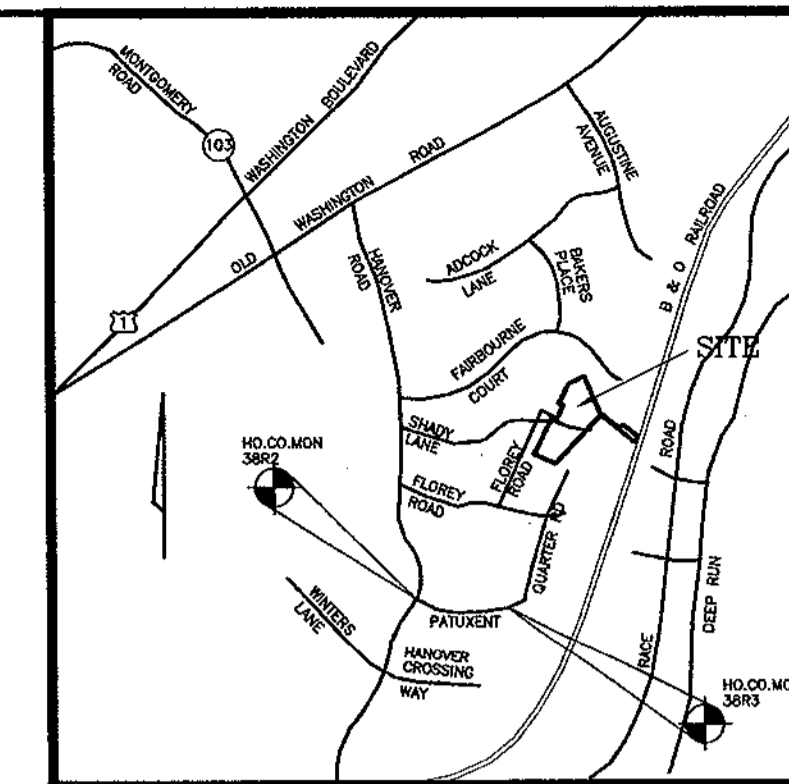


GENERAL NOTES

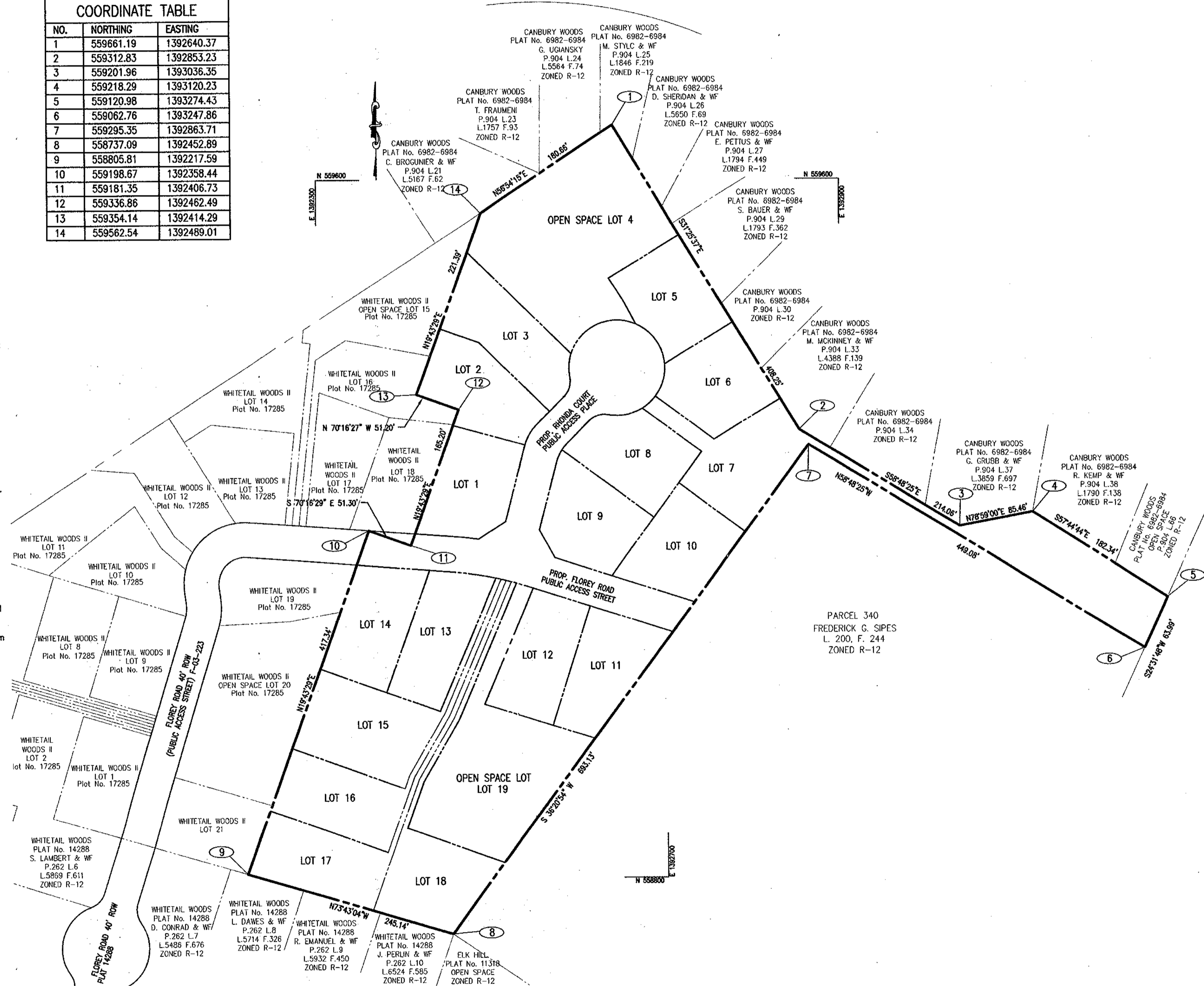
- The project is in conformance with the latest Howard County Standards unless waivers have been approved.
 - This plot is based on a field run monumented boundary survey performed on or about May 25, 2002 by KCE Engineering, Inc.
 - The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System. Howard County Monument Nos. 38R2 and 38R3 were used for this project.
- | # | ELEVATION | NORTHING | EASTING |
|------|-----------|------------|-------------|
| 38R2 | 168.788' | 557500.683 | 1391227.052 |
| 38R3 | 124.653' | 557417.823 | 1391983.177 |
- Planning and Zoning File Number: S-03-02; WP-03-35; P-04-11
 - Water will be public. Water to be provided through Contr. No. 14-4220-D
 - Sewer will be public. Sewer to be provided through Contr. No. 14-4220-D
 - Stormwater Management for this development is provided by an extended detention micropond facility to provide Cpv and WQv and a bioretention facility to provide WQv and Rev. Both facilities are Hazard Class "A". The facilities will be located on open space lots 4 & 19 and will be privately owned and maintained by the HOA.
 - Existing utilities are based on Whitetail Woods Contr. no. 14-3754-D, Canbury Woods Contr. no. 14-1450-D, and proposed Whitetail Woods-II Contr. no. 14-4104-D.
 - There are no floodplains located on-site as certified by LaBare LLC.
 - There are no wetlands or streams located on-site as certified by LaBare LLC.
 - There are no steep slopes on-site with a contiguous area of 20,000 s.f. or greater.
 - APFO Traffic study was prepared by Traffic Concepts, Inc. dated April 2002 and approved under S-03-02.
 - The railway noise study for this project was prepared by KCE Engineering, Inc. dated November 2003.
 - The geotechnical report for this project was prepared by KCE Engineering, Inc. dated November 2003.
 - This subdivision complies with the forest conservation requirements of section 16.1200 of the Howard County Code with a 4.03 AC. reforestation obligation provided off-site (Tally Property Parcel 2, Tax Map 8, Parcel 392). Surety in the amount of \$87,773 was posted with the DPW, developer's agreement.
 - All landscaping requirements as set forth in the Landscape Manual shall be complied with.
 - Street trees are provided for this subdivision in accordance with Section 16.124(a)(1) of the Subdivision and Land Development Regulations and the Landscape Manual. A minimum of 20' shall be maintained between street lights and trees.
 - Streetlights will be required in this development in accordance with the Design Manual. Streetlight placement and the type of fixture and pole selected shall be in accordance with the latest Howard County Design Manual, Volume II (1993) and as modified by "Guidelines for Street Lights in Residential Developments (June 1993). The June 1993 policy includes guidelines for lateral and longitudinal placement. A minimum spacing of 20' shall be maintained between any streetlight and any tree.
 - Sediment and Erosion Control will be provided for this Site.
 - Deed Reference: **L-180, F-577.**
 - This Property is within the Metropolitan District.
 - To the best of the owner's knowledge, there are no burial/cemetery locations on site.
 - For flag or pipeline lots, refuse collection, snow removal and road maintenance are provided to the junction of the flag or pipeline and road right-of-way line and not onto the pipeline lot driveway. The 4'x10' concrete pad for a Refuse and Recycling Collection Pad located within Open Space Lot 19 will be maintained by the owners of Lots 15 thru 18 pursuant to the Declaration of Right of Access and Maintenance Obligation recorded among the Land Records of Howard County, Maryland along with the recording of this plot.
 - Lots 15, 16, 17, and 18 will utilize a use-in-common driveway, Howard County Standard Detail no. R-6.06 will be used for the entrance at the intersection of the public road.
 - This plan is grandfathered to the Fifth Edition of the Howard County Subdivision and Land Development Regulations with a signed Sketch Plan prior to May 22, 2003. Development or construction on these lots must comply with setback and buffer regulations in effect at the time of submission of the site development plan, waiver petition application or building/grading permit.
 - Recreation space is provided in accordance with the requirements of Howard County Subdivision Regulations, Section 16.121(a)(4).
 - Open Space Lots #4 and #19 have been created in accordance with the requirements of Howard County Subdivision Regulations Section 16.121(c) and will be dedicated to a Homeowners' Association concurrent with recording of the final plan.
 - This site is located within the BW four mile height restriction zone. Approval is required from the Maryland Aviation Administration for new house construction on this site. Approval date 7/20/05.
 - Waiver Petition WP-03-035 was submitted to request a waiver to Section 16.121(e)(1) of the Ho.Co. Subdivision Regulations requiring 40 ft. of public road frontage for Open Space Lots #4 (then #5) and #19 (then #20). However, after revising the lot lines, the public road frontage for both the Open Space Lots was achieved and the petition withdrawn on 11/20/02.
 - The subject property is zoned "R-12" per the 2/2/04 Comprehensive Zoning Plan.
 - All filled areas within the public right-of-way shall meet 95% compaction in accordance with AASHTO T-180 specifications.
 - Retaining (wall) walls on open space Lots 4 and 19 will be privately owned and maintained by the HOA. Retaining wall on Lot 11 will be privately owned and maintained by lot owner.
 - All sign posts used for traffic control signs installed in the County right-of-way shall be mounted on a 2" galvanized steel, perforated, square tube post (14 gauge) inserted into a 2-1/2" galvanized steel, perforated, square tube sleeve (12 gauge) 3' long. A galvanized steel pole cap shall be mounted on top of each post.
 - Driveway(s) shall be provided prior to residential occupancy to insure safe access for fire and emergency vehicles per the following minimum requirements:
 - Width - 12 feet (14feet serving more than one residence).
 - Surface - 6 inches of compacted crusher run base with tar and chip coating.
 - Geometry - maximum 15% grade, maximum 10% grade change and minimum of 45-foot turning radius
 - Structures (culvert/bridges) - Capable of supporting 25 gross tons (H25 loading).
 - Drainage elements - Capable of safely passing 100-year flood with no more than 1 foot depth over driveway surface.
 - Structure clearances - minimum 12 feet.
 - Maintenance - Sufficient to insure all weather use.

FINAL PLAN DORCHESTER HOMES LOTS 1-19 HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1"=2000'

NO.	NORTHING	EASTING
1	559661.19	1392640.37
2	559312.83	1392853.23
3	559201.96	1393036.35
4	559218.29	1393120.23
5	559120.98	1393274.43
6	559062.76	1393247.86
7	559295.35	1392863.71
8	558737.09	1392452.89
9	558805.81	1392217.59
10	559198.67	1392358.44
11	559181.35	1392406.73
12	559336.86	1392462.49
13	559354.14	1392414.29
14	559562.54	1392489.01



LOCATION MAP
SCALE: 1"=80'

SITE DATA

- LOCATION: TAX MAP 38, PARCEL 756
- FIRST ELECTION DISTRICT
- EXISTING ZONING: R-12
- GROSS AREA OF PARCEL: 304,615 SFT.=6.993 ACRES
- AREA OF RIGHT OF WAY: 32,554 SFT.=0.747 ACRES
- AREA OF FLOODPLAIN: N/A
- AREA OF CONTIGUOUS STEEP SLOPES ON-SITE: 3,302 SQ.FT. (0.076 AC.)
- NET AREA OF PROJECT: 6.917 ACRES
- NUMBER OF PROPOSED RESIDENTIAL LOTS: 17
- AREA OF PROPOSED RESIDENTIAL LOTS: 4.905 ACRES
- AREA OF SMALLEST BUILDABLE LOT PROPOSED: 10,800 SQ.FT. (LOTS 1,10,11)
- AREA OF RECREATION SPACE REQUIRED: 200 SF PER RESIDENTIAL LOT = 200x17=3,400 SF
- AREA OF OPEN SPACE REQUIRED: 10% OF GROSS AREA OF PARCEL =30,461 SF (0.699 AC.)
- NUMBER OF PROPOSED OPEN SPACE LOTS: 2
- CREDITED OPEN SPACE: 55,544 SF.=1.28 ACRES
- NON CREDITED OPEN SPACE: 2873 SF.=0.06 ACRES
- TOTAL OPEN SPACE AREA PROVIDED: 58,417 SF.=1.34 ACRES

SHEET INDEX

SHEET NO.	TITLE
1 OF 13	COVER SHEET
2 OF 13	ROAD LAYOUT PLAN
3 OF 13	ROAD PROFILES
4 OF 13	GRADING, SEDIMENT AND EROSION CONTROL PLAN
5 OF 13	GRADING, SEDIMENT AND EROSION CONTROL DETAILS
6 OF 13	LANDSCAPE AND FOREST CONSERVATION PLAN
7 OF 13	STORM DRAIN DRAINAGE AREA MAP
8 OF 13	STORM DRAIN PROFILES AND STORMWATER MANAGEMENT DETAILS
9 OF 13	STORM WATER MANAGEMENT DETAILS-1
10 OF 13	STORM WATER MANAGEMENT DETAILS-2
11 OF 13	OFFSITE PLANTING PLAN-1
12 OF 13	OFFSITE PLANTING PLAN-2
13 OF 13	WATERFOWL DETERRANT SYSTEM- DETAILS

NO.	REVISION	DATE

COVER SHEET
DORCHESTER HOMES
LOTS 1-3, 5-18 AND OPEN SPACE LOTS 4, 19

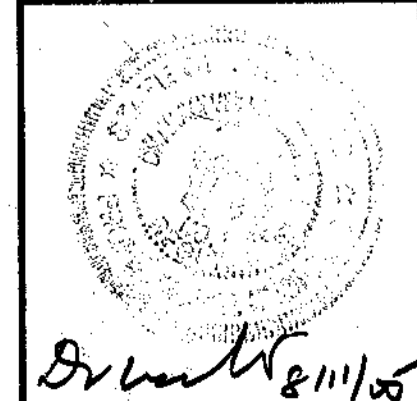
REF: S-03-02, WP-03-35, P-04-11
1ST ELECTION DISTRICT- HOWARD COUNTY, MARYLAND
PARCEL 756 LIBER 771, FOLIO 440
TAX MAP 38 BLOCK 9 ZONE R-12



KCE ENGINEERING, INC.
EXECUTIVE CENTER
3300 NORTH RIDGE ROAD, SUITE 315
ELLCOTT CITY, MARYLAND 21043
PHONE (410) 203-9800 FAX (410) 203-9228

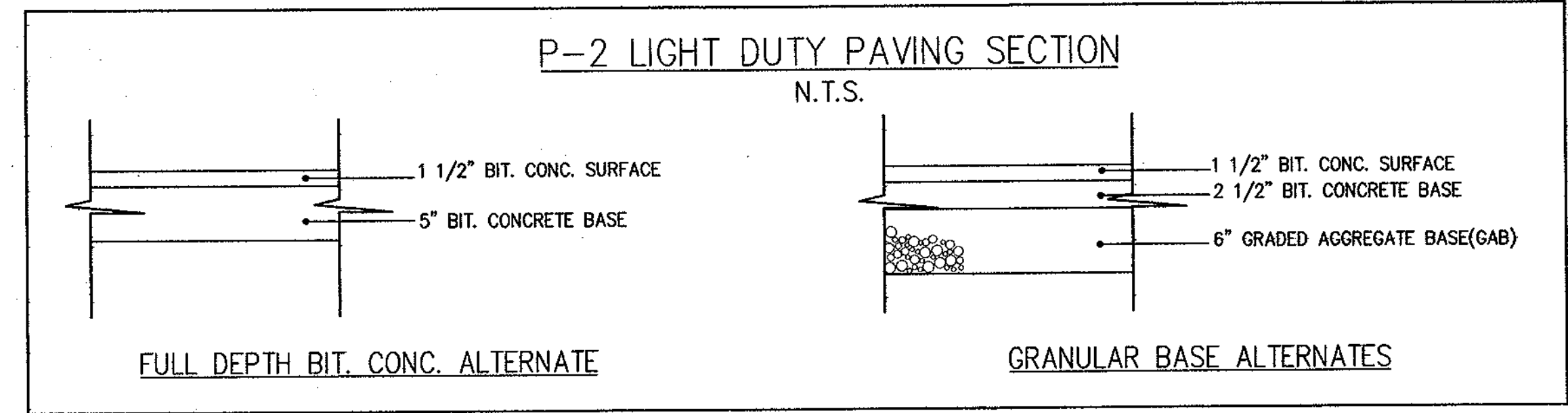
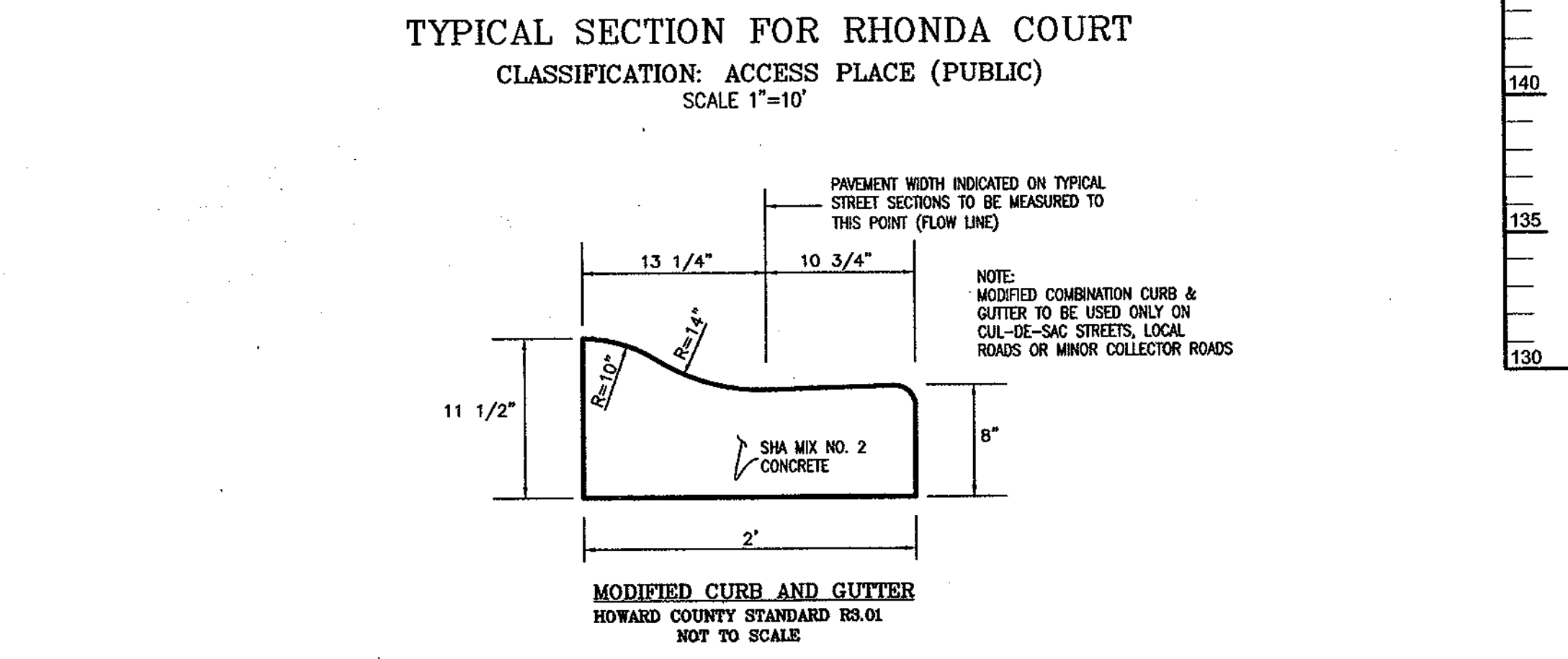
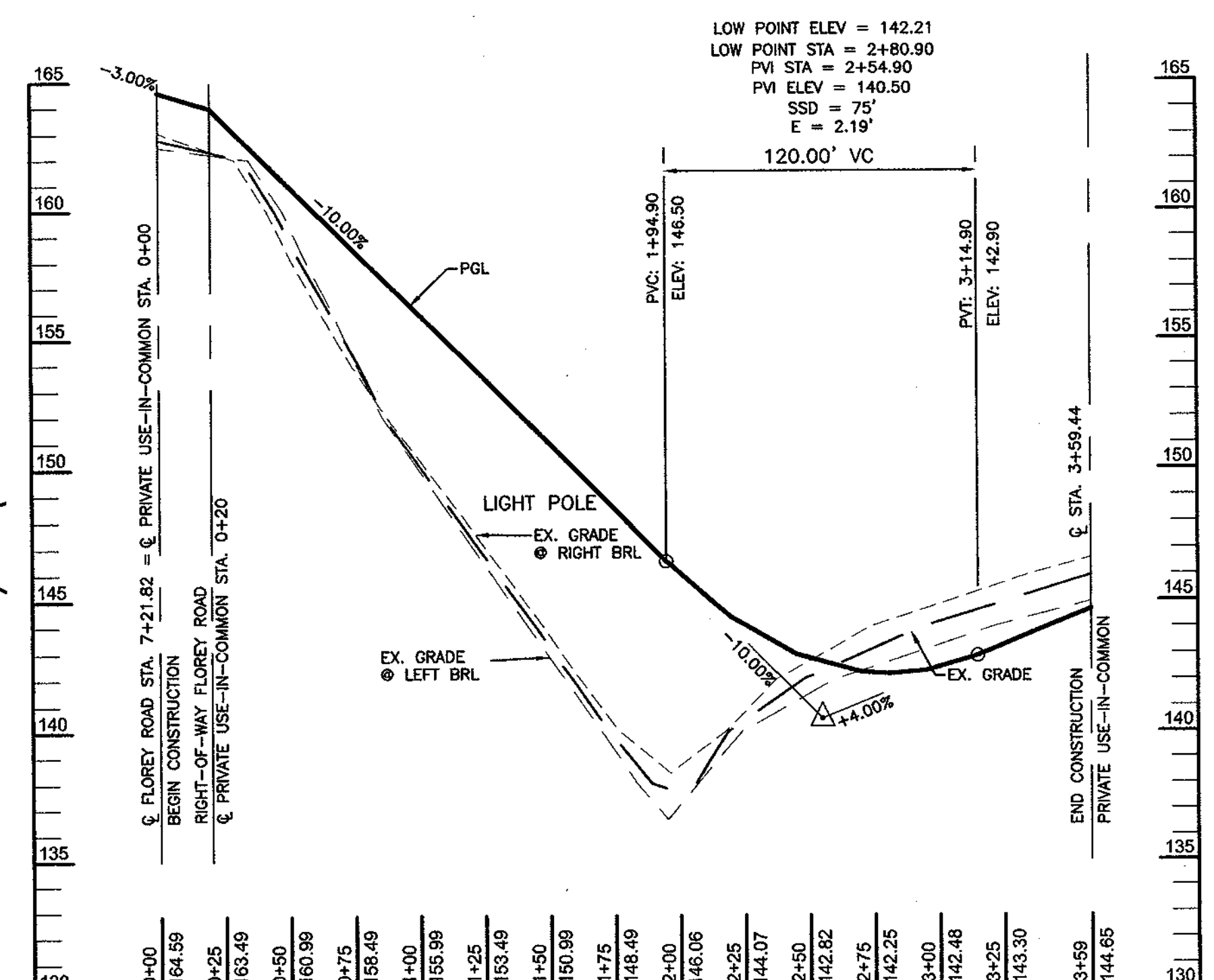
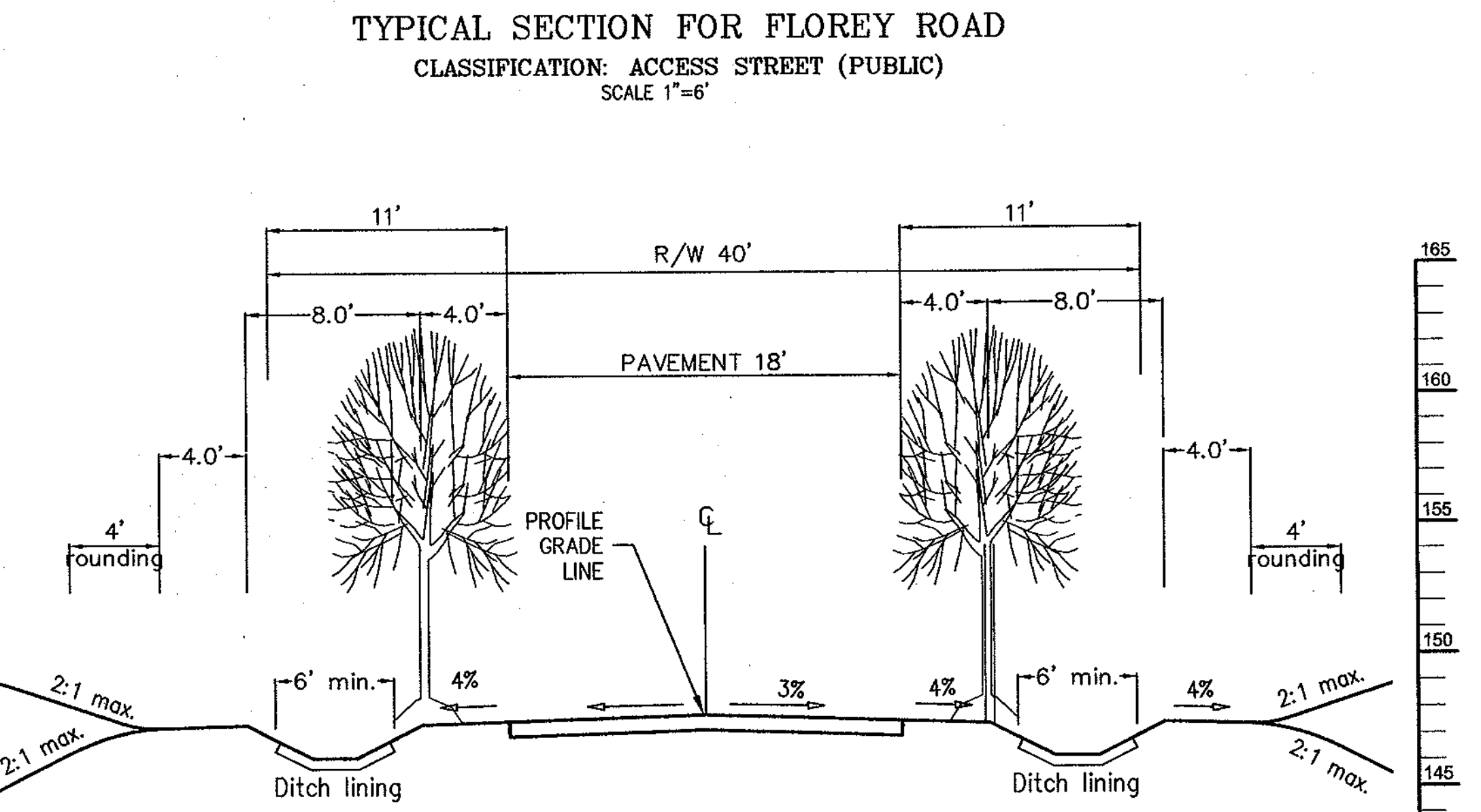
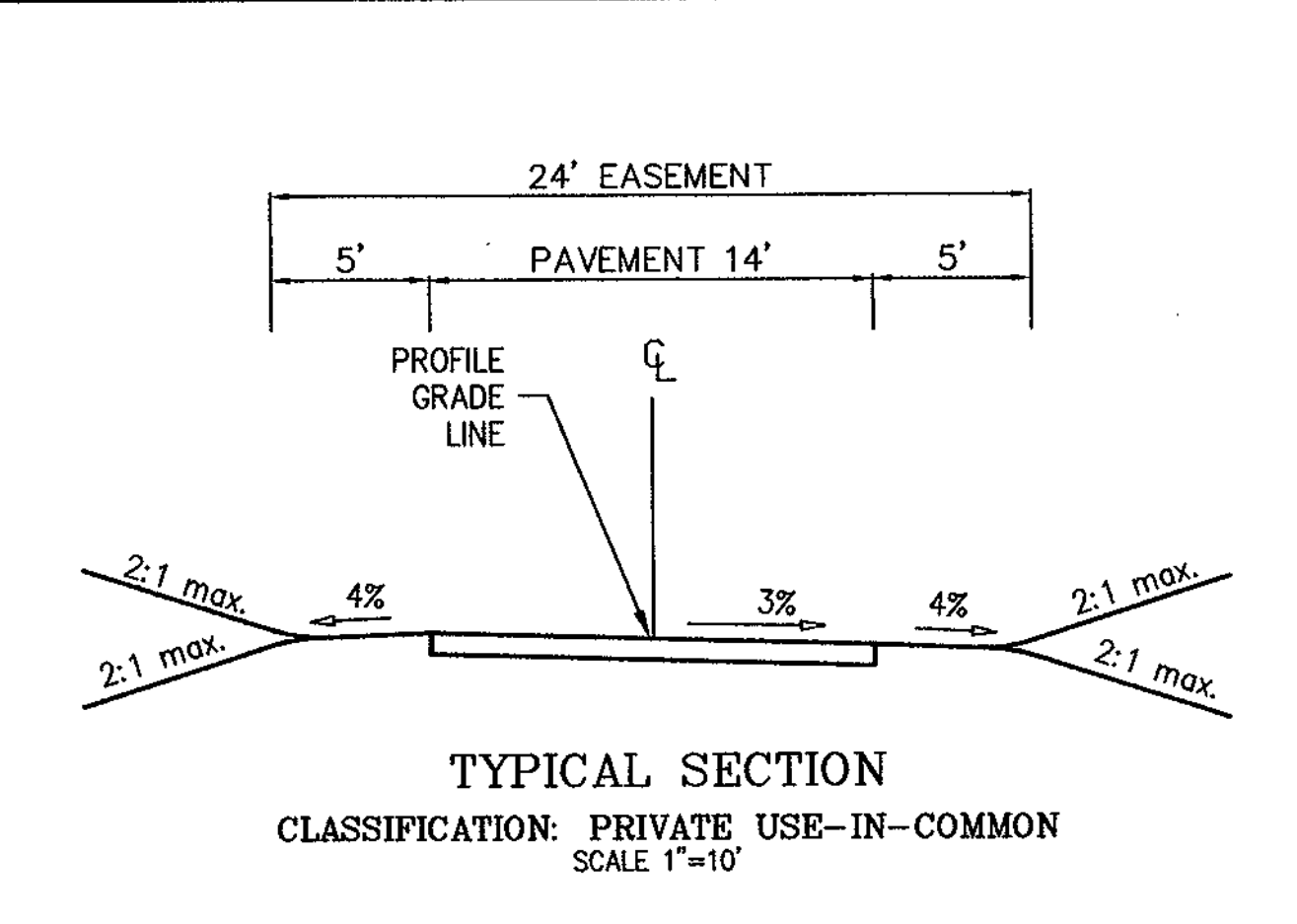
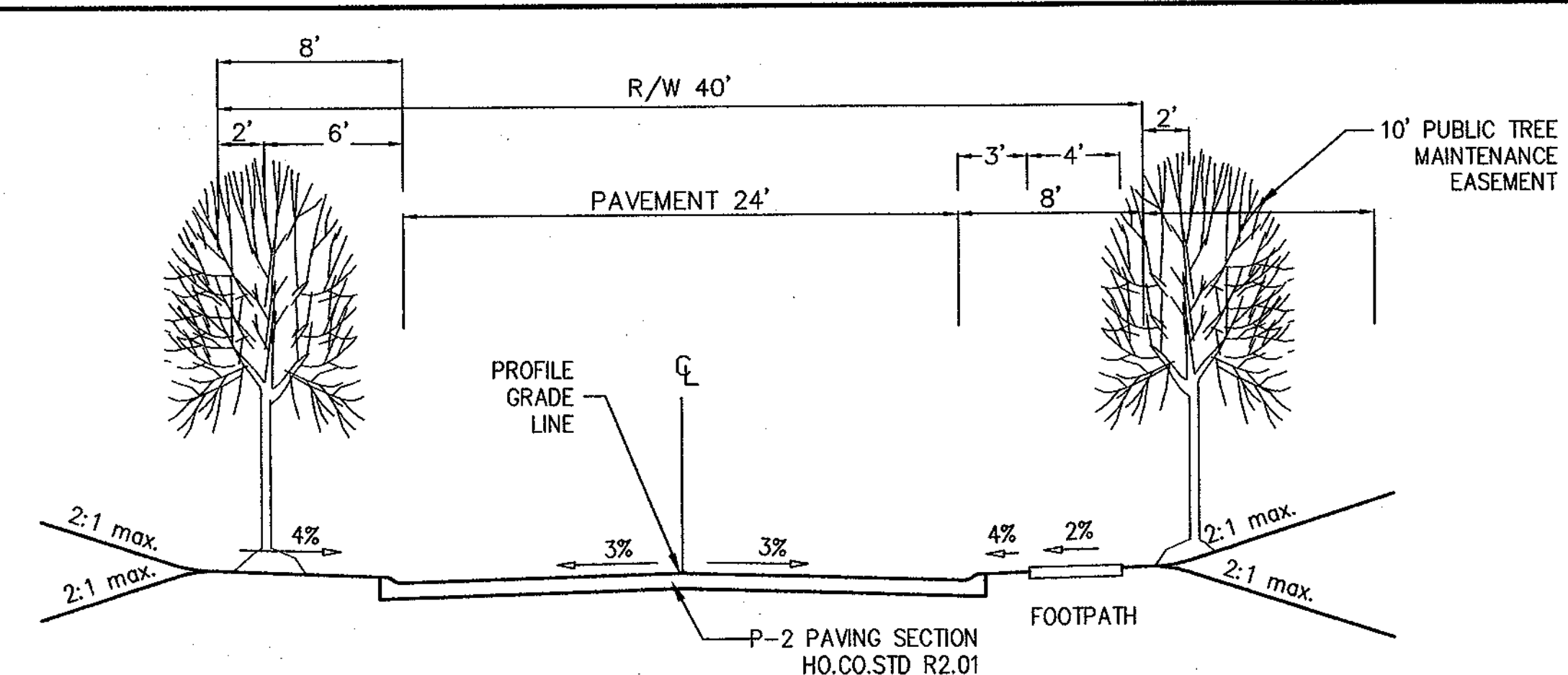
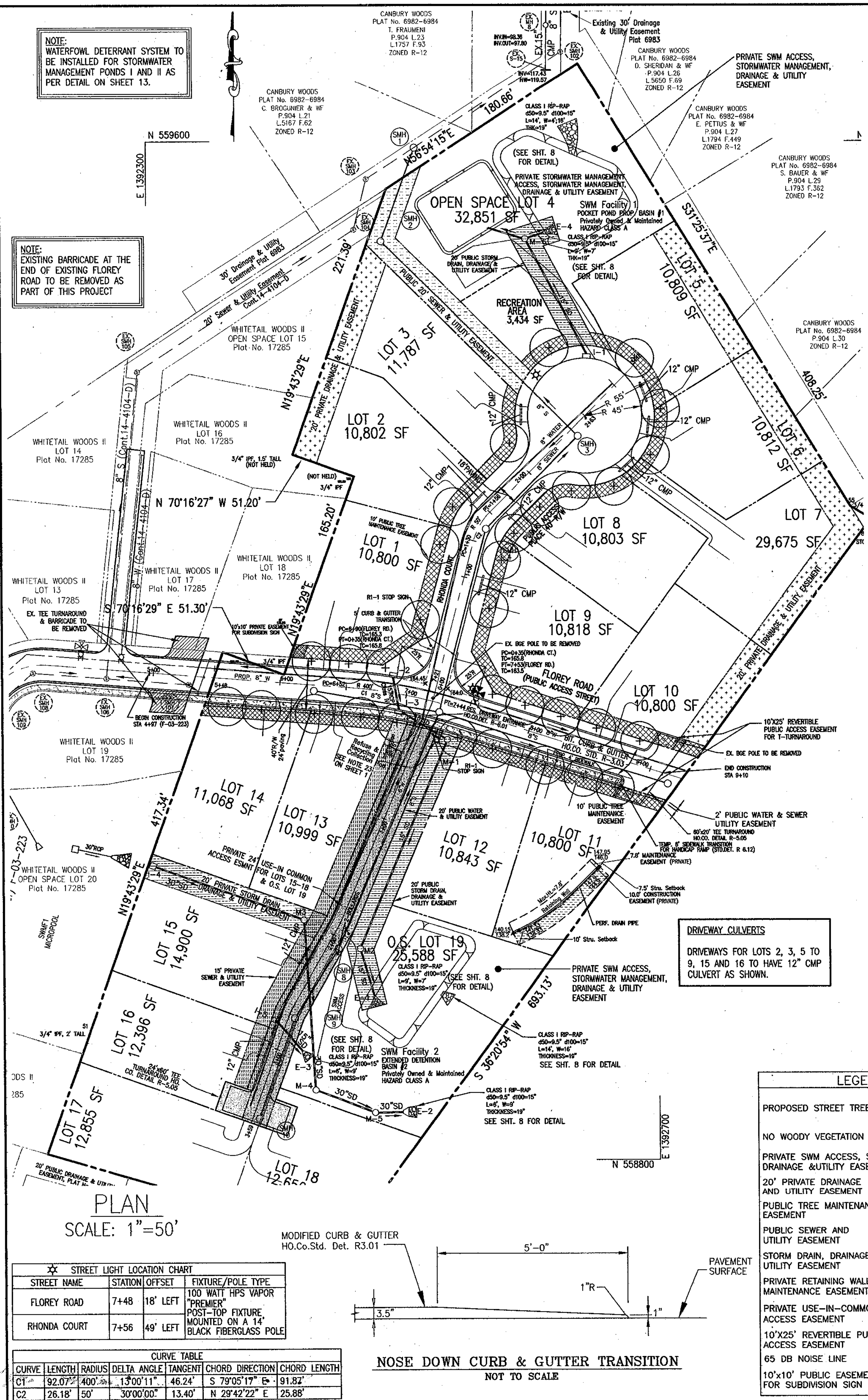
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS DATE: 8-30-05	APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 9/1/05
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OWNER/DEVELOPER
DORCHESTER HOMES, LLC
8248 VETERANS HWY, SUITE 101
MILLERSVILLE, MD 21108



