

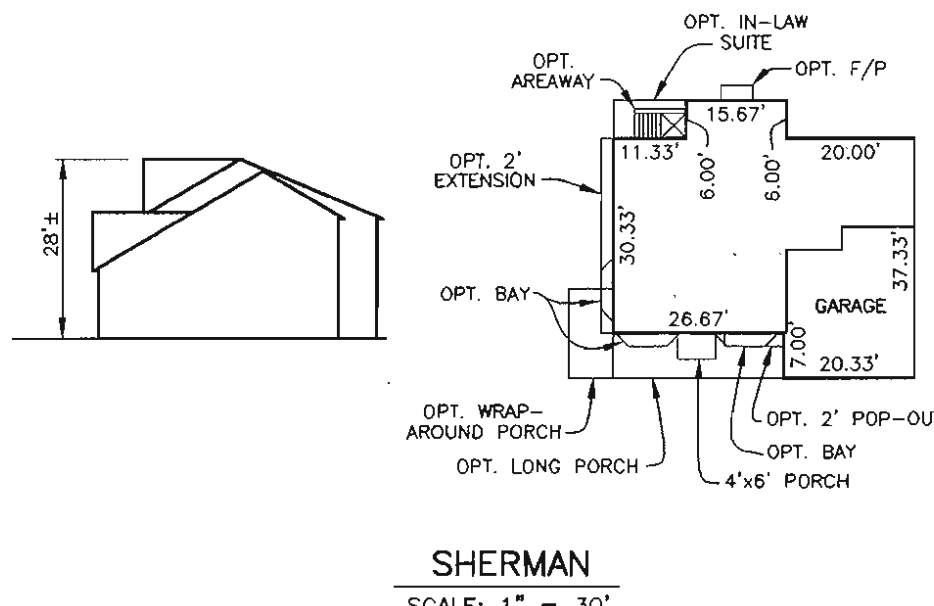
GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE, UNLESS WAIVER(S) HAVE BEEN APPROVED.
- 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 CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHTS PLACEMENT AND TYPE OF FIXTURE & SIGNING SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE, 1993)".
- EXISTING TOPOGRAPHY SHOWN HEREON WAS FIELD RUN BY BENCHMARK ENGINEERING, INC. DATED MAY 2003. CONTOUR INTERVAL IS 2 FEET.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL MONUMENTS 30072 & 30073, WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
- THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT WATER AND SEWER SHALL BE PUBLIC, CONNECTING TO CONTRACTS 344-S FOR SEWER AND TO CONTRACT 137-W FOR WATER. DRAINAGE AREA IS WITHIN THE PATUXENT RIVER AREA WATERSHED.
- STORMWATER MANAGEMENT SHALL BE PROVIDED FOR THIS PROJECT BASED ON GUIDELINES ESTABLISHED BY THE 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I & II. STORMWATER MANAGEMENT SHALL BE PROVIDED BY THE USE OF RAINGARDENS.
- EXISTING UTILITIES SHOWN WERE LOCATED BY APPROVED CONTRACT DRAWINGS AND FIELD LOCATIONS.
- THERE ARE NO EXISTING WETLANDS, WETLANDS BUFFERS, STREAMS, STREAM BUFFERS OR 100-YR. FLOODPLAIN ON-SITE.
- THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE, PROFESSIONAL, DATED JUNE 2003, AND IT WAS DETERMINED THAT THERE WERE NO WETLANDS ON THIS SITE.
- PERIMETER LANDSCAPING IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL SHALL BE PROVIDED AS SHOWN ON THIS SITE PLAN. FINANCIAL SURETY IN THE AMOUNT OF \$2,400.00 FOR 8 SHADE TREES SHALL BE POSTED WITH THE BUILDERS' GRADING PERMIT.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERY LOCATIONS ON-SITE.
- UNLESS NOTED AS "PRIVATE", ALL EASEMENTS ARE PUBLIC.
- BRL INDICATES BUILDING RESTRICTION LINE.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES. THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12' (14' SERVING MORE THAN ONE RESIDENCE).
 - SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.)
 - GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADII.
 - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOAD)
 - 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.
- THIS PLAN IS SUBJECT TO THE AMENDED 5th EDITION OF THE HOWARD COUNTY SUBDIVISION REGULATIONS AND THE AMENDED HOWARD COUNTY ZONING REGULATIONS, COUNCIL BILL 75-2003.
- SUBJECT PROPERTY IS ZONED R-20 PER 2-2-04 COMPREHENSIVE ZONING PLAN.
- THERE ARE NO PREVIOUS APPLICABLE HOWARD COUNTY DPZ FILE REFERENCES FOR THIS PROJECT.
- CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION ACTIVITY AND SHALL ADJUST ALL UTILITIES AND RIM ELEVATIONS AS NEEDED TO MATCH THIS PLAN.
- THE 18' PRIVATE INGRESS & EGRESS R/W WAS ABANDONED BY DEED L8647/F361 ON SEPTEMBER 21, 2004.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS MORE THAN 16 FEET IN WIDTH MAY NOT PROJECT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED, MAY NOT PROJECT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- THE WATER AND SEWER CONTRACT # IS 24-4206-D.
- DRIVEWAY APRON TO BE CONSTRUCTED PER THE HOWARD COUNTY STANDARD DETAIL R6.06.
- THIS PROPERTY IS EXEMPT FROM THE FOREST CONSERVATION ACT BECAUSE THIS DEVELOPMENT IS LESS THAN 40,000 SF. (30,492 SF., 0.7 ACRES) IN ACCORDANCE WITH SECTION 16.1202 (b)(1)(i) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

LANDSCAPE PLANTING LIST		
SYMBOL	QUANTITY	REMARKS
	8	SHADE TREES QUERCUS RUBRA "NORTHERN RED OAK" 2.5"-3.0" MIN. CAL. B & B FULL HEAD

LANDSCAPING NOTES

- PERIMETER LANDSCAPING SHALL BE PROVIDED BY THE PLANTINGS AS SHOWN ON THESE PLANS.
- TREES MUST BE A MINIMUM OF FOUR(4) FEET FROM THE CURB OR SIDEWALK AND MUST BE A MINIMUM OF FIVE(5) FEET FROM ANY STORM DRAIN.
- A MINIMUM DISTANCE OF TWENTY(20) FEET MUST BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND FROM ANY STREET LIGHTS.
- TREE MUST BE PLANTED A MINIMUM OF FIVE(5) FEET FROM AN OPEN SPACE ACCESS STRIP AND TEN(10) FEET FROM A DRIVEWAY.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SEC. 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE BUILDERS' GRADING PERMIT IN THE AMOUNT OF \$2,400.00 FOR 8 SHADE TREES.



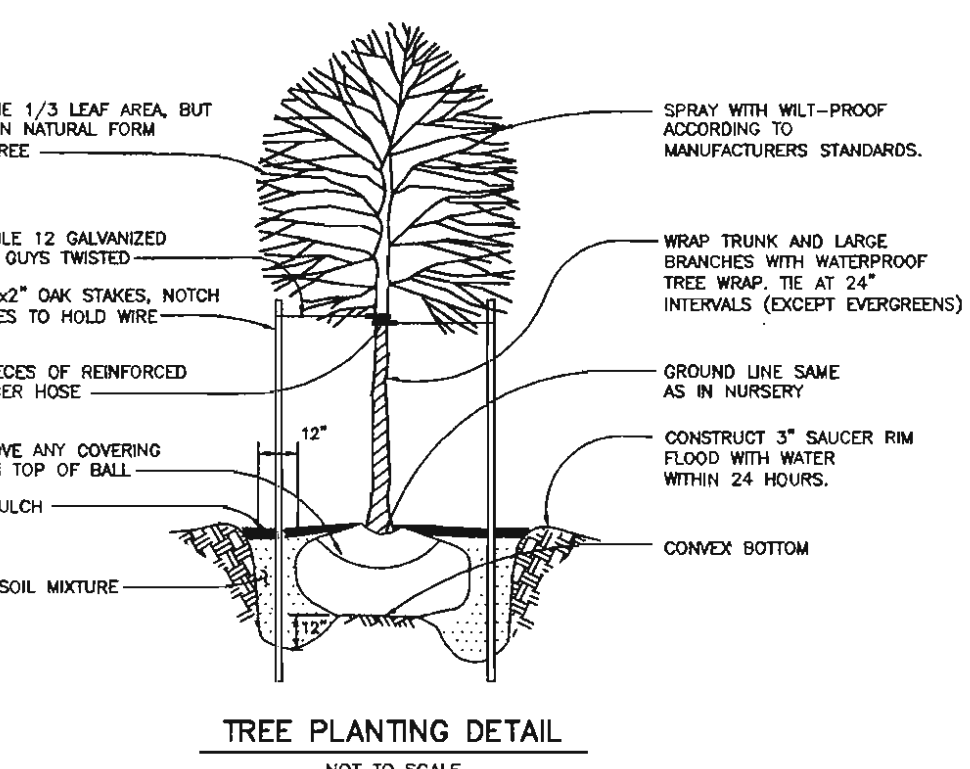
SOILS LEGEND		
MAP SYMBOL	SOIL TYPE	MAPPING UNIT
MW2	B	MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
MW3	B	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
MW4	B	MANOR LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED
MW5	B	MANOR LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED
G-62	B	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED

SOILS MAP No. 20
* - INDICATES HYDRIC SOILS

SITE ANALYSIS DATA CHART

GENERAL SITE DATA	
1.) PRESENT ZONING:	R-20
2.) APPLICABLE DPZ FILE REFERENCES:	N/A
3.) DEED REFERENCE:	LIBER 261 / FOLIO 101
4.) PROPOSED USE OF SITE:	SINGLE-FAMILY DETACHED
5.) PROPOSED WATER AND SEWER SYSTEMS:	PUBLIC

AREA TABULATION	
1.) GROSS TRACT AREA:	0.82 AC.±
2.) AREA WITHIN 100-YEAR FLOODPLAIN:	0.00 AC.±
3.) TOTAL AREA OF 25% OR GREATER STEEP SLOPES AREA NOT IN FLOODPLAIN:	0.00 AC.±
4.) NET TRACT AREA:	0.82 AC.±
5.) TOTAL NUMBER OF RESIDENTIAL UNITS/LOTS PROPOSED ON THIS SUBMISSION:	1



PLAN
SCALE: 1" = 30'

SHEET INDEX	
NO.	DESCRIPTION
1	SITE DEVELOPMENT AND LANDSCAPE PLAN, NOTES & DETAILS
2	SEDIMENT AND EROSION CONTROL PLAN, NOTES & DETAILS
3	SWM PLAN, NOTES & DETAILS

ADDRESS CHART	
LOT #	STREET ADDRESS
1	9101 SYBERT DRIVE

PERMIT INFORMATION CHART					
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#	P/O PARCEL 16		
COLUMBIA HILLS CORPORATION PROPERTY					
PLAT No.	GRID No.	ZONING	TAX MAP	ELEC. DIST.	CENSUS
L261,F101	5	R-20	30	2nd	6023.02
WATER CODE		SEWER CODE			
-		-			

DEVELOPER'S/BUILDER'S CERTIFICATE
I/WE 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/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Steve Breeden 10/7/04
DATE: 10/7/04

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chris Hamilton 11/3/04
DATE: 11/3/04
CHIEF, DIVISION OF LAND DEVELOPMENT

Paul L. ... 11/16/04
DATE: 11/16/04
DIRECTOR

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS
8480 BALTIMORE NATIONAL PIKE • SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
E-MAIL: benchmark@cois.com

Donald M. ... 10/8/04

OWNER: DAWSON PROPERTY LLC
P.O. BOX 417
ELLCOTT CITY, MD 21041
410-465-4244

BUILDER: DORSEY FAMILY HOMES
9926 CYPRESSMEDE DR.
ELLCOTT CITY, MD 21043

PROJECT: COLUMBIA HILLS CORPORATION PROPERTY
P/O PARCEL 16

LOCATION: TAX MAP 30 - GRID 5
P/O PARCEL 16
L 261 - F 101
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SITE DEVELOPMENT AND LANDSCAPE PLAN, NOTES & DETAILS

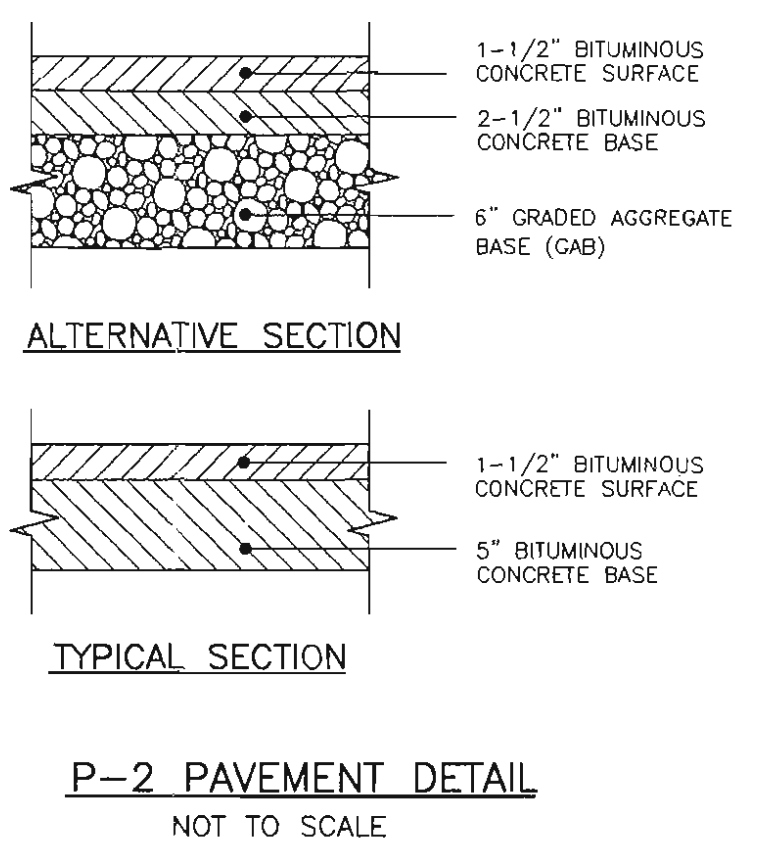
DATE: OCTOBER, 2004 PROJECT NO. 0391

Design: MLV Draft: LDD Check: DAM SCALE: AS SHOWN DRAWING 1 OF 3

BENCH MARKS NAD'83 HORIZONTAL

HO. CO. #30072	N 574179.232'	E 1361312.723'
	ELEV. = 388.74	
HO. CO. #30073	N 574812.755'	E 1361173.247'
	ELEV. = 386.42	

VICINITY MAP
SCALE: 1" = 2000'

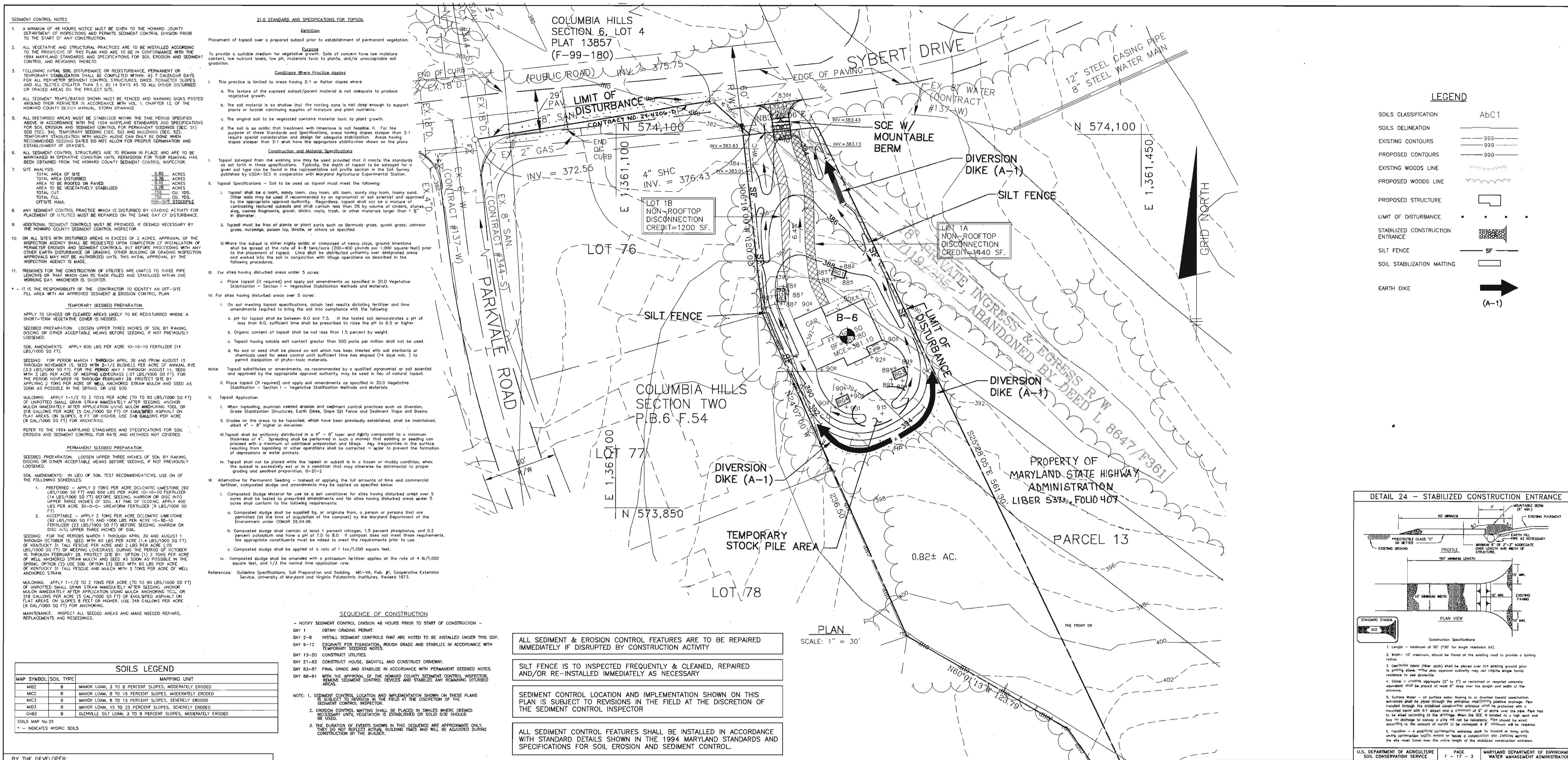


LEGEND

SOILS CLASSIFICATION	AbC1
SOILS DELINEATION	---
EXISTING CONTOURS	999
PROPOSED CONTOURS	999
EXISTING WOODS LINE	~~~~~
PROPOSED WOODS LINE	~~~~~
EXISTING STRUCTURE	□

