

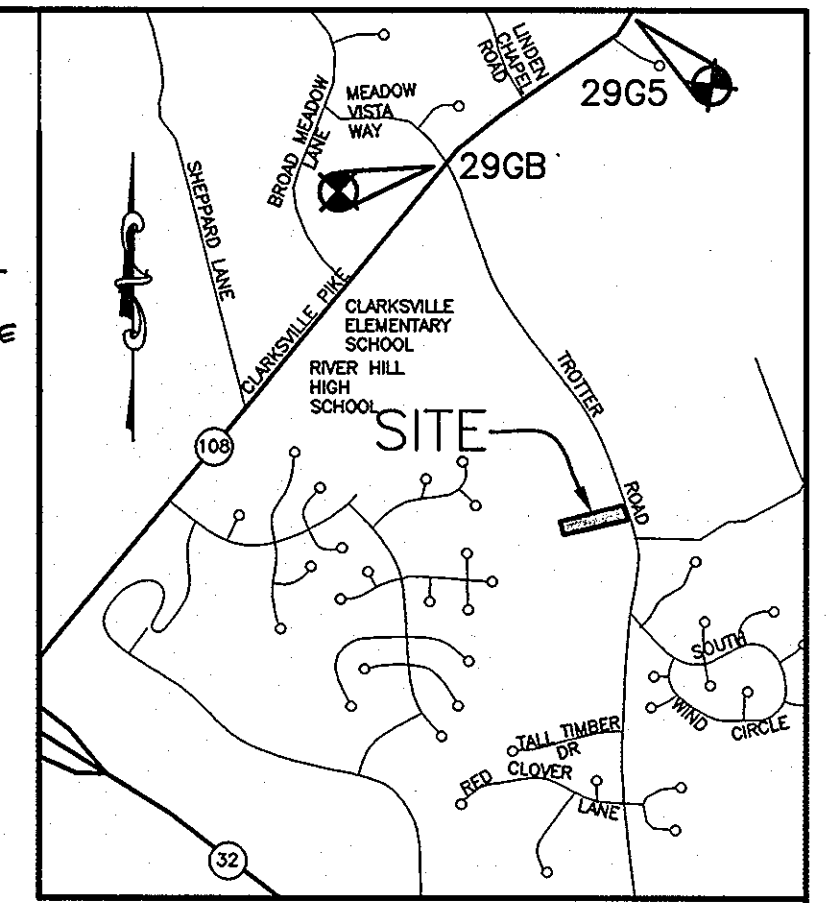
SHEET INDEX			
NO	DESCRIPTION	NO	DESCRIPTION
1	TITLE SHEET	8	STORMWATER MANAGEMENT DETAILS
2	EXISTING CONDITIONS PLAN AND SOILS MAP	9	SOIL BORING LOGS
3	OVERALL SITE DEVELOPMENT PLAN	10	LANDSCAPE PLAN
4	SITE DEVELOPMENT PLAN	11	FINAL LANDSCAPE NOTES AND DETAILS
5	FINAL GRADING AND SEDIMENT CONTROL PLAN	12	PRIVATE STREET GRADE ESTABLISHMENT PLAN
6	SEDIMENT AND EROSION CONTROL DETAILS		
7	STORMWATER MANAGEMENT PLAN		

- GENERAL NOTES**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
 - 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 72 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
 - TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST 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.
 - ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 - THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED JANUARY 2007.
 - THE BEARINGS SHOWN ON THIS SURVEY ARE IN THE MARYLAND COORDINATE SYSTEM NAD83/91 BASED ON HOWARD COUNTY, MARYLAND GEODETIC CONTROL STATIONS 296B AND 2965. THE VERTICAL DATUM IS NAVD88 BASED ON THE SAME CONTROL STATIONS.
 - WATER IS PUBLIC. CONTRACT NO. 34-4497-D
 - SEWER IS PUBLIC. CONTRACT NO. 34-4497-D
 - WATER QUALITY FOR THE DEVELOPMENT IS PROVIDED BY A NATURAL AREA CONSERVATION CREDIT, SHEET FLOW TO BUFFER CREDIT AND PRIVATELY OWNED AND MAINTAINED DRY SWALES AND RAIN GARDENS. Rev is addressed in PRIVATELY OWNED AND MAINTAINED GRASS SWALES. CPV WAS NOT REQUIRED.
 - APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
 - THERE IS NO FLOODPLAIN ON THIS SITE.
 - THERE ARE NO WETLANDS ON THIS SITE PER FIELD VISIT BY PHRA IN 2007.
 - A TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP DATED APRIL 2007 AND WAS APPROVED ON JULY 31, 2007 UNDER PREVIOUS SUBMITTAL SP-07-012.
 - A NOISE STUDY FOR THIS PROJECT IS NOT REQUIRED.
 - THE BOUNDARY SURVEY FOR THIS PROJECT WAS PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED JANUARY 2007.
 - SUBJECT PROPERTY ZONED R-20 PER 2-02-04 COMPREHENSIVE ZONING PLAN AND THE COMP-LITE ZONING AMENDMENTS DATED 7/28/06.
 - SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S.: S-06-011, SP-07-012, F-08-162.
 - THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
 - CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
 - PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
 - NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
 - PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
 - ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180.
 - ALL LIGHTING IS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES. LIGHT TRESPASS ONTO A PROPERTY IN THE R-20 OR NT ZONING DISTRICT SHALL BE LIMITED TO 0.1 FOOT CANDLES.
 - FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT PER F-08-162. STREET TREES ARE NOT REQUIRED WITH THIS DEVELOPMENT.
 - THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED UNDER F-08-162. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
 - THE FOREST CONSERVATION OBLIGATION FOR THIS PLAN HAS BEEN SATISFIED UNDER F-08-162.
 - FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPE STEM AND THE ROAD RIGHT-OF-WAY LINE ONLY AND NOT ONTO THE FLAG OR PIPE STEM LOT DRIVEWAY.
 - THERE ARE NO EXISTING STRUCTURES ON SITE.
 - NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR REQUIRED BUFFERS, FLOODPLAIN, AND FOREST CONSERVATION EASEMENT AREAS. DISTURBANCE TO THE EXISTING INTERMITTENT STREAM AND ASSOCIATED BUFFER IS PROPOSED NEAR THE BEGINNING OF THE USE-IN-COMMON DRIVEWAY. THIS IS A NECESSARY DISTURBANCE FOR ROAD AND UTILITY CONSTRUCTION. IMPACTS WILL BE MINIMIZED AND WILL INCLUDE ONLY THE AREA NECESSARY REQUIRED FOR THESE IMPROVEMENTS.
 - BASED ON AVAILABLE COUNTY MAPS AND RECORDS, THERE ARE NO HISTORIC STRUCTURES OR KNOWN CEMETERIES LOCATED ON THE SUBJECT PROPERTY.
 - THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY GEOTECHNICAL LABORATORIES, INC., DATED APRIL 15, 2007, AND WAS APPROVED ON JULY 31, 2007 UNDER SP-07-012.
 - DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH- 12'(6' SERVING MORE THAN ONE RESIDENCE);
 - SURFACE- 6" OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1/2" MIN.);
 - GEOMETRY- MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS;
 - STRUCTURES (CULVERTS/BRIDGES)- CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING);
 - DRAINAGE ELEMENTS- CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
 - WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE.
 - TROTTER ROAD IS CLASSIFIED AS A HOWARD COUNTY SCENIC ROAD. THE SCENIC ROAD STUDY WAS SUBMITTED AND APPROVED UNDER F-08-162.
 - IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
 - BUILDER TO DETERMINE FINAL NUMBER OF WELLED EXIT STEPS FOR EACH HOUSE IN THE FIELD.
 - ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
 - SHC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.
 - FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.06.
 - INSTALL TREE PROTECTION FENCE AT THE L.O.D. AND IMPLEMENT TREE PROTECTION METHODS AS SHOWN. THE AREA BELOW THE DRIPLINE OF EXISTING TREES TO REMAIN/BE SAVED SHOULD REMAIN UNDISTURBED FROM CUTTING AND FILLING DURING THE DEVELOPMENT PROCESS. NO IMPERVIOUS MATERIAL SHOULD BE PLACED UNDER THE DRIPLINE OF TREES TO REMAIN. TREE PROTECTION FENCE IS REQUIRED TO BE INSTALLED AROUND THE TREES AT THE LIMIT OF DISTURBANCE. TREE PROTECTION FENCE IS ALSO REQUIRED AROUND EACH SPECIMEN TREE TO REMAIN. SEE PLAN FOR TREE PROTECTION FENCE LOCATIONS.
 - THE PROPOSED HOUSES WILL HAVE INSIDE METERS.
 - CONSTRUCTION ON LOT 2 WILL NEED TO BE DELAYED UNTIL THE STOCKPILE IS REMOVED.
 - ON DECEMBER 29, 2008, HOWARD COUNTY PLANNING & ZONING APPROVED A WAIVER PETITION REQUEST TO WAIVE SECTION 16.144(p) AND SECTION 16.144(q). THE CONDITIONS OF THE WAIVER PETITION APPROVAL ARE AS FOLLOWS: (WP 04-080)
 - THE DEVELOPER MUST SUBMIT DEVELOPER'S AGREEMENTS, POST FINANCIAL SURETY FOR INSTALLATION OF PUBLIC WATER AND SEWERAGE, POST FINANCIAL SURETY FOR CONSTRUCTION, POST SURETY AND EXECUTE A DEED OF FOREST CONSERVATION EASEMENT AND A FOREST CONSERVATION AGREEMENT FOR THE PROPOSED FOREST CONSERVATION AREAS AND SUBMIT PAYMENT TO DPW, RES. OF THE BALANCE OF THE DEPARTMENT OF PUBLIC WORKS, ENGINEERING REVIEW FEE IN ASSOCIATION WITH F-08-162 WITHIN 180 DAYS OF THE DATE OF THIS WAIVER APPROVAL (ON OR BEFORE JUNE 24, 2009).
 - THE DEVELOPER MUST SUBMIT FINAL ORIGINALS FOR SIGNATURE AND RECORDATION IN ASSOCIATION WITH F-08-162 WITHIN 180 DAYS OF THE DATE OF THIS WAIVER APPROVAL (ON OR BEFORE JUNE 24, 2009).

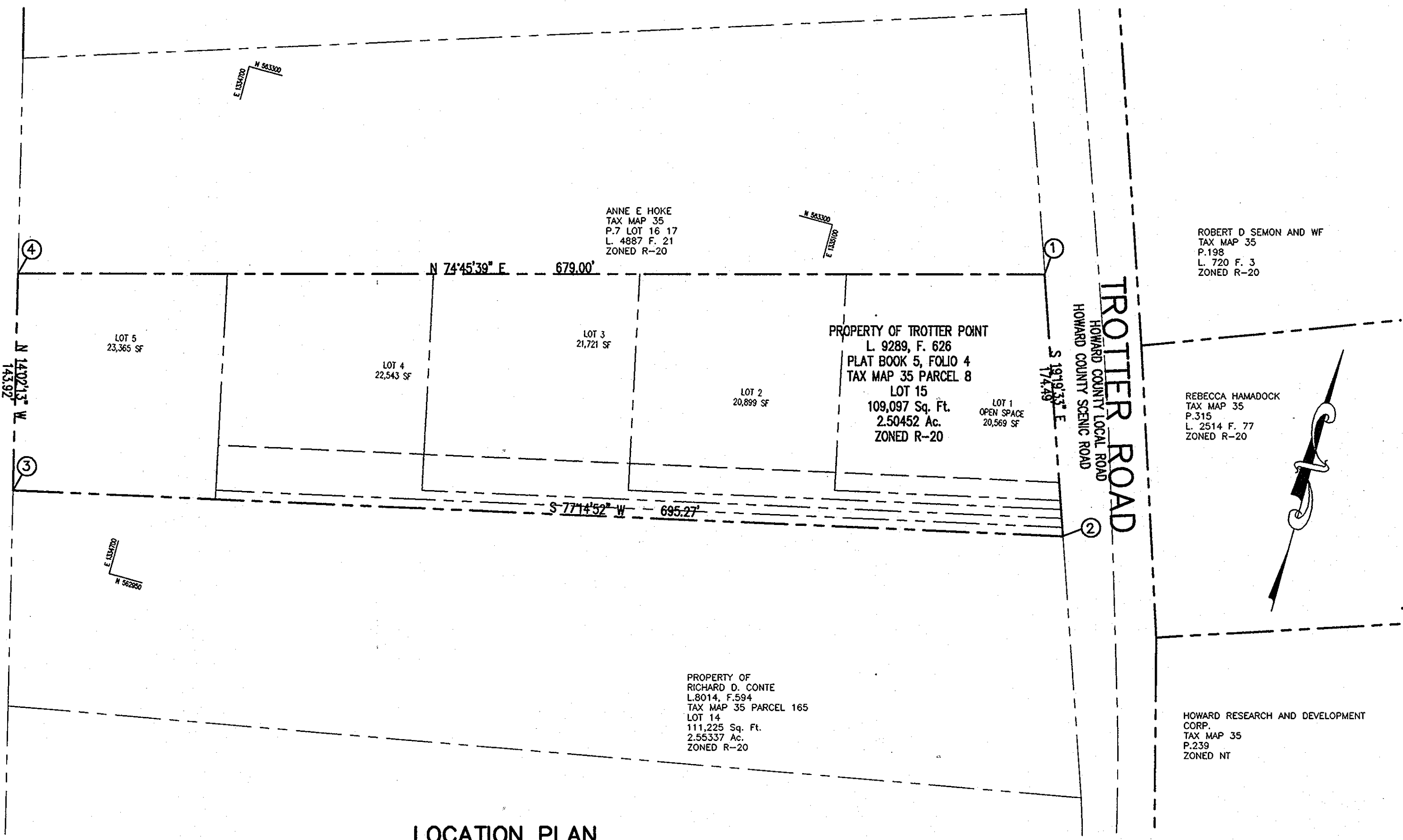
SITE DEVELOPMENT PLAN TROTTER POINT PARCEL 8

A RESUBDIVISION OF FOREST HILLS LOT 15 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GENERAL NOTES, continued
 AL. ON DECEMBER 14, 2009, HOWARD COUNTY PLANNING & ZONING APPROVED A RECONSIDERATION OF WAIVER WP 04-235 TO WAIVE SECTION 16.146(C) AND SECTION 16.146(M). THE CONDITIONS OF THE WAIVER PETITION APPROVAL ARE AS FOLLOWS:
 1. THE DEVELOPER MUST SUBMIT DEVELOPER'S AGREEMENT AND POST FINANCIAL SURETY FOR CONSTRUCTION AND MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITY AND, IF APPLICABLE, SUBMIT PAYMENT TO DPW, RES. OF THE BALANCE OF ANY DEPARTMENT OF PUBLIC WORKS, ENGINEERING REVIEW FEE IN ASSOCIATION WITH SP-09-024 WITHIN 180 DAYS OF JUNE 30, 2010, (ON OR BEFORE DECEMBER 27, 2010).
 2. THE DEVELOPER MUST SUBMIT SITE DEVELOPMENT PLAN ORIGINALS (WHICH INCLUDES A LANDSCAPE PLAN) FOR SIGNATURE IN ASSOCIATION WITH SP-09-024 WITHIN 180 DAYS OF JUNE 30, 2010 (ON OR BEFORE DEC. 27, 2010)



VICINITY MAP
 SCALE: 1"=2000'
 COPYRIGHT ADC THE MAP PEOPLE
 PERMITTED USE NO. 2071188
 HOWARD COUNTY ADD MAP 14: H6 AND H7



AREA TABULATION CHART

EXISTING ZONING:	R-20
GROSS AREA OF SITE:	2.50 ACRES (109,097 SF)
AREA IN 100 YEAR FLOODPLAIN:	0 ACRES
AREA OF STEEP SLOPES:	0.08 ACRES (3,608 SF)
NET TRACT AREA:	2.42 ACRES
AREA OF RIGHT-OF-WAY DEDICATION:	0 ACRES
AREA OF PROPOSED RIGHT-OF-WAY:	0 ACRES
AREA OF PROPOSED BUILDABLE LOTS:	2.03 ACRES (88,528 SF)
MINIMUM LOT SIZE:	20,000 SF
AREA OF REQUIRED OPEN SPACE:	6% OF GROSS AREA OF DEVELOPMENT 0.06 X 2.50 ACRES = 0.15 ACRES REQUIRED
AREA OF PROPOSED OPEN SPACE:	0.47 ACRES PROPOSED (20,569 SF ±)
AREA OF REQUIRED RECREATION OPEN SPACE:	NONE REQUIRED
LIMIT OF DISTURBED AREA:	1.70 ACRES (73,853 SF)
NUMBER OF BUILDABLE LOTS:	4 LOTS
NUMBER OF OPEN SPACE LOTS:	1
PROPOSED WATER AND SEWER:	PUBLIC WATER AND SEWER
EXISTING USES:	RESIDENTIAL
PROPOSED USES:	4 LOTS
APPLICABLE DEPARTMENT OF PLANNING AND ZONING FILE NO'S.:	S-06-011, SP-07-012, F-08-162

BENCH MARK
 HOWARD COUNTY CONTROL STATION 296B
 N 566,826.1675
 E 1,333,265.8589
 ELEV. 455.959

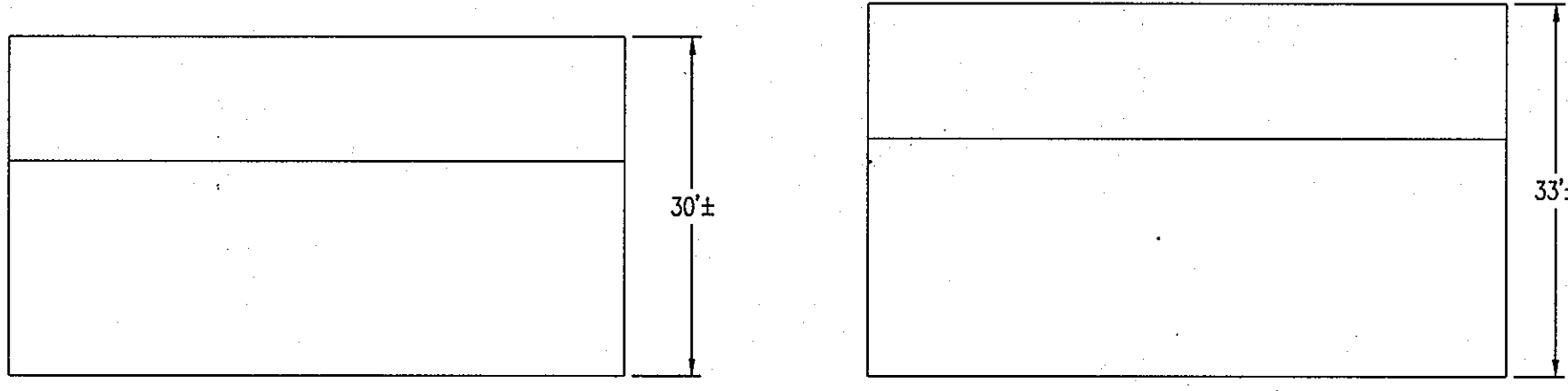
HOWARD COUNTY CONTROL STATION 2965
 N 568,341.2144
 E 1,335,392.3911
 ELEV. 387.350

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DEVELOPMENT ENGINEERING DIVISION	4/1/10	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	4/28/10	DATE
DIRECTOR	4/8/10	DATE

COORDINATE LIST

1	N 563305.11	E 1335244.07
2	N 563140.45	E 1335301.82
3	N 562987.02	E 1334623.86
4	N 563126.64	E 1334588.95



HOUSE TEMPLATES
 SCALE: 1"=20'

BEFORE BEGINNING CONSTRUCTION CONTACT
"MISS UTILITY"
 AT
1-800-257-7777
 AT LEAST 72 HOURS PRIOR TO EXCAVATION

MINIMUM LOT SIZE CHART

LOT NO.	GROSS AREA	PIPESTEM AREA	MIN. LOT SIZE
2	20899	899	20000
3	21721	1721	20000
4	22543	2543	20000
5	23365	3365	20000

ALL AREAS SHOWN ABOVE ARE IN SQUARE FEET

ADDRESS CHART

LOT/PARCEL #	STREET ADDRESS
2	5760 TROTTER ROAD
3	5762 TROTTER ROAD
4	5764 TROTTER ROAD
5	5766 TROTTER ROAD

SUBDIVISION NAME	TROTTER POINT	SECT./AREA	PARCEL 8
PLAT NO.	20852 + 20853	GRID #	2
ZONING	R-20	TAX MAP NO.	35
ELECT. DIST.	5TH	CENSUS TRACT	6055.01
WATER CODE	1 04	SEWER CODE	6700000

OWNER

TROTTER POINT LLC
 ATTN: BRIAN BOY
 11807 WOLLINGFORD CT
 CLARKSVILLE, MD 21029
 T: 410.792.2565

DEVELOPER

TROTTER POINT LLC
 ATTN: BRIAN BOY
 9695 NORFOLK AVENUE
 LAUREL, MD 20723
 T: 410.792.2565

PROJECT
TROTTER POINT
 A RESUBDIVISION OF FOREST HILLS LOT 15, PLAT BOOK 5, P. 4

AREA TAX MAP 35 GRID 2 PARCEL 8 ZONED R-20
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SINGLE FAMILY DETACHED HOMES

TITLE SHEET

Patton Harris Rust & Associates, p.c
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