DRAWN BY: MG
CHECKED BY: DMK
SCALE: 1" = 50'
DATE: AUGUST, 2005

SHEET:
1 OF 13



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 8/20/05

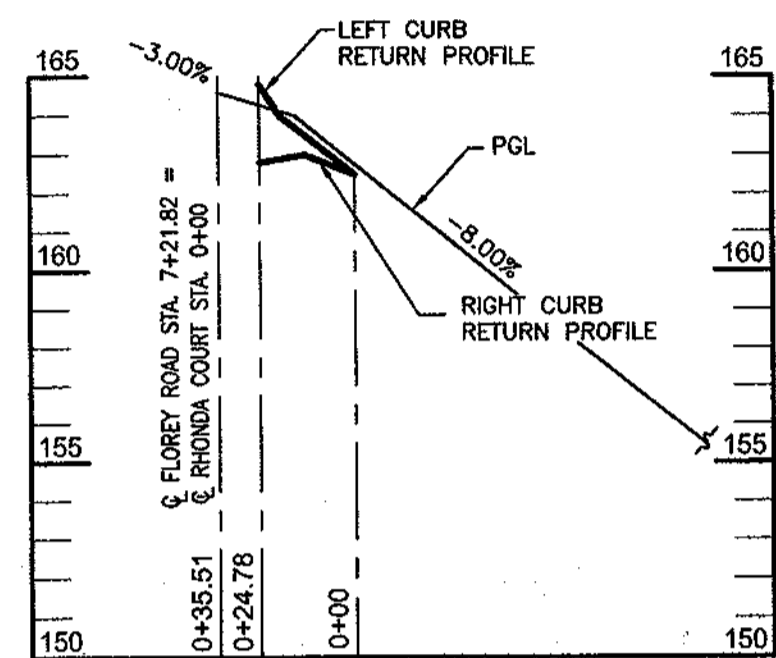
ROAD LAYOUT PLAN
DORCHESTER HOMES
LOTS 1-3, 5-18 AND OPEN SPACE LOTS 4, 19

REF: S-03-02, WP-03-35, P-04-11
1ST ELECTION DISTRICT- HOWARD COUNTY, MARYLAND
PARCEL 756 LIBER 771, FOLIO 440
TAX MAP 3B BLOCK 9 ZONE R-12

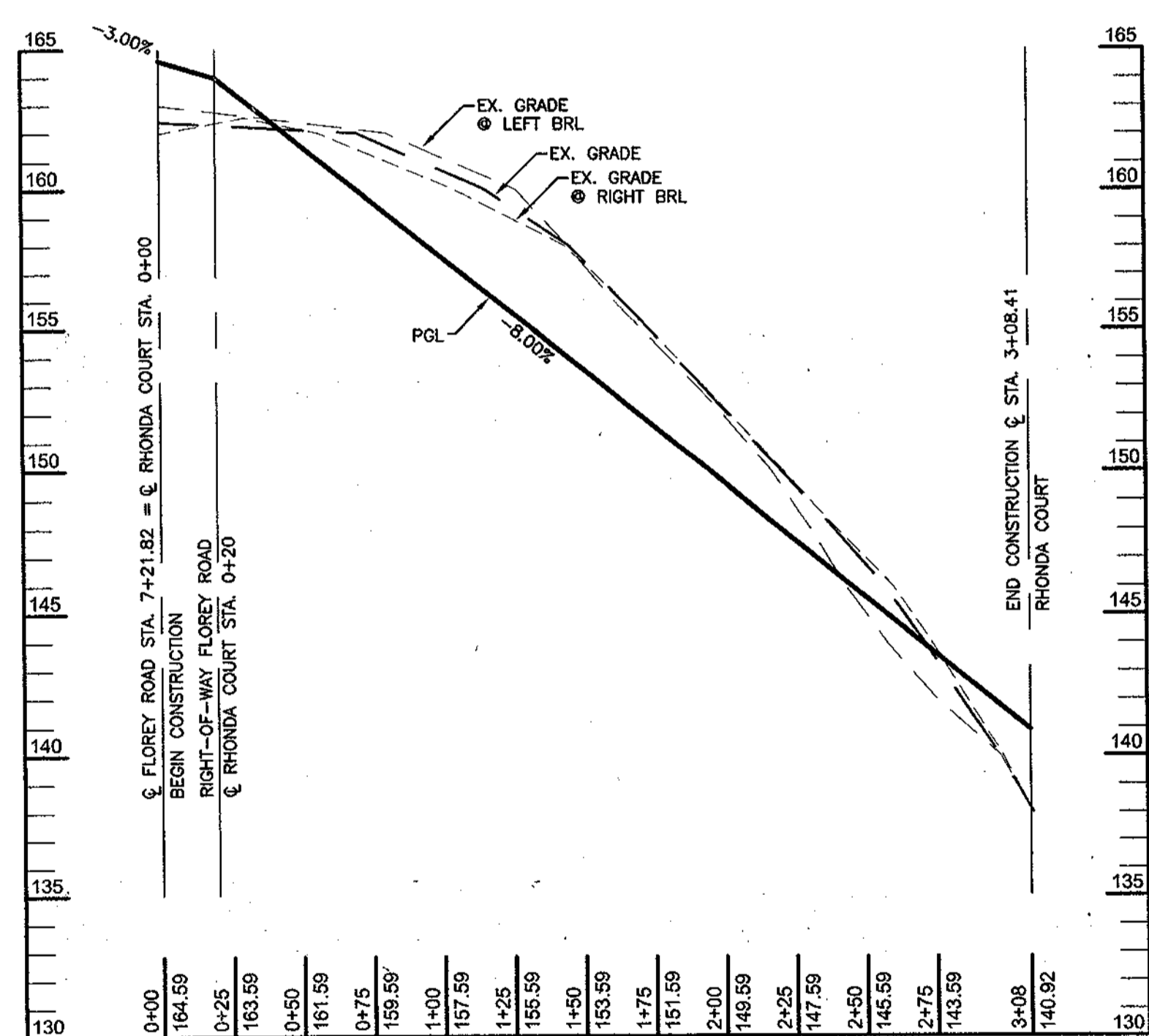
KCE ENGINEERING, INC.
EXECUTIVE CENTER
3300 NORTH RIDGE ROAD, SUITE 315
ELLCOTT CITY, MARYLAND 21043
PHONE (410) 203-9800 FAX (410) 203-9228

DRAWN BY: MG
CHECKED BY: DVK
SCALE: AS SHOWN
DATE: August, 2005

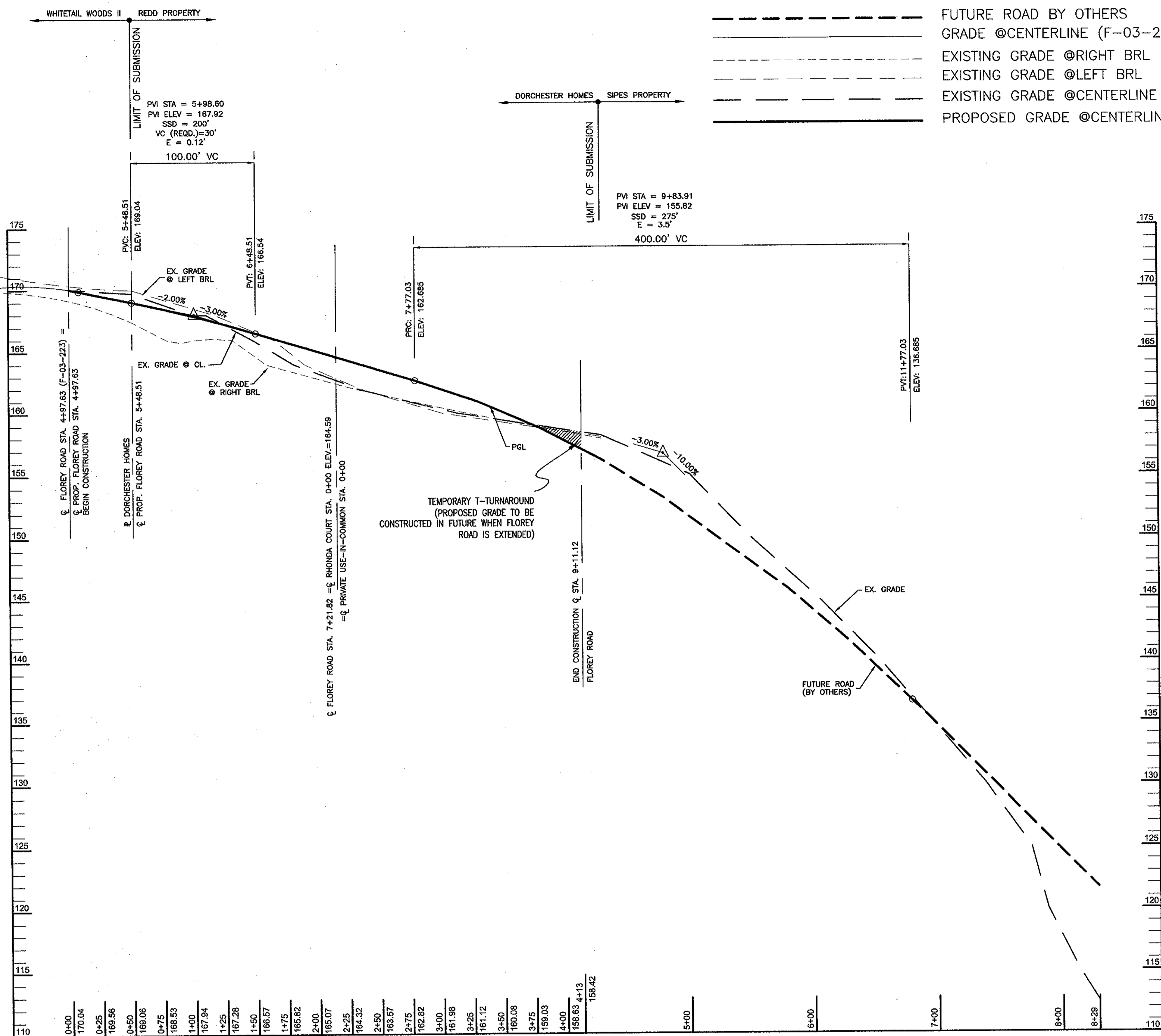
SHEET:
2 OF 13



CURB RETURN PROFILE:
FLOREY ROAD & RHONDA CT.
SCALE 1"=50' H, 1"=5' V



ROAD PROFILE: RHONDA COURT
ROAD CLASSIFICATION: ACCESS PLACE (PUBLIC)
DESIGN SPEED: 15 MPH
SCALE 1"=50' H, 1"=5' V



ROAD PROFILE: FLOREY ROAD
ROAD CLASSIFICATION: ACCESS STREET (PUBLIC)
DESIGN SPEED: 25 MPH
SCALE 1"=50' H, 1"=5' V

----- FUTURE ROAD BY OTHERS
 ----- GRADE @CENTERLINE (F-03-223)
 ----- EXISTING GRADE @RIGHT BRL
 ----- EXISTING GRADE @LEFT BRL
 ----- EXISTING GRADE @CENTERLINE
 ----- PROPOSED GRADE @CENTERLINE

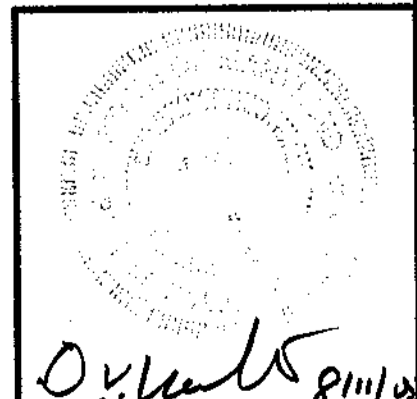
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, BUREAU OF HIGHWAYS
 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 9/1/05
 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT
 9/1/05
 DATE

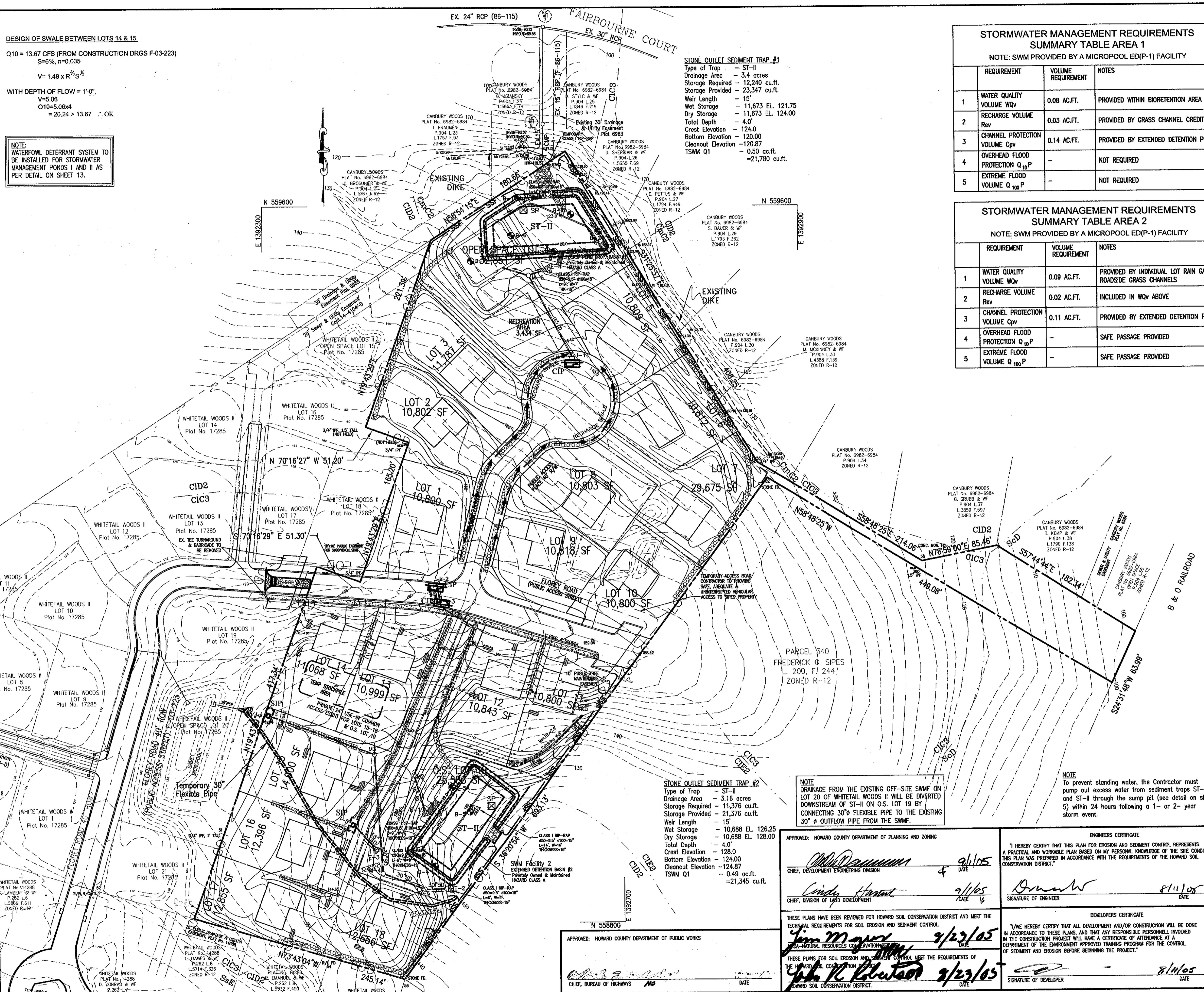


KCE ENGINEERING, INC.
 EXECUTIVE CENTER
 3300 NORTH RIDGE ROAD, SUITE 315
 ELLICOTT CITY, MARYLAND 21043
 PHONE (410) 203-9800 FAX (410) 203-9228
 SHEET 3 OF 13 SCALE: AS SHOWN DATE: August, 2005

ROAD PROFILES
DORCHESTER HOMES
 LOTS 1-3, 5-18 AND OPEN SPACE LOTS 4, 19
 REF: S-03-02, WP-03-35, P-04-11
 1ST ELECTION DISTRICT- HOWARD COUNTY, MARYLAND
 PARCEL 756 LIBER 771, FOLIO 440
 TAX MAP 38 BLOCK 9 ZONE R-12

DESIGN OF SWALE BETWEEN LOTS 14 & 15
 Q10 = 13.67 CFS (FROM CONSTRUCTION DRGS F-03-223)
 S=6%, n=0.035
 $V = 1.49 \times R^{2/3} \times S^{1/2}$
 WITH DEPTH OF FLOW = 1'-0",
 V=5.06
 Q10=5.06x4
 = 20.24 > 13.67 .OK

NOTE:
 WATERFOWL DETERRANT SYSTEM TO
 BE INSTALLED FOR STORMWATER
 MANAGEMENT PONDS I AND II AS
 PER DETAIL ON SHEET 13.



STONE OUTLET SEDIMENT TRAP #1
 Type of Trap - ST-II
 Drainage Area - 3.4 acres
 Storage Required - 12,240 cu.ft.
 Storage Provided - 23,347 cu.ft.
 Weir Length - 15'
 Wet Storage - 11,673 EL. 121.75
 Dry Storage - 11,673 EL. 124.00
 Total Depth - 4.0'
 Crest Elevation - 124.0
 Bottom Elevation - 120.00
 Cleanout Elevation - 120.87
 TSMW Q1 - 0.50 ac.ft.
 = 21,780 cu.ft.

