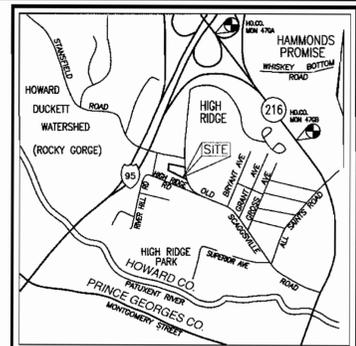


GENERAL NOTES

- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 MISS UTILITY 1-800-257-7777
 VERIZON TELEPHONE 725-9976
 HOWARD COUNTY BUREAU OF UTILITIES: 313-2366
 AT&T CABLE LOCATION DIVISION: 393-3553
 B.G.&E. CO. CONTRACTOR SERVICES: 850-4620
 B.G.&E. CO. UNDERGROUND DAMAGE CONTROL: 787-4620
 STATE HIGHWAY ADMINISTRATION: 531-5533
- SITE ANALYSIS:
 TOTAL AREA OF SITE: 1.498 AC
 PRESENT ZONING: RSC
 LIMIT OF DISTURBANCE: 1.22 AC
 PROPOSED USE OF SITE: SINGLE FAMILY DETACHED DWELLINGS
- PROJECT BACKGROUND:
 LOCATION: TAX MAP 47, PARCEL 760 AND 1018, GRID 19
 ZONING: RSC
 DEED REFERENCE: ACCESS UTILITY INSTALLATION AND MAINTENANCE EASEMENT (LIBER 6237, FOLIO 0425)
 HOMEOWNERS ASSOCIATION ARTICLES OF INCORPORATION (LIBER 00276, FOLIO 1591)
 DPZ REFERENCES: F-01-20, WP-02-10, P-02-24, S-01-25, F-03-143, F-03-196.
- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- 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 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 BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- THE PROJECT BOUNDARY IS BASED ON A SURVEY PREPARED BY FREDERICK WARD ASSOCIATES, DATED DECEMBER 2001.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY WITH 2 FEET CONTOUR INTERVALS PREPARED BY R.C. KELLY & ASSOCIATES INC., DATED AUGUST 12, 1996.
- COORDINATE DATUM IS BASED ON THE MARYLAND COORDINATE SYSTEM (NAD 83) AS PROJECTED BY THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL STATIONS: 47GA & 47GB
- WATER AND SEWER FOR THIS PROJECT WILL BE PUBLIC AND PROVIDED THROUGH CONTRACT NO. 24-4124-D
- NOISE WALL HAS BEEN CONSTRUCTED BY MSHA ALONG THE EAST SIDE OF I-95.
 UPON COMPLETION OF THE I-95 NOISE WALL, LOT 13 MAY BE RESUBDIVIDED INTO A TOTAL OF 3 LOTS.)
 AS NOTED ON F-03-143.
- A FUTURE PROPOSED NOISE WALL WILL BE CONSTRUCTED BY MSHA ALONG THE EAST SIDE OF I-95.
 UPON COMPLETION OF THE I-95 NOISE WALL, LOT 13 MAY BE RESUBDIVIDED INTO A TOTAL OF 3 LOTS.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETARY LOCATIONS ON SITE.
- THERE ARE NO WETLANDS, STEEP SLOPES, FLOODPLAIN OR OTHER SENSITIVE ENVIRONMENTAL FEATURES OR CRITICAL HABITATS PER A FOREST STAND DELINEATION REPORT DATED MAY 19, 2000 BY WILLIAM T. BRIDGELAND, WILDLIFE BIOLOGIST.
 THERE ARE NO WETLANDS ON THIS SITE THAT WILL BE DISTURBED OR THAT WILL REQUIRE 401 AND 404 WETLAND PERMITS FROM THE STATE OF MARYLAND.
- FOREST STAND DELINEATION PROVIDED BY WILLIAM T. BRIDGELAND DATED MAY 19, 2000.
- FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY THE PLANTING OF 0.30 ACRE OF AFFORESTATION AND THE POST OF A BOND IN THE AMOUNT OF \$ 6,534.00 UNDER F-03-143.
- NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAMS, OR THEIR BUFFERS, AND THE FOREST CONSERVATION EASEMENTS.