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAY				ADJACENT TO PERIMETER PROPERTIES					
	YES	NO	NO	NO	YES	NO	YES	YES		
PERIMETER NO. / LANDSCAPE TYPE					0	N/A	2	A	0	A
LINEAR FEET OF ROADWAY (FRONTAGE/PERIMETER)					50.07	561.90'	251.66'	356.52'		
CREDIT FOR EXISTING VEGETATION: NO OR YES (w/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)					-	YES	YES	YES		
CREDIT FOR WALL, FENCE OR BERM: NO OR YES (w/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)					-	NO	NO	NO		
NUMBER OF PLANTS REQUIRED: SHADE TREES					-	4	-	4		
EMERALD GREEN TREES					-	-	-	-		
OTHER TREES (2:1 SUBSTITUTE) SHRUBS					-	-	-	-		
NUMBER OF PLANTS PROVIDED: SHADE TREES					-	4	-	4		
EMERALD GREEN TREES					-	-	-	-		
OTHER TREES (2:1 SUBSTITUTE) SHRUBS (10:1 SUBSTITUTE) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)					-	-	-	-		



SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERE TO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, DIKES, FENCE LINE SLOPES AND ALL SLOPES GREATER THAN 2:1. 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- 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.
- 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 SEEDINGS (SEC. 51) SO2 (SEC. 24), TEMPORARY SEEDING (SEC. 52) AND MULCHING (SEC. 53). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING RATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7. SITE ANALYSIS:

TOTAL AREA OF SITE	0.82 ACRES
TOTAL AREA DISTURBED	0.38 ACRES
AREA TO BE ROCKED OR PAVED	0.00 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.44 ACRES
TOTAL CUT	10,000 CU. YDS.
TOTAL FILL	10,000 CU. YDS.
OPPOSITE HAUL	0.00 STOCKPILE

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY USUAL ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

9. ADDITIONAL SEDIMENT CONTROLS 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, GRADING, OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS OBTAINED.

11. LENGTHS FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY AN OFF-SITE FILL AREA WITH AN APPROVED SEDIMENT & EROSION CONTROL PLAN.

TEMPORARY SEEDING PREPARATION

APPLY TO GRADED OR CLEARED AREAS UNLIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDING 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/1000 SQ FT).

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT) FOR THE PERIOD MAY 1 THROUGH AUGUST 15, SEED WITH 3 LBS PER ACRE OF WHEATING LOVEGRASS (0.7 LBS/1000 SQ FT) FOR THE PERIOD NOVEMBER 16 THROUGH 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 SOIL.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL, OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT OR FLAT AREAS, ON SLOPES 8 FT OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDING PREPARATION

SEEDING 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 (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS PER ACRE 30-0-0 UREA-NITROGEN FERTILIZER (3 LBS/1000 SQ FT).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIOD MARCH 1 THROUGH APRIL 30 AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 40 LBS PER ACRE (4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ FT) OF WHEATING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH 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 SOIL. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL, OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

SEQUENCE OF CONSTRUCTION

- NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION -

DAY 1 OBTAIN GRADING PERMIT.

DAY 2-8 INSTALL SEDIMENT CONTROLS THAT ARE NOTED TO BE INSTALLED UNDER THIS SDP.

DAY 9-12 PREPARE FOR FINANCING THROUGH GRADE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDING NOTES.

DAY 13-20 CONSTRUCT UTILITIES.

DAY 21-82 CONSTRUCT HOUSE, BACKFILL AND CONSTRUCT DRIVEWAY.

DAY 83-87 FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES.

DAY 88-91 WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.

SOILS LEGEND

MAP SYMBOL	SOIL TYPE	MAPPING UNIT
MIB2	B	MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
MIB3	B	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
MIC3	B	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
MID3	B	MANOR LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED
OH2	B	OLEVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED

SOILS MAP No. 23
+ - INDICATES HYDRIC SOILS

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

David Wagon
DAWSON PROPERTY LLC/Steve Green
10/7/04
DATE

BY THE ENGINEER:
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 AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Donald Macon
ENGINEER
10/7/04
DATE

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

HOWARD SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING REQUIREMENTS.

NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF DIVISION OF LAND DEVELOPMENT DATE

DIRECTOR DATE

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

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

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

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 growth.
- The original soil to be vegetated contains material toxic to plant growth.
- The soil is so acidic that treatment with limestone is not feasible. If, for the purpose of these Standards and Specifications, exposed slopes steeper than 2:1 require special construction and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

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 Experiment 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. Topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, broken 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, quack grass, Johnson grass, nutsedge, poison ivy, thistle, or others as specified.

- Where the subsoil is either highly acidic or composed of heavy clay, 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 20.0 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.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts 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.
 - 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 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge may be applied as specified below:

- Composted Sludge Material for use on a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribed 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 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: Guidelines Specifications, Soil Preparation and Sadding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1973.

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION -

DAY 1 OBTAIN GRADING PERMIT.

DAY 2-8 INSTALL SEDIMENT CONTROLS THAT ARE NOTED TO BE INSTALLED UNDER THIS SDP.

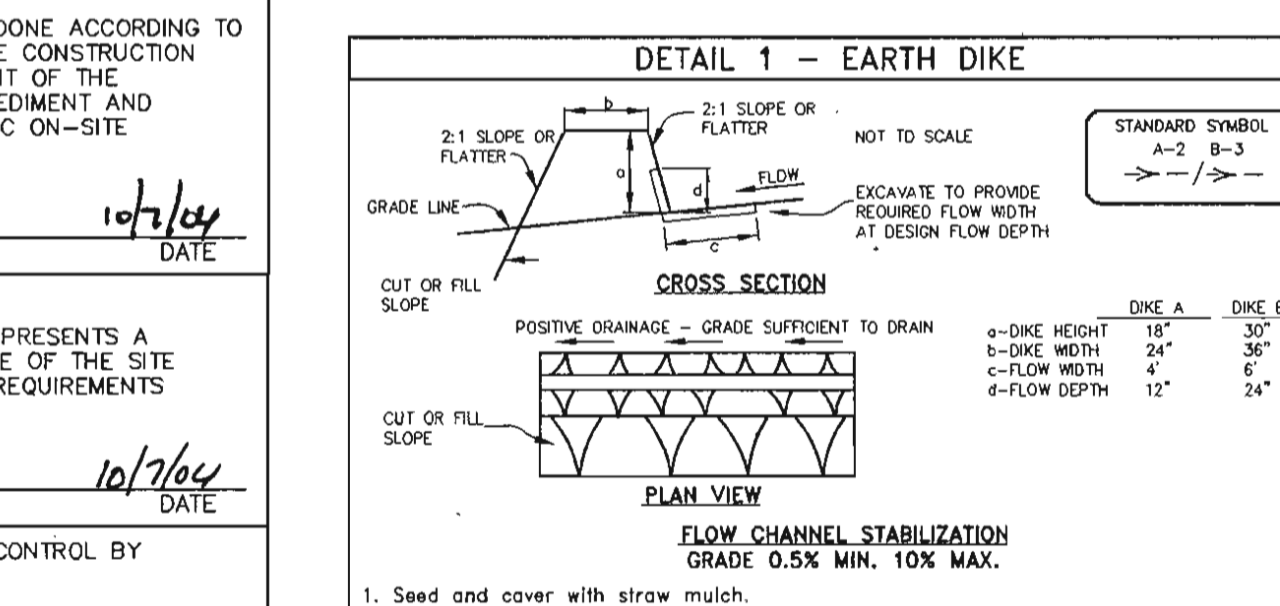
DAY 9-12 PREPARE FOR FINANCING THROUGH GRADE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDING NOTES.

DAY 13-20 CONSTRUCT UTILITIES.

DAY 21-82 CONSTRUCT HOUSE, BACKFILL AND CONSTRUCT DRIVEWAY.

DAY 83-87 FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES.

DAY 88-91 WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.



CONSTRUCTION SPECIFICATIONS

- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
- Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
- Runoff diverted from an undisturbed area shall outlet directly into an undisturbed area.
- All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
- The dike shall be excavated or shaped to line, grade and cross section or as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
- Fill shall be compacted by earth moving equipment.
- All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
- Inspection and maintenance must be provided periodically and after each rain event.