DESIGNED BY : PHRA

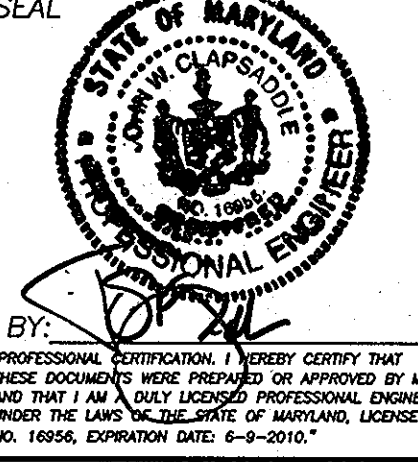
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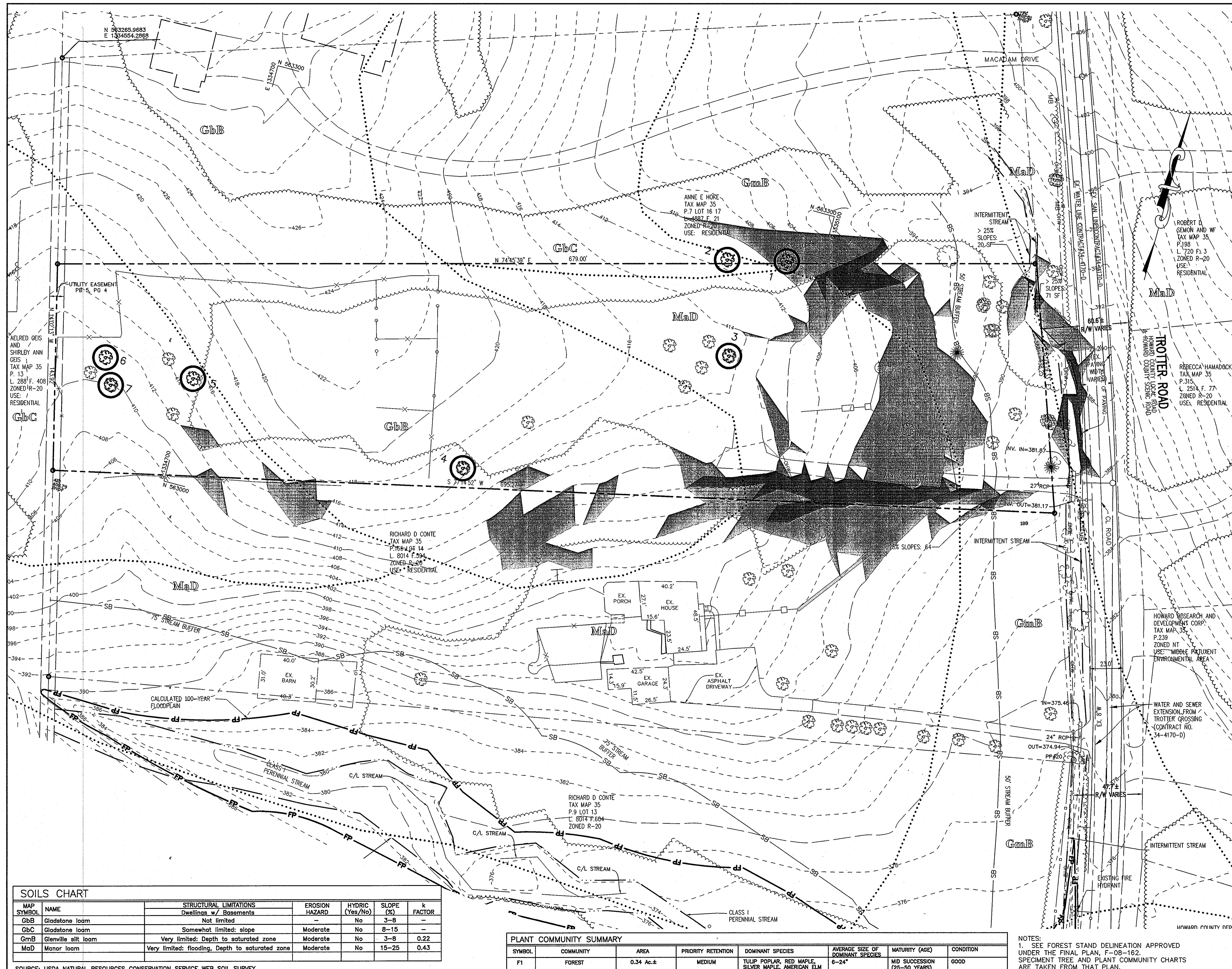
PROJECT NO : 12888-1-1 PLANS
 SDP C400SDP01

DATE : FEBRUARY 3, 2010

SCALE : AS SHOWN

DRAWING NO. 1 OF 12





LEGEND

- PROPERTY LINE
- EXISTING TREELINE
- PROPOSED TREELINE
- PROPOSED LOT LINE
- EX. STREAM AND BUFFER
- EX. 100-YEAR FLOODPLAIN
- EXISTING CONTOURS
- EXISTING BUILDING
- SLOPES 15-25%
- SLOPES > 25%
- EXISTING WATER LINE
- EXISTING FIRE HYDRANT
- SPECIMEN TREES

SPECIMEN TREE CHART

KEY	SPECIES	SIZE	CONDITION
1	BLACK LOCUST (<i>Robinia pseudoacacia</i>)	48"	GOOD
2	BLACK LOCUST (<i>Robinia pseudoacacia</i>)	48"	GOOD
3	SILVER MAPLE (<i>Acer saccharinum</i>)	32"	GOOD
4	TULIP POPLAR (<i>Liriodendron tulipifera</i>)	30"	GOOD
5	TULIP POPLAR (<i>Liriodendron tulipifera</i>)	44"	GOOD
6	SLIPPERY ELM (<i>Ulmus rubra</i>)	40"	GOOD
7	SILVER MAPLE (<i>Acer saccharinum</i>)	51"	GOOD

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* 4/1/10 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* 4/29/10 DATE

DIRECTOR: *[Signature]* 4/2/10 DATE

DATE NO. REVISION

OWNER: TROTTER POINT LLC
ATTN: BRIAN BOY
11807 WOLLINGFORD CT
CLARKSVILLE, MD 21029
T: 410.792.2565

DEVELOPER: TROTTER POINT LLC
ATTN: BRIAN BOY
9695 WOLFPOLE AVENUE
LAUREL, MD 20723
T: 410.792.2565

PROJECT: **TROTTER POINT**
A RESUBDIVISION OF FOREST HILLS LOT 15, PLAT BOOK 5, P. 4
AREA TAX MAP 35 GRID 2 PARCEL 8 ZONED R-20
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SINGLE FAMILY DETACHED HOMES

TITLE: **EXISTING CONDITIONS PLAN AND SOILS MAP**

Patton Harris Rust & Associates, PC
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DESIGNED BY: PJS
DRAWN BY: PJS
PROJECT NO: 12888-1-1 PLANS
SDP_C400SDP02
DATE: FEBRUARY 30, 2010
SCALE: 1"=30'
DRAWING NO. 2 OF 12

SOILS CHART

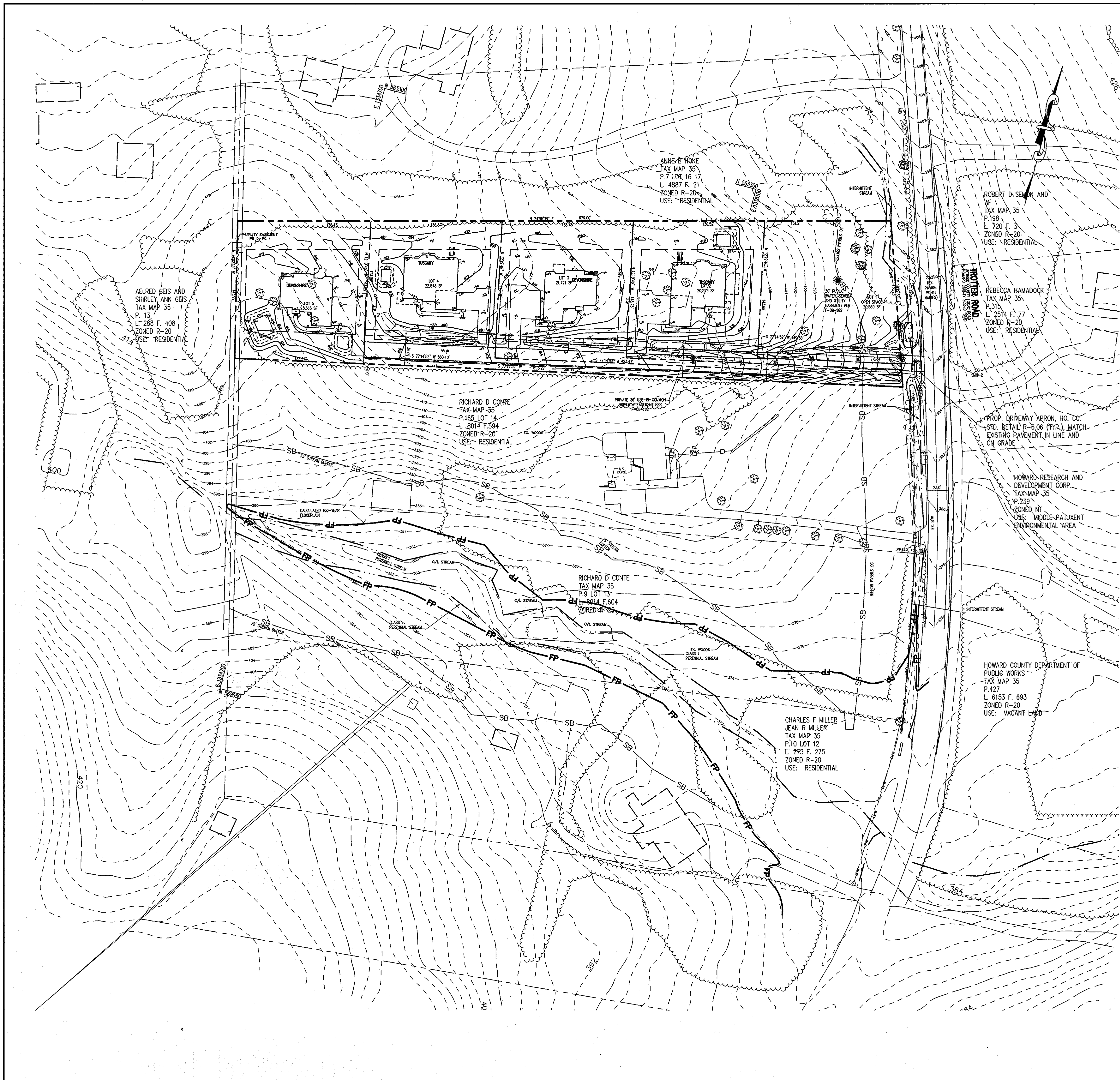
MAP SYMBOL	NAME	STRUCTURAL LIMITATIONS Dwellings w/ Basements	EROSION HAZARD	HYDRIC (Yes/No)	SLOPE (%)	k FACTOR
GbB	Gladstone loam	Not limited	-	No	3-8	-
GbC	Gladstone loam	Somewhat limited: slope	Moderate	No	8-15	-
GmB	Glennville silt loam	Very limited: Depth to saturated zone	Moderate	No	3-8	0.22
MaD	Manor loam	Very limited: flooding, Depth to saturated zone	Moderate	No	15-25	0.43

PLANT COMMUNITY SUMMARY

SYMBOL	COMMUNITY	AREA	PRIORITY RETENTION	DOMINANT SPECIES	AVERAGE SIZE OF DOMINANT SPECIES	MATURITY (AGE)	CONDITION
F1	FOREST	0.34 Ac.±	MEDIUM	TULIP POPLAR, RED MAPLE, SILVER MAPLE, AMERICAN ELM	6-24"	MID SUCCESSION (25-50 YEARS)	GOOD

NOTES:
1. SEE FOREST STAND DELINEATION APPROVED UNDER THE FINAL PLAN, F-08-162.
SPECIMEN TREE AND PLANT COMMUNITY CHARTS ARE TAKEN FROM THAT PLAN.

SOURCE: USDA NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY

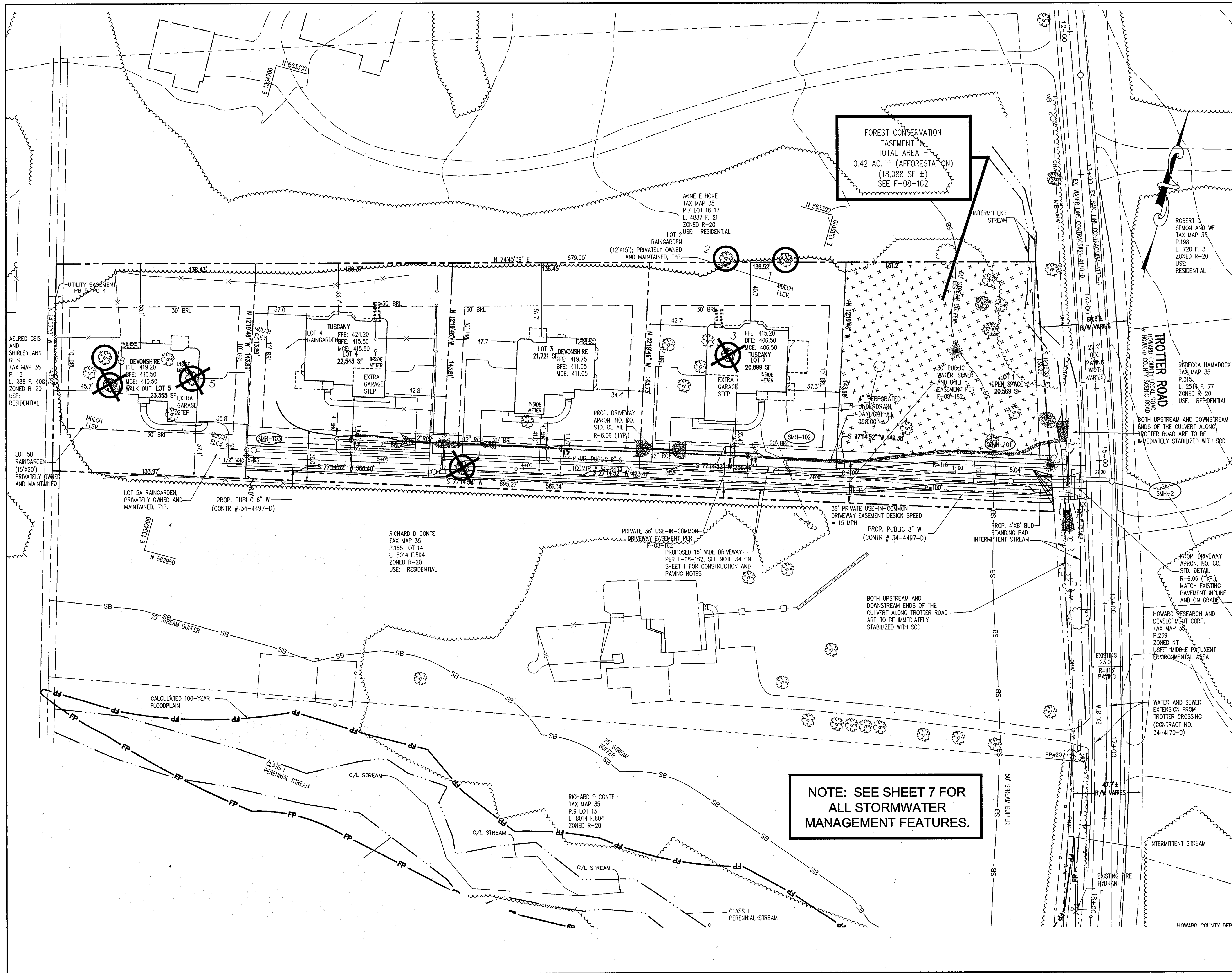


LEGEND

- PROPERTY LINE
- EXISTING TREELINE
- PROPOSED TREELINE
- PROPOSED LOT LINE
- EX. STREAM AND BUFFER
- EX. 100-YEAR FLOODPLAIN
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING BUILDING
- PROPOSED BUILDING

THIS SHEET IS FOR
ADJACENT SITE
INFORMATION ONLY. SEE
SHEETS 4-7 FOR DETAILED
CONSTRUCTION
INFORMATION.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
	4/1/10 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	4/28/10 DATE
	4/8/10 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	4/8/10 DATE
	4/8/10 DATE
DIRECTOR	4/8/10 DATE
DATE NO.	REVISION
OWNER	TROTTER POINT LLC ATTN: BRIAN BOY 11807 WOLLINGFORD CT CLARKSVILLE, MD 21029 T: 410.792.2565
DEVELOPER	TROTTER POINT LLC ATTN: BRIAN BOY 9695 NORFOLK AVENUE LAUREL, MD 20723 T: 410.792.2565
PROJECT	TROTTER POINT A RESUBDIVISION OF FOREST HILLS LOT 15, PLAT BOOK 5, P. 4 AREA TAX MAP 35 GRID 2 PARCEL 8 ZONED R-20 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SINGLE FAMILY DETACHED HOMES
TITLE	OVERALL SITE DEVELOPMENT PLAN
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
SEAL	
DESIGNED BY : ALC	
DRAWN BY: ALC	
PROJECT NO .12888-1-1\PLANS SDP\C400SDP02	
DATE : FEBRUARY 3, 2010	
SCALE : 1"=50'	
DRAWING NO. 3 OF 12	



LEGEND

PROPERTY LINE	
EXISTING TREELINE	
PROPOSED TREELINE	
PROPOSED LOT LINE	
EX. STREAM AND BUFFER	
EX. 100-YEAR FLOODPLAIN	
EXISTING CONTOURS	
PROPOSED CONTOURS	
EXISTING BUILDING	
PROPOSED BUILDING	
SLOPES 15-25%	
SLOPES > 25%	
EXISTING WATER LINE	
EXISTING FIRE HYDRANT	
SPECIMEN TREES TO BE REMOVED	
SPECIMEN TREES TO REMAIN	
PROPOSED WATER LINE	
PROPOSED FIRE HYDRANT	
EXISTING SANITARY SEWER LINE	
PROPOSED SANITARY SEWER LINE	
PROPOSED STORM DRAIN	
AFFORESTATION AREA	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* 4/1/10 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* 4/1/10 DATE

DIRECTOR: *[Signature]* 4/1/10 DATE

DATE	NO.	REVISION

OWNER: TROTTER POINT LLC
 ATTN: BRIAN BOY
 11807 WOLLINGFORD CT
 CLARKSVILLE, MD 21029
 T: 410.792.2565

DEVELOPER: TROTTER POINT LLC
 ATTN: BRIAN BOY
 9695 NORFOLK AVENUE
 LAUREL, MD 20723
 T: 410.792.2565

PROJECT: **TROTTER POINT**
 A RESUBDIVISION OF FOREST HILLS LOT 15, PLAT BOOK 5, P. 4
 AREA TAX MAP 35 GRID 2 PARCEL 8 ZONED R-20
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SINGLE FAMILY DETACHED HOMES

TITLE: **SITE DEVELOPMENT PLAN**

Patton Harris Rust & Associates, pc
 Engineers. Surveyors. Planners. Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

DESIGNED BY: ALC
 DRAWN BY: ALC
 PROJECT NO: 12888-1-1\PLANS
 SDP_C400SDP03
 DATE: FEBRUARY 3, 2010
 SCALE: 1"=30'
 DRAWING NO. 4 OF 12

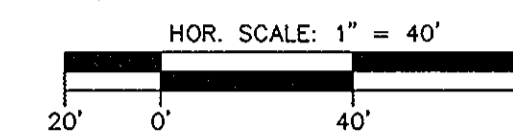
SEAL: STATE OF MARYLAND PROFESSIONAL ENGINEER

DRIVEWAY CULVERT SCHEDULE

LOT NO.	DESCRIPTION	CULVERT LENGTH * (FT)	STATION / OFFSET		INVERTS		SLOPE
			UPSTREAM	DOWNSTREAM	UPSTREAM	DOWNSTREAM	
LOT 2	12" RCP W/ END SECTIONS PER HOCDPW D-5.51	24'	3+17.61 O/S 17' RT	2+93.61 O/S 17' RT.	408.53	407.87	2.75%
LOT 3	12" RCP W/ END SECTIONS PER HOCDPW D-5.51	24'	4+49.07 O/S 14.5' RT	4+25.07 O/S 15.5' RT.	415.30	413.45	7.71%
LOT 4	12" RCP W/ END SECTIONS PER HOCDPW D-5.51	24'	4+81.89 O/S 15.5' RT	4+57.89 O/S 14.5' RT.	417.04	415.90	4.75%

* LENGTH INCLUDES END SECTIONS

NOTE: SEE SHEET 7 FOR ALL STORMWATER MANAGEMENT FEATURES.



ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.