STONE OUTLET SEDIMENT TRAP #2
 Type of Trap - ST-II
 Drainage Area - 3.16 acres
 Storage Required - 11,376 cu.ft.
 Storage Provided - 21,376 cu.ft.
 Weir Length - 15'
 Wet Storage - 10,688 EL. 126.25
 Dry Storage - 10,688 EL. 128.00
 Total Depth - 4.0'
 Crest Elevation - 128.0
 Bottom Elevation - 124.00
 Cleanout Elevation - 124.87
 TSMW Q1 - 0.49 ac.ft.
 = 21,345 cu.ft.

NOTE
 DRAINAGE FROM THE EXISTING OFF-SITE SWMF ON
 LOT 20 OF WHITETAIL WOODS II WILL BE DIVERTED
 DOWNSTREAM OF ST-II ON O.S. LOT 19 BY
 CONNECTING 30" FLEXIBLE PIPE TO THE EXISTING
 30" @ OUTFLOW PIPE FROM THE SWMF.

STORMWATER MANAGEMENT REQUIREMENTS
 SUMMARY TABLE AREA 1
 NOTE: SWM PROVIDED BY A MICROPOOL ED(P-1) FACILITY

REQUIREMENT	VOLUME REQUIREMENT	NOTES
1 WATER QUALITY VOLUME WQv	0.08 AC.FT.	PROVIDED WITHIN BIORETENTION AREA
2 RECHARGE VOLUME Rev	0.03 AC.FT.	PROVIDED BY GRASS CHANNEL CREDITS
3 CHANNEL PROTECTION VOLUME Cpv	0.14 AC.FT.	PROVIDED BY EXTENDED DETENTION POND
4 OVERHEAD FLOOD PROTECTION Q ₁₀ P	-	NOT REQUIRED
5 EXTREME FLOOD VOLUME Q ₁₀₀ P	-	NOT REQUIRED

STORMWATER MANAGEMENT REQUIREMENTS
 SUMMARY TABLE AREA 2
 NOTE: SWM PROVIDED BY A MICROPOOL ED(P-1) FACILITY

REQUIREMENT	VOLUME REQUIREMENT	NOTES
1 WATER QUALITY VOLUME WQv	0.09 AC.FT.	PROVIDED BY INDIVIDUAL LOT RAIN GARDENS & ROADSIDE GRASS CHANNELS
2 RECHARGE VOLUME Rev	0.02 AC.FT.	INCLUDED IN WQv ABOVE
3 CHANNEL PROTECTION VOLUME Cpv	0.11 AC.FT.	PROVIDED BY EXTENDED DETENTION POND
4 OVERHEAD FLOOD PROTECTION Q ₁₀ P	-	SAFE PASSAGE PROVIDED
5 EXTREME FLOOD VOLUME Q ₁₀₀ P	-	SAFE PASSAGE PROVIDED

LEGEND

- PROPOSED STREET TREE
- PROPOSED TREE MAINTENANCE EASEMENT
- NO WOODY VEGETATION BUFFER
- PUBLIC SEWER AND UTILITY EASEMENT
- PUBLIC DRAINAGE AND UTILITY EASEMENT
- PRIVATE WALL MAINTENANCE EASEMENT
- USE-IN-COMMON ACCESS EASEMENT
- AREA OF 15 TO 24.9% SLOPES
- PROPOSED CONTOUR
- EXISTING CONTOUR
- LIGHT POLE
- SLOPES >25%
- SLOPES 15% TO 24.9%
- 65 DB NOISE LINE
- STABILIZATION CONSTRUCTION ENTRANCE (SCE) W/MOUNTABLE BERM
- (CIP) CURB INLET PROTECTION
- 4" PERF. UNDERDRAIN
- RAIN GARDEN
- RECHARGE SWALE
- GRASS CHANNEL
- SOIL BOUNDARY CIE2 CIE3
- LIMIT OF DISTURBANCE LOD
- SUPER SILT FENCE SSF
- tb=TOP BERM bb=BOTTOM BERM
- EROSION CONTROL MATTING
- STANDARD INLET PROTECTION
- SUMP PIT SP

* Temporary 30" pipe to be installed only if required by sediment control inspector

GRADING, SEDIMENT & EROSION CONTROL PLAN
 DORCHESTER HOMES
 LOTS 1-3, 5-18 AND OPEN SPACE LOTS 4, 19
 REF: S-03-02, WP-03-35, P-04-11
 1ST ELECTION DISTRICT- HOWARD COUNTY, MARYLAND
 PARCEL 756 LIBER 771, FOLIO 440
 TAX MAP 38 BLOCK 9 ZONE R-12

KCE ENGINEERING, INC.
 EXECUTIVE CENTER
 3300 NORTH RIDGE ROAD, SUITE 315
 ELLICOTT CITY, MARYLAND 21043
 PHONE (410) 203-9800 FAX (410) 203-9228

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 ENGINEERS CERTIFICATE
 I HEREBY 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.
 CHIEF, DIVISION OF ENGINEERING 9/1/05
 CHIEF, DIVISION OF LAND DEVELOPMENT 9/1/05
 SIGNATURE OF ENGINEER 8/11/05

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
 DEVELOPERS CERTIFICATE
 I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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.
 CHIEF, BUREAU OF HIGHWAYS 9/23/05
 CHIEF, NATURAL RESOURCES CONSERVATION 9/23/05
 SIGNATURE OF DEVELOPER 8/11/05

STANDARDS 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...

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION...

III. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS...

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES: 1. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS INDICATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING...

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...

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

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:

- 1. Preferred - Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding...

Mulching - Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding...

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

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be re-disturbed 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/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.).

Seeding: - For periods March 1 - April 30 and from August 1 - November 30, inclusive, seed with 2-1/2 bushel per acre of Annual Ryegrass...

Mulching: - Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed-free, small grain straw immediately after seeding...

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.

4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), soil (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52).

6. All sediment control structures are to remain in place and are to be maintained from the Howard County Sediment Control Inspector.

7. Site Analysis: Total Area of Site 6,991 Acres. Area Disturbed: 6.7 Acres. Area to be roofed or paved: 1.65 Acres. Area to be vegetatively stabilized: 5.05 Acres. Total Cut: 3,340 Cu. Yds.

8. Any sediment control practice which is disturbed by grading activity or placement of utilities must be repaired on the same day of disturbance.

9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.

10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading.

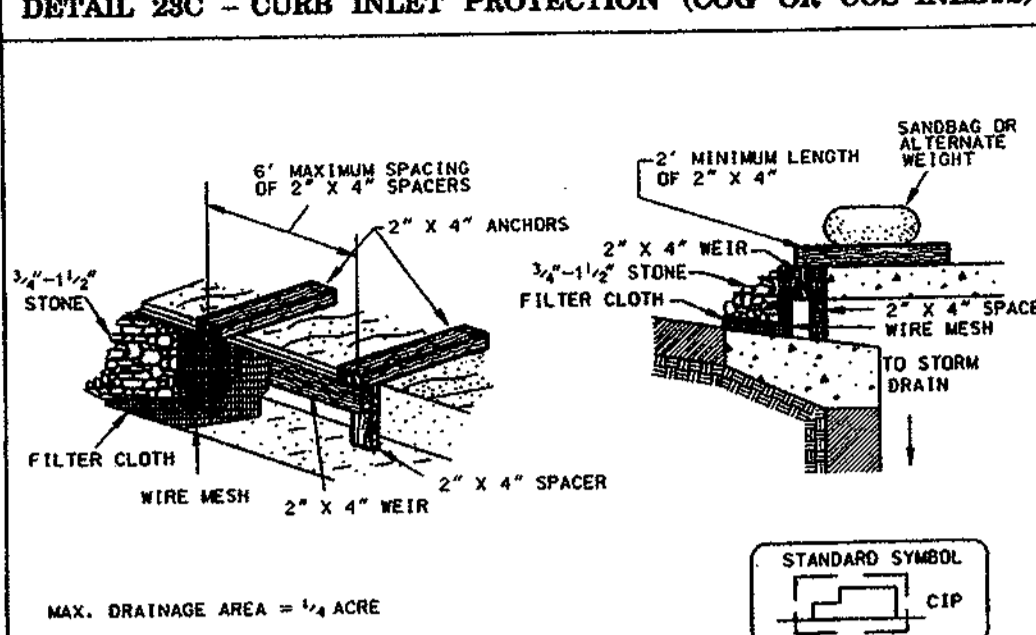
11. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.

NOTE: THESE PLANS HAVE BEEN REVIEWED FOR HOWARD COUNTY SEDIMENT CONTROL DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

I HEREBY 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.

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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.

DETAIL 23C - CURB INLET PROTECTION (COG OR COS INLETS)

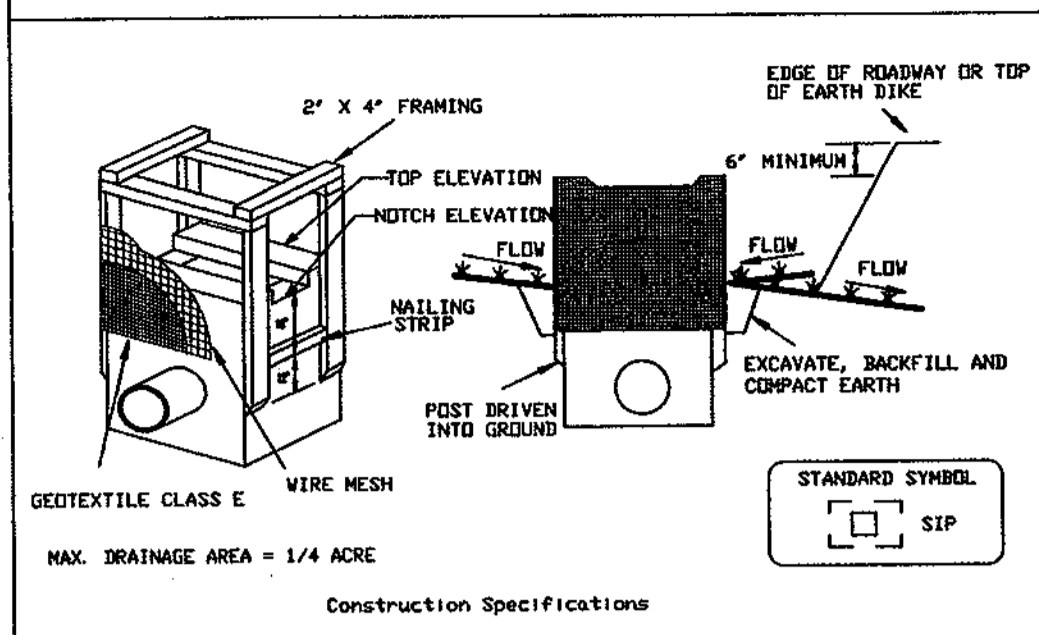


- 1. Attach a continuous piece of wire mesh (30" minimum width) by throat length plus 4" to the 2" x 4" weir (measuring throat length plus 2") as shown on the standards drawing.

CONSTRUCTION SPECIFICATIONS: 1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing.

Table with columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, PAGE E-26-22, MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

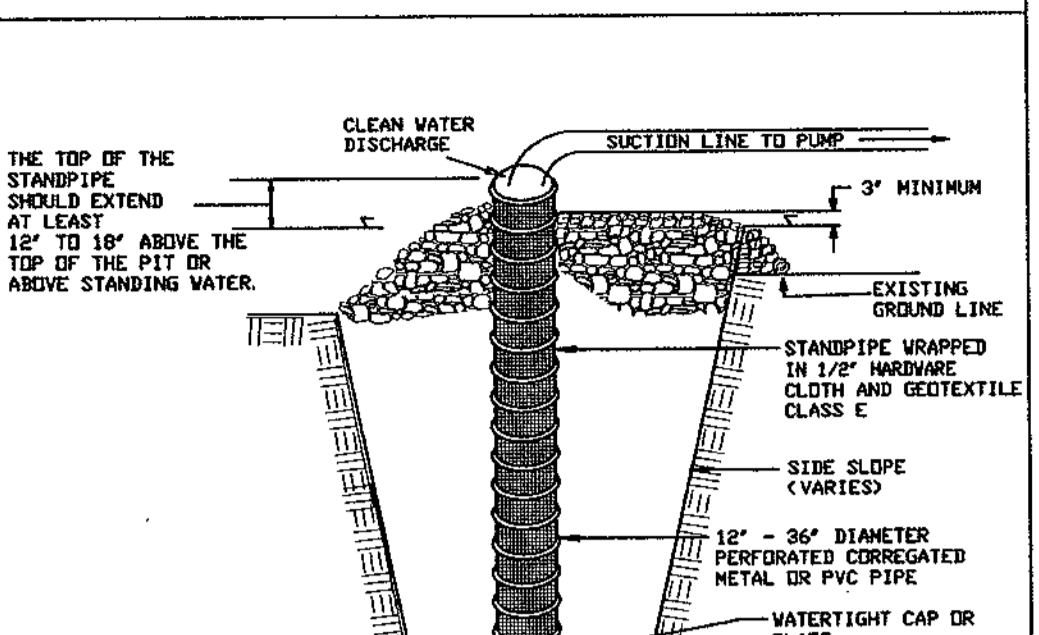
DETAIL 23A - STANDARD INLET PROTECTION



- 1. Excavate completely around the inlet to a depth of 18" below the match elevation.

Table with columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, PAGE E-26-5, MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 20B - SUMP PIT



- 1. Pit dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.

Table with columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, PAGE E-19-2, MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NOTES.

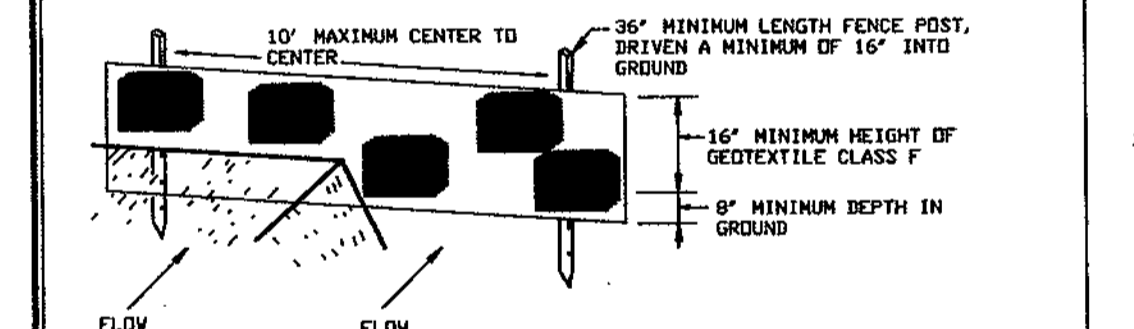
DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLIED WITH: (a) 7 CALENDER DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES AND ALL SLOPES GREATER THAN 3:1 (b) 14 CALENDER DAYS FOR ALL OTHER DISTURBED AREAS.

SEQUENCE OF CONSTRUCTION

- 1. Obtain grading permit. 1 DAY
2. Notify Howard County Bureau of Inspections and Permits (313-1860) at least 24 hours before starting any work. 1 DAY
3. Construct stabilized construction entrance. 2 DAYS
4. Install perimeter super silt fence, silt fence. 2 DAYS
5. Construct storm drain system 1-4 to E-2 so that storm water from existing pond bypasses the proposed stone outlet sediment trap. 1 WEEK

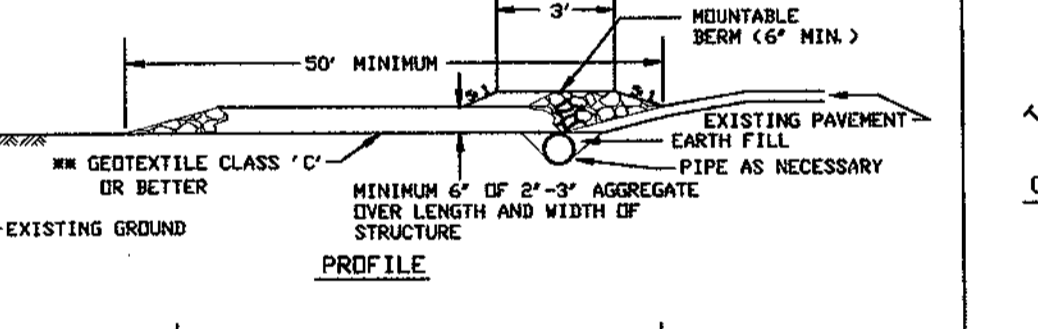
DETAIL 22 - SILT FENCE



- 1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum cut or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood.

Table with columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, PAGE E-15-3, MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

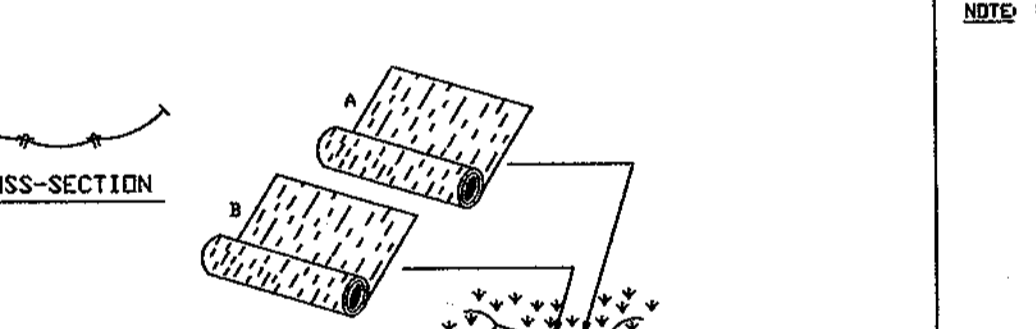
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



- 1. Length - minimum of 50' (#30' for single residence lot).

Table with columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, PAGE F-19-3, MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

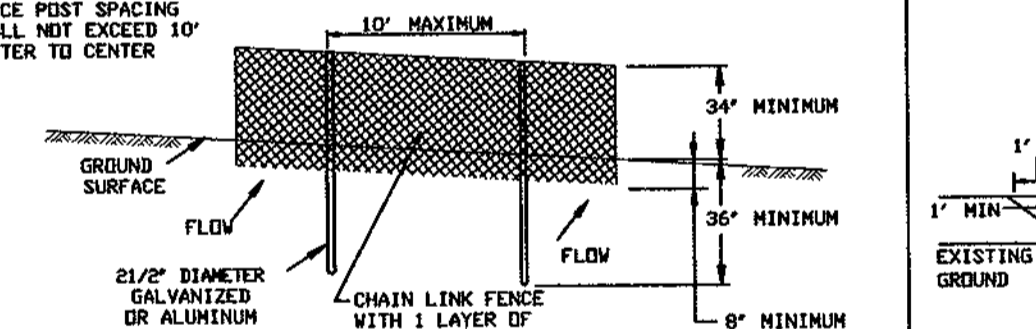
DETAIL 30 - EROSION CONTROL MATTING



- 1. Matting shall be placed over the existing ground prior to placing stone.

Table with columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, PAGE G-22-2, MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

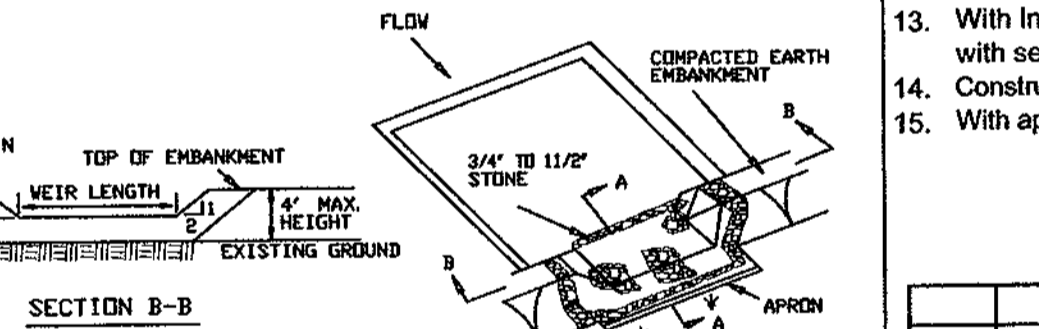
DETAIL 33 - SUPER SILT FENCE



- 1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing.

Table with columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, PAGE H-26-3, MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II



- 1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and rock nuts.

Table with columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, PAGE E-9-10, MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

GRADING, SEDIMENT & EROSION CONTROL DETAILS DORCHESTER HOMES LOTS 1-3, 5-18 AND OPEN SPACE LOTS 4, 19

KCE ENGINEERING, INC. EXECUTIVE CENTER 3300 NORTH RIDGE ROAD, SUITE 315 ELLICOTT CITY, MARYLAND 21043 PHONE (410) 203-9800 FAX (410) 203-9228

DRAWN BY: MG CHECKED BY: DDK SCALE: AS SHOWN DATE: August, 2005 SHEET: 5 OF 13

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

NOTES

1. NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.
2. THERE ARE NO ISOLATED FOREST STANDS ON THIS SITE.
3. THE PROPERTY OUTLINE IS BASED ON A BOUNDARY SURVEY PREPARED BY KCE ENGINEERING, INC. DATED MAY 25, 2002.
4. THE EXISTING FEATURES AND CONTOURS SHOWN HEREIN ARE BASED ON A FIELD RUN SURVEY PREPARED BY KCE ENGINEERING, INC. DATED MAY 25, 2002.
5. THIS SUBDIVISION COMPLIES WITH THE FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1202 OF THE HOWARD COUNTY CODE WITH A 4.0% A.C. REFORESTATION OBLIGATION PROVIDED OFF-SITE (Tally Property Parcel 2, Tax Map 8, Parcel 392) SURETY IN THE AMOUNT OF \$7,773 WAS POSTED WITH THE DPW, DEVELOPER'S AGREEMENT.
6. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING TO BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR 59 SHADE TREES, 38 EVERGREEN TREES AND 10 SHRUBS IN THE AMOUNT OF \$23,700.
7. SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
8. SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
9. PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
10. KEEP MULCH 1" FROM TRUNK
11. SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
12. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LANDSCAPE PLANTING SPECIFICATIONS.
13. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
14. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
15. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLANT DIFFERS FROM THE CURRENT LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

16. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
17. AT THE TIME OF PLANT INSTALLATION, ALL TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATIONS FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE ROAD DRAWING PLANS.

18. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

19. AT THE TIME OF PLANT INSTALLATION, ALL TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATIONS FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE ROAD DRAWING PLANS.



SOILS LEGEND

SYMBOL	NAME/DESCRIPTION	TYPE
C1C3	CHILLUM GRAVELLY LOAM, 5%-10% SLOPES, SEVERELY ERODED	B
C1D2	CHILLUM GRAVELLY LOAM, 10%-15% SLOPES, MODERATELY ERODED	B
C1E2	CHILLUM GRAVELLY LOAM, 15%-30% SLOPES, MODERATELY ERODED	B
C1G2	CHILLUM SILT LOAM, 5%-10% SLOPES, MODERATELY ERODED	B
Sd	SANDY AND CLAYEY LAND, MODERATELY SLOPING	B
SsE	SASSAFRAS SOILS, 15%-40% SLOPES	B

*SOIL MAP NO. 28 OF THE HOWARD COUNTY SOIL SURVEY

SCHEDULE D - STORMWATER MANAGEMENT AREA LANDSCAPING

Linear Feet of Perimeter	POND #1 660 LF	POND #2 612 LF
Credit for Existing Vegetation (No, Yes & Linear Feet)	NO	NO
Credit for Other Landscaping (No, Yes & %)	NO	NO
Number of Plants Required	TYPE "B" BUFFER	TYPE "B" BUFFER
Shade Trees (150)	13	15
Evergreen Trees (140)	17	15
Number of Plants Provided		
Shade Trees	13	12
Evergreen Trees	17	15

FOREST CONSERVATION WORKSHEET
Dorchester Homes Subdivision

NET TRACT AREA: 5-Aug-02

A. Total tract area ...	7.00
B. Land dedication for roads (parks, county facility, etc.) ...	0.00
C. Land dedication for roads or utilities (not being constructed by this plan) ...	0.00
D. Area to remain in commercial agricultural production/use ...	0.00
E. Other deductions (specify) ...	0.00
F. Net Tract Area ...	7.00

LAND USE CATEGORY: (from Trees Technical Manual)
Input the number "1" under the appropriate land use, limit to only one entry.

Category	ARA	MDR	IDA	HDR	MPD	CIA
	0	0	0	1	0	0

G. Afforestation Threshold ... 15% x F = 1.05
H. Conservation Threshold ... 20% x F = 1.40

EXISTING FOREST COVER:

I. Existing forest cover ... 6.30
J. Area of forest above afforestation threshold ... 5.25
K. Area of forest above conservation threshold ... 4.90

BREAK EVEN POINT:

L. Forest retention above threshold with no mitigation ... 2.38
M. Clearing permitted without mitigation ... 3.92

PROPOSED FOREST CLEARING:

N. Total area of forest to be cleared ... 6.30
O. Total area of forest to be retained ... 0.00

PLANTING REQUIREMENTS:

P. Reforestation for clearing above conservation threshold ... 1.23
Q. Reforestation for clearing below conservation threshold ... 2.80
R. Credit for retention above conservation threshold ... 0.00
S. Total reforestation required ... 4.03
T. Total afforestation required ... 0.00
U. Credit for landscaping (may not exceed 20% of "S") ... 0.00
V. Total reforestation and afforestation required ... 4.03

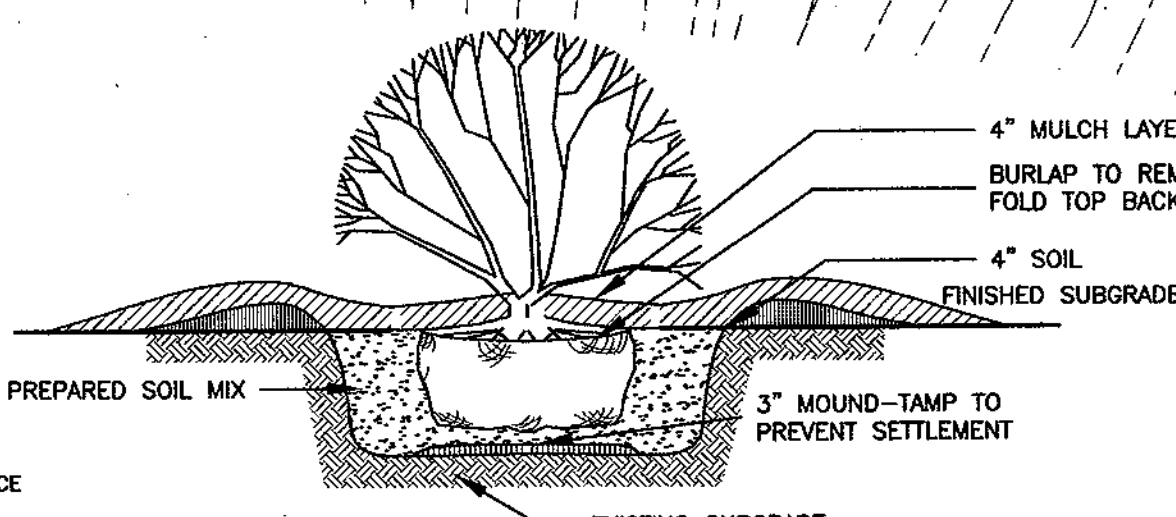
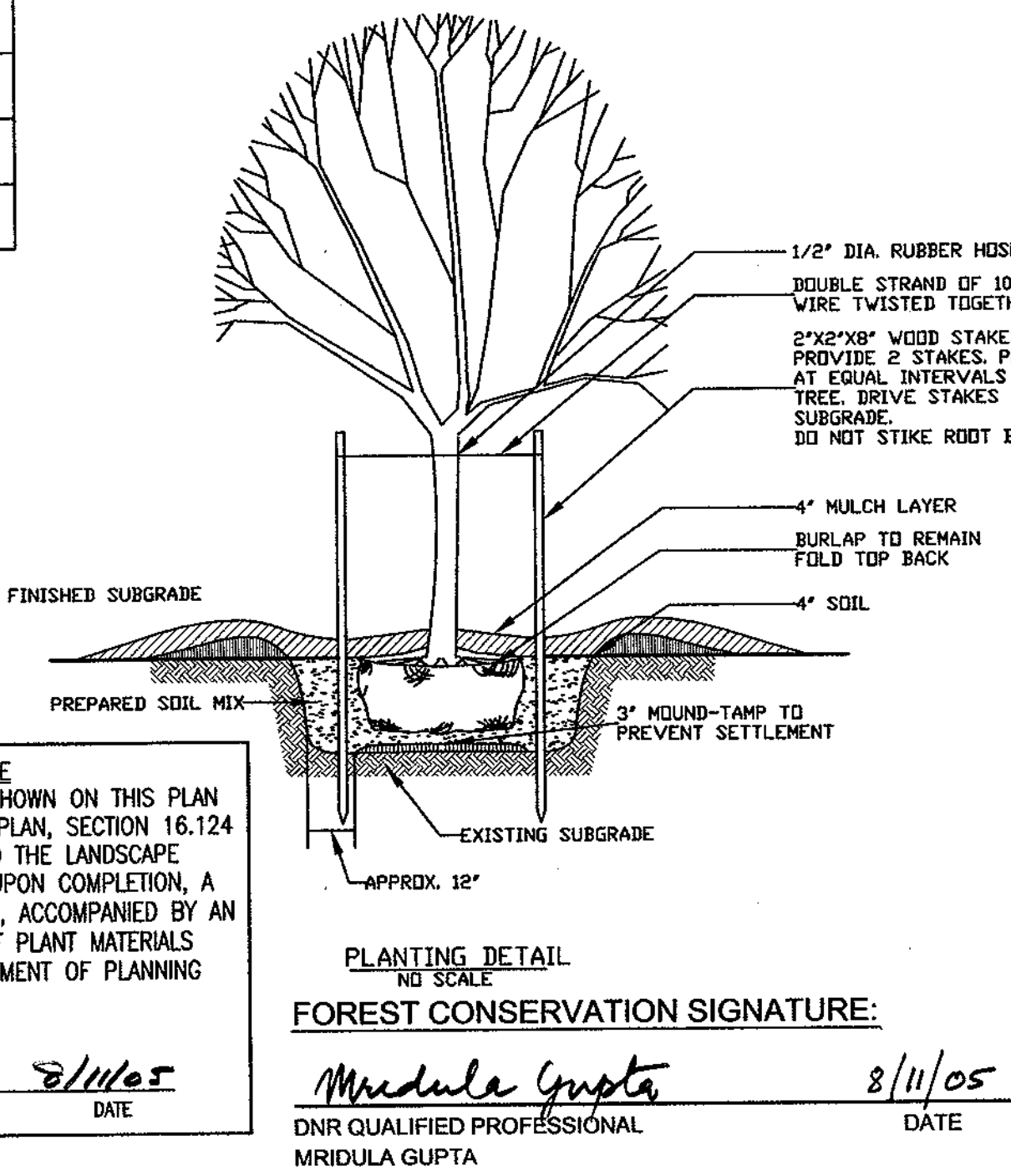
SCHEDULE A - PERIMETER LANDSCAPE EDGE