- TRAFFIC STUDY PREPARED BY LEE CUNNINGHAM & ASSOCIATES INC. DATED MARCH, 2001.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN PAID AS PART OF THE DEVELOPERS AGREEMENT IN THE AMOUNT OF \$ 6,534.00 UNDER F-03-143.
- SEDIMENT AND EROSION CONTROL HAS BEEN PROVIDED FOR THIS SITE.
- THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.
- EXISTING UTILITIES ARE BASED ON HOWARD COUNTY RECORDS.
- FOR PRIVATE ACCESS PLACE, FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED AT THE JUNCTION OF THE FLAG OR PIPE STEM AND ROAD RIGHT-OF-WAY AND NOT TO THE PIPE STEM LOT DRIVEWAY.
- LANDSCAPING FOR LOTS 8 THROUGH 13 SHOWN HEREIN IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN UNDER F-03-143 IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- STORMWATER MANAGEMENT IS BEING TREATED ON THIS SITE BY GRASS CHANNEL IN ACCORDANCE WITH THE 2000 MARYLAND DEPARTMENT OF THE ENVIRONMENT SWM REGULATION.
- OPEN SPACE LOTS TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION, PER SECTION 16.121(c)(1).
- WAIVER (WP-02-10) (S-01-25), DATED AUGUST 31, 2001, WAS GRANTED TO WAIVE OPEN SPACE ACCESS REQUIRED UNDER SECTION 16.121(E)(i).
- AS A RESULT OF THE SKETCH PLAN BEING SUBMITTED FOR REVIEW PRIOR TO NOVEMBER 15, 2001, THIS PLAN IS SUBJECT TO COMPLIANCE WITH THE FOURTH EDITION OF THE SUBDIVISION REGULATION, IN ADDITION, BECAUSE IT DID NOT HAVE PRELIMINARY PLAN APPROVAL PRIOR TO NOVEMBER 1, 2001, IT IS SUBJECT TO COMPLIANCE WITH COUNTY COUNCIL BILL 50-2001 WHICH AMENDS PORTIONS OF THE ZONING REGULATION.
- 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 ONLY AND NOT ONTO THE FLAG OR PIPE STEM DRIVEWAY.
 THE 4'X10' CENTRAL TRASH COLLECTION CONCRETE PAD 4" IN DEPTH WITHIN THE PUBLIC RIGHT-OF-WAY WILL BE MAINTAINED BY THE OWNERS OF LOTS 8-15 PURSUANT TO THE DECLARATION OF RIGHT OF ACCESS AND MAINTENANCE OBLIGATIONS THE LAND RECORDS AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 A. WIDTH - 12 (14" FOR SERVING MORE THAN ONE RESIDENCE)
 B. SURFACE - 6" OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN)
 C. GEOMETRY - MAX 15% GRADE, MAX 10% GRADE CHANGE, AND MIN 45' TURNING RADIUS
 D. STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING)
 E. DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT OF DEPTH OVER DRIVEWAY SURFACE
 F. MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
- 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 REAR YARD SETBACK.
- THE SUBJECT PROPERTY IS ZONED R-SC PER THE 02/02/04 COMPREHENSIVE ZONING PLAN.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS AS AMENDED BY CB 76-2003. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, OR BUILDING/GRADING PERMIT.
- SITE STOCKPILE AREA WILL BE REMOVED WHEN LOT 13 IS RESUBDIVIDED AND NEW DWELLINGS ARE CONSTRUCTED.