Jean Classaddle 2/3/2010
SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Robert D. Semon 2/3/10
SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE

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

John R. Roberts 3/30/10
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Mr. Dennis 4/1/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Ken S. Shadlock 4/08/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Norman G. Suttler 4/8/10
DIRECTOR DATE

DATE	NO.	REVISION
	E-2	

OWNER: TROTTER POINT LLC
ATTN: BRIAN BOY
11807 WOLLINGFORD CT
CLARKSVILLE, MD 21029
T: 410.792.2565

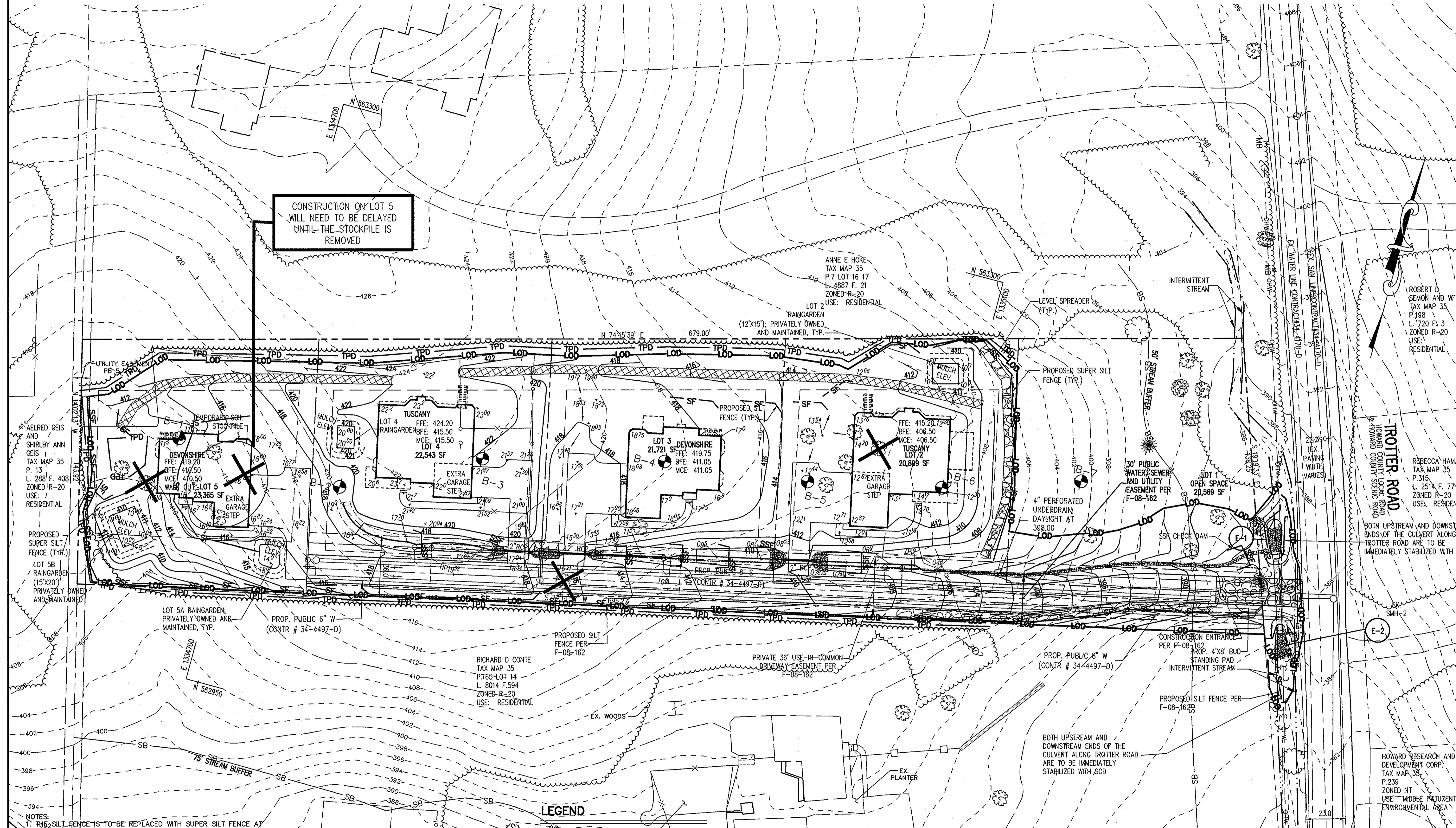
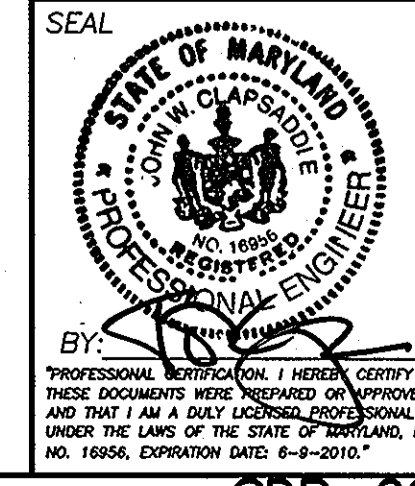
DEVELOPER: TROTTER POINT LLC
ATTN: BRIAN BOY
9695 NORFOLK AVENUE
LAUREL, MD 20723
T: 410.792.2565

PROJECT: TROTTER POINT
A RESUBDIVISION OF FOREST HILLS LOT 15, PLAT BOOK 5, P. 4
AREA TAX MAP 35 GRID 2 PARCEL 8 ZONED R-20
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SINGLE FAMILY DETACHED HOMES

TITLE: FINAL GRADING AND SEDIMENT CONTROL PLAN

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DESIGNED BY: RFP
DRAWN BY: KAD
PROJECT NO: 12888-1-1\PLANS
SDP_C400SDPOS
DATE: FEBRUARY 3, 2010
SCALE: 1"=30'
DRAWING NO. 5 OF 12



- NOTES:
1. THIS SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
 2. DURING CONSTRUCTION THE CONTRACTOR SHALL INSTALL SUPER SILT FENCE ACROSS 0-1 DRY SWALE FOR SEDIMENT CONTROL AT EACH CHECK DAM LOCATION, UNTIL WHICH HE INSTALLS THE PERMANENT 0-1 DRY SWALE, AT WHICH TIME HE SHALL REMOVE SUPER SILT FENCE AND BUILD CHECK DAM.
 3. WATER QUALITY FOR THE DEVELOPMENT IS PROVIDED BY A NATURAL AREA CONSERVATION CREDIT, SHEET FLOW TO BUFFER CREDIT AND PRIVATELY OWNED AND MAINTAINED DRY SWALES AND RAIN GARDENS. REV IS ADDRESSED IN PRIVATELY OWNED AND MAINTAINED GRASS SWALES. GPV WAS NOT REQUIRED.

LEGEND

PROPERTY LINE		PROPOSED CONTOURS		EROSION CONTROL MATING		EXISTING SANITARY SEWER LINE		PROPOSED WATER LINE	
EXISTING TREELINE		EXISTING BUILDING		EXISTING WATER LINE		PROPOSED SANITARY SEWER LINE		PROPOSED FIRE HYDRANT	
PROPOSED TREELINE		PROPOSED BUILDING		EXISTING FIRE HYDRANT		PROPOSED STORM DRAIN		TREES TO BE REMOVED	
PROPOSED LOT LINE		LIMIT OF DISTURBANCE		4"-7" ROCK PRESSED INTO EARTH		STABILIZED CONSTRUCTION ENTRANCE			
EX. STREAM AND BUFFER		TREE PROTECTION DEVICE (TPD) (SUPER SILT FENCE)							
		SILT FENCE							
		SUPER SILT FENCE							

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, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

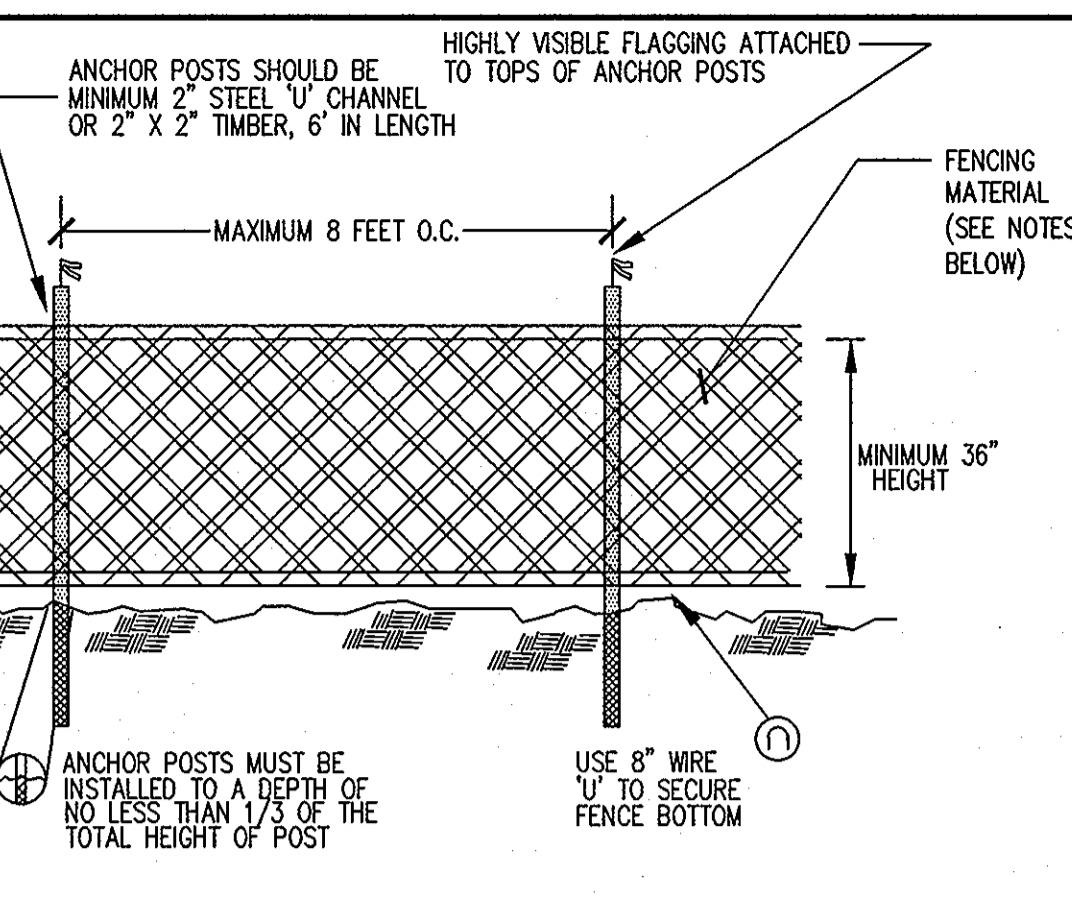
- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS. PER 1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREA FORM FERTILIZER (9 LBS. PER 1000 SQ.FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS. PER 1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR PERIOD MARCH 1 THRU APRIL 30 AND FROM AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS. PER 1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (0.05 LBS. PER 1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING PERIOD OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY ONE OF THE FOLLOWING OPTIONS:

- 2 TONS PER ACRE OF WELL-ANCHORED MULCH STRAW AND SEED AS SOON AS POSSIBLE IN THE SPRING.
- USE SOD.
- SEED WITH 60 LBS. PER ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE WELL-ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 1000 SQ.FT.) FOR ANCHORING.

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



TREE PROTECTION FENCING

NOT TO SCALE

NOTES:

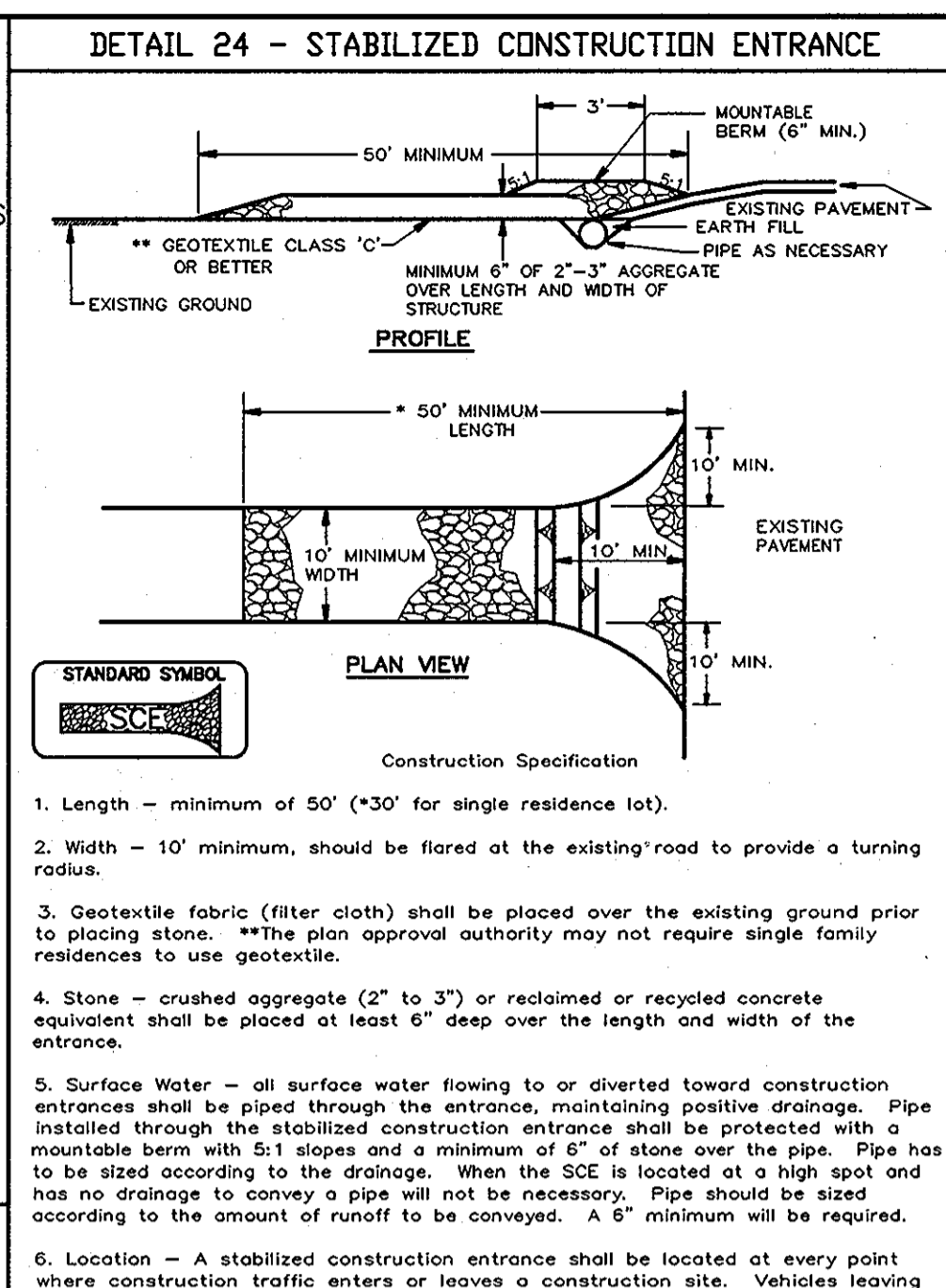
- BLAZE OR EROSION MESH OR SUPER SILT FENCE FOR TREE PROTECTION DEVICE, ONLY.
- BOUNDARIES OF PROTECTION AREA WILL BE ESTABLISHED PRIOR TO GRADING AND SEDIMENT CONTROL.
- AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVER LARGE ROOTS WHEN INSTALLING POSTS.
- FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

STANDARD SEDIMENT CONTROL NOTES

- 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).
- 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 THERETO.
- 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 STEEPER THAN 3:1; B) 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 THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, 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 SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G.). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHED OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

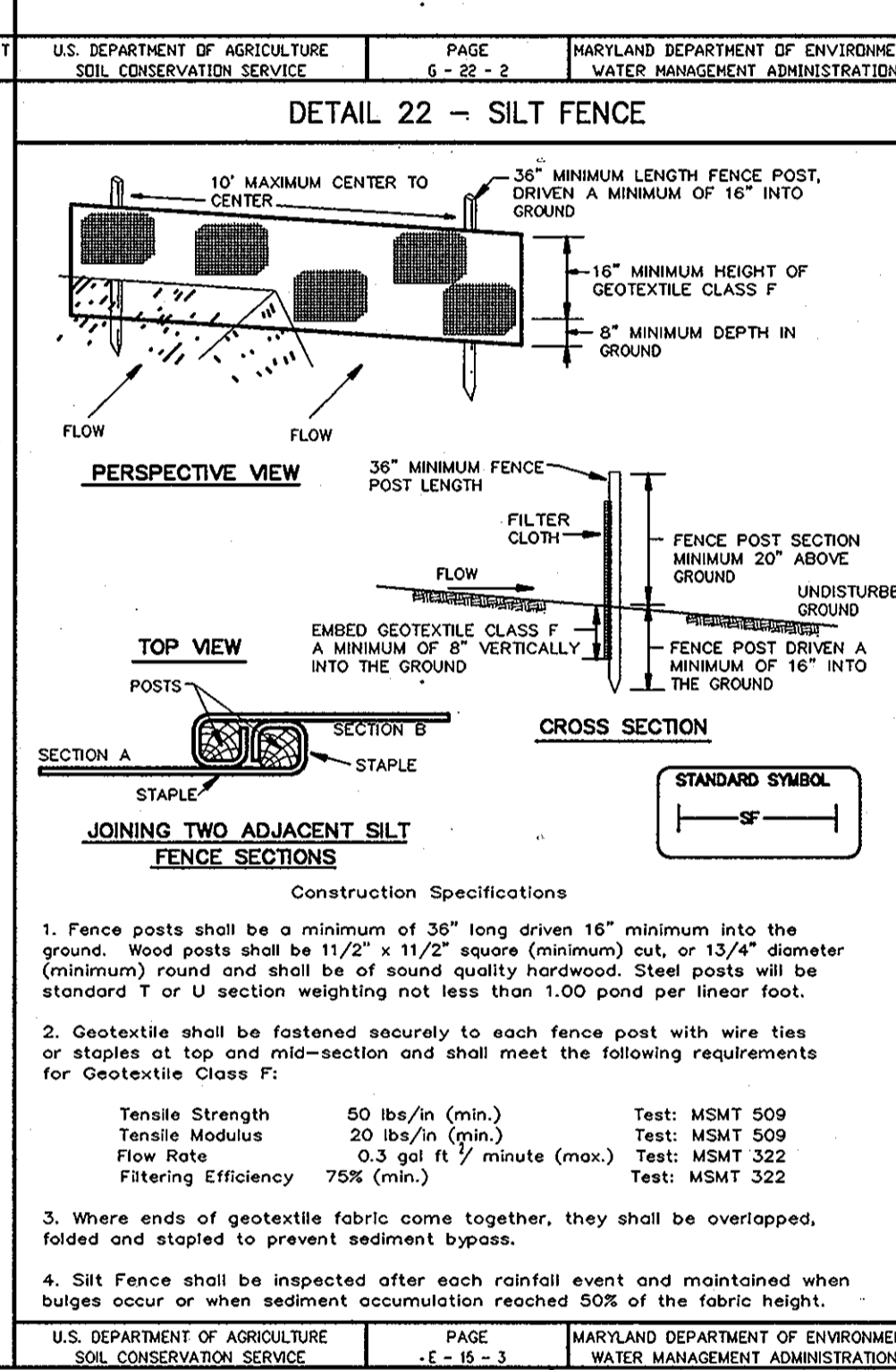
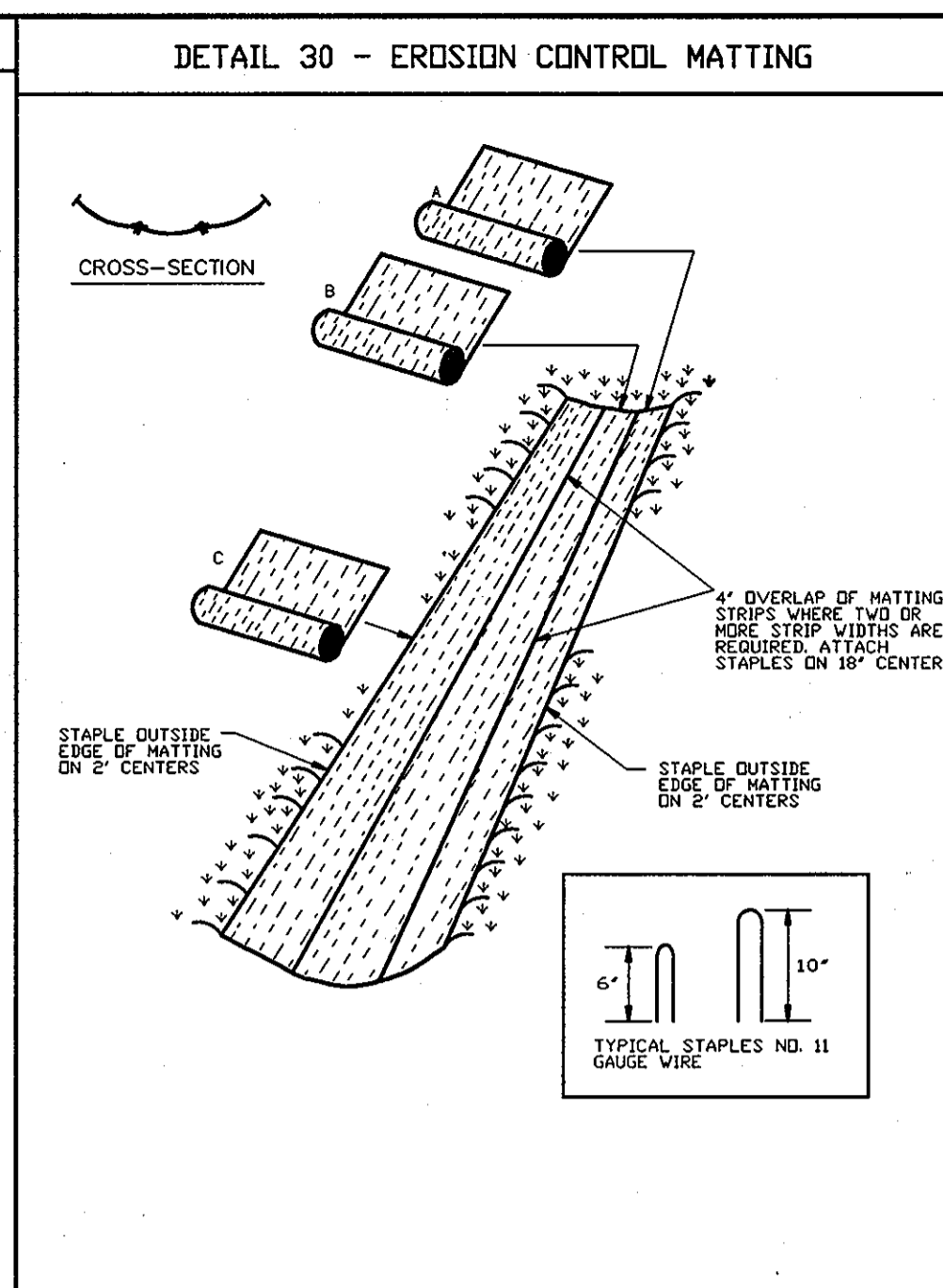
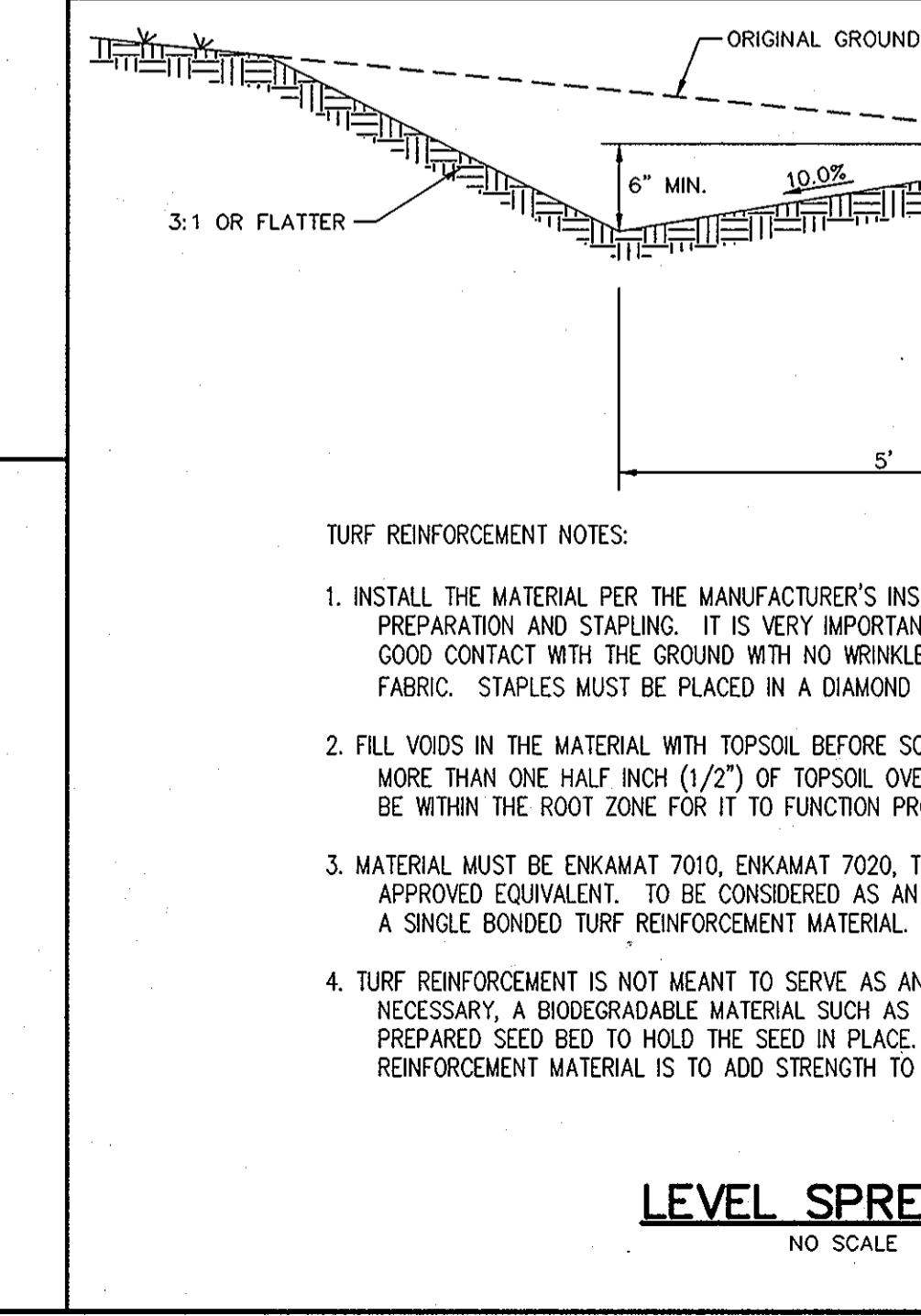
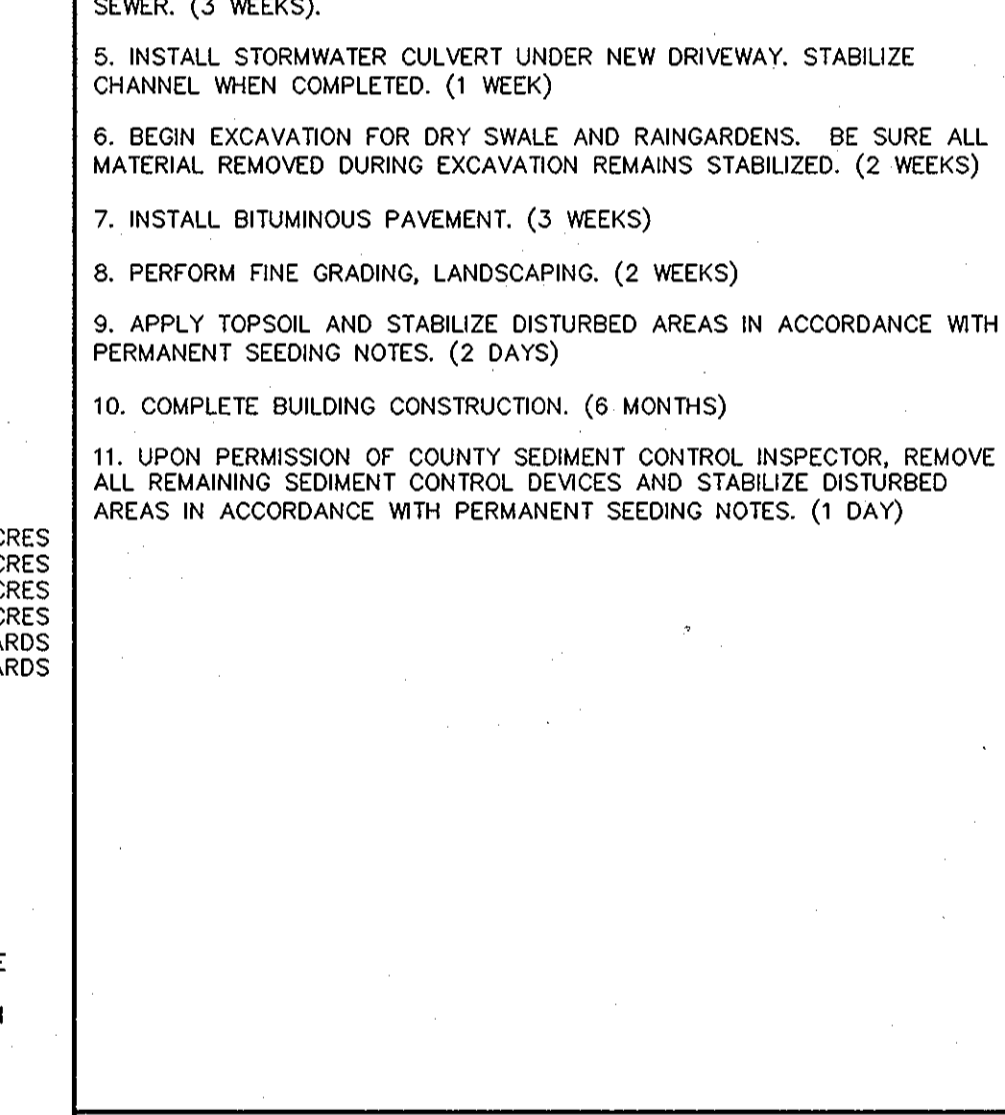
TOTAL AREA OF SITE	2.50 ACRES
AREA DISTURBED	1.67 ACRES
AREA TO BE ROOFED OR PAVED	0.37 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.30 ACRES
TOTAL CUT	5000 CU. YARDS
TOTAL FILL	5000 CU. YARDS