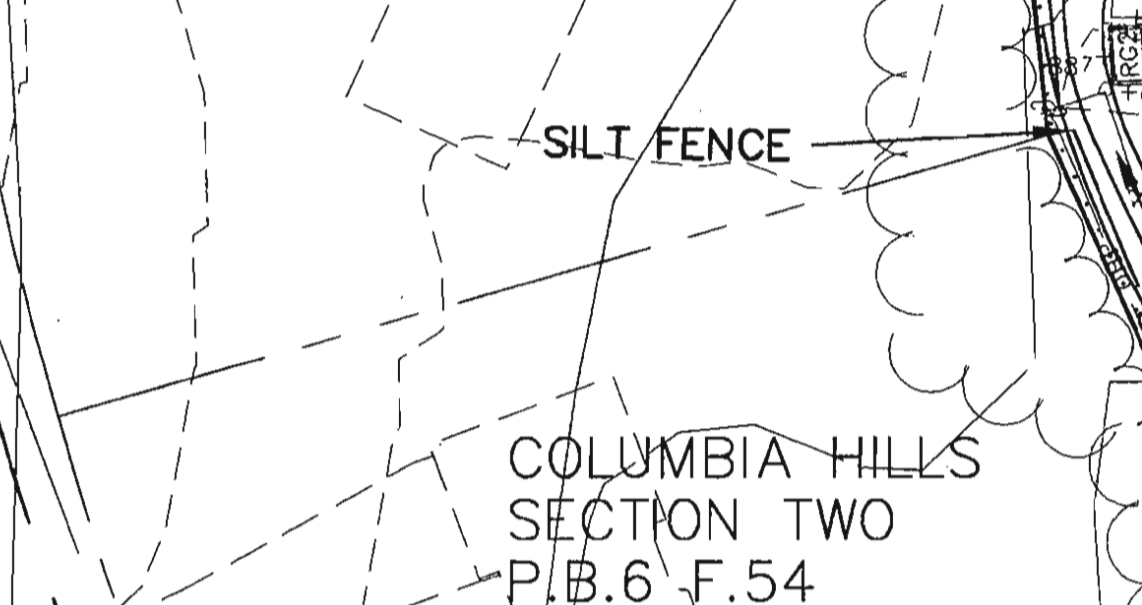
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE A - 6 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

ALL SEDIMENT & EROSION CONTROL FEATURES ARE TO BE REPAIRED IMMEDIATELY IF DISRUPTED BY CONSTRUCTION ACTIVITY

SILT FENCE IS TO BE INSPECTED FREQUENTLY & CLEANED, REPAIRED AND/OR RE-INSTALLED IMMEDIATELY AS NECESSARY

SEDIMENT CONTROL LOCATION AND IMPLEMENTATION SHOWN ON THIS PLAN IS SUBJECT TO REVISIONS IN THE FIELD AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR

ALL SEDIMENT CONTROL FEATURES SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS SHOWN IN THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- 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) oak, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.2 gph ft / minute (max.)	Test: MSMT 522
Filtration Efficiency	75% (min.)	Test: MSMT 522

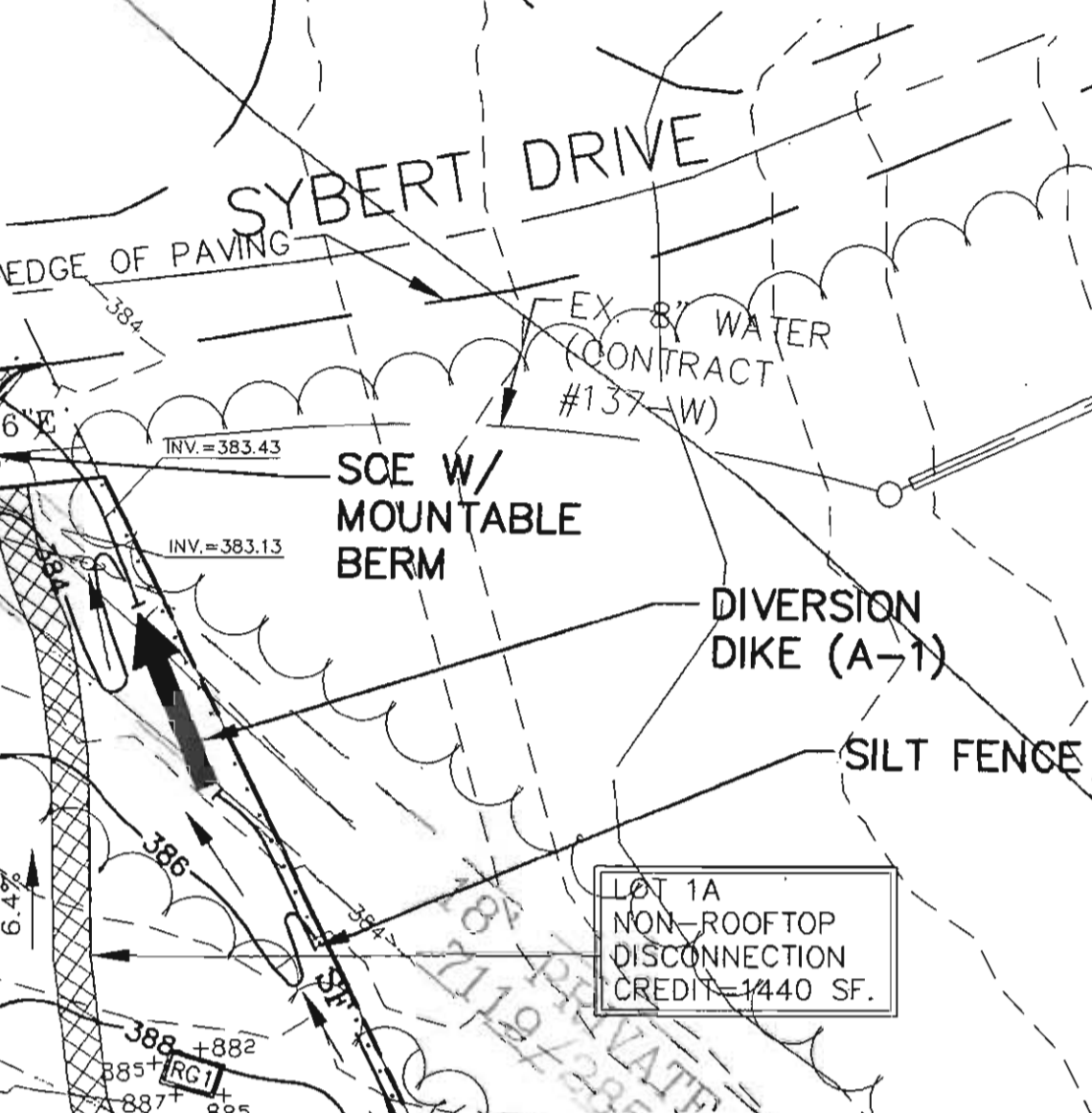
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E - 13 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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.



CONSTRUCTION SPECIFICATIONS

- Length - minimum of 50' (50' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (other cloth) shall be placed over the existing ground to prevent erosion. This plan approval authority may not require single family residence to use geotextile.
- Slope - existing aggregate (2' to 3') or reclaimed or recycled concrete shall be placed at least 8" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction activities shall be directed through the entrance, meeting positive drainage. The entrance through the stabilized construction entrance shall be protected with a rounded term with 1/2" diameter and a minimum of 6" of slope over the pipe. The hole to be sized according to the drainage when the SCE is located at a high spot and has the drainage to convey a pipe will not be necessary. The hole should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - a stabilized construction entrance shall be located in many sites where construction traffic enters or leaves a construction site. Criteria against the site must be met over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F - 17 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

LEGEND

SOILS CLASSIFICATION AbC1

SOILS DELINEATION

EXISTING CONTOURS

PROPOSED CONTOURS

EXISTING WOODS LINE

PROPOSED WOODS LINE

PROPOSED STRUCTURE

LIMIT OF DISTURBANCE

STABILIZED CONSTRUCTION ENTRANCE

SILT FENCE

SOIL STABILIZATION MATTING

EARTH DIKE

(A-1)

SEQUENCE OF CONSTRUCTION

- NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION -

DAY 1 OBTAIN GRADING PERMIT.

DAY 2-8 INSTALL SEDIMENT CONTROLS THAT ARE NOTED TO BE INSTALLED UNDER THIS SDP.