SITE DEVELOPMENT PLAN HILLTOP ESTATES SECTION II, LOTS 8-15 HOWARD COUNTY, MARYLAND

SHEET INDEX		
COVER SHEET	DESCRIPTION	SHEET NO
	SITE DEVELOPMENT AND SEDIMENT AND EROSION CONTROL PLAN	1 OF 4
	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS	2 OF 4
	HOUSE TYPES	4 OF 4



VICINITY MAP
SCALE: 1" = 2000'
BENCHMARK INFORMATION

NO	NORTHING	EASTING	ELEVATION
47GA	532404.175	1351627.338	350.405
47GB	529917.204	1353526.738	259.195

ADDRESS CHART

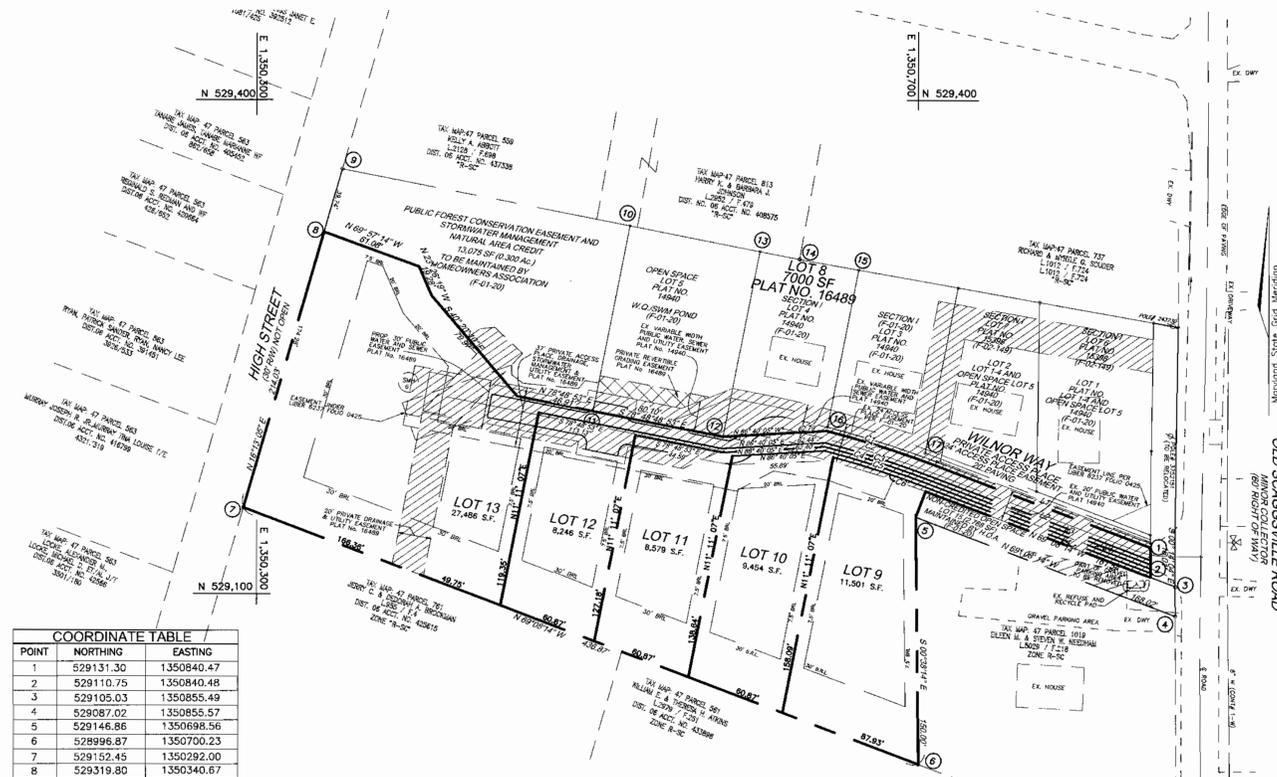
LOT NO	STREET ADDRESS
8	10113 WILNOR WAY
9	10110 WILNOR WAY
10	10114 WILNOR WAY
11	10118 WILNOR WAY
12	10122 WILNOR WAY
13	10126 WILNOR WAY
14	OPEN SPACE
15	OPEN SPACE

COORDINATE LIST

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C1	626.07'	68.46'	69.44'	S 72° 18' 41" E	06° 20' 53"	34.77'
C2	624.87'	68.07'	69.03'	S 72° 18' 18" E	06° 20' 07"	34.57'
C3	617.43'	67.26'	67.23'	S 72° 15' 30" E	06° 14' 31"	33.67'
C4	615.04'	66.80'	66.56'	S 72° 14' 22" E	06° 12' 14"	33.53'
C5	612.65'	65.93'	65.89'	S 72° 13' 13" E	06° 09' 56"	33.29'
C6	610.27'	65.61'	65.58'	S 71° 56' 08" E	06° 05' 47"	29.83'

LINE TABLE

	NORTHING	EASTING
L1	S 69° 08' 14" E	138.14'
L2	N 69° 08' 14" W	139.04'
L3	N 69° 08' 14" W	141.80'
L4	N 69° 08' 14" W	142.71'
L5	N 69° 08' 14" W	143.53'
L6	N 69° 08' 14" W	144.54'
L7	N 80° 05' 23" W	8.37'
L8	S 39° 40' 22" W	6.30'
L9	N 84° 34' 25" W	33.76'
L10	N 53° 14' 09" W	8.54'
L11	N 05° 03' 54" W	5.94'
L12	N 43° 18' 40" E	9.62'



COORDINATE TABLE

POINT	NORTHING	EASTING
1	529131.30	1350840.47
2	529110.75	1350840.48
3	529105.03	1350855.49
4	529087.02	1350855.57
5	529146.86	1350698.56
6	528996.87	1350700.23
7	529152.45	1350292.00
8	529319.80	1350340.67
9	529357.97	1350351.77
10	529323.57	1350525.74
11	529211.13	1350503.50
12	529195.59	1350582.08
13	529308.03	1350604.32
14	529303.29	1350628.30
15	529296.92	1350664.08
16	529201.59	1350645.23
17	529180.49	1350711.39

LOCATION PLAN
SCALE: 1" = 100'

AREA TABULATION OF FINAL PLAT #16488
HILLTOP ESTATES - SECTION II
LOTS 8-15

SUBDIVISION OF PARCELS 760 & 1018
RESUBDIVISION OF LOT 4, SECTION 1

	TOTAL
NUMBER OF BUILDABLE LOTS TO BE RECORDED.....	6
NUMBER OF NON-BUILDABLE LOTS TO BE RECORDED.....	0
NUMBER OF OPEN SPACE LOTS TO BE RECORDED.....	2
NUMBER OF LOTS TO BE RECORDED.....	8
AREA OF BUILDABLE LOTS TO BE RECORDED.....	1,538 AC
AREA OF NON-BUILDABLE LOTS TO BE RECORDED.....	0 AC
AREA OF OPEN SPACE LOTS TO BE RECORDED.....	0.511 AC
AREA OF LOTS TO BE RECORDED.....	1538.511 AC
AREA OF ROADWAY TO BE RECORDED.....	0 AC
AREA OF SUBDIVISION TO BE RECORDED.....	2.049 AC