Landscape Type	Perimeter								Roadways		TOTAL PLANTS PROVIDED*
	1	2	3	4	5	6	7	8 (Lot 1)	9 (Lot 9)		
Linear Feet of Roadway/Frontage/Perimeter	263'	268'	64'	253'	517'	245'	800'	116'	120'		
Number of Plants Required	4	4	1	4	9	4	13	2	2		
Shade Trees	4	4	0	4	0	4	0	0	0		
Evergreen Trees	0	0	0	0	0	0	0	0	0		
Credit for Existing Vegetation	N	Yes*	Yes*	Yes*	N	N	N	N	N		
Shade Trees	0	0	0	0	0	0	0	0	0		
Evergreen Trees	0	0	0	0	0	0	0	0	0		
Other(20' wide landscape buffer)	0	268'	64'	253'	0	0	0	0	0		
Number of Plants Provided	4	0	0	0	9	4	13	2	2	34	Shade
Shade Trees	0	0	0	0	0	0	0	0	0	3	Evergreen

* EXISTING WOODS TO REMAIN

KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	ROOT
29		CLEDITIA INERMIS THORNLESS HONEYLOCUST	2 1/2"-3" CAL.	B&B
32		FINUS STROBUS WHITE PINE	6'-8' HT.	B&B
6		PICEA ABIES NORWAY SPRUCE	6'-8' HT.	B&B
30		SOPHORA JAPONICA JAPANESE PAGODA TREE	2 1/2"-3" CAL.	B&B

KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	ROOT
9		NYSSA SYLVANICA BLACK GUM	1 1/2"-2" CAL.	B&B
18		MYRICA PENNSYLVANICA BAYBERRY (mole spp. only)	2'-2 1/2' HT.	B&B OR CONT.
9		LINDERA BENZON SPICE BUSH	2'-2 1/2' HT.	B&B OR CONT.
13		CEPHALANTHUS OCCIDENTALIS BUTTONBUSH	2'-2 1/2' HT.	B&B OR CONT.
225		BUBBECKIA LACINATA TALL CONEFLOWER	8"-12" HT.	CONT.
55		LOBELIA CARDINALIS CARDINAL FLOWER	8"-12" HT.	CONT.
120		SCORPUS CYPERINUS WOODGRASS	8"-12" HT.	CONT.
65		DICHANTHEMUM SCOPARIUM BROOM PANIC GRASS	8"-12" HT.	CONT.



SITE DATA

1. LOCATION: TAX MAP 38, PARCEL 756
2. FIRST ELECTION DISTRICT
3. EXISTING ZONING: R-12
4. GROSS AREA OF PARCEL: 304,615 SFT, =6.993 ACRES
5. AREA OF FLOODPLAIN: N/A
6. AREA OF STEEP SLOPES ON-SITE: 3,302 SQ.FT. (0.078 ACRES)

NOTE: LABARE LLC INVESTIGATORS HAVE DETERMINED THROUGH FIELD INSPECTION THAT THERE ARE NO JURISDICTIONAL WETLANDS OR WATERS OF THE U.S. ON THE SUBJECT PROPERTY.

TRASH PAD LANDSCAPING

QUAN.	BOTANICAL/COMMON NAME	SIZE	CAT.
10	ILEX CRENATA 'ROTUNDFOLIUM' ROUNDLEAF JAPANESE HOLLY	2 1/2"-3" HT.	B & B

STREET TREE CALCULATIONS

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
FLOREY ROAD	725/40	18	18
RHONDA COURT	550/40	14	14

STREET TREE SCHEDULE

KEY	QUAN.	BOTANICAL/COMMON NAME	SIZE	REM.
+	32	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE (seedless variety only)	2 1/2"-3" CAL.	B & B

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

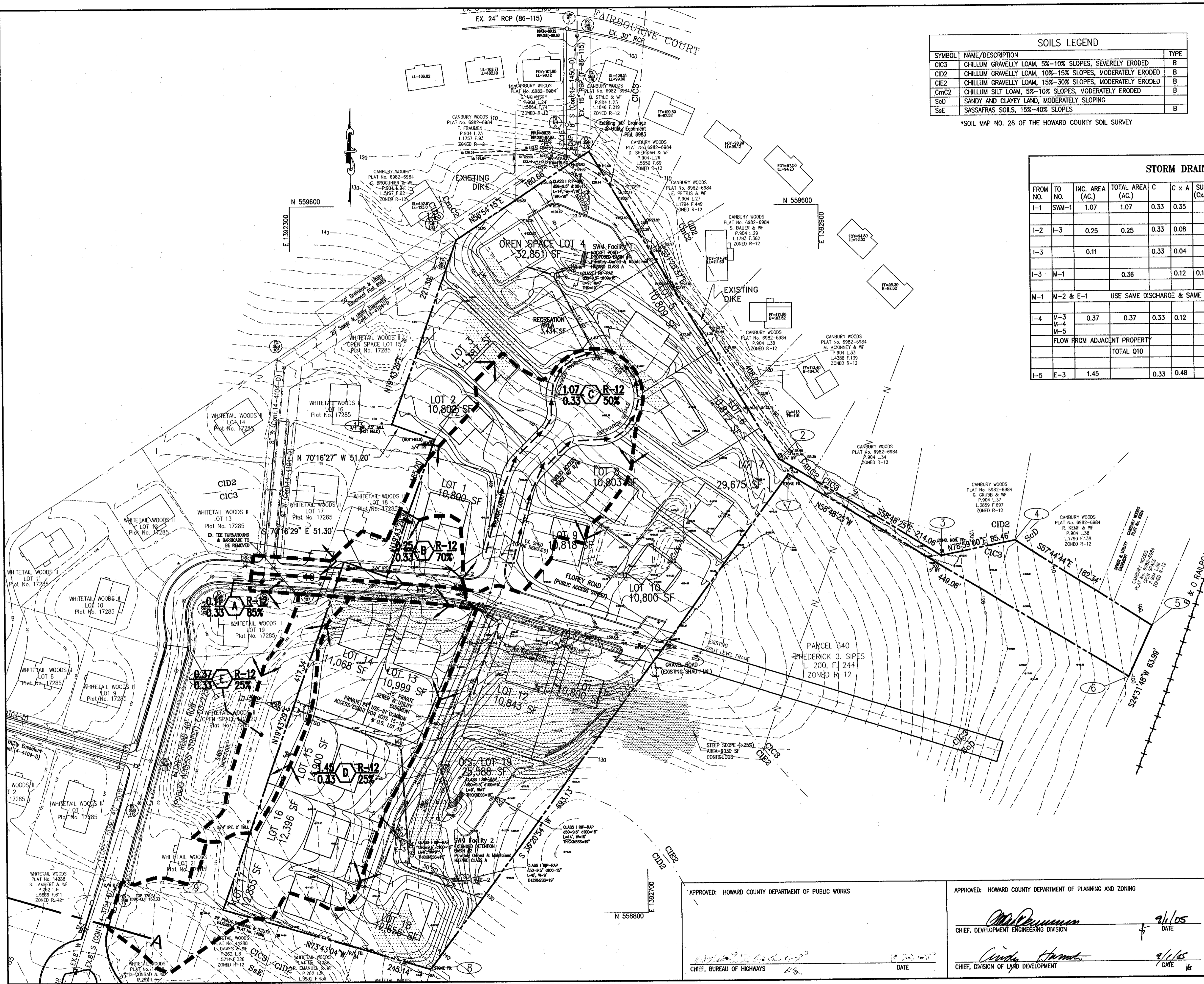
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DATE: 9/1/05

LANDSCAPE AND FOREST CONSERVATION PLAN
DORCHESTER HOMES
LOTS 1-3, 5-18 AND OPEN SPACE LOTS 4, 19
REF: S-03-02, WP-03-35, P-04-11
1ST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
PARCEL 756 - LIBER 771, FOLIO 440
TAX MAP 38 BLOCK 9 ZONE R-12

KCE ENGINEERING, INC.
EXECUTIVE CENTER
3300 NORTH RIDGE ROAD, SUITE 315
ELLCOTT CITY, MARYLAND 21043
PHONE (410) 203-9800 FAX (410) 203-9228

DRAWN BY: MG
CHECKED BY: DVK
SCALE: AS SHOWN
DATE: August, 2005

SHEET: 6 OF 13



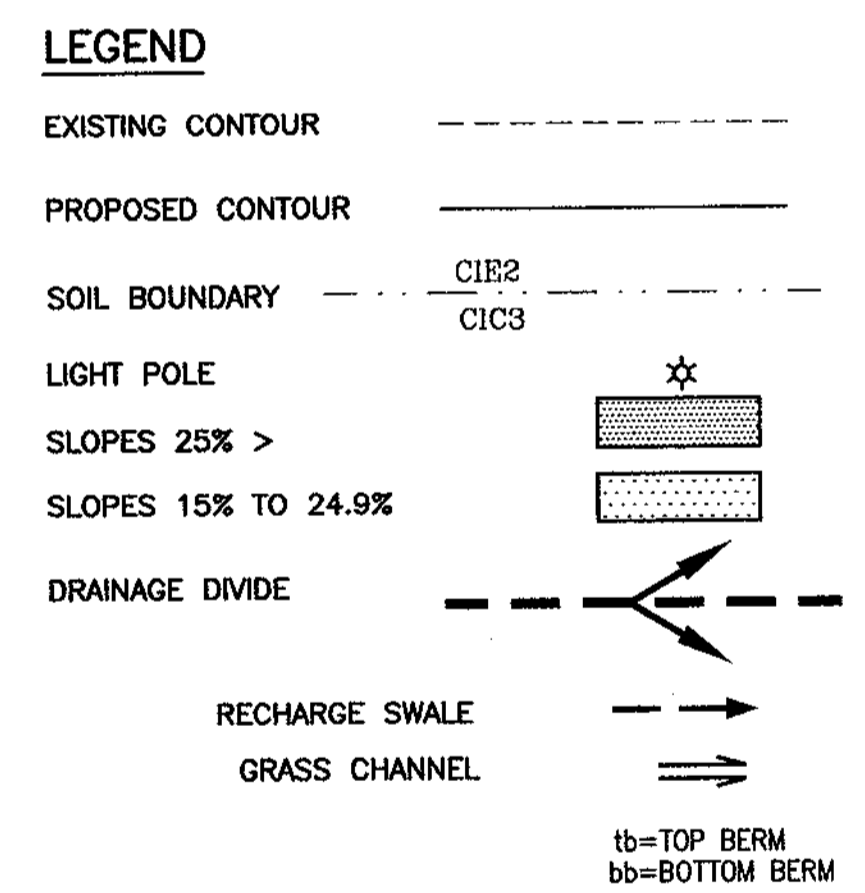
SOILS LEGEND

SYMBOL	NAME/DESCRIPTION	TYPE
CIC3	CHILLUM GRAVELLY LOAM, 5%-10% SLOPES, SEVERELY ERODED	B
CID2	CHILLUM GRAVELLY LOAM, 10%-15% SLOPES, MODERATELY ERODED	B
CIE2	CHILLUM GRAVELLY LOAM, 15%-30% SLOPES, MODERATELY ERODED	B
CM2	CHILLUM SILT LOAM, 5%-10% SLOPES, MODERATELY ERODED	B
Scd	SANDY AND CLAYEY LAND, MODERATELY SLOPING	B
Sse	SASSAFRAS SOILS, 15%-40% SLOPES	B

*SOIL MAP NO. 25 OF THE HOWARD COUNTY SOIL SURVEY

STORM DRAIN COMPUTATIONS

FROM NO.	TO NO.	INC. AREA (AC.)	TOTAL AREA (AC.)	C	C x A	SUM (CxA)	TIME (Min.)	t (IN./HR.)	Q (CFS)	DES. SLOPE (%)	DIAMETER (IN.)	VELOCITY (FT./SEC.)	LENGTH (FT.)	TIME (Min.)	REMARKS			
1-1	SWM-1	1.07	1.07	0.33	0.35		10.0	6.6	2.31	0.12	15"	1.8						
1-2	1-3	0.25	0.25	0.33	0.08		10.0	6.6	0.53		15"	0.5	29	0.97				
1-3		0.11		0.33	0.04		10.0	6.6										
1-3	M-1		0.36		0.12	0.12	11.0	6.3	0.76		15"	0.7	44	1.04				
M-1	M-2 & E-1	USE SAME DISCHARGE & SAME PIPE SIZE I.E. 15" Ø																
1-4	M-3	0.37	0.37	0.33	0.12		10.0	6.6	0.79									
	M-4																	
	M-5																	
FLOW FROM ADJACENT PROPERTY														14.24				
TOTAL Q10															15.03	0.12	30"	3.0
1-5	E-3	1.45		0.33	0.48		10.0	6.6	3.17	0.2	15"	2.4						



**STORM DRAIN DRAINAGE AREA MAP
DORCHESTER HOMES
LOTS 1-3, 5-18 AND OPEN SPACE LOTS 4, 19**

REF: S-03-02, WP-03-35, P-04-11
1ST ELECTION DISTRICT- HOWARD COUNTY, MARYLAND
PARCEL 756 LIBER 771, FOLIO 440
TAX MAP 38 BLOCK 9 ZONE R-12

KCE ENGINEERING, INC.
EXECUTIVE CENTER
3300 NORTH RIDGE ROAD, SUITE 315
ELLCOTT CITY, MARYLAND 21043
PHONE (410) 203-9800 FAX (410) 203-9228

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature]
CHIEF, BUREAU OF HIGHWAYS

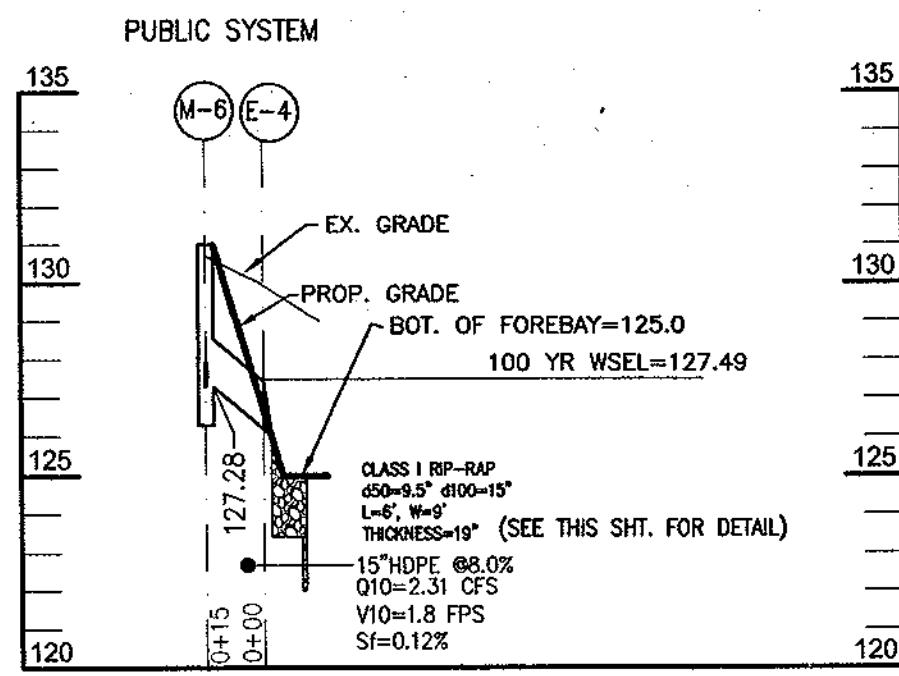
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT

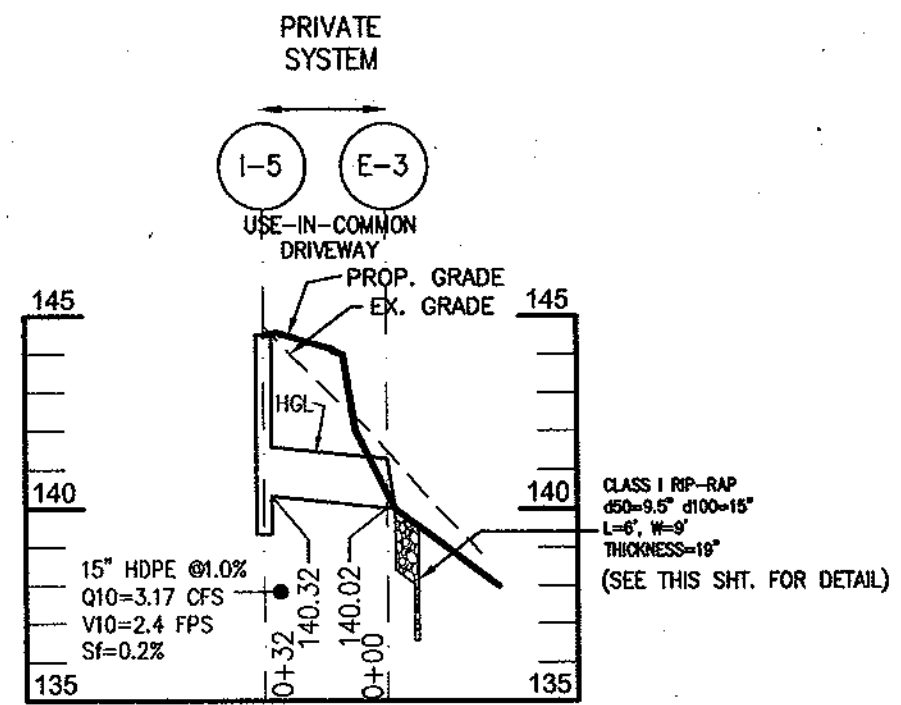


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DATE: August, 2005

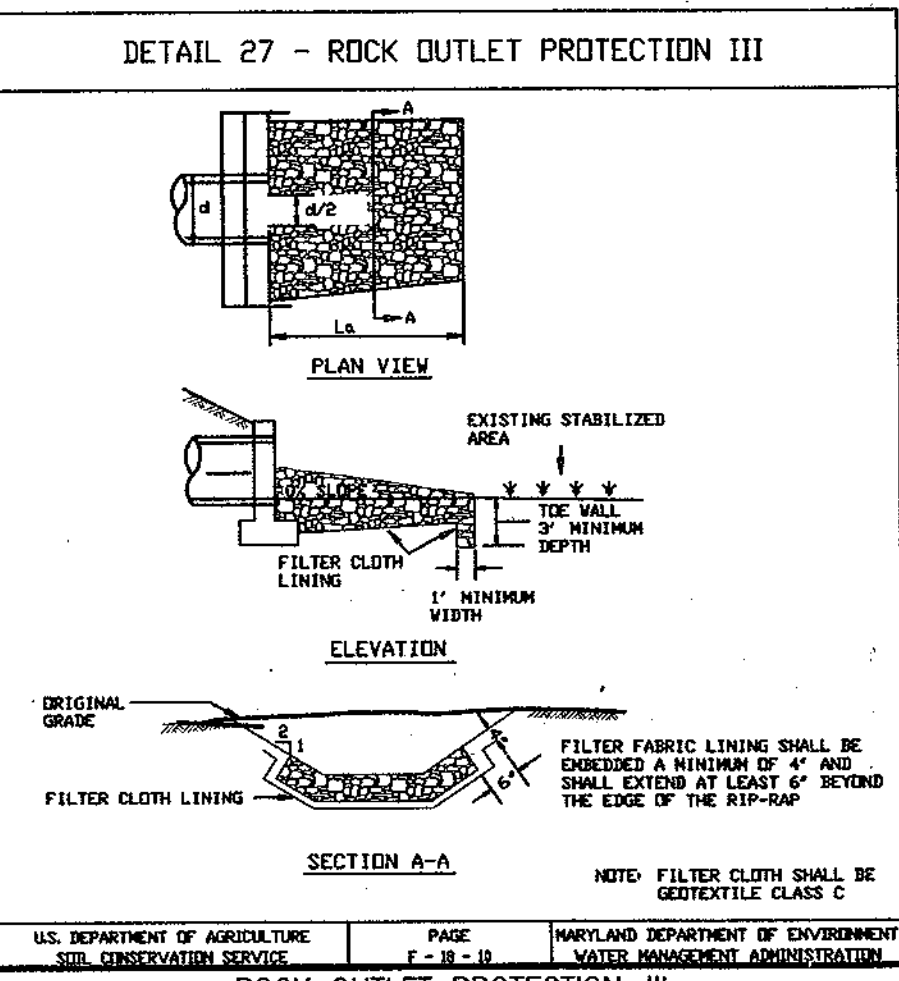
SHEET:
7 OF 13



STORM DRAIN PROFILE (M-6 TO E-4)
SCALE 1"=50' H, 1"=5' V



STORM DRAIN PROFILE (I-5 TO E-3)
SCALE 1"=50' H, 1"=5' V

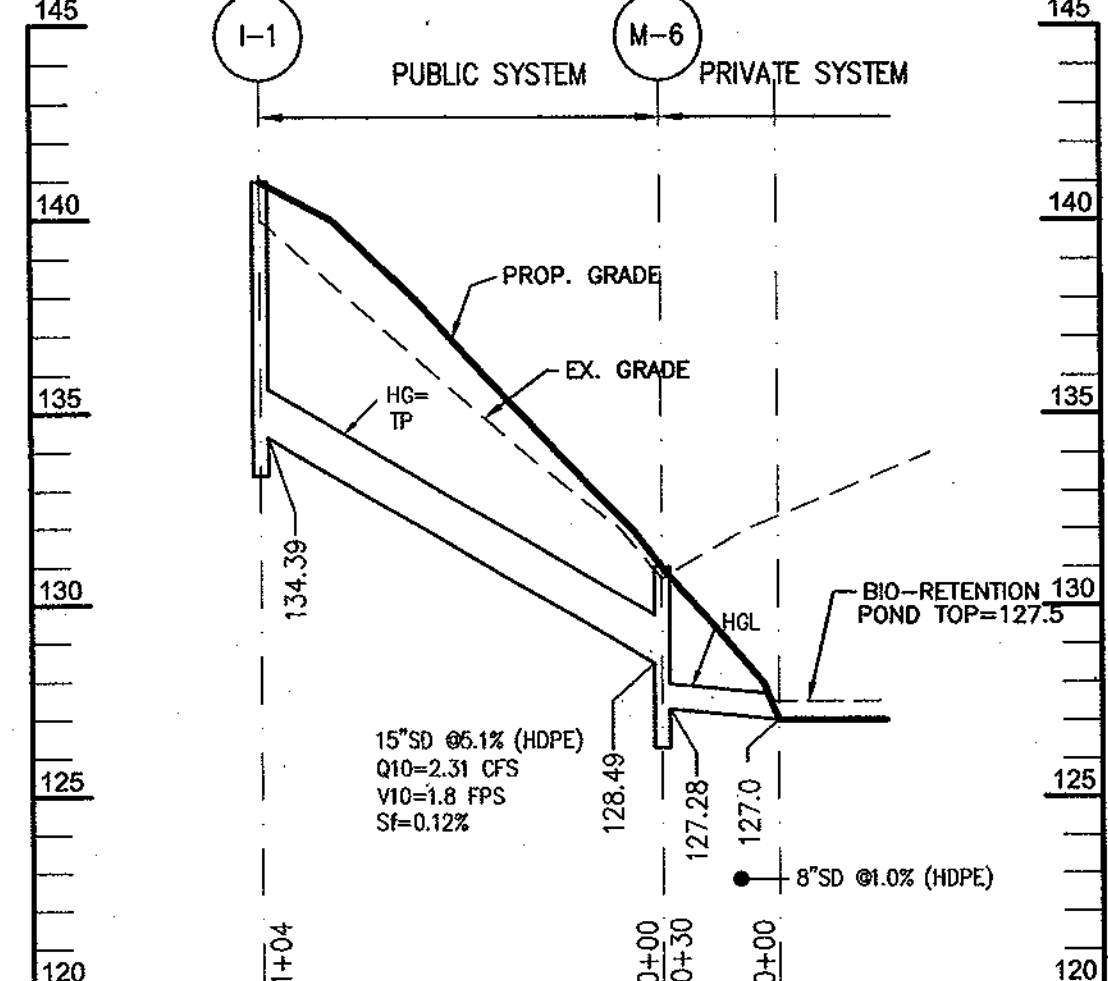


ROCK OUTLET PROTECTION-III

Construction Specifications

- The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
- Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
- Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
- The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

