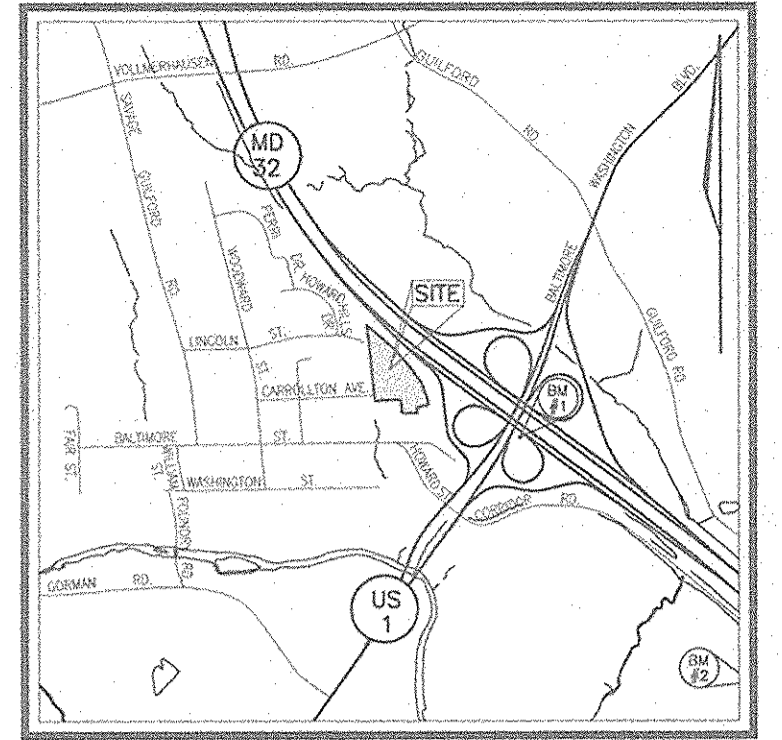


SHEET INDEX	
SHEET NO.	TITLE
1	COVER SHEET
2	ROAD CONSTRUCTION PLAN AND PROFILES
3	GRADING AND SEDIMENT & EROSION CONTROL PLAN
4	SEDIMENT & EROSION CONTROL NOTES/DETAILS
5	STORMWATER MANAGEMENT NOTES AND DETAILS
6	DRAINAGE AREA MAP FOR GRASS SWALES
7	LANDSCAPE AND STREET TREE PLAN
8	FOREST CONSERVATION PLAN

# FINAL ROAD CONSTRUCTION PLAN BASFORD'S RETREAT BUILDABLE BULK PARCEL 'A' HOWARD COUNTY, MARYLAND



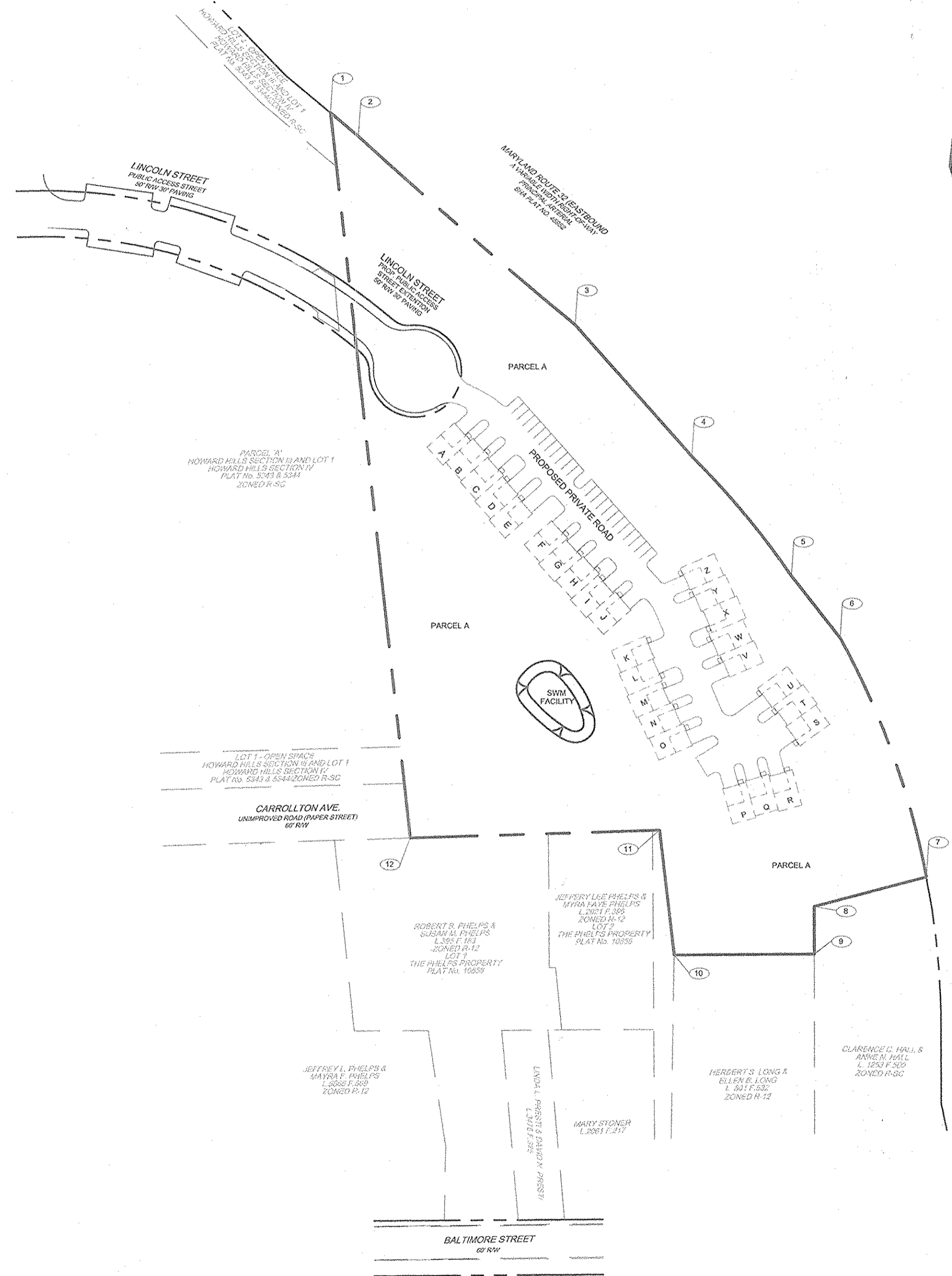
VICINITY MAP  
SCALE: 1"=2000'

### SITE DATA

LOCATION: TAX MAP 47, GRID 12, PARCEL '494'  
6TH ELECTION DISTRICT  
EXISTING ZONING: R-SC  
DPZ REFERENCES: S-01-36, P-02-21  
GROSS AREA OF PROJECT: 6.74 AC (293,746 SF)  
AREA OF STEEP SLOPES: 0.04 AC (1869 SF)  
NET AREA OF PROJECT: 6.70 AC (291,877 SF)  
AREA OF PUBLIC RIGHT-OF-WAY DEDICATION: 0.23 AC (9988 SF)  
AREA OF OPEN SPACE REQUIRED: (WILL BE PROVIDED AT SITE DEVELOPMENT PLAN STAGE)  
APPROXIMATE LIMIT OF DISTURBANCE: 4.30 AC (187,234 SF±)

### GENERAL NOTES

- 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/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK 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.
- DEED REFERENCE: 896/58
- THE PROJECT BOUNDARY IS BASED ON A SURVEY PREPARED BY FREDERICK WARD ASSOCIATES, DATED JANUARY 2002.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHICAL SURVEY PREPARED BY FREDERICK WARD ASSOCIATES, DATED JANUARY 2002.
- WATER FOR THIS PROJECT WILL BE PUBLIC AND PROVIDED THROUGH CONTR. NO. 24-4055-D. ON-SITE SEWER FOR THIS PROJECT WILL BE PRIVATE AND WILL TIE INTO CONTR. NO. 24-4055-D.
- STORMWATER MANAGEMENT FOR THIS SITE IS PROVIDED BY AN INFILTRATION BASIN TO PROVIDE Rev. Wq<sub>v</sub> and C<sub>pv</sub>. THIS FACILITY IS NOT REQUIRED TO MEET THE MD CODE 378 SPECIFICATIONS AND IS HAZARD CLASS A.
- WETLANDS SHOWN ON-SITE DELINEATED BY FREDERICK WARD ASSOCIATES DATED AUGUST 2001.
- THERE ARE NO FLOODPLAINS ON SITE.
- FOREST CONSERVATION PLAN PREPARED BY FREDERICK WARD AND ASSOCIATES DATED FEBRUARY 2002.  
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 RETENTION OF EXISTING FOREST IN THE AMOUNT OF 2.14 ACRES AND A FEE-IN-LIEU IN THE AMOUNT OF \$3880.00 FOR THE REQUIRED 0.27 AC OF REFORESTATION. A FINANCIAL SURETY IN THE AMOUNT OF \$18,644.00 IS TO BE POSTED WITH THE FC MAINTENANCE AGREEMENT.
- APFO TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, DATED MAY 2001, AND APPROVED UNDER S-01-36.
- PLANNING AND ZONING FILE NUMBERS: S-01-36, P-02-21
- PERIMETER AND STORMWATER MANAGEMENT LANDSCAPING REQUIREMENTS AS SET FORTH IN SECTION 16.124 OF THE SUBDIVISION REGULATIONS AND THE HOWARD COUNTY LANDSCAPE MANUAL SHALL BE COMPLIED WITH. A FINANCIAL SURETY IN THE AMOUNT OF \$3000.00 FOR THE REQUIRED 8 SHADE TREES AND 10 EVERGREEN TREES WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT. REQUIRED RESIDENTIAL INTERNAL AND PARKING AREA LANDSCAPING AS SET FORTH IN THE LANDSCAPE MANUAL WILL BE PROVIDED AT THE SITE DEVELOPMENT PLAN PHASE. FINANCIAL SURETY FOR THE PROPOSED NOISE WALL USED FOR SCREENING TO BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$13,960.00 FOR 698 LF OF NOISE WALL. TOTAL FINANCIAL SURETY FOR LANDSCAPING TO BE POSTED IS \$17,860.00.
- STREET TREES ARE REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL.
- STREET LIGHTING HAS BEEN PROVIDED FOR THE PUBLIC ROAD IN ACCORDANCE WITH SECTION 16.135 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE DESIGN MANUAL. INTERNAL STREET LIGHTING TO BE PROVIDED AT THE SITE DEVELOPMENT PHASE. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- SEDIMENT AND EROSION CONTROL HAS BEEN PROVIDED FOR THIS SITE.
- THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETERY LOCATIONS ON SITE.
- A NOISE STUDY WAS PREPARED BY FREDERICK WARD ASSOCIATES, DATED APRIL 2001. NOISE MITIGATION DESIGN WILL BE PROVIDED AT THE SITE DEVELOPMENT PHASE.
- LOCATION OF INTERIOR SIDEWALKS TO BE DETERMINED AT THE SITE DEVELOPMENT PHASE.
- STREET TREES FOR THE PROPOSED PRIVATE ROAD WILL BE PROVIDED AT THE SITE DEVELOPMENT PHASE.
- THE PROPOSED INTERIOR ROAD WILL BE PRIVATELY OWNED AND MAINTAINED.
- THE STORMWATER MANAGEMENT INFILTRATION BASIN WILL BE PRIVATELY OWNED AND MAINTAINED BY THE CONDOMINIUM ASSOCIATION.
- THE PROPOSED PROJECT WILL BE DEVELOPED AS A CONDOMINIUM REGIME.
- NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS OR THEIR BUFFERS AND THE FOREST CONSERVATION RETENTION EASEMENTS.
- AS A CONDITION OF THE SKETCH PLAN HAVING BEEN APPROVED PRIOR TO NOVEMBER 15, 2001, THIS PLAN IS GRANDFATHERED TO THE FOURTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- STORMWATER MANAGEMENT SOIL BORINGS FOR THIS SITE ARE BASED ON A GEOTECHNICAL ANALYSIS PREPARED BY HILLS-CARNES ENGINEERING ASSOCIATES OF FREDERICK, INC., DATED MARCH 2002.
- A FOREST STAND DELINEATION PLAN WAS PREPARED FOR THIS SITE BY FREDERICK WARD ASSOCIATES, DATED MARCH 2001, AND APPROVED UNDER S-01-36.
- COORDINATE DATUM IS BASED ON THE MARYLAND COORDINATE SYSTEM (NAD 83) AS PROJECTED BY THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL STATIONS: 47F5 & 48D6



PLAN VIEW  
SCALE: 1"=100'

COORDINATE TABLE (NAD 83)		
NO.	NORTHING	EASTING
1	537093.02	1364007.58
2	537067.25	1364037.78
3	536861.63	1364272.45
4	536718.23	1364398.66
5	536587.92	1364506.30
6	536520.42	1364559.05
7	536259.99	1364651.00
8	536227.91	1364530.30
9	536176.44	1364530.31
10	536175.73	1364378.51
11	536311.46	1364363.04
12	536303.68	1364092.55

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 5-20-03  
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Cindy Hamann* 5/23/03  
Chief, Division of Land Development Date  
*Chris Williams* 5/23/03  
Chief, Development Engineering Division Date

**AS-BUILT CERTIFICATION**  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.  
*Robert H. Vogel, P.E.* P.E. No. 16193 DATE 5-1-07

NO.		ROAD/STORM DRAIN ASBUILT	5-1-07
REVISION			DATE
<b>COVER SHEET</b>			
<b>BASFORD'S RETREAT</b>			
<b>BUILDABLE BULK PARCEL 'A'</b>			
TAX MAP 47 BLOCK 12		PARCEL '494'	
6TH ELECTION DISTRICT		HOWARD COUNTY, MARYLAND	
REF.: S-01-36, P-02-21			
<b>FREDERICK WARD ASSOCIATES, INC.</b>			
ENGINEERS	7125 Riverwood Drive Columbia, Maryland 21046-2354		
ARCHITECTS	Phone: 410-290-9550 Fax: 410-720-6226		
SURVEYORS	Bel Air, Maryland Columbia, Maryland Warrenton, Virginia		
DESIGN BY:	RHV		
DRAWN BY:	CMH		
CHECKED BY:	RHV		
DATE:	MAY 2003		
SCALE:	AS SHOWN		
W.O. NO.:	2014020.0		
1 SHEET OF 8			

**LEGEND**

DIRECTION OF FLOW

LIGHT POLES

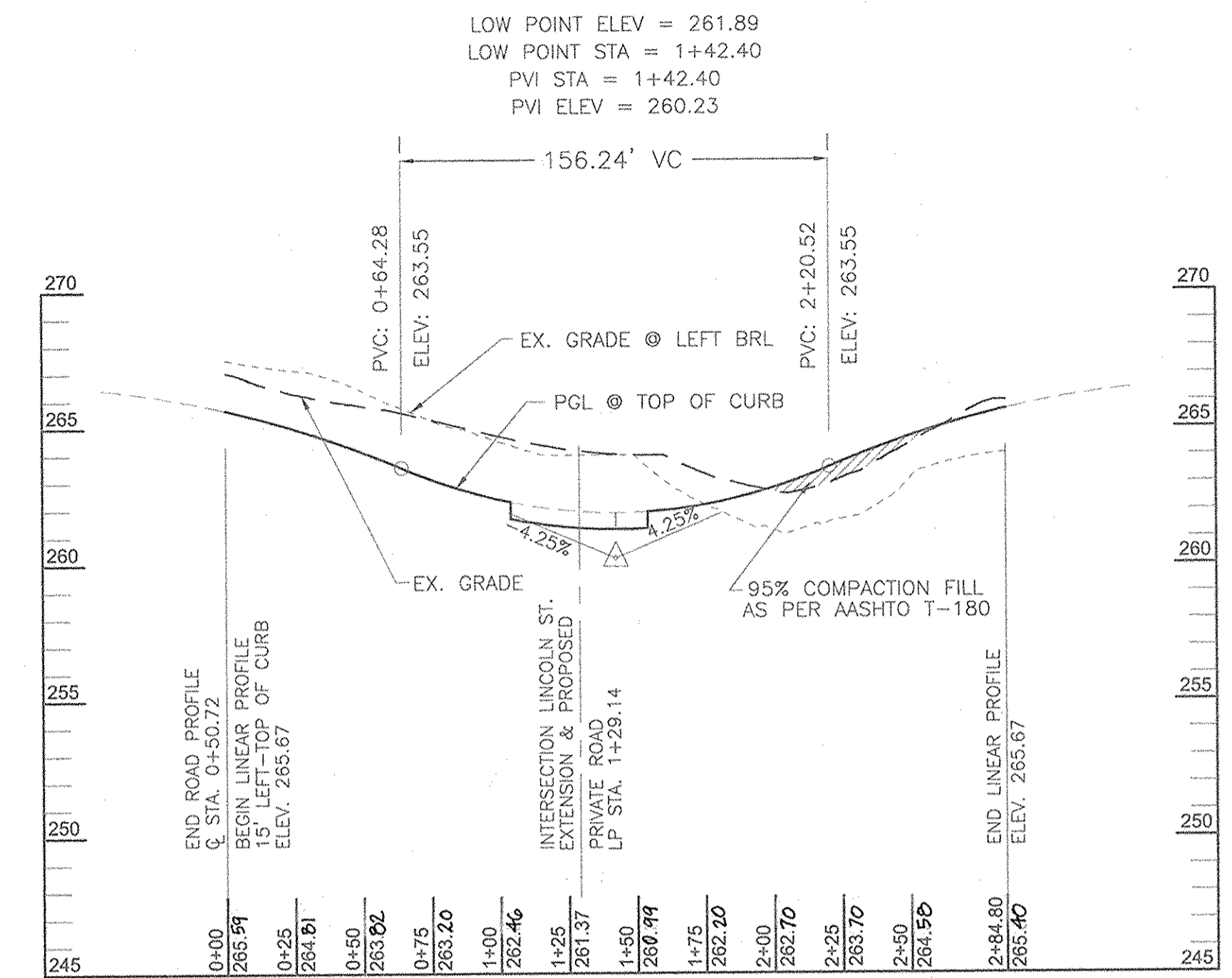
TREE MAINTENANCE & UTILITY EASEMENT

FOREST CONSERVATION EASEMENT

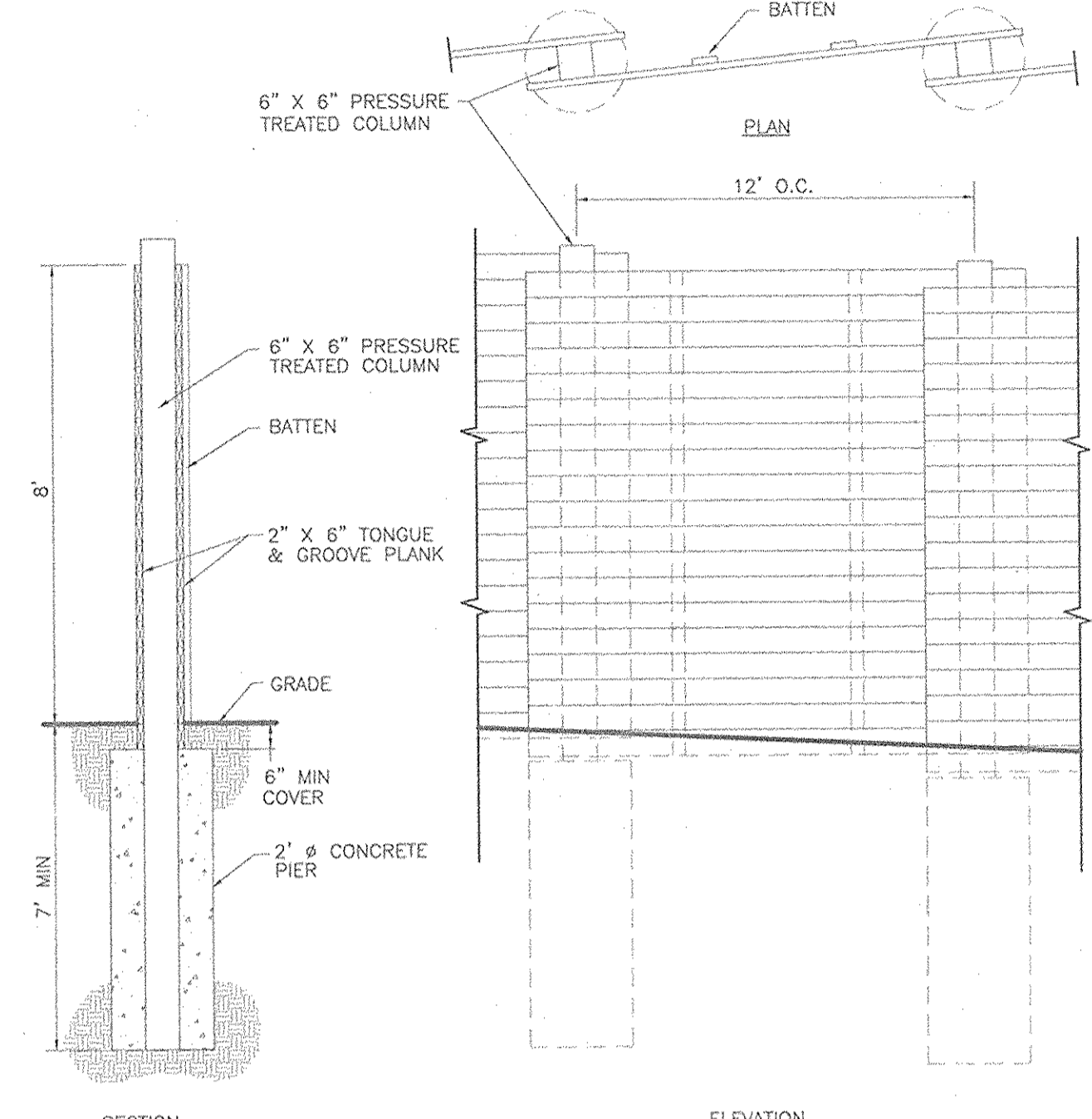
PROPOSED STREET TREES  
"OCTOBER GLORY RED MAPLE"



PLAN VIEW  
SCALE: 1"=50'



LINEAR PROFILE  
LINCOLN STREET EXTENSION  
PUBLIC ACCESS STREET  
DESIGN SPEED : 30 MPH  
SCALE: 1"=5' HORIZ.  
1"=50' VERT.



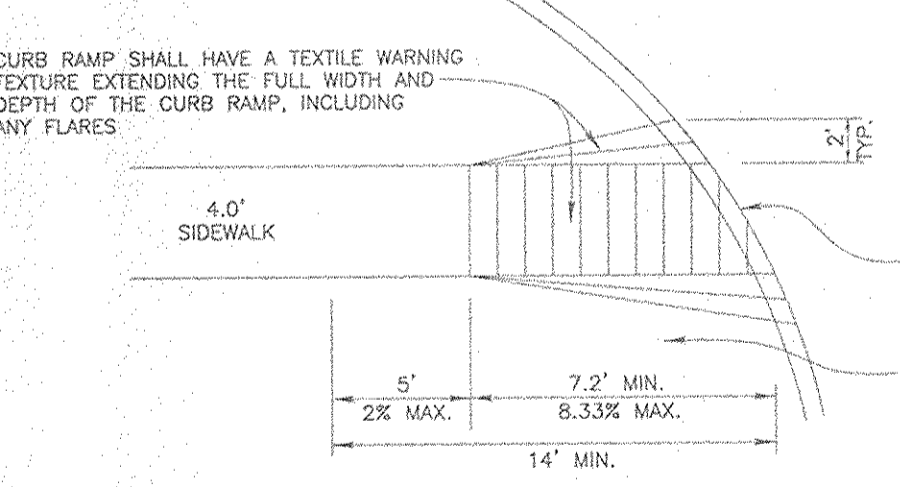
NOTE:  
THE PROPOSED NOISE WALL IS TO BE PRIVATELY OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION. THE NOISE WALL SHALL BE INSPECTED AND REPAIRED AS NECESSARY AT A MINIMUM OF ONCE A YEAR.

NOISE WALL SECTION DETAIL  
N.T.S.

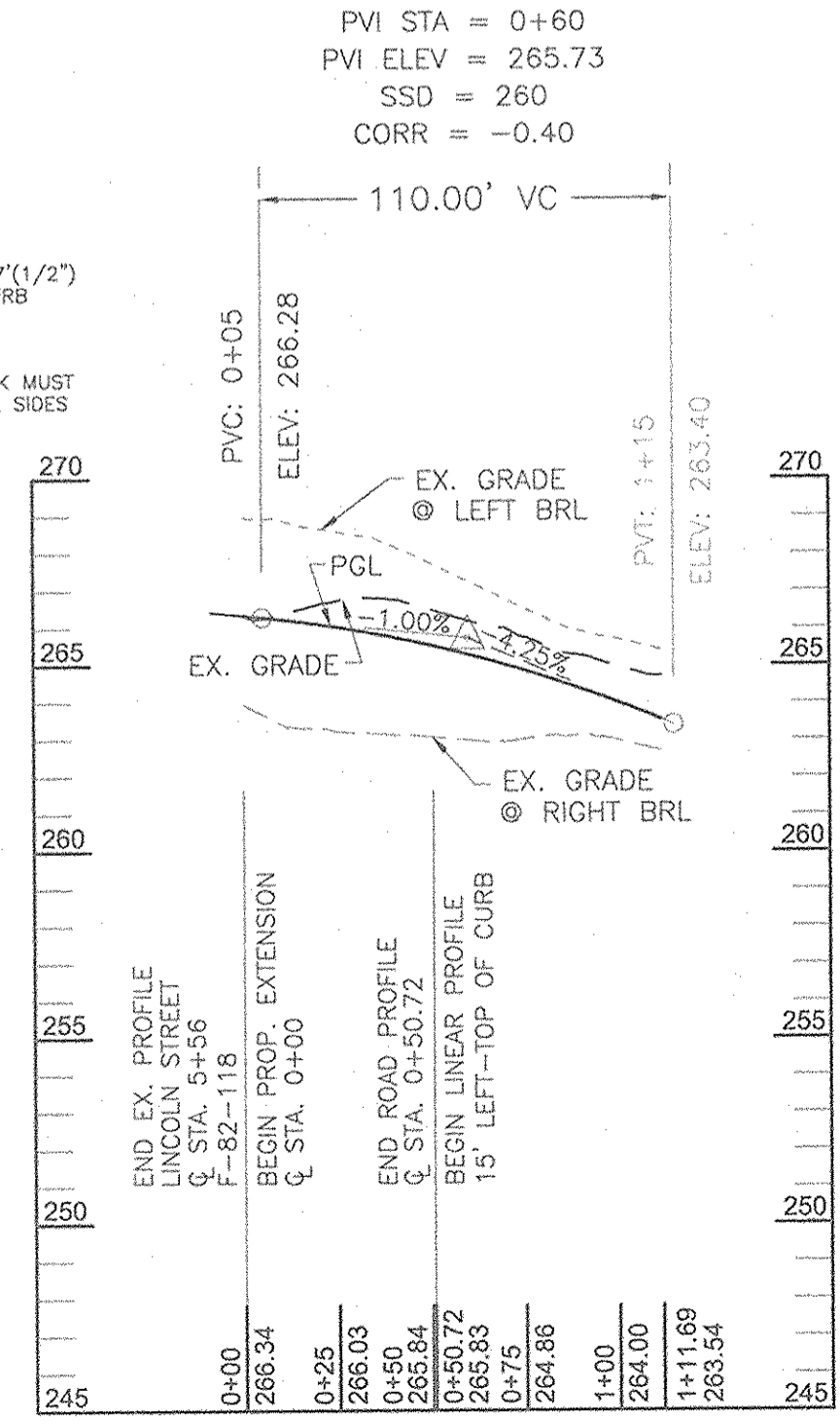
STREET TREE CALCULATIONS			
STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
LINCOLN STREET EXT.	320/40	8	8

STREET TREE SCHEDULE				
KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
	8	ZELKOVA SERRATA 'VILLAGE GREEN'	2 1/2"-3" CAL. B & B	
		VILLAGE GREEN ZELKOVA		

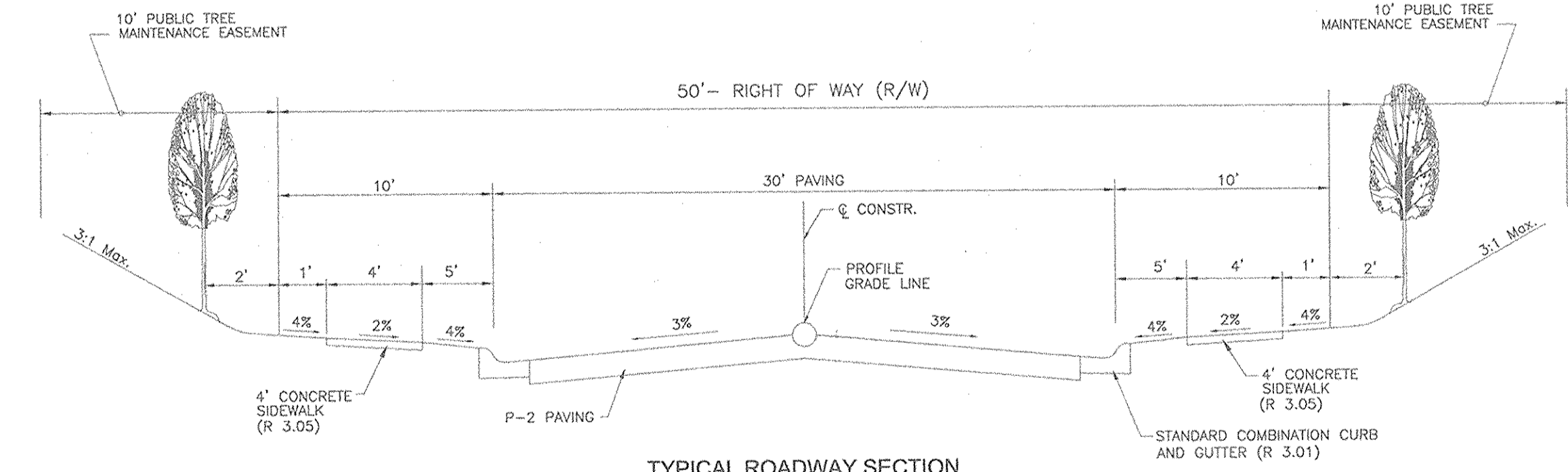
CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHORD LENGTH
C1	74.32'	550.00'	07°44'32"	37.22'	S51°02'20"E	74.26'



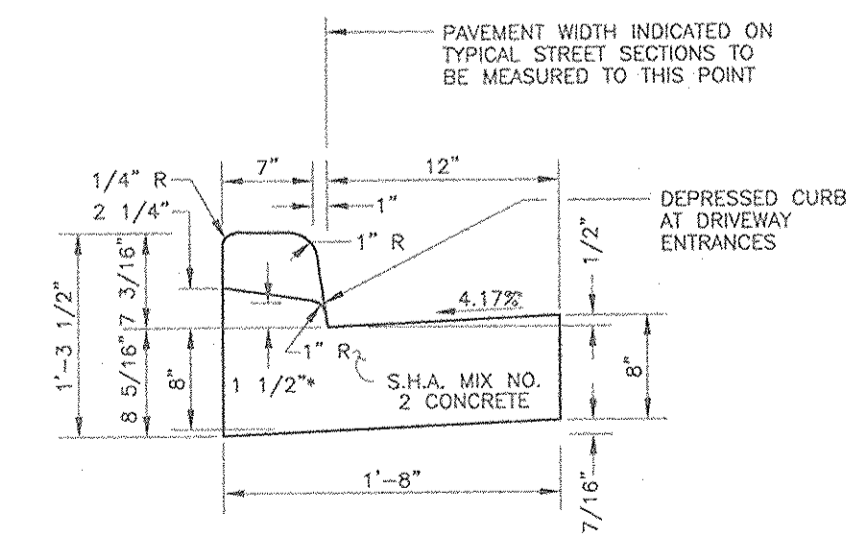
HANDICAP RAMP  
NOT TO SCALE



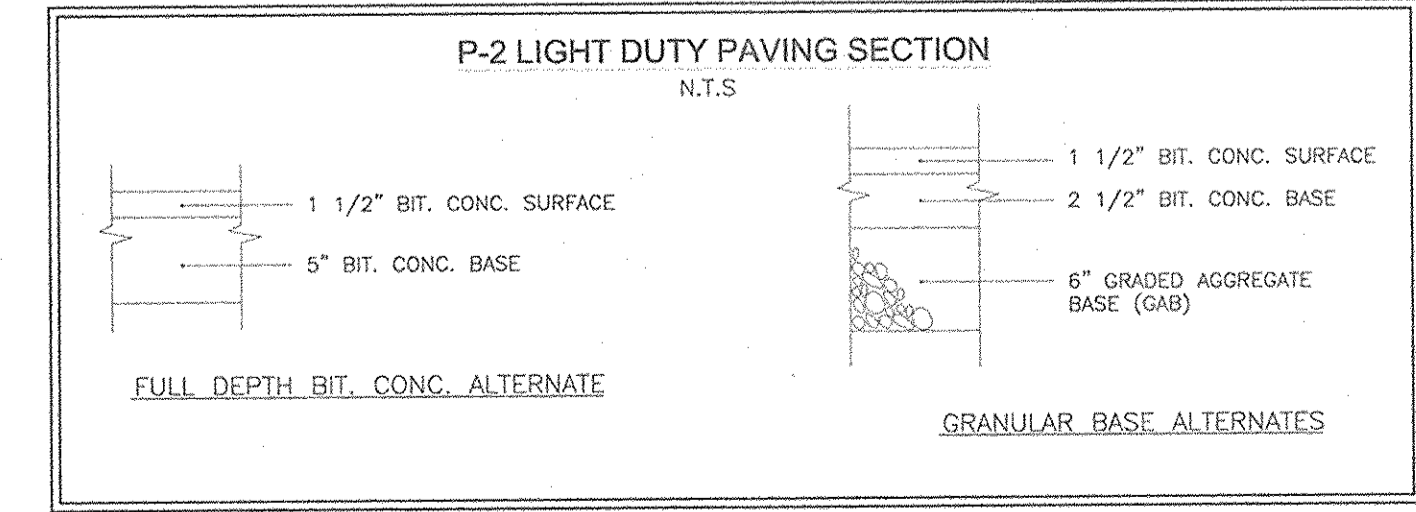
ROAD PROFILE  
LINCOLN STREET EXTENSION  
PUBLIC ACCESS STREET  
DESIGN SPEED : 30 MPH  
SCALE: 1"=5' HORIZ.  
1"=50' VERT.



TYPICAL ROADWAY SECTION  
PUBLIC ACCESS STREET  
LINCOLN STREET EXTENSION  
STA. 0+00 TO STA. 0+50.72  
DESIGN SPEED : 30 MPH  
SECTION NOT TO SCALE



STANDARD COMBINATION  
CURB AND GUTTER  
HOWARD COUNTY STANDARD R-3.01  
NOT TO SCALE



P-2 LIGHT DUTY PAVING SECTION  
N.T.S.

**STREET LIGHT**  
NOTE: 150-watt HPS vapor "Premier" post top fixture mounted on a 1 1/2" black fiberglass pole located 2' to 4' from back of curb located at STA 0+46.18' RT.

AS-BUILT CERTIFICATION  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.  
ROBERT H. VOSE, P.E.  
16193  
PE No. 5-1-07  
DATE

OWNER / DEVELOPER  
BASFORD'S RETREAT, LLC  
9991 NORFOLK AVE.  
LAUREL, MARYLAND 20723  
(410) 792-2588

ROAD/STORM DRAIN AS-BUILT		
NO.	REVISION	DATE
1		5-1-07

**ROAD CONSTRUCTION PLAN AND PROFILES**  
**BASFORD'S RETREAT**  
BUILDABLE BULK PARCEL 'A'  
TAX MAP 47 BLOCK 12 PARCEL '494'  
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
REF.: S-01-36, P-02-21

**FREDERICK WARD ASSOCIATES, INC.**  
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHV	
DRAWN BY: CMH	
CHECKED BY: RHV	
DATE: MAY 2003	
SCALE: 1"=50'	
W.O. NO.: 2014020.0	2 SHEET OF 8

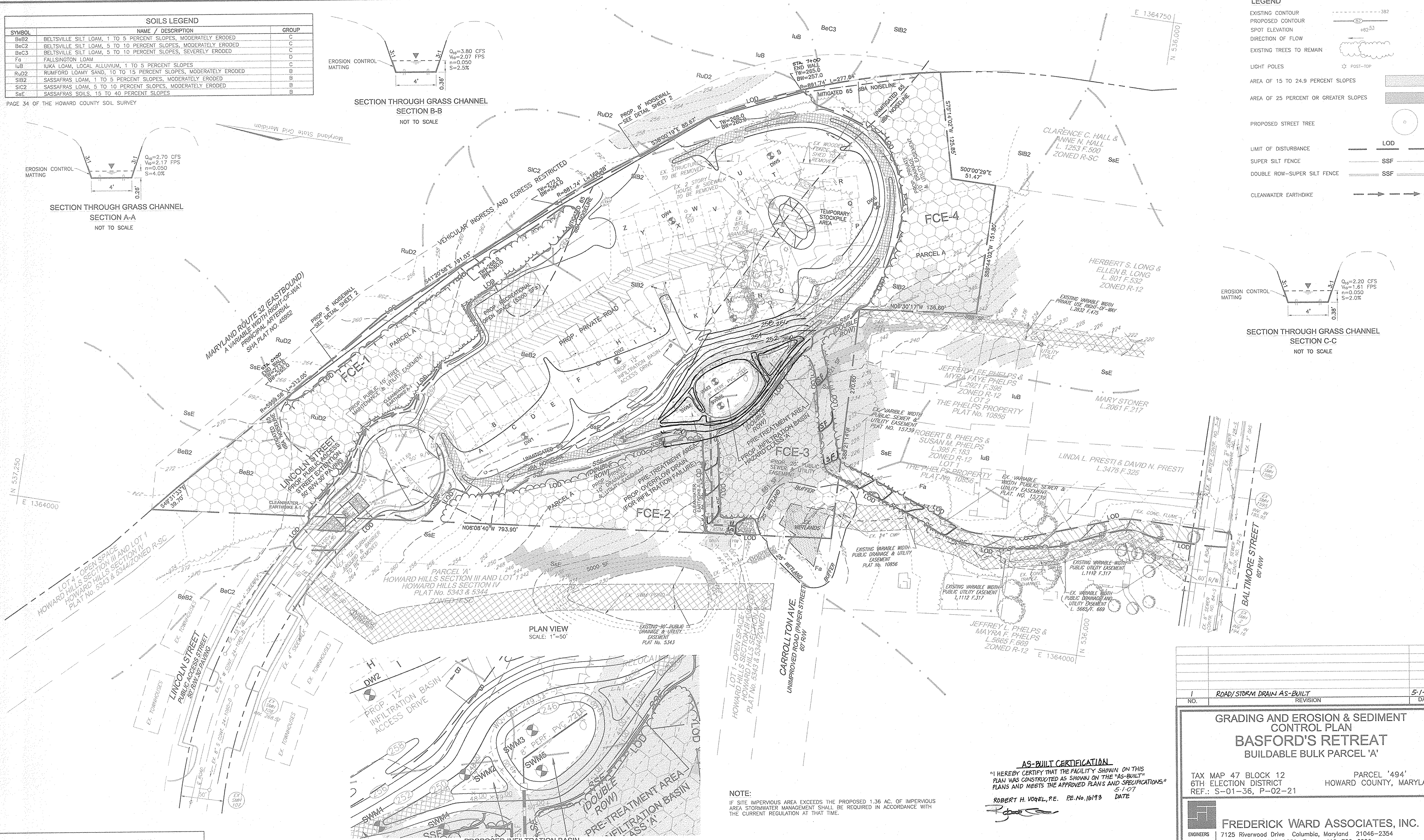
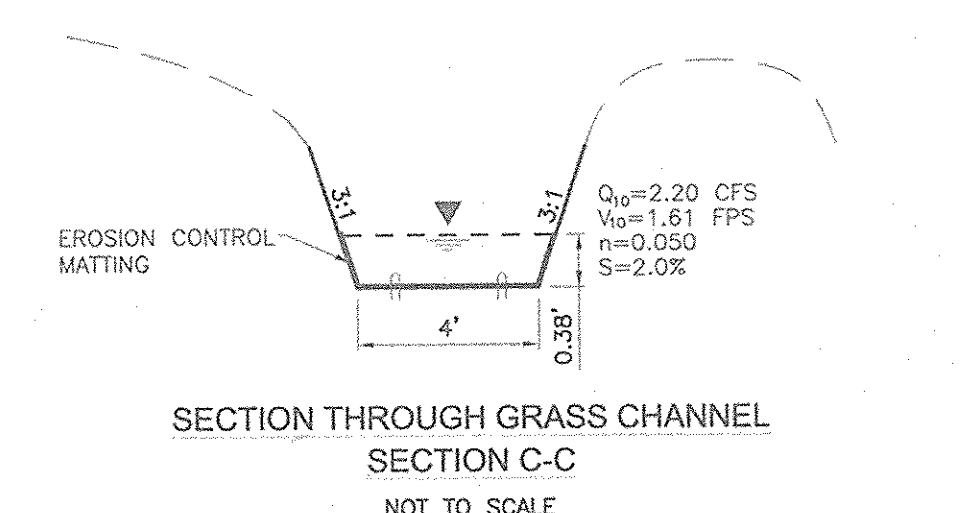
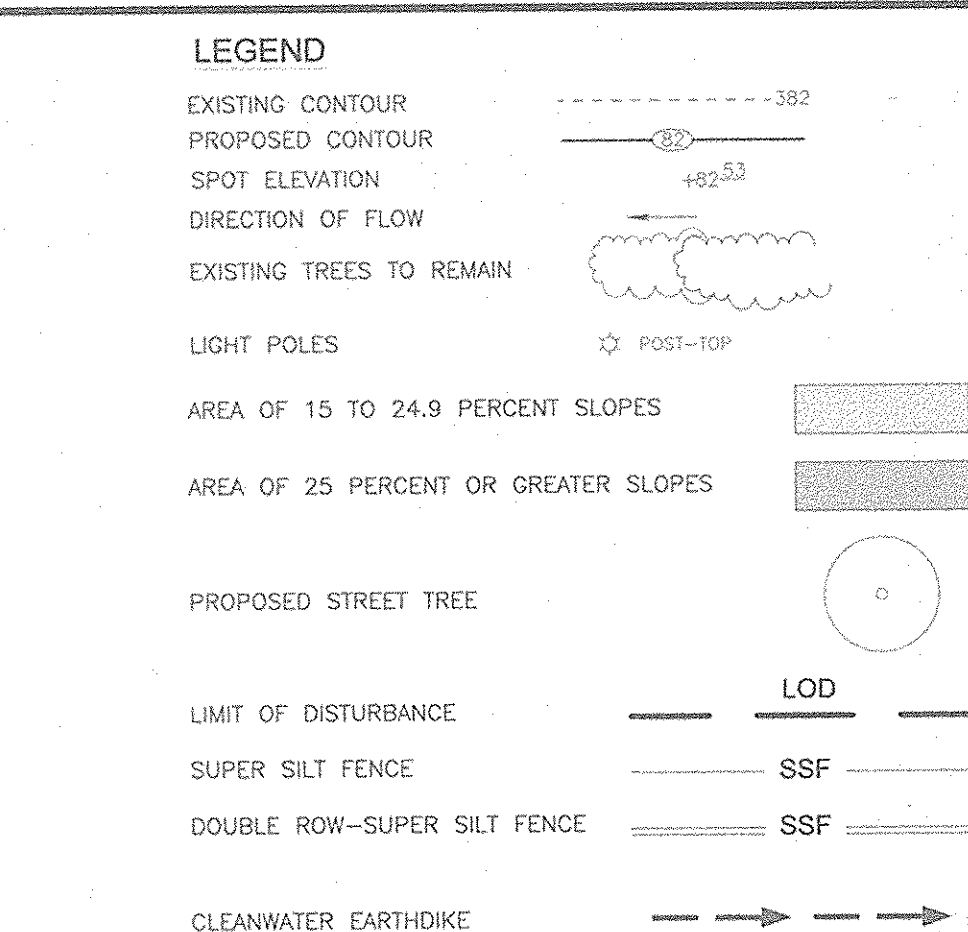
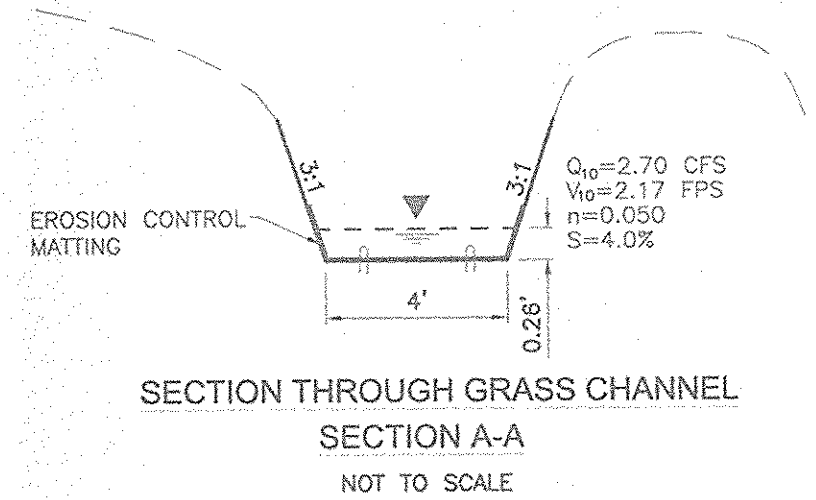
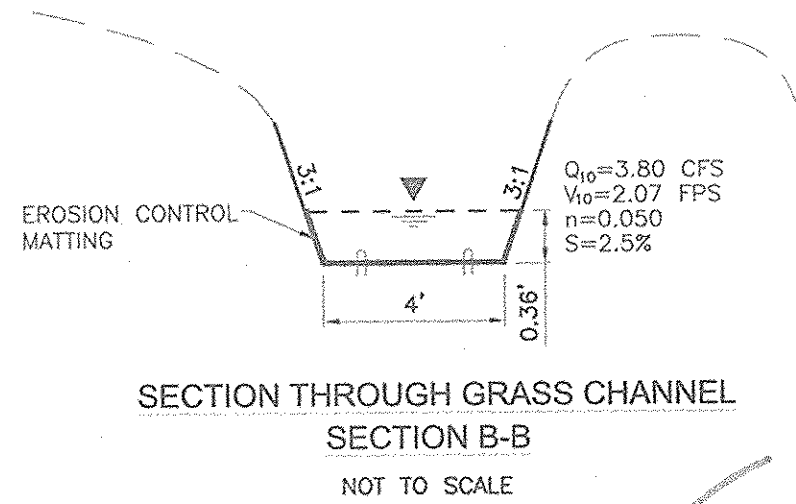
APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Dwyer* 5-20-03  
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Cindy Harvate* 5/23/03  
Chief, Division Land Development Date

*Chris Damron* 5/23/03  
Chief, Development Engineering Division Date

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
BeB2	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	C
BeC2	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
BeC3	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED	C
Fa	FALLSINGTON LOAM	C
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	B
RuD2	RUMFORD LOAMY SAND, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
SsE2	SASSAFRAS LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
SsC2	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
SsE	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES	B

PAGE 34 OF THE HOWARD COUNTY SOIL SURVEY



APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Pangle* 5-20-03  
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Chris Hanna* 5/23/03  
 Chief, Division Land Development Date

*John R. Robertson* 5/23/03  
 Chief, Development Engineering Division Date

Reviewed for HOWARD SCD and meets Technical Requirements

*Jim Meyer* 5-13-03  
 USA-Natural Resources Conservation Service Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT

*John R. Robertson* 5-13-03  
 DA-Natural Resources Conservation Service Date

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development 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 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.

*Paul Hinkle* 5/6/03  
 Signature of Developer PAUL HINKLE Date

ENGINEER'S CERTIFICATE

"I hereby certify that this plan for pond construction and 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.

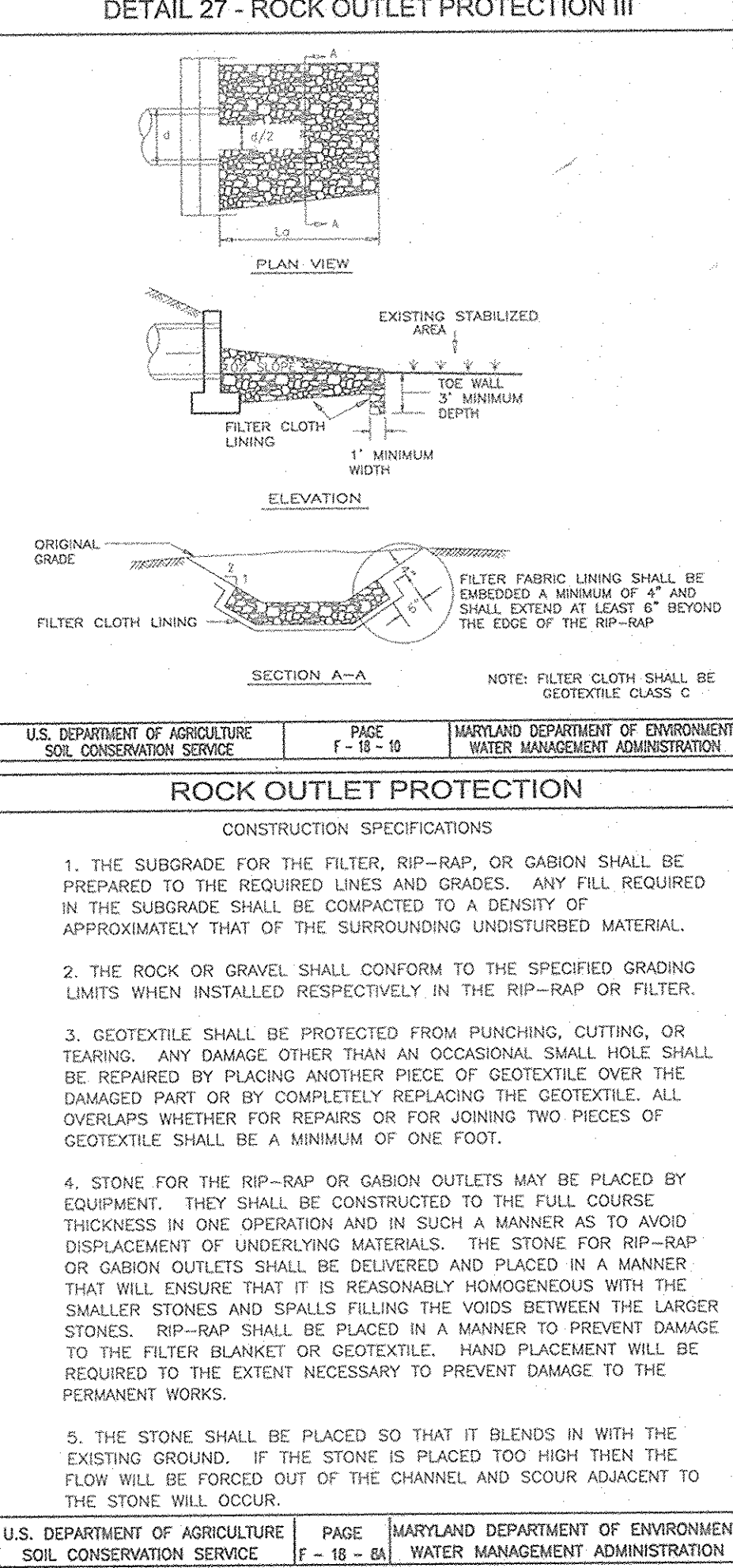
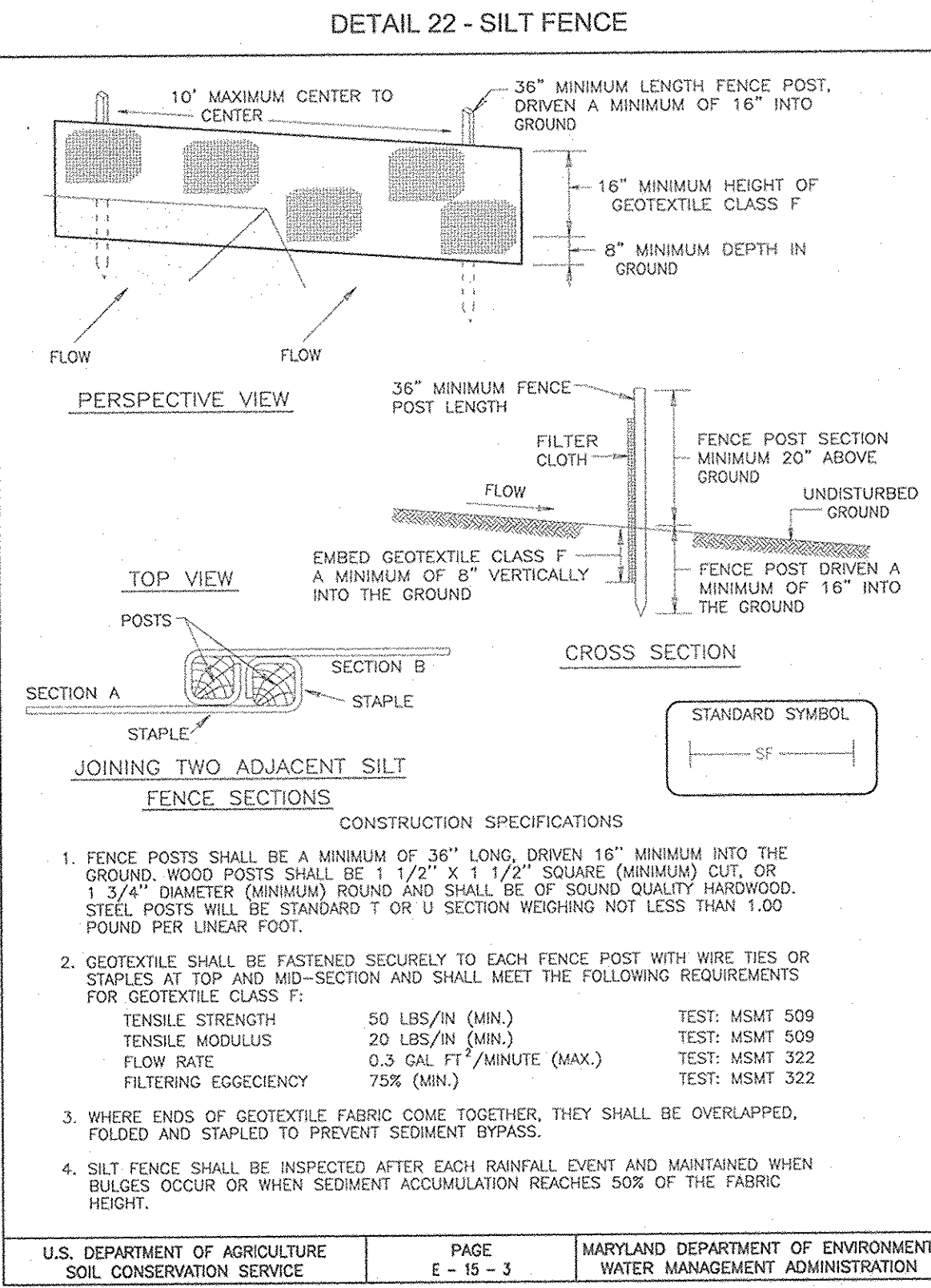
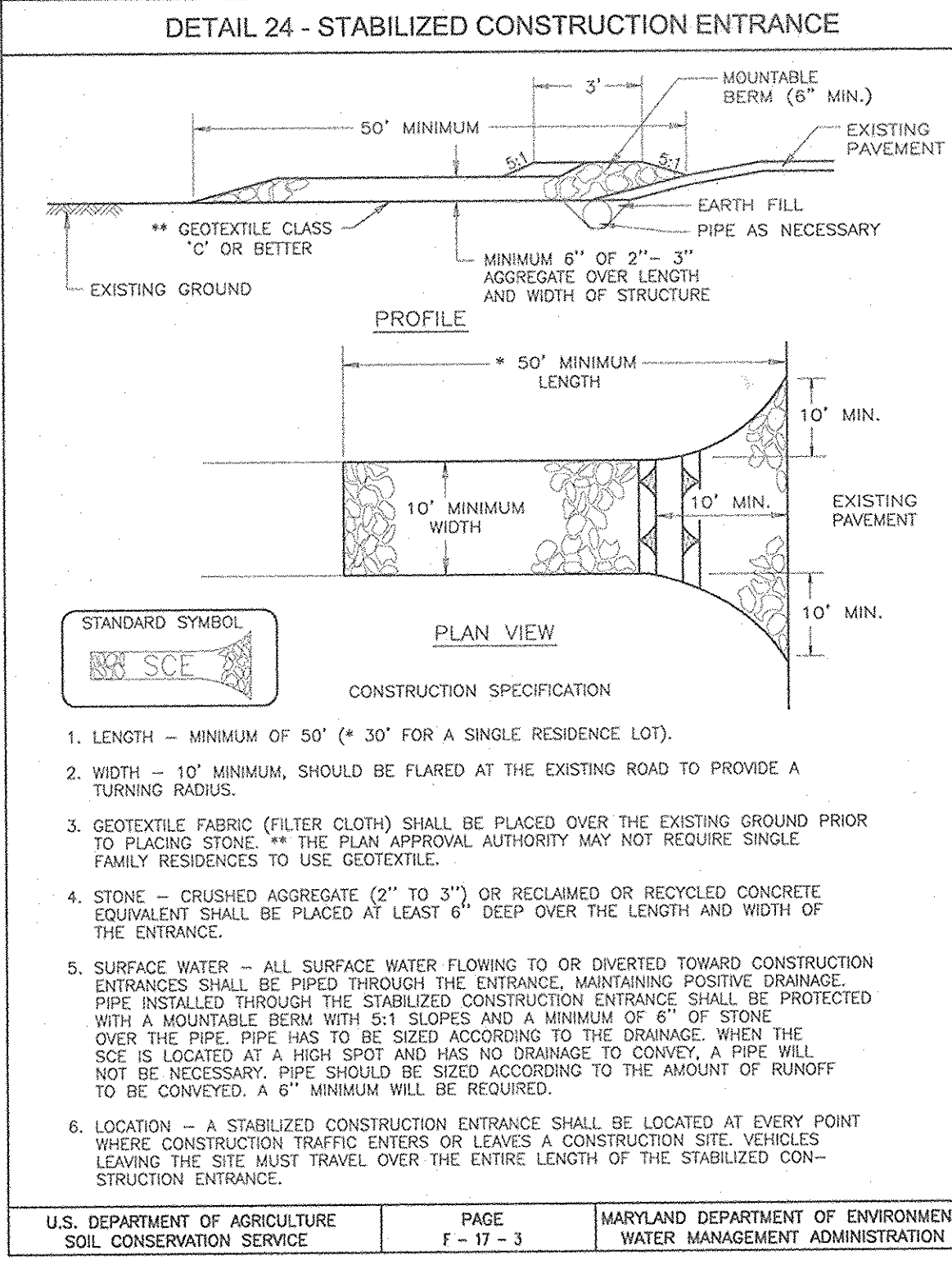
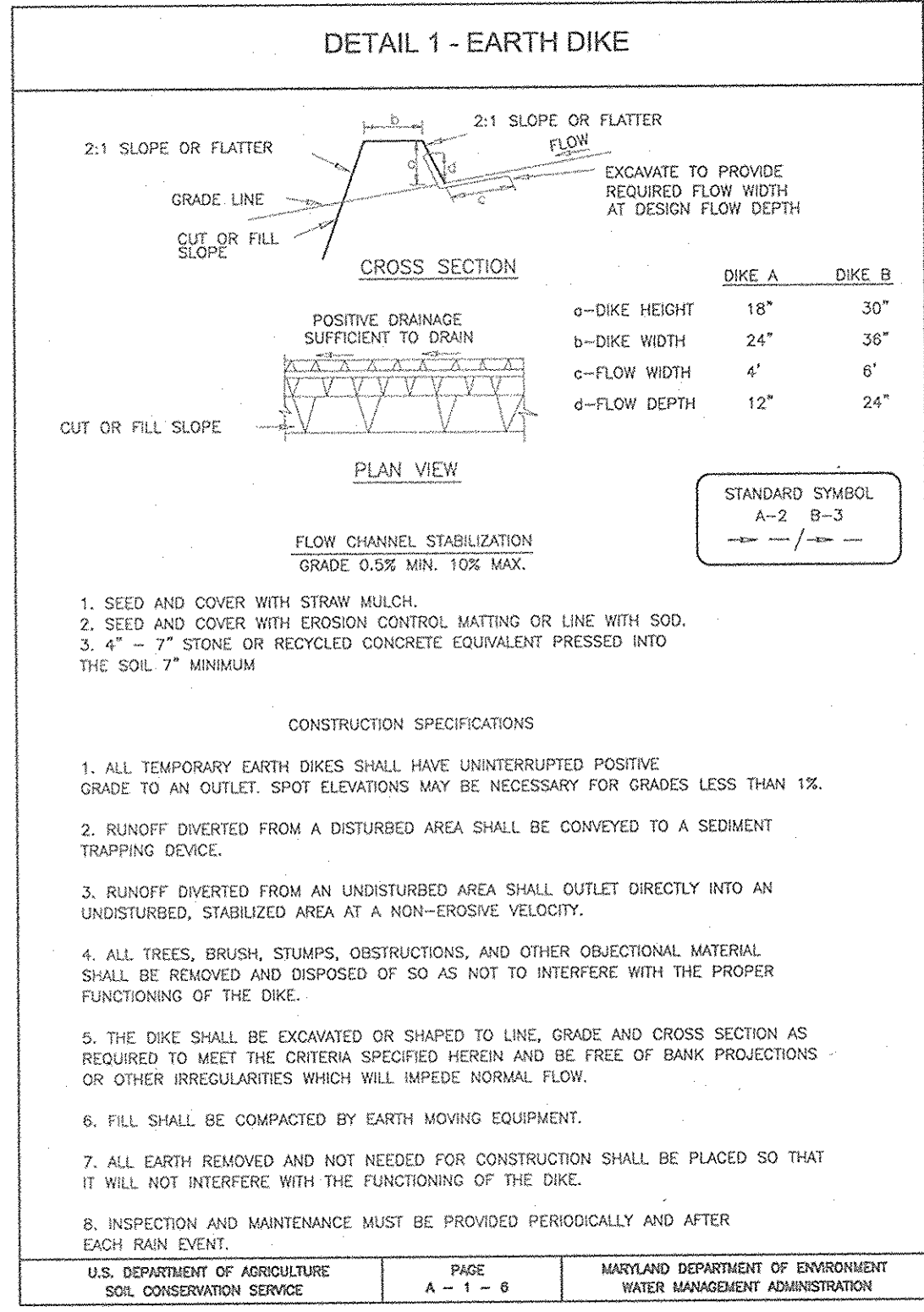
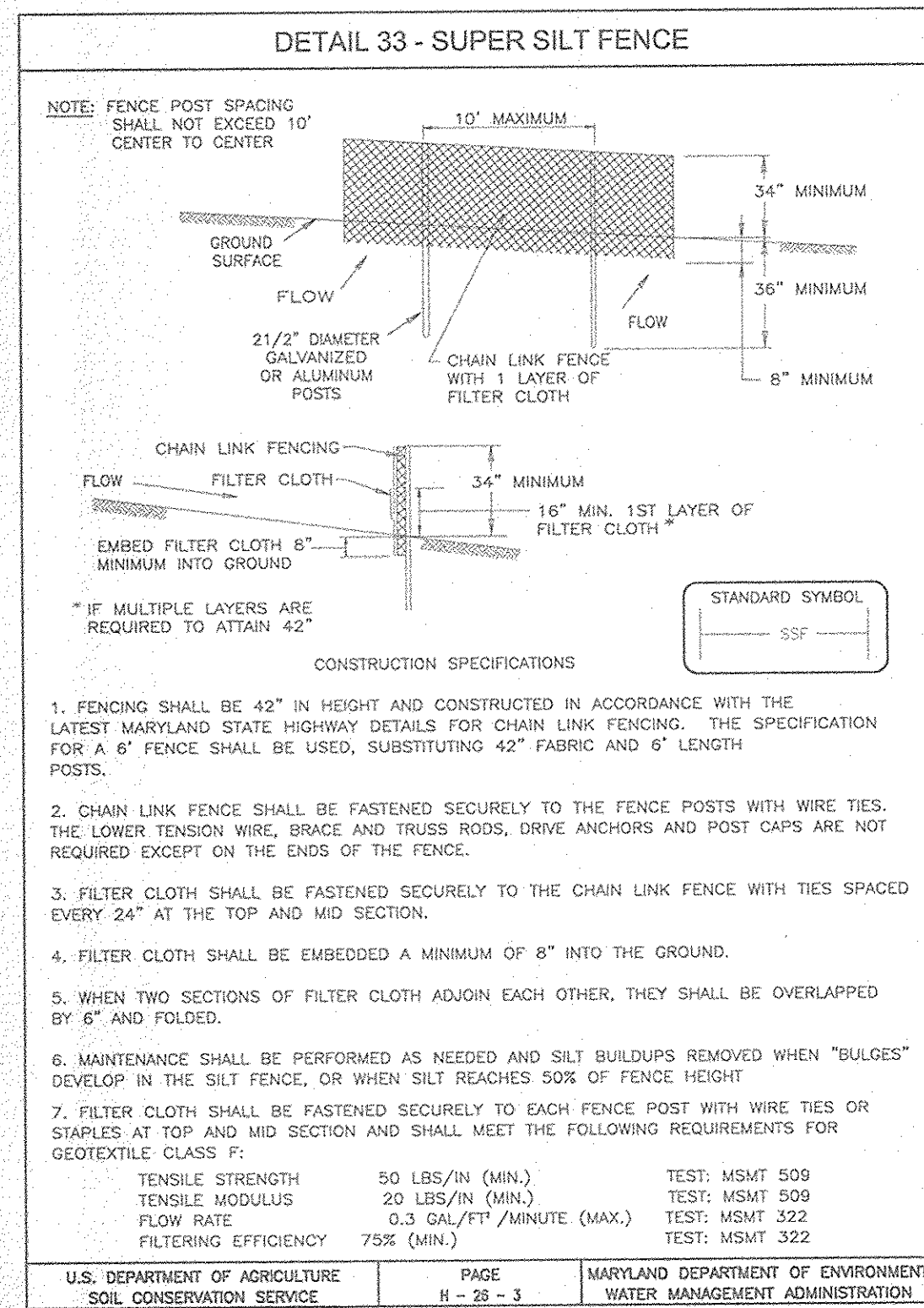
*Robert H. Vogel* 5/6/03  
 Signature of Engineer Robert H. Vogel Date

AS-BUILT CERTIFICATION

"I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE 'AS-BUILT' PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS."

*Robert H. Vogel, P.E.* PE.No.16193 DATE 5-1-07

NO.	ROAD/STORM DRAIN AS-BUILT	REVISION	5-1-07
GRADING AND EROSION & SEDIMENT CONTROL PLAN		PARCEL '494'	
BASFORD'S RETREAT		BUILDABLE BULK PARCEL 'A'	
TAX MAP 47 BLOCK 12		6TH ELECTION DISTRICT	
REF.: S-01-36, P-02-21		HOWARD COUNTY, MARYLAND	
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-8226 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia			
DESIGN BY:	RHV	SCALE:	AS SHOWN
DRAWN BY:	CMH	W.O. NO.:	2014020.0
CHECKED BY:	RHV		
DATE:	MAY 2003		
		3 SHEET OF 8	



### 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 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 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-SSS 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 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 CONCRETE, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 AND 1/2" IN DIAMETER.
  - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUISANCE IVY, THISTLE, OR OTHERS AS SPECIFIED.
  - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE APPLIED AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
  - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
  - FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES: 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 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, SILT FENCE AND SEDIMENT TRAPS AND BASINS.
  - GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 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 MOODY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDING PREPARATION.

### 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/100 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 THE 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 APPLY 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 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (14 LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (05 LBS/1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROJECT SITE BY: OPTION (1) 2 TONS PER 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 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 2 1/8 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

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

### 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. PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.)

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 1 THRU FEBRUARY 28, PROJECT 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/1000 SQ.FT.) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 2 1/8 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

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

### 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 (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 1994 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 VENCED 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 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 (SEE C). 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	6.74 ACRES
AREA DISTURBED	4.30 ACRES
AREA TO BE ROOFED OR PAVED	0.19 ACRES
AREA TO BE VEGETATIVELY STABILIZED	4.11 ACRES
TOTAL CUT	9000 CY
TOTAL FILL	9000 CY
OFFSITE WASTE/BORROW AREA LOCATION	
- 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

### SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND INSTALL PERIMETER SUPER SILT FENCE AND CLEANWATER DIKES.
- WITH INSPECTOR APPROVAL CLEAR AND GRUB SITE TO LOD.
- GRADE ROAD TO SUB-BASE AND GRADE SIDE.
- COMPLETE ROAD CONSTRUCTION AND INSTALL CURB AND GUTTER AND SIDEWALK.
- STABILIZE ALL DISTURBED AREAS.
- CONSTRUCT INFILTRATION BASIN AND SWALES. STABILIZE IMMEDIATELY.
- WITH INSPECTOR APPROVAL STABILIZE ANY REMAINING DISTURBED AREAS. INSTALL STREET TREES AND PERIMETER LANDSCAPING.

**DURATION**

3 DAYS
2 WEEKS
1 MONTH
3 WEEKS
1 WEEK
1 WEEK

**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 COMPLETED WITHIN: A. 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1. B. 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.

NO.	REVISION	DATE

### SEDIMENT & EROSION CONTROL NOTES AND DETAILS BASFORD'S RETREAT BUILDABLE BULK PARCEL 'A'

TAX MAP 47 BLOCK 12 PARCEL '494'  
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
REF.: S-01-36, P-02-21

**FREDERICK WARD ASSOCIATES, INC.**  
7125 Riverwood Drive Columbia, Maryland 21046-2354  
Phone: 410-290-9550 Fax: 410-720-6228  
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHV  
DRAWN BY: CMH  
CHECKED BY: RHV  
DATE: MAY 2003  
SCALE: AS SHOWN  
W.O. NO.: 2014020.0

4 SHEET OF 8

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Dangle* 5-20-03  
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Arvin Hamer* 5/21/03  
Chief, Division of Land Development Date

*John P. Robertson* 5/13/03  
Chief, Development Engineering Division Date

Reviewed for HOWARD SCD and meets Technical Requirements

*Jim Myers* 5-13-03  
USDA-Natural Resources Conservation Service Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT

*John P. Robertson* 5-13-03  
USDA-Natural Resources Conservation Service Date

**DEVELOPER'S CERTIFICATE**

"I/We certify that all development and construction will be done according to this plan of development 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 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.

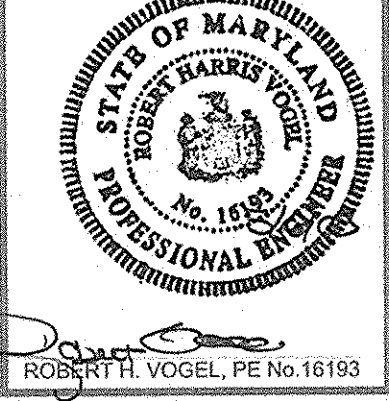
*Paul J. Hinkle* 5/6/03  
Signature of Developer PAUL HINKLE Date

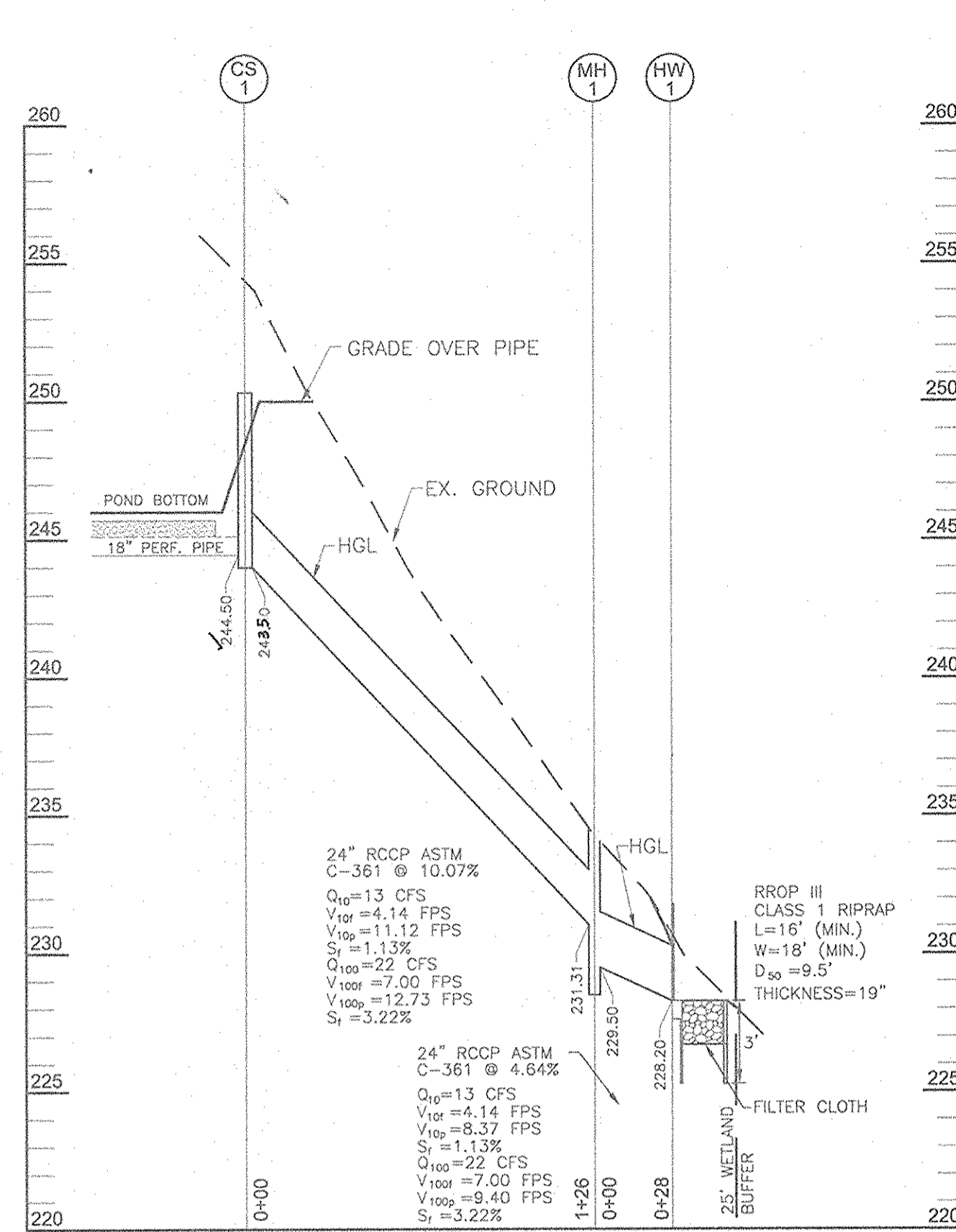
**ENGINEER'S CERTIFICATE**

"I hereby certify that this plan for pond construction and 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.

*Robert H. Vogel* 5/6/03  
Signature of Engineer Robert H. Vogel Date

OWNER/DEVELOPER  
BASFORD'S RETREAT, LLC  
9681 NORFOLK AVE.  
LAUREL, MARYLAND 20723  
(410) 792-2588

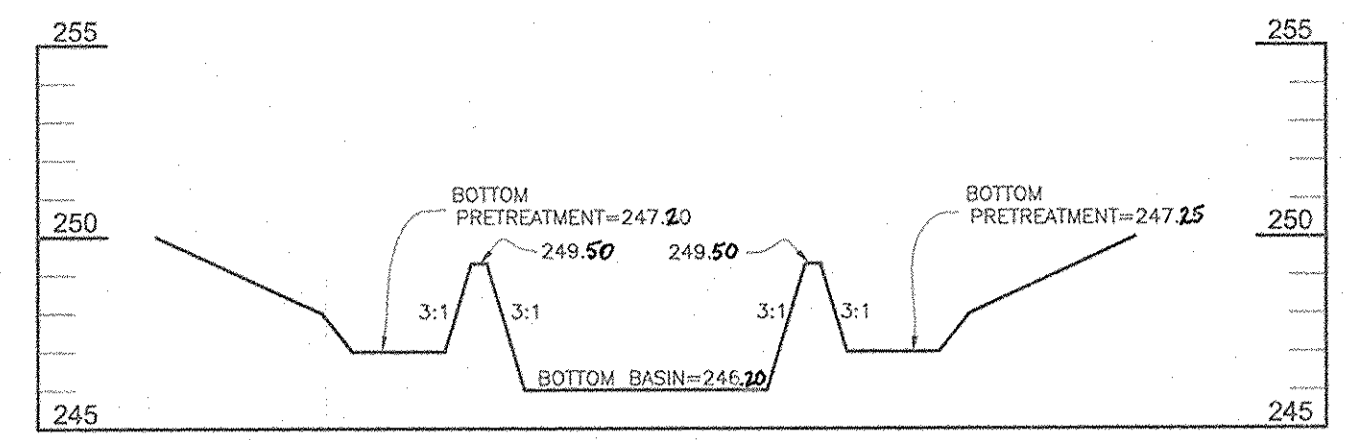




Drainage Pipe Profile  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.

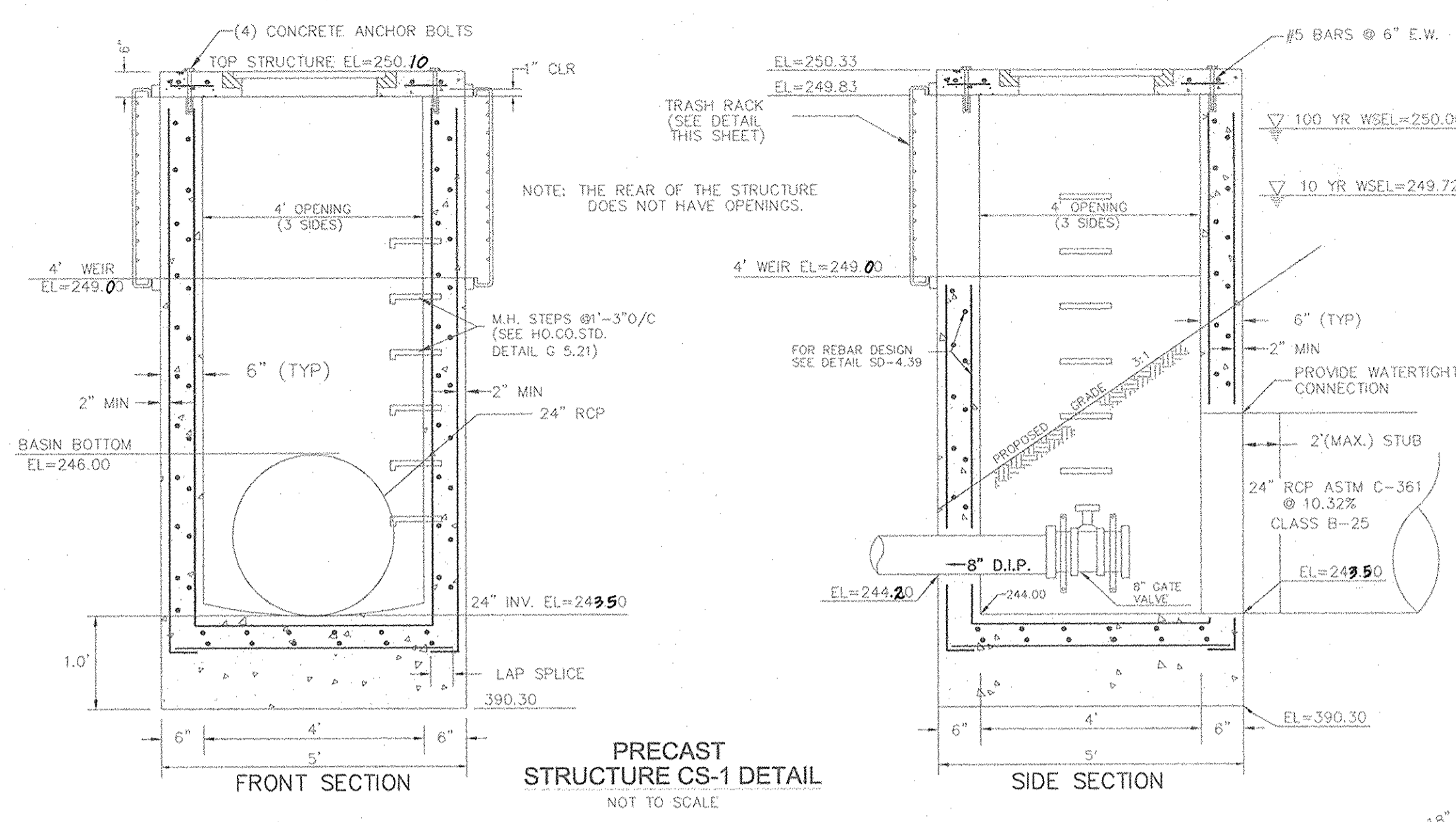
PIPE SIZE	TYPE	TOTAL LENGTH
24"	RCCP ASTM C-361	154 LF

NO.	TYPE	LOCATION	TOP ELEV.	INV IN	INV OUT	REMARKS
CS-1	CONTROL STRUCTURE	N 536465.17 E 1364214.11	250.10	244.20	243.50	SEE DETAIL THIS SHEET
MH-1	STANDARD 5' MANHOLE	N 536443.04 E 1364087.51	234.26	231.00	229.50	G 5.13
HW-1	TYPE 'A' HEADWALL	N 536415.20 E 1364090.61	230.00	228.20	-	SD 5.12

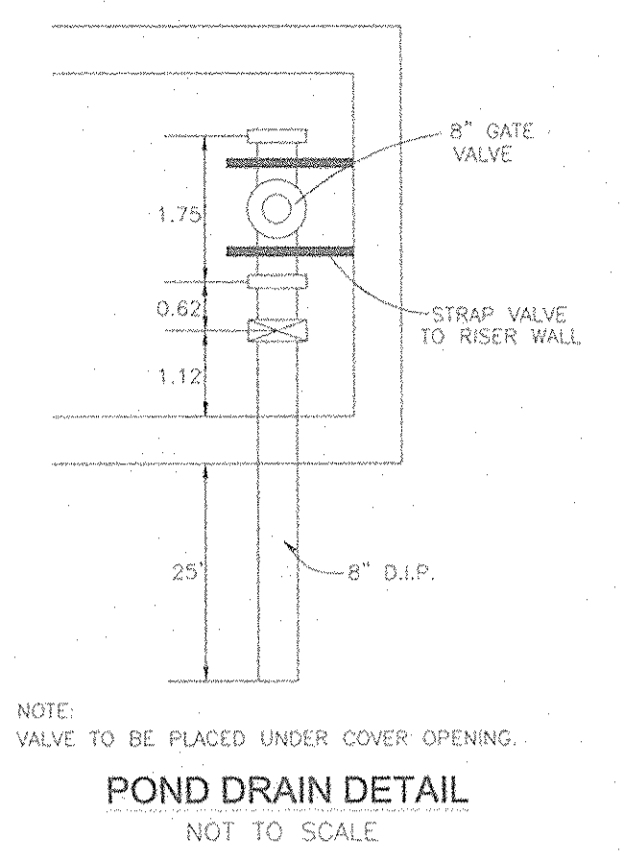


PROFILE THROUGH INFILTRATION BASIN  
SCALE: HOR: 1"=50'  
VERT: 1"=5'

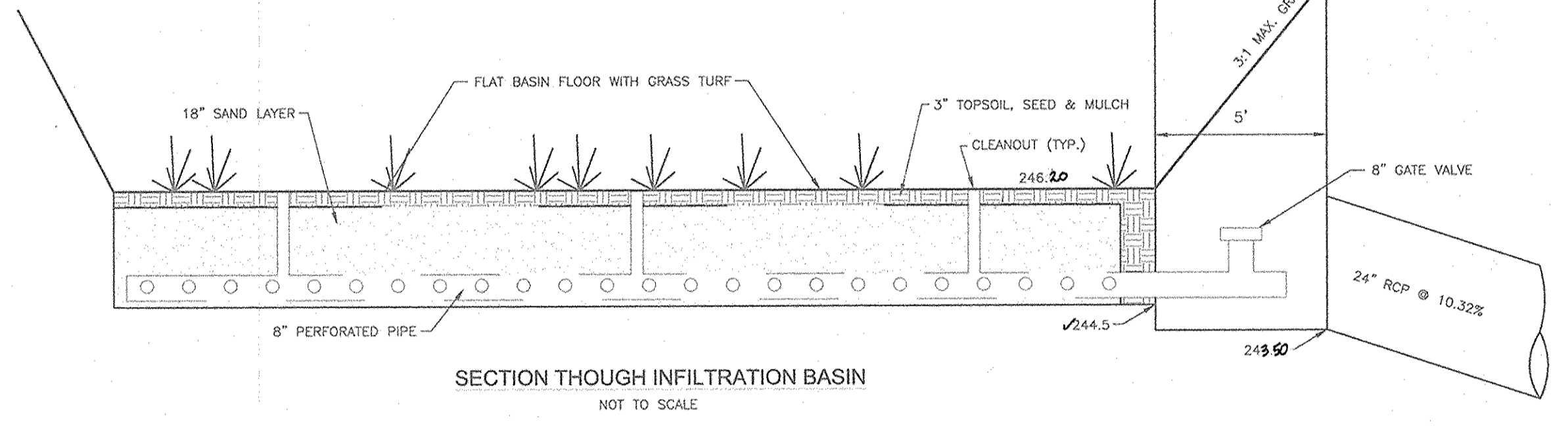
**OPERATION AND MAINTENANCE SCHEDULE FOR STORMWATER MANAGEMENT FACILITY**  
 STORMWATER MANAGEMENT FACILITY ROUTINE MAINTENANCE (PRIVATELY OWNED AND MAINTAINED)  
 1. FACILITY WILL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IS FUNCTIONING PROPERLY.  
 2. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.  
 3. DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.  
 4. VISIBLE SIGNS OF EROSION IN THE FACILITY AS WELL AS RIPRAP OUTLET AREAS SHALL BE REPAIRED AS SOON AS IT IS NOTICED.  
 NON-ROUTINE MAINTENANCE  
 1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.  
 2. SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE, INTERFERE WITH THE FUNCTION OF THE RISER, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.



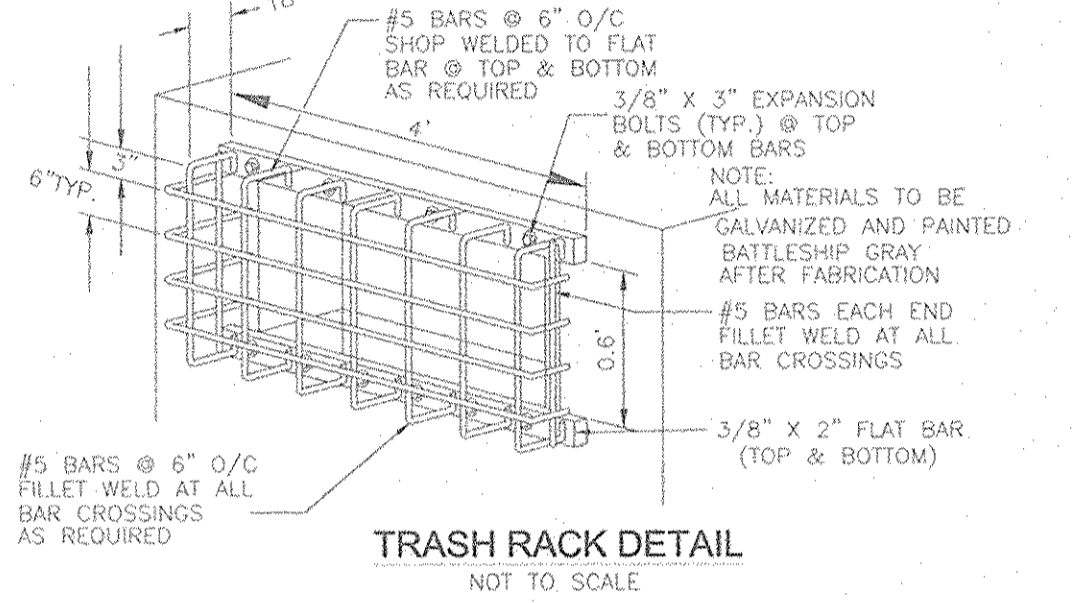
PRECAST STRUCTURE CS-1 DETAIL  
NOT TO SCALE



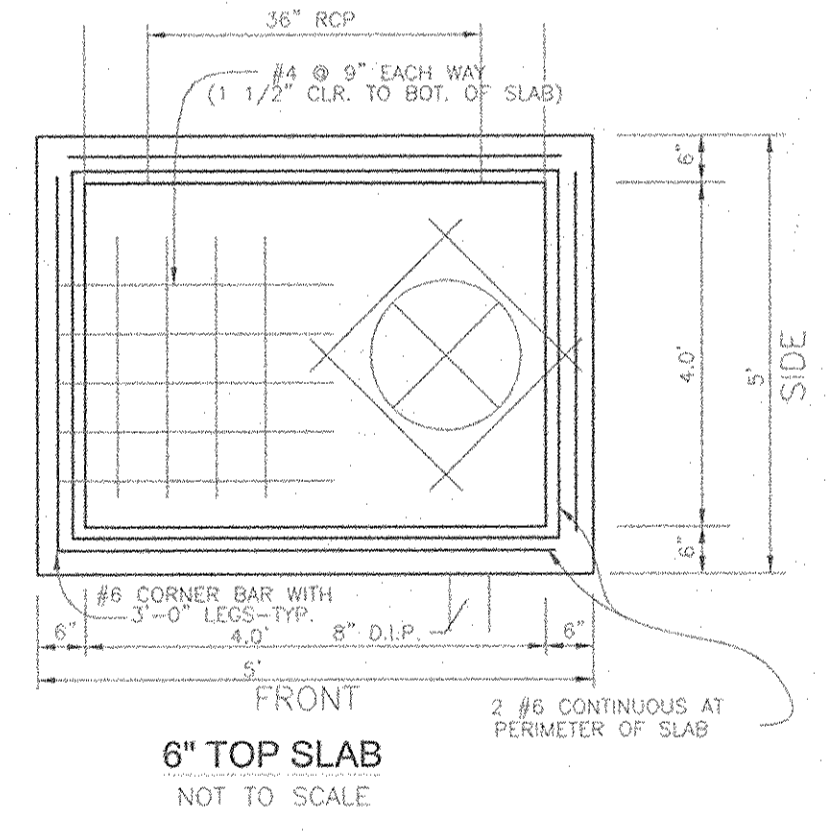
POND DRAIN DETAIL  
NOT TO SCALE



SECTION THROUGH INFILTRATION BASIN  
NOT TO SCALE



TRASH RACK DETAIL  
NOT TO SCALE

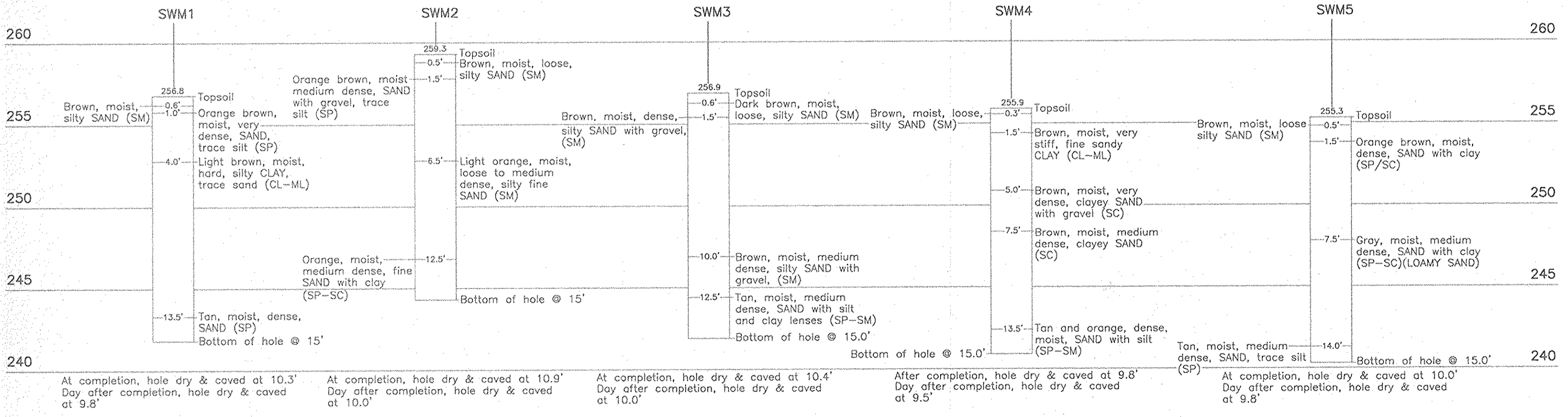


6" TOP SLAB  
NOT TO SCALE

**B.2.B Infiltration Basins Notes and Specifications**

An infiltration basin may not receive run-off until the entire contributing drainage area to the basin has received final stabilization.

- The sequence of various phases of basin construction shall be coordinated with the overall project construction schedule. A program should schedule rough excavation of the basin with the rough grading phase of the project to permit use of the material as fill in earthwork areas. The partially excavated basin, however, cannot serve as a sedimentation basin.
- Specifications for basin construction should state: (1) the earliest point in progress when storm drainage may be directed to the basin, and (2) the means by which this delay in use is to be accomplished. Due to the wide variety of conditions encountered among projects, each should be separately evaluated in order to postpone use as long as is reasonably possible.
- Specifications for basin construction should state: (1) the earliest point in progress when storm drainage may be directed to the basin, and (2) the means by which this delay in use is to be accomplished. Due to the wide variety of conditions encountered among projects, each should be separately evaluated in order to postpone use as long as is reasonably possible.
- Initial basin excavation should be carried to within 2 feet of the final elevation of the basin floor. Final excavation to the finished grade should be deferred until all disturbed areas on the watershed have been stabilized or protected. The final phase excavation should remove all accumulated sediment. Relatively light tracked equipment is recommended for this operation to avoid compaction of the basin floor. After the final grading is completed, the basin should provide a well-settled, highly porous surface texture.
- Infiltration basins may be lined with a 6- to 12-inch layer of filter material such as coarse sand (ASTM M-43, Sizes 9 or 10) to help prevent the buildup of impervious deposits on the soil surface. The filter layer can be replaced or cleaned when it becomes clogged. When a 6-inch layer of coarse organic material is specified for disking (such as bulks, leaves, stems, etc.) or spading into the basin floor to increase the permeability of the soils, the basin floor should be soaked or inundated for a brief period, then allowed to dry subsequent to this operation. This induces the organic material to decay rapidly, loosening the upper soil layer.
- Establishing dense vegetation on the basin side slopes and floor is recommended. A dense vegetative stand will not only prevent erosion and sloughing, but will also provide a natural means of maintaining relatively high infiltration rates. Erosion protection of inflow points to the basin shall also be provided.
- Selection of suitable vegetative materials for the side slope and all other areas to be stabilized with vegetation and application of soil amendments (e.g., lime, fertilizer, etc.) shall be done in accordance with the NRCS Standards and Specifications for Critical Area Planting (MD-342) or the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control.
- Grasses of the fescue family are recommended for seeding primarily due to their adaptability to dry sandy soils, drought resistance, hardness, and ability to withstand brief inundations. The use of legumes will also permit long intervals between mowings. This is important due to the relatively steep slopes which make mowing difficult. Mowing twice a year, once in June and again in September, is generally satisfactory. Refertilization with 10-6-4 ratio fertilizer at a rate of 500 lb per acre (11 lb per 1000 sq ft) may be required the second year after seeding.



STORMWATER MANAGEMENT BORING PROFILES  
NOT TO SCALE

APPROVED: DEPARTMENT OF PUBLIC WORKS  
 Chief, Bureau of Highways  
 5-20-03  
 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development  
 5/23/03  
 Date

Reviewed for HOWARD SCD and meets Technical Requirements  
 US-A-Natural Resources Conservation Service  
 5-13-03  
 Date

DEVELOPER'S CERTIFICATE  
 I/We certify that all development and construction will be done according to this plan of development 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 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.  
 Signature of Developer PAUL HINKLE  
 5/6/03  
 Date

AS-BUILT CERTIFICATION  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS"  
 Signature of Engineer Robert H. Vogel  
 5/6/03  
 Date

NO.	ROAD/STORM DRAIN AS-BUILT REVISION	5-1-03 DATE

**STORMWATER MANAGEMENT NOTES AND DETAILS**  
**BASFORD'S RETREAT**  
 BUILDABLE BULK PARCEL 'A'  
 TAX MAP 47 BLOCK 12 6TH ELECTION DISTRICT  
 REF.: S-01-36, P-02-21  
 PARCEL '494'  
 HOWARD COUNTY, MARYLAND

**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS ARCHITECTS SURVEYORS  
 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 Phone: 410-290-9550 Fax: 410-720-6226  
 Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHV  
 DRAWN BY: CMH  
 CHECKED BY: RHV  
 DATE: MAY 2003  
 SCALE: AS SHOWN  
 W.O. NO.: 2014020.0  
 5 SHEET OF 8

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
BeB2	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	C
BeC2	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
BeC3	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED	C
Fa	FALLSINGTON LOAM	D
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C
RuD2	RUMFORD LOAMY SAND, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
SIB2	SASSAFRAS LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
SIC2	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
SsE	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES	B

PAGE 34 OF THE HOWARD COUNTY SOIL SURVEY

**TC PATH INFORMATION**

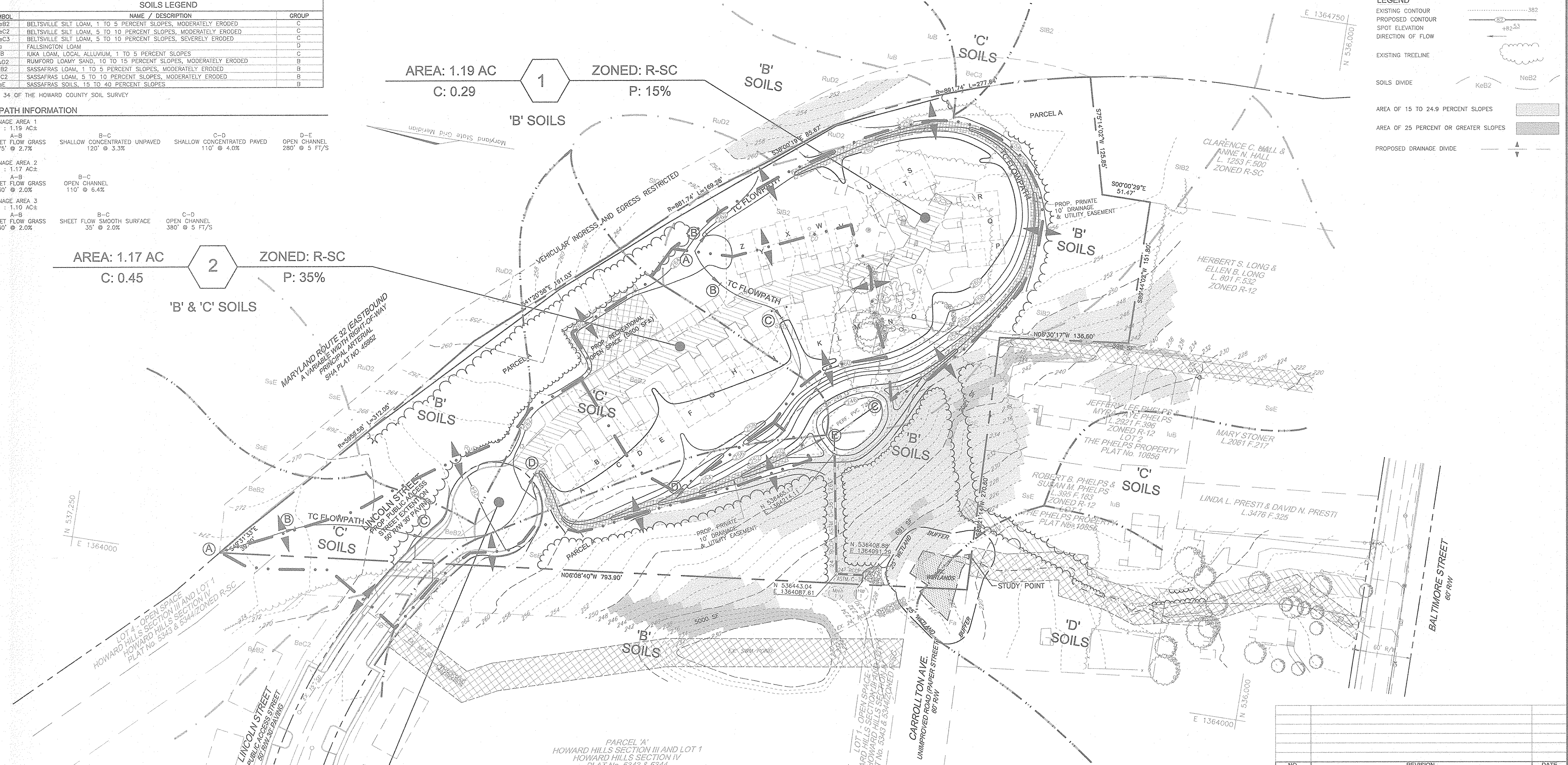
DRAINAGE AREA 1			
Area: 1.19 AC±			
A-B	B-C	C-D	D-E
SHEET FLOW GRASS 75' @ 2.7%	SHALLOW CONCENTRATED UNPAVED 120' @ 3.3%	SHALLOW CONCENTRATED PAVED 110' @ 4.0%	OPEN CHANNEL 280' @ 5 FT/5'
DRAINAGE AREA 2			
Area: 1.17 AC±			
A-B	B-C		
SHEET FLOW GRASS 30' @ 2.0%	OPEN CHANNEL 110' @ 6.4%		
DRAINAGE AREA 3			
Area: 1.10 AC±			
A-B	B-C	C-D	
SHEET FLOW GRASS 60' @ 2.0%	SHEET FLOW SMOOTH SURFACE 35' @ 2.0%	OPEN CHANNEL 380' @ 5 FT/5'	

LEGEND	
EXISTING CONTOUR	
PROPOSED CONTOUR	
SPOT ELEVATION	
DIRECTION OF FLOW	
EXISTING TREELINE	
SOILS DIVIDE	
AREA OF 15 TO 24.9 PERCENT SLOPES	
AREA OF 25 PERCENT OR GREATER SLOPES	
PROPOSED DRAINAGE DIVIDE	

AREA: 1.17 AC  
C: 0.45  
ZONED: R-SC  
P: 35%  
'B' & 'C' SOILS

AREA: 1.19 AC  
C: 0.29  
ZONED: R-SC  
P: 15%  
'B' SOILS

AREA: 1.10 AC  
C: 0.41  
ZONED: R-SC  
P: 32%  
'B' & 'C' SOILS



PLAN VIEW  
SCALE: 1"=50'

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 5-20-03  
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Candy Hamata* 5/23/03  
Chief, Division of Planning and Development Date

*Alan Dammann* 5/23/03  
Chief, Development Engineering Division Date

NO.	REVISION	DATE

**DRAINAGE AREA MAP FOR GRASS SWALES  
BASFORD'S RETREAT  
BUILDABLE BULK PARCEL 'A'**

TAX MAP 47 BLOCK 12 PARCEL '494'  
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
REF.: S-01-36, P-02-21

**FREDERICK WARD ASSOCIATES, INC.**  
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHV  
DRAWN BY: CMH  
CHECKED BY: RHV  
DATE: MAY 2003  
SCALE: 1"=50'  
W.O. NO.: 2014020.0

OWNER/DEVELOPER  
BASFORD'S RETREAT, LLC  
9831 NORFOLK AVE.  
LAUREL, MARYLAND 20723  
(410) 792-2588

STATE OF MARYLAND PROFESSIONAL ENGINEER  
ROBERT H. VOGEL, PE No. 16193

6 SHEET OF 8

SCHEDULE A: PERIMETER LANDSCAPE EDGE						
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES				
		1	2	3	4	5
PERIMETER/FRONTAGE DESIGNATION	C	C	C	C	B	B
LANDSCAPE TYPE	1075'	177'	152'	407'	535'	185'
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER						
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	YES** 372'	YES* 177'	YES* 152'	YES* 350'	YES* 455'	YES* 185'
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	YES* 695'	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED (LF REMAINING)	0	0	0	57	80	150
SHADE TREES	1:40 0	1:40 0	1:40 0	1:40 2	1:50 2	1:40 0
EVERGREEN TREES	1:20 0	1:20 0	1:20 0	1:20 3	1:40 2	1:40 0
SHRUBS	0	0	0	2	2	0
NUMBER OF TREES PROVIDED	0	0	0	3	2	0
SHADE TREES	0	0	0	3	2	0
EVERGREEN TREES	0	0	0	2	2	0
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	1	1	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0	1	1	0
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED						

\*\* EXISTING WOODS TO REMAIN  
\*\* PROPOSED NOISE WALL PROVIDES A VISUAL SCREEN

LANDSCAPE SCHEDULE				
KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
AR	8	ACER RUBRUM 'BOYHALL' BOYHALL FASTIGIATE RED MAPLE	2 1/2"-3" Cal.	B & B
SP	10	PICEA OMORICA SERBIAN SPRUCE	6' - 8' Ht.	B & B

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT MAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LANDSCAPE SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

**DEVELOPER'S AGREEMENT**

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING PROVIDED PER THE LANDSCAPE MANUAL TO BE POSTED WITH THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$3900.00 FOR 8 SHADE TREES AND 10 EVERGREEN TREES.  
FINANCIAL SURETY FOR THE PROPOSED NOISE WALL TO BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$13,960.00 FOR 698 LF OF NOISE WALL. (\$20.00 X 698 LF = \$13,960.00)  
TOTAL FINANCIAL SURETY FOR LANDSCAPING TO BE POSTED IS \$17,860.00

NOTE: REQUIRED INTERNAL RESIDENTIAL LANDSCAPING, PARKING AREA LANDSCAPING AND SIDEWALKS ON THE INTERNAL PRIVATE ROAD WILL BE PROVIDED AT THE SITE DEVELOPMENT PHASE.

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING-TYPE 'B' BUFFER	
LINEAR FEET OF PERIMETER	POND #1 280 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	YES* 95'
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO
NUMBER OF TREES REQUIRED	(185')
SHADE TREES	4 SHADE TREES
EVERGREEN TREES	5 EVERGREEN TREES
NUMBER OF TREES PROVIDED	4 SHADE TREES
SHADE TREES	5 EVERGREEN TREES
SHRUBS	

\*EXISTING WOODS TO REMAIN

STREET TREE CALCULATIONS				
STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED	
LINCOLN STREET EXT.	320/40	8	8	

NOTE: STREET TREES FOR THE PROPOSED PRIVATE ROAD WILL BE PROVIDED AT THE SITE DEVELOPMENT PHASE.

STREET TREE SCHEDULE				
KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
AR	8	ZELKOVA SERRATA 'VILLAGE GREEN' VILLAGE GREEN ZELKOVA	2 1/2"-3" CAL.	B & B

NOTE: A MINIMUM OF 20' IS REQUIRED BETWEEN ANY TREE AND ANY STREET LIGHT

**LEGEND**

EXISTING TREES TO REMAIN

SOILS DIVIDE

AREA OF 15 TO 24.9 PERCENT SLOPES

AREA OF 25 PERCENT OR GREATER SLOPES

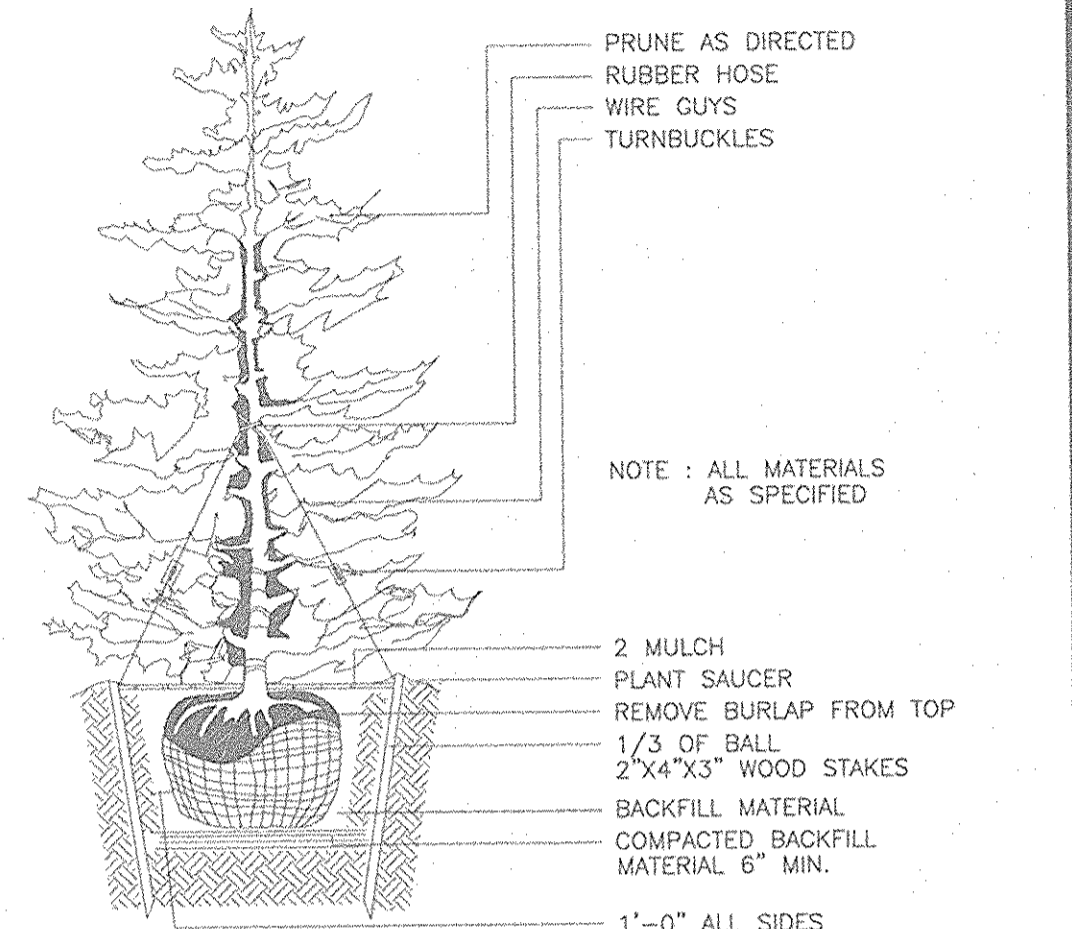
FOREST RETENTION EASEMENT

PROP. SHADE TREE

PROP. EVERGREEN TREE

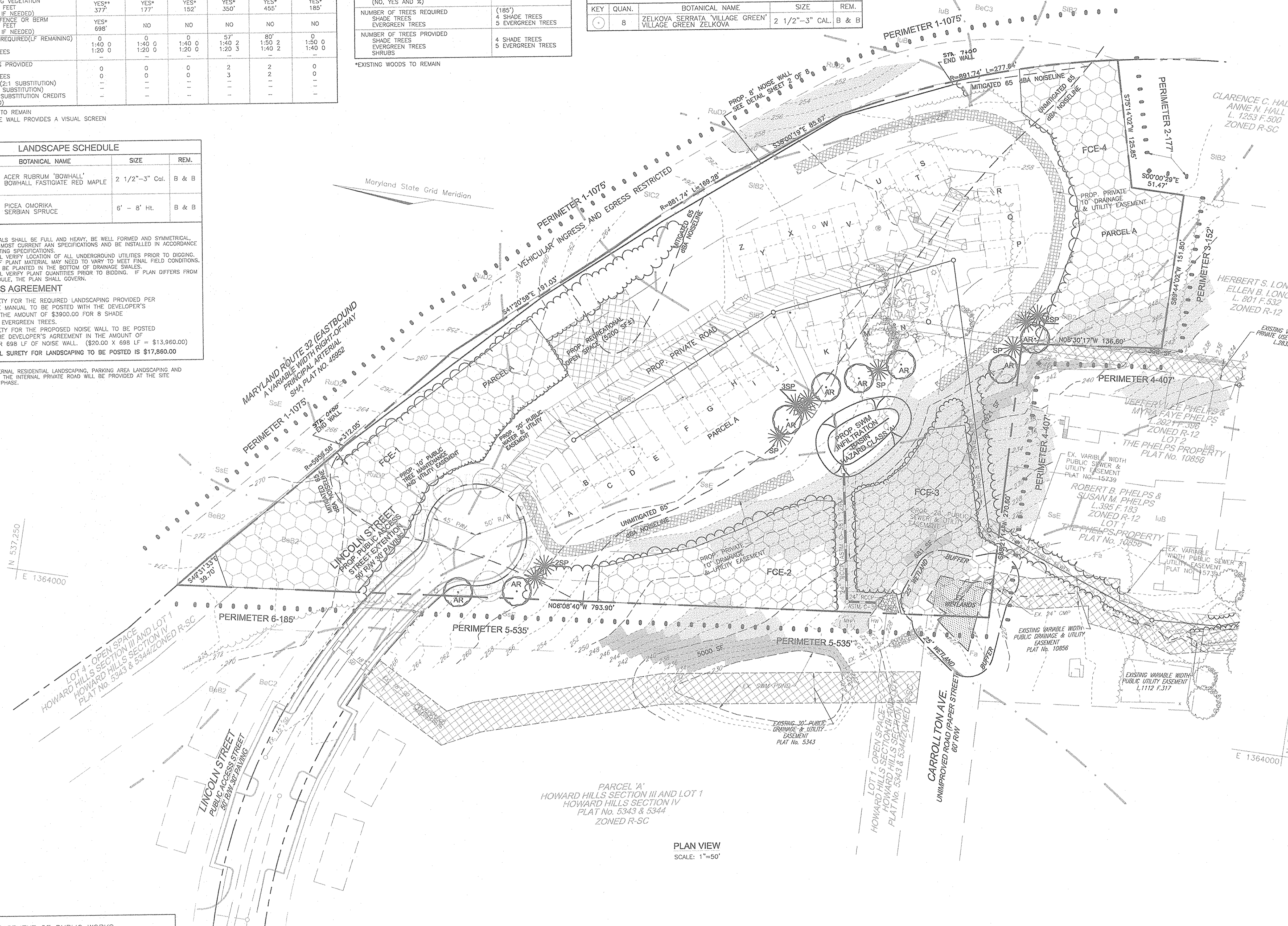
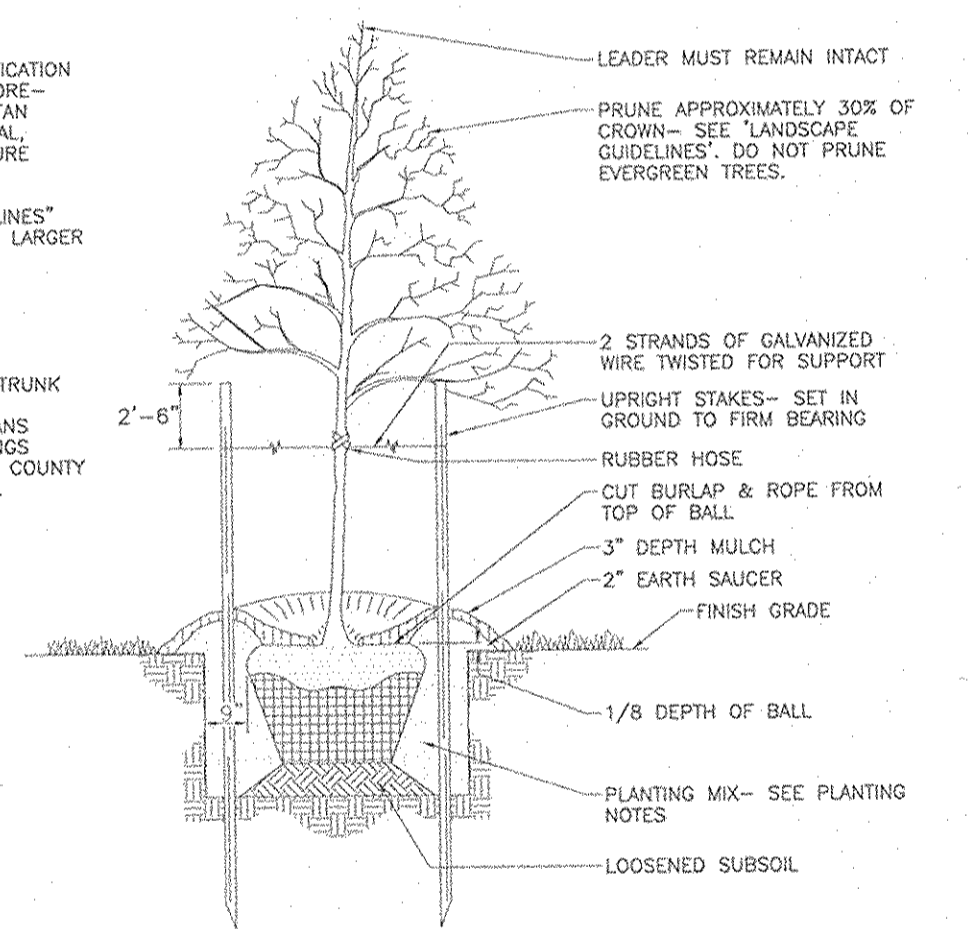
PROP. PERIMETER

PERIMETER 1



**NOTES**

- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
- SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.



APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Michael M. Doncker* 5-20-03  
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Conita Hamon* 5/20/03  
Chief, Division of Planning and Zoning Date

*Paul J. Stutler* 5/16/03  
Chief, Development Engineering Division Date

"I certify that the landscaping shown on this plan will be done according to the plan and section 16.124 of the howard county code and landscape manual. I further certify that upon completion a letter of notice of plant installation, accompanied by an executed one year guarantee of plant materials will be submitted to the department of planning and zoning."

*Paul J. Stutler* 5/16/03  
DEVELOPER DATE

NO.	REVISION	DATE

**LANDSCAPE AND STREET TREE PLAN**  
**BASFORD'S RETREAT**  
BUILDABLE BULK PARCEL 'A'

TAX MAP 47 BLOCK 12  
6TH ELECTION DISTRICT  
REF.: S-01-36, P-02-21

PARCEL '494'  
HOWARD COUNTY, MARYLAND

**FREDERICK WARD ASSOCIATES, INC.**  
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

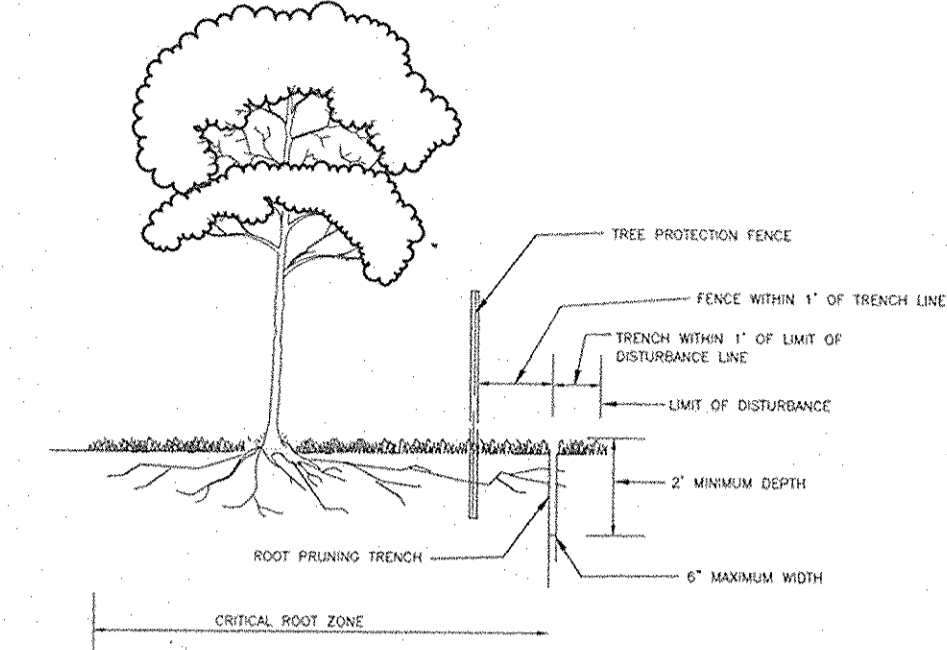
DESIGN BY: RHV  
DRAWN BY: CMH  
CHECKED BY: RHV  
DATE: MAY 2003  
SCALE: 1"=50'  
W.O. NO.: 2014020.0

OWNER/DEVELOPER  
BASFORD'S RETREAT, LLC  
9891 NORFOLK AVE.  
LAUREL, MARYLAND 20723  
(410) 792-2588

7 SHEET OF 8

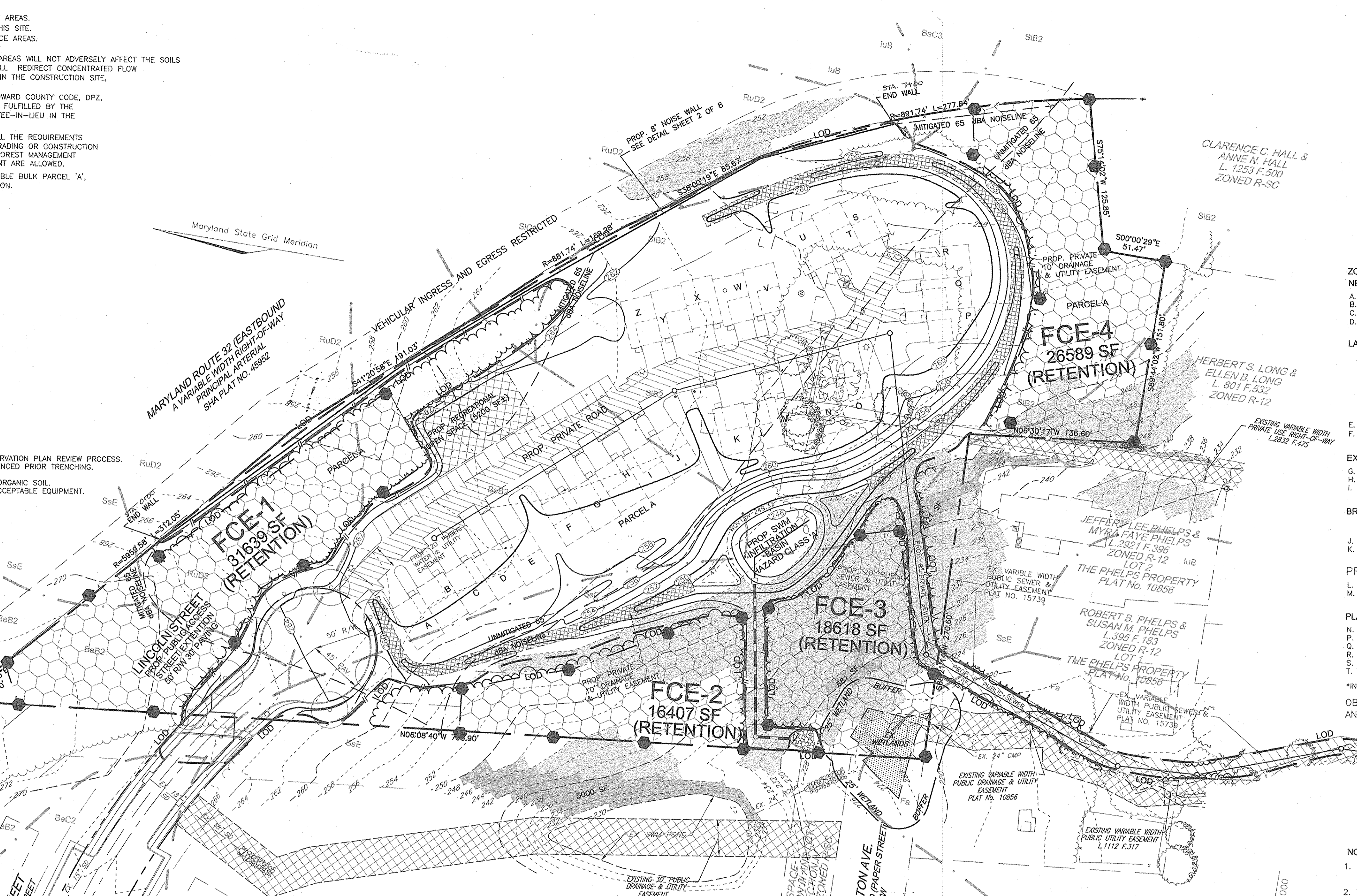
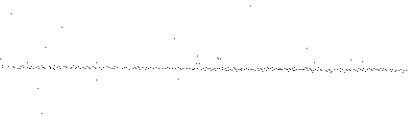
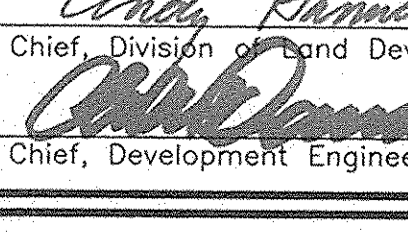
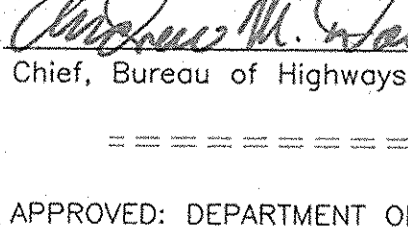
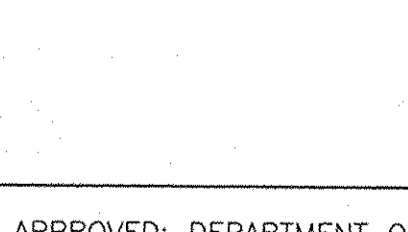
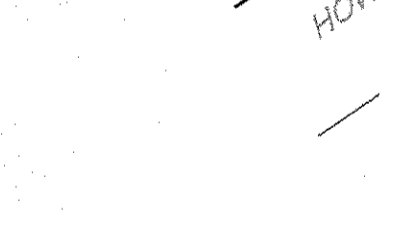
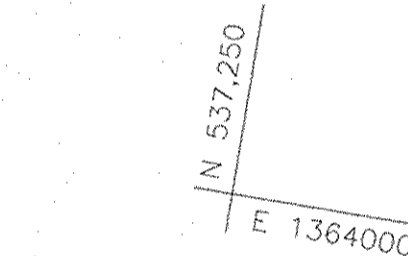
**FOREST RETENTION AREAS AND NOTES**

1. FORESTED WETLANDS AND THEIR BUFFERS ARE RETAINED IN OPEN SPACE AREAS.
2. NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.
3. THE WOODED STEEP SLOPES ARE SUBSTANTIALLY RETAINED IN OPEN SPACE AREAS.
4. THERE ARE NO ISOLATED FOREST STANDS ON THIS SITE.
5. CHANGES IN GRADING AND RUNOFF WITHIN CONSTRUCTION/INSTALLATION AREAS WILL NOT ADVERSELY AFFECT THE SOILS WITHIN THE FOREST RETENTION AREA. SEDIMENT CONTROL MEASURES WILL REDIRECT CONCENTRATED FLOW RUNOFF TO STORMWATER MANAGEMENT FACILITIES, RETAIN SEDIMENT WITHIN THE CONSTRUCTION SITE, AND/OR REDIRECT CLEAN WATER AWAY FROM CONSTRUCTION AREAS.
6. FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE, DPZ, AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY THE RETENTION OF EXISTING FOREST IN THE AMOUNT OF 2.14 ACRES AND A FEE-IN-LIEU IN THE AMOUNT OF \$5880.60 FOR THE REQUIRED 0.27 AC OF REFORESTATION.
7. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. 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.
8. REFER TO THE FINAL SUBDIVISION PLAT FOR BASFORD'S RETREAT, BUILDABLE BULK PARCEL 'A', FOR FOREST CONSERVATION EASEMENT BEARING AND DISTANCE INFORMATION.



- NOTES:**
1. RETENTION AREAS TO BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
  2. BOUNDARIES OF RETENTION AREAS TO BE STAKED, FLAGGED AND/OR FENCED PRIOR TRENCHING.
  3. EXACT LOCATION OF TRENCH SHOULD BE IDENTIFIED.
  4. TRENCH SHOULD IMMEDIATELY BE BACKFILLED WITH SOIL REMOVED OR ORGANIC SOIL.
  5. ROOTS SHOULD BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.

**ROOT PRUNING NOTES**



**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- DIRECTION OF FLOW
- TREE PROTECTION FENCE
- EXISTING TREES TO REMAIN
- SOILS DIVIDE
- AREA OF 15 TO 24.9 PERCENT SLOPES
- AREA OF 25 PERCENT OR GREATER SLOPES
- FOREST PROTECTION/RETENTION AREA SIGN
- FOREST RETENTION EASEMENT

**HOWARD COUNTY FOREST CONSERVATION WORKSHEET**

ZONED R-SC  
NET TRACT AREA:

A. TOTAL TRACT AREA	6.74 AC
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.00 AC
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.00 AC
D. NET TRACT AREA	6.74 AC

LAND USE CATEGORY

INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED R-SC.

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

E. AFFOREST THRESHOLD 15% X D = 1.01 AC  
F. CONSERVATION THRESHOLD 20% X D = 1.35 AC

**EXISTING FOREST COVER:**

G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN)	=	6.24 AC
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD	=	5.23 AC
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD	=	4.89 AC

**BREAK EVEN POINT:**

(2 X I) + F = BREAK EVEN POINT (2.33 AC)

J. FOREST RETENTION WITH NO MITIGATION	=	2.33 AC
K. CLEARING PERMITTED WITHOUT MITIGATION	=	3.91 AC

**PROPOSED FOREST CLEARING:**

L. TOTAL AREA OF FOREST TO BE CLEARED	=	4.24 AC*
M. TOTAL AREA OF FOREST TO BE RETAINED	=	2.14 AC

**PLANTING REQUIREMENTS:**

N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD (L X 25)	=	1.06 AC
P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD	=	0.00 AC
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD (M-F)	=	0.79 AC
R. TOTAL REFORESTATION REQUIRED (N+P-Q)	=	0.27 AC
S. TOTAL AFFORESTATION REQUIRED	=	0.00 AC
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED	=	0.27 AC

\*INCLUDES 0.14 ACRES OFF-SITE CLEARING IN PUBLIC SEWER AND UTILITY EASEMENT.

OBLIGATION TO BE FULFILLED BY ON-SITE RETENTION OF 2.14 AC. (93,218 SF) AND A FEE-IN-LIEU FOR THE REQUIRED 0.27 AC. OF REFORESTATION.

- NOTES**
1. THE PROPERTY OUTLINE IS BASED ON A BOUNDARY SURVEY PREPARED BY FREDERICK WARD ASSOCIATES IN JANUARY, 2002.
  2. THE EXISTING FEATURES AND CONTOURS SHOWN HEREON ARE BASED ON TOPOGRAPHY PREPARED BY FREDERICK WARD ASSOCIATES IN JANUARY, 2002.

PLAN VIEW SCALE: 1"=50'

PARCEL 'A' HOWARD HILLS SECTION III AND LOT 1 HOWARD HILLS SECTION IV PLAT No. 5343 & 5344 ZONED R-SC

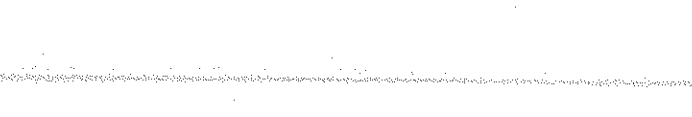
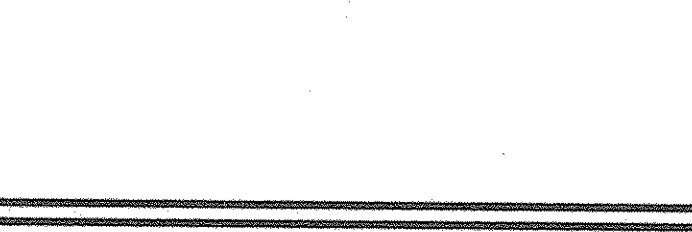
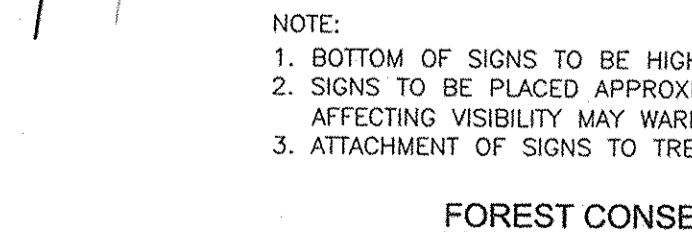
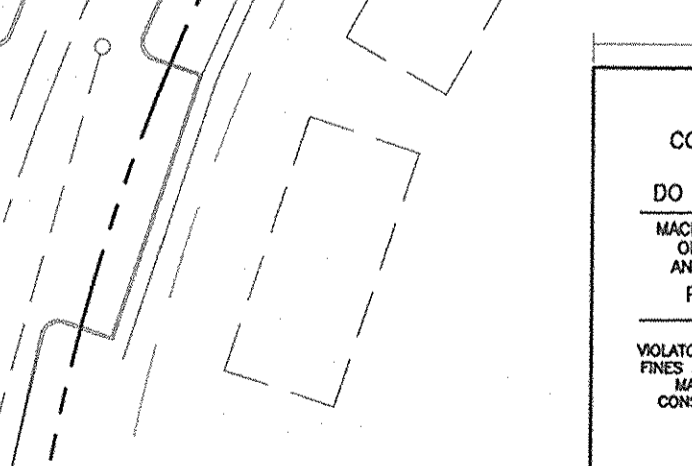
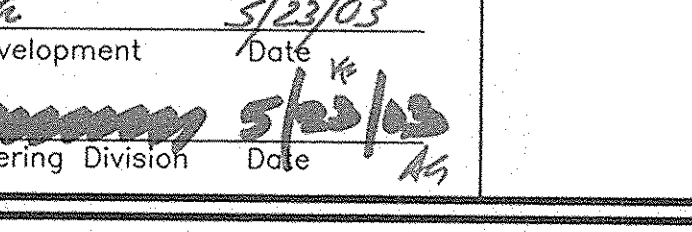
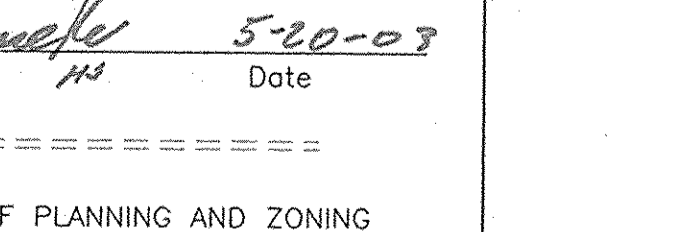
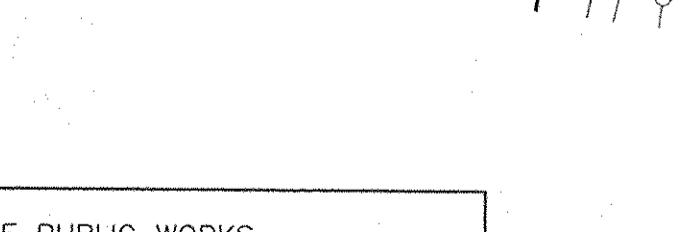
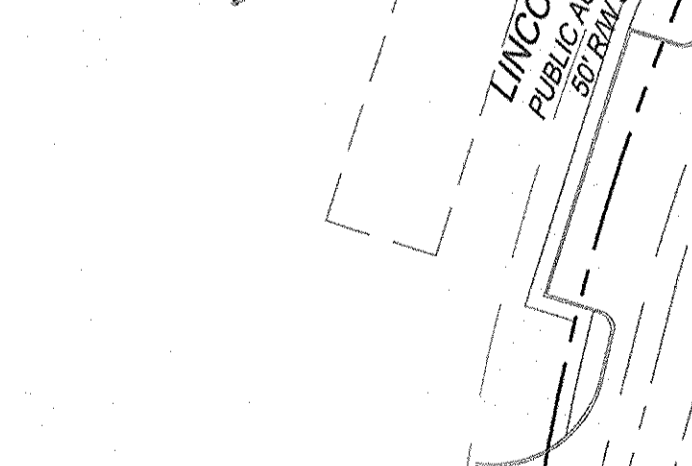
LOT 1 OPEN SPACE HOWARD HILLS SECTION III AND LOT 1 HOWARD HILLS SECTION IV PLAT No. 5343 & 5344 ZONED R-SC

LOT 2 OPEN SPACE HOWARD HILLS SECTION III AND LOT 1 HOWARD HILLS SECTION IV PLAT No. 5343 & 5344 ZONED R-SC

LOT 3 OPEN SPACE HOWARD HILLS SECTION III AND LOT 1 HOWARD HILLS SECTION IV PLAT No. 5343 & 5344 ZONED R-SC

LOT 4 OPEN SPACE HOWARD HILLS SECTION III AND LOT 1 HOWARD HILLS SECTION IV PLAT No. 5343 & 5344 ZONED R-SC

LOT 5 OPEN SPACE HOWARD HILLS SECTION III AND LOT 1 HOWARD HILLS SECTION IV PLAT No. 5343 & 5344 ZONED R-SC



- NOTES:**
1. BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
  2. SIGNS TO BE PLACED APPROXIMATELY 50'-100' FEET APART, CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
  3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

- NOTES:**
1. FOREST PROTECTION DEVICE ONLY.
  2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
  3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
  4. ROOT DAMAGE SHOULD BE AVOIDED.
  5. PROTECTION SIGNAGE SHOULD BE USED.
  6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

**BLAZE ORANGE PLASTIC MESH**

**COST ESTIMATE: (For bonding purposes, only)**

RETENTION OF 2.14 AC. (93,218 SF X 0.20) \$18,644.00

**SURETY NOTE**

FINANCIAL SURETY IN THE AMOUNT OF \$18,644.00 WILL BE POSTED WITH THE FC MAINTENANCE AGREEMENT.

COST OF FEE-IN-LIEU FOR THE REQUIRED 0.27 AC. OF REFORESTATION IS \$5,880.60. (11,761 SF X 0.50)

- FOREST PROTECTION NOTES**
- PRE-CONSTRUCTION ACTIVITIES**
1. FOR RETENTION AREAS, INSTALL RETENTION SIGNS ON SUPERSILT FENCE OR BLAZE ORANGE FENCE BEFORE CONSTRUCTION BEGINS.
  2. FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
  3. A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNE TREES AS REQUIRED. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.

- CONSTRUCTION PHASE**
1. NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE RETENTION AREA.
  2. NO EQUIPMENT SHALL BE OPERATED INSIDE THE TREE RETENTION AREA INCLUDING TREE CANOPIES.
  3. IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.

- POST-CONSTRUCTION ACTIVITIES**
1. AT THE DIRECTION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.
  2. FENCE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.
  3. DO NOT REMOVE SIGNS.

**APPROVED: DEPARTMENT OF PUBLIC WORKS**

*Charles M. Pankaj* 5-20-03  
Chief, Bureau of Highways Date

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

*Cindy Kamm* 5/23/03  
Chief, Division of Land Development Date

*William J. ...* 5/23/03  
Chief, Development Engineering Division Date

**OWNER / DEVELOPER**

BASFORD'S RETREAT, LLC  
9691 NORFOLK AVE  
LAUREL, MARYLAND 20723  
(410) 792-2588

NO.	REVISION	DATE

**DESIGN BY:** RHV  
**DRAWN BY:** CMH  
**CHECKED BY:** RHV  
**DATE:** MAY 2003  
**SCALE:** AS SHOWN  
**W.O. NO.:** 2014020.0