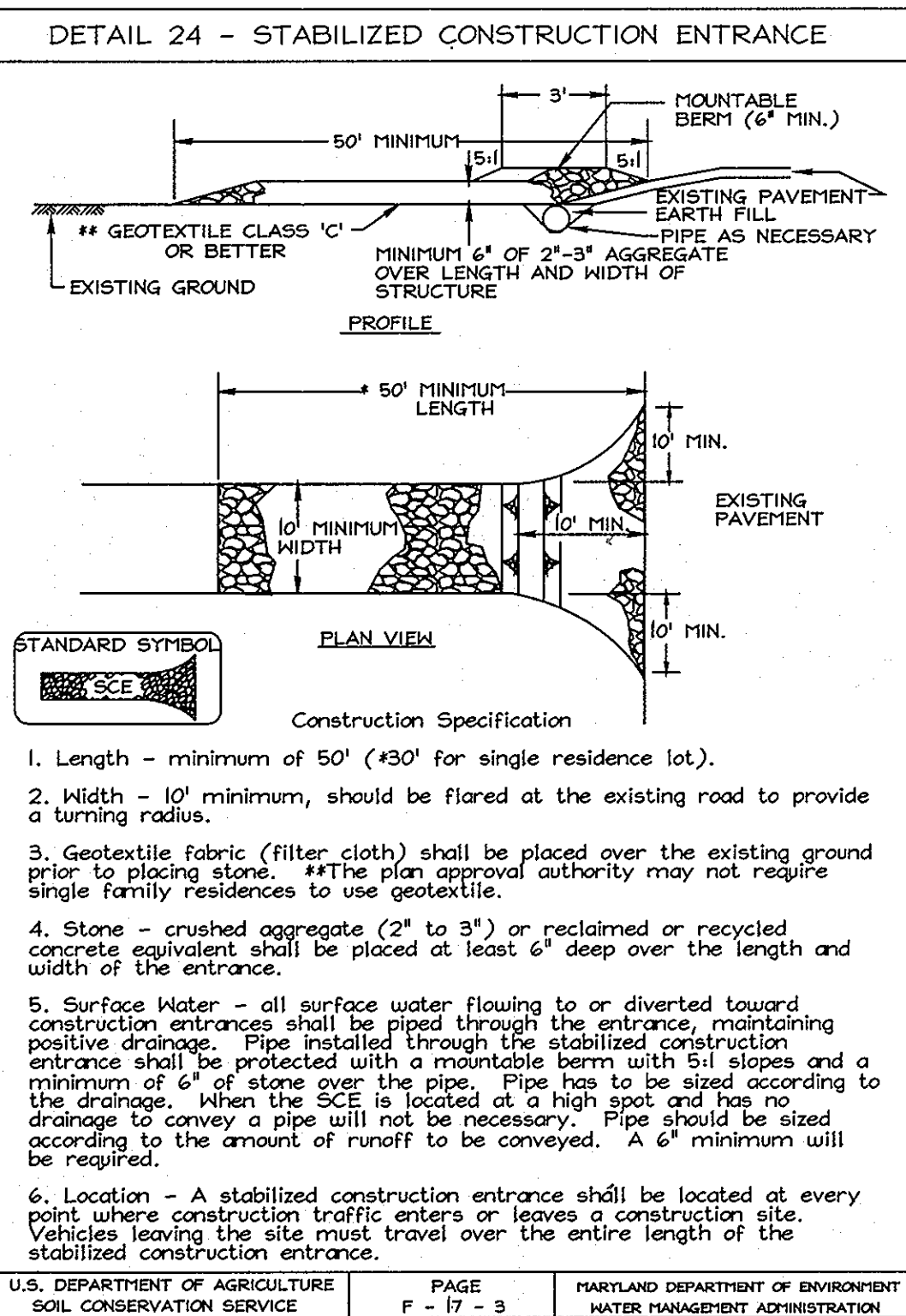
DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Wayne S. Smoot 8-26-09
 SIGNATURE OF DEVELOPER

REVISIONS

No.	Date	Description
1	May, 2010	Revise infiltration trench # 1 location and elevations / Show as-built elevations. For all private SWM facilities and private tree turn around. Revise LDD.
2	6/1/2011 LDE, INC.	REVISE HOUSE MODEL LOT 7 / REVISE LOT GRADING LOT 7