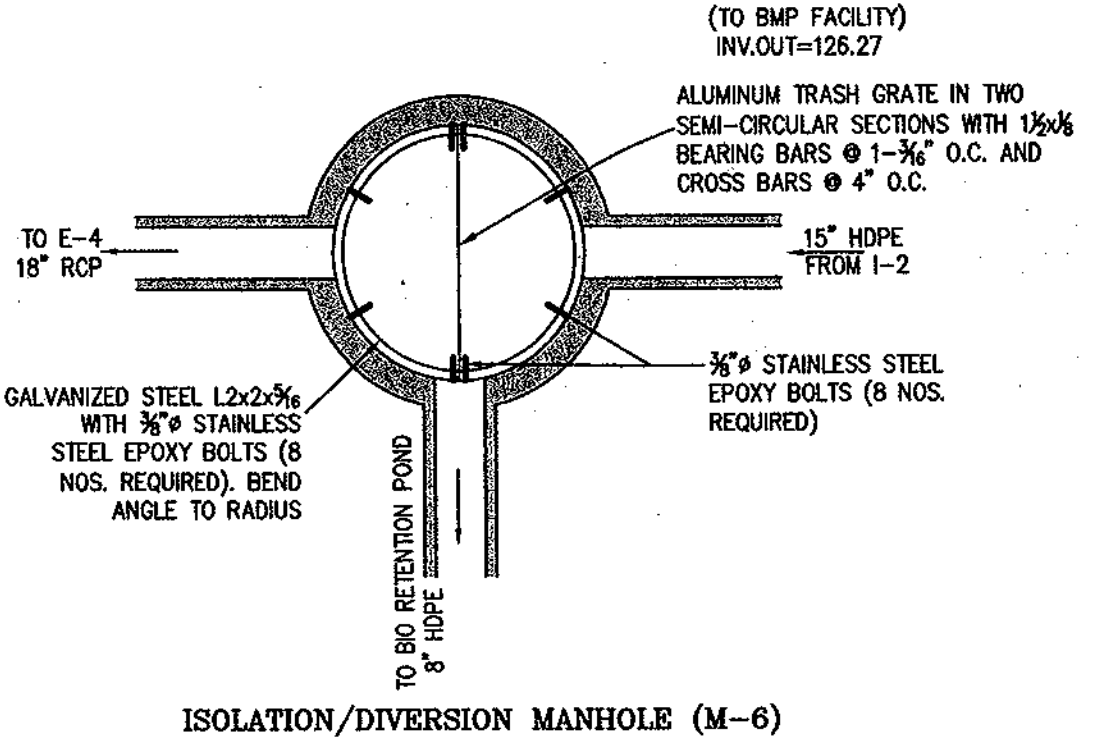
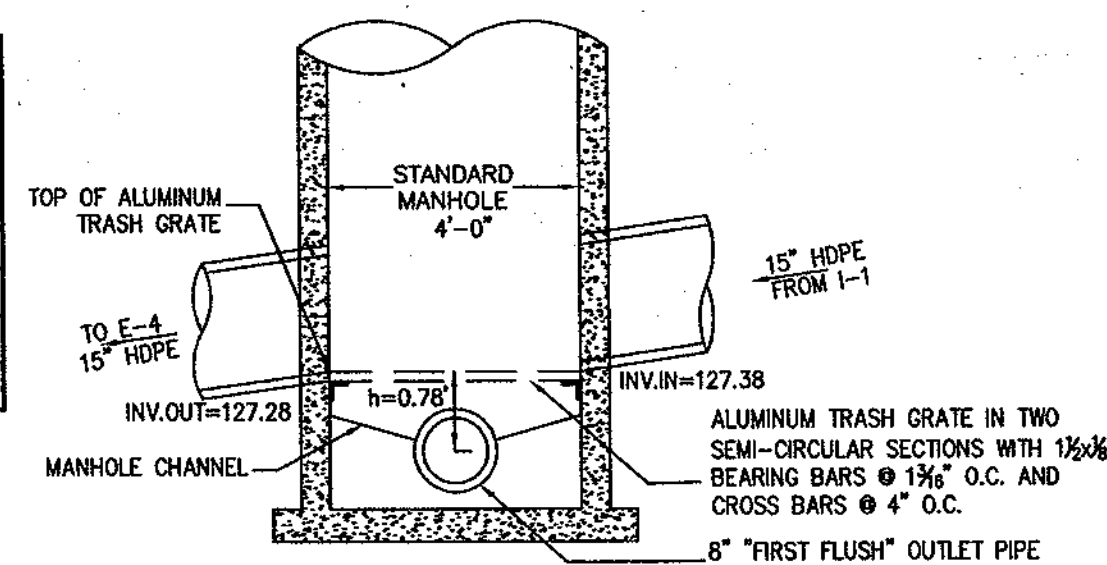
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-18-10A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



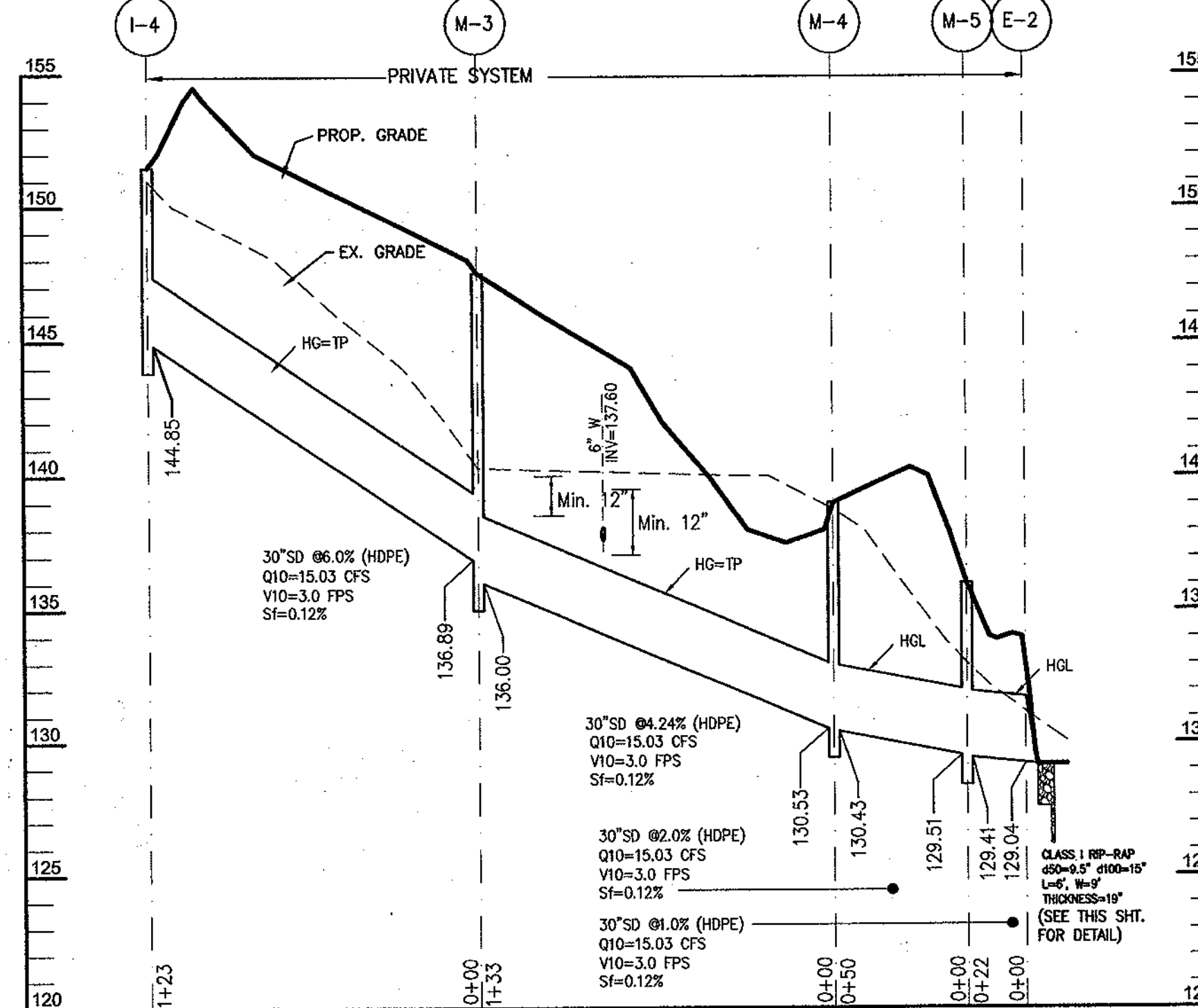
STORM DRAIN PROFILE (I-1 TO BIORETENTION POND)
SCALE 1"=50' H, 1"=5' V

PIPE SUMMARY

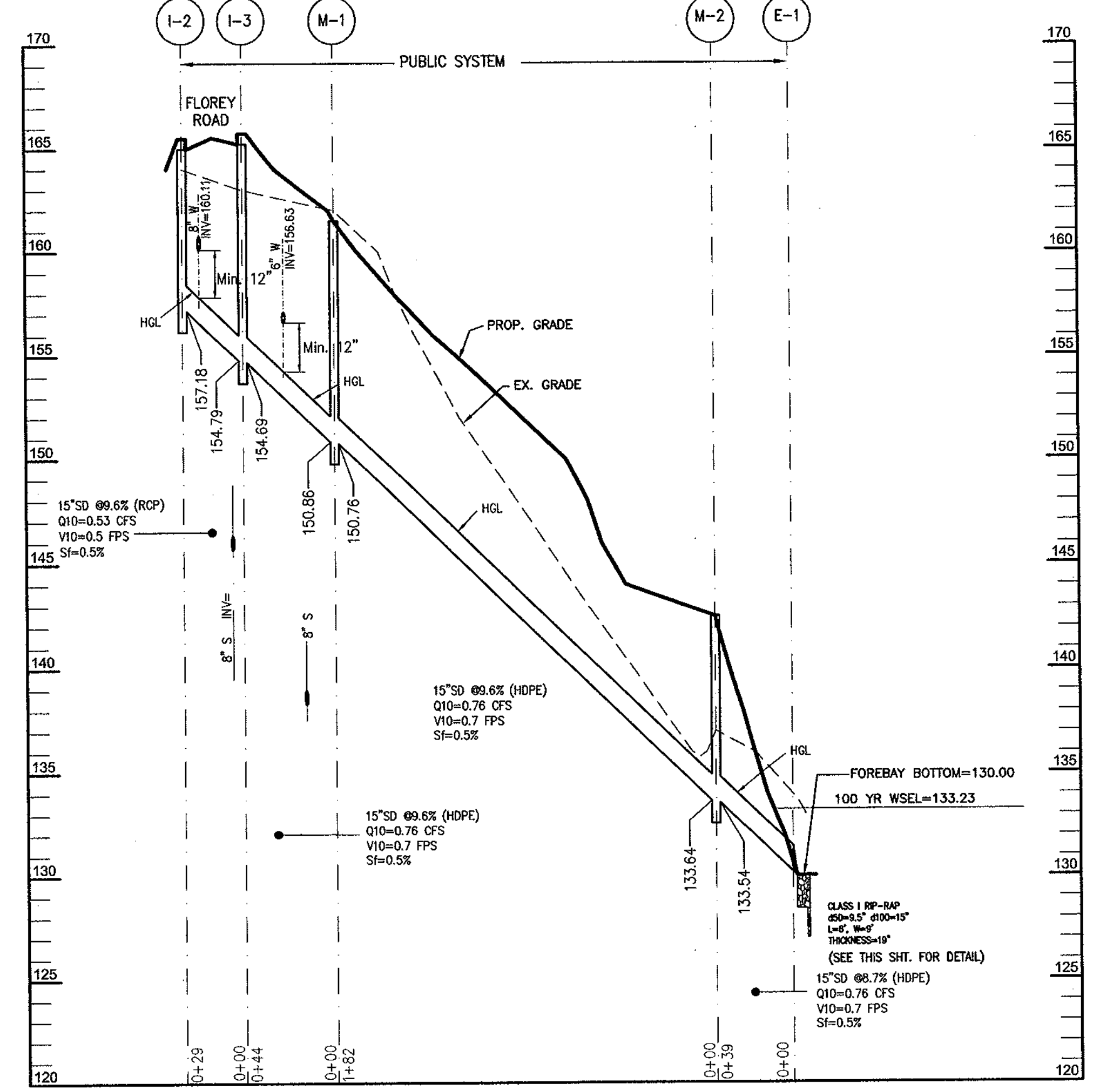
SIZE	TYPE	LENGTH	SIZE	TYPE	LENGTH
6"	PVC	133'	6"	PVC	0
8"	HDPE	30'	8"	HDPE	0
15"	HDPE	32'	15"	HDPE	384'
30"	HDPE	355'	15"	RCP Class IV	29'
			30"	HDPE	0



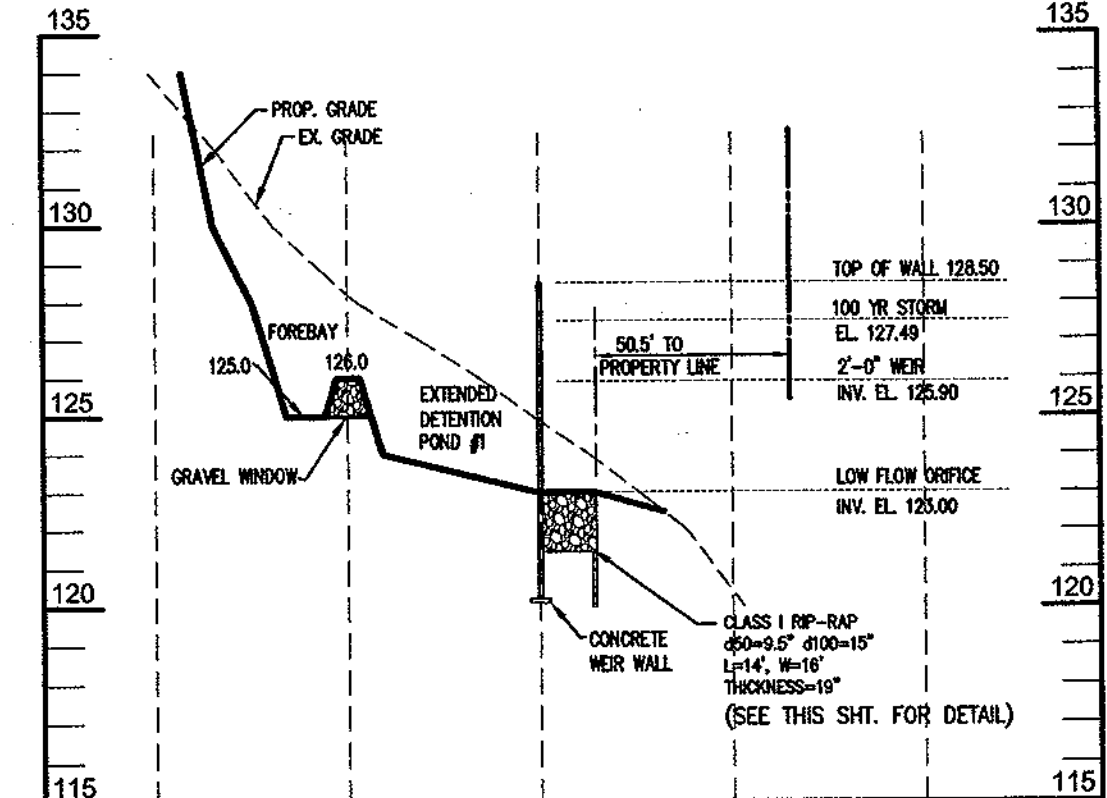
ISOLATION/DIVERSION MANHOLE (M-6)



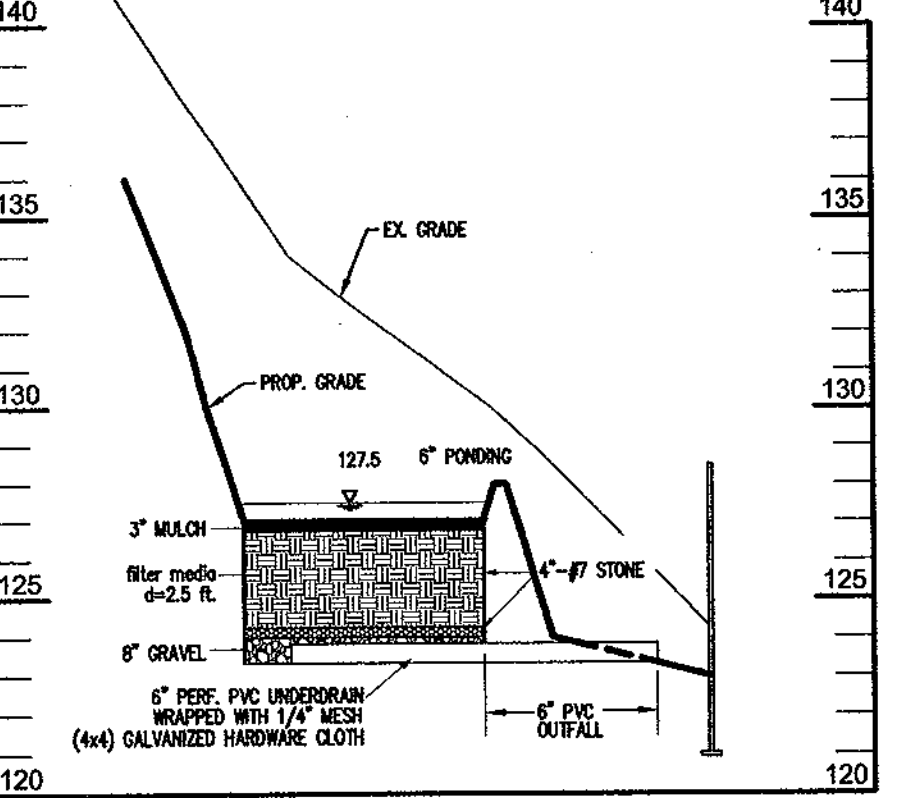
STORM DRAIN PROFILE (I-4 TO E-2)
SCALE 1"=50' H, 1"=5' V



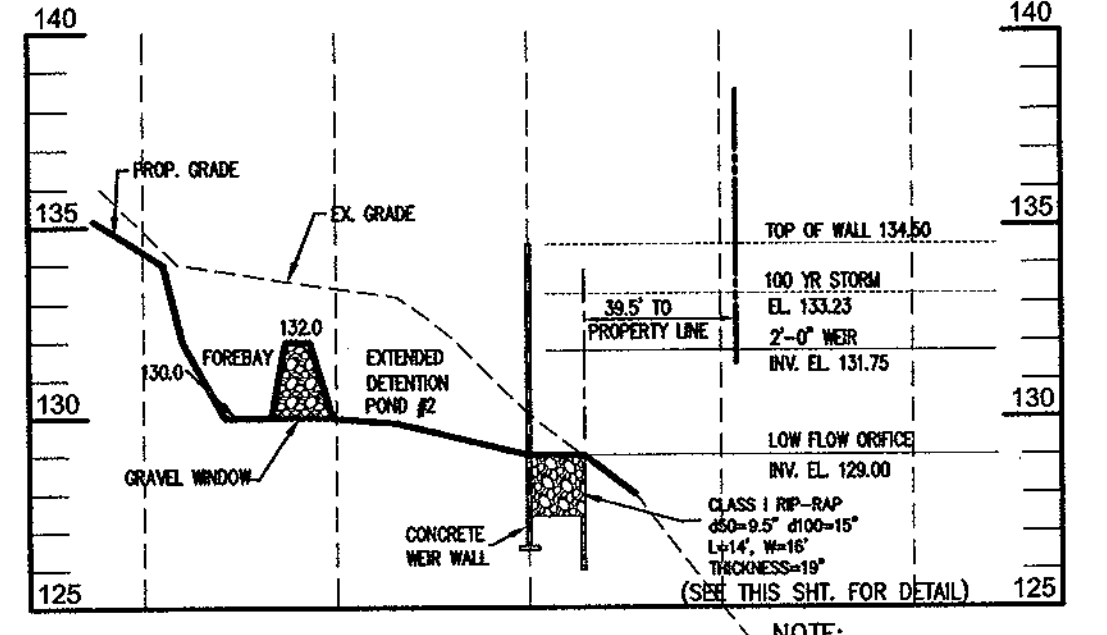
STORM DRAIN PROFILE (I-2 TO E-1)
SCALE 1"=50' H, 1"=5' V



SECTION A-A
SCALE 1"=50' H, 1"=5' V



SECTION B-B
SCALE 1"=50' H, 1"=5' V



SECTION C-C
SCALE 1"=50' H, 1"=5' V

STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INV. ELEV. (in)	INV. ELEV. (out)	WIDTH	TOP ELEVATION	STD. DETAIL	OWNERSHIP
I-1	TYPE 'K' INLET	N 559431, E 1392646	-	134.39	10'-0"	141.00	SD 4.12	PUBLIC
I-2	A-5 INLET	N 559181, E 1392493	-	157.18	5'-0"	165.00	SD 4.40	PUBLIC
I-3	A-5 INLET	N 559152, E 1392497	154.79	154.69	5'-0"	165.25	SD 4.40	PUBLIC
I-4	TYPE 'D' INLET	N 559031, E 1392302	-	144.85	-	151.50	SD 4.39	PRIVATE
I-5	YARD INLET	N 558911, E 1392396	-	140.32	-	143.50	SD 4.14	PRIVATE
M-1	PRECAST CONCRETE MANHOLE	N 559130, E 1392535	150.86	150.76	4'-0"	161.50	G 5.12	PUBLIC
M-2	PRECAST CONCRETE MANHOLE	N 558961, E 1392466	133.64	133.54	4'-0"	142.50	G 5.12	PUBLIC
M-3	PRECAST CONCRETE MANHOLE	N 558985, E 1392431	136.89	136.79	5'-0"	147.50	G 5.13	PRIVATE
M-4	PRECAST CONCRETE MANHOLE	N 558856, E 1392429	130.53	130.43	5'-0"	139.00	G 5.13	PRIVATE
M-5	PRECAST CONCRETE MANHOLE	N 558838, E 1392476	129.51	129.41	5'-0"	136.00	G 5.13	PRIVATE
M-6	PRECAST CONCRETE MANHOLE	N 559523, E 1392598	128.49	127.28/126.27	4'-0"	131.00	G 5.12	PUBLIC
E-1	15" HDPE END SECTION	N 558929, E 1392473	-	130.19	-	-	SD 5.21	-
E-2	30" HDPE END SECTION	N 558865, E 1392510	-	129.04	-	-	SD 5.31	-
E-3	15" HDPE END SECTION	N 558889, E 1392421	-	140.02	-	-	SD 5.11	-
E-4	15" HDPE END SECTION	N 559528, E 1392614	-	126.17	-	-	SD 5.21	-

STORMDRAIN PROFILES & STORMWATER MANAGEMENT DETAILS

DORCHESTER HOMES

LOTS 1-3, 5-18 AND OPEN SPACE LOTS 4, 19

REF: S-03-02, WP-03-35, P-04-11
1ST ELECTION DISTRICT- HOWARD COUNTY, MARYLAND
PARCEL 756 LIBER 771, FOLIO 440
TAX MAP 38 BLOCK 9 ZONE R-12

KCE ENGINEERING, INC.

EXECUTIVE CENTER
3300 NORTH RIDGE ROAD, SUITE 315
ELLCOTT CITY, MARYLAND 21043
PHONE (410) 203-9800 FAX (410) 203-9228

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William J. Mankin
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Michelle J. Mankin
CHIEF, DIVISION OF LAND DEVELOPMENT

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD COUNTY DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

USDA-NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

HOWARD COUNTY SOIL CONSERVATION DISTRICT.

ENGINEERS CERTIFICATE

I HEREBY 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.

AD Marks
SIGNATURE OF ENGINEER

8/11/05
DATE

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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.

