

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1850).
- ALL VEGETATIVE AND STRUCTURAL PREPARATIONS ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL, REVISIONS THEREOF.
- 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. 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51) 500 (SEC. 54), TEMPORARY SEEDING (SEC. 52) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY 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 PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE (THIS SUBMISSION)	2.3	ACRES
AREA DISTURBED	0.45	ACRES
AREA TO BE ROOFED OR PAVED	0.21	ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.24	ACRES
TOTAL CUT	45.3	CY
TOTAL FILL	300	CY
OFFSITE WASTE/BORROW AREA LOCATION	*	

- *IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY THE SPILL/BORROW SITE AND NOTIFY AND OBTAIN APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR OF THE SITE AND ITS GRADING PERMIT NUMBER AT THE TIME OF CONSTRUCTION.
- 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 CONTROL 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 CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
 - IN THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR, AN ADDITIONAL ROW OF "SUPER" SILT FENCE IS TO BE PLACED AT THE EASTERN L.O.D.

PERMANENT SEEDBED PREPARATIONS

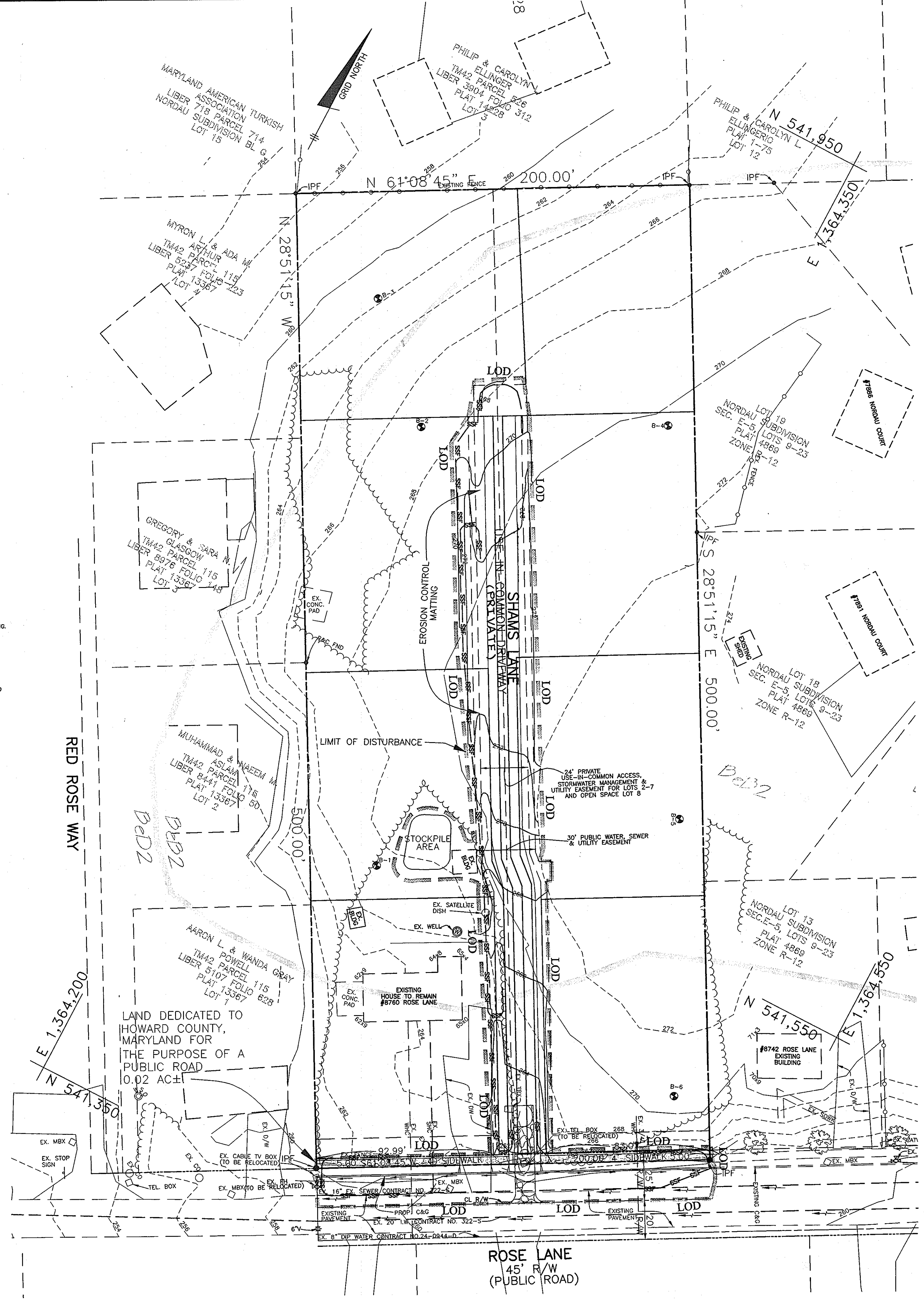
- SCHEDULES:
SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING:
- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ FT).
 - ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
- SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 80 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ FT) OF WHEAT LOWGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, SEED WITH 100 LBS PER ACRE (2 TONS PER ACRE) OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE 500 (OPTION 3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.
- MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (8 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.
- MAINTENANCE: INSPECT ALL SEEDBED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

SEQUENCE OF CONSTRUCTION

- NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION
- DAY 1 OBTAIN GRADING PERMIT.
 - DAY 2-9 CLEAR & GRUB FOR SEDIMENT CONTROL DEVICES. #40 INSTALL SEDIMENT CONTROL DEVICES.
 - DAY 10-15 UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR CLEAR AND GRUB REMAINDER OF THE SITE.
 - DAY 16-26 UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, BEGIN MASS GRADING OF THE SITE.
 - DAY 27-28 STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES.
 - DAY 29-49 INSTALL STORM DRAINS AND OTHER UTILITIES INCLUDING THE UNDERGROUND STORMWATER MANAGEMENT FACILITIES AND SAND FILTERS. (NOTE-DIVERSION PIPES ENTERING THE SAND FILTERS SHALL BE BLOCKED UNTIL THE SITE IS STABILIZED).
 - DAY 50-55 INSTALL CURB AND GUTTER.
 - DAY 56-61 INSTALL BASE COURSE PAVING FOR PARKING LOT.
 - DAY 62-162 CONSTRUCT OFFICE BUILDING.
 - DAY 163-166 FINAL GRADE REMAINDER OF SITE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
 - DAY 167-170 INSTALL FINAL PAVING.
 - DAY 171-172 INSTALL REQUIRED LANDSCAPING AS SPECIFIED ON THESE PLANS.
 - DAY 173-183 UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE REMAINING SEDIMENT CONTROL DEVICES AND PERMANENTLY STABILIZE ANY REMAINING DISTURBED AREAS.
- NOTE: 1. SEDIMENT CONTROL LOCATION AND IMPLEMENTATION SHOWN ON THESE PLANS IS SUBJECT TO REVISION IN THE FIELD AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR.
2. EROSION CONTROL MATTING SHALL BE PLACED IN SWALES WHERE DEEMED NECESSARY UNTIL VEGETATION IS ESTABLISHED OR SOIL SHOULD

LEGEND

- | | |
|----------------------------------|------|
| SOILS CLASSIFICATION | AbC1 |
| SOILS Delineation | |
| EXISTING CONTOURS | 999 |
| PROPOSED CONTOURS | 999 |
| EXISTING WOODS LINE | |
| EXISTING STRUCTURE | |
| PROPOSED SIDEWALK | |
| LIMIT OF DISTURBANCE | |
| SUPER SILT FENCE | SSF |
| STABILIZED CONSTRUCTION ENTRANCE | |



SEDIMENT AND EROSION CONTROL PLAN
SCALE: 1" = 30'

SUPER SILT FENCE

CONSTRUCTION SPECIFICATIONS

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Database for Chain Link Fencing. The specification for a 4' 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 flag rods, drive and flag rods, 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" of the top and mid section.
- 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 6" and folded.
- Maintenance shall be performed as needed and silt buildups removed when "bubbles" 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 of 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	1.5 gpm/ft ² (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

SUPER SILT FENCE DESIGN CRITERIA

Slope	Slope Length (Horizontal)	Silt Fence Length
0 - 10%	0 - 101'	Unlimited
10 - 20%	101 - 51'	200 feet
20 - 33%	51 - 31'	100 feet
33 - 50%	31 - 21'	50 feet
50% +	21' +	25 feet

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 20-54 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 4" IN DEPTH. MATCH THE TRENCH AND THEN FINISH TO CONFORM TO THE CHANNEL CROSS-SECTION. SECURE WITH A ROW OF STAPLES ABOUT 4" BELOW SURFACE FROM THE TRENCH. SPACING BETWEEN STAPLES IS 6".
- STAPLE THE 4" OVERLAP IN THE CHANNEL CROSS-SECTION 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 GROUND.
- STAPLES SHALL BE PLACED 2" APART WITH A ROWS FOR EACH STRIP, 2 OUTER ROWS AND 2 ALTERNATE ROWS FROM THE CENTER.
- WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE END OF THE LOWER STRIP BY 6" BEFORE FINISHING. BEFORE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
- THE GEOTEXTILE END OF THE MATTING LAYER SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.

NOTE: IF ROWS WILL COVER THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE ROW MUST BE REVEALED.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 0-23-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 - SUPER SILT FENCE

CONSTRUCTION SPECIFICATIONS

- KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH 4" IN DEPTH. MATCH THE TRENCH AND THEN FINISH TO CONFORM TO THE CHANNEL CROSS-SECTION. SECURE WITH A ROW OF STAPLES ABOUT 4" BELOW SURFACE FROM THE TRENCH. SPACING BETWEEN STAPLES IS 6".
- STAPLE THE 4" OVERLAP IN THE CHANNEL CROSS-SECTION 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 GROUND.
- STAPLES SHALL BE PLACED 2" APART WITH A ROWS FOR EACH STRIP, 2 OUTER ROWS AND 2 ALTERNATE ROWS FROM THE CENTER.
- WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE END OF THE LOWER STRIP BY 6" BEFORE FINISHING. BEFORE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
- THE GEOTEXTILE END OF THE MATTING LAYER SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.

NOTE: IF ROWS WILL COVER THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE ROW MUST BE REVEALED.

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

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

CONSTRUCTION SPECIFICATIONS

- Length - minimum of 50' (50' for single residence).
- Width - 10' minimum, should be fixed at the existing road to provide a turning radius.
- Geotextile fabric (Other cloth) shall be placed over the existing ground prior to placing stone. (The plan approval authority may not require single family residence to use geotextile.)
- Stone - crushed aggregate 2" to 3" or equivalent or recycled concrete equivalent shall be placed at 4" depth over the length and width of the entrance.
- Surface water - all surface water flowing to or diverted toward construction entrance shall be piped through the entrance, maintaining positive drainage. Pipe shall extend through the stabilized construction entrance to a minimum of 10' of stone over the pipe. Pipe has to be sized according to the volume. When the 10' is achieved, the pipe may have no drainage to convey a pipe will not be necessary. Pipe shall be sized according to the amount of runoff to be conveyed.
- Location - A stabilized construction entrance shall be located at every spot where construction activities occur. Construction entrances shall conform to the area marked on the site plan of the stabilized construction entrance.

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

TOPSOIL 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-NRCS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Rejected topsoil shall not be a mixture of contrasting textures and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, trash, or other materials larger than 1-1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nutgrass, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-800 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.0 or higher.
 - Organic content or 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 acid or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 - Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
 - Place topsoil (if required) and apply soil amendments as specified in 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.
 - On the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 8" higher in elevation.
 - Topsoil shall be uniformly distributed in a 4" - 8" layer and tightly 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 seeded preparation.
- Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below.
 - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.06.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guidelines Specifications, Soil Preparation and Sodding, MD-WA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1975.

TEMPORARY SEEDBED PREPARATIONS

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/1000 SQ FT). SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF KEYSER (0.7 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE 500.

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

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Wick R. Hall
CHIEF, BUREAU OF HIGHWAYS
DATE: 9-25-08

BY THE DEVELOPER:

Sayed Hassan
DEVELOPER - SAYED HASSAN
DATE: 8/6/08

BY THE ENGINEER:

Donall Mason
ENGINEER - DONALD A. MASON, P.E. # 21443
DATE: 7-10-09

REVIEWED FOR HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John V. Blanton
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 9/16/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John V. Blanton
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 8/15/08

Cindy Harsh
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 7/30/08

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
www.bei-civilengineering.com

OWNER: SAYED AND SONA HASSAN
9467 VOLLMEYER DRIVE
COLUMBIA, MARYLAND 21046
301-693-6700

PROJECT: ROSE LANE
SECTION E-5
LOT 7 AND OPEN SPACE
LOT 8 & A RESUBDIVISION OF NORDAU
SUBDIVISION SECTION E-5, LOTS 3 AND
4, PLAT BOOK 3 FOLD 51

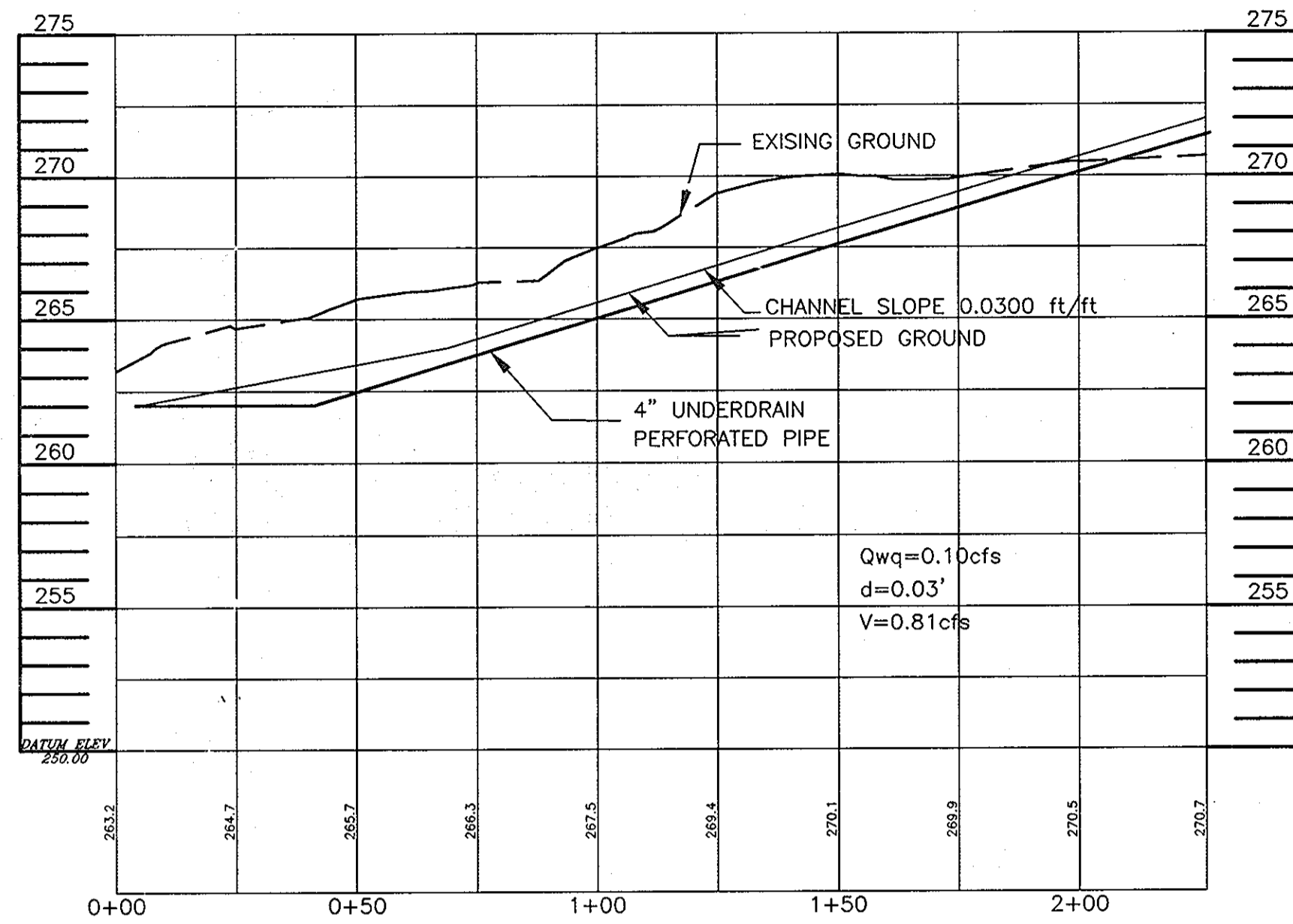
LOCATION: TAX MAP 42 - GRID 24
PARCEL 160 AND 240
8TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT AND EROSION CONTROL
PLAN, NOTES AND DETAILS