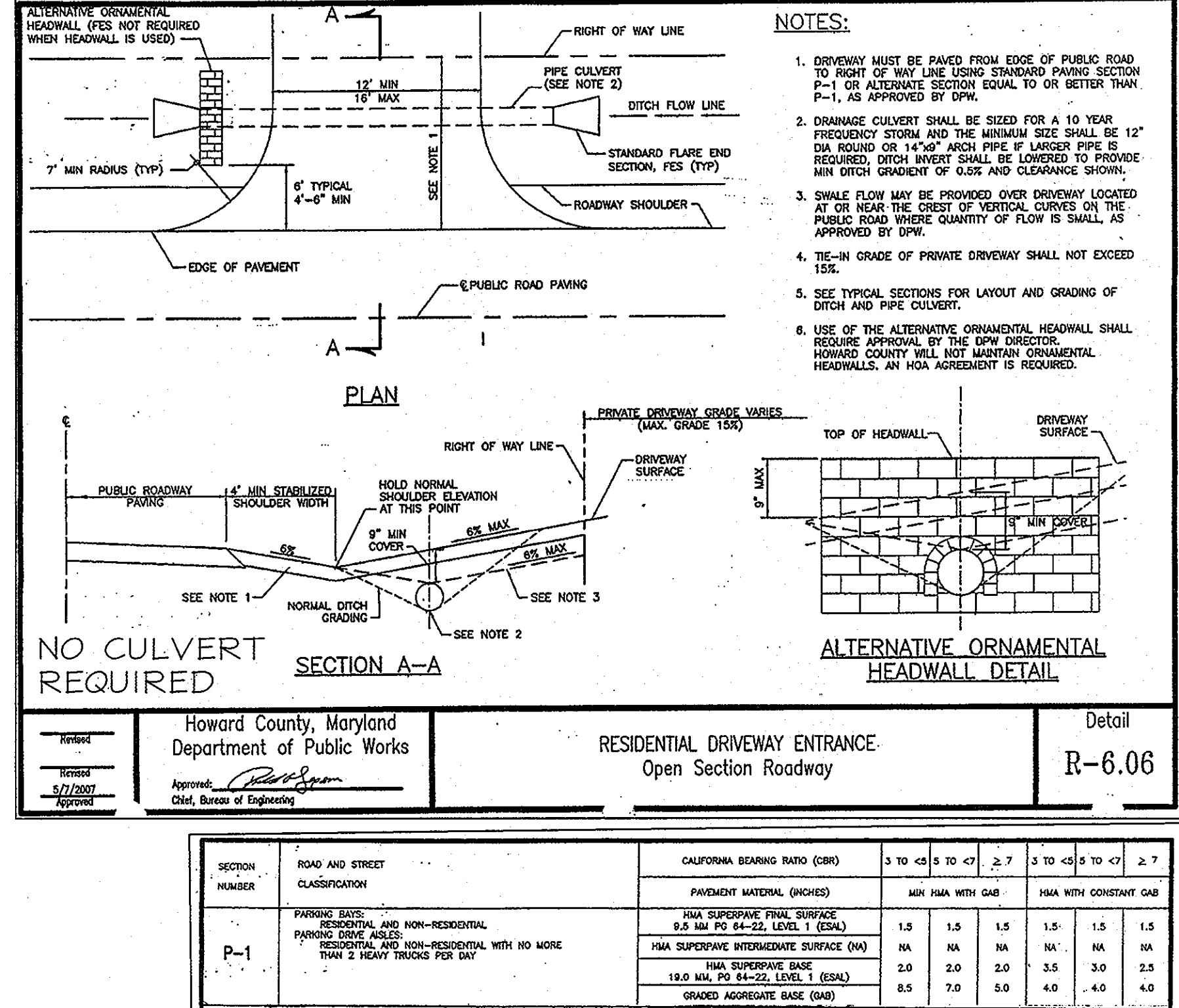
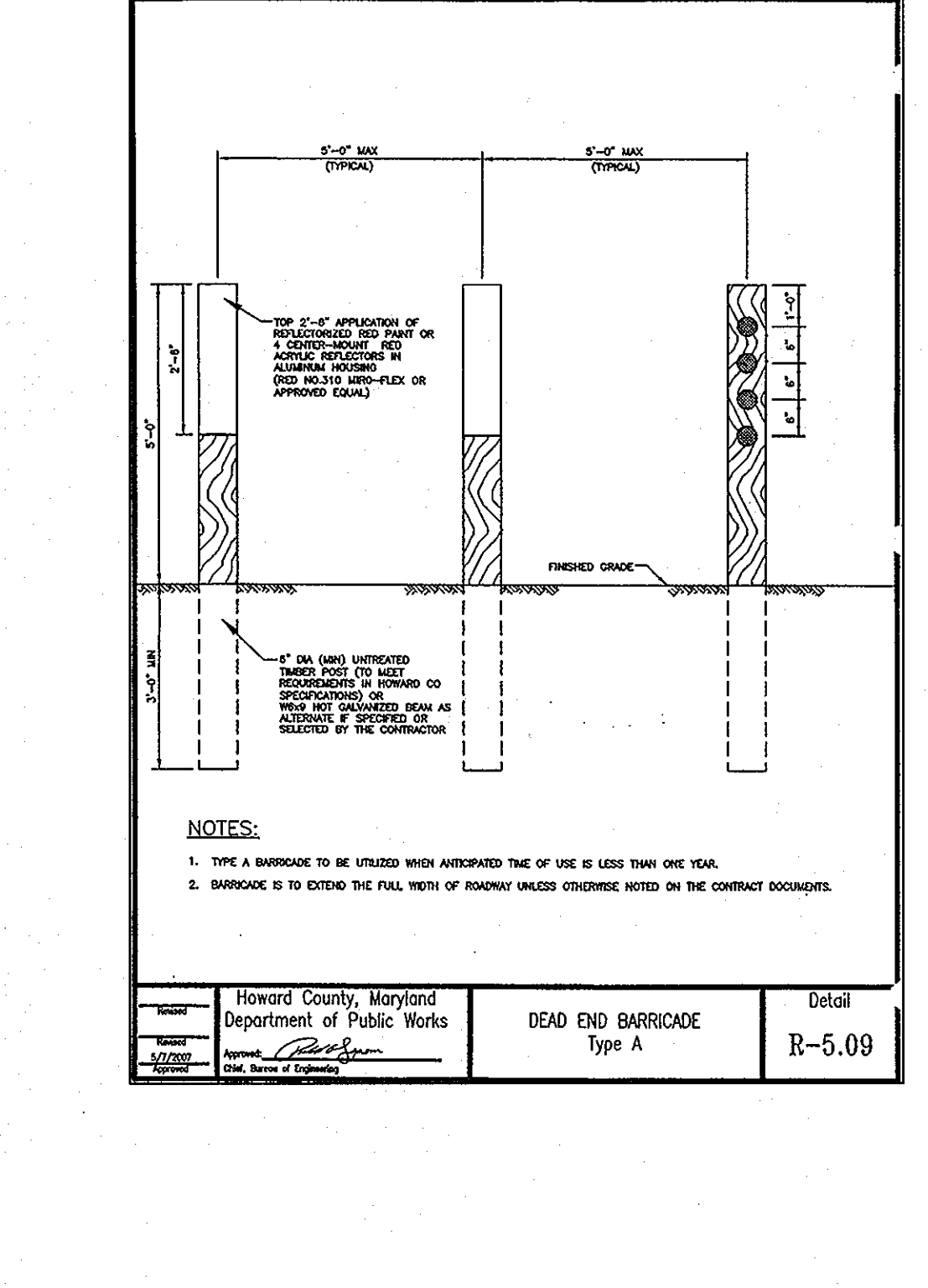
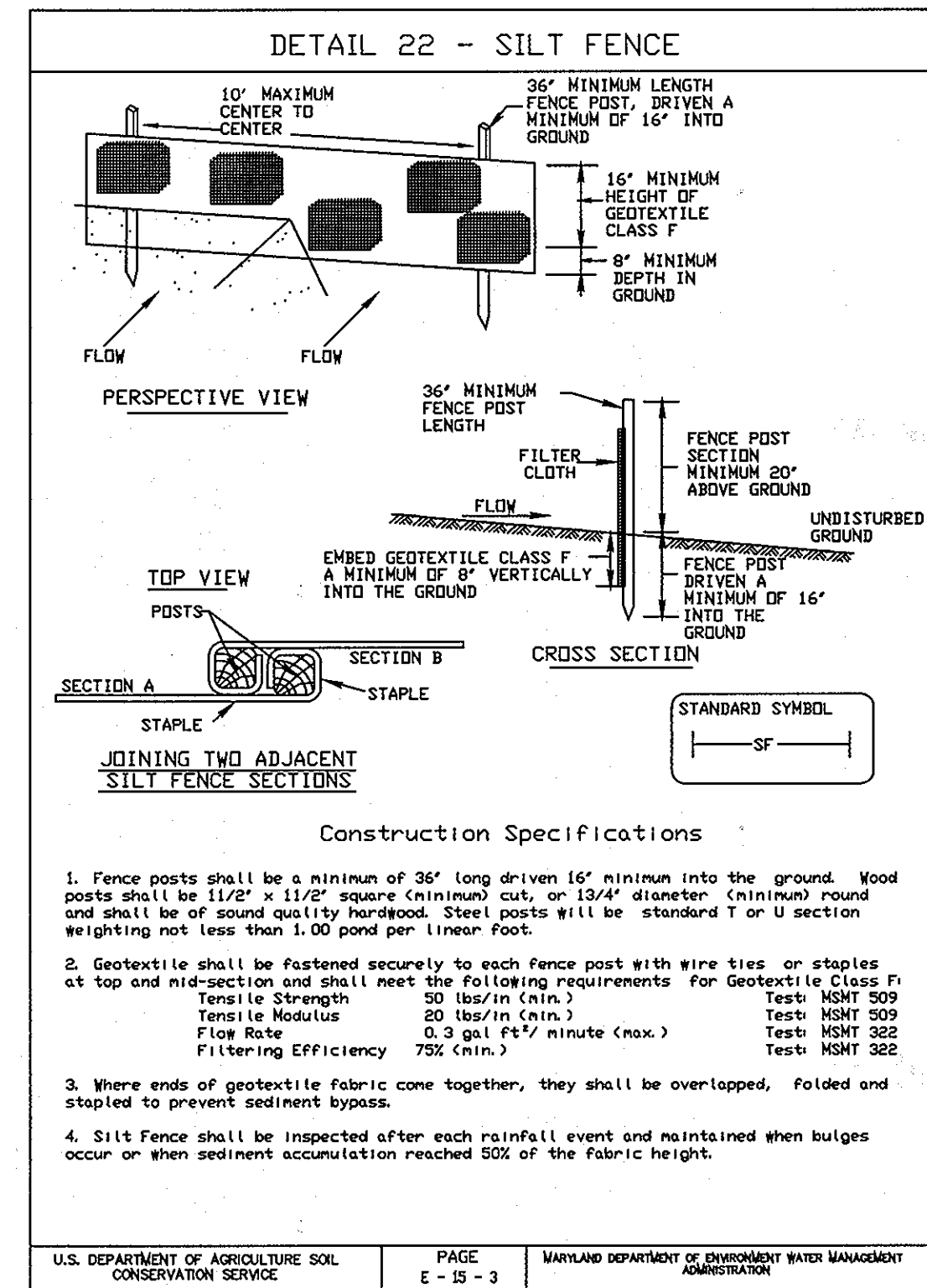