[Signature]
SIGNATURE OF DEVELOPER

8/11/05
DATE

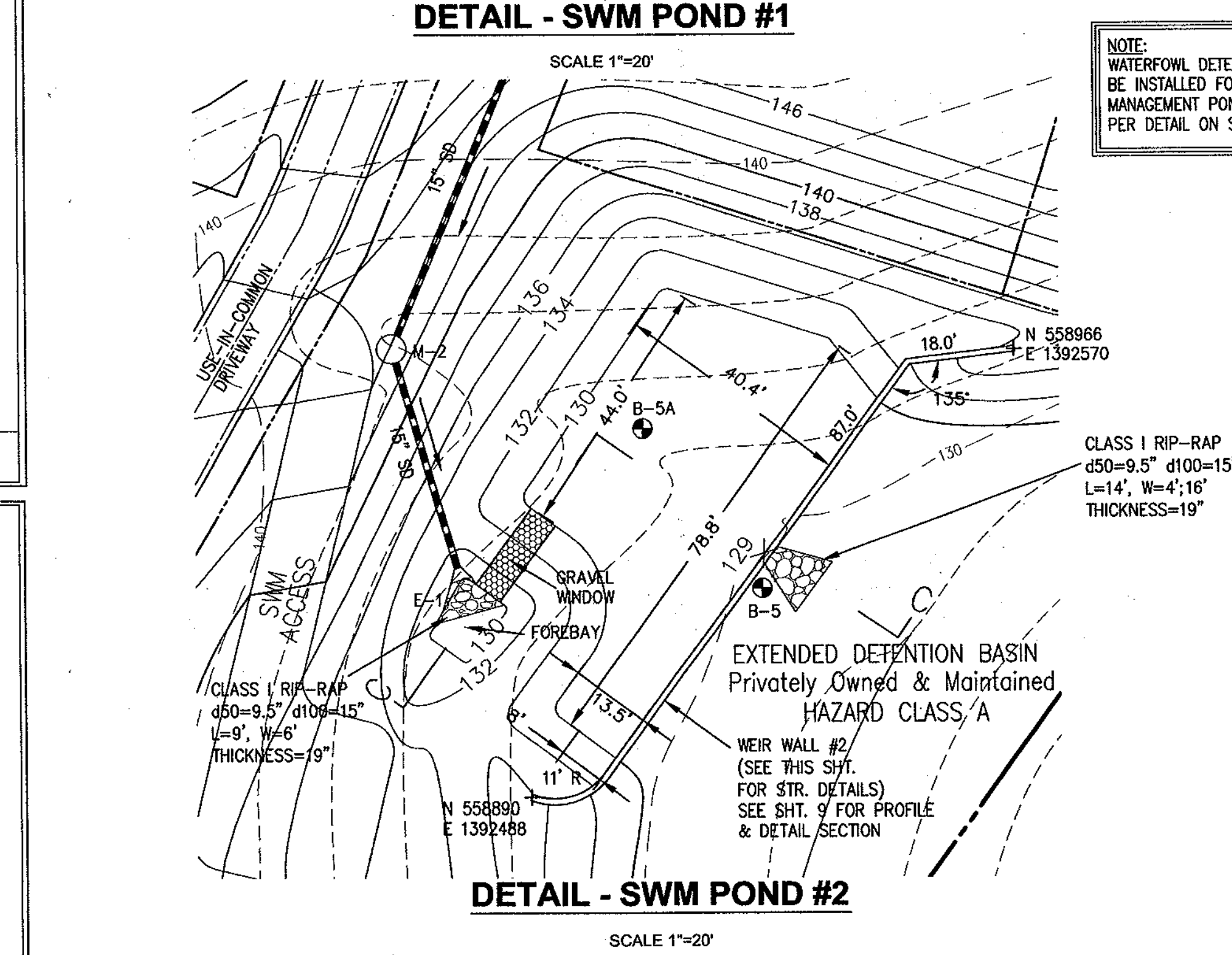
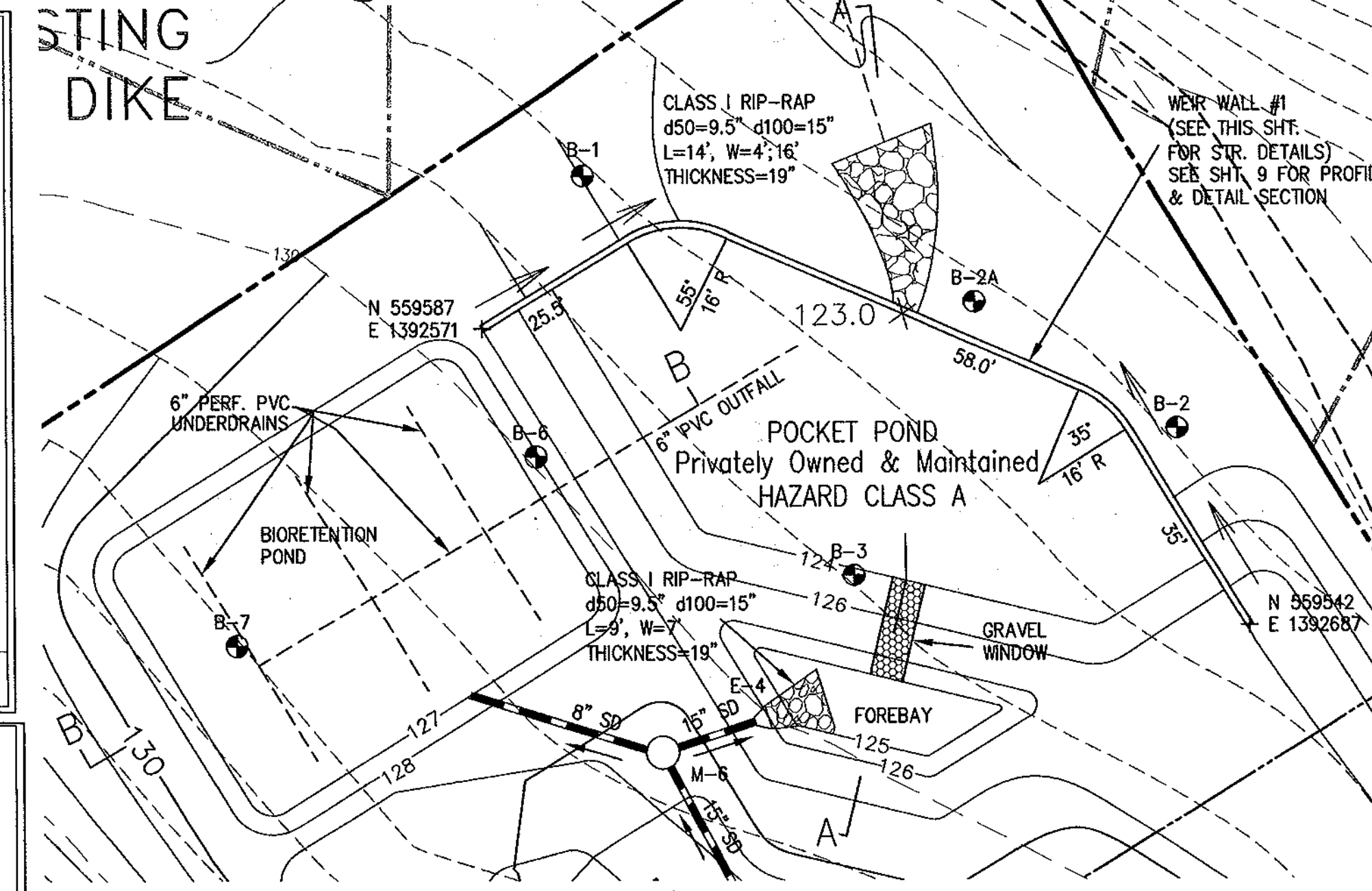
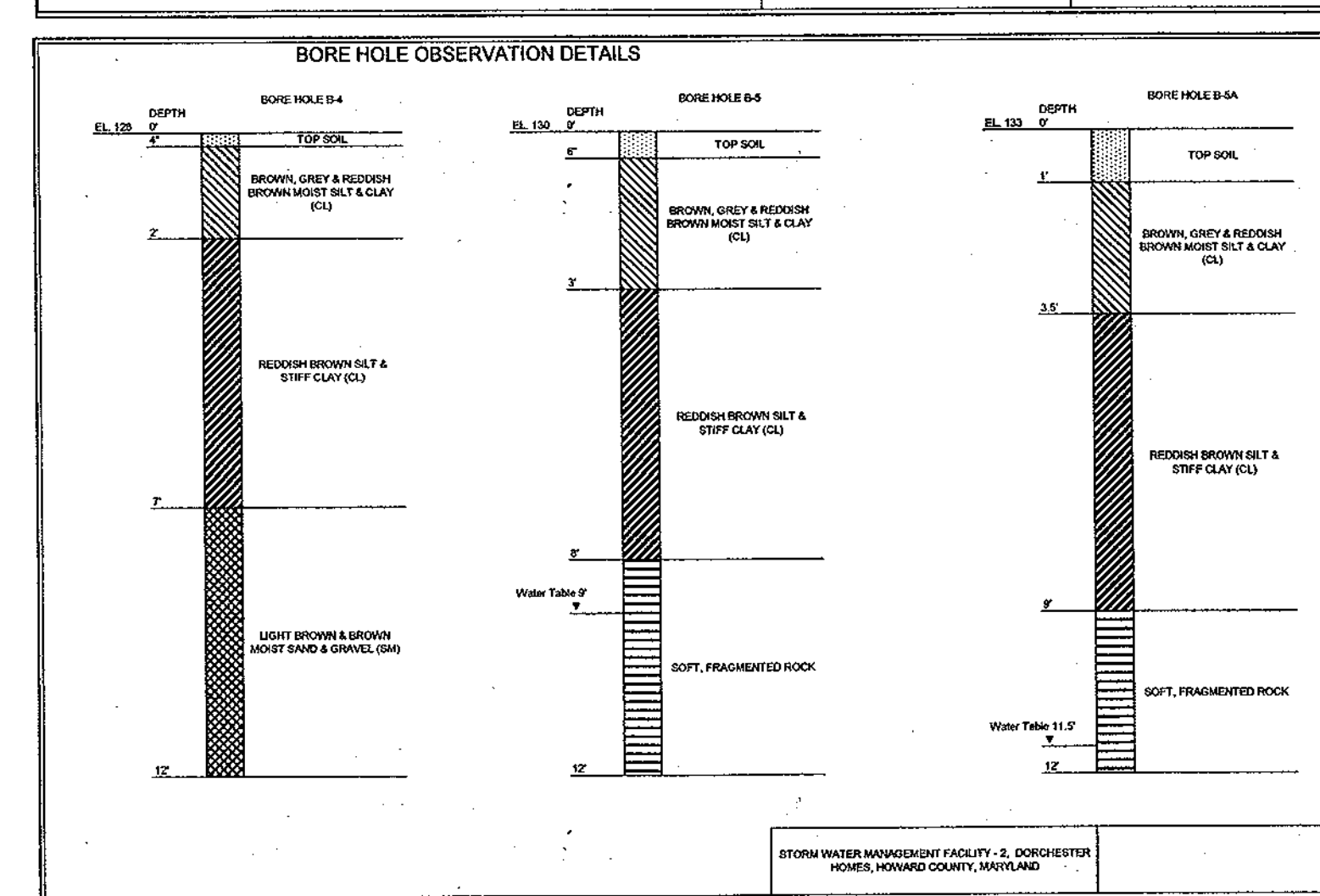
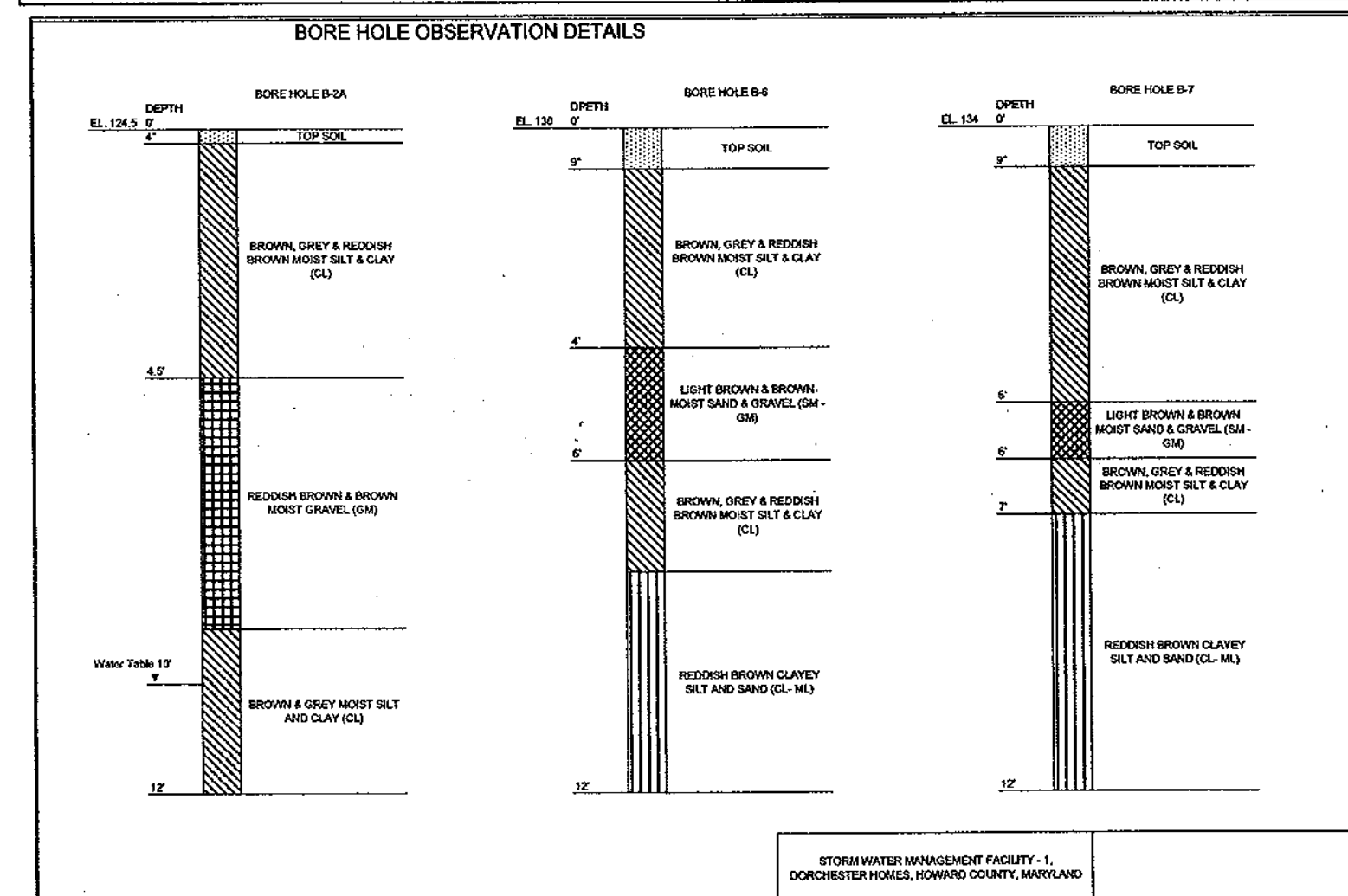
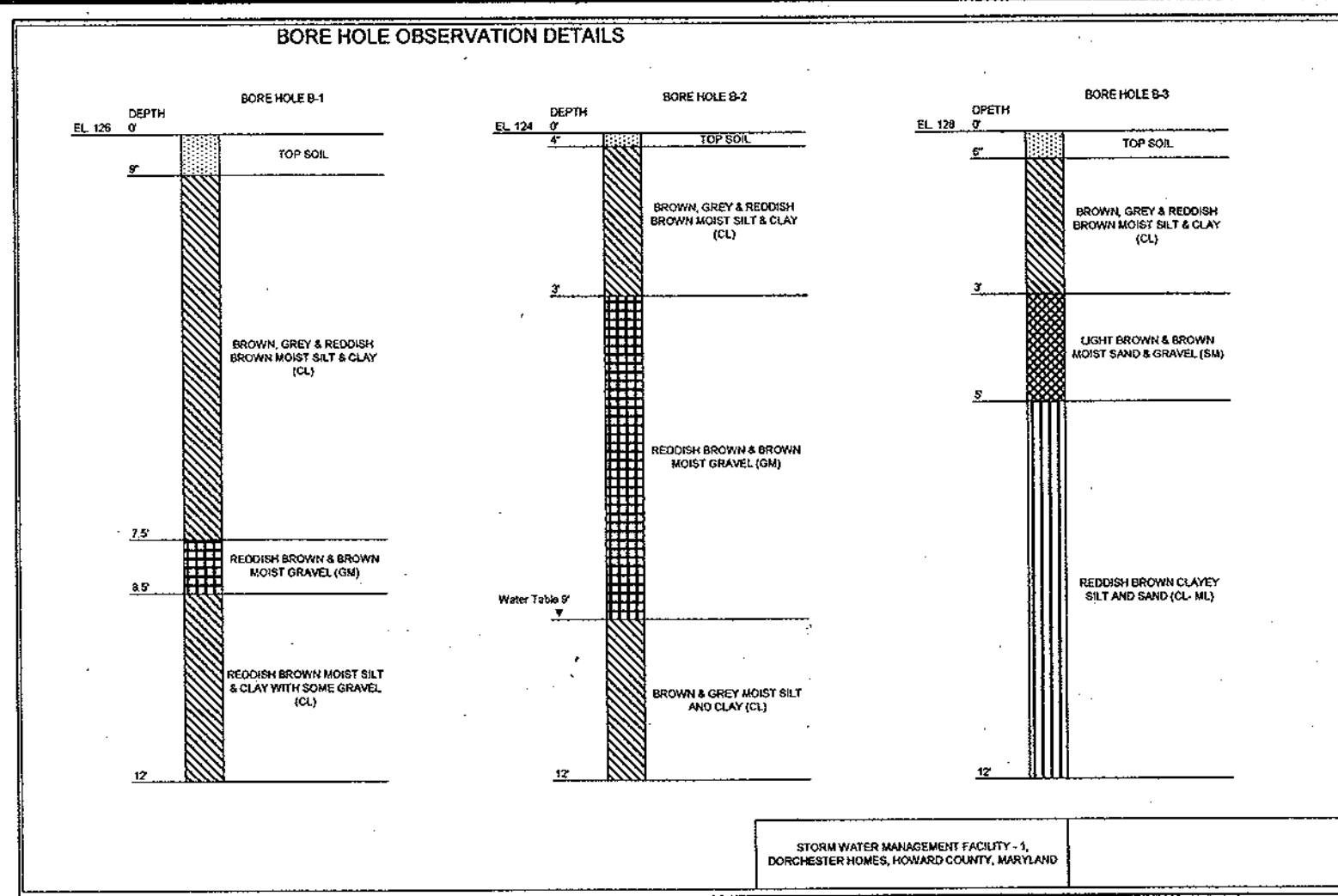
DRAWN BY: MG

CHECKED BY: DVK

SCALE: AS SHOWN

DATE: August, 2005

SHEET: 8 OF 13



STRUCTURAL NOTES

1.0 DESIGN PARAMETERS

1.1 Design assumptions are as follows:

	Effective Friction Angle (°)	Unit Weight (PCF)	Effective Cohesion (PSF)
Retained soil	30	120	0
Foundation soil	30	110	0

Bearing capacity of foundation soil: 3000 PSF
Surcharge: 250 PSF of equivalent live load (for retaining wall only)
No seismic analysis

2.0 MATERIAL

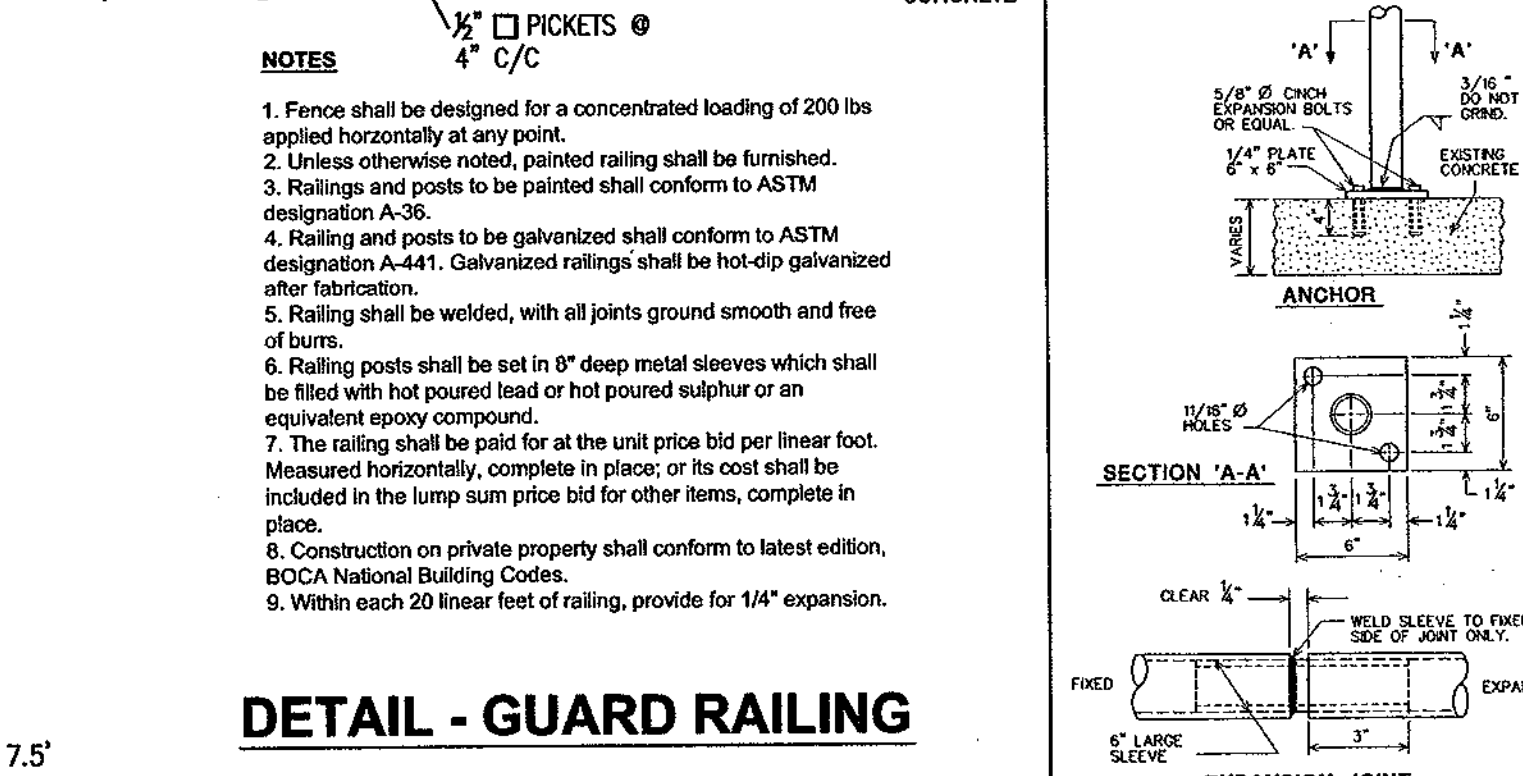
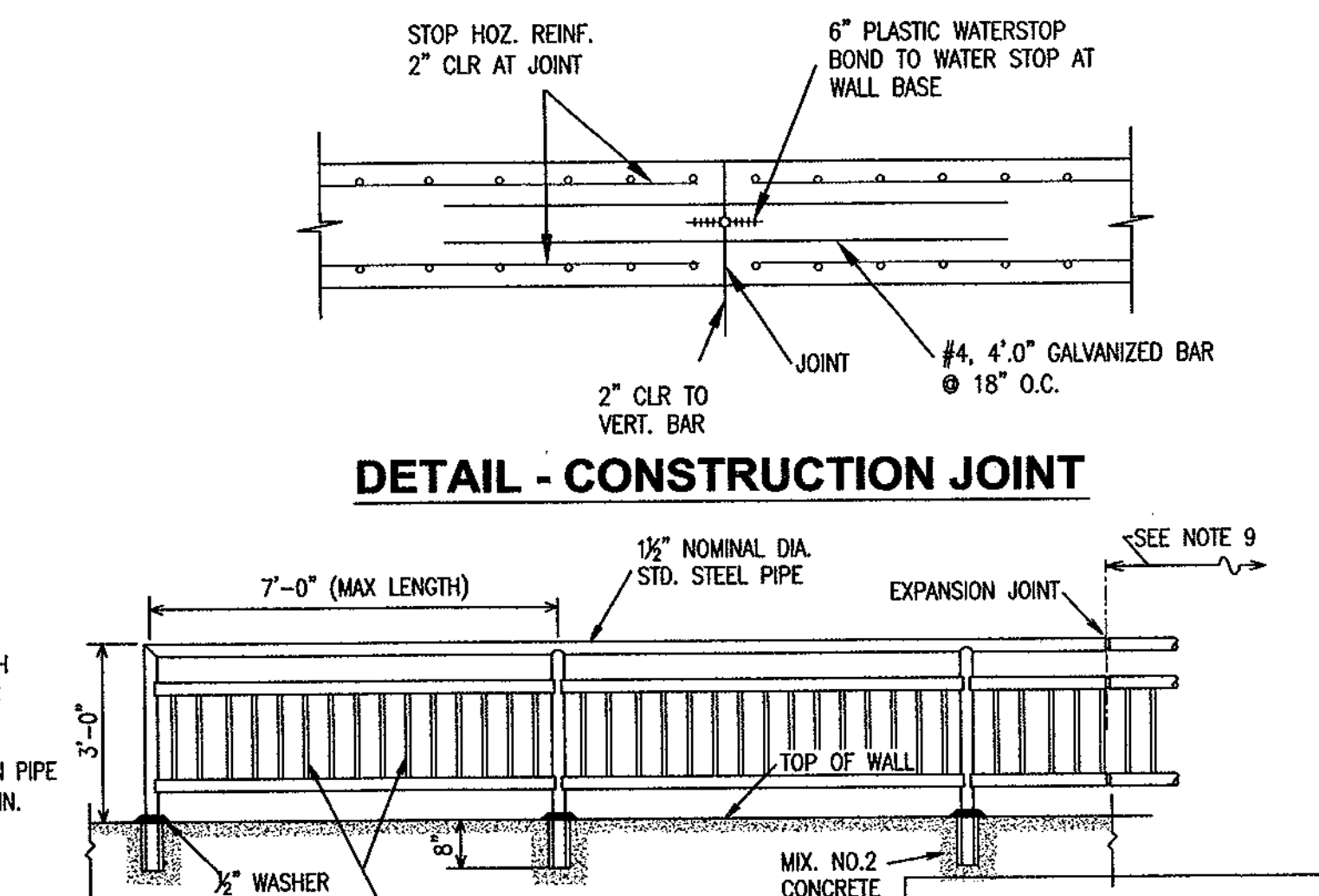
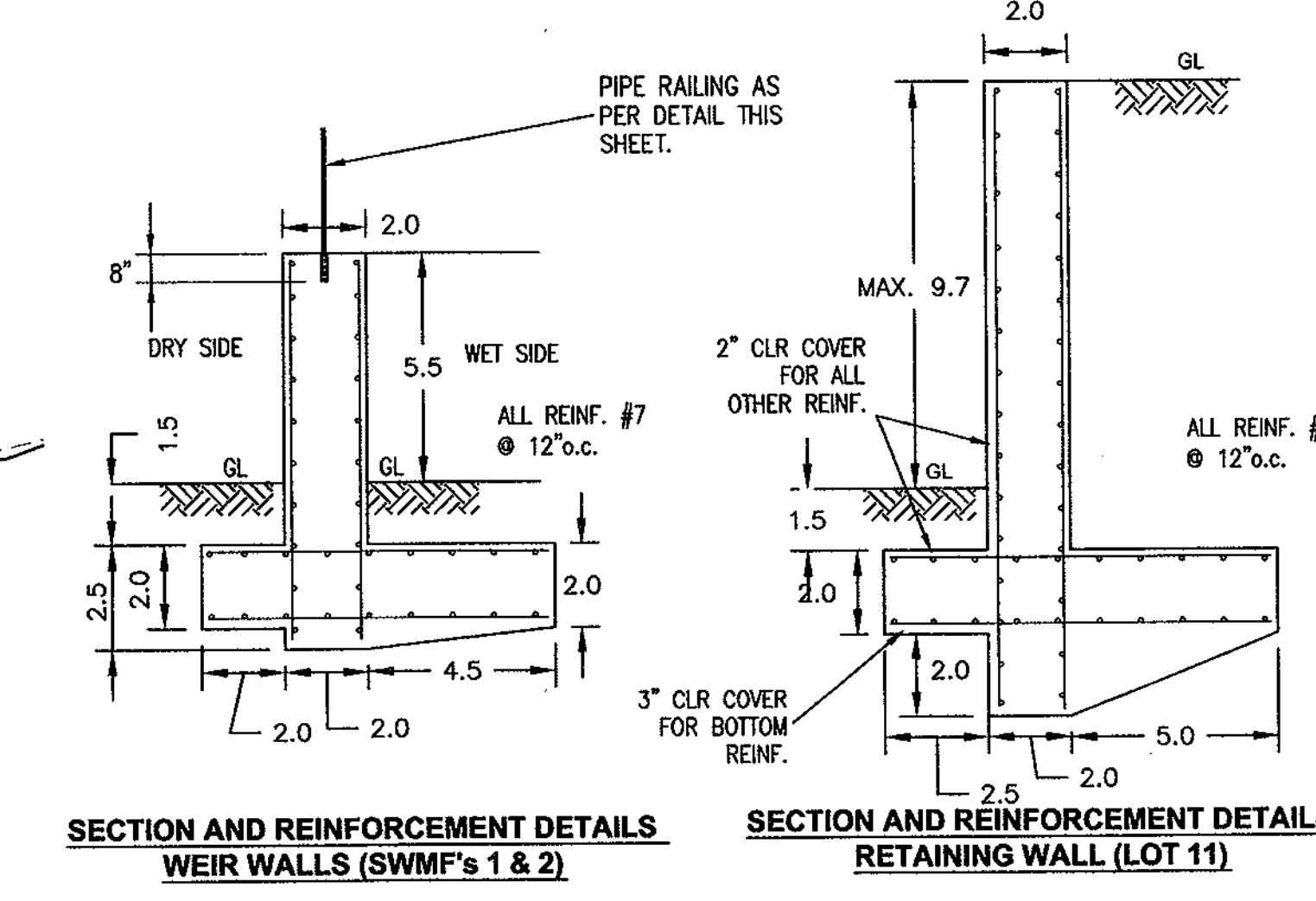
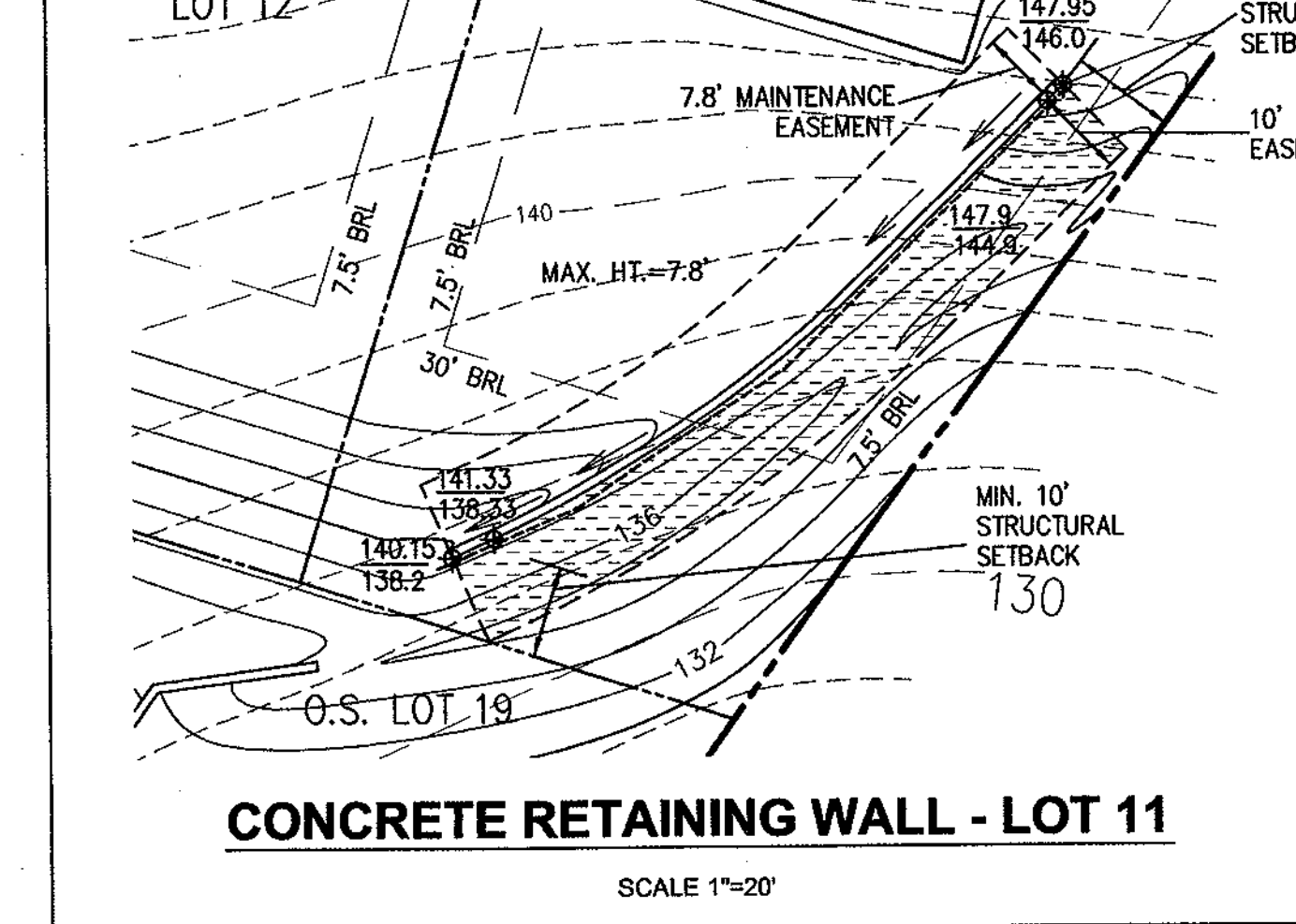
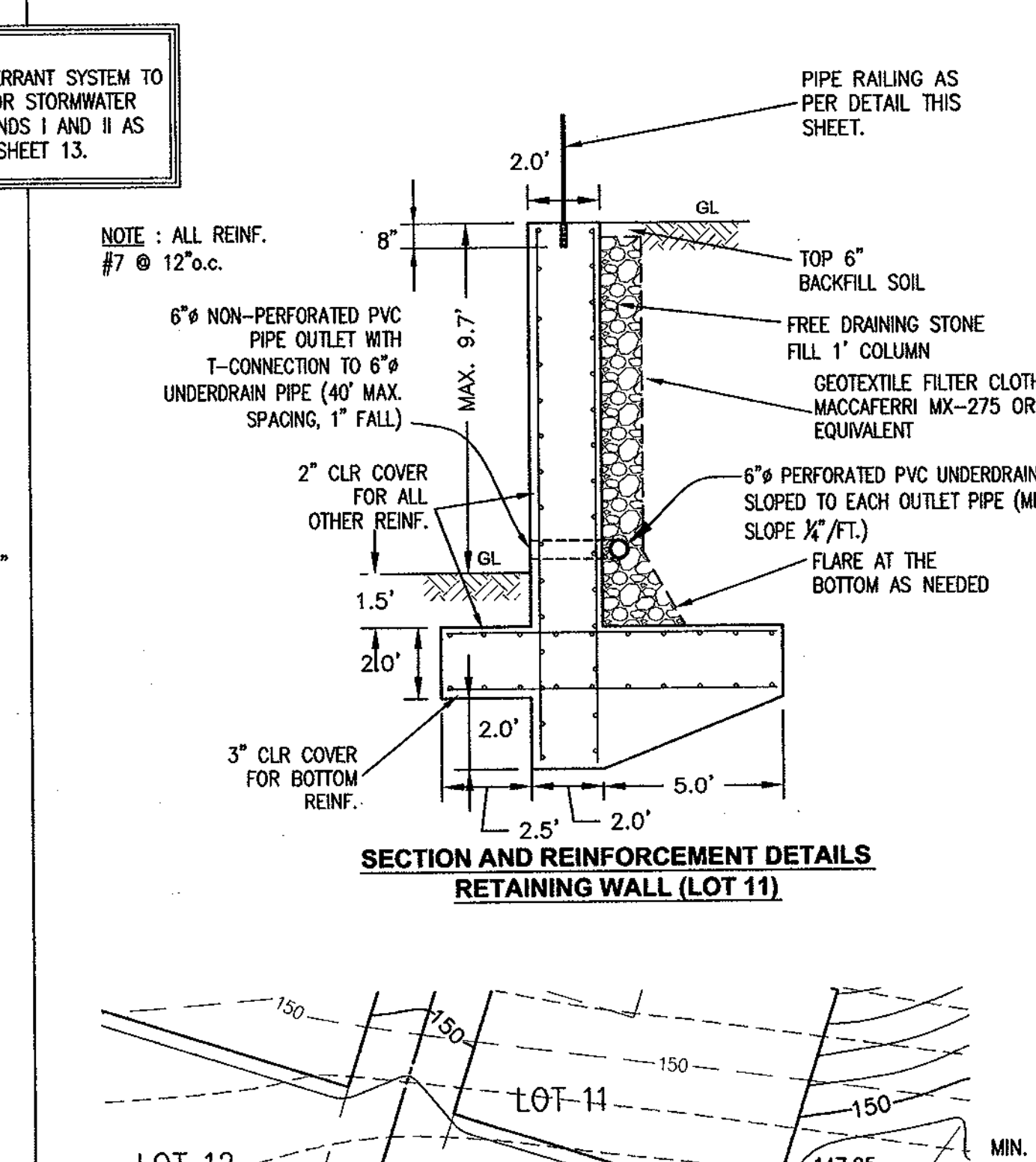
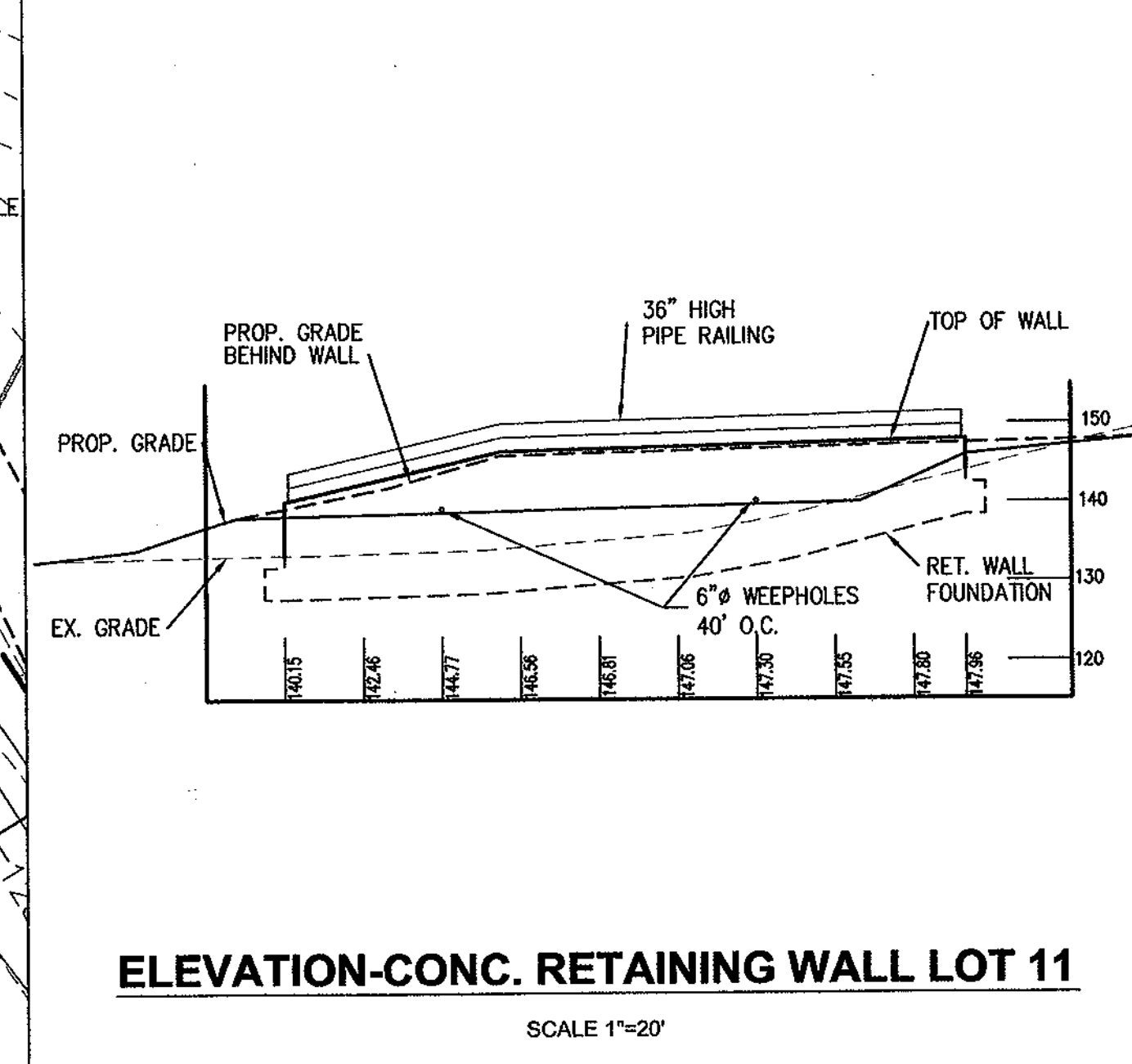
2.1 Concrete: Class AA, 4000 PSI characteristic strength
2.2 Steel: Grade 60, 60000 PSI yield strength