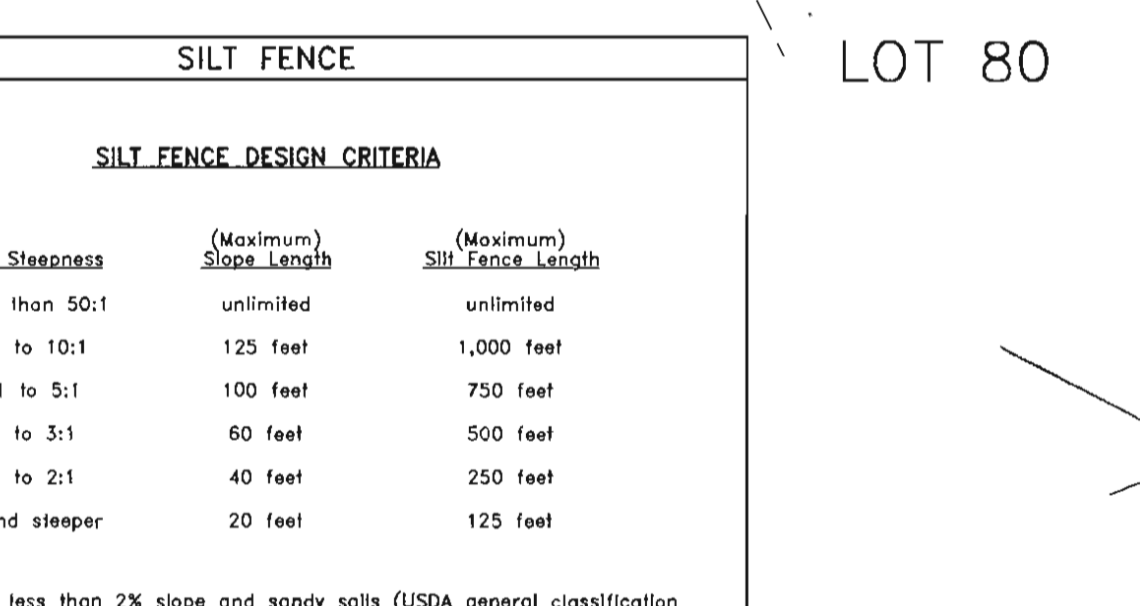
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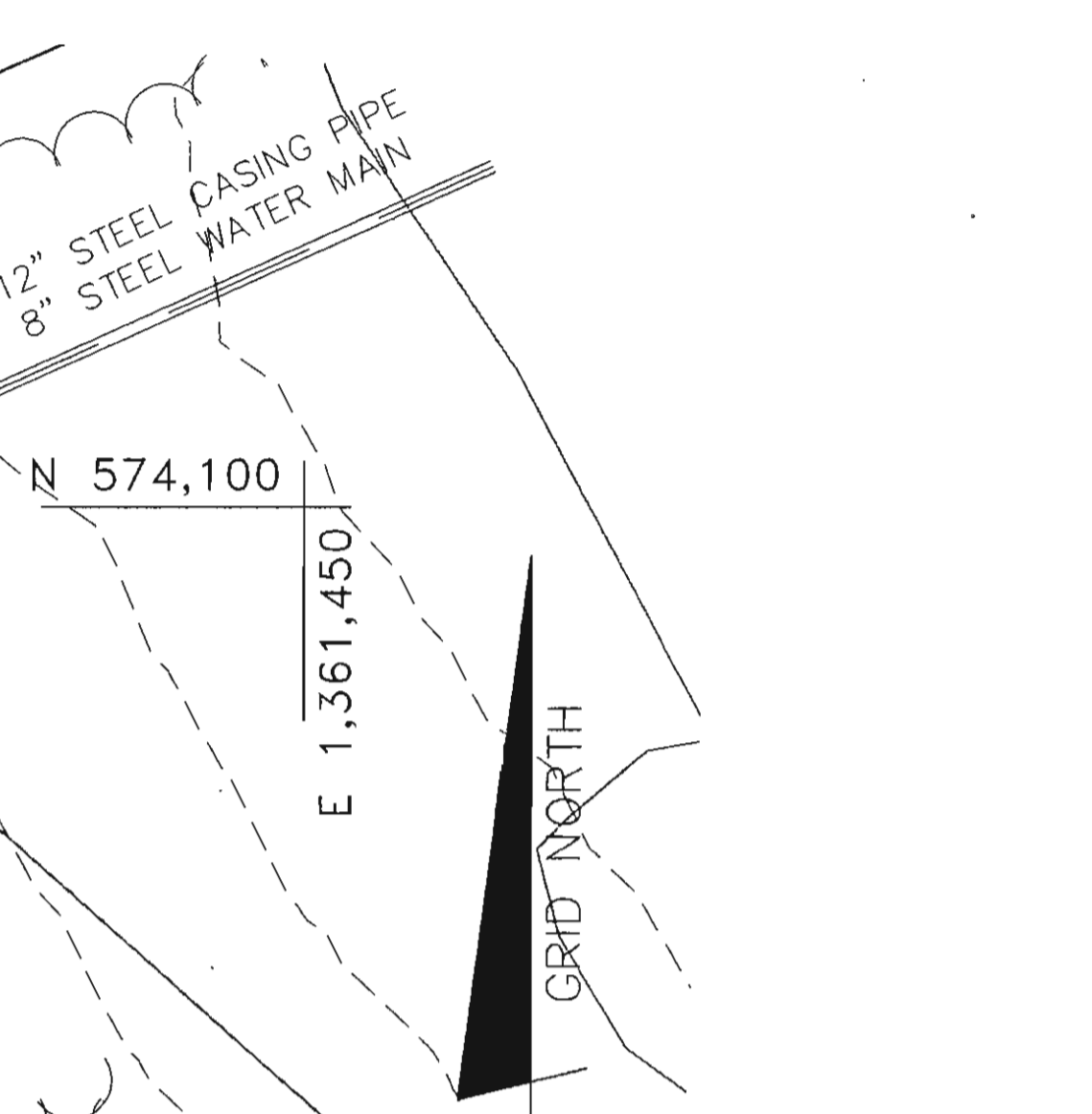
DAY 88-91 WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.



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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE A - 6 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



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Flow Rate	0.2 gph ft / minute (max.)	Test: MSMT 522
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- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E - 13 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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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.

LEGEND

SOILS CLASSIFICATION AbC1

SOILS DELINEATION

EXISTING CONTOURS

PROPOSED CONTOURS

EXISTING WOODS LINE

PROPOSED WOODS LINE

PROPOSED STRUCTURE

LIMIT OF DISTURBANCE

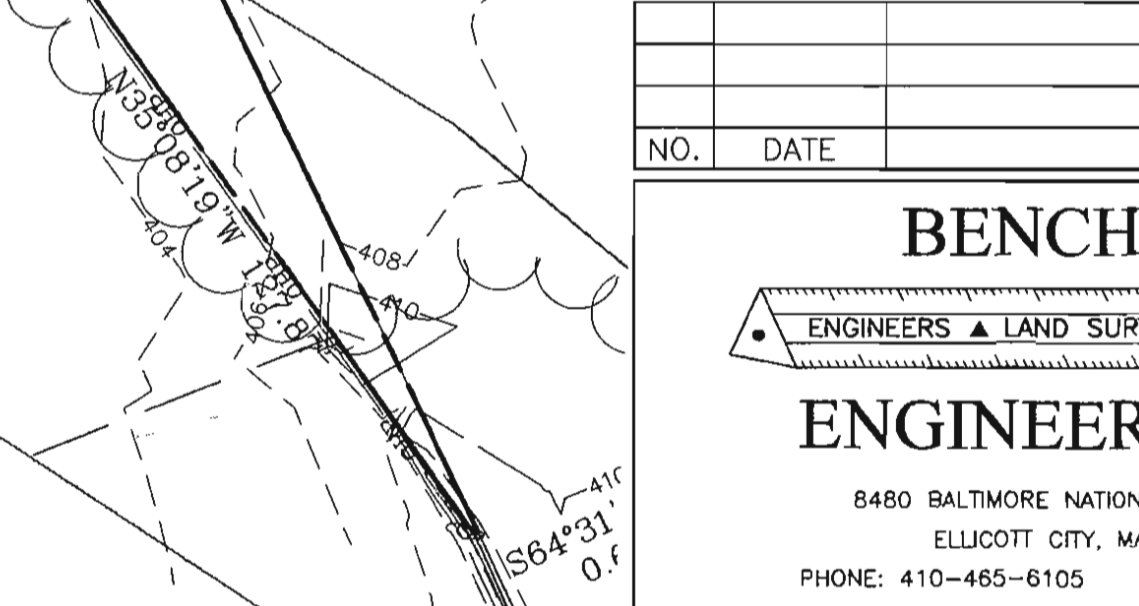
STABILIZED CONSTRUCTION ENTRANCE

SILT FENCE

SOIL STABILIZATION MATTING

EARTH DIKE

(A-1)



CONSTRUCTION SPECIFICATIONS

- Length - minimum of 50' (50' for single residence lot).
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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F - 17 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

David Wagon
DAWSON PROPERTY LLC/Steve Green
10/7/04
DATE

BY THE ENGINEER:
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 AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Donald Macon
ENGINEER
10/7/04
DATE

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

HOWARD SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING REQUIREMENTS.

NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF DIVISION OF LAND DEVELOPMENT DATE

DIRECTOR DATE

NO. DATE REVISION

BENCHMARK ENGINEERS, LAND SURVEYORS & PLANNERS

8480 BALTIMORE NATIONAL PIKE SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
E-MAIL: benchmark@eais.com

Donald Macon
10/8/04

OWNER: COLUMBIA HILLS CORPORATION PROPERTY P/O PARCEL 16

DAWSON PROPERTY LLC
P.O. BOX 417
ELLICOTT CITY, MD 21041
410-465-4244

BUILDER: DORSEY FAMILY HOMES
9926 CYPRESSMEDE DR.
ELLICOTT CITY, MD 21043

LOCATION: TAX MAP 30 - GRID 5 P/O PARCEL 16 L-261 PARCEL 101 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT AND EROSION CONTROL PLAN, NOTES & DETAILS