 OFFSITE WASTE AREA LOCATION TO HAVE ACTIVE GRADING PERMIT
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 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, OTHER BUILDING OR GRADING. INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
- SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.



SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- INSTALL PERIMETER CONTROLS, STABILIZED CONSTRUCTION ENTRANCE, SUPER SILT FENCE/SILT FENCE. (3 DAYS)
- BEGIN ROUGH GRADING. (3 DAYS)
- AS SUBGRADE ELEVATIONS ARE ESTABLISHED, INSTALL WATER AND SEWER. (3 WEEKS)
- INSTALL STORMWATER CULVERT UNDER NEW DRIVEWAY. STABILIZE CHANNEL WHEN COMPLETED. (1 WEEK)
- BEGIN EXCAVATION FOR DRY SWALE AND RAINGARDENS. BE SURE ALL MATERIAL REMOVED DURING EXCAVATION REMAINS STABILIZED. (2 WEEKS)
- INSTALL BITUMINOUS PAVEMENT. (3 WEEKS)
- PERFORM FINE GRADING, LANDSCAPING. (2 WEEKS)
- APPLY TOPSOIL AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 DAYS)
- COMPLETE BUILDING CONSTRUCTION. (6 MONTHS)
- UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 DAY)



30.0 - DUST CONTROL

DEFINITION: CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE: TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES: THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON-OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS:

TEMPORARY METHODS:

- MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
- VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
- TILLAGE - TO ROUGHEN SURFACE AND BRING CLOSS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN FLOWING ON ROAD TO SIZE OF THE DISTURBED AREA. PRE-INSTALLING CURRENTS SPRING-TOOTHED HARROWS, AND SIMILAR FLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
- IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOST REPEAT AS NEEDED, AT NO TIME SHOULD THE SITE BE SPRINKLED TO THE POINT OF RUNOFF BEGINS TO FLOW.
- BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
- CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOSTLY MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS:

- PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
- TOPSOILING - COVERING WITH LESS ERODIBLE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
- STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

REFERENCES:

- AGRICULTURE HANDBOOK 346. WIND EROSION FORCES IN THE UNITED STATES AND THEIR USES IN PREDICTING SOIL LOSS.
- AGRICULTURE INFORMATION BULLETIN 354. HOW TO CONTROL WIND EROSION. USDA-ARS.

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 SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES:

- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE 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 EXPERIMENTATION STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1-1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTRICE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - WHERE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - 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 PHYTO-TOXIC MATERIALS.
 - NOTE: TOPSOIL SUBSTITUTES TO 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 I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- TOPSOIL APPLICATION
 - WHEN TOPSOIL IS MAINTAINED NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
 - GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 6" 8" HIGHER IN ELEVATION.
 - TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 - TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
 - ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZERS COMPOSTED MANURE MAY BE APPLIED AS SPECIFIED BELOW:
 - COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITE 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: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING, MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTE. REVISED 1973.

TEMPORARY SEEDING NOTES

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

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS. PER 1000 SQ.FT.).

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS. PER 1000 SQ.FT.). FOR PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (0.07 LBS. PER 1000 SQ.FT.). FOR PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 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.

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.

DATE: 2/3/2010
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE): JOHN CLARKE
 JOHN CLARKE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DATE: 2/3/10
 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE): JOHN L. RUTLER
 JOHN L. RUTLER

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DATE: 4/1/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature]
 DATE: 4/28/10
 CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature]
 DATE: 4/8/10
 DIRECTOR: [Signature]

DATE	NO.	REVISION

OWNER: TROTTER POINT LLC
 ATTN: BRIAN BOY
 11807 WOLLINGFORD CT
 CLARKSVILLE, MD 21029
 T: 410.792.2565

DEVELOPER: TROTTER POINT LLC
 ATTN: BRIAN BOY
 9695 NORFOLK AVENUE
 LAUREL, MD 20723
 T: 410.792.2565

PROJECT: TROTTER POINT
 A RESUBDIVISION OF FOREST HILLS LOT 15, PLAT BOOK 5, P. 4

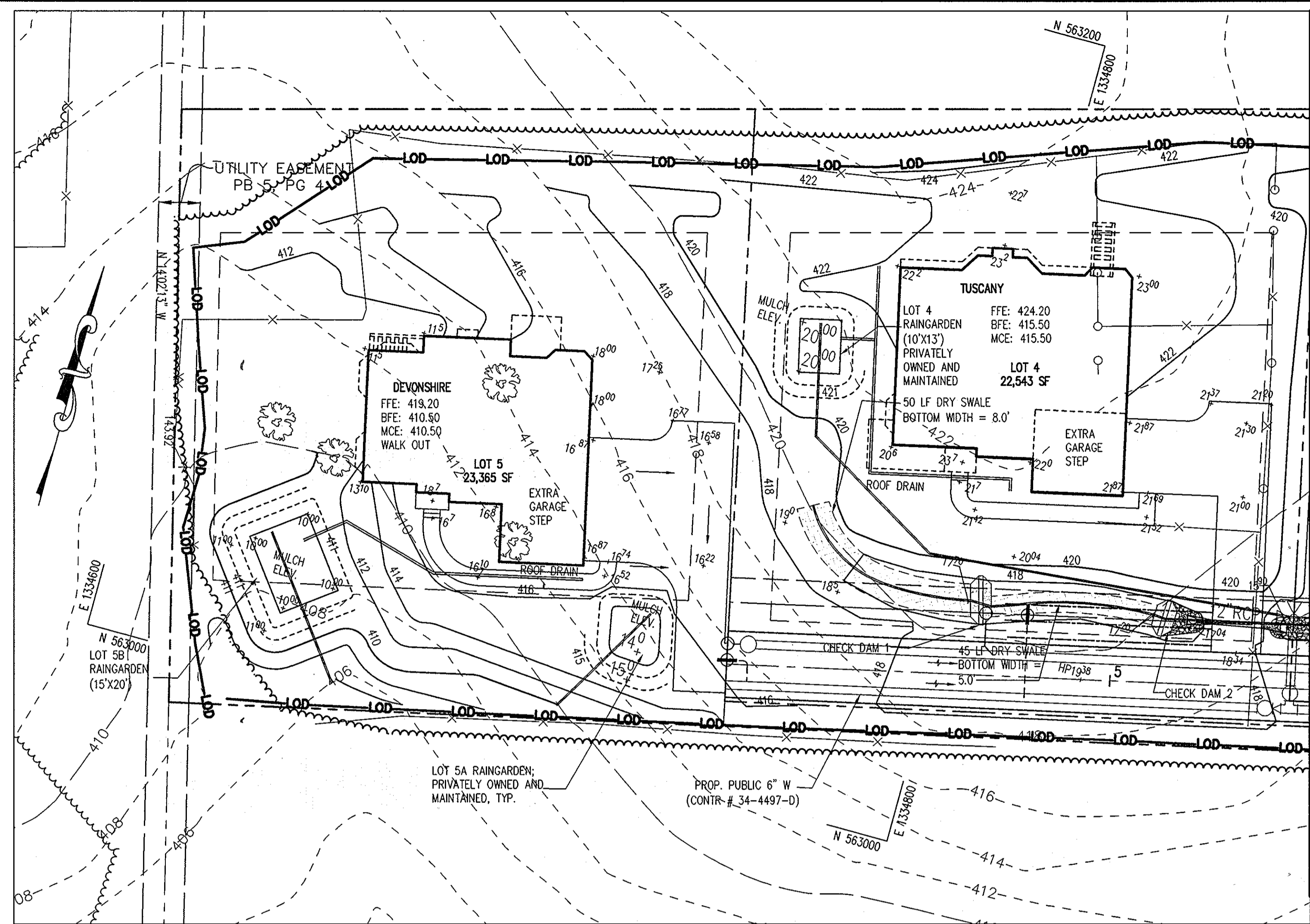
AREA TAX MAP: 35 GRID 2 PARCEL 8 ZONED R-20
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SINGLE FAMILY DETACHED HOMES

TITLE: SEDIMENT AND EROSION CONTROL DETAILS

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

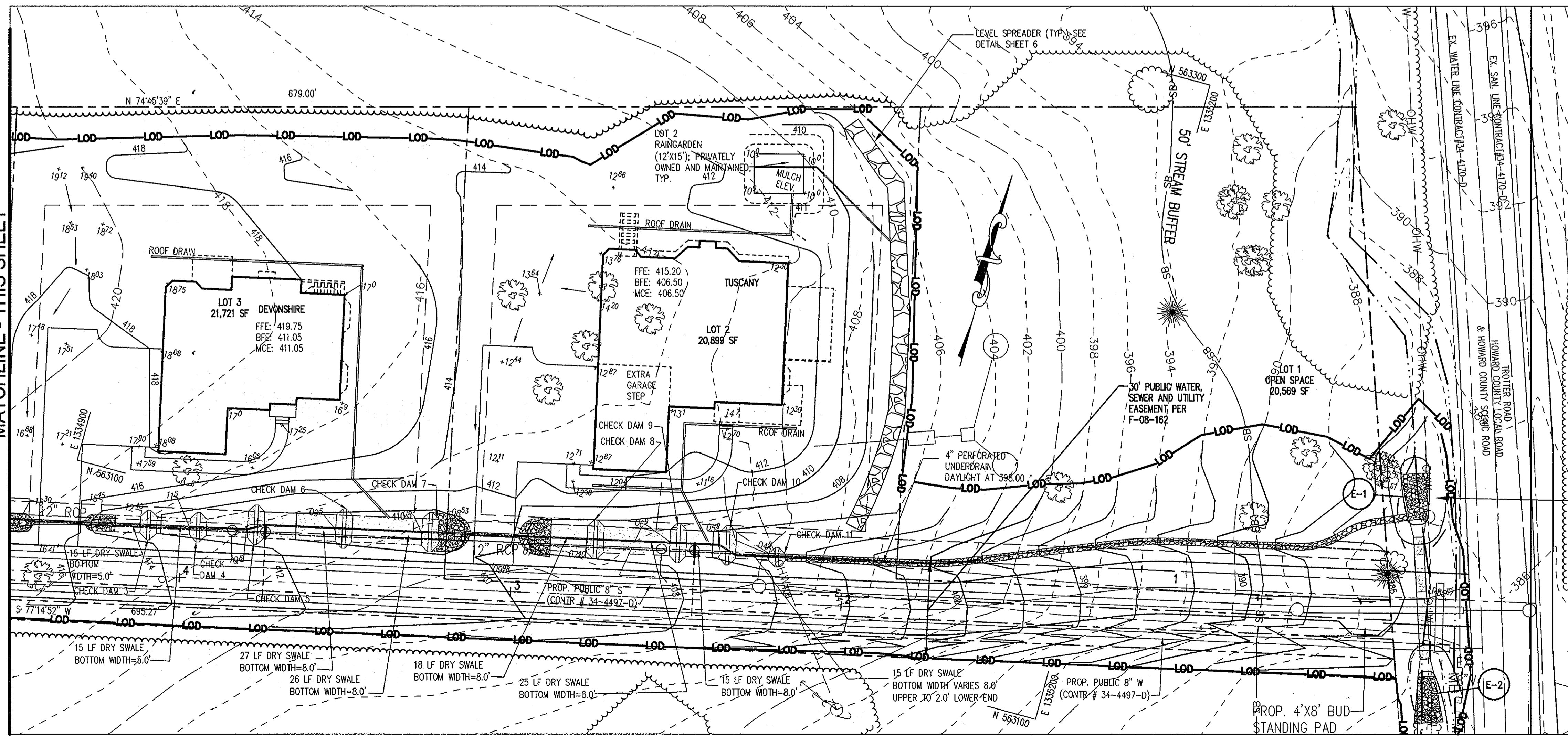
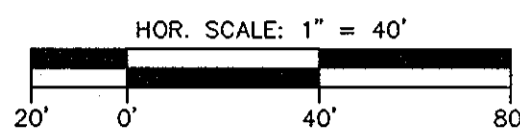
DESIGNED BY: RFP
 DRAWN BY: KAD
 PROJECT NO: 12888-1-1 PLANS
 SDP-C400SDP06.DWG
 DATE: FEBRUARY 3, 2010
 SCALE: AS SHOWN
 DRAWING NO. 6 OF 12

SDP-09-024



STORMWATER MANAGEMENT REQUIREMENTS				
REQUIRED				
DRAINAGE AREA	C _p v (AC-FT)	WQ _v (AC-FT)	Rev (AC-FT)	COMMENTS
A	NOT REQD.	0.0094	0.0024	WQ _v & Rev PROVIDED BY RAINGARDEN
B	NOT REQD.	0.0373	0.0093	WQ _v & Rev PROVIDED BY 0-1 DRY SWALE
C	NOT REQD.	0.0053	0.0011	WQ _v & Rev PROVIDED BY RAINGARDEN
PROVIDED				
DRAINAGE AREA	C _p v (AC-FT)	WQ _v (AC-FT)	Rev (AC-FT)	COMMENTS
A	NOT REQD.	0.0094	0.0024	WQ _v & Rev PROVIDED BY RAINGARDEN
B	NOT REQD.	0.0379	0.0093	WQ _v & Rev PROVIDED BY 0-1 DRY SWALE
C	NOT REQD.	0.0053	0.0011	WQ _v & Rev PROVIDED BY RAINGARDEN

STORMWATER MANAGEMENT SUMMARY TABLE					
PRE-DEVELOPMENT DRAINAGE AREAS (EXISTING)					
DRAINAGE AREA (AC)	C _p v (AC-FT)	Q _p 1 (CFS)	Q _p 10 (CFS)	Q _p 100 (CFS)	COMMENTS
A (3.07)	NOT REQD.	0.1	2.8	6.5	
B (1.17)	NOT REQD.	0.1	2.0	4.3	
C (1.05)	NOT REQD.	0.4	2.4	4.6	
TOTAL		0.5	6.2	13.4	
POST-DEVELOPMENT DRAINAGE AREAS (PROPOSED)					
DRAINAGE AREA (AC)	C _p v (AC-FT)	Q _p 1 (CFS)	Q _p 10 (CFS)	Q _p 100 (CFS)	COMMENTS
A (3.06)	NOT REQD.	0.3	3.5	7.4	C _p v NOT REQUIRED (Q _p 1 < 2 CFS)
B (1.35)	NOT REQD.	0.4	2.4	4.5	C _p v NOT REQUIRED (Q _p 1 < 2 CFS)
C (1.02)	NOT REQD.	0.3	2.2	4.3	C _p v NOT REQUIRED (Q _p 1 < 2 CFS)
TOTAL		0.4	4.9	13.1	



APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Brian Boy 4/11/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kevin DeLoach 4/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Thomas G. Buttle 4/9/10
DIRECTOR DATE

DATE	NO.	REVISION

OWNER
TROTTER POINT LLC
ATTN: BRIAN BOY
11807 WOLLINGFORD CT
CLARKSVILLE, MD 21029
T: 410.792.2565

DEVELOPER
TROTTER POINT LLC
ATTN: BRIAN BOY
9695 NORFOLK AVENUE
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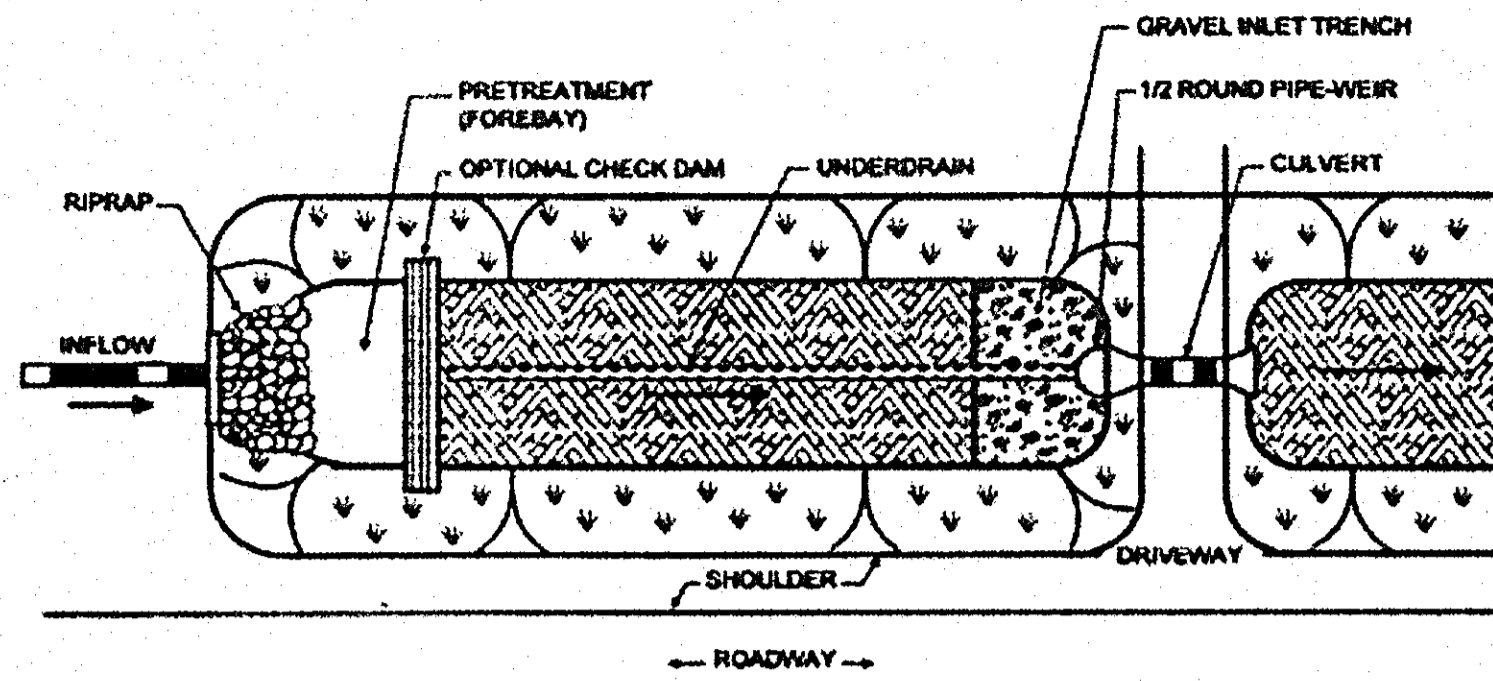
PROJECT
TROTTER POINT
A RESUBDIVISION OF FOREST HILLS LOT 15, PLAT BOOK 5, P. 4
AREA TAX MAP 35 GRID 2 PARCEL 8 ZONED R-20
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SINGLE FAMILY DETACHED HOMES