PERMIT INFORMATION CHART

PROJECT NAME	SECTION/AREA	LOT/PARCEL
HILLTOP ESTATES	II	8-15
PLAT REF	BLOCK NO	ZONE
16488	19	RSC
TAX MAP	ELECT DIST	CENSUS TR
47	6TH	6069.02
WATER CODE:	SEWER CODE:	
C-06	7172000	

NO.	REVISION	DATE

COVER SHEET

**SITE DEVELOPMENT PLAN
HILLTOP ESTATES
SECTION II, LOTS 8 TO 15
SINGLE FAMILY DETACHED UNITS**

REF: F-01-20, WP-02-10, P-02-24, S-01-25

TAX MAP: 47 BLOCK: 19 PARCELS: 760, 1018
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET
ELICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: RJ
DRAWN BY: RJ
CHECKED BY: RHV
DATE: 02-07-2005
SCALE: AS SHOWN
W.O. NO.: 04-173

1 SHEET OF 4

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

6/16/05
6/20/05
6/20/05

CHIEF DEVELOPMENT ENGINEERING DIVISION
CHIEF DIVISION OF LAND DEVELOPMENT
DIRECTOR

BY THE ENGINEER

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

SIGNATURE OF ENGINEER
ROBERT H. VOGEL, PE

BY THE DEVELOPER

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."

SIGNATURE OF DEVELOPER
DATE

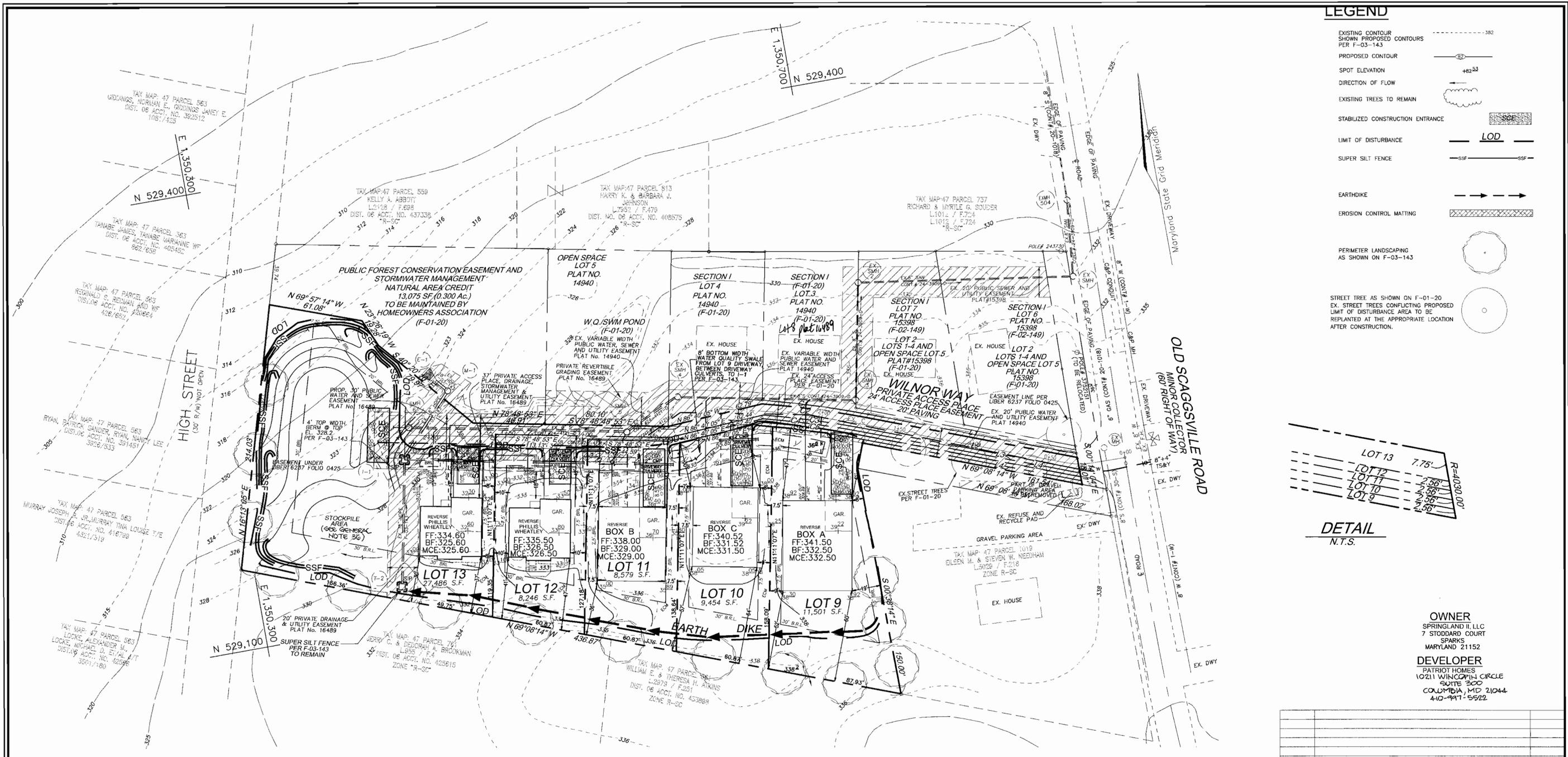
THESE PLANS HAVE BEEN REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE

SIGNATURE OF REVIEWER
DATE

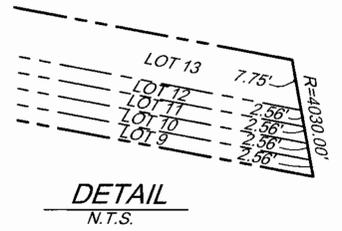
THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD COUNTY



LEGEND

- EXISTING CONTOUR SHOWN PROPOSED CONTOURS PER F-03-143
- PROPOSED CONTOUR
- SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREES TO REMAIN
- STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE
- EARTHDIKE
- EROSION CONTROL MATTING
- PERIMETER LANDSCAPING AS SHOWN ON F-03-143
- STREET TREE AS SHOWN ON F-01-20 EX. STREET TREES CONFLICTING PROPOSED LIMIT OF DISTURBANCE AREA TO BE REPLANTED AT THE APPROPRIATE LOCATION AFTER CONSTRUCTION.



OWNER
 SPRINGLAND II LLC
 7 STODDARD COURT
 SPARKS
 MARYLAND 21152

DEVELOPER
 PATRIOT HOMES
 10211 WINCOPIN CIRCLE
 SUITE 300
 COLUMBIA, MD 21044
 410-947-5522

COORDINATE LIST						LINE TABLE		
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT	NORTHING	EASTING
C1	628.07'	69.48'	69.44'	S 72° 18' 41" E	06° 20' 53"	34.77'	L1	S 69° 08' 14" E 138.14'
C2	624.67'	69.07'	69.03'	S 72° 18' 18" E	06° 20' 07"	34.57'	L2	N 69° 08' 14" W 139.04'
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C4	615.04'	66.60'	66.56'	S 72° 14' 22" E	06° 12' 14"	33.33'	L4	N 69° 08' 14" W 142.71'
C5	612.65'	65.93'	65.89'	S 72° 13' 13" E	06° 09' 56"	32.99'	L5	N 69° 08' 14" W 143.63'
C6	610.27'	65.61'	65.56'	S 71° 56' 08" E	05° 35' 47"	29.83'	L6	N 69° 08' 14" W 144.54'
							L7	N 80° 05' 23" W 8.37'
							L8	S 39° 40' 22" W 6.30'
							L9	N 84° 34' 25" W 33.76'
							L10	N 53° 14' 06" W 8.54'
							L11	N 00° 03' 54" W 5.94'
							L12	N 45° 18' 40" E 9.62'

PLAN
 SCALE: 1" = 30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 6/16/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

[Signature] 6/20/05
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

[Signature] 6/16/05
 DIRECTOR
 DATE

BY THE ENGINEER

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

[Signature] 6/16/05
 SIGNATURE OF ENGINEER
 ROBERT H. VOGEL, PE
 DATE

BY THE DEVELOPER

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

[Signature] 6/16/05
 SIGNATURE OF DEVELOPER
 DATE

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

[Signature] 6/16/05
 USDA - NATURAL RESOURCES CONSERVATION SERVICE
 DATE

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

[Signature] 6/16/05
 HOWARD COUNTY
 DATE

NO.	REVISION	DATE

GRADING SEDIMENT EROSION CONTROL

**SITE DEVELOPMENT PLAN
 HILLTOP ESTATES**
 SECTION II, LOTS 8 TO 15
 SINGLE FAMILY DETACHED UNITS
 REF: F-01-20, WP-02-10, P-02-24, S-01-25

TAX MAP: 47 BLOCK: 19 PARCELS: 760, 1018
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RJ
 DRAWN BY: RJV
 CHECKED BY: RJV
 DATE: 02-07-2005
 SCALE: AS SHOWN
 W.O. NO.: 04-173

2 SHEET OF 4

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETABLE 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 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 MATERIALS SPECIFICATIONS

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED 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-SOCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR A 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 PLATS OR PLAT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 LBS/1000 SF) PRIOR TO THE PLACEMENT OF TOPSOIL. LIMESTONE 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 SPECIFICATION, 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 NOT BE 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 PREVENT DISSIPATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- TOPSOIL APPLICATION:
 - WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
 - GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4"-8" HIGHER IN ELEVATION.
 - TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND LIGHTLY 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.