DATE: OCTOBER, 2004 PROJECT NO. 0391

SCALE: AS SHOWN DRAWING 2 OF 3

Design: MLV Draft: LDD Check: DAM

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE A - 6 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E - 13 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F - 17 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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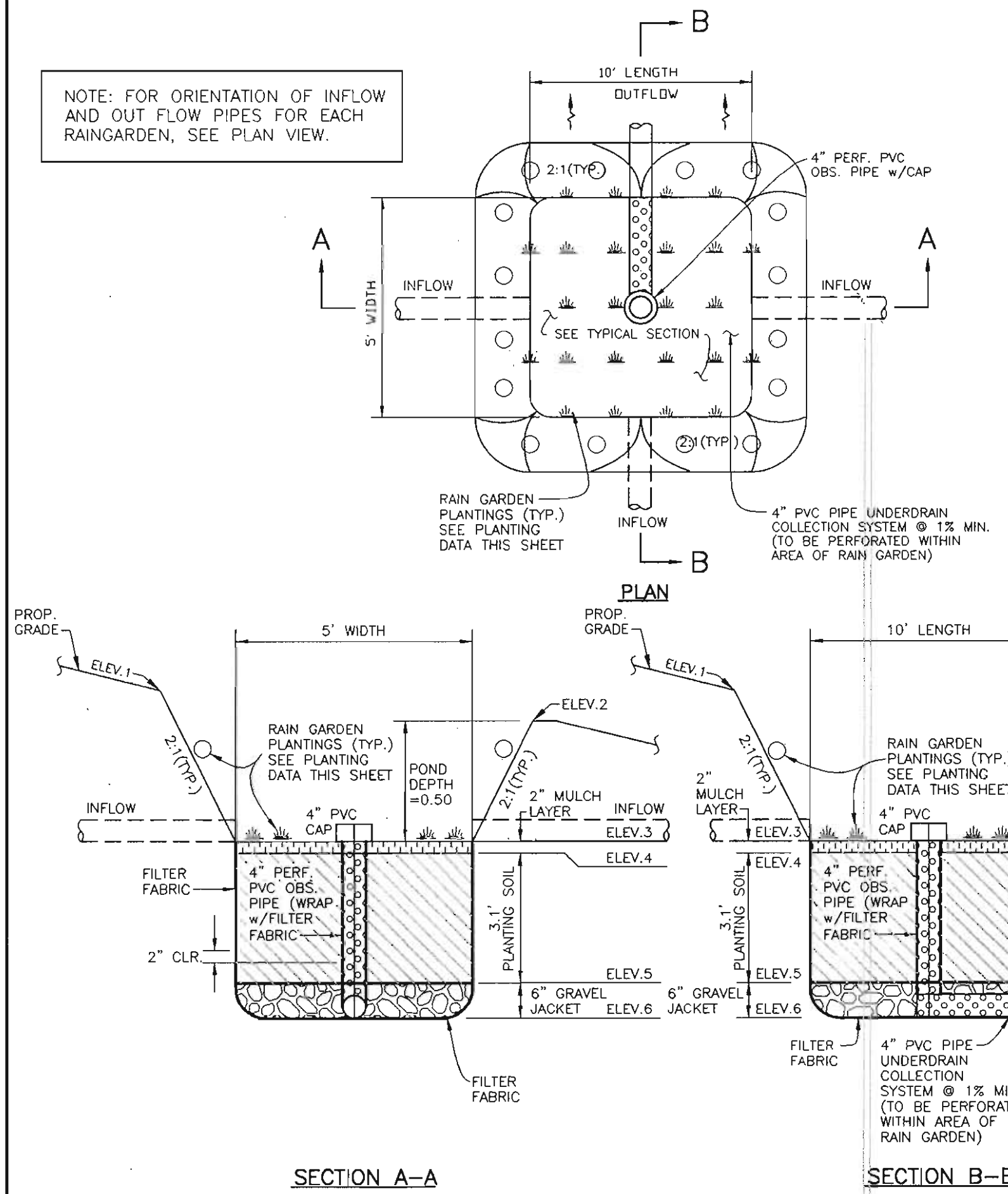
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E - 13 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE A - 6 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

RAIN GARDEN - LANDSCAPE DATA			
HYDROLOGIC ZONE	SYMBOL	QTY.	PLANT TYPES
3 - REGULARLY INUNDATED SHORELINE FRINGE (HIGH MARSH)	▲	50	CREeping BUGLEWEED (AJUGA REPTANS) OR COMMON PERIWINKLE (VINCA MINOR)
HYDROLOGIC CONDITION - 0' TO 1'-0" DEEP HARDNESS - TEMPERATE ZONE 6B (-5' TO 0')	○	18 (1 GAL POT)	IRIS (IRIS VERSICOLOR) OR DAYLILY (HEMEROCALLIS SPECIES)
NOTE: REFER TO MDE 2000 MD STORMWATER DESIGN MANUAL VOLUMES 1 & 2 FOR LANDSCAPE CONTRACTOR RESPONSIBILITIES, PRACTICES AND MAINTENANCE DUTIES			

NOTE: FOR ORIENTATION OF INFLOW AND OUT FLOW PIPES FOR EACH RAINGARDEN, SEE PLAN VIEW.

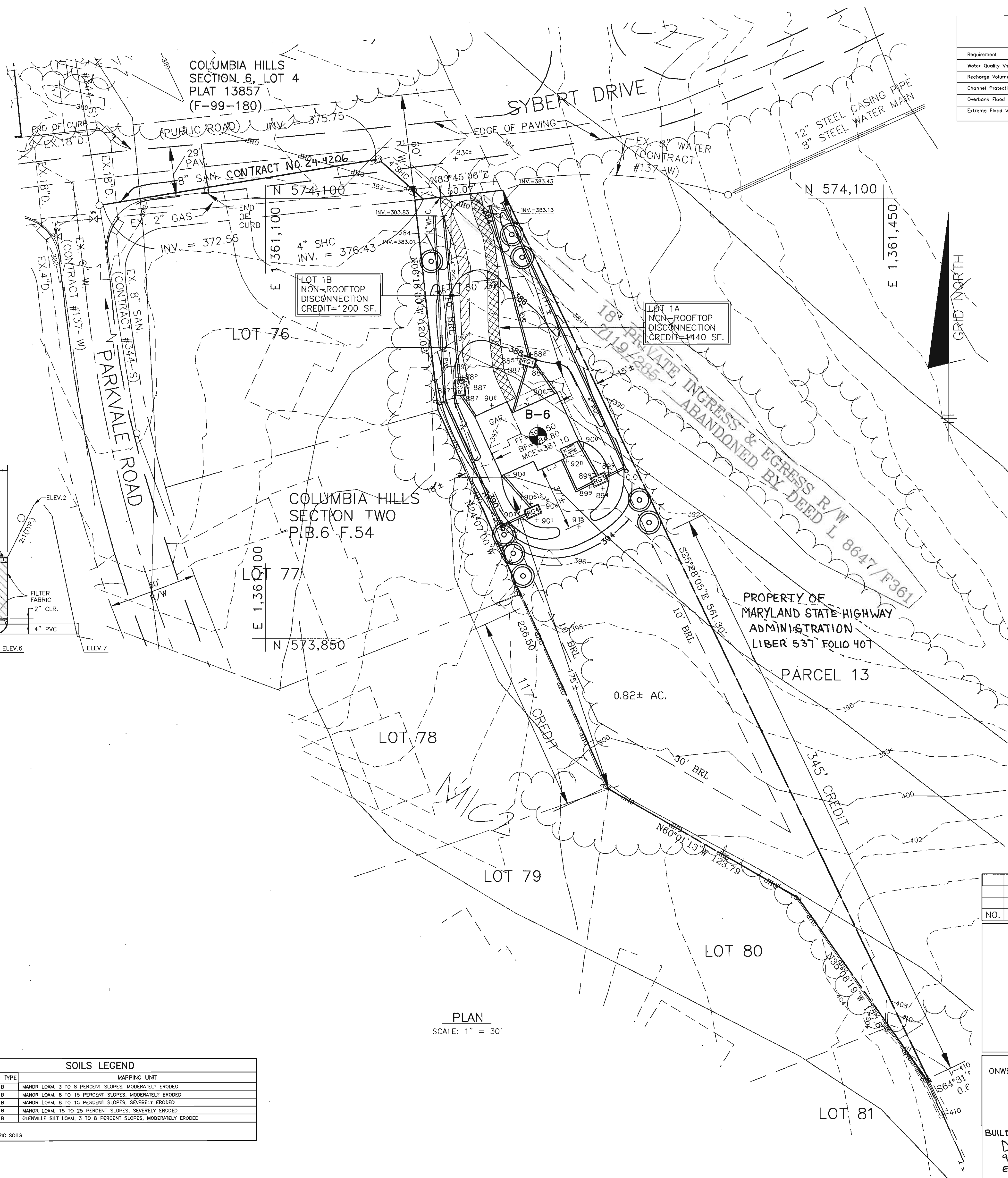


RAIN GARDEN DETAILS
NOT TO SCALE

RAINGARDEN	LOT 1	RG 1	RG 2	RG 3	RG 4
ELEV. 1	388.70	388.70	389.90	390.60	
ELEV. 2	388.20	388.20	389.40	390.10	
ELEV. 3	387.70	387.70	388.90	389.60	
ELEV. 4	387.53	387.53	388.73	389.43	
ELEV. 5	384.43	384.43	385.63	386.33	
ELEV. 6	383.93	383.93	385.13	385.83	
ELEV. 7	383.13	383.01	383.43	383.83	
OUTFALL PIPE	90 ft @ 1%	92 ft @ 1%	170 ft @ 1%	200 ft @ 1%	

MAP SYMBOL	SOIL TYPE	MAPPING UNIT
MB2	B	MANDR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
MC2	B	MANDR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
MC3	B	MANDR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
MD3	B	MANDR LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED
GS2	B	GLENWILE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED

SOILS MAP No. 25
- - - INDICATES HYDRIC SOILS



PLAN
SCALE: 1" = 30'

SWM SUMMARY TABLE GENERAL STORAGE REQUIREMENTS			
Requirement	Volume Required (cc-ft)	Volume Provided (cc-ft)	Notes
Water Quality Volume (WQv)	0.019 (828 cf)	0.019 (828 cf)	WQv provided in raingarden
Recharge Volume (Rev)	0.005 (218 cf)	0.005 (218 cf)	Rev provided by credits
Channel Protection Volume (Cpv)	N/A	N/A	Cpv release rate is < 2 cfs (0.31)
Overbank Flood Protection Volume (Opv)	N/A	N/A	Not required for this area
Extreme Flood Volume (EFV)	N/A	N/A	Not required for this area