TITLE
STORMWATER MANAGEMENT PLAN

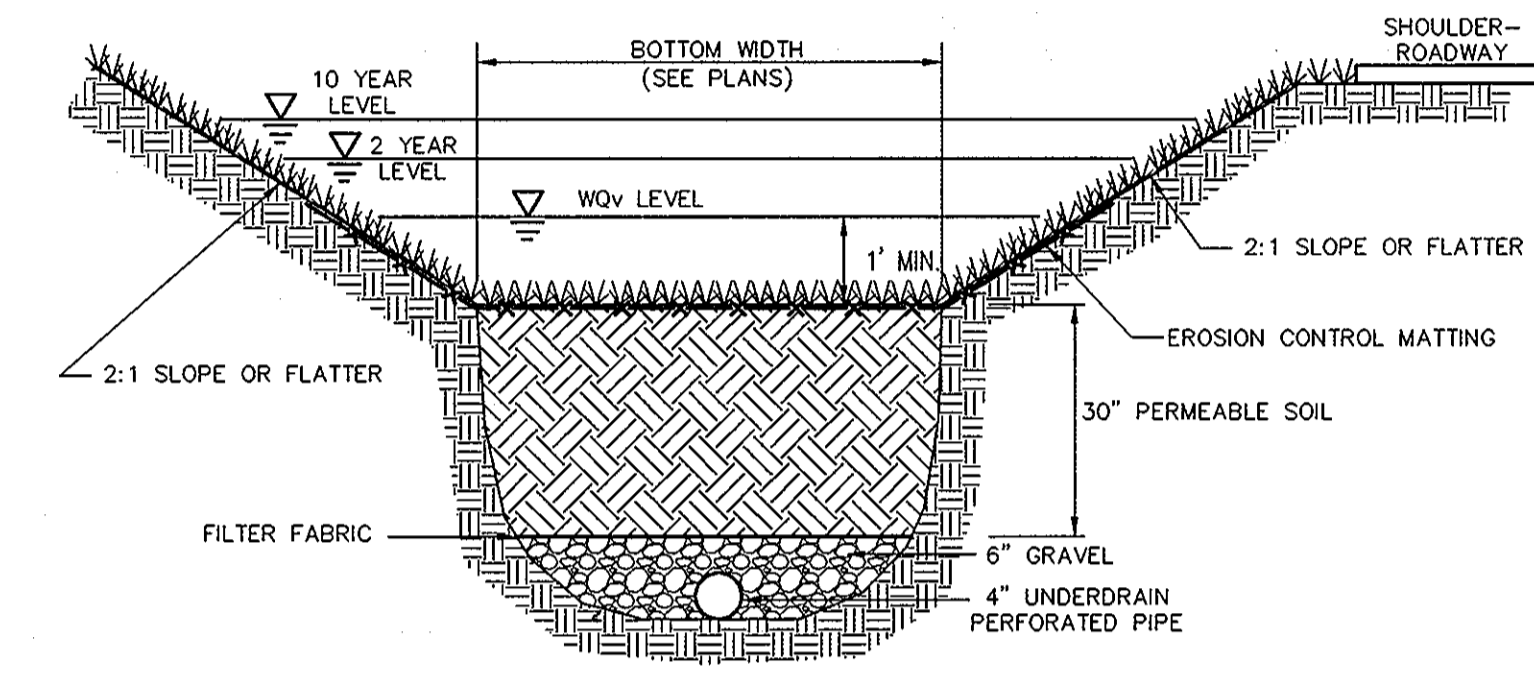
Patton Harris Rust & Associates, pc
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8818 Centre Park Drive
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SEAL
STATE OF MARYLAND
BRIAN BOY
PROFESSIONAL ENGINEER
NO. 18534, EXPIRES 06/30/11

DESIGNED BY : JWC
DRAWN BY: PJS
PROJECT NO. 12888-1-1\PLANS
SDP_C4005DP07
DATE : FEBRUARY 3, 2010
SCALE : 1"=20'
DRAWING NO. 7 OF 12



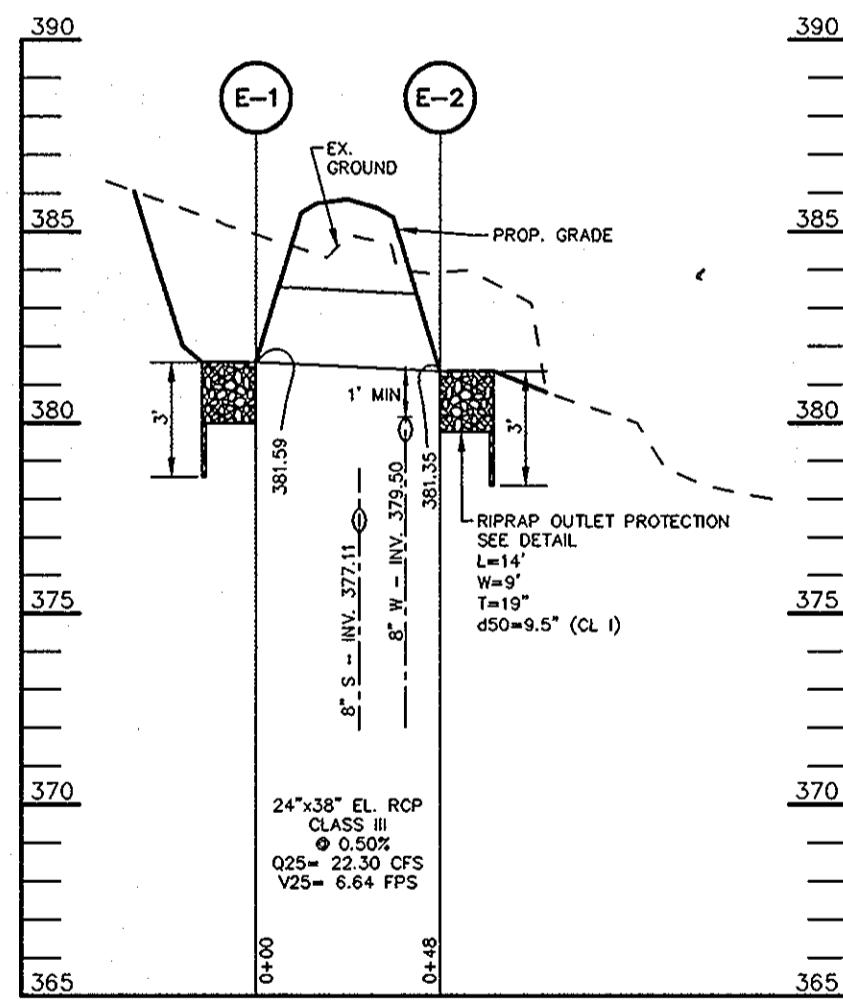
PLAN VIEW



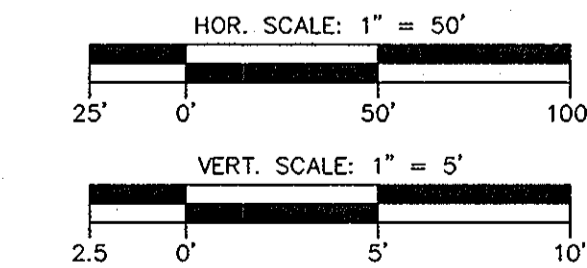
SECTION

DRY SWALE DETAIL

NO SCALE



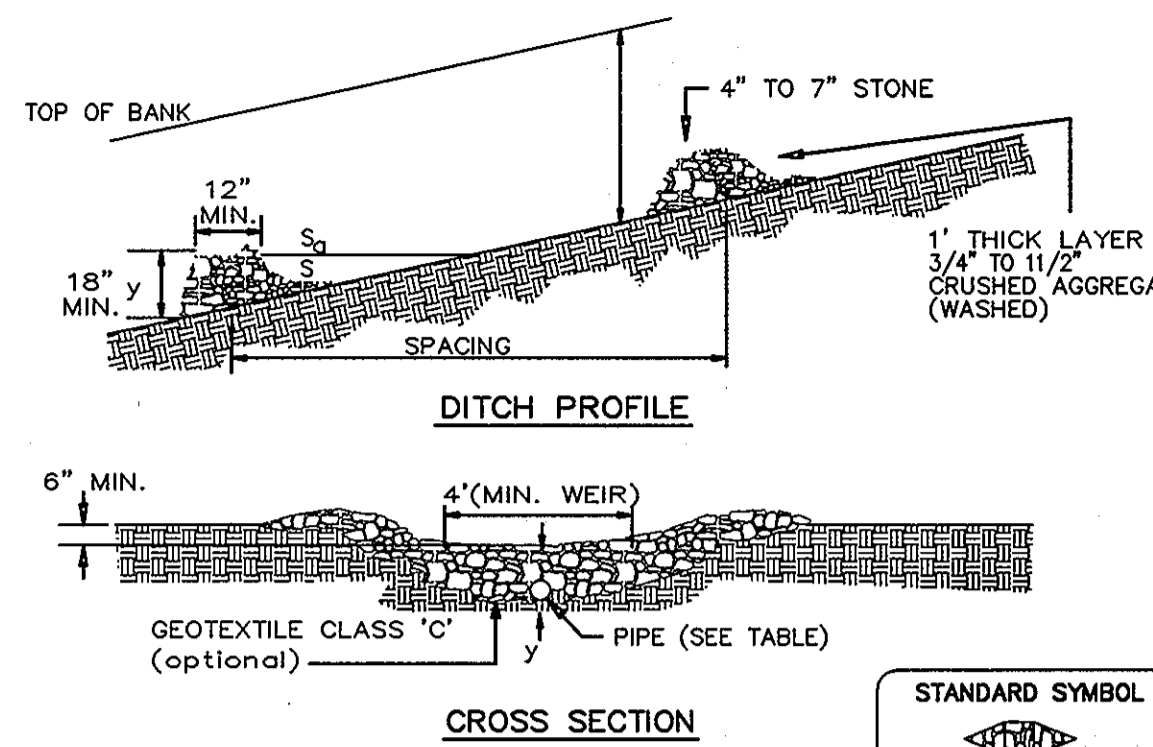
STORM SEWER PROFILE



STRUCTURE SCHEDULE

NUMBER	LOCATION		PIPE INVERTS		SIZE	REMARKS
	NORTHING	EASTING	INV. IN.	INV. OUT.		
E-1	N 563184.0445	E 1335297.0186	-	381.59	24" X 38"	TO BE SUPPLIED BY PIPE MANUFACTURER
E-2	N 563148.6114	E 1335308.7734	-	381.35	24" X 38"	TO BE SUPPLIED BY PIPE MANUFACTURER

STONE CHECK DAM IN DRY SWALE



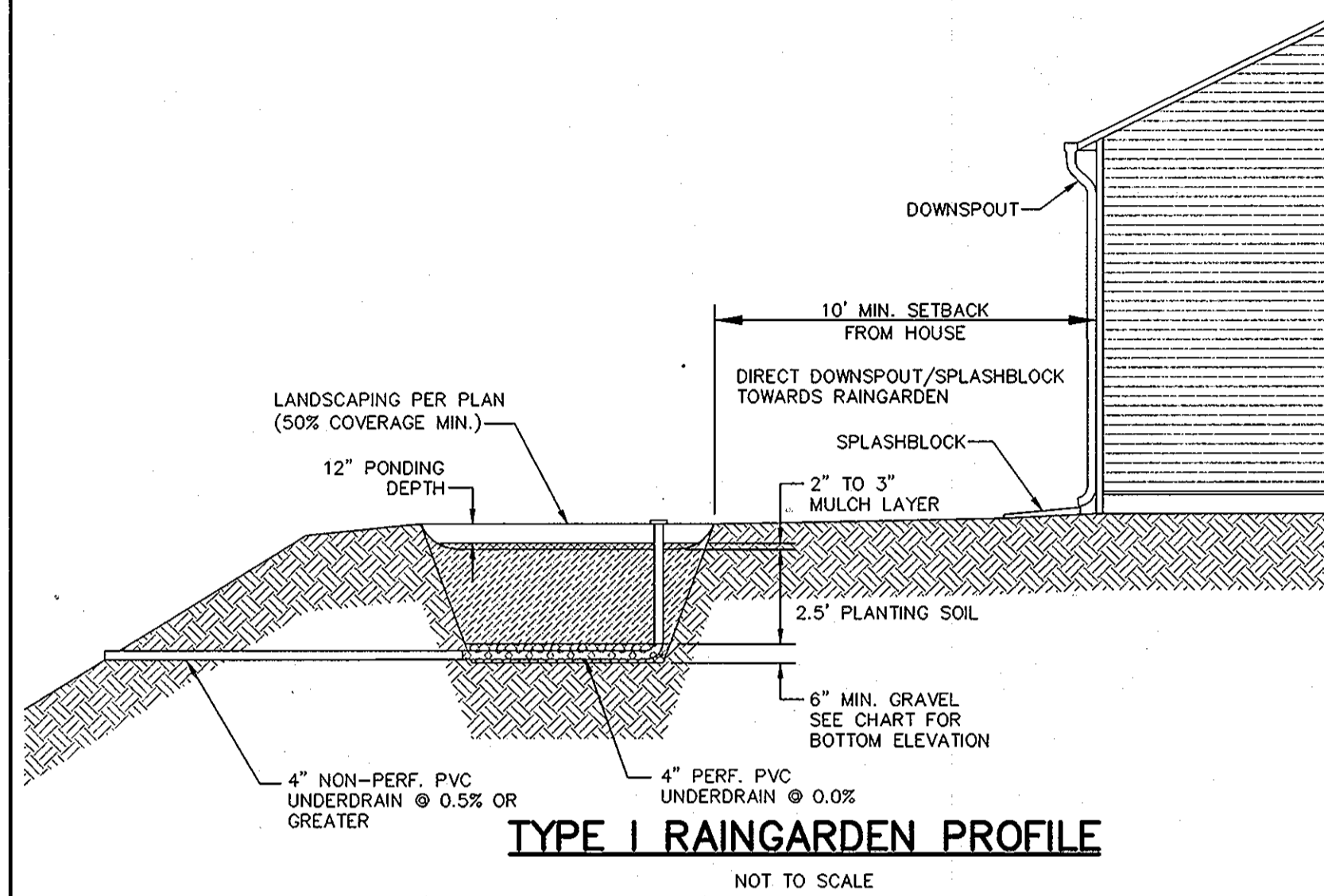
CHECK DAM	BOTTOM ELEV.	BOTTOM WIDTH	CREST ELEV.	PIPE DIA.	CL STA.	OFFSET
1	417.7	8.0	418.7	4"	5+32	18.0' RT.
2	417.2	5.0	418.20	4"	4+87	15.6' RT.
3	412.4	5.0	413.40	4"	4+10	15.5' RT.
4	411.5	5.0	412.50	4"	3+95	15.5' RT.
5	410.6	8.0	411.60	6"	3+77	17.0' RT.
6	409.5	8.0	410.50	6"	3+51	17.0' RT.
7	408.7	8.0	409.70	6"	3+25	17.0' RT.
8	407.4	8.0	408.40	6"	2+75	17.0' RT.
9	406.9	8.0	407.90	6"	2+50	17.0' RT.
10	405.9	8.0	406.9	6"	2+35	17.0' RT.
11	404.8	2.0	405.8	6"	2+20	14.0' RT.

Construction Specifications

- Swales and ditches shall be prepared in accordance with the construction specifications described in Section A-2 of the MDE SWM Manual, Standards and Specifications for Temporary Swale.
- The check dam shall be constructed of 4"-7" stone. The stone shall be placed so that it completely covers the width of the channel and keyed into the channel banks.
- The top of the check dam shall be constructed so the center is approximately 6" lower than the outer edges, forming a weir that water can flow across.
- The maximum height of the check dam at the center shall not exceed 2'.
- The upstream side of the check dam shall be lined with approximately 1" of 3/4" to 1 1/2" crushed aggregate.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED OPEN CHANNEL SYSTEMS (O-1 AND O-2)

- THE OPEN CHANNEL SYSTEM SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
- THE OPEN CHANNEL SHALL BE MOWED A MINIMUM OF AS NEEDED DURING THE GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 6 INCHES.
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE OPEN CHANNEL SYSTEM SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- REMOVE SILT IN THE OPEN CHANNEL SYSTEM WHEN IT EXCEEDS 25% OF THE ORIGINAL WQV.



TYPE I RAINGARDEN PROFILE

NOT TO SCALE

RAINGARDEN SPECIFICATIONS

PLANTING SOIL SHOULD BE SANDY LOAM, LOAMY SAND, OR A LOAM/SAND MIX AND SHOULD CONTAIN A MINIMUM 35 TO 60% SAND BY VOLUME. THE CLAY CONTENT SHOULD BE LESS THAN 25%. THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER. ONE SIMPLE METHOD OF FOR PRODUCING SUITABLE PLANTING SOIL IS TO MIX THREE PARTS OF COMMERCIALY AVAILABLE WASHED SAND WITH TWO PARTS TOPSOIL TO PRODUCE A HOMOGENEOUS SOIL. PLANTING SOIL SHOULD BE PLACED IN 12" TO 18" LAYERS THAT ARE LOOSELY COMPACTED (TAMPED LIGHTLY WITH A BACKHOE BUCKET) TO A DEPTH OF 2 1/2 FEET.

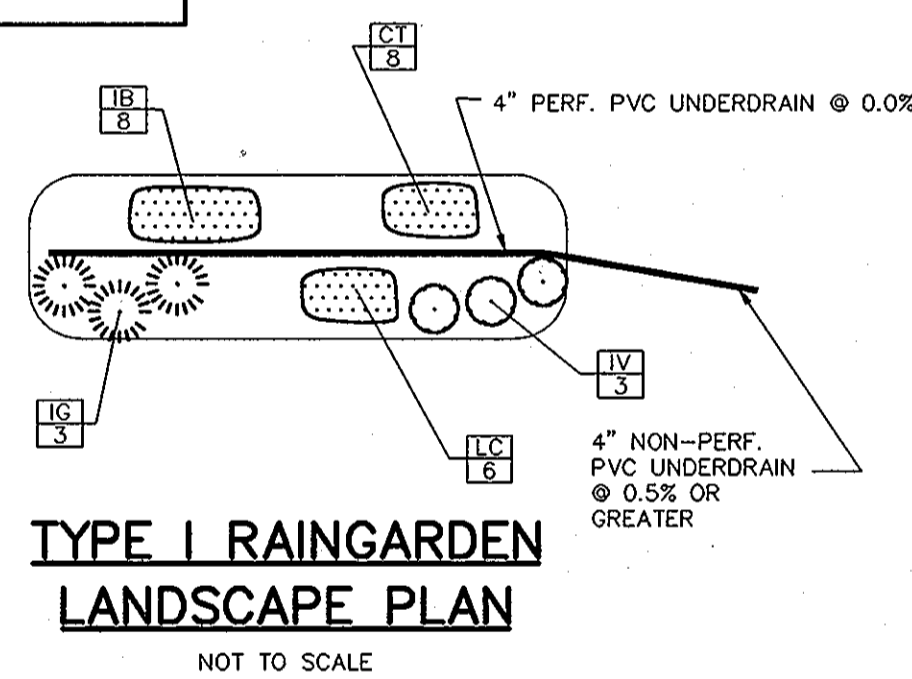
RAINGARDEN MULCH SHOULD BE STANDARD LANDSCAPE STYLE, SINGLE OR DOUBLE SHREDED HARDWOOD MULCH. THE MULCH SHOULD BE WELL AGED, UNIFORM IN COLOR, AND FREE OF OTHER MATERIALS SUCH AS WEEDS OR ROOTS. GRASS CLIPPINGS ARE UNACCEPTABLE AS A MULCH MATERIAL. MULCH SHOULD BE APPLIED TO A MAXIMUM DEPTH OF THREE INCHES. RAINGARDENS SHOULD BE REMULCHED ON AN ANNUAL BASIS.

UNDERDRAINS SHALL CONSIST OF A 4" DIAMETER RIGID SCHEDULE 40 (OR SDR 35) PVC PIPE (SLOTTED HOPE IS ALSO ACCEPTABLE) THAT IS PERFORATED WITHIN THE RAINGARDEN. PERFORATIONS SHALL BE 3/8" DIAMETER MINIMUM AT 6" ON CENTER WITH MINIMUM OF 4 HOLES PER ROW. UNDERDRAINS SHALL BE PLACED ON A 3" WIDE SECTION OF FILTER CLOTH (CLASS "C" GEOTEXTILE). THE PIPE IS PLACED NEXT, FOLLOWED BY THE GRAVEL BEDDING. THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5% AT LEAST ONE OBSERVATION WELL/CLEANOUT MUST BE PROVIDED PER RAINGARDEN. A RODENT GUARD SHOULD BE INSTALLED AT THE DOWNSTREAM END OF UNDERDRAINS TO PREVENT MICE AND LARGER RODENTS FROM ENTRY. A TYPICAL RODENT GUARD CONSISTS OF A 3/8" HEX-HEAD BOLT THROUGH THE PIPE HORIZONTALLY. NUTS ARE PLACED ON BOTH THE INSIDE AND OUTSIDE OF THE PIPE.

