

GENERAL NOTES

- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- PROJECT BACKGROUND:
LOCATION: END EX. NORTH RIDGE ROAD TO EX. ROGER'S AVE.
TAX MAP: 17-17,18,24
ZONING: POR, R-ED, R-20
ELECTION DISTRICT: 2
GROSS AREA OF TRACT: 77.28 ACRES
PARCEL A (POR) = 44.55 AC.
PARCEL B (R-ED) = 27.06 AC.
PARCEL C (R-20) = 1.56 AC.
PARCEL D = 0.11 AC.
ROAD R/W = 4.00 AC.
- SEE DEPARTMENT OF PLANNING & ZONING FILE NUMBERS:
S 01-10 (PB 350), WP-01-79, WP-01-122.
- THE TOPOGRAPHY SHOWN HAS A 2' CONTOUR INTERVAL AND WAS DETERMINED BY: AERIAL PHOTOGRAPHY BY GREENMAN-PEDERSEN, INC OR 4/6/2000 AND SUPPLEMENTED BY GLW FIELD RUN TOPO ON 11/21/2000.
- PUBLIC WATER AND SEWER TO BE UTILIZED.
EX. WATER CONTRACT # 14-1063-D EX. SEWER CONTRACT # 117-S, 10-1129
- HORIZONTAL AND VERTICAL CONTROL BASED ON HOWARD COUNTY CONTROL GPS STATIONS 17 FA AND 24 C2. SEE DESCRIPTION BELOW VICINITY MAP FOR COORDINATES AND ELEVATIONS.
- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM BEST AVAILABLE RECORDS. THE CONTRACTOR MUST DETERMINE THIS EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL CROSSINGS WELL IN ADVANCE OF CONSTRUCTION. ANY DISCREPANCIES MUST BE COMMUNICATED TO THE ENGINEER AT ONCE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY AND MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS /DIVISION OF CONSTRUCTION INSPECTION AT 1 (410) 313 - 1880 AT LEAST FIVE (5) DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THE PLANS.
MISS UTILITY 1-800-257-7777
VERIZON 1-800-446-5266
HOWARD COUNTY BUREAU OF UTILITIES 410-313-4900
AT&T CABLE LOCATION DIVISION 393-3553
BALTIMORE GAS & ELECTRIC CO. 410-850-4620 & 410-787-9068
- TYPES OF STORM DRAINS REFER TO THE STANDARD DETAILS OF HOWARD COUNTY AND MSHA.
- TRENCH COMPACTION FOR STORM DRAINS WITHIN ROADS AND STREET RIGHT - OF - WAYS LIMITS SHALL BE IN ACCORDANCE WITH "HOWARD COUNTY DESIGN MANUAL", VOL. IV, STANDARD G-2.01.
- SEDIMENT CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH * 1939A MARYLAND STANDARDS AND SPECIFICATION FOR SOILS EROSION AND SEDIMENT CONTROL*.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- STREET TREES SHALL BE PLANTED A MINIMUM OF FIVE (5) FEET FROM STORM DRAIN, WATERLINE OR SEWER PIPE MANHOLES; ALSO A MINIMUM OF TWENTY (20) FEET FROM STREET LIGHTS.
- COMPACTION IN FILL AREAS SHALL BE IN ACCORDANCE WITH AASHTO T-180 OR AS APPROVED IN THE DESIGN MANUAL VOLUME IV.
- WETLAND DELINEATION BY EXPLORATION RESEARCH ON 11/3/2000.
- TRAFFIC STUDY WAS SUBMITTED AS PART OF THE SKETCH PLAN (S-01-10), WHICH WAS APPROVED ON MAY 5, 2001.
- GEOTECH REPORT FOR THIS PROJECT WAS PREPARED BY HILLIS-CARNES ON APRIL 2,2001.
- STREET TREE LOCATIONS SHOWN ARE TENTATIVE AND ARE TO BE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF TREES MAY VARY TO ACCOMMODATE FIELD CONDITIONS AND BUILDERS LANDSCAPE PROGRAM.
- THE 100-YEAR FLOOD PLAIN INFORMATION WAS COMPUTED BY GLW AND SUBMITTED AS PART OF THIS PLAN.
- JOINT MAINTENANCE (CONDO ASSOCIATION AND HOWARD COUNTY) STORM WATER MANAGEMENT WETPOND FOR NORTH RIDGE ROAD & FUTURE POR PARCEL 'A' IS SUBMITTED AS PART OF THIS PLAN. NOTE THAT GROUNDWATER RECHARGE (REV) FOR THE ENTIRE DRAINAGE AREA TO THE SWM POND IS TO BE PROVIDED IN PRIVATE, STRUCTURAL AND NON-STRUCTURAL FACILITIES ON PARCEL 'A', TO BE SUBMITTED WITH THE SDP.
- ON MAY 5,2001 S-01-10 (PB350): WAIVER WAS GRANTED BY THE HOWARD COUNTY PLANNING BOARD, SUBJECT TO COMMENTS BY THE SUBDIVISION REVIEW COMMITTEE. PB-350 WAS FOR INFRASTRUCTURE DEVELOPMENT IN THE R-ED ZONED PORTION OF THE SITE (RIDGE ROAD EXTENSION AND STORMWATER MANAGEMENT ONLY).
- ON MARCH 6,2001, WP-01-79: WAIVER OF SECTION 16.121 WAS GRANTED WHICH REQUIRES THE PROVISION OF OPEN SPACE AND RECREATIONAL OPEN SPACE IN THE R-ED AND R-20 ZONING DISTRICTS, SUBJECT TO ONE CONDITION IN THE APPROVAL LETTER.
 - PROVIDE A NOTE ON THE SKETCH PLAN, THE PRELIMINARY PLAN, AND THE FINAL PLAT STATING THAT THE OPEN SPACE OBLIGATION HAS BEEN DEFERRED FOR THE R-20 ZONED LAND AND FOR THE ACREAGE OF THE EXTENSION OF THE NORTH RIDGE ROAD RIGHT-OF-WAY AND STORMWATER MANAGEMENT POND ON THE R-ED ZONED PORTION OF THIS SITE UNTIL THE R-20 AND R-ED PORTIONS ARE DESIGNED. THE FUTURE PROVISION OF OPEN SPACE ACREAGE MUST BE BASED ON THE GROSS ACREAGE OF THE R-20 AND R-ED ZONED LAND, INCLUDING THE ROAD RIGHT-OF-WAY AND THE SWM POND AND MUST BE NOTED IN THE PLAT TABULATIONS.

ROAD CONSTRUCTION PLAN

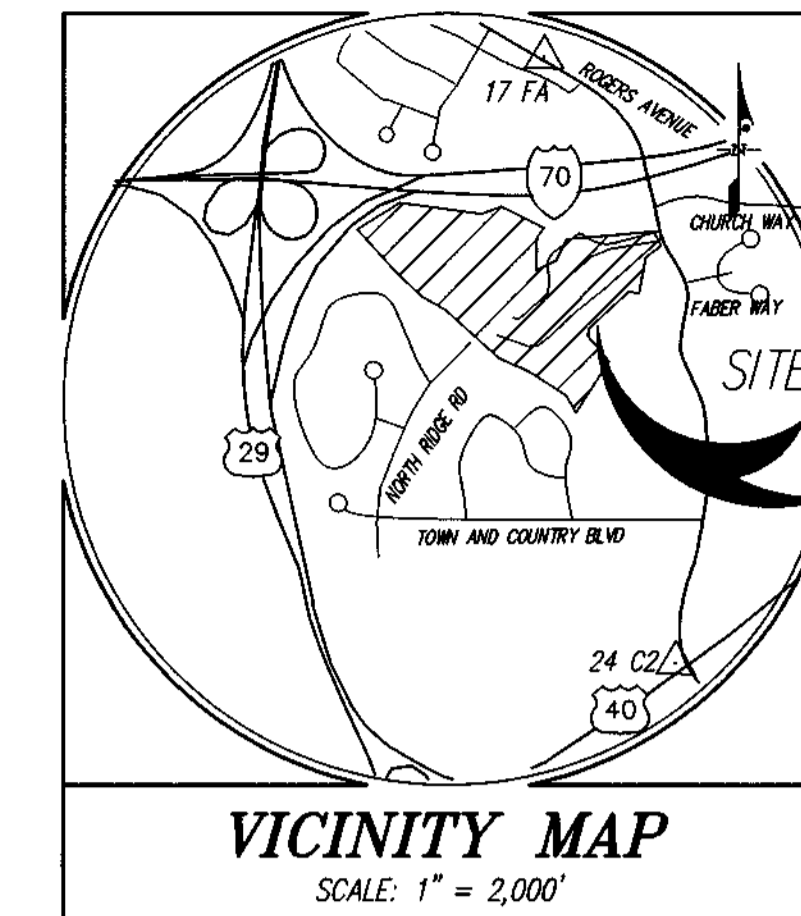
THE ENCLAVE AT ELLICOTT HILLS

PARCELS A THRU E

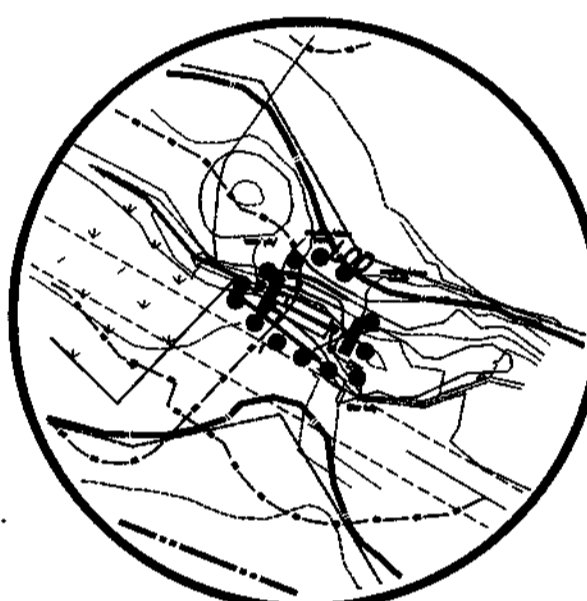
NORTH RIDGE ROAD

23+08.96 TO EX. ROGERS AVE

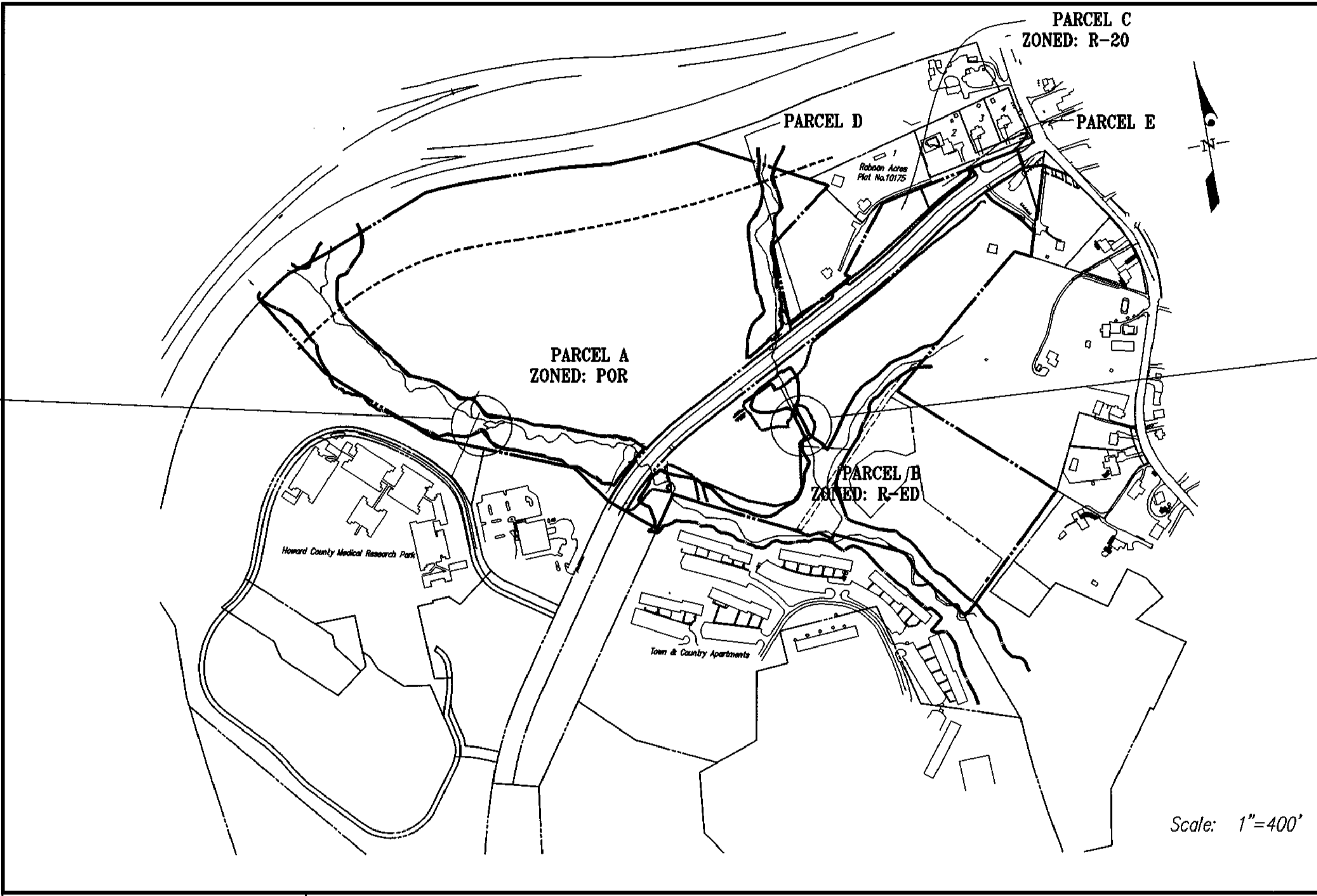
- LEGEND
- EXISTING STREET LIGHT
 - PROPOSED STREET LIGHT
 - PROP. TOP OF CURB ELEVATION
 - EXISTING WATER MAIN
 - EXISTING STORM DRAIN
 - PROP. STORM DRAIN
 - EXIST. CURB/CURB & GUTTER
 - PROP. CURB & GUTTER
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - PROPOSED STREET TREES
 - PROPOSED LANDSCAPE TREE
 - PROPOSED GUARDRAIL
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - PROPERTY LINE
 - EXISTING STRUCTURE



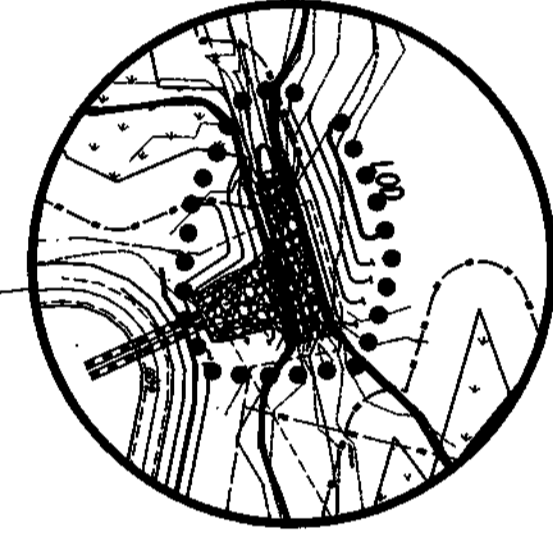
HO. CO. MONUMENT 17FA N: 594948.25
E: 1364626.77
ELEV.: 476.80
HO. CO. MONUMENT 24C2 N: 588648.31
E: 1366038.20
ELEV.: 354.08



MITIGATION AREA II



MDE TRACKING NUMBER
01-NT-0260/2001-64588



MITIGATION AREA I

SHEET INDEX

- COVER SHEET
- NORTH RIDGE ROAD STATION 23+08.96 TO STATION 37+00
- NORTH RIDGE ROAD STATION 37+00 TO STATION 45+92.06
- STORMWATER MANAGEMENT / GRADING PLAN
- GRADING PLAN
- SEDIMENT CONTROL PLAN
- SEDIMENT CONTROL PLAN
- SEDIMENT CONTROL PLAN--BORROW AREA--FLOODPLAIN/STREAM RESTORATION
- SEDIMENT CONTROL DETAILS
- SEDIMENT CONTROL DETAILS
- SEDIMENT CONTROL DETAILS
- CULVERT DETAILS
- STORMWATER MANAGEMENT DETAILS
- STORMWATER MANAGEMENT DETAILS
- STORMWATER MANAGEMENT SPECIFICATION & BORING LOGS
- STORM DRAIN PROFILES
- STORMWATER MANAGEMENT POND LANDSCAPE PLAN & DETAILS
- STORMWATER MANAGEMENT POND LANDSCAPE PLAN DETAIL SHEET
- STORM DRAIN DRAINAGE AREA MAP
- STORMWATER MANAGEMENT DRAINAGE AREA MAP EX. CONDITIONS
- STORMWATER MANAGEMENT DRAINAGE AREA MAP PROP. CONDITIONS
- FOREST CONSERVATION PLAN (FOR ROAD & SWM CONSTRUCTION)
- FOREST CONSERVATION PLAN DETAILS (FOR ROAD & SWM CONSTRUCTION)
- STRIPING PLAN
- CULVERT REMOVAL/STREAM STABILIZATION
- CULVERT REMOVAL/STREAM STABILIZATION

- ON JUNE 7, 2001, WP-01-122: WAIVER OF SECTION 16.144 (f)-(i) AND 16.146 REQUIRING SUBMISSION OF PRELIMINARY PLAN SUBJECT TO FOUR CONDITIONS IN THE APPROVAL LETTER.
 - SUBMIT CONSTRUCTION PLANS FOR THE ROAD AND SWM, AND PLAT THE ENTIRE 76 ACRE SITE, INCLUDING NON-BUILDABLE BULK PARCELS, THE ROAD R/W AND THE SWM EASEMENT AREA. THE FINAL PLANS AND PLAT ARE DUE 9 MONTHS FROM THE DATE OF THIS LETTER (BY MARCH 7, 2002).
 - PROVIDE PRELIMINARY PLANS FOR POR ZONED UNITS IN ACCORDANCE WITH PHASING MILESTONES ESTABLISHED UNDER S-01-10, BY LETTER DATED 5/17/01.
 - AS REQUIRED IN OUR COMMENT 4 IN THE LETTER OF 12/22/00, AND AS ACKNOWLEDGED BY YOUR CONSULTANT IN THE RESPONSE LETTER OF 1/24/01, FOREST CONSERVATION PROGRAM OBLIGATIONS FOR THE WHOLE SITE MUST BE ADDRESSED WITH THE FINAL PLAN SUBMISSION. AS PART OF THAT SUBMISSION, A CORRECTED FOREST STAND DELINEATION, REFLECTING ACCURATE FOREST STAND IDENTIFICATIONS, MUST BE FORWARDED TO THIS DIVISION. ALSO VERIFY THAT NO STATE-ENDANGERED PLANTS OR ANIMALS ARE WITHIN THIS PROJECT SITE.
 - COMPLY WITH COMMENTS FROM THE DEVELOPMENT ENGINEERING DIVISION DATED 5/31/01. AFTER REVIEW OF THE SUBMITTED INFORMATION REQUESTING A WAIVER OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTIONS 16.144(f)-(i) AND 16.146, WHICH REQUIRES SUBMITTAL OF A PRELIMINARY PLAN, THIS DIVISION HAS NO OBJECTION. SUBJECT TO THE STORMWATER MANAGEMENT PROPOSED UNDER THE FINAL ROAD PLANS BE DESIGNED USING RUNOFF CURVE NUMBERS AND IMPERVIOUS COVER ESTIMATES IN ACCORDANCE WITH THE TR55 MANUAL FOR THE PROPOSED, ULTIMATE USE. THIS METHODOLOGY FOR ESTIMATING RUNOFF AND IMPERVIOUS AREA IS ACCEPTABLE SINCE THE FINAL PRODUCT OF THE ADJACENT, BULK PARCELS IS UNKNOWN. ADDITIONALLY, STORMWATER MANAGEMENT FOR THE INTERSECTION OF ROGERS AVENUE, ASSUMED TO DRAIN TO THE PROPOSED FACILITY AT SKETCH PLAN, SHALL BE PERFORMED FOR THE ULTIMATE CONNECTION. IMPERVIOUS AREA FOR THE ULTIMATE CONNECTION AT THIS INTERSECTION SHALL BE ASSUMED TO BE A 100' ROUNDABOUT IN ACCORDANCE THE MAY 15,2001, MEETING WITH MR. CARL GUTSCHICK.
- A LANDSCAPE SURETY IN THE AMOUNT OF \$ 7,050.00 IS PART OF THE DEVELOPERS AGREEMENT.
- THE FOREST CONSERVATION IN THE INTERMEDIATE FOREST CONSERVATION PLAN COVERS THE AREA ENCOMPASSING THE ROAD CONSTRUCTION AND THE STORMWATER MANAGEMENT CONSTRUCTION AREAS OF LIMIT OF DISTURBANCE ONLY. THERE ARE 5 FOREST CONSERVATION EASEMENT AREAS AS SHOWN ON SHEET 22. THE SURETY AMOUNT FOR THE DEVELOPER AGREEMENT IS FOR THE AREA OUTSIDE THE FLOODPLAIN (5.77 AC.) * (\$0.20 PER SF) IS \$50,268.00

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 10-23-01
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hamrick 10/21/01
Chief, Division of Land Development

Paul DeWitt 10/23/01
Chief, Development Engineering Division



GLW
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BIRTINGVILLE OFFICE PARK
BURTONGVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

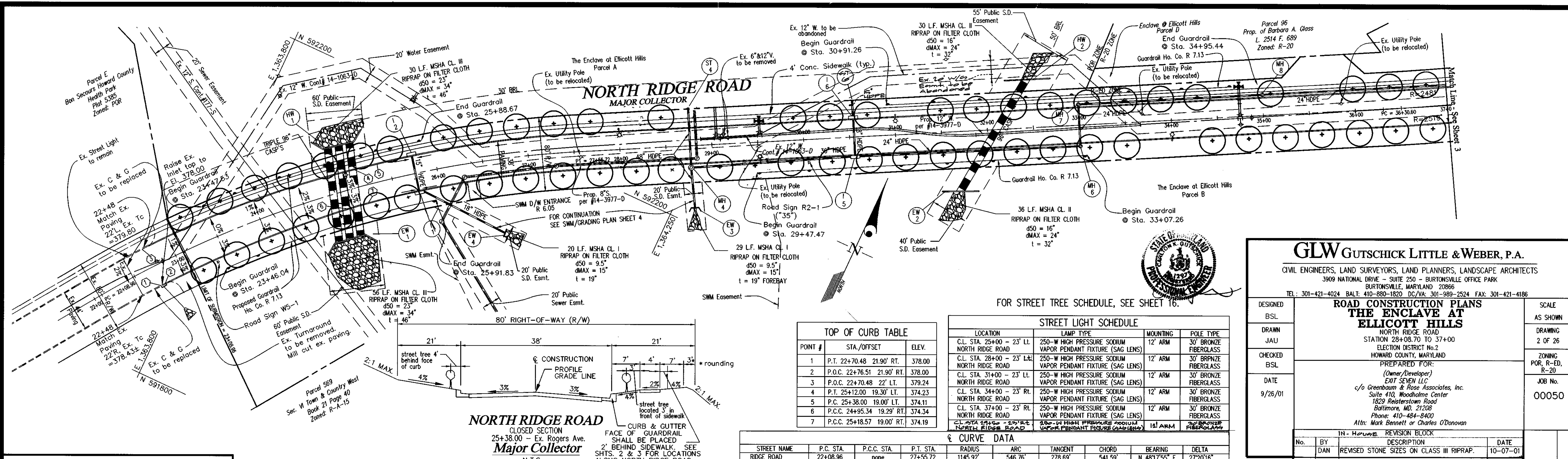
10-2-01	UPDATED GENERAL NOTES 23,24,25. ADDED GENERAL NOTE 26 & 27.	JAU	
	IN-HOUSE REVISION	BY	APP'R

PREPARED FOR:
(Owner/Developer)
EXIT SEVEN LLC
c/o Greenbaum & Rose Associates, Inc.
Suite 410, Woodholme Center
1829 Paolierstown Road
Baltimore, Maryland 21208
Attn: Charlie O'Donovan
Phone: 410-484-8400

COVER SHEET
THE ENCLAVE AT ELLICOTT HILLS
NORTH RIDGE ROAD
ELECTION DISTRICT No. 2
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	POR,R-ED, R-20	00050
DATE	TAX MAP - GRID	SHEET
SEPT. 26, 2001	17-17,18,24	1 OF 26

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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Rudolph M. ... 10-23-01
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
... 10/29/01
 Chief, Development Engineering Division

LEGEND

Ex. Left 30' BRL

Ex. Centerline

Ex. Right 30' BRL

Scales

Horizontal : 1"=50'

Vertical : 1"=5'

TOP OF CURB TABLE

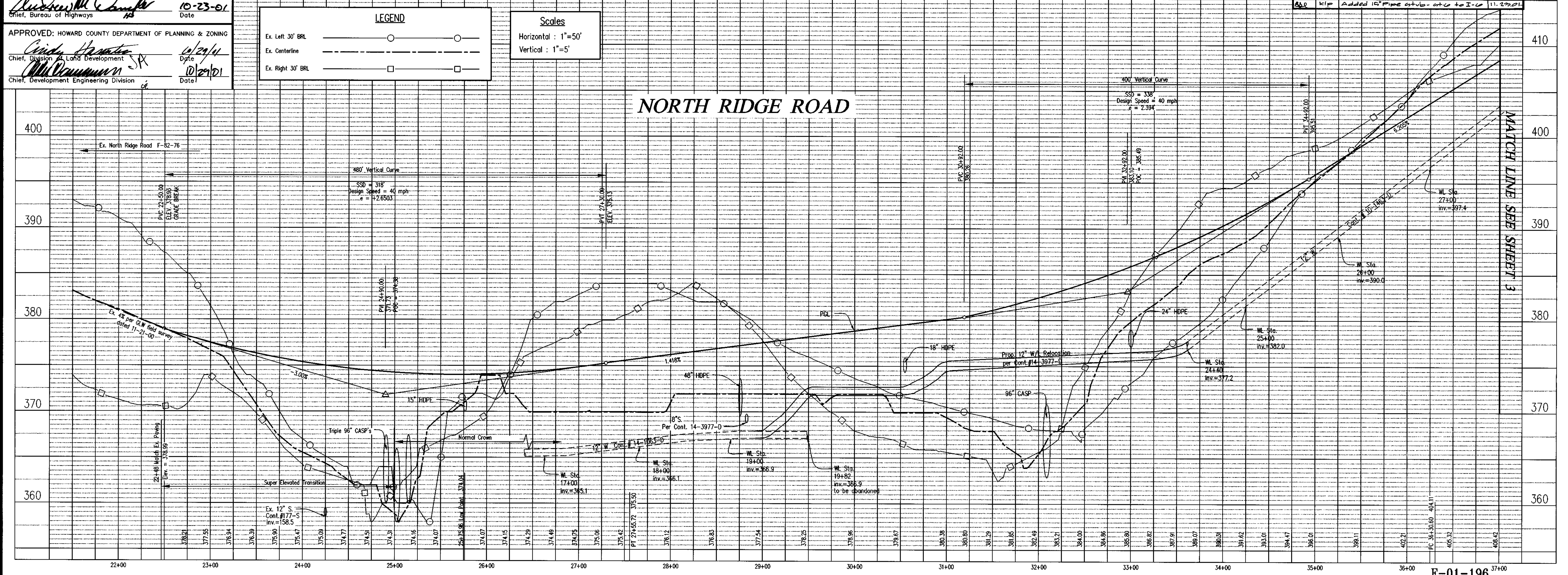
POINT #	STA./OFFSET	ELEV.
1	P.T. 22+70.48 21.90' RT.	378.00
2	P.O.C. 22+76.51 21.90' RT.	378.00
3	P.O.C. 22+70.48 22' LT.	379.24
4	P.T. 25+12.00 19.30' LT.	374.23
5	P.C. 25+38.00 19.00' LT.	374.11
6	P.C.C. 24+95.34 19.29' RT.	374.34
7	P.C.C. 25+18.57 19.00' RT.	374.19

STREET LIGHT SCHEDULE

LOCATION	LAMP TYPE	MOUNTING	POLE TYPE
C.L. STA. 25+00 - 23' LL. NORTH RIDGE ROAD	250-W HIGH PRESSURE SODIUM VAPOR PENDANT FIXTURE (SAG LENS)	12' ARM	30' BRONZE FIBERGLASS
C.L. STA. 28+00 - 23' LL. NORTH RIDGE ROAD	250-W HIGH PRESSURE SODIUM VAPOR PENDANT FIXTURE (SAG LENS)	12' ARM	30' BRONZE FIBERGLASS
C.L. STA. 31+00 - 23' LL. NORTH RIDGE ROAD	250-W HIGH PRESSURE SODIUM VAPOR PENDANT FIXTURE (SAG LENS)	12' ARM	30' BRONZE FIBERGLASS
C.L. STA. 34+00 - 23' RT. NORTH RIDGE ROAD	250-W HIGH PRESSURE SODIUM VAPOR PENDANT FIXTURE (SAG LENS)	12' ARM	30' BRONZE FIBERGLASS
C.L. STA. 37+00 - 23' RT. NORTH RIDGE ROAD	250-W HIGH PRESSURE SODIUM VAPOR PENDANT FIXTURE (SAG LENS)	12' ARM	30' BRONZE FIBERGLASS
C.L. STA. 39+00 - 25' RT. NORTH RIDGE ROAD	250-W HIGH PRESSURE SODIUM VAPOR PENDANT FIXTURE (SAG LENS)	12' ARM	30' BRONZE FIBERGLASS

¶ CURVE DATA

STREET NAME	P.C. STA.	P.C.C. STA.	P.T. STA.	RADIUS	ARC	TANGENT	CHORD	BEARING	DELTA
RIDGE ROAD	22+08.96	none	27+55.72	1145.92'	546.76'	278.69'	541.59'	N 48°17'55" E	27°20'18"
RIDGE ROAD	36+30.60	none	39+30.86	2500.00'	300.27'	150.31'	300.09'	N 58°31'36" E	06°52'54"



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC: 301-989-2524 FAX: 301-421-4186

**ROAD CONSTRUCTION PLANS
 THE ENCLAVE AT
 ELLICOTT HILLS**

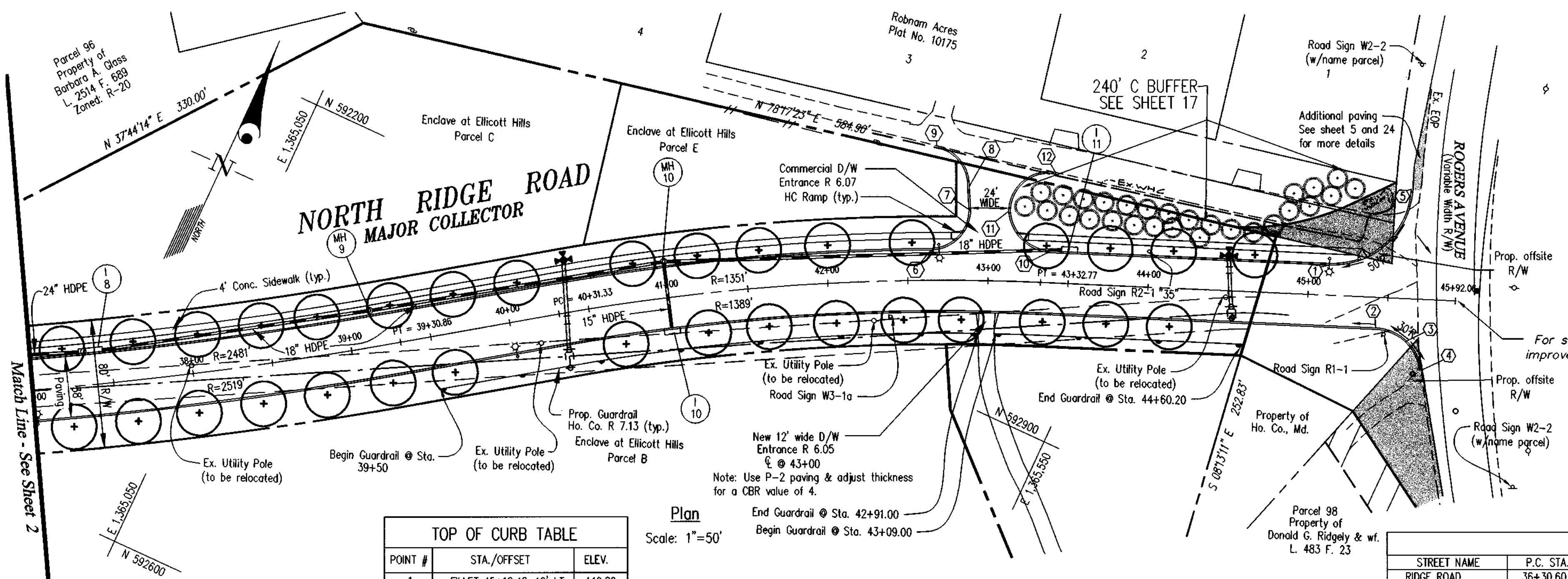
NORTH RIDGE ROAD
 STATION 28+08.70 TO 37+00
 ELECTION DISTRICT No. 2
 HOWARD COUNTY, MARYLAND

PREPARED FOR:
 (Owner/Developer)
 EXIT SEVEN LLC
 c/o Greenbaum & Rose Associates, Inc.
 Suite 410, Woodholme Center
 1829 Reisterstown Road
 Baltimore, MD 21208
 Phone: 410-464-8400
 Attn: Mark Bennett or Charles O'Donovan

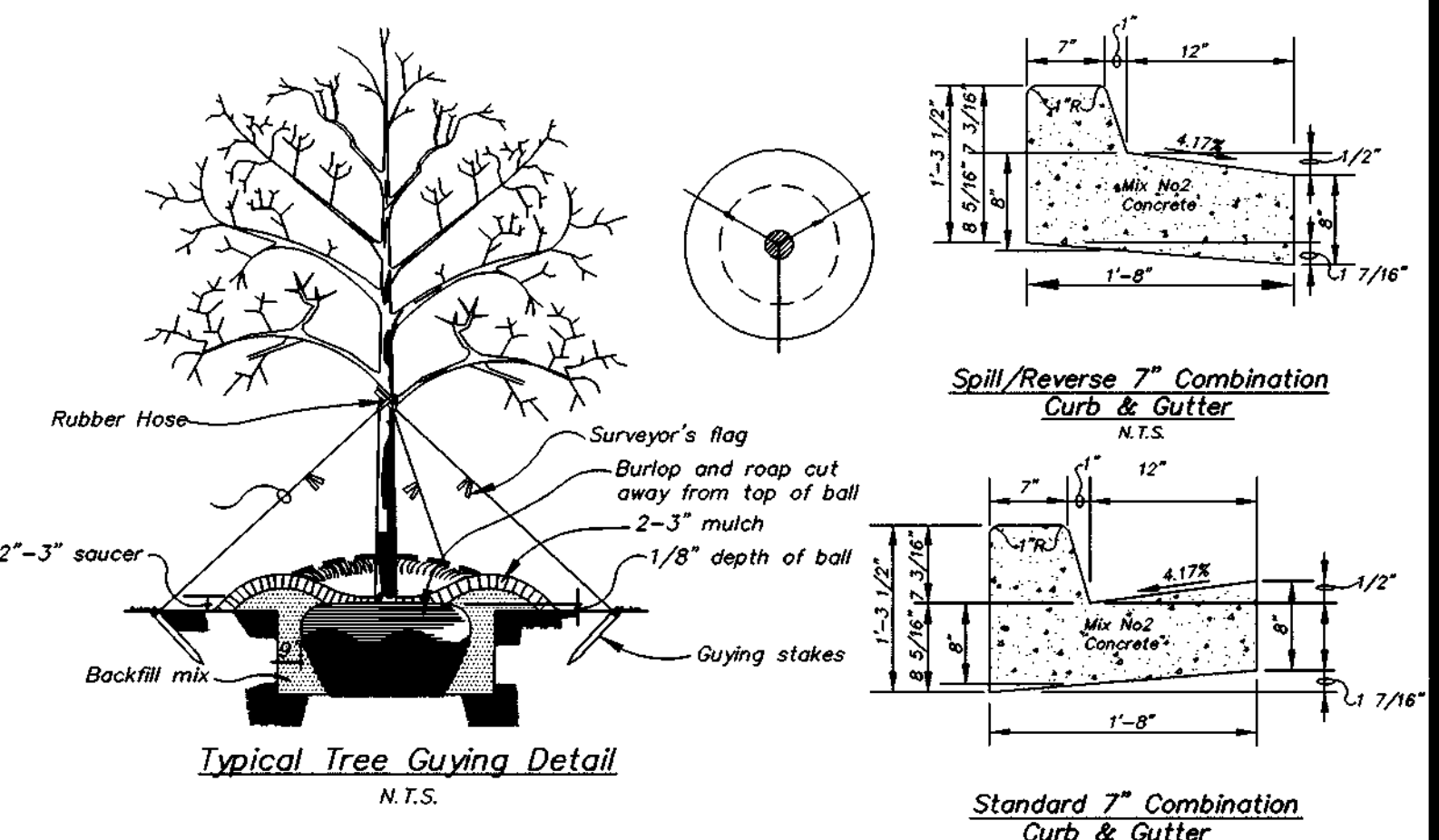
REVISION BLOCK

No.	BY	DESCRIPTION	DATE
1	DAN	REVISED STONE SIZES ON CLASS III RIPRAP.	10-07-01
2	ct	Add Light Pole @ 29+50	10-25-01
3	ct	Added 15' pipe curb - curb to I.C.	11-29-01

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Plan View of Future Possible Round-About @ Intersection of Rogers Ave. & North Ridge Rd. by Howard County
Scale: 1"=100'



Typical Tree Guying Detail
N.T.S.

Standard 7" Combination Curb & Gutter
N.T.S.

FOR TREE SCHEDULES, SEE SHEET 17.

LOCATION	LAMP TYPE	MOUNTING	POLE TYPE
C.L. STA. 37+00 - 23' RL NORTH RIDGE ROAD	250-W HIGH PRESSURE SODIUM VAPOR PENDANT FIXTURE (SAG LENS)	12' ARM	30' BRONZE FIBERGLASS
C.L. STA. 40+00 - 23' RL NORTH RIDGE ROAD	250-W HIGH PRESSURE SODIUM VAPOR PENDANT FIXTURE (SAG LENS)	12' ARM	30' BRONZE FIBERGLASS
C.L. STA. 42+70 - 23' LL NORTH RIDGE ROAD	250-W HIGH PRESSURE SODIUM VAPOR PENDANT FIXTURE (SAG LENS)	12' ARM	30' BRONZE FIBERGLASS
C.L. STA. 45+12.5 - 23' LL NORTH RIDGE ROAD	250-W HIGH PRESSURE SODIUM VAPOR PENDANT FIXTURE (SAG LENS)	12' ARM	30' BRONZE FIBERGLASS

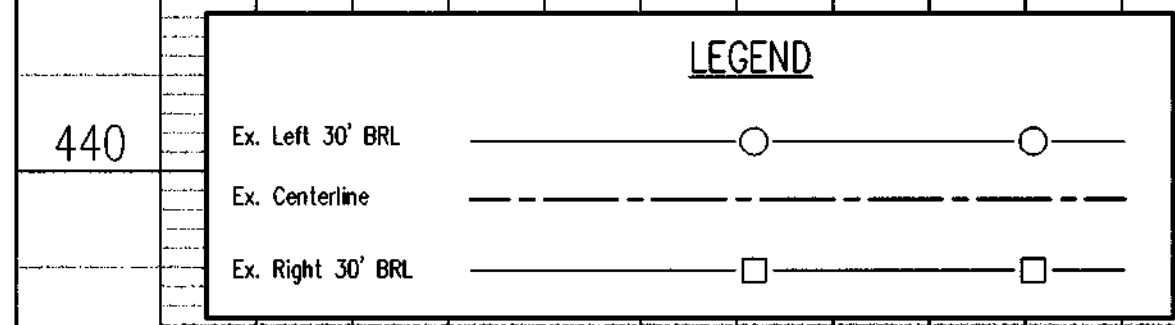
STREET NAME	P.C. STA.	P.C.C. STA.	P.T. STA.	RADIUS	ARC	TANGENT	CHORD	BEARING	DELTA
RIDGE ROAD	36+30.60	none	39+30.86	2500.00'	300.27'	150.31'	300.09'	N 58°31'36" E	06°52'54"
RIDGE ROAD	40+31.33	none	43+32.77	1370.00'	301.44'	151.33'	300.83'	N 61°23'22" E	12°38'24"

POINT #	STA./OFFSET	ELEV.
1	FILLET 45+12.48, 19' LT.	449.89
2	FILLET 45+43.09, 19' RT.	450.61
3	HP, MID POINT 45+62.48, 26.11' RT.	451.11
4	NOSE DOWN CURB 45+72.68, 44.06' RT.	Match Ex. EOP 449.03
5	NOSE DOWN CURB 45+62.48, 68.47' LT.	EOP 453.95
6	PC 42+64.85, 19' LT.	441.85
7	PT 42+88.62, 44.32' LT.	444.58
8	PC 42+87.67, 58.72' LT.	446.30
9	NOSE DOWN CURB 42+68.44, 83.89' LT.	Match Ex. EOP 446.60
10	PC 43+36.76, 19' LT.	444.78
11	PRC 43+11.59, 43.81' LT.	445.58
12	NOSE DOWN CURB 43+39.53, 69.15' LT.	Match Ex. EOP 448.30

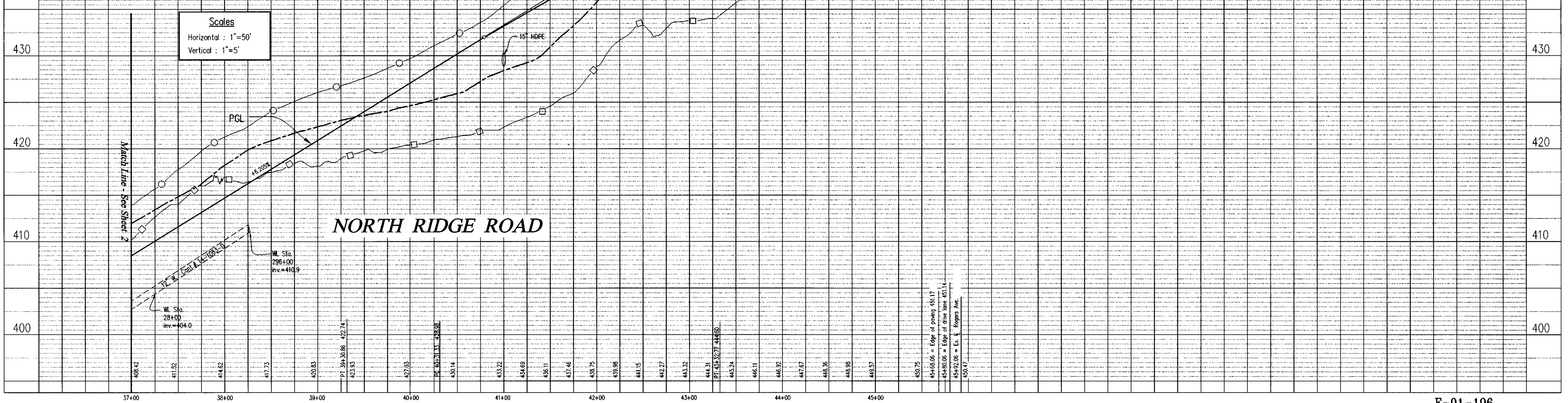
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Danks 10-23-01
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
David H. ... 10/29/01
 Chief, Division of Land Development

... 10/29/01
 Chief, Development Engineering Division



Scales
 Horizontal : 1"=50'
 Vertical : 1"=5'



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
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 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

ROAD CONSTRUCTION PLANS
THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD
 STATION 37+00.00 TO 45+92.06
 ELECTION DISTRICT No. 6
 HOWARD COUNTY, MARYLAND

DESIGNED: BSL
 DRAWN: JAU
 CHECKED: BSL
 DATE: 9/26/01

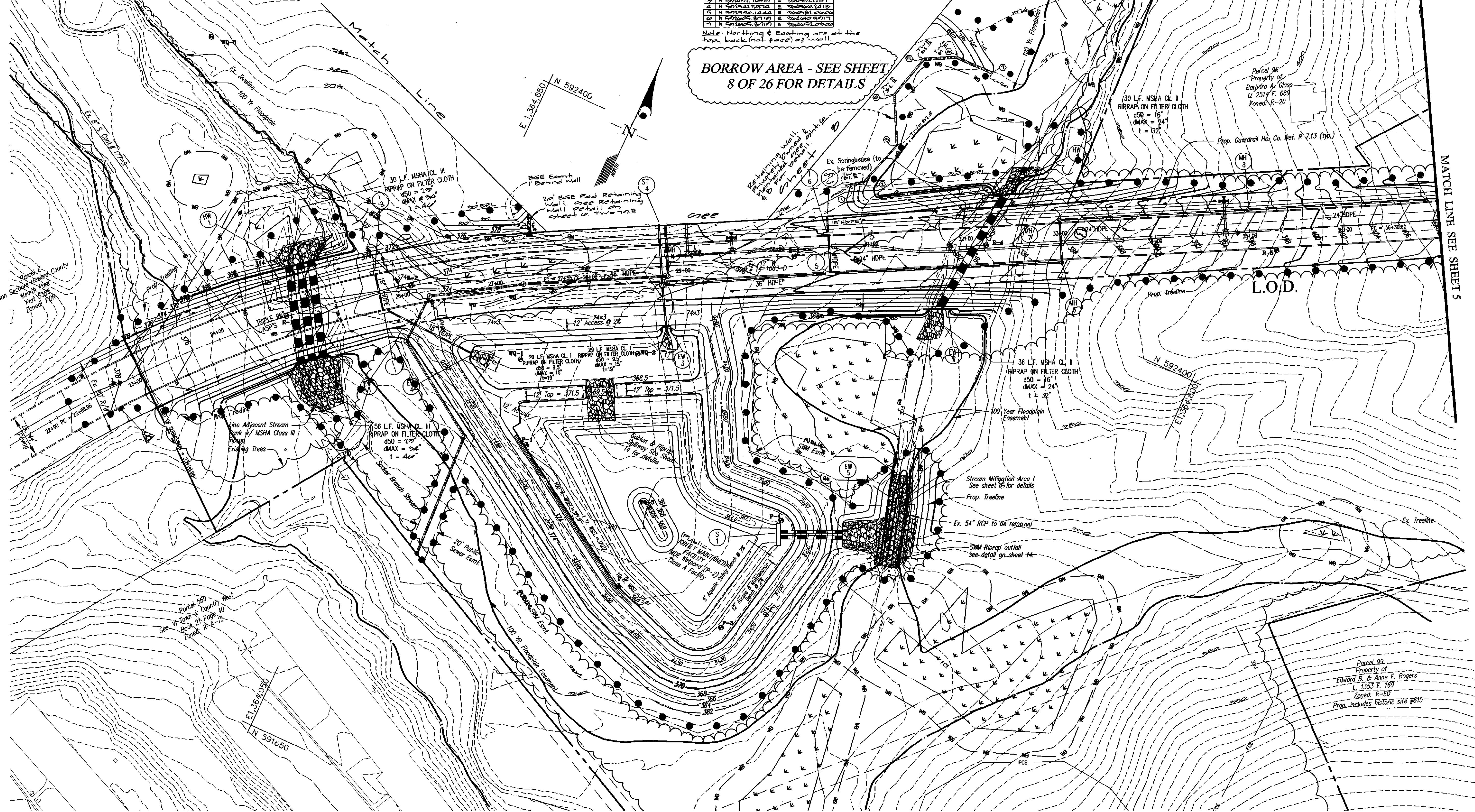
SCALE: AS SHOWN
 DRAWING: 3 OF 26
 ZONING: FOR, R-ED, R-20
 JOB No.: 00050

REVISIONS (IN-HOUSE)
 10/2/01 ADDED NOTE TO SEE SHEET 17 FOR "240' C BUFFER" LMM
 10/6/01 REVISE NW CURB @ ENT. @ ROGERS AVE. TO 50' RAD. & REMOVE SPILL GUTTER

Wall Northing & Easting	
1	N 592400
2	N 592400
3	N 592400
4	N 592400
5	N 592400
6	N 592400
7	N 592400

Note: Appropriate licensed Professional shall Verify Soil Bearing Capacity Exceeds the 2000 Pcf minimum And shall observe The Placement of Backfill.

BORROW AREA - SEE SHEET 8 OF 26 FOR DETAILS



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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Dangle 10/23/01
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Kanitz 11/29/01
 Chief, Division of Land Development Date

John Cummings 10/29/01
 Chief, Development Engineering Division Date

SIMM POND
 D.A. = 38.55 Ac. FOR WATER QUANTITY (minus offsite area and credits = 34.55 Ac. for water quality)
 WQV Req. = 1,7894 Ac.-Fl. Provided = 1,896 Ac.-Fl.
 Rev. Req. = 0.428 Ac.-Fl. Structural & 5.3 Ac. Non Structural Provided on the POR Parcel
 See future site development plan.
 Cpv Req. = 2.405 Ac.-Fl. Provided = 2.502 Ac.-Fl.
 An MDE Wetpond (P-2) was designed with a 4' Permanent Pool and Additional Volume to store the Cpv Volume.

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.

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Jim Payne / cs
 Natural Resources Conservation Service

10/17/01
 Date

John Seiz
 Howard Soil Conservation District

10/17/01
 Date

DEVELOPER'S/BUILDER'S CERTIFICATE
 "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 Maryland 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.

Charles... 10/8/01
 Signature of Developer/Builder Date

ENGINEER'S CERTIFICATE
 "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."

Chris Kanitz 10/8/01
 Engineer's Signature Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BARTONSVILLE OFFICE PARK
 BARTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

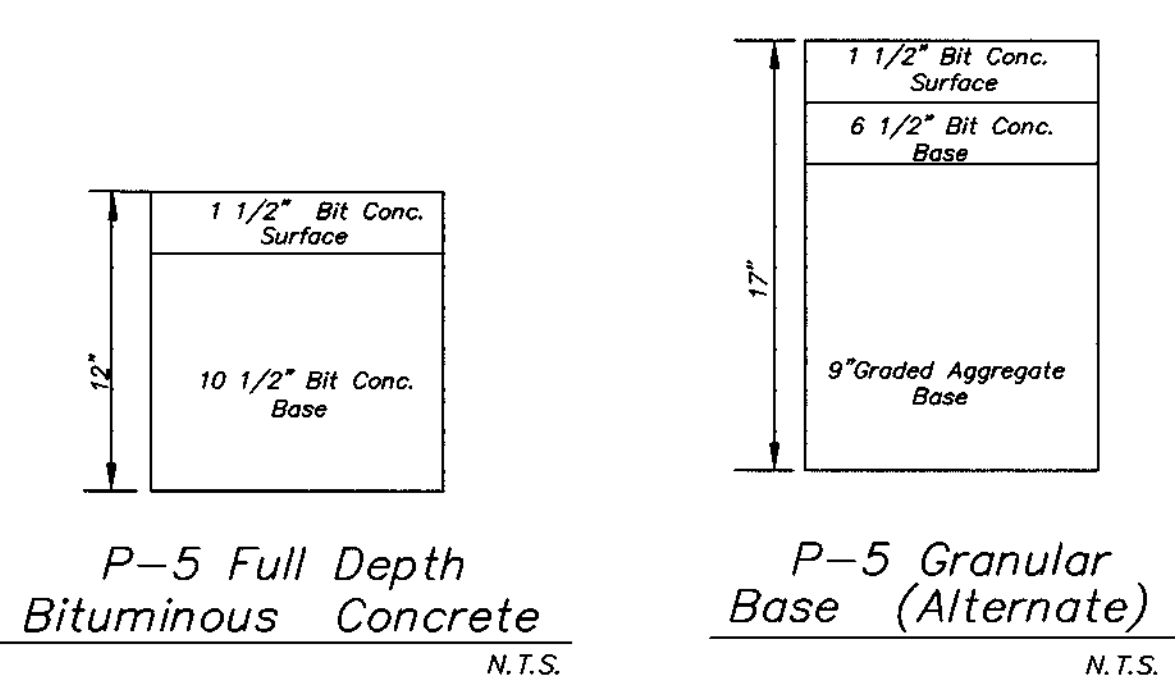
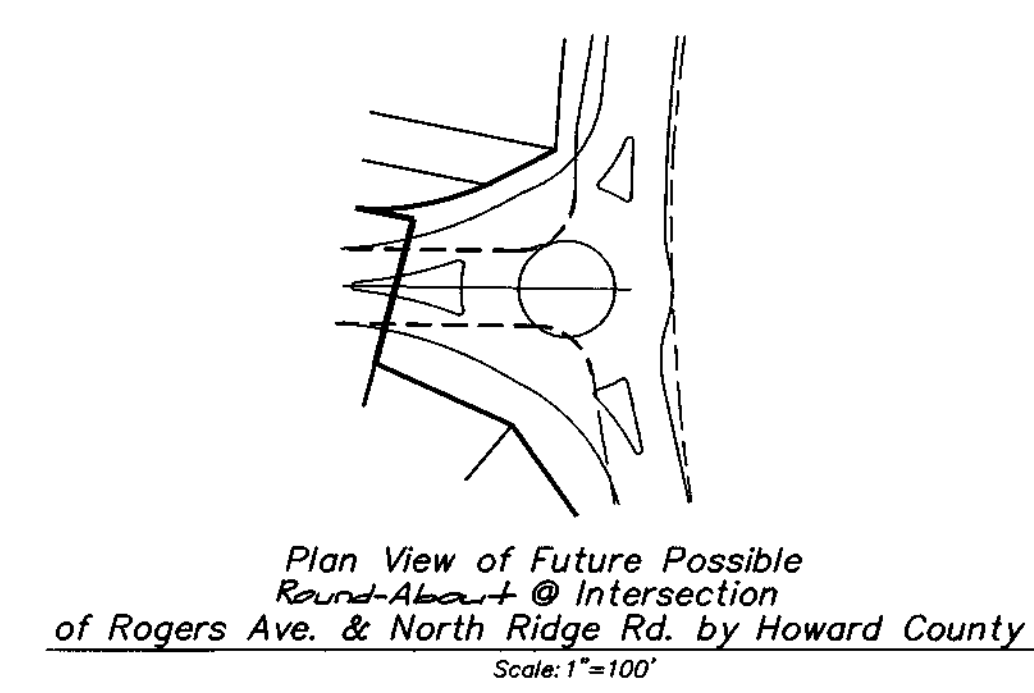
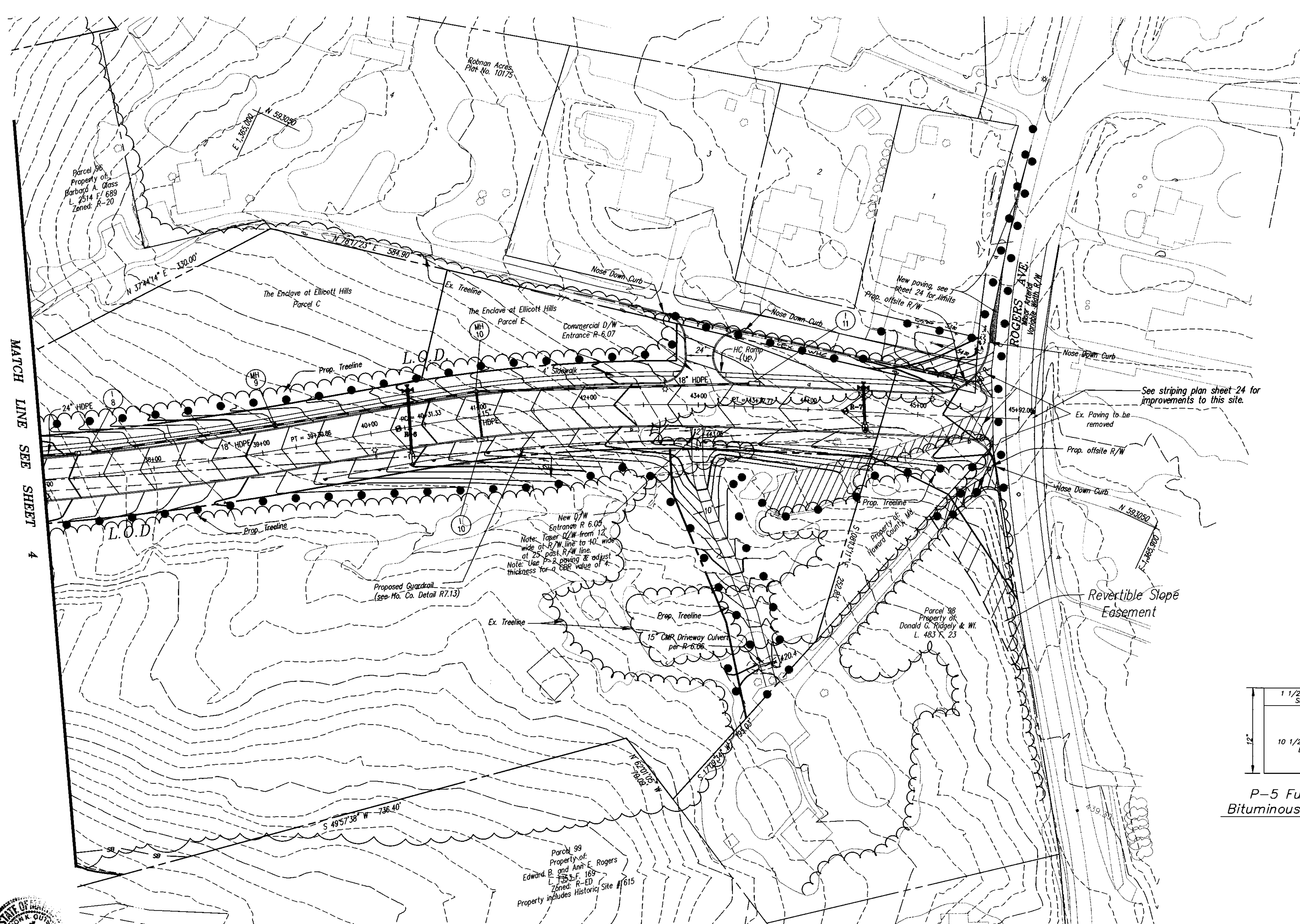
DATE	DESCRIPTION	BY	APPR.
11/29/01	Added Match Line & Retaining Walls & 15" Pipe Stub from I-2	kjp	BSP
10/21/01	update stone size per cl III riprap @ HWI & EW1	kjp	BSP
		IN-HOUSE REVISION	

PREPARED FOR:
 (Owner/Developer)
 EXIT SEVEN LLC
 c/o Greenbaum & Rose Associates, Inc.
 Suite 410, Woodchime Center
 1829 Ristersdown Road
 Baltimore, MD 21208
 Phone: 410-484-8400
 Attn: Mark Bennett or Charles O'Donovan

STORMWATER MANAGEMENT/GRADING PLAN
THE ENCLAVE AT ELLICOTT HILLS
 NORTHRIDGE ROAD
 ELECTION DISTRICT No. 2

SCALE	ZONING	G. L. W. FILE No.
1"=50'	POR, R-ED, R-20	00050
DATE	TAX MAP - GRID	SHEET
9/26/01	17-17,18,24	4 OF 26

HOWARD COUNTY, MARYLAND



ROGERS AVENUE Paving Sections
N.T.S.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Daulton 10/25/01
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Condy Hester 10/27/01
 Chief, Division of Land Development Date

Chris DeWitt 10/25/01
 Chief, Development Engineering Division Date

ENGINEER'S CERTIFICATE
 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.

CKG 10/18/01
 Engineer's Signature Date

DEVELOPER'S/BUILDER'S CERTIFICATE
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Andrew M. Daulton 10/18/01
 Signature of Developer/Builder 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 Russell 10/12/01
 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.

Yvette Alby 10/12/01
 Howard Soil Conservation District Date

GLW GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS 3909 NATIONAL DRIVE - SUITE 250 - BERTONSVILLE OFFICE PARK BERTONSVILLE, MARYLAND 20866 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186		PREPARED FOR: (Owner/Developer) EXIT SEVEN LLC c/o Greenbaum & Rose Associates, Inc. Suite 410, Woodholme Center 1829 Reisterstown Road Baltimore, MD, 21208 Phone: 410-484-8400 Attn: Mark Bennett or Charles O'Donovan		GRADING PLAN THE ENCLAVE AT ELlicOTT HILLS NORTH RIDGE ROAD		SCALE 1"=50'	ZONING POR, R-ED, R-20	G. L. W. FILE No. 00050
DATE	REVISION	BY	APPR.	ELECTION DISTRICT No. 2	DATE	TAX MAP - GRID	SHEET	
10/25/01					9/26/01	17-17,18,24	5 OF 26	

00050\DESIGN\00050GP2.DWG 10-8-01 10:00:14 am EST

STONE OUTLET SEDIMENT TRAP # 2

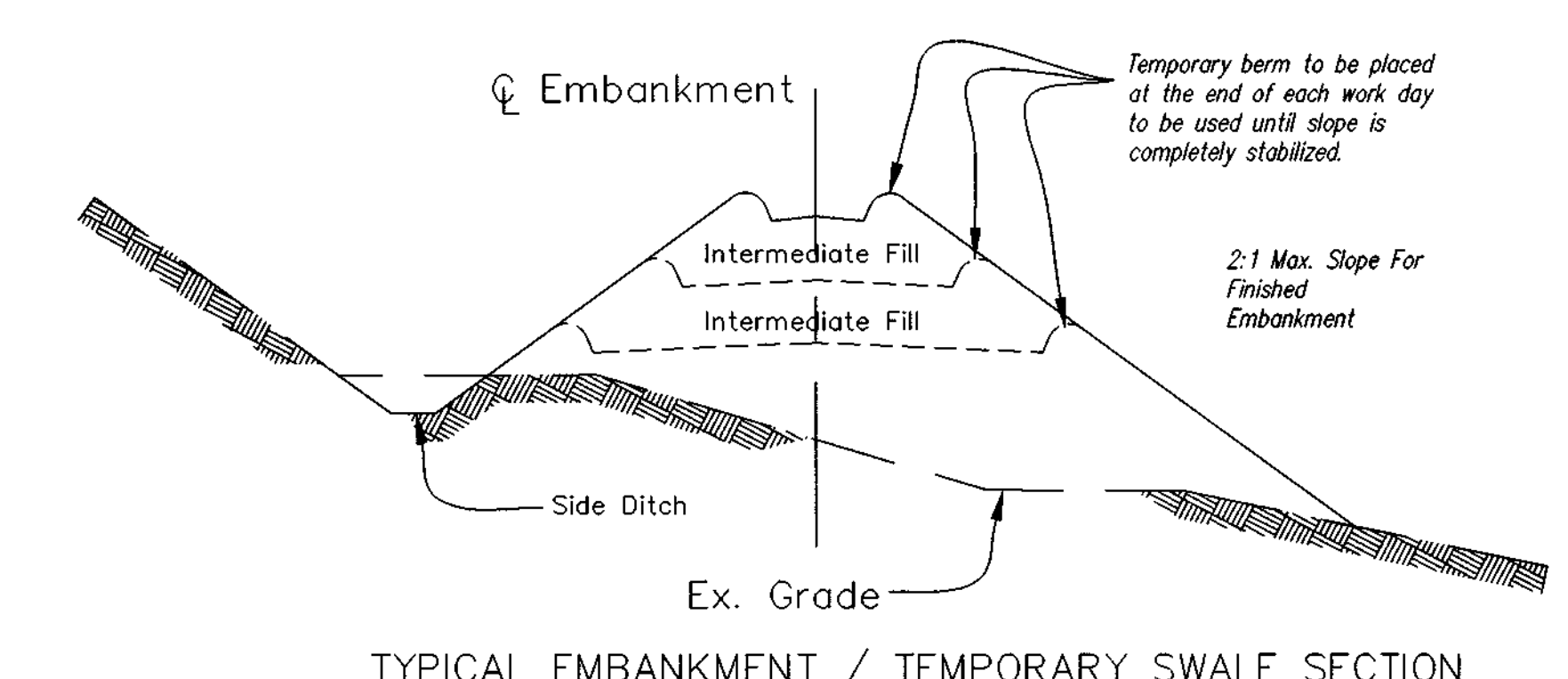
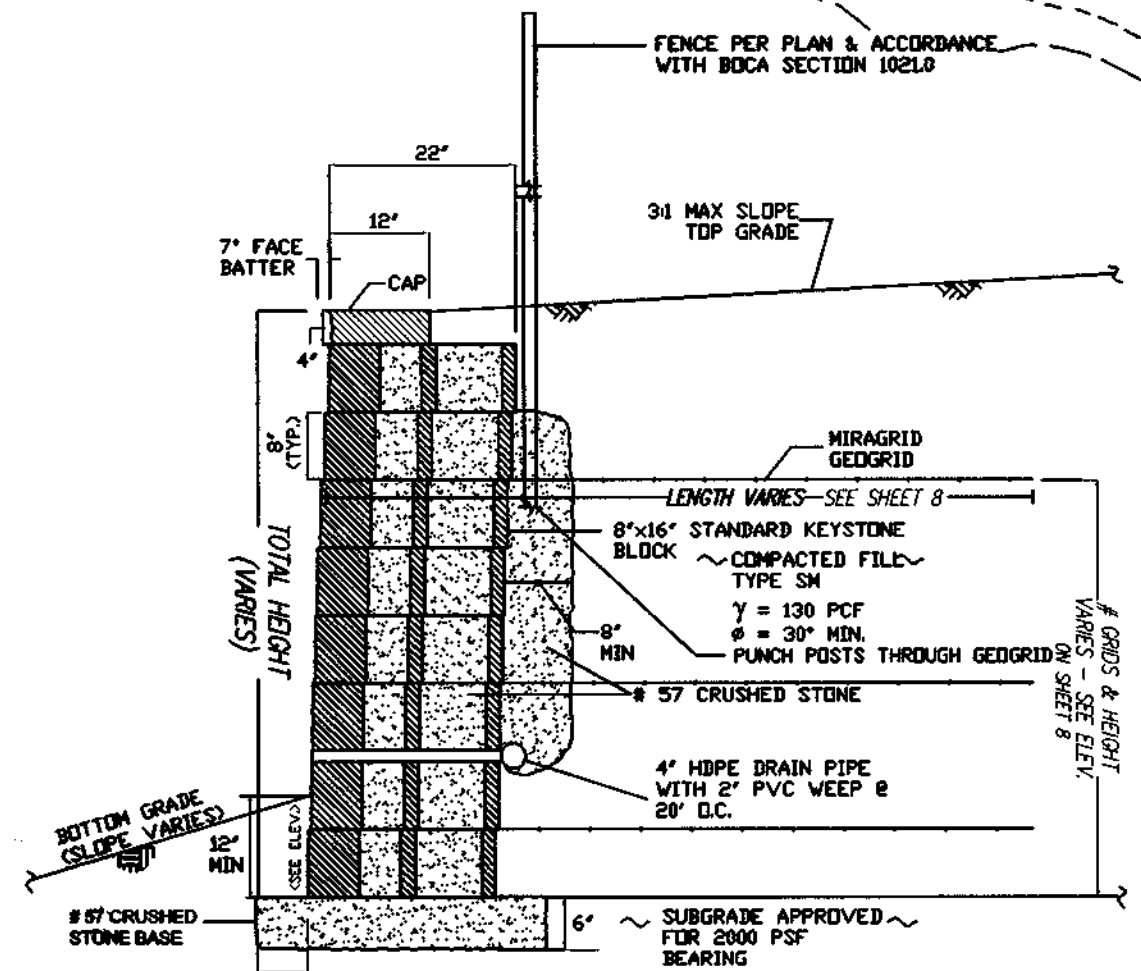
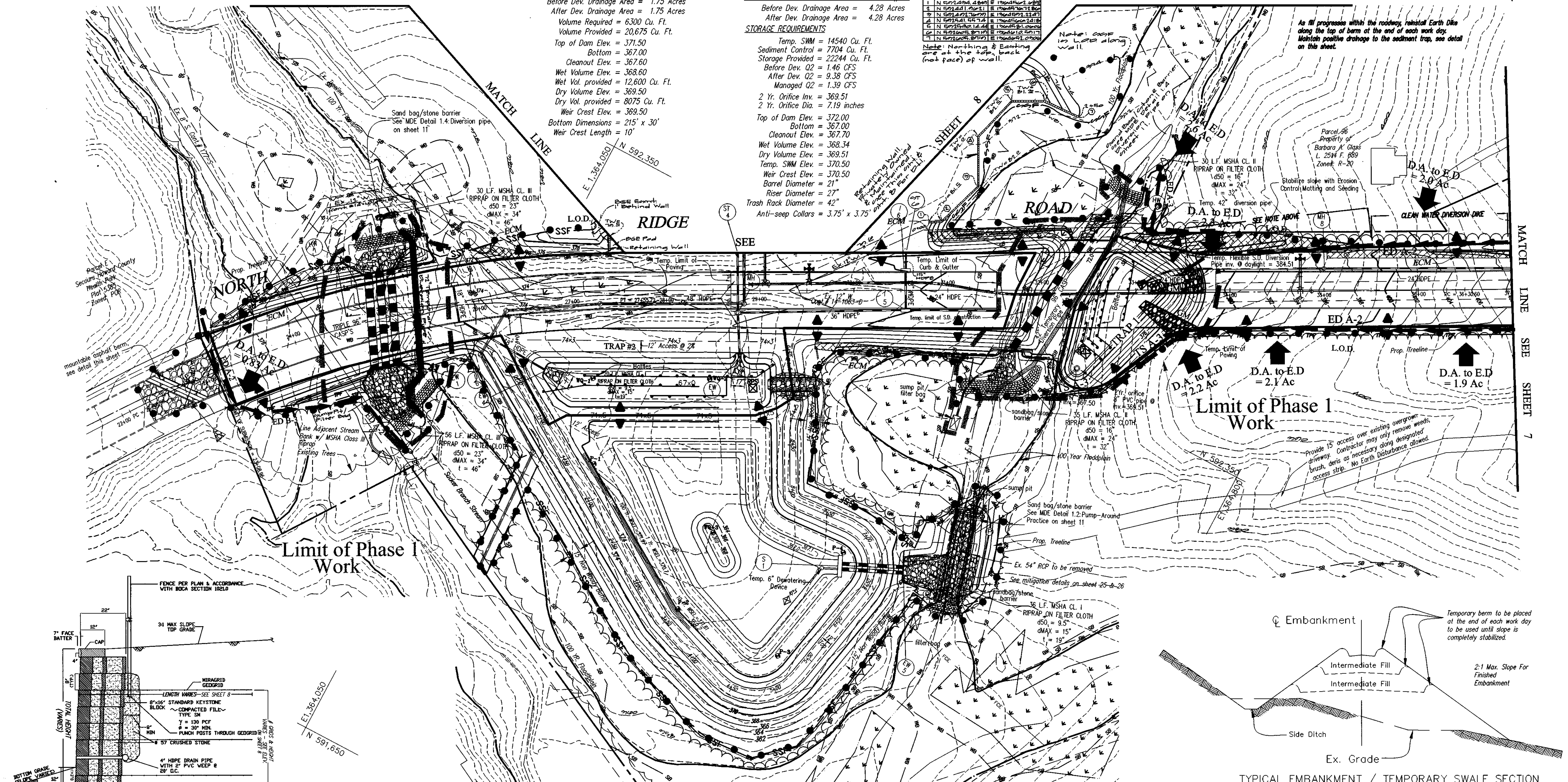
Before Dev. Drainage Area = 1.75 Acres
 After Dev. Drainage Area = 1.75 Acres
 Volume Required = 6,300 Cu. Ft.
 Volume Provided = 20,675 Cu. Ft.
 Top of Dam Elev. = 371.50
 Bottom = 367.00
 Cleanout Elev. = 367.60
 Wet Volume Elev. = 368.60
 Wet Vol. provided = 12,600 Cu. Ft.
 Dry Volume Elev. = 369.50
 Dry Vol. provided = 8,075 Cu. Ft.
 Weir Crest Elev. = 369.50
 Bottom Dimensions = 215' x 30'
 Weir Crest Length = 10'

PIPE OUTLET SEDIMENT TRAP # 1

Before Dev. Drainage Area = 4.28 Acres
 After Dev. Drainage Area = 4.28 Acres
STORAGE REQUIREMENTS
 Temp. SWM = 14540 Cu. Ft.
 Sediment Control = 7704 Cu. Ft.
 Storage Provided = 22244 Cu. Ft.
 Before Dev. Q2 = 1.46 CFS
 After Dev. Q2 = 9.38 CFS
 Managed Q2 = 1.39 CFS
 2 Yr. Orifice Inv. = 369.51
 2 Yr. Orifice Dia. = 7.19 inches
 Top of Dam Elev. = 372.00
 Bottom = 367.00
 Cleanout Elev. = 367.70
 Wet Volume Elev. = 368.34
 Dry Volume Elev. = 369.50
 Temp. SWM Elev. = 370.50
 Weir Crest Elev. = 370.50
 Barrel Diameter = 21"
 Riser Diameter = 27"
 Trash Rack Diameter = 42"
 Anti-seep Collars = 3.75' x 3.75'

Wall Northing & Easting
 1 N 592,404.400 E 136,405.000
 2 N 592,411.200 E 136,405.000
 3 N 592,418.000 E 136,405.000
 4 N 592,424.800 E 136,405.000
 5 N 592,431.600 E 136,405.000
 6 N 592,438.400 E 136,405.000
 7 N 592,445.200 E 136,405.000
 8 N 592,452.000 E 136,405.000
 9 N 592,458.800 E 136,405.000
 10 N 592,465.600 E 136,405.000
 Note: Northing & Easting are at the top, back (not face) of wall.

Note: Appropriate Licensed Professional shall Verify Soil Bearing Capacity Exceeds The 2000 PSF Min. And shall Observe The Placement of Backfill.



Note: For Construction Specifications & Details For Stream Diversion Pipes, Sandbag Barriers & Diversion & Stream Pump Around Practice, Refer to MDE Details on sheet 11.

DEVELOPER'S/BUILDER'S CERTIFICATE

"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 Maryland 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.

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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 Date: 10/20/01

Signature: Jim Myers / J.C.
 Date: 10/12/01
 Natural Resources Conservation Service

Signature: [Signature]
 Date: 10/18/01
 Signature of Developer/Builder

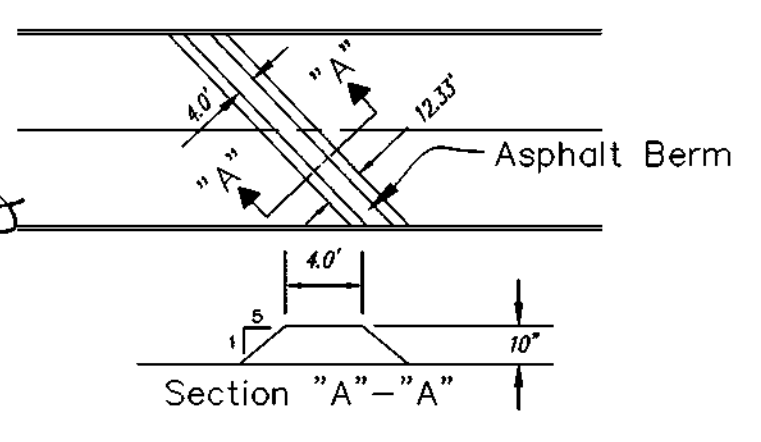
Signature: [Signature]
 Date: 10/18/01
 Engineer's Signature

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development
 Date: 10/20/01
 Chief, Development Engineering Division
 Date: 10/20/01

Signature: [Signature]
 Date: 10/12/01
 Howard Soil Conservation District

Signature: [Signature]
 Date: 10/18/01

Signature: [Signature]
 Date: 10/18/01



Mountable Berm Diversion Detail NTS

LEGEND

- ED, A-1 EARTH DIKE
- TEMP. SWALE A-1 TEMPORARY SWALE
- GABION INFLOW PROTECTION
- RPS REMOVABLE PUMPING STATION
- SSF SUPER SILT FENCE
- SF SILT FENCE
- L.O.D. LIMIT OF DISTURBANCE (the LOD is concurrent with the sediment erosion controls along the perimeter of the site.)
- ECM EROSION CONTROL MATTING

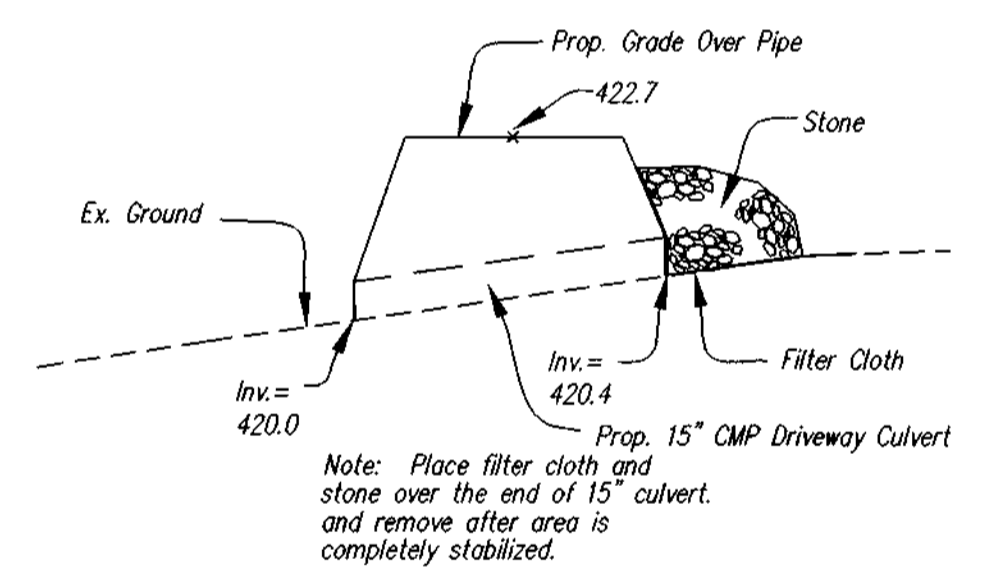
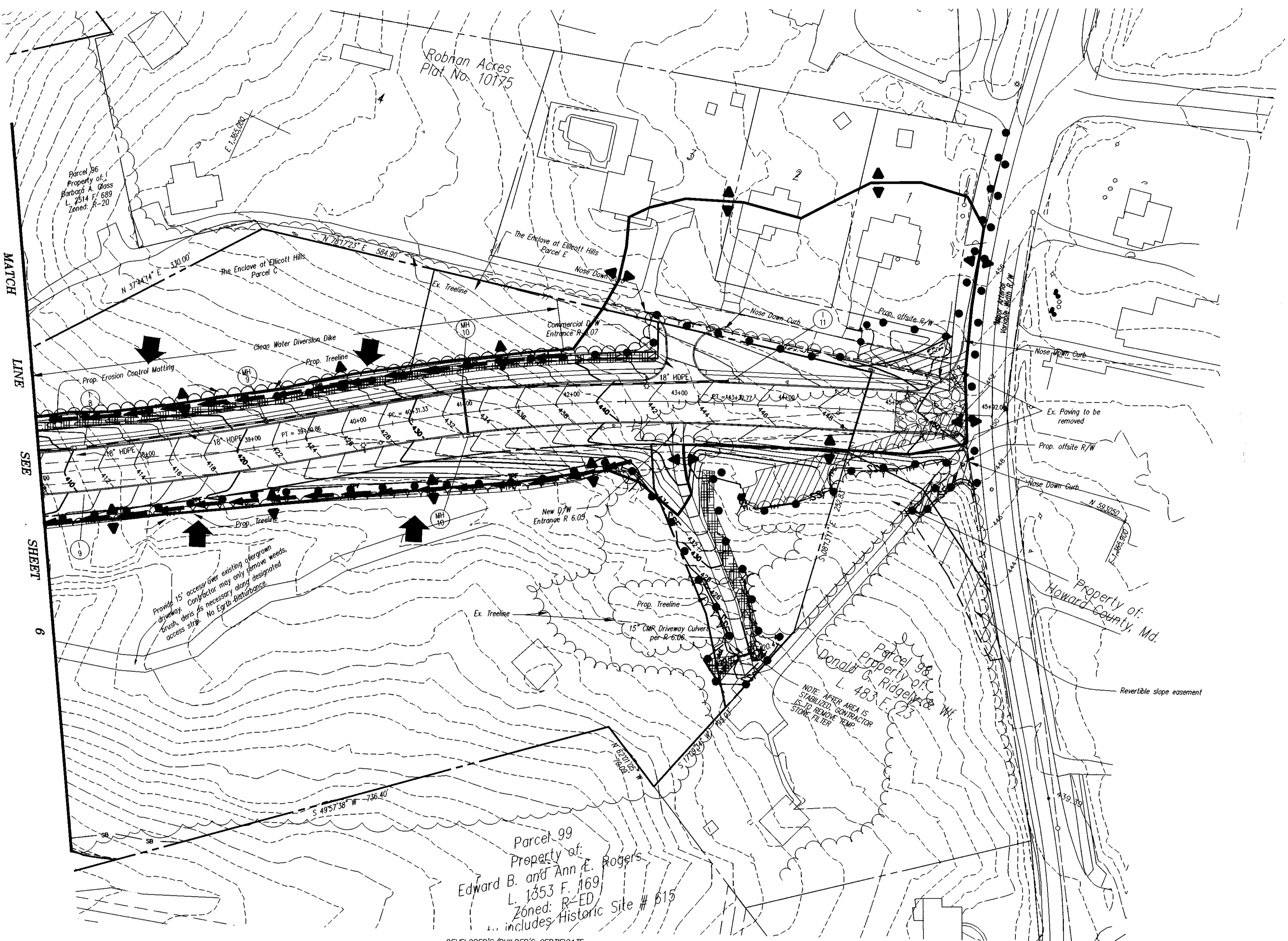
GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3906 NATIONAL DRIVE, SUITE 250 - BURTONVILLE OFFICE PARK
 BURTONVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 301-989-2524
 00050\DESIGN\00050SC2.DWG DES. BSL DRN. JAU CHK. BSL

DATE	REVISION	BY	APP'R.
11/27/01	add. ret. wall & wall det. Rev. triple cell bypass pipe location to other side of stream	KLW	

PREPARED FOR: (Owner/Developer)
 EXIT SEVEN LLC
 c/o Greenbaum & Rose Associates, Inc.
 Suite 410, Woodholme Center
 1829 Risterstown Road
 Baltimore, MD 21208
 Phone: 410-484-8400
 Attn: Mark Bennett or Charles O'Donovan

SEDIMENT CONTROL PLAN
THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD
 ELECTION DISTRICT No. 2
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	POR, R-ED, R-20	00050
DATE	TAX MAP - GRID	SHEET
9/26/01	17-17,18,24	6 OF 26



Temp. Stone Filter Detail for 15" Driveway Culvert

LEGEND

	ED, A-1	EARTH DIKE
	TEMP. SWALE, A-1	TEMPORARY SWALE
	GABION	GABION INFLOW PROTECTION
	RES	REMOVABLE PUMPING STATION
	SSF	SUPER SILT FENCE
	SF	SILT FENCE
	L.O.D.	LIMIT OF DISTURBANCE
	ECM	EROSION CONTROL MATTING

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 M.../s 10/17/01
Natural Resources Conservation Service

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Mark.../s 10/17/01
Howard Soil Conservation District

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Mark.../s 10/8/01
Signature of Developer/Builder

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CK... 10/8/01
Engineer's Signature



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew... 10-23-01
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Andy... 10/29/01
Chief, Division of Land Development

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS	3909 NATIONAL DRIVE - SUITE 250 - BURTOWNSVILLE OFFICE PARK	BURTOWNSVILLE, MARYLAND 20896	TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186
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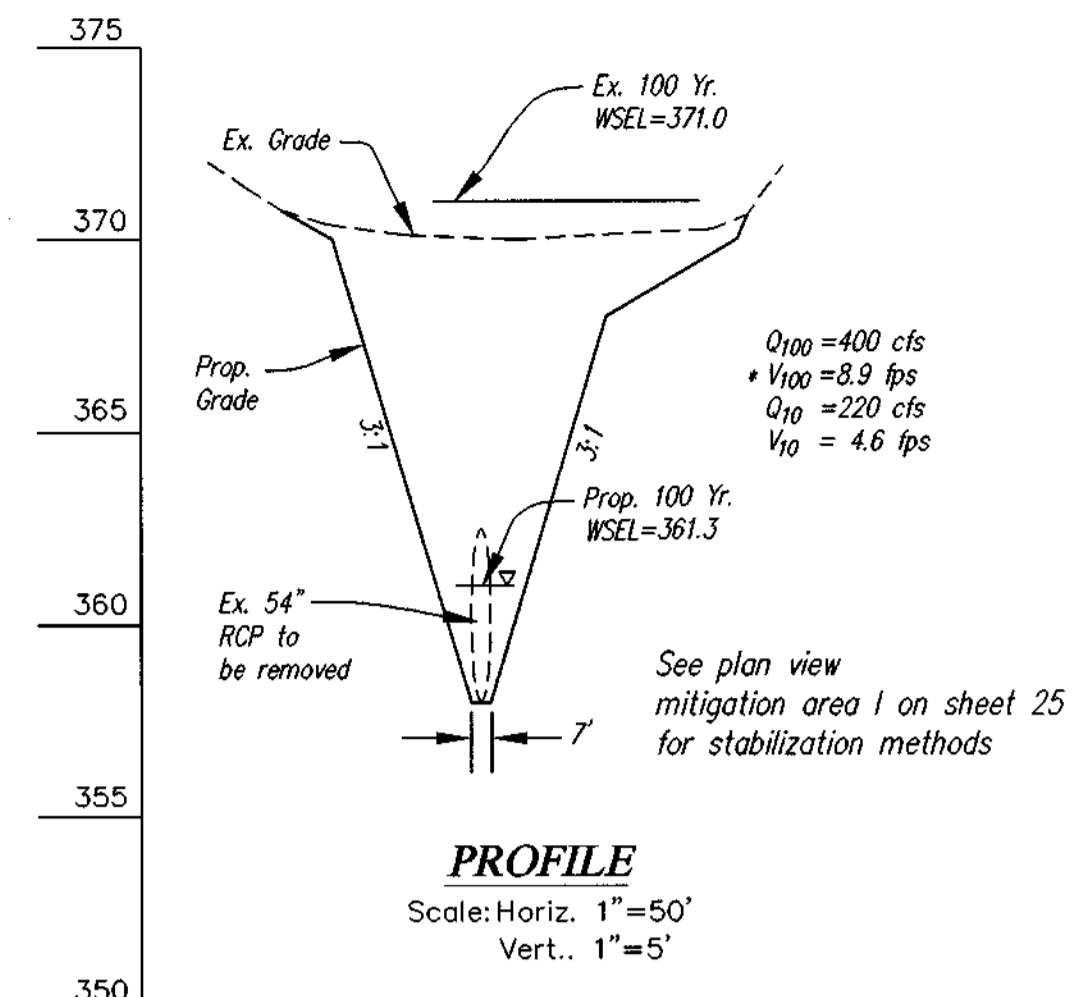
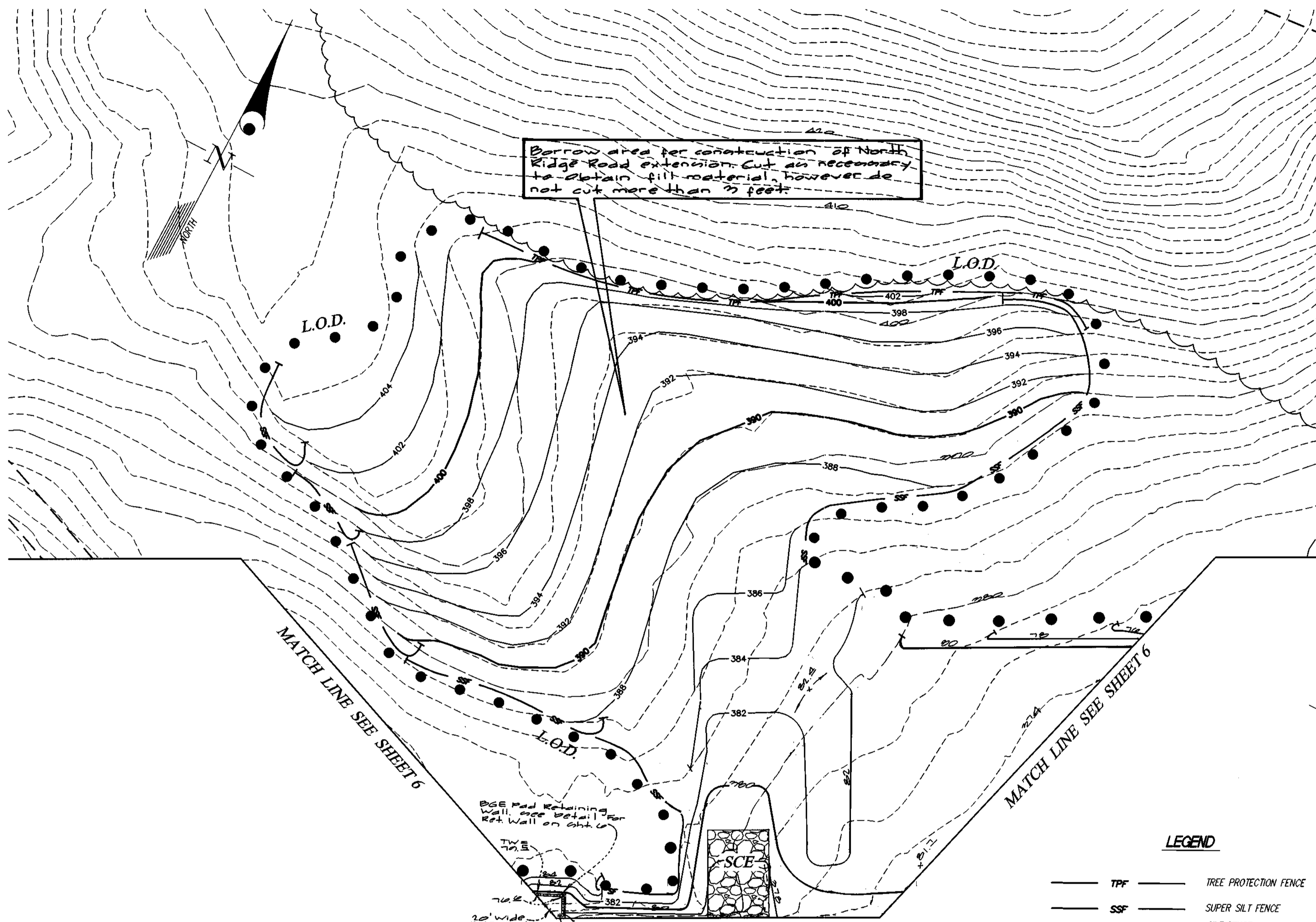
PREPARED FOR:
(Owner/Developer)
EXIT SEVEN LLC
c/o Greenbaum & Rose Associates, Inc.
Suite 410, Woodholme Center
1829 Rectorstown Road
Baltimore, MD 21208
Phone: 410-484-8400
Attn: Mark Bennett or Charles O'Donovan

SEDIMENT CONTROL PLAN
THE ENCLAVE AT ELLICOTT HILLS
NORTH RIDGE ROAD

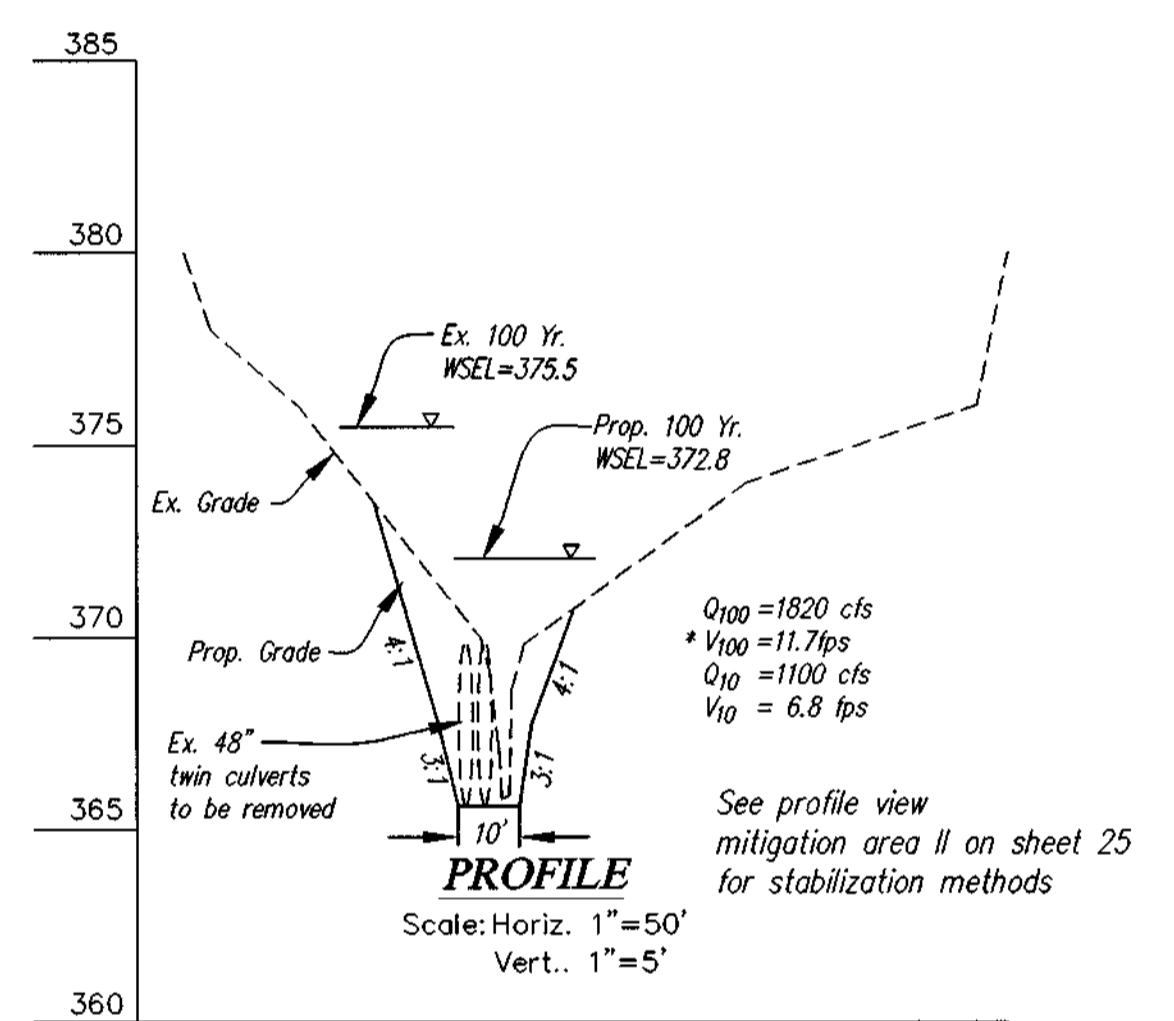
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DATE: 9/26/01
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	POR, R-ED, R-20	00050
DATE	TAX MAP - GRID	SHEET
9/26/01	17-17.18.24	7 OF 26

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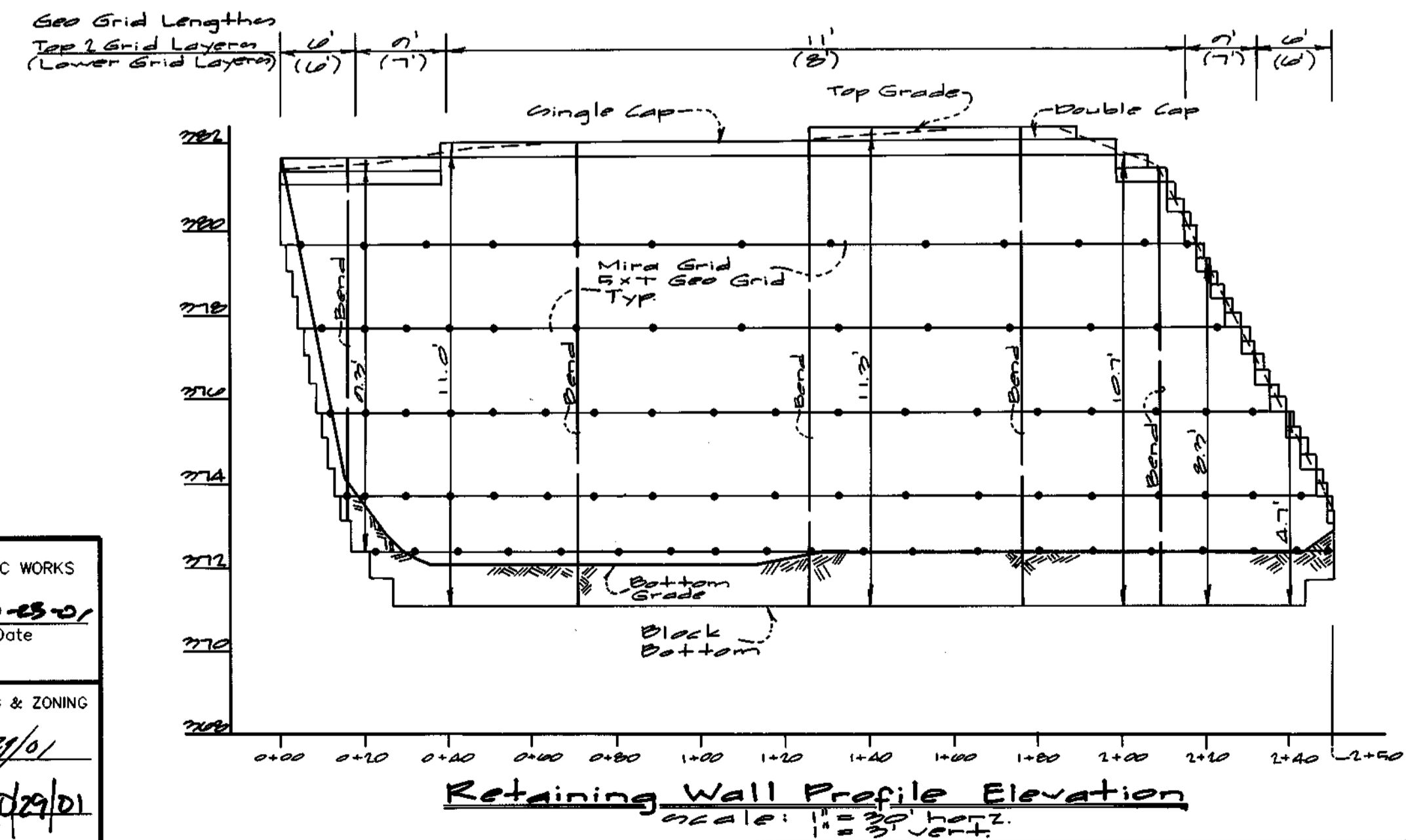


* From HEC-2 FP Study
FLOODPLAIN CROSS SECTION 202.5
MODIFICATION MITIGATION AREA 1
SEE SHEET 25 & 26 FOR MORE INFORMATION



* From HEC-2 FP Study
FLOODPLAIN CROSS SECTION 16
MODIFICATION MITIGATION AREA 2
SEE SHEET 25 & 26 FOR MORE INFORMATION

- LEGEND**
- TPF — TREE PROTECTION FENCE
 - SSF — SUPER SILT FENCE
 - SF — SILT FENCE
 - L.O.D. — LIMIT OF DISTURBANCE



DEVELOPER'S/BUILDER'S CERTIFICATE

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Signature of Developer/Builder: *[Signature]*
Date: 10/8/01

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Engineer's Signature: *[Signature]*
Date: 10/8/01

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Signature: *[Signature]*
Date: 10/12/01
Howard Soil Conservation District

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.

Signature: *[Signature]*
Date: 10/12/01
Natural Resources Conservation Service



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways: *[Signature]* 10/13/01
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development: *[Signature]* 10/13/01
Date

Chief, Development Engineering Division: *[Signature]* 10/29/01
Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 BALT: 410-850-1820 DC/VA: 301-989-2524 FAX: 301-421-4196

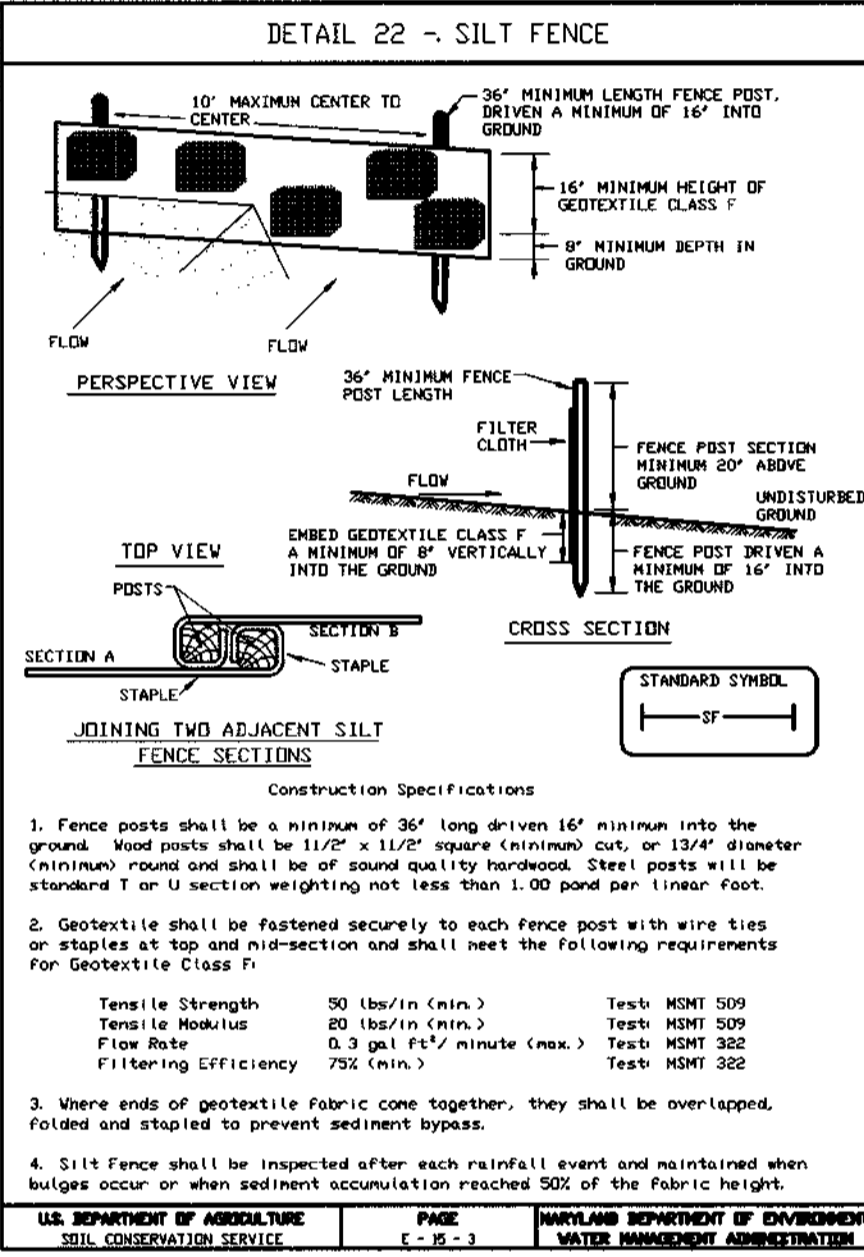
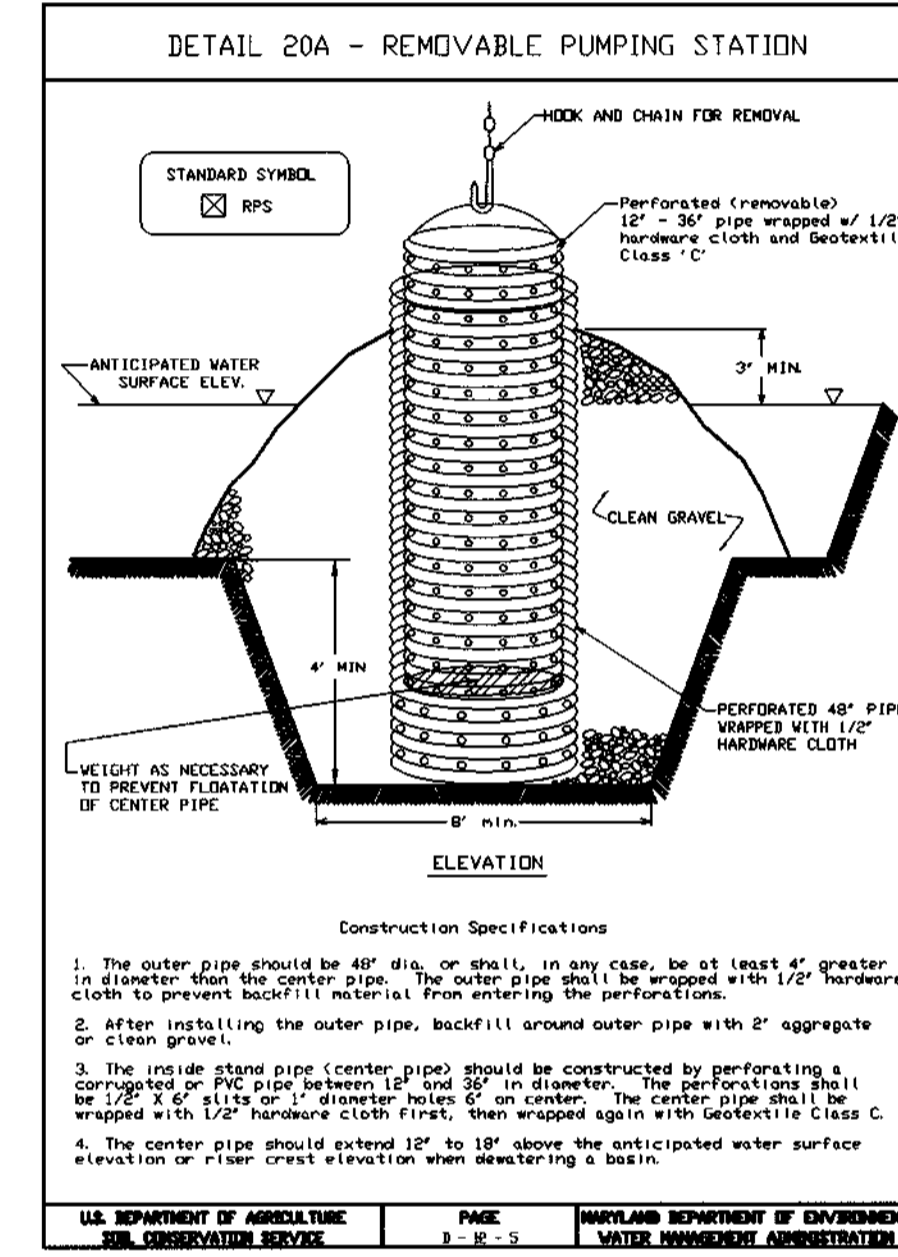
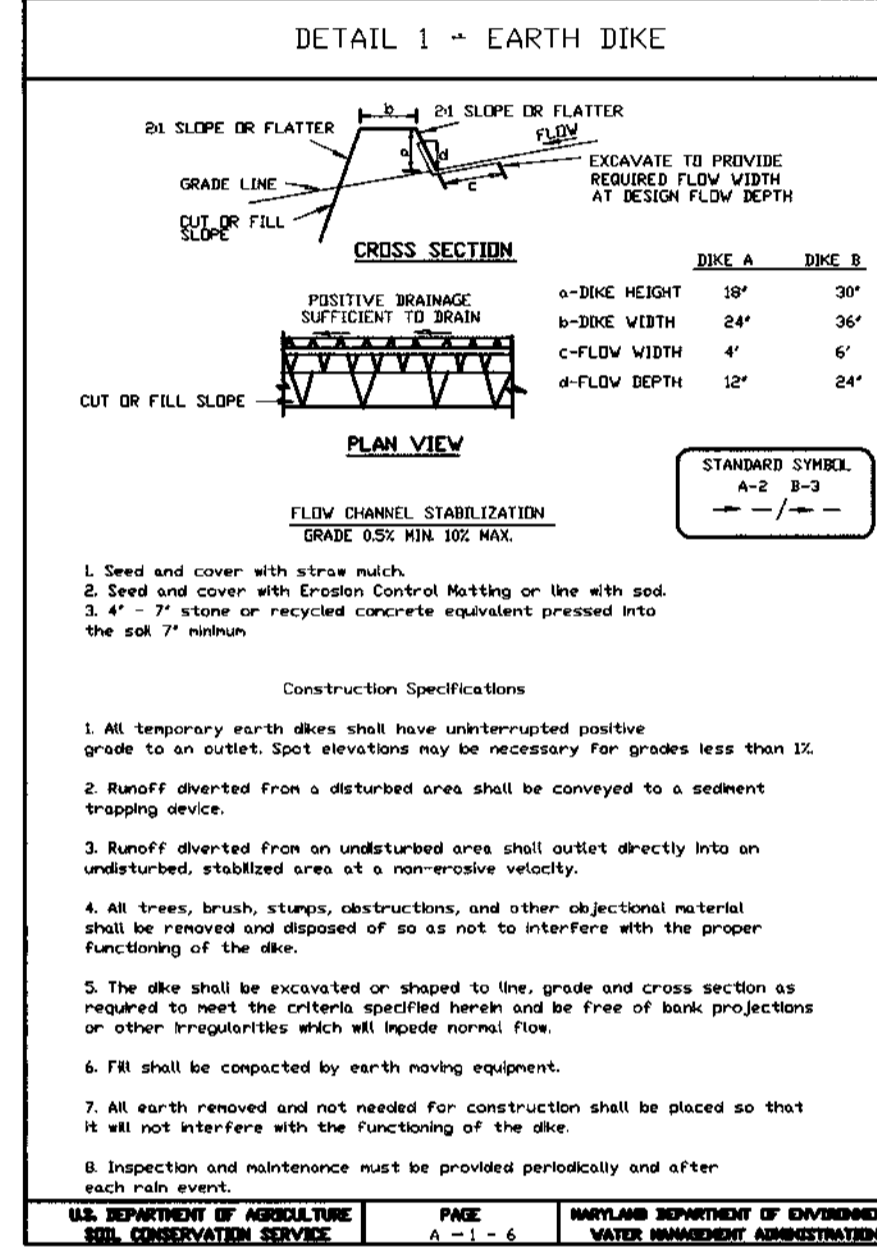
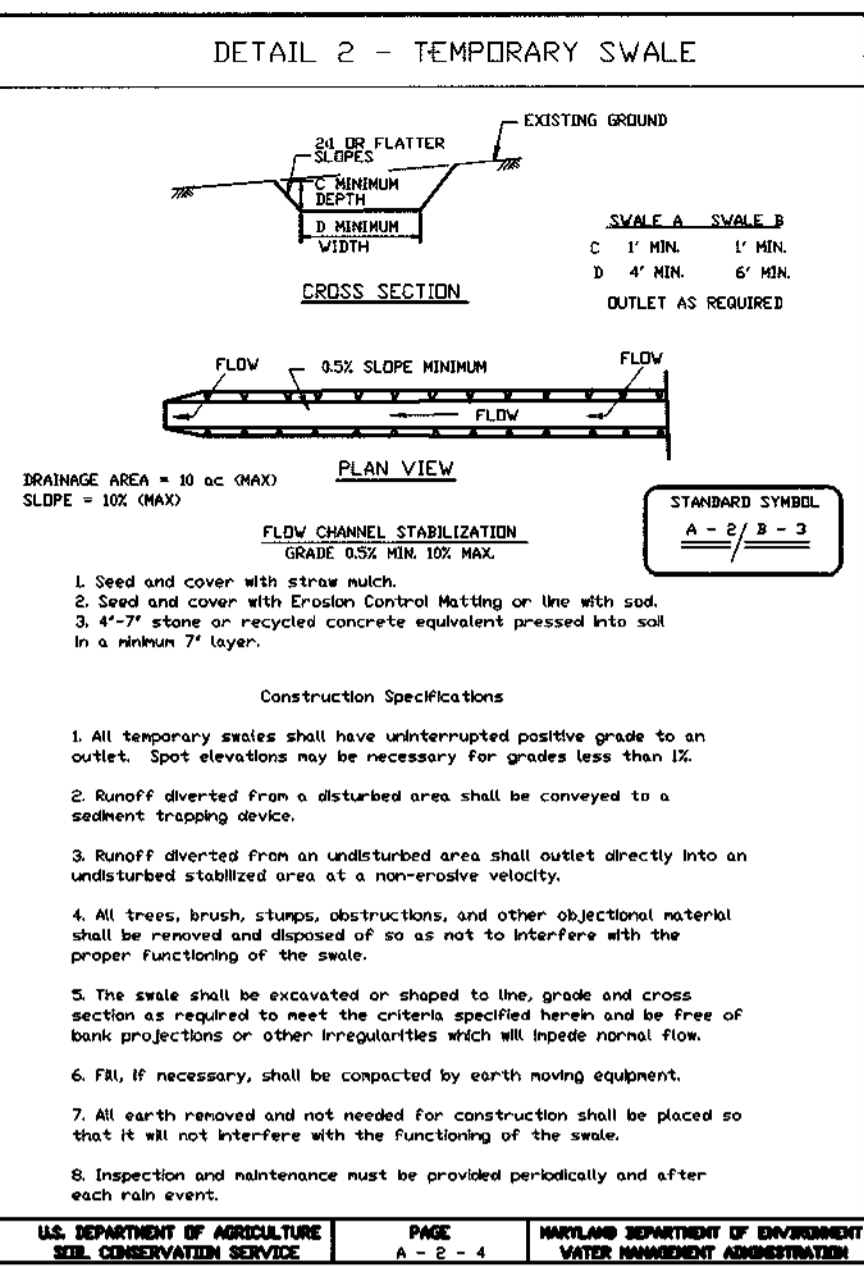
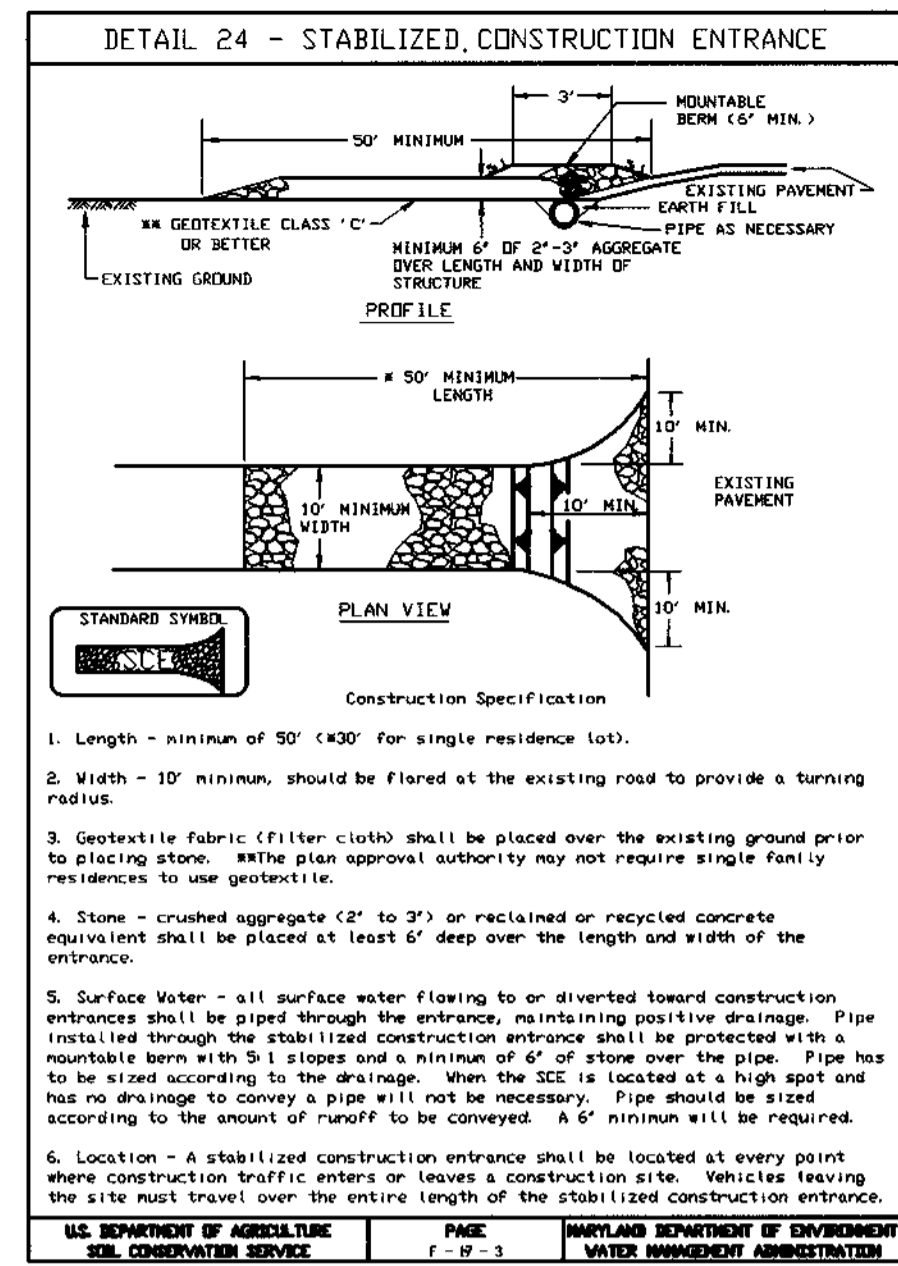
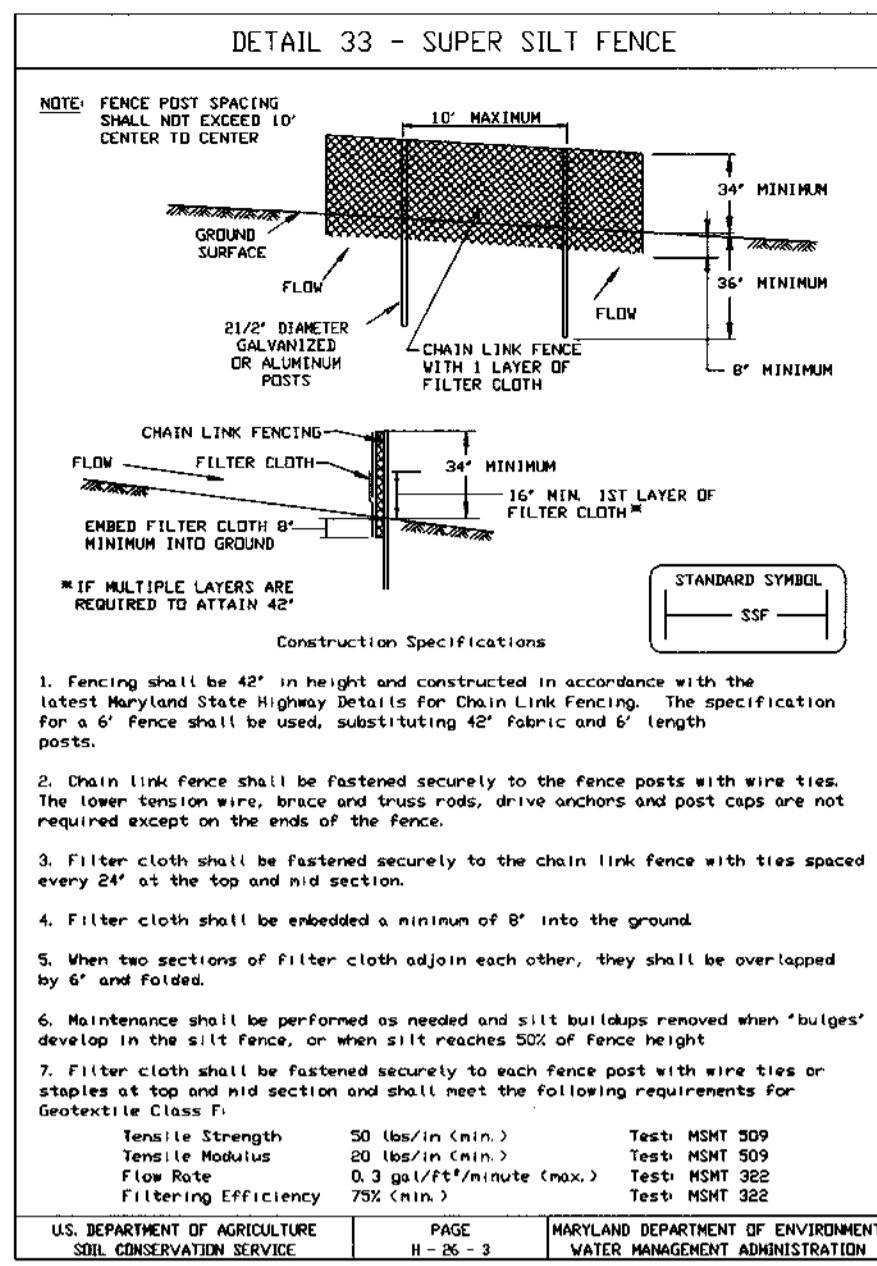
DATE	REVISION	BY	APP'R.
11/29/01	Rev Grading in Borrow Area & Added Retaining Wall	klp	BBL

PREPARED FOR:
(Owner/Developer)
EXIT SEVEN LLC
c/o Greenbaum & Rose Associates, Inc.
Suite 410, Woodholme Center
1829 Reisterstown Road
Baltimore, MD 21208
Phone: 410-484-8400
Attn: Mark Bennett or Charles O'Donovan

SEDIMENT CONTROL PLAN - BORROW AREA - FLOODPLAIN/STREAM RESTORATION
THE ENCLAVE AT ELLICOTT HILLS
NORTH RIDGE ROAD
ELECTION DISTRICT No. 2
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	POR, R-ED,	00050
DATE	TAX MAP - GRID	SHEET
9/26/01	17-17,18,24	8 OF 26

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DUST CONTROL

Objective: Controlling dust blowing and movement on construction sites and roads.

General: 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 and off-site damage is likely without treatment.

Temporary Methods:

1. **Mulches** - See standards for vegetative stabilization with mulches only. Mulch should be applied or tacked to prevent blowing.
2. **Vegetative Cover** - See standards for temporary vegetative cover.
3. **Walls** - To roughen surface and bring close to the surface. This is an emergency measure which should be used before soil blowing starts. High priority on windward side of site. Observe the plan shown about 1/2" clear, apply mulch, mulch, and similar plans are examples of equipment which may produce the desired effect.
4. **Wetters** - This is generally done as an emergency treatment. Site is wetted 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, all fences, heavy fences, straw bales, and similar material can be used to control or correct soil blowing. Barriers placed at right angles to prevailing currents of winds of about 10 miles their height are effective in controlling soil blowing.
6. **Odorous Chemicals** - Apply at rates that will keep surface moist. May need reapplication.

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 erodible soil materials. See standards for topsoiling.
3. **Stones** - Cover surface with crushed stone or coarse gravel.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways 10/23/01
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Bureau of Land Development 10/27/01
 Chief, Development Engineering Division 10/23/01

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONTOWN, MARYLAND 20866
 TEL: 301-421-4024 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
11/29/01	Rev. site analysis	GLW	

PREPARED FOR:
 (Owner/Developer)
 EXIT SEVEN LLC
 c/o Greenbaum & Rose Associates, Inc.
 Suite 410, Woodhome Center
 1829 Reisterstown Road
 Baltimore, MD, 21208
 Phone: 410-404-9400
 Attn: Mark Bennett or Charles O'Donovan



ENGINEER'S CERTIFICATE
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Signature: [Mark Bennett] Date: 10/8/01

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Signature: [Mark Bennett] Date: 10/8/01

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Signature: [Mark Bennett] Date: 10/17/01

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.

Signature: [Jim Munnell] Date: 10/17/01

STANDARD AND SPECIFICATIONS FOR TOPSOIL DEFINITION

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

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (410) 131-1880
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.
3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater 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 their perimeter in accordance with Vol. 1, Chapter 12, 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51), sod (Sec. 54), temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization, with mulch alone, can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
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:

Total Area of Site	: 77.27 Acres
Area Disturbed	: 9.89** Acres
Area to be roofed or paved	: 2.07 Acres
Area to be vegetatively stabilized	: 11.33 Acres
Total Cut	: 29555 Cu. Yds.
Total Fill	: 37100 Cu. Yds.

 Off-site waste/borrow area location: P.O.R. PARCEL "A" (** 14.4 Ac. including borrow on PARCEL "A")
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 control must be provided, if deemed necessary by the Howard County DPW 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 3 feet lengths or that which shall be backfilled and stabilized within one working day whichever is shorter.

PERMANENT SEEDING NOTES

- Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless 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/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
 - 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.
- Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.
- Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 ft or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.
- Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.

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 supply 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 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 respective soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
 - 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 a agronomist or soil scientist and approved by the appropriate approval authority. Regarded, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
 - ii. Topsoil must be free of plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
 - iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 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 1 - Vegetative Stabilization Methods and Materials.
 - ii. 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
- III. For sites having disturbed areas over 5 acres:

CONSTRUCTION AND MATERIAL SPECIFICATIONS

1. All temporary earth dikes shall have unobstructed positive grade to an outlet. Spot elevations may be necessary for grades less than 1:2.
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 the 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, if necessary, 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.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum round) and shall be of good quality hardwood. Steel posts will be standard I or U section weighing not less than 1.00 pound 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: HMT 509
Tensile Modulus	80 lbs/in (min.)	Test: HMT 509
Flow Rate	0.3 gal/177/min (max.)	Test: HMT 322
Filtering Efficiency	75% (min.)	Test: HMT 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 reaches 50% of the fabric height.

SEDIMENT CONTROL DETAILS

THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD

SCALE: NO SCALE
 ZONING: POR, R-ED R-20
 DATE: 9/26/01
 TAX MAP - GRID: 17-17,18,24
 SHEET: 9 of 26

HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT No. 2

SEDIMENT CONTROL DETAILS

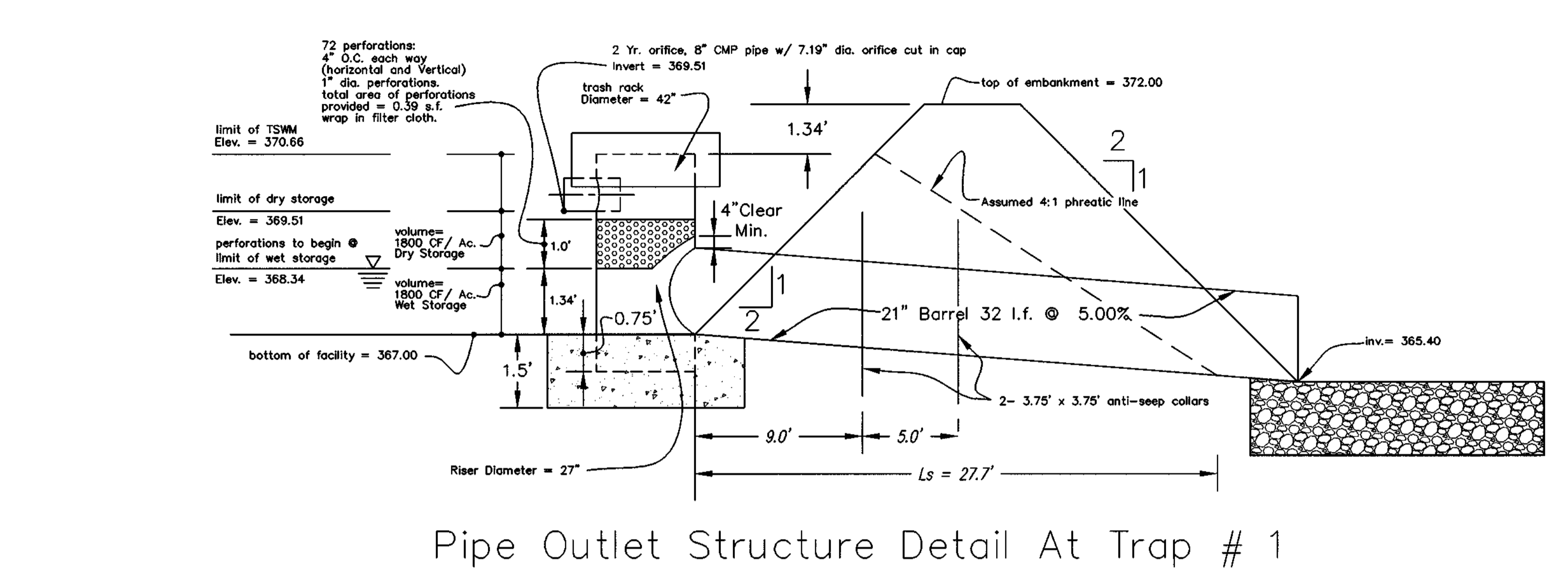
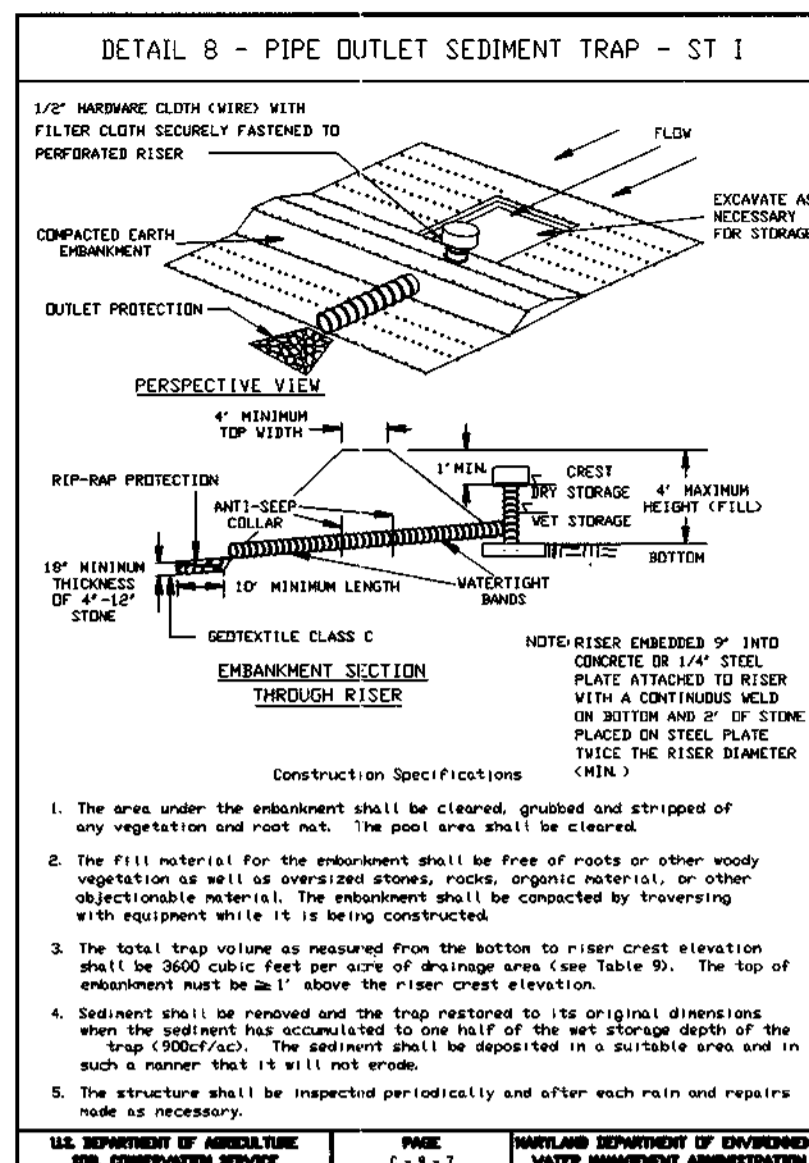
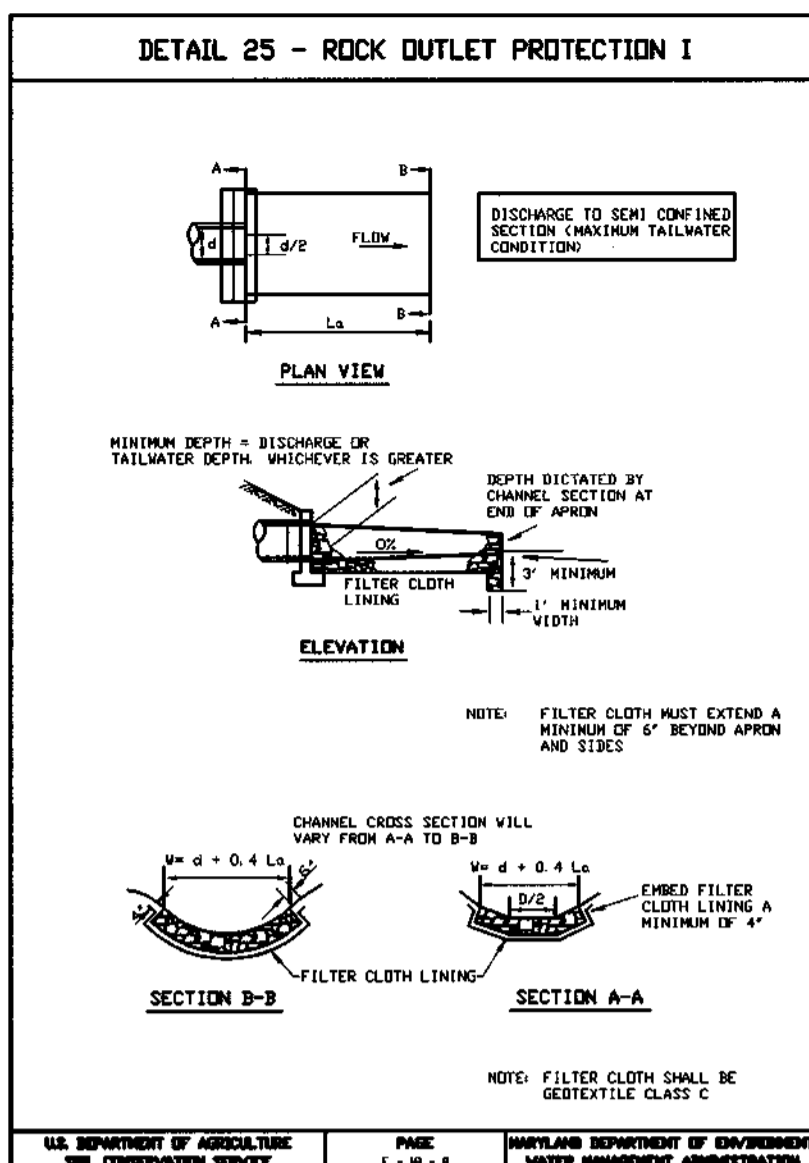
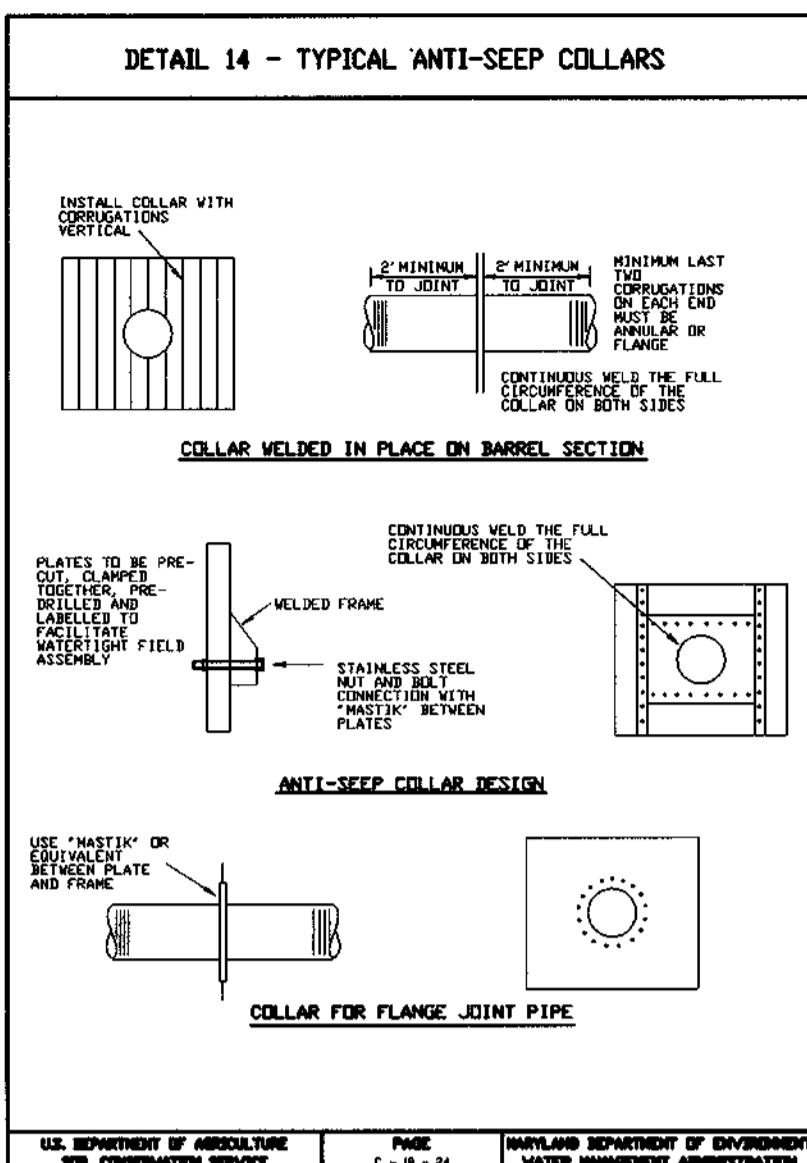
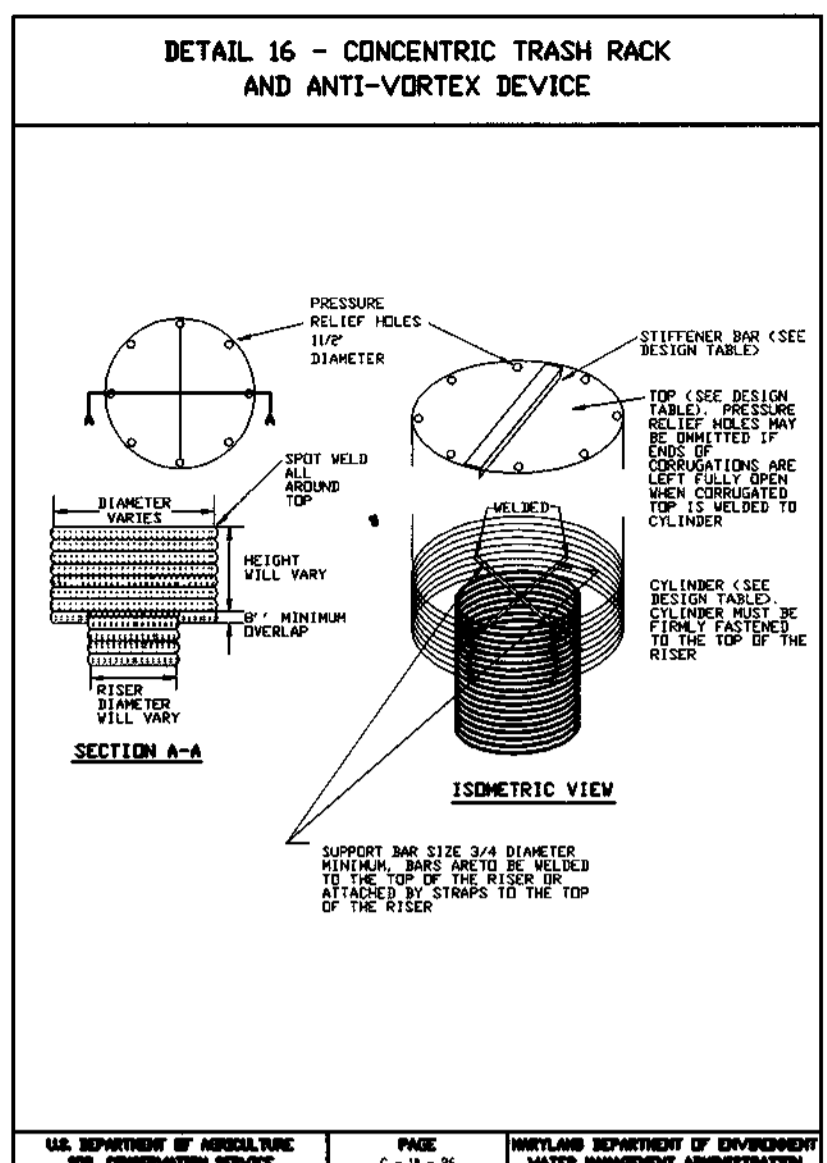
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 DATE: 9/26/01
 TAX MAP - GRID: 17-17,18,24
 SHEET: 9 of 26

HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT No. 2

SEDIMENT CONTROL DETAILS

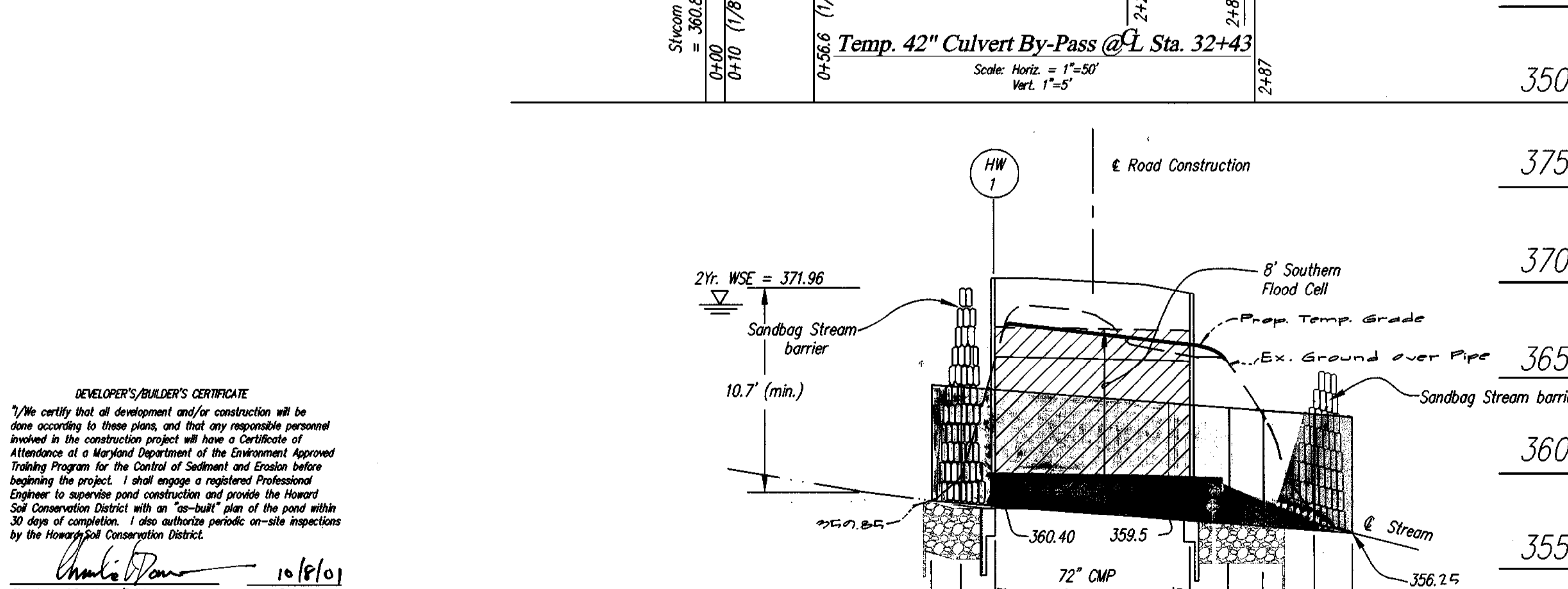
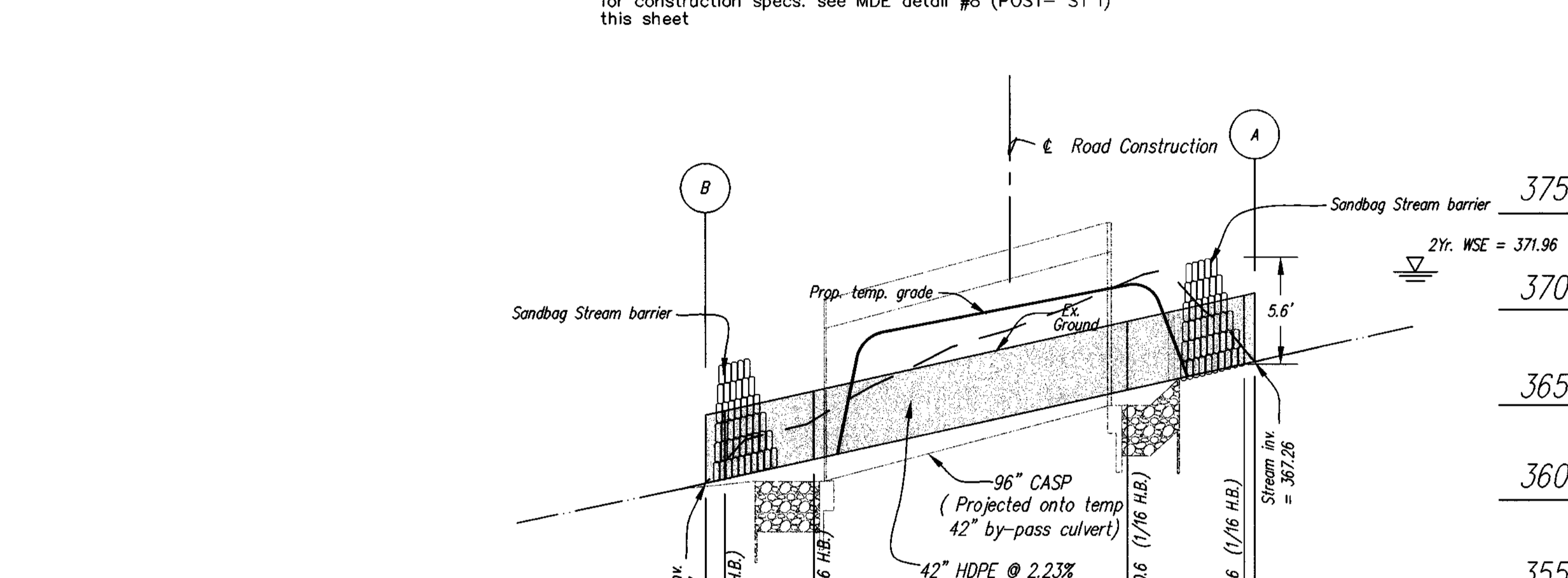
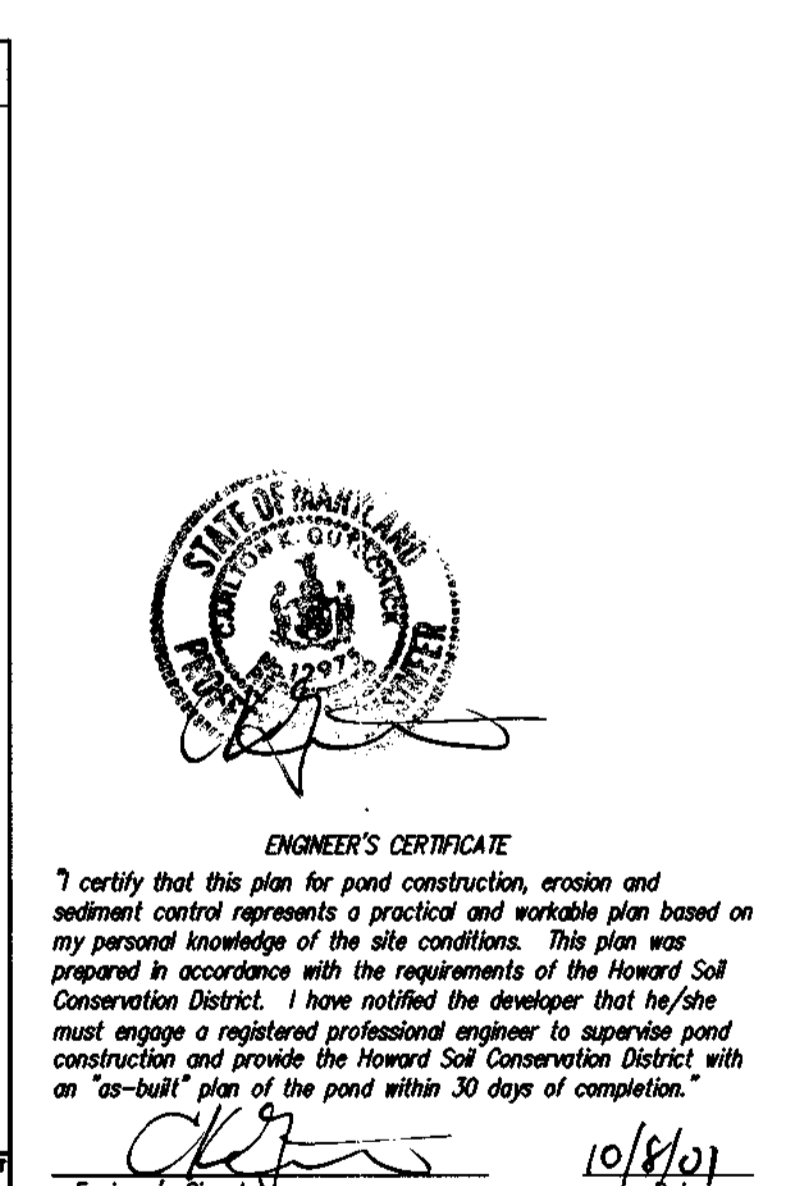
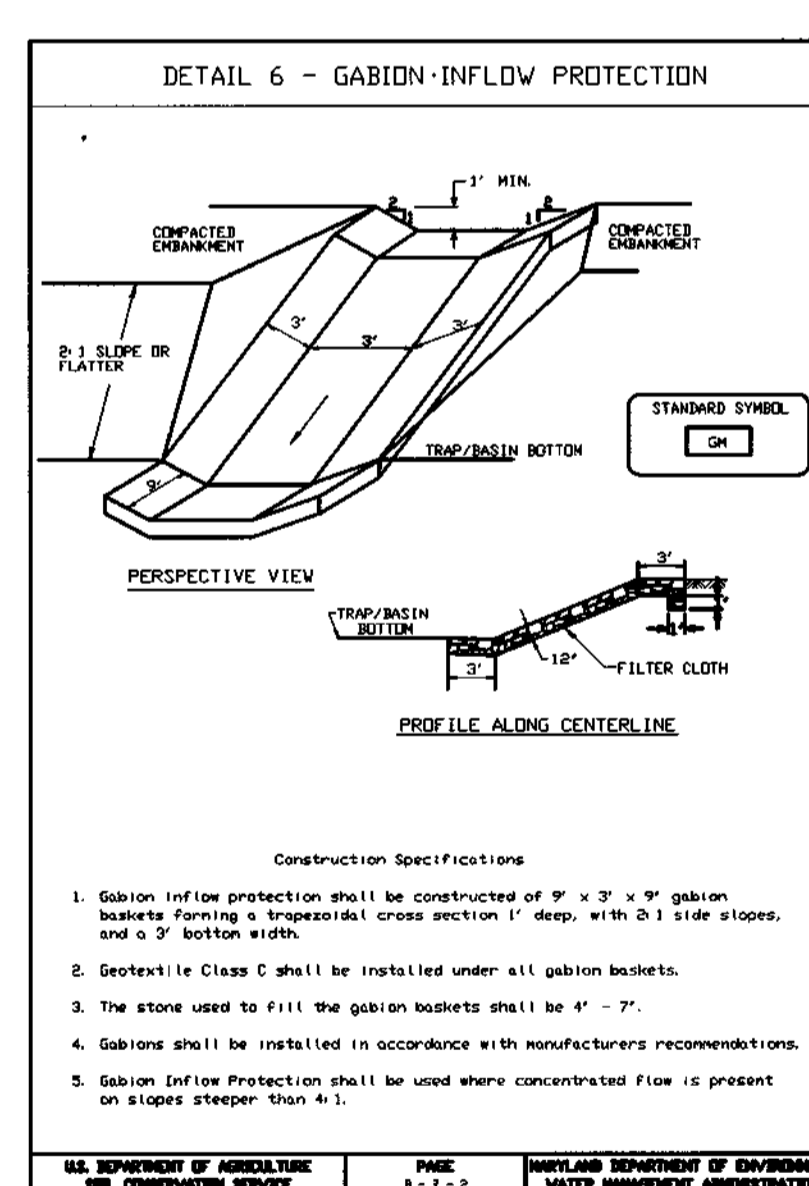
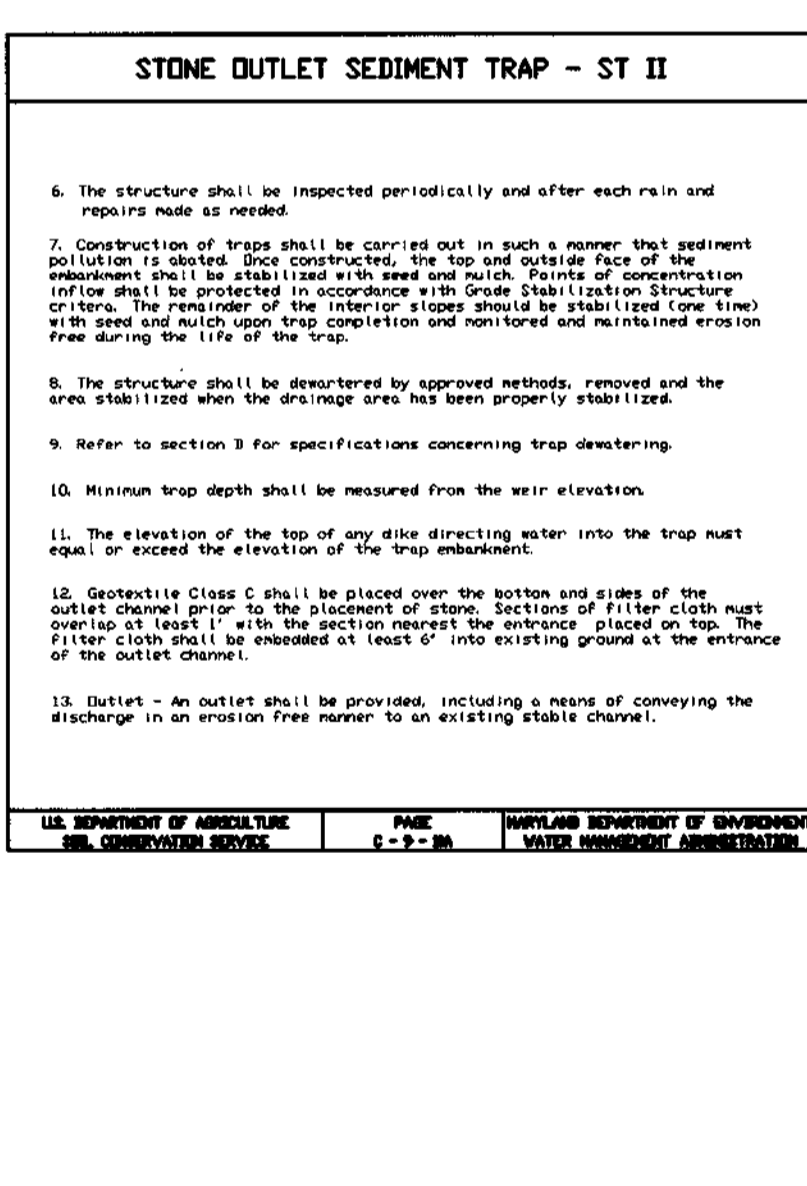
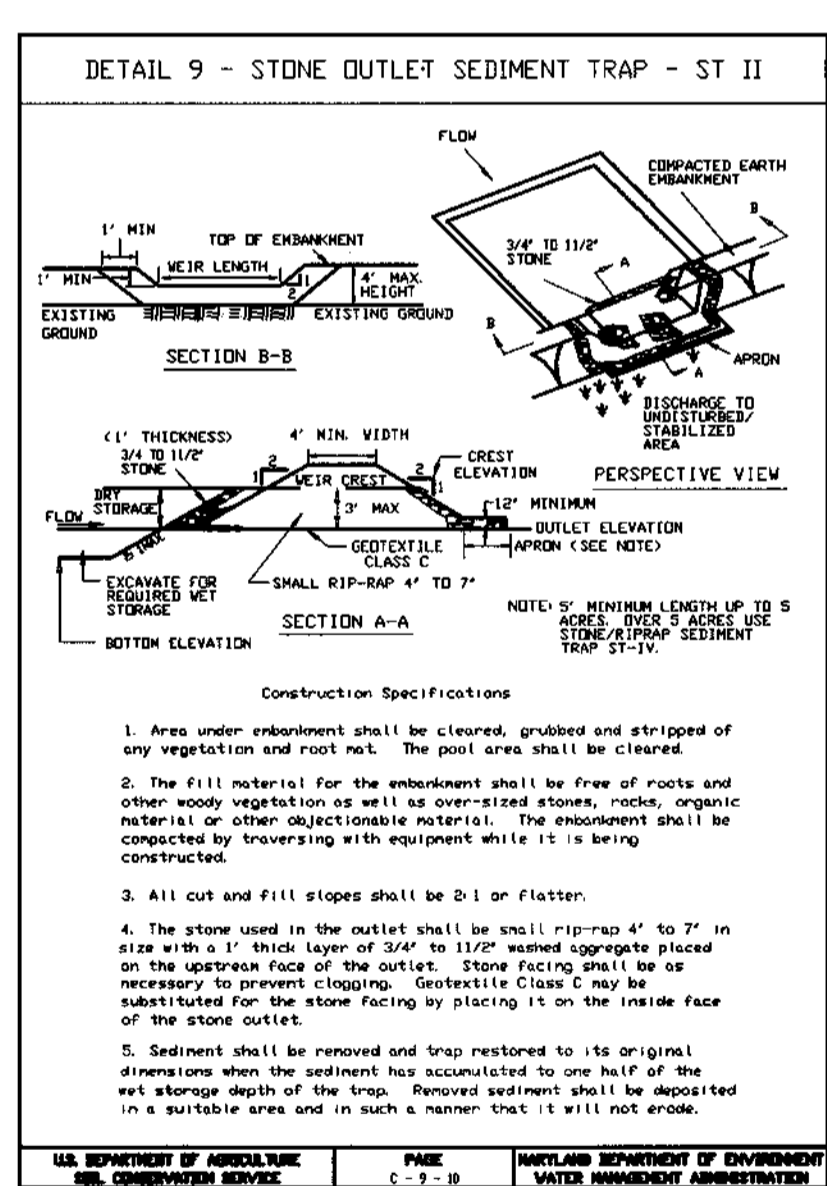
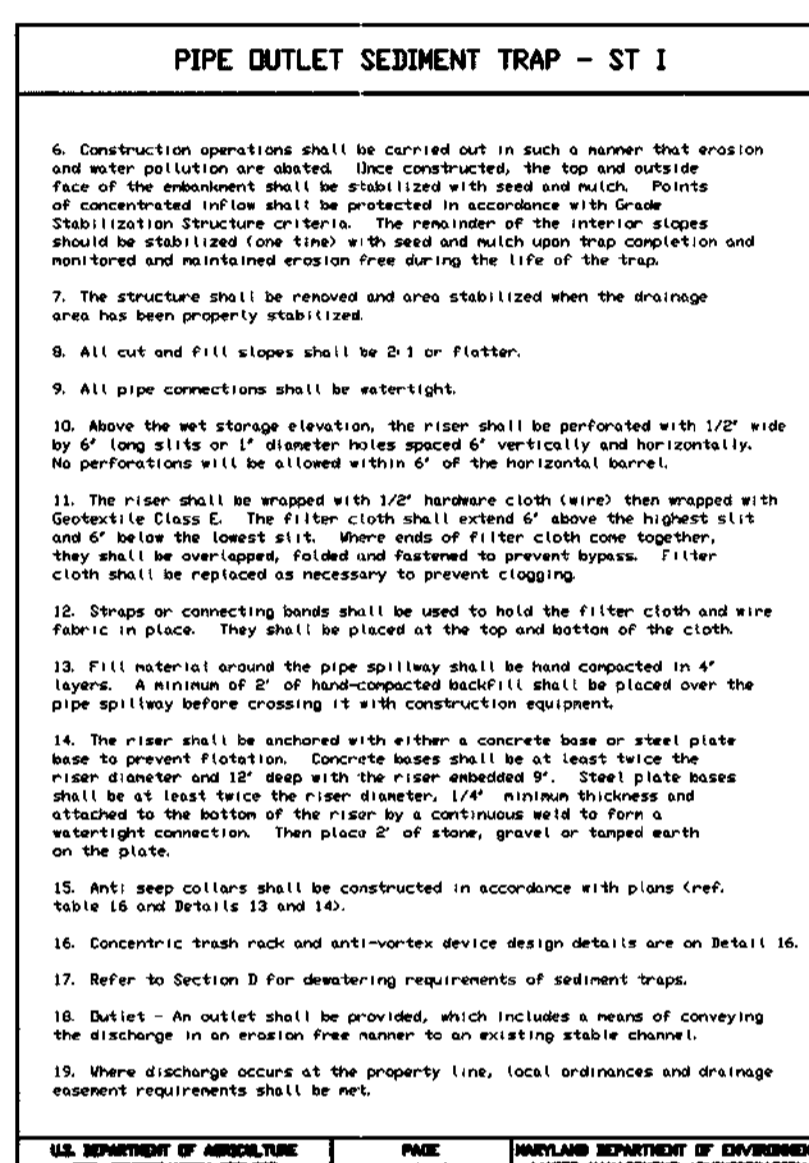
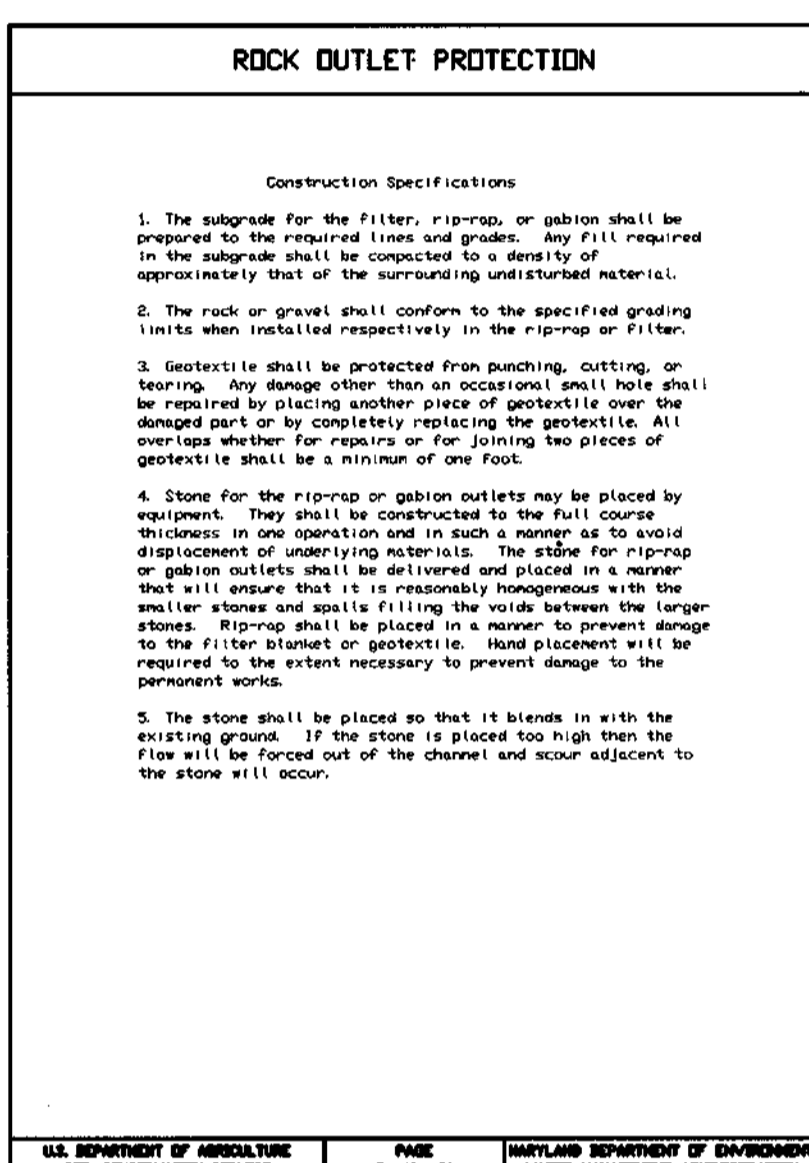
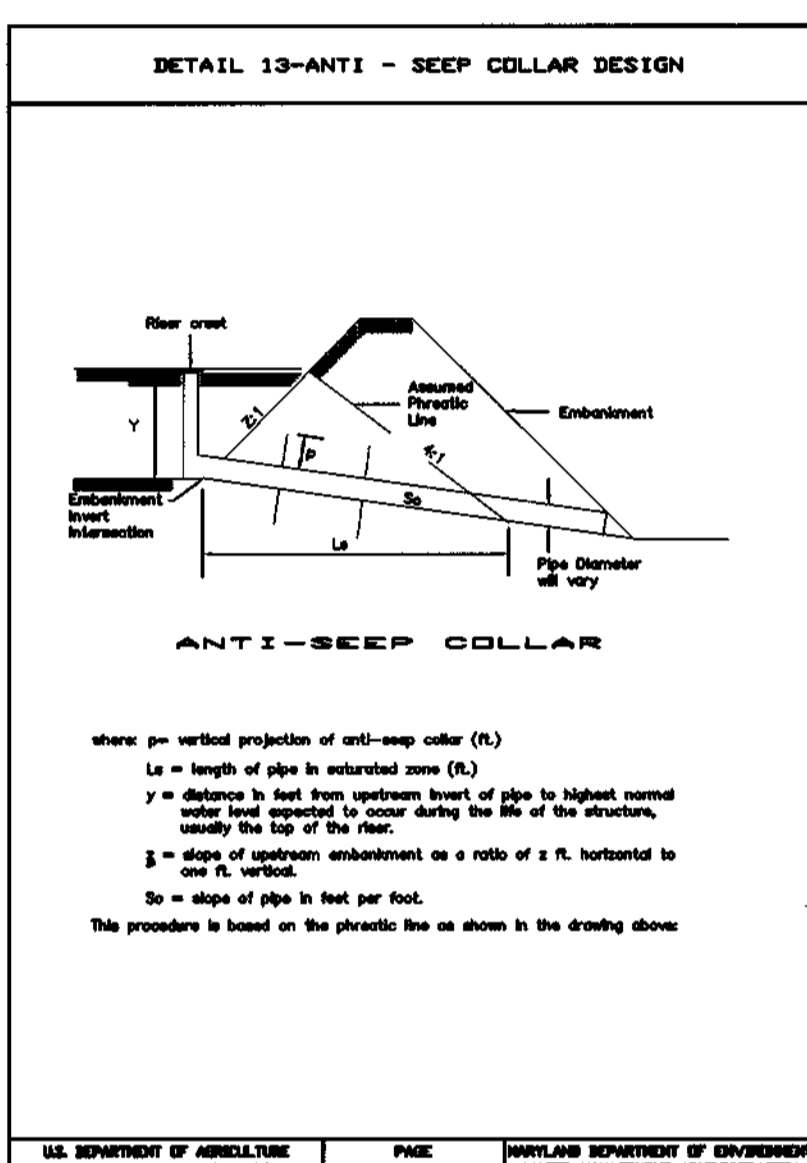
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 ZONING: POR, R-ED R-20
 DATE: 9/26/01
 TAX MAP - GRID: 17-17,18,24
 SHEET: 9 of 26

HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT No. 2



DETAIL 16 CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE (continued)

Riser Diam. - in.	Trash Rack Dia. - in.	Trash Rack Thick. - in.	Minimum Spacing - in.	Minimum Top Support - in.	Minimum Top Support - in.
12	18	16	6	86 Rebar	16 ga.
15	21	16	7	-	-
18	27	16	8	-	-
21	30	16	11	-	-
24	36	16	13	-	14 ga.
27	42	16	15	-	14 ga.
36	54	16	17	86 Rebar	12 ga.
42	60	14	15	-	-
48	72	12	21	1-1/4\"/>	



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard W. [unclear] 10-23-01
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
John [unclear] 10/29/01
 Chief, Division of Land Development

David [unclear] 10/29/01
 Chief, Development Engineering Division

APPROVED: HOWARD SOIL CONSERVATION DISTRICT
John A. [unclear] 10/12/01
 Howard Soil Conservation District

APPROVED: NATURAL RESOURCES CONSERVATION SERVICE
Jim [unclear] 10/12/01
 Natural Resources Conservation Service

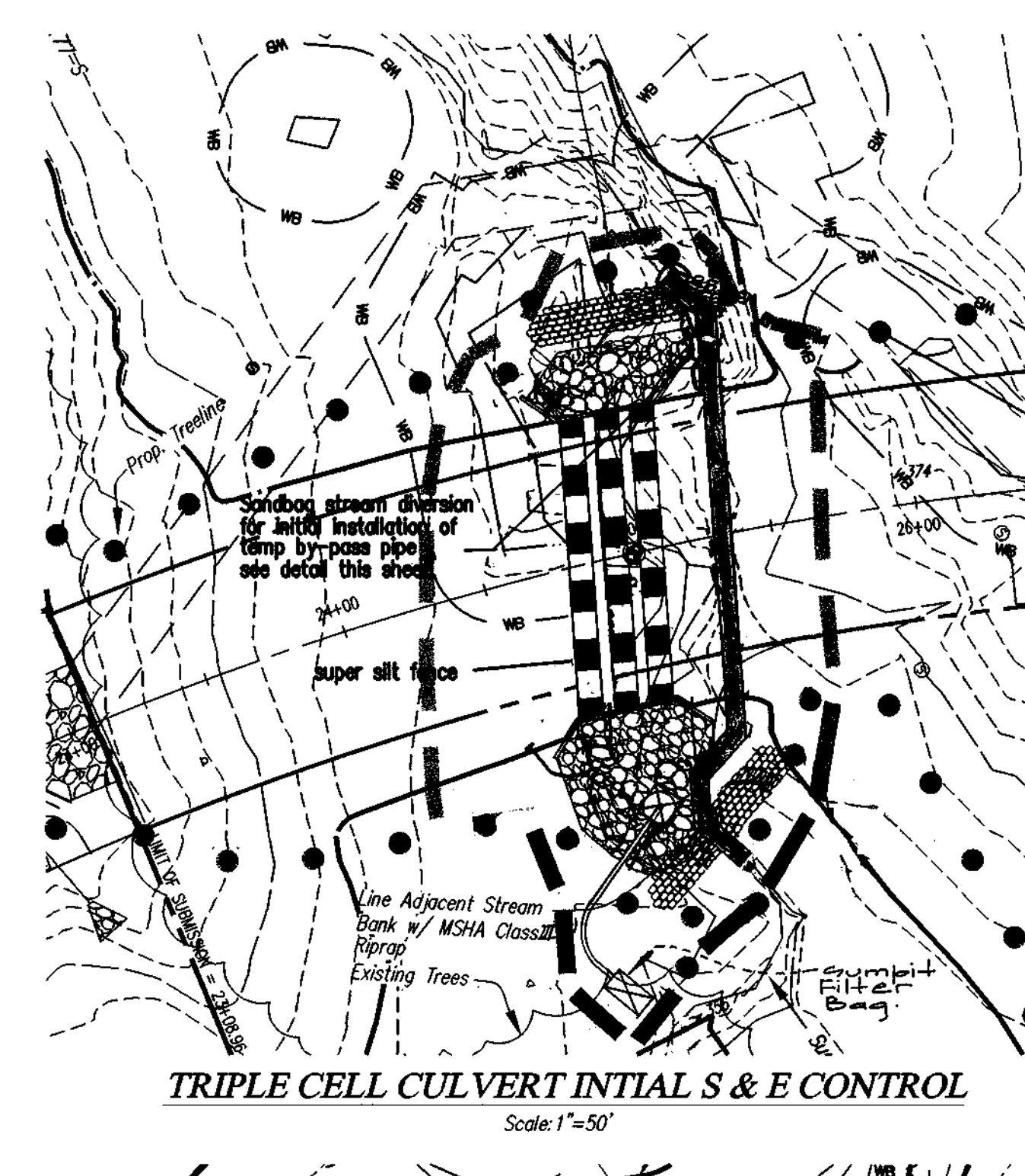
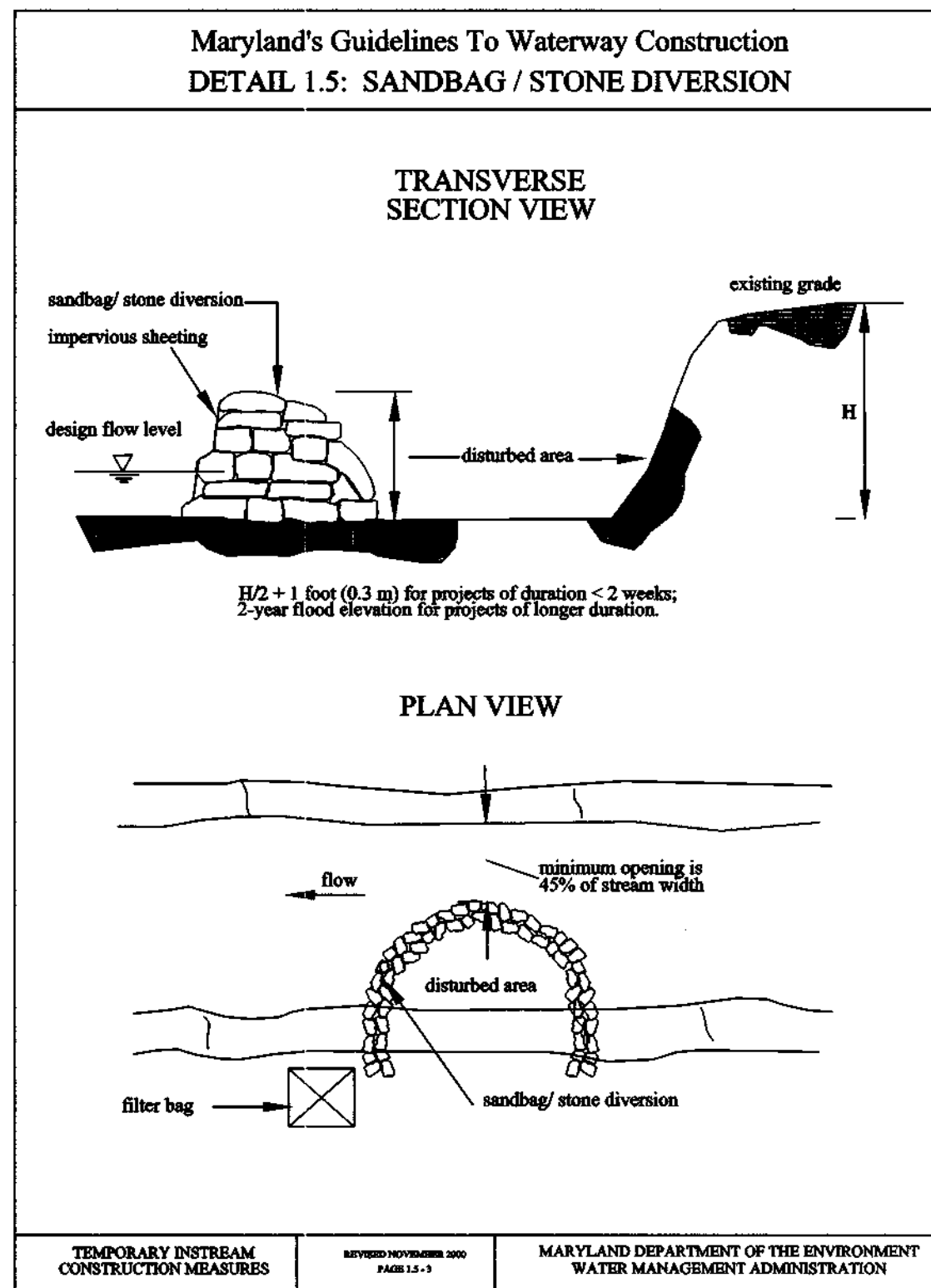
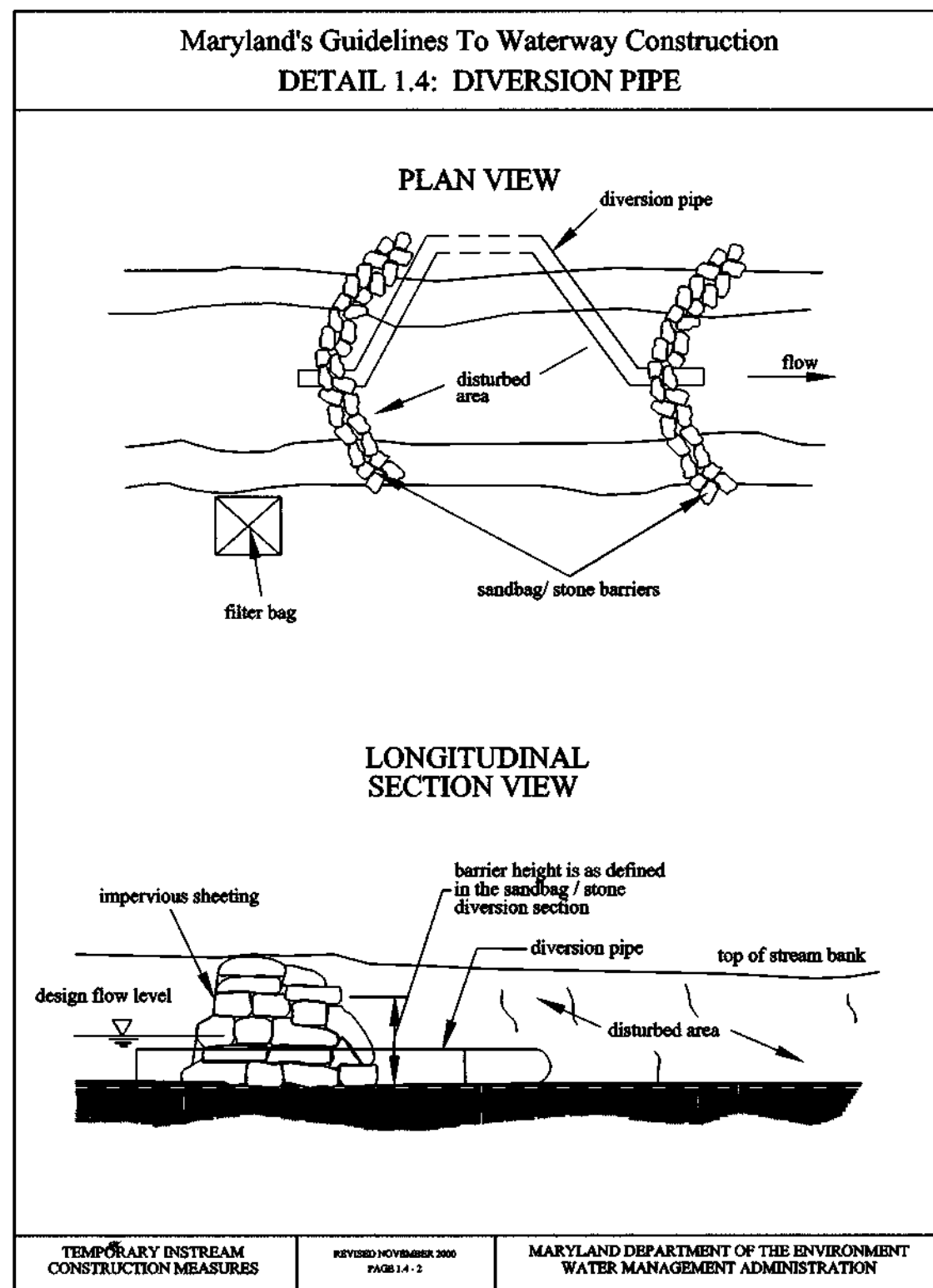
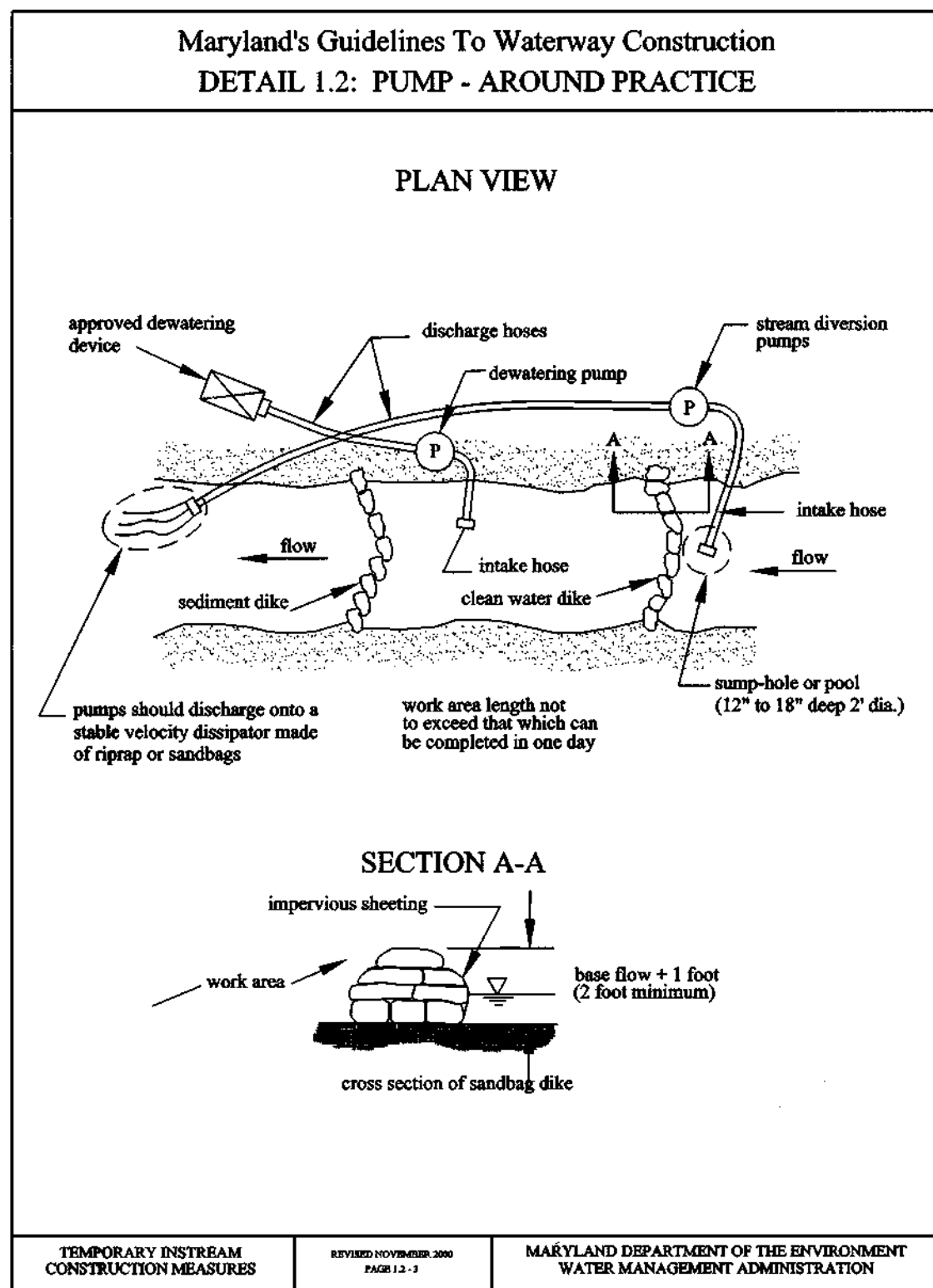
GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3009 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK
 BURTONVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 301-421-4186

PREPARED FOR:
 (Owner/Developer)
 EXIT SEVEN LLC
 c/o Greenbaum & Rose Associates, Inc.
 Suite 410, Woodhome Center
 1829 Reisterstown Road
 Baltimore, MD, 21208
 Phone: 410-434-8400
 Attn: Mark Bennett or Charles O'Donovan

SEDIMENT CONTROL DETAILS
 THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	POR, R-ED R-20	00050
DATE	TAX MAP - GRID	SHEET
9/26/01	17-17,18,24	10 of 26

ELECTION DISTRICT No. 2



- #### Sequence of Construction
1. Obtain grading permit and arrange for an on-site pre-construction meeting with the Sediment Control Inspector (SCI). (1 day) MDE Permit No. 200164588.
 2. Install Stabilized Construction Entrance and silt fence at the entrance at Rogers Ave. and at centerline Station 22+30 along North Ridge Road. Begin to clear and grub site within the right-of-way, install earth dikes along North Ridge Road and install Trap #1. (Note: work in 96" culvert can be done concurrently with Trap #1.) Do not clear and grub the areas between the culverts until the silt fence and earth dikes are in place for the area and permission is granted by the SCI to proceed. (2 weeks)
 3. Use the existing 15-foot driveway for initial access to the Stormwater Management Facility and Culvert as noted on Sheets 6 and 7. Install silt fence, super silt fence and earth dikes in the areas of the Culverts and the Stormwater Management Facility.
 4. With permission from the SCI, Commence construction of the Stormwater Management Facility (SWM).
 5. PHASE I CONSTRUCTION
 - i. Excavate trench for the temp. 42" by-pass pipe and install pipe and sandbag barrier to divert stream through the pipe.
 - ii. Begin excavation and installation of single 96" culvert and headwall.
 - iii. As headwall and culvert nears completion, install rip-rap and divert stream through 96" culvert. Remove temp. 42" diversion pipe.
 - iv. Grade over pipe to provide a minimum of 3 feet of cover.
 - v. Permission must be obtained from the SCI before proceeding to S.O.C. Item #6.
- #### Installation of single 96" Culvert:
- i. Excavate trench for the temp. 42" by-pass pipe and install pipe and sandbag barrier to divert stream through the pipe.
 - ii. Begin excavation and installation of single 96" culvert and headwall.
 - iii. As headwall and culvert nears completion, install rip-rap and divert stream through 96" culvert. Remove temp. 42" diversion pipe.
 - iv. Grade over pipe to provide a minimum of 3 feet of cover.
 - v. Permission must be obtained from the SCI before proceeding to S.O.C. Item #6.
- #### Installation of triple 96" Culverts:
- i. Excavate Trench for the temp. 72" by-pass pipe and install the sandbag barrier to divert the stream through the pipe.
 - ii. Begin the excavation and construction of the headwall and install the 96" culverts. Install rip-rap, divert base flow of stream through the center tube and remove by-pass diversion pipe.
 - iii. Grade over pipe to provide a minimum of 3 feet of cover.
 - iv. Permission must be obtained from the SCI before proceeding to S.O.C. Item #6.
 - v. Final grading of road shall be done in accordance with the final grading shown on Sheets 4 and 5.

Maryland's Guidelines To Waterway Construction DETAIL 1.2: PUMP - AROUND PRACTICE

IMPLEMENTATION SEQUENCE

1. Construction activities including the installation of erosion and sediment control measures should not begin until all necessary elements and/or right-of-ways have been acquired. All existing utilities should be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and should repair the damage at his/her own expense to the county's or utility company's satisfaction.
2. The contractor should notify the Maryland Department of the Environment or MDE sediment control inspector at least 5 days before beginning construction. Additionally, the contractor should submit the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
3. The contractor should conduct a pre-construction meeting on site with the MDE sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sequence of construction. The contractor should state out all limits of disturbance prior to the pre-construction meeting so they may be reviewed. The participants will also designate the contractor's staging areas and log all trees within the limit of disturbance which will be removed for construction access. Trees should not be removed within the limit of disturbance without approval from the MDE or local authority.
4. Construction should not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor should stay within the limits of the disturbance as shown on the plans and minimize disturbance within the rest area whenever possible.
5. Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor should begin work at the upstream section and proceed downstream keeping with the installation of stabilized construction entrances. In some cases, work may begin downstream if appropriate. The sequence of construction must be followed unless the contractor gets written approval from the MDE or local authority. The contractor should only begin work in an area which can be completed by the end of the day including grading adjacent to the channel. At the end of each work day, the work area must be stabilized and the pump around removed from the channel. Work should not be conducted in the channel during rain events.
6. Sandbag dikes should be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow should be pumped around the work area. The pump should discharge onto a stable velocity dissipater made of stone or sandbags.
7. Water from the work area should be pumped to a sediment filtering measure such as a dewatering basin, sediment bag, or other approved source. The measure should be located such that the water drains back into the channel below the downstream sandbag dike.
8. Traversing a channel reach with equipment within the work area where no work is proposed should be avoided. If equipment has to traverse such a reach to access to another area, then timber mats or similar measures should be used to minimize disturbance to the channel. Temporary stream crossings should be used only when necessary and only when noted on the plans or specified. (See Section 4, Stream Crossings, Maryland Guidelines to Waterway Construction).
9. All stream restoration measures should be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical cross-sections. All grading must be stabilized at the end of each day with seed and mulch or soil and mulch as specified on the plans.
10. After an area is completed and stabilized, the clean water dike should be removed. After the first sediment flush, a new clean water dike should be established upstream from the old sediment dike. Finally, upon establishment of a new sediment dike below the old one, the old sediment dike should be removed.
11. A pump around must be installed on any tributary or storm drain outfall which contributes baseflow to the work area. This should be accomplished by locating a sandbag dike at the downstream end of the tributary or storm drain outfall and pumping the stream flow around the work area. This water should discharge onto the same velocity dissipater used for the main stem pump around.
12. If a tributary is to be restored, construction should take place on the tributary before work on the main stem reaches the tributary confluence. Construction in the tributary, including pump around practice, should follow the same sequence as for the main stem of the river or stream. When construction on the tributary is completed, work on the main stem should resume. Water from the tributary should continue to be pumped around the work area in the main stem.
13. The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approves their removal.
14. After construction of disturbed areas should be regraded and revegetated as per the planting plan.

TEMPORARY INSTREAM CONSTRUCTION MEASURES | MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Maryland's Guidelines To Waterway Construction DETAIL 1.4: DIVERSION PIPE

DESCRIPTION

The work should consist of installing flow diversion pipes in combination with sandbag or stone diversions when construction activities occur within the stream channel.

EFFECTIVE USES & LIMITATIONS

Diversion pipes with an insufficient flow capacity can cause the channel diversion to fail thereby resulting in severe erosion of the disturbed channel section under construction. Therefore, in-channel construction activities should occur only during periods of low flow.

MATERIAL SPECIFICATIONS

Materials for stream diversions should meet the following requirements:

- * Riprap: Stone should be washed and have a minimum diameter of 6 inches (15 centimeters).
- * Sandbags: Sandbags should consist of materials which are resistant to ultraviolet radiation, tearing, and puncture and should be woven tightly enough to prevent leakage of fill material (i.e., sand, fine gravel, etc.).
- * Sheetpiling: Sheetpiling should consist of polyethylene or other material which is impervious and resistant to puncture and tearing.

INSTALLATION GUIDELINES

All erosion and sediment control devices including mandatory dewatering basins should be installed as the first order of business according to a plan approved by the MDE or local authority. Installation should proceed from upstream to downstream during low flow conditions. If necessary, silt fence or straw bales should be installed around the perimeter of the work area.

Diversion pipes with sandbag or stone barriers should be completed as follows (refer to Detail 1.4):

1. Sandbag/stone barriers should be sized and installed as detailed in MDC 1.5: Sandbag/Stone Diversion. The materials should be sized to withstand baseflow velocities.
2. All excavated material should be deposited and stabilized in an approved area outside the 100-year floodplain unless otherwise authorized by the MDE.
3. Sediment-laden water from the construction area should be pumped to a dewatering basin.
4. The diversion pipe should have a minimum capacity sufficient to convey the 2-year flow for projects with a duration of two weeks or greater. For projects of shorter duration, the capacity of the pipe can be reduced accordingly.
5. If necessary, silt fence or straw bales should be installed around the perimeter of the work area.
6. Sediment control devices are to remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal.

TEMPORARY INSTREAM CONSTRUCTION MEASURES | MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Maryland's Guidelines To Waterway Construction DETAIL 1.5: SANDBAG/STONE CHANNEL DIVERSION

MATERIAL SPECIFICATIONS

Materials for sandbag and stone stream diversions should meet the following requirements:

- * Riprap: Riprap should be washed and have a minimum diameter of 6 inches (15 centimeters).
- * Sandbags: Sandbags should consist of materials which are resistant to ultraviolet radiation, tearing, and puncture and should be woven tightly enough to prevent leakage of the fill material (i.e., sand, fine gravel, etc.).
- * Sheetpiling: Sheetpiling should consist of polyethylene or other materials which are impervious and resistant to puncture and tearing.

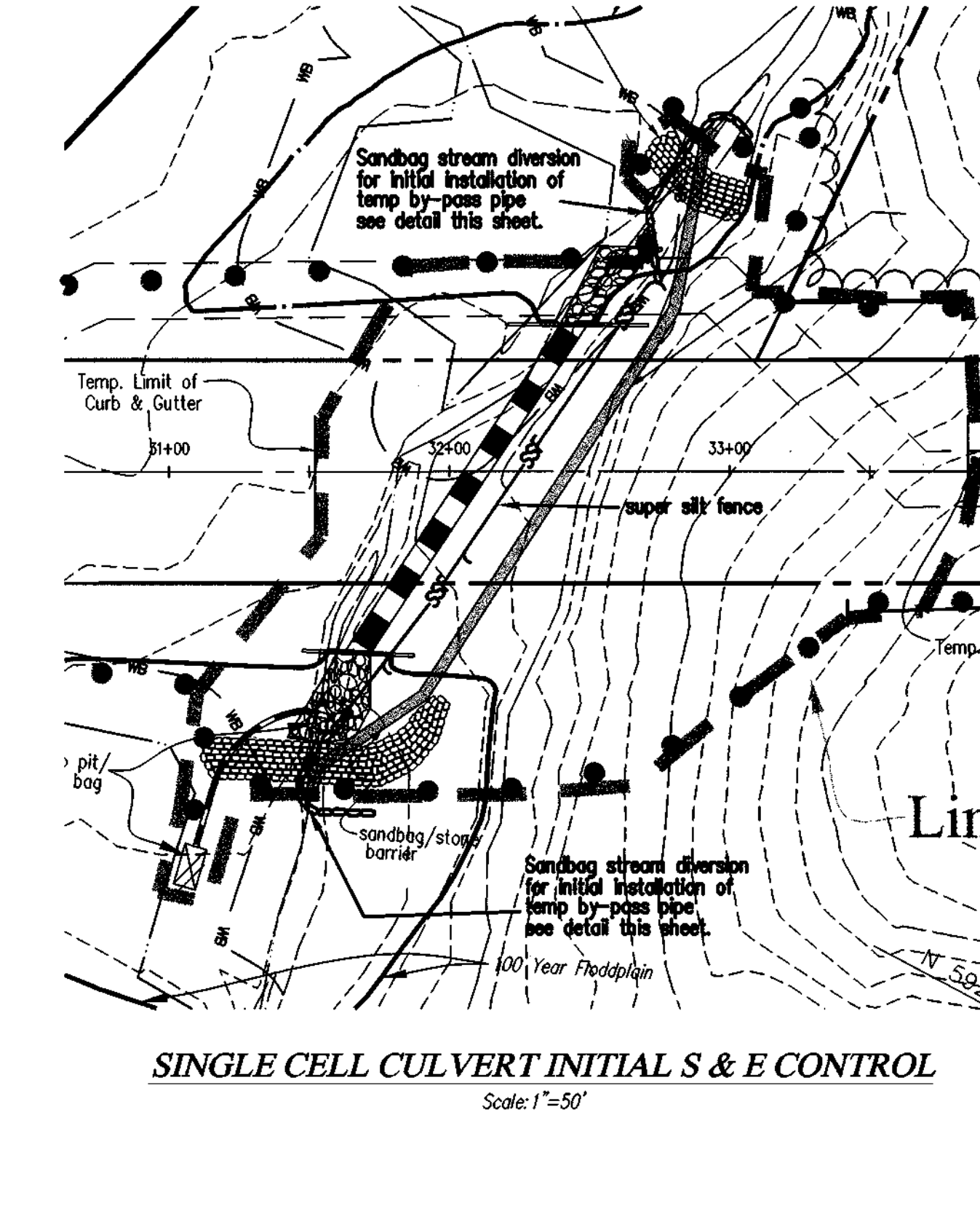
INSTALLATION GUIDELINES

All erosion and sediment control devices, including dewatering basins, should be implemented as the first order of business according to a plan approved by the MDE or local authority. Installations should proceed from upstream to downstream during periods of low flow. If necessary, silt fence or straw bales should be installed around the perimeter of the work area.

Sandbag/stone diversions can be used independently or as components of other stream diversion techniques. Installation of this measure should proceed as follows (refer to Detail 1.5):

1. The diversion structure should be installed from upstream to downstream.
2. The height of the sandbag/stone diversion should be a function of the duration of the project in the stream reach. For projects with a duration less than 2 weeks, the height of the diversion should be one half the streambank height, measured from the channel bed, plus 1 foot (0.3 meters) or bank full height, whichever is greater. For projects of longer duration, the top of the sandbag or stone diversion should correspond to bankfull height. For diversion structures utilizing sandbags, the stream bed should be hand prepared prior to placement of the base layer of sandbags in order to ensure a water tight fit. Additionally, it may be necessary to prepare the bank in a similar fashion.
3. All excavated material should be deposited and stabilized in an approved area outside the 100-year floodplain unless otherwise authorized by the MDE.
4. Sediment-laden water from the construction area should be pumped to a dewatering basin.
5. Sheetpiling on the diversion should be positioned such that the upstream portion covers the downstream portion with at least a 10-inch (0.45 meters) overlap.
6. Sandbag or stone diversions should not obstruct more than 45% of the stream width. Additionally, bank stabilization measures should be placed in the restricted section of accelerated erosion and bank cover as observed during the construction time or if project time is expected to last more than 2 weeks.
7. Prior to removal of these temporary structures, any accumulated sediment should be removed, deposited and stabilized in an approved area outside the 100-year floodplain unless authorized by the MDE.
8. Sediment control devices are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspecting authority approves their removal.

TEMPORARY INSTREAM CONSTRUCTION MEASURES | MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



- i. Excavate Trench for the temp. 72" by-pass pipe and install the sandbag barrier to divert the stream through the pipe.
 - ii. Begin the excavation and construction of the headwall and install the 96" culverts. Install rip-rap, divert base flow of stream through the center tube and remove by-pass diversion pipe.
 - iii. Grade over pipe to provide a minimum of 3 feet of cover.
 - iv. Permission must be obtained from the SCI before proceeding to S.O.C. Item #6.
 - v. Final grading of road shall be done in accordance with the final grading shown on Sheets 4 and 5.
6. PHASE II CONSTRUCTION
7. As the construction for the Stream crossings nears completion, install Trap #2 and begin to rough grade North Ridge Road between Stations 23+08.96 and 31+52 and install storm drains except in the area of Trap #1.
 8. Install curb and gutter and base paving up to the limits shown on sheet 6, stabilize any disturbed areas no longer needing grading in accordance with the permanent seeding notes. Remove the existing driveways to Robnan Acres and Donald G. Ridgely.
 9. Complete Stormwater Management Facility. As soon as drainage area to Trap #1 has been stabilized and permission has been granted by the SCI, back fill trap and install the remainder of storm drains, relocate waterline, complete curb and gutter and base paving in that area. Install sidewalks, street trees, and surface course paving.
 10. After first receiving permission from the SCI, remove any remaining sediment control devices and stabilize remaining disturbed areas in accordance with the permanent seeding notes.

Note: The up-stream and down-stream sandbag barriers are to be installed after the stream diversion pipe is installed.



ENGINEER'S CERTIFICATE

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.

Signature: *CBJ* Date: 10/8/01

DEVELOPER'S/BUILDER'S CERTIFICATE

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 Maryland 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.

Signature: *Charles O'Donovan* Date: 10/8/01

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Signature: *Howard Soil Conservation District* Date: 10/12/01

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.

Signature: *Jim Rogers* Date: 10/12/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Signature: *Richard M. Quirk* Date: 10-23-01
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Signature: *Linda Hester* Date: 10/21/01
Chief, Division of Land Development

Signature: *Michael J. ...* Date: 10/21/01
Chief, Development Engineering Division

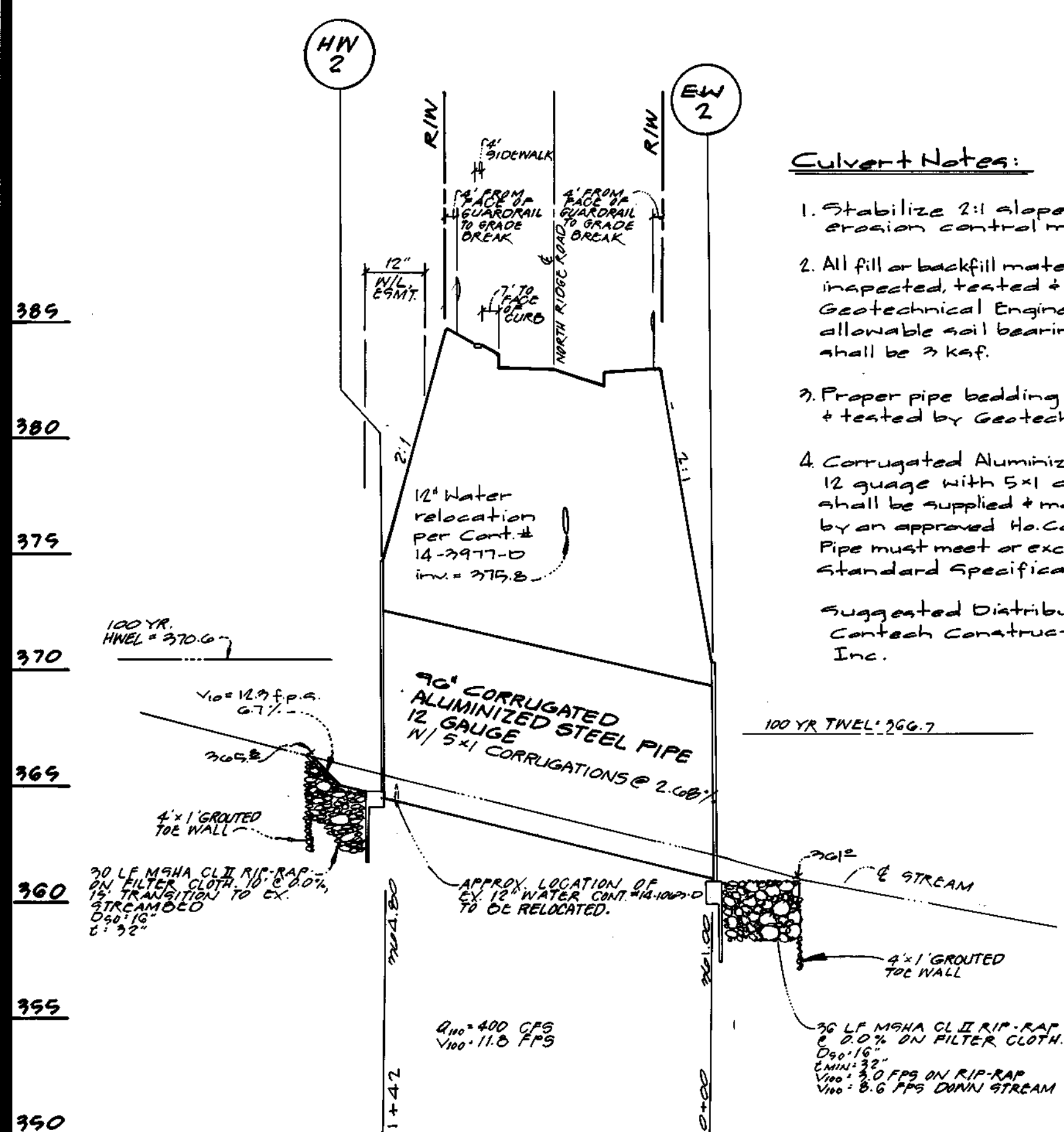
GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE, SUITE 250 - BURTONTOWN OFFICE PARK
BURTONTOWN, MARYLAND 20887
TEL: 301-421-4024 BALT. 410-880-1820 DC/VA. 301-989-2524 FAX: 301-421-4186

00050\design\00050scd3.dwg | DES. | DRN. | CHK.

NO.	DATE	DESCRIPTION	BY	APPR.
11/27/01	10/27/01	revised to change culvert location to other side of the stream for triple cell culvert - revised and re-constructed	GT	...
10/26/01	10/26/01	revise details and sequence of construction	MCF	...
		IN-HOUSE REVISION	BY	APPR.

PREPARED FOR -
(Owner/Developer)
EXIT SEVEN LLC
c/o Greenbaum & Rose Associates, Inc.
Suite 410, Woodholme Center
1829 Reston Road
Baltimore, MD 21208
Phone: 410-484-8400
Attn: Mark Bennett or Charles O'Donovan

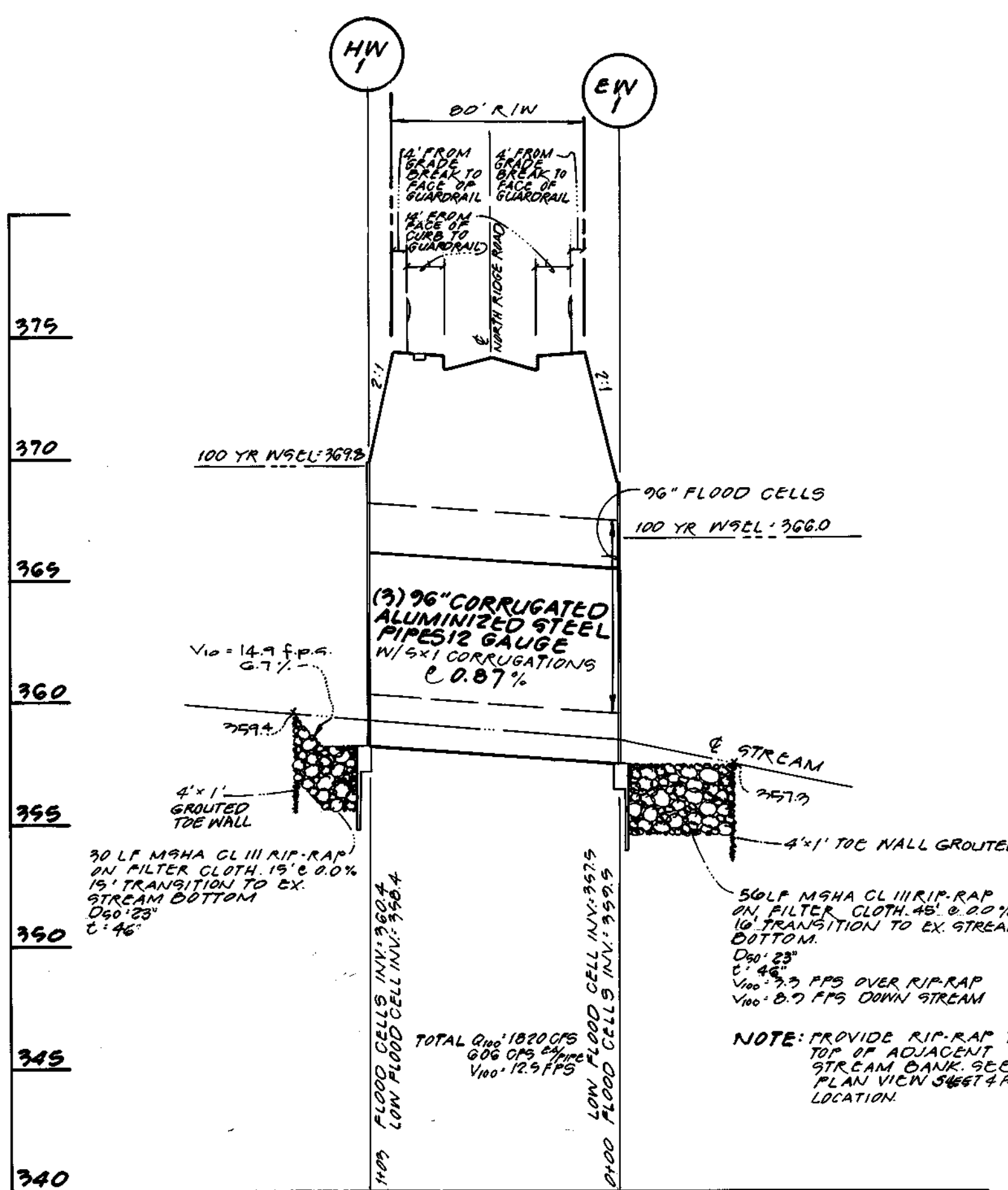
SEDIMENT CONTROL DETAILS		
THE ENCLAVE AT ELLICOTT HILLS PARCEL 88 601488		
SCALE	ZONING	G. L. W. FILE NO.
NO SCALE	POR, R-ED R-20	00050
DATE	TAX MAP - GRID	SHEET
9/26/01	17-17,18,24	11 of 26
ELECTION DISTRICT No. 2 HOWARD COUNTY, MARYLAND		



Culvert Notes:

1. Stabilize 2:1 slopes with erosion control matting + seed
2. All fill or backfill material shall be inspected, tested + approved by a Geotechnical Engineer. Not allowable soil bearing pressure shall be 3 kaf.
3. Proper pipe bedding shall be used + tested by Geotechnical Engineer
4. Corrugated Aluminized Steel pipe 12 gauge with 5x1 corrugations shall be supplied + manufactured by an approved Ho.Co distributor. Pipe must meet or exceed Ho.Co. standard specifications.

Suggested Distributor:
Centech Construction Products, Inc.

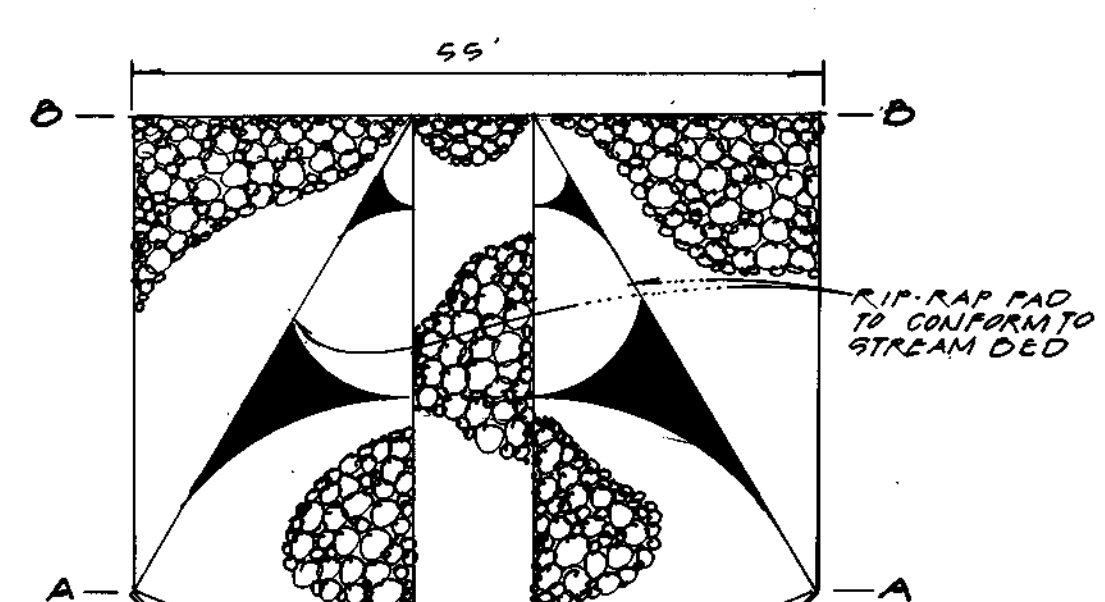
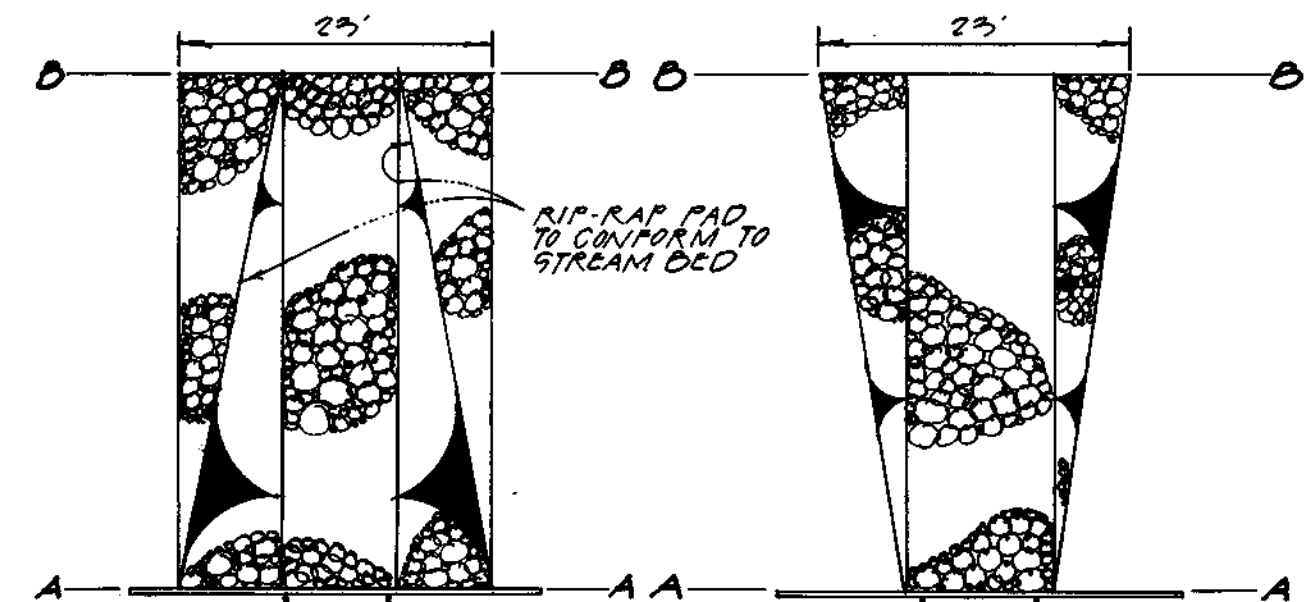


PIPE SUMMARY		
SIZE	TYPE	LENGTH
96"	CORRUGATED ALUMINIZED STEEL PIPE 12 GAUGE W/ 5X1 CORRUGATIONS	451 LF

STRUCTURE SCHEDULE									
NO	TYPE	DIAM. (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STD. DETAIL	Location to E. & Face of Headwall	REMARKS
			UPPER	LOWER	UPPER	LOWER			
HW-1	96" RIPPED TYPE 'A' ENDWALL	96"	367.00	358.4	SEE THIS SHEET	32+40.00	52.25' LT.		
EW-1	96" RIPPED TYPE 'A' ENDWALL	96"	367.00	367.5	"	31+01.40	65.00' RT.		
HW-2	96" RIPPED TYPE 'C' HEADWALL	96"	370.00	364.00	"	25+07.00	60.00' LT.		
EW-2	96" RIPPED TYPE 'C' ENDWALL	96"	370.00	361.00	"	24+57.00	52.00' RT.		

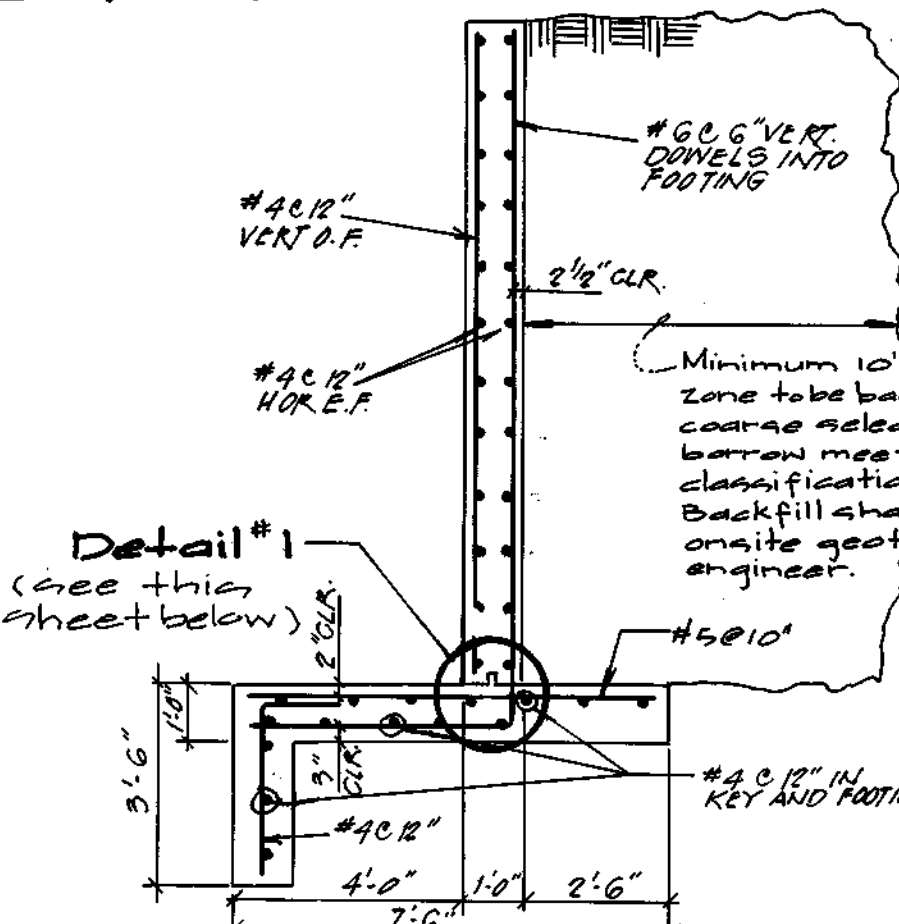
CULVERT PROFILE

CULVERT PROFILE

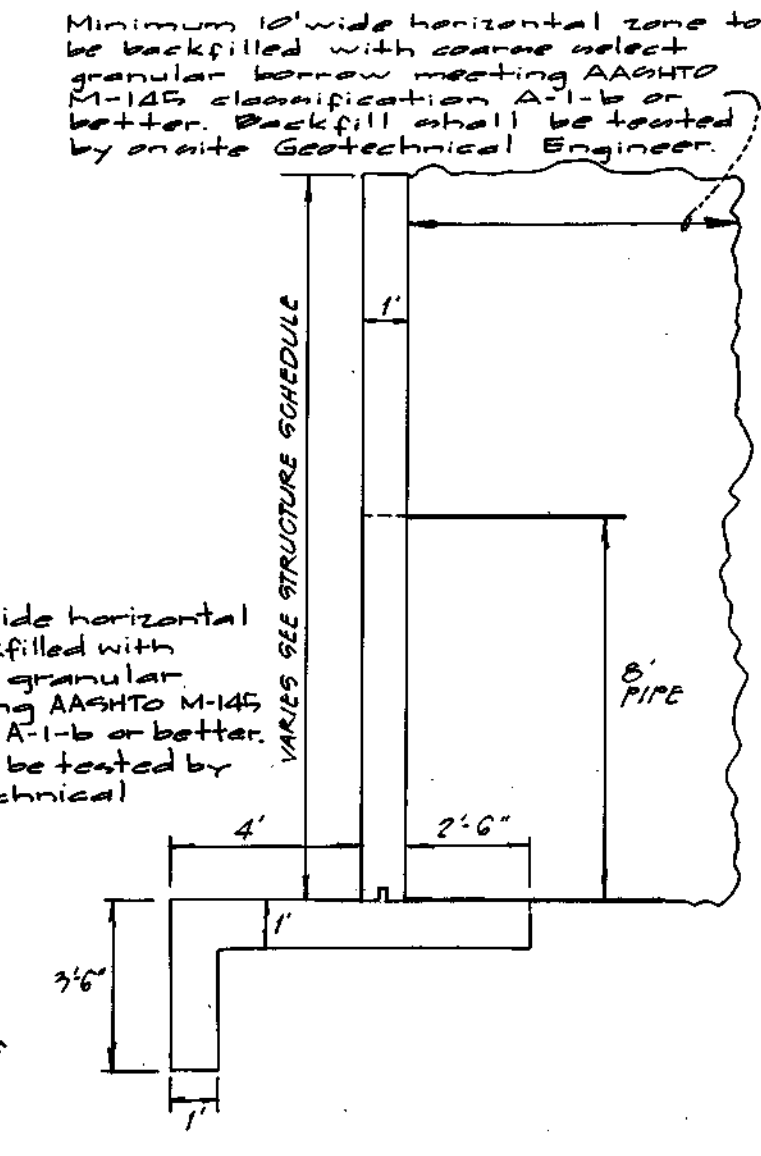


PLAN VIEW FOR HW#2 PLAN VIEW FOR EW#2

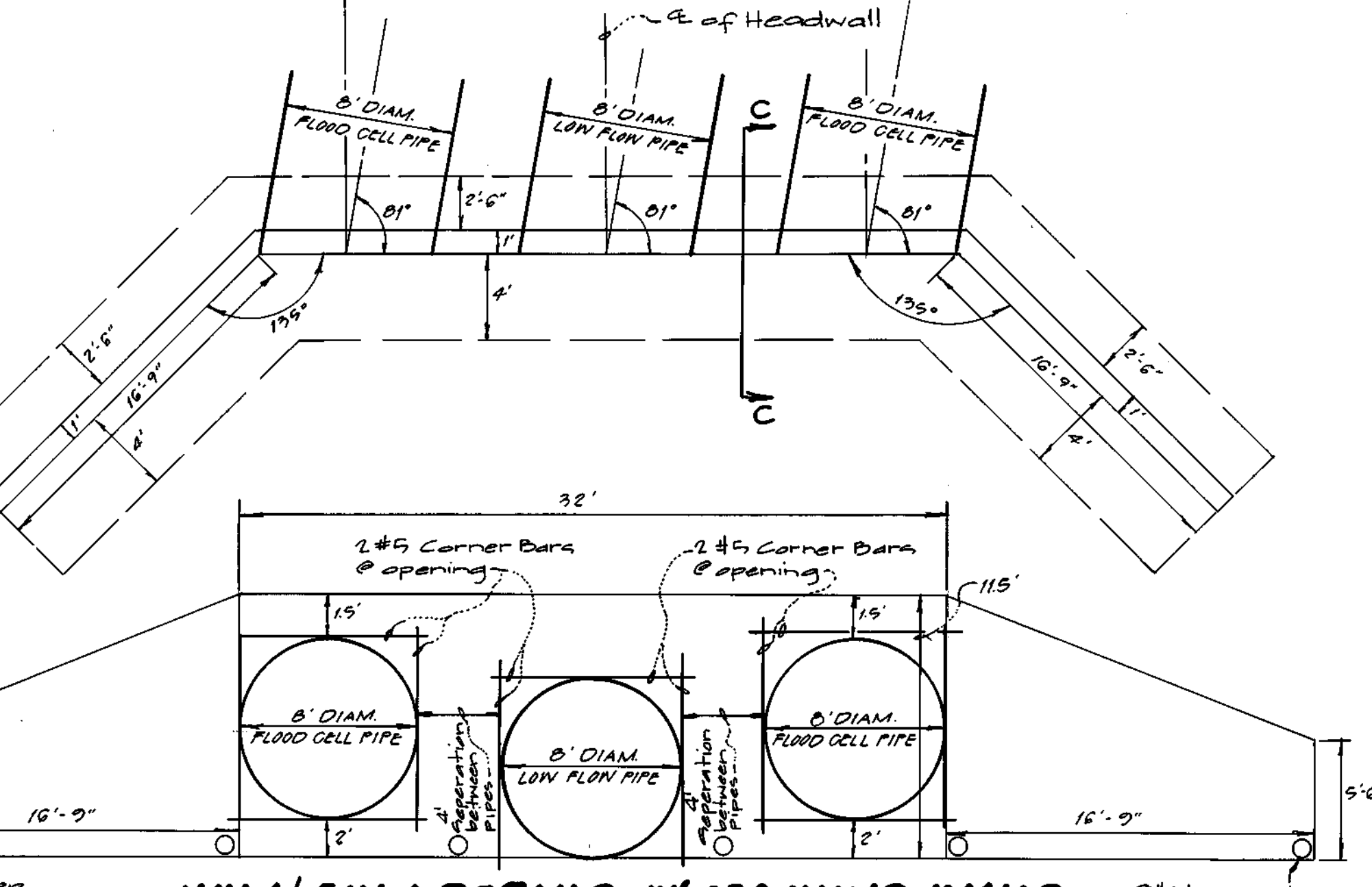
PLAN VIEW FOR HW#1 & EW#1



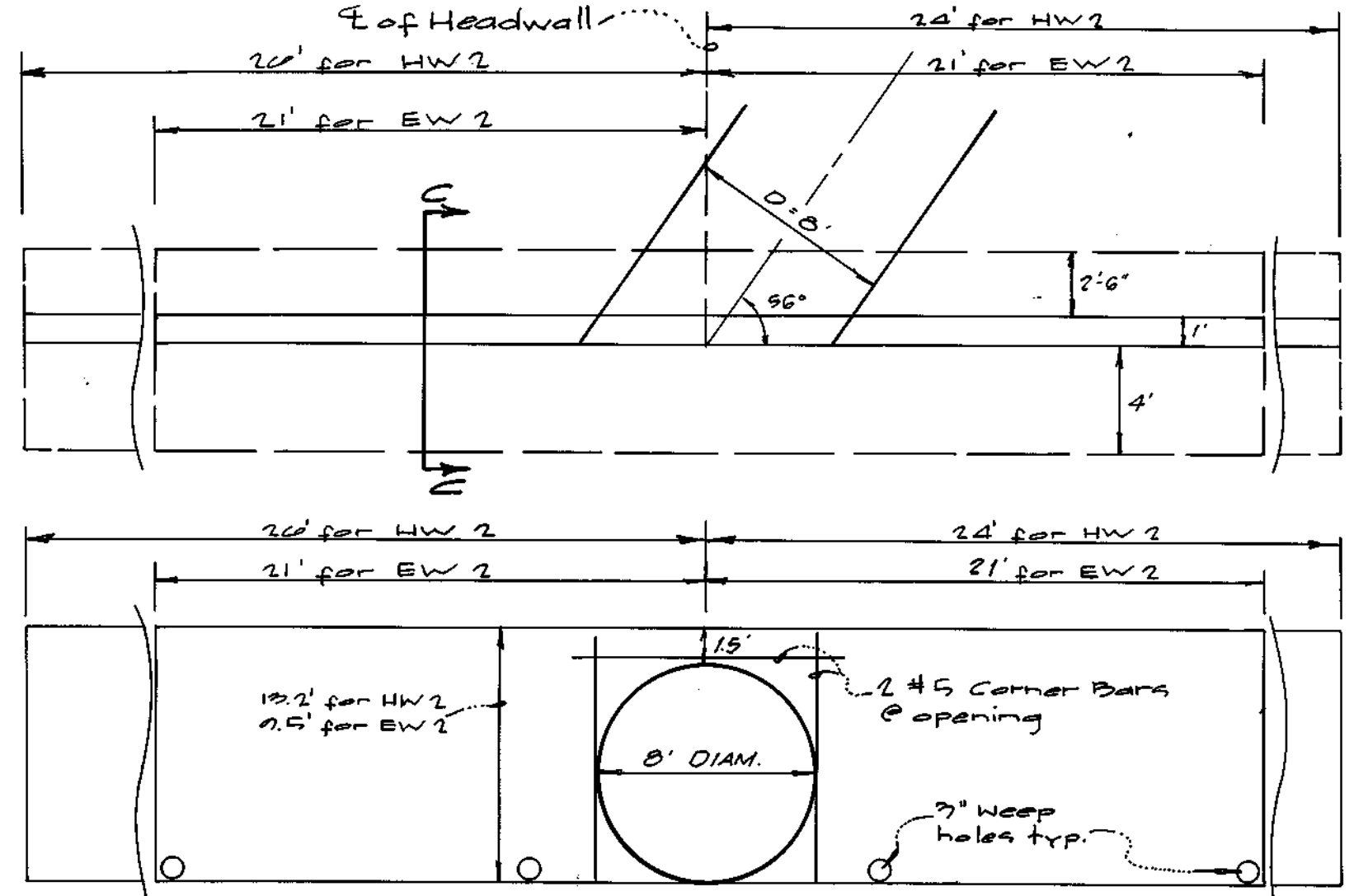
REINFORCEMENT DETAIL



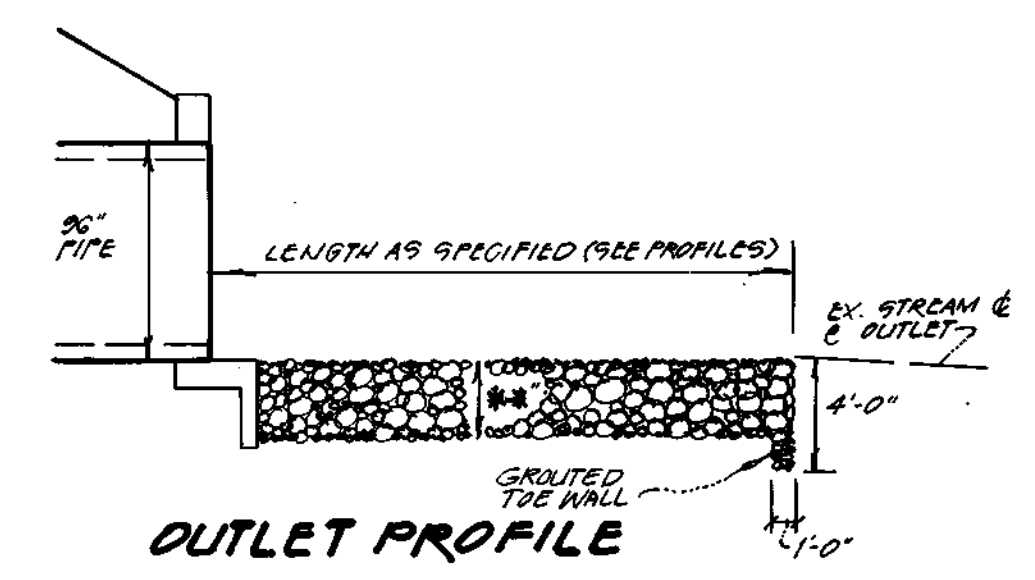
SECTION C-C



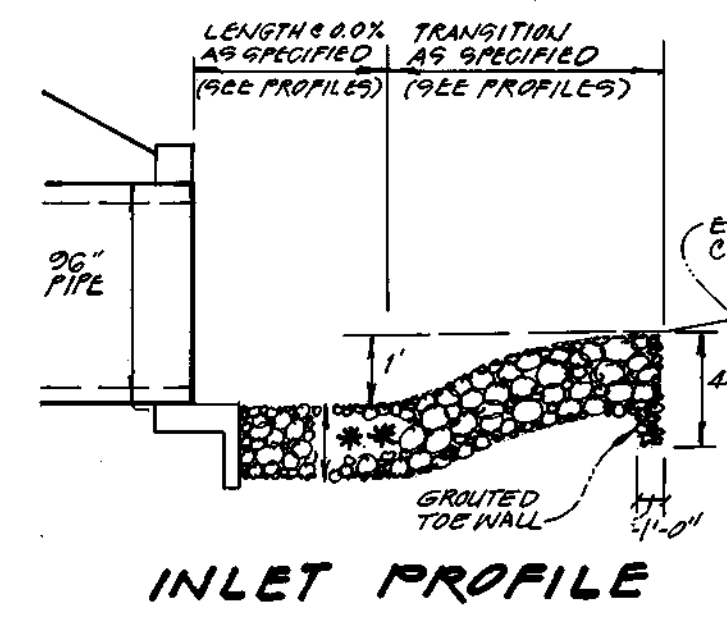
HW-1/EW-1 DETAILS W/ 45° WING WALLS



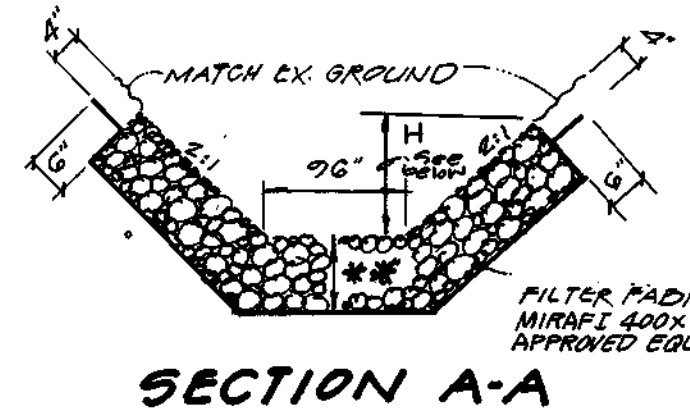
HEADWALL#2/ENDWALL#2 DETAILS



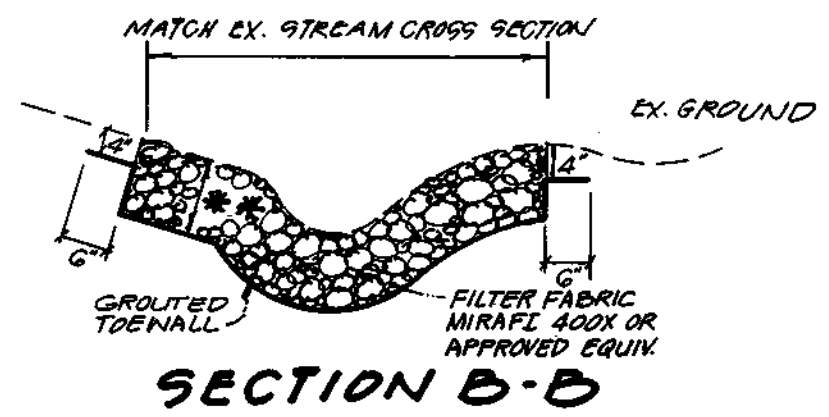
OUTLET PROFILE



INLET PROFILE



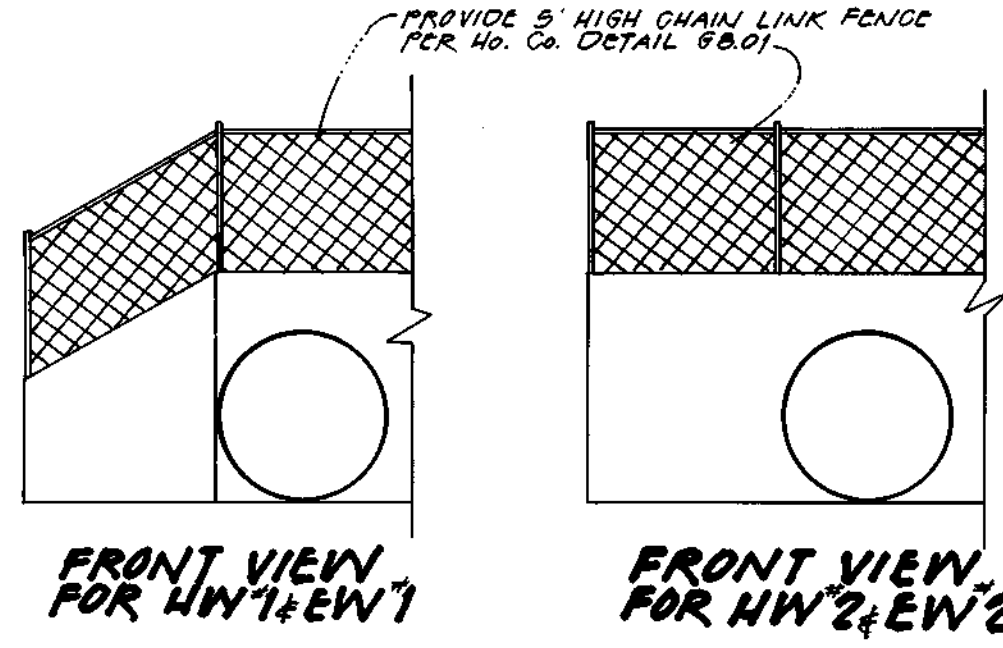
SECTION A-A



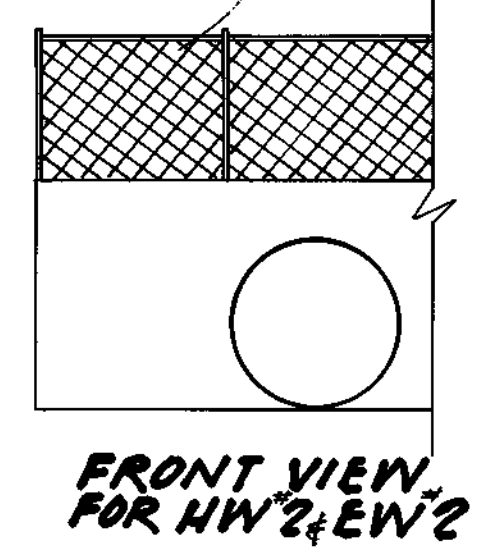
SECTION B-B

CULVERT INLET & OUTFALL RIP-RAP DETAILS

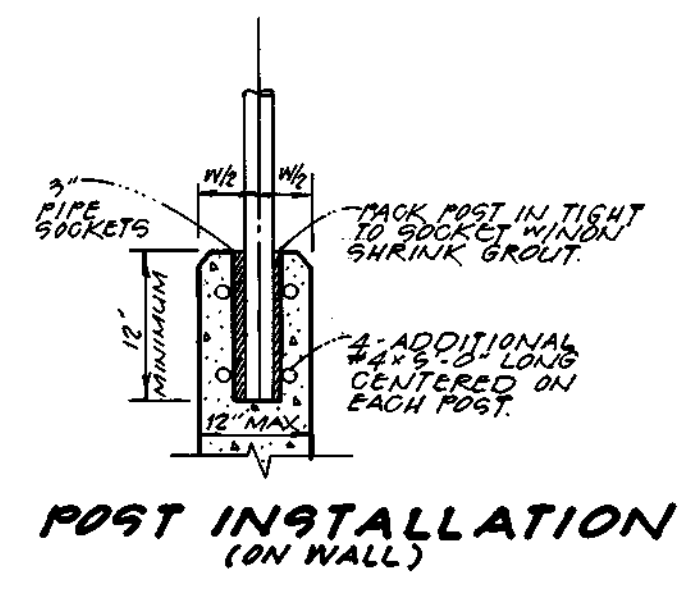
** THICKNESS = 32" FOR CLASS II RIP RAP
THICKNESS = 46" FOR CLASS III RIP RAP



FRONT VIEW FOR HW#1 & EW#1



FRONT VIEW FOR HW#2 & EW#2



POST INSTALLATION (ON WALL)

CHAIN LINK FENCE DETAILS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard M. D'Amico 10/23/01
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hamaker 10/21/01
Chief, Division of Land Development

John DeMunnich 10/23/01
Chief, Development Engineering Division



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONTOWNE OFFICE PARK
BURTONTOWNE, MARYLAND 20886
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

NO.	DATE	DESCRIPTION	BY	APP'R.
10-7-01	10/7/01	Revised Stone Sizes For Class II Riprap @ HW-1 & EW-1	BJE	ALL
		IN-HOUSE REVISION	BY	APP'R.

PREPARED FOR:
(OWNER/DEVELOPER)
EXIT SEVEN LLC

56 GREENEDALE + ROSE ASSOCIATES, INC.
SUITE 410, WOODHARNE CENTER
1809 REGISTERSTOWN ROAD 410-484-8400
BALTIMORE, MARYLAND 21208
ATTN: MARK BENNETT OR CHARLES O'DONOVAN

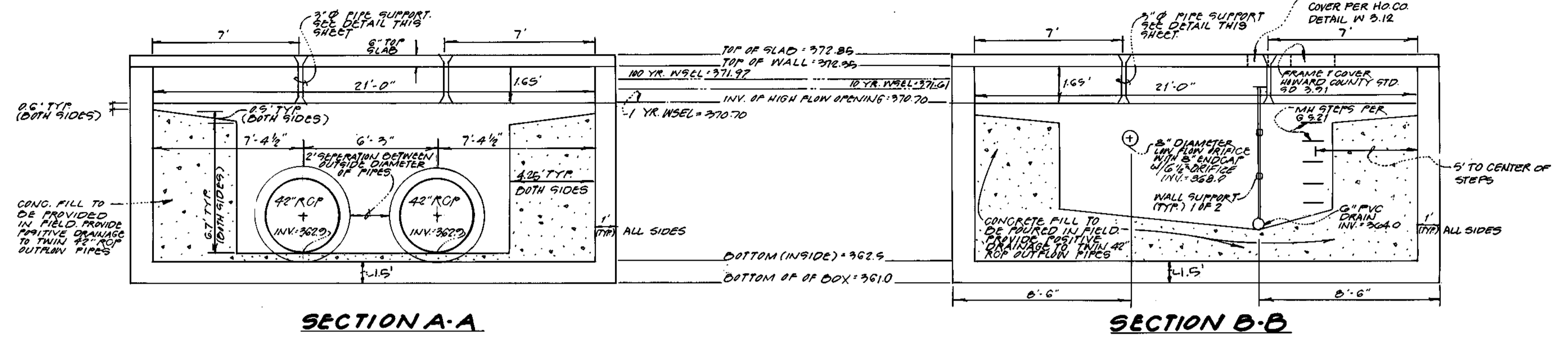
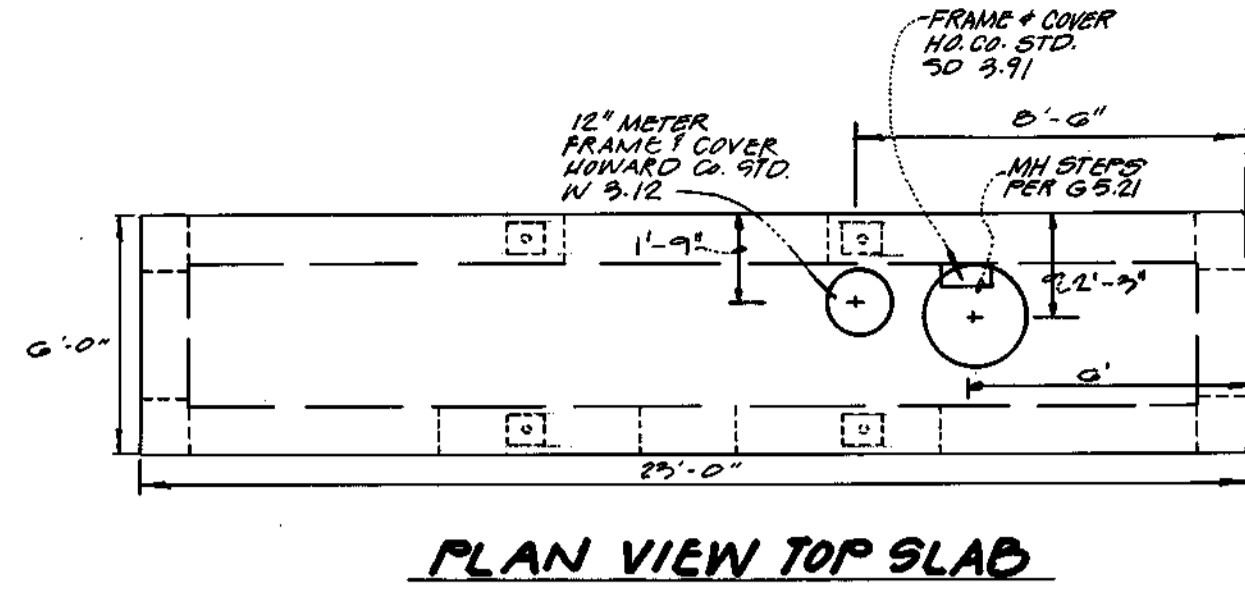
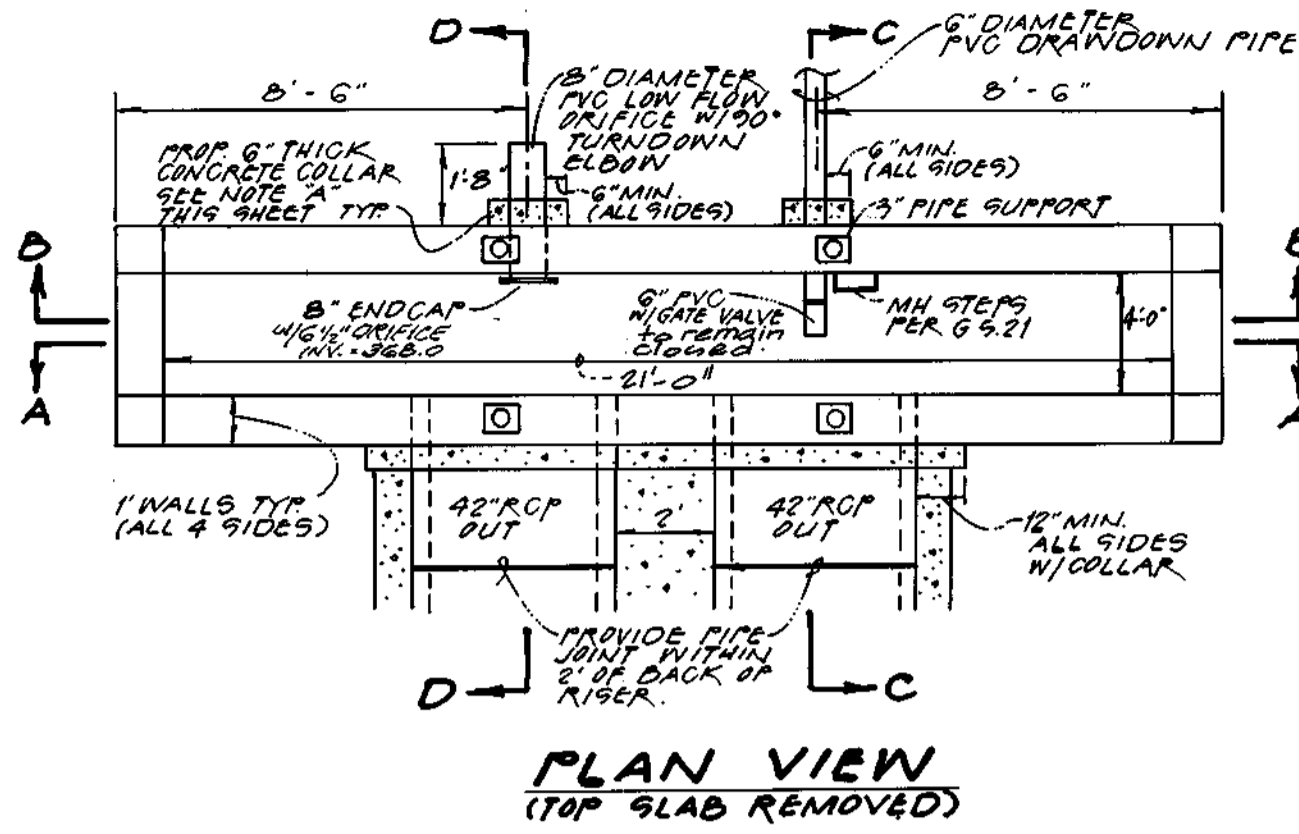
CULVERT DETAILS
THE ENCLAVE AT ELLICOTT HILLS
NORTH RIDGE ROAD

SCALE: AS SHOWN
ZONING: NT
DATE: Sept 20, 2001
TAX MAP: 17-17,18,24
ELECTION DISTRICT No. 2
HOWARD COUNTY, MARYLAND

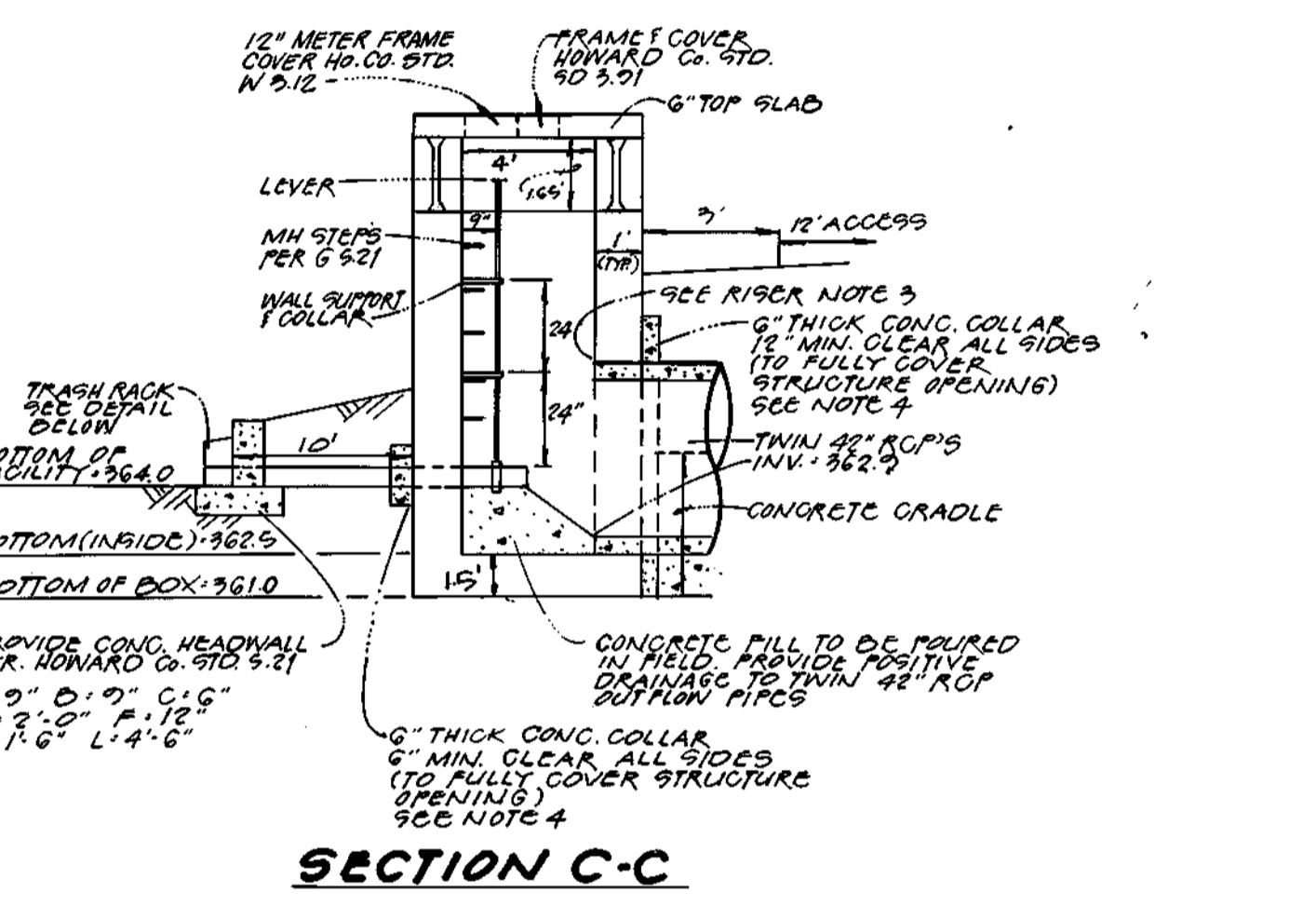
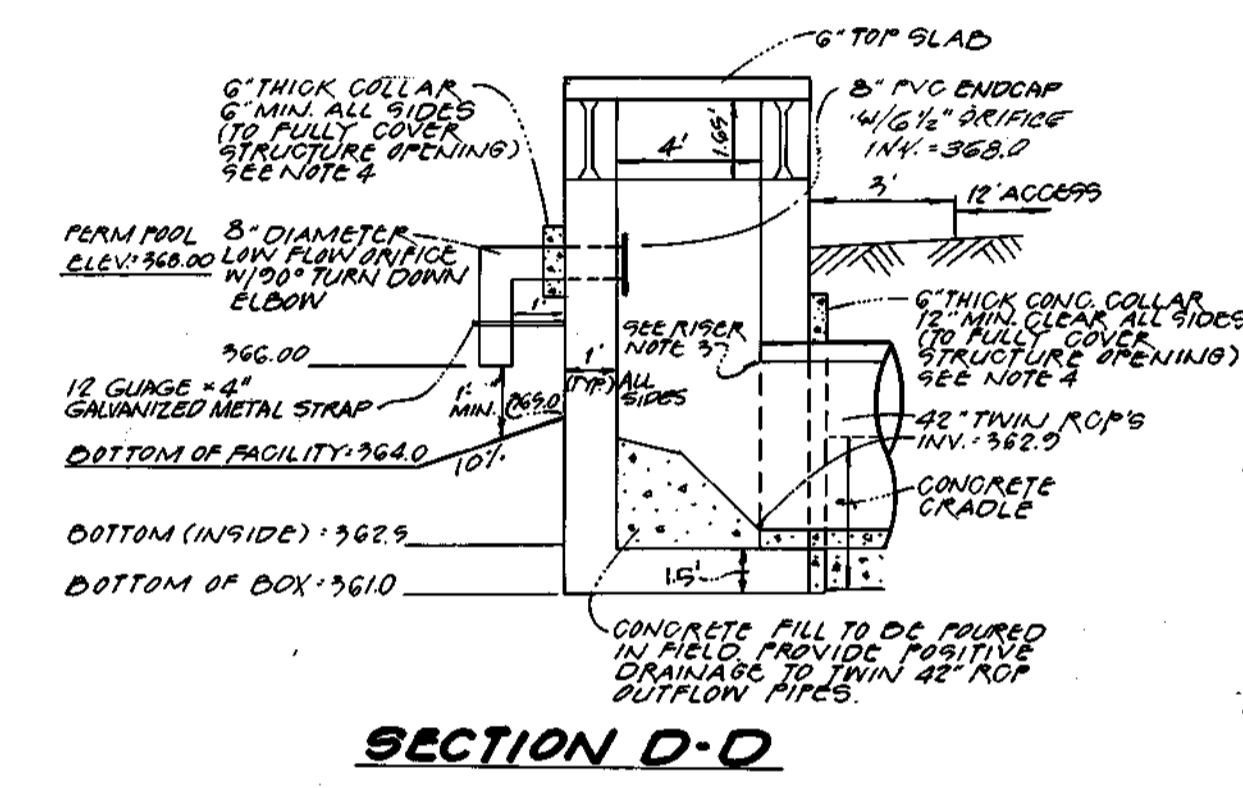
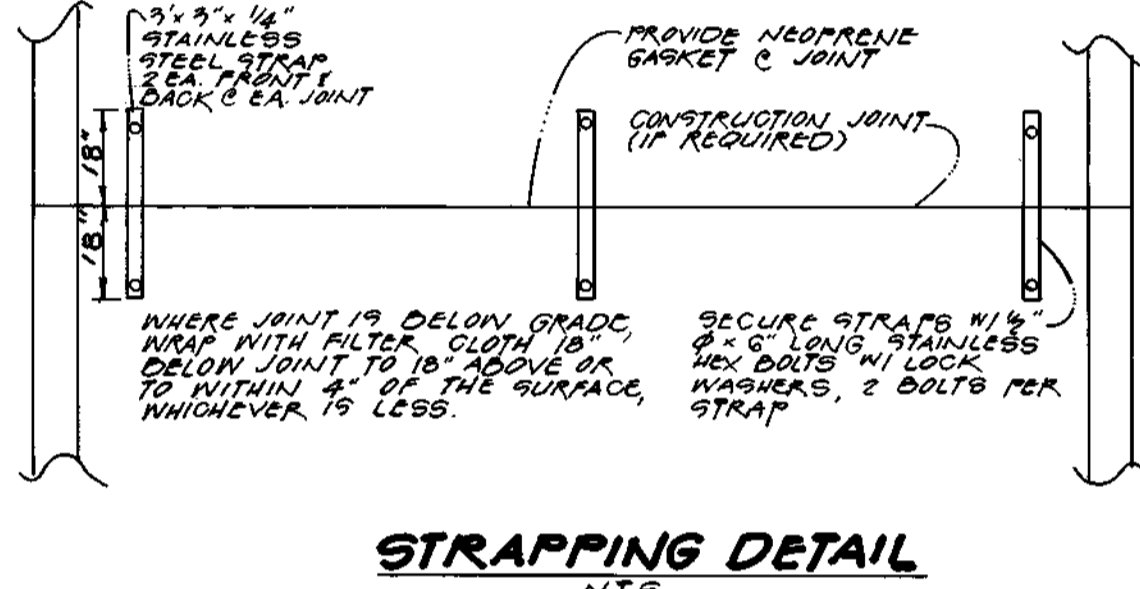
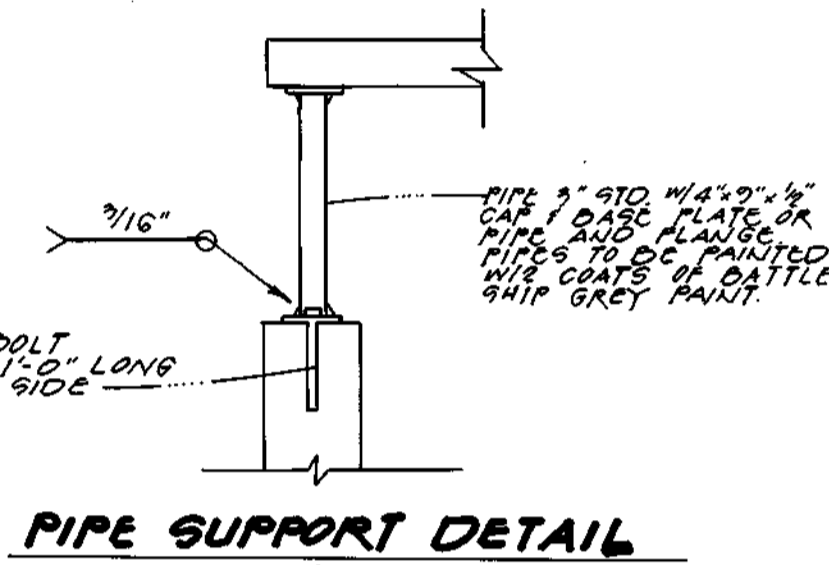
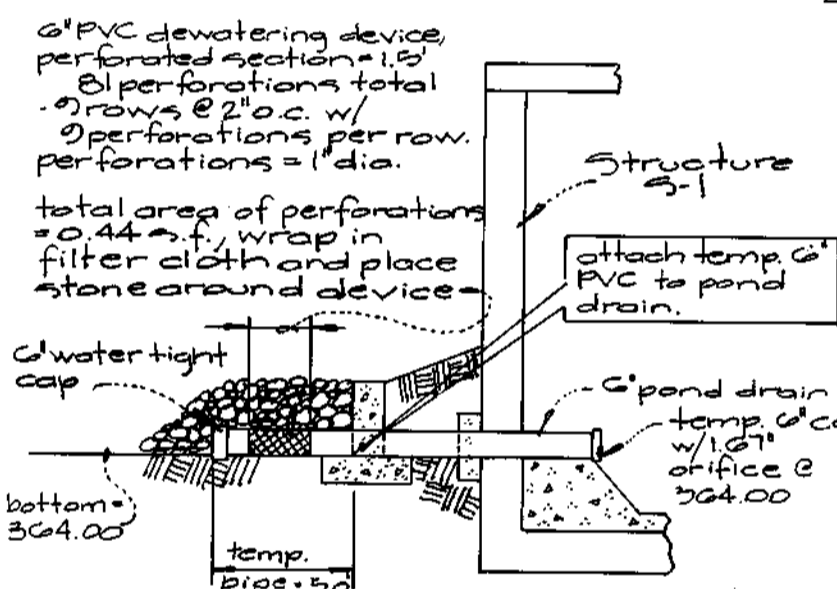
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	00050
DATE	TAX MAP	
Sept 20, 2001	17-17,18,24	12 OF 20

STRUCTURE S-1 DETAILS

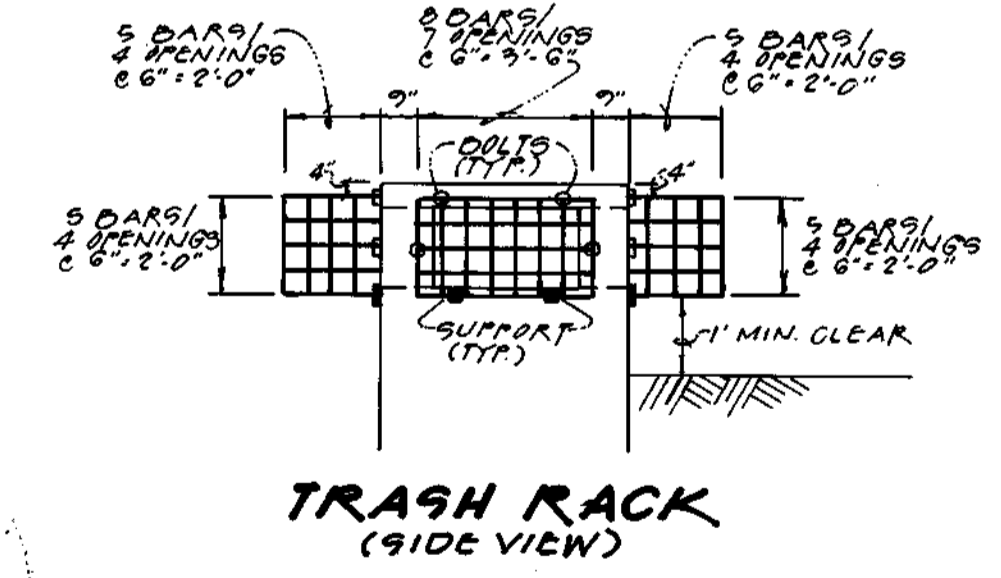
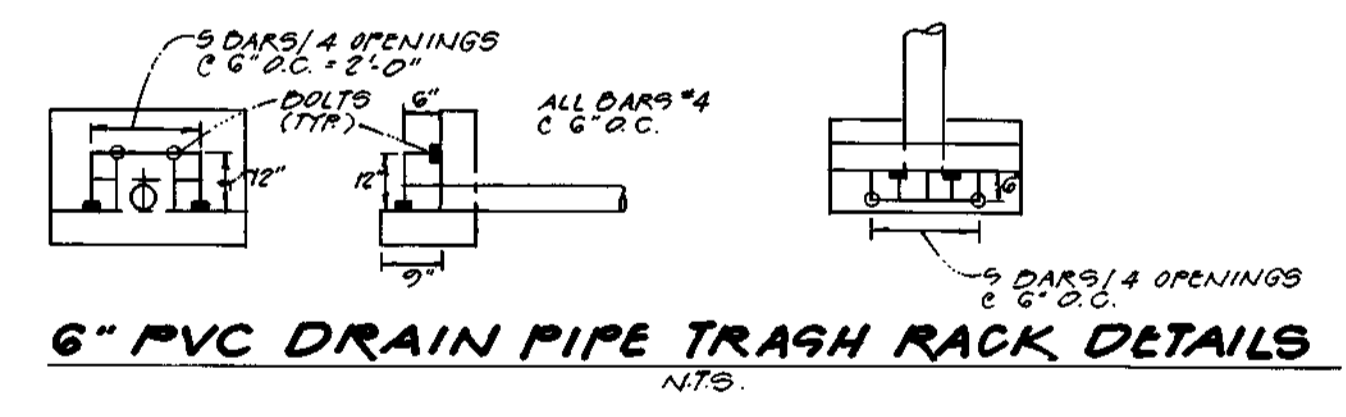
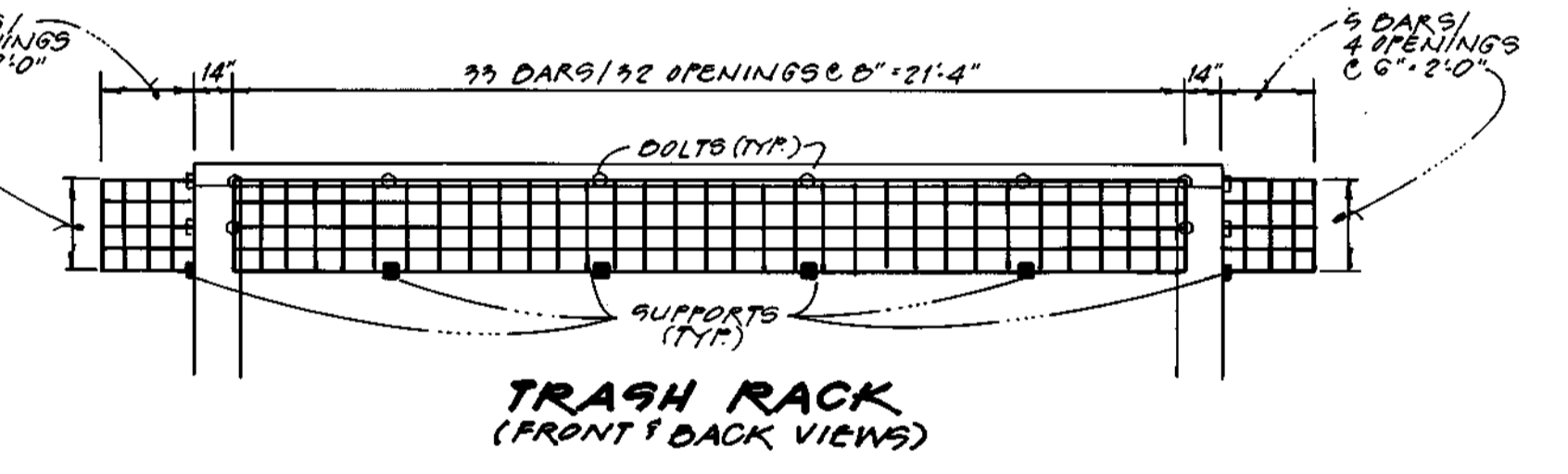
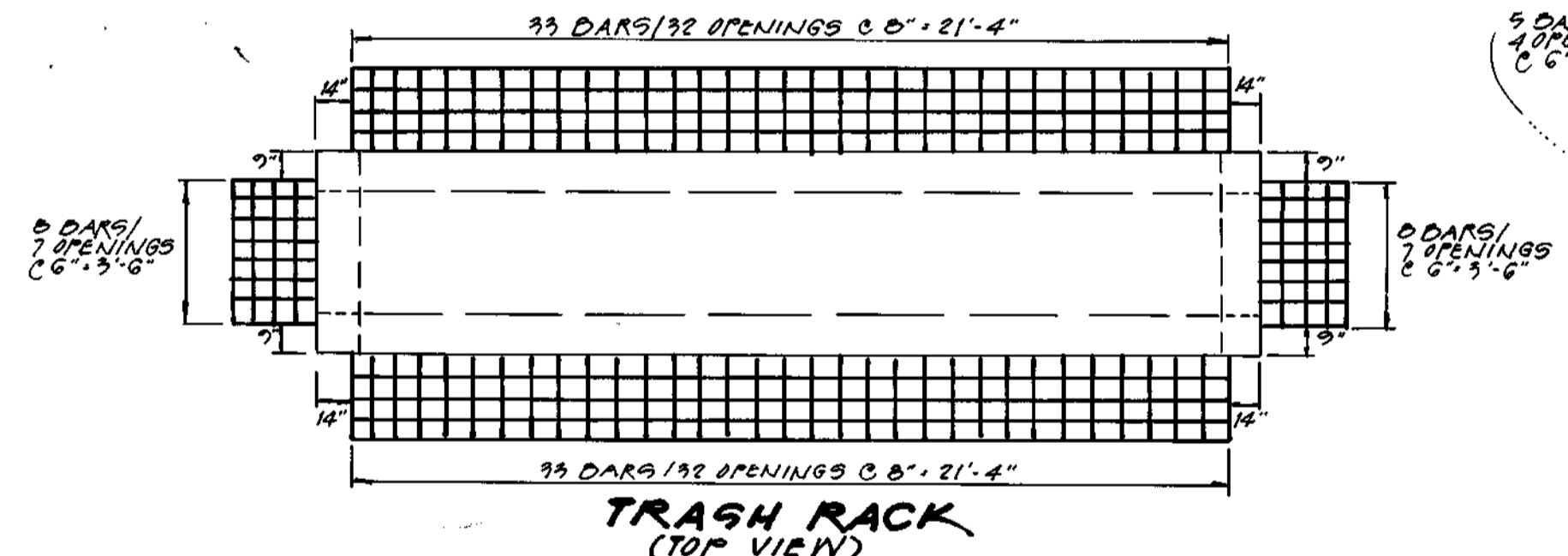
APPROX. SCALE 1" = 4"



- Riser Notes:**
- Riser to be pre-cast reinforced concrete. Contractor/Precaster to provide reinforcing design and shop drawings to the engineer of record (GLW) for approval prior to manufacture. The engineer of record is responsible for ensuring that the structure meets the design requirements.
 - Bottom & sides of S-1 shall be monolithic. If separate sections must be poured then all joints must be keyed and adequately secured with steel straps per the detail on this sheet. Provide a neoprene gasket at all joints, & wrap the structure with filter cloth from 18" below the joint to 18" above the joint (or to 4" below grade if less than 18") where the joint is below grade.
 - Contractor to fill all gaps between structure walls and pipes with concrete and purge with non-shrink grout.
 - Contractor to provide concrete collars outside structure at all pipes as shown hereon to further ensure a water tight box. Provide a layer of non-shrink grout at all interfaces of pre-cast concrete with poured in place.
 - Provide 4000 PSI air entrained conc. for all field poured concrete inside and adjacent to S-1.
 - Gate valve is to remain closed.



- TRASH RACKS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION AND PAINTED WITH 1 SHIP AND 1 FIELD COAT OF BATTLESHIP GREY PAINT.
- VERTICAL BARS SHALL BE ON THE OUTSIDE OF STRUCTURE.
- TRASH RACK TO BE SECURELY BOLTED TO RISER STRUCTURE WITH 1/2" DIA. BOLTS ENCLOSED 6" INTO RISER WALL.
- ALL REBAR INTERSECTIONS TO BE SPOT WELDED.
- MINIMUM OPENING SIZE TO BE 6" x 6" SEE PROFILE VIEWS FOR OTHER SIZES.



NOTE: ALL BAR DIMENSIONS ARE C.C. DIMENSIONS UNLESS NOTED OTHERWISE.

DEVELOPER'S/BUILDER'S CERTIFICATE

"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 Maryland 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.

ENGINEER'S CERTIFICATE

"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."

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

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.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Development Engineering Division

Signature of Developer/Builder
 Date: 10/8/01

Engineer's Signature
 Date: 10/8/01

Signature of Howard Soil Conservation District
 Date: 10/17/01

Signature of Natural Resources Conservation Service
 Date: 10/17/01

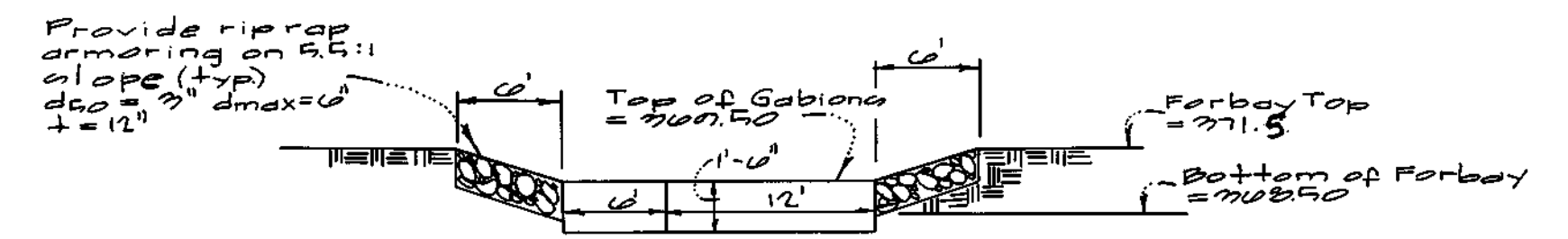
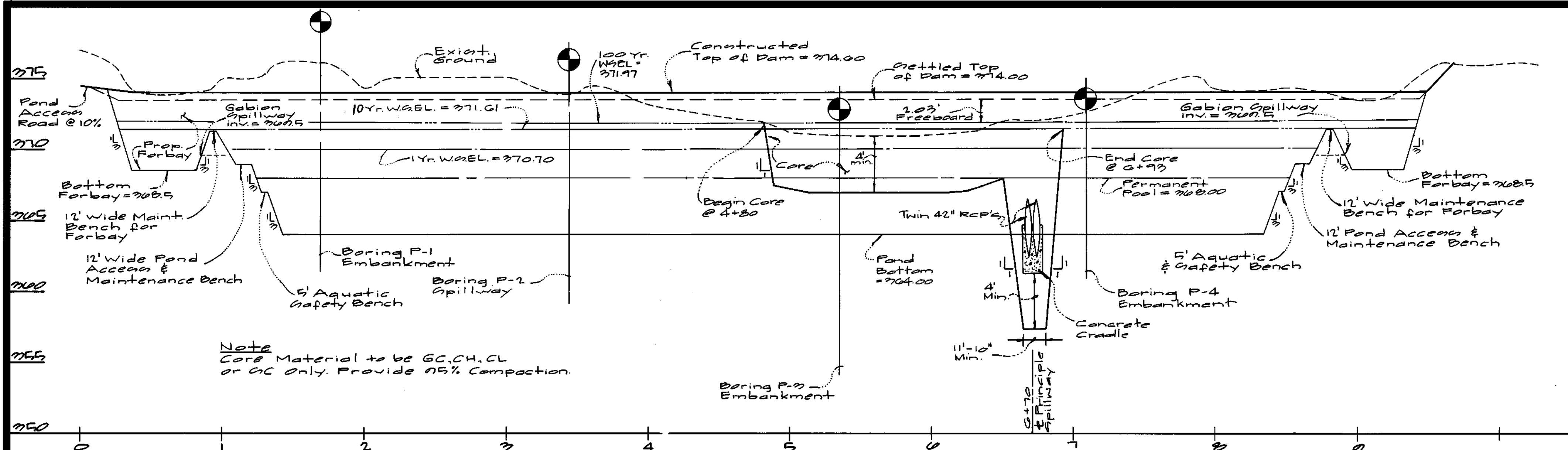
GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK
 BURTONVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-988-2524 FAX: 301-421-4188

DATE	REVISION	BY	APP'R.
10-08-01	Add note for Gate Valve to be closed see Riser Note # 6		
10-8-01	Add 6" Temp Pond Dewatering Device For Sed Control Phase		

PREPARED FOR:
 (OWNER/DEVELOPER)
 EXIT SEVEN LLC
 c/o GREENBAUM & ROSE ASSOCIATES, INC.
 SUITE 410, INNOVATION CENTER
 1824 REISTERSTOWN ROAD
 BALTIMORE, MARYLAND 21206
 ATTN: MARK BENNETT OR CHARLES O'DONOVAN
 PHONE NO: 410-484-8400

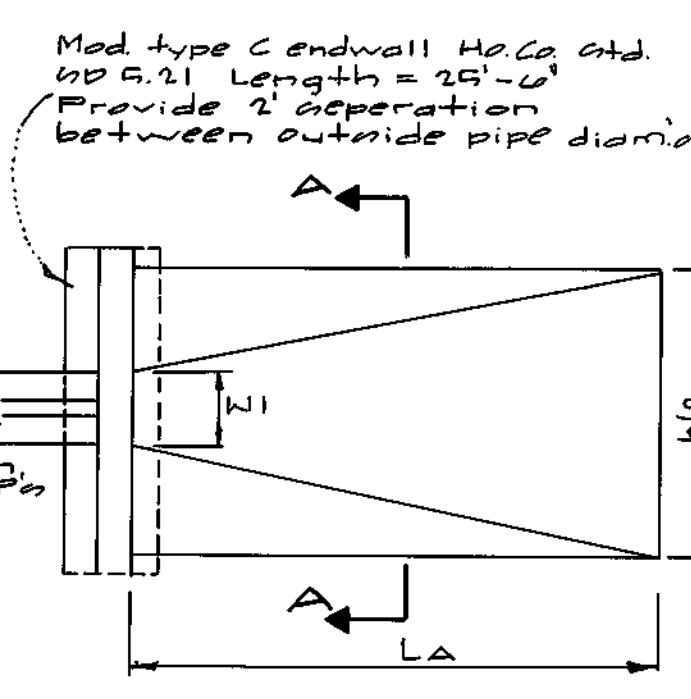
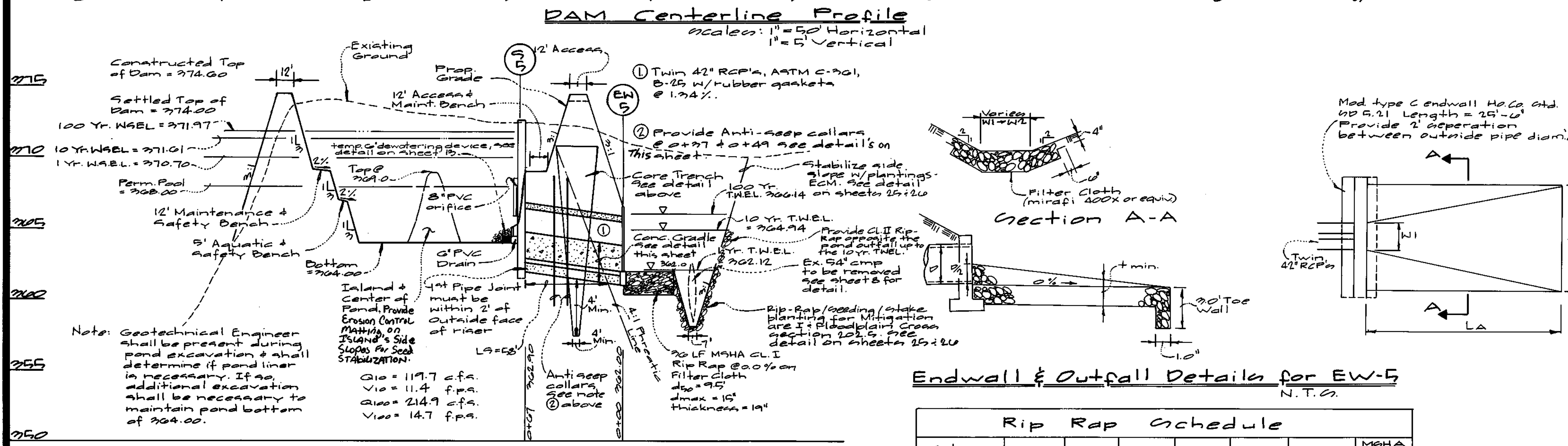
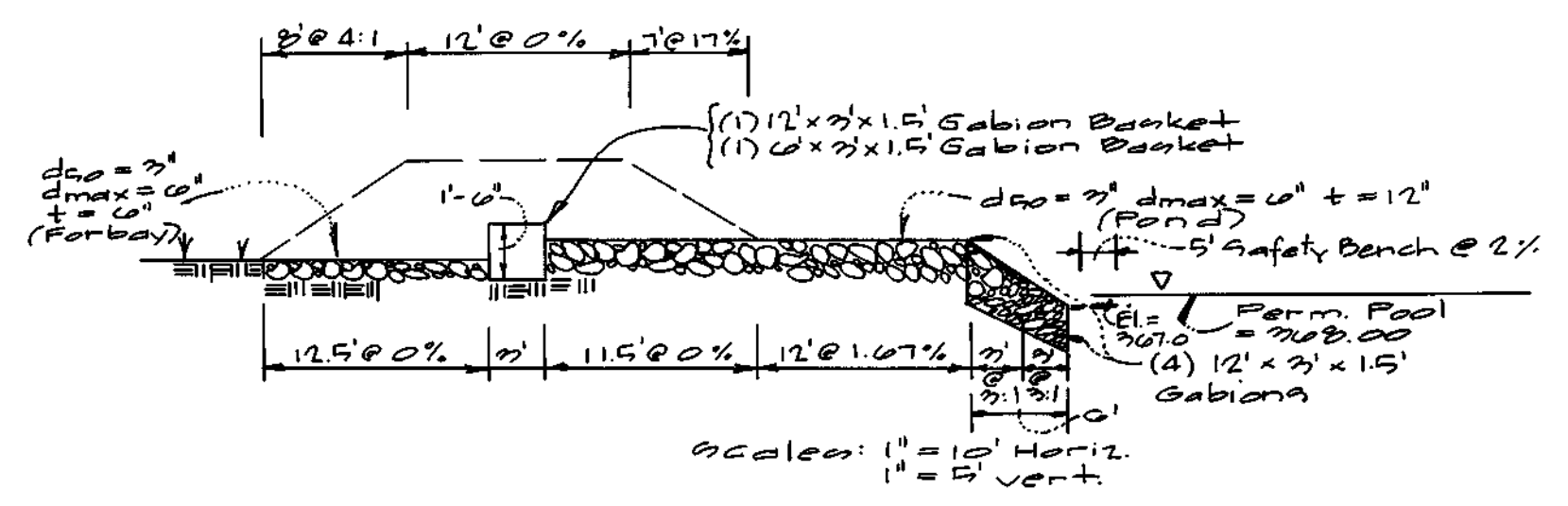
STORMWATER MANAGEMENT DETAILS
THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD
 ELECTION DISTRICT No. 2
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	POR, R-ED, R-20	00050
DATE	TAX MAP - GRID	SHEET
Sept 20, 2001	17-17,18,24	13 OF 20



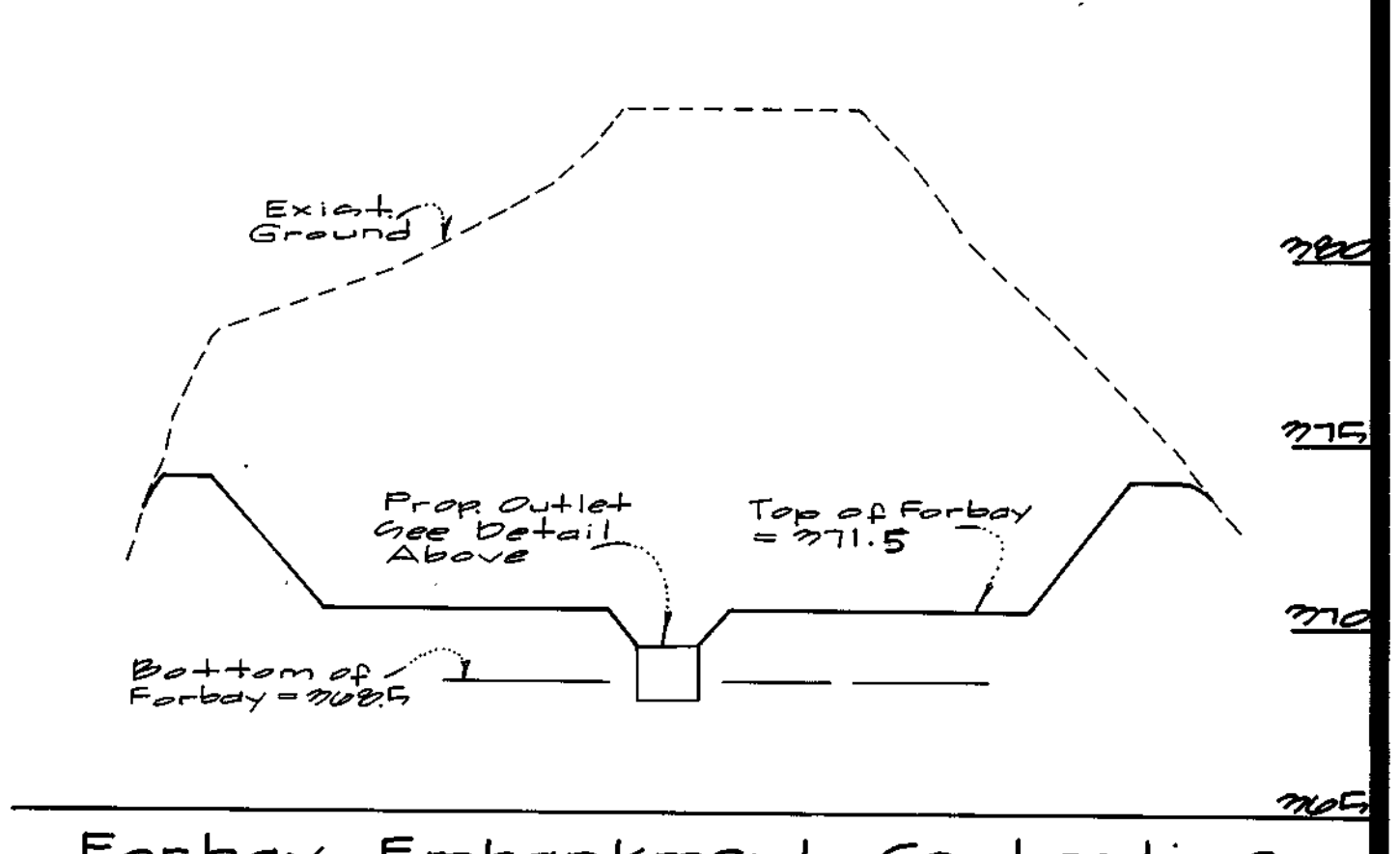
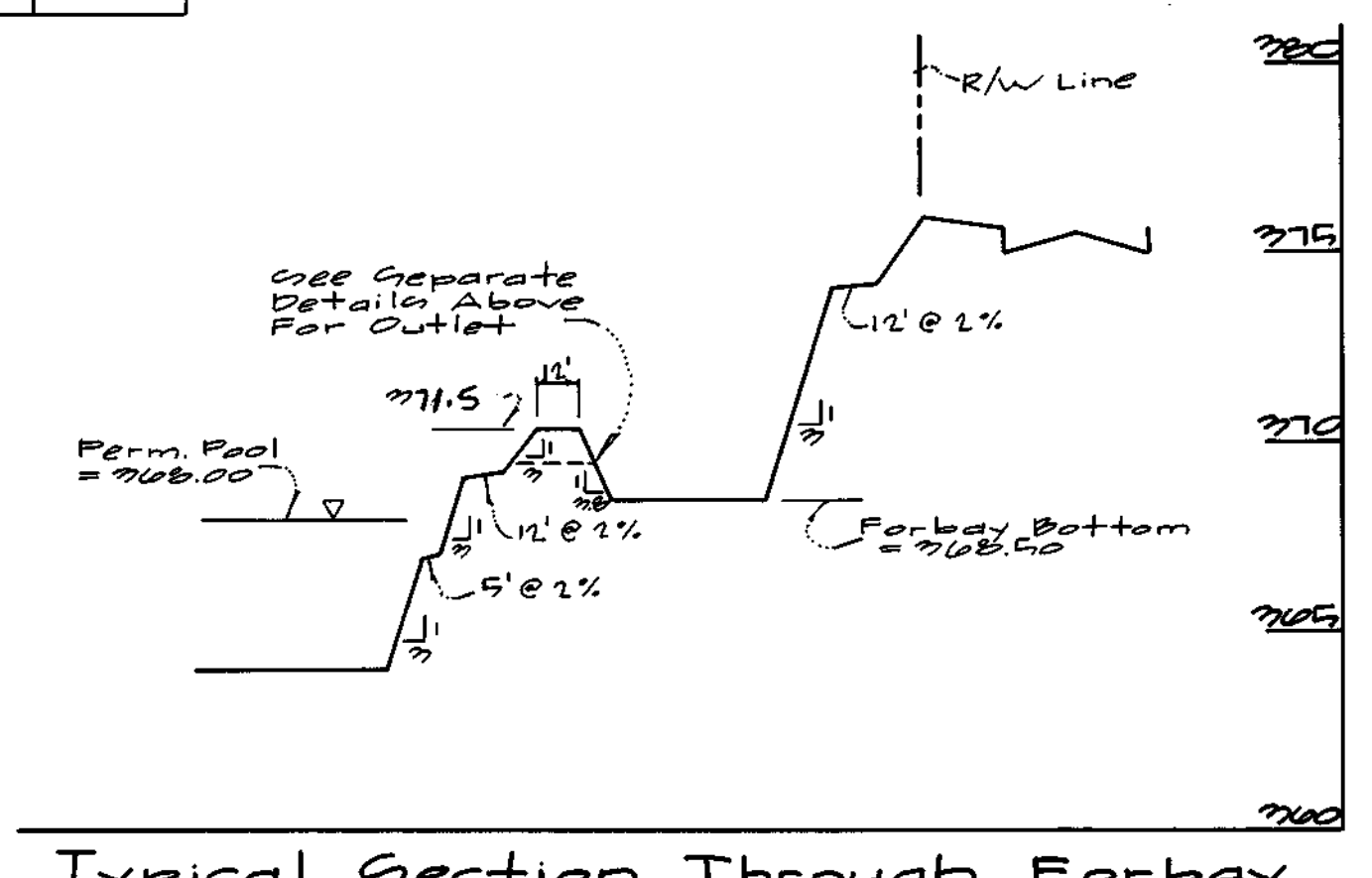
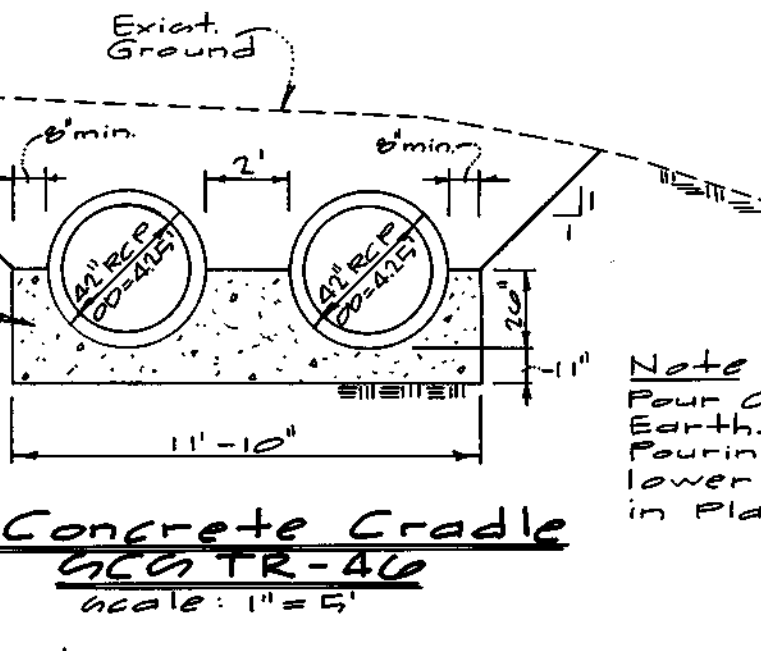
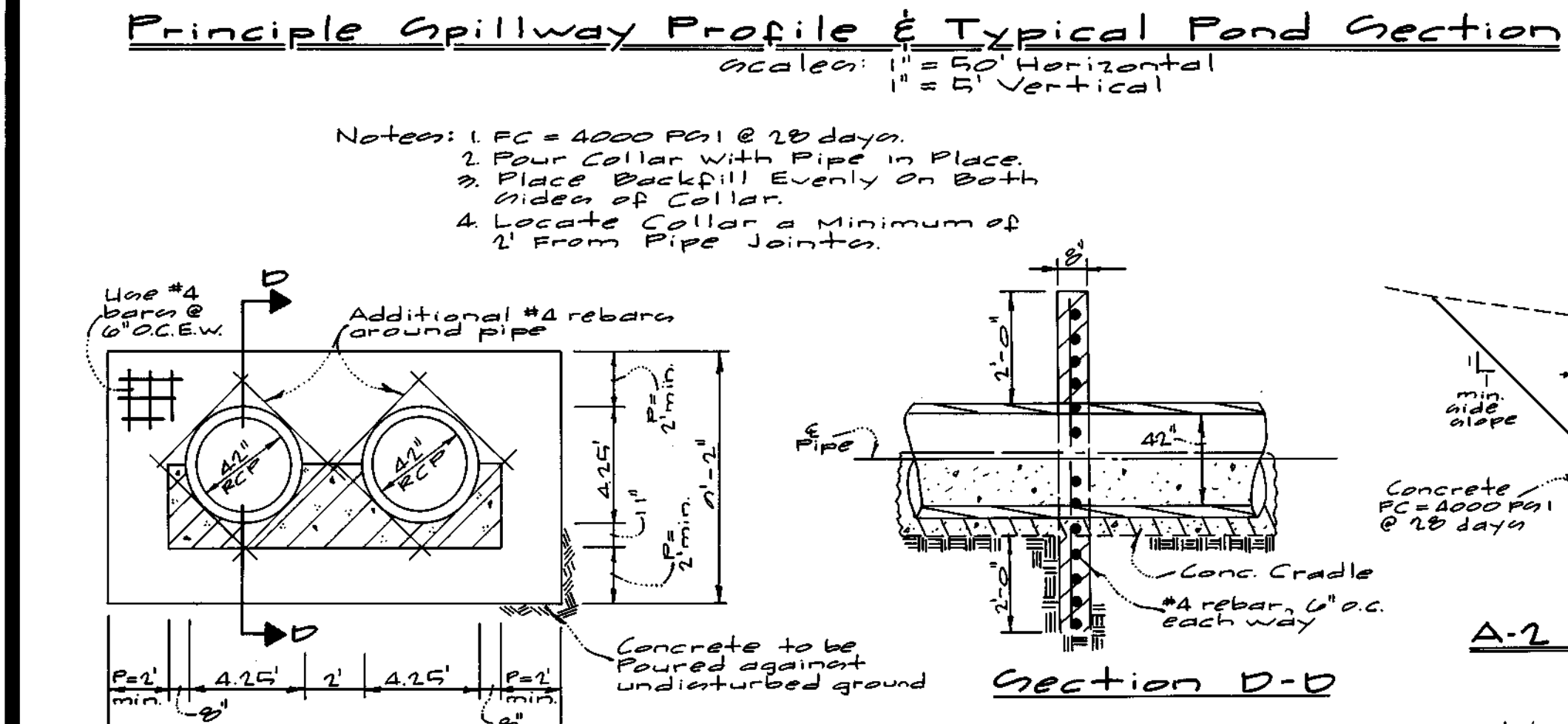
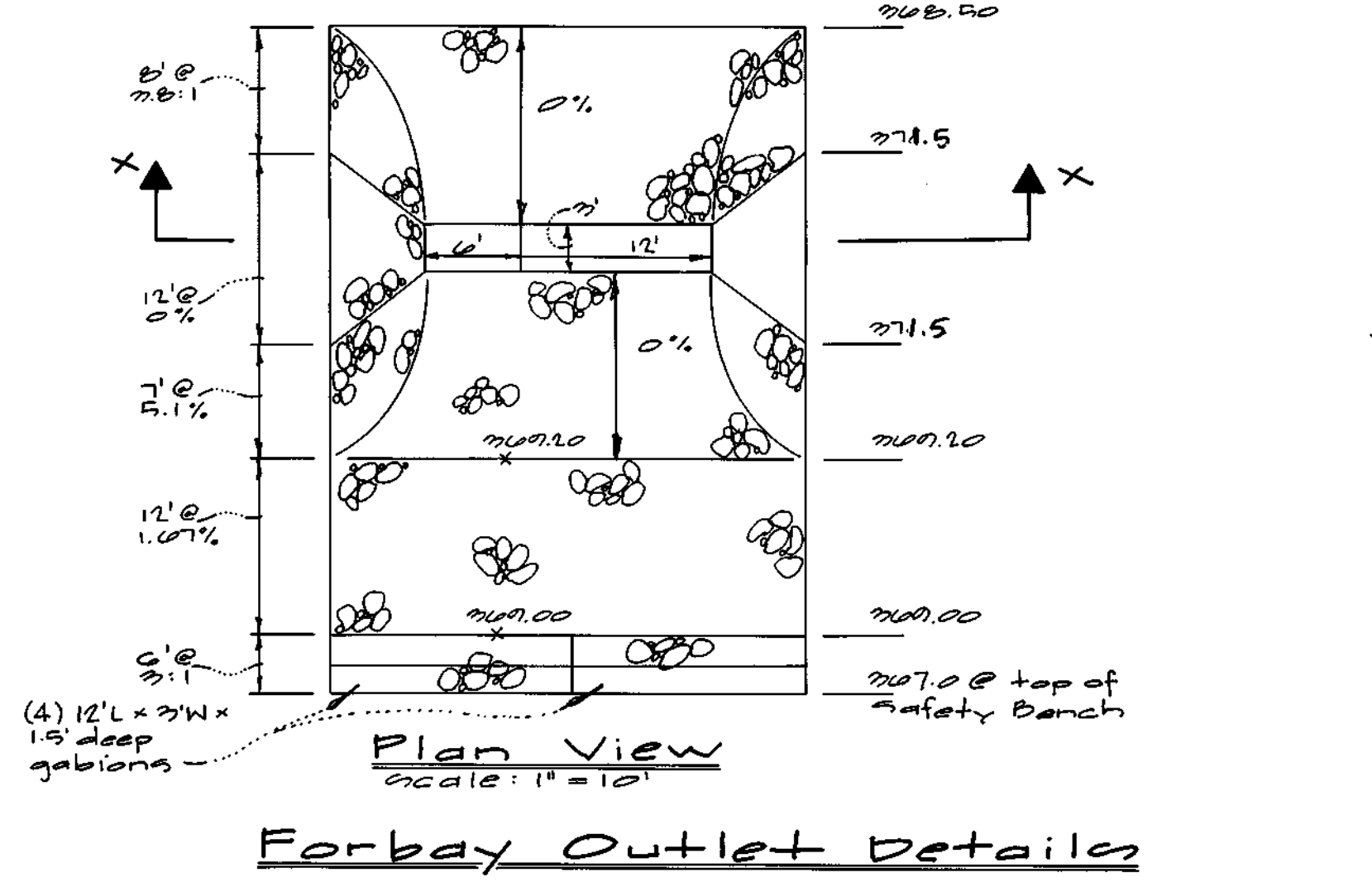
Note: All Rip-Rap & Gabions to be placed on Filter Cloth Use Mirafi 400x or equiv.

Section X-X
 scales: 1" = 10' Horiz.
 1" = 5' Vert.



Rip Rap Schedule

Str.	D	LA	W1	W2	Tmin	D50	MSHA CLASS
EW-5	Twin 42"	30	11	25	10"	0.5"	I



Approved: Howard County Dept. of Public Works
 Chief, Bureau of Highways AS Date
 Approved: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Development Engineering Division CE Date

DEVELOPER'S/BUILDER'S CERTIFICATE
 "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 Maryland 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.

ENGINEER'S CERTIFICATE
 "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."

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

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.

CONSTRUCTION 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.

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.

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.

Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

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.

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 heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum.

Outlet Trench - The outlet 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.

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.

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.

NOTE:

In addition to the Howard County Standard Specifications, and those on this sheet, the construction of the Stormwater Management facility shall be in accordance with the recommendations contained in the geotechnical report by Hillis-Carnes Engineering Associates, Inc.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways
10-23-01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development
10/29/01
Chief, Development Engineering Division
10/29/01

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.

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 (10 mil) on both sides of the pipe.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-190 or M-211 with watertight coupling bands or flanges.

2. Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material and coatings as the pipe.

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.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-ruffed to an adequate number of corrugations to accommodate the bandwidth.

Helicly 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 C-361.

2. Bedding - 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 sides of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell and upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material.

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 plastic 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" inch 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.

Drainage Diaphragms - When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

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.

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.

OPERATION AND MAINTENANCE

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually.

STORMWATER MANAGEMENT FACILITY (JOINTLY MAINTAINED) OPERATIONS AND MAINTENANCE GUIDELINES

Operations:

- 1. Top and side slopes of the embankment shall be mowed a minimum of two (2) times per year, once in June and once in September. Other side slopes and maintenance access shall be mowed as needed.
2. Debris and litter shall be removed during regular mowing operations as needed.
3. When deemed necessary for aesthetic reasons, and upon approval from the Department of Public Works, sediment shall be removed from the pond.

Maintenance

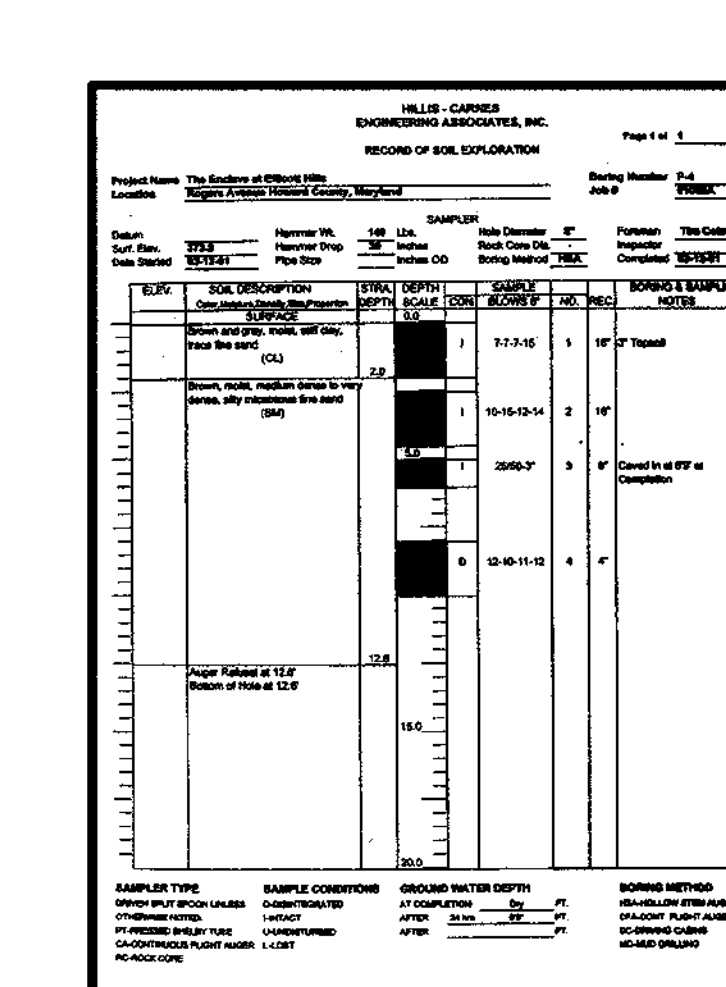
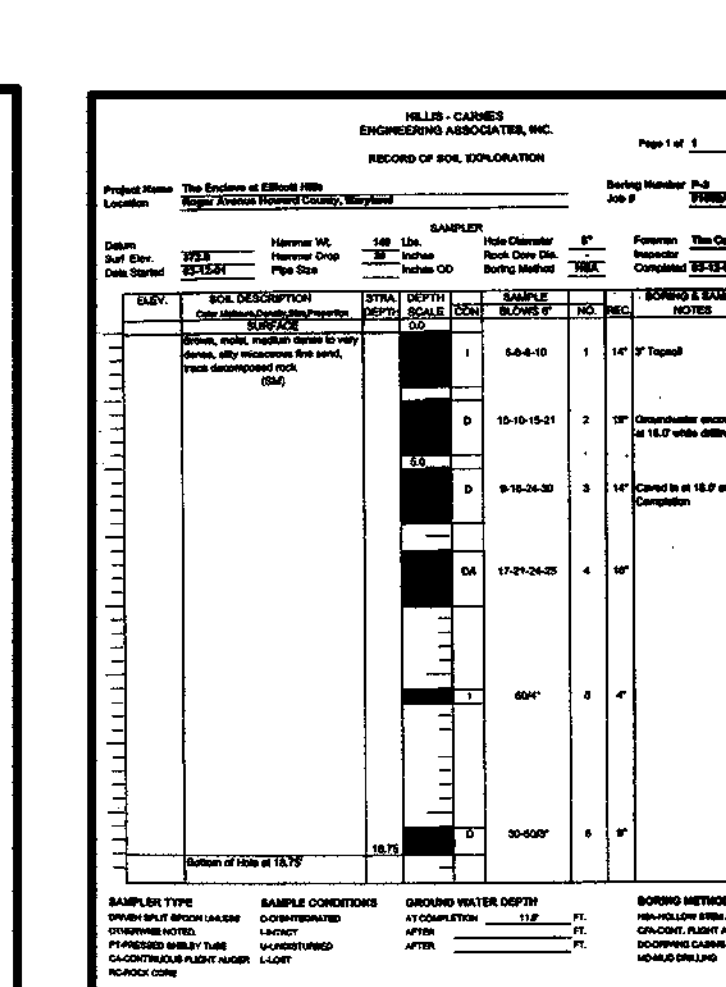
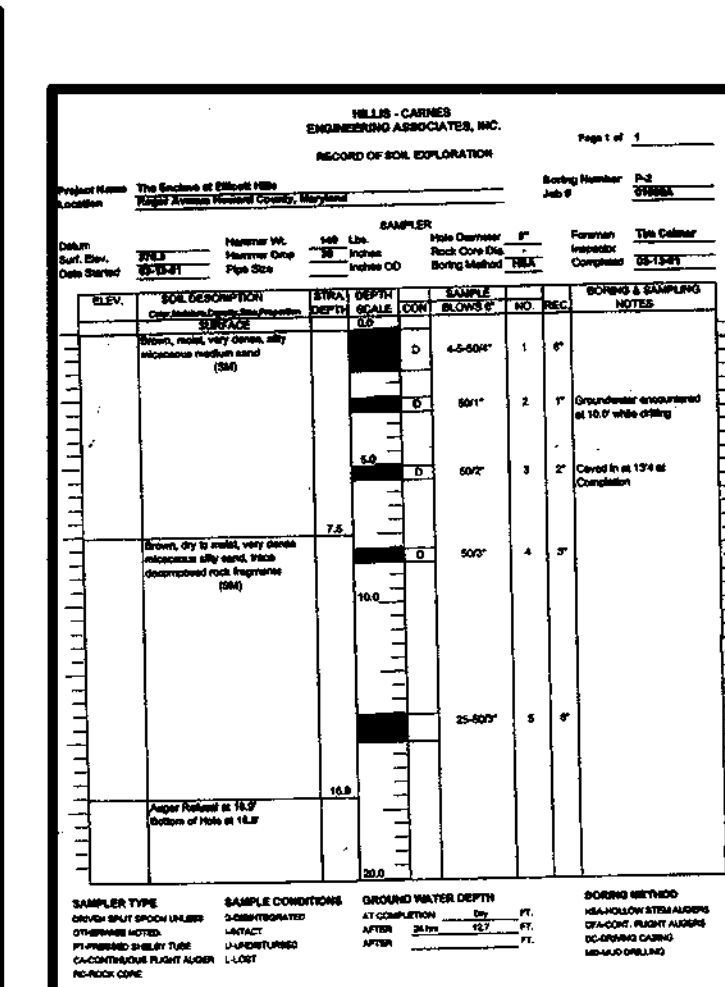
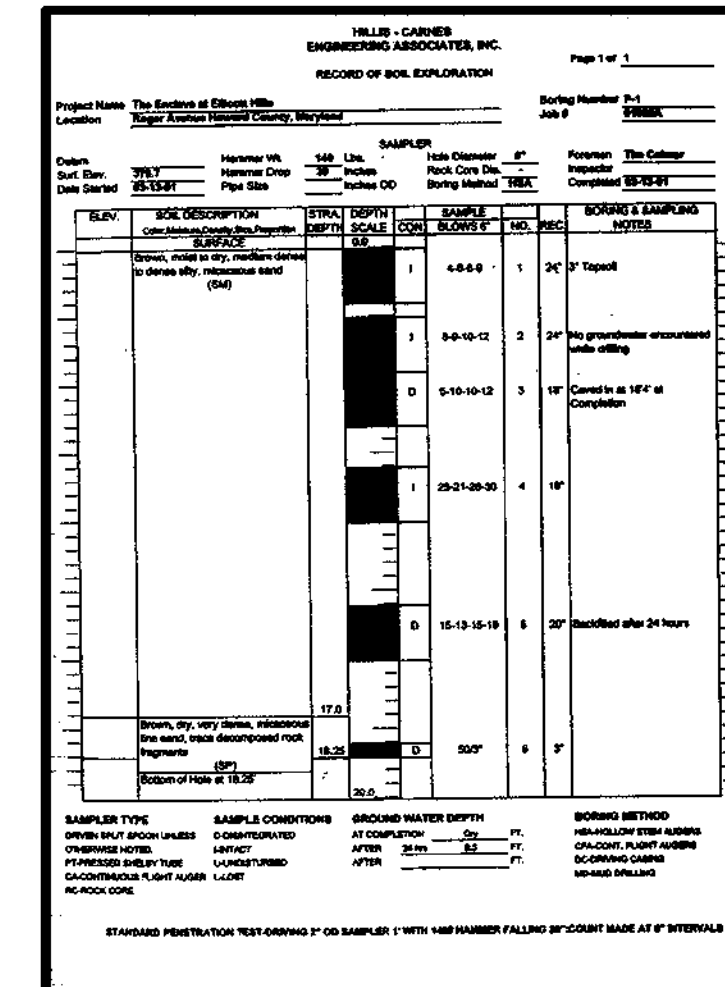
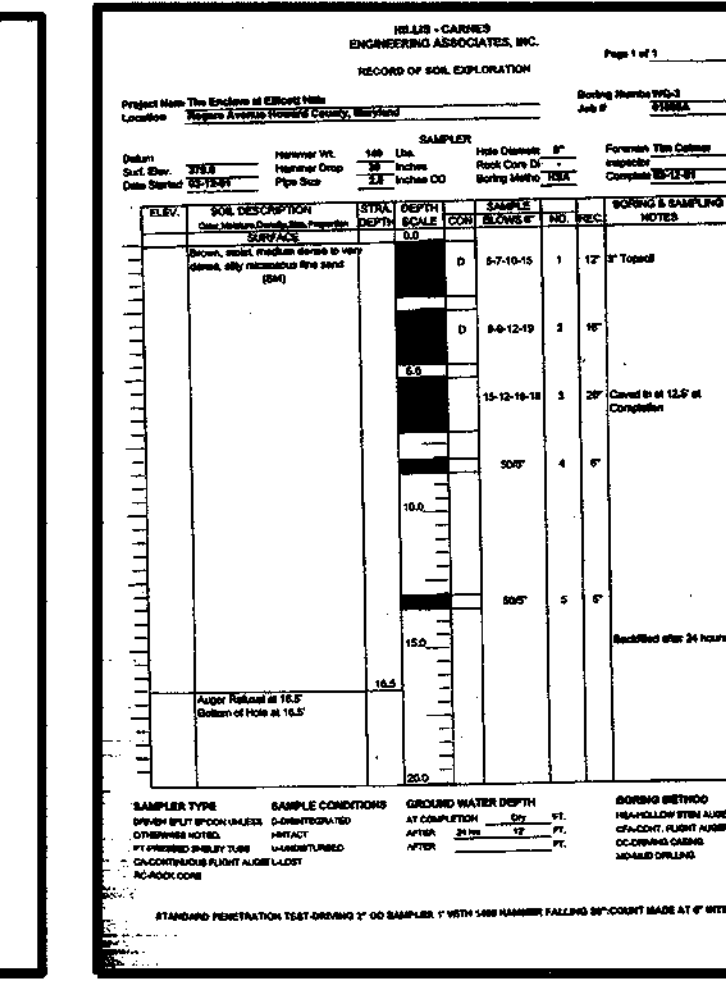
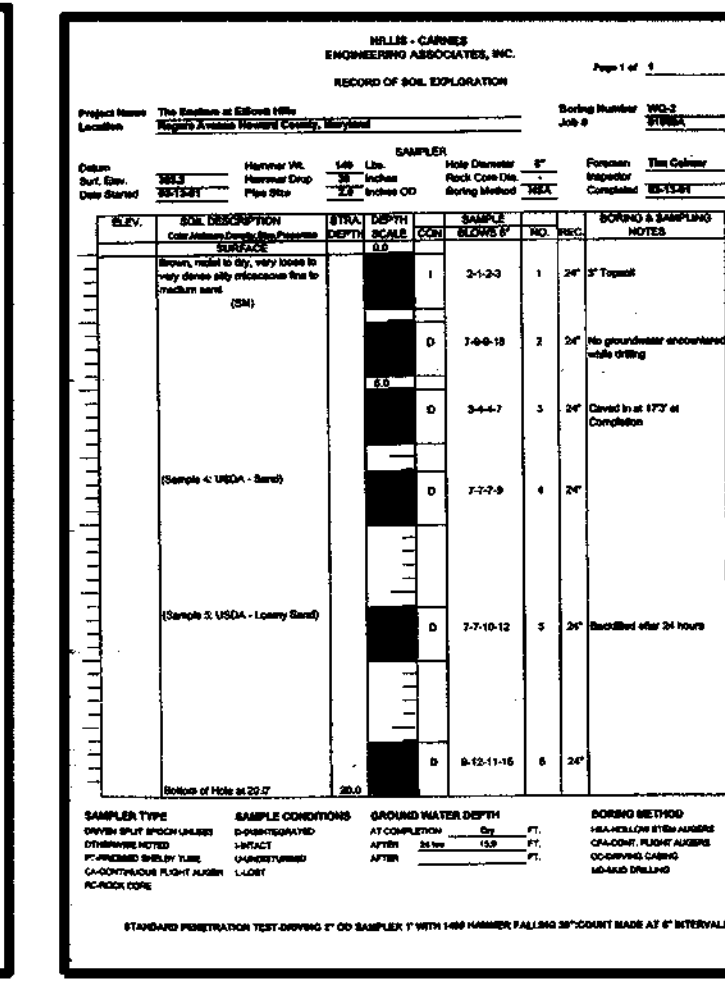
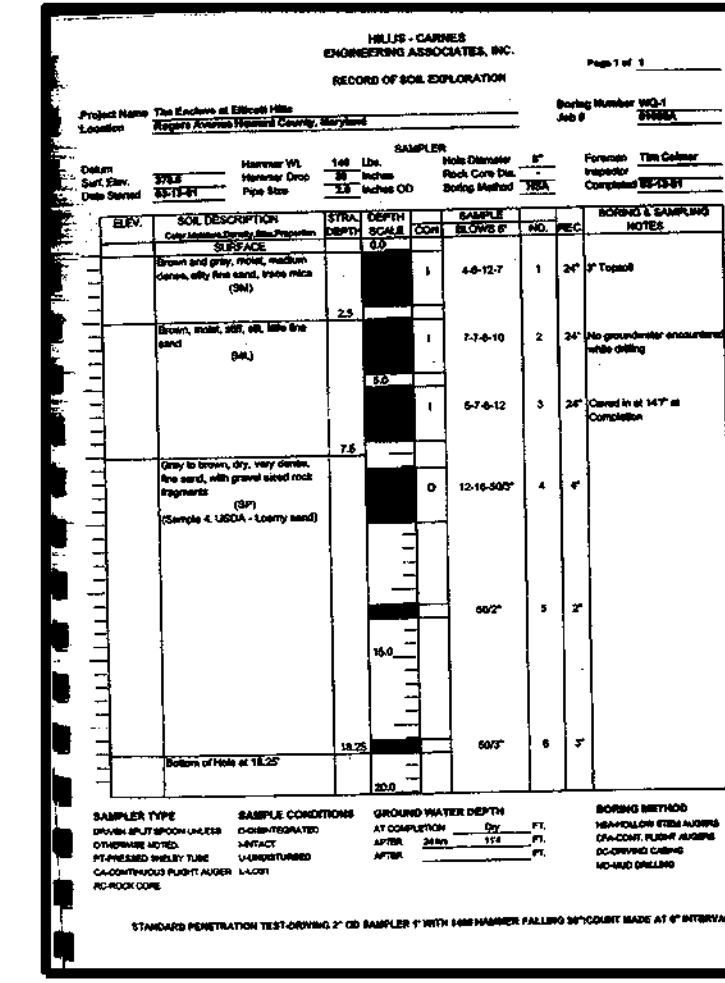
During the semi-annual visual inspections, the following items must be checked and documented by the owner:

I. Spillways and Outlet Device

- 1. Pipes - check for sagging, misalignment, gaps at joints, cracks, leaks, and wear along inside surface of pipes. Also remove any blockages.
2. Trash Rocks - inspect and replace if necessary. Actual time for removal of trash rocks should be limited. Trash rocks shall be painted once a year.
3. Concrete Surfaces - check for cracks or any other signs of failure.
4. Forebay and Spillway - check for stone & wire mesh deterioration or loss and spillway failure.
5. Rip Rap Outlet - check for stone deterioration or stone loss.
6. Dewatering Device - remove blockages.

II. Embankments

- 1. Vegetation - proper vegetative cover is required on all embankments. The owner shall follow proper seeding specifications for reseeding.
2. Trees and Brush - trees and brush shall be removed from the embankment. Stumps can be removed using silvicide.
3. Mowing - mowing is necessary to control the establishment of woody growth and to maintain the vegetative cover. The embankment, a 25-foot wide (except in wetland/stream buffers) strip adjacent to the toe, upstream and downstream of the embankment, and the area within 50 feet of the control structures need to be mowed. Mowing shall be done at least once a year (mid to late summer) but may be done more often.
4. Seepage - the following warning signs should be looked for when inspecting for seepage problems: cracks (longitudinal and vertical), soft spots or boggy areas on downstream embankment, seepage along downstream toe of embankment.
5. Stability - large cracks, slides, sloughing and excessive settlement are signs of embankment instability and a need for repair. Repairs must be approved by Howard Soil Conservation District.
6. Rodents - check for burrows, which can lead to seepage, and remove rodents when encountered.



ENGINEER'S CERTIFICATE
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.

DEVELOPER'S/BUILDER'S CERTIFICATE
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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project.

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

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.

GLW GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

PREPARED FOR: (Owner/Developer) EXIT SEVEN LLC c/o Greenbaum & Rose Associates, Inc.

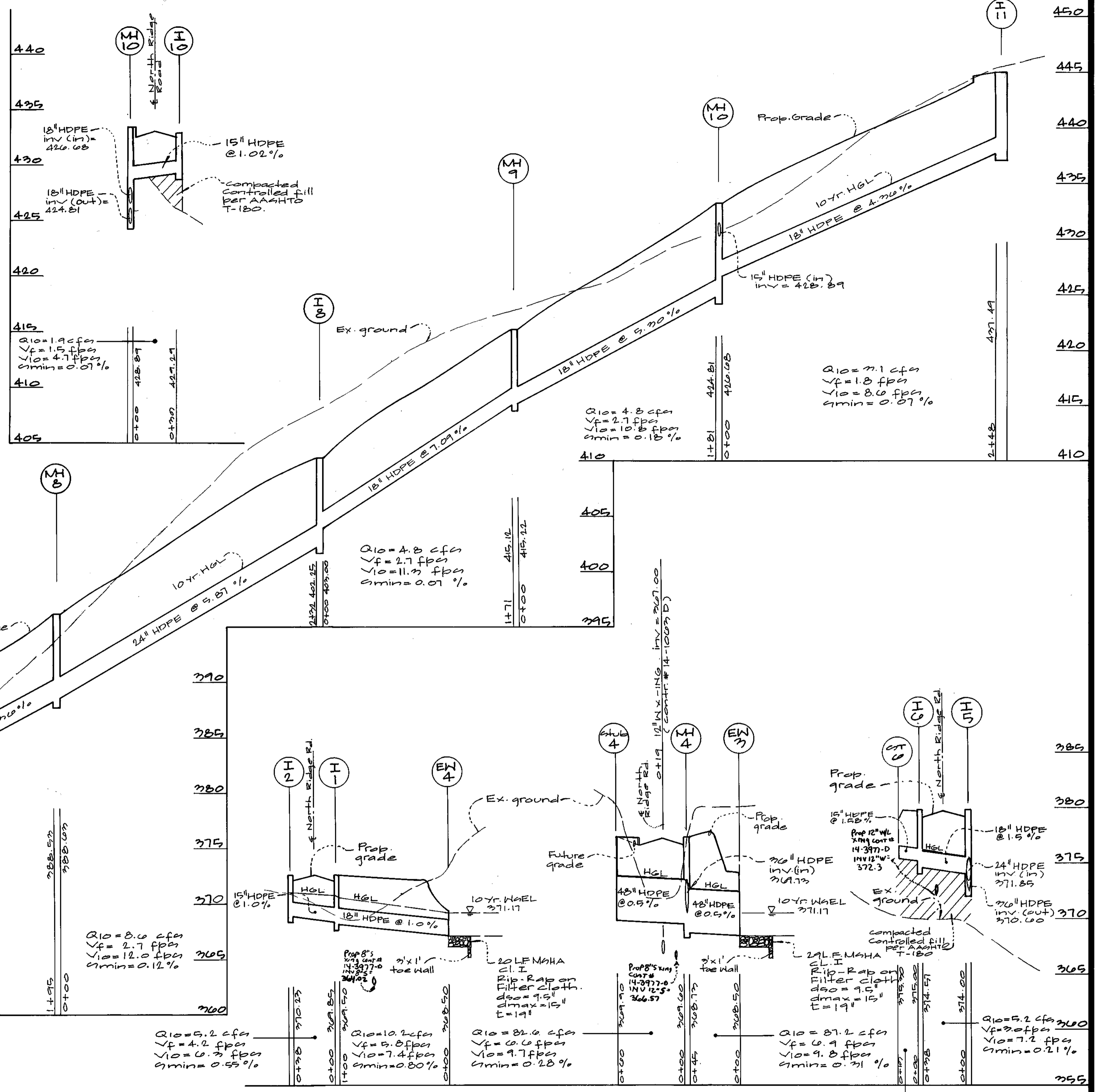
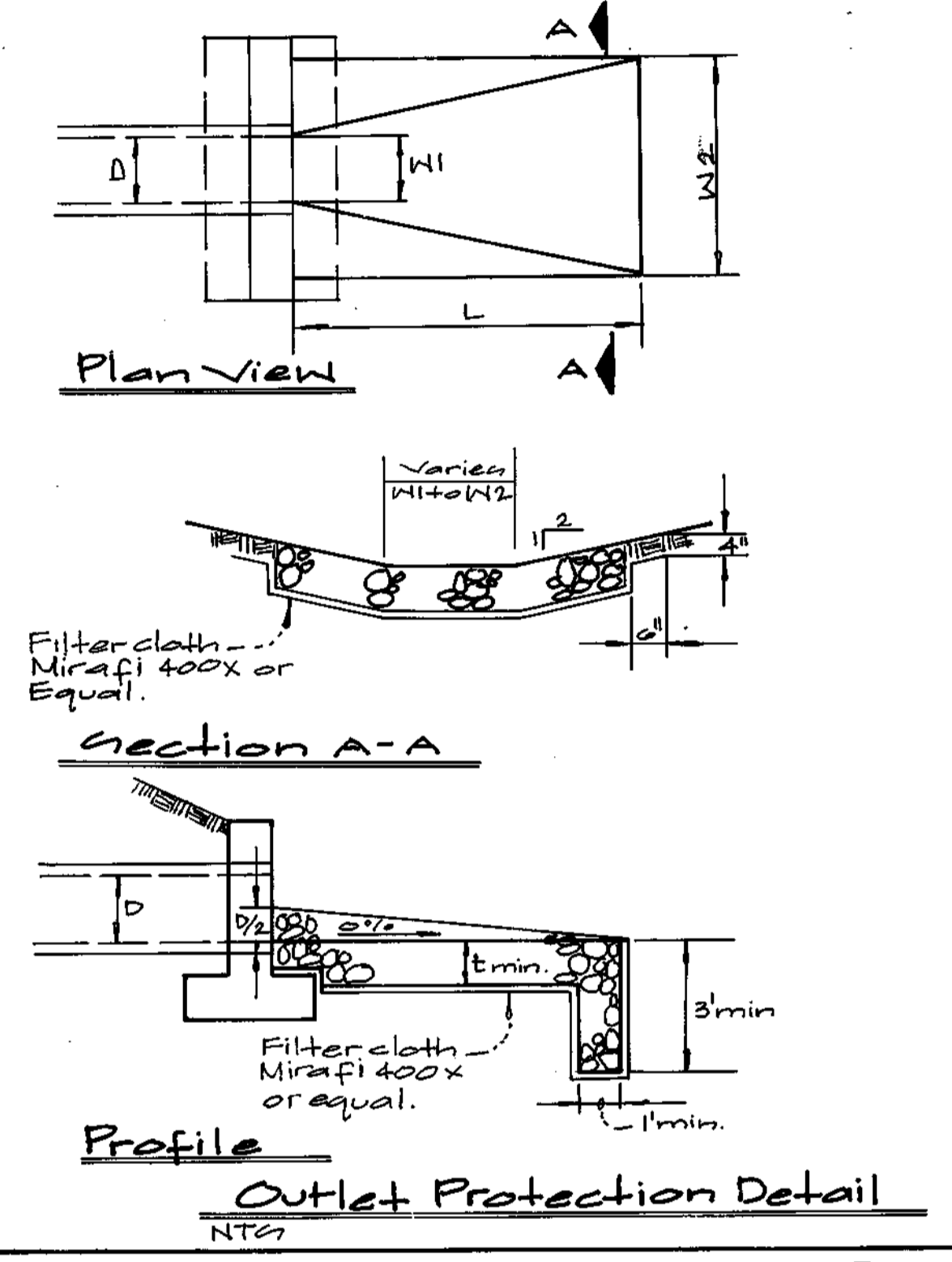
STORMWATER MANAGEMENT SPECIFICATIONS & BORING LOGS THE ENCLAVE AT ELLICOTT HILLS NORTH RIDGE ROAD SCALE NO SCALE ZONING POR, R-ED R-20 G. L. W. FILE No. 00050

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PIPE SUMMARY		
SIZE	TYPE	LENGTH
15"	HDPE, ADS N-12	70 L.F.
18"	"	738 L.F.
24"	"	705 L.F.
36"	"	173 L.F.
48"	"	105 L.F.

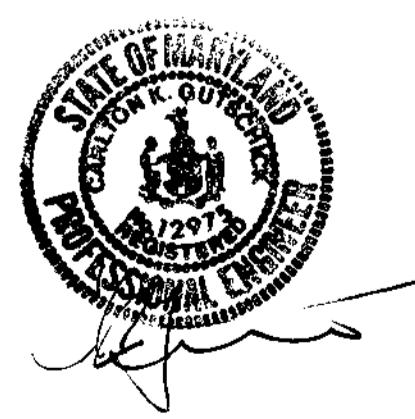
Rip-Rap Schedule			
Structure	L	W1	W2
EN-3	29'	13'	10'
EN-4	20'	2'-0"	10'

STRUCTURE SCHEDULE										
NO	TYPE	WIDTH / DIAM (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STD. DETAIL	LOCATIONS of CURB		REMARKS
			UPPER	LOWER	UPPER	LOWER		INVERT	OUTLET	
EN-3	48" HDPE	48"	374.00		369.50		Ho.Co. SD. 5.11		See Plan	
EN-4	48" HDPE	48"	370.75		366.25		Ho.Co. SD. 5.21		"	
I-1	A-10 Inlet	4'-0"	374.07		369.85	369.50	Ho.Co. SD. 4.41	Sta. 25+75.90 @ 19' R		
I-2	A-10 Inlet	2'-0"	374.07		370.23		Ho.Co. SD. 4.41	Sta. 25+75.90 @ 19' L		
I-5	A-10 Inlet	4'-0"	374.04	374.70	374.00	370.00	Ho.Co. SD. 4.41	Sta. 30+55 @ 19' R		
I-6	A-10 Inlet	2'-0"	374.84	374.70	374.57	375.00	Ho.Co. SD. 4.41	Sta. 30+55 @ 19' L		
I-8	CG-15 Inlet	3'-0"	411.24	412.71	409.00	402.25	Std. 374.02	Sta. 37+37.5 @ 19' L		
I-10	A-10 Inlet	3'-0"	422.55	422.95	421.29		Ho.Co. SD. 4.41	Sta. 41+00 @ 19' R		
I-11	A-10 Inlet	2'-0"	445.45	445.09	437.49		Ho.Co. SD. 4.41	Sta. 43+50 @ 19' L		
ST-2	15" stub				375.20			Sta. 30+55 @ 20' L		
MH-4	shallow Manhole	4'-0"	377.39		369.73	368.73	MD 284.05	Sta. 28+76.30 @ 23' R		
MH-6	"	4'-0"	385.95		371.58	371.48	Ho.Co. G. 5.12	Sta. 33+00 @ 22' R		
MH-7	"	4'-0"	385.95		378.08	377.18		Sta. 33+00 @ 22' L		
MH-8	"	4'-0"	376.10		388.87	388.53		Sta. 35+00 @ 22' L		
MH-9	"	4'-0"	421.79		419.22	415.12		Sta. 39+15 @ 22' L		
MH-10	"	4'-0"	439.37		428.89	424.81		Sta. 41+00 @ 22' L		
ST-4	48" stub				370.00			Sta. 28+76.30 @ 20' L		



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 Date: 10-23-01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development
 Date: 10/21/01



Profile Scale:
 Horizontal: 1" = 50'
 Vertical: 1" = 5'

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BALT: 410-383-1800 DC/VA: 301-989-2524 FAX: 301-421-4186

NO.	DESCRIPTION	DATE	BY	APP'R.
11.23.01	Added 15" HDPE Pipe Stub, stub to I-6		klp	BSQ
10.28.01	Revised Pipe schedule to reflect correct amounts. Update ctr schedule		Gr	BSL

OWNER/DEVELOPER: **Greenbaum & Rose Associates, Inc.**
 Suite 410, Woodholme Center
 1829 Reisterstown Road
 Baltimore, MD 21208
 Attn: Mark Bennett
 Phone: 410-484-8400

Storm Drain Profiles & Details
THE ENCLAVE AT ELLICOTT HILLS
 North Ridge Road

SCALE: AS SHOWN
 ZONING: FOR - R-20
 DATE: Sept 20, 2001
 TAX MAP: 17-17,18,24
 G. L. W. FILE NO.: 00050
 16 OF 26

HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT No. 2
 F01196

PLANT LIST - SWM Pond #1

SYMBOL	QTY.	NAME (SCIENTIFIC/COMMON)	SIZE	ROOT	COMMENTS
DECIDUOUS TREES					
SB	1	Salix babylonica Weeping Willow	2 1/2"-3" Cal.	B&B	
SHRUBS					
VO	6	Viburnum opulus/ Cranberry Viburnum	24"-30" Spr.	Cont.	
GROUND COVER and PERENNIALS					
CC	5390	Calamagrostis canadensis/ Blue joint Grass	1 Qt.	Cont.	12" O.C.
SC	940	Scirpus cyperinus/ Wool Grass	1 Qt.	Cont.	12" O.C.
SP	720	Scirpus pungens/ Three Square	1 Qt.	Cont.	12" O.C.
IV	660	Iris versicolor/ Blue Flag Iris	1 Qt.	Cont.	12" O.C.
LC	7086	Lobelia cardinalis/ Cardinal Flower	1 Qt.	Cont.	12" O.C.

PLANT LIST - SWM Buffer B

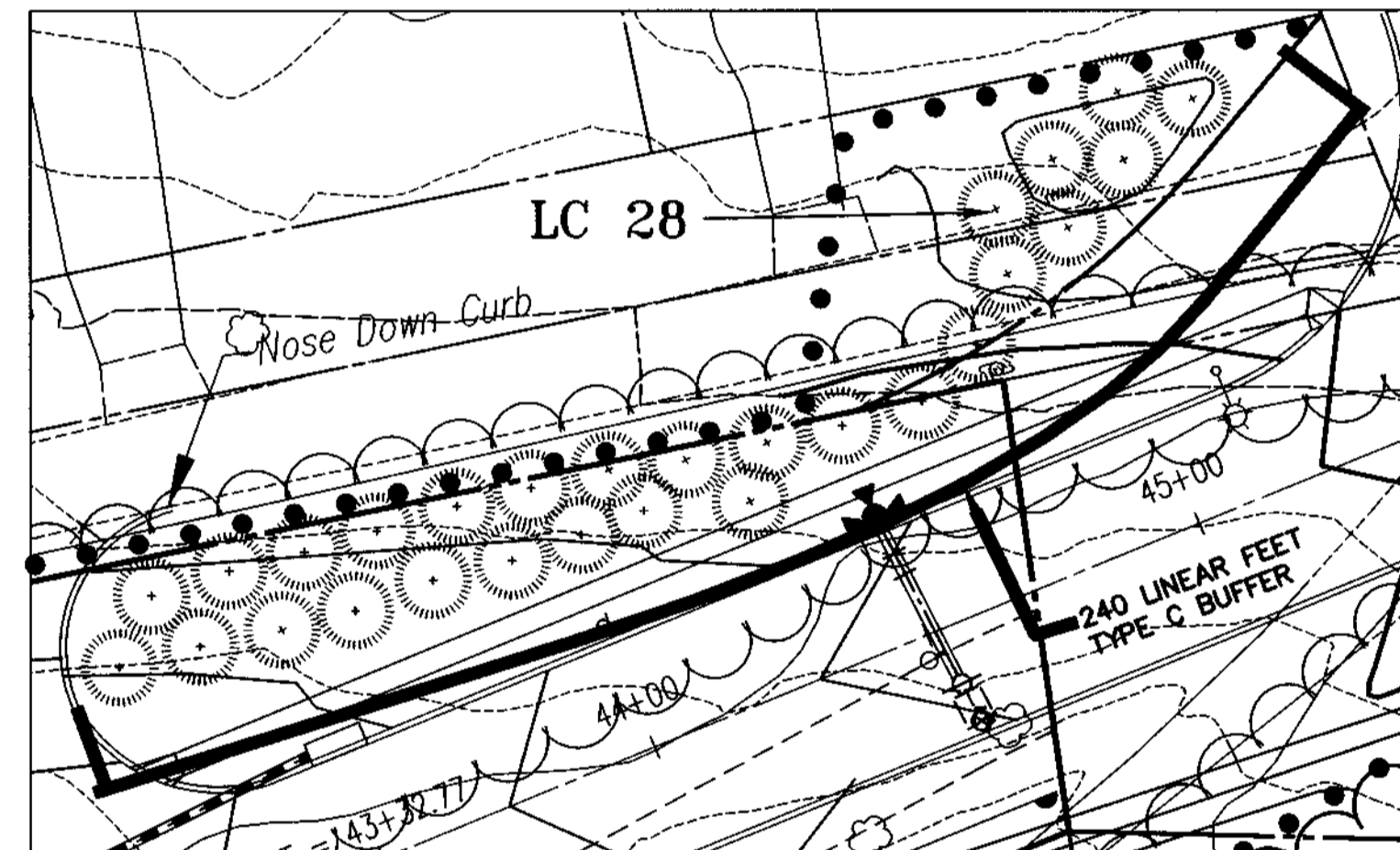
SYMBOL	QTY.	NAME (SCIENTIFIC/COMMON)	SIZE	ROOT	COMMENTS
DECIDUOUS TREES					
AR	5	Acer rubrum Red Maple	2-2 1/2" Cal.	B&B	
EVERGREEN TREES					
PS	15	Pinus strobus/ White Pine	7-8' Ht.	B&B	

STREET TREE SCHEDULE - SHOWN ON P. 2 OF 26

SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	QUANTITY	REMARKS
⊙	Acer saccharum 'Green Mountain' Green Mountain Sugar Maple	3-3 1/2" Cal.	60	B & B

STREET TREE SCHEDULE - SHOWN ON P. 3 OF 26

SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	QUANTITY	REMARKS
⊙	Acer saccharum 'Green Mountain' Green Mountain Sugar Maple	3-3 1/2" Cal.	33	B & B



TYPE C BUFFER AT ENTRANCE OF RIDGE ROAD AT ROGERS AVENUE SCALE: 1" = 30'

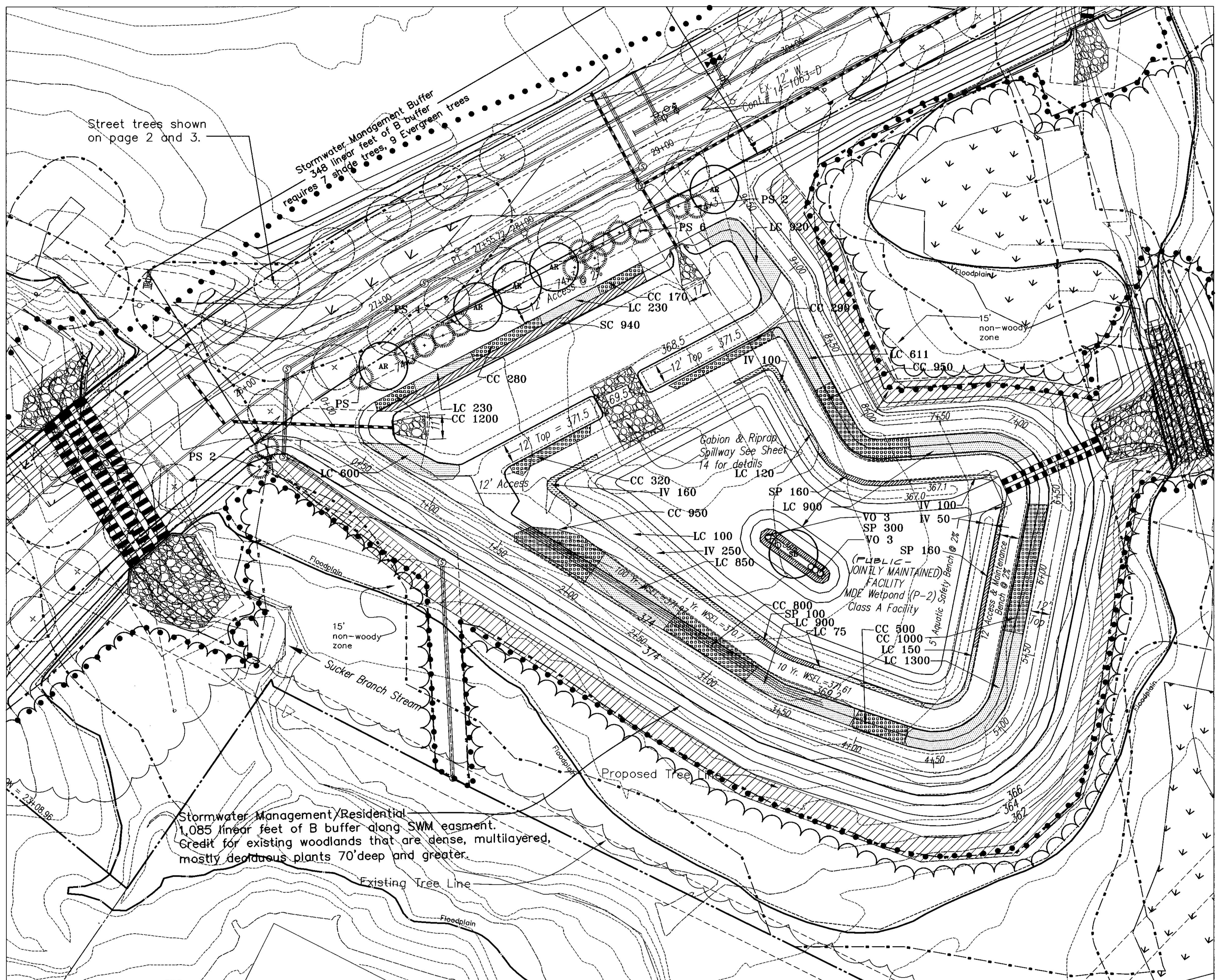
TYPE C BUFFER - SHOWN ON P. 3 OF 26 AND ABOVE

SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	QUANTITY	REMARKS
⊙ LC	X Cupressocyparis 'Leylandii' Leyland Cypress	8-10' HL	28	B & B

SEE SHEET 18 - LANDSCAPE DETAIL SHEET FOR SCHEDULE A

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, accompanies by an executed one-year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Name (Developer's/Builder's) _____ Date 10/8/01



Stormwater Management Planting Plan

Scale 1" = 30'0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Robert D. Dangle 10/23/01
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hanrahan 10/29/01
 Chief, Division of Land Development

Mark Bennett 10/29/01
 Chief, Development Engineering Division



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-999-2524 FAX: 301-421-4186

DATE	DESCRIPTION	BY	APPR.
10/2/01	ADDED TYPE C BUFFER PLAN VIEW, SEPARATED PLANT LIST FOR SWM POND 1 AND SWM BUFFER	LMM	BSL

PREPARED FOR:
 (Owner/Developer)
 EXIT SEVEN LLC
 c/o Greenbaum & Rose Associates, Inc.
 Suite 410, Woodholme Center
 1929 Resisterstown Road
 Baltimore, MD 21208
 Attn: Mark Bennett or Charlie O'Donovan
 Phone: 410-484-8400

STORMWATER MANAGEMENT POND LANDSCAPE PLAN AND DETAIL SHEET

THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD

ELECTION DISTRICT No. 2

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	POR	00050
DATE	TAX MAP - GRID	SHEET
Sept. 26, 2001	17-17, 18, 24	17 OF 26

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PLANT MATERIALS AND PLANTING METHODS

A. Plant Materials

The landscape contractor shall furnish and install and/or dig, ball, burlap and transplant all of the plant materials called for on drawings and/or listed in the Plant Schedule.

1. Plant Names

Plant names used in the Plant Schedule shall conform with "Standardized Plant Names," latest edition.

2. Plant Standards

All plant material 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 (hereafter referred to as AAN Standards). All plants shall be typical of their species and variety, shall have a normal habit of growth and shall be first quality, sound, vigorous, well-branched and with healthy, well-furnished root systems. They shall be free of disease, insect pests and mechanical injuries.

All plants shall be nursery grown and shall have been grown under the same climate conditions as the location of this project for at least two years before planting. Neither heeled-in plants nor plants from cold storage will be accepted.

3. Plant Measurements

All plants shall conform to the measurements specified in the Plant Schedule as approved by the ARC.

a. Caliper measurements shall be taken six inches (6") above grade for trees under four-inch (4") caliper and twelve (12") above grade for trees four inches (4") in caliper and over.

b. Minimum branching height for all shade trees shall be six feet (6'), maximum eight feet (8').

c. Caliper, height, spread and size of ball shall be generally as follows:

CALIPER	HEIGHT	SPREAD	SIZE OF BALL
3" - 3.5"	14'-16'	6'-8'	32" diameter
3.5" - 4"	14'-16'	8'-10'	36" diameter
4" - 4.5"	16'-18'	8'-10'	40" diameter
4.5" - 5"	16'-17'	10'-12'	44" diameter
5" - 5.5"	16'-20'	10'-12'	48" diameter
5.5" - 6"	18'-20'	12'-14'	52" diameter

All plant material shall generally average the median for the size ranges indicated above as indicated in the "AAN Standards".

4. Plant Identification

Legible labels shall be attached to all shade trees, minor trees, specimen shrubs and bundles or boxes of other plant material giving the botanical and common names, size and quantity of each. Each shipment of plants shall bear certificates of inspection as required by Federal, State and County authorities.

5. Plant Inspection

The ARC may, upon request by the builder or developer, at least ten (10) days prior to the installation of any proposed plant material, inspect all proposed plant material at the source of origin.

B. Planting Methods

All proposed plant materials that meet the specifications in Section A are to be planted in accordance with the following methods during the proper planting seasons as described in the following:

1. Planting Seasons

The planting of deciduous trees, shrubs and vines shall be from March 1st to June 15th and from September 15th to December 15th. Planting of deciduous material may be continued during the winter months providing there is no frost in the ground and frost-free topsoil planting mixtures are used.

The planting of evergreen material shall be from March 15th to June 15th and from August 15th to December 1st. No planting shall be done when ground is frozen or excessively moist. No frozen or wet topsoil shall be used at any time.

3. Excavation of Plant Pits

The landscaping contractor shall excavate all plant pits, vine pits, hedge trenches and shrub beds in accordance with the following schedule:

a. Locations of all proposed plant material shall be staked and approved in the field by the landscape architect before any of the proposed plant material is installed by the landscape contractor.

b. All pits shall be generally circular in outline, vertical sides; depth shall not be less than 6" deeper than the root ball, diameter shall not be less than two times the diameter of the root ball as set forth in the following schedule.

c. If areas are designated as shrub beds or hedge trenches, they shall be excavated to at least 18" depth minimum. Areas designated for ground covers and vines shall be excavated to at least 12" in depth minimum.

d. Diameter and depth of tree pits shall generally be as follows:

PLANT SIZE	ROOT BALL	PIT DIAMETER	PIT DEPTH
3" - 3.5" cal.	32"	64"	28"
3.5" - 4" cal.	36"	72"	32"
4" - 4.5" cal.	40"	80"	36"
4.5" - 5" cal.	44"	88"	40"
5" - 5.5" cal.	48"	96"	44"
5.5" - 6" cal.	52"	104"	48"

A 20 % compaction figure of the soil to be removed is assumed and will be allowed in calculation of extra topsoil. The tabulated pit sizes are for purposes of uniform calculation and shall not override the specified depths below the bottoms of the root balls.

4. Staking, Guying and Wrapping

All plant material shall be staked or guyed, and wrapped in accordance with the following specifications:

a. Stakes: Shall be sound wood 2" x 2" rough sawn oak or similar durable woods, or lengths, minimum 7'-0" for major trees and 5'-0" minimum for minor trees.

b. Wire and Cable: Wire shall be #10 ga. galvanized or bethanized annealed steel wire. For trees over 3" caliper, provide 5/16" turn buckles, eye and eye with 4" take-up. For trees over 5" caliper, provide 3/16", 7 strand cable cadmium plated steel, with galvanized "eye" thimbles of wire and hose on trees up to 3" in caliper.

c. Hose: Shall be new, 2 ply reinforced rubber hose, minimum 1/2" I.D. "Plastic Lock Ties" or "Paul's Trees Braces" may be used in place of wire and hose on trees up to 3" in caliper.

d. All trees under 3" in caliper are to be planted and staked in accordance with the attached "Typical Tree Staking Detail".

5. Plant Pruning, Edging and Mulching

a. Each tree, shrub or vine shall be pruned in an appropriate manner to its particular requirements, in accordance with accepted standard practice. Broken or bruised branches shall be removed with clean cuts flush with the adjacent trunk or branches. All cuts over 1" in

diameter shall be painted with an approved antiseptic tree wound dressing.

b. All trenches and shrub beds shall be edged and cultivated to the lines shown on the drawing. The areas around isolated plants shall be edged and cultivated to the full diameter of the pit. Sod which has been removed and stacked shall be used to trim the edges of all excavated areas to the neat lines of the plant pit saucers, the edges of shrub areas, hedge trenches and vine pockets.

c. After cultivation, all plant materials shall be mulched with a 2" layer of fine, shredded pine bark, peat moss, or another approved material over the entire area of the bed or saucer.

6. Plant Inspection and Acceptance

The ARC shall be responsible for inspecting all planting projects on a periodic basis to assure that all work is proceeding in accordance with the approved plans and specifications.

7. Plant Guarantee

All plant material shall be guaranteed for the duration of one full growing season, after final inspection and acceptance of the work in the planting project. Plants shall be alive and in satisfactory growing condition at the end of the guarantee period.

a. For this purpose, the "growing season" shall be that period between the end of the "Spring" planting season, and the commencement of the "Fall" planting season.

b. Guarantee for planting performed after the specified end of the "Spring" planting season, shall be extended through the end of the next following "Spring" planting season.

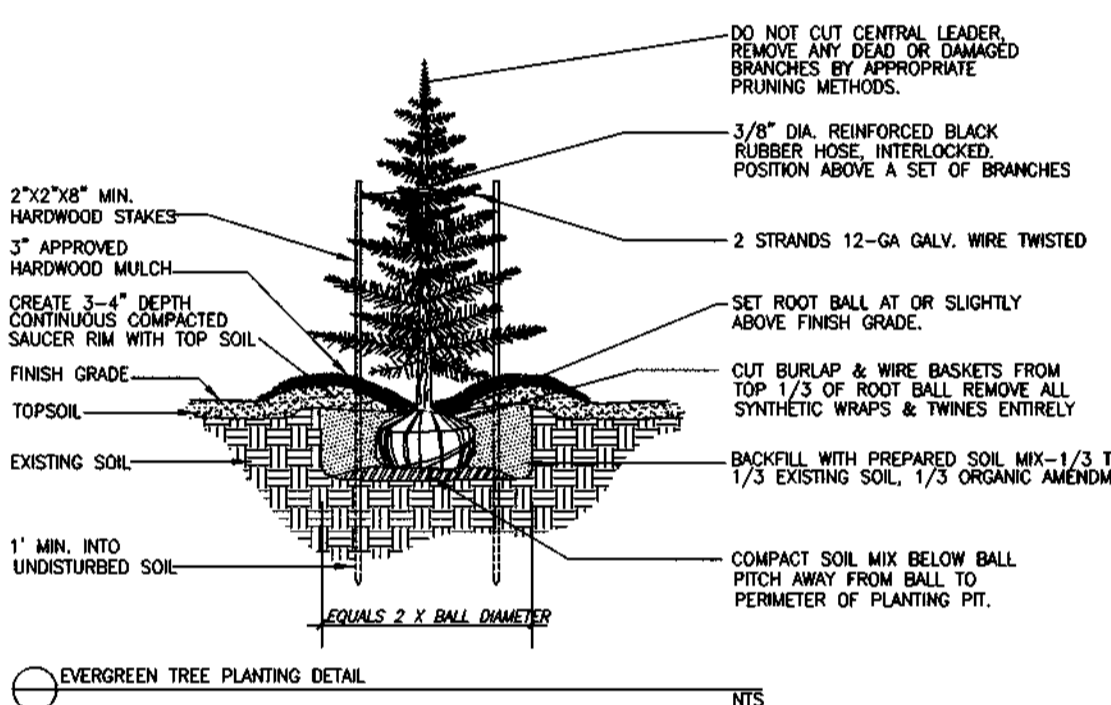
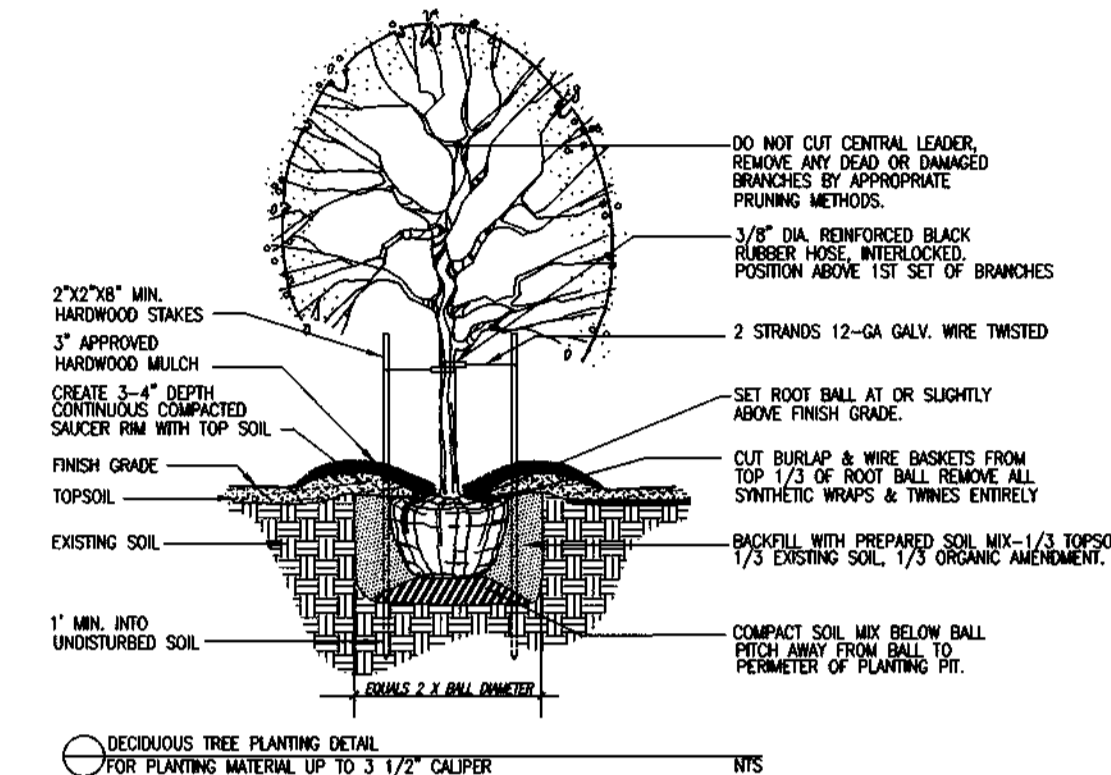
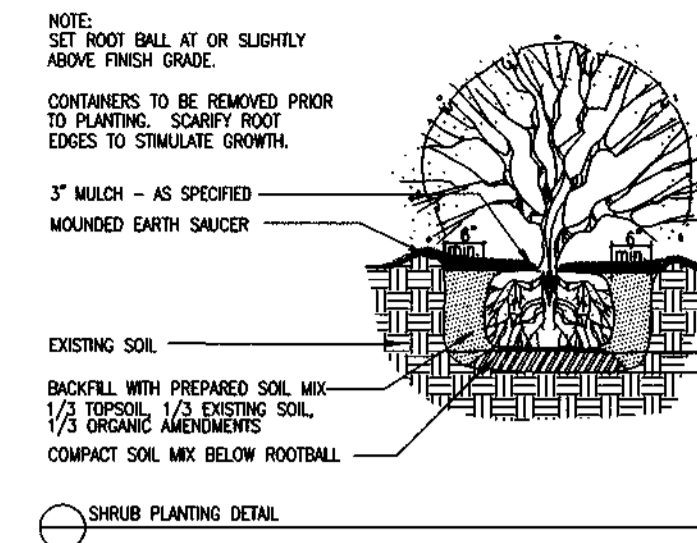
Sodding

All sodding shall be in accordance with the "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas" latest edition, approved by the Landscape Contractors Association of Metropolitan Washington and the American Society of Landscape Architects.

All sod shall be strongly rooted sod, not less than two years old and free of weeds and undesirable native grasses. Provide only sod capable of growth development when planted and in strips not more than 18" wide x 4" long. Provide sod composed principally of improved strain Kentucky bluegrass, such as, Columbia, Victa, or Escort.

LANDSCAPING NOTES

- This plan has been prepared in accordance with Section 16.124 of the Howard County Code and Chapter VI (Alternative Compliance) of the Howard County Landscape Manual.
- Contractor shall notify all utilities at least (5) five days before starting work. All General Notes, especially those regarding utilities, on Sheet 1 shall apply.
- Field verify underground utility locations and existing conditions before starting planting work. Contact engineer / landscape architect if any relocation's are required.
- Plant quantities shown on Plant List are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on the plan and those shown on the plant list, the quantities on the plan shall take precedence.
- All plant material shall be full, heavy, well formed, and symmetrical, and conform to the A.A.N. Specifications, and be installed in accordance with project specifications.
- No substitution shall be made without written consent of the owner or his representative.
- All areas disturbed by construction activities but not otherwise planted, paved, or mulched shall be seeded or sodded in accordance with the project specifications.
- The contractor shall notify the owner in writing if he/she encounters soil drainage conditions which may be detrimental to the growth of the plants.
- All exposed earth within limits of planting beds shall be mulched with shredded hardwood mulch per Planting Details.
- Financial surety for the required landscaping per Schedules A and D must be posted as part of the Developer's agreement in the amount of \$7,050.00.
- Tabulation for landscape shown:
Planting provided:
Shade Trees 6
Ornamental Trees 0 = 0 E.S.T. 1 2:1
Evergreen Trees 43 = 0 E.S.T. 1 2:1
Shrubs provided: 6 = 0 E.S.T. 1 10:1
(Shrubs not incl. in alt. comp.)
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berm, fences and walls. All plant materials shall be maintained in good growing condition and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.



WETLAND PLANTING NOTES

Upon completion of final grading, the contractor shall remove any stones, debris or construction materials larger than two inches (2") in any dimension, then provide and spread topsoil to cover the basin floor to a minimum depth of four inches (4"). This entire area shall then be disked to a depth of six inches (6") before planting.

To install potted plants, make a hole in the topsoil layer wide and deep enough that after planting, the topsoil in the pot is at or slightly below the top of the topsoil planting area.

* Peat pots must be torn in two or three places to allow for unrestricted root growth.

* All pots other than peat pots are to be removed right before planting.

Bareroot plants shall be planted in holes wide enough to allow their existing roots to be spread in a natural manner radially from the root crown without bending or twisting.

One ounce of 18-6-25 slow release fertilizer shall be incorporated into soil for each plant at the time of planting.

Soil shall be saturated with water during and after planting, or the planting area may be completely flooded at these times (wet planting). Planting soil shall be firmly pressed around each plant to prevent flotation. These plants shall be grown in pots (container specified) or nursery growing beds (bare root specified) for a minimum of 12 months prior to installation and shall have been wet cultivated during the entire period.

Remove litter and debris as required during the first growing season and at the beginning of the second growing season.

SCHEDULE D

STORMWATER MANAGEMENT AREA LANDSCAPING

Linear Feet of Perimeter	348 linear feet at roadside of B buffer: Shade 1:50, Evergreen 1:40
	1,085 linear feet of perimeter B buffer: Shade 1:50, Evergreen 1:40 required. See note regarding existing vegetation below.
Number of Trees Required Shade Trees Evergreen Trees	7 shade trees 9 evergreen trees
Credit for Existing Vegetation (No, Yes and %)	Yes; credit for existing woodlands surrounding stormwater management
Number of Trees Provided Shade Trees Evergreen Trees Other Trees (2:1 Substitution)	5 shade trees 15 evergreen trees *

*6 evergreen trees in excess of requirement of 9 to be applied to the 2 required shade trees.

Existing woodlands consist of dense, multilayered, mostly deciduous plants. The woods are at least 70' deep, except by the southern outfall. In order to provide more buffering, existing forest must be cleared in the floodplain.

SCHEDULE A

PERIMETER LANDSCAPE EDGE

LANDSCAPE TYPE	Residential Adjacent to Non-Residential
Linear Feet of Roadway Frontate/Perimeter	240
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe Below if Needed)	No
Number of Plants Required Shade Trees Evergreen Trees Other Trees	Buffer Type C 6 Shade Trees 12 Evergreen Trees 0 Other Trees
Number of Trees Provided Shade Trees Evergreen Trees Other Trees (2:1 Substitution)	0 Shade Trees * 28 Evergreen Trees 0 Other Trees

*16 evergreen trees in excess of requirement of 12 evergreen trees to be applied with 2:1 substitution to the 6 required shade trees.

The Financial surety for the required landscape material per schedule D must be posted as part of the developer's agreement to the amount of \$3,450.00. Financial surety for the required landscape material per schedule A must be posted as part of the developer's agreement for the amount of \$3,600.00. The combined total for Financial surety is \$7,050.00.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature] 10-23-01
Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] 10/29/01
Chief, Division of Land Development Date

[Signature] 10/29/01
Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DRAWINGS\00050\DESIGN\05SWMD.DWG DES.LMM DRN.LMM CHK.BSL

10/27/01 ADDED SCHEDULE A, MOVED SCHEDULE D FROM P. 17, AND UPDATED SURETY AMOUNT

DATE IN-HOUSE REVISION

LMM BSL

BY APPR.

PREPARED FOR:

(Owner/Developer)
EWT SEVEN LLC
c/o Greenebaum & Rose Associates, Inc.
Suite 410, Woodholme Center
1829 Reisterstown Road
Baltimore, MD 21208
Attn: Mark Bennet or Charlie O'Donovan
Phone: 410.484.8400

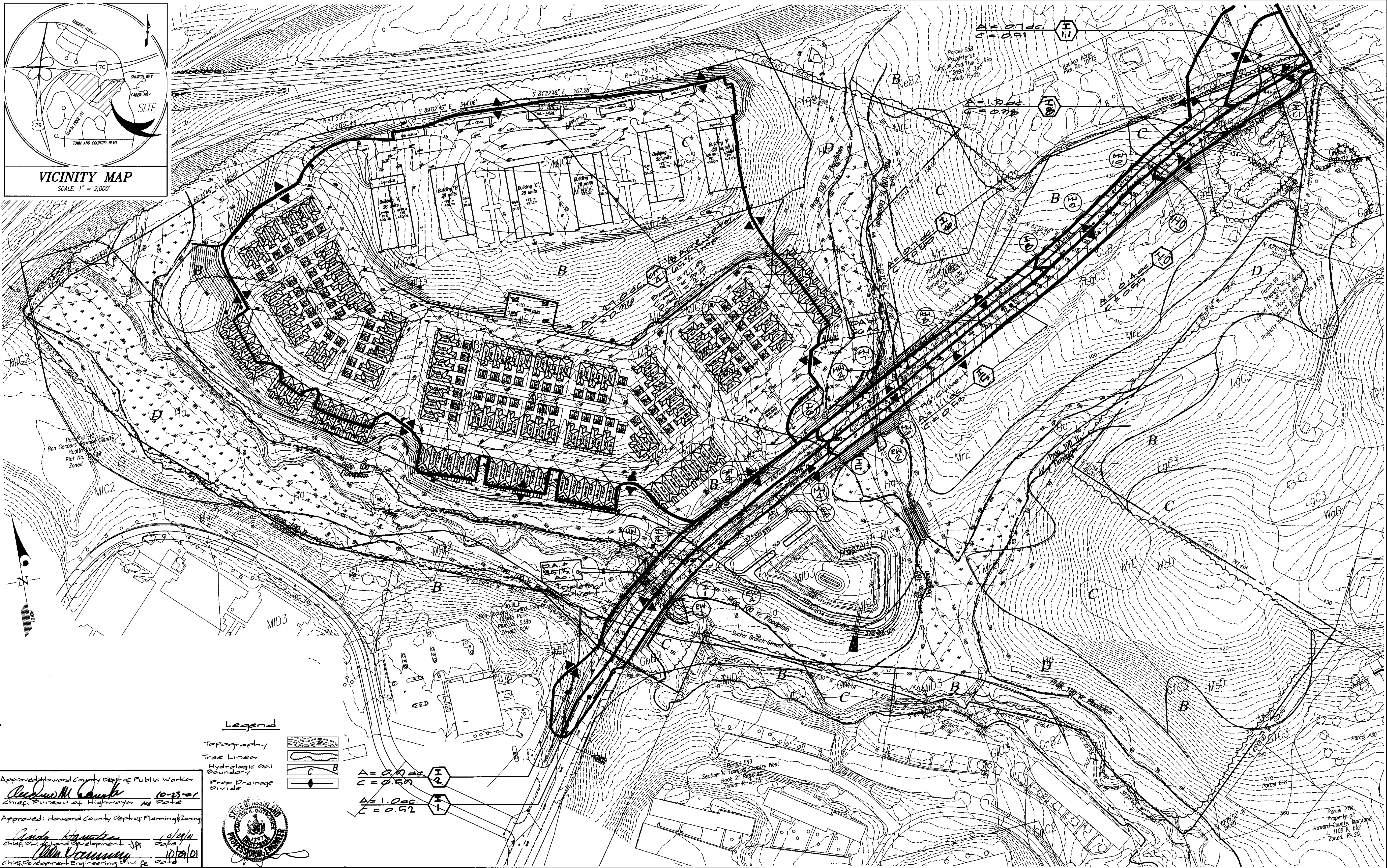
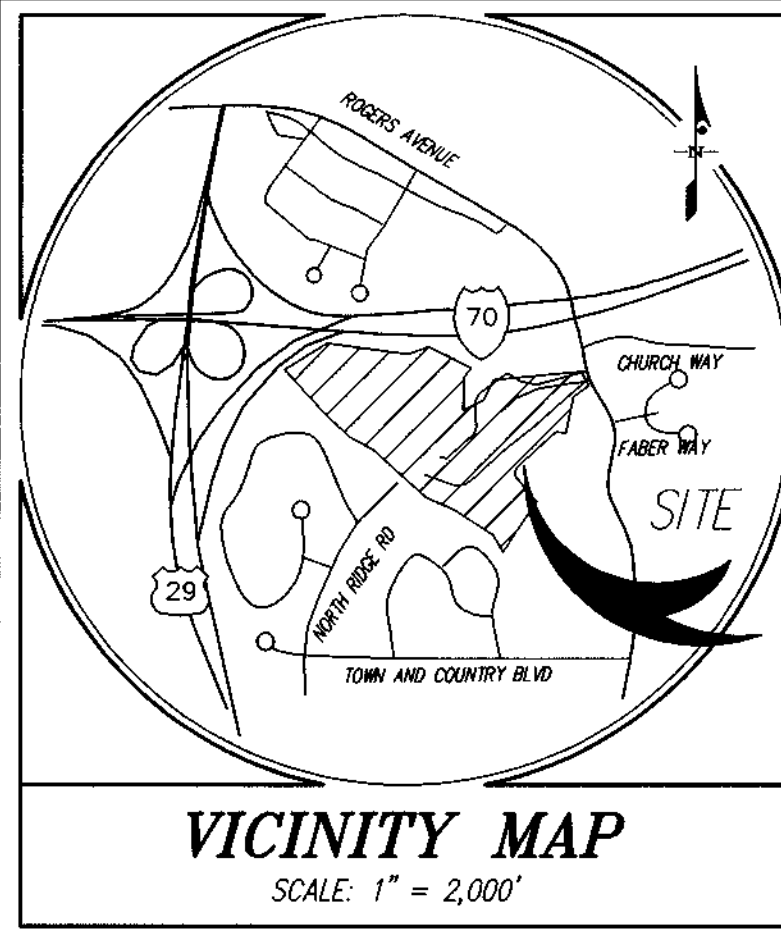
STORMWATER MANAGEMENT POND LANDSCAPE PLAN DETAIL SHEET

THE ENCLAVE AT ELLICOTT HILLS
NORTH RIDGE ROAD

ELECTION DISTRICT No. 2

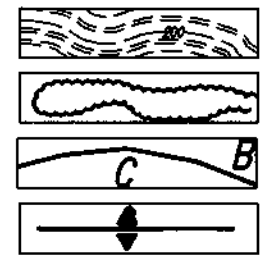
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
as shown	POR	00050
DATE	TAX MAP - GRD	SHEET
Sept. 26, 2001	17-17, 18, 24	18 OF 26



Legend

- Topography
- Tree Lines
- Hydrologic Soil Boundary
- Prop. Drainage Divide



$A = 0.0025$
 $C = 0.00$
 $A = 1.000$
 $C = 0.52$

Approved: Howard County Dept. of Public Works
Richard M. Conner 10/23/01
 Chief, Bureau of Highway Maintenance

Approved: Howard County Dept. of Planning & Zoning
Andy Hawley 10/29/01
 Chief, Bureau of Planning & Zoning
John Secours 10/29/01
 Chief, Bureau of Engineering



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-989-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

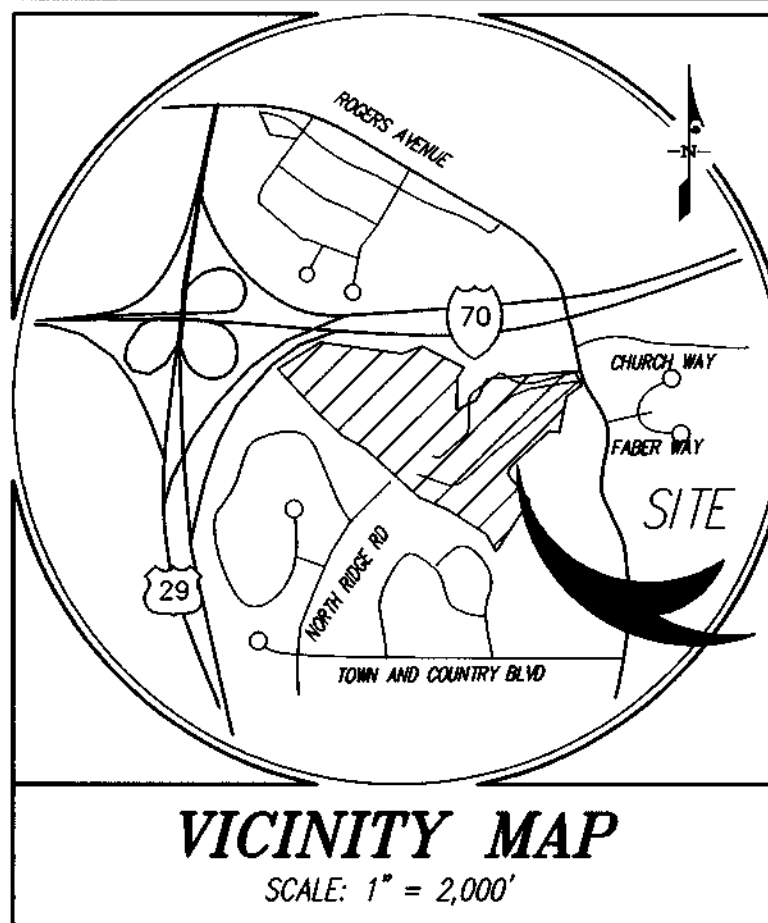
DATE	REVISION	BY	APP'R

PREPARED FOR:
 (OWNER / DEVELOPER)
 CIVIT SERVICES LLC
 % GREENBAUM + ROSE ASSOCIATES, INC.
 SUITE 410, NINDHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MARYLAND 21208
 ATTN: MARK BISHOP, PROJECT MANAGER
 PHONE NO: 410-484-8400

Interim Drain D.A.M.
THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD
 ELLICOTT CITY ELECTION DISTRICT No. 02
 HOWARD COUNTY, MARYLAND

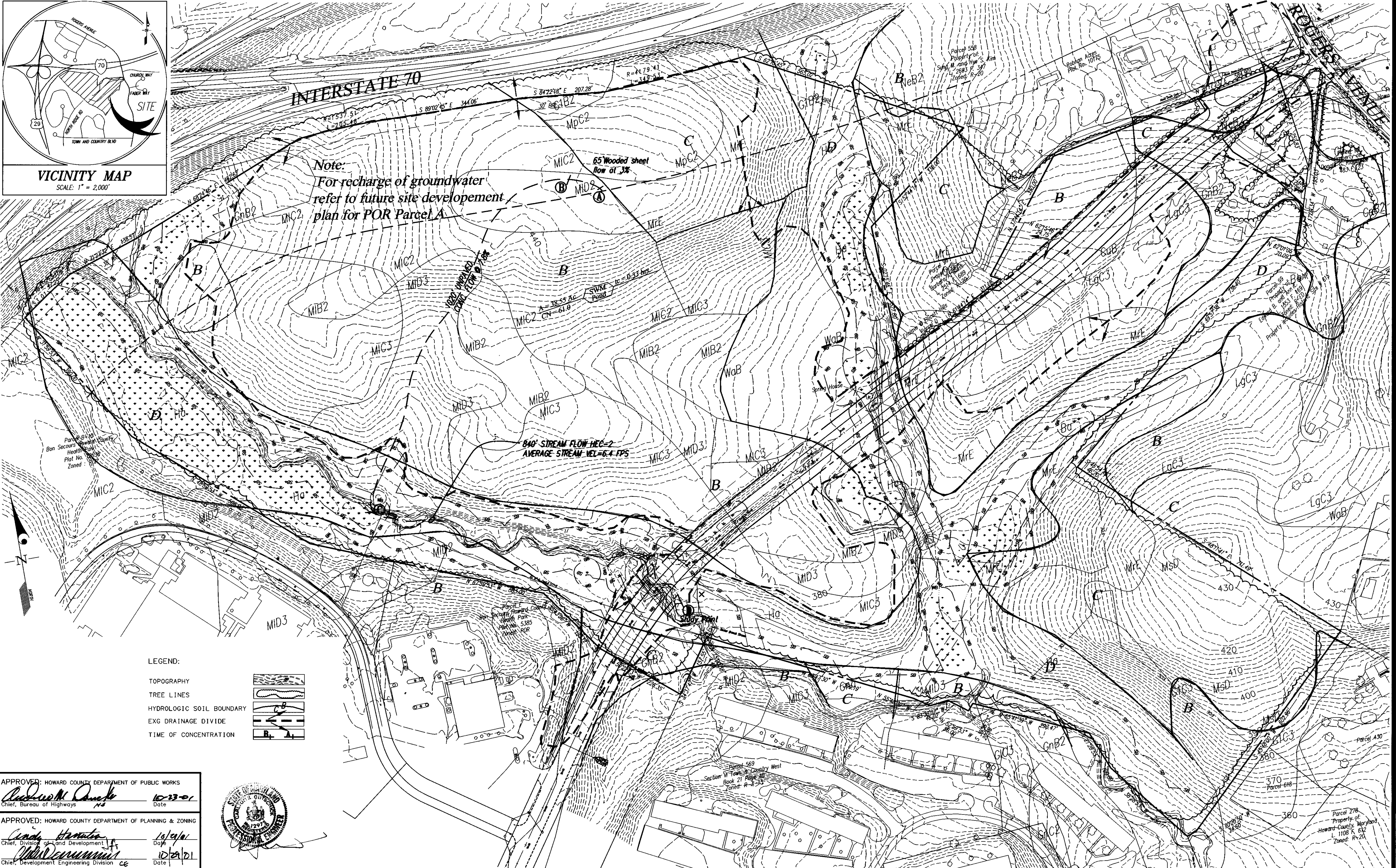
SCALE	ZONING	G. L. W. FILE No.
1"=100'	FOR. RES. R-20	00050
DATE	TAX MAP - GRID	SHEET
Sept. 26, 2001	17-17, 18, 24	19 of 20

5-25-01 10:35:09 am EST



VICINITY MAP
SCALE: 1" = 2,000'

Note:
For recharge of groundwater refer to future site development plan for POR Parcel A



LEGEND:

TOPOGRAPHY	
TREE LINES	
HYDROLOGIC SOIL BOUNDARY	
EXG DRAINAGE DIVIDE	
TIME OF CONCENTRATION	

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/23/01
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 10/24/01
 Chief, Division of Land Development

[Signature] 10/24/01
 Chief, Development Engineering Division



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BERTONSVILLE OFFICE PARK
 BERTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