3.0 CONSTRUCTION NOTES

3.1 Retaining walls shall only be constructed under the observation of a Maryland Registered Professional Engineer.
3.2 The required bearing pressure beneath the footing of the wall shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to the start of construction. The required test procedure shall be the dynamic cone penetrometer test ASTM STP-399.
3.3 The suitability of fill material shall be confirmed by the on-site soils technician. Each 8-inch lift must be compacted to a minimum of 95 % Standard Proctor Density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
3.4 For retaining walls, provide weep holes (6" Ø PVC PIPE) @ 40' spacing.

4.0 GENERAL

4.1 This drawing shall be read in conjunction with all other contract documents.
4.2 If conditions are different than those stated in the drawings, notes and specifications, the design modification may be needed prior to proceeding with construction.



STORMWATER MANAGEMENT DETAILS - 2

DORCHESTER HOMES
LOTS 1-3, 5-18 AND OPEN SPACE LOTS 4, 19

REF: S-03-02, WP-03-35, P-04-11
1ST ELECTION DISTRICT- HOWARD COUNTY, MARYLAND
PARCEL 756 LIBER 771, FOLIO 440
TAX MAP 38 BLOCK 9 ZONE R-12

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[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature]
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 9/11/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 9/11/05
CHIEF, DIVISION OF LAND DEVELOPMENT

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

USDA-NATURAL RESOURCES CONSERVATION SERVICE

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[Signature] 8/11/05
SIGNATURE OF ENGINEER DATE

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[Signature] 8/11/05
SIGNATURE OF DEVELOPER DATE

DRAWN BY: MG
CHECKED BY: DVK
SCALE: AS SHOWN
DATE: August, 2005

SHEET:
10 OF 13

No.	REVISIONS Description	Date
1	Revised shape of Easement #8, no change to area	10/10/05

See Sheet 12 of 13 for Vicinity Map



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard County Seal

Howard County Seal

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT

DATE: 9/1/05
 DATE: 9/1/05

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
CHB2	Chester silt loam, 3 to 8 percent slopes, moderately eroded	B
Co	Codorus silt loam	B
CuB	Comus silt loam, local alluvium, 3 to 8 percent slopes	B
GIB2	Glenela loam, 3 to 8 percent slopes, moderately eroded	B
GIC2	Glenela loam, 8 to 15 percent slopes, moderately eroded	B
GIC3	Glenela loam, 8 to 15 percent slopes, severely eroded	B
GID2	Glenela loam, 15 to 25 percent slopes, moderately eroded	B
GID3	Glenela loam, 15 to 25 percent slopes, severely eroded	B
GnA	Glenville silt loam, 0 to 3 percent slopes	C
GnB2	Glenville silt loam, 3 to 8 percent slopes, moderately eroded	C
Ha	Hatboro silt loam	D
MIB2	Manor loam, 3 to 8 percent slopes, moderately eroded	B
MIC2	Manor loam, 8 to 15 percent slopes, moderately eroded	B
MIC3	Manor loam, 8 to 15 percent slopes, severely eroded	B
MID2	Manor loam, 15 to 25 percent slopes, moderately eroded	B
MID3	Manor loam, 15 to 25 percent slopes, severely eroded	B
MtE	Mt. Airy channery loam, 25 to 45 percent slopes	A

LEGEND	
Proposed Forest Easement Signage	Existing Contour 5
Forest Conservation Easement	Existing Contour 25
Existing Forest Conservation Easement	Property Boundary Line
Steep Slopes 15-24%	Soils Division Line
Steep Slopes >25%	Forest Stand Type Boundary
	Existing Stream
	Stream Buffer
	Wetlands
	Wetlands Buffer

Surety in the amount of \$87,773.00 shall be posted as part of the Developer's Agreement for 4.03 ac/175,547 sq. ft.

OWNER
 Talley Family LLP
 1525 Daisy Road
 Hoodline, MD 21797
 410-442-2300

This property is encumbered with a Ho. Co. Agricultural Land Preservation Easement, HO-03-02-PFSD, which is held by the Ho. Co. Agricultural Land Preservation Program.

Forest conservation easement #8 was approved by the DPZ, Agricultural Land Preservation Program Administrator on June 10, 2005 as off-site reforestation mitigation within existing environmental features and buffer areas in accordance with adopted DPZ policy for the Dorchester Homes project.

FSH Associate
 Engineers Planners Surveyors
 8318 Forest Street Ellicott City, MD 21043
 Tel: 410-750-2251 Fax: 410-750-7350
 E-mail: FSHAssociates@cs.com

OFFSITE FOREST RESTORATION FOR DORCHESTER HOMES
 LOTS 1-3, 5-18 on Talley Parcel 2
 RE-03-02 DS2, P.N. 17192, TM
 TAX MAP 8 GRID 13
 4TH ELECTION DISTRICT

DATE: 04-05
 SCALE: 1" = 30'

KEY	TYPE OF COMMUNITY	AREA Acres	SOIL INFORMATION			HABITAT VALUE	EXISTING VEGETATION (Type and approx. %)	STAND CHARACTERISTICS			FOREST AREA IN SENSITIVE ENVIRONMENTS
			SOIL TYPE	TYPICAL FOREST COVER	WOODLAND SUITABILITY INDEX			SIZE AVG. DIAM.	AGE	GENERAL CONDITIONS	
F-1	Upland Hardwoods	4.59	MID2 MIB2 GIB2	Mixed upland Hardwood	65-74 95+ 75-84	fair fair good	Black oak 60% White oak 20% Mockernut Hickory 20%	12-18 10-16 6-12	48-72 50-80 36-72	Poor Heavy understory grazing	1.2 Ac. Steep slopes 15-25%
OF-1	Open Field	41.01	Co Ho GnB2	Mixed water Tolerant Hardwoods	75-84 95+ 65-74	good good good	N/A	N/A	N/A	N/A	N/A
C-1	Crop Field	27.16	GnA GIB2 GIC2 MIC3 MIB2	Mixed water Tolerant Hardwoods	75-84 75-84 65-74 65-74 65-74	good good fair fair fair	N/A	N/A	N/A	N/A	N/A
C-2	Crop Field	32.21	Co CuB GnA	Mixed water Tolerant Hardwoods	75-84 75-84 65-74	good good good	N/A	N/A	N/A	N/A	N/A
L-1	Lawn (Farm Stead)	2.86	GIB2	Mixed upland Hardwood	65-74	fair	N/A	N/A	N/A	N/A	N/A
L-2	Lawn	1.62	MIB2	Mixed upland Hardwood	65-74	fair	N/A	N/A	N/A	N/A	N/A

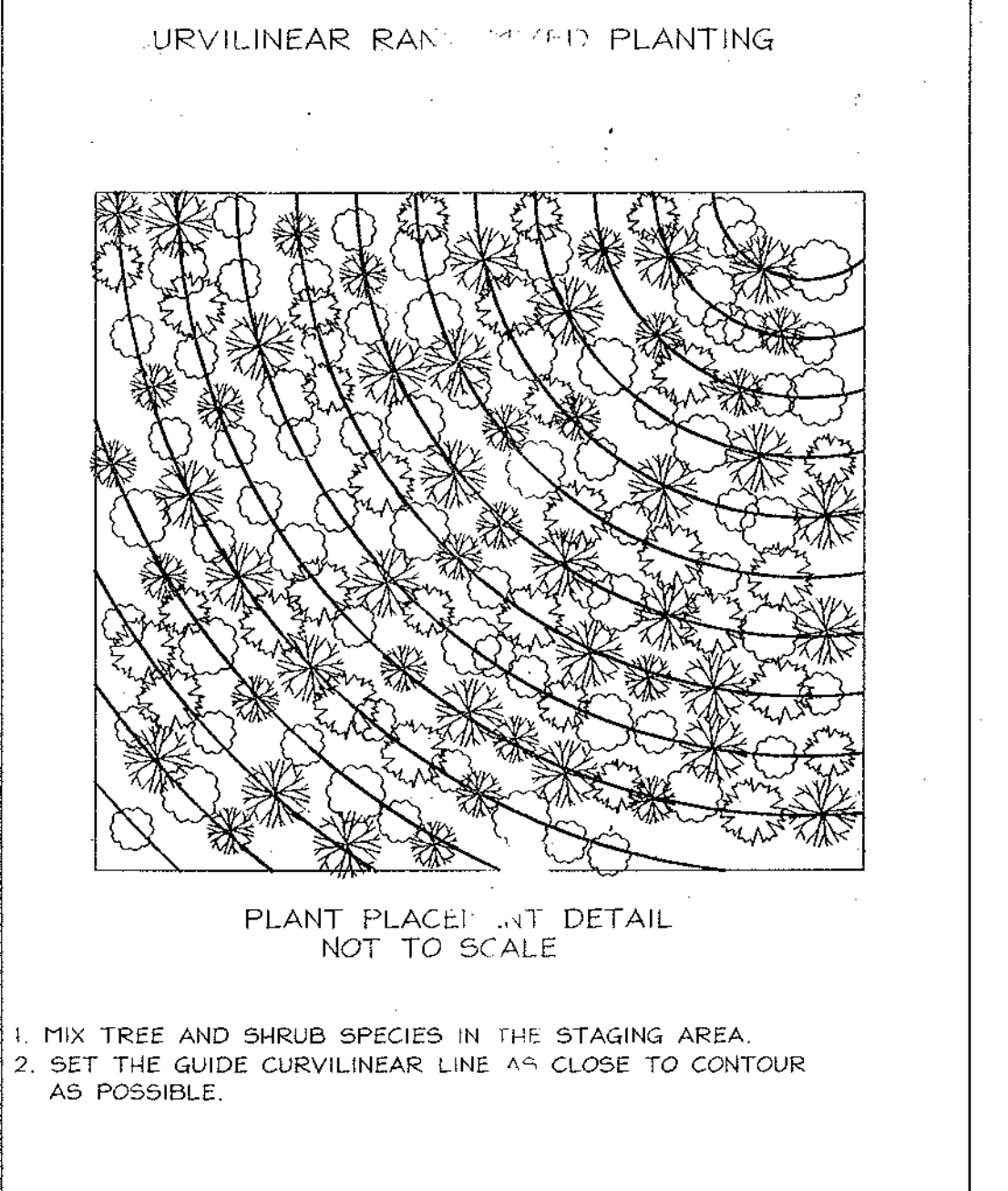
Forest Stand Narrative
 F-1: This forest stand is 4.59 Ac. in size and contains steep slopes. The canopy is dominated by black oak, Quercus velutina, white oak, Quercus alba and mockernut hickory, Carya tomentosa. The area is currently grazed and the understory is sparse.
 L-1: This 2.86 Ac. area surrounds an existing house and various farm out buildings. The area contains lawn and ornamental tree plantings. No environmentally sensitive areas are covered by L-1.
 L-2: This 1.62 Ac. area surrounds an existing house located on the south west corner of the property. The area contains lawn and various ornamental plantings. The area contains no environmentally sensitive areas.
 C-1: This 27.16 Ac. crop area is currently in active crop land production. There are no environmentally sensitive areas.
 C-2: This 32.21 Ac. crop area is currently in active crop production. The area contains environmentally sensitive areas including streams and associated buffers.
 OF-1: This 41.01 Ac. open field area contains grazing pastures and open field. The area contains wetlands, streams and associated buffers.

Easement 8: PLANTING AREA: 4.03 Ac.

Qty	Botanical Name	Common Name	Size	Credit/Plant	Total Credit
50	Acer rubrum	Red Maple	1" cal.	217.8	10890
100	Acer rubrum	Red Maple	2-3' ht.	125.0	12500
50	Amelanchier canadensis	Servicberry	1" cal.	217.8	10890
100	Amelanchier canadensis	Servicberry	2-3' ht.	125.0	12500
50	Betula nigra	River Birch	1" cal.	217.8	10890
75	Betula nigra	River Birch	2-3' ht.	125.0	9375
50	Carpinus caroliniana	Hornbeam	1" cal.	217.8	10890
100	Carpinus caroliniana	Hornbeam	2-3' ht.	125.0	12500
50	Cercis canadensis	Redbud	1" cal.	217.8	10890
75	Cercis canadensis	Redbud	2-3' ht.	125.0	9375
50	Liquidambar styraciflua	Sweetgum	1" cal.	217.8	10890
100	Liquidambar styraciflua	Sweetgum	2-3' ht.	125.0	12500
50	Nyssa sylvatica	Black Gum	1" cal.	217.8	10890
75	Nyssa sylvatica	Black Gum	2-3' ht.	125.0	9375
50	Platanus occidentalis	Sycamore	1" cal.	217.8	10890
83	Platanus occidentalis	Sycamore	2-3' ht.	125.0	10375

1108 Total Plantings 175,620 s.f. = 4.03 Ac.

EASEMENT	TYPE	AREA (ACRES)
8	Reforestation	4.03
T		4.03



Native Seed Mix

Percentage	Botanical Name	Common Name
25%	Agrostis alba	Redtop
25%	Carex vulpinoideis	Fox Sedge
25%	Alopecurus pratensis	Meadow Fox Tail
20%	Andropogon scoparius	Little Bluestem
5%	Chrysanthemum leucan themum	Ox Eye Daisy

Surety in the amount of \$87,773.00 shall be posted as part of the Developer's Agreement for 4.03 ac/175,547 sq. ft.

Forest conservation easement 8B was approved by the DPZ, Agricultural Land Preservation Program Administrator on June 10, 2005 as off-site reforestation mitigation within existing environmental features and buffer areas in accordance with adopted DPZ policy for the Dorchester Homes project.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 9/1/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

[Signature] 9/1/05
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

Reforestation Area Monitoring Notes

- Monthly visits during the first growing season are to assess the success of the plantings and to determine if supplemental watering, pest control, invasive plant management, mowing or other actions are necessary. Early spring visits will document winter kill and autumn visits will document summer kill.
- The minimum survival rate shall be 75% of the total number of trees planted per acre at the end of the two year maintenance period. Wild tree seedlings from natural regeneration on the planting site may be counted up to 50% toward the total survival number if they are healthy native species at least 12 inches tall.
- Survival will be determined by a stratified random sample of the plantings. The species composition of the sample population should be proportionate to the amount of each species in the entire planting to be sampled.
- Effective monitoring will assess plant survivability during the first growing season and make recommendations for reinforcement planting if required at that time.

Forest Tree Protection and Management Notes

- Any significant changes made to the Forest Conservation Plan shall be made with the prior approval of the Howard County Dept. Of Planning and Zoning.
- Forest protection and management to be in accordance with a forest management plan. The plan shall be prepared by a MD. licensed forester to facilitate the landowners management objectives, such as wildlife enhancement, water quality, aesthetics, forest products, etc.
- Future forest harvests may be conducted under a Howard County approved forest harvest plan, prepared by a MD. licensed forester.

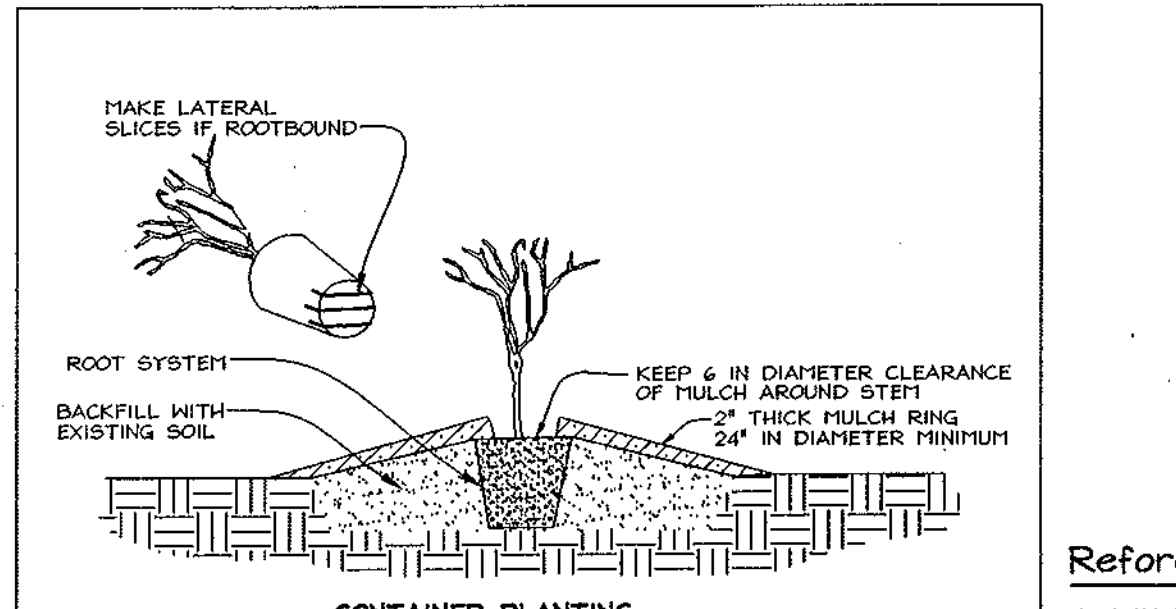
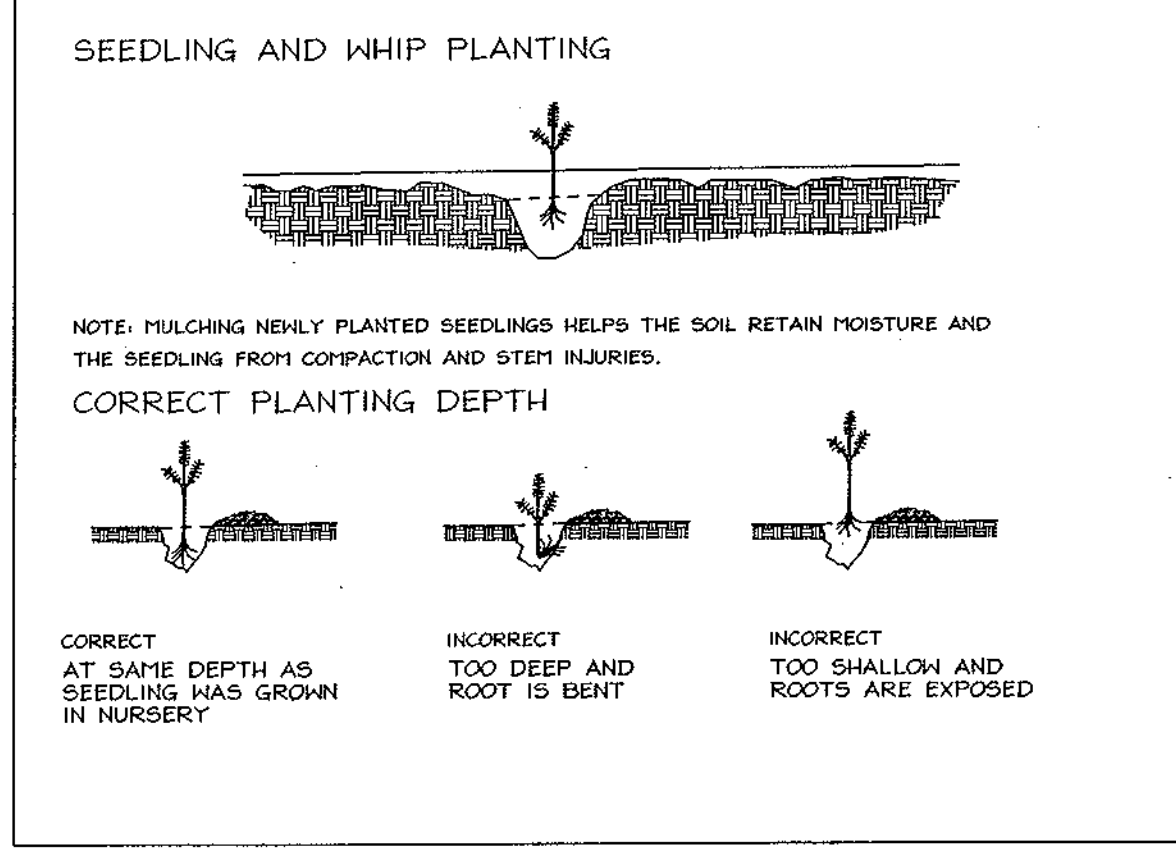
Planting Area Description
 The proposed planting area, totalling 4.03 Ac. is proposed entirely within stream and wetland buffer areas. The current land use is pasture land, making it an ideal area to plant and provide a forested stream buffer.

Planting will utilize a variety of sizes and species as shown in the proposed planting schedule. The larger stock will be placed further upland. All container grown stock will utilize tree shelters. The entire area will be stabilized with the described seed mix cover crop. The planting as specified will more than satisfy the required acreage.

Plant Selection and Density Spacing Requirements.
 Planting size and density shall be varied with a combination of planting stock. Planting quantity and spacing are based on square footage credit, which varies by material size. A total of 49,560 sq. ft. of planting credit must be fulfilled for each acre planted. This credit can be fulfilled with any combination of material size in accordance with the following chart.