RAINGARDENS SHALL NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

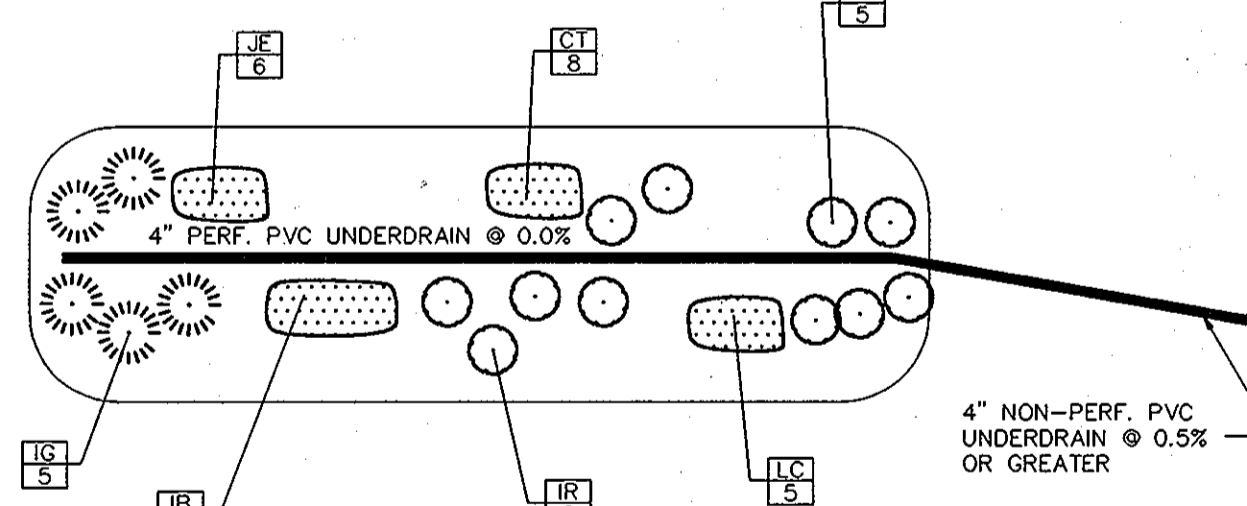
FOR PLANT INSTALLATION ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO THAT 1/8 OF THE BALL IS ABOVE THE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHOULD BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT (UPRIGHT) DURING THE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE RAINGARDEN IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFLECTS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH IS USED TO AMEND THE SOIL.



TYPE I RAINGARDEN LANDSCAPE PLAN

NOT TO SCALE



TYPE II RAINGARDEN LANDSCAPE PLAN

NOT TO SCALE

RAINGARDEN PLANT LIST - TYPE I

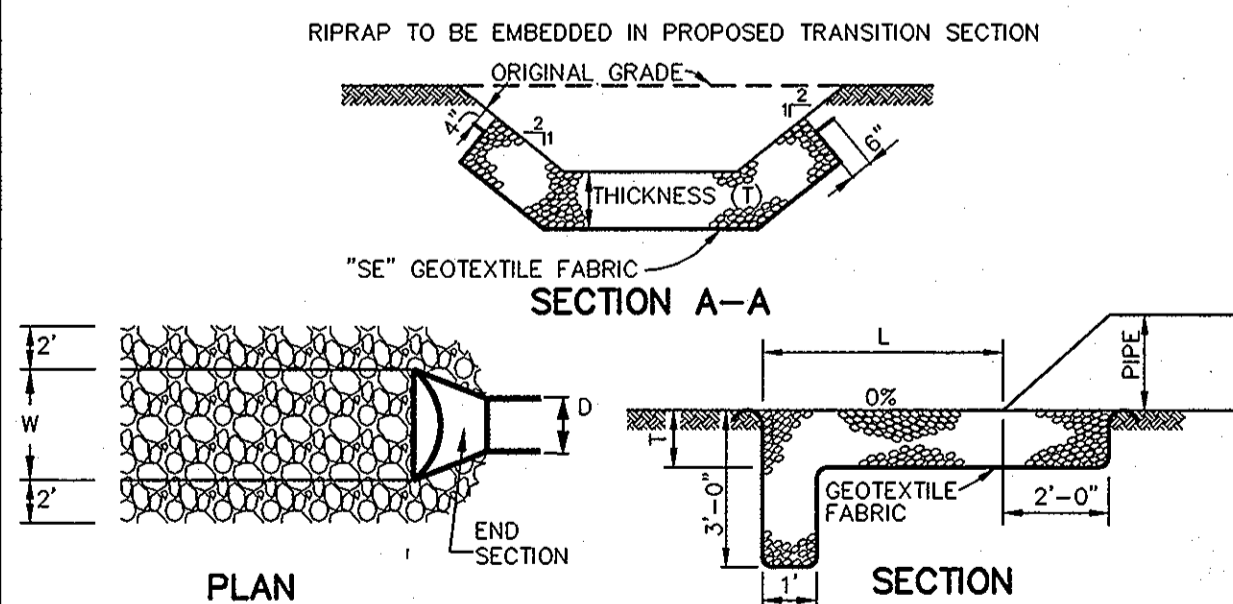
KEY	QTY. PER GARDEN	SCIENTIFIC/COMMON NAME	SIZE	ROOT	SPACING	ZONE*
IG	3	ILEX GLABRA INKBERRY	18"-24" HT.	CONT.	PLANT AS SHOWN	(2,3), 4
IV	3	ITEA VIRGINICA 'HENRY'S GARNET' VIRGINIA SWEETSPICE	2.5'-3' HT.	CONT.	PLANT AS SHOWN	***
CT	8	CAREX TYPHINA CAT-TAIL SEDGE	1 QUART	CONT.	18" SPACING	(2,3), 4
IB	8	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 GAL.	CONT.	18" SPACING	(1,2), 3
LC	6	LOBELIA CARDINALIS CARDINAL FLOWER	1 GAL.	CONT.	18" SPACING	1, (2, 3), 4

RAINGARDEN PLANT LIST - TYPE II

KEY	QTY. PER GARDEN	SCIENTIFIC/COMMON NAME	SIZE	ROOT	SPACING	ZONE*
IG	5	ILEX GLABRA INKBERRY	18"-24" HT.	CONT.	PLANT AS SHOWN	(2,3), 4
IR	6	ILEX VERTICILLATA 'RED SPRITE' AND 'JIM DANDY' RED SPRITE AND 'JIM DANDY' WINTERBERRY	18"-24" HT.	CONT.	SEE NOTE 1	1,(2,3)
IV	5	ITEA VIRGINICA 'HENRY'S GARNET' VIRGINIA SWEETSPICE	2.5'-3' HT.	CONT.	PLANT AS SHOWN	***
CT	8	CAREX TYPHINA CAT-TAIL SEDGE	1 QUART	CONT.	18" SPACING	(2,3), 4
IB	6	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 GAL.	CONT.	18" SPACING	(1,2), 3
JE	6	JUNCUS EFFUSUS SOFT RUSH	1 QUART	CONT.	18" SPACING	(2,3), 4
LC	5	LOBELIA CARDINALIS CARDINAL FLOWER	1 GAL.	CONT.	18" SPACING	1, (2, 3), 4

RAINGARDEN PLANT LIST NOTES:

- PLANT ONE 'JIM DANDY' WINTERBERRY PER EVERY 5 RED SPRITE WINTERBERRIES
- HYDROLOGIC ZONES ACCORDING TO APPENDIX A OF THE MARYLAND MODEL STORMWATER MANAGEMENT ORDINANCE JULY 2000.
- *** KNOWN TO TOLERATE INUNDATION AS WELL AS DRY AREAS ACCORDING TO DRR, MICHAEL A., MANUAL OF WOODY LANDSCAPE PLANTS
- **** COMMONLY USED BIORETENTION SPECIES ACCORDING TO TABLE A.4 IN APPENDIX A OF THE MARYLAND MODEL STORMWATER MANAGEMENT ORDINANCE JULY 2000.



RIPRAP OUTLET PROTECTION DETAIL

NO SCALE

STRUCTURE	MEDIAN STONE DIA. (L)	LENGTH (L)	WIDTH (W)	THICKNESS (T)	Q ₁₀	V ₁₀	d ₁₀	
E-1	9.5" CL I	14'	9'	9"	19"	22.30	6.64	1.23*
E-2	9.5" CL I	14'	9'	9"	19"	22.30	6.64	1.23*
LOT 2	9.5" CL I	5'	8'	8"	19"	1.50	4.14	0.49
LOT 3	9.5" CL I	5'	5'	5"	19"	1.74	4.23	0.52
LOT 4	9.5" CL I	5'	8'	8"	19"	0.37	2.77	0.23

NOTE: Q, V & DPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL.

* VALUES GIVEN FOR E-1 & E-2 ARE Q₂₅, V₂₅ & D₂₅.

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTING SOIL	SAND: 30% TO 60% SILT: 30% TO 55% CLAY: 0% TO 25%	N/A	USDA SOIL TYPES LOAMY SAND, SANDY LOAM, OR LOAM
MULCH	SHREDED HARDWOOD	N/A	AGED SIX MONTHS MINIMUM
GEOTEXTILE	CLASS "C" (ASTM D-4751) GRAB TENSILE STRENGTH (ASTM D-4832) PUNCTURE RESISTANCE (ASTM D-4833)	N/A	USE AS NECESSARY BENEATH UNDERDRAINS ONLY.
GRAVEL	AASHTO M-43 #57 OR #67	3/8" TO 3/4"	
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" RIGID SCHEDULE 40 PVC, SDR 35, OR HDPE	3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW, MIN. OF 2" GRAVEL OVER PIPES; GRAVEL NOT NECESSARY BENEATH PIPES.

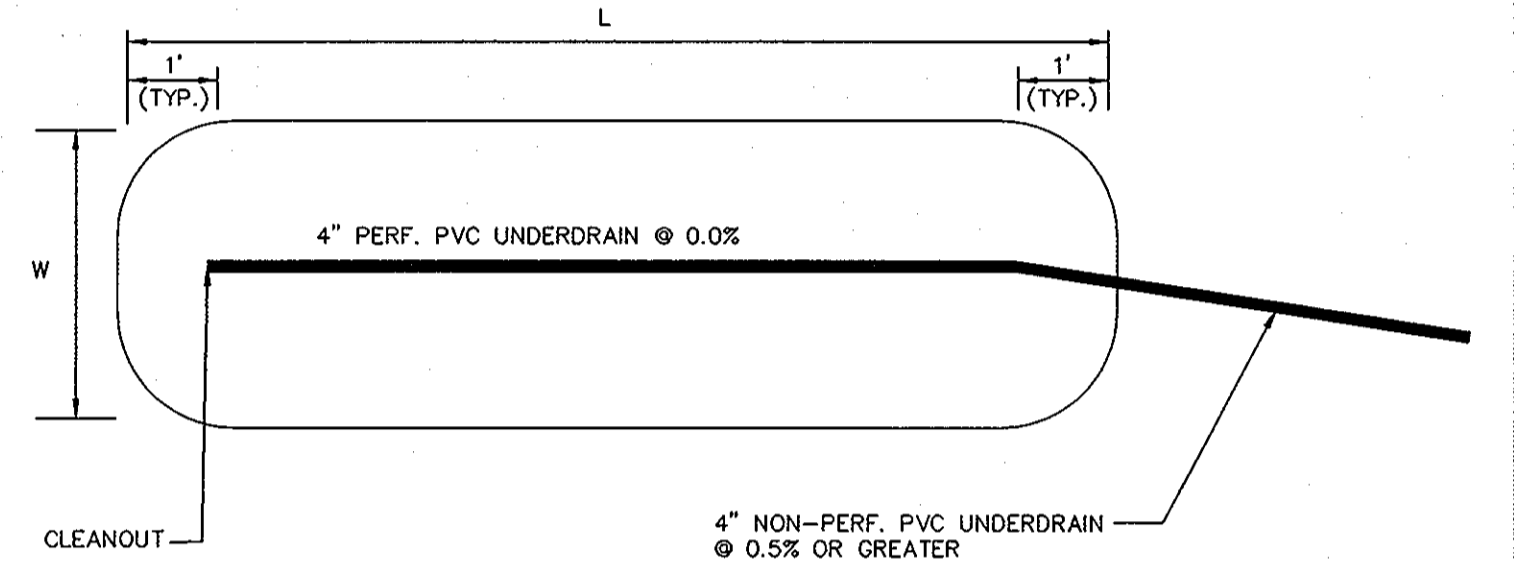
OPERATION AND MAINTENANCE SCHEDULE FOR RAINGARDENS

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

RAINGARDEN SCHEDULE

LOT #	SIZE	TYPE	TOP EL. AT MULCH LAYER	4" PERF. PIPE INV.	4" NON-PERF. PIPE OUTFALL INV.	L*	W*	BOTTOM ELEVATION
2	1 180 SF	I	410.0	406.75	406.50	51	15'	406.75
4	1 130 SF	I	420.00	416.75	415.90	143	13'	416.75
5	A 130 SF	I	414.00	410.75	410.00	19	12'	410.75
5	B 300 SF	II	410.00	406.75	406.00	16	20'	406.75

* LENGTH AND WIDTH ARE OVERALL LENGTH AND WIDTH. RAINGARDENS ARE NOT NECESSARILY RECTANGULAR IN SHAPE AND SHALL BE CONSTRUCTED PER PLAN.



TYPICAL RAINGARDEN

PLAN

NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *John DeWitt* 4/1/10
 CHIEF, DIVISION OF LAND DEVELOPMENT: *Veronica S. Smith* 4/10/10
 DIRECTOR: *Thomas E. Butler* 4/8/10

DATE NO. REVISION

OWNER: TROTTER POINT LLC
 ATTN: BRIAN BOY
 11807 WOLLINGFORD CT
 CLARKSVILLE, MD 21029
 T: 410.792.2565

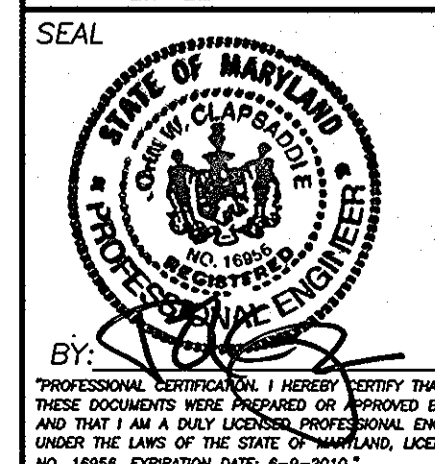
DEVELOPER: TROTTER POINT LLC
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PROJECT: TROTTER POINT
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 AREA TAX MAP 35 GRID 2 PARCEL 8 ZONED R-20
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 SINGLE FAMILY DETACHED HOMES

TITLE: STORMWATER MANAGEMENT DETAILS

Patton Harris Rust & Associates, PC
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
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 F 410.997.9282

DESIGNED BY: RFP
 DRAWN BY: KAD
 PROJECT NO: 12888-1-PLANS
 50P/C400SP08.DWG
 DATE: FEBRUARY 3, 2010
 SCALE: AS SHOWN
 DRAWING NO. 8 OF 12



BORING LOG **geolab**

Report No. Trotter Point, LLC Date: 4/17/2007

Client: Trotter Point, LLC

Project: SWM Study, Trotter Point, Howard County, MD

Boring No. B-1 (1 of 1) Elev. 413.8 Location: See Boring Location Plan

Altitude	Depth	DESCRIPTION OF MATERIALS (classification)	Sampler Name	Sample Depth (Feet)	Remarks
413.8	0.0	Sod and forest litter with root (organic) matter and organic soil		1.0	Boring dry during drilling and at completion.
413.7	0.6	Brown to orange-brown slightly micaceous silty clayey fine to medium SAND with traces coarse sand and rock fragments, moist, loose (SC) (LOAM)		2.3, 4	Cave-in depth at 6.0 feet.
410.4	3.0	Dark orange-brown slightly micaceous clayey silty fine to medium SAND, moist, loose (SM-SC) (SANDY LOAM)		3.1	After 24 hours, boring dry to cave-in depth.
407.9	4.0	Brown with orangish-yellowish-brown slightly micaceous fine to medium SAND with some silt, moist, medium dense (SM) (LOAMY SAND)		4.0	Standpipe installed in adjacent supplemental boring to 8.0 feet.
				5.7, 10	
				10.5	
				12, 12	
401.8	13.0	End of Boring		16.1	

Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.

BORING LOG **geolab**

Report No. Trotter Point, LLC Date: 4/17/2007

Client: Trotter Point, LLC

Project: SWM Study, Trotter Point, Howard County, MD

Boring No. B-2 (1 of 1) Elev. 421.1 Location: See Boring Location Plan

Altitude	Depth	DESCRIPTION OF MATERIALS (classification)	Sampler Name	Sample Depth (Feet)	Remarks
421.1	0.0	Sod with root (organic) matter and organic soil		1.0	Boring dry during drilling and at completion.
418.6	2.5	Brown to red-brown slightly micaceous silty clayey fine to coarse SAND with some quartz (rock) fragments, moist, medium dense (SC) (LOAM)		2.5	Cave-in depth at 9.3 feet.
				6.7, 9	After 24 hours, boring dry to cave-in depth.
				12.6	Standpipe installed in adjacent supplemental boring to 13.0 feet.
412.6	8.5	Yellow-brown and dark brown micaceous fine to coarse SAND with little to some rock fragments and little silt, damp, medium dense to dense (SM) (LOAMY SAND)		8.5	
				10.25, 23	
				15	
409.4	17.5	Brown micaceous fine to medium SAND with some silt, moist, medium dense (SM) (SANDY LOAM)		17.5	
				4, 4, 14	
401.1	20.0	End of Boring		17.0	

Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.

BORING LOG **geolab**

Report No. Trotter Point, LLC Date: 4/17/2007

Client: Trotter Point, LLC

Project: SWM Study, Trotter Point, Howard County, MD

Boring No. B-3 (1 of 1) Elev. 421.4 Location: See Boring Location Plan

Altitude	Depth	DESCRIPTION OF MATERIALS (classification)	Sampler Name	Sample Depth (Feet)	Remarks
421.4	0.0	Sod with root (organic) matter and organic soil		1.0	Boring dry during drilling and at completion.
418.4	3.0	Light brown to orange-brown slightly micaceous silty clayey fine to medium SAND with trace rock fragments, moist, loose (SC) (LOAM)		3.5, 4	Cave-in depth at 10.9 feet.
				3.5, 4	After 24 hours, boring dry to cave-in depth.
				36.4	Standpipe installed in adjacent supplemental boring to 13.5 feet.
414.4	6.0	Yellow-brown slightly micaceous fine to medium SAND with some silt, damp, loose (SM) (LOAMY SAND)		6.0	
				3.3, 3	
				7.5	
413.4	8.0	Brown slightly micaceous silty fine SAND with little medium sand, moist, medium dense to dense (SM) (SANDY LOAM)		8.0	
				2, 4, 4	
				10	
				13.5	
				5, 8, 9	
				15	
				18.3	
401.4	20.0	End of Boring		20	

Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.

BORING LOG **geolab**

Report No. Trotter Point, LLC Date: 4/17/2007

Client: Trotter Point, LLC

Project: SWM Study, Trotter Point, Howard County, MD

Boring No. B-4 (1 of 1) Elev. 418.6 Location: See Boring Location Plan

Altitude	Depth	DESCRIPTION OF MATERIALS (classification)	Sampler Name	Sample Depth (Feet)	Remarks
418.6	0.0	Sod with root (organic) matter and organic soil		1.0	Boring dry during drilling and at completion.
415.1	3.5	Brown with orange-brown slightly micaceous silty fine to medium SAND, moist, loose (SM) (SANDY LOAM)		3.5	Cave-in depth at 10.0 feet.
				2, 2, 2	
				2.5	
413.0	5.0	Light orange-tan slightly micaceous fine to medium SAND with some silt and little quartz (rock) fragments, damp, loose (SM) (LOAMY SAND)		5.0	After 24 hours, boring dry to cave-in depth.
				3, 4, 4	Standpipe installed in adjacent supplemental boring to 9.5 feet.
				3	
412.4	6.0	Light yellow-tan fine to coarse SAND with little silt, moist, loose (SM) (LOAMY SAND)		6.0	
				3, 3, 3	
				7.5	
410.1	8.5	Brown with orange-brown slightly micaceous fine to medium SAND with some silt, damp, medium dense (SM) (SANDY LOAM)		8.5	
				3, 6, 14	
				10	
406.1	12.5	Light yellow-tan to grayish-brown with off-white slightly micaceous fine to coarse SAND with some silt, damp, very dense (Weathered Rock) (SM) (SANDY LOAM)		12.5	
				50, 5	
				15	
				16.5	
				50, 5	
400.4	18.0	End of Boring		18	

Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.

BORING LOG **geolab**

Report No. Trotter Point, LLC Date: 4/17/2007

Client: Trotter Point, LLC

Project: SWM Study, Trotter Point, Howard County, MD

Boring No. B-5 (1 of 1) Elev. 414.4 Location: See Boring Location Plan

Altitude	Depth	DESCRIPTION OF MATERIALS (classification)	Sampler Name	Sample Depth (Feet)	Remarks
414.4	0.0	Sod with root (organic) matter and organic soil		1.0	Boring dry during drilling and at completion.
411.1	3.3	Brown to orange-brown slightly micaceous silty fine to medium SAND, moist, loose (SM) (SANDY LOAM)		3.3	Cave-in depth at 8.2 feet.
				2, 2, 4	
				2.3	
410.9	3.5	Brown micaceous fine to coarse SAND with some silt, moist to damp, loose (SM) (LOAMY SAND)		3.5	After 24 hours, boring dry to cave-in depth.
				2, 1, 5	Standpipe installed in adjacent supplemental boring to 9.0 feet.
				5	
				4, 4, 5	
				7.5	
406.4	8.0	Light yellow-tan to off-white slightly micaceous fine to coarse SAND with some silt, damp, medium dense (SM) (LOAMY SAND)		8.0	
				5, 4, 9	
				10	
403.4	11.0	Orange-brown slightly micaceous silty fine SAND with trace medium sand, moist, medium dense (SM) (SANDY LOAM)		11.0	
				12.5	
				5, 5, 5	
				15	
399.4	15.0	End of Boring		15	

Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.