SILT FENCE

Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 Feet	1,000 Feet
10:1 to 5:1	100 Feet	750 Feet
5:1 to 3:1	60 Feet	500 Feet
3:1 to 2:1	40 Feet	250 Feet
2:1 and steeper	20 Feet	125 Feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.



2.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition: Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose: To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies:

- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plan.

Construction and Material Specifications:

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 2.0.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

IV. (Continued)

- Organic content of topsoil shall be not less than 1.5 percent by weight.
- Topsoil having soluble salt content greater than 500 parving salts per million shall not be used.
- No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

- Place topsoil (if required) and apply soil amendments as specified in 2.0.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- Topsoil Application
 - When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Basins.
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
 - Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compact to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
- Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - Composted sludge shall be applied oil sterilant at a rate of 1 ton / 1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously loosened.

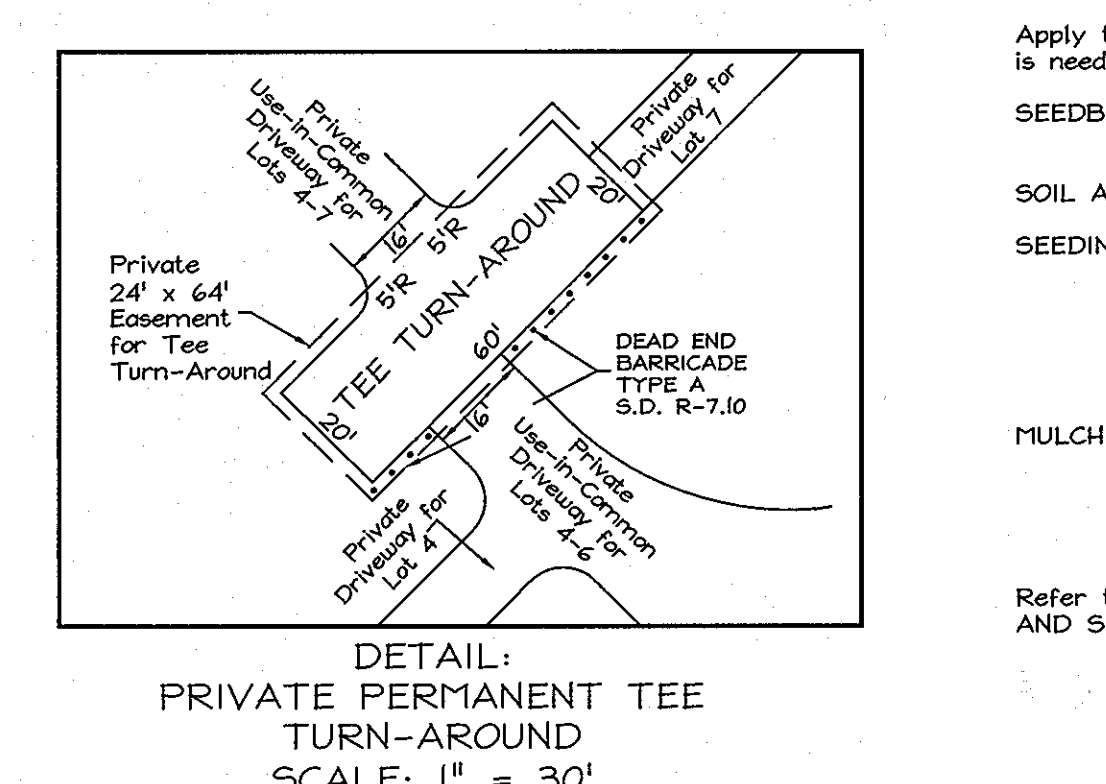
SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules:

- PREFERRED** -- Apply 2 tons per acre dolomitic limestone (42 lbs/1000sq. ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000sq. ft.) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.
- ACCEPTABLE** -- Apply 2 tons per acre dolomitic limestone (42 lbs/1000sq. ft.) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

SEEDING -- For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue and 2 lbs. per acre (.05 lbs/1000sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) - 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) - Use sod. Option (3) - Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch 2 tons / acre well anchored straw.

MULCHING -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. ft.) for anchoring.

MAINTENANCE -- Inspect all seeding areas and make needed repairs, replacements and reseedings.



HOWARD SOIL CONSERVATION DISTRICT TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

SEEDBED PREPARATION: -- Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: -- Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000sq. ft.).

SEEDING -- For periods March 1 thru April 30, and from August 15 thru October 15 seed with 2-12 bushels per acre of annual rye (3.2 lbs/1000sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs/1000sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