LEGEND	
SOILS CLASSIFICATION	AbC1
SOILS DELINEATION	---
EXISTING CONTOURS	999
PROPOSED CONTOURS	999
EXISTING WOODS LINE	---
PROPOSED WOODS LINE	---
EXISTING STRUCTURE	□
SOIL BORING	⊙
RAIN GARDEN	RG1
NON-ROOFTOP DISCONNECTION CREDIT	▨
NON-ROOFTOP DISCONNECTION CREDIT	▩

OPERATION & MAINTENANCE SCHEDULE FOR RAIN GARDENS

- ANNUAL MAINTENANCE OF PLANT MATERIAL AND MULCH LAYER IS REQUIRED. MAINTENANCE OF MULCH IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH-OUT. ANY REPLACEMENT OF MULCH SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE & INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL & PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN THE SPRING AND FALL. THIS INSPECTION WILL INCLUDE: REMOVAL OF DEAD & DISEASED VEGETATION CONSIDERED BEYOND TREATMENT; TREATMENT OF ALL DISEASED TREES & SHRUBS; AND REPLACEMENT OF ALL DEFICIENT STAKES & WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE THE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS-NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

MATERIALS AND SPECIFICATIONS FOR RAIN GARDEN			
MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE APPENDIX A: TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.5' TO 4.0' DEEP)	SAND: 30-60% SILT: 30-55% CLAY: 0-25%	N/A	USDA SOIL TYPES: LOAMY SAND, SANDY LOAM OR LOAM
MULCH	SHREDDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM
GEOTEXTILE (CLASS "C")	APPARENT OPENING SIZE: (ASTM E-475) TENSILE STRENGTH: (ASTM E-483) PUNCTURE RESISTANCE: (ASTM E-483)	N/A	FOR USE AS NECESSARY BENEATH UNDERDRAINS ONLY
UNDERDRAIN GRAVEL	ASHTO M-43	0.375" TO 0.750"	
UNDERDRAIN PIPING	F750, TYPE PS28 OR ASHTO M-278	4" TO 6" RIGID 3/8" PERFORATED 6" O/C. 4 HOLES PER ROW. MINIMUM OF 3" OF GRAVEL OVER PIPES. NOT NECESSARY UNDERNEATH PIPES	

DEVELOPER'S/BUILDER'S CERTIFICATE
I/WE 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/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DAWSON PROPERTY LLC. / Steve Braeden
DATE: 10/1/04

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 10/20/04

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 11/3/04

DIRECTOR
DATE: 11/20/04

NO. DATE		REVISION	
BENCHMARK ENGINEERING, INC.			
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS			
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418 ELLCOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644 E-MAIL: benchmark@ccis.com			
OWNER: DAWSON PROPERTY L.L.C. P.O. BOX 417 ELLCOTT CITY, MD 21041 410-465-4244		PROJECT: COLUMBIA HILLS CORPORATION PROPERTY P/O PARCEL 16	
BUILDER: DORSEY FAMILY HOMES 9926 CYPRESSMEDE DRIVE ELLCOTT CITY, MD 21043		LOCATION: TAX MAP 30 - GRID 5 L 251 F 101 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE: SWM PLAN, NOTES & DETAILS			
DATE: OCTOBER, 2004		PROJECT NO. 0391	
Design: MLV		SCALE: AS SHOWN	
Draft: LDD		DRAWING 3 OF 3	
Check: DAM		SDP-04-97	

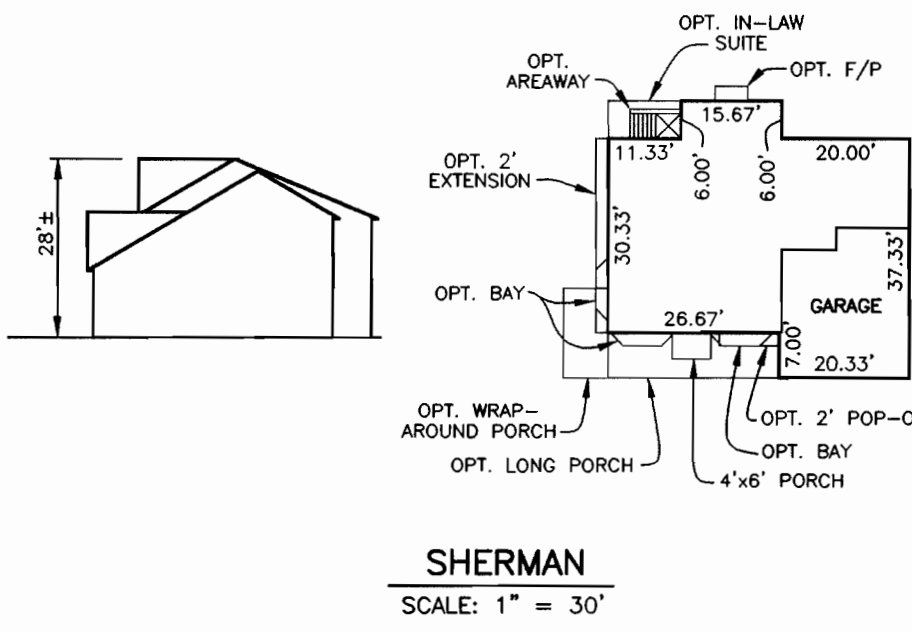
GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE, UNLESS WAIVER(S) HAVE BEEN APPROVED.
- 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 CONTRACTOR SHALL NOTIFY "MISS U LITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHTS PLACEMENT AND TYPE OF FIXTURE & SIGNING SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE, 1993)".
- EXISTING TOPOGRAPHY SHOWN HEREON WAS FIELD RUN BY BENCHMARK ENGINEERING, INC. DATED MAY 2003. CONTOUR INTERVAL IS 2 FEET.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL MONUMENTS 30C22 & 30C23, WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
- THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER SHALL BE PUBLIC, CONNECTING TO CONTRACTS 344-S FOR SEWER AND TO CONTRACT 137-W FOR WATER. DRAINAGE AREA IS WITHIN THE PATUXENT RIVER AREA WATERSHED.
- STORMWATER MANAGEMENT SHALL BE PROVIDED FOR THIS PROJECT BASED ON GUIDELINES ESTABLISHED BY THE 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I & II. STORMWATER MANAGEMENT SHALL BE PROVIDED BY THE USE OF RAINGARDENS.
- EXISTING UTILITIES SHOWN WERE LOCATED BY APPROVED CONTRACT DRAWINGS AND FIELD LOCATIONS.
- THERE ARE NO EXISTING WETLANDS, WETLANDS BUFFERS, STREAMS, STREAM BUFFERS OR 70-YR. FLOODPLAIN ON-SITE.
- THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE, PROFESSIONAL, DAT: 1 JUNE 2003, AND IT WAS DETERMINED THAT THERE WERE NO WETLANDS ON THIS SITE.
- PERIMETER LANDSCAPING IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL SHALL BE PROVIDED AS SHOWN ON THIS SITE PLAN. FINANCIAL SURETY IN THE AMOUNT OF \$2,400.00 FOR 8 SHADE TREES SHALL BE POSTED WITH THE BUILDERS' GRADING PERMIT.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERY LOCATIONS ON-SITE.
- UNLESS NOTED AS "PRIVATE", ALL EASEMENTS ARE PUBLIC.
- BRL INDICATES BUILDING RESTRICTION LINE.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
A) WIDTH - 12' (14' SERVING MORE THAN ONE RESIDENCE).
B) SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN).
C) GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS.
D) STRUCTURES/CULVERTS/BRIDGES - CAPABLE OF SUPPORTING 25 GROSS TONS (425 LOAD).
E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
F) STRUCTURE CLEARANCES - MINIMUM 12 FEET.
G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- THIS PLAN IS SUBJECT TO THE AMENDED 5th EDITION OF THE HOWARD COUNTY SUBDIVISION REGULATIONS AND THE AMENDED HOWARD COUNTY ZONING REGULATIONS, COUNCIL BILL 75-2003.
- SUBJECT PROPERTY IS ZONED R-20 PER 2-2-04 COMPREHENSIVE ZONING PLAN.
- THERE ARE NO PREVIOUS APPLICABLE HOWARD COUNTY DPZ FILE REFERENCES FOR THIS PROJECT.
- CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION ACTIVITY AND SHALL ADJUST ALL UTILITIES AND RIM ELEVATIONS AS NEEDED TO MATCH THIS PLAN.
- THE 18' PRIVATE INGRESS & EGRESS R/W WAS ABANDONED BY DEED L8647/F361 ON SEPTEMBER 21, 2004.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS MORE THAN 16 FEET IN WIDTH MAY NOT PROJECT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED, MAY NOT PROJECT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- THE WATER AND SEWER CONTRACT # IS 24-4206-D.
- DRIVEWAY APRON TO BE CONSTRUCTED PER THE HOWARD COUNTY STANDARD DETAIL R.6.06.
- THIS PROPERTY IS EXEMPT FROM THE FOREST CONSERVATION ACT BECAUSE THIS DEVELOPMENT IS LESS THAN 40,000 SF. (30,492 SF., 0.7 ACRES). IN ACCORDANCE WITH SECTION 16.1202 (b)(1)(i) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

LANDSCAPE PLANTING LIST			
SYMBOL	QUANTITY	NAME	REMARKS
	8	SHADE TREES QUERCUS RUBRA & B "NORTHERN RED OAK"	2.5'-3.0" MIN. CAL. 8' & B FULL HEAD

LANDSCAPING NOTES

- PERIMETER LANDSCAPING SHALL BE PROVIDED BY THE PLANTINGS AS SHOWN ON THESE PLANS.
- TREES MUST BE A MINIMUM OF FOUR(4) FEET FROM THE CURB OR SIDEWALK AND MUST BE A MINIMUM OF FIVE(5) FEET FROM ANY STORM DRAIN.
- A MINIMUM DISTANCE OF TWENTY(20) FEET MUST BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND FROM ANY STREET LIGHTS.
- TREE MUST BE PLANTED A MINIMUM OF FIVE(5) FEET FROM AN OPEN SPACE ACCESS STRIP AND TEN(10) FEET FROM A DRIVEWAY.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SEC.-16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE BUILDERS' GRADING PERMIT IN THE AMOUNT OF \$2,400.00 FOR 8 SHADE TREES.