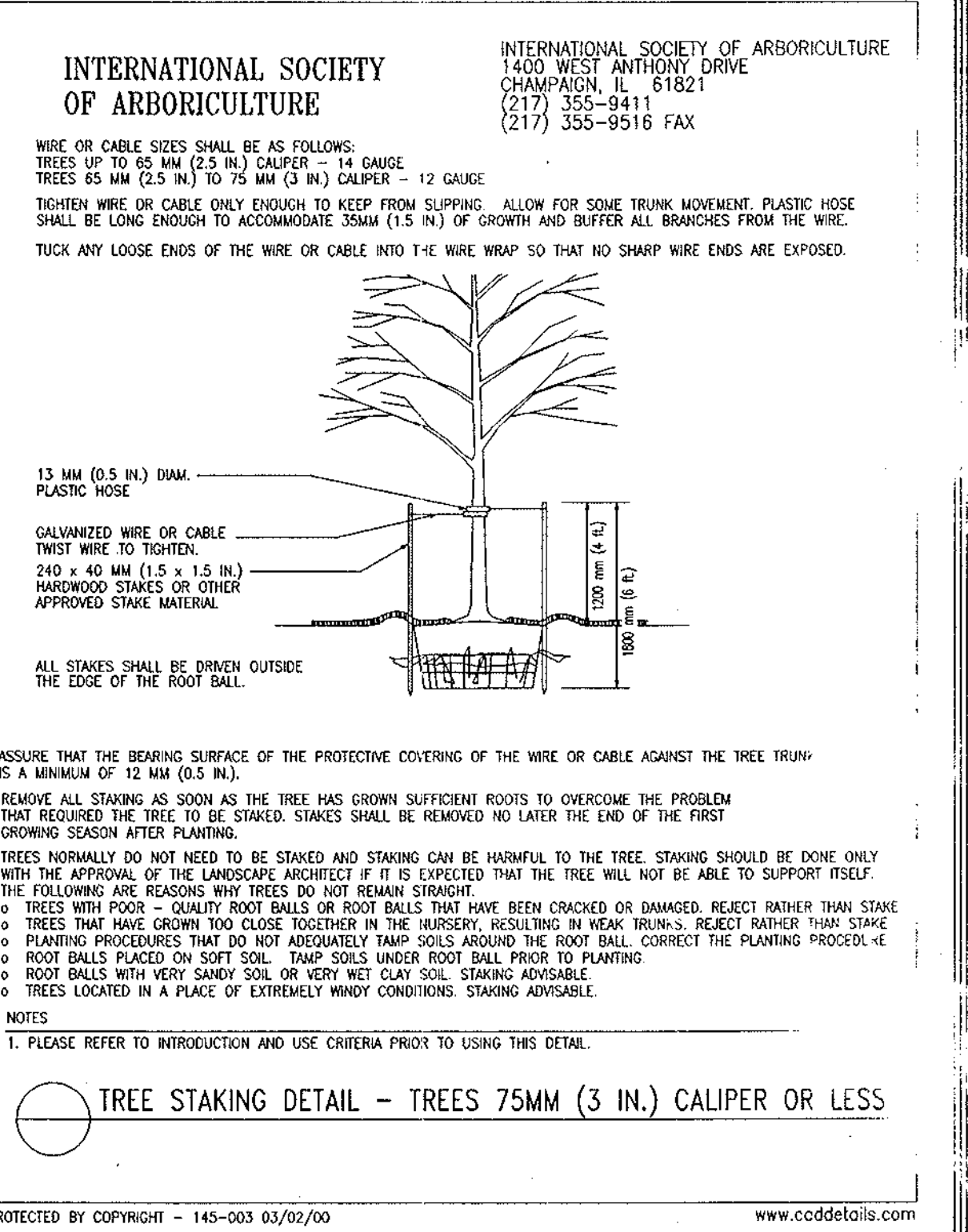
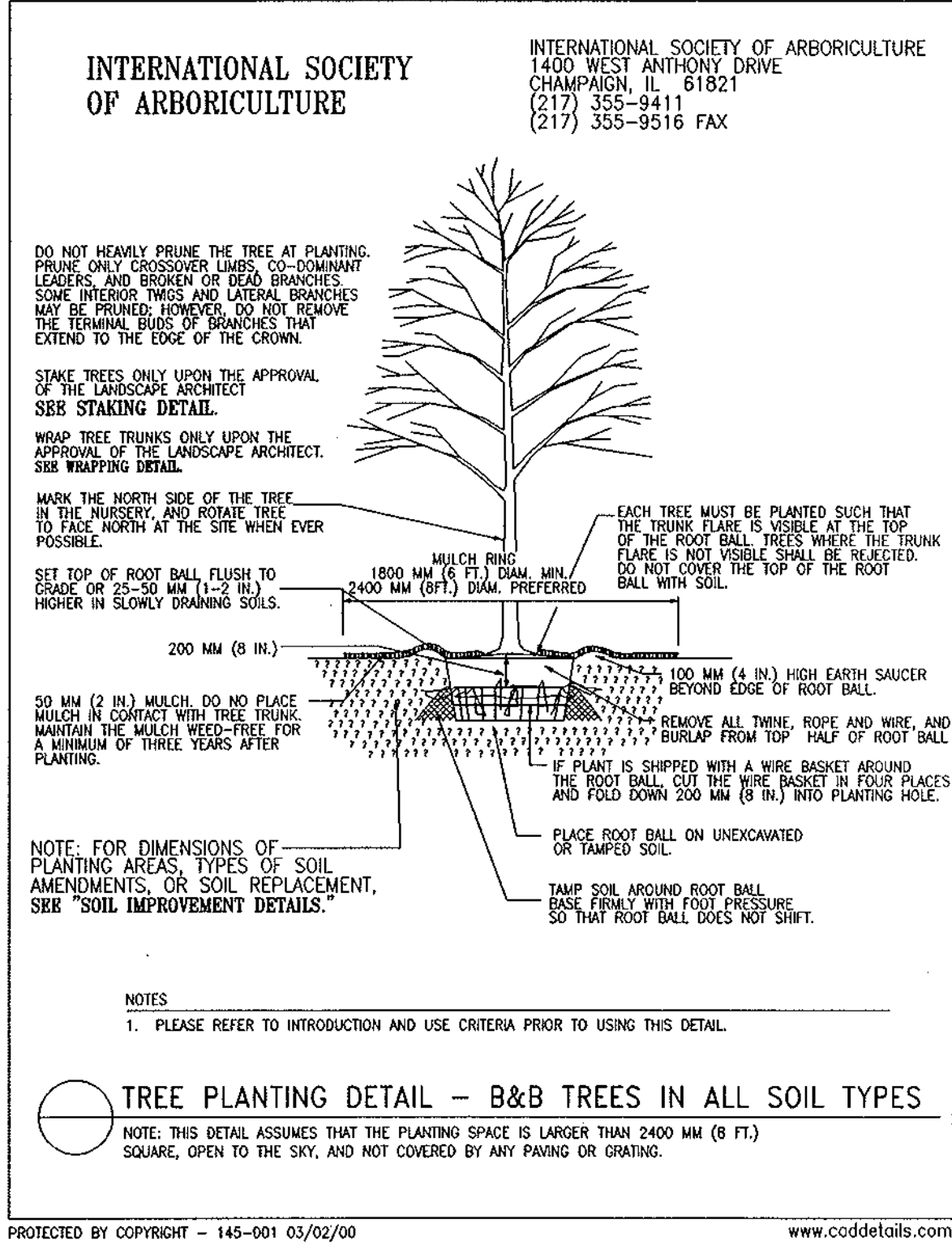
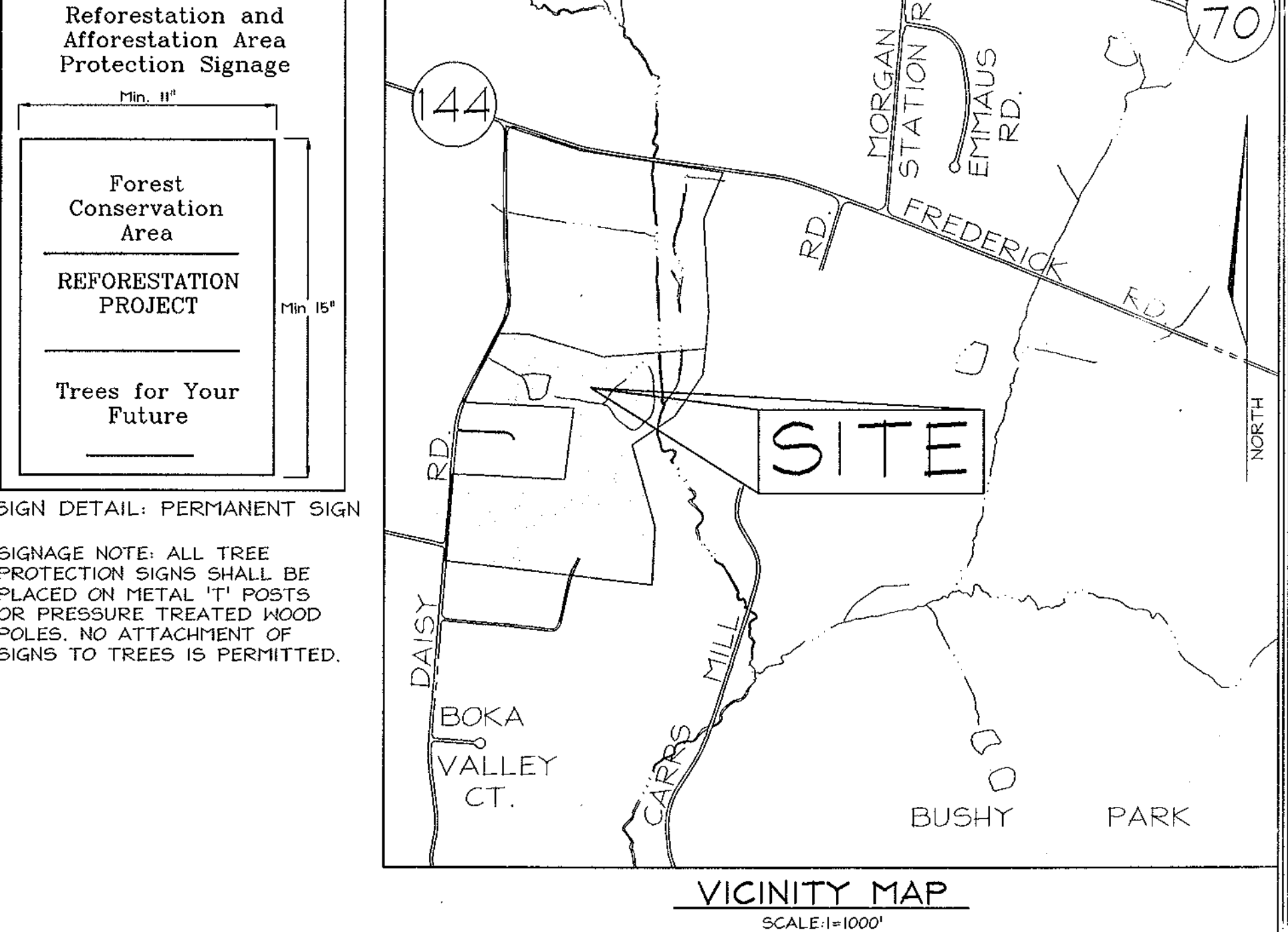
Plant Material Size Table.

Material Size	Spacing	TPA	Sq. Ft. Credit per Plant	Comments
2" caliper trees	20' x 20'	100	495.6	B & B
1" caliper trees	15' x 15'	200	217.8	B & B
seedlings or whips	11' x 11'	350	125	Container 1-3 gal w/tree shelters
seedlings or shrubs	8' x 8'	700	62	Bare root.



Reforestation Area Planting Notes

- Initial planting inspection and certification required. Planting contractor to notify Howard County after planting is complete.
- Reforestation areas may be planted as soon as reasonable to do so. Late winter- early spring plantings are preferred. Earliest planting dates will vary from year to year but planting may generally begin as soon as the ground is no longer frozen. Alternate planting dates may be considered as conditions warrant.
- Soil amendments and fertilization recommendations will be made based upon the results of soil analysis for nitrogen, phosphorus, potassium, organic matter content and pH. If required, fertilizer will be provided using a slow release, soluble 16-8-16 analysis designed to last 5-8 years contained in polyethylene perforated bags such as manufactured by ADCO Works, P.O. Box 310 Hottel, N.Y. 11423 or approved equal.
- Plant materials shall be planted in accordance with the planting diagram, planting details and planting schedule.



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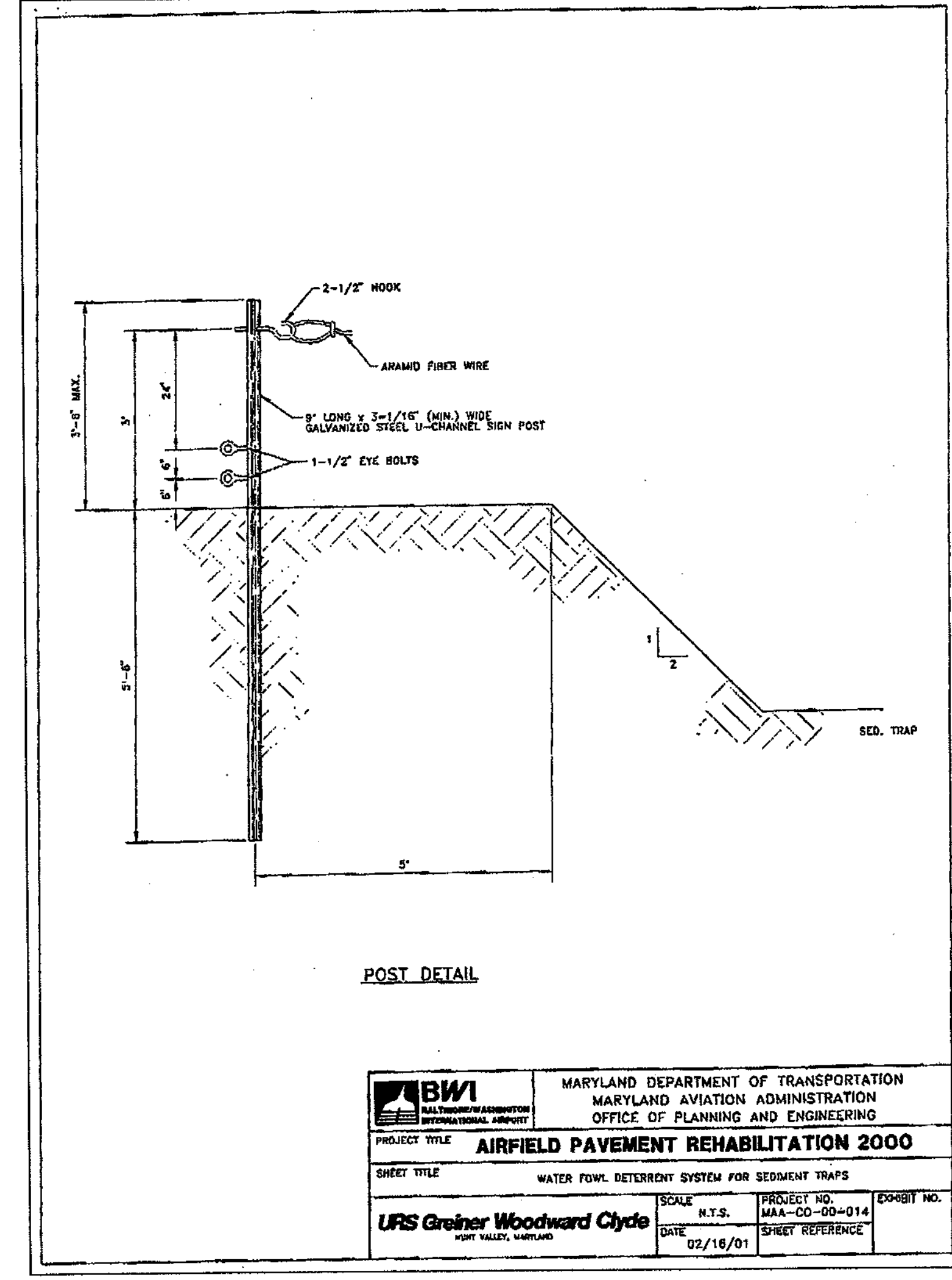
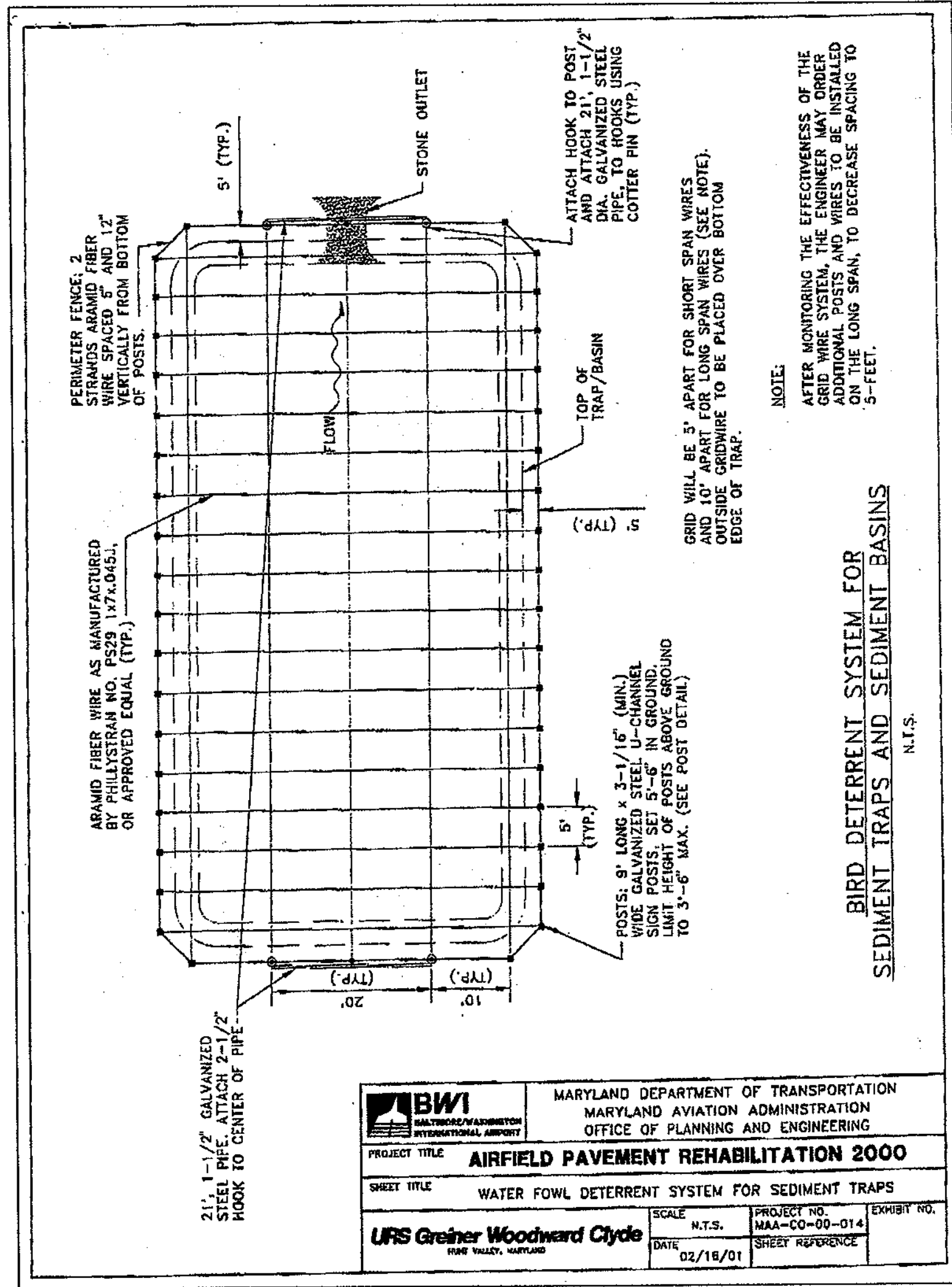
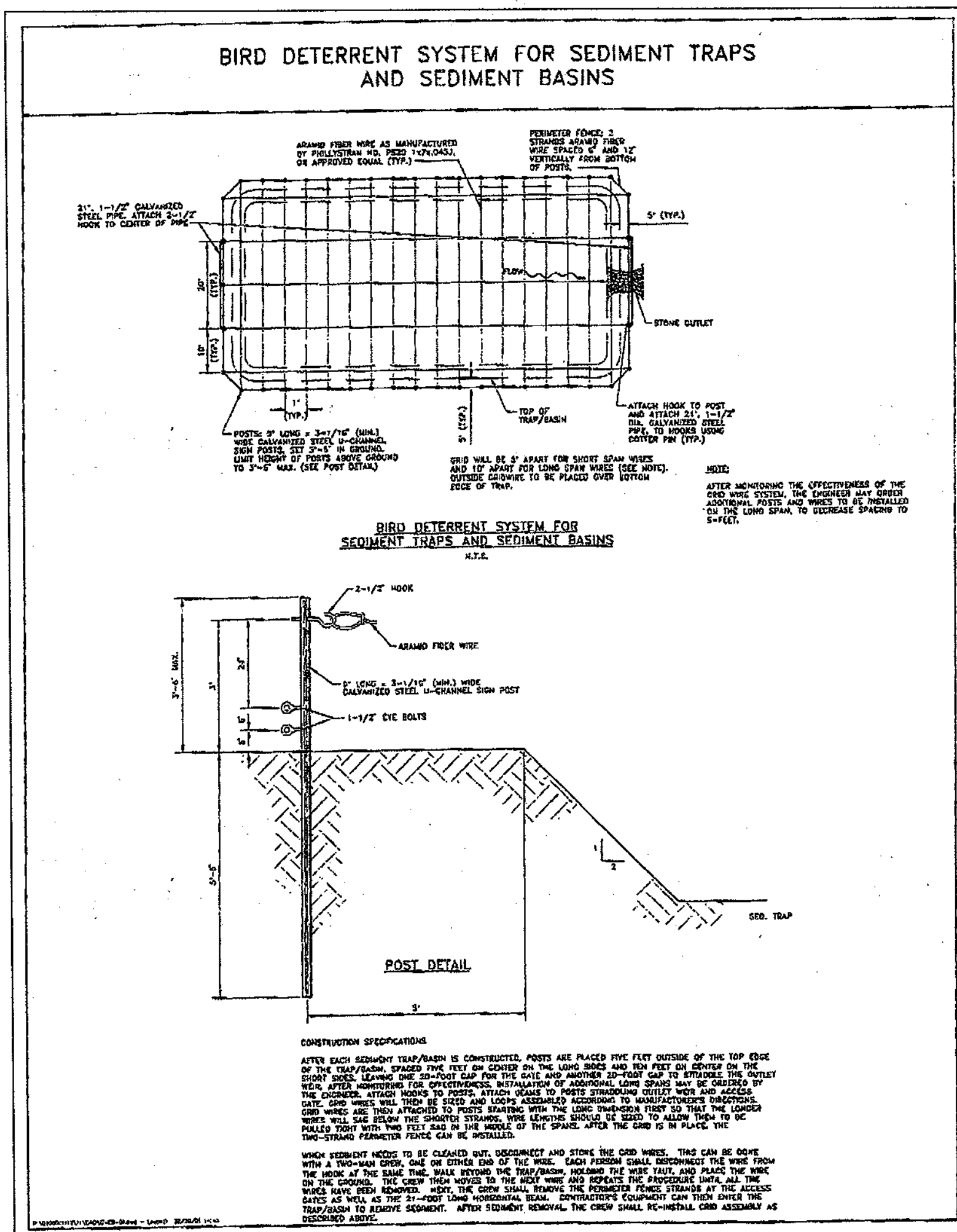
OFFSITE FOREST MITIGATION PLAN
 for DORCHESTER HOMES
 LOTS 1-3, 5-18 & O.S. Lots 4 & 19
 on Talley Property Parcel 2
 RE-03-02 DS2, P.N. 15816, F-04-054 FC,
 P.N. 17192, TM 8, TM PARCEL 392
 TAX MAP 8 GRID 13 PARCEL 392
 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN BY: RAB
 DRAWN BY: RAB
 CHECKED BY: SLH
 SCALE: As shown
 DATE: July 27, 2005
 H.O. No.: 3082
 SHEET No.: 12 OF 13

EXPLORATION RESEARCH, INC.
 ENVIRONMENTAL CONSULTANTS
 LANDSCAPE ARCHITECTS
 6516 FOREMOST DRIVE
 BELLEVILLE CITY, MARYLAND 21043
 TEL: (410) 760-1100 FAX: (410) 760-7980
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FSH Associates
 Engineers Planners Surveyors
 8318 Forest Street Ellicott City, MD 21045
 Tel: 410-750-2251 Fax: 410-750-7350
 E-mail: FSHAssociates@cs.com

OWNER
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 1525 Daisy Road
 Woodbine, MD 21797
 410-442-2300



WATERFOWL DETERRENT SYSTEM FOR SEDIMENT TRAPS AT BWI AIRPORT

There is a need to discourage ducks and other waterfowl from being attracted to stormwater in sediment traps. The system proposed for BWI will interfere with the ducks' landing pattern by installing a grid using lightweight wire above the surface of the trap. As they approach a water-filled trap, ducks, geese and other waterfowl will see the grid wires and not attempt to land. A perimeter fence consisting of two wire strands strung around the posts will keep birds from walking onto the traps.

Initial grid spacing will be five feet for short spans and ten feet for long spans. See the attached detail for a typical layout. After monitoring the effectiveness of this system, MAA may require installation of additional long spans to decrease spacing to five feet. The ends of the grid wires will be strung from hooks placed on posts three feet above the ground. It is expected that the wires will sag two feet and will exert a maximum line tension of thirty-five pounds.

Grid wire will be high-strength, lightweight synthetic material made from aramid fiber as manufactured by Phillystran, Inc., Part No. PS29 1x7x.045J, or approved equal.

Posts will be nine-foot long galvanized steel U-channel signposts, driven five and one half feet into the ground. The height above ground shall be no more than three and one half feet. Three holes will be attached to each post to fasten one 2-1/2 inch hook and two 1-1/2 inch eye bolts.

An access gate will be installed on the short end opposite the outlet to facilitate trap cleanout. Each gate consists of a twenty foot long, 1-1/2" diameter horizontal pipe placed three feet above ground and spanning two posts spaced twenty feet apart. When sediment is to be cleaned out from the trap, the long pipe is removed. An identical horizontal pipe will also span the opposite end of the trap. Each pipe will have a hook placed in the middle to attach grid wire.

PROCEDURE FOR INSTALLING AND REMOVING GRID WIRE SYSTEM

After each sediment trap is constructed, posts are placed five feet outside of the top edge of the traps, spaced five feet on center on the long side of the trap and ten feet on center on the short sides, leaving one twenty foot gap for the gate. After monitoring for effectiveness, installation of additional long spans may be ordered by MAA. Attach hooks to posts. Attach beams to posts straddling outlet weir and access gate. Grid wires will then be sized and loops assembled according to manufacturer's directions. Grid wires are then attached to posts starting with the long dimension first so that the longer wires will sag below the shorter strands. Wire lengths should be sized to allow them to be pulled tight with two feet sag in the middle of the spans. After the grid is in place, the two-strand perimeter fence can be installed.

When sediment needs to be cleaned out, disconnect and store the grid wires. This can be done with a two-man crew, one on either end of the wire. Each person shall disconnect the wire from the hook at the same time, walk beyond the trap, holding the wire taut, and place the wire on the ground. The crew then moves to the next wire and repeats the procedure until all the wires have been removed. Next, the crew shall remove the perimeter fence stands at the access gates as well as the twenty-one foot long horizontal beam. Contractor's equipment can then enter the trap to remove sediment. After sediment removal, the crew shall re-install grid assembly as described above.

WATERFOWL DETERRENT SYSTEM FOR SEDIMENT TRAPS AT BWI AIRPORT

SWM Pond Bottom Dimensions, ft.	Approximate length per Gridwire, ft.	Number of Gridwires	Total length Of Gridwires ft.	Total length of Perimeter Fence ft.	Number of Posts
40' X 85'	113'	5	565'	362'	44
	68'	18	1,224'		
Trap TOTAL:			1,789'		
40' X 70'	98'	5	490'	332'	38
	68'	15	1,020'		
Trap TOTAL:			1,510'		
30' X 105' (2 traps)	125'	4	500'	350'	50
	50'	22	1,100'		
Trap TOTAL:			1,600'		
30' X 150'	175'	4	700'	450'	70
	50'	32	1,600'		
Trap TOTAL:			2,300'		
30' X 155'	170'	4	680'	440'	68
	50'	31	1,550'		
Trap TOTAL:			2,230'		
GRAND TOTAL:			11,029'	2,284'	320

TOTAL LENGTH OF GRID WIRE: 11,029 + 2 x 2,284 = 15,597 feet

WATERFOWL DETERRENT SYSTEM DETAILS

DORCHESTER HOMES

LOTS 1-3, 5-18 AND OPEN SPACE LOTS 4, 19

REF: S-03-02, WP-03-35, P-04-11

1ST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

PARCEL 756 LIBER 771, FOLIO 440

TAX MAP 38 BLOCK 9 ZONE R-12

KCE ENGINEERING, INC.

EXECUTIVE CENTER

3300 NORTH RIDGE ROAD, SUITE 315

ELLCOTT CITY, MARYLAND 21043

PHONE (410) 203-9800 FAX (410) 203-9228

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William J. ...

CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cheryl Hamata

CHIEF, DIVISION OF LAND DEVELOPMENT

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT

ENGINEERS CERTIFICATE

I HEREBY 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.

[Signature]

SIGNATURE OF ENGINEER

DEVELOPERS CERTIFICATE

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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.

[Signature]

SIGNATURE OF DEVELOPER

DRAWN BY: MG

CHECKED BY: DVK

SCALE: AS SHOWN

DATE: August, 2005

SHEET: 13 OF 13