BORING LOG **geolab**

Report No. Trotter Point, LLC Date: 4/17/2007

Client: Trotter Point, LLC

Project: SWM Study, Trotter Point, Howard County, MD

Boring No. B-6 (1 of 1) Elev. 409.3 Location: See Boring Location Plan

Altitude	Depth	DESCRIPTION OF MATERIALS (classification)	Sampler Name	Sample Depth (Feet)	Remarks
409.3	0.0	Brown with off-white micaceous fine to medium SAND with some silt and some rock fragments, moist, loose to dense (SM) (LOAMY SAND)		1.0	Boring dry during drilling and at completion.
				2, 13, 23	
				2.3	Cave-in depth at 2.5 feet.
418.9	2.5	Light yellow-tan and dark micaceous gray Rock Fragments with silty fine to coarse SAND, damp, dense to very dense (Weathered Rock) (GM) (LOAMY SAND)		2.5	After 24 hours, boring dry to cave-in depth.
				14, 17, 27	
				5	No sod/organic cover present at the surface.
403.3	6.0	Auger Refusal at 6.0 feet		6.0	

Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.

BORING LOG **geolab**

Report No. Trotter Point, LLC Date: 4/17/2007

Client: Trotter Point, LLC

Project: SWM Study, Trotter Point, Howard County, MD

Boring No. B-7 (1 of 1) Elev. 403.1 Location: See Boring Location Plan

Altitude	Depth	DESCRIPTION OF MATERIALS (classification)	Sampler Name	Sample Depth (Feet)	Remarks
403.1	0.0	Sod with root (organic) matter and organic soil		1.0	Boring dry during drilling and at completion.
402.4	0.8	Brown to dark brown slightly micaceous fine to medium SAND with some silt, moist, loose (SM) (SANDY LOAM)		1.0	Cave-in depth at 5.2 feet.
				3, 2, 3	
				2.5	
				3.5	After 24 hours, boring dry to cave-in depth.
				2, 2, 4	Standpipe installed in adjacent supplemental boring to 4.0 feet.
				5	
399.1	4.0	Dark brown with off-white slightly micaceous fine to coarse SAND with some silt, damp, medium dense (SM) (LOAMY SAND)		4.0	
				4, 4, 13	
				10.2	
395.1	8.0	White, gray and black Rock Fragments with some silty fine to coarse sand, damp, very dense (GM) (LOAMY SAND)		8.0	
394.6	8.5	Auger Refusal at 8.5 feet		8.5	

Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

M. Dennis 4/1/07 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

K. J. Shedd 4/10/07 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

Dennis & Buttle 4/8/07 DATE
DIRECTOR

DATE	NO.	REVISION

OWNER: TROTTER POINT LLC
ATTN: BRIAN BOY
11807 WOLLINGFORD CT
CLARKSVILLE, MD 21029
T: 410.792.2565

DEVELOPER: TROTTER POINT LLC
ATTN: BRIAN BOY
9695 NORFOLK AVENUE
LAUREL, MD 20723
T: 410.792.2565

PROJECT: TROTTER POINT
A RESUBDIVISION OF FOREST HILLS LOT 15, PLAT BOOK 5, P. 4

AREA TAX MAP 35 GRID 2 PARCEL 8 ZONED R-20
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SINGLE FAMILY DETACHED HOMES

TITLE: SOIL BORING LOGS

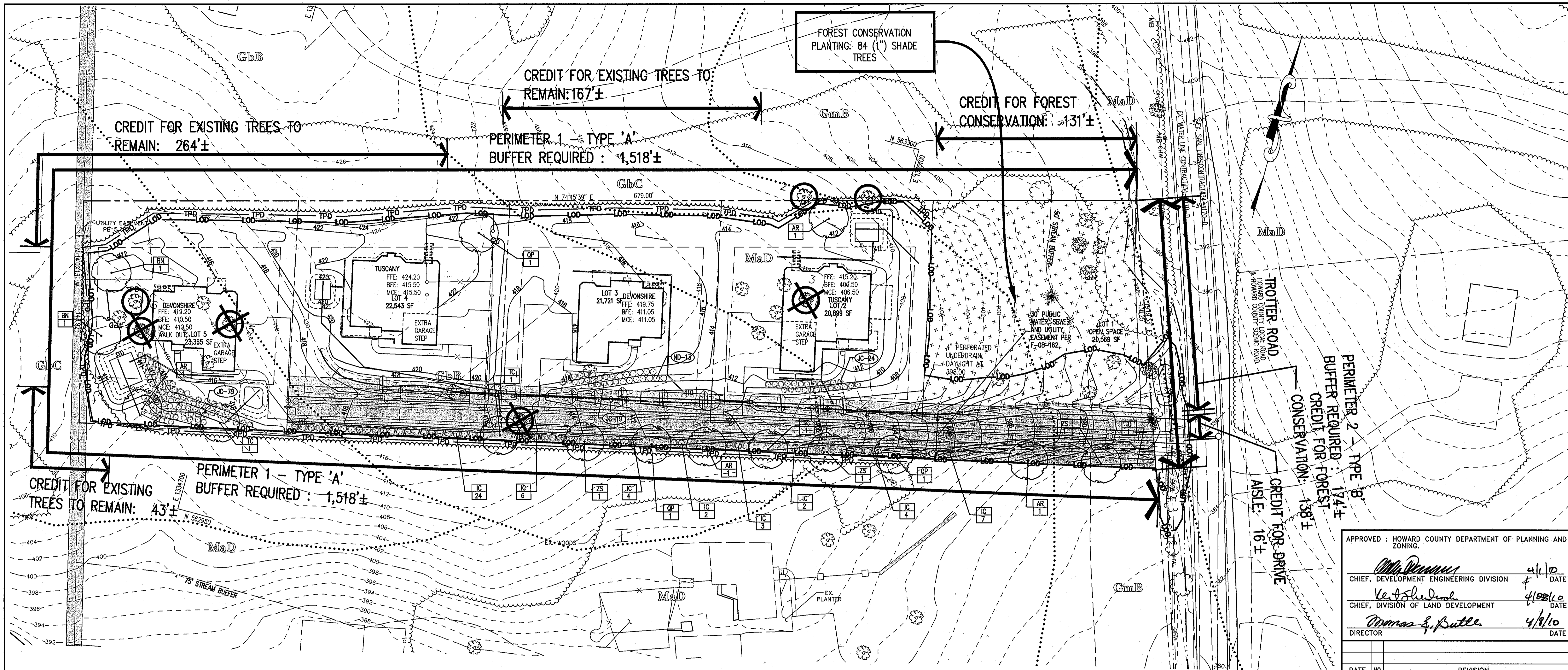
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DESIGNED BY : ALC
DRAWN BY: ALC
PROJECT NO : 12888-1-1\PLANS
SDP C4005DP09
DATE : FEBRUARY 3, 2010
SCALE : NOT TO SCALE
DRAWING NO. 9 OF 12

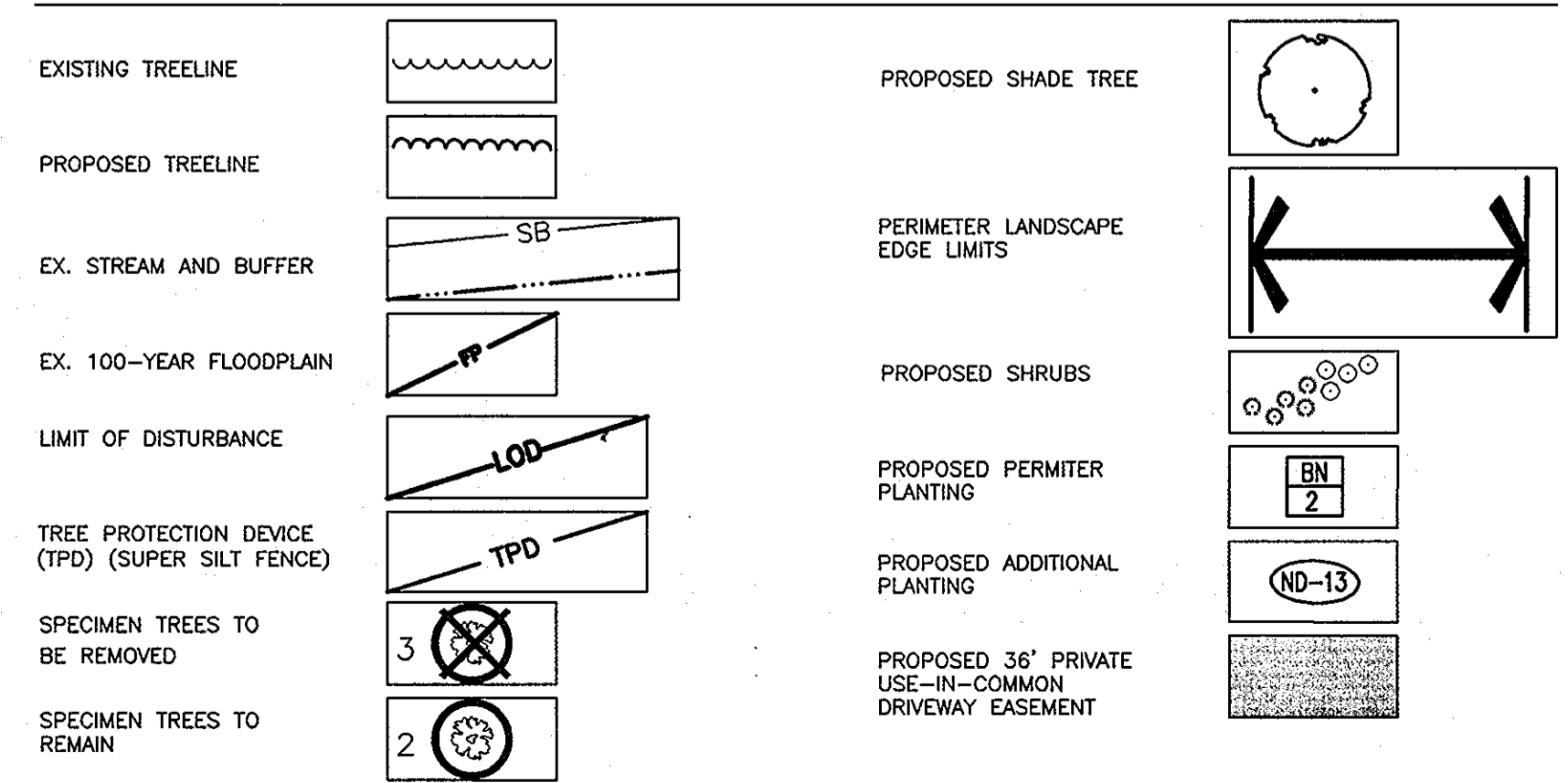
SEAL: STATE OF MARYLAND PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18536, EXPIRATION DATE: 6-30-2014.

SDP-09-024



LEGEND



SPECIMEN TREE CHART				
KEY	SPECIES	SIZE	CONDITION	REMAIN/REMOVE
1	BLACK LOCUST (<i>Robinia pseudoacacia</i>)	48"	GOOD	REMAIN
2	BLACK LOCUST (<i>Robinia pseudoacacia</i>)	48"	GOOD	REMAIN
3	SILVER MAPLE (<i>Acer saccharinum</i>)	32"	GOOD	REMOVE
4	TULIP POPLAR (<i>Liriodendron tulipifera</i>)	30"	GOOD	REMOVE
5	TULIP POPLAR (<i>Liriodendron tulipifera</i>)	44"	GOOD	REMOVE
6	SLIPPERY ELM (<i>Ulmus rubra</i>)	40"	GOOD	REMAIN
7	SILVER MAPLE (<i>Acer saccharinum</i>)	51"	GOOD	REMOVE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Chris Dennis 4/1/10 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Kevin Shedd 4/28/10 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT

Thomas E. Buttle 4/8/10 DATE
 DIRECTOR

DATE	NO.	REVISION

OWNER
 TROTTER POINT LLC
 ATTN: BRIAN BOY
 11807 WOLLINGFORD CT
 CLARKSVILLE, MD 21029
 T: 410.792.2565

DEVELOPER
 TROTTER POINT LLC
 ATTN: BRIAN BOY
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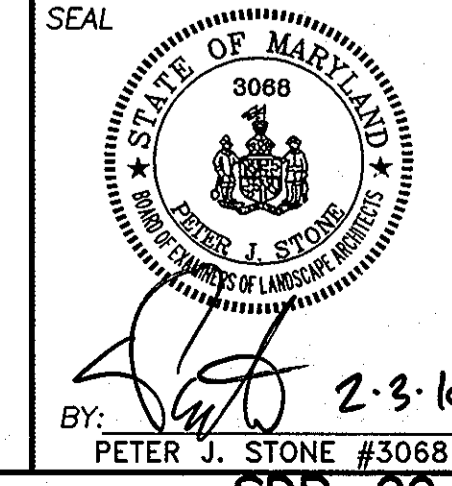
PROJECT
TROTTER POINT
 A RESUBDIVISION OF FOREST HILLS LOT 15, PLAT BOOK 5, P. 4

AREA TAX MAP 35 GRID 2 PARCEL 8 ZONED R-20
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SINGLE FAMILY DETACHED HOMES

TITLE
FINAL LANDSCAPE PLAN

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

DESIGNED BY : PHRA
 DRAWN BY: ALC
 PROJECT NO : 12888-1-1\PLANS
 SDP_C400SDP10
 DATE : FEBRUARY 3, 2010
 SCALE : 1"=30'
 DRAWING NO. 10 OF 12



PLANTING SPECIFICATIONS

- Plants, related material, and operations shall meet the detailed description, as given on the plans and as described herein. Where discrepancies exist between Standards & Guidelines referenced within these specifications and the Landscape Manual of the applicable jurisdiction, the latter takes precedence.
- All plant material, unless otherwise specified, that is not nursery grown, uniformly branched, does not have a vigorous root system, and does not conform to the most recent edition of the American Association of Nurserymen (AAN) Standards will be rejected. Plant material that is not healthy, vigorous, free from defects, decay, disfiguring roots, sunscald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements will be rejected. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will be rejected. All B & B plants shall be freshly dug; no heeled-in plants or plants from cold storage will be accepted.
- Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to the most recent edition of the "Landscape Specification Guidelines by the Landscape Contractors Association of MD, DC, & VA", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects.
- Contractor shall guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section on the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.
- Contractor shall be responsible for notifying all relevant and appropriate utility companies, utility contractors, and "Miss Utility" a minimum of 48 hours prior to the beginning of any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Major changes will require the approval of the landscape architect. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.
- Protection of existing vegetation to remain shall be accomplished via the installation of tree protection fence at the l.o.d. and implement tree protection methods as shown. The area below the dripline of existing trees to remain/be saved should remain undisturbed from cutting and filling during the development process. No impervious material should be placed under the dripline of trees to remain. Tree protection fence is required to be installed around the trees of the limit of disturbance. Tree protection fence is also required around each specimen tree to remain. See plan for tree protection fence locations.
- Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction. Do not plant Pinus strobus or Xpressocyparis leylandii between November 15 and March 15. Landscape plants are not to be installed before site is graded to final grade.
- Contractor to regrade, fine grade, sod, hydroseed and straw mulch all areas disturbed by their work.
- Bid shall be based on actual site conditions. No extra payment shall be made for work arising from actual site conditions differing from those indicated on drawings and specifications.
- Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence. Where discrepancies on the plan exist between the symbols and the callout leader, the number of symbols take precedence.
- All shrubs and groundcover areas shall be planted in continuous planting beds, prepared as specified, unless otherwise indicated on plans. (See Specification 13). Beds to be mulched with minimum 2" and maximum 3" of composted, double-shredded hardwood mulch throughout.
- Positive drainage shall be maintained on planting beds (minimum 2 percent slope).
- Bed preparation shall be as follows: Till into a minimum depth of 6" 1 yard of Compro or Leafgro per 200 SF of planting bed, and 1 yard of topsoil per 100 SF of bed. Add 3 lbs of standard 5-10-5 fertilizer per cubic yard of planting mix and till. Ericaceous plants (Azaleas, Rhododendrons, etc.); top dress after planting with iron sulfate or comparable product according to package directions. Taxus baccata 'repandens' (English weeping yew); Top dress after planting with 1/4 to 1/2 cup lime each.
- Planting mix: For trees not in a prepared bed, mix 50% Compro or Leafgro with 50% soil from tree hole to use as backfill, see tree planting detail.
- Weed & insect control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. For tree planting, apply a pre-emergent on top of soil and root ball before mulching. Caution: For areas to be planted with a ground cover, be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated. Maintain the mulch weed-free for the extent of the warranty period. Under no circumstances is a pesticide containing chlorpyrifos to be used as a means of pest control.
- Water: All plant material planted shall be watered thoroughly the day of planting. All plant material not yet planted shall be properly protected from drying out until planted. At a minimum, water unplanted plant material daily and as necessary to avoid desiccation.
- Pruning: Do not heavily prune trees and shrubs at planting. Prune only broken, dead, or diseased branches.
- All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded, grass seed planted, and covered with straw mulch.

SCHEDULE A - PERIMETER LANDSCAPE EDGE				
	ADJACENT TO PERIMETER PROPERTIES		ADJACENT TO ROADWAYS	
PERIMETER	1		2	
LANDSCAPE TYPE	A		B	
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	1518±		174±	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 605		YES 138	
CREDIT FOR WALL, FENCE, BERM OR DRIVE AISLE (YES/NO/LINEAR FEET)	NO		YES 16' ±	
LINEAR FEET REMAINING	913±		20'	
NUMBER OF PLANTS REQUIRED				
SHADE TREES	15		0	
EVERGREEN TREES	0		1	
SHRUBS	52**		0	
NUMBER OF PLANTS PROVIDED				
SHADE TREES	15		0*	
EVERGREEN TREES	0		1*	
SMALL FLOWERING TREES	0		0*	
SHRUBS	52		0*	

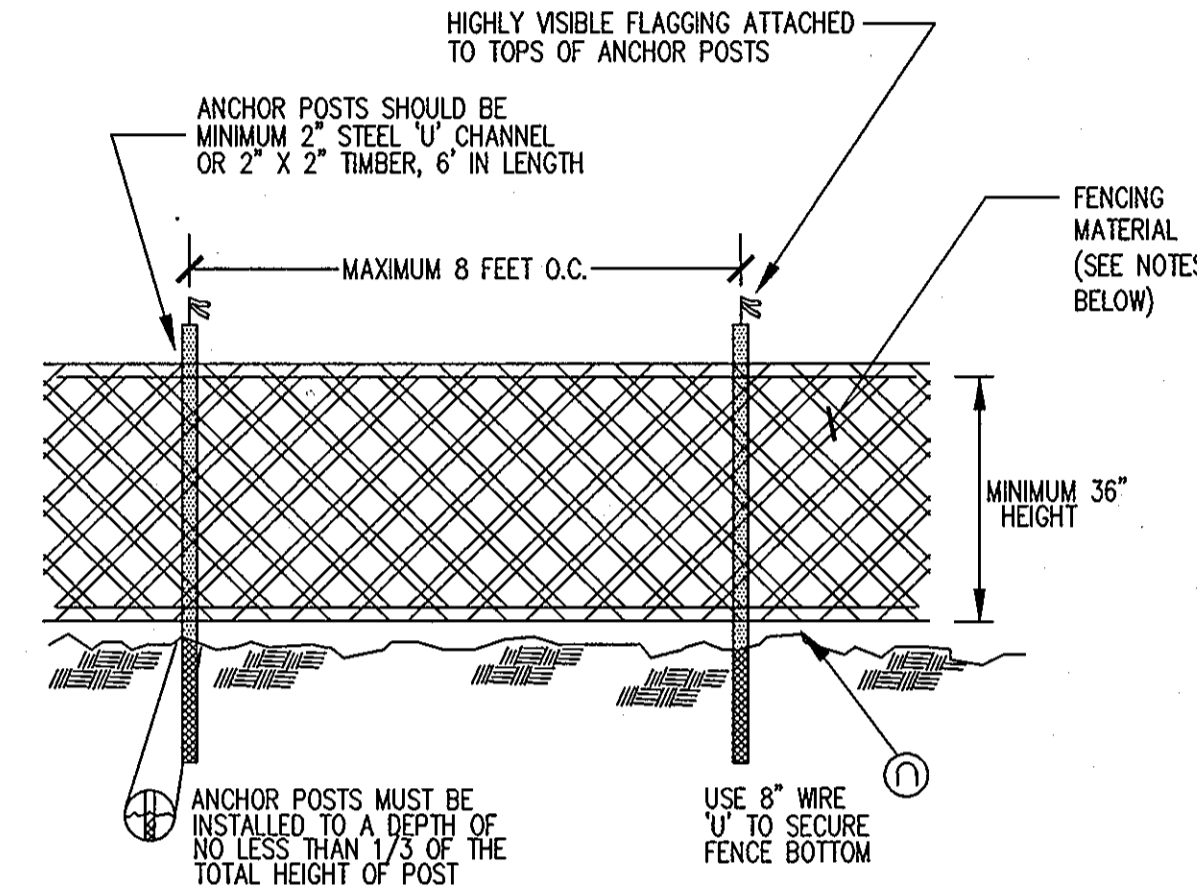
SCHEDULE 'A' NOTES

- PERIMETER 2 REQUIREMENTS WILL BE SATISFIED BY AFFORESTATION PLANTINGS AND EXISTING VEGETATION (NEW AFFORESTATION PLANTINGS ALONG TROTTER ROAD WILL BE PLANTED WITH MATURE TREES OF AT LEAST 1"-2" CALIPER). THE REQUIRED PLANTINGS FOR PERIMETER 2 ARE NOT BONDED AS THE REFORESTATION PLANTINGS HAVE BEEN BONDED.
- 52 SHRUBS (HEDGE) ARE REQUIRED ALONG THE PORTION OF PERIMETER 1 WHERE THERE IS LESS THAN 10' BETWEEN THE DRIVEWAY AND THE PROPERTY LINE. SEE SECTION 16.120(b)(6)(v)

SCENIC ROAD LANDSCAPING

SCENIC ROAD PLANT REQUIREMENTS WILL BE FULFILLED BY THE AFFORESTATION PLANTINGS. SEE FINAL FOREST CONSERVATION PLAN.