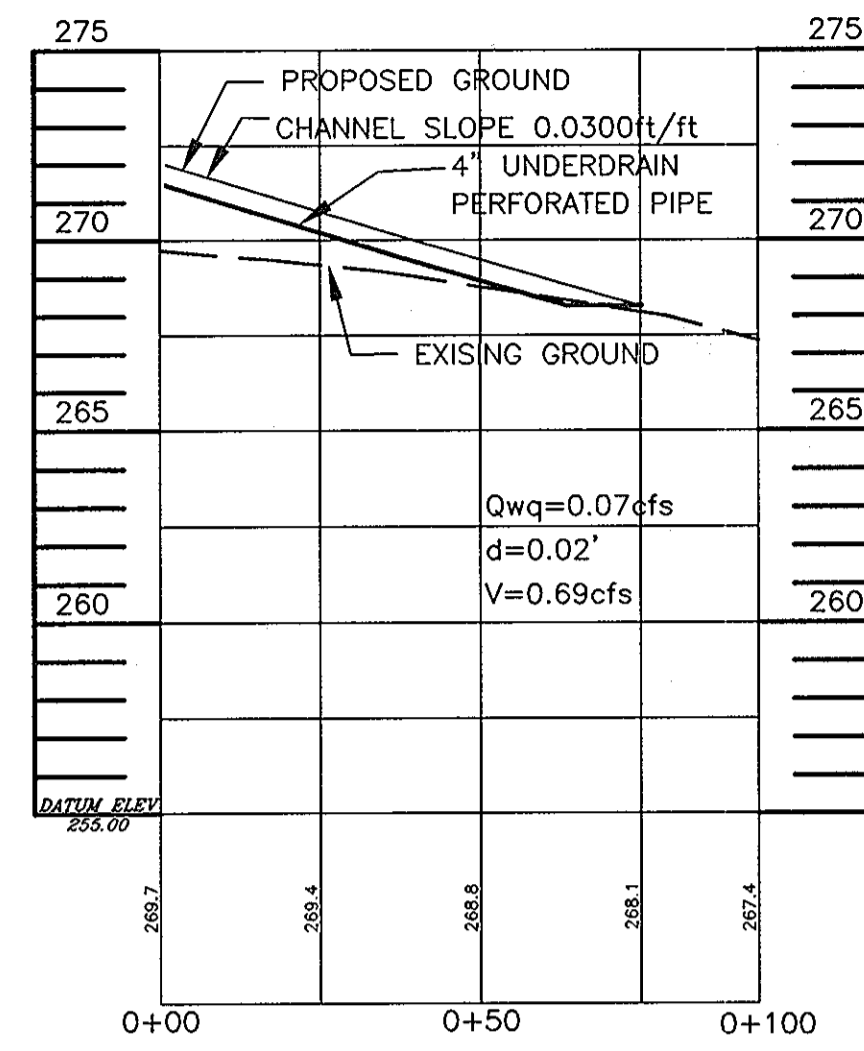
DATE: APRIL 2007
JULY 2008 PROJECT NO. 1968

Design: DAM Draft: EDD Check: DAM SCALE: AS SHOWN DRAWING 2 OF 5

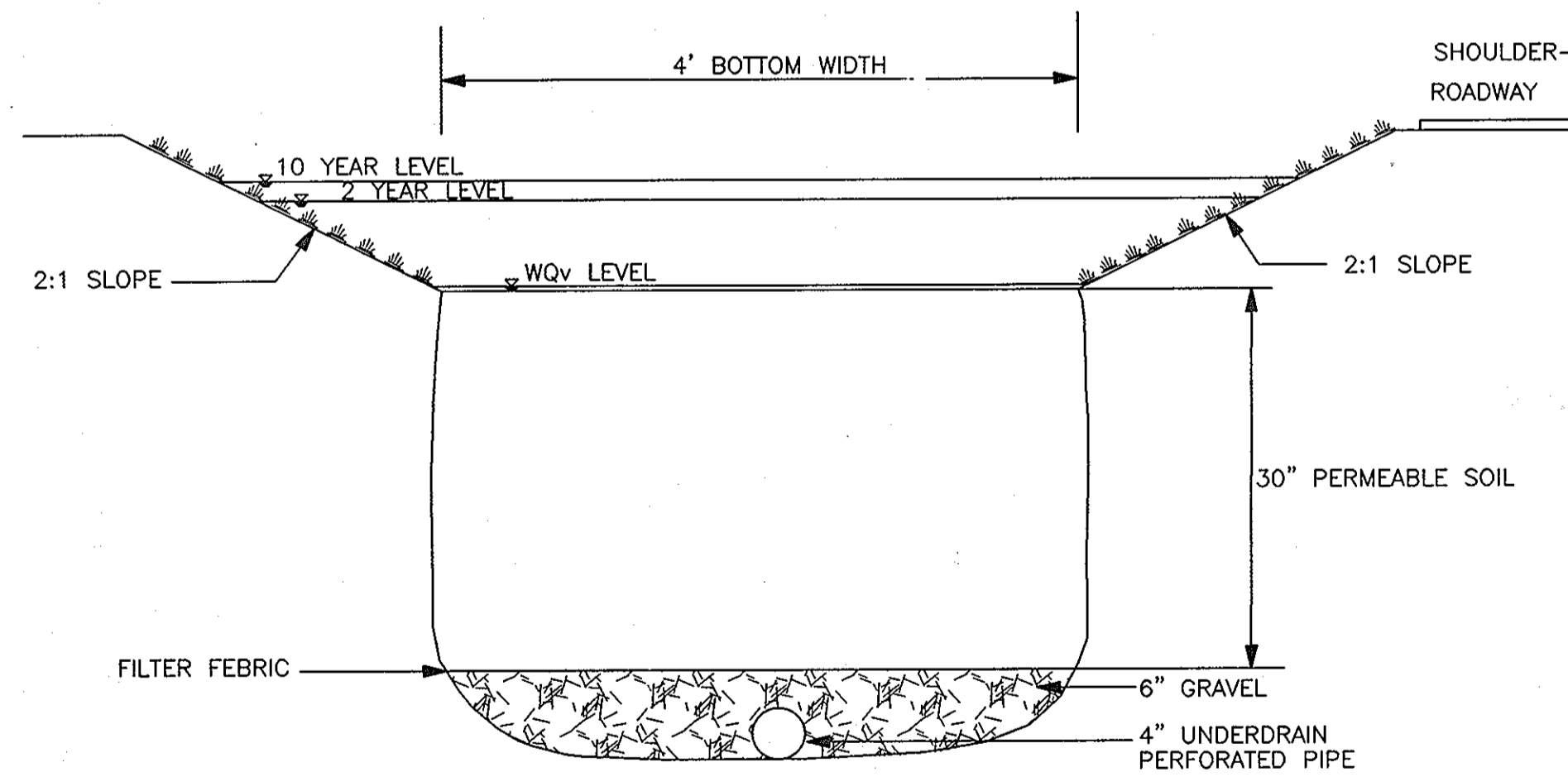
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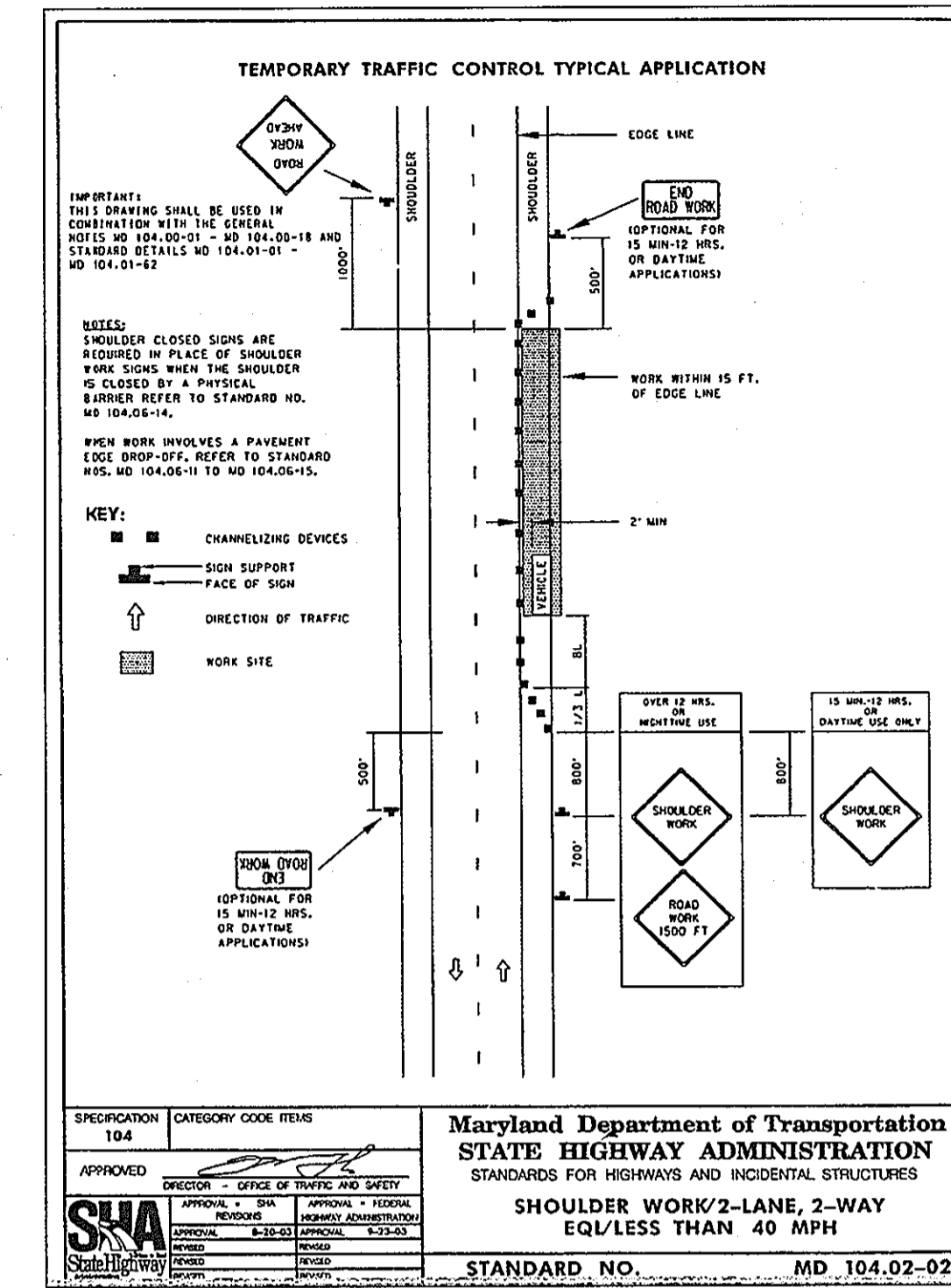
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DRY SWALE 'A'
SCALE: 1" = 30'



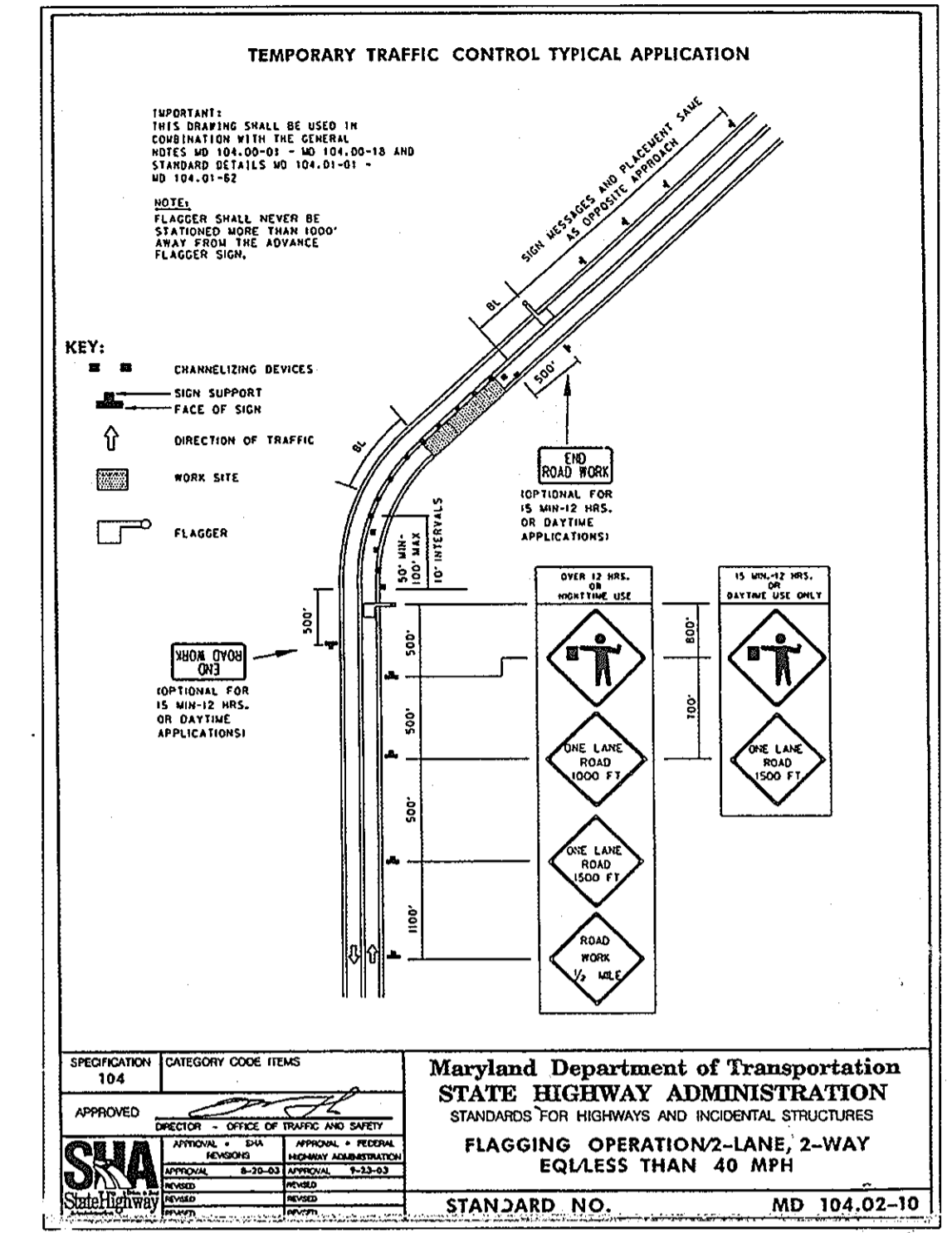
PROFILE
DRY SWALE 'B'
SCALE: 1" = 30'