TEMPORARY SEEDING NOTES

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/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SF).

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL/ACRE ANNUAL RYE (3.2 LBS/1000 SF). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS/ACRE WEEPING LOVEGRASS (0.07 LBS/1000 SF). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS/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/ACRE (70 TO 90 LBS/1000 SF) OF UNROTTED SMALL-GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS/ACRE (5 GAL/1000 SF) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT OR HIGHER, USE 348 GALLONS/ACRE (8 GAL/1000 SF) FOR ANCHORING.

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

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/1000 SF) AND 800 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SF) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT THE TIME OF SEEDING, APPLY 400 LBS/ACRE 20-0-0 UREAFORM FERTILIZER (9 LBS/1000 SF)
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SF) AND APPLY 1000 LBS/ACRE 10-10-10 FERTILIZER (23 LBS/1000 SF) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS/ACRE (1.4 LBS/1000 SF) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEE WITH 60 LBS/ACRE OF KENTUCKY 31 TALL FESCUE AND 2 LBS/ACRE (0.05 LBS/1000 SF) OF WEEPING LOVEGRASS. DURING PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION 1) 2 TONS/ACRE WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION 2) USE SOD. OPTION 3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

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

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

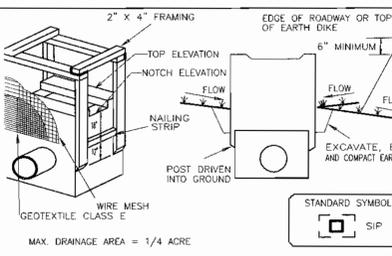
SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410) 313-1855.
 - ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE LATEST MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
 - FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1. B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 - ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
 - ALL DISTURBED AREAS MUST BE STABILIZED WITH THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL BE DONE WHEN RECOMMENDED SEEDING DATES 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 PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 - SITE ANALYSIS:

TOTAL AREA	2.05 AC.
AREA TO BE ROOTED OR PAVED	1.22 AC.
AREA TO BE VEGETATIVELY STABILIZED	30 AC.
TOTAL CUT	1,300 CY
TOTAL FILL	1,300 CY
OFFSITE WASTE/BORROW AREA LOCATION	N/A
 - 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.
- *TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT.

EX. INLET PROTECTION PER F-03-143

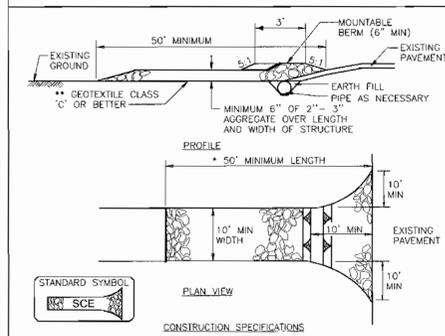
DETAIL 23A - STANDARD INLET PROTECTION



Construction Specifications

- Excavate completely around the inlet to a depth of 18" below the notch elevation.
- Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
- Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
- Stretch the Geotextile Class E lightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
- Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
- If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
- The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

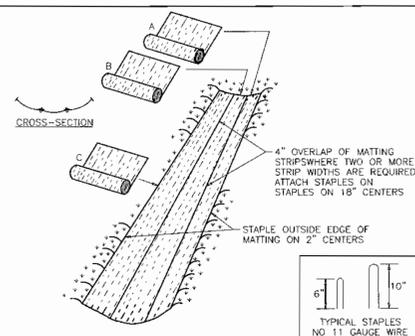


CONSTRUCTION SPECIFICATIONS

- Length - Minimum of 50' (*30' for a single residence lot).
- Width - 10' minimum. Should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. *The plan approval authority may not require single family residences to use geotextile.
- Stone - Crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" over the length and width of the entrance.
- Surface Water - All surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the Stabilized Construction Entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 5' of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey, a pipe will not be necessary. Pipe 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 at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the Stabilized Construction Entrance.

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

DETAIL 30 - EROSION CONTROL MATTING



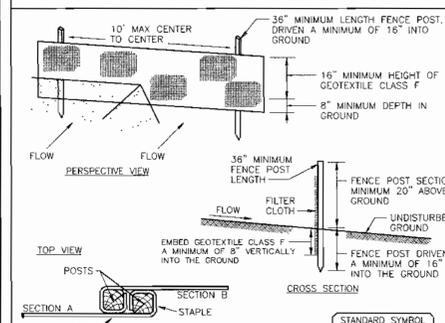
CONSTRUCTION SPECIFICATIONS

- Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamps firmly to conform to the channel cross-section. Secure with row of staples, about 4" down from the trench. Spacing between staples is 6".
 - Staple the 4" overlap in the channel center using an 18" spacing between staples.
 - Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
 - Staples shall be placed 2' apart with 4 rows for each strip, 2 outer row, and 2 alternating rows down the center.
 - Where one roll of matting ends and another begins, the end of the top strip shall overlap the roll of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
 - The discharge end of the matting liner should be similarly secured with 2 double rows of staples.
- Note: If flow will enter from the edge of the matting then the area affected by the flow must be keyed-in.

US DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE G-22-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

EX. SILT FENCE PER F-03-143

DETAIL 22 - SILT FENCE



CONSTRUCTION SPECIFICATIONS

- Fence posts shall be a minimum of 36" long, driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard I or U section weighing not less than 100 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	0.3 gal/ft ² /minute (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322
- 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 reaches 50% of the fabric height.

US DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-15-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

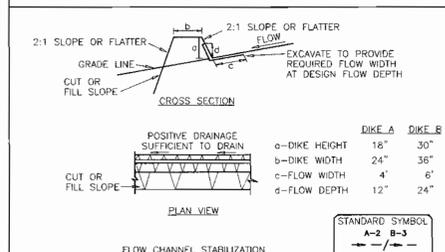
SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (410.313.1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
- INSTALL SEDIMENT CONTROL MEASURES AS SHOWN ON PLAN AND IN ACCORDANCE WITH DETAILS. (5 DAYS)
- INSPECT SEDIMENT CONTROL MEASURES FROM F-03-143 TO REMAIN PER SDP. REPAIR AS NEEDED. (1 DAY)
- AFTER OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED, GRADE SITE. (2 WEEKS)
- CONSTRUCT HOUSES. THE FIRST FLOOR ELEVATIONS CANNOT BE MORE THAN 1' HIGHER OR 0.2' LOWER THAN THE ELEVATIONS SHOWN ON THIS PLAN. (6 MONTHS)
- STOCKPILE TO REMAIN APPROXIMATELY 6 MONTHS 3 WEEKS
- INSTALL DRIVEWAY CULVERT AND GRASS CHANNEL PER F-03-143. GRADING CONTOURS ARE SHOWN EXISTING ON THIS PLAN WHICH WERE PROPOSED PER F-03-143. (3 DAYS)
- REMOVE STOCKPILE, FINISH GRADING SITE. (1 DAYS)
- INSTALL PERIMETER LANDSCAPING PER F-03-143. IF IT IS NOT INSTALLED. (1 DAY)
- UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES. (2 DAYS)

NOTES

- DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLIED WITH.

DETAIL 1 - EARTH DIKE

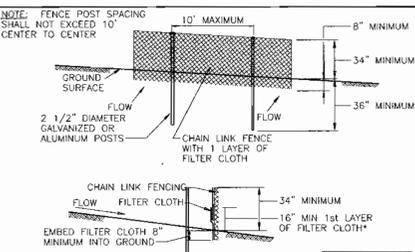


CONSTRUCTION SPECIFICATIONS

- Seed and cover with straw mulch.
- Seed and cover with Erosion Control Matting or line with sod.
- 4"-7" stone or recycled concrete equivalent pressed into the soil 7" minimum.

US DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE A-1-5 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 - SUPER SILT FENCE



CONSTRUCTION SPECIFICATIONS

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6" length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and cross rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and midsection.
 - Filter cloth shall be embedded a minimum of 8" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 8" and folded.
 - Maintenance shall be performed as needed and silt buildups removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and midsection 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	0.3 gal/ft ² /minute (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322
- *IF MULTIPLE LAYERS ARE REQUIRED TO ATTAIN 42"

US DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H-25-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

OWNER
SPRINGLAND II LLC
7 STODDARD COURT
SPARKS
MARYLAND 21152

DEVELOPER
PATRIOT HOMES
10211 WINCOPH CIRCLE
SUITE 300
COLUMBIA, MD 21044
410-997-5522

NO.	REVISION	DATE

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
SITE DEVELOPMENT PLAN
HILLTOP ESTATES
SECTION II, LOTS 8 TO 15
SINGLE FAMILY DETACHED UNITS
REF: F-01-20, WP-02-10, P-02-24, S-01-25

TAX MAP: 47 BLOCK: 19 PARCELS 760, 1018
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410-461-7666 FAX: 410-461-8661