PLANT SCHEDULE						
SYMBOL	QTY.	SCIENTIFIC/COMMON NAME	SIZE	ROOT	REMARKS	
AR	4	ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE	2.5-3" CAL.	B&B	AS SHOWN	
BN	2	BETULA NIGRA 'HERITAGE' HERITAGE RIVER BIRCH	10-12' HT.	B&B	MULTI-STEM	
QP	3	QUERCUS PHELLOS WILLOW OAK	2.5-3" CAL.	B&B	AS SHOWN	
TC	3	TILIA CORDATA 'GREENSPIRE' GREENSPIRE LITTLELEAF LINDEN	2.5-3" CAL.	B&B	AS SHOWN	
ZS	3	GINKGO BILOBA 'AUTUMN GOLD' AUTUMN GOLD GINKGO	2.5-3" CAL.	B&B	MALE ONLY	
IO	1	ILEX OPACA AMERICAN HOLLY	5-6' HT.	B&B	AS SHOWN	
IC	52	ILEX CORNUTA 'BURFORDI NANA' DWARF BURFORD HOLLY	24-30" HT.	CONT.	AS SHOWN	
JC	122	JUNIPERUS CONFERTA 'BLUE PACIFIC' BLUE PACIFIC SHORE JUNIPER	1 GAL.	CONT.	AS SHOWN	
ND	13	COTONEASTER SAUCIFOLIUS 'REPENS' WILLOWLEAF COTONEASTER	1 GAL.	CONT.	AS SHOWN	



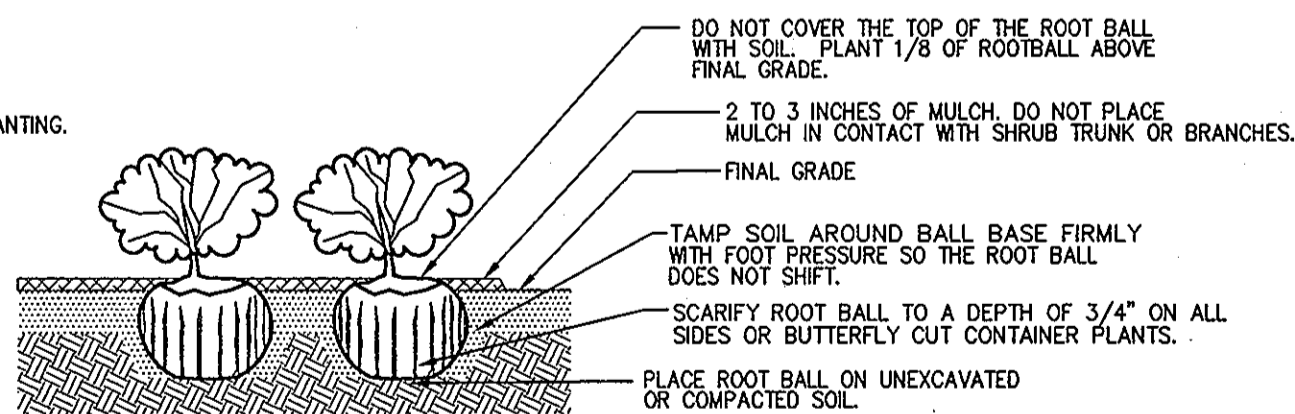
NOTES:

- BLAZE ORANGE MESH OR SUPER SILT FENCE FOR TREE PROTECTION DEVICE, ONLY.
- BOUNDARIES OF PROTECTION AREA WILL BE ESTABLISHED PRIOR TO GRADING AND SEDIMENT CONTROL.
- AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVER LARGE ROOTS WHEN INSTALLING POSTS.
- FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION FENCING
NOT TO SCALE

NOTES:

- SEE PLANTING SPECIFICATIONS FOR PREPARATION OF PLANTING BED.
- DO NOT HEAVILY PRUNE THE SHRUB AT PLANTING. PRUNE ONLY BROKEN, DAMAGED, OR DISEASED BRANCHES.
- DIG PLANTING PIT 12" WIDER THAN THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 18".
- FOR B&B SHRUBS, REMOVE ALL TWINE ROPE, AND BURLAP FROM TOP OF ROOT BALL.
- ALL CONTAINERS SHALL BE REMOVED BEFORE INSTALLATION.

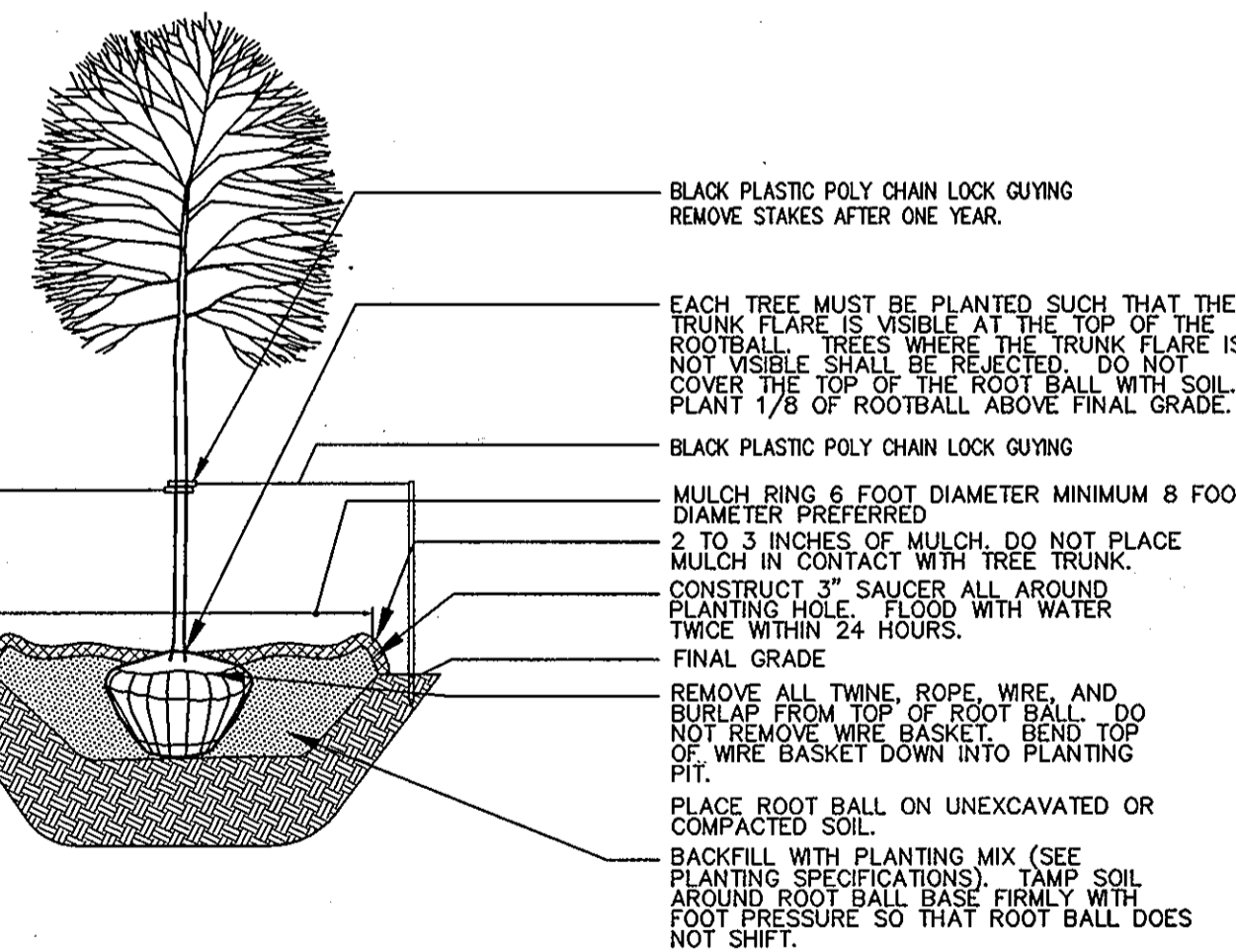


SHRUB BED PLANTING DETAIL - B&B AND CONTAINER SHRUBS
NOT TO SCALE

NOTES:

- DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED, HOWEVER DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
- STAKE TREES AS SHOWN.
- DIG PLANTING PIT TWICE AS WIDE AS THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 5'.
- TIGHTEN GUYS ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. GUYS SHALL BE LONG ENOUGH TO ACCOMMODATE 1.5 IN. OF GROWTH AND BUFFER ALL BRANCHES.
- TUCK ANY LOOSE ENDS OF THE GUY SO THAT NO LOOSE ENDS ARE EXPOSED.

INSTALL TWO STAKES ON OPPOSITE SIDES OF TREE, PARALLEL TO THE DIRECTION OF THE PREVAILING WINDS, UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT. ALL STAKES SHALL BE DRIVEN UNDER THE EDGE OF THE ROOT BALL INTO PREFERABLY UNEXCAVATED SOIL.



DECIDUOUS B&B TREE PLANTING DETAIL (TREES 3" CAL. OR SMALLER)
NOT TO SCALE

GENERAL NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$6,060.
15 SHADE TREES @ \$300 = 4,500
0 ORNAMENTAL TREES @ \$150 = 0
0 EVERGREEN TREES @ \$150 = 0
52 SHRUBS @ \$30 = 1,560
Landscape surety was addressed with Developer Agreement under F 08-102.
- THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- ALL MATERIAL SELECTED SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION.
- AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS SHALL BE OF THE PROPER HEIGHT AND/OR SPREAD REQUIREMENTS IN ACCORDANCE WITH THIS PLAN AND THE HOWARD COUNTY LANDSCAPE MANUAL.
- NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.
- PERIMETER LANDSCAPE OBLIGATIONS WILL BE FULFILLED BY NEW PLANTINGS AND EXISTING FOREST AREAS.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION, FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE LANDSCAPE MANUAL.
- DEVELOPER/BUILDER IS RESPONSIBLE FOR INSTALLATION OF SWM PLANTINGS, STREET TREES, PERIMETER LANDSCAPING AND SCENIC ROAD PLANTING. NO INTERNAL LANDSCAPING IS REQUIRED WITH THIS DEVELOPMENT.
- ALL 2:1 SLOPES TO BE PERMANENTLY VEGETATED WITH PERENNIAL SEED MIXTURE SO REGULAR MOWING IS NOT REQUIRED.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DEVELOPMENT ENGINEERING DIVISION 4/1/10 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT 4/08/10 DATE

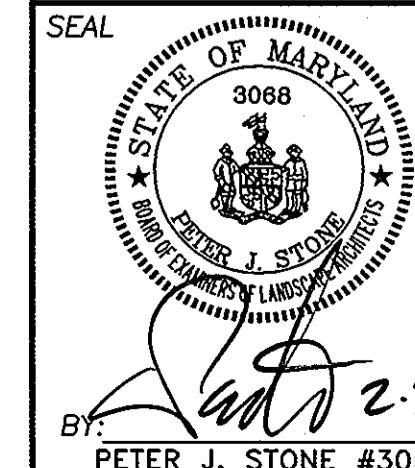
DIRECTOR 4/8/10 DATE

DATE	NO.	REVISION
OWNER		
TROTTER POINT LLC ATTN: BRIAN BOY 11807 WOLLINGFORD CT CLARKSVILLE, MD 21029 T: 410.792.2565		
DEVELOPER		
TROTTER POINT LLC ATTN: BRIAN BOY 9695 NORFOLK AVENUE LAUREL, MD 20723 T: 410.792.2565		
PROJECT		
TROTTER POINT A RESUBDIVISION OF FOREST HILLS LOT 15, PLAT BOOK 5, P. 4		
AREA TAX MAP 35 GRID 2 PARCEL 8 ZONED R-20 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SINGLE FAMILY DETACHED HOMES		

TITLE
FINAL LANDSCAPE NOTES AND DETAILS

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

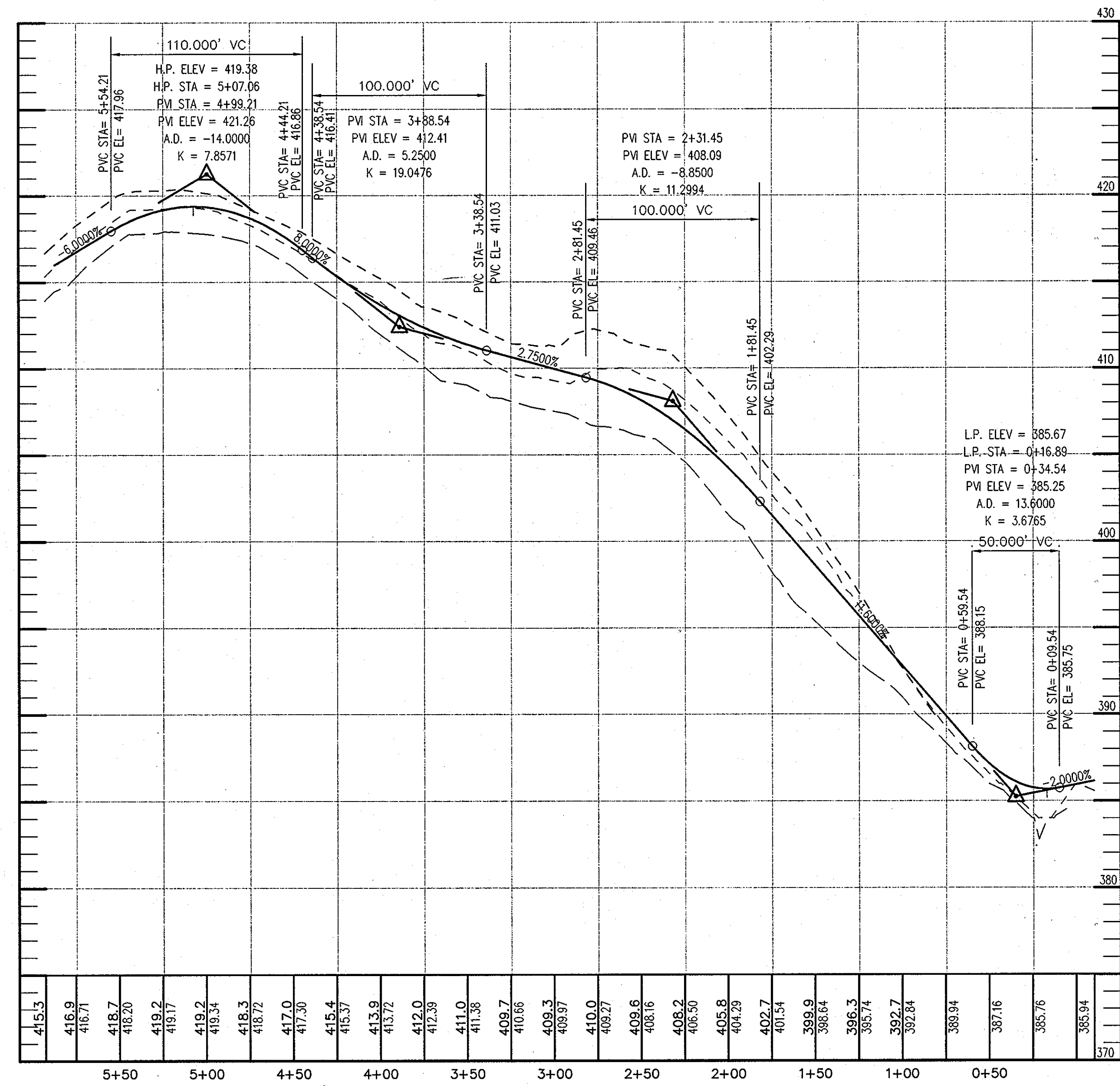
DESIGNED BY : ALC
DRAWN BY: ALC
PROJECT NO : 12888-1-1\PLANS
SDP/C400SDP11.DWG
DATE : FEBRUARY 3, 2010
SCALE : AS SHOWN
DRAWING NO. 11 OF 12



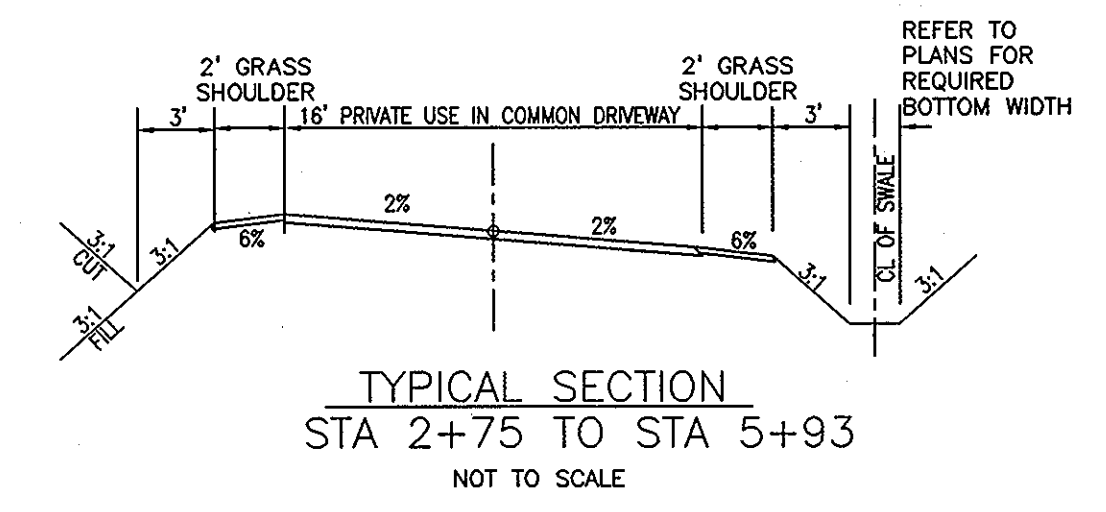
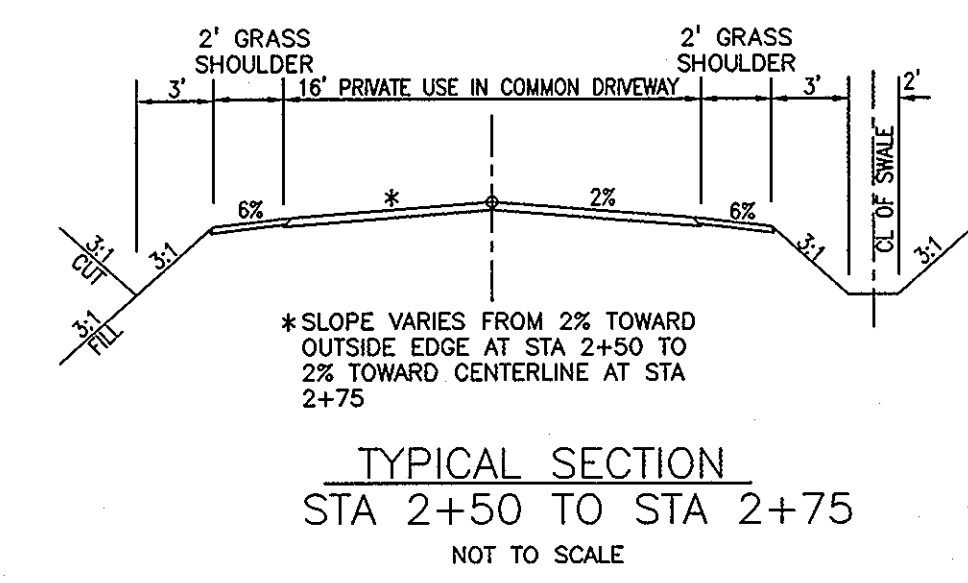
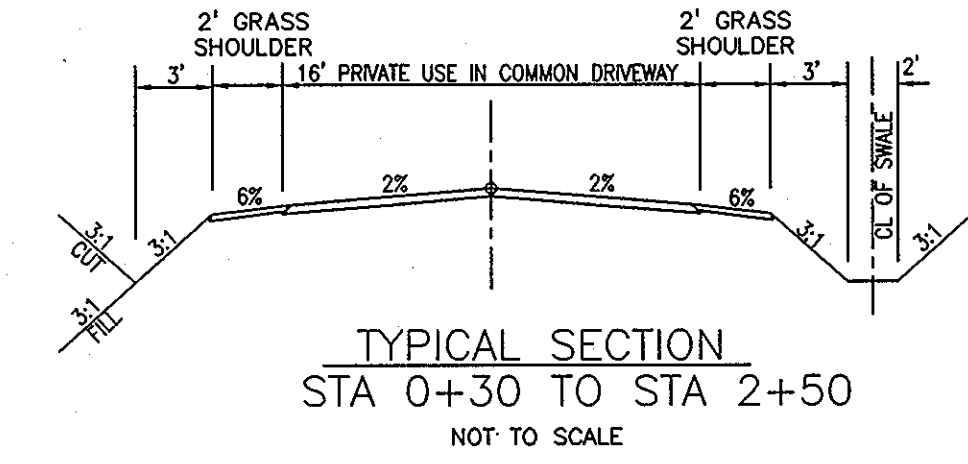
DEVELOPER'S/BUILDER'S CERTIFICATE:

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 2/3/10



PRIVATE DRIVEWAY PROFILE
 SCALE: HOR: 1"=50'
 VERT: 1"=5'



LEGEND

- EX. GRND. 14' RIGHT -----
- EX. GRND. AT CENTER LINE -----
- EX. GRND. 14' LEFT -----
- PROP. GRADE AT CENTER LINE -----

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[Signature] 4/1/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/28/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4/8/10
 DIRECTOR DATE

DATE	NO.	REVISION

OWNER: TROTTER POINT LLC
 ATTN: BRIAN BOY
 11807 WOLLINGFORD CT
 CLARKSVILLE, MD 21029
 T: 410.792.2565

DEVELOPER: TROTTER POINT LLC
 ATTN: BRIAN BOY
 9695 NORFOLK AVENUE
 LAUREL, MD 20723
 T: 410.792.2565

PROJECT: **TROTTER POINT**
 A RESUBDIVISION OF FOREST HILLS LOT 15, PLAT BOOK 5, P. 4
 AREA TAX MAP 35 GRID 2 PARCEL 8 ZONED R-20
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SINGLE FAMILY DETACHED HOMES

TITLE: **PRIVATE STREET GRADE ESTABLISHMENT PLAN**

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

SEAL: [Professional Engineer Seal]

DESIGNED BY : RJ
 DRAWN BY: RJ
 PROJECT NO : 12888-1-1\PLANS
 SDP\C400SDP12
 DATE : FEBRUARY 3, 2010
 SCALE : 1"=50'
 DRAWING NO. 12 OF 12