DRY SWALE SECTION
SCALE: 1" = 1'



MAINTENANCE OF TRAFFIC CONTROL PLAN
NOT TO SCALE



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Walter R. ... 9-25-08 DATE
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Harris 9/29/08 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT
... 8/15/08 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	DATE	REVISION

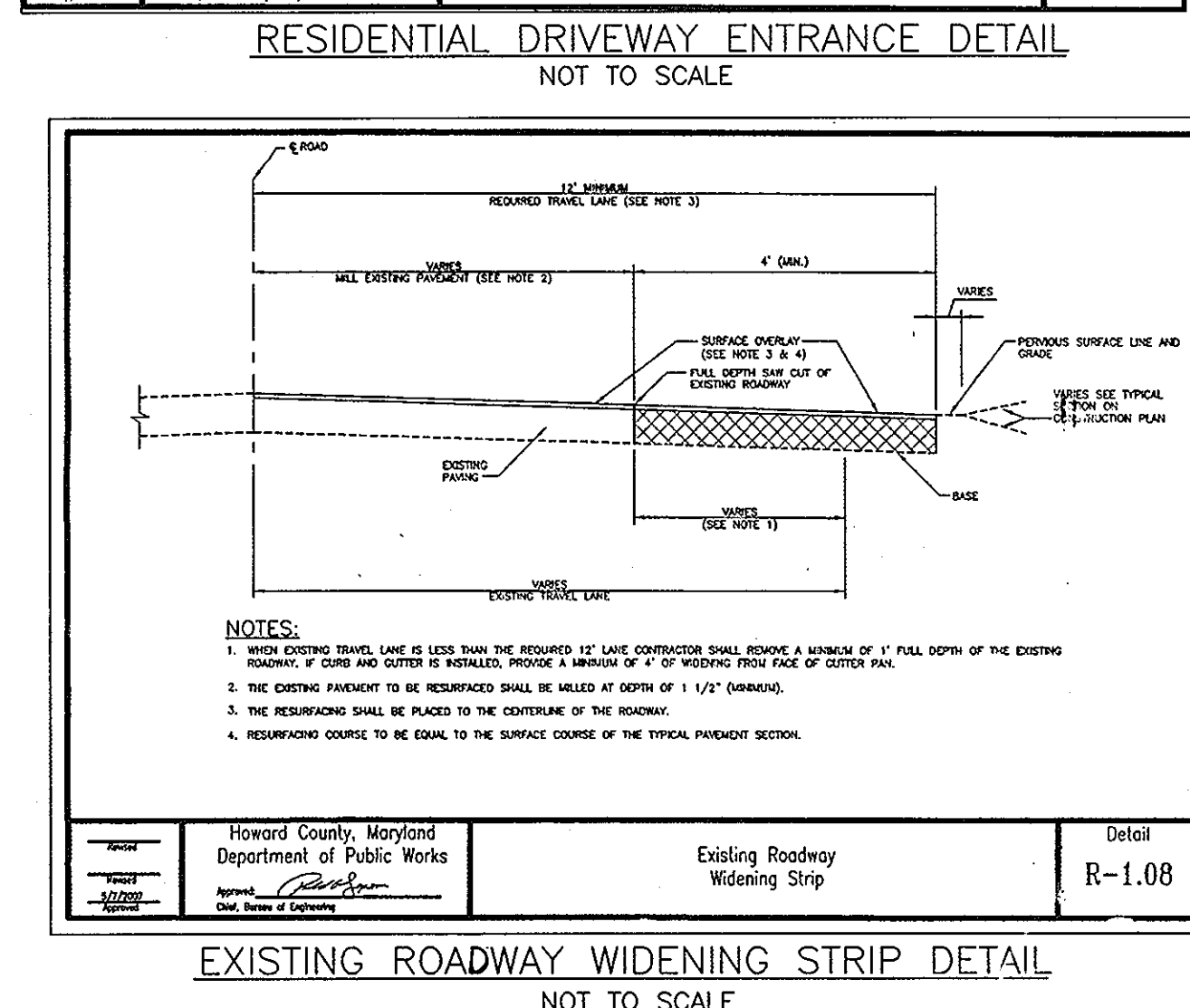
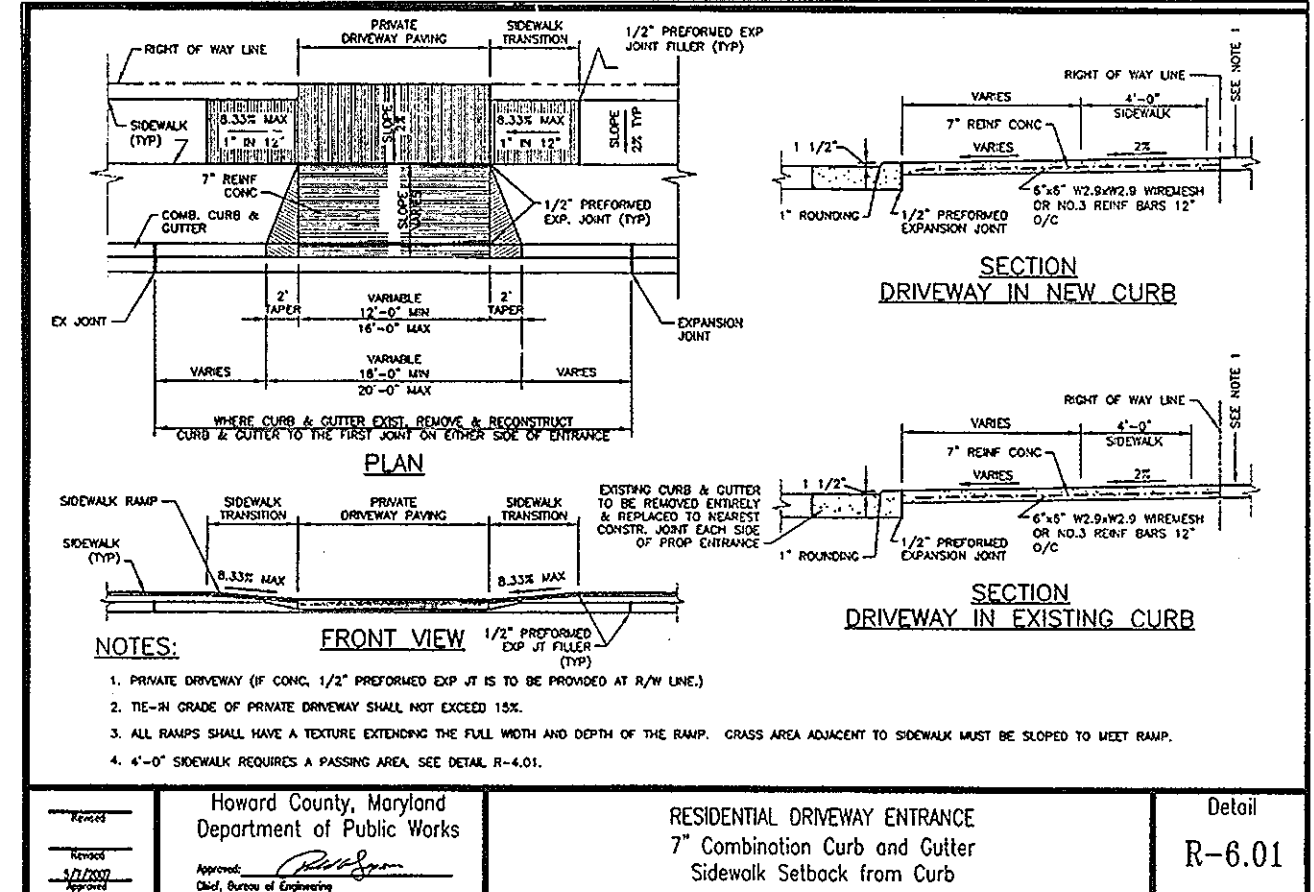
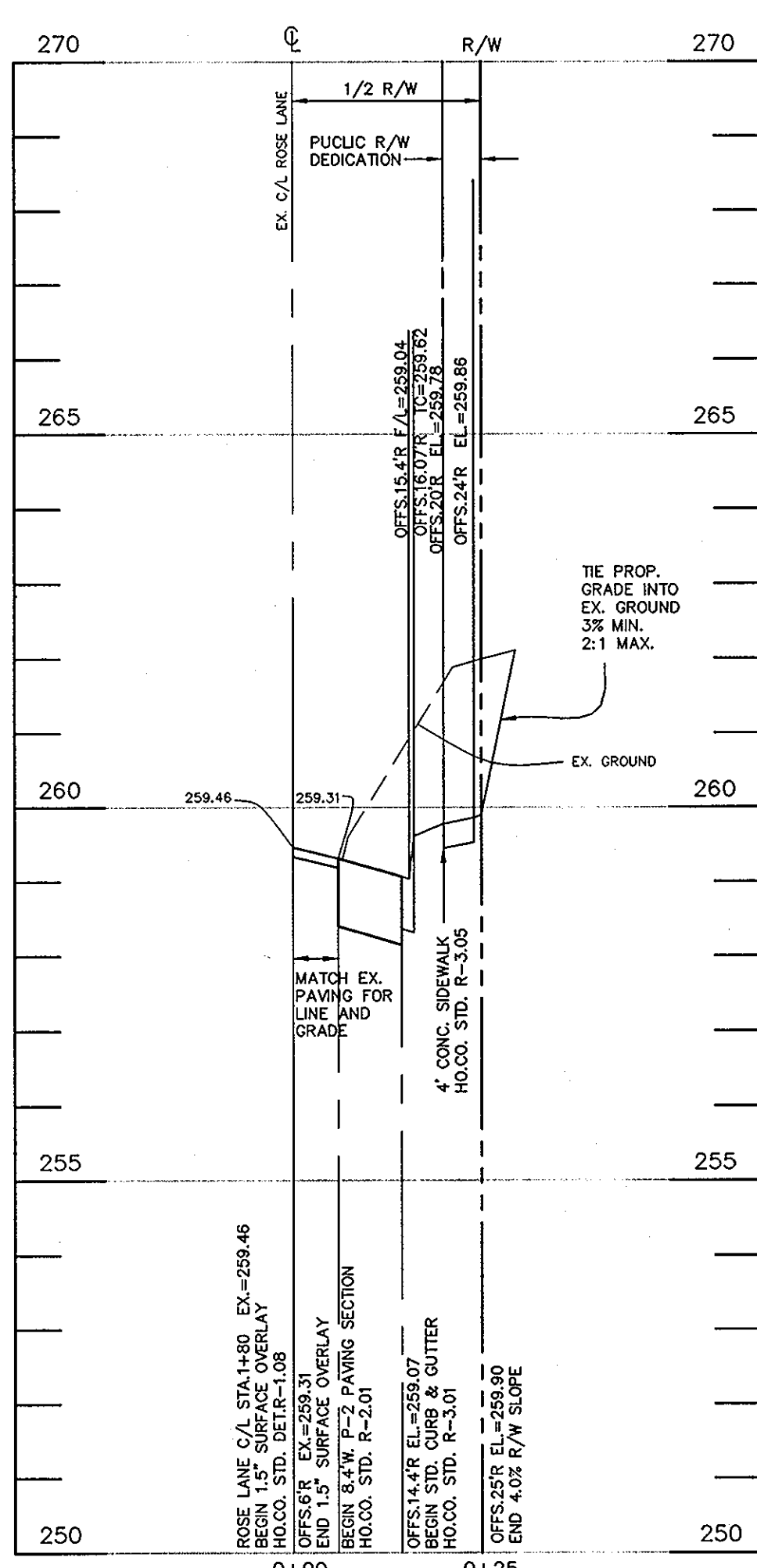
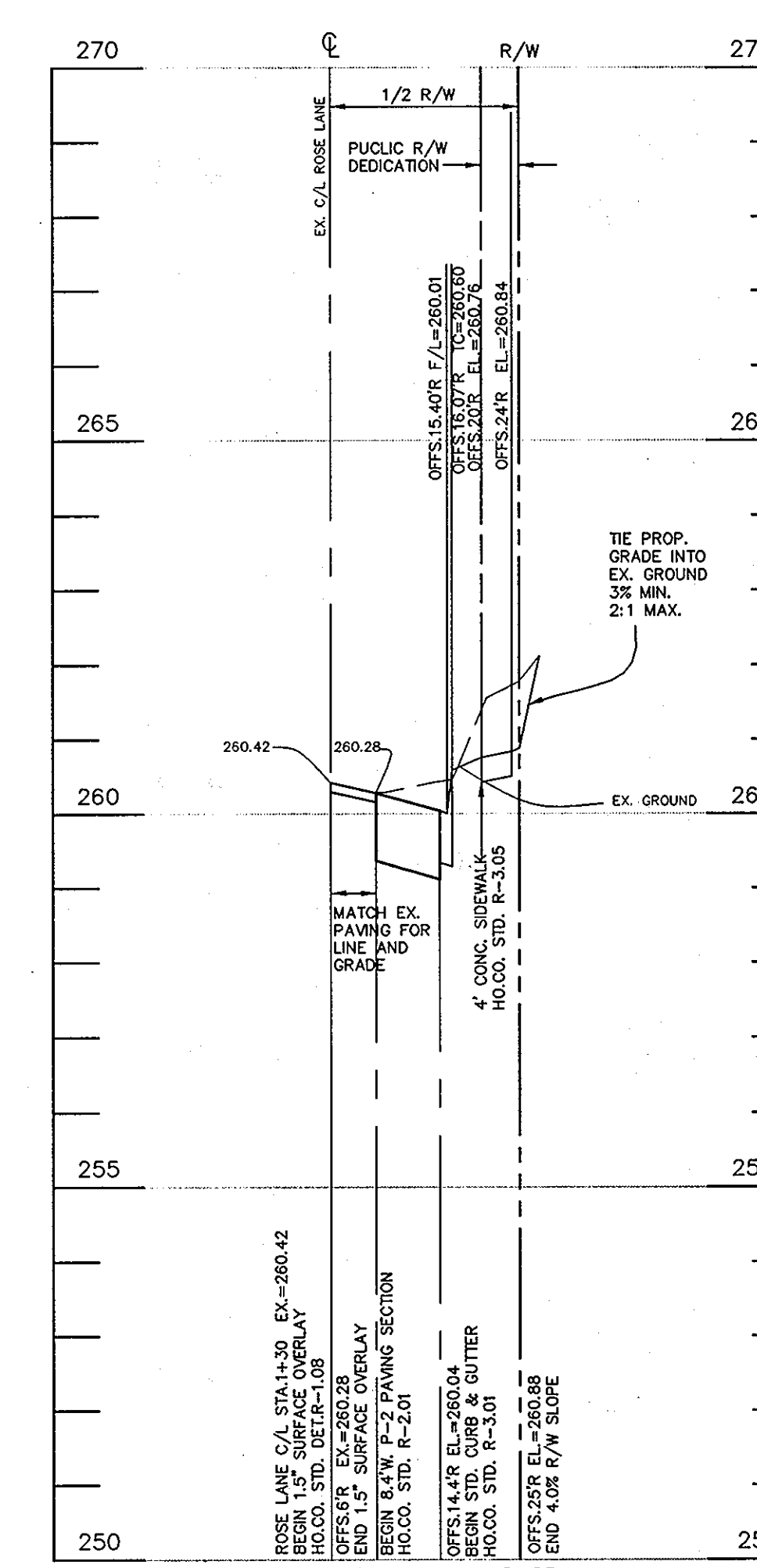
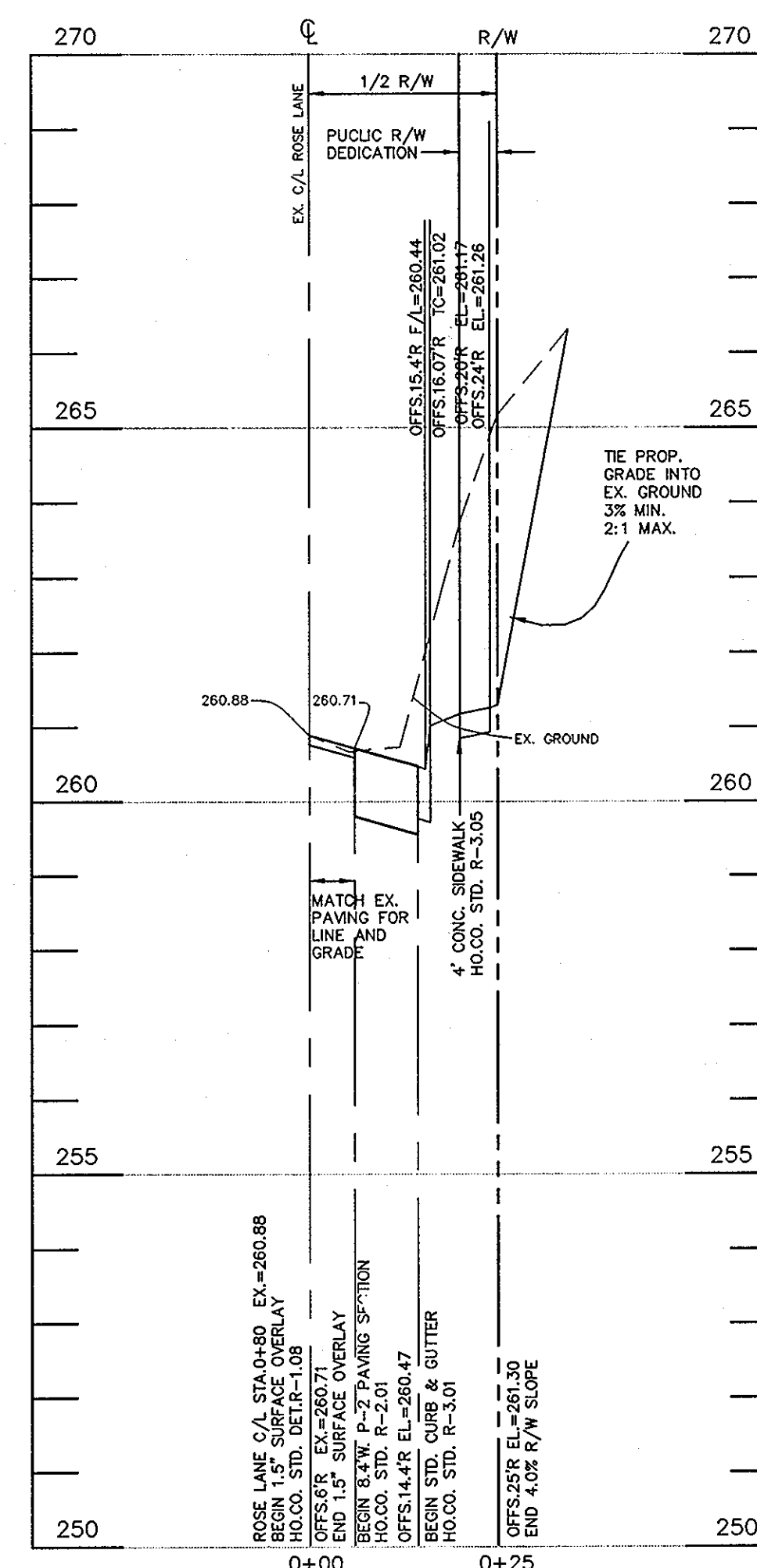
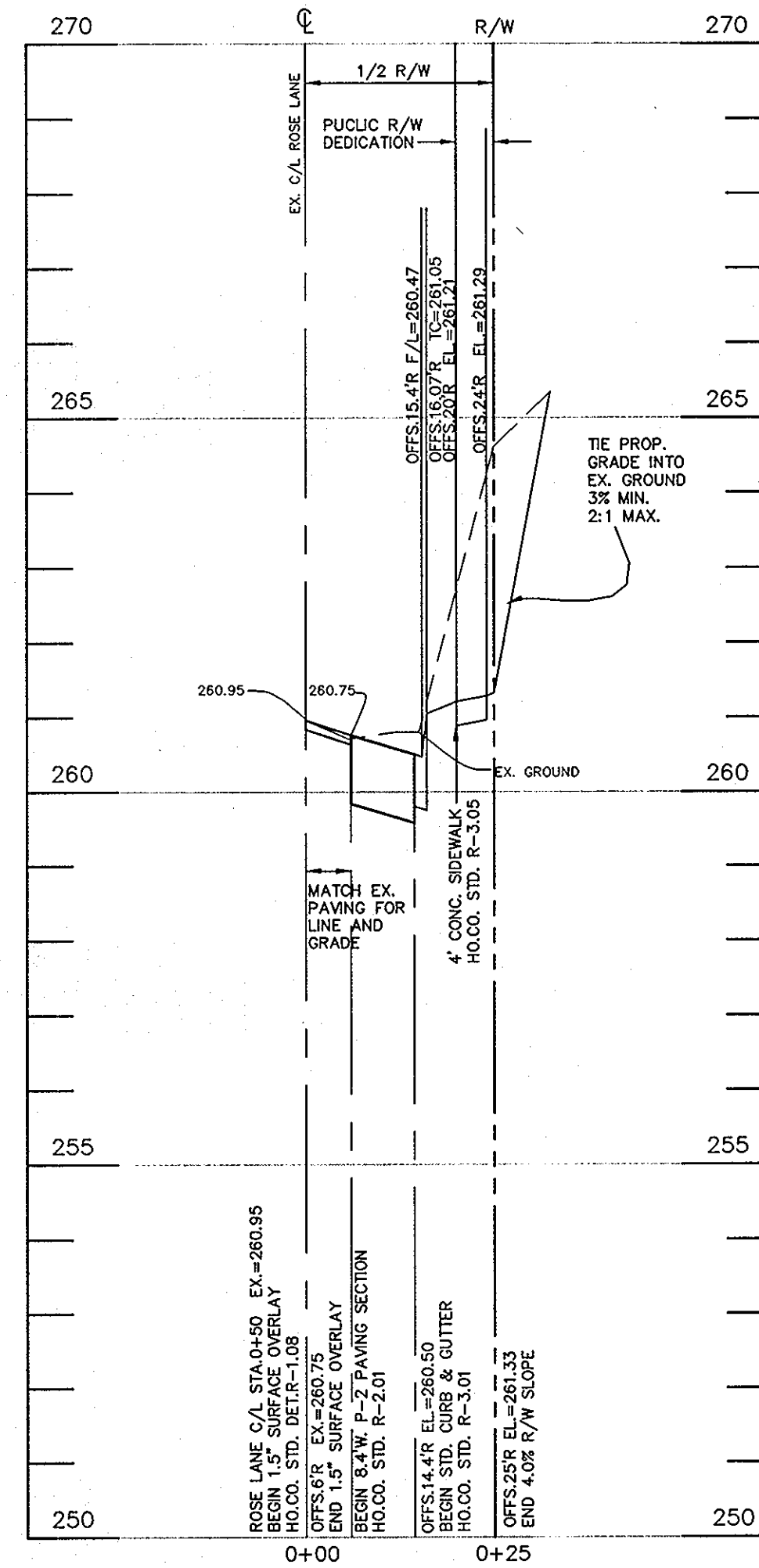
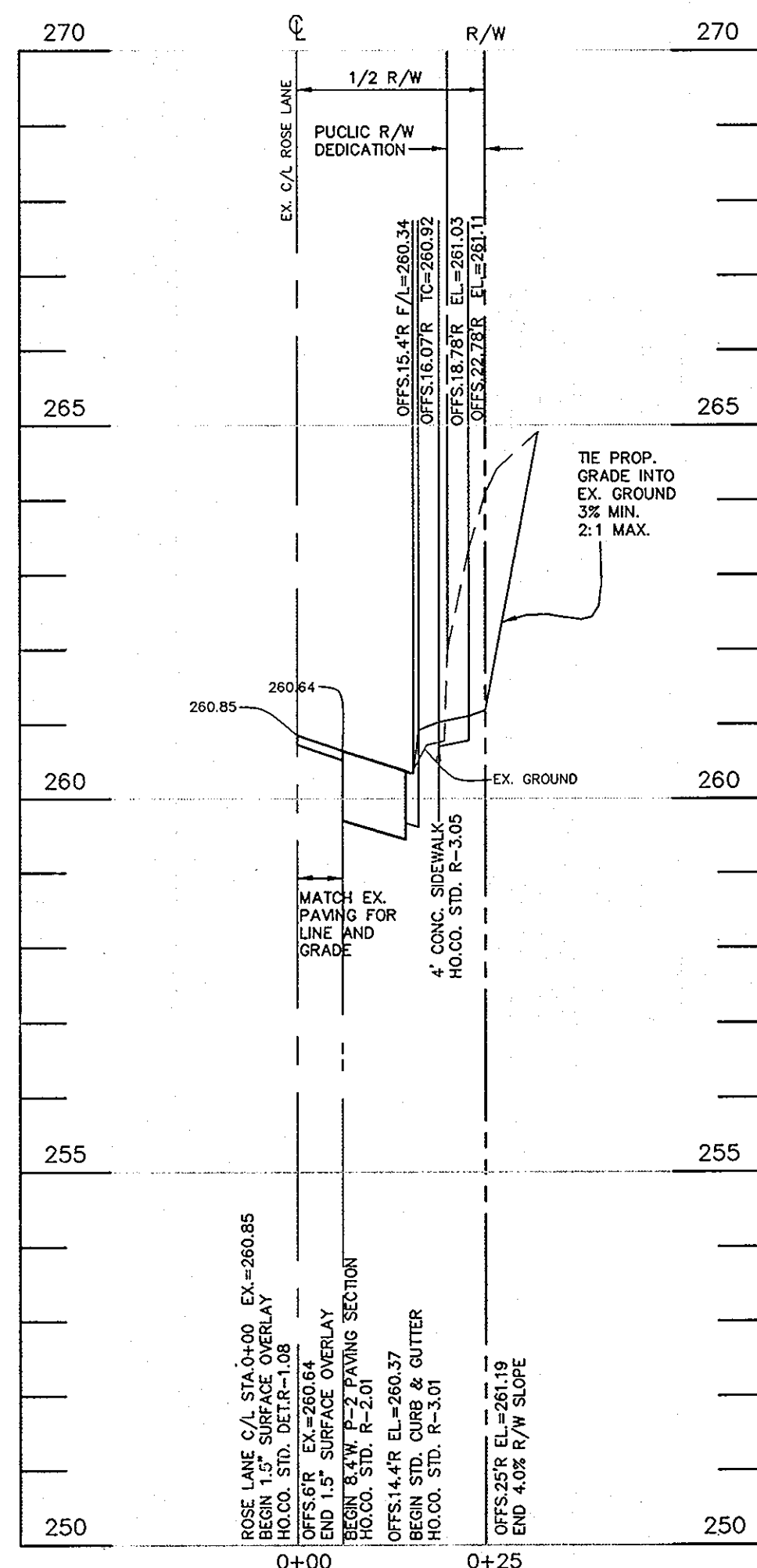
BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.

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ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-8644
www.bel-civilengineering.com

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. 21443, Expiration Date: 12-21-2008.

...
PROFESSIONAL ENGINEER

OWNER: SAYED AND SONA HASSAN 9467 VOLLMERHAUSEN DRIVE COLUMBIA, MARYLAND 21046 301-776-8264	PROJECT: ROSE LANE SECTION E-5 LOT 1 THRU LOT 7 AND OPEN SPACE LOT 8, A RESUBDIVISION OF NORDALI SUBDIVISION SECTION E-5, LOTS 3 AND 4 PLAT BOOK 3 FOLIO 51
DATE: APRIL 2007 JULY 2008	LOCATION: TAX MAP 42 - GRID 24 PARCEL 150 AND 240 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DESIGN: DAM	TITLE: DRY SWALE PROFILE AND SECTION AND MAINTENANCE OF TRAFFIC DETAILS
DRAFT: EDD	DATE: APRIL 2007 JULY 2008
CHECK: DAM	PROJECT NO. 1968
SCALE: AS SHOWN	DRAWING 3 OF 5



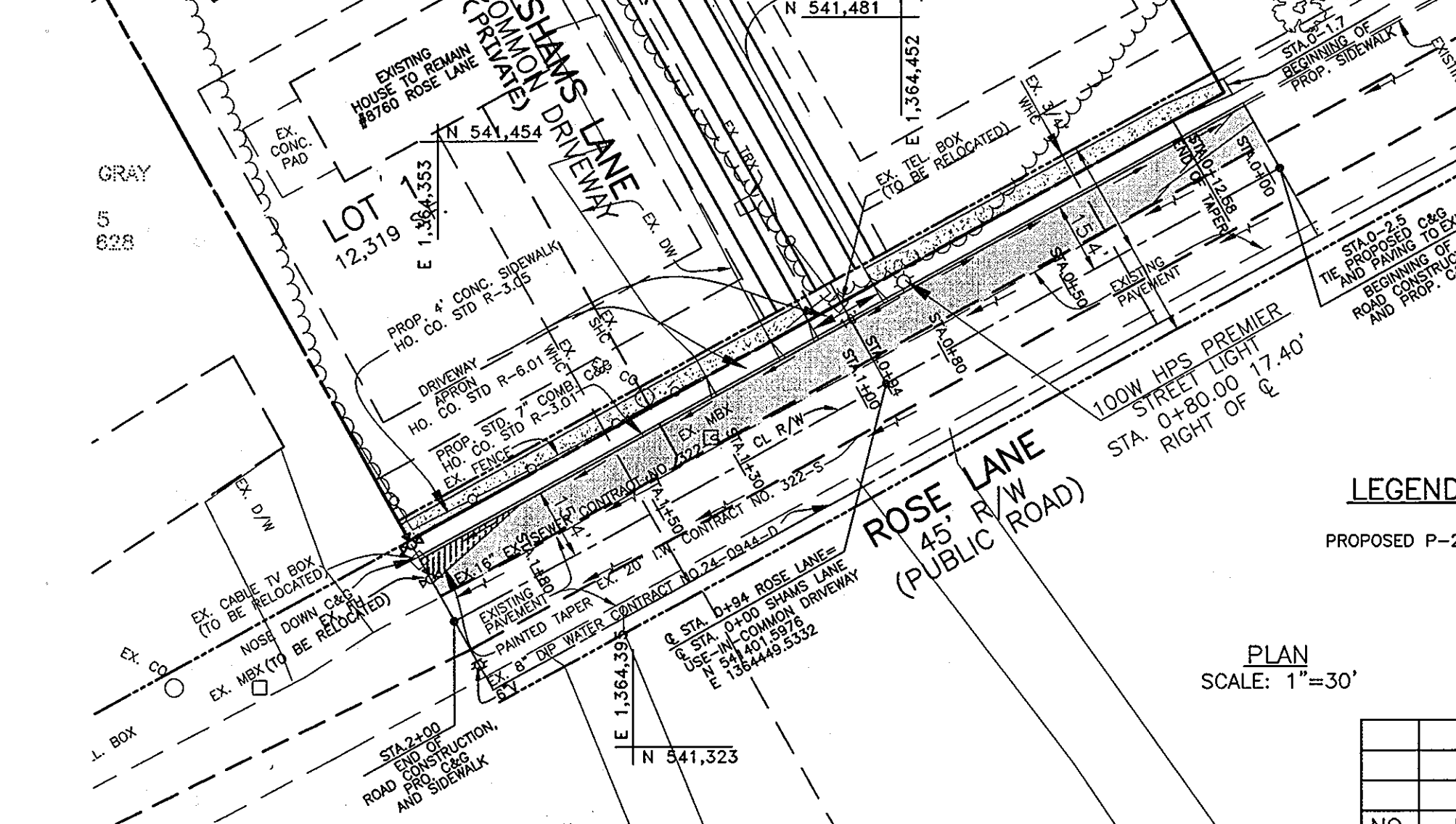
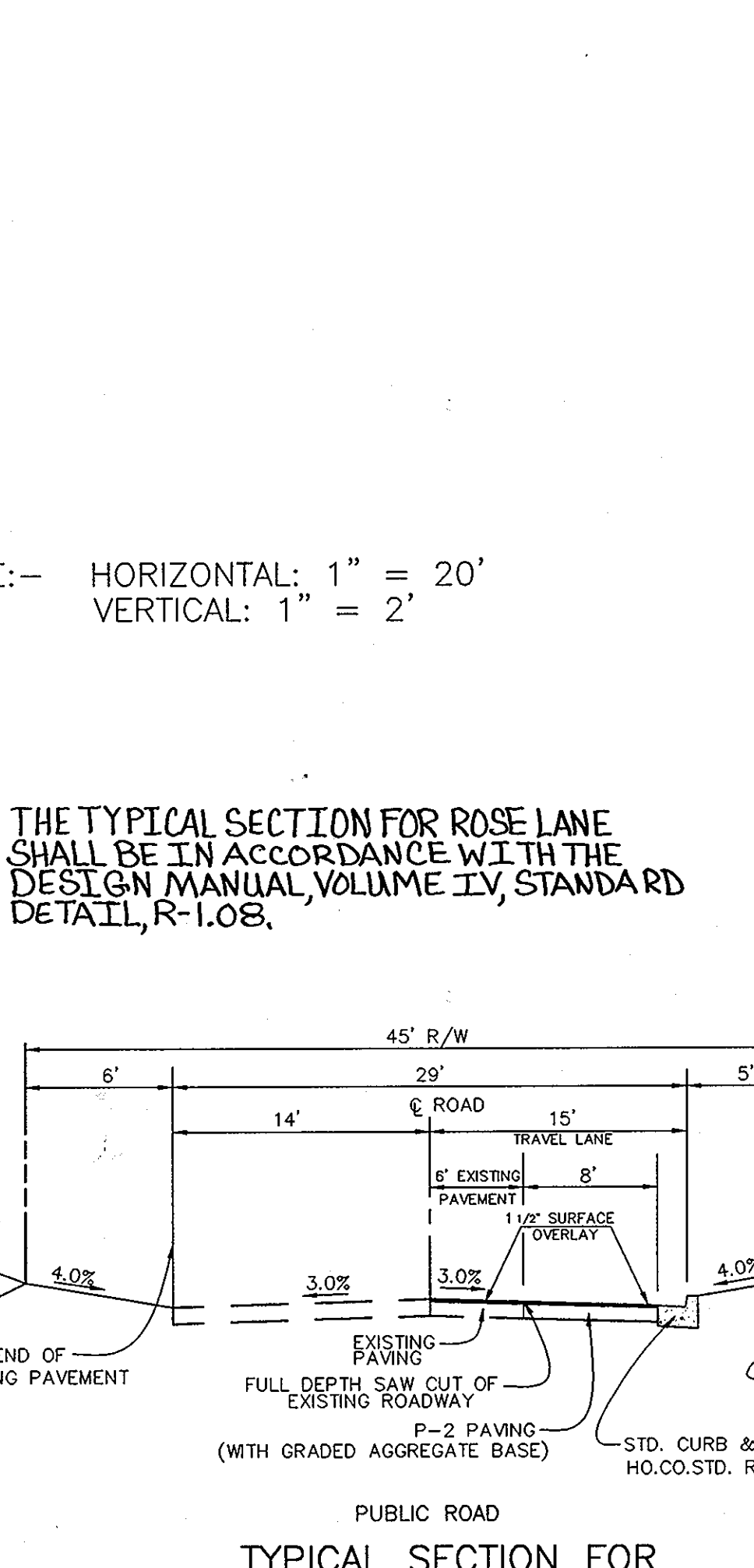
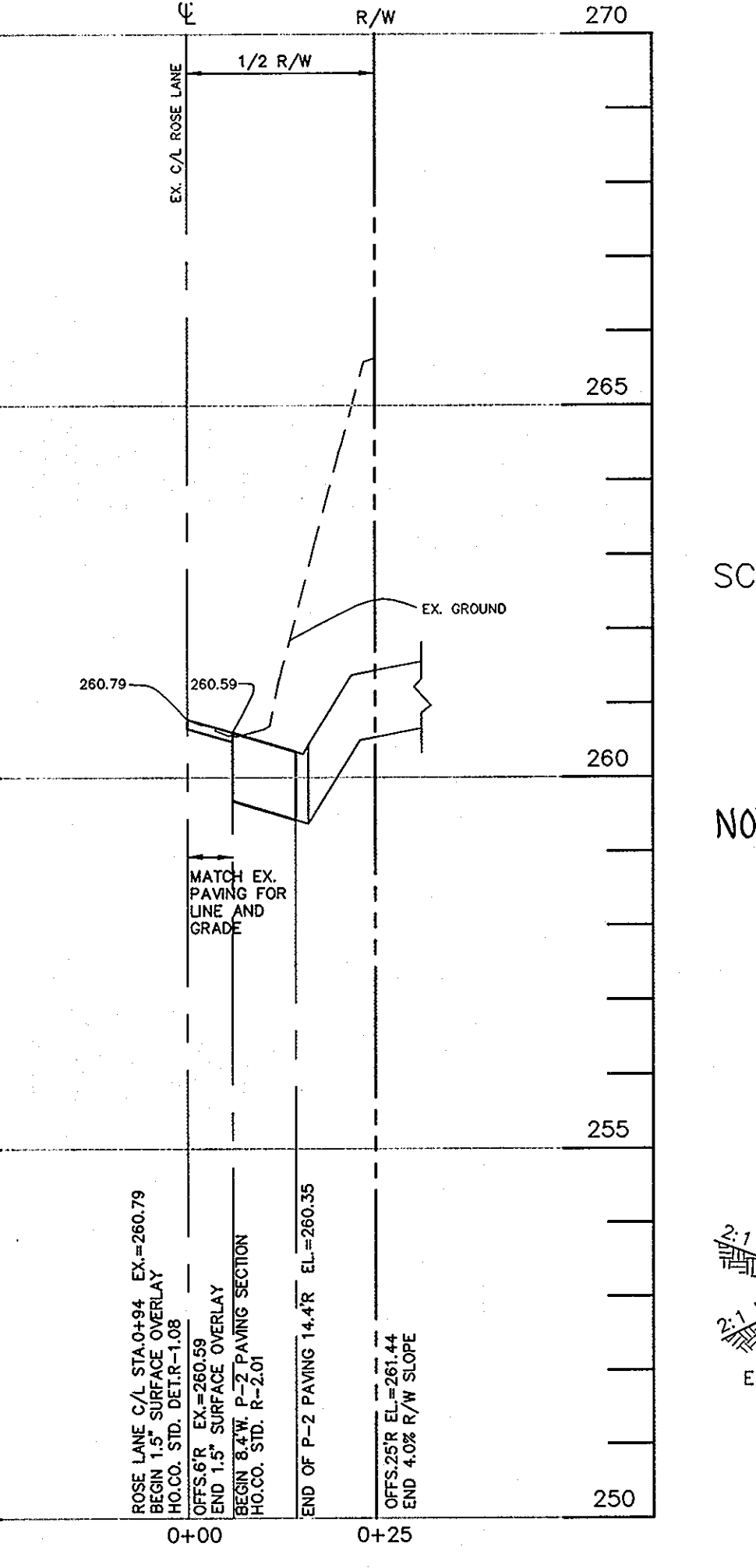
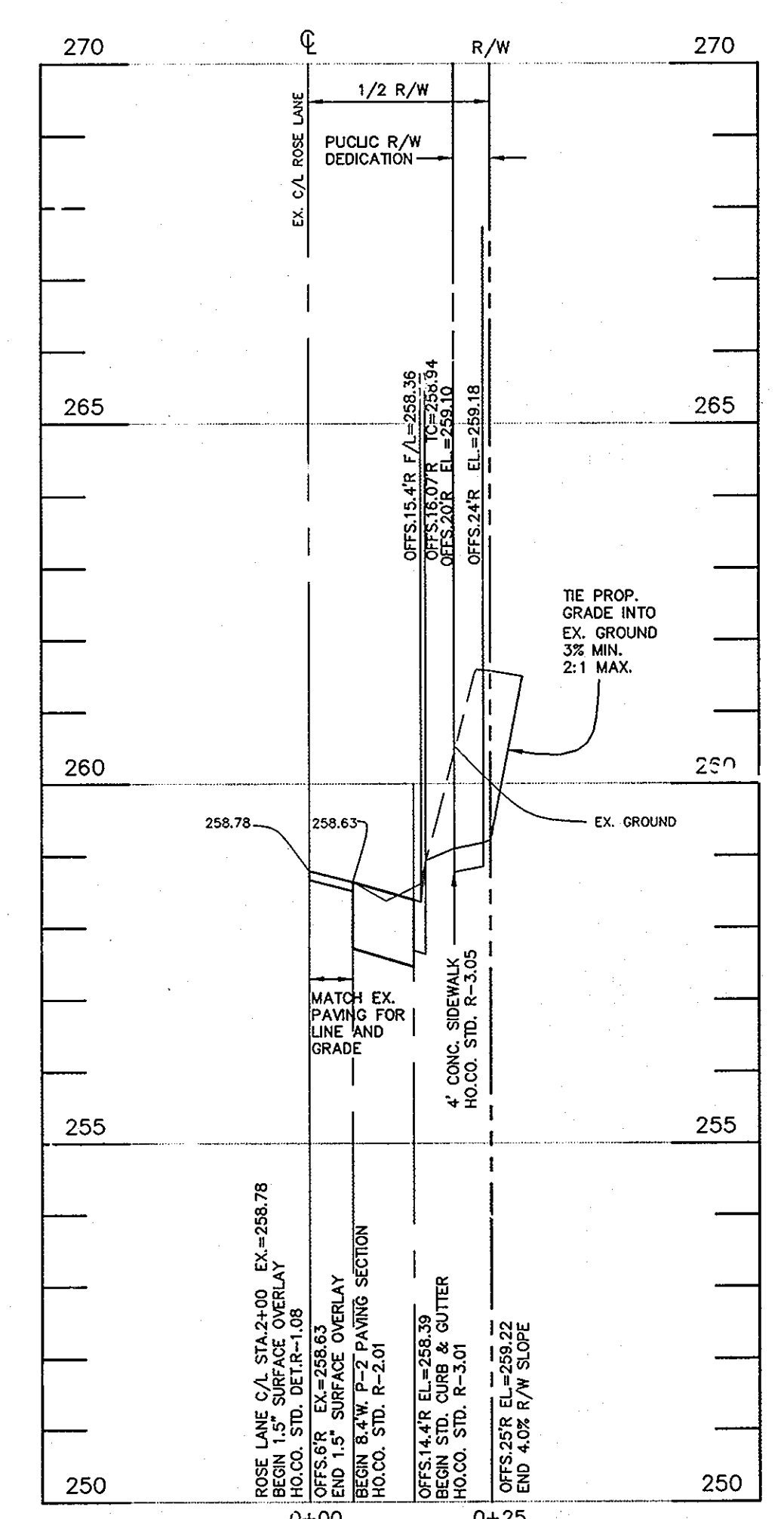
ROADWAY CROSS-SECTION
STA 0+00 (@ EDGE OF PROPERTY LINE)

ROADWAY CROSS-SECTION
STA 0+50

ROADWAY CROSS-SECTION
STA 0+80 (@ 6' OFF THE DRIVEWAY)

ROADWAY CROSS-SECTION
STA 1+30

ROADWAY CROSS-SECTION
STA 1+80



SCALE: - HORIZONTAL: 1" = 20'
VERTICAL: 1" = 2'

NOTE: THE TYPICAL SECTION FOR ROSE LANE SHALL BE IN ACCORDANCE WITH THE DESIGN MANUAL, VOLUME IV, STANDARD DETAIL, R-1.08.

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	1 TO 4	4 TO 6	6 TO 8	8 TO 12	12 TO 15	15 TO 20	20 TO 25	25 TO 30	30 TO 40	40 TO 50	50 TO 60	60 TO 80	80 TO 100
P-1	FARMER BOULDER AND NON-RESIDENTIAL PAVED DRIVEWAY WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	MAX SUPERFICIAL FINE SURFACE 8.5 MM PER 24-25 LEVEL 1 (2.5%) MAX SUPERFICIAL INTERMEDIATE SURFACE (S4) 1.0% MAX SUPERFICIAL BASE 1.0% 18.0 MM PER 24-25 LEVEL 1 (2.5%)	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
P-2	PAVED DRIVE LANE RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY	MAX SUPERFICIAL FINE SURFACE 8.5 MM PER 24-25 LEVEL 1 (2.5%) MAX SUPERFICIAL INTERMEDIATE SURFACE (S4) 1.0% MAX SUPERFICIAL BASE 1.0% 18.0 MM PER 24-25 LEVEL 1 (2.5%)	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
P-3	PAVED DRIVE LANE RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY	MAX SUPERFICIAL FINE SURFACE 8.5 MM PER 24-25 LEVEL 1 (2.5%) MAX SUPERFICIAL INTERMEDIATE SURFACE (S4) 1.0% MAX SUPERFICIAL BASE 1.0% 18.0 MM PER 24-25 LEVEL 1 (2.5%)	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
P-4	MAJOR COLLECTORIAL AND HIGHWAY	MAX SUPERFICIAL FINE SURFACE 8.5 MM PER 24-25 LEVEL 1 (2.5%) MAX SUPERFICIAL INTERMEDIATE SURFACE (S4) 1.0% MAX SUPERFICIAL BASE 1.0% 18.0 MM PER 24-25 LEVEL 1 (2.5%)	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

LEGEND
PROPOSED P-2 PAVING

PLAN SCALE: 1"=30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
W. R. ... 9-25-07
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Hamer 9/25/07
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
... 9/15/08

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
www.bel-civilengineering.com

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. 21443, Expiration Date: 12-21-2008.

David M. ... 7-10-08

OWNER: SAYED AND SONA HASSAN
9467 VOLLMERHAUSEN DRIVE
COLUMBIA, MARYLAND 21046
301-776-8264

PROJECT: ROSE LANE SECTION E-5
LOT 1 THRU LOT 7 AND OPEN SPACE
LOT 8, A RESUBDIVISION OF NORDAU SUBDIVISION SECTION E-5, LOTS 3 AND 4 PLAT BOOK 3 FOLIO 51

LOCATION: TAX MAP 42 - GRID 24
PARCEL 160 AND 240
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: ROADWAY IMPROVEMENTS CROSS-SECTIONS AND DETAILS

DATE: APRIL 2007
JULY 2008

PROJECT NO. 1968

SCALE: AS SHOWN DRAWING 4 OF 5

Design: DAM Draft: EDD Check: DAM

FOREST CONSERVATION WORKSHEET
VERSION 1.0

NET TRACT AREA:

A. Total tract area	2.30
B. Area within 100 year floodplain	0.00
C. Area to remain in agricultural production	0.00
D. Net tract area	2.30

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)

Input the number "1" under the appropriate land use zoning, and limit to only one entry.

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

E. Afforestation Threshold 15% x D = 0.35
F. Conservation Threshold 20% x D = 0.46

EXISTING FOREST COVER:

G. Existing forest cover (excluding floodplains)	1.80
H. Area of forest above afforestation threshold	1.46
I. Area of forest above conservation threshold	1.34

BRFAK EVEN POINT:

J. Forest retention above threshold with no mitigation	0.73
K. Clearing permitted without mitigation	1.07

PROPOSED FOREST CLEARING:

L. Total area of forest to be cleared	1.57
M. Total area of forest to be retained	0.23

PLANTING REQUIREMENTS:

N. Reforestation for clearing above conservation threshold	0.34	
P. Reforestation for clearing below conservation threshold	0.46	
Q. Credit for retention above conservation threshold	1.00	0.00
R. Total reforestation required	0.80	1.00
S. Total afforestation required	0.00	0.00
T. Total reforestation and afforestation required	0.80	0.00

LEGEND

SOILS CLASSIFICATION	AbC1
SOILS DELINEATION	---
EXISTING CONTOURS	---
PROPOSED CONTOURS	---
EXISTING WOODS LINE	---
PROPOSED WOODS LINE	---
EXISTING STRUCTURE	---
PROPOSED STRUCTURE	---
FOREST CONSERVATION EASEMENTS	FCE
FOREST CONSERVATION SIGNAGE	---
PROPOSED SIDEWALK	---

SITE ANALYSIS DATA CHART

GENERAL SITE DATA

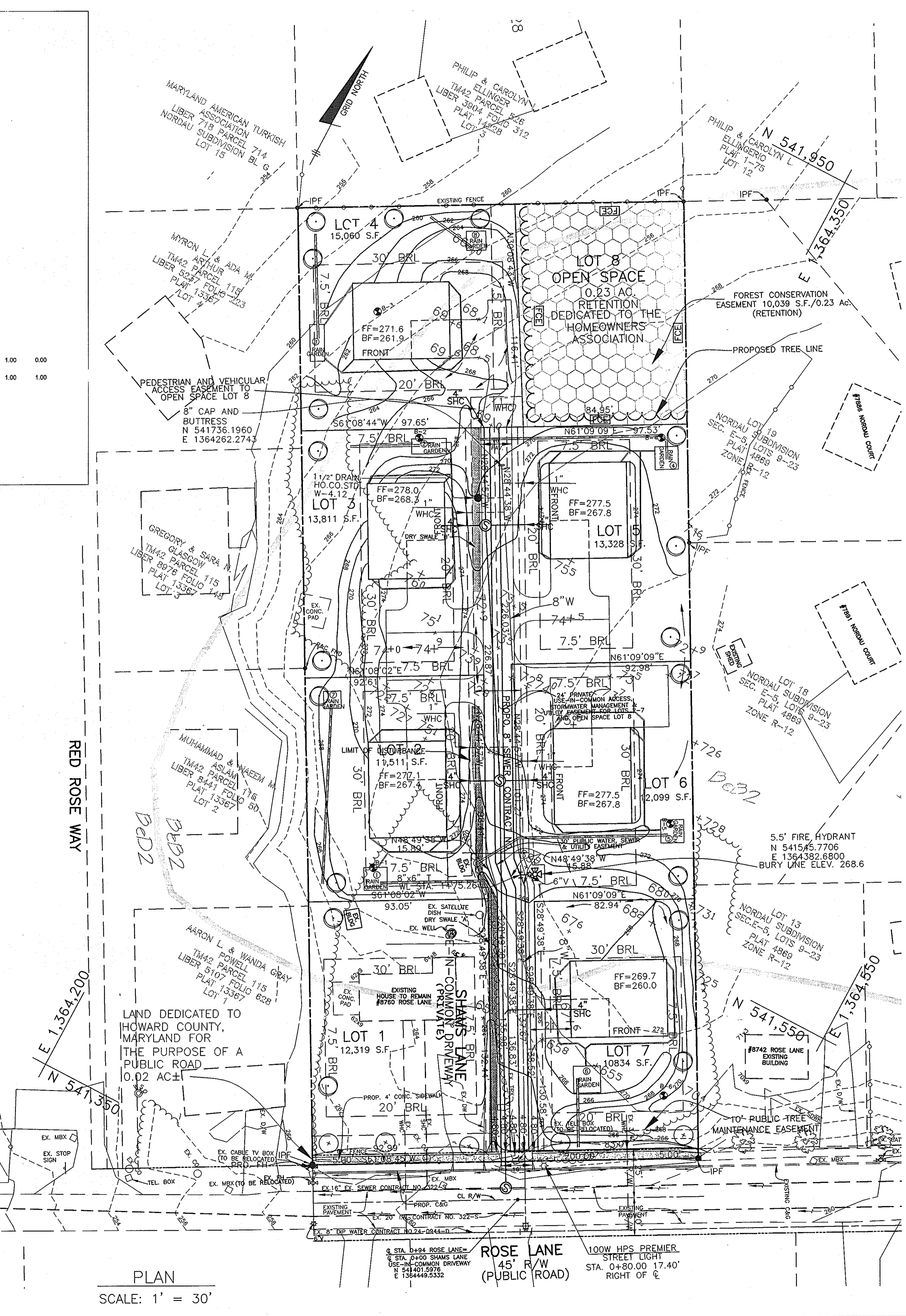
1.) PRESENT ZONING:	R-12
2.) APPLICABLE DPZ FILE REFERENCES:	N/A
3.) DEED REFERENCE:	9407/580, 10366/530
4.) PROPOSED USE OF SITE:	SINGLE-FAMILY DETACHED
5.) PROPOSED WATER AND SEWER SYSTEMS:	PUBLIC AREA TABULATION

1.) GROSS TRACT AREA: 2.30 ac.±
2.) AREA WITHIN 100-YEAR FLOODPLAIN: 0.00 ac.±
3.) TOTAL AREA OF 25% OR GREATER STEEP SLOPES: 0.00 ac.±
4.) NET TRACT AREA: 2.28 ac.±
5.) TOTAL NUMBER OF RESIDENTIAL UNITS/LOTS PROPOSED ON THIS SUBMISSION: 7
6.) AREA OF ROAD RIGHT-OF-WAY: 0.02 ac.±
7.) OPEN SPACE ON-SITE TOTAL REQUIREMENTS MINIMUM RESIDENTIAL LOT SIZE: 10,800
OPEN SPACE REQUIRED (10%): 0.23 ac.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Michelle R. Adams 9-25-08
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Judy Harris 9/30/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. ... 9/30/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



PLAN
SCALE: 1" = 30'

CONSTRUCTION PERIOD PROTECTION PROGRAM

A. Forest Protection Techniques

1. **Soil Protection Area (Critical Root Zone).**
The soil protection area, or critical root zone, of a tree is that portion of the soil column where most of its roots may be found. The majority of roots responsible for water and nutrient uptake are located just below the soil surface. Temporary fencing shall be placed around the critical root zone of the forest in areas where the forest limits occur within 25 feet of the limit of disturbance.

2. **Fencing and Signage.**
Existing forest limits occurring within 50 feet of the limits of disturbance shall be protected using temporary protective fencing. Permanent signage shall be placed around the afforestation area prior to plant installation, as shown on the plan.

3. **Pre-Construction Meeting.**
Upon staking of limits of disturbance a pre-construction meeting will be held between the developer, contractor and appropriate County inspector. The purpose of the meeting will be to verify that all sediment control is in order, and to notify the contractor of possible penalties for non-compliance with the FCP.

4. **Storage Facilities/Equipment Cleaning.**
All equipment storage, parking, sanitary facilities, material stockpiling, etc. associated with construction of the project will be restricted to those areas outside of the proposed Forest Conservation Easement. Cleaning of equipment will be limited to areas within the LOD of the proposed homesites. Wastewater resulting from equipment cleaning will be controlled to prevent runoff into environmentally sensitive areas.

5. **Sequence of Construction.**
The following timetable represents the proposed timetable for development of the subject property. The items outlined in the Forest Conservation Plan will be enacted within two (2) years of subdivision approval.

Below find a proposed sequence of construction.

1. Install all signage and sediment control devices.
2. Hold pre-construction meeting between developer, contractor and County inspector.
3. Build access roads, install water and sewer, and construct houses. Stabilize all disturbed areas accordingly.
4. Remove sediment control.
5. Hold post-construction meeting with County inspectors to assure compliance with FCP. Submit Certification of Retention.

E. Construction Monitoring.
Eco-Science Professionals, or another qualified professional designated by the developer, will monitor construction of the project to ensure that all activities are in compliance with the Forest Conservation Plan.

F. Post-Construction Meeting.
Upon completion of construction, Eco-Science Professionals, or another qualified professional designated by the developer, will notify the County that construction has been completed and arrange for a post-construction meeting to review the project site. The meeting will allow the County inspector to verify that forest retention requirements have been met.

POST-CONSTRUCTION MANAGEMENT PLAN

Howard County requires a two year post-construction management plan to be prepared as part of the Forest Conservation Plan. The plan goes into effect upon acceptance of the construction certification of completion by the County. Eco-Science Professionals, or another qualified professional designated by the developer, will be responsible for implementation of the post-construction management plan.

The following items will be incorporated into the plan for the subject property:

A. Fencing and Signage.
Permanent signage indicating the limits of the retention/planting area shall be maintained.

B. General Site Inspections.
Site inspections will be performed to insure that retention of the forest is met in accordance with this plan and that the forest edge remains healthy and stable.

C. Education.
The developer will provide appropriate materials to property owners informing them of the location and purpose of the forest conservation easement. Materials may include site plans and information explaining the intent of the forest conservation law.

D. Final Inspection.
At the end of the two year post-construction management period, Eco-Science Professionals, or another qualified professional, will submit to the administrator of the Howard County Forest Conservation Program certification that all retention/afforestation requirements have been met. Upon acceptance of this certification, the County will release the developer from all future obligations and release the developer's bond.

FOREST CONSERVATION EASEMENTS

Easements are a legal means of providing permanent protection of forests, farmland and open space. In accordance with the criteria outlined in the Howard County Forest Conservation Manual, a forest conservation easement will be recorded for the retention areas the subject property. Submission of the easements for recordation will occur prior to commencement of construction activities.

FOREST RETENTION AREA

MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED

VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1992

MIN. 11"
MIN. 15"

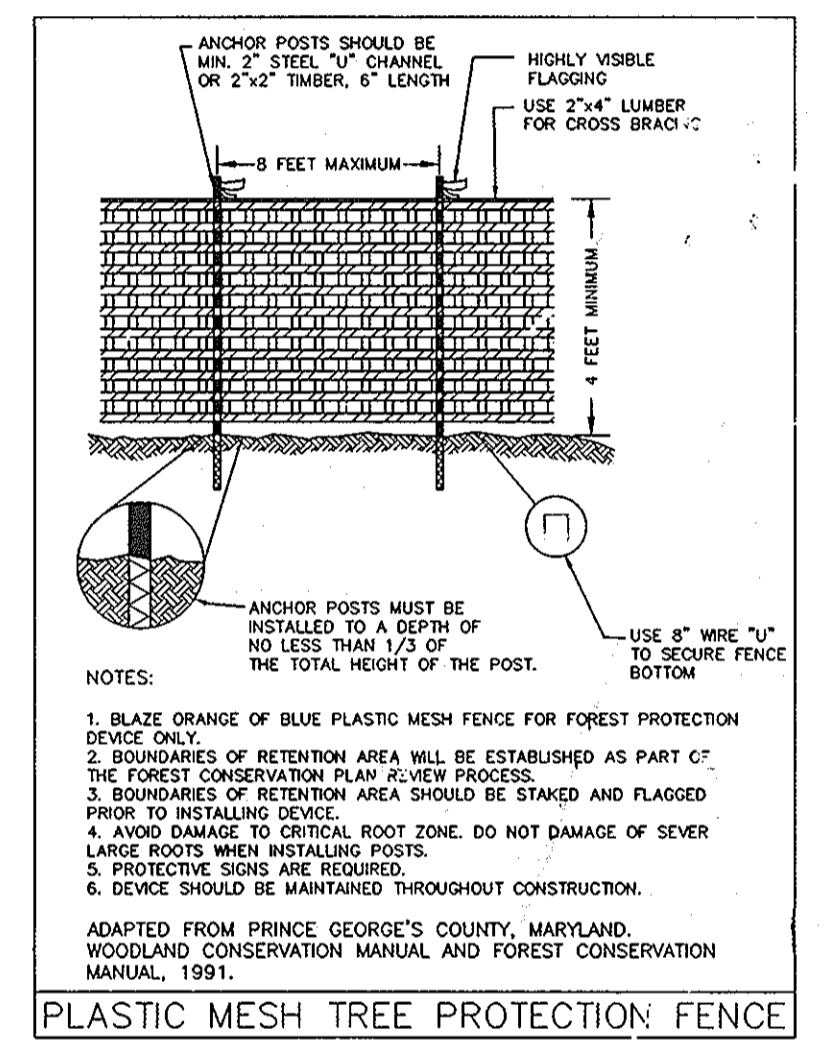
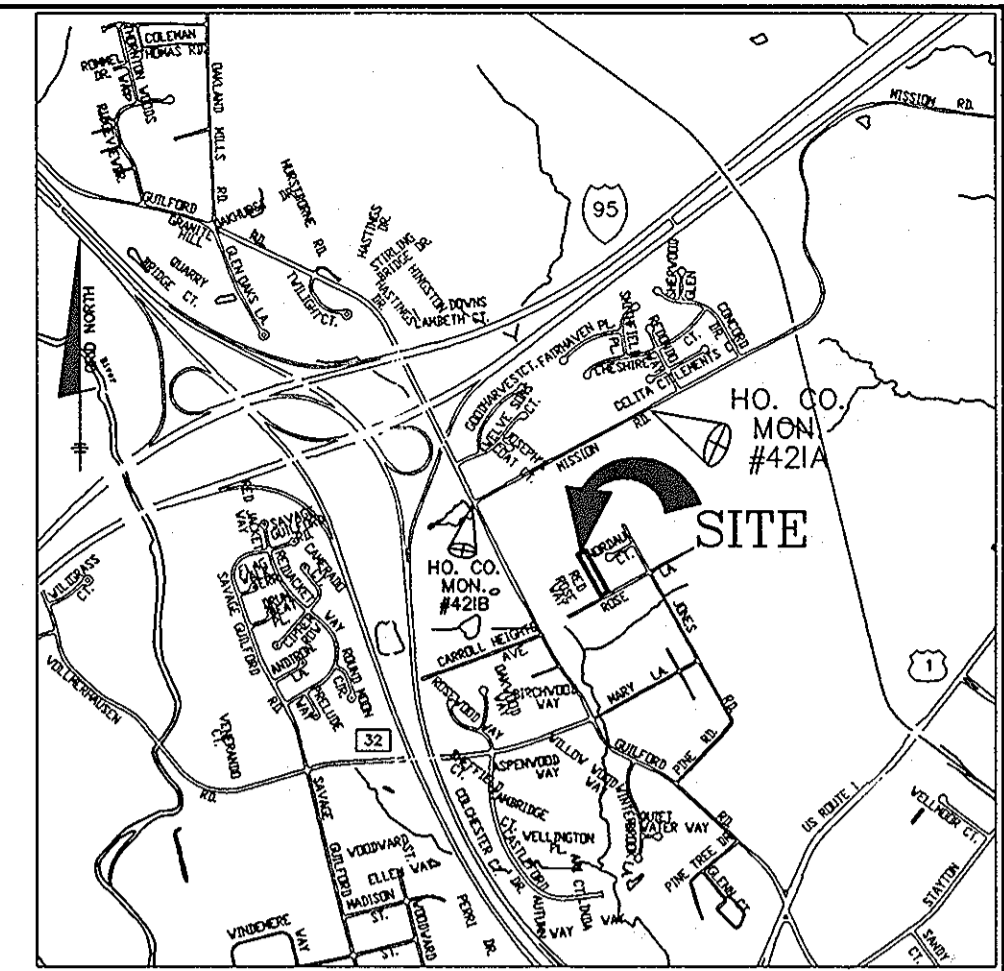
FCP NOTES:

- 1.) THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
- 2.) NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEARING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
- 3.) TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. FENCING SHALL BE INSTALLED ALONG LIMITS OF DISTURBANCE OCCURRING WITHIN 50 FEET OF THE PROPOSED FENCE LIMITS.
- 4.) PERMANENT SIGNAGE WILL BE POSTED AT 50-100 FEET INTERVALS ALONG ALL FCE LIMITS.
- 5.) THE FOREST CONSERVATION SIGNAGE MUST BE IN PLACE FOR PERPETUITY.
- 6.) THE FOREST CONSERVATION OBLIGATION IN ACCORDANCE SECTION 16.1202 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL SHALL BE FULFILLED BY THE PLACEMENT OF 23 ACRES OF EXISTING FOREST INTO A FOREST CONSERVATION EASEMENT. SURETY IN THE AMOUNT OF \$2,007.80 SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS FINAL PLAN, F-197, AND BY THE PAYMENT OF A FEE-IN-LIEU IN THE AMOUNT OF \$25,136 TO THE FOREST CONSERVATION FUND FOR 0.8 ACRES OF REQUIRED REFORESTATION.

SOILS LEGEND

MAP SOIL	SOIL GROUP	SOIL TYPE
BaB2	C	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
BdD2	C	BELTSVILLE SILT LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED

* INDICATES HYDRIC SOILS
TAKEN FROM SOILS SURVEY, ISSUED JULY 1968, MAP NO. 30



Eco-Science Professionals, Inc.

CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACOE Wetland Deliberator
Certification # JPC03MD06104412

John P. Canoles

P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

BENCHMARK ENGINEERING, INC.

ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6844
www.bel-civilengineering.com

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. 21443, Expiration Date: 12-21-2008

John P. Canoles 7-10-06

OWNER: SAYED AND SONA HASSAN
9467 VOLLMERHAUSEN DRIVE
COLUMBIA, MARYLAND 21046
301-693-6700

PROJECT: ROSE LANE SECTION E-5 LOT 1 THRU LOT 7 AND OPEN SPACE LOT 8, A RESUBDIVISION OF NORDAU SUBDIVISION SECTION E-5, LOTS 3 AND 4 PLAT BOOK 3 FOLIO 51

LOCATION: TAX MAP 42 - GRID 24 PARCEL 180 AND 240 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

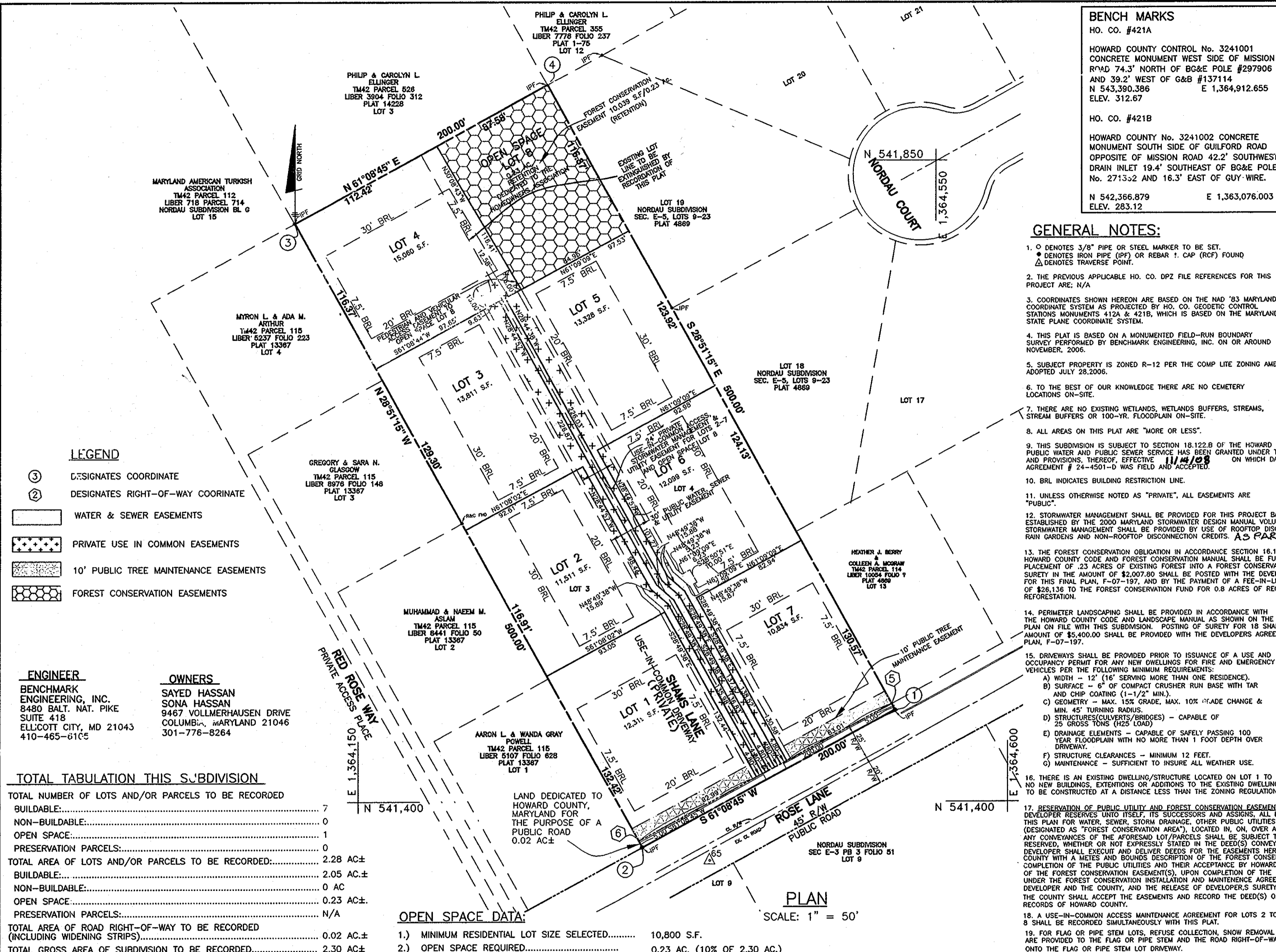
TITLE: FOREST CONSERVATION PLAN

DATE: APRIL, 2007
JULY, 2008

PROJECT NO.: 1968

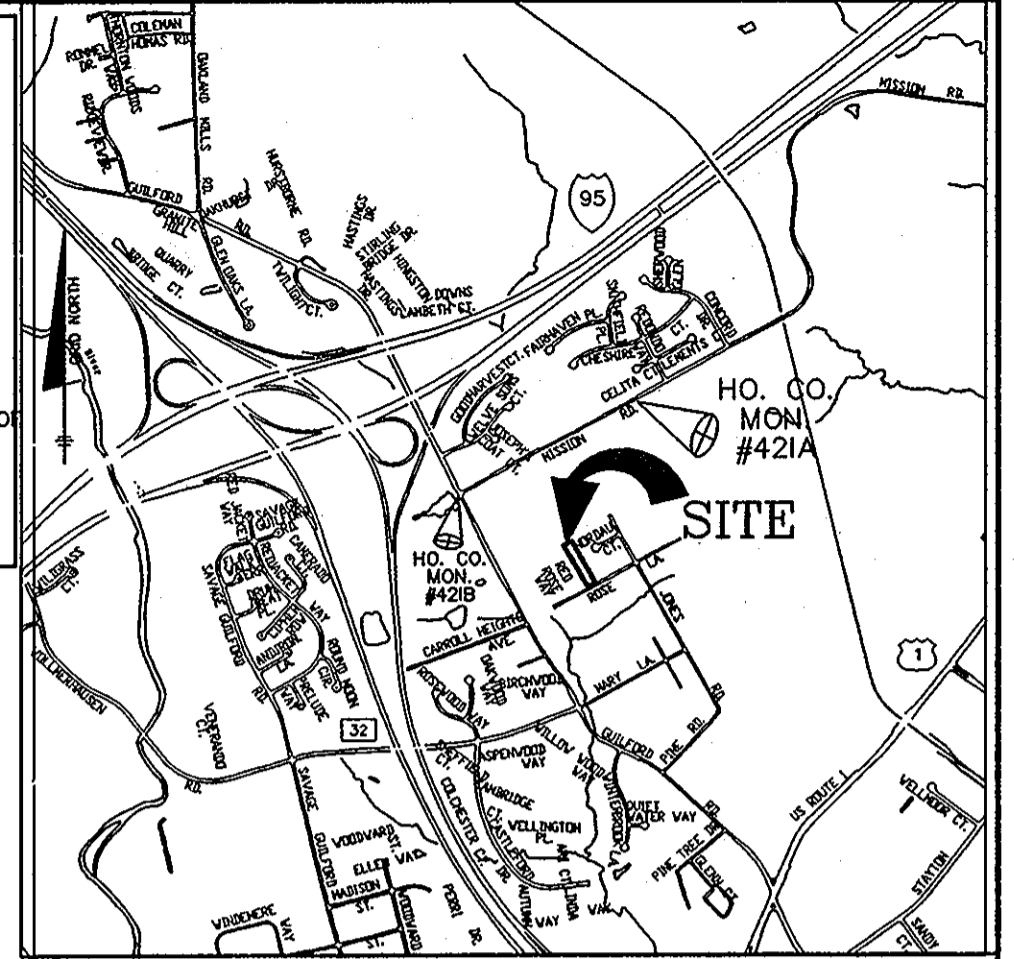
SCALE: AS SHOWN DRAWING 5 OF 5

Design: DAM Draft: EDD Check: DAM



BENCH MARKS
 HO. CO. #421A
 HOWARD COUNTY CONTROL No. 3241001
 CONCRETE MONUMENT WEST SIDE OF MISSION
 ROAD 74.3' NORTH OF BG&E POLE #297906
 AND 39.2' WEST OF G&B #137114
 N 543,390.386 E 1,364,912.655
 ELEV. 312.67
 HO. CO. #421B
 HOWARD COUNTY No. 3241002 CONCRETE
 MONUMENT SOUTH SIDE OF GUILFORD ROAD
 OPPOSITE OF MISSION ROAD 42.2' SOUTHWEST OF
 DRAIN INLET 19.4' SOUTHEAST OF BG&E POLE
 No. 271352 AND 16.3' EAST OF GUY-WIRE.
 N 542,366.879 E 1,363,076.003
 ELEV. 283.12

GENERAL NOTES:
 1. O DENOTES 3/8" PIPE OR STEEL MARKER TO BE SET.
 * DENOTES IRON PIPE (IPT) OR REBAR 1" CAP (RCF) FOUND
 Δ DENOTES TRAVERSE POINT.
 2. THE PREVIOUS APPLICABLE HO. CO. DPZ FILE REFERENCES FOR THIS PROJECT ARE: N/A
 3. COORDINATES SHOWN HEREON ARE BASED ON THE NAD '83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HO. CO. GEODETIC CONTROL STATIONS MONUMENTS # 4124 & 4218, WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
 4. THIS PLAT IS BASED ON A MONUMENTED FIELD-RUN BOUNDARY SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC. ON OR AROUND NOVEMBER, 2006.
 5. SUBJECT PROPERTY IS ZONED R-12 PER THE COMP LITE ZONING AMENDMENTS, ADOPTED JULY 28, 2006.
 6. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO CEMETERY LOCATIONS ON-SITE.
 7. THERE ARE NO EXISTING WETLANDS, WETLANDS BUFFERS, STREAMS, STREAM BUFFERS OR 100-YR. FLOODPLAIN ON-SITE.
 8. ALL AREAS ON THIS PLAT ARE "MORE OR LESS".
 9. THIS SUBDIVISION IS SUBJECT TO SECTION 18.122.B OF THE HOWARD COUNTY CODE, PUBLIC WATER AND PUBLIC SEWER SERVICE HAS BEEN GRANTED UNDER THE TERMS AND PROVISIONS, THEREOF, EFFECTIVE 11/14/08 ON WHICH DATE DEVELOPER AGREEMENT # 24-4501-D WAS FIELD AND ACCEPTED.
 10. BRL INDICATES BUILDING RESTRICTION LINE.
 11. UNLESS OTHERWISE NOTED AS "PRIVATE", ALL EASEMENTS ARE "PUBLIC".
 12. STORMWATER MANAGEMENT SHALL BE PROVIDED FOR THIS PROJECT BASED ON GUIDELINES ESTABLISHED BY THE 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I & II. CREDITS, RAIN GARDENS AND NON-ROOFTOP DISCONNECTION CREDITS, AS PART OF THE SDP.
 13. THE FOREST CONSERVATION OBLIGATION IN ACCORDANCE SECTION 18.122.B OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL SHALL BE FULFILLED BY THE PLACEMENT OF .23 ACRES OF EXISTING FOREST INTO A FOREST CONSERVATION EASEMENT. SURETY IN THE AMOUNT OF \$2,007.80 SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THIS FINAL PLAN, F-07-197, AND BY THE PAYMENT OF A FEE-IN-LIEU IN THE AMOUNT OF \$26,136 TO THE FOREST CONSERVATION FUND FOR 0.8 ACRES OF REQUIRED REFORESTATION.
 14. PERIMETER LANDSCAPING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 18.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL AS SHOWN ON THE CERTIFIED LANDSCAPE PLAN ON FILE WITH THIS SUBDIVISION. POSTING OF SURETY FOR 18 SHADE TREES IN THE AMOUNT OF \$5,400.00 SHALL BE PROVIDED WITH THE DEVELOPERS AGREEMENT FOR THIS FINAL PLAN, F-07-197.
 15. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 A) WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE).
 B) SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.).
 C) GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS.
 D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF 25 GROSS TONS (H2S LOAD)
 E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
 F) STRUCTURE CLEARANCES - MINIMUM 12 FEET.
 G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
 16. THERE IS AN EXISTING DWELLING/STRUCTURE LOCATED ON LOT 1 TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATIONS PROVIDE.
 17. RESERVATION OF PUBLIC UTILITY AND FOREST CONSERVATION EASEMENTS DEVELOPER RESERVES UNTO ITSELF, ITS SUCCESSORS AND ASSIGNS, ALL EASEMENTS SHOWN ON THIS PLAN FOR WATER, SEWER, STORM DRAINAGE, OTHER PUBLIC UTILITIES AND FOREST CONSERVATION (DESIGNATED AS "FOREST CONSERVATION AREA"), LOCATED IN, ON, OVER AND THROUGH LOTS/PARCELS, ANY CONVEYANCES OF THE FORESAID LOT/PARCELS SHALL BE SUBJECT TO THE EASEMENTS HEREIN RESERVED, WHETHER OR NOT EXPRESSLY STATED IN THE DEED(S) CONVEYING SAID LOT(S) PARCELS. DEVELOPER SHALL EXECUTE AND DELIVER DEEDS FOR THE EASEMENTS HEREIN RESERVED TO HOWARD COUNTY WITH A METES AND BOUNDS DESCRIPTION OF THE FOREST CONSERVATION AREA. UPON COMPLETION OF THE PUBLIC UTILITIES AND THEIR ACCEPTANCE BY HOWARD COUNTY, AND IN THE CASE OF THE FOREST CONSERVATION EASEMENT(S), UPON COMPLETION OF THE DEVELOPER'S OBLIGATION UNDER THE FOREST CONSERVATION INSTALLATION AND MAINTENANCE AGREEMENT EXECUTED BY THE DEVELOPER AND THE COUNTY, AND THE RELEASE OF DEVELOPER'S SURETY POSTED WITH SAID AGREEMENT, THE COUNTY SHALL ACCEPT THE EASEMENTS AND RECORD THE DEED(S) OF EASEMENT IN THE LAND RECORDS OF HOWARD COUNTY.
 18. A USE-IN-COMMON ACCESS MAINTENANCE AGREEMENT FOR LOTS 2 TO 7 AND OPEN SPACE LOT 8 SHALL BE RECORDED SIMULTANEOUSLY WITH THIS PLAT.
 19. FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE FLAG OR PIPE STEM AND THE ROAD RIGHT-OF-WAY LINE ONLY AND NOT ONTO THE FLAG OR PIPE STEM LOT DRIVEWAY.



VICINITY MAP
 SCALE: 1" = 2000'

20. THE HOMEOWNERS ASSOCIATION DOCUMENTS HAVE BEEN FILED WITH THE MARYLAND STATE DEPARTMENT OF ASSESSMENTS AND TAXATION AS RECORDING REFERENCE NUMBER PLAT 13367 ON 7/25/08
 21. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE MARS GROUP IN MARCH, 2006 AND REVISED IN JULY, 2007, AND WAS APPROVED ON AUGUST 24, 2007.

- LEGEND**
- ③ DESIGNATES COORDINATE
 - ② DESIGNATES RIGHT-OF-WAY COORDINATE
 - Water & Sewer Easements
 - Private Use in Common Easements
 - 10' Public Tree Maintenance Easements
 - Forest Conservation Easements

ENGINEER
 BENCHMARK ENGINEERING, INC.
 8480 BALT. NAT. PIKE
 SUITE 418
 ELLICOTT CITY, MD 21043
 410-465-6165

OWNERS
 SAYED HASSAN
 SONA HASSAN
 9467 VOLLMERHAUSEN DRIVE
 COLUMBIA, MARYLAND 21046
 301-776-8264

TOTAL TABULATION THIS SUBDIVISION

TOTAL NUMBER OF LOTS AND/OR PARCELS TO BE RECORDED	
BUILDABLE.....	7
NON-BUILDABLE.....	0
OPEN SPACE.....	1
PRESERVATION PARCELS.....	0
TOTAL AREA OF LOTS AND/OR PARCELS TO BE RECORDED.....	2.28 AC±
BUILDABLE.....	2.05 AC±
NON-BUILDABLE.....	0 AC
OPEN SPACE.....	0.23 AC±
PRESERVATION PARCELS.....	N/A
TOTAL AREA OF ROAD RIGHT-OF-WAY TO BE RECORDED (INCLUDING WIDENING STRIPS).....	0.02 AC±
TOTAL GROSS AREA OF SUBDIVISION TO BE RECORDED.....	2.30 AC±

OPEN SPACE DATA:

1.) MINIMUM RESIDENTIAL LOT SIZE SELECTED.....	10,800 S.F.
2.) OPEN SPACE REQUIRED.....	0.23 AC. (10% OF 2.30 AC.)
3.) TOTAL CREDITED OPEN SPACE PROVIDED.....	0.23 AC.

RIGHT OF WAY COORDINATE CHART

BOUNDARY COORDINATES		
No.	NORTH	EAST
5	N 541372.3241	E 1364344.5995
6	N 541468.8407	E 1364519.7696

COORDINATE CHART (NAD '83)

BOUNDARY COORDINATES		
No.	NORTH	EAST
1	N 541464.4614	E 1364522.1825
2	N 541367.9448	E 1364347.0124
3	N 541805.8700	E 1364105.7210
4	N 541902.3866	E 1364280.8911

MINIMUM LOT SIZE CHART

LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
2	11,511 S.F.	636 S.F.	10,875 S.F.
3	13,811 S.F.	1,202 S.F.	12,609 S.F.
4	15,060 S.F.	1,824 S.F.	13,236 S.F.
5	13,328 S.F.	1,227 S.F.	12,101 S.F.
6	12,099 S.F.	627 S.F.	11,472 S.F.

TRAVERSE POINT CHART (NAD '83)

No.	NORTH	EAST
4	541978.3336	1364073.8377
5	541985.2175	1364303.8453
65	541358.7632	1364393.6187
66	541487.8898	1364630.4474

THE SOLE AND ONLY PURPOSE OF THIS PLAT IS TO RESUBDIVIDE NORDAU SUBDIVISION SECTION E-5, LOTS 3 AND 4 TO CREATE ROSE LANE, LOTS 1 THRU 7 AND OPEN SPACE LOT 8

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS:
 HOWARD COUNTY HEALTH DEPARTMENT
B. DeLeon for Peter Beileman 12/18/2008
 HOWARD COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Donald Mason 12/10/08
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kurt Schaefer 12/30/08
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

SURVEYOR'S CERTIFICATION
 I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE FINAL PLAT SHOWN HEREON IS CORRECT; THAT IT IS A SUBDIVISION OF ALL OF THE LAND CONVEYED BY RYAN HAYES TO SAYED HASSAN AND SONA HASSAN BY DEED DATED AUGUST 3, 2005 AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN LIBER 9407, FOLIO 580; AND ALL OF THE LAND CONVEYED BY DONALD FRANK COLE AND MARGARET A. COLE TO SAYED HASSAN AND SONA HASSAN BY DEED DATED OCTOBER 2, 2006 AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN LIBER 10366 FOLIO 530; AND THAT ALL MONUMENTS ARE IN PLACE OR WILL BE IN PLACE PRIOR TO THE ACCEPTANCE OF THE STREETS IN THE SUBDIVISION BY HOWARD COUNTY AS SHOWN IN ACCORDANCE WITH THE ANNOTATED CODE OF MARYLAND, AS NOW AMENDED.
 THE REQUIREMENTS § 3-108, THE REAL PROPERTY ARTICLE, ANNOTATED CODE OF MARYLAND, 1988 REPLACEMENT VOLUME, (AS SUPPLEMENTED) AS FAR AS THEY RELATE TO THE MAKING OF THIS PLAT AND THE SETTING OF MARKERS HAVE BEEN COMPLIED WITH.
Donald A. Mason 8/12/08
 DONALD A. MASON
 PROFESSIONAL LAND SURVEYOR MARYLAND REG. No. 21320
 FOR BENCHMARK ENGINEERING, INC. MARYLAND REG. No. 351

OWNER'S DEDICATION
 SAYED HASSAN AND SONA HASSAN, OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, HEREBY ADOPT THIS PLAT OF SUBDIVISION AND IN CONSIDERATION OF THE APPROVAL OF THIS FINAL PLAT BY THE DEPT. OF PLANNING AND ZONING, GRANT UNTO HOWARD COUNTY, MARYLAND, ITS SUCCESSORS AND ASSIGNS, 1) THE RIGHT TO LAY, CONSTRUCT AND MAINTAIN SEWERS, DRAINS, WATER PIPES AND OTHER MUNICIPAL UTILITIES AND SERVICES IN AND UNDER ALL ROADS AND STREET RIGHTS-OF-WAY AND THE SPECIFIC EASEMENT AREAS SHOWN HEREON, 2) THE RIGHT TO REQUIRE DEDICATION FOR PUBLIC USE THE BEDS OF THE STREETS AND/OR ROADS, FLOODPLAIN AND OPEN SPACE WHERE APPLICABLE, AND FOR GOOD AND OTHER VALUABLE CONSIDERATION, HEREBY GRANT THE OPTION TO HOWARD COUNTY TO ACQUIRE THE FEE SIMPLE TITLE TO THE BEDS OF THE STREETS AND/OR ROADS AND FLOODPLAINS, STORM DRAINAGE FACILITIES AND OPEN SPACE WHERE APPLICABLE, (3) THE RIGHT TO REQUIRE DEDICATION OF WATERWAYS AND DRAINAGE EASEMENTS FOR THE SPECIFIC PURPOSE OF THEIR CONSTRUCTION, REPAIR AND MAINTENANCE AND 4) THAT NO BUILDING OR SIMILAR STRUCTURE OF ANY KIND SHALL BE ERRECTED ON OR OVER THE SAID EASEMENTS AND RIGHTS-OF-WAY, WITNESS OUR HANDS THIS 12TH DAY OF OCTOBER 2008
 THE REQUIREMENTS § 3-108, THE REAL PROPERTY ARTICLE, ANNOTATED CODE OF MARYLAND, 1988 REPLACEMENT VOLUME, (AS SUPPLEMENTED) AS FAR AS THEY RELATE TO THE MAKING OF THIS PLAT AND THE SETTING OF MARKERS HAVE BEEN COMPLIED WITH.
Sayed Hassan 8/12/08
 SIGNATURE OF OWNER DATE:
 SAYED HASSAN
Sona Hassan 8/12/08
 SIGNATURE OF OWNER DATE:
 SONA HASSAN

RECORDED AS PLAT 20385
 ON 12/31/08 AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

RESUBDIVISION PLAT
ROSE LANE
 SECTION E-5
 LOT 1 THRU LOT 7 AND OPEN SPACE LOT 8, A RESUBDIVISION OF NORDAU SUBDIVISION SECTION E-5, LOTS 3 AND 4 PLAT BOOK 3 FOLIO 51

6th ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
 TAX MAP No. 42 SCALE: AS SHOWN
 PARCELS: 160 AND 240 DATE: AUGUST, 2008
 BLOCK: 24 SHEET: 1 OF 1
 ZONED: R-12