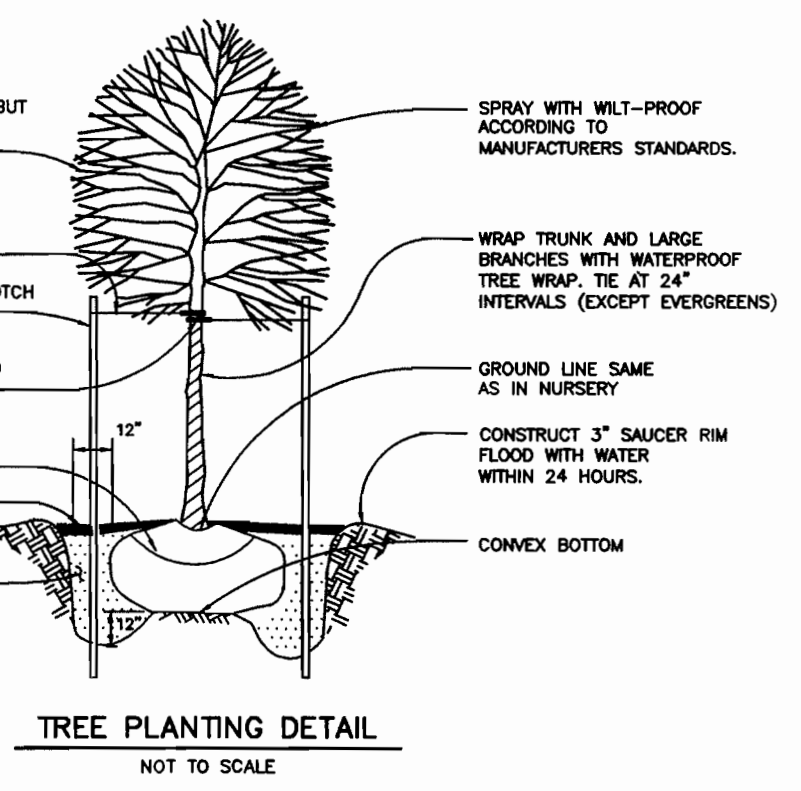


SOILS LEGEND		
MAP SYMBOL	SOIL TYPE	MAPPING UNIT
	M2	MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
	M2C	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
	M2C3	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
	M2C3	MANOR LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED
	G2	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED

SOILS MAP No.20
* - INDICATES HYDRIC SOILS

SITE ANALYSIS DATA CHART

GENERAL SITE DATA	
1. PRESENT ZONING:	R-20
2. APPLICABLE DPZ FILE REFERENCES:	N/A
3. DEED REFERENCE:	LIBER 261 / FOLIO 101
4. PROPOSED USE OF SITE:	SINGLE-FAMILY DETACHED
5. PROPOSED WATER AND SEWER SYSTEMS:	PUBLIC
AREA TABULATION	
1. GROSS TRACT AREA:	0.82 AC.±
2. AREA WITHIN 100-YEAR FLOODPLAIN:	0.00 AC.±
3. TOTAL AREA OF 25% OR GREATER STEEP SLOPES:	0.00 AC.±
4. NET TRACT AREA:	0.82 AC.±
5. TOTAL NUMBER OF RESIDENTIAL UNITS/LOTS PROPOSED ON THIS SUBMISSION:	1



PLAN

SCALE: 1" = 30"

PERMIT INFORMATION CHART					
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#	P/O PARCEL 16		
COLUMBIA HILLS CORPORATION PROPERTY					
PLAT No.	GRID No.	ZONING	TAX MAP	ELEC. DIST.	CENSUS
L261,F101	5	R-20	30	2nd	6023.02
WATER CODE		SEWER CODE			

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE 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/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

[Signature] DATE: 10/7/04
DAWSON PROPERTY LLC / Steve Bredan

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] DATE: 11/3/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] DATE: 11/3/04
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] DATE: 11/4/04
DIRECTOR

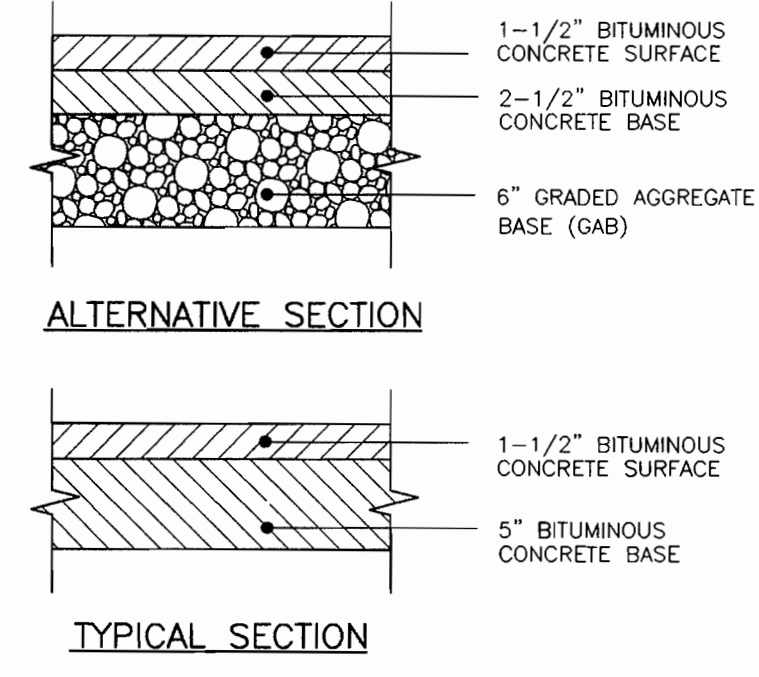
SHEET INDEX	
NO.	DESCRIPTION
1	SITE DEVELOPMENT AND LANDSCAPE PLAN, NOTES & DETAILS
2	SEDIMENT AND EROSION CONTROL PLAN, NOTES & DETAILS
3	SWM PLAN, NOTES & DETAILS

ADDRESS CHART	
LOT #	STREET ADDRESS
1	9101 SYBERT DRIVE

BENCHMARK NAD'83 HORIZONTAL

HO. CO. #30C22 3/8" REBAR WITH RED PLASTIC CAP N 574179.232' ELEV. = 388.74	E 1361312.723'
HO. CO. #30C23 3/8" REBAR WITH RED PLASTIC CAP N 574812.795' ELEV. = 386.42	E 1361173.247'

VICINITY MAP
SCALE: 1" = 2000'



P-2 PAVEMENT DETAIL

NOT TO SCALE

LEGEND

SOILS CLASSIFICATION	AbC1
SOILS DELINEATION	---
EXISTING CONTOURS	999
PROPOSED CONTOURS	999
EXISTING WOODS LINE	---
PROPOSED WOODS LINE	---
EXISTING STRUCTURE	---

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTIES	YES	NO	NO	NO
PERIMETER NO. / LANDSCAPE TYPE	(1) N/A	(2) A	(3) A	(4) A		
LINEAR FEET OF ROADWAY (FRONTAGE/PERIMETER)	50.07'	561.30'	251.66'	356.52'		
CREDIT FOR EXISTING VEGETATION: NO OR YES (w/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	-	YES	YES	YES		
CREDIT FOR WALL, FENCE OR BERM: NO OR YES (w/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	-	NO	NO	NO		
NUMBER OF PLANTS REQUIRED: SHADE TREES	-	4	-	4		
EVERGREEN TREES	-	-	-	-		
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-		
SHRUBS	-	-	-	-		
NUMBER OF PLANTS PROVIDED: SHADE TREES	-	4	-	4		
EVERGREEN TREES	-	-	-	-		
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-		
SHRUBS (10:1 SUBSTITUTE) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	-	-	-	-		

5-23-05 REVISED GRADES & RAIN GARDEN ON 9101 SYBERT DRIVE
 3-14-05 REVISED FF & BF ELEVATIONS ON 9101 SYBERT DRIVE TO MATCH AS-BUILT ELEVATION

BENCHMARK ENGINEERS, LAND SURVEYORS & PLANNERS

ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6844
 E-MAIL: benchmark@ccis.com

[Signature] 10/8/04

OWNER:	DAWSON PROPERTY LLC P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT:	COLUMBIA HILLS CORPORATION PROPERTY P/O PARCEL 16
BUILDER:	DORSEY FAMILY HOMES 9926 CYPRESSMEDE DR. ELLICOTT CITY, MD 21043	LOCATION:	TAX MAP 30 - GRID 5 P/O PARCEL 16 L 25 - F 101 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE:	OCTOBER, 2004	TITLE:	SITE DEVELOPMENT AND LANDSCAPE PLAN, NOTES & DETAILS
Design: MLV	Draft: LDD	Check: DAM	PROJECT NO. 0391
SCALE: AS SHOWN	DRAWING 1 OF 3		