DESIGN BY: RU
DRAWN BY: RU
CHECKED BY: RHV
DATE: 02-07-2005
SCALE: AS SHOWN
W.O. NO.: 04-173

3 SHEET OF 4

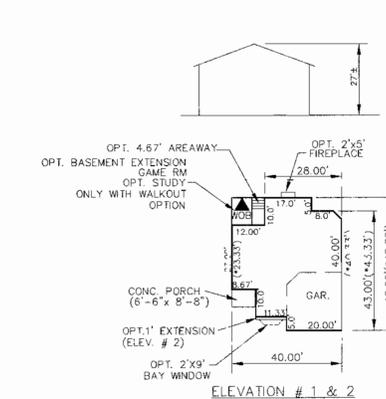
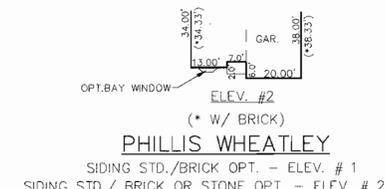
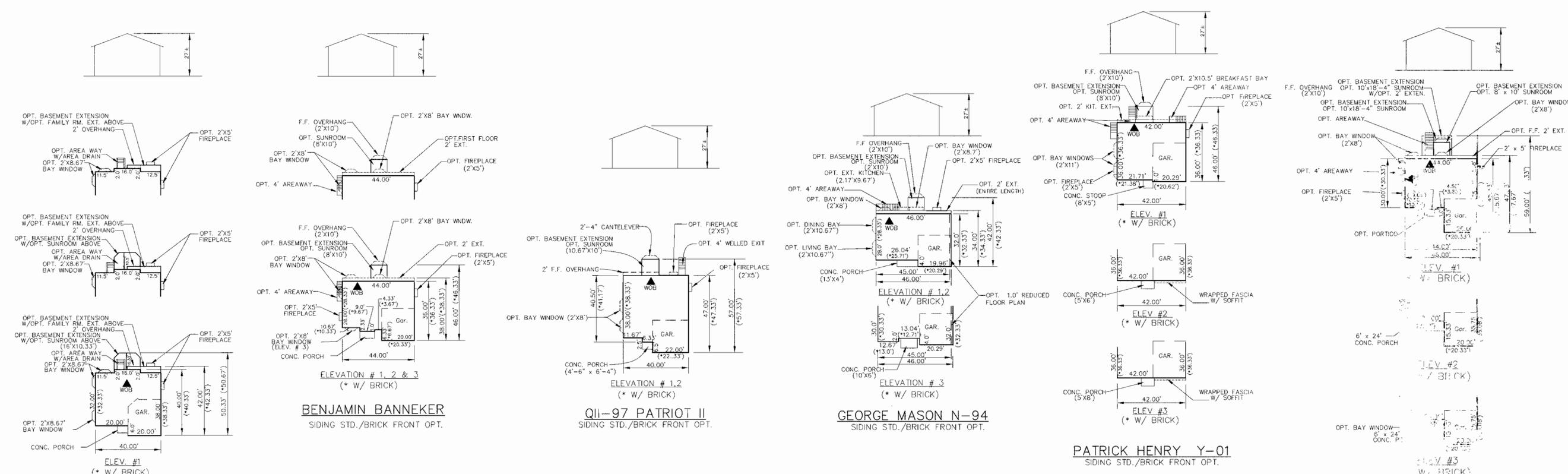
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 6/16/05
DATE: 6/20/05
DATE: 6/21/05

BY THE ENGINEER
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
DATE: 6/21/05

BY THE DEVELOPER
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.
DATE: 5/26/05

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
DATE: 6/16/05

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
DATE: 6/16/05



- PHILLIS WHEATLEY:** ALL OPTIONS AVAILABLE
- QII-97 PATRIOT II:** NO SUNROOM
- NATHANIEL GREENE:** ALL OPTIONS AVAILABLE
- GEORGE MASON N-94:** DOES NOT FIT
- PATRICK HENRY Y-01:** DOES NOT FIT
- BENJAMIN BANNEKER:** DOES NOT FIT
- ABRAHAM CLARK:** DOES NOT FIT

HOUSE PLANS
SCALE: 1"=30'

NO.	REVISION	DATE

HOUSE PLANS
SITE DEVELOPMENT PLAN
HILLTOP ESTATES
 SECTION II, LOTS 8 TO 15
 SINGLE FAMILY DETACHED UNITS
 REF: F-01-20, WP-02-10, P-02-24, S-01-25

TAX MAP: 47 BLOCK: 19 PARCELS: 760, 1018
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERS • SURVEYORS, INC.
 8407 MAIN STREET ELICOTT CITY, MD 21043 TEL: 410-461-7666 FAX: 410-461-8961

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 6/16/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 6/21/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 6/21/05
 DIRECTOR DATE

BY THE ENGINEER

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

[Signature] 6/21/05
 SIGNATURE OF ENGINEER DATE
 ROBERT H. VOGEL, PE

BY THE DEVELOPER

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

[Signature] 5/24/05
 SIGNATURE OF DEVELOPER DATE

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

USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

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

HOWARD SCD DATE

DESIGN BY: RJ
 DRAWN BY: RJ
 CHECKED BY: RJ
 DATE: 07-2005
 SCALE: AS SHOWN
 W.O. NO.: 04-173

4 SHEET OF 4