MULCHING -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

SEQUENCE OF CONSTRUCTION

- Obtain grading permit. 1 Day
- Notify the Howard County Department of Public Works/ Bureau of Engineering/Construction Inspection Division at 410-318-1880 at least 24 hours prior to the start of work. 1 Day
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done. 1 Day
- Install stabilized construction entrance and silt fence in accordance with the approved grading and sediment control plan. 1 Day
- Install tree protection fencing around all trees to remain, as shown on the approved site development plan. 1 Day
- Obtain permission from the sediment control inspector to proceed. 1 Day
- Grade site for proposed tee turn around, common and private driveways, house pads, private stormwater management infiltration trenches in accordance with the approved grading and sediment control plan. 1 Week
- Insure all areas not to be roofed or paved are immediately stabilized in accordance with the temporary seeding notes shown on sheet 3. Daily
- Install utilities, including trench drain and outfall pipe and private water and sewer house connections for lots 6 & 7. 1 Week
- Final grade for tee turn around, common driveway and private driveways. Immediately stabilize all areas not to be roofed or paved. 2 Days
- Obtain permission from the sediment control inspector to proceed. 1 Day
- Install stone base for areas to be paved, including widening of existing common drive to the northwest of the site. Insure that lots 4 & 5 have unobstructed vehicular access to Spruce Way over stone / gravel. 2 Days
- Remove existing driveways for lots 4 & 5 in accordance with the approved site development plan and grading and sediment control plan. The existing asphalt and stone that is removed shall not be stockpiled onsite but shall be trucked offsite to the Howard County landfill or other approved disposal site. 2 Days
- With permission from the sediment control inspector, remove silt fence in the front yards of lots 4 & 5. 1 Day
- Immediately stabilize the disturbed areas associated with the removed driveways in accordance with the permanent seeding notes on sheet 3. 1 Day
- Install paving base for existing common driveway widening, tee turn around, new common driveway and private driveways. 1 Day
- Final grade for and construct private stormwater management infiltration trenches in accordance with the approved grading and sediment control plan and the details shown on sheet 4. 1 Week
- Immediately stabilize all remaining disturbed areas in accordance with the permanent seeding notes on sheet 3. 1 Day
- Construct new houses on lots 6 & 7. 4 Months
- Immediately stabilize all remaining disturbed areas in accordance with the permanent seeding notes on sheet 3. 1 Day
- Once houses are completed, obtain permission from the sediment control inspector to install surface paving. 1 Day
- Install surface paving for widening of existing common driveway, tee turn around, new common driveway and private driveways. 1 Day
- Insure that all remaining disturbed areas are stabilized in accordance with the permanent seeding notes on sheet 3. With the permission of the sediment control inspector, remove all remaining sediment control devices (silt fence). 1 Day
- Install proposed landscaping trees. 1 Day
- TOTAL ESTIMATED CONSTRUCTION TIME: 6 Months, 1 Week

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* 9/16/09

CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* 9-17-09

DIRECTOR: *[Signature]* 9-18-09

DEVELOPER'S / BUILDER'S CERTIFICATION

I certify that the landscaping shown on this plan will be done according to the plan, Section 16.04 of the Howard County Code and the Howard County Landscape Manual. I further certify that upon completion a Letter of Landscape Installation, accompanied by an executed One Year Guarantee of Plant Materials will be submitted to the Department of Planning and Zoning.

Wayne A. Smaat 9-26-09
 DATE

DEVELOPER / BUILDER: *[Signature]* 9/19/09

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

BRUCE D. BURTON 8/26/09
 SIGNATURE OF ENGINEER DATE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Wayne A. Smaat 9-26-09
 DATE

DEVELOPER'S CERTIFICATE

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. 19184, EXPIRES 09/26/11.

SIGNED: BRUCE D. BURTON 8/26/09

No.	Date	Description

DESIGNED	S.D.H.	SCALE
		AS SHOWN
DRAWN	G.D.W.	DRAWING
		3 OF 4
CHECKED	B.D.B.	JOB NO.
		08-004
DATE	8/2009	FILE NO.
		SDP-09-42

LDE Inc.
 Engineers, Surveyors, Planners
 9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045
 (410)715-1070 - (301)596-3424 - FAX (410)715-9540

MAPLEWOOD OVERLOOK
 LOTS 4 - 7
 PLAT NO. 18443
 PROPOSED SINGLE FAMILY DETACHED UNITS ON LOTS 4 & 7 AND RELOCATED SEE-IN-COPTION DRIVEWAY/STORMWATER MANAGEMENT FOR EXISTING DWELLINGS ON LOTS 4 & 5

2nd Election District - Howard County, Maryland
 Previous Submittals: P98-176, W900-73, F00-188, F00-111, W904-131, F-05-174

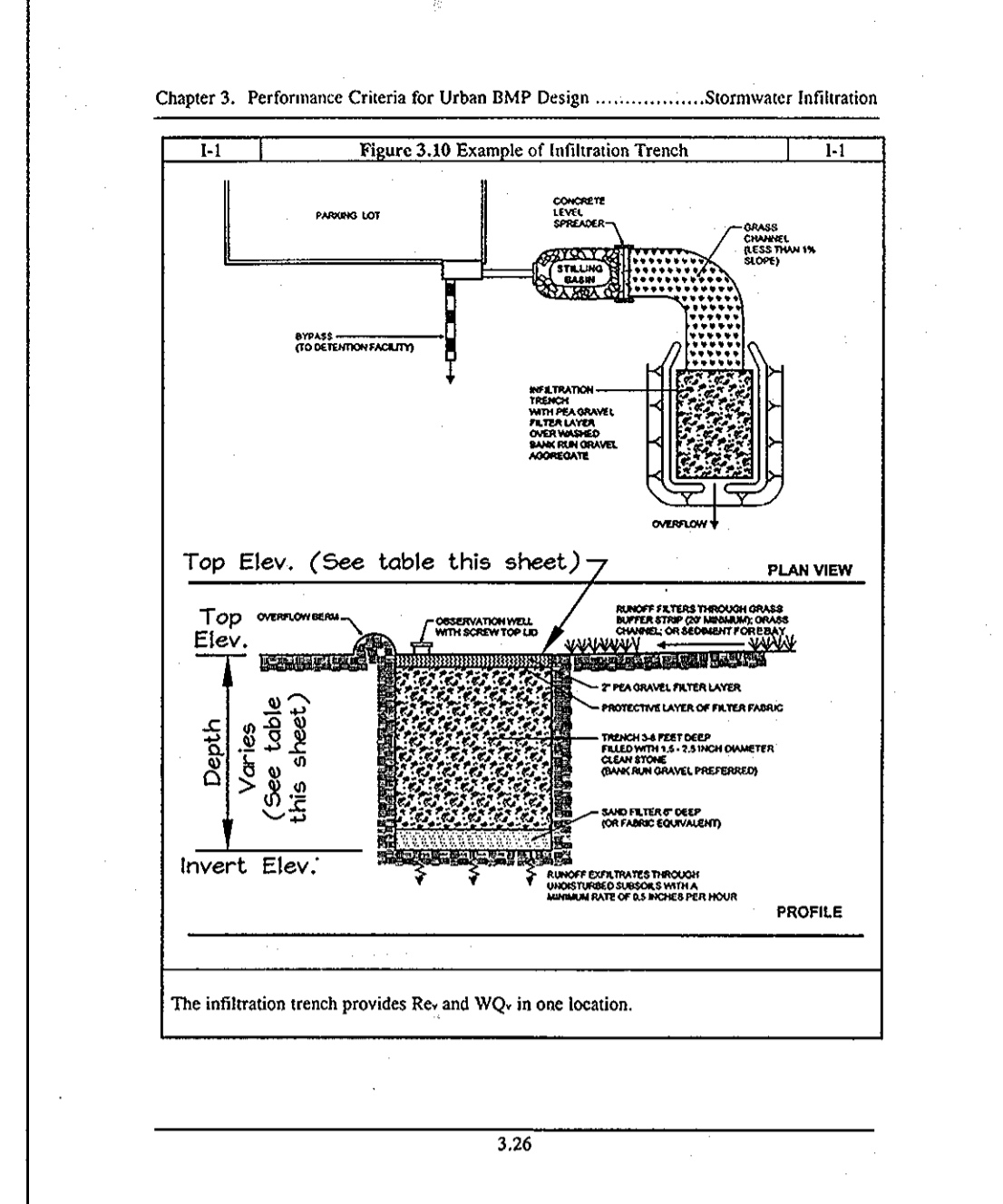
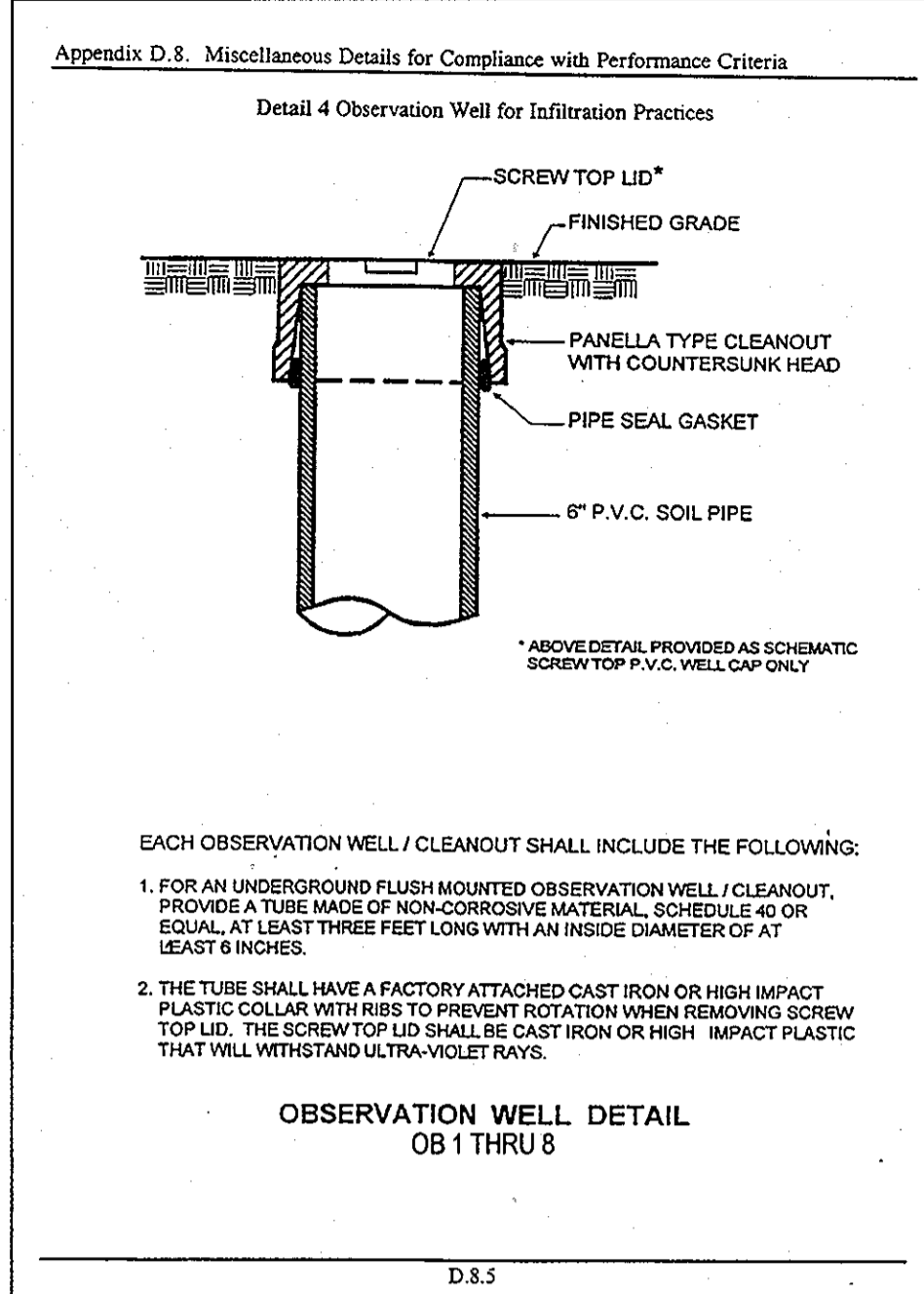
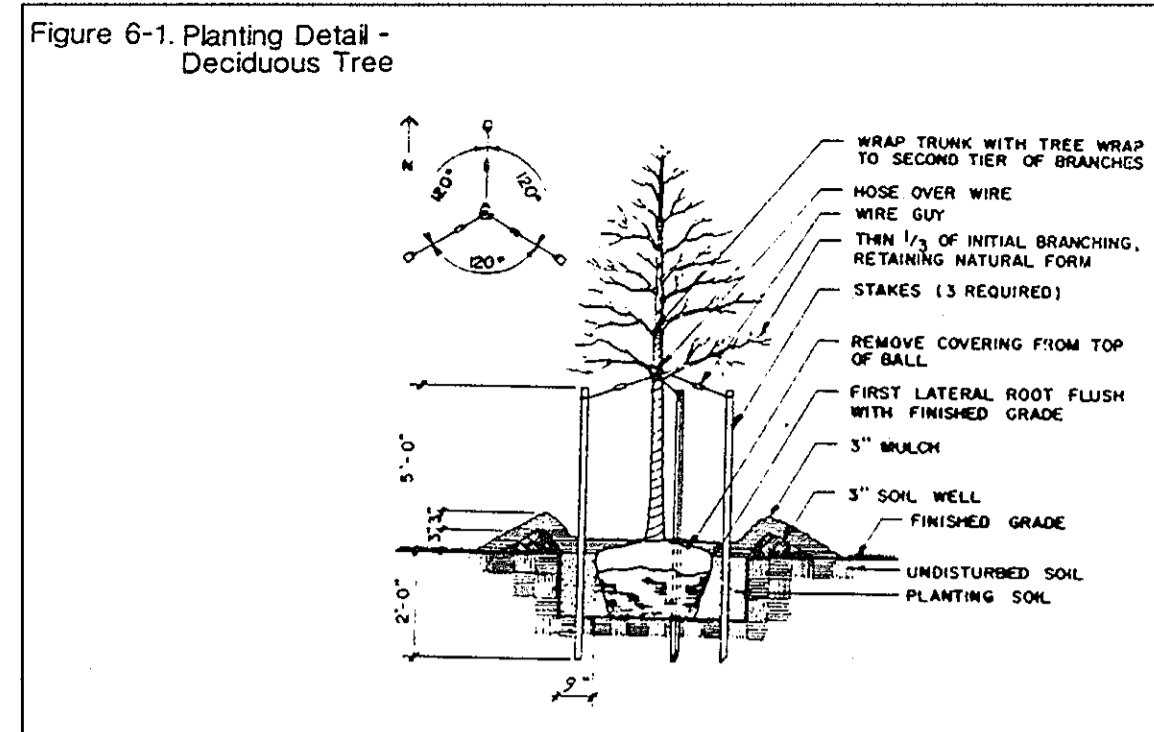
OWNER/DEVELOPER:
 Helen V. Smaat
 1076 Old Frederick Road
 Elicott City, Maryland 21042

Denise L. Smaat
 10182 Old Frederick Road
 Elicott City, Maryland 21042
 410-465-0829

SCHEDULE A PERIMETER LANDSCAPE EDGE		
Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	B	A
Linear Feet of Roadway Frontage/Perimeter	N/A	717*
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	N/A	YES 73 L.F.
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	N/A	NO
Number of Plants Required Shade Trees Evergreen Trees Shrubs	N/A	Using 644 L.F. 160=11
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (21 substitution) Shrubs (101 substitution) (Describe plant substitution credits below if needed)	N/A	11 Shade

Comments: * 717 L.F. - 73 L.F. = 644 L.F. required perimeter to be planted.
644 L.F. = 11 Shade @ 160' TYPE 'A'

LANDSCAPE PERIMETER TABLE				
Perimeter No.	Perimeter Length	Buffer Type	Adjacent Land use	
1	273 L.F.	A	SFD	
2	184 L.F.	A	SFD	
3	258 L.F.	A	OPEN SPACE	
Total	717 L.F.			



LANDSCAPE SCHEDULE				
SYMBOL	QNTY	COMMON NAME	SCIENTIFIC NAME	REMARKS
	11	Red Maple October Glory	Acer rubrum	- 2 1/2\"/>

INFILTRATION TRENCH DIMENSIONS				
TRENCH NO.	DIMENSIONS Length x Width	DEPTH	INVERT	TOP ELEV.
1	8.6 X 5'	5.5'	493.3	498.8
2	12.6 X 5'	6.0'	489.5	495.5
3	51.6 X 5'	5.2'	487.5	492.7
4	40 X 5'	6.5'	486.8	493.3

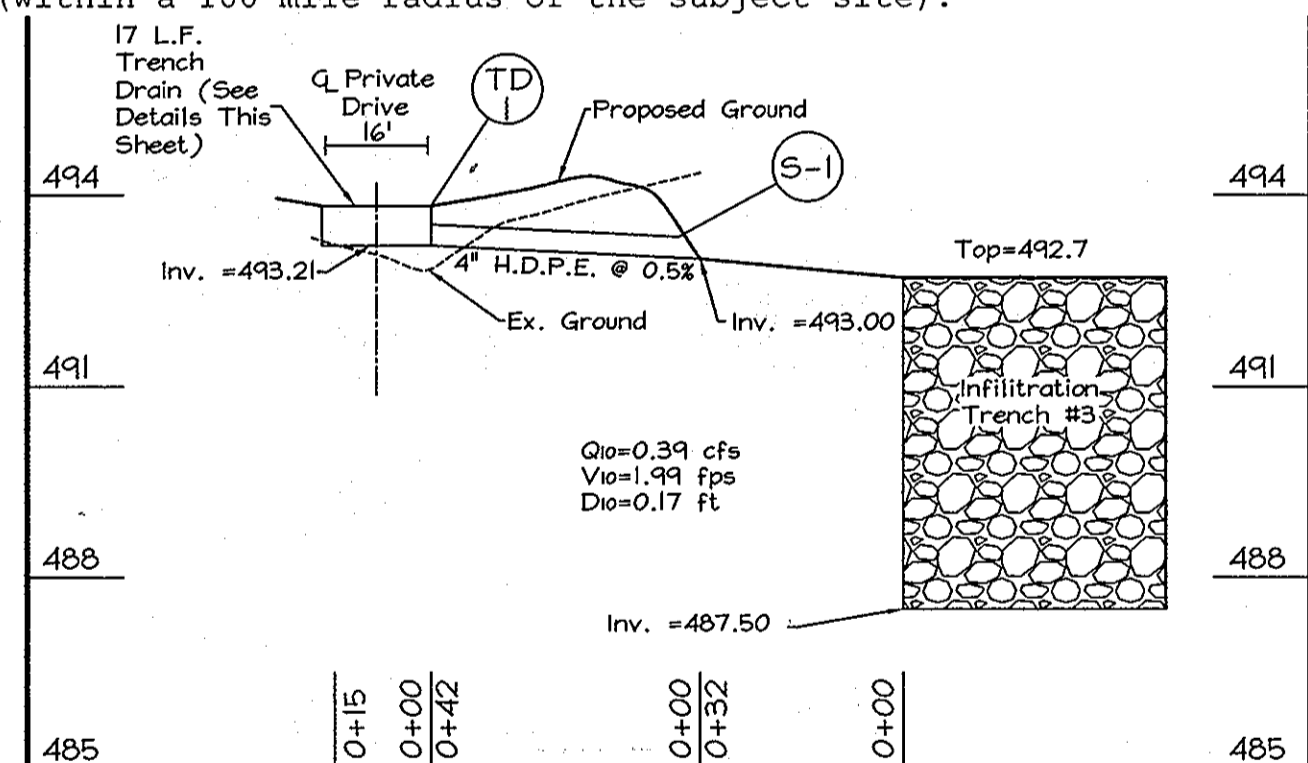
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES

- The monitoring wells and structures shall be inspected by the lot owner on a quarterly basis (every three months) and after every large storm event.
- Water levels and sediment build up in the monitoring wells shall be recorded by the lot owner over a period of several days to insure trench drainage.
- A logbook shall be maintained by the lot owner to determine the rate at which the facility drains.
- When the facility becomes clogged so that it does not drain down within the 72 hour time period, corrective action shall be taken by the lot owner.
- The lot owner shall make the maintenance logbook available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration facility have been verified by the county, the monitoring schedule can be reduced upon approval by Howard County to an annual basis unless the performance data indicates that a more frequent schedule is required.
- See SWM maintenance responsibility chart shown on this sheet.

LOT OWNERS SWM MAINTENANCE RESPONSIBILITY	
LOT	SWM MAINTENANCE RESPONSIBILITY
4	INFILTRATION TRENCH #2
5	INFILTRATION TRENCH #1
6	INFILTRATION TRENCH #3
7	INFILTRATION TRENCH #4

LANDSCAPE NOTES

- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and Landscape Manual.
- The Owner/Developer is responsible for the planting of all plant material required to meet the standards established by the Howard County Landscape Manual. Planting shall be provided under this site development plan.
- Landscaping surety for this subdivision was previously posted under a developer's agreement in the amount of \$3,300.00 for F-05-179. This developer's agreement has been amended and extended for SDP-09-42. Surety amounts remain unchanged from those originally posted under F-05-179.
- All plant materials shall be in good condition and be obtained locally (within a 100 mile radius of the subject site).

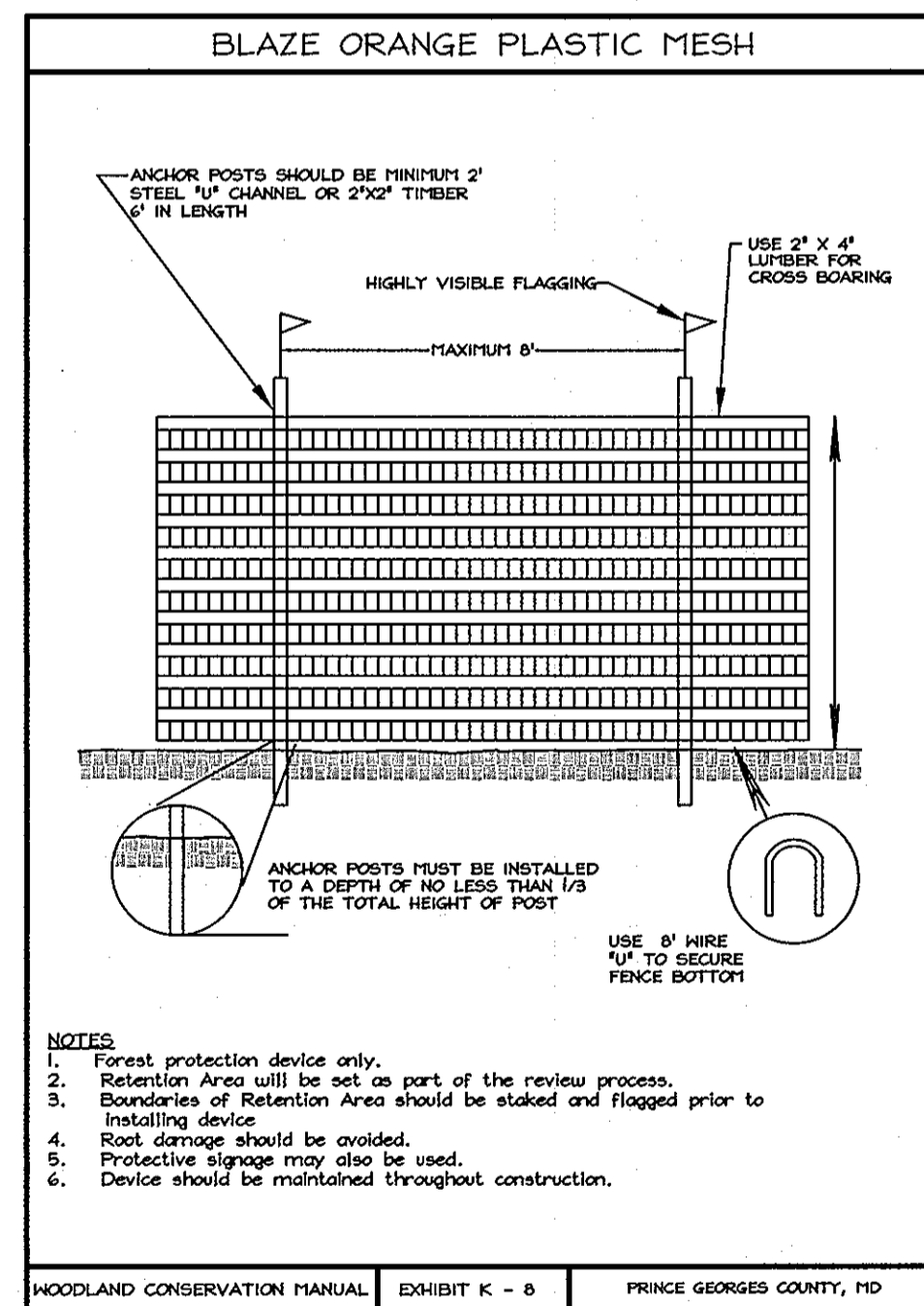


PRIVATE STORM DRAIN PROFILE

SCALE: H: 1\"/>

STRUCTURE SCHEDULE

STRUCTURE NO.	TYPE	INVERT IN	INVERT OUT	TOP ELEV.	REMARKS
TD-1	Trench Drain	-	493.21	493.85	See details, this sheet
S-1	H.D.P.E. End Section	493.01	493.00	493.50	Std. 4\"/>



NOTES

- Forest protection device only.
- Retention Area will be set as part of the review process.
- Boundaries of Retention Area should be staked and flagged prior to installing device.
- Root damage should be avoided.
- Protective slope may also be used.
- Device should be maintained throughout construction.

Chapter 3. Performance Criteria for Urban BMP Design. Stormwater Infiltration

3.3.1 Infiltration Feasibility Criteria

To be suitable for infiltration, underlying soils shall have an infiltration rate (I) of 0.52 inches per hour or greater, as initially determined from NRCS soil textural classification and subsequently confirmed by field geotechnical tests. Approved geotechnical testing procedures for feasibility and design are outlined in Appendix D.1. The minimum geotechnical testing is one test hole per 3000 sq. ft. with a minimum of two borings per facility (taken within the proposed limits of the facility).

Soils should also have a clay content of less than 20% and a silt/clay content of less than 40%.

Infiltration cannot be located on slopes greater than 15% or within fill soils.

To protect groundwater from possible contamination, runoff from designated hotspot land uses or activities cannot be infiltrated without proper pretreatment to remove hydrocarbons, trace metals, or nutrients. A list of designated stormwater hotspots is provided in Section 2.8.

Infiltration may be prohibited within areas of karst topography. If a site overlies karst geology, the local approval authority should be consulted for specific design requirements. Recommended procedures for determining whether a site overlies karst are provided in Appendix D.2.

The bottom of the infiltration facility shall be separated by at least four feet vertically from the seasonally high water table or bedrock layer, as documented by on-site soil testing. This distance is reduced to 2 feet on the Lower Eastern Shore (see Figure 4.1).

Infiltration facilities should be located a minimum of 100 feet horizontally from any water supply well.

The maximum contributing area to an individual infiltration practice should generally be less than 5 acres.

Infiltration practices should not be placed in locations that cause water problems to downgradient properties. Infiltration facilities should be setback 25 feet (10 feet for dry wells) downgradient from structures.

3.3.2 Infiltration Conveyance Criteria

A conveyance system shall be included in the design of all infiltration practices in order to ensure that excess flow is discharged at non-erosive velocities.

The overland flow path of surface runoff exceeding the capacity of the infiltration system shall be evaluated to preclude erosive concentrated flow. If computed flow velocities do not exceed

Chapter 3. Performance Criteria for Urban BMP Design. Stormwater Infiltration

the non-erosive threshold, overflow may be accommodated by natural topography (see Appendix D.12 for the critical erosive velocities for grass and soil).

All infiltration systems shall be designed to fully de-water the entire WQ- within 48 hours after the storm event.

The truncated hydrograph method shall be used if infiltration is used to control Cp or Qp (see Appendix D.13 for details on this method).

If runoff is delivered by a storm drain pipe or along the main conveyance system, the infiltration practice should be designed as an off-line practice. (See Detail No. 5, Appendix D.8 for example of an off-line infiltration practice.)

Adequate stormwater outfalls shall be provided for the overflow associated with the ten-year design storm event (non-erosive velocities on the down-slope).

3.3.5 Infiltration Pretreatment Criteria

Pretreatment Volume

A minimum of 25% of the WQ- must be pretreated prior to entry to an infiltration facility. If the f for the underlying soils is greater than 2.00 inches per hour, 50% of the WQ- shall be pretreated prior to entry into an infiltration facility. This can be provided by a sedimentation basin, silt trap, sand pit or other acceptable measures. Exit velocities from pretreatment shall be non-erosive during the two-year design storm.

The Camp-Hazen equation (Chapter 3.4.3) may be used as an acceptable alternative for determining infiltration pretreatment requirements.

Pretreatment Techniques to Prevent Clogging

Each system shall have redundant methods to protect the long term integrity of the infiltration rate. The following techniques, at least three per trench (1-1) and two per basin (1-2), must be installed in every infiltration practice:

- grass channel (see Chapter 5 - Credit #5 for example computation and requirements for use)
- grass filter strip (minimum 20 feet and only if sheet flow is established and maintained)
- bottom sand layer
- upper sand layer (6\"/>

Chapter 3. Performance Criteria for Urban BMP Design. Stormwater Infiltration

The sides of infiltration trenches shall be lined with an acceptable filter fabric that prevents soil piping but has greater permeability than the parent soil (see Appendix B.2).

3.3.4 Infiltration Treatment Criteria

Infiltration practices shall be designed to infiltrate the entire WQ- less the pretreatment volume through the floor of each practice using the design methods outlined in Appendix D.13.

Infiltration practices are best used in conjunction with other BMPs and often downstream detention is still needed to meet the Cp- and Qp- sizing criteria.

The construction sequence and specifications for each infiltration practice shall be followed, as outlined in Appendix B.2. Experience has shown that the longevity of infiltration practices is strongly influenced by the care taken during construction.

A porosity value "n" (n=Vv/V) of 0.40 should be used in the design of stone reservoirs for infiltration practices.

3.3.5 Infiltration Landscaping Criteria

Pretreatment Volume

A dense and vigorous vegetative cover shall be established over the contributing pervious drainage area before runoff can be accepted into the facility. Infiltration trenches shall not be constructed until all of the contributing drainage area has been completely stabilized.

3.3.6 Infiltration Maintenance Criteria

Infiltration practices may not serve as a sediment control device during the site construction phase. In addition, the erosion and sediment control plan for the site must clearly indicate how sediment will be prevented from entering the infiltration site.

An observation well shall be installed in every infiltration trench, consisting of an anchored six-inch diameter perforated PVC pipe with a lockable cap. (See Detail No. 4, Appendix D.8.)

It is recommended that infiltration designs include dewatering methods in the event of failure. This can be done with underdrain pipe systems that accommodate drawdown.

Direct access shall be provided to all infiltration practices for maintenance and rehabilitation.

Infiltration practices should not be covered by an impermeable surface.

OSHA safety standards should be consulted for trench excavation.

TRENCH DRAIN

NEENAH FOUNDRY COMPANY

R-4995 - R-4996 Type M Trench Frame with Solid or Grated Cover

Cast Iron Trench Assemblies - Medium or Heavy Duty - For Use in Sidewalks, Driveways, Garages, Loading Docks, etc.

Read Carefully Before Ordering

Specify:

- Complete catalog number.
- Medium or heavy duty.
- Overall length of cover required.
- Lid solid, flat grated, or diagonally barred convex grating.
- Location of outlet, side, bottom-outlet (give dimensional location and pipe size).
- Whether one-end or both ends are to be open-ended.
- Perma-Grip surface if required. (See page 227.)

Illustrating Type M frame with grating cover. Standard with 4-inch outside couk-outlet. Can be equipped for inside couk if specified.

Trench covers are used over areas requiring long drainage assemblies. Can be supplied in a variety of sizes and lengths to meet special needs. For trenches of irregular pattern, arrangements can be made to furnish cover to fit.

Standard 4-inch outlet at end of drain. Special size outlets are available on special order. Side and bottom outlets optional and furnished only when specified.

SECTIONS THRU DRAINS

SECTIONS THRU DRAINS, TYPE M

ALTERNATE SECTIONS - SIDE AND BOTTOM OUTLETS

Coloq No.	Description	Dimensions in inches				Length
		A	B	C	D	
Standard Sizes						
R-4995-A1	with grated cover	11 1/2	11 1/2	10	6	as ordered
R-4995-A2	with grated cover	7	7	5	4 1/4	as ordered
R-4995-B1	with solid cover	11 1/2	11 1/2	10	6	as ordered
R-4995-B2	with solid cover	7	7	5	4 1/4	as ordered
Standard Sizes						
R-4996-A1	with grated cover	11 1/2	11 1/2	10	6	as ordered
R-4996-A2	with grated cover	7	7	5	4 1/4	as ordered
R-4996-B1	with solid cover	11 1/2	11 1/2	10	6	as ordered
R-4996-B2	with solid cover	7	7	5	4 1/4	as ordered
R-4996-B3	with solid cover	11 1/2	11 1/2	10	12	as ordered

Above Standard Frames made in 4-foot sections, covers in 2-foot lengths.

*Available with Type "B" grate only (see page 216).

**Frames and covers furnished in 3-foot lengths.

* USE R-4996-A1 DIMENSIONS

A = 11 1/2"
B = 11 1/2"
C = 10"
D = 6"

Total Length = 17 ft

238

NOTE: The trench drain shall be formed and cast in place to insure the proper design dimensions, slopes and elevations. Use of a pre-cast structure will require review by the engineer prior to the contractor ordering the structure. Grate shall be traffic bearing, with side opening (Heavy Duty).

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

9/16/09

9/17/09

9-18-09

DEVELOPER'S / BUILDER'S CERTIFICATION

I certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I further certify that upon completion a Letter of Landscape Installation, accompanied by an executed One Year Guarantee of Plant Materials will be submitted to the Department of Planning and Zoning.

9/26/09

9/26/09

9/9/09

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

BRUCE D. BURTON

8/26/09

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

BRUCE D. BURTON

8-26-09

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BRUCE D. BURTON

8/26/09

No.	Date	Description
1	May, 2010	Revise infiltration trench table to show as-built elevations / Show as-built trench drain elevations

LDE Inc.

Engineers, Surveyors, Planners

9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX (410)715-9510

DESIGNED: S.D.H.

DRAWN: G.D.W.

CHECKED: B.D.B.

DATE: 8/2009

SCALE: AS SHOWN

DRAWING: 4 OF 4

JOB NO.: 08-004

FILE NO.: SDP-09-42

STORMWATER MANAGEMENT NOTES, DETAILS & LANDSCAPE SCHEDULE, NOTES & DETAILS MAPLEWOOD OVERLOOK

LOTS 4 - 7

PLAT NO. 18443

PROPOSED SINGLE FAMILY DETACHED UNITS ON LOTS 6 & 7 AND RELOCATED USE-IN-CORPORATION DRIVEWAY/STORMWATER MANAGEMENT FOR EXISTING DWELLINGS ON LOT 5

Tax Map No. 17 - Grid No. 7 - Parcel 731
2nd Election District - Howard County, Maryland

Previous Submittals: F98-176, WPO0-73, F00-186, F00-111, WPO4-131, F-05-179

OWNER/DEVELOPER: Helen V. Smoot
10182 Old Frederick Road
Ellicott City, Maryland 21042

Designer: Wayne A. Smoot
10182 Old Frederick Road
Ellicott City, Maryland 21042