SITE DEVELOPMENT PLANS
WOODMONT ACADEMY
PHASE ONE
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

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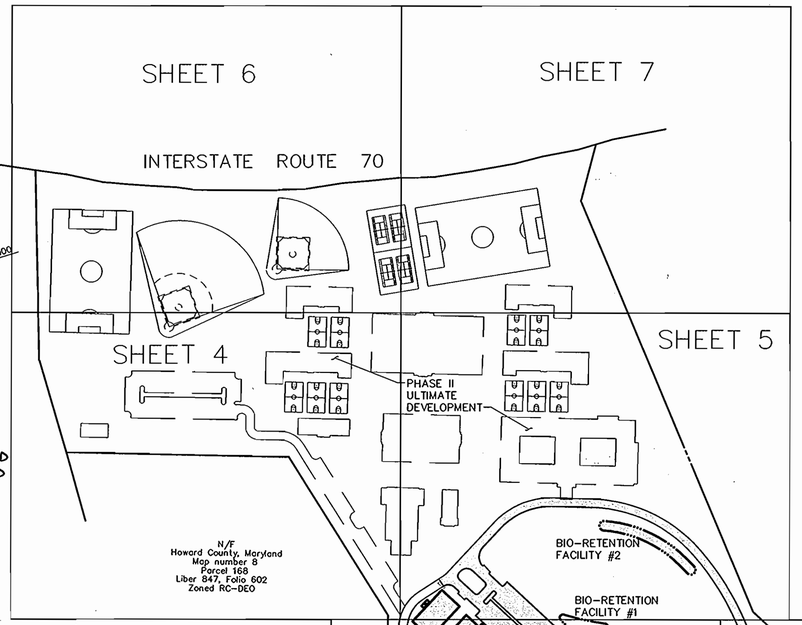
GENERAL NOTES

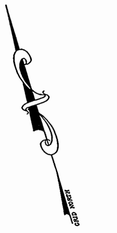
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY WINGS AERIAL MAPPING CO. DATED MARCH 2002.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 08IA AND 08IB WERE USED FOR THIS PROJECT.
8. WATER IS PRIVATE.
9. SEWER IS PRIVATE.
10. THE STORMWATER MANAGEMENT FACILITIES PROPOSED FOR THIS SITE ARE ALL PRIVATELY OWNED AND MAINTAINED. A WET POND WILL PROVIDE THE REQUIRED WQv AND Cpv FOR THE ULTIMATE CONDITIONS IN DRAINAGE AREA #1. A BIORETENTION FACILITY WILL PROVIDE THE REQUIRED Rev FOR THE PROPOSED CONDITIONS IN PHASE I AND THE NOTED FUTURE PARKING. TWO (2) BIORETENTION FACILITIES WILL PROVIDE WQv AND Rev FOR DRAINAGE AREA #2. SHEET FLOW TO BUFFER AND NON-ROOFTOP DISCONNECTION CREDITS WILL ALSO BE USED IN DRAINAGE AREA #2. Cpv IS NOT REQUIRED FOR DRAINAGE AREA #2.
A. ANY CHANGES THAT RESULT IN AN INCREASE IN THE IMPERVIOUS AREA TO DRAINAGE AREA 1P OR 2P AS SHOWN ON SHEET 27 OF 49 WILL REQUIRE A REDLINE REVISION FOR THE PURPOSE OF PROVIDING ADDITIONAL STORMWATER MANAGEMENT.
B. WHEN PHASE II IS INITIATED A NEW SWM DESIGN MUST BE PREPARED FOR ALL AREAS OUTSIDE OF DRAINAGE AREAS 1P AND 2P AS SHOWN ON SHEET 27 OF 49 AS EACH NEW DRAINAGE AREA IS DEVELOPED.
11. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
12. FLOODPLAIN STUDY PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED FEBRUARY 2003.
13. THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY NAVARRO & WRIGHT DATED AUG. 2002.
14. THE APFO TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP DATED JANUARY 2003 AND APPROVED ON MAY 30, 2003.
15. A NOISE STUDY FOR THIS PROJECT IS NOT REQUIRED.
16. THE GEOTECHNICAL STUDY FOR STORMWATER MANAGEMENT FOR THIS PROJECT WAS PREPARED BY HILLIS CARNES, INC DATED JANUARY, 2003.
17. THE BOUNDARY SURVEY FOR THIS PROJECT WAS PREPARED BY NAVARRO & WRIGHT DATED AUG. 2002.
18. SUBJECT PROPERTY ZONED RC-DEO PER 10-18-93 COMPREHENSIVE ZONING PLAN.
19. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
20. SEE DEPARTMENT OF PLANNING AND ZONING FILE NO. BA-02-19C, GP-03-49, WP-03-106, TU-03-02.
21. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
22. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
23. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
24. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
25. ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED. E
26. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
27. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
28. STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
29. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
30. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180.
31. THE HEARING EXAMINER APPROVED THE DECISION AND ORDER FOR BA-02-19C, FOR A PRIVATE SCHOOL AND RETREAT CENTER ON JULY 17, 2002.
(A) A 50 FOOT BUFFER WILL BE REDUCED TO 30 FEET FROM ADJOINING PROPERTIES NEAR THE EASTERN PORTION OF THE DRIVEWAY.
(B) IN THE FUTURE A PORTION OF THE WESTERN DRIVEWAY AND PLAYING FIELDS WILL BE EXTENDED TO WITHIN 30 FOOT SETBACK.
32. THE FOREST CONSERVATION OBLIGATION FOR THE PROPOSED SITE DEVELOPMENT HAS BEEN MET BY AFFORESTING 9.86± AC OF FOREST ON SITE AND PAYMENT OF A FEE-IN-LIEU FOR THE REMAINING OBLIGATION. SURETY IN THE AMOUNT OF $205,571 (411,502 SF x $0.50) HAS BEEN POSTED FOR THE AFFORESTATION. 18,000 SF OF AFFORESTATION (18 SHADE TREES @ 400 SF AND 48 EVERGREEN TREES @ 225 SF) HAS BEEN BONDED AS PART OF THE LANDSCAPE PLAN TO MEET PERIMETER LANDSCAPE REQUIREMENTS. PAYMENT OF FEE-IN-LIEU IN THE AMOUNT OF $59,242 (118,483 x $0.50 SF) IS PROPOSED FOR THE REMAINING OBLIGATION OF 2.72 AC. A FOREST CONSERVATION EASEMENT WILL BE ESTABLISHED OVER THE AFFORESTATION AREAS.
33. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $105,750.

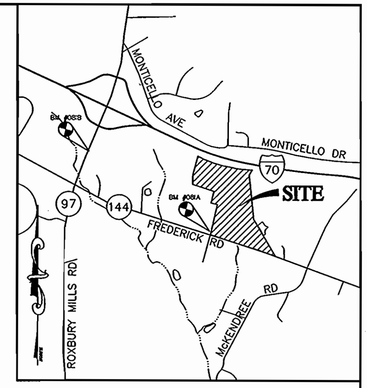
175	SHADE TREES @ $300	= $52,500
54	ORNAMENTAL TREES @ $150	= $ 8,100
321	EVERGREEN TREES @ $150	= $48,150
0	SHRUBS @ $30	= $0



PLAN
SCALE: 1" = 200'

Mobberley, John and Gretchen
Map number 14
Parcel 46
Liber 2210, Folio 123
Zoned RC-DEO
Agricultural





VICINITY MAP
SCALE: 1"=2000'

SITE TABULATION

WOODMONT ACADEMY – PHASE 1

1.	GROSS AREA OF TRACT	66.42 ACRES
2.	ZONING OF TRACT	RC-DEO
3.	AREA OF FLOODPLAIN	0 ACRES
4.	NET AREA	66.42 ACRES
5.	LIMIT OF DISTURBANCE	36.9 ACRES
6.	PROPOSED USE – PRIVATE SCHOOL	
7.	NUMBER OF STUDENTS	536
8.	PROPOSED FLOOR AREA	27,417 SF
	SCHOOL	25,200 SF
	ADMINISTRATIVE	2,217 SF
5.	PARKING REQUIRED	1 SP/6 STUDENTS = 90 SPACES
6.	PARKING PROVIDED	98 SPACES
	HANDICAP SPACES REQUIRED	6
	HANDICAP SPACES PROVIDED	6 (INCL. 2 VAN SPACES)

BENCHMARKS

CONTROL STATION 08IA
ELEVATION 599.315
N 601,107.012
E 1,310,575.051
LOCATED EAST OF COOKSVILLE REPAIR SHOP, NORTH OF SUMMER HILL FARM ENTRANCE CONTROL
STATION 08IB
ELEVATION 596.707
N 603,342.517
E 1,307,205.869
LOCATED IN MEDIAN AT ROUTE 70 AND ROUTE 97 INTERSECTION

PHASE 1 SEWER TABULATION

536 STUDENTS x 15 GPD/STUDENT = 8040 GPD
50 ADMINISTRATION/INSTRUCTORS x 15 GPD/PERSON = 750 GPD
TOTAL PHASE 1 FLOW = 8790 GPD

AS-BUILT STATEMENT:

"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."

JOHN W. GLAPSADDLE 7/9/2008
DATE

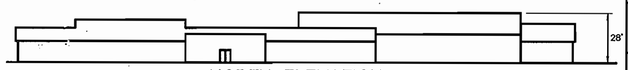
STATE OF MARYLAND · JOHN W. GLAPSADDLE · No. 19949 · REGISTERED PROFESSIONAL ENGINEER

GENERAL NOTES

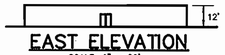
34. ALL LIGHTING WILL BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
35. EXISTING STRUCTURES MUST BE DEMOLISHED PRIOR TO DEVELOPMENT OF SITE.
36. WP-03-106 IS TO WAIVE SECTION 16.155(a)(1) AND APPROVED ON APRIL 11, 2003 SUBJECT TO THE FOLLOWING CONDITIONS:
A. THE PETITIONER SHALL OBTAIN APPROVAL FOR A GRADING PERMIT/PLAN FROM THE SOIL CONSERVATION DISTRICT, AND A GRADING PERMIT FROM THE DEPARTMENT OF INSPECTIONS LICENSES AND PERMITS (DILP), PRIOR TO COMMENCEMENT OF GRADING ON THE SUBJECT PROPERTY.
B. NO GRADING MAY BE DONE ON THE ADJOINING HOWARD COUNTY DPW PROPERTY UNTIL SUCH TIME AS THE PETITIONER PROVIDES A CONSENT LETTER FROM THE APPROPRIATE COUNTY AUTHORITY.
C. THE PETITIONER SHALL ARRANGE WITH THE DPW TO HAVE INSPECTIONS CONDUCTED ON THE SEDIMENT BASIN AND PERMANENT SWM FEATURES SHOWN ON THE WAIVER EXHIBIT (INTERIM GRADING PLAN), IN ADDITION, THE PETITIONER SHALL INCORPORATE NOTES ABOUT THE DPW INSPECTIONS INTO THE SEQUENCE OF CONSTRUCTION ON THE GRADING PLAN THAT WILL BE REVIEWED BY THE SOIL CONSERVATION DISTRICT.
37. GP-03-49 IS VALID UNTIL APRIL 14, 2004, OR UNTIL SDP-03-90 IS NO LONGER ACTIVE.
38. TU-03-02 A REQUEST FOR TEMPORARY USE OF FIVE MODULAR BUILDINGS AND ACCESSORY ABOVE GROUND WATER SUPPLY AND SANITATION UNITS WAS APPROVED BY THE DIRECTOR OF PLANNING AND ZONING ON THE 24th OF JULY 2003 SUBJECT TO THE FOLLOWING CONDITION:
A. THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND COUNTY LAWS AND REGULATIONS, AND SHALL COMPLY WITH THE COMMENTS FROM THE STATE HIGHWAY ADMINISTRATION AND THE DEPARTMENT OF INSPECTIONS, LICENSE AND PERMITS AS NOTED IN FINDINGS OF FACT NO. 9.
B. THE PETITIONER SHALL CONDUCT THE TEMPORARY USE IN SUBSTANTIAL CONFORMANCE WITH THE RECORDED TESTIMONY.
C. AFTER THE PETITIONER IS GRANTED FINAL APPROVAL FROM THE DEPARTMENT OF INSPECTIONS, LICENSE AND PERMITS TO OCCUPY AND USE THE MODULAR FACILITIES, THE PETITIONER SHALL SUBMIT A WRITTEN DECLARATION TO THE DEPARTMENT OF PLANNING AND ZONING SPECIFYING THE DATE THE PETITIONER WILL INITIALLY OCCUPY ANY OF THE MODULAR BUILDINGS, WHICH SHALL BECOME PART OF THE OFFICIAL RECORD IN THE CASE. THE 60 DAY TEMPORARY USE PERIOD SHALL BEGIN ON THIS DECLARED DATE OF FIRST OCCUPANCY.

WELL AND SEPTIC GENERAL NOTES

1. THIS AREA ▨ DESIGNATES A PRIVATE SEWAGE DISPOSAL EASEMENT AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT PLAT SHALL NOT BE NECESSARY.
2. PERC HOLES SHOWN HEREON HAVE BEEN FIELD LOCATED BY PATTON HARRIS RUST AND ASSOCIATES, PC JULY 2002.
3. WELLS AND SEPTIC SYSTEMS WITHIN 100 FEET OF THE PROPERTY BOUNDARY HAVE BEEN SHOWN TO THE BEST OF OUR KNOWLEDGE AND INFORMATION.
4. THE LOTS SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
5. ALL WELLS TO BE DRILLED PRIOR TO SITE DEVELOPMENT PLAN SIGNATURE.
6. ALL HOLES SUBJECT TO MOUNDING ANALYSIS FOR USABILITY OF PROPOSED SYSTEM DESIGN.
7. GROUNDWATER APPROPRIATIONS PERMIT NO. H02002G012(01) WAS ISSUED ON NOVEMBER 11, 2002.
8. GROUNDWATER DISCHARGE PERMIT TO BE ISSUED PRIOR TO SITE DEVELOPMENT PLAN SIGNATURE.
9. A CONSTRUCTION PERMIT MUST BE ISSUED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT TO INSTALL THE PRE-TREATMENT UNIT AND PUMPING CHAMBER.



NORTH ELEVATION
SCALE: 1" = 20'



EAST ELEVATION
SCALE: 1" = 20'
(ADMINISTRATION MODULAR TRAILER)

ADDRESS CHART

PARCEL	STREET ADDRESS
115	2000 WOODMONT DRIVE

SUBDIVISION NAME			SECT./AREA		PARCEL
WOODMONT ACADEMY			–		115
PLAT #	BLOCK #	ZONING	TAX MAP NO.	ELECT. DIST.	CENSUS TRACT
–	24 & 6	RC-DEO	8 & 14	4 th	6040
WATER CODE			SEWER CODE		
PRIVATE			PRIVATE		

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-2-

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 8/20/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 8/20/03
CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE 8/21/03

DATE	NO.	REVISION
11/9/07	1	REVISED SHEET INDEX

OWNER / DEVELOPER
WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
TITLE SHEET

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

7-28-03
DATE

CHRISTOPHER J. REID #19949 — STATE OF MARYLAND · CHRISTOPHER J. REID · No. 19949 · PROFESSIONAL ENGINEER

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-TITLE.DWG
DATE :	JULY 28, 2003
SCALE :	AS SHOWN
DRAWING NO.	1 OF 51

SDP-03-90

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DA #1 - SUMMARY CHART

SIZING CRITERIA	VOLUME REQUIRED	NOTES
WQv	0.83 AC.FT.	WET POND
*Rev	0.068 AC.FT.	BIO-RETENTION
Cpv	1.38 AC.FT.	WET POND
Qp	N/A	N/A
Qf	N/A	N/A

* Rev IS BASED ON PROPOSED SITE IMPERVIOUSNESS, NOT ULTIMATE

DA #2 - SUMMARY CHART

SIZING CRITERIA	VOLUME REQUIRED	NOTES
WQv	0.20 AC.FT.	BIO-RETENTION
Rev	0.032 AC.FT.	BIO-RETENTION
Cpv	N/A	Q1 PR < Q1 EX
Qp	N/A	N/A
Qf	N/A	N/A

NOTES:

1. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE NOTED.
3. ALL ON-SITE ROADS ARE PRIVATE.
4. ALL LIGHTING IS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
5. * STD/REV - STANDARD TO REVERSE CURB TRANSITION.
6. FOR LIGHTING SPECIFICATIONS AND DETAIL SEE SHEET 22.

DATE	NO.	REVISION
11/9/07	3	OMIT WORK COVERED ON 3A

LEGEND

- EXISTING 2'CONTOUR
- EXISTING 10'CONTOUR
- PROPOSED 2'CONTOUR
- PROPOSED 10'CONTOUR
- PROPERTY LINE AND RIGHT OF WAY
- FENCE
- GUARDRAIL
- STORM DRAIN (15"D)
- OVERHEAD WIRES (OHW)
- EXISTING TREELINE
- PROPOSED TREELINE
- PROP.SPOT ELEVATION (13.2)
- SETBACK LINES
- 15%-25% SLOPES
- 25% OR GREATER SLOPES
- MSHA PAVING
- P-1 PAVING
- P-3 PAVING
- CONCRETE SIDEWALK
- MACADAM SIDEWALK
- PROPOSED LIGHTS
- VEHICULAR INGRESS AND EGRESS RESTRICTED — VI & ER
- LIMIT OF WETLANDS
- PROPOSED REFORESTATION AREA (SEE SHEETS 40-45)

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/27/03

DATE	NO.	REVISION
7/8/05	2	CHANGED A-JACKS TO STILLING BASIN W/RIPRAP AND 54" TO 4-24" RCP. REVISED GRADING AND SIDEWALK AROUND BLDG. GRASSCRETE TO PAVING, ADD 2 PROPANE TANKS
4/28/04	1	RELOCATED PUMP HOUSE & ADDED GREASE TRAP SBL

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

SITE DEVELOPMENT PLAN

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

7.28.03
DATE

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-400SIT-1
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	2 OF 51

SDP-03-90

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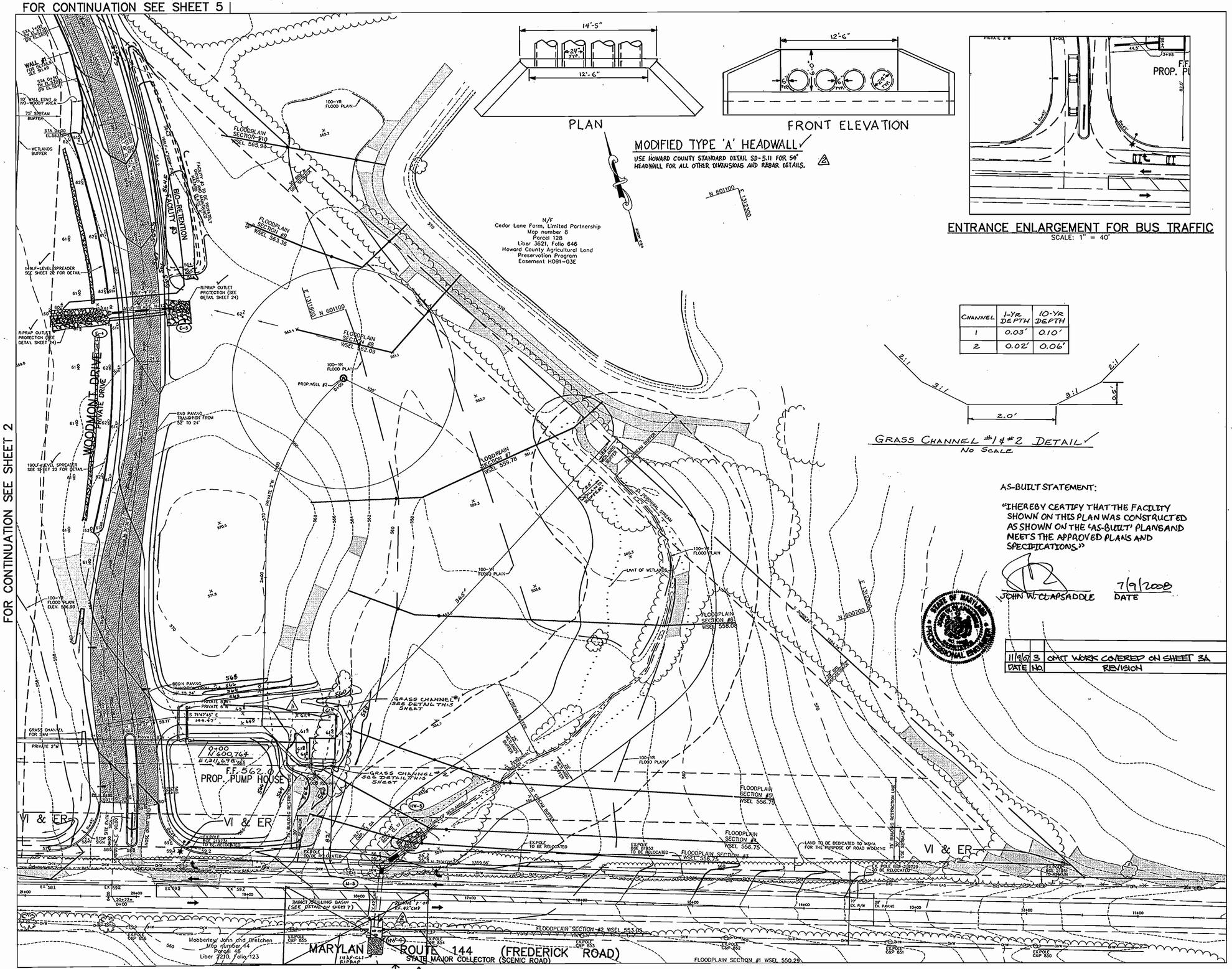
FOR CONTINUATION SEE SHEET 5

FOR CONTINUATION SEE SHEET 2



PLAN

FRONT ELEVATION

MODIFIED TYPE 'A' HEADWALL

USE HOWARD COUNTY STANDARD DETAIL SD-5.11 FOR 54" HEADWALL FOR ALL OTHER DIMENSIONS AND REBAR DETAILS. (2)

ENTRANCE ENLARGEMENT FOR BUS TRAFFIC
SCALE: 1" = 40'

CHANNEL	1-YR. DEPTH	10-YR. DEPTH
1	0.03'	0.10'
2	0.02'	0.06'

GRASS CHANNEL #1 & #2 DETAIL
No Scale

AS-BUILT STATEMENT:

"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."

JOHN W. CLAPSADDLE

7/9/2008
DATE

DATE	NO.	REVISION
11/9/07	3	OMIT WORK COVERED ON SHEET 3A

NOTES:

1. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE NOTED.
3. ALL ON-SITE ROADS ARE PRIVATE.
4. ALL LIGHTING IS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
5. * STD/REV - STANDARD TO REVERSE CURB TRANSITION.
6. FOR LIGHTING SPECIFICATIONS AND DETAIL SEE SHEET 22.

LEGEND

EXISTING 2'CONTOUR	300
EXISTING 10'CONTOUR	300
PROPOSED 2'CONTOUR	300
PROPOSED 10'CONTOUR	300
PROPERTY LINE AND RIGHT OF WAY	
FENCE	
GUARDRAIL	
STORM DRAIN	15"D
OVERHEAD WIRES	OHW
EXISTING TREELINE	
PROPOSED TREELINE	
PROP.SPOT ELEVATION	13'2
SETBACK LINES	
15%-25% SLOPES	
25% OR GREATER SLOPES	
MSHA PAVING	
P-1 PAVING	
P-2 PAVING	
CONCRETE SIDEWALK	
MACADAM SIDEWALK	
PROPOSED LIGHTS	*
VEHICULAR INGRESS AND EGRESS RESTRICTED	VI & ER
LIMIT OF WETLANDS	
PROPOSED REFORESTATION AREA (SEE SHEETS 40-45)	

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-13-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/20/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 8/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/21/03

DATE	NO.	REVISION
7/8/05	2	CHANGED A-JACKS TO SITTING BASIN AND ADDED HEADWALL DETAIL.
4/29/04	1	RELOCATE PUMP HOUSE — SEL.

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

SITE DEVELOPMENT PLAN

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

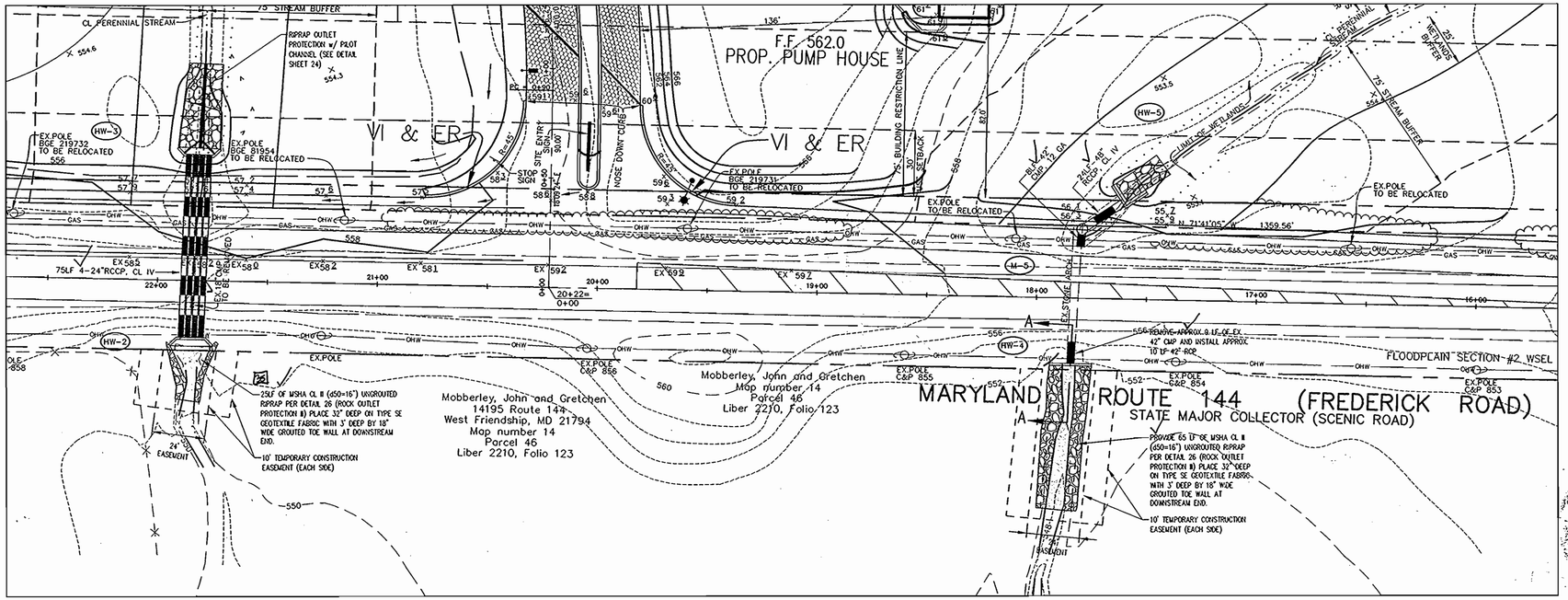
7.28.03
DATE

CHRISTOPHER J. REID #19949

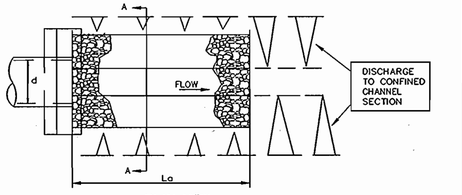
DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-400SIT-2
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	3 OF 51

SDP-03-90

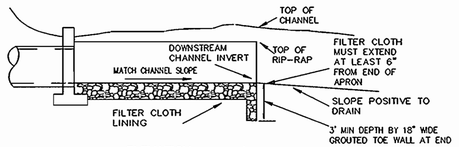
P:\projects\22516\2-0\Engr\Plans\C-400SIT-2.dwg, Layout1, 07/22/2003 01:40:12 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1



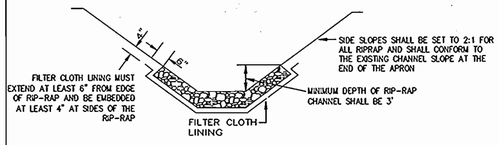
DETAIL 26 – ROCK OUTLET PROTECTION II



PLAN VIEW



ELEVATION



SECTION A–A

NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 18 - 9	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

ROCK OUTLET PROTECTION II

Construction Specifications

1. The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.

2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.

3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.

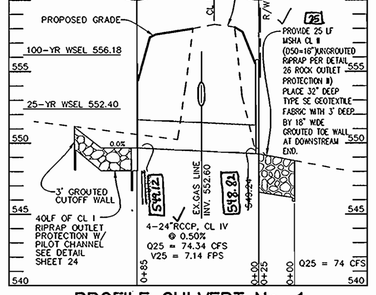
4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

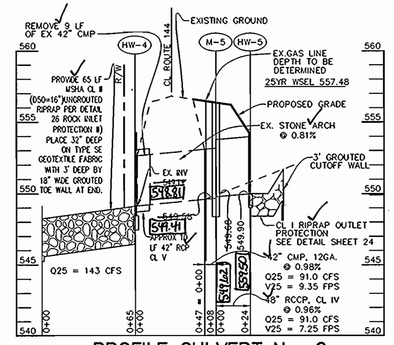
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 18 - 9A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STRUCTURE SCHEDULE

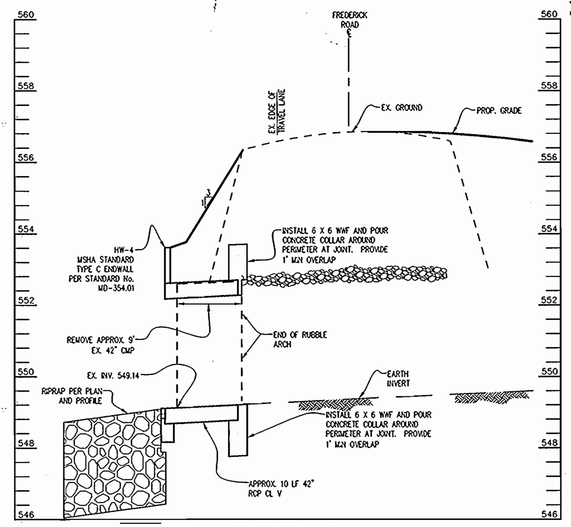
STRUCTURE	TYPE INSIDE DIMS	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
M-5	5'-0" DIA.	N 600609.98 E 1311815.22	549.68(48")	549.58(42")	556.4	HOCO STD. DETAIL G-5.13
HW-2	TYPE "A" HEADWALL	N 600689 E 1311415	–	549.30(4-24")	–	REFER TO DETAIL ON SHEET 3
HW-3	TYPE "A" HEADWALL	N 600757 E 1311440	–	549.66(4-24")	–	REFER TO DETAIL ON SHEET 3
HW-4	TYPE "C" ENDWALL	N 600559 E 1311794	–	549.1 ±	–	MSHA STD. DETAIL MD-354.01
HW-5	TYPE "E" HEADWALL	N 600614 E 1311838 (FACE & CORNER OF WALL)	–	549.90(48")	–	HOCO STD. DETAIL SD-5.31



PROFILE CULVERT No. 1
(WEST OF SITE ENTRANCE)
SCALE :
HOR.-1"=50'
VERT.-1"=5'



PROFILE CULVERT No. 2
(WEST OF SITE ENTRANCE)
SCALE :
HOR.-1"=50'
VERT.-1"=5'



SECTION A–A
SCALE : HOR.-1"=10'
VERT.-1"=2'

AS-BUILT STATEMENT:

"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."

JOHN W. CLAPSADDLE — 7/9/2008 DATE

STATE OF MARYLAND JOHN W. CLAPSADDLE NO. 19696 REGISTERED PROFESSIONAL ENGINEER

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT — DATE 12/12/07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 12/14/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11/29/07

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/3/07

DATE	NO.	REVISION
10/2/07	1	ADDED SHEET TO SDP SET

OWNER / DEVELOPER

WOODMONT ACADEMY
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
MSHA CULVERT OUTFALL DESIGN PLAN
REVISED SITE DEVELOPMENT PLAN

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

STATE OF MARYLAND JOHN W. CLAPSADDLE NO. 19696 REGISTERED PROFESSIONAL ENGINEER

11/9/2007

DESIGNED BY : C.J.R.
DRAWN BY: DAM
PROJECT NO : 22516/2-0/ENGR C-400SIT-3A
DATE : OCT. 2, 2007
SCALE : 1" = 30'
DRAWING NO. 3A OF 51

PURPOSE STATEMENT

THE PURPOSE AT THIS NEW SHEET IS TO REVISE THE CULVERT DESIGN, RIPRAP, PROFILES AND DETAILS.

SDP-03-90

FOR CONTINUATION SEE SHEET 6

FOR CONTINUATION SEE SHEET 2

NOTES:

1. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE NOTED.
3. ALL ON-SITE ROADS ARE PRIVATE.
4. ALL LIGHTING IS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
5. * STD/REV – STANDARD TO REVERSE CURB TRANSITION.
6. FOR LIGHTING SPECIFICATIONS AND DETAIL SEE SHEET 22.

LEGEND

EXISTING 2'CONTOUR	300
EXISTING 10'CONTOUR	300
PROPOSED 2'CONTOUR	300
PROPOSED 10'CONTOUR	300
PROPERTY LINE AND RIGHT OF WAY	
FENCE	
GUARDRAIL	
STORM DRAIN	15"D
OVERHEAD WIRES	OHW
EXISTING TREELINE	
PROPOSED TREELINE	
PROP.SPOT ELEVATION	13x2
SETBACK LINES	
15%–25% SLOPES	
25% OR GREATER SLOPES	
MSHA PAVING	
P-1 PAVING	
P-3 PAVING	
CONCRETE SIDEWALK	
MACADAM SIDEWALK	
PROPOSED LIGHTS	*
VEHICULAR INGRESS AND EGRESS RESTRICTED	VI & ER
LIMIT OF WETLANDS	
PROPOSED REFORESTATION AREA (SEE SHEETS 40–45)	

FOR CONTINUATION SEE SHEET 5

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/29/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAS — DATE 8/29/03

CHIEF, DIVISION OF LAND DEVELOPMENT RB — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

SITE DEVELOPMENT PLAN

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

7-28-03
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-400SIT-3
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	4 OF 51

SDP-03-90

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FOR CONTINUATION SEE SHEET 7

FOR CONTINUATION SEE SHEET 4

FOR CONTINUATION SEE SHEET 2

FOR CONTINUATION SEE SHEET 3

NOTES:

1. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE NOTED.
3. ALL ON-SITE ROADS ARE PRIVATE.
4. ALL LIGHTING IS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
5. * STD/REV - STANDARD TO REVERSE CURB TRANSITION.
6. FOR LIGHTING SPECIFICATIONS AND DETAIL SEE SHEET 22.

LEGEND

EXISTING 2'CONTOUR	300
EXISTING 10'CONTOUR	300
PROPOSED 2'CONTOUR	300
PROPOSED 10'CONTOUR	300
PROPERTY LINE AND RIGHT OF WAY	
FENCE	
GUARDRAIL	
STORM DRAIN	15"D
OVERHEAD WIRES	OHW
EXISTING TREELINE	
PROPOSED TREELINE	
PROP.SPOT ELEVATION	13x2
SETBACK LINES	
15%-25% SLOPES	
25% OR GREATER SLOPES	
MSHA PAVING	
P-1 PAVING	
P-3 PAVING	
CONCRETE SIDEWALK	
MACADAM SIDEWALK	
PROPOSED LIGHTS	✲
VEHICULAR INGRESS AND EGRESS RESTRICTED	VI & ER
LIMIT OF WETLANDS	
PROPOSED REFORESTATION AREA (SEE SHEETS 40-45)	

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

8-25-03
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 8/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE 8/27/03

DATE	NO.	REVISION
7/5/05	1	ADDED GRAVEL ACCESS DRIVE TO SEPTIC AREA AND REVISED DRIVEWAY.

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
SITE DEVELOPMENT PLAN

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

7.28.03
DATE

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-400SIT-4
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	5 OF 51

SDP-03-90

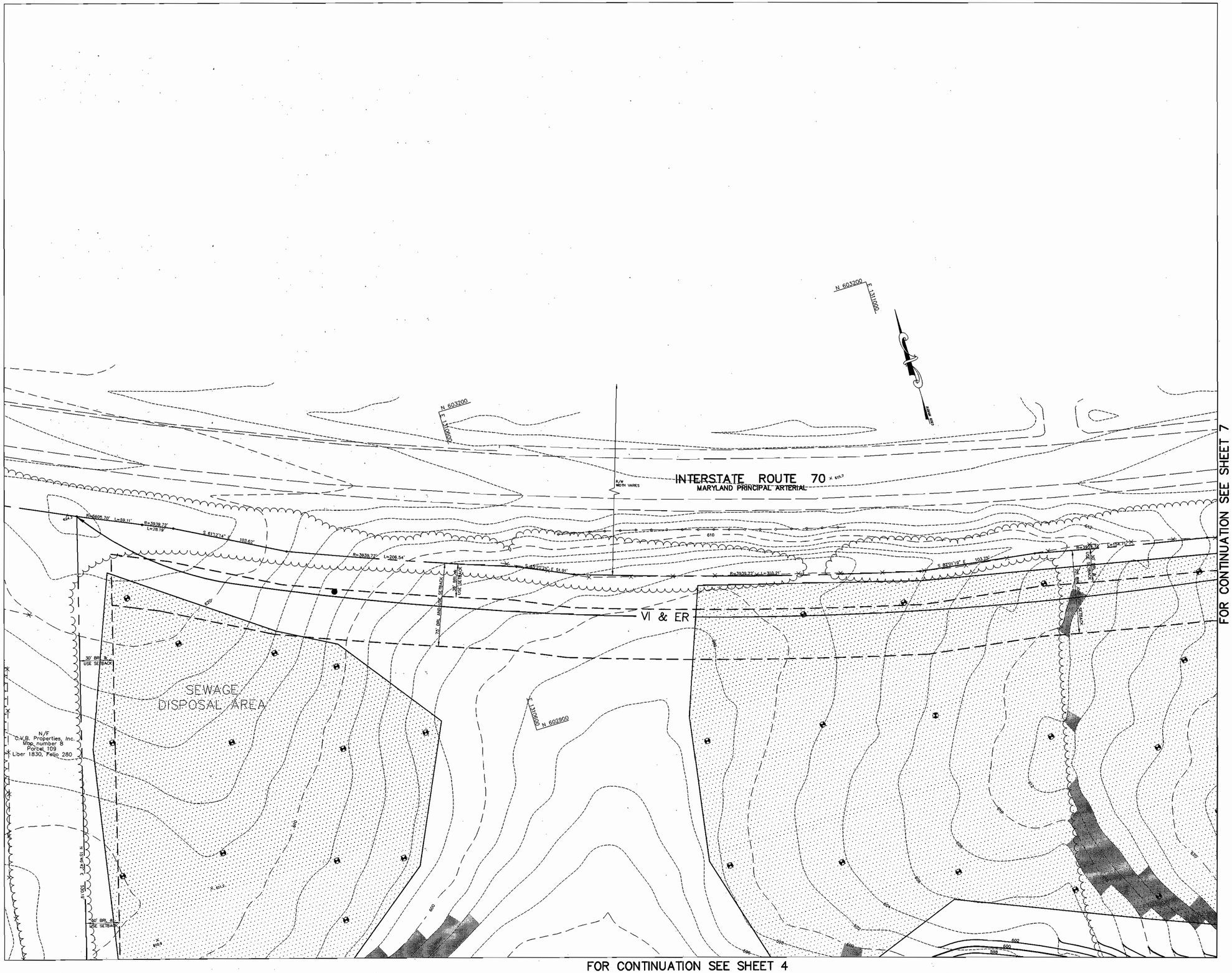
P:\project\22516\2-0\Engr\Plans\C-400SIT-4.dwg, Layout1, 07/25/2003 09:23:21 AM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

NOTES:

1. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE NOTED.
3. ALL ON-SITE ROADS ARE PRIVATE.
4. ALL LIGHTING IS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
5. * STD/REV - STANDARD TO REVERSE CURB TRANSITION.
6. FOR LIGHTING SPECIFICATIONS AND DETAIL SEE SHEET 22.

LEGEND

EXISTING 2'CONTOUR
EXISTING 10'CONTOUR
PROPOSED 2'CONTOUR
PROPOSED 10'CONTOUR
PROPERTY LINE AND RIGHT OF WAY
FENCE
GUARDRAIL
STORM DRAIN 15"D
OVERHEAD WIRES OHW
EXISTING TREELINE
PROPOSED TREELINE
PROP.SPOT ELEVATION 13^X2
SETBACK LINES
15%-25% SLOPES
25% OR GREATER SLOPES
MSHA PAVING
P-1 PAVING
P-3 PAVING
CONCRETE SIDEWALK
MACADAM SIDEWALK
PROPOSED LIGHTS
VEHICULAR INGRESS AND EGRESS RESTRICTED VI & ER
LIMIT OF WETLANDS
PROPOSED REFORESTATION AREA (SEE SHEETS 40-45)



APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/22/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 8/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT MS — DATE 8/21/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
SITE DEVELOPMENT PLAN

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

7.28.07 DATE

STATE OF MARYLAND CHRISTOPHER J. REID 19949 REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-400SIT-5
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	6 OF 51

SDP-03-90

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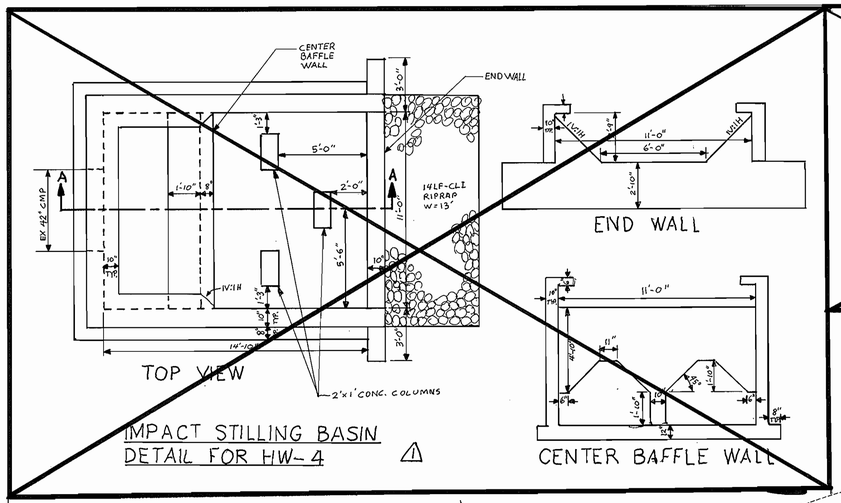
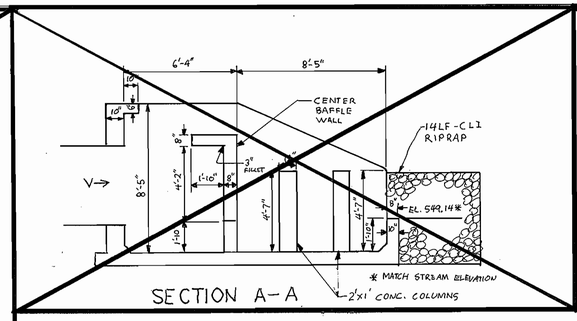


IMPACT STILLING BASIN DETAIL FOR HW-4 ⚠1

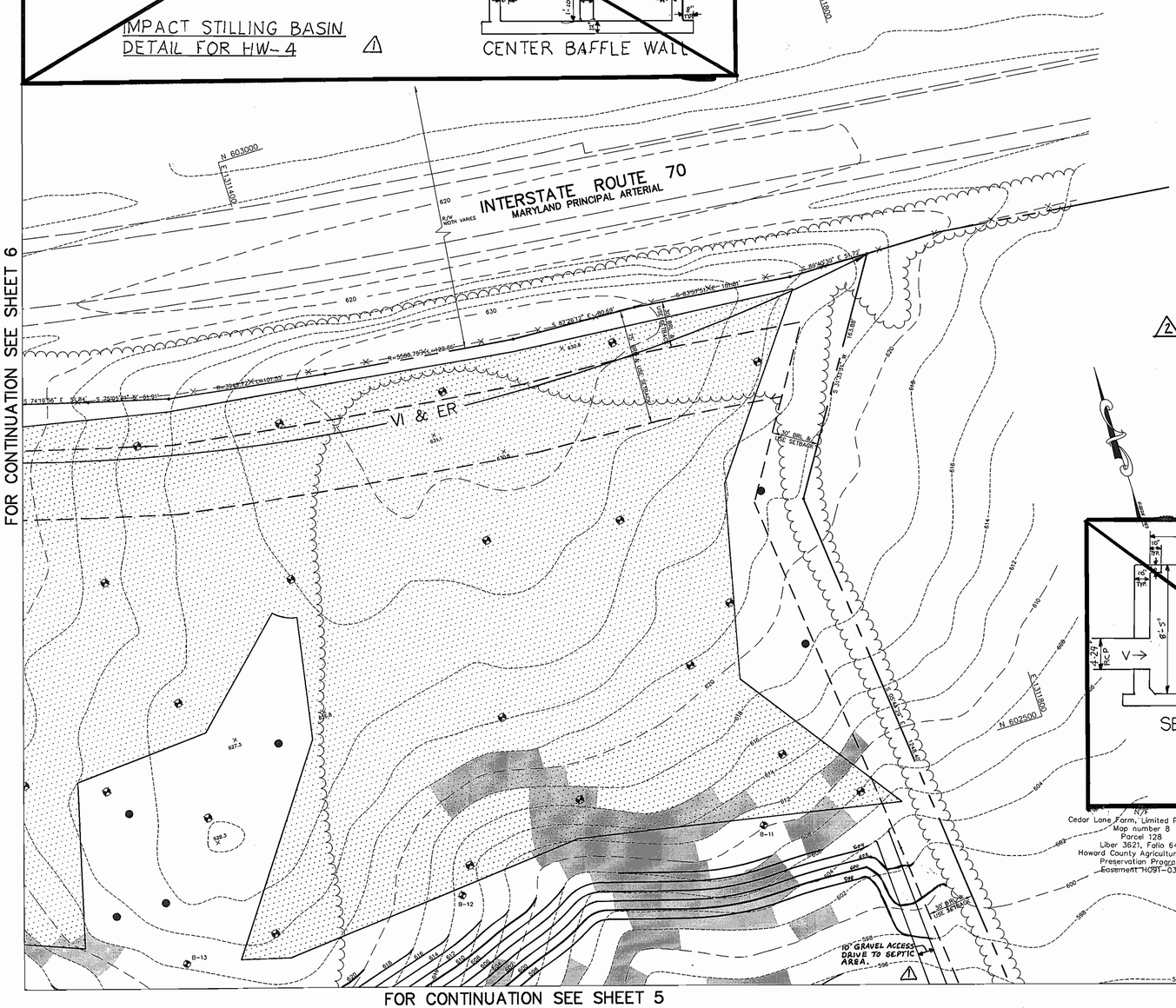


SECTION A-A

STILLING BASIN NOTES

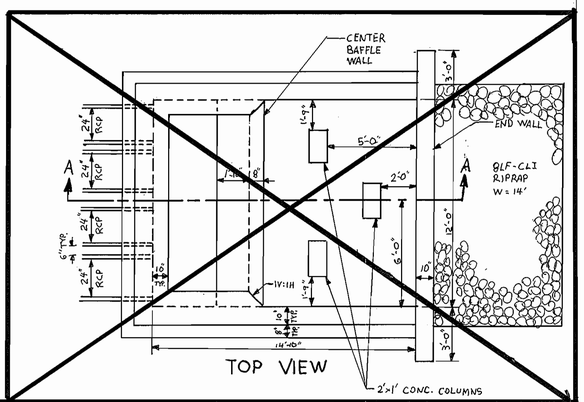
1. STRUCTURE TO BE PRECAST. SHOP DRAWINGS FOR THIS CONCRETE STRUCTURE SHALL MEET THE MINIMUM ASTM REQUIREMENTS FOR PRECAST STRUCTURES. A SHOP DRAWING SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION AND SHALL BE SIGNED AND SEALED BY A MARYLAND REGISTERED PROFESSIONAL ENGINEER.
2. CONCRETE SHALL BE MSHA MIX NO.3 (f'c=3,500 PSI MINIMUM).
3. ALL JOINTS SHALL BE WATERTIGHT USING NEOPRENE GASKETS.
4. STILLING BASIN SHALL BE PLACED ON A FIRMLY COMPACTED SUBGRADE AND SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
5. USE FLOWABLE FILL FOR THE BACK FILL FOR THE 4-24" PIPES

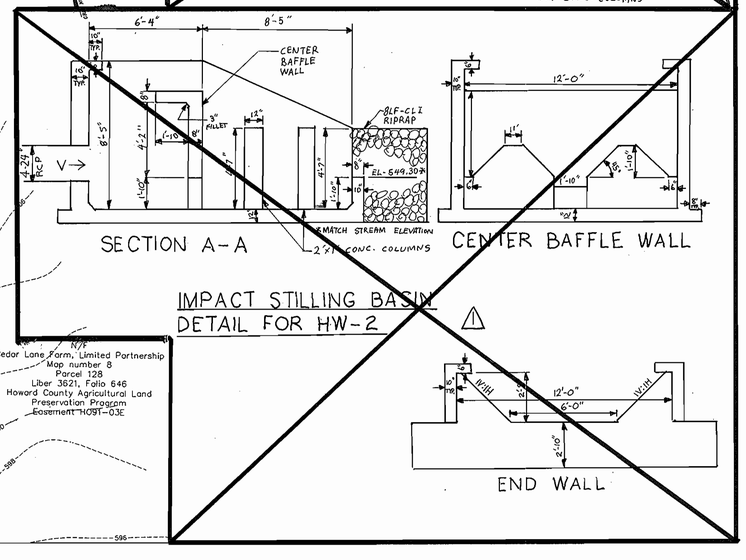
⚠2



FOR CONTINUATION SEE SHEET 5

FOR CONTINUATION SEE SHEET 6





IMPACT STILLING BASIN DETAIL FOR HW-2 ⚠1

NOTES:

1. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE NOTED.
3. ALL ON-SITE ROADS ARE PRIVATE.
4. ALL LIGHTING IS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
5. ✱ STD/REV - STANDARD TO REVERSE CURB TRANSITION.
6. FOR LIGHTING SPECIFICATIONS AND DETAIL SEE SHEET 22.

LEGEND

EXISTING 2'CONTOUR	300
EXISTING 10'CONTOUR	300
PROPOSED 2'CONTOUR	300
PROPOSED 10'CONTOUR	300
PROPERTY LINE AND RIGHT OF WAY	
FENCE	
GUARDRAIL	
STORM DRAIN	15"D
OVERHEAD WIRES	OHW
EXISTING TREELINE	
PROPOSED TREELINE	
PROP.SPOT ELEVATION	13✱2
SETBACK LINES	
15%-25% SLOPES	
25% OR GREATER SLOPES	
MSHA PAVING	
P-1 PAVING	
P-3 PAVING	
CONCRETE SIDEWALK	
MACADAM SIDEWALK	
PROPOSED LIGHTS	✲
VEHICULAR INGRESS AND EGRESS RESTRICTED	VI & ER
LIMIT OF WETLANDS	
PROPOSED REFORESTATION AREA (SEE SHEETS 40-45)	

DATE	NO.	REVISION
11/9/07	2	DELETE IMPACT STILLING BASINS

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — 8-22-03 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 8/20/03 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — 8/19/03 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT HB — 8/21/03 DATE

DATE	NO.	REVISION
7/5/05	⚠1	ADD 10' GRAVEL ACCESS DRIVE TO SEPTIC AREA AND STILLING BASIN DETAILS

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

SITE DEVELOPMENT PLAN

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

7-28-03 DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — NO. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-400SIT-6
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	7 OF 51

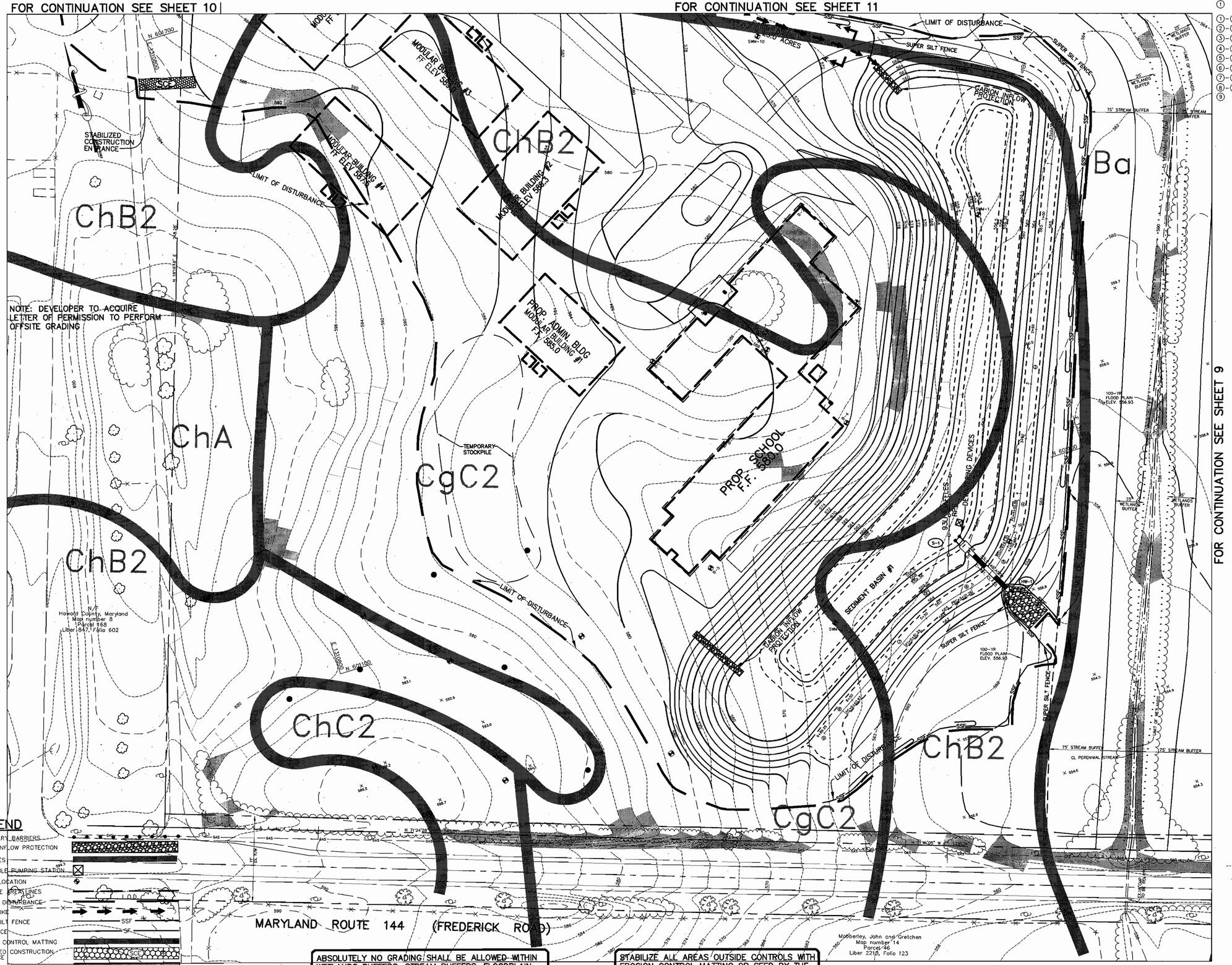
SDP-03-90

P:\project\22516\2-0\Engr\Plans\C-400SIT-6.dwg, Layout1, 07/23/2003 01:43:04 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

FOR CONTINUATION SEE SHEET 10

FOR CONTINUATION SEE SHEET 11

FOR CONTINUATION SEE SHEET 9



DAM CENTERLINE DATA

①	N 601443.53 E 1311547.40
①-②	R=41.94' 58.67'
②-③	S 22°17'11" W 225.26'
③-④	S 22°24'30" W 121.94'
④-⑤	R=119.97' L=57.33'
⑤-⑥	R=70.00' L=38.06'
⑥-⑦	R=193.61' L=79.97'
⑦-⑧	S 58°14'58" W 81.73'
⑧-⑨	R=1763.61' L=26.30'
⑨	N 600919.43 E 1311201.48

LEGEND

- TEMPORARY BARRIERS
- RIPRAP INFLOW PROTECTION
- SOIL LINES
- REMOVABLE PUMPING STATION
- BORING LOCATION
- DRAINAGE AREA LINES
- LIMIT OF DISTURBANCE
- EARTH DIKE
- SUPER SILT FENCE (SSF)
- SILT FENCE (SF)
- EROSION CONTROL MATTING
- STABILIZED CONSTRUCTION ENTRANCE (SCE)
- 15%-25% SLOPES
- 25% OR GREATER SLOPES

ABSOLUTELY NO GRADING SHALL BE ALLOWED WITHIN WETLANDS BUFFERS, STREAM BUFFERS, FLOODPLAIN, STEEP SLOPES OR FORESTED AREAS.

STABILIZE ALL AREAS OUTSIDE CONTROLS WITH EROSION CONTROL MATTING OR SEED BY THE END OF EACH DAY.

NOTE: CONTRACTOR TO LIMIT THE TOTAL UNSTABILIZED AREA TO 20 ACRES AT ANY TIME.

SEDIMENT BASIN #1

DRAINAGE AREA	34.0 ACRES
STOR. REQ'D (WET STOR.)	61200 CF
STOR. REQ'D (DRY STOR.)	61200 CF
STOR. PROV. (WET STOR.)	61200 CF @ 559.33
STOR. PROV. (DRY STOR.)	65030 CF @ 560.58
RISER CREST ELEVATION	560.58
BASIN CLEANOUT ELEVATION	558.00
TOP OF DAM	565.0
BOTTOM EL.	556.5
SIDE SLOPES	3:1
$Q_{1}EX$	7.42 CFS
$Q_{1}PR$	5.95 CFS

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER — DATE 7.28.03

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND, WITHIN 30 DAYS OF COMPLETION.

ENGINEER — DATE 7-28-03

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~, SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 8/19/03

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

FOR SDP-03-90

HOWARD SOIL CONSERVATION DISTRICT — DATE 8/19/03

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/28/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 9/30/03

CHIEF, DIVISION OF LAND DEVELOPMENT MB — DATE 8/21/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

INTERIM GRADING AND SEDIMENT CONTROL PLAN

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

7.28.03 DATE

CHRISTOPHER J. REID #19949

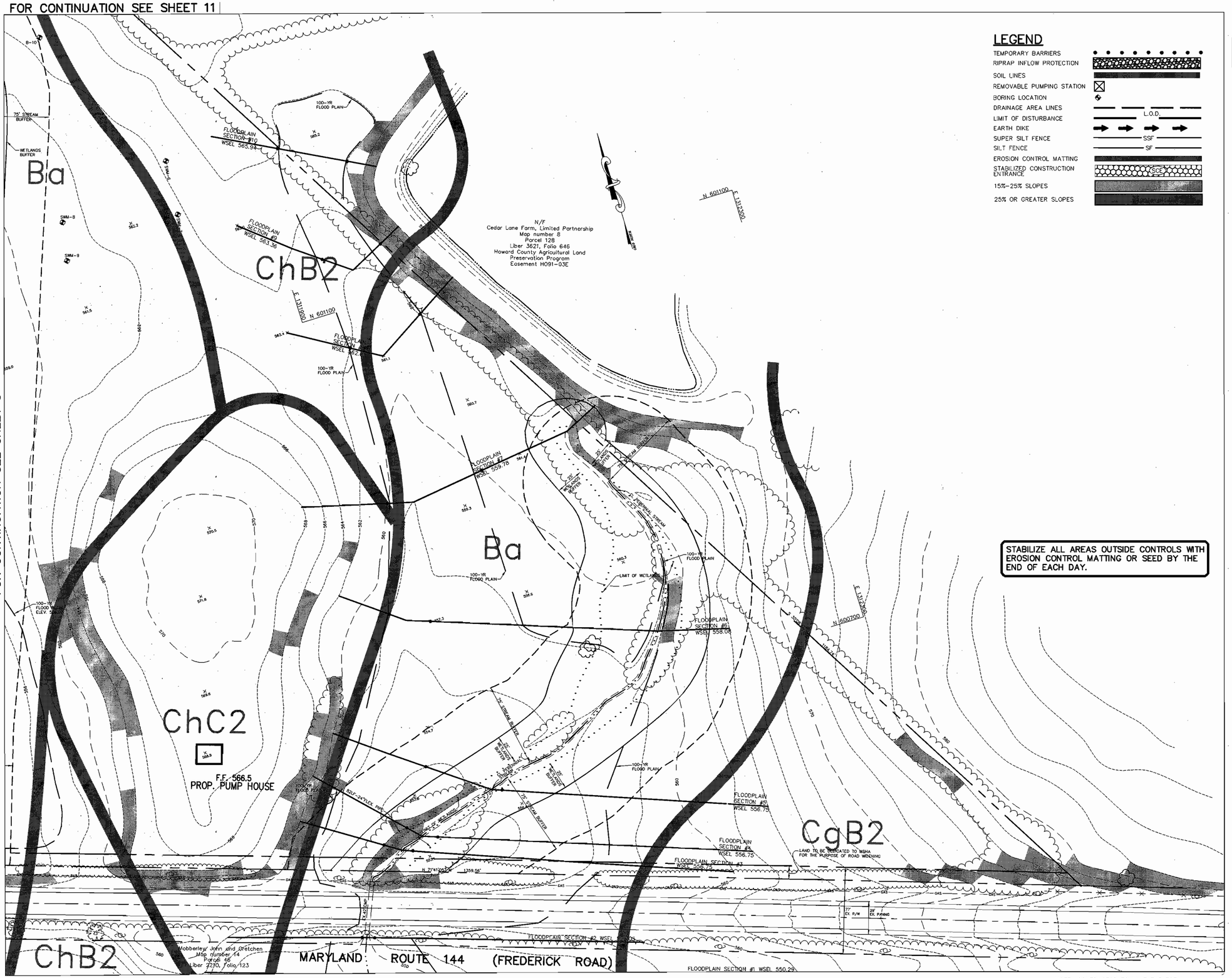
DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-250ESC-1
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	8 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\C-250ESC-1.dwg, Layout1, 07/25/2003 09:21:43 AM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

FOR CONTINUATION SEE SHEET 11

FOR CONTINUATION SEE SHEET 8



LEGEND

- TEMPORARY BARRIERS
- RIPRAP INFLOW PROTECTION
- SOIL LINES
- REMOVABLE PUMPING STATION
- BORING LOCATION
- DRAINAGE AREA LINES
- LIMIT OF DISTURBANCE — L.O.D.
- EARTH DIKE
- SUPER SILT FENCE — SSF
- SILT FENCE — SF
- EROSION CONTROL MATTING
- STABILIZED CONSTRUCTION ENTRANCE — SCE
- 15%-25% SLOPES
- 25% OR GREATER SLOPES

ABSOLUTELY NO GRADING SHALL BE ALLOWED WITHIN WETLANDS BUFFERS, STREAM BUFFERS, FLOODPLAIN, STEEP SLOPES OR FORESTED AREAS.

STABILIZE ALL AREAS OUTSIDE CONTROLS WITH EROSION CONTROL MATTING OR SEED BY THE END OF EACH DAY.

NOTE: CONTRACTOR TO LIMIT THE TOTAL UNSTABILIZED AREA TO 20 ACRES AT ANY TIME.

BY THE DEVELOPER :

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7.28.03
DEVELOPER — DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Christopher J Reid — 7-28-03
ENGINEER — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION;~~* SOIL EROSION AND SEDIMENT CONTROL.

8/14/03
NATURAL RESOURCES CONSERVATION SERVICE — DATE

THESE PLANS FOR ~~SMALL POND CONSTRUCTION;~~* SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*GF-03-99
8/14/03
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

8-22-03
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

8/20/03
DIRECTOR — DATE

8/20/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAI — DATE

5/21/03
CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
INTERIM GRADING AND SEDIMENT CONTROL PLAN

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

7-28-03
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — REGISTERED PROFESSIONAL ENGINEER

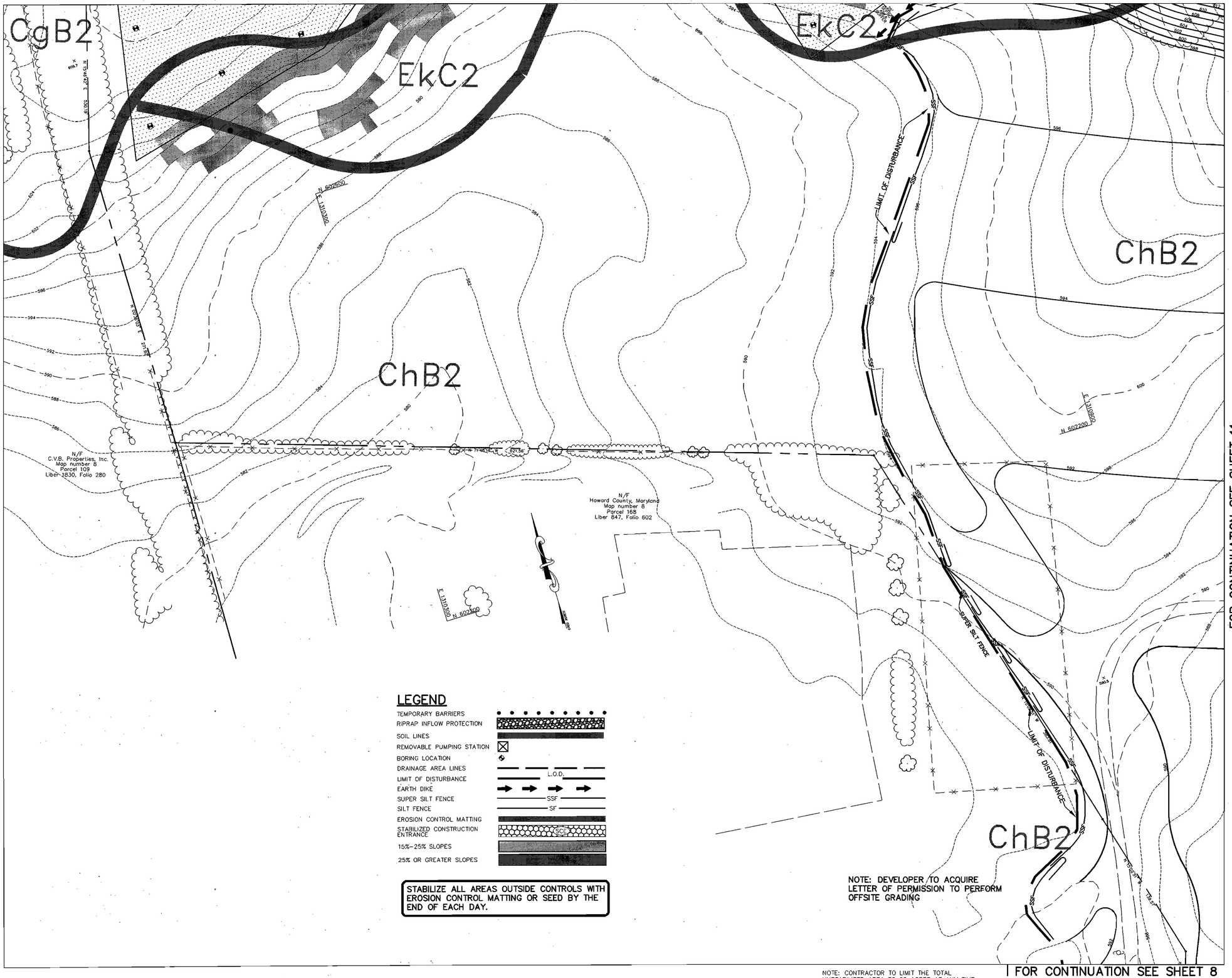
CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO	22516/2-0/ENGR C-250ESC-2
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	9 OF 51

SDP-03-90

P:\project\22516\2-01\Engr\Plans\C-250ESC-2.dwg, Layout1, 07/23/2003 04:52:47 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

FOR CONTINUATION SEE SHEET 12



LEGEND

- TEMPORARY BARRIERS
- RIPRAP INFLOW PROTECTION
- SOIL LINES
- REMOVABLE PUMPING STATION
- BORING LOCATION
- DRAINAGE AREA LINES
- LIMIT OF DISTURBANCE — L.O.D.
- EARTH DIKE
- SUPER SILT FENCE — SSF
- SILT FENCE — SF
- EROSION CONTROL MATTING
- STABILIZED CONSTRUCTION ENTRANCE — SCE
- 15%–25% SLOPES
- 25% OR GREATER SLOPES

STABILIZE ALL AREAS OUTSIDE CONTROLS WITH EROSION CONTROL MATTING OR SEED BY THE END OF EACH DAY.

NOTE: CONTRACTOR TO LIMIT THE TOTAL UNSTABILIZED AREA TO 20 ACRES AT ANY TIME.

ABSOLUTELY NO GRADING SHALL BE ALLOWED WITHIN WETLANDS BUFFERS, STREAM BUFFERS, FLOODPLAIN, STEEP SLOPES OR FORESTED AREAS.

BY THE DEVELOPER :

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DEVELOPER — DATE 7.28.03

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER — DATE 7.28.03

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~, SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 8/14/03

THESE PLANS FOR ~~SMALL POND CONSTRUCTION~~, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. * 6P-03-89

HOWARD SOIL CONSERVATION DISTRICT — DATE 8/14/03

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/20/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MRJ — DATE 8/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT RS — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
INTERIM GRADING AND SEDIMENT CONTROL PLAN

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

7.28.03
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — 19949 — PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

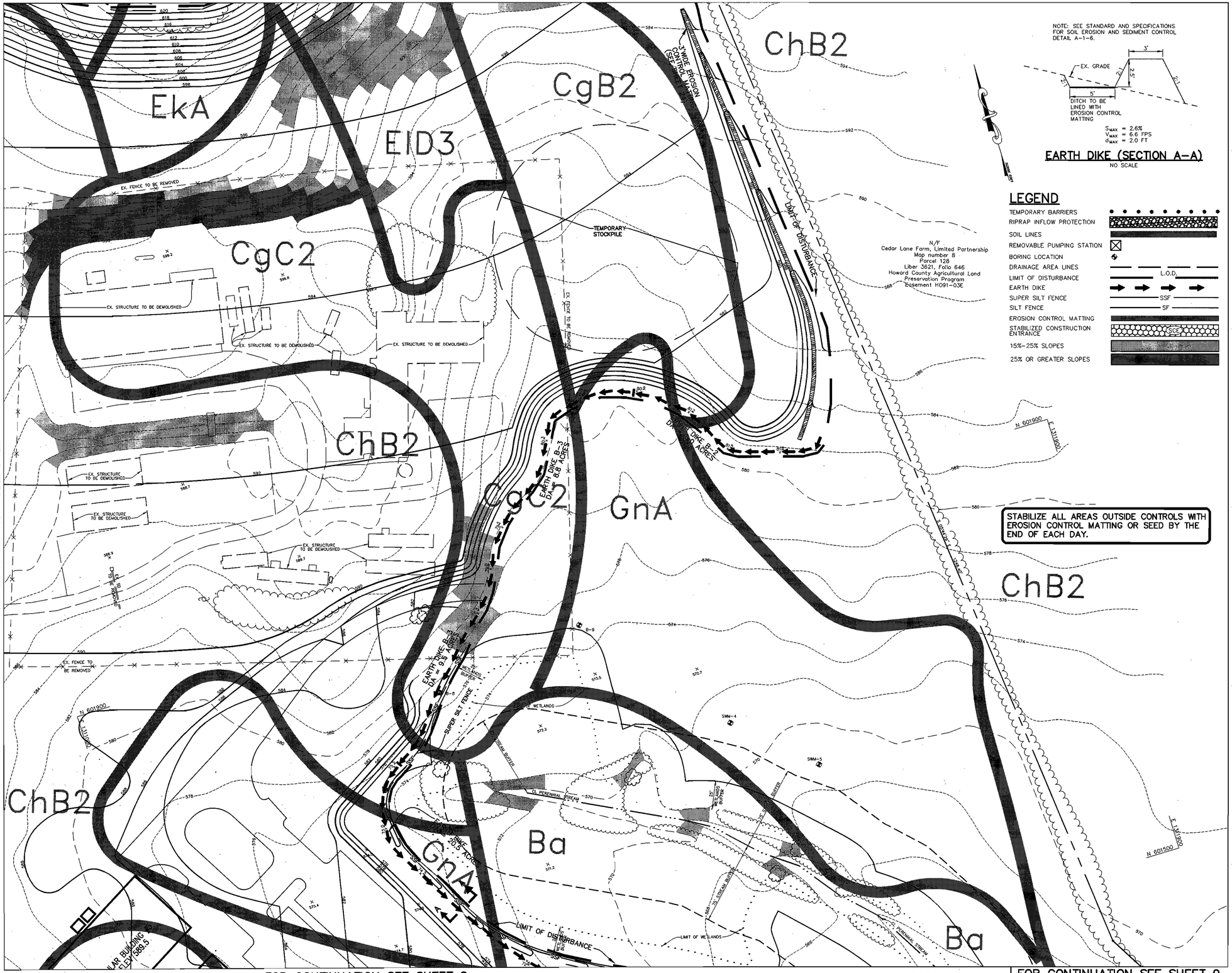
DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-250ESC-3
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	10 OF 51

SDP-03-90

P:\project\22516\2-0\Engn\Plans\C-250ESC-3.dwg, Layout1, 07/29/2003 04:53:38 PM, HP1050C Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

FOR CONTINUATION SEE SHEET 13

FOR CONTINUATION SEE SHEET 10



NOTE: SEE STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL DETAIL A-1-6.

S_{MAX} = 2.6%
V_{MAX} = 6.6 FPS
d_{MAX} = 2.0 FT

EARTH DIKE (SECTION A-A)
NO SCALE

LEGEND

- TEMPORARY BARRIERS
- RIPRAP INFLOW PROTECTION
- SOIL LINES
- REMOVABLE PUMPING STATION
- BORING LOCATION
- DRAINAGE AREA LINES
- LIMIT OF DISTURBANCE — L.O.D.
- EARTH DIKE
- SUPER SILT FENCE — SSF
- SILT FENCE — SF
- EROSION CONTROL MATTING
- STABILIZED CONSTRUCTION ENTRANCE — SCE
- 15%-25% SLOPES
- 25% OR GREATER SLOPES

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BY THE DEVELOPER :

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DEVELOPER — DATE 7.28.03

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND, WITHIN 30 DAYS OF COMPLETION.

ENGINEER — DATE 7.28.03

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~, SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 8/14/03

THESE PLANS FOR ~~SMALL POND CONSTRUCTION~~, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. *GP-03-99

HOWARD SOIL CONSERVATION DISTRICT — DATE 8/14/03

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/20/03

~~CHIEF, DEVELOPMENT ENGINEERING DIVISION~~ MAJ — DATE 8/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT MB — DATE 8/21/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
INTERIM GRADING AND SEDIMENT CONTROL PLAN

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

7.28.03
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR *C-250ESC-4
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	11 OF 51

FOR CONTINUATION SEE SHEET 8

NOTE: CONTRACTOR TO LIMIT THE TOTAL UNSTABILIZED AREA TO 20 ACRES AT ANY TIME.

FOR CONTINUATION SEE SHEET 9

P:\project\22516\2-0\Engr\Plans\C-250ESC-4.dwg, Layout1, 07/25/2003 09:22:37 AM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

LEGEND

TEMPORARY BARRIERS
RIPRAP INFLOW PROTECTION
SOIL LINES
REMOVABLE PUMPING STATION
BORING LOCATION
DRAINAGE AREA LINES
LIMIT OF DISTURBANCE — L.O.D.
EARTH DIKE
SUPER SILT FENCE — SSF
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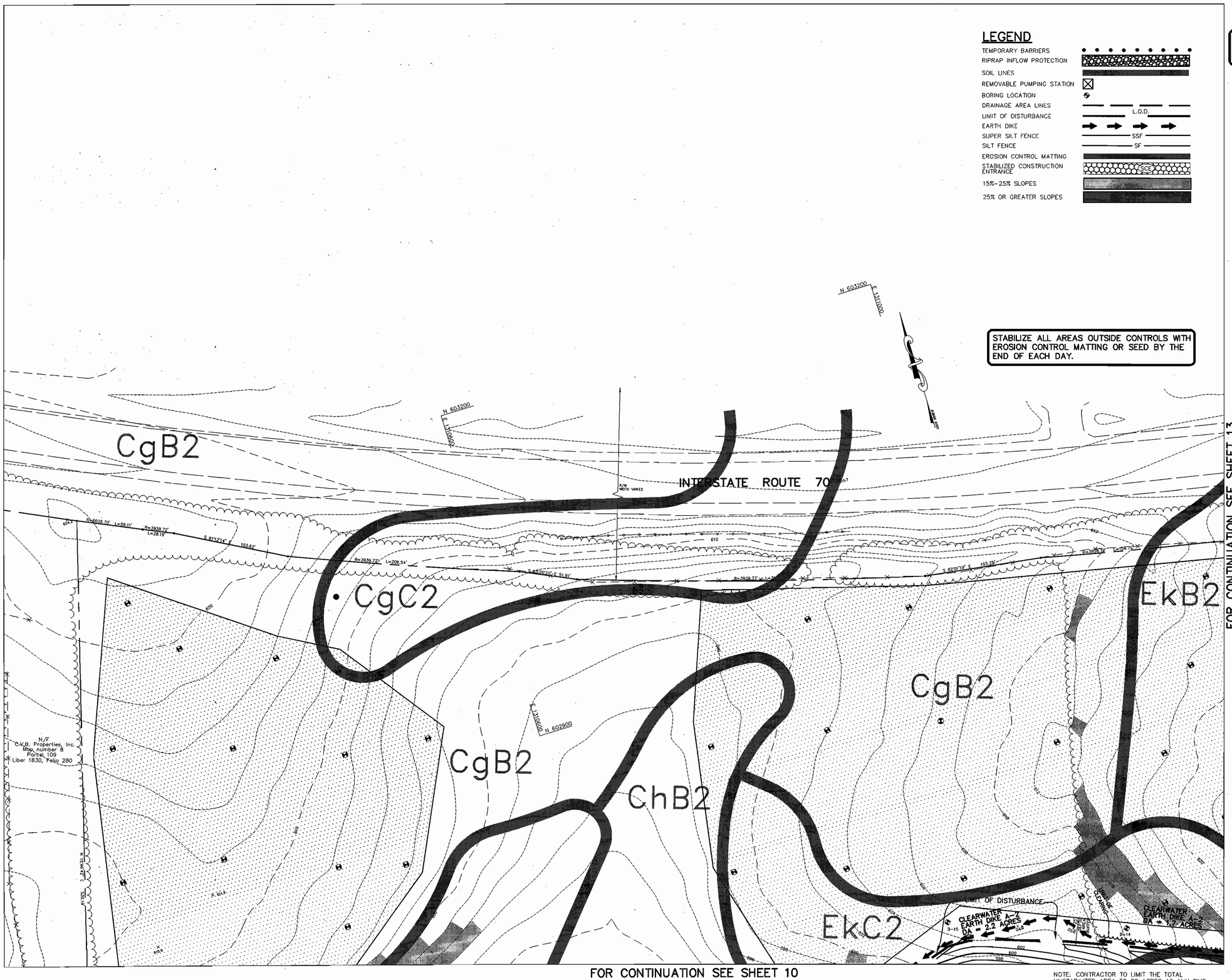

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7.28.03
DEVELOPER — DATE

BY THE ENGINEER :

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Christy J Reid 7.28.03
ENGINEER — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~ SOIL EROSION AND SEDIMENT CONTROL.

8/14/03
NATURAL RESOURCES CONSERVATION SERVICE — DATE

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

* GP-03-99
8/14/03
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

8-22-03
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

8/20/03
DIRECTOR — DATE

8/21/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

8/21/03
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
INTERIM GRADING AND SEDIMENT CONTROL PLAN

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

7.28.03
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — 19949 — REGISTERED PROFESSIONAL ENGINEER

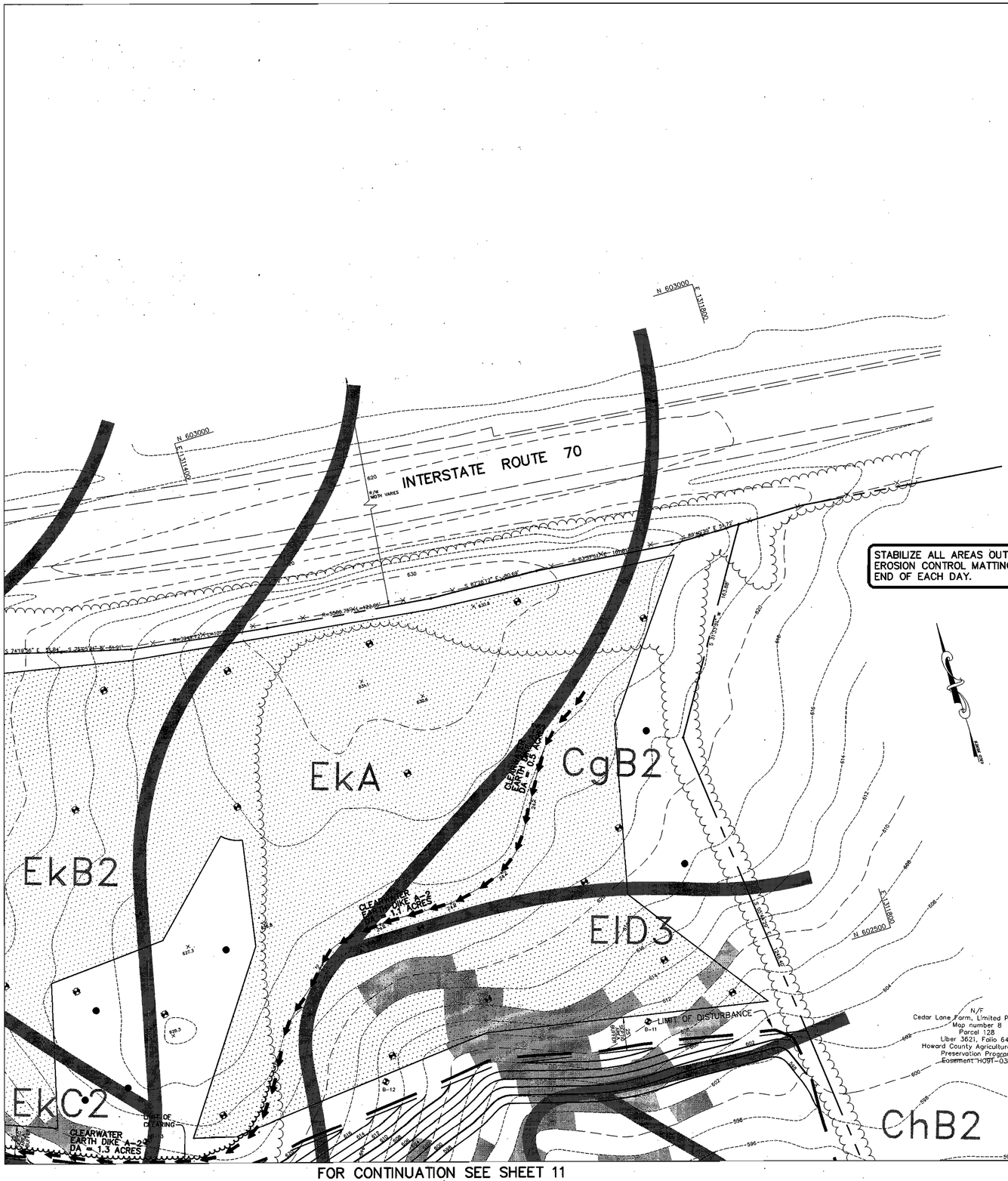
CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR 'C-250ESC-5
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	12 OF 51

SDP-03-90

P:\project\22516\2-0\Engn\Plans\C-250ESC-5.dwg, Layout1, 07/29/2003 04:55:05 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

FOR CONTINUATION SEE SHEET 12



FOR CONTINUATION SEE SHEET 11

STABILIZE ALL AREAS OUTSIDE CONTROLS WITH EROSION CONTROL MATTING OR SEED BY THE END OF EACH DAY.

NOTE: CONTRACTOR TO LIMIT THE TOTAL UNSTABILIZED AREA TO 20 ACRES AT ANY TIME.

LEGEND

- TEMPORARY BARRIERS
- RIPRAP INFLOW PROTECTION
- SOIL LINES
- REMOVABLE PUMPING STATION
- BORING LOCATION
- DRAINAGE AREA LINES
- LIMIT OF DISTURBANCE (L.O.D.)
- EARTH DIKE
- SUPER SILT FENCE (SSF)
- SILT FENCE (SF)
- EROSION CONTROL MATTING
- STABILIZED CONSTRUCTION ENTRANCE (SCE)
- 15%–25% SLOPES
- 25% OR GREATER SLOPES

ABSOLUTELY NO GRADING SHALL BE ALLOWED WITHIN WETLANDS BUFFERS, STREAM BUFFERS, FLOODPLAIN, STEEP SLOPES OR FORESTED AREAS.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

7.28.03
DEVELOPER — DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

7.28.03
ENGINEER — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~ SOIL EROSION AND SEDIMENT CONTROL.

8/14/03
NATURAL RESOURCES CONSERVATION SERVICE — DATE

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

*GP03-49

8/14/03
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

8-22-03
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

8/20/03
DIRECTOR — DATE

8/20/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE

8/27/03
CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
INTERIM GRADING AND SEDIMENT CONTROL PLAN

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

7.28.03
DATE

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-250ESC-6
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	13 OF 51

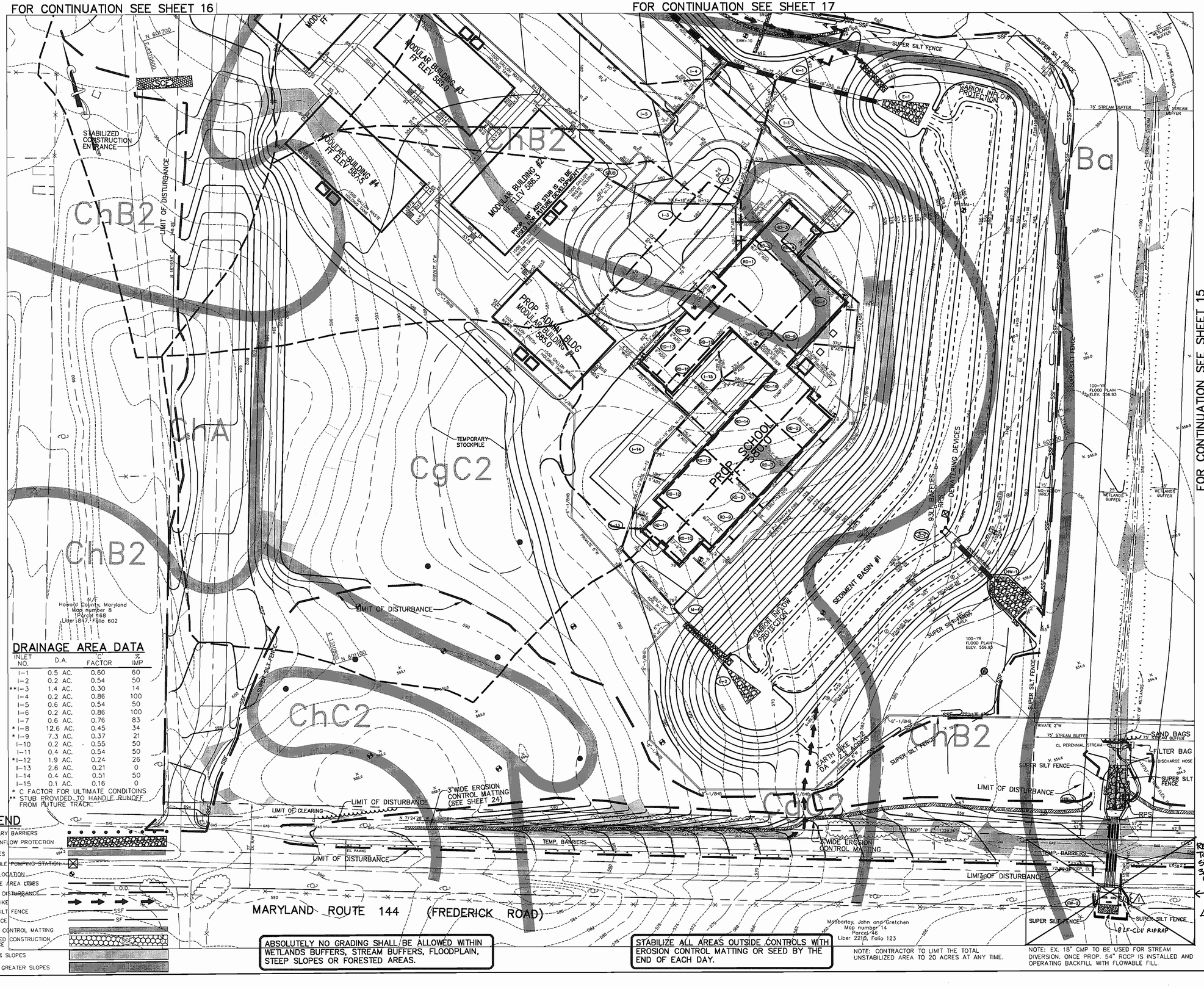
SDP-03-90

P:\project\22516\2-0\Eng\Plans\C-250ESC-6.dwg, Layout1, 07/23/2003 04:55:42 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

FOR CONTINUATION SEE SHEET 16

FOR CONTINUATION SEE SHEET 17

FOR CONTINUATION SEE SHEET 15



DRAINAGE AREA DATA

INLET NO.	D.A.	'C' FACTOR	% IMP
I-1	0.5 AC.	0.60	60
I-2	0.2 AC.	0.54	50
**I-3	1.4 AC.	0.30	14
I-4	0.2 AC.	0.86	100
I-5	0.6 AC.	0.54	50
I-6	0.2 AC.	0.86	100
I-7	0.6 AC.	0.76	83
* I-8	12.6 AC.	0.45	34
* I-9	7.3 AC.	0.37	21
I-10	0.2 AC.	0.55	50
I-11	0.4 AC.	0.54	50
*I-12	1.9 AC.	0.24	26
I-13	2.6 AC.	0.21	0
I-14	0.4 AC.	0.51	50
I-15	0.1 AC.	0.16	0

* C FACTOR FOR ULTIMATE CONDITOINS
** STUB PROVIDED TO HANDLE RUNOFF FROM FUTURE TRACK.

LEGEND

TEMPORARY BARRIERS
RIPRAP INFLOW PROTECTION
SOIL LINES
REMOVABLE PUMPING STATION
BORING LOCATION
DRAINAGE AREA LINES
LIMIT OF DISTURBANCE
EARTH DIKE
SUPER SILT FENCE
SILT FENCE
EROSION CONTROL MATTING
STABILIZED CONSTRUCTION ENTRANCE
15%-25% SLOPES
25% OR GREATER SLOPES

ABSOLUTELY NO GRADING SHALL BE ALLOWED WITHIN WETLANDS BUFFERS, STREAM BUFFERS, FLOODPLAIN, STEEP SLOPES OR FORESTED AREAS.

STABILIZE ALL AREAS OUTSIDE CONTROLS WITH EROSION CONTROL MATTING OR SEED BY THE END OF EACH DAY.

NOTE: CONTRACTOR TO LIMIT THE TOTAL UNSTABILIZED AREA TO 20 ACRES AT ANY TIME.

NOTE: EX. 18" CMP TO BE USED FOR STREAM DIVERSION. ONCE PROP. 54" RCCP IS INSTALLED AND OPERATING BACKFILL WITH FLOWABLE FILL.

SEDIMENT BASIN #1

DRAINAGE AREA	34.0 ACRES
STOR. REQ'D (WET STOR.)	61200 CF
STOR. REQ'D (DRY STOR.)	61200 CF
STOR. PROV. (WET STOR.)	61200 CF @ 559.33
STOR. PROV. (DRY STOR.)	65030 CF @ 560.58
RISER CREST ELEVATION	560.58
BASIN CLEANOUT ELEVATION	558.00
TOP OF DAM	565.0
BOTTOM EL.	556.5
SIDE SLOPES	3:1
Q_i EX	7.42 CFS
Q_i PR	5.95 CFS

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER — DATE 7.28.03

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND, WITHIN 30 DAYS OF COMPLETION.

Christop J Reid — 7.28.03
ENGINEER — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~, SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE — 8/19/03 DATE

THESE PLANS FOR ~~SMALL POND CONSTRUCTION~~, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*6-03-99

HOWARD SOIL CONSERVATION DISTRICT — 8/19/03 DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT — 8-22-03 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 8/20/03 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — 8/20/03 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT HB — 9/4/03 DATE

DATE	NO.	REVISION
11/9/07	2	OMIT WORK SHOWN ON SHEET 3A
7/8/05	1	CHANGED A-38CM'S TO STILLING BASIN AND 54" TO 4-24" RCP'S.

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
GRADING AND SEDIMENT CONTROL PLAN

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

7.28.03 DATE

CHRISTOPHER J. REID #19949

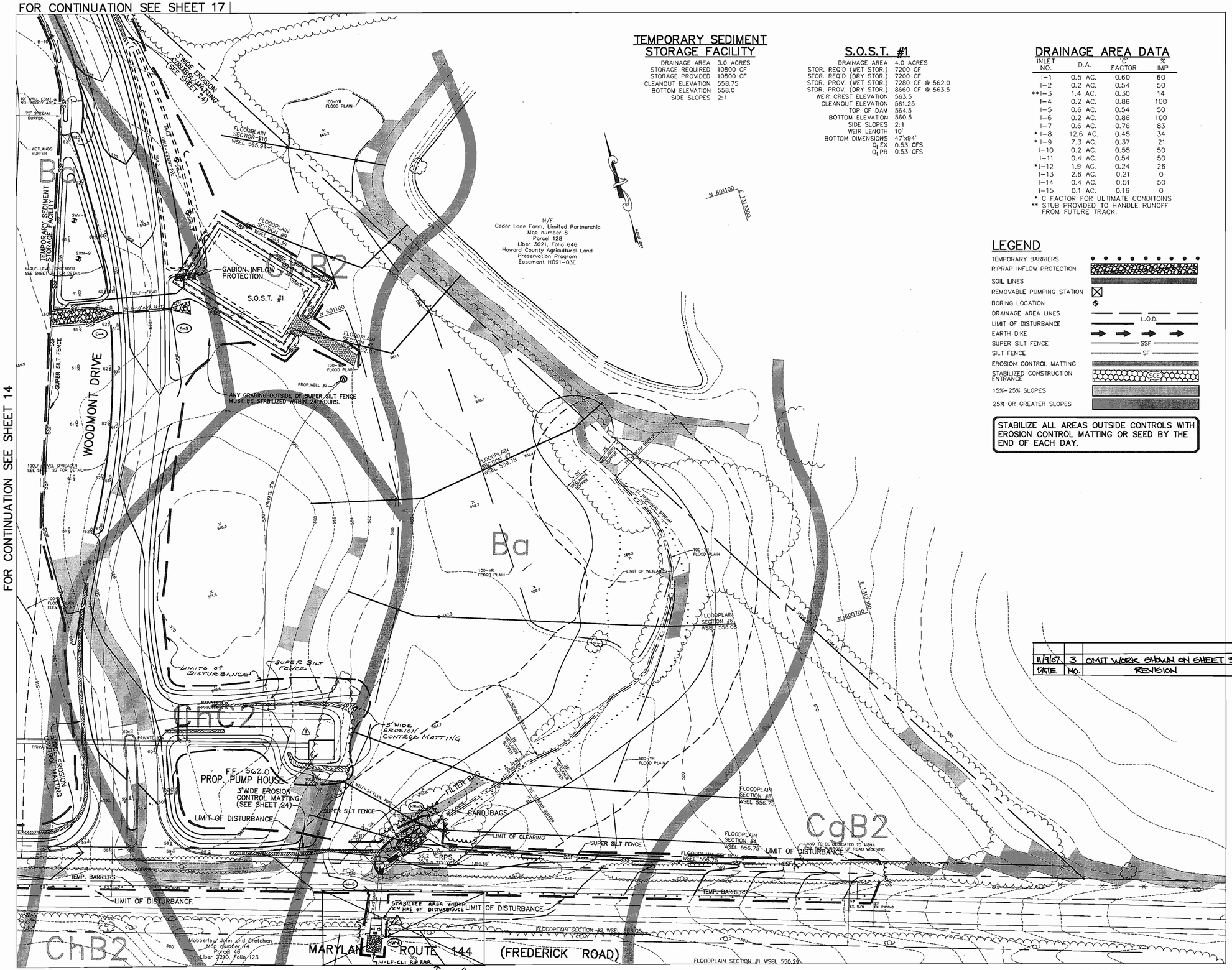
DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-200ESC-1
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	14 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\C-200ESC-1.dwg, Layout1, 07/23/2003 04:46:30 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

FOR CONTINUATION SEE SHEET 17

FOR CONTINUATION SEE SHEET 14



TEMPORARY SEDIMENT STORAGE FACILITY

DRAINAGE AREA	3.0 ACRES
STORAGE REQUIRED	10800 CF
STORAGE PROVIDED	10800 CF
CLEANOUT ELEVATION	558.75
BOTTOM ELEVATION	558.0
SIDE SLOPES	2:1

S.O.S.T. #1

DRAINAGE AREA	4.0 ACRES
STOR. REQ'D (WET STOR.)	7200 CF
STOR. REQ'D (DRY STOR.)	7200 CF
STOR. PROV. (WET STOR.)	7280 CF @ 562.0
STOR. PROV. (DRY STOR.)	8660 CF @ 563.5
WEIR CREST ELEVATION	563.5
CLEANOUT ELEVATION	561.25
TOP OF DAM	564.5
BOTTOM ELEVATION	560.5
SIDE SLOPES	2:1
WEIR LENGTH	10'
BOTTOM DIMENSIONS	47'x94'
Q_i EX	0.53 CFS
Q_i PR	0.53 CFS

DRAINAGE AREA DATA

INLET NO.	D.A.	'C' FACTOR	% IMP
I-1	0.5 AC.	0.60	60
I-2	0.2 AC.	0.54	50
**I-3	1.4 AC.	0.30	14
I-4	0.2 AC.	0.86	100
I-5	0.6 AC.	0.54	50
I-6	0.2 AC.	0.86	100
I-7	0.6 AC.	0.76	83
* I-8	12.6 AC.	0.45	34
* I-9	7.3 AC.	0.37	21
I-10	0.2 AC.	0.55	50
I-11	0.4 AC.	0.54	50
*I-12	1.9 AC.	0.24	26
I-13	2.6 AC.	0.21	0
I-14	0.4 AC.	0.51	50
I-15	0.1 AC.	0.16	0

* C FACTOR FOR ULTIMATE CONDITOINS
** STUB PROVIDED TO HANDLE RUNOFF FROM FUTURE TRACK.

LEGEND

- TEMPORARY BARRIERS
- RIPRAP INFLOW PROTECTION
- SOIL LINES
- REMOVABLE PUMPING STATION
- BORING LOCATION
- DRAINAGE AREA LINES
- LIMIT OF DISTURBANCE (L.O.D.)
- EARTH DIKE
- SUPER SILT FENCE (SSF)
- SILT FENCE (SF)
- EROSION CONTROL MATTING
- STABILIZED CONSTRUCTION ENTRANCE (SCE)
- 15%-25% SLOPES
- 25% OR GREATER SLOPES

STABILIZE ALL AREAS OUTSIDE CONTROLS WITH EROSION CONTROL MATTING OR SEED BY THE END OF EACH DAY.

NOTE: CONTRACTOR TO LIMIT THE TOTAL UNSTABILIZED AREA TO 20 ACRES AT ANY TIME.

ABSOLUTELY NO GRADING SHALL BE ALLOWED WITHIN WETLANDS BUFFERS, STREAM BUFFERS, FLOODPLAIN, STEEP SLOPES OR FORESTED AREAS.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

7.28.03

DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

7.28.03

ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~ SOIL EROSION AND SEDIMENT CONTROL.

8/19/03

NATURAL RESOURCES CONSERVATION SERVICE DATE

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

#6P03-49

8/19/03

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

8-22-03

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

4/30/03

DIRECTOR DATE

9/30/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE

5/27/03

CHIEF, DIVISION OF LAND DEVELOPMENT HB DATE

DATE	NO.	REVISION
11/9/07	3	OMIT WORK SHOWN ON SHEET 3A
7/8/05	2	CHANGED A-JACKS TO STILLING BASIN
4/29/04	1	RELOCATED PUMP HOUSE S.E.L.

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

GRADING AND SEDIMENT CONTROL PLAN

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

7.28.03
DATE

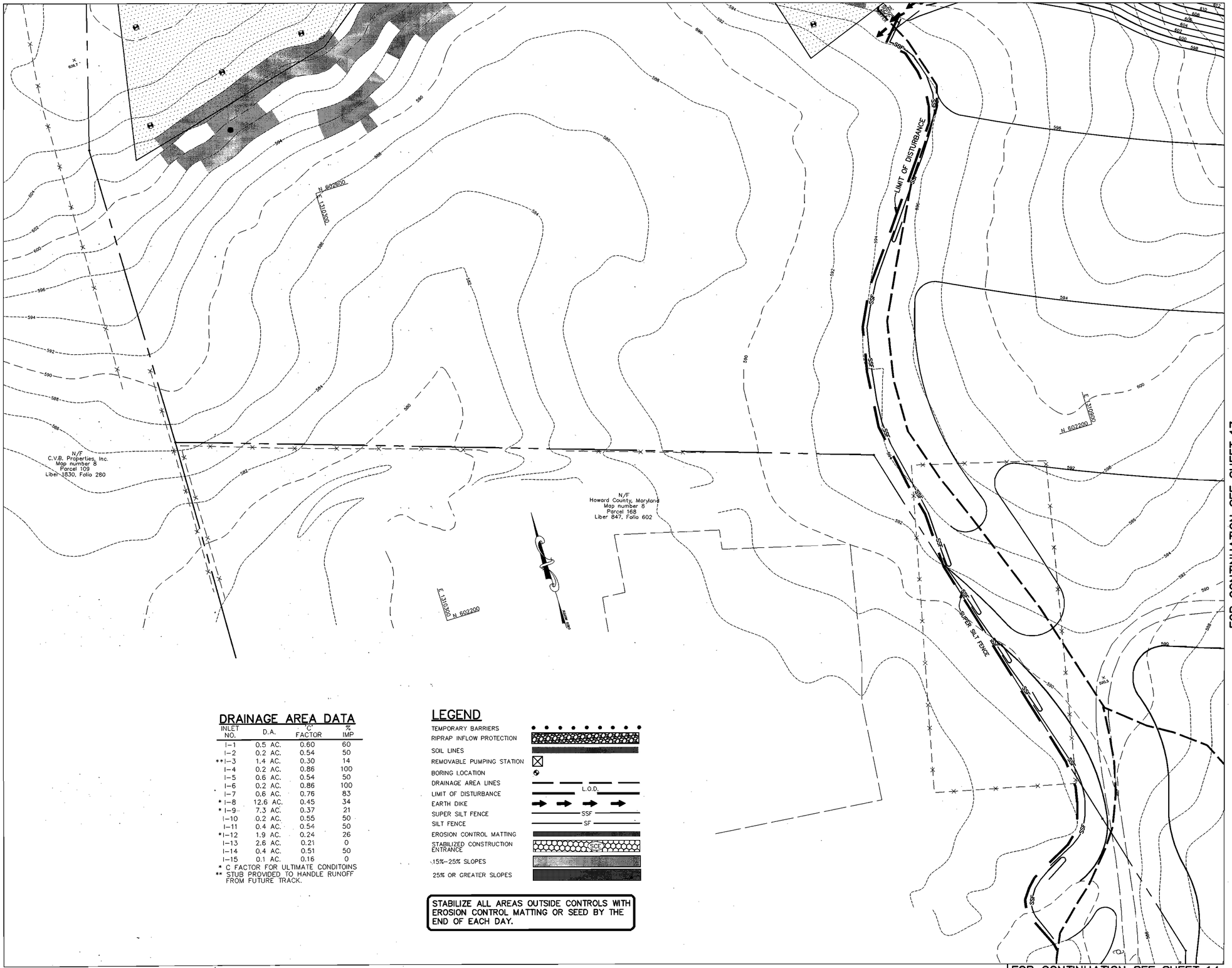
CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-200ESC-2
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	15 OF 51

SDP-03-90

P:\projects\22516\2-0\Engr\Plans\C-200ESC-2.dwg, Layout1, 07/23/2003 04:48:06 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

FOR CONTINUATION SEE SHEET 18



DRAINAGE AREA DATA

INLET NO.	D.A.	'C' FACTOR	% IMP
I-1	0.5 AC.	0.60	60
I-2	0.2 AC.	0.54	50
**I-3	1.4 AC.	0.30	14
I-4	0.2 AC.	0.86	100
I-5	0.6 AC.	0.54	50
I-6	0.2 AC.	0.86	100
I-7	0.6 AC.	0.76	83
* I-8	12.6 AC.	0.45	34
* I-9	7.3 AC.	0.37	21
I-10	0.2 AC.	0.55	50
I-11	0.4 AC.	0.54	50
*I-12	1.9 AC.	0.24	26
I-13	2.6 AC.	0.21	0
I-14	0.4 AC.	0.51	50
I-15	0.1 AC.	0.16	0

* C FACTOR FOR ULTIMATE CONDITOINS
** STUB PROVIDED TO HANDLE RUNOFF FROM FUTURE TRACK.

LEGEND

- TEMPORARY BARRIERS
- RIPRAP INFLOW PROTECTION
- SOIL LINES
- REMOVABLE PUMPING STATION
- BORING LOCATION
- DRAINAGE AREA LINES
- LIMIT OF DISTURBANCE — L.O.D.
- EARTH DIKE
- SUPER SILT FENCE — SSF
- SILT FENCE — SF
- EROSION CONTROL MATTING
- STABILIZED CONSTRUCTION ENTRANCE — SCE
- 15%-25% SLOPES
- 25% OR GREATER SLOPES

STABILIZE ALL AREAS OUTSIDE CONTROLS WITH EROSION CONTROL MATTING OR SEED BY THE END OF EACH DAY.

NOTE: CONTRACTOR TO LIMIT THE TOTAL UNSTABILIZED AREA TO 20 ACRES AT ANY TIME.

ABSOLUTELY NO GRADING SHALL BE ALLOWED WITHIN WETLANDS BUFFERS, STREAM BUFFERS, FLOODPLAIN, STEEP SLOPES OR FORESTED AREAS.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER — DATE 7.28.03

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER — DATE 7.28.03

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION,~~ SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 8/14/03

THESE PLANS FOR ~~SMALL POND CONSTRUCTION,~~ SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*GP-03-19

HOWARD SOIL CONSERVATION DISTRICT — DATE 8/14/03

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-27-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/27/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

GRADING AND SEDIMENT CONTROL PLAN

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

7.28.03
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-200ESC-3
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	16 OF 51

SDP-03-90

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FOR CONTINUATION SEE SHEET 19

FOR CONTINUATION SEE SHEET 16

DRAINAGE AREA DATA

INLET NO.	D.A.	'C' FACTOR	% IMP
I-1	0.5 AC.	0.60	60
I-2	0.2 AC.	0.54	50
**I-3	1.4 AC.	0.30	14
I-4	0.2 AC.	0.86	100
I-5	0.6 AC.	0.54	50
I-6	0.2 AC.	0.86	100
I-7	0.6 AC.	0.76	83
* I-8	12.6 AC.	0.45	34
* I-9	7.3 AC.	0.37	21
I-10	0.2 AC.	0.55	50
I-11	0.4 AC.	0.54	50
*I-12	1.9 AC.	0.24	26
I-13	2.6 AC.	0.21	0
I-14	0.4 AC.	0.51	50
I-15	0.1 AC.	0.16	0

* C FACTOR FOR ULTIMATE CONDITOINS
** STUB PROVIDED TO HANDLE RUNOFF FROM FUTURE TRACK.

LEGEND

- TEMPORARY BARRIERS
- RIPRAP INFLOW PROTECTION
- SOIL LINES
- REMOVABLE PUMPING STATION
- BORING LOCATION
- DRAINAGE AREA LINES
- LIMIT OF DISTURBANCE (L.O.D.)
- EARTH DIKE
- SUPER SILT FENCE (SSF)
- SILT FENCE (SF)
- EROSION CONTROL MATTING
- STABILIZED CONSTRUCTION ENTRANCE (SCE)
- 15%-25% SLOPES
- 25% OR GREATER SLOPES

STABILIZE ALL AREAS OUTSIDE CONTROLS WITH EROSION CONTROL MATTING OR SEED BY THE END OF EACH DAY.

FOR CONTINUATION SEE SHEET 14

NOTE: CONTRACTOR TO LIMIT THE TOTAL UNSTABILIZED AREA TO 20 ACRES AT ANY TIME.

FOR CONTINUATION SEE SHEET 15

ABSOLUTELY NO GRADING SHALL BE ALLOWED WITHIN WETLANDS BUFFERS, STREAM BUFFERS, FLOODPLAIN, STEEP SLOPES OR FORESTED AREAS.

BY THE DEVELOPER :
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER — DATE 7.28.03

BY THE ENGINEER :
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER — DATE 7.28.03

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~* SOIL EROSION AND SEDIMENT CONTROL.
*GP-03-99

NATURAL RESOURCES CONSERVATION SERVICE — DATE 8/19/03

THESE PLANS FOR ~~SMALL POND CONSTRUCTION~~* SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
*GP-03-99

HOWARD SOIL CONSERVATION DISTRICT — DATE 8/19/03

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER — DATE 8-22-03
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/21/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 8/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/21/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
GRADING AND SEDIMENT CONTROL PLAN

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

7.28.03
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — NO. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-200ESC-4
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	17 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\C-200ESC-4.dwg, Layout1, 07/25/2003 09:20:53 AM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

DRAINAGE AREA DATA

INLET NO.	D.A.	'C' FACTOR	% IMP
I-1	0.5 AC.	0.60	60
I-2	0.2 AC.	0.54	50
**I-3	1.4 AC.	0.30	14
I-4	0.2 AC.	0.86	100
I-5	0.6 AC.	0.54	50
I-6	0.2 AC.	0.86	100
I-7	0.6 AC.	0.76	83
* I-8	12.6 AC.	0.45	34
* I-9	7.3 AC.	0.37	21
I-10	0.2 AC.	0.55	50
I-11	0.4 AC.	0.54	50
*I-12	1.9 AC.	0.24	26
I-13	2.6 AC.	0.21	0
I-14	0.4 AC.	0.51	50
I-15	0.1 AC.	0.16	0

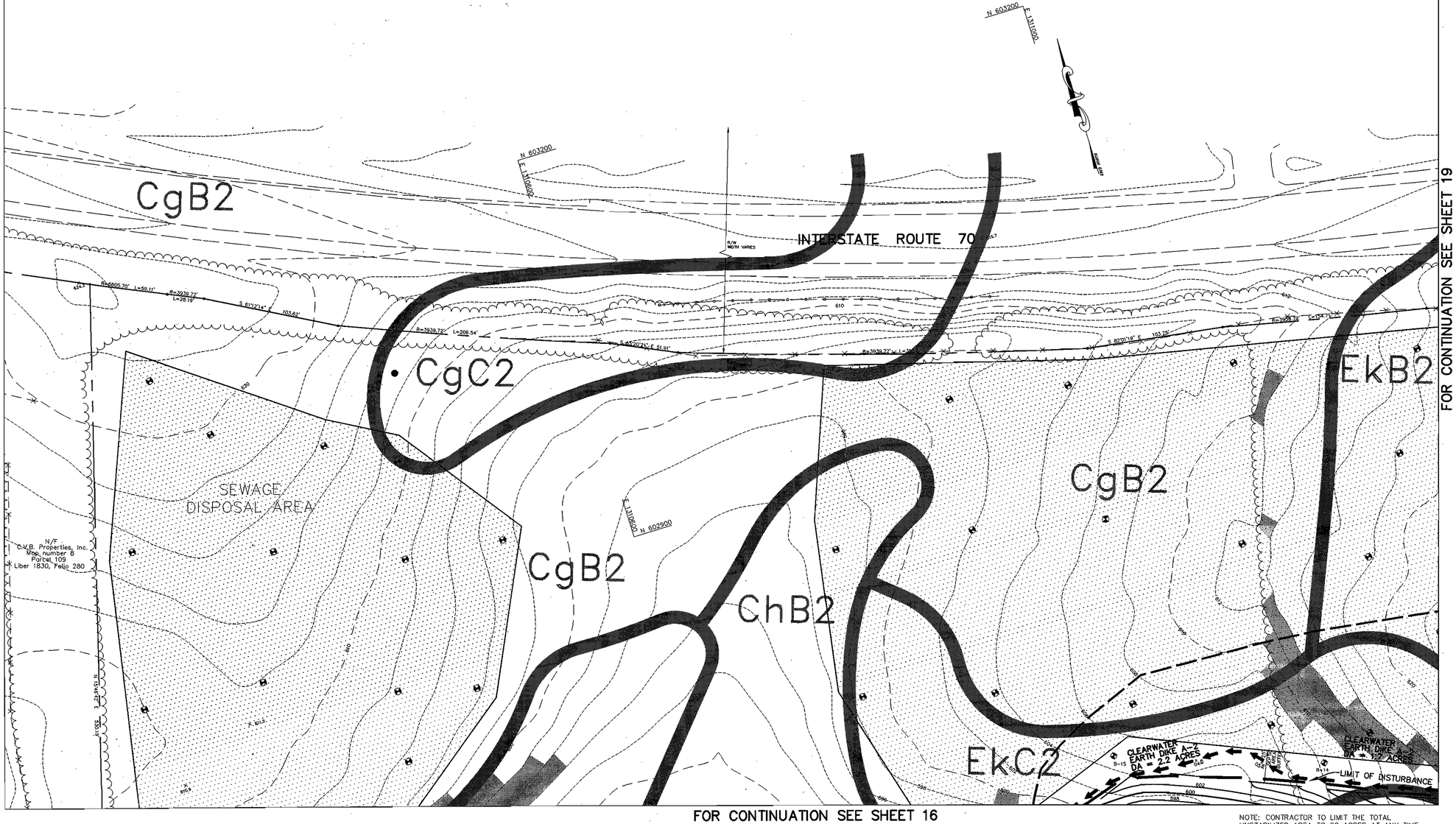
* C FACTOR FOR ULTIMATE CONDITIONS
** STUB PROVIDED TO HANDLE RUNOFF FROM FUTURE TRACK.

LEGEND

- TEMPORARY BARRIERS
- RIPRAP INFLOW PROTECTION
- SOIL LINES
- REMOVABLE PUMPING STATION
- BORING LOCATION
- DRAINAGE AREA LINES
- LIMIT OF DISTURBANCE (L.O.D.)
- EARTH DIKE
- SUPER SILT FENCE (SSF)
- SILT FENCE (SF)
- EROSION CONTROL MATTING
- STABILIZED CONSTRUCTION ENTRANCE (SCE)
- 15%-25% SLOPES
- 25% OR GREATER SLOPES

STABILIZE ALL AREAS OUTSIDE CONTROLS WITH EROSION CONTROL MATTING OR SEED BY THE END OF EACH DAY.

ABSOLUTELY NO GRADING SHALL BE ALLOWED WITHIN WETLANDS BUFFERS, STREAM BUFFERS, FLOODPLAIN, STEEP SLOPES OR FORESTED AREAS.



NOTE: CONTRACTOR TO LIMIT THE TOTAL UNSTABILIZED AREA TO 20 ACRES AT ANY TIME.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

7.28.03
DEVELOPER — DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Christy J Reid 7.28.03
ENGINEER — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~ SOIL EROSION AND SEDIMENT CONTROL.

Jim Myers /CB 8/14/03
NATURAL RESOURCES CONSERVATION SERVICE — DATE

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

#69-03-79
8/14/03
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

8-22-03
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

8/20/03
DIRECTOR — DATE

8/20/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE

8/27/03
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
GRADING AND SEDIMENT CONTROL PLAN

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

7.28.03
DATE

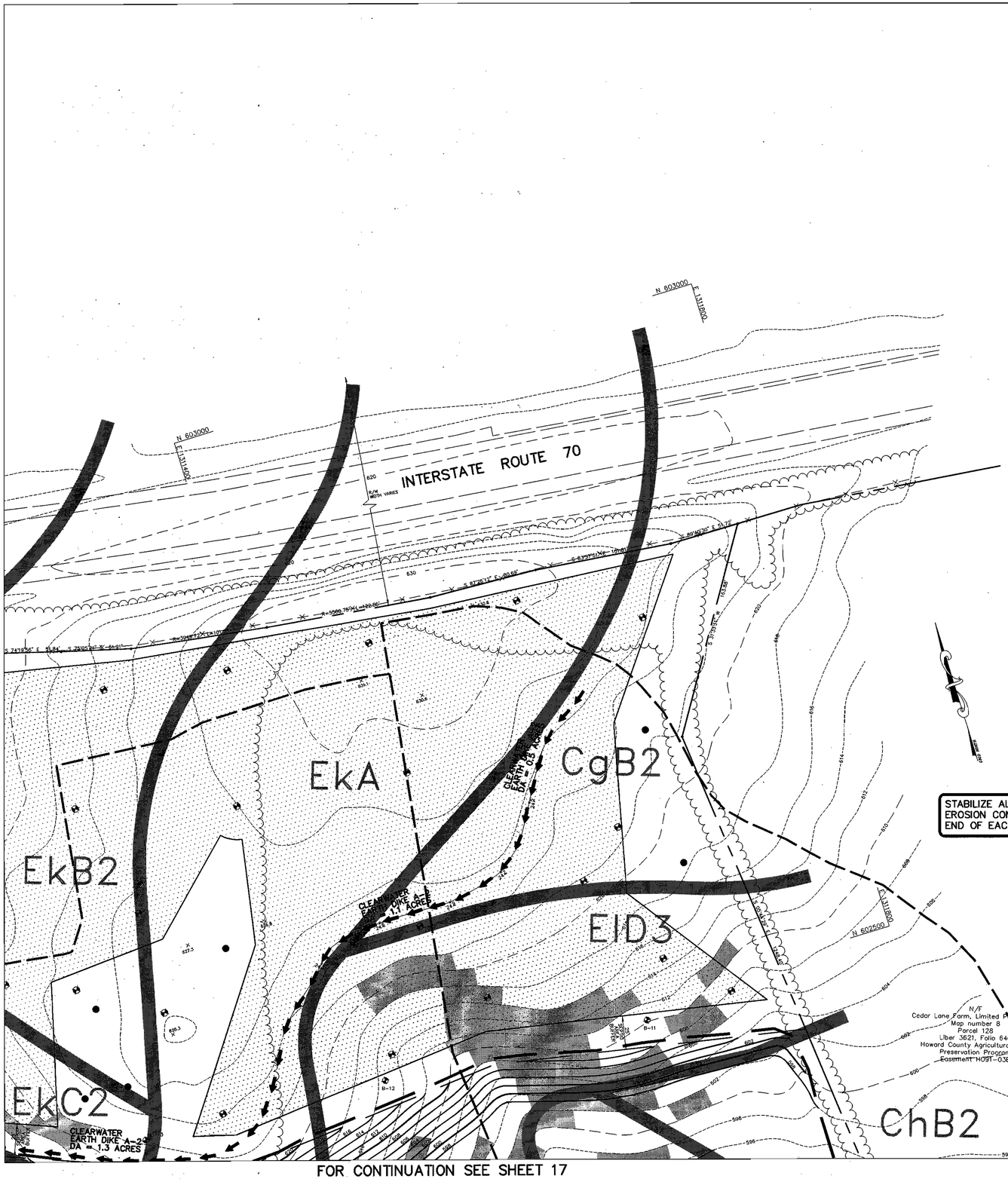
STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-200ESC-5
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	18 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\C-200ESC-5.dwg, Layout1, 07/23/2003 04:50:17 PM, HP1950C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1



LEGEND

TEMPORARY BARRIERS
RIPRAP INFLOW PROTECTION
SOIL LINES
REMOVABLE PUMPING STATION
BORING LOCATION
DRAINAGE AREA LINES
LIMIT OF DISTURBANCE — L.O.D.
EARTH DIKE
SUPER SILT FENCE — SSF
SILT FENCE — SF
EROSION CONTROL MATTING
STABILIZED CONSTRUCTION ENTRANCE — SCE
15%-25% SLOPES
25% OR GREATER SLOPES

DRAINAGE AREA DATA

INLET NO.	D.A.	'C' FACTOR	% IMP
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I-2	0.2 AC.	0.54	50
**I-3	1.4 AC.	0.30	14
I-4	0.2 AC.	0.86	100
I-5	0.6 AC.	0.54	50
I-6	0.2 AC.	0.86	100
I-7	0.6 AC.	0.76	83
* I-8	12.6 AC.	0.45	34
* I-9	7.3 AC.	0.37	21
I-10	0.2 AC.	0.55	50
I-11	0.4 AC.	0.54	50
*I-12	1.9 AC.	0.24	26
I-13	2.6 AC.	0.21	0
I-14	0.4 AC.	0.51	50
I-15	0.1 AC.	0.16	0

* C FACTOR FOR ULTIMATE CONDITOINS
** STUB PROVIDED TO HANDLE RUNOFF FROM FUTURE TRACK.

ABSOLUTELY NO GRADING SHALL BE ALLOWED WITHIN WETLANDS BUFFERS, STREAM BUFFERS, FLOODPLAIN, STEEP SLOPES OR FORESTED AREAS.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER — DATE 7.28.03

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER — DATE 7.28.03

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION,~~ SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 8/14/03

THESE PLANS FOR ~~SMALL POND CONSTRUCTION,~~ SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*GP-03-99

HOWARD SOIL CONSERVATION DISTRICT — DATE 8/14/03

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 8/26/03

CHIEF, DIVISION OF LAND DEVELOPMENT MB — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
GRADING AND SEDIMENT CONTROL PLAN

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

7.28.03
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR C-200ESC-6
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	19 OF 51

SDP-03-90

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STRUCTURE SCHEDULE

STRUCTURE	TYPE INSIDE DIMS	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
I-1	A-5 2.5'WIDE	N 601455.66 E 1311318.20	573.00(18")	570.26(18")	577.1	HOCO STD. DETAIL SD-4.40
I-2	A-5 2.5'WIDE	N 601393.89 E 1311273.70	574.90(12")	574.40(18")	578.6	HOCO STD. DETAIL SD-4.40
I-3	A-5 2.5'WIDE	N 601421.10 E 1311201.08	575.60(18")	575.50(18")	580.0	HOCO STD. DETAIL SD-4.40
I-4	A-5 6.0'WIDE	N 601523.88 E 1311299.39	564.69(48") 574.05(15")	564.59(48")	577.9	HOCO STD. DETAIL SD-4.40 GRANITE BOTTOM
I-5	A-5 2.5'WIDE	N 601489.72 E 1311240.59	–	576.25(15")	580.1	HOCO STD. DETAIL SD-4.40
I-6	A-5 6.0'WIDE	N 601607.54 E 1311250.80	565.27(48")	565.17(48")	580.4	HOCO STD. DETAIL SD-4.40
I-7	A-5 2.5'WIDE	N 601745.34 E 1311166.83	566.17(48") 576.74(18")	566.07(48")	581.2	HOCO STD. DETAIL SD-4.40 GRANITE BOTTOM
I-8	D 6'X4'	N 601848.22 E 1311107.07	568.27(30")	566.77(48")	581.5 *	HOCO STD. DETAIL SD-4.39 4 OPENINGS (20LFX1LF)
I-9	D 4'X2.5'	N 601806.24 E 1311660.11	–	571.52(30")	575.5 *	HOCO STD. DETAIL SD-4.39 4 OPENINGS (6LFX1LF)
I-10	A-5 2.5'WIDE	N 601720.04 E 1311122.44	580.50(18")	580.40(18")	584.4	HOCO STD. DETAIL SD-4.40
I-11	A-5 2.5'WIDE	N 601684.55 E 1311062.10	581.30(18")	581.20(18")	585.4	HOCO STD. DETAIL SD-4.40
I-12	D 4'X4'	N 601787.40 E 1311002.50	–	582.50(18")	585.5 *	HOCO STD. DETAIL SD-4.39 4 OPENINGS (8LFX1LF)
I-13	D 2.5'X2.5'	N 601124.50 E 1311080.78	572.47(15")	572.22(18")	578.0 *	HOCO STD. DETAIL SD-4.39
I-14	S 2.6'X2.6'	N 601200.32 E 1311137.32	573.52(15")	573.42(15")	579.1	HOCO STD. DETAIL SD-4.22
I-15	S 2.6'X2.6'	N 601245.52 E 1311215.14	(3) 575.17(6")	574.42(15")	578.9	HOCO STD. DETAIL SD-4.22
M-1	6'-0" DIA.	N 601496.94 E 1311344.08	564.33(48") 566.73(18")	564.23(48")	573.7	HOCO STD. DETAIL G-5.03
M-2	5'-0" DIA.	N 601949.32 E 1311262.60	569.30(30")	569.20(30")	590.2	HOCO STD. DETAIL G-5.13
M-3	5'-0" DIA.	N 601880.75 E 1311485.28	570.57(30")	570.47(30")	589.4	HOCO STD. DETAIL G-5.13
M-4	4'-0" DIA.	N 601059.10 E 1311109.97	565.05(18") 573.72(12")	564.95(18")	576.7	HOCO STD. DETAIL G-5.11
~~M-5~~	~~5'-0" DIA.~~	~~N 600609.98 E 1311815.22~~	~~549.68(48")~~	~~549.58(42")~~	~~556.4~~	~~HOCO STD. DETAIL G-5.13~~
M-7	4'-0" DIA.	N 601741.84 E 1311160.38	576.65(18")	576.55(12") 576.81(18")	582.0	HOCO STD. DETAIL G-5.11
E-1	48"ADS END SECTION	N 601445.13 E 1311430.25	–	557.00(48")	–	ADS, N-12
E-2	18"ADS END SECTION	N 600986.63 E 1311142.24	–	557.00(18")	–	ADS, N-12
E-3	12"ADS END SECTION	N 601723.83 E 1311208.06	–	574.00(12")	–	ADS, N-12
E-4	18" ADS END SECTION	N 601159.40 E 1311728.59	–	561.00(18")	–	ADS, N-12
E-5	18" ADS END SECTION	N 601146.63 E 1311784.39	–	562.00(18")	–	ADS, N-12
HW-1	TYPE "A" HEADWALL	N 600997.83 E 1311396.93	–	562.22(48")	–	HOCO STD. DETAIL SD-5.11
~~HW-2~~	~~TYPE "A" HEADWALL~~	~~N 600689 E 1311415~~		~~549.30(54")~~		~~HOCO STD. DETAIL SD-5.11~~
~~HW-3~~	~~TYPE "A" HEADWALL~~	~~N 600757 E 1311440~~	~~–~~	~~549.66(54")~~	~~–~~	~~HOCO STD. DETAIL SD-5.11~~
~~HW-4~~	~~TYPE "A" HEADWALL~~	~~N 600559 E 1311794~~		~~549.14(42")~~		~~HOCO STD. DETAIL SD-5.11~~
~~HW-5~~	~~TYPE "E" HEADWALL~~	~~N 600614 E 1311838 (FACE & CORNER OF WALL)~~		~~550.60(48")~~		~~HOCO STD. DETAIL SD-5.31~~
S-1	MODIFIED STRUCTURE	N 601044.50 E 1311372.58	556.50(8") 556.50(8")	556.50(48")	565.00	SEE SHEET 25
SMH-1	4'-0" DIA.	N 601727.83 E 1311165.72	574.94(6") 571.21(8")	571.11(8")	583.5	HOCO STD. DETAIL G-5.11 & S-1.32
SMH-2	4'-0" DIA.	N 601375.23 E 1311376.47	573.43(6")	573.26(8")	579.1	HOCO STD. DETAIL G-5.11
PS-1	–	N 601854.51 E 1311277.38	570.30(8")	–	584.1	BY OTHERS

△2 REFER TO SHEET 3A

REFER TO SHEET 3A △2

NOTES:
FOR END SECTIONS AND HEADWALLS THE LOCATION IS CENTER OF THROAT OPENING AT FACE OF STRUCTURE.
LOCATION OF 'D' AND 'S' INLETS AND MANHOLES IS AT CENTER OF TOP COVER; FOR "A" INLETS LOCATION IS GIVEN FOR CENTER OF THROAT OPENING AT FACE OF CURB;
* ELEVATION IS AT THROAT OPENING

PIPE SCHEDULE

PIPE LENGTH	SIZE	TYPE
156	4"	PVC
490	4"	PERF. PVC
375	6"	ADS, N-12
555	12"	ADS, N-12
253	15"	ADS, N-12
689	18"	ADS, N-12
598	30"	ADS, N-12
8	42"	CMP 12 GA
24	42"	RCCP CL V
529	48"	ADS, N-12
53	48"	ASTM
72	54"	RCCP CL V

PROFILE
SCALE :
HOR.-1"=50'
VERT.-1"=5'

PROFILE
SCALE :
HOR.-1"=50'
VERT.-1"=5'

PROFILE
SCALE :
HOR.-1"=50'
VERT.-1"=5'

PROFILE
SCALE :
HOR.-1"=50'
VERT.-1"=5'

PROFILE
SCALE :
HOR.-1"=50'
VERT.-1"=5'

AS-BUILT STATEMENT:

"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."

JOHN W. CLAPSADDLE 7/9/2008
DATE

PROFILE
SCALE :
HOR.-1"=50'
VERT.-1"=5'

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER 8-22-03 DATE
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR 8/28/03 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ 8/20/03 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT HB 8/21/03 DATE

DATE	NO.	REVISION
11/9/07	2	OMIT M-5, HW-2, HW-3, HW-4, & HW-5
7/8/05	1	REVISED STRUCTURE SCHEDULE

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
PROFILES

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

7.28.03
DATE

CHRISTOPHER J. REID #19949

DESIGNED BY : C.J.R.
DRAWN BY: DAM
PROJECT NO : 22516/2-0/ENGR PROFILE1
DATE : JULY 28, 2003
SCALE : AS SHOWN
DRAWING NO. 20 OF 51

SDP-03-90

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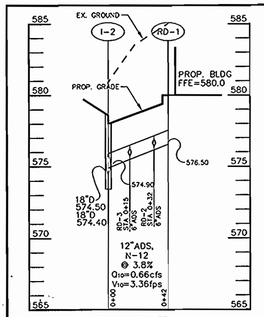
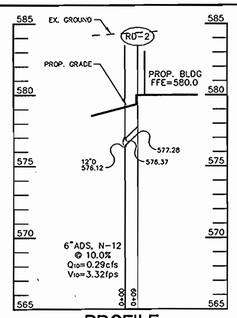
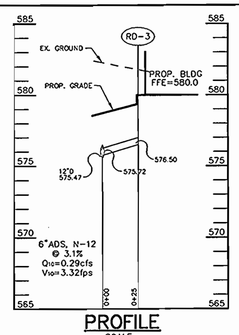


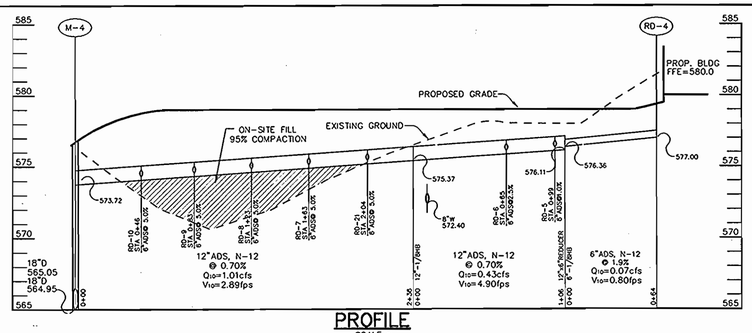
PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'



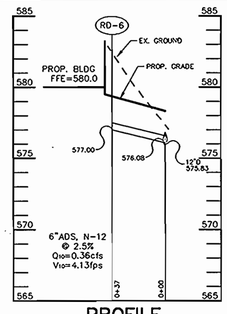
PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'



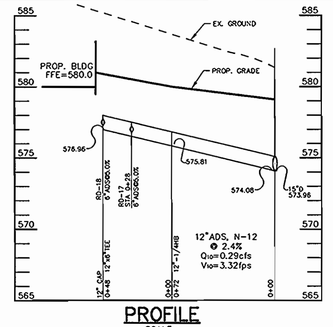
PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'



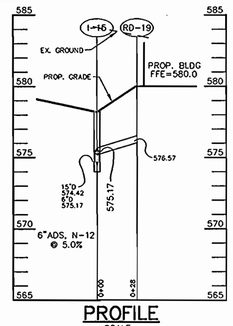
PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'



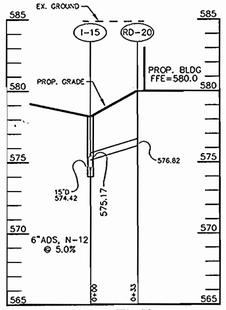
PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'



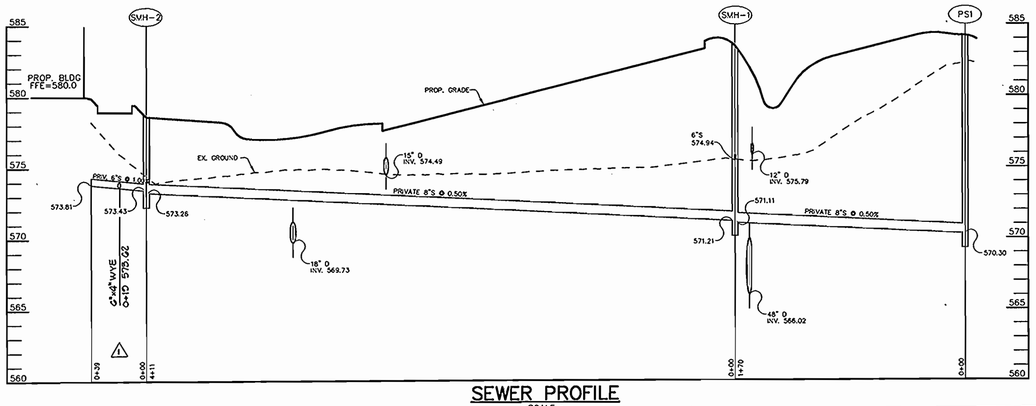
PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'



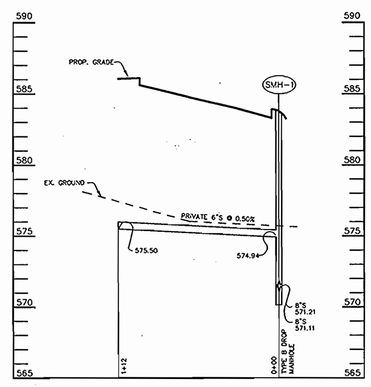
PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'

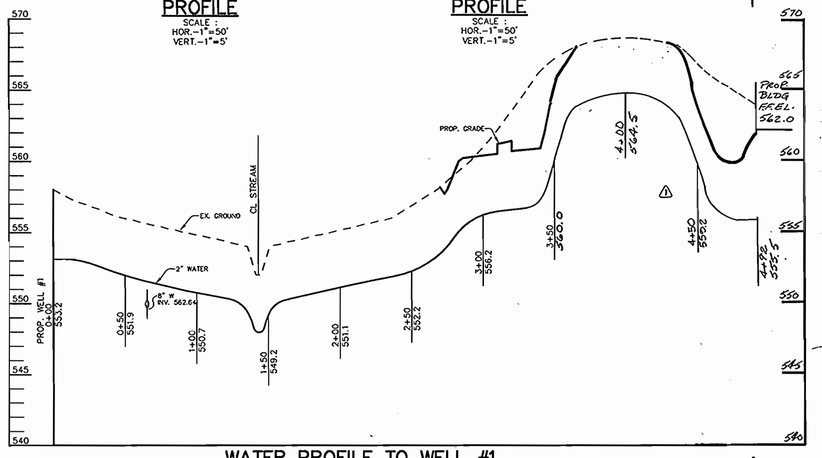


PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'

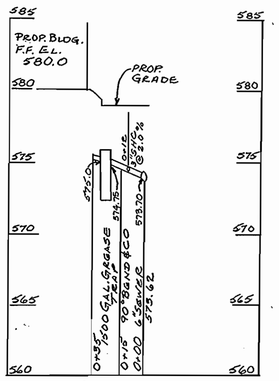


SEWER PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'





WATER PROFILE TO WELL #1
SCALE : HOR.-1"=50' VERT.-1"=5'

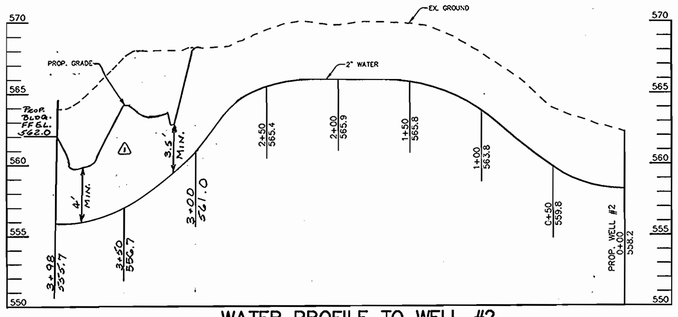


SEWER PROFILE
SCALE: HOR. 1"=30' VERT 1"=5'

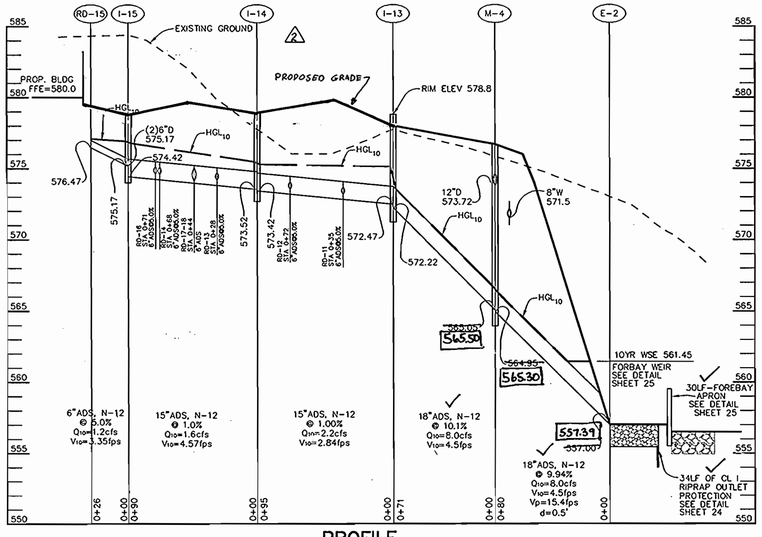
AS-BUILT STATEMENT:

"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."

JOHN W. CLARSADDLE 7/9/2008 DATE



WATER PROFILE TO WELL #2
SCALE : HOR.-1"=50' VERT.-1"=5'



PROFILE
SCALE : HOR.-1"=50' VERT.-1"=5'

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

Dewey Printup 8-22-03
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Joseph Rutter 8/26/03
DIRECTOR — DATE

8/20/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE

Cindy Hamilton 8/20/03
CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE

DATE	NO.	REVISION
7/8/05	3	REVISED GRADING ON STORM DRAIN PROFILE
4-29-04	1	REVISE PROFILES TO PUMPHOUSE S.E.L.

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

PROFILES

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

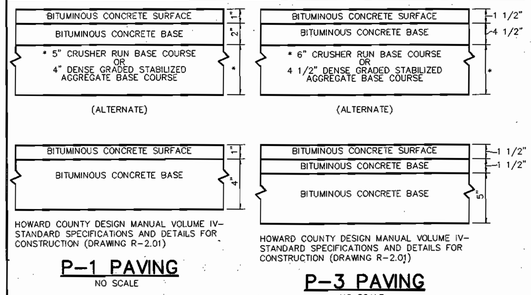
7.28.03
DATE

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR PROFILE2
DATE :	JULY 28, 2003
SCALE :	AS SHOWN
DRAWING NO.	21 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\PROFILE2.dwg, Layout1, 07/23/2003 01:44:21 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1



HOWARD COUNTY DESIGN MANUAL VOLUME IV- STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

P-1 PAVING
NO SCALE

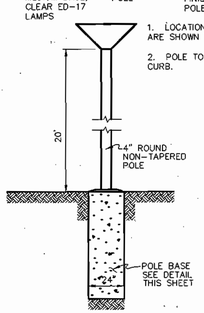
HOWARD COUNTY DESIGN MANUAL VOLUME IV- STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

P-3 PAVING
NO SCALE

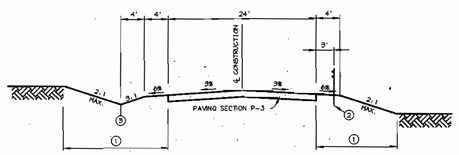
LIGHTING FIXTURE SCHEDULE

LAMPS	MOUNTING	DESCRIPTION	VOLTAGE
175W METAL HALIDE MULTITAP BALLAST WITH MEDIUM BASE, CLEAR ED-17 LAMPS	20' ROUND STRAIGHT ALUMINUM POLE	TEMPERED GLASS LENS, TYPE 5 HORIZONTAL CUT OFF REFLECTOR (BLACK FINISH) WITH MATCHING POLE	120/208/ 240/277

1. LOCATIONS OF LIGHT FIXTURES ARE ON THE PLAN AND ARE SHOWN THUS:
2. POLE TO BE LOCATED MINIMUM 3' BACK FROM BACK OF CURB.



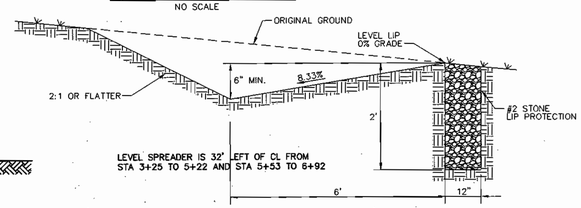
LIGHT POLE DETAIL
NO SCALE



OPEN SECTION

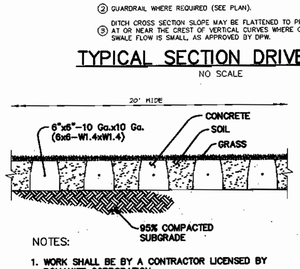
① INDICATES 2" TOPSOIL, SEED AND MULCH.
② GUARDRAIL WHERE REQUIRED (SEE PLAN).
③ DITCH CROSS SECTION SLOPE MAY BE FLATTENED TO PROVIDE A SWALE AT OR NEAR THE CREST OF VERTICAL CURVES WHERE QUANTITY OF SWALE FLOW IS SMALL, AS APPROVED BY DPW.

TYPICAL SECTION DRIVE LANE
NO SCALE



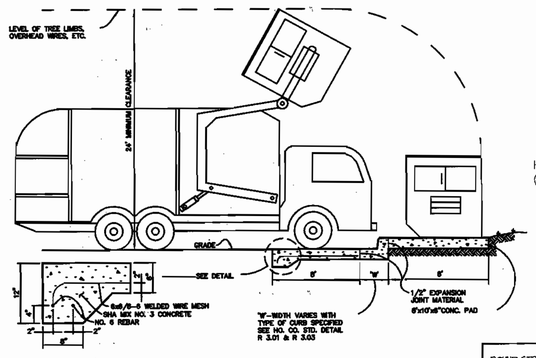
LEVEL SPREADER IS 32' LEFT OF CL FROM STA 3+25 TO 5+22 AND STA 5+53 TO 6+92

LEVEL SPREADER
NO SCALE



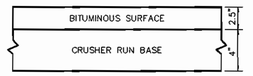
NOTES:
1. WORK SHALL BE BY A CONTRACTOR LICENSED BY BOMANITE CORPORATION.
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.
3. EXPANSION JOINTS SHALL BE PROVIDED WHEREVER A GRASSCRETE SLAB ABUTS OTHER CONCRETE OR STRUCTURES.

GRASSCRETE POROUS PAVEMENT FOR FIRELANE ACCESS
NO SCALE

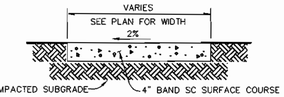


DUMPSTER PAD
NO SCALE

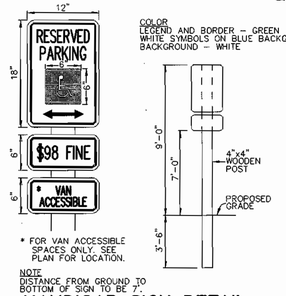
POLE BASE DETAIL
NO SCALE



MACADAM PLAY AREA
NO SCALE



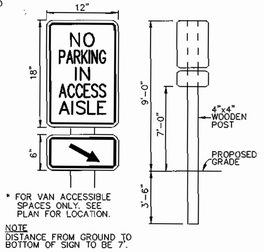
ASPHALT WALK DETAIL
NO SCALE



* FOR VAN ACCESSIBLE SPACES ONLY. SEE PLAN FOR LOCATION.

NOTE
DISTANCE FROM GROUND TO BOTTOM OF SIGN TO BE 7'.

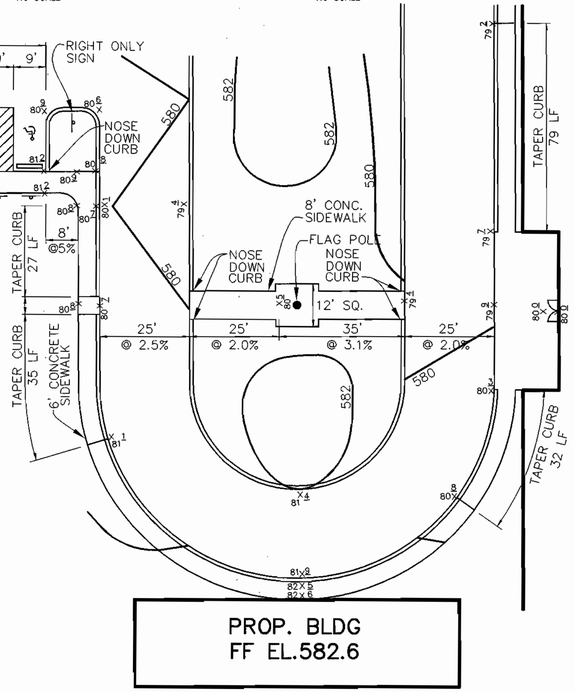
HANDICAP SIGN DETAIL
NO SCALE



* FOR VAN ACCESSIBLE SPACES ONLY. SEE PLAN FOR LOCATION.

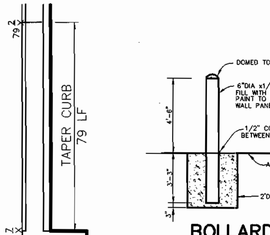
NOTE
DISTANCE FROM GROUND TO BOTTOM OF SIGN TO BE 7'.

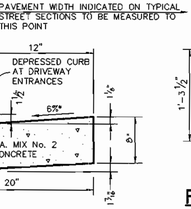
ACCESS AISLE SIGN
NO SCALE



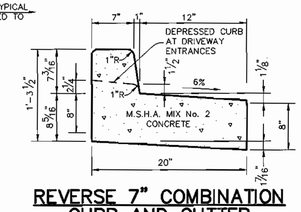
PROP. BLDG
FF EL.582.6

HANDICAP RAMP DETAIL
SCALE: 1" = 20'





BOLLARD DETAIL
NO SCALE



CONCRETE WHEEL STOP LOCATION PLAN
NO SCALE

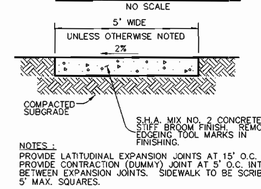
PAVEMENT WIDTH INDICATED ON TYPICAL STREET SECTIONS TO BE MEASURED TO THIS POINT

HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01).

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.

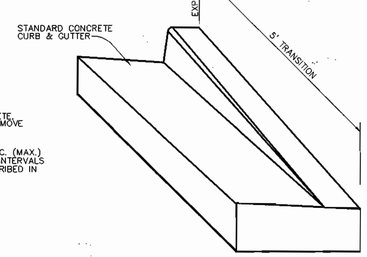
STANDARD 7" COMBINATION CURB AND GUTTER
NO SCALE

REVERSE 7" COMBINATION CURB AND GUTTER
NO SCALE



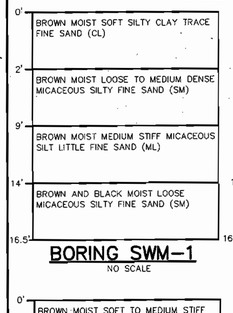
NOTES:
PROVIDE LATITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.) PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 5' MAX. SQUARES.

SIDEWALK DETAIL
NO SCALE

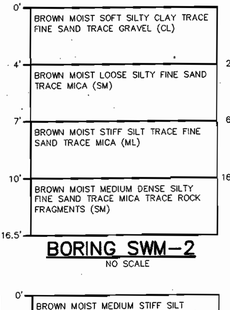


NOSE DOWN CURB DETAIL
NO SCALE

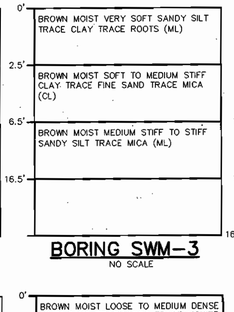
NOTES:
1. WORK SHALL BE BY A CONTRACTOR LICENSED BY BOMANITE CORPORATION.
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.
3. EXPANSION JOINTS SHALL BE PROVIDED WHEREVER A GRASSCRETE SLAB ABUTS OTHER CONCRETE OR STRUCTURES.



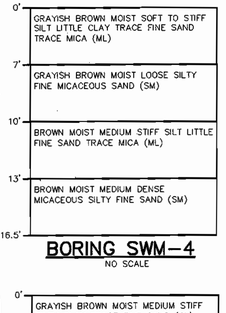
BORING SWM-1
NO SCALE



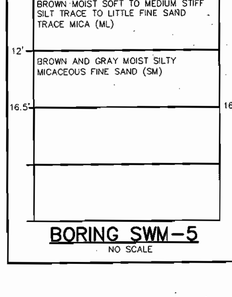
BORING SWM-2
NO SCALE



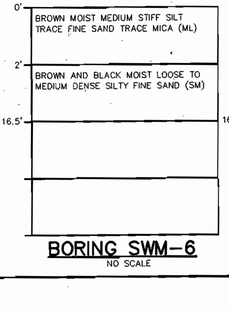
BORING SWM-3
NO SCALE



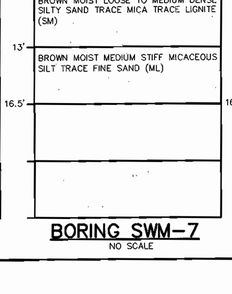
BORING SWM-4
NO SCALE



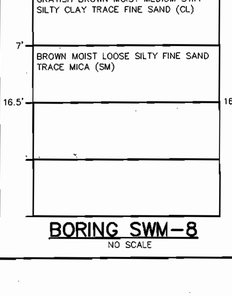
BORING SWM-5
NO SCALE



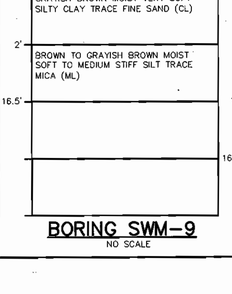
BORING SWM-6
NO SCALE



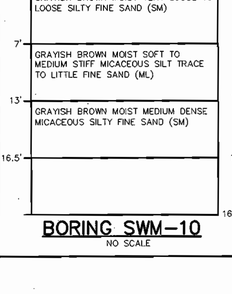
BORING SWM-7
NO SCALE



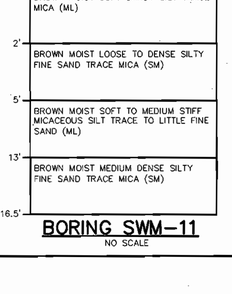
BORING SWM-8
NO SCALE



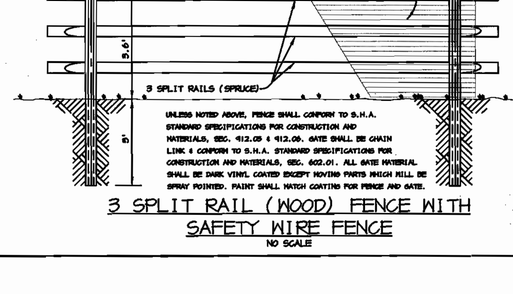
BORING SWM-9
NO SCALE



BORING SWM-10
NO SCALE



BORING SWM-11
NO SCALE



3 SPLIT RAIL (WOOD) FENCE WITH SAFETY WIRE FENCE
NO SCALE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-15-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/14/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/27/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
DETAILS

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

7.28.03 — DATE

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR DETAILS1
DATE :	JULY 28, 2003
SCALE :	AS SHOWN
DRAWING NO.	22 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\DETAILS1.dwg, Layout1, 07/22/2003 01:45:41 PM, HP1050C_Draft.pc3, ArchD - 24 x 36 in. (landscape), 1:1

MD-378 STANDARDS AND SPECIFICATIONS

SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

SITE PREPARATION

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

EARTH FILL

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8-inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tire or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

When required by the reviewing agency the mimimum required density shall not be ess than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cutoff Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall compacted with construction equipment, rollers, or hand tampers to assure maximum density and maximum permeability.

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

STRUCTURE BACKFILL

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi; 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoinig soil fill shall be placed in horizontal layers not to exceed four inched in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

PIPE CONDUITS

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

1. Materials - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

   Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

   Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to to the requirements of AASHTO Specifications M-196 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts mat be used for connections. the pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material and coted as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at at least 24 mils in thickness.

3. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

   All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter; flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, prepunched to the flange bolt circle, sandwiched between adjacent flanges; a 12 inch wide standard lap type band with 12 inch wide by 3/8 inch thick closed cell circular neoprene gasket; and a 12 inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch long annular corrugated band using a minimum of 4 (four) rods and lugs, 2 on each connecting pipe ends. A 24 inch wide by 3/8 inch thick closed cell circular neoprene gasket will be installed with 12 inch on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable.

   Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

4. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

5. Backfilling shall conform to "Structure Backfill."

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding/cradle for their entire length. This bedding/cradle shall consist of high slump concrete placed under the pipe and up the side of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser.

4. Backfilling shall conform to "Structure Backfill."

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Plastic Pipe - The following criteria shall apply for pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4 - 10 inch pipe shall meet the requirements of AASHTO M252 Type S, and 12" through 24" shall meet the requirements of AASHTO M294 Type S.

2. Joints and connections to anti-seep collars shall be completely watertight.

3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Backfilling shall conform to Structure "Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

CONCRETE

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

ROCK RIPRAP

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311.

Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

CARE OF WATER DURING CONSTRUCTION

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

EROSION AND SEDIMENT CONTROL

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seedbed Preparation : Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

Soil Amendments : Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.).

Seeding : For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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 :

1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.).

2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding : For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options :

1) 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.

2) Use sod.

3) Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Maintenance : Inspect all seeded areas and make needed repairs, replacements and reseedings.

OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF THE POND SHOWN HEREON SHALL BE PERFORMED AT LEAST ONCE ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATION FOR PONDS" (MD378). THE POND OWNER AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition

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

Purpose

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

Conditions Where Practice Applies

I. This practice is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. 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.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.

II. 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

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimentation Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

   i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½" in diameter.

   ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

   iii. Where subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

II. For sites having disturbed areas under 5 acres:
   i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:

   i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
      a. 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.
      b. Organic content of topsoil shall be not less than 1.5 percent by weight.
      c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
      d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes to amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority may be used in lieu of natural topsoil.

   ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

   i. 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.

   ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

   iii. 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.

   iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. 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:

   i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for site having disturbed areas under 5 acres shall conform to the following requirements:
      a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
      b. 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.
      c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
      d. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

1) NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL E STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.

2) PLACE MATERIALS IN A LOCATION AND MANNER THAT DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.

3) DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIAL FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.

4) PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.

5) REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, OR WATERWAYS, OR PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.

6) RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.

7) ALL STABILIZATION IN THE NONTIDAL WETLAND AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), BARLEY (HORDEUM SP.), OATS (UNIOLA SP.), AND/OR RYE (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.

8) AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST-CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.

9) TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM: USE I WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.

10) STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.

11) CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. I, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G.). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHED OF GRASSES.

6. 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.

7. SITE ANALYSIS:

	INTERIM PHASE	PHASE 1
TOTAL AREA OF SITE	66.1 ACRES	66.1 ACRES
AREA DISTURBED	25.8 ACRES	32.8 ACRES
AREA TO BE ROOFED OR PAVED	0 ACRES	4.5 ACRES
AREA TO BE VEGETATIVELY STABILIZED	25.8 ACRES	28.3 ACRES
TOTAL CUT		127000 CU. YARDS
TOTAL FILL		127000 CU. YARDS

OFFSITE WASTE AREA LOCATION TO HAVE ACTIVE GRADING PERMIT.

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

9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

11. 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.

12. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.

13. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.

14. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.

SEQUENCE OF CONSTRUCTION (INTERIM PHASE & PHASE 1)

1. OBTAIN ROUGH GRADING PERMIT.

2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE AND SEDIMENT BASIN PER INTERIM GRADING PLANS. (4 WEEKS).

3. INSTALL EARTH DIKES ONCE SEDIMENT BASIN IS FUNCTIONING.

4. UPON ACCEPTANCE BY THE COUNTY INSPECTOR, CONTRACTOR TO PROCEED WITH ROUGH GRADING OF ENTIRE SITE. CONTRACTOR TO PROVIDE DUST CONTROL AS NECESSARY.

5. PRIOR TO PHASE II CONTRACTOR TO INSPECT, REPAIR OR REPLACED ANY INTERIM SEDIMENT CONTROLS: STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE, SEDIMENT BASIN BEFORE INSTALLING REMAINDER OF SILT FENCES AND DIKES. (2 WEEKS).

6. UPON ACCEPTANCE BY THE COUNTY INSPECTOR, CONTRACTOR TO CONTINUE WITH ROUGH GRADING & START BUILDING CONSTRUCTION. CONTRACTOR TO AVOID FILLING IN VICINITY OF I-9 SUCH THAT EARTH DIKE CEASES TO FUNCTION UNTIL STORM DRAIN SYSTEM IS INSTALLED AND FUNCTIONING. CONTRACTOR TO PROVIDE DUST CONTROL AS NECESSARY. NO WORK, INCLUDING PLACEMENT OF SEDIMENT CONTROLS IS TO BE DONE WITHIN THE WETLANDS, FLOODPLAIN OR STREAM AREAS.

7. AS SUBGRADE ELEVATIONS ARE ESTABLISHED, INSTALL STORM DRAINS, WATER, AND SEWER. (10 WEEKS)

8. INSTALL CURB AND GUTTER AND PAVE ROADWAYS. (6 WEEKS)

9. PRIOR TO ANY WORK BEING PERFORMED WITHIN THE WETLANDS AND STREAMS, A MDE PERMIT IS REQUIRED. ONCE PERMIT IS ISSUED AND SEDIMENT CONTROLS PLACED, ROAD WIDENING OF MD ROUTE 144 CULVERT MODIFICATIONS CAN PROCEED. CONTRACTOR TO FOLLOW GUIDELINES FOR WORK WITHIN BEST MANAGEMENT PRACTICES FOR NON-TIDAL WETLANDS, WETLANDS BUFFER, WATERWAYS, AND 100 YEAR FLOODPLAINS.

10. APPLY TOPSOIL AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 WEEKS)

11. PERFORM FINE GRADING, SITE LANDSCAPING, LIGHTING AND SIDEWALKS. (8 WEEKS)

12. CONSTRUCT AND LANDSCAPE BIO-RETENTION FACILITIES 1, 2, & 3 AFTER STABILIZATION OF DRAINAGE AREAS TO BIO-RETENTION FACILITIES IS COMPLETE. PERFORM REMAINING LANDSCAPING. (2 WEEKS)

13. UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND CONVERT SEDIMENT BASIN TO PERMANENT STORM WATER MANAGEMENT FACILITY. CONVERT FACILITY IN THE FOLLOWING STEPS:
A. CLEAN STORM DRAIN INLETS AND FLUSH OUT PIPES. (5 DAYS)
B. PUMP OUT STANDING WATER IN BASIN USING PUMPING STATION. (2 DAYS)
C. REMOVE TEMPORARY DRAW DOWN DEVICE AND PLYWOOD. (1 DAY)
D. INSTALL POND DRAIN AND ORIFICE PLATES. (3 DAYS)
E. REMOVE ACCUMULATED SEDIMENT. (2 DAYS)
F. INSTALL PLANTS PER LANDSCAPE PLAN. (2 DAYS)
G. STABILIZE REMAINING DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (3 DAYS)

OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITY

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER, AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.

2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.

3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.

4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY WET POND

ROUTINE MAINTENANCE

1. Facility shall be inspected anually and after major storms. Inspections should be performed during wet weather to determine if the pond 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, the bottom of the pond, 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 pond as well as riprap outlet area 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 the the 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's Department of Public Works.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER 7.28.03 DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER 7.28.03 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~* SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE 8/14/03 DATE

THESE PLANS FOR ~~SMALL POND CONSTRUCTION~~* SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. *GP-03-49

HOWARD SOIL CONSERVATION DISTRICT 8/14/03 DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER 7-30-2003 DATE
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR 8/26/03 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ 8/14/03 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT HB DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
SEDIMENT CONTROL NOTES

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

7-28-03
DATE

STATE OF MARYLAND CHRISTOPHER J. REID No. 19949 REGISTERED PROFESSIONAL ENGINEER

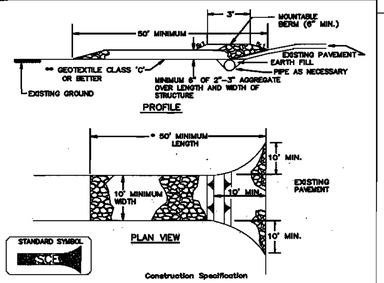
CHRISTOPHER J. REID #19949

DESIGNED BY : C.J.R.
DRAWN BY: DAM
PROJECT NO : 22516/2-0/ENGR DETAILS2
DATE : JULY 28, 2003
SCALE : AS SHOWN
DRAWING NO. 23 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\DETAILS2.dwg, Layout1, 07/23/2003 01:46:17 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length – minimum of 50' (*30' for single residence lot).

2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

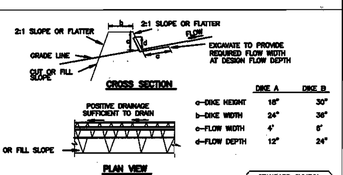
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

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

DETAIL 1 - EARTH DIKE



	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.

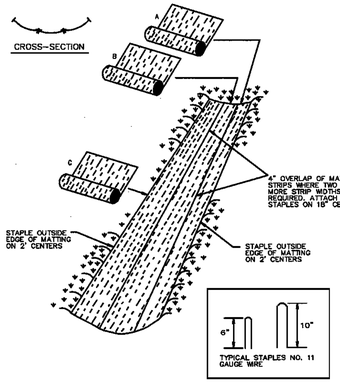
6. Fill shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

8. Inspection and maintenance must be provided periodically and after each rain event.

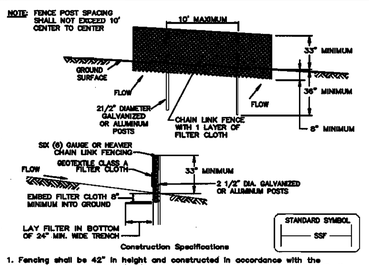
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE A - 1 - 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 - EROSION CONTROL MATTING



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

DETAIL 33 - SUPER SILT FENCE



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The SHA specifications for a 6 foot fence shall be used, substituting 42" fabric and 6 foot length posts.

2. The posts do not need to be set in concrete.

3. Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.

4. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

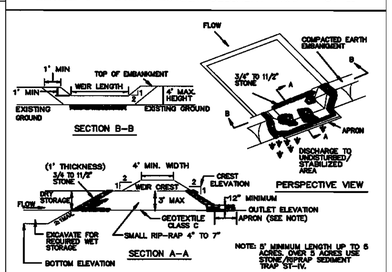
5. Filter cloth shall be embedded a minimum of 8" into the ground.

6. When two sections of geotextile fabric adjoin each other, they shall be overlapped by 6" and folded.

7. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H - 28 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II



Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The peat area shall be cleared.

2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.

3. All cut and fill slopes shall be 2:1 or flatter.

4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1' thick layer of 3/4" to 11/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.

5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

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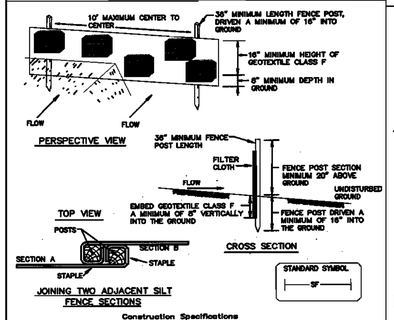
DETAIL 22 - SILT FENCE



JOINING TWO ADJACENT SILT FENCE SECTIONS

Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

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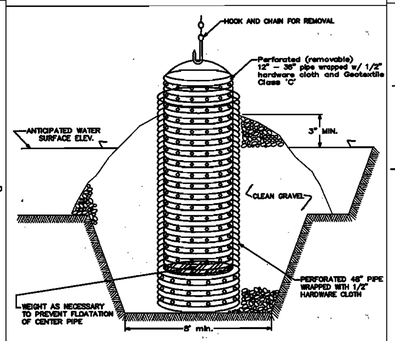
DETAIL 20A - REMOVABLE PUMPING STATION



Construction Specifications

1. The outer pipe should be 45° dip, or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.

2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.

3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 4" slits or 1" diameter holes 8" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C.

4. The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

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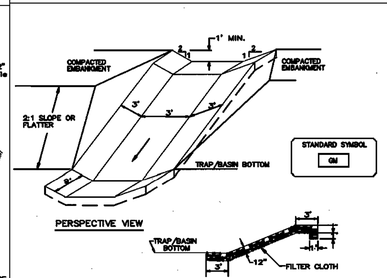
DETAIL 6 - GABION INFLOW PROTECTION



Construction Specifications

1. Gabion inflow protection shall be constructed of 9' x 3' x 9" gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.

2. Geotextile Class C shall be installed under all gabion baskets.

3. The stone used to fill the gabion baskets shall be 4" – 7".

4. Gabions shall be installed in accordance with manufacturers recommendations.

5. Gabion inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

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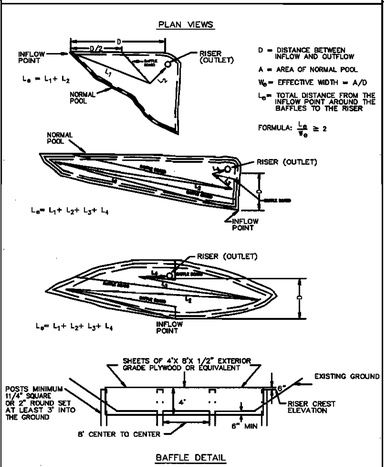
DETAIL 18 - SEDIMENT BASIN BAFFLES



D = DISTANCE BETWEEN INFLOW AND OUTFLOW

A = AREA OF NORMAL POOL

W_e = EFFECTIVE WIDTH = A/D

L_e = TOTAL DISTANCE FROM THE INFLOW POINT AROUND THE BAFFLES TO THE RISER

FORMULA: $\frac{L_e}{W_e} \geq 2$

$L_e = L_1 + L_2 + L_3 + L_4$

$L_e = L_1 + L_2 + L_3 + L_4$

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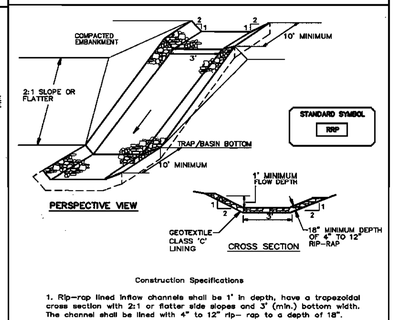
DETAIL 5 - RIP-RAP INFLOW PROTECTION



Construction Specifications

1. Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3' (min.) bottom width. The channel shall be lined with 4" to 12" rip- rap to a depth of 18".

2. Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.

3. Entrance and exit sections shall be installed as shown on the detail section.

4. Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.

5. Gabion inflow Protection may be used in lieu of Rip-rap inflow Protection.

6. Rip-rap should blend into existing ground.

7. Rip-rap inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.

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30.0 - DUST CONTROL

DEFINITION

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

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

SPECIFICATIONS

TEMPORARY METHODS

1. MULCHES – SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
2. VEGETATIVE COVER – SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
3. TILLAGE – TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION – THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
5. BARRIERS – SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
6. CALCIUM CHLORIDE – APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS

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

REFERENCES

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

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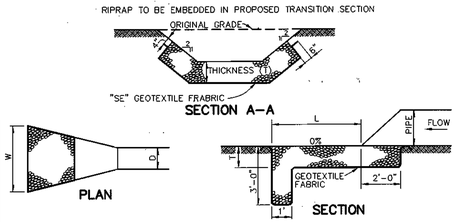
RIPRAP TO BE EMBEDDED IN PROPOSED TRANSITION SECTION



NOTE: O_{10}, V & DEPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL.

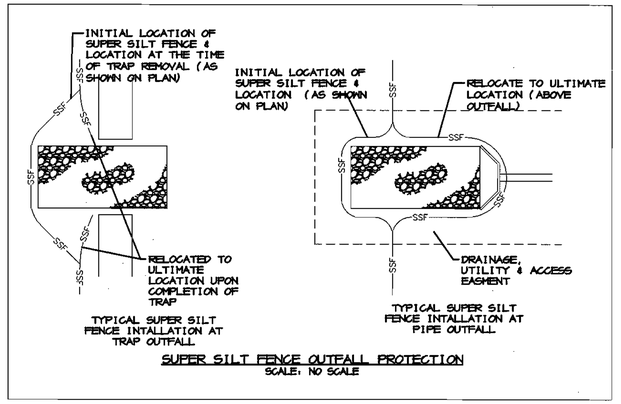
STRUCTURE	MEDIAN STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)	O_{10}	Vp	DEPTH
E-1	16" CL II	44'	26'	32"	79.4	24.2	1.2'
E-2	9.5" CL I	34'	16'	19"	8.0	15.4	0.5'
E-3	9.5" CL I	12'	13'	19"	–	8.4	0.34
E-4	9.5" CL I	53'	14'	19"	6.97	8.04	0.14'
E-5	9.5" CL I	12'	14'	19"	6.97	8.04	–
HW-1	9.5" CL I	37'	22'	19"	27.12	7.84	1.25'
~~HW-2~~	~~16" CL II~~	~~8'~~	~~16'~~	~~32"~~	~~59.65~~	~~9.4~~	~~1.85'~~
HW-3	9.5" CL I	40'	15'	19"	59.65	9.4	1.85'
~~HW-4~~	~~9.5" CL I~~	~~5'~~	~~11'~~	~~19"~~	–	–	–
HW-5	9.5" CL I	23'	11'	19"	86.0	9.0	–

RIPRAP OUTLET PROTECTION DETAIL

NO SCALE

CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER, RIP-RAP, OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
2. THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
3. "SE" GEOTEXTILE OR BETTER SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF GEOTEXTILE FABRIC OVER THE DAMAGED SECTION, WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXTILE FABRIC, IT SHALL BE A MINIMUM OF ONE FOOT.
4. STONE FOR THE RIP-RAP OR GABION OUTLETS MAY BE PLACED BY EQUIPMENT. THEY SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIP-RAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMANGE TO THE FILTER BLANKET OR GEOTEXTILE FABRIC. HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.
5. THE STONE SHALL BE PLACED SO THAT IT BLENDS IN WITH THE EXISTING GROUND. IF THE STONE IS PLACED TOO HIGH THEN THE FLOW WILL BE FORCED OUT OF THE CHANNEL AND SCOUR ADJACENT TO THE STONE WILL OCCUR.



SUPER SILT FENCE OUTFALL PROTECTION

SCALE: NO SCALE

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

7.28.03

DEVELOPER — DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Christy J Reid 7.28.03

ENGINEER — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~ SOIL EROSION AND SEDIMENT CONTROL.

Jim Myers 8/14/03

NATURAL RESOURCES CONSERVATION SERVICE — DATE

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

6-03-99

8/14/03

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

8-22-03

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

8/27/03

DIRECTOR — DATE

8/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

8/27/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

SEDIMENT CONTROL DETAILS

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

7.28.03

DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR DETAILS3
DATE :	JULY 28, 2003
SCALE :	AS SHOWN
DRAWING NO.	24 OF 51

SDP-03-90

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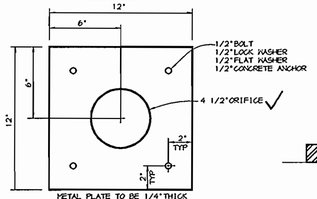
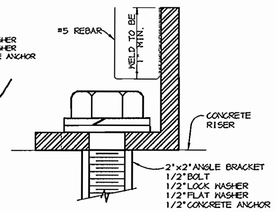


METAL PLATE

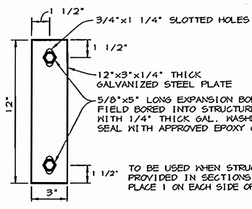
SCALE 1"=8"

GALVANIZE METAL PLATE AFTER FABRICATION AND PAINT BATTLESHIP GRAY.



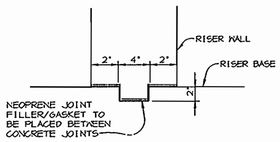
ENLARGEMENT A

NO SCALE



RISER JOINT FASTENER

NO SCALE



TYPICAL KEY JOINT DETAIL

NO SCALE

RISER STRUCTURE NOTES FOR S-1

1. RISER TO BE CAST-IN-PLACE. SHOP DRAWINGS FOR THIS CONCRETE STRUCTURE SHALL MEET THE MINIMUM ASTM REQUIREMENTS FOR CAST-IN-PLACE STRUCTURES. A SHOP DRAWING SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION AND SHALL BE SIGNED AND SEALED BY A MARYLAND REGISTERED PROFESSIONAL ENGINEER.

2. CONCRETE SHALL BE MSHA MIX NO. 3 (f'c=3,500 psi MINIMUM)

3. REFER TO HOWARD COUNTY STD. G-5.21 FOR MANHOLE STEP DETAILS.

4. RISER JOINTS SHALL BE WATERTIGHT USING NEOPRENE GASKETS.

5. ALL PIPE CONNECTIONS SHALL PROVIDE RUBBER GASKET FOR WATERTIGHTNESS.

6. RISER SHALL BE PLACED ON A FIRMLY COMPACTED SUBGRADE AND SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.

7. ALL 8" BUTTERFLY VALVE SHALL BE CONNECTED TO THE RISER WALL WITH ALL-THREADED ROD AND A FLANGE JOINT.

REMOVABLE TRASH RACK NOTES:

1. STEEL TO CONFORM TO ASTM A-36. #5 BARS TO BE SMOOTH. SEE DETAIL FOR SPACING.

2. ALL REBAR TO BE WELDED AT ALL INTERSECTIONS.

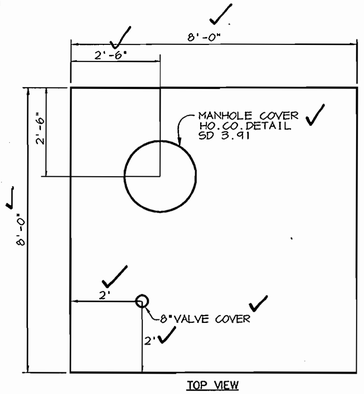
3. ALL BENDS TO BE 2" RADIUS. 2"X2" ANGLE IRON AND 1/2" DIAMETER ANCHOR BOLTS TO BE USED FOR TRASH RACK FRAME.

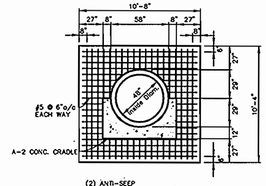
4. GALVANIZE TRASH RACK AFTER FABRICATION AND PAINT 2-COATS BATTLESHIP GRAY.

RISER REINFORCEMENT NOTES:

REINFORCING TO BE #7 DEFORMED BARS @ 6" C/C, 2 MATS, WITH 2" COVER IN TOP SLAB

REINFORCING TO BE #4 DEFORMED BARS @ 6" C/C, 2 MATS WITH 2 COVER IN WALLS AND BOTTOM SLAB.



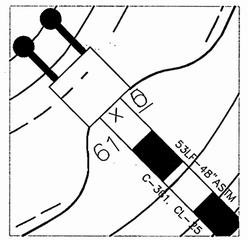


NOTES: 1. LOCATE COLLAR A MINIMUM OF TWO FEET FROM PIPE JOINT.

NOTES: 2. COLLAR/PIPE CONNECTION SHALL BE WATERTIGHT.

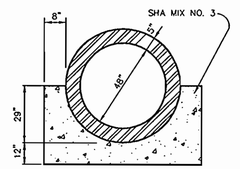
CONCRETE ANTI-SEEP COLLAR SWMF #1

NO SCALE



DEWATERING DEVICES

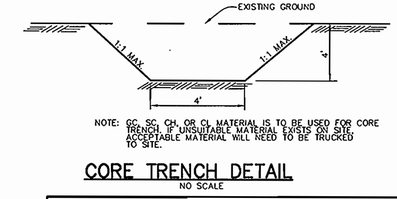
NO SCALE



CLASS 'A' DAMS LESS THAN 50' HIGH

A-2 CONCRETE CRADLE

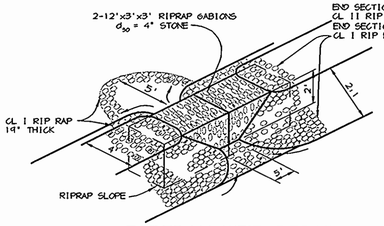
NO SCALE



NOTE: GC, SC, CH, OR CL MATERIAL IS TO BE USED FOR CORE TRENCH. IF UNSUITABLE MATERIAL EXISTS ON SITE, ACCEPTABLE MATERIAL WILL NEED TO BE TRUCKED TO SITE.

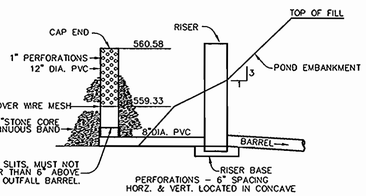
CORE TRENCH DETAIL

NO SCALE



FOREBAY WEIR DETAIL

NO SCALE



FILTER CLOTH OVER WIRE MESH

SEDIMENT BASIN 2 - 8" DEWATERING DEVICE WITH 12" PERFORATED RISERS

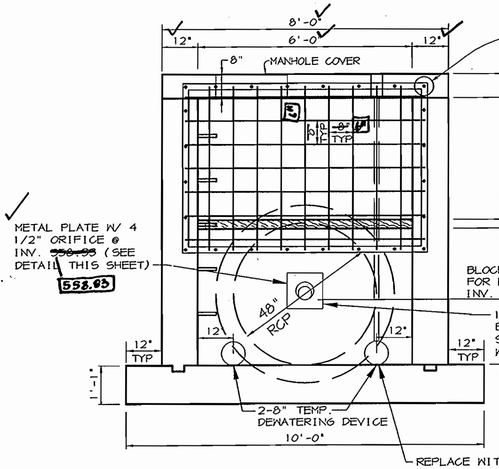
NO SCALE

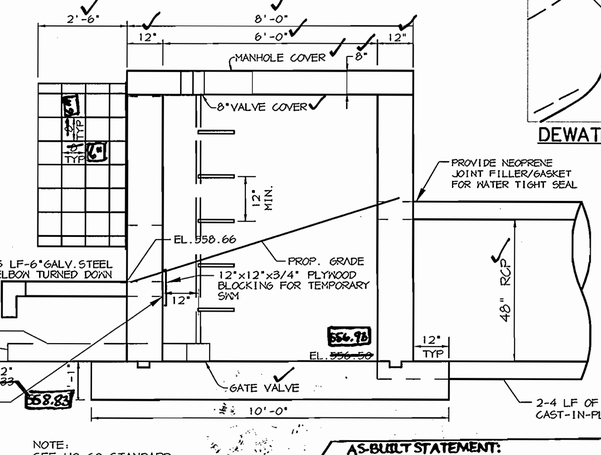
1. PERFORATIONS ON THE DRAW-DOWN DEVICE MAY NOT EXTEND INTO THE WET STORAGE.

2. THE TOTAL AREA OF THE PERFORATIONS MUST BE GREATER THAN 2 TIMES THE AREA OF THE INTERNAL ORIFICE.

3. THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE FABRIC. THE GEOTEXTILE FABRIC SHALL MEET THE SPECIFICATIONS FOR GEOTEXTILE CLASS E.

4. PROVIDED SUPPORT OF DRAW-DOWN DEVICE TO PREVENT SAGGING AND FLOATATION. AN ACCEPTABLE PREVENTATIVE MEASURE IS TO STAKE BOTH SIDES OF DRAW-DOWN DEVICE WITH 1" STEEL ANGLE, OR 1" BY 4" SQUARE OR 2" ROUND WOODEN POSTS SET 3' MINIMUM INTO THE GROUND THEN JOINING THEM TO THE DEVICE BY WRAPPING WITH 12 GAUGE MINIMUM WIRE.



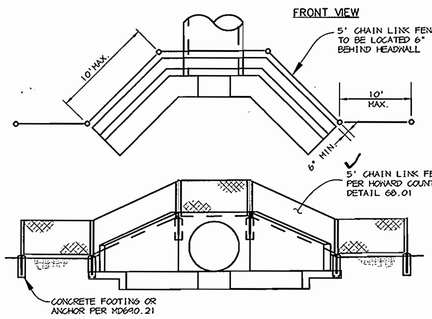


S-1 DETAILS

SCALE 1"=2'

NOTE:
SEE HO.CO STANDARD DETAIL SD 4.41 FOR REINFORCEMENT.

SIDE VIEW



DETAIL HEADWALL WITH FENCE

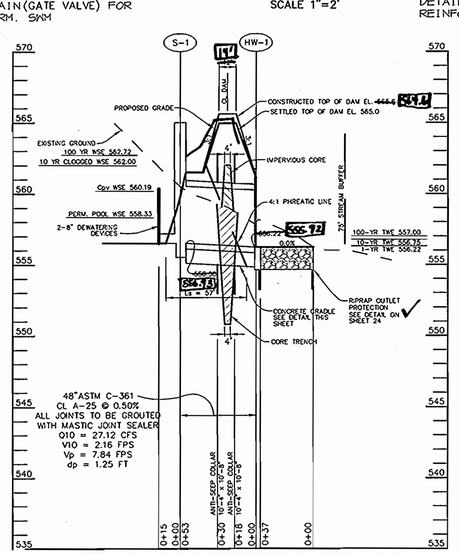
SCALE: 1" = 10'

EMBANKMENT AND CORE TRENCH CONSTRUCTION

THE AREA OF THE PROPOSED SWM FACILITIES SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OF STRUCTURE AREAS IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROOFROLLED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE UTILIZING A DYNAMIC CONE PENETROMETER. ANY EXCESSIVELY SOFT OR LOOSE MATERIALS IDENTIFIED BY PROOFROLLING OR PENETROMETER TESTING SHOULD BE EXCAVATED TO SUITABLE FIRM SOIL, AND THEN GRADES RE-ESTABLISHED BY BACKFILLING WITH SUITABLE SOIL.

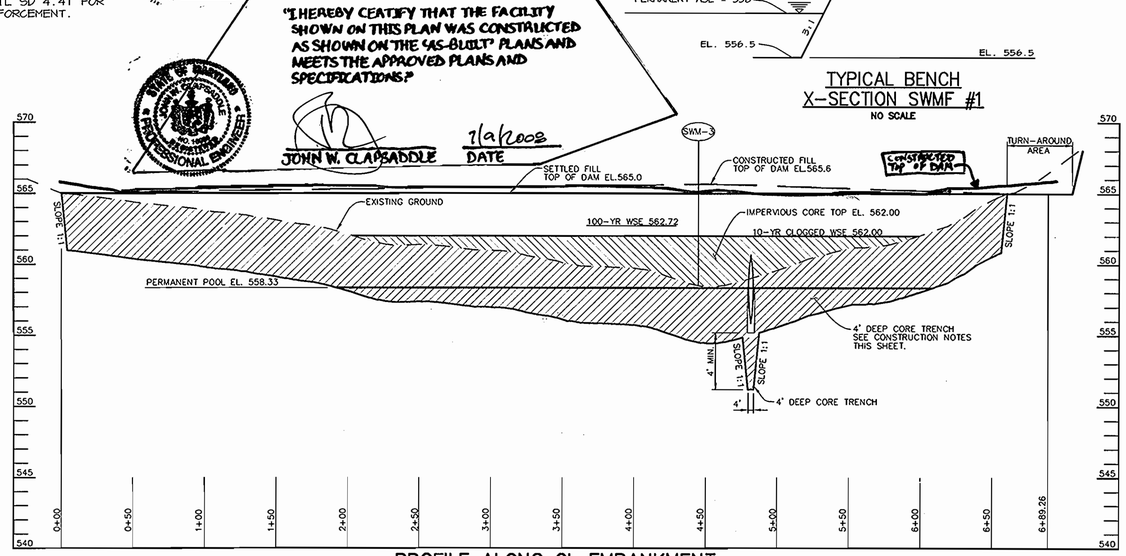
A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD BE PRESENT TO MONITOR PLACEMENT AND COMPACTION OF FILL FOR THE EMBANKMENT AND CUT-OFF TRENCH, IN ACCORDANCE WITH NRCS-MD CODE NO. 378, SOILS CONSIDERED SUITABLE FOR THE CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL AND MUST HAVE AT LEAST 30% PASSING THE #200 SIEVE.

IT IS OUR PROFESSIONAL OPINION THAT IN ADDITION TO THE SOIL MATERIALS DESCRIBED ABOVE A FINE-GRAINED SOIL, INCLUDING SILT (ML) WITH A PLASTICITY INDEX OF 10 OR MORE CAN BE UTILIZED FOR THE CENTER OF THE EMBANKMENT AND CORE TRENCH. ALL FILL MATERIALS MUST BE PLACED AND COMPACTED IN ACCORDANCE WITH NRCS-MD CODE NO. 378 SPECIFICATIONS.



PROFILE THRU PRINCIPAL SPILLWAY

SCALE :
HOR.-1"=50'
VERT.-1"=5'



PROFILE ALONG CL EMBANKMENT

SCALE :
HOR.-1"=50'
VERT.-1"=5'

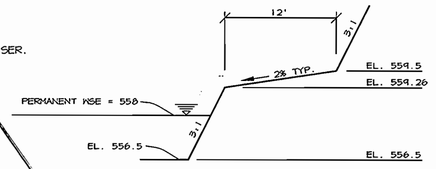
AS-BUILT STATEMENT:

"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."

STATE OF MARYLAND JOHN WILLIAM CLAPSADDLE No. 19949 REGISTERED PROFESSIONAL ENGINEER

JOHN W. CLAPSADDLE

1/9/2008
DATE



TYPICAL BENCH X-SECTION SWMF #1

NO SCALE

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER — DATE 7.28.03

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER — DATE 7.28.03

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ~~SMALL POND CONSTRUCTION~~ SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 8/19/03

THESE PLANS FOR ~~SMALL POND CONSTRUCTION~~ SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. #CP-03-49

HOWARD SOIL CONSERVATION DISTRICT — DATE 8/19/03

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-12-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/18/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/18/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/21/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

STORMWATER MANAGEMENT PROFILES AND DETAILS

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

7.28.03
DATE

STATE OF MARYLAND CHRISTOPHER J. REID No. 19949 REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR DETAILS4
DATE :	JULY 28, 2003
SCALE :	AS SHOWN
DRAWING NO.	25 OF 51

SDP-03-90

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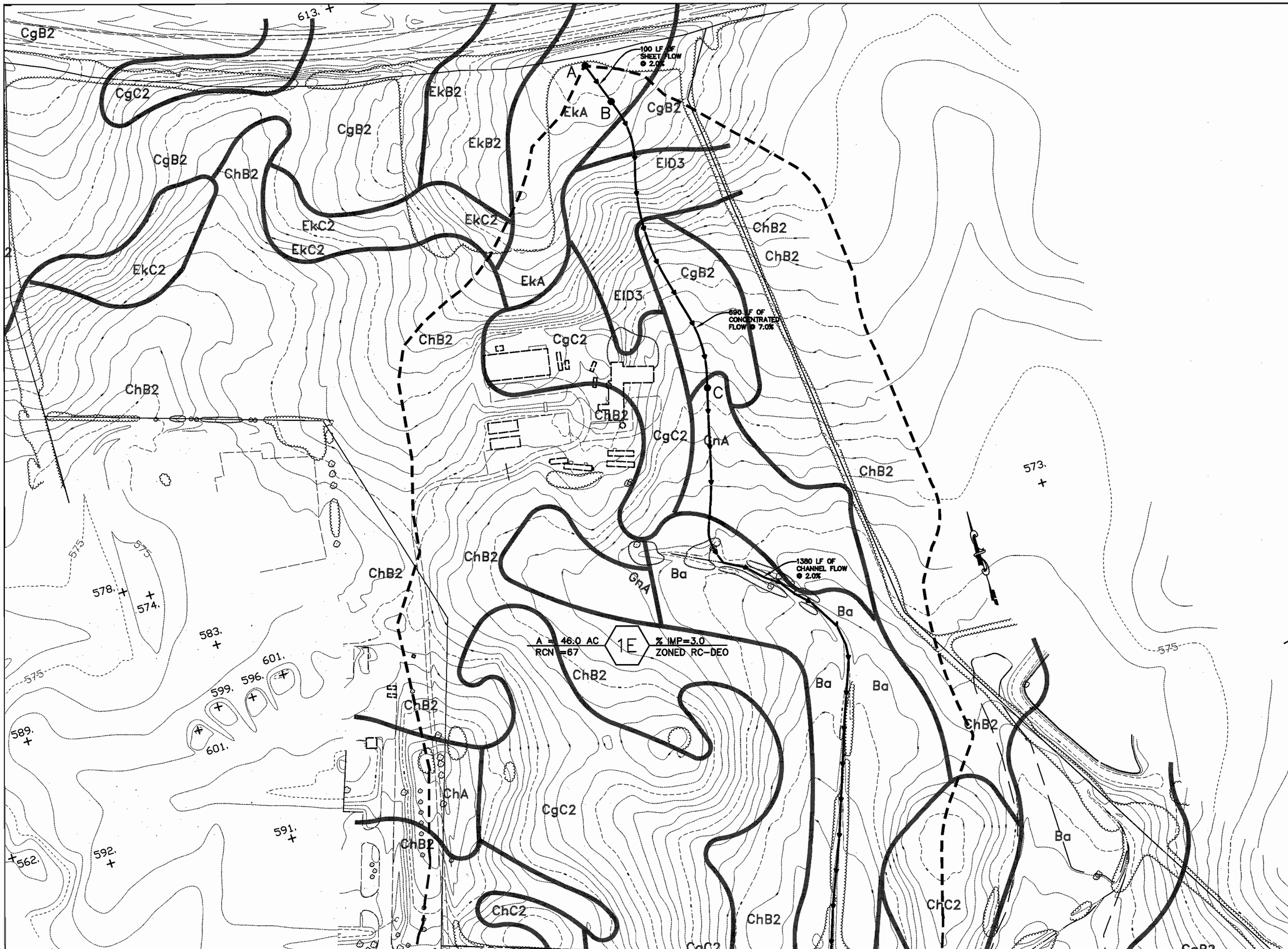

LEGEND

SOIL LINES

AREA DESIGNATION

DRAINAGE AREA LINES

TIME OF CONCENTRATION PATH A B

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MRJ — DATE 8/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

DRAINAGE AREA MAP EXISTING CONDITIONS

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

7-28-03 DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR DAEX1
DATE :	JULY 28, 2003
SCALE :	1" = 100'
DRAWING NO.	26 OF 51

SDP-03-90

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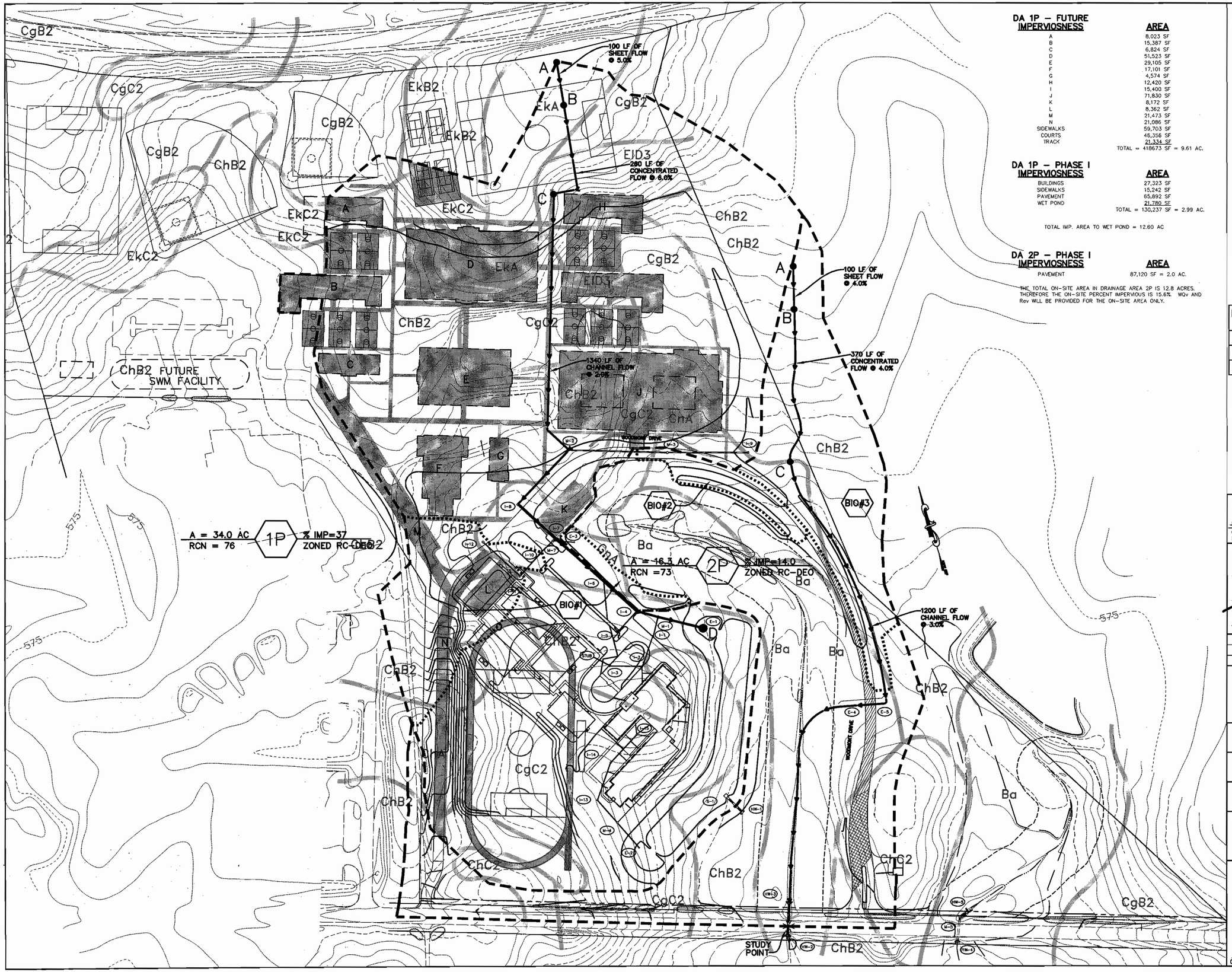

DA 1P – FUTURE IMPERVIOSNESS

	AREA
A	8,023 SF
B	15,387 SF
C	6,824 SF
D	51,523 SF
E	29,105 SF
F	17,101 SF
G	4,574 SF
H	12,420 SF
I	15,400 SF
J	71,830 SF
K	8,172 SF
L	8,362 SF
M	21,473 SF
N	21,086 SF
SIDEWALKS	59,703 SF
COURTS	46,356 SF
TRACK	21,334 SF
	TOTAL = 418673 SF = 9.61 AC.

DA 1P – PHASE I IMPERVIOSNESS

	AREA
BUILDINGS	27,323 SF
SIDEWALKS	15,242 SF
PAVEMENT	65,892 SF
WET POND	21,780 SF
	TOTAL = 130,237 SF = 2.99 AC.

TOTAL IMP. AREA TO WET POND = 12.60 AC

DA 2P – PHASE I IMPERVIOSNESS

	AREA
PAVEMENT	87,120 SF = 2.0 AC.

THE TOTAL ON-SITE AREA IN DRAINAGE AREA 2P IS 12.8 ACRES. THEREFORE THE ON-SITE PERCENT IMPERVIOUS IS 15.6%. WQv AND Rev WILL BE PROVIDED FOR THE ON-SITE AREA ONLY.

LEGEND

SOIL LINES

AREA DESIGNATION

DRAINAGE AREA DIVIDES

TIME OF CONCENTRATION PATH (A — B)

DRAINAGE AREA DIVIDES FOR BIORETENTION FACILITIES

FUTURE IMPERVIOUS AREAS

IMPERVIOUS AREA FOR THE SHEET FLOW TO BUFFER CREDIT

IMPERVIOUS AREA FOR THE NON-ROOFTOP DISCONNECT CREDIT

BIORETENTION SUMMARY TABLE

BIORETENTION #	DRAINAGE AREA	SWM CRITERIA
1	2.6 AC.	Rev ONLY
2	0.52 AC.	WQv & Rev
3	3.8 AC.	WQv & Rev

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/28/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 8/28/03

CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

DRAINAGE AREA MAP ULTIMATE CONDITIONS

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

7.28.03 DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR DAPR1
DATE :	JULY 28, 2003
SCALE :	1" = 100'
DRAWING NO.	27 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\DAPR1.dwg, Layout1, 07/28/2003 02:14:21 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

MATCH LINE SEE SHEET 30

MATCH LINE SEE SHEET 31

MATCH LINE SEE SHEET 29

LEGEND

- EX. TREELINE
- PROP. TREELINE
- PROPERTY LINE
- WETLANDS AND 25' BUFFER
- PERENNIAL STREAM AND 75' BUFFER
- CONTOUR LINES
- EX. BUILDING
- PROP. SHADE TREE
- PROP. EVERGREEN TREE
- PROP. ORNAMENTAL TREE
- PROP. SHRUBS
- LANDSCAPE REQUIREMENT — AR-3
- BIORETENTION PLANTING — LS-B
- SWM POND PLANTING — AR-3
- AMENITY PLANTING — FP-3
- PERIMETER LANDSCAPE EDGE LIMITS
- PERIMETER LANDSCAPE EDGE CONTINUES
- CREDITED LANDSCAPE ISLAND
- REFORESTATION AREA
- PROPOSED SEPTIC FIELD

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/20/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 8/14/03

CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE 8/22/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

LANDSCAPE PLAN

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

7-24-03 DATE

STATE OF MARYLAND 830 DAVID T. DOWS — DAVID TT DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO :	22516/2-0/ENGR 'L201LND
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	28 OF 51

SDP-03-90

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MATCH LINE SEE SHEET 31

MATCH LINE SEE SHEET 28

N/F
Cedar Lane Farm, Limited Partnership
Map number 8
Parcel 128
Liber 3621, Folio 646
Howard County Agricultural Land
Preservation Program
Easement H091-03E

WOODMONT DRIVE
PRIVATE DRIVE

PERIMETER 4 (TYPE C)
2597'
CREDIT: EXISTING VEGETATION
261'

PERIMETER 1 (TYPE B)
1890'
CREDIT: EXISTING VEGETATION
92'

MARYLAND ROUTE 144 (FREDERICK ROAD)
STATE MAJOR COLLECTOR (SCENIC ROAD)

Mobberley John and Gretchen
Map number 14
Parcel 46
Liber 2270, Folio 123

PROP. PUMP HOUSE
F.F. 586.5

AFFORESTATION AREA
5.66 AC

AFFORESTATION AREA
1.00 AC

100-YR FLOOD PLAIN

100-YR TODD PLAIN

100-YR FLOOD PLAIN ELEV. 566.93

FLOODPLAIN SECTION #5 WSEL 552.09

FLOODPLAIN SECTION #4 WSEL 552.75

FLOODPLAIN SECTION #3 WSEL 553.05

FLOODPLAIN SECTION #2 WSEL 553.05

FLOODPLAIN SECTION #1 WSEL 550.28

LIMIT OF WETLANDS

WETLANDS BUFFER

25' STREAM BUFFER

25' BUILDING RESTRICTION LINE

LAND TO BE DEDICATED TO HOWARD COUNTY FOR THE PURPOSE OF ROAD IMPROVEMENTS

77' EX. R/W

29' EX. PAVING

1359.56'

S 21°01'00" E

PRIVATE 8"W
PRIVATE 6"W

STONE SWALE

SITE ENTR. SCON

AA-5
45

MV-5
5

PA-7

FP-3

LC-335

FP-14

LS-4

AR-5

10-5

QP-3

QP-5

AR-3

PL-4

P5-4

P2-4

AR-1

FP-4

PA-2

LS-3

AR-3

FP-3

LEGEND

- EX. TREELINE
- PROP. TREELINE
- PROPERTY LINE
- WETLANDS AND 25' BUFFER
- PERENNIAL STREAM AND 75' BUFFER
- CONTOUR LINES
- EX. BUILDING
- PROP. SHADE TREE
- PROP. EVERGREEN TREE
- PROP. ORNAMENTAL TREE
- PROP. SHRUBS
- LANDSCAPE REQUIREMENT (AR-5)
- BIORETENTION PLANTING (LS 3)
- SWM POND PLANTING (AR-3)
- AMENITY PLANTING (FP-3)
- PERIMETER LANDSCAPE EDGE LIMITS
- PERIMETER LANDSCAPE EDGE CONTINUES
- CREDITED LANDSCAPE ISLAND
- REFORESTATION AREA
- PROPOSED SEPTIC FIELD

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/26/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
LANDSCAPE PLAN

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

7.24.03
DATE

STATE OF MARYLAND 830 DAVID T. DOWS ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO :	22516/2-0/ENGR L200LND
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	29 OF 51

SDP-03-90

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MATCH LINE SEE SHEET 32

MATCH LINE SEE SHEET 31

MATCH LINE SEE SHEET 28

PERIMETER 2 (TYPE C)

PERIMETER 802' VEGETATION

CREDIT: EXISTING 905'

PERIMETER 2 (TYPE A)

1891'

10-5

PS-7

QP-3

PS-6

QP-3

CF-4

PS-10

FP-3

CV-4

PS-5

AR-3

PA-7

FP-3

PA-12

QP-2

FP-1

CV-3

30' BRL & USE SETBACK

30' BUILDING RESTRICTION LINE

N 602800

E 1310900

N 602200

E 1310300

N/F
C.V.B. Properties, Inc.
Map number 8
Parcel 109
Liber 1830, Folio 280

N/F
Howard County, Maryland
Map number 8
Parcel 168
Liber 847, Folio 602

LEGEND

- EX. TREELINE
- PROP. TREELINE
- PROPERTY LINE
- WETLANDS AND 25' BUFFER
- PERENNIAL STREAM AND 75' BUFFER
- CONTOUR LINES
- EX. BUILDING
- PROP. SHADE TREE
- PROP. EVERGREEN TREE
- PROP. ORNAMENTAL TREE
- PROP. SHRUBS
- LANDSCAPE REQUIREMENT (AR-5)
- BIORETENTION PLANTING (LG 9)
- SWM POND PLANTING (AR-3)
- AMENITY PLANTING (FP-3)
- PERIMETER LANDSCAPE EDGE LIMITS
- PERIMETER LANDSCAPE EDGE CONTINUES
- CREDITED LANDSCAPE ISLAND
- REFORESTATION AREA
- PROPOSED SEPTIC FIELD

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 8/26/03

CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

LANDSCAPE PLAN

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

7-24-03
DATE

STATE OF MARYLAND — 830 — DAVID T. DOWS — REGISTERED PROFESSIONAL ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO :	22516/2-0/ENGR L203LND
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	30 OF 51

SDP-03-90

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LEGEND

EX. TREELINE	
PROP. TREELINE	
PROPERTY LINE	
WETLANDS AND 25' BUFFER	
PERENNIAL STREAM AND 75' BUFFER	
CONTOUR LINES	
EX. BUILDING	
PROP. SHADE TREE	
PROP. EVERGREEN TREE	
PROP. ORNAMENTAL TREE	
PROP. SHRUBS	
LANDSCAPE REQUIREMENT	AR-3
BIORETENTION PLANTING	LS 3
SWM POND PLANTING	AR-3
AMENITY PLANTING	FP-3
PERIMETER LANDSCAPE EDGE LIMITS	
PERIMETER LANDSCAPE EDGE CONTINUES	
CREDITED LANDSCAPE ISLAND	
REFORESTATION AREA	
PROPOSED SEPTIC FIELD	

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

[signature] 8-22-03
COUNTY HEALTH OFFICER DATE
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[signature] 8/24/03
DIRECTOR DATE

[signature] 8/20/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE

[signature] 8/27/03
CHIEF, DIVISION OF LAND DEVELOPMENT HB DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

LANDSCAPE PLAN

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

7.24.03
DATE

STATE OF MARYLAND 830 DAVID T. DOWS

DAVID T. DOWS #830

DESIGNED BY : K.L.S.
DRAWN BY: K.L.S.
PROJECT NO : 22516/2-0/ENGR L202LND
DATE : JULY 28, 2003
SCALE : 1" = 40'
DRAWING NO. 31 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\L202LND.dwg, Layout1, 07/24/2003 07:32:19 AM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

MATCH LINE SEE SHEET 30

PLANTING SPECIFICATIONS

1. Plants, related material, and operations shall meet the detailed description, as given on the plans and as described herein. Where discrepancies exist between Standards & Guidelines referenced within these specifications and the Howard County Landscape Manual, the latter takes precedence.

2. All plant material, unless otherwise specified, that is not nursery grown, uniformly branched, does not have a vigorous root system, and does not conform to the most recent edition of the American Association of Nurserymen (AAN) Standards will be rejected. Plant material that is not healthy, vigorous, free from defects, decay, disfiguring roots, sunscald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements will be rejected. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will be rejected. All B & B plants shall be freshly dug; no healed-in plants or plants from cold storage will be accepted.

3. Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to the most recent edition of the "Landscape Specification Guidelines by the Landscape Contractors Association of MD, DC, & VA", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects.

4. Contractor shall guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section on the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

5. Contractor shall be responsible for notifying all relevant and appropriate utility companies, utility contractors, and "Miss Utility" a minimum of 48 hours prior to the beginning of any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Major changes will require the approval of the landscape architect. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

6. Protection of existing vegetation to remain shall be accomplished via the temporary installation of 4 foot high snow fence at the drip line, see detail.

7. Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction. Do not plant Pinus strobus or XCupressacyparis leylandii between November 15 and March 15. Landscape plants are not to be installed before site is graded to final grade.

8. Contractor to regrade, fine grade, sod, hydroseed and straw mulch all areas disturbed by their work.

9. Bid shall be based on actual site conditions. No extra payment shall be made for work arising from actual site conditions differing from those indicated on drawings and specifications.

10. Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence. Where discrepancies on the plan exist between the symbols and the callout leader, the number of symbols take precedence.

11. All shrubs and groundcover areas shall be planted in continuous planting beds, prepared as specified, unless otherwise indicated on plans. (See Specification 13). Beds to be mulched with minimum 2" and maximum 3" of composted, double-shredded hardwood mulch throughout.

12. Positive drainage shall be maintained on planting beds (minimum 2 percent slope).

13. Bed preparation shall be as follows: Till into a minimum depth of 6" 1 yard of Compro or Leafgro per 200 SF of planting bed, and 1 yard of topsoil per 100 SF of bed. Add 3 lbs of standard 5-10-5 fertilizer per cubic yard of planting mix and till. Ericaceous plants (Azaleas, Rhododendrons, etc.): top dress after planting with iron sulfate or comparable product according to package directions. Taxus baccata 'Repandens' (English weeping yews): Top dress after planting with 1/4 to 1/2 cup lime each.

14. Planting mix: For trees not in a prepared bed, mix 50% Compro or Leafgro with 50% soil from tree hole to use as backfill, see tree planting detail.

15. Weed & insect control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. For tree planting, apply a pre-emergent on top of soil and root ball before mulching. Caution: For areas to be planted with a ground cover, be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated. Maintain the mulch weed-free for the extent of the warranty period. Under no circumstances is a pesticide containing chlorpyrifos to be used as a means of pest control.

16. Water: All plant material planted shall be watered thoroughly the day of planting. All plant material not yet planted shall be properly protected from drying out until planted. At a minimum, water unplanted plant material daily and as necessary to avoid dessication.

17. Pruning: Do not heavily prune trees and shrubs at planting. Prune only broken, dead, or diseased branches.

18. All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded, grass seed planted, and covered with straw mulch.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

[signature] 5-22-03
COUNTY HEALTH OFFICER — DATE
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[signature] 8/28/03
DIRECTOR — DATE

[signature] 8/26/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE

[signature] 8/27/03
CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
LANDSCAPE PLAN

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

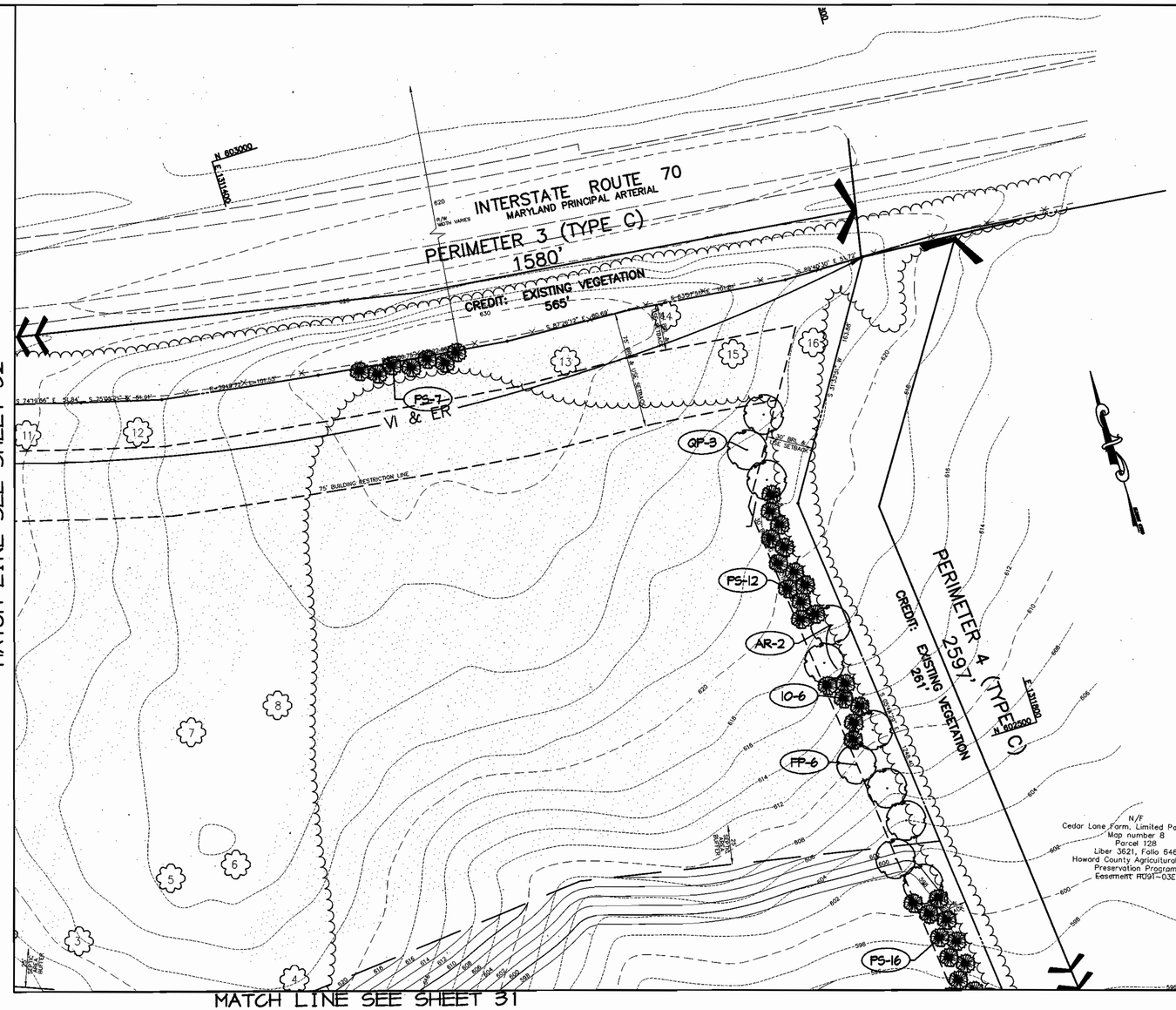
7.24.03
DATE

STATE OF MARYLAND 830 DAVID T. DOWS BOARD OF EXAMINERS OF LANDSCAPE ARCHITECTS
[signature]
DAVID T. DOWS #830

DESIGNED BY : K.L.S.
DRAWN BY: K.L.S.
PROJECT NO : 22516/2-0/ENGR L205LND
DATE : JULY 28, 2003
SCALE : 1" = 40'
DRAWING NO. 32 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\L205LND.dwg, Layout1, 07/24/2003 07:36:49 AM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1



LEGEND

EX. TREELINE
PROP. TREELINE
PROPERTY LINE
WETLANDS AND 25' BUFFER
PERENNIAL STREAM AND 75' BUFFER
CONTOUR LINES
EX. BUILDING
PROP. SHADE TREE
PROP. EVERGREEN TREE
PROP. ORNAMENTAL TREE
PROP. SHRUBS
LANDSCAPE REQUIREMENT — AR-3
BIORETENTION PLANTING — LS / S
SWM POND PLANTING — AR-3
AMENITY PLANTING — FP-3
PERIMETER LANDSCAPE EDGE LIMITS
PERIMETER LANDSCAPE EDGE CONTINUES
CREDITED LANDSCAPE ISLAND
REFORESTATION AREA
PROPOSED SEPTIC FIELD

BIORETENTION PLANT LIST

KEY	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	SPACING	ZONE*
LS	12	LIQUIDAMBAR STYRACIFLUA SWEET GUM	2.5'-3' CAL.	B&B	PLANT AS SHOWN	***
MV	9	MAGNOLIA VIRGINIANA SWAMP MAGNOLIA	6'-8' HT.	B&B	PLANT AS SHOWN	***
AA	84	ARONIA ARBUTIFOLIA RED CHOKEBERRY	2.5'-3' HT.	CONT.	PLANT AS SHOWN	***
IV	84	ITEA VIRGINICA 'HENRY'S GARNET' VIRGINIA SWEETSPIRE	2.5'-3' HT.	CONT.	PLANT AS SHOWN	***
EP	323	EUPATORIUM PURPUREA JOE PYE WEED	1 GAL.	CONT.	24" SPACING	****
IB	427	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 GAL.	CONT.	24" SPACING	(1, 2), 3
LC	502	LOBELIA CARDINALIS CARDINAL FLOWER	1 GAL.	CONT.	24" SPACING	1, (2, 3), 4

BIORETENTION PLANT LIST NOTES:
- * HYDROLOGIC ZONES ACCORDING TO APPENDIX A OF THE MARYLAND MODEL STORMWATER MANAGEMENT ORDINANCE JULY 2000.
- ** ALSO KNOWN CAREX STRICTA 'AUREA'
- *** KNOWN TO TOLERATE INNUNDATION AS WELL AS DRY AREAS ACCORDING TO DIRR, MICHAEL A., MANUAL OF WOODY LANDSCAPE PLANTS
- **** COMMONLY USED BIORETENTION SPECIES ACCORDING TO TABLE A.4 IN APPENDIX A OF THE MARYLAND MODEL STORMWATER MANAGEMENT ORDINANCE JULY 2000.

STORMWATER MANAGEMENT POND PLANT LIST

KEY	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	SPACING	ZONE
QM	13	QUERCUS MICHAUXII SWAMP/CHESTNUT OAK	2.5'-3' CAL.	B&B	PLANT AS SHOWN	1, (2,3,4,5)
TD	8	TAXODIUM DISTICHUM BALD CYPRESS	2.5'-3' CAL.	B&B	PLANT AS SHOWN	(1,2),3
CO	36	CEPHALANTHUS OCCIDENTALIS COMMON BUTTONBUSH	2.5'-3' HT.	CONT.	PLANT AS SHOWN	(1,2),3
IL	23	ITEA LAEVIGATA WINTERBERRY HOLLY	2.5'-3' HT.	CONT.	PLANT AS SHOWN	(1,2),3
LA	67	LEUCOTHOE AXILLARIS COASTAL LEUCOTHOE	18-24" SP.	CONT.	24" SPACING	(1,2,3,4),5
IB	625	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 GAL.	CONT.	24" SPACING	(1,2),3
LK	817	LOBELIA KALMII BROOK LOBELIA	1 GAL.	CONT.	24" SPACING	(1,2),3
HU	966	HYDROCOTYLE UMBELLETA PENNYWORT	1 GAL.	CONT.	12" SPACING	(1,2),3

SWM PLANT LIST NOTES:
- * HYDROLOGIC ZONES ACCORDING TO APPENDIX A OF THE MARYLAND MODEL STORMWATER

AMENITY LANDSCAPE PLANT LIST

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AR	1	Acer rubrum 'Red Sunset' Red Sunset Red Maple	2.5'-3' cal.	B&B	Plant as shown
FP	7	Fraxinus pennsylvanica 'Summit' Summit Green Ash	2.5'-3' cal.	B&B	Plant as shown
QP	6	Quercus phellos Willow Oak	2.5'-3' cal.	B&B	Plant as shown
PA	17	Picea abies Norway Spruce	6'-8' ht.	B&B	Plant as shown
PS	18	Pinus strobus Eastern White Pine	6'-8' ht.	B&B	Plant as shown
PK	7	Prunus serrulata 'Kwanzan' Kwanzan Cherry	1.5"-2" cal.	B&B	Plant as shown
GS	14	Gleditsia triacanthos v. inermis 'Shademaster' Shademaster Honeylocust	2.5'-3' cal.	B&B	Plant as shown

SCHEDULE A - PERIMETER LANDSCAPE EDGE

	ADJACENT TO PERIMETER PROPERTIES			ADJACENT TO ROADWAYS	
PERIMETER	2		4	1	3
LANDSCAPE TYPE	A	C	C	B	C
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	1891'	802'	2597'	1840'	1580'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES 205'	YES 261'	YES 92'	YES 565'
CREDIT FOR WALL, FENCE, BERM OR DRIVE AISLE (YES/NO/LINEAR FEET)	NO	NO	NO	NO	NO
LINEAR FEET REMAINING	1891'	547'	2336'	1748'	1015'
NUMBER OF PLANTS REQUIRED					
SHADE TREES	32	15	58	36	25
EVERGREEN TREES	-	30	117	45	51
SHRUBS	-	-	-	-	-
NUMBER OF PLANTS PROVIDED					
SHADE TREES	15	11	48	36	25
EVERGREEN TREES	24	30	117	45	51
SMALL FLOWERING TREES	10	8	20	-	-
SHRUBS	-	-	-	-	-

SUBSTITUTION NOTES:
PERIMETER 2(A): 24 EVERGREEN AND 10 ORNAMENTAL TREES WERE SUBSTITUTED FOR 17 SHADE TREES.
PERIMETER 2(C): 8 ORNAMENTAL TREES WERE SUBSTITUTED FOR 4 SHADE TREES.

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING

PARKING LOT	1
NUMBER OF PARKING SPACES	98
NUMBER OF SHADE TREES REQUIRED (1/20 SPACES)	5
NUMBER OF TREES PROVIDED	
SHADE TREES	5
OTHER TREES (2:1 SUBSTITUTION)	-
NUMBER OF ISLANDS PROVIDED	5

SCHEDULE D - STORMWATER MANAGEMENT PERIMETER LANDSCAPING

S.W.M. POND PERIMETER	1	2
LANDSCAPE TYPE	B	B
LINEAR FEET OF TOTAL PERIMETER	±1,848'	±316'
CREDIT FOR EX. VEGETATION (NO OR YES & %)	NO	NO
CREDIT FOR OTHER PROP. LANDSCAPING (NO OR YES & %)	NO	NO
LINEAR FEET OF REMAINING PERIMETER	1,848'	316'
NUMBER OF TREES REQUIRED:		
SHADE TREES	37	6
EVERGREEN TREES	46	8
NUMBER OF PLANTS PROVIDED		
SHADE TREES	29	6
EVERGREEN TREES	46	8
OTHER TREES (2:1 SUBSTITUTION, 50% MAX.)	16	0

SUBSTITUTION NOTE:
16 SMALL FLOWERING TREES WERE SUBSTITUTED FOR 8 SHADE TREES.

PARKING LOT AND PERIMETER PLANT LIST

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AR	48	Acer rubrum 'Red Sunset' Red Sunset Red Maple	2.5"-3" cal.	B&B	Plant as shown
FP	31	Fraxinus pennsylvanica 'Summit' Summit Green Ash	2.5"-3" cal.	B&B	Plant as shown
PL	24	Platanus acerfolia London Plane Tree	2.5"-3" cal.	B&B	Plant as shown
QP	46	Quercus phellos Willow Oak	2.5"-3" cal.	B&B	Plant as shown
IO	69	Ilex opaca American Holly	5'-6' ht.	B&B	Plant as shown
PA	51	Picea abies Norway Spruce	6'-8' ht.	B&B	Plant as shown
PS	141	Pinus strobus Eastern White Pine	6'-8' ht.	B&B	Plant as shown
CV	8	Chionanthus virginicus White Fringe Tree	8' - 10' ht.	B&B	Plant as shown
CF	11	Cornus florida 'Rubra' Red Flowering Dogwood	8' - 10' ht.	B&B	Plant as shown

STORMWATER MANAGEMENT PERIMETER PLANT LIST

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AR	11	Acer rubrum 'Red Sunset' Red Sunset Red Maple	2.5"-3" cal.	B&B	Plant as shown
BN	18	Betula nigra 'Heritage' Heritage River Birch	2.5"-3" cal.	B&B	Plant as shown
QP	11	Quercus phellos Willow Oak	2.5"-3" cal.	B&B	Plant as shown
IO	84	Ilex opaca American Holly	5'-6' ht.	B&B	Plant as shown
PS	20	Pinus strobus Eastern White Pine	6'-8' ht.	B&B	Plant as shown
CF	16	Cornus florida 'Rubra' Red Flowering Dogwood	8'-10'' ht.	B&B	Plant as shown

GENERAL NOTES:
1) THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
2) FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $105,750.
175 SHADE TREES @ $300 = $52,500
54 ORNAMENTAL TREES @ $150 = $8,100
321 EVERGREEN TREES @ $150 = $48,150
0 SHRUBS @ $30 = $0
3) THIS PLAN SHOWS REQUIRED PERIMETER LANDSCAPING FOR PHASE I AND ALL FUTURE PHASES OF DEVELOPMENT AT WOODMONT ACADEMY. PARKING LOT AND STORMWATER MANAGEMENT LANDSCAPING ARE PROVIDED FOR PHASE I ONLY. FUTURE PHASES WILL BE REQUIRED TO PROVIDE PARKING LOT AND STORMWATER MANAGEMENT LANDSCAPING AS NEEDED TO COMPLY WITH COUNTY REGULATIONS.
4) CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
5) ALL MATERIAL SELECTED SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
6) ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION.
7) AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS SHALL BE OF THE PROPER HEIGHT AND/OR SPREAD REQUIREMENTS IN ACCORDANCE WITH THIS PLAN AND THE HOWARD COUNTY LANDSCAPE MANUAL.
8) NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.

DEVELOPER'S/BUILDER'S CERTIFICATE:

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8/22/03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/28/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/26/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

LANDSCAPE PLAN

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

7.16.03 DATE

STATE OF MARYLAND 830 DAVID T. DOWS ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO :	22516/2-0/ENGR L204LND
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	33 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\L204LND.dwg, Layout1, 07/24/2003 07:35:36 AM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

MATCH LINE SEE SHEET 36

MATCH LINE SEE SHEET 37

MATCH LINE SEE SHEET 35

ChB2

ChB2

ChA

CgC2

ChB2

Ba

ChB2

ChC2

CgC2

ChB2

100-YR FLOOD PLAIN ELEV. 556.93

100-YR FLOOD PLAIN ELEV. 556.93

30' BUILDING RESTRICTION LINE

25' WETLANDS BUFFER

LEGEND

EX. TREELINE

PROPERTY LINE

SOILS - SOIL SURVEY SYMBOL — EldB3 / CgB2

STEEP SLOPES 15-25%

STEEP SLOPES ≥ 25%

CONTOUR LINES

EX. TREE >30"

STAND #

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

8-22-05
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

8/26/03
DIRECTOR — DATE

9/4/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

8/27/03
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
FOREST STAND DELINEATION

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

7-24-03
DATE

STATE OF MARYLAND 830 DAVID T. DOWS ENGINEER

DAVID T. DOWS #830

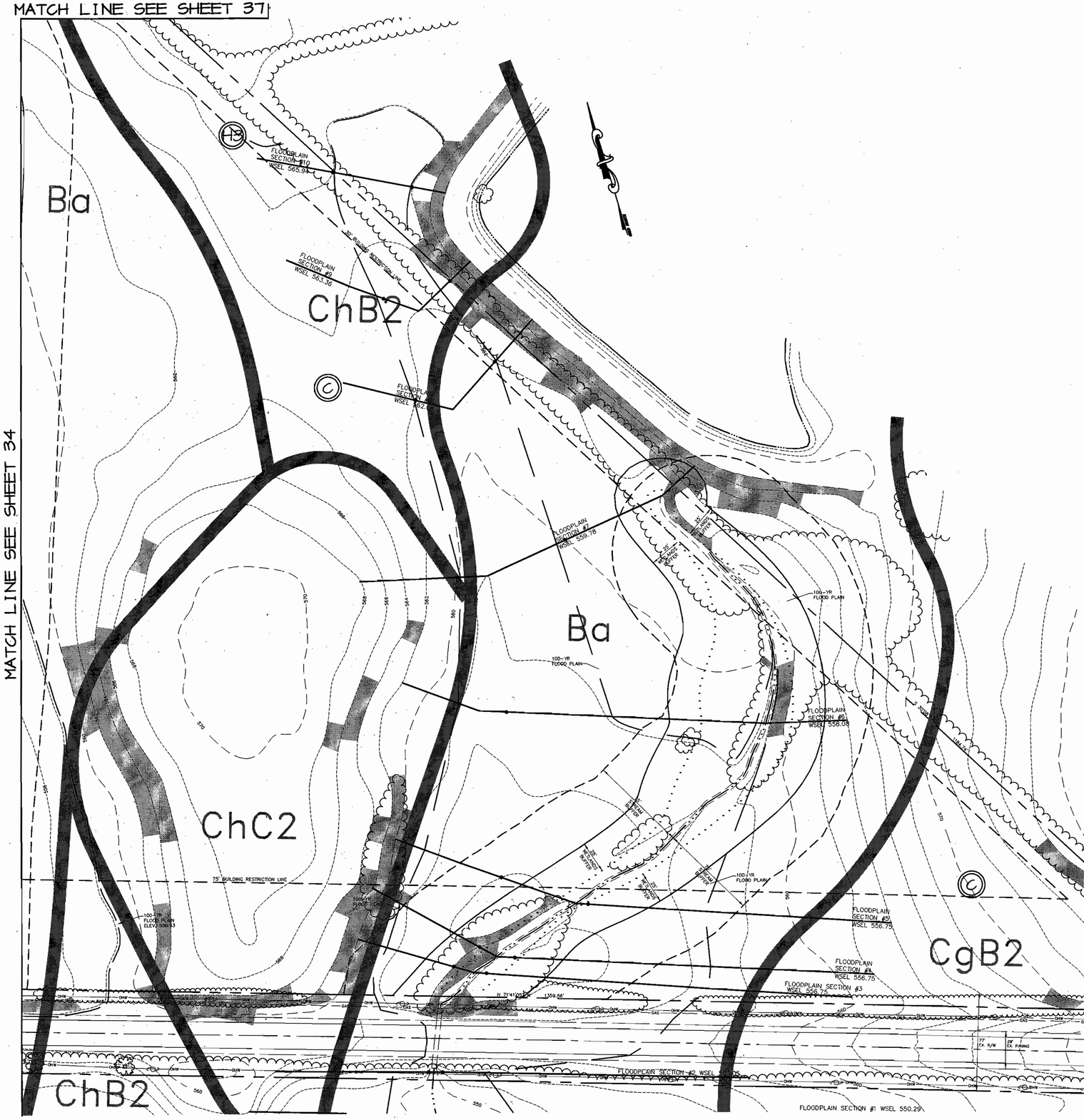
DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO :	22516/2-0/ENGR L201FSD
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	34 OF 51

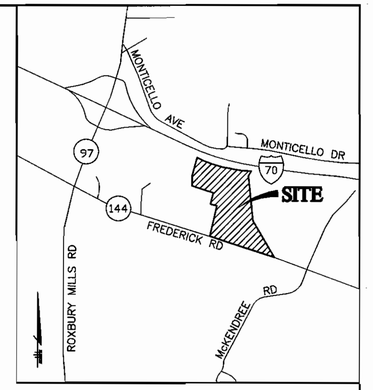
SDP-03-90

P:\project\22516\2-0\Engr\Plans\L201FSD.dwg, Layout1, 07/23/2003 02:02:23 PM, HP1050C Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

MATCH LINE SEE SHEET 37

MATCH LINE SEE SHEET 34





VICINITY MAP
SCALE: 1"=2000'

LEGEND

- EX. TREELINE
- PROPERTY LINE
- SOILS - SOIL SURVEY SYMBOL (EID3 / CgB2)
- STEEP SLOPES 15-25%
- STEEP SLOPES ≥ 25%
- CONTOUR LINES
- EX. TREE >30"
- STAND #

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/20/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAT — DATE 8/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE 5/21/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
FOREST STAND DELINEATION

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

7-24-03
DATE

STATE OF MARYLAND 830 DAVID T. DOWS ENGINEER
DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO	22516/2-0/ENGR L200FSD
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	35 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\L200FSD.dwg, Layout1, 07/23/2003 02:01:37 PM, HP1950C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

MATCH LINE SEE SHEET 38

LEGEND

- EX. TREELINE
- PROPERTY LINE
- SOILS - SOIL SURVEY SYMBOL (EkD3, CgB2)
- STEEP SLOPES 15-25%
- STEEP SLOPES ≥ 25%
- CONTOUR LINES
- EX. TREE >30"
- STAND #

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 8/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
FOREST STAND DELINEATION

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

7-24-03
DATE

STATE OF MARYLAND — 830 — DAVID T. DOWS — REGISTERED PROFESSIONAL ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO :	22516/2-0/ENGR L203FSD
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	36 OF 51

SDP-03-90

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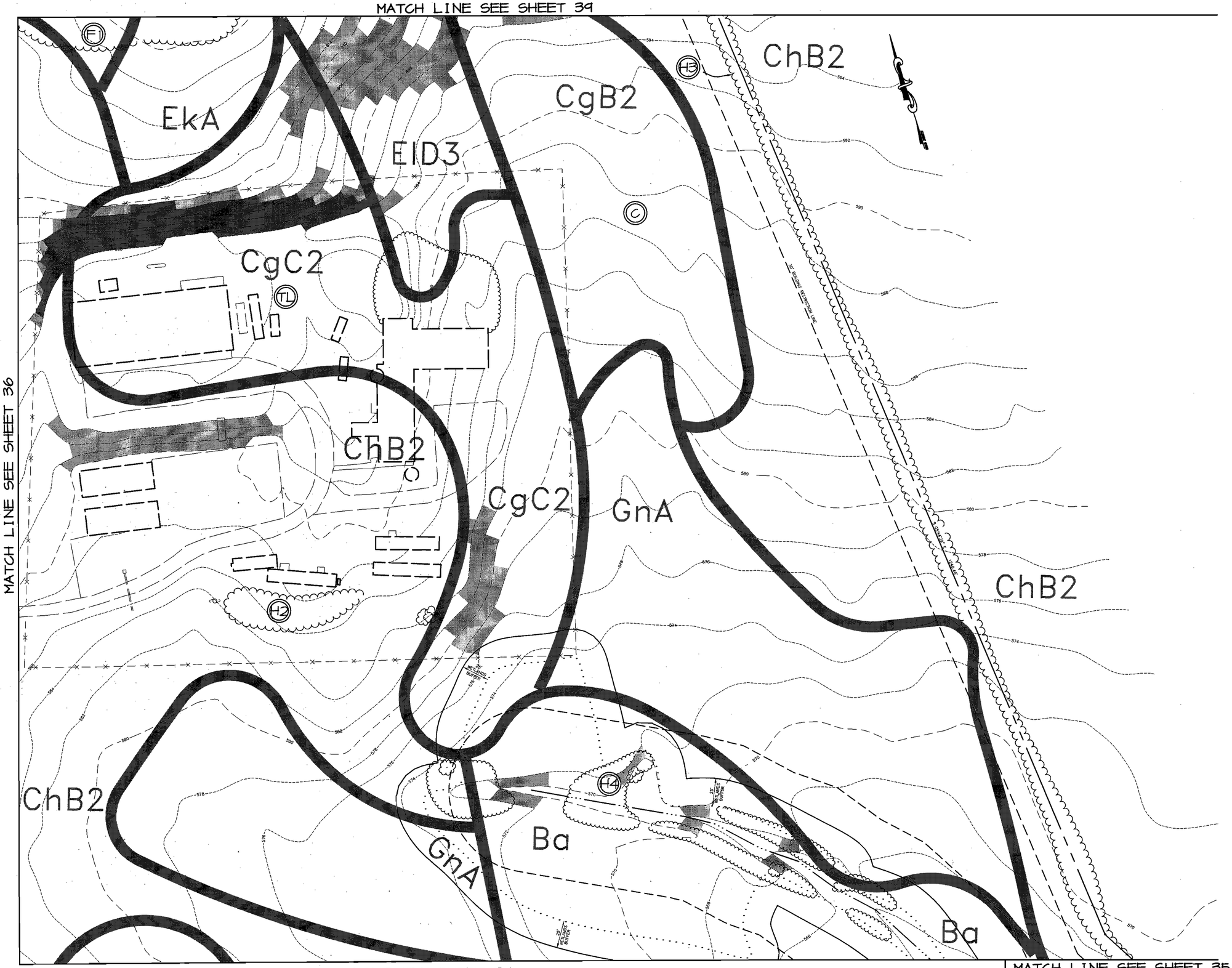
MATCH LINE SEE SHEET 39

MATCH LINE SEE SHEET 36

MATCH LINE SEE SHEET 34

MATCH LINE SEE SHEET 35



LEGEND

EX. TREELINE	
PROPERTY LINE	
SOILS - SOIL SURVEY SYMBOL	EID3 / CgB2
STEEP SLOPES 15-25%	
STEEP SLOPES >25%	
CONTOUR LINES	30' 30'
EX. TREE >30"	
STAND #	F1

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 5-27-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 6/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 6/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
FOREST STAND DELINEATION

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

7.24.03
DATE

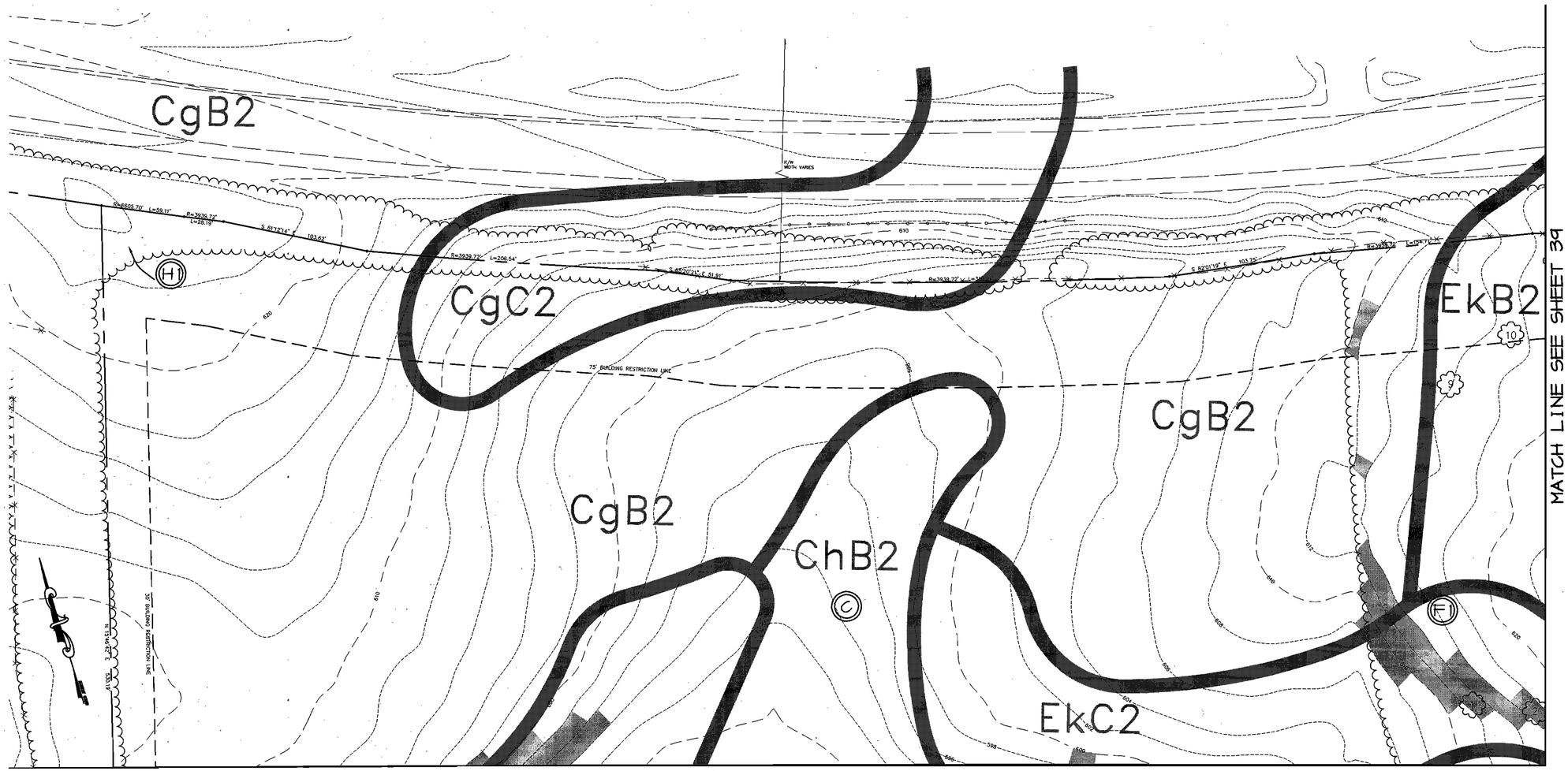
STATE OF MARYLAND 830 DAVID T. DOWS ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO	22516/2-0/ENGR L202FSD
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	37 OF 51

SDP-03-90

P:\projects\22516\2-0\Engr\Plans\L202FSD.dwg, Layout1, 07/23/2003 02:04:14 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1



LEGEND

- EX. TREELINE
- PROPERTY LINE
- SOILS - SOIL SURVEY SYMBOL (EID3 / CgB2)
- STEEP SLOPES 15-25%
- STEEP SLOPES ≥ 25%
- CONTOUR LINES
- EX. TREE >30"
- STAND #

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
FOREST STAND DELINEATION

Patton Harris Rust & Associates, pc
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
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7-24-03
DATE

STATE OF MARYLAND — 830 — DAVID T. DOWS — PROFESSIONAL ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO :	22516/2-0/ENGR L205FSD
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	38 OF 51

SDP-03-90

GENERAL NOTES:

1. THE SITE IS LOCATED ON FREDERICK ROAD. THE SITE CONSISTS OF ONE PARCEL WHICH IS 66.08± ACRES.

2. TOPOGRAPHIC INFORMATION IS FROM AN AERIAL SURVEY. BOUNDARY INFORMATION IS FROM WAS PREPARED BY NAVARRO AND WRIGHT, DATED AUGUST 2002.

3. THE SOILS ON SITE ARE BAILE SILT LOAM (MAPPING UNIT Ba), CHESTER GRAVELLY LOAM (MAPPING UNIT CgB2) CHESTER GRAVELLY LOAM (MAPPING UNIT CgC2), CHESTER SILT LOAM (MAPPING UNIT ChA), HESTER SILT LOAM (MAPPING UNIT ChB2), CHESTER SILT LOAM (MAPPING UNIT ChC2), ELIOAK SILTY CLAY LOAM (MAPPING UNIT EID3), ELIOAK SILT LOAM (EkA), ELIOAK SILT LOAM (EkB2), ELIOAK SILT LOAM (MAPPING UNIT EkC2), GLENVILLE SILT LOAM (MAPPING UNIT GnA). ACCORDING TO THE SOIL SURVEY FOR HOWARD COUNTY, MARYLAND. STEEP SLOPES ARE PRESENT ON THE SITE.

4. THE SITE IS ZONED RCDEO (RURAL CONSERVATION , DENSITY EXCHANGE OPTION).

5. THE SITE IS LOCATED IN THE PATUXENT WATERSHED, MIDDLE PATUXENT RIVER SUBWATERSHED. BOTH WETLANDS AND STEEP SLOPES ARE PRESENT ON SITE.

6. TWO STREAMS ARE LOCATED ON SITE. NO FLOODPLAINS ARE LOCATED ON SITE.

7. THERE IS ONE EXISTING FOREST STAND LOCATED ON SITE.

8. FIELD WORK FOR THIS INVENTORY WAS CONDUCTED IN DECEMBER, 2002 BY GRAHAM HUBBARD, ENVIRONMENTAL TECHNICIAN AND KELLY SEETOO, PLANNER OF PATTON HARRIS RUST & ASSOCIATES, PC.

9. THE SITE HAS A FOREST CONSERVATION THRESHOLD OF 20% AND AN AFFORESTATION THRESHOLD OF 15%.

10. NO CEMETERIES OR HISTORIC STRUCTURES ARE LOCATED ON-SITE. ALL EXISTING STRUCTURES WILL BE REMOVED.

11. NO RARE, THREATENED, OR ENDANGERED PLANTS OR ANIMALS OR CRITICAL HABITATS WERE OBSERVED IN THE FIELD.

12. THIS FOREST STAND DELINEATION (FSD) HAS BEEN PREPARED IN ACCORDANCE WITH HOWARD COUNTY REGULATIONS.

SOILS CHART

SOILS GROUP	MAP SYMBOL	NAME	STRUCTURAL LIMITATIONS DWELLINGS	EROSION HAZARD	HYDRIC	SLOPE (%)
D	Ba	BAILE SILT LOAM	SEVERE	--	YES	--
B	CgB2	CHESTER GRAVELLY LOAM	SLIGHT	MODERATE	NO	3-8%
B	CgC2	CHESTER GRAVELLY LOAM	MODERATE	MODERATE	NO	8-15%
B	ChA	CHESTER SILT LOAM	SLIGHT	–	NO	0-3%
B	ChB2	CHESTER SILT LOAM	SLIGHT	MODERATE	NO	3-8%
B	ChC2	CHESTER SILT LOAM	MODERATE	MODERATE	NO	8-15%
C	EID3	ELIOAK SILTY CLAY LOAM	MODERATE/SEVERE	SEVERE	NO	12-25%
C	EkA	ELIOAK SILT LOAM	SLIGHT	--	NO	0-3%
C	EkB2	ELIOAK SILT LOAM	MODERATE	MODERATE	NO	3-8%
C	EkC2	ELIOAK SILT LOAM	MODERATE/SEVERE	MODERATE	NO	8-15%
C	GnA	GLENVILLE SILT LOAM	MODERATE	--	NO*	0-3%

* SOIL MAY CONTAIN HYDRIC INCLUSIONS

SITE TABULATIONS:

TOTAL SITE AREA: 66.08 Ac.±
AREA TO BE DEDICATED FOR PUBLIC ROAD: 0.5 Ac±
NET SITE AREA: 65.58 Ac.±
EXISTING FOREST: 2.62 Ac.
EXISTING ZONING: RCDEO

PLANT COMMUNITY SUMMARY

SYMBOL	COMMUNITY	AREA
F1	FOREST	2.62 AC±
H1	HEDGE ROW	.45 AC±
H2	HEDGE ROW	.07 AC±
H3	HEDGE ROW	1.15 AC±
H4	HEDGE ROW	.57 AC±
C	CROPS	56.44 AC±
TL	TREE LAWN-IMPERVIOUS AREA	4.8 AC±

FOREST STAND 1 – NARRATIVE :

The only stand on site located on the Northern edge and occupies about 2.6± acres. The trees in this stand are typical of those trees found in the Chestnut Oak Forest Association. The stand is mature, primarily comprised of a deciduous canopy, and the overall condition of the stand is good. The tree cover in this stand is fairly dense with a canopy closure of 80%. The understory is also fairly open with a mix of exotic invasive species and downed trees and woody debris. Several specimen trees were located in this stand.

Chestnut Oaks have established themselves as the dominant tree with a 50% canopy dominance. Red Oak is the codominant species and comprises about 40% of the canopy. White Oak and Black Cherry are also found in the stand. The average diameter at breast height (dbh) varies from 2" to 44".

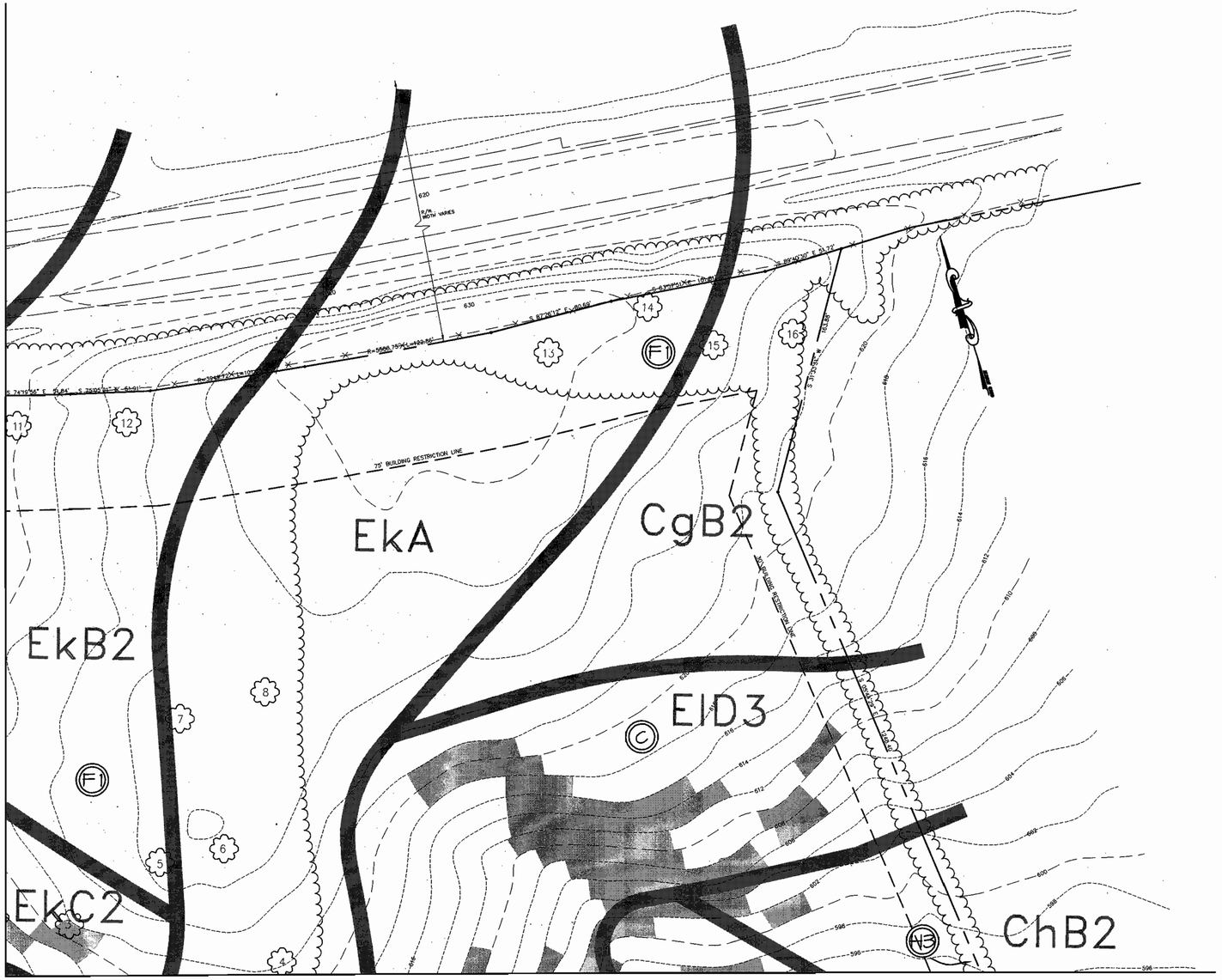
The understory is primarily comprised of a mix of Black Cherry, Poison Ivy, Multiflora Rose, and Japanese Honeysuckle. The invasive plant species include Poison Ivy, Multiflora Rose and Japanese Honeysuckle. The forest floor in this stand is covered by leaf litter, downed woody debris, Multiflora Rose and Japanese Honeysuckle. Downed woody debris occupies approximately 15% of the ground plane.

No portion of this stand is encumbered by the 100 year floodplain, wetland buffers, or environmentally sensitive areas. The preservation priority of the forest is moderate when comparing the lack of environmentally sensitive areas against the maturity of the stand and its high quality vegetation.

EX. TREE >24" DBH KEY

SYMBOL	DESCRIPTION	TO REMAIN IN PHASE 1
1	32 " Red Oak	No
2	33" Chestnut Oak	No
3	35" Chestnut Oak	No
4	30" Red Oak	No
5	32" Chestnut Oak	No
6	44" Red Oak	No
7	32" Red Oak	No
8	36" Red Oak	No
9	30" White Oak	No
10	34" Red Oak	No
11	31" Red Oak	No
12	32" Chestnut Oak	No
13	39" Chestnut Oak	No
14	40" twin Red Oak	No
15	30" Red Oak	No
16	44" twin Chestnut Oak	Yes

P:\project\22516\2-0\Engr\Plans\L205FSD.dwg, Layout1, 07/23/2003 02:04:51 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1



LEGEND

- EX. TREELINE
- PROPERTY LINE
- SOILS - SOIL SURVEY SYMBOL (EID3 / CgB2)
- STEEP SLOPES 15-25%
- STEEP SLOPES ≥ 25%
- CONTOUR LINES
- EX. TREE >30"
- STAND ®

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/14/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MBJ — DATE 8/14/03

CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE 7/23/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
FOREST STAND DELINEATION

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

7.24.03
DATE

STATE OF MARYLAND 830 DAVID T. DOWS PROFESSIONAL ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO :	22516/2-0/ENGR L204FSD
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	39 OF 51

SDP-03-90

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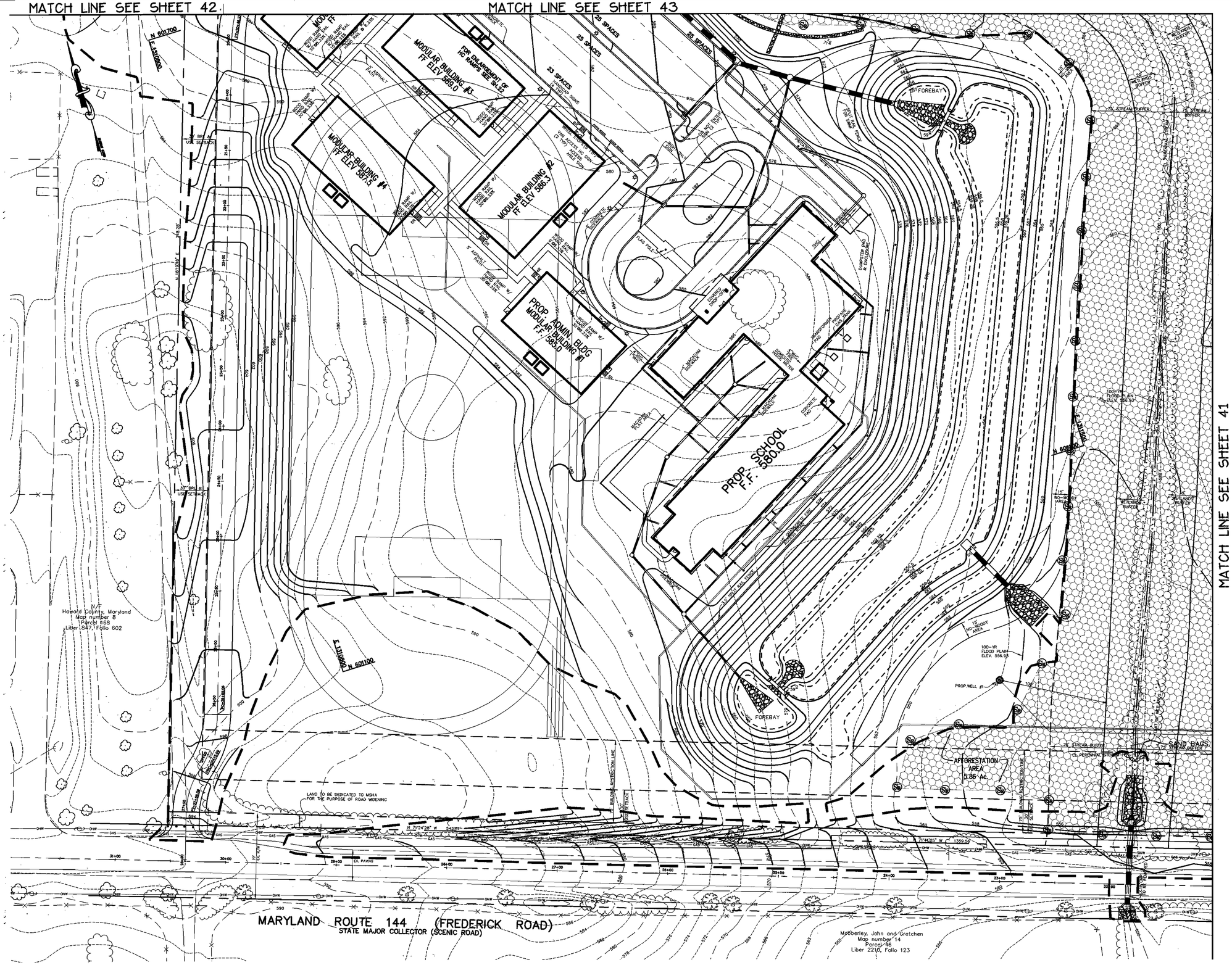
MATCH LINE SEE SHEET 42

MATCH LINE SEE SHEET 43

MATCH LINE SEE SHEET 41



LEGEND

- LIMIT OF DISTURBANCE
- EX. SPECIMEN TREES (40" DIA)
- EX. TREELINE
- PROP. TREELINE
- PROP. REFORESTATION AREA
- REFORESTATION AREA SIGNAGE
- PROPOSED SEPTIC FIELD

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/26/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

FOREST CONSERVATION PLAN

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

7.24.03 DATE

STATE OF MARYLAND — 830 — DAVID T. DOWS — REGISTERED PROFESSIONAL ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO	22516/2-0/ENGR L301FCP
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	40 OF 51

SDP-03-90

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MATCH LINE SEE SHEET 43

MATCH LINE SEE SHEET 40

MARYLAND ROUTE 144 (FREDERICK ROAD)
STATE MINOR COLLECTOR (SCENIC ROAD)

WOODMONT DRIVE
PRIVATE DRIVE

BIO-RETENTION FACILITY #3

AFFORESTATION AREA 4.00 AC.

AFFORESTATION AREA 5.86 AC.

N/F
Cedar Lane Farm, Limited Partnership
Map number 8
Parcel 128
Liber 3621, Folio 646
Howard County Agricultural Land
Preservation Program
Easement HO91-03E

Mobberley John and Gretchen
Map number 14
Parcel 46
Liber 2270, Folio 123

F.F. 566.5
PROP. PUMP HOUSE

PROP. WELL #2

SAND BAGS

LAND TO BE DEDICATED TO MSHA FOR THE PURPOSE OF ROAD WIDENING

LEGEND

LIMIT OF DISTURBANCE	
EX. SPECIMEN TREES	40" OAK
EX. TREELINE	
PROP. TREELINE	
PROP. REFORESTATION AREA	
REFORESTATION AREA SIGNAGE	
PROPOSED SEPTIC FIELD	

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/21/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/19/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/21/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
FOREST CONSERVATION PLAN

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

7-24-03
DATE

STATE OF MARYLAND 830 DAVID T. DOWS PROFESSIONAL ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO :	22516/2-0/ENGR L300FCP
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	41 OF 51

SDP-03-90

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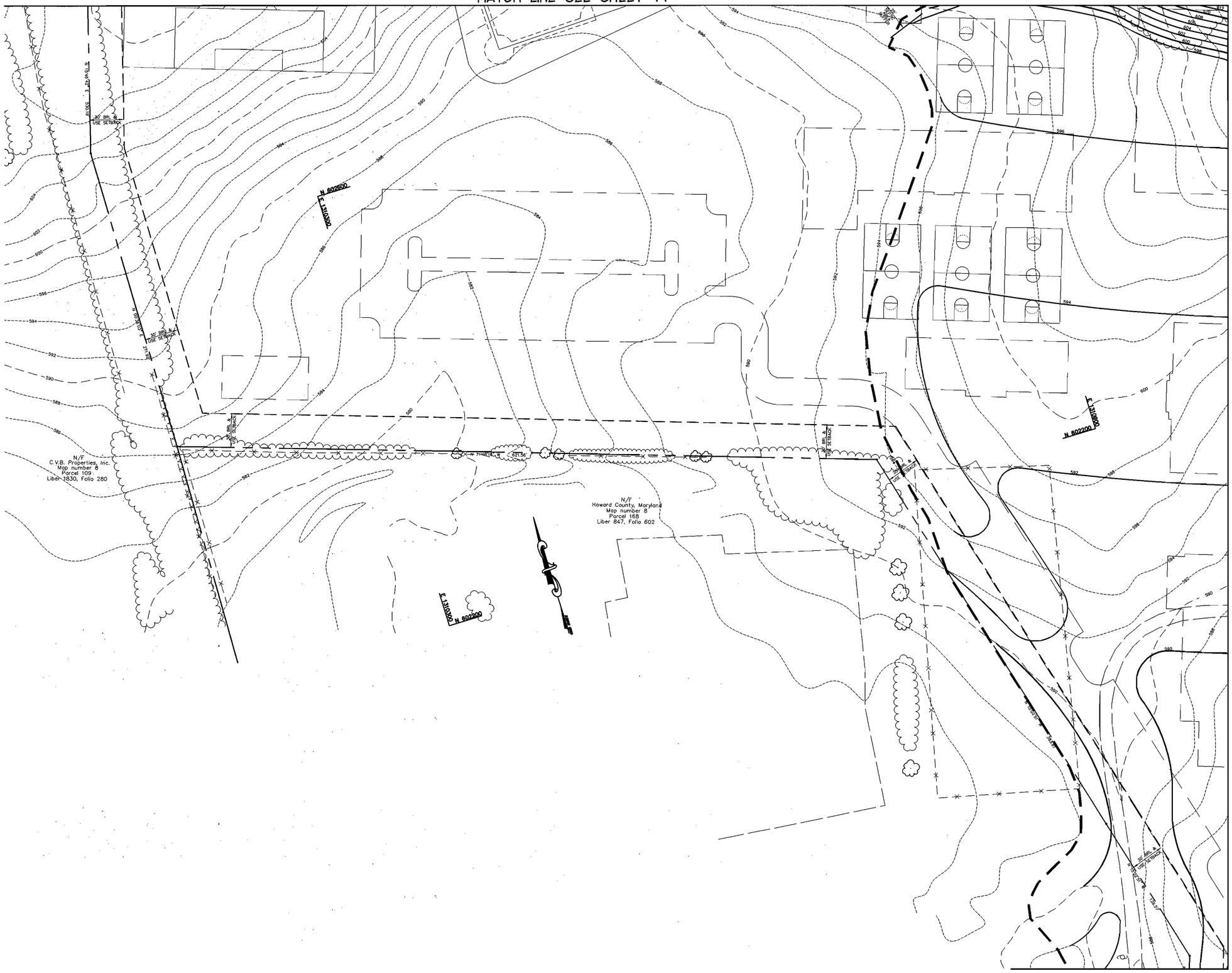
MATCH LINE SEE SHEET 44



MATCH LINE SEE SHEET 43

LEGEND

- LIMIT OF DISTURBANCE
- EX. SPECIMEN TREES (40" CAL)
- EX. TREELINE
- PROP. TREELINE
- PROP. REFORESTATION AREA
- REFORESTATION AREA SIGNAGE
- PROPOSED SEPTIC FIELD

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8/22/03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 4/24/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MRJ — DATE 5/21/03

CHIEF, DIVISION OF LAND DEVELOPMENT MB — DATE 5/21/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

FOREST CONSERVATION PLAN

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

7-24-03
DATE

STATE OF MARYLAND — 830 — DAVID T. DOWS — REGISTERED PROFESSIONAL ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO :	22516/2-0/ENGR L303FCP
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	42 OF 51

SDP-03-90

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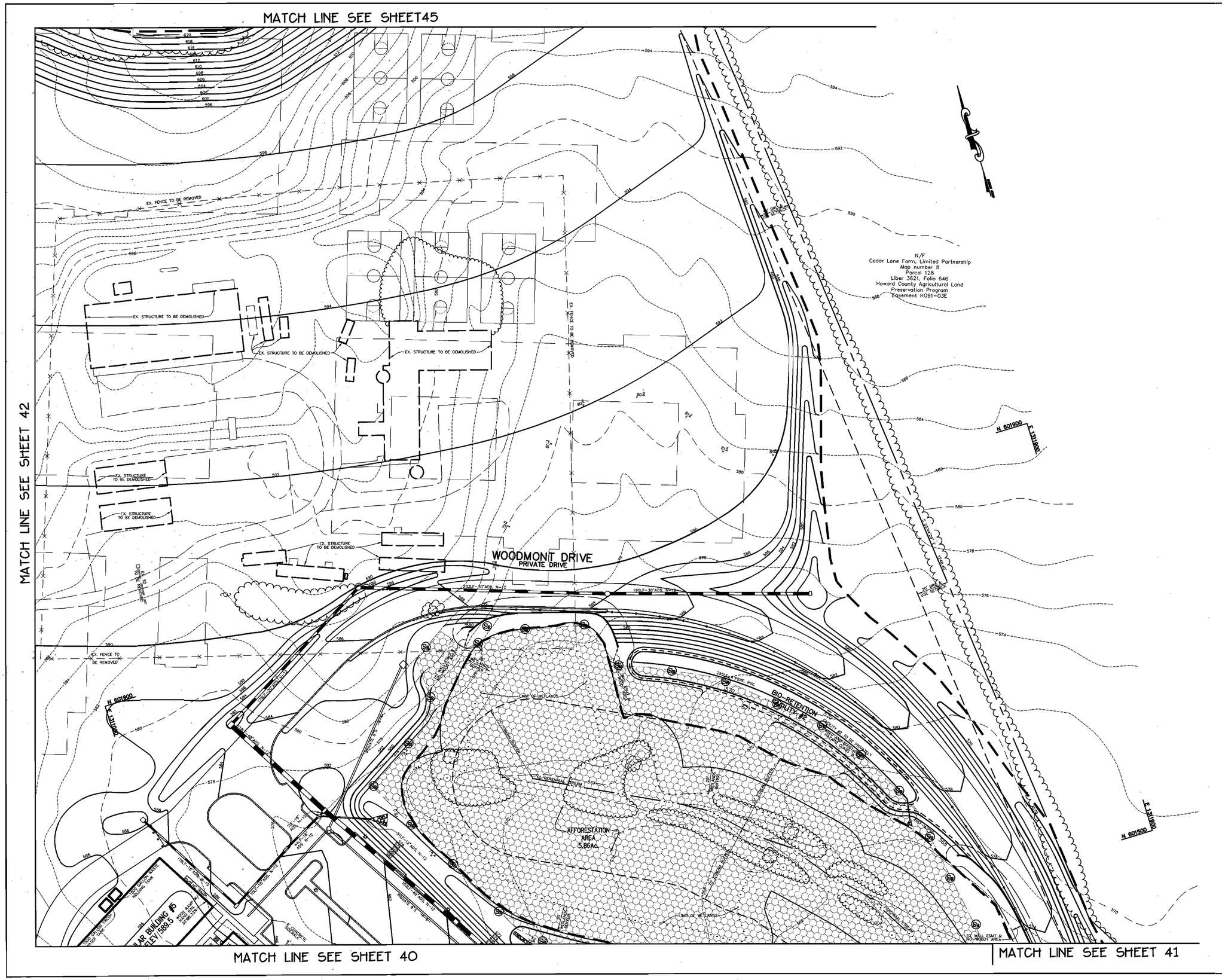

LEGEND

LIMIT OF DISTURBANCE	
EX. SPECIMEN TREES	40" OAK
EX. TREELINE	
PROP. TREELINE	
PROP. REFORESTATION AREA	
REFORESTATION AREA SIGNAGE	
PROPOSED SEPTIC FIELD	

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER — DATE 8-22-03
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/28/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAS — DATE 8/26/03

CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
FOREST CONSERVATION PLAN

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

7-24-03
DATE

STATE OF MARYLAND 830 DAVID T. DOWS PROFESSIONAL ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO :	22516/2-0/ENGR L302FCP
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	43 OF 51

SDP-03-90

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MATCH LINE SEE SHEET 45

MATCH LINE SEE SHEET 42

LEGEND

LIMIT OF DISTURBANCE	
EX. SPECIMEN TREES	40" OAK
EX. TREELINE	
PROP. TREELINE	
PROP. REFORESTATION AREA	
REFORESTATION AREA SIGNAGE	
PROPOSED SEPTIC FIELD	

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

GENERAL NOTES:

1. THIS PLAN HAS BEEN PREPARED USING FIELD RUN TOPOGRAPHY. PORTIONS OF THE EXISTING TREELINE AND SPECIMEN TREE LOCATIONS WERE FIELD APPROXIMATED.

2. NO CRITICAL HABITATS OF RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.

3. NO TREES, SHRUBS, OR PLANTS IDENTIFIED AS RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.

4. THERE ARE NO KNOWN CEMETERIES OR BURIAL PLOTS LOCATED ON THE SITE, ACCORDING TO THE HOWARD COUNTY CEMETERIES INVENTORY.

5. EXISTING STRUCTURES ARE PRESENT ON THE SITE AS SHOWN. ALL EXISTING STRUCTURES WILL BE REMOVED.

6. THIS SITE CONTAINS ONE HYDRIC SOIL, BAILE SILT LOAM (Ba). ONE SOIL WITH POSSIBLE HYDRIC INCLUSIONS, GLENVILLE SILT LOAM (GnA) IS ALSO PRESENT ON THE SITE.

7. THE FSD, DATED JANUARY 8, 2003, HAS BEEN PREPARED BY PATTON HARRIS RUST & ASSOCIATES IN CONJUNCTION WITH THIS PROJECT.

8. JUSTIFICATION FOR FOREST REMOVAL: IN ORDER TO CONSTRUCT PRIVATE SEPTIC SYSTEMS THE FORESTED AREA NEEDS TO BE CLEARED.

9. THE HOWARD COUNTY FOREST CONSERVATION MANUAL SUPERCEDES ANY DISCREPANCIES BETWEEN THE MANUAL AND THESE PLANS.

10. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION.

11. THE FOREST CONSERVATION OBLIGATION FOR THE PROPOSED SITE DEVELOPMENT HAS BEEN MET BY AFFORESTING 9.86± AC OF FOREST ON SITE AND PAYMENT OF A FEE-IN-LIEU FOR THE REMAINING OBLIGATION. SURETY IN THE AMOUNT OF $205,571 (411,502 SF x $0.50) HAS BEEN POSTED FOR THE AFFORESTATION. 18,000 SF OF AFFORESTATION (18 SHADE TREES @ 400 SF AND 48 EVERGREEN TREES @ 225 SF) HAS BEEN BONDED AS PART OF THE LANDSCAPE PLAN TO MEET PERIMETER LANDSCAPE REQUIREMENTS. PAYMENT OF FEE-IN-LIEU IN THE AMOUNT OF $59,242 (118,483 x $0.50 SF) IS PROPOSED FOR THE REMAINING OBLIGATION OF 2.72 AC. A FOREST CONSERVATION EASEMENT WILL BE ESTABLISHED OVER THE AFFORESTATION AREAS.

12. THE REFORESTATION 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.

13. BEARINGS AND DISTANCES FOR THE FOREST CONSERVATION EASEMENT ARE PROVIDED ON AN EASEMENT PLAT AS PLAT NO. 16129, DATED 8/20/2003.

FOREST CONSERVATION SEQUENCE OF OPERATIONS

1. Prior to beginning any grading operations on this site or on a respective lot, there shall be a preconstruction meeting held at the site which is to include the Contractor and representatives from Patton Harris Rust & Associates, pc. The Howard County Department of Planning and Zoning (DPZ) and the owner will be notified by the Contractor as to the time and place of the field meeting, should they wish to send a representative. The purpose of this meeting will be to review the approved FCP and to field verify the correct Limits of Disturbance (LOD).

2. After site grading, stormwater management construction and parking lot construction have been completed, reforestation can begin. Planting shall follow specifications at right.

3. Upon completion of planting, a 2 year (24 month) maintenance and replacement period shall begin, as noted in the specifications.

PLANTING SPECIFICATIONS

AFFORESTATION OR REFORESTATION MAINTENANCE AND REPLACEMENT REQUIREMENTS

A two year (24) month maintenance and replacement warranty period is required for all newly planted materials. The maintenance and replacement warranty period shall commence upon the date of the written acceptance by the Owner of the planted areas. A written warranty will be delivered to the Owner upon acceptance of the planted areas. Maintenance and replacement shall be provided by the Contractor responsible for the initial planting operations and related work. All landscape plant material included as forest conservation credits shall be covered under this maintenance and replacement warranty period.

I. MAINTENANCE: The Contractor shall field check the newly planted area(s) and shall provide the following maintenance items in accordance with the following schedule which shall begin after the completion and acceptance of the initial Afforestation or Reforestation planting.

II. MAINTENANCE ITEMS:

1. Watering: Watering of all newly planted materials once per week as weather permits during the entire initial growing season. Following the initial growing season, watering shall be done on an "as needed" basis depending on the frequency of natural rainfall. During the months of July and August and periods of severe drought, all newly planted materials shall be watered thoroughly once every week. Watering shall be done deeply and slowly using an open end hose or watering probe, at low pressure, allowing the water to be absorbed into the soil until thoroughly saturated. The watered area shall include the whole root zone as the tree becomes more established.

2. Fertilizing: Fertilizing shall be applied only after the soil has been tested to determine its needs. Organic fertilizer should be applied in accordance with the amounts recommended in the soil analysis report. No fertilizing of newly planted trees shall be done within the first growing season after initial planting. Following the first growing season, apply fertilizer as recommended either in late fall or early spring.

3. Supplemental Mulch: To control undesirable vegetation adjacent to the newly planted materials and to prevent tree roots from drying out, additional mulch shall be placed over the existing mulch field where required. Carefully remove any invasive plants (including the root system) within the mulch fields. Do not damage trees in any way during removal of invasive plants or remulching operations.

4. Pruning: Remove dead, diseased, dying and broken branches from all plant materials. Pruning shall be done cleanly leaving no ragged ends.

III. REPLACEMENT OF DEAD OR DYING MATERIALS:

1. Replacement: Any plant materials which are 25% dead or more shall be replaced during the appropriate spring or fall planting seasons in accordance with the methods indicated in the Planting Specifications. A tree shall be considered dead when the main leader has died back.

2. All replacements shall be plants of the same genus, species and size as specified on the plant list.

3. Contractor shall schedule an inspection of the Afforestation or Reforestation area(s) by a qualified representative of the DPZ and by the qualified professional who prepared the plan, at the beginning and at the end of the growing season to observe any problems, monitor survival rate and specify necessary remedial actions needed to correct existing problems. The inspection should focus on the following items when determining survival potential:

(a) Vigor and threat of competing vegetation (b) Plant structure
(c) Growth rate
(d) Crown development
(e) Trunk conditions and health

IV. PLANT CONDITION CHECK SHEETS

The Contractor shall maintain accurate records on appropriate field data check sheets which shall include all conditions observed relative to the health and potential survival of the plant materials. Such check sheets shall be completed during each scheduled maintenance session during the 24 month management and maintenance program. One copy of the check sheets shall be sent to the Client, one copy to PHRA, and one copy shall be sent to the Howard County Department of Planning and Zoning.

V. SURVIVAL REQUIREMENT

The survival rate for Afforestation and Reforestation areas shall be a minimum of seventy-five percent (75%) of the total number of trees required to be planted per acre under the approved plan.

VI. INSPECTION/CERTIFICATION SCHEDULE

The Contractor shall submit with his bid, a schedule for the work which shall include inspections by PHRA at the conclusion of installation and at the start and conclusion of each growing season during the two-year warranty period.

VII. PENALTY FOR VIOLATION

A site inspection by the Contractor and a representative of PHRA shall take place at the end of the 24 month management and maintenance agreement period. The Contractor shall contact PHRA at least one (1) month in advance of such inspection for coordination. If the survival rate of the Afforestation or Reforestation area(s) falls below the established survival requirements by the end of the 24-month management and maintenance agreement, the remaining amount of the cash bond or other surety may be subject to forfeiture, or other penalties may be imposed.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER 8-27-03 DATE
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

FOREST CONSERVATION PLAN

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

7-24-03
DATE

STATE OF MARYLAND 830 DAVID T. DOWS BOARD OF EXAMINERS OF LANDSCAPE ARCHITECTS

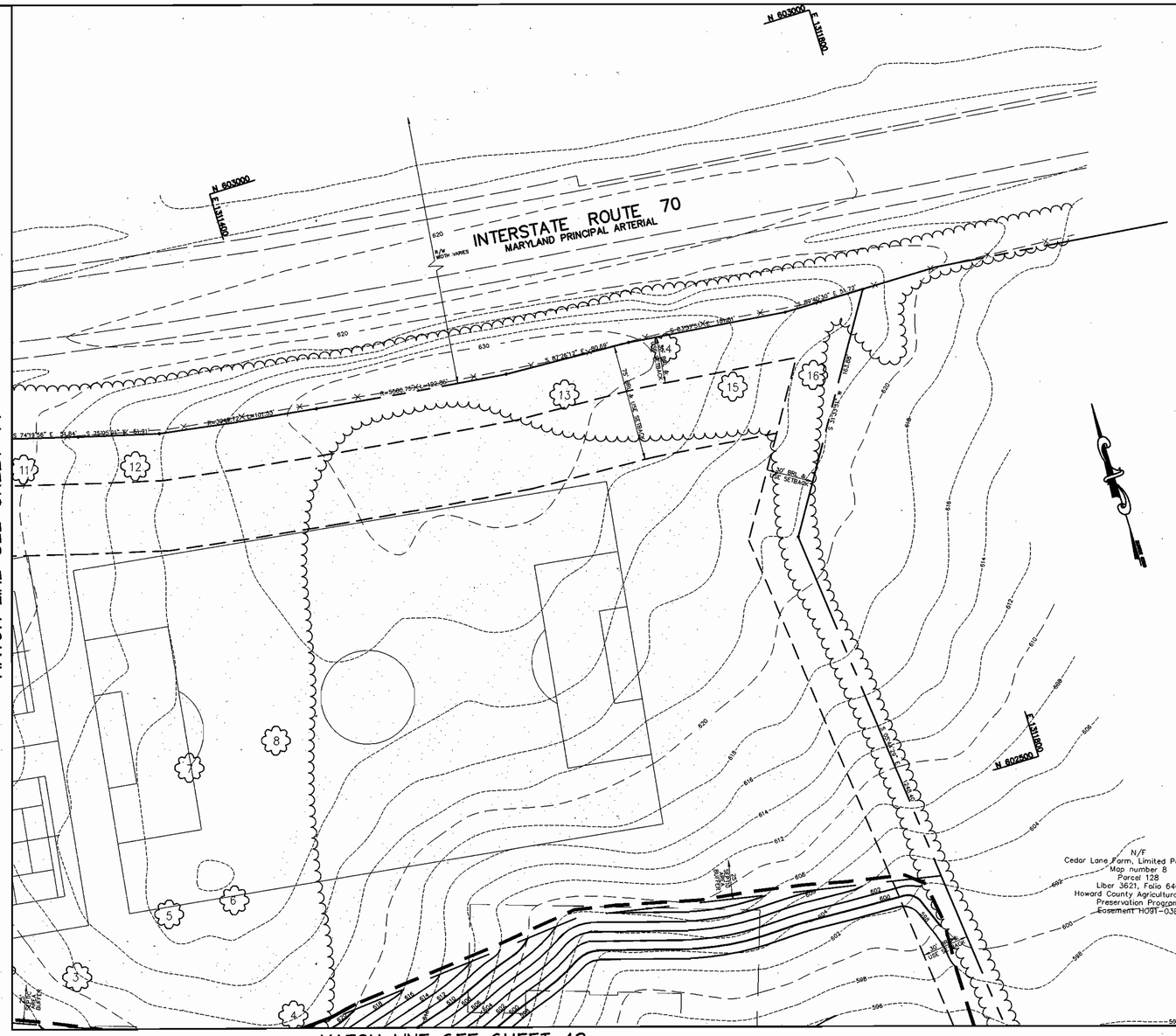
DAVID T. DOWS #830

DESIGNED BY : K.L.S.
DRAWN BY: K.L.S.
PROJECT NO : 22516/2-0/ENGR L305FCP
DATE : JULY 28, 2003
SCALE : 1" = 40'
DRAWING NO. 44 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\L305FCP.dwg, Layout1, 07/23/2003 02:10:30 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1

MATCH LINE SEE SHEET 44



FOREST CONSERVATION PROGRAM

I. OBJECTIVE: IT IS THE OBJECTIVE OF THE REFORESTATION PORTION OF THE PROPOSED WOODMONT ACADEMY TO REPLANT IN THE WETLANDS AND STREAM BUFFERS FOR MAXIMUM ENVIRONMENTAL BENEFIT.

II. PRESERVATION: FOREST PRESERVATION AREAS SHALL BE PERMANENTLY PROTECTED BY FOREST CONSERVATION EASEMENTS.

III. POST CONSTRUCTION MANAGEMENT PRACTICE: A TWO (2) YEAR POST-CONSTRUCTION AND MANAGEMENT PROGRAM TO ENSURE PROBABILITY OF A HIGH SURVIVAL RATE INCLUDES THE FOLLOWING:

MAINTENANCE OF SIGNS, FENCES AND TREE PROTECTION DEVICES TO PREVENT UNWARRANTED INTRUSIONS AND DAMAGE.

CAREFUL REMOVAL OF ALL TEMPORARY STRUCTURES AFTER CONSTRUCTION.

ROUTINE INSPECTIONS OF FOREST CONSERVATION EASEMENTS.

LEGEND

- LIMIT OF DISTURBANCE
- EX. SPECIMEN TREES (40" OAK)
- EX. TREELINE
- PROP. TREELINE
- PROP. REFORESTATION AREA
- REFORESTATION AREA SIGNAGE (S)
- PROPOSED SEPTIC FIELD

Howard County Forest Conservation Worksheet

Project Name: Woodmont Academy
State File #:
Date: November 25, 2002

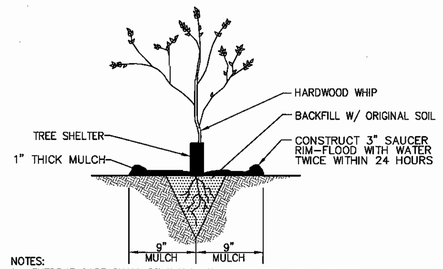
			Acres
Net Tract Area			
A.	*Total Tract Area*	A =	66.42
B.	*Other Deductions*	B =	0.00
C.	*Net Tract Area* Net Tract Area = (A-B-C)	C =	66.42
Land Use Category Institutional			
D.	*Reforestation Threshold* (Net Tract Area X .15%	D =	9.96
E.	*Conservation Threshold* (Net Tract Area X .20%	E =	13.28
Existing Forest Cover			
F.	***Existing Forest Cover within the Net Tract Area***	F =	2.62
G.	*Area of Forest Above Conservation Threshold* If the Existing Forest Cover (F) is greater than Conservation Threshold (G), then G = Existing Forest Cover (F) - Conservation Threshold (E); Otherwise G = 0	G =	0.00
Break Even Point			
H.	*Break Even* (Amount of forest that must be retained so that no mitigation is required) (1) If the area of forest above the Conservation Threshold (G) is greater than zero, then H = (0.2 X the area of forest above Conservation Threshold (G)) + the Conservation Threshold (E) (2) If the area of forest above the Conservation Threshold (G) is equal to zero, then H = Existing Forest Cover (F)	H =	FALSE
I.	*Forest Clearing Permitted Without Mitigation* I = Existing Forest Cover (F) - Break Even Point (H)	I =	2.62
Proposed Forest Clearing			
J.	***Total Area of Forest to be Cleared***	J =	2.62
K.	*Total Area of Forest to be Retained* K = Existing Forest Cover (F) - forest to be cleared (J)	K =	0.00
Planting Requirements			
If the Total Area of Forest to be Cleared (K) is at or above the Breakeven Point (H), no planting is required and no further calculations are necessary (L=0, M=0, N=0, P=0). If not, calculate the planting requirement below.			
L.	*Afforestation for Clearing Above the Conservation Threshold* (1) If the total area of forest to be retained (K) is greater than the Conservation Threshold (E), then L = the area of forest to be cleared (J) X 0.25 or (2) If the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then L = area of forest above Conservation Threshold (G) X 0.25	L =	0.00
M.	*Afforestation for Clearing Below the Conservation Threshold* (1) If Existing Forest Cover (F) is greater than Conservation Threshold (E) and the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then M = 2.0 X (the Conservation Threshold (E) - the forest to be retained (K)) (2) If Existing Forest (F) is less than or equal to the Conservation Threshold (E), then M = 2.0 X Forest to be cleared (J).	M =	5.24
N.	*Credit for Retention Above the Conservation Threshold* If the area of forest to be retained (K) is greater than the Conservation Threshold (E), then N = K - E	N =	0.00
P.	*Total Afforestation Required for clearing below minimum* P = L + M - N	P =	5.24
Q.	*Total Afforestation Required for unforested below minimum* (1) If Existing Forest Cover (F) is less than the Afforestation Threshold (D) then Q = the Afforestation Threshold (D) - the Existing Forest Cover (F)	Q =	7.34
R.	*Total Planting Requirement* R = P + Q	R =	12.58

Notes:
1. Gross Tract Area includes 0.34 acres of off-site disturbance.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.



NOTES:
1. EXTREME CARE SHALL BE TAKEN TO INSURE RETAINED MOISTURE OF THE ROOTS. A MOIST CARRYING CONTAINER SHALL BE USED WHEN TRANSPORTING WHIPS TO THE FIELD.
2. DO NOT SUBMERGE ROOTS OF WHIPS IN WATER OVERNIGHT.

WHIP PLANTING W/ TREE SHELTER DETAIL
NOT TO SCALE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 8-13-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/28/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/10/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/21/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
FOREST CONSERVATION PLAN

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

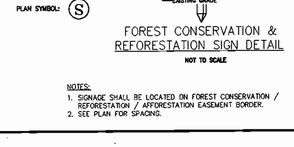
7-24-03
DATE

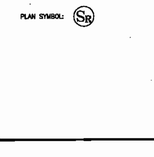
STATE OF MARYLAND — 830 — DAVID T. DOWS — REGISTERED PROFESSIONAL ENGINEER

DAVID T. DOWS #830

DESIGNED BY :	K.L.S.
DRAWN BY:	K.L.S.
PROJECT NO	22516/2-0/ENGR L304FCP
DATE :	JULY 28, 2003
SCALE :	1" = 40'
DRAWING NO.	45 OF 51

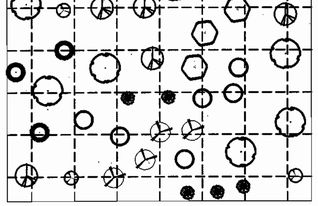
SDP-03-90





FOREST CONSERVATION & REFORESTATION SIGN DETAIL
NOT TO SCALE

NOTES:
1. SIGNAGE SHALL BE LOCATED ON FOREST CONSERVATION / REFORESTATION / AFFORESTATION EASEMENT BORDER.
2. SEE PLAN FOR SPACING.



KEY

TREES

- TREE SPECIES 'A'
- TREE SPECIES 'B'
- TREE SPECIES 'C'
- TREE SPECIES 'D'
- TREE SPECIES 'E'
- TREE SPECIES 'F'
- TREE SPECIES 'G'
- TREE SPECIES 'H'
- TREE SPECIES 'I'

NOTES

1. RANDOMLY LOCATE GROUPS OF PLANT SPECIES, TAKING CARE NOT TO PLANT IN SUCCESSION MORE THAN 4 OF THE SAME SPECIES.
2. THIS DETAIL PROVIDES A HYPOTHETICAL, GRAPHIC DEPICTION OF A PROPOSED LAYOUT FOR NINE DIFFERENT TREE SPECIES (A-I). IT IS NOT MEANT TO BE FOLLOWED EXACTLY. THE PURPOSE IS TO ACHIEVE THE APPEARANCE OF RANDOM SPACING. SEE PLANT LIST FOR ACTUAL NUMBER OF PLANT SPECIES.
3. SEE PLANT LIST FOR ON-CENTER SPACING REQUIREMENTS.

RANDOM PLANTING LAYOUT DETAIL
NOT TO SCALE

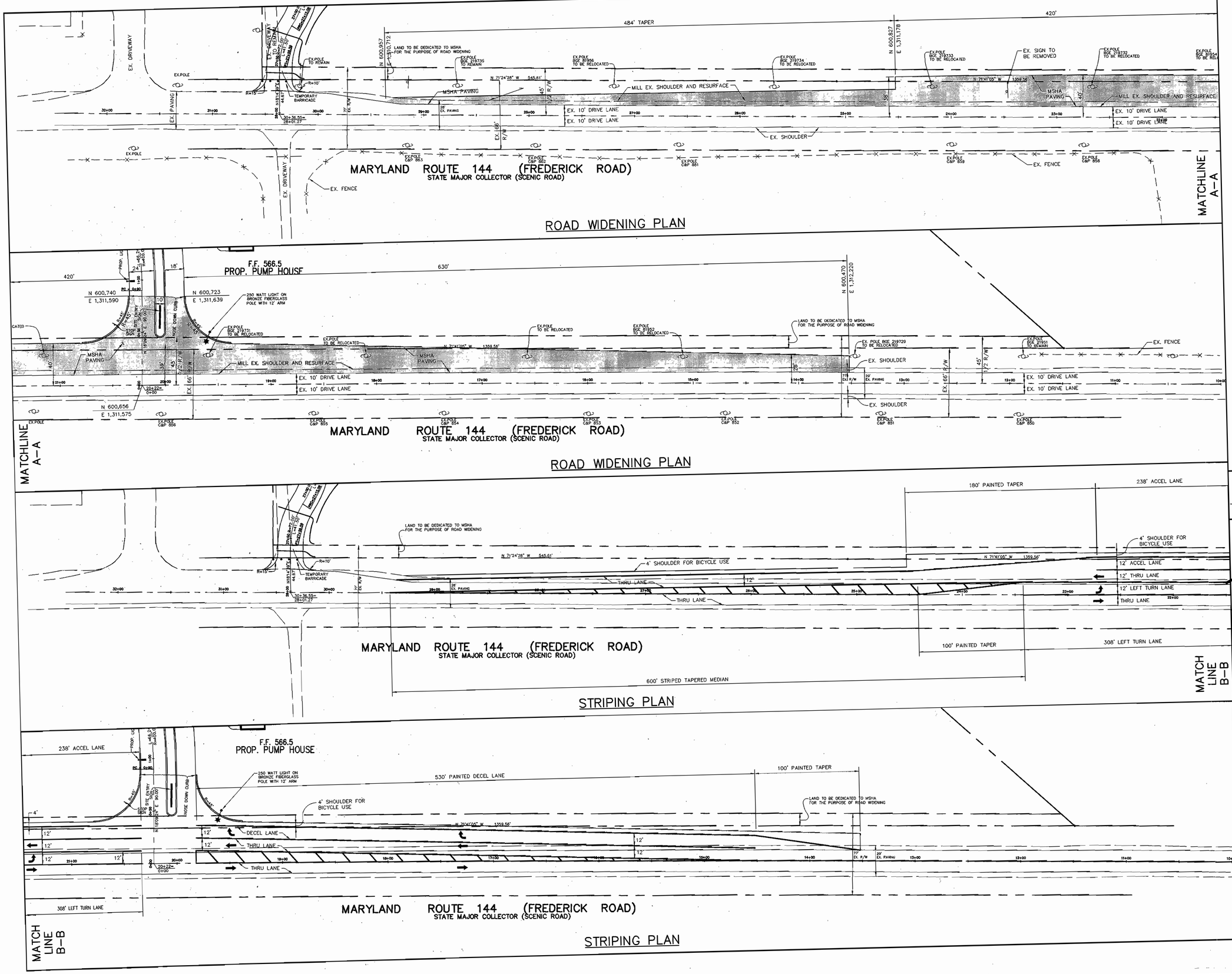
REFORESTATION PLANT LISTS

UPLAND PLANT LIST

QUANTITIES	SCIENTIFIC / COMMON NAME	SIZE	ROOT	REMARKS
367	LIRIODENDRON TULIPIFERA / TULIP TREE		BARE ROOT WITH TREE SHELTERS	PLANT 11' O.C. RANDOM PATTERN
367	FRAXINUS AMERICANA WHITE ASH			
367	ACER RUBRUM / RED MAPLE			
372	QUERCUS ALBA / WHITE OAK			
367	ACER PSEUDOPLATANUS SYCAMORE			
367	QUERCUS COCCINEA SCARLET OAK			
367	QUERCUS ALBA WHITE OAK			
367	QUERCUS PRINUS CHESTNUT OAK			
367	NYSSA SYLVATICA BLACK GUM			

TOTAL: 3308
NOTE: 18,000 SF OF REFORESTATION HAS BEEN BONDED AS PART OF THE LANDSCAPE PLAN TO MEET PERIMETER LANDSCAPING REQUIREMENTS. (18 SHADE @ 400 SF AND 48 EVERGREEN @ 225 SF)

P:\project\22516\2-0\Engr\Plans\L304FCP.dwg, Layout1, 07/23/2003 02:09:53 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1



NOTE: FOR DETAILS AND CROSS-SECTIONS, SEE SHEET 49.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER — DATE 8-22-03
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/28/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
ROAD WIDENING AND STRIPING PLAN

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

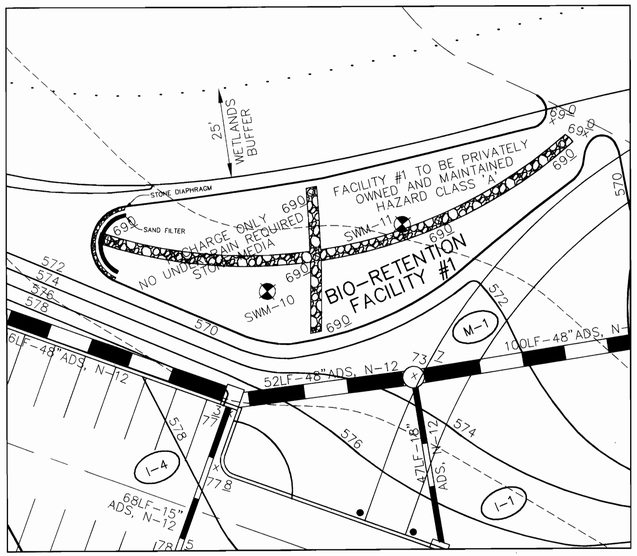
7.28.03
DATE

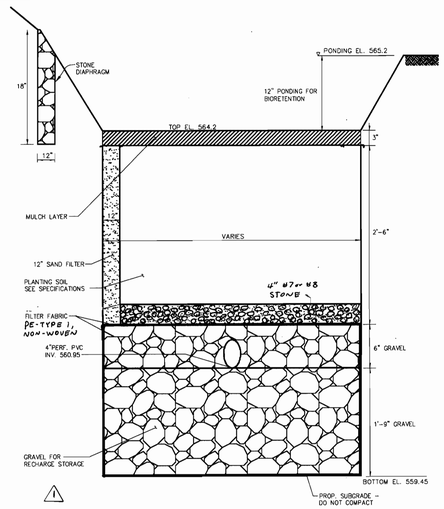
STATE OF MARYLAND — CHRISTOPHER J. REID — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY : C.J.R.
DRAWN BY: DAM
PROJECT NO : 22516/2-0/ENGR C-RD-1
DATE : JULY 28, 2003
SCALE : 1" = 40'
DRAWING NO. 46 OF 51

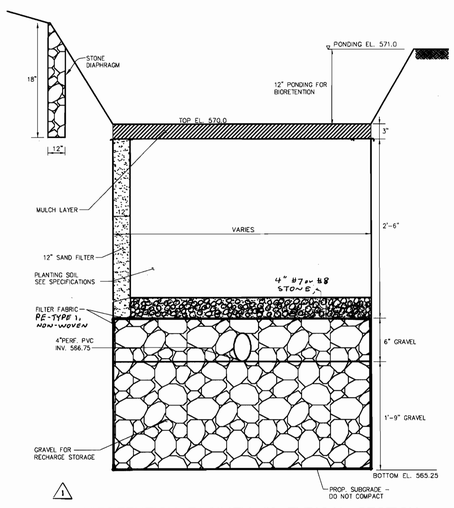
SDP-03-90





BIORETENTION FACILITY #3 TYPICAL SECTION

HOR. 1"=5'
VERT. 1"=1'

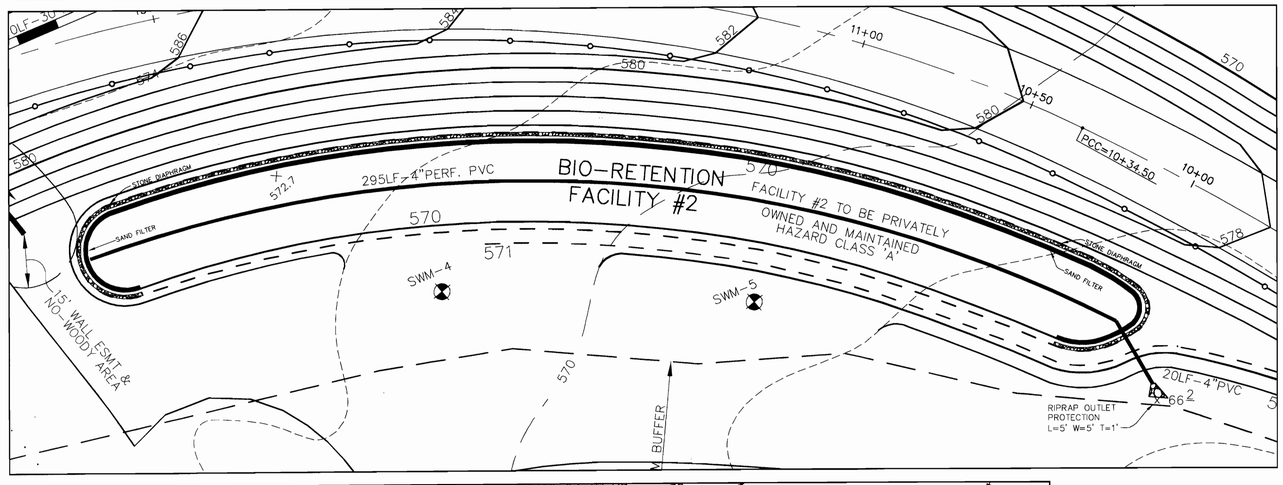


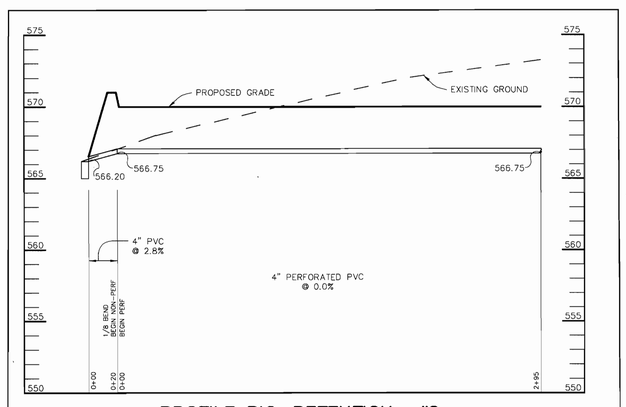
BIORETENTION FACILITY #2 TYPICAL SECTION

SCALE: HOR. 1"=5'
VERT. 1"=1'

Table: Materials Specifications for Bioretention

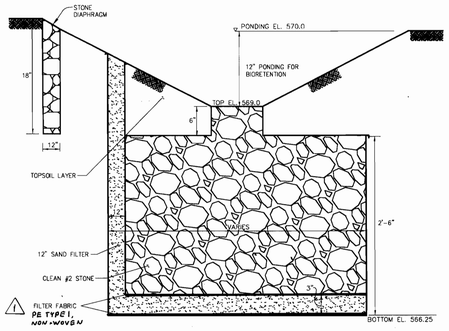
MATERIAL	SPECIFICATIONS	SIZE	NOTES
PLANTINGS	SEE LANDSCAPE PLAN SHEET	N/A	
PLANTING SOIL (2.5' TO 4' DEEP)	SAND 35 – 60 % SILT 30 – 55 % CLAY 10 – 25 %	N/A	USDA SOIL TYPES LOAMY SAND, SANDY LOAM, OR LOAM
MULCH	SHREDDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM
STONE DIAGHRAM AND CURTAIN DRAIN	PEA GRAVEL: ASTM-D-448 ORNAMENTAL STONE: WASHED COBBLES	PEA GRAVEL: No. 7	
GEOTEXTILE	PE TYPE I, NON-WOVEN	N/A	FOR USE ENCLOSING UNDER DRAIN GRAVEL ONLY
UNDERDRAIN GRAVEL	AASHTO M-43	# 57 STONE	
UNDERDRAIN PIPE	F 758, TYPE PS 28 OR AASHTO M-278	4" RIGID SCHEDULE 40 PVC OR SDR35	3/8" PERF. @ 6"O/C, 4 HOLES PER ROW OR SLOTTED PIPE. WRAP PERF PIPE WITH ¼"GALVANIZED HARDWARE CLOTH
SAND	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRASTONE #10 ARE NOT ACEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.





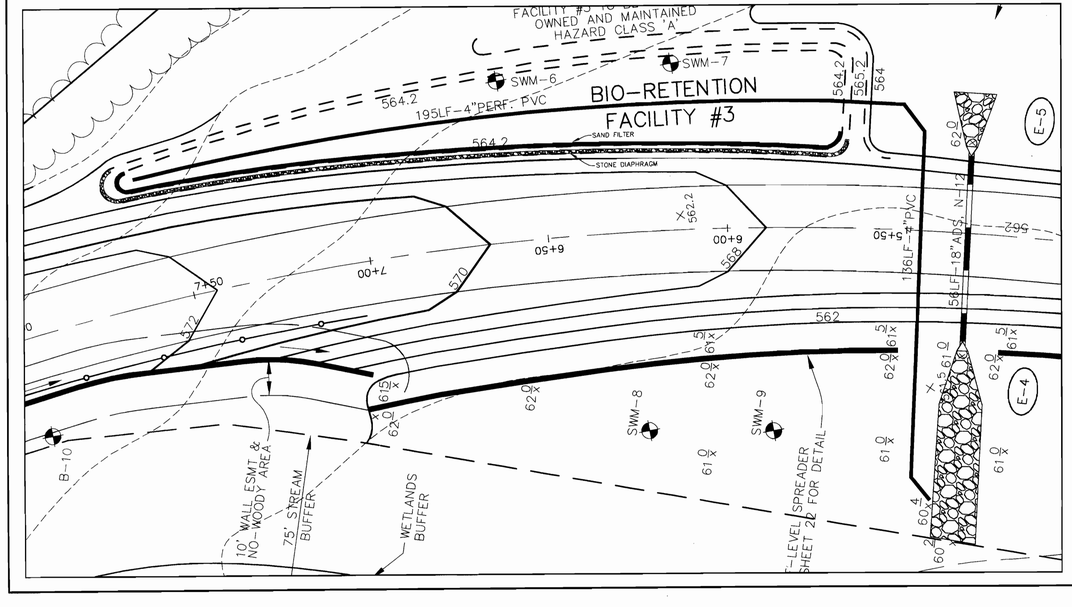
PROFILE BIO-RETENTION #2

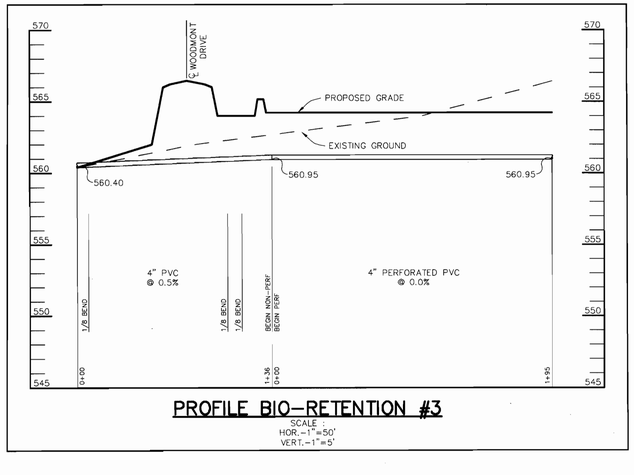
SCALE :
HOR.-1"=50'
VERT.-1"=5'



BIORETENTION FACILITY #1 TYPICAL SECTION

SCALE: HOR. 1"=5'
VERT. 1"=1'





PROFILE BIO-RETENTION #3

SCALE
HOR.-1"=50'
VERT.-1"=5'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 9/16/05

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 9/19/05

CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE 8/21/05

DATE	NO.	REVISION
7/5/05	1	UPDATED BIORETENTION SPECIFICATIONS

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
BIO-RETENTION DETAILS

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

7.28.03
DATE

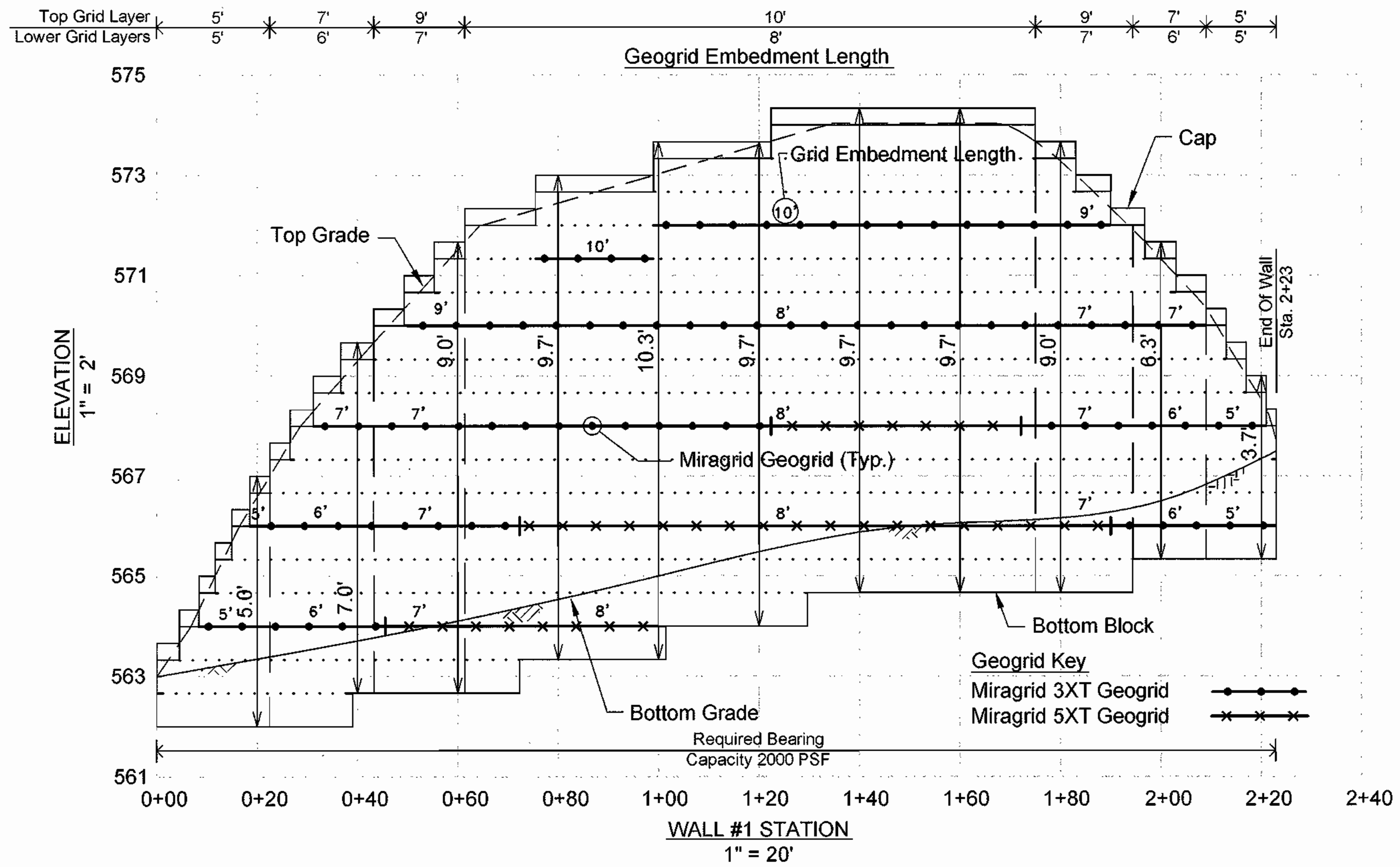
STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

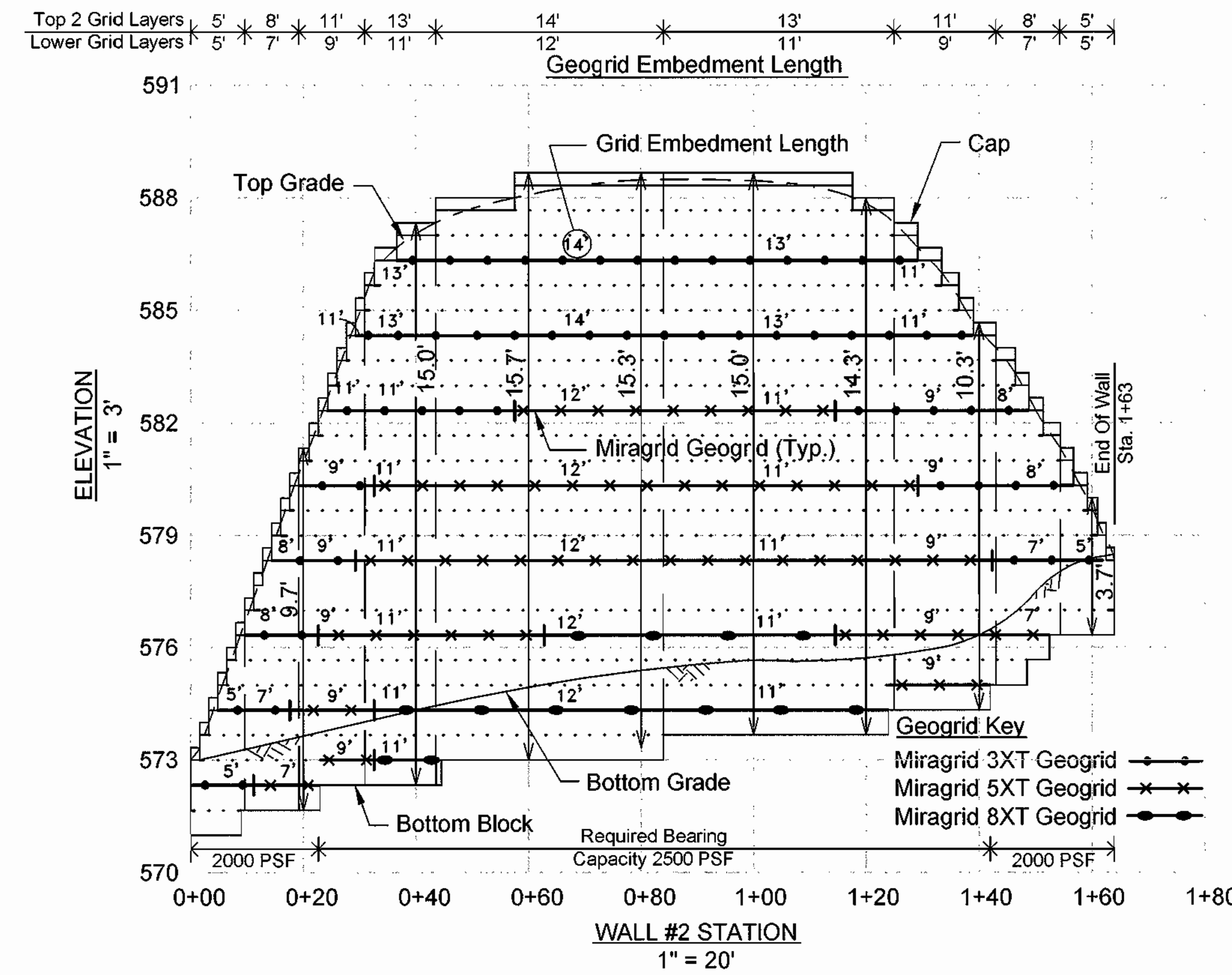
DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR DETAILS5
DATE :	JULY 28, 2003
SCALE :	1" = 20'
DRAWING NO.	47 OF 51

SDP-03-90

P:\project\22516\2-01\Engr\Plans\DETAILS5.dwg, Layout1, 07/23/2003 01:52:30 PM, HP1050C, Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1



WALL #1 ELEVATION



WALL #2 ELEVATION

NOTES:

1.) No trees shall be planted within 10 feet of the top of the retaining wall.
2.) Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICENT, WACEL, or equiv.) certified soils technician.
3.) The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
4.) The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95 % standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
5.) One soil boring is required every one hundred feet along the length of the wall. Copies of the boring reports shall be provided to the Howard County Inspector prior to the start of the construction.

SPECIFICATIONS

KEYSTONE MODULAR CONCRETE BLOCK RETAINING WALL

PART 1: GENERAL

1.01 Description

A. Work shall consist of furnishing and construction of a KEYSTONE Retaining Wall System in accordance with these specifications and in reasonably close conformity with the lines, grades, design, and dimensions shown on the plans.
B. Work includes preparing foundation soil, furnishing and installing leveling pad, unit drainage fill and backfill to the lines and grades shown on the construction drawings.
C. Work includes furnishing and installing geogrid soil reinforcement of the type, size, location, and lengths designated on the construction drawings.

1.02 Delivery, Storage and Handling

A. Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification has been received.
B. Contractor shall protect all materials from damage due to job site conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

PART 2: PRODUCTS

2.01 Modular Concrete Retaining Wall Units

A. Modular concrete units shall conform to the following architectural requirements:
face color - concrete gray - standard manufacturers' color may be specified by the Owner.
face finish - sculptured rock face in angular tri-planer configuration. Other face finishes will not be allowed without written approval of Owner.
bond configuration - running with bonds nominally located at midpoint vertically adjacent units, in both straight and curved alignments.
exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.
B. Modular concrete materials shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.
C. Modular concrete units shall conform to the following structural and geometric requirements measured in accordance with appropriate references:
compressive strength = 3000 psi minimum;
absorption = 8 % maximum (6% in northern states) for standard weight aggregates;
dimensional tolerances = ± 1/8" from nominal unit dimensions not including rough split face, ±1/16" unit height - top and bottom planes;
unit size - 8" (H) x 18" (W) x 12" (D) minimum;
unit weight - 75 lbs/unit minimum for standard weight aggregates;
inter-unit shear strength - 1000 plf minimum at 2 psi normal pressure;
geogrid/unit peak connection strength - 1000 plf minimum at 2 psi normal force.
D. Modular concrete units shall conform to the following constructability requirements:
vertical setback = 1/8"± per course (near vertical) or 1"+ per course per the design;
alignment and grid positioning mechanism - fiberglass pins, two per unit minimum;
maximum horizontal gap between erected units shall be - 1/2 inch.

2.02 Shear Connectors

A. Shear connectors shall be 1/2 inch diameter thermoset isopthalic polyester resin-protruded fiberglass reinforcement rods or equivalent to provide connection between vertically and horizontally adjacent units. Strength of shear connectors between vertical adjacent units shall be applicable over a design temperature of 10 degrees F to + 100 degrees F.
B. Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.

2.03 Base Leveling Pad Material

A. Material shall consist of a compacted #57 crushed stone base as shown on the construction drawings.

2.04 Unit Drainage Fill

A. Unit drainage fill shall consist of #57crushed stone
B. One cubic foot, minimum, of drainage fill shall be used for each square foot of wall face. Drainage fill shall be placed within cores of, between, and behind units to meet this requirement.

2.05 Reinforced Backfill

A. Reinforced backfill shall type SM, be free of debris and meet the following gradation tested in accordance with ASTM D-422 and meet other properties shown on the plan:

Sieve Size	Percent Passing
2 inch	100-75
3/4 inch	100-75
No. 40	0-60
No. 200	0-35

Plasticity Index (PI) <15 and Liquid Limit <40 per ASTM D-4318.
B. Material can be site excavated soils where the above requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the reinforced soil mass.

2.06 Geogrid Soil Reinforcement

A. Geosynthetic reinforcement shall consist of geogrids manufactured specifically for soil reinforcement applications and shall be manufactured from high tenacity polyester yarn.

2.07 Drainage Pipe

A. The drainage pipe shall be perforated corrugated HDPE pipe manufactured in accordance with ASTM D-1248.

PART 3 EXECUTION

3.01 Excavation

A. Contractor shall excavate to the lines and grades shown on the construction drawings. Owner's representative shall be responsible for inspecting and approving the excavation prior to placement of leveling material or fill soils.

3.02 Base Leveling Pad

A. Leveling pad material shall be placed to the lines and grades shown on the construction drawings, to a minimum thickness of 6 inches and extend laterally a minimum of 6" in front and behind the modular wall unit.
B. Leveling pad shall be prepared to insure full contact to the base surface of the concrete units.

3.03 Modular Unit Installation

A. First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and insure that all units are in full contact with the base and properly seated.
B. Place the front of units side-by-side. Do not leave gaps between adjacent units. Layout of corners and curves shall be in accordance with manufacturer's recommendations.
C. Install shear/connecting devices per manufacturer's recommendations.
D. Place and compact drainage fill within and behind wall units. Place and compact backfill soil behind drainage fill. Follow wall erection and drainage fill closely with structure backfill.
E. Maximum stacked vertical height of wall units, prior to unit drainage fill and backfill placement and compaction, shall not exceed three courses.

3.04 Structural Geogrid Installation

A. Geogrid shall be oriented with the highest strength axis perpendicular to the wall alignment.
B. Geogrid reinforcement shall be placed at the strengths, lengths, and elevations shown on the construction design drawings or as directed by the Engineer.
C. The geogrid shall be laid horizontally on compacted backfill and attached to the modular wall units. Place the next course of modular concrete units over the geogrid. The geogrid shall be pulled taut, and anchored prior to backfill placement on the geogrid.
D. Geogrid reinforcements shall be continuous throughout their embedment lengths and placed side-by-side to provide 100% coverage at each level. Spliced connections between shorter pieces of geogrid or gaps between adjacent pieces of geogrid are not permitted.

3.05 Reinforced Backfill Placement

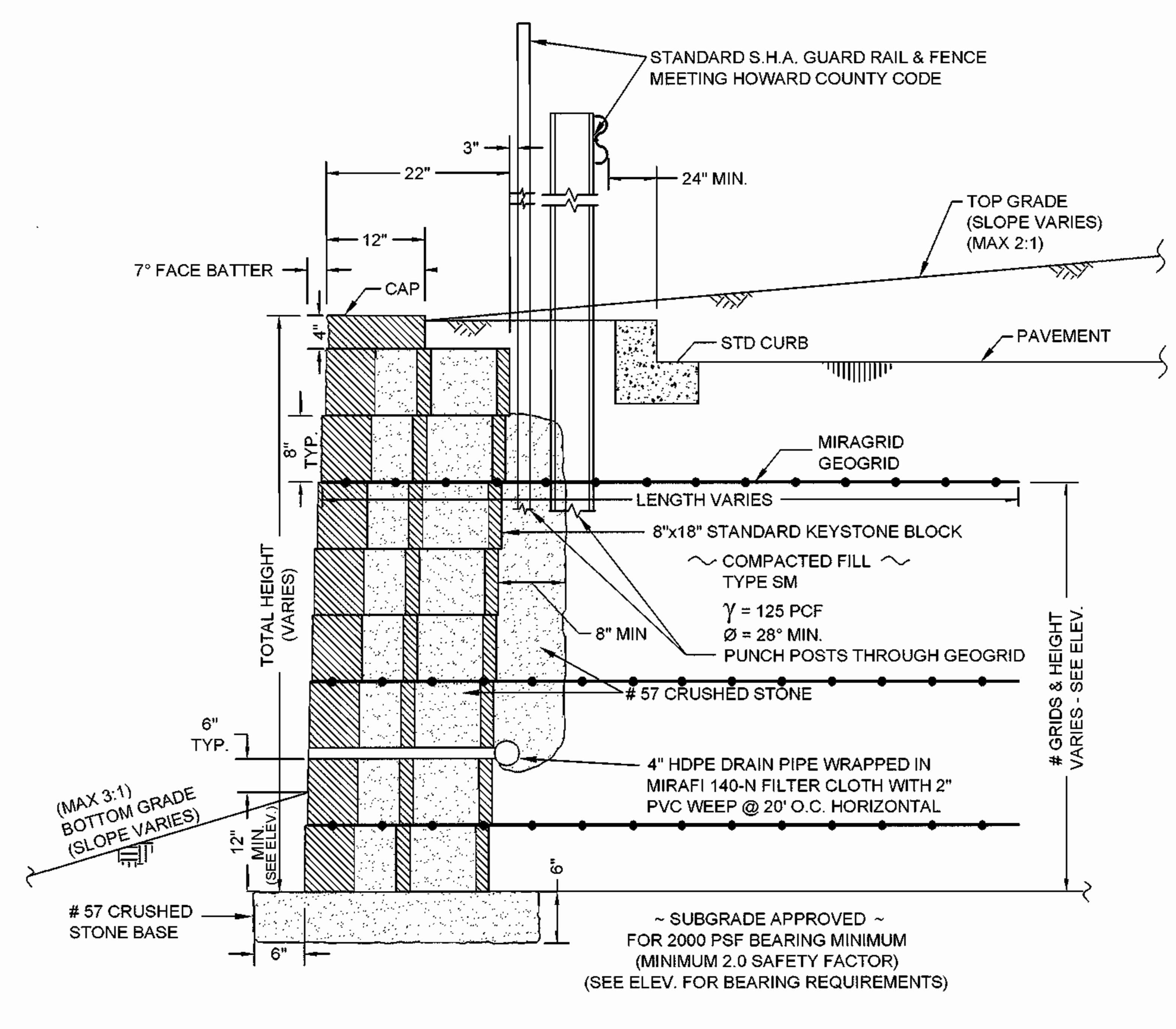
A. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid and installation damage.
B. Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8 - 10 inches where heavy compaction equipment is used. Lift thickness shall be decreased to achieve the required density as required.
C. Reinforced backfill shall be compacted to 95% of the maximum density as determined by ASTM D698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be + 3% to - 3% of optimum.
D. Only lightweight hand-operated equipment shall be allowed within 3 feet from the tail of the modular concrete unit.
E. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.
F. Rubber tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.
G. At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill away from the wall units to direct runoff away from wall face. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

3.06 Cap Installation

A. Cap units shall be glued to underlying units with an all-weather adhesive recommended by the manufacturer.

3.07 Field Quality Control

A. The Owner shall engage inspection and testing services, including independent laboratories, to provide quality assurance and testing services during construction.
B. As a minimum, quality assurance testing should include foundation soil inspection, soil and backfill testing, verification of design parameters, and observation of construction for general compliance with design drawings and specifications.



WALL SECTION
NTS

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/28/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 8/20/03

CHIEF, DIVISION OF LAND DEVELOPMENT HB — DATE 8/27/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
RETAINING WALL DETAILS

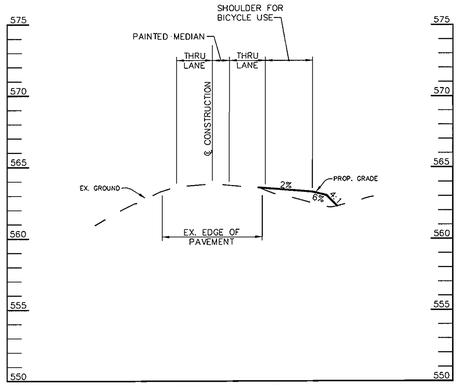
HILLIS-CARNES
ENGINEERING ASSOCIATES, INC.
12011 Guilford Road Suite 106 Annapolis Junction, Maryland 20701
Balto. (410) 880-4788 D.C. (301) 470-4239 Fax (410) 880-4098

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

7/24/03
DATE

DESIGNED BY :	RWS
DRAWN BY:	AM
PROJECT NO :	02660-B
DATE :	JULY 28, 2003
SCALE :	AS SHOWN
DRAWING NO.	48 OF 51

SDP-03-90



STA 14+13

SCALE :
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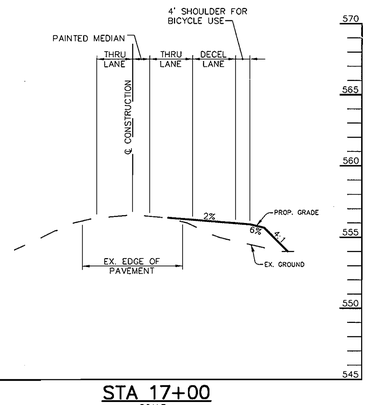
VERT.-1"=5'



STA 17+00

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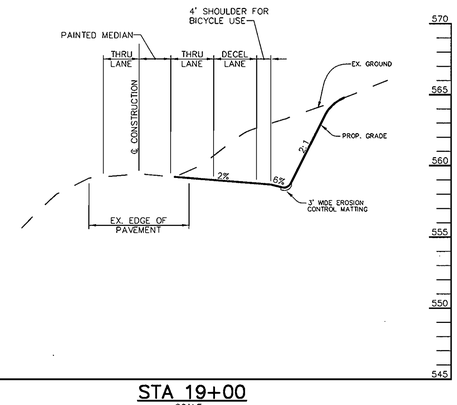

STA 19+00

SCALE :
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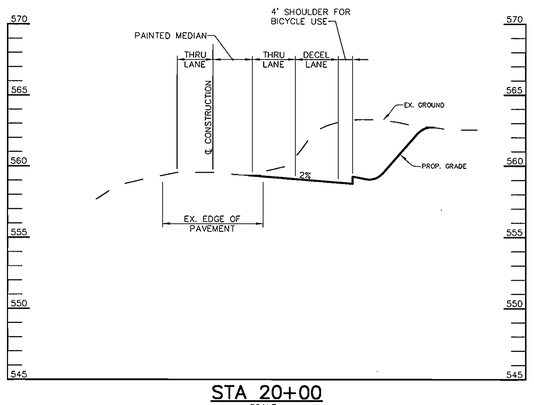

STA 20+00

SCALE :
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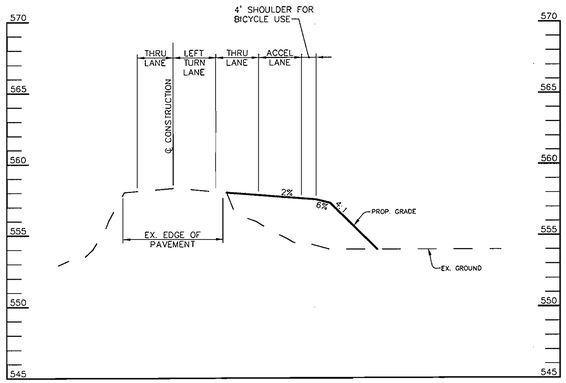
VERT.-1"=5'



STA 22+00

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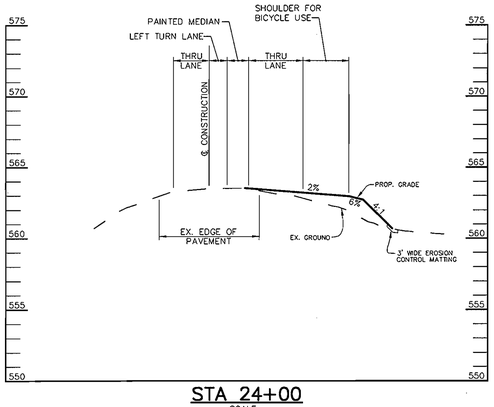
VERT.-1"=5'

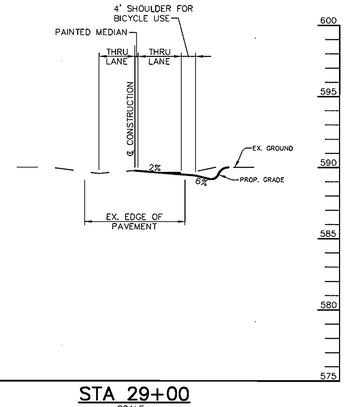


STA 24+00

SCALE :
HOR.-1"=20'
VERT.-1"=5'

STA 27+00

SCALE :
HOR.-1"=20'
VERT.-1"=5'



STA 29+00

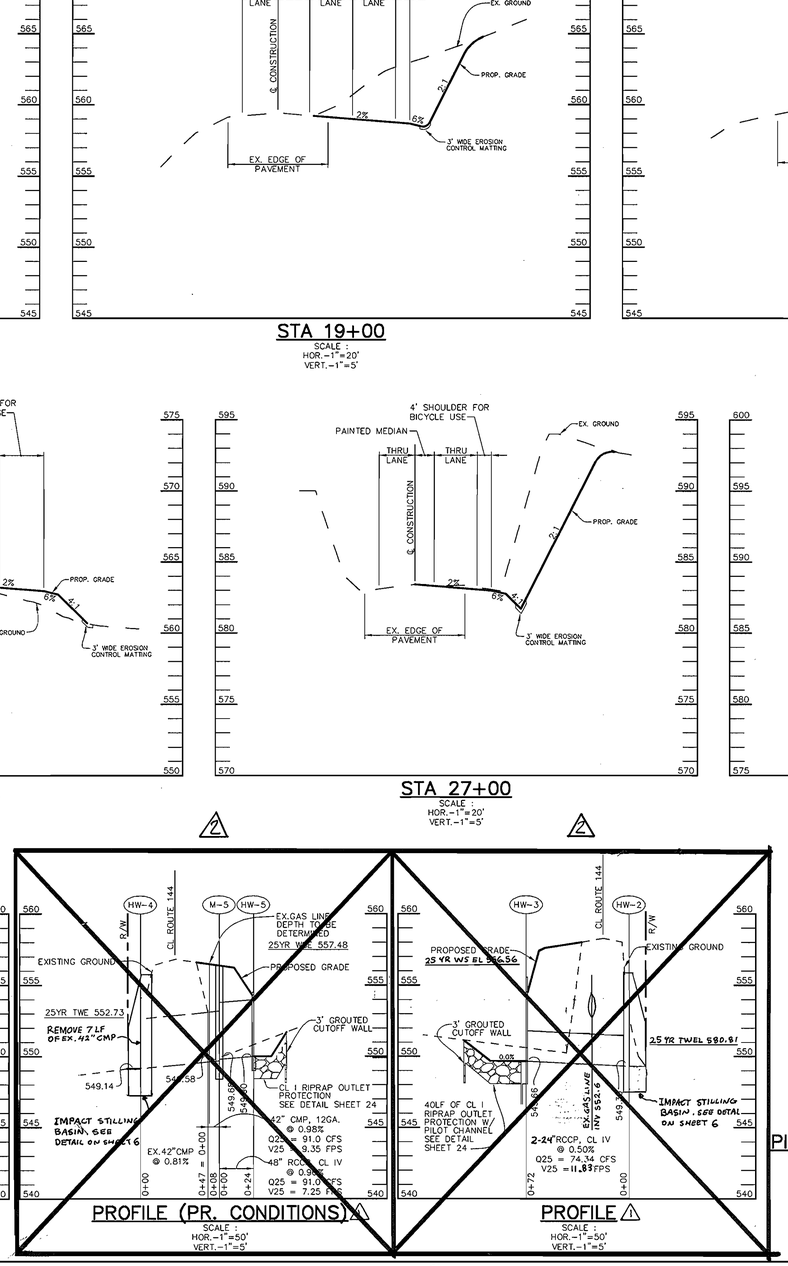
SCALE :
HOR.-1"=20'
VERT.-1"=5'

PROFILE

SCALE :
HOR.-1"=50'
VERT.-1"=5'

PROFILE (EX. CONDITIONS)

SCALE :
HOR.-1"=50'
VERT.-1"=5'



PROFILE (PR. CONDITIONS) ⚠2

SCALE :
HOR.-1"=50'
VERT.-1"=5'

PROFILE ⚠1

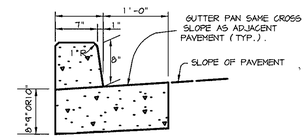
SCALE :
HOR.-1"=50'
VERT.-1"=5'

PILOT CHANNEL WITHIN RIPRAP DETAIL

NO SCALE

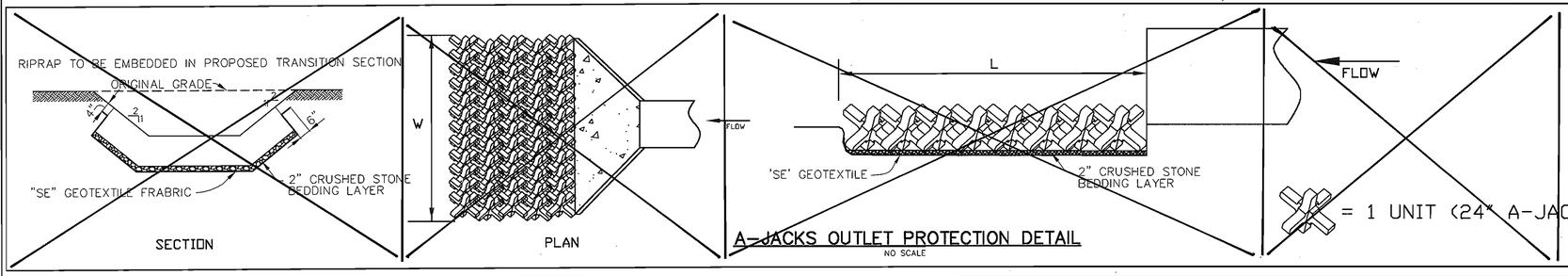
M.S.H.A. PAVING SECTION

NO SCALE



M.S.H.A. TYPE 'A' CURB AND GUTTER

NO SCALE



A-JACKS OUTLET PROTECTION DETAIL

NO SCALE

STRUCTURE	# OF UNITS	# OF ROWS	LENGTH (L)	WIDTH (W)
HW-2	128	5	8'	16'
HW-4	80	5	5'	12'

TITLE: A-JACKS MATRIX STANDARD DETAIL	PREPARED BY: ARMORTEC		
DESCRIPTION: A-JACKS MATRIX & OUTFALL PIPE OUTLET CROSS-SECTION	1301 INTERNATIONAL DRIVE SUITE 1200 MCLEAN, VA 22101	PH: (570) 843-4650 FAX: (570) 383-8504 TOLL FREE:	
	DRAWN BY: KWN	DATE: 7-3-03	2003 DETAILS
	CHKED BY: DWD	SCALE: N.T.S.	DRAWING NAME/NO.: 8X16 MATRIX.dwg

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 8/20/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/19/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/2/03

DATE	NO.	REVISION
11/9/07	2	OMIT PROFILES FOR TWO CULVERTS
7/5/05	⚠1	CHANGED 5'-0" TO 2-24" PIPES, REVISED PROFILE AND REMOVED A-JACKS DETAIL

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT

WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

MSHA PROFILES AND DETAILS

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

7.28.03
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR PROFILE3
DATE :	JULY 28, 2003
SCALE :	AS SHOWN
DRAWING NO.	49 OF 51

SDP-03-90

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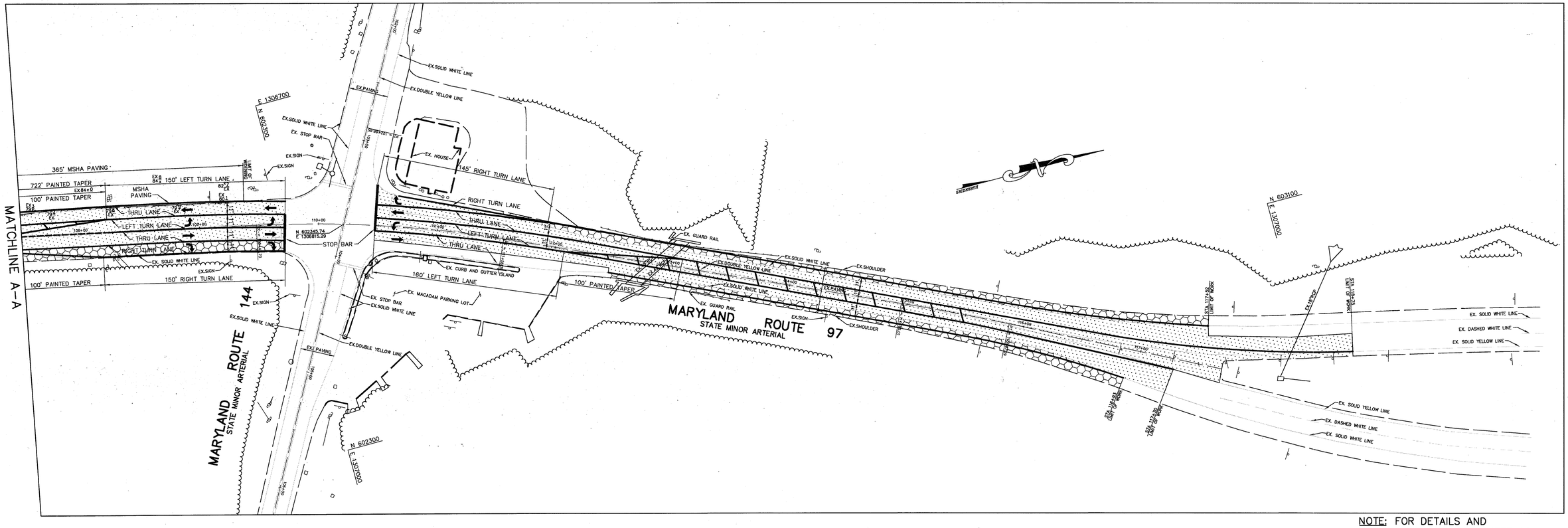
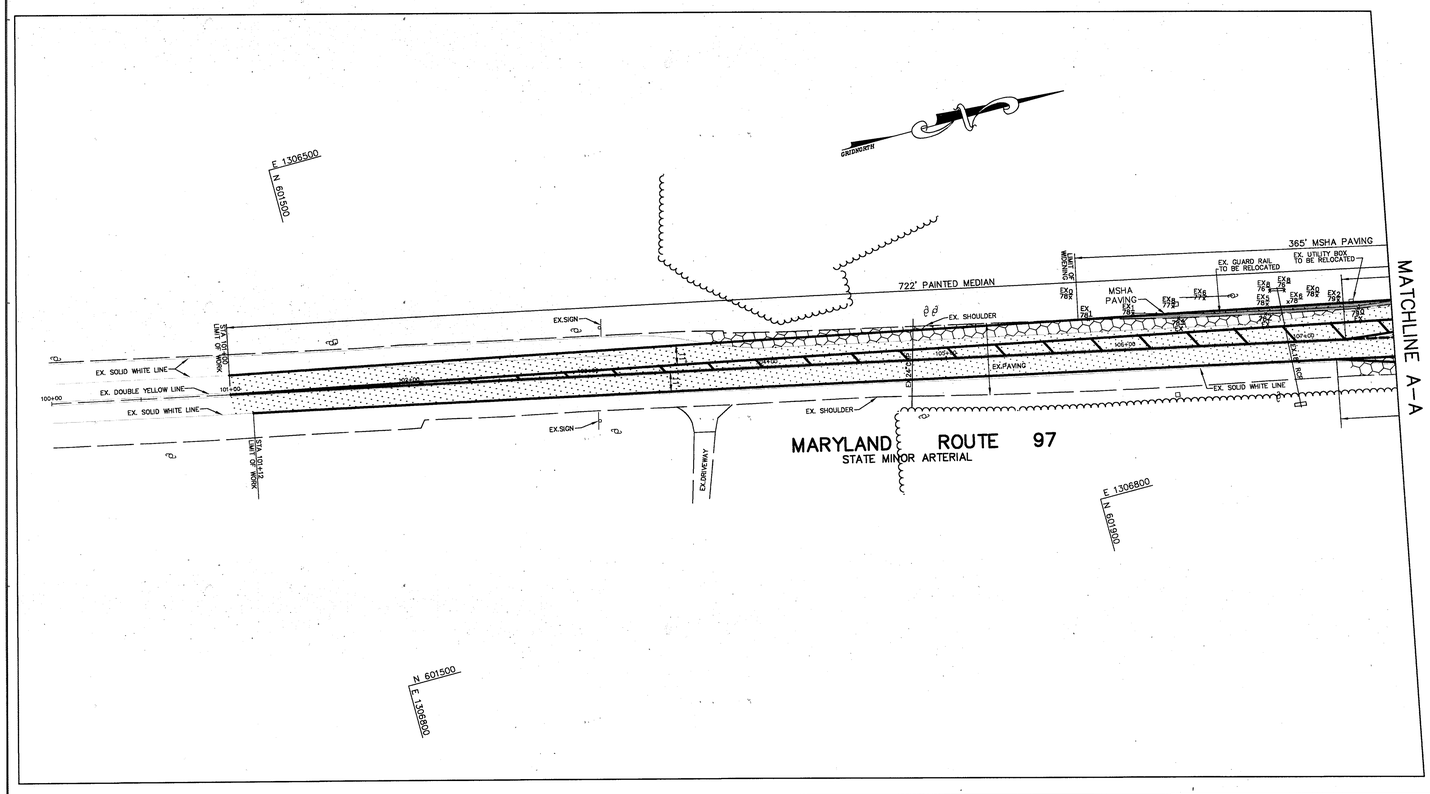


NOTE: FOR DETAILS AND CROSS-SECTIONS, SEE SHEET 49.



LEGEND

- NEW MSHA BASE WIDENING
- EXISTING SHOULD PAVING TO BE REMOVED AND RECONSTRUCTED
- PAVING OVERLAY

HOT MIX ASPHALT SUPERPAVE — 2"
HOT MIX ASPHALT SUPERPAVE — 2"
HOT MIX ASPHALT SUPERPAVE — 3"
HOT MIX ASPHALT SUPERPAVE — 3"
BASE COURSE USING GRADED AGGREGATE — 4"
BASE COURSE USING GRADED AGGREGATE — 4"
BASE COURSE USING GRADED AGGREGATE — 6"

MD 97 BASE WIDENING AND RECONSTRUCTION
NO SCALE

HOT MIX ASPHALT SUPERPAVE — 2"
EXISTING PAVEMENT

MD 97 OVERLAY
NO SCALE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 5-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 6/26/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/23/03

DATE	NO.	REVISION

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 - PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
ROAD WIDENING AND STRIPING PLAN FOR RT 97 - RT 144 INTERSECTION

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

7.28.03
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY : C.J.R.
DRAWN BY: DAM
PROJECT NO : 22516/2-0/ENGR WRT144RT97
DATE : JULY 28, 2003
SCALE : 1" = 40'
DRAWING NO. 50 OF 51

SDP-03-90

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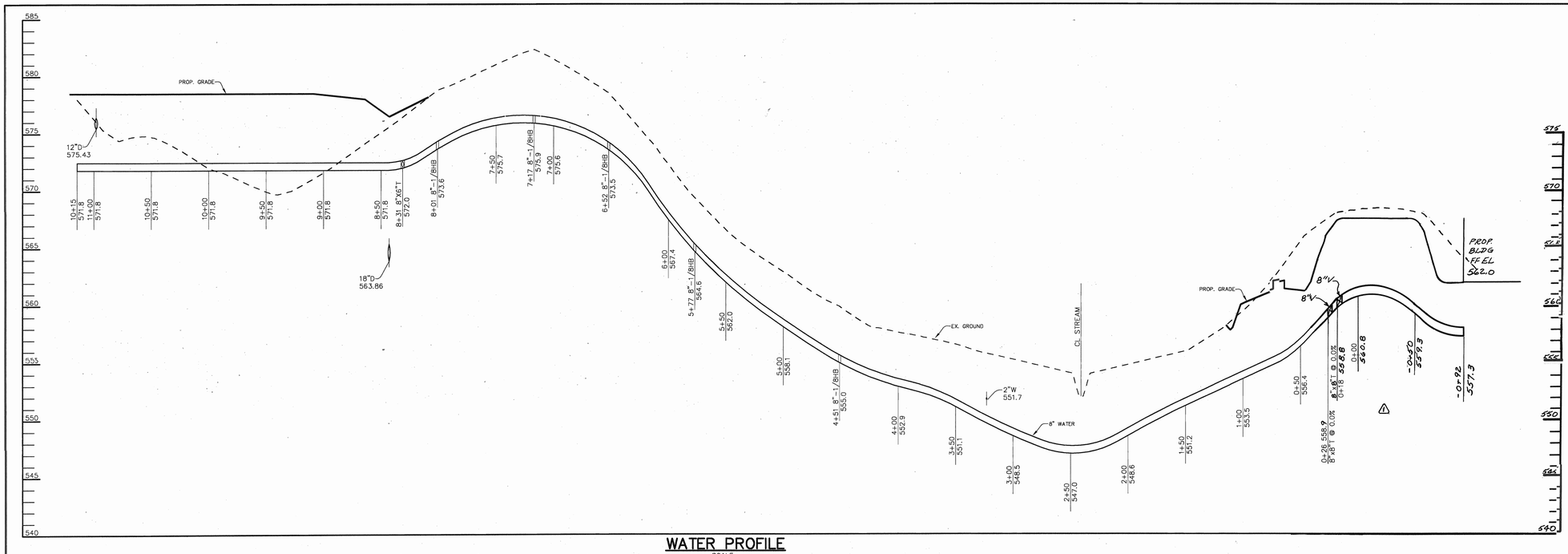
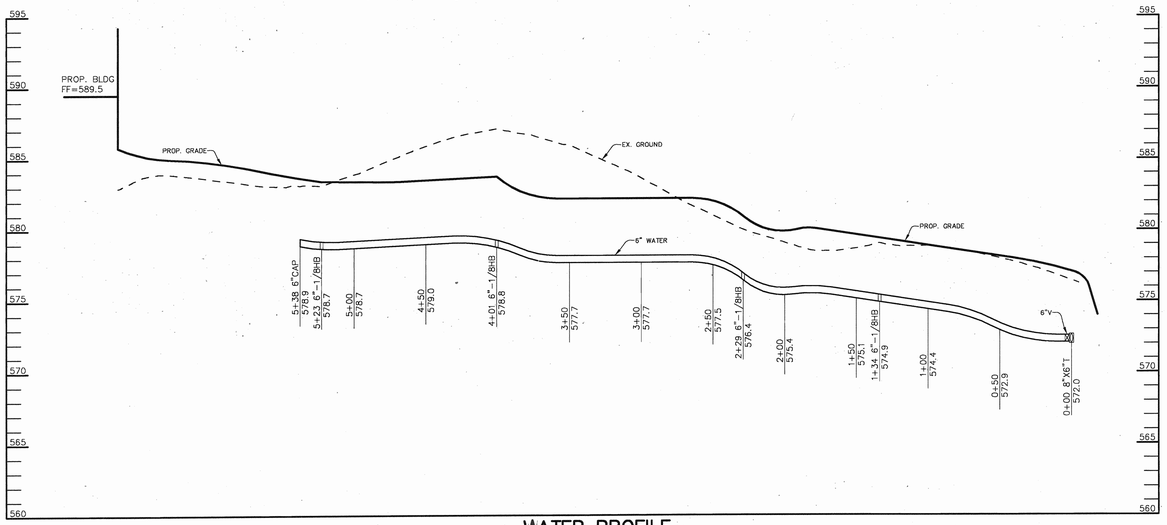


WATER PROFILE

SCALE :
HOR.-1"=50'
VERT.-1"=5'



WATER PROFILE

SCALE :
HOR.-1"=50'
VERT.-1"=5'

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT — DATE 5-22-03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 6/27/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 6/26/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/27/03

DATE	NO.	REVISION
5-3-04	⚠	REVISED WATERMAIN TO PUMP HOUSE S.E.L.

OWNER / DEVELOPER

WOODMONT EDUCATIONAL FOUNDATION, INC.
10817 DAVIS AVENUE
WOODSTOCK, MARYLAND 21163
410-203-0619

PROJECT
WOODMONT ACADEMY
PHASE 1 – PRIVATE SCHOOL

AREA TAX MAP 8 & 14 PARCEL 115 ZONED RC-DEO
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
PROFILES

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

7-28-03
DATE

STATE OF MARYLAND — CHRISTOPHER J. RUSSO — No. 21599 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. RUSSO

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	22516/2-0/ENGR PROFILE4
DATE :	JULY 28, 2003
SCALE :	AS SHOWN
DRAWING NO.	51 OF 51

SDP-03-90

P:\project\22516\2-0\Engr\Plans\PROFILE4.dwg, Layout 1, 07/29/2003 01:54:59 PM, HP1050C_Draft.pc3, Arch D - 24 x 36 in. (landscape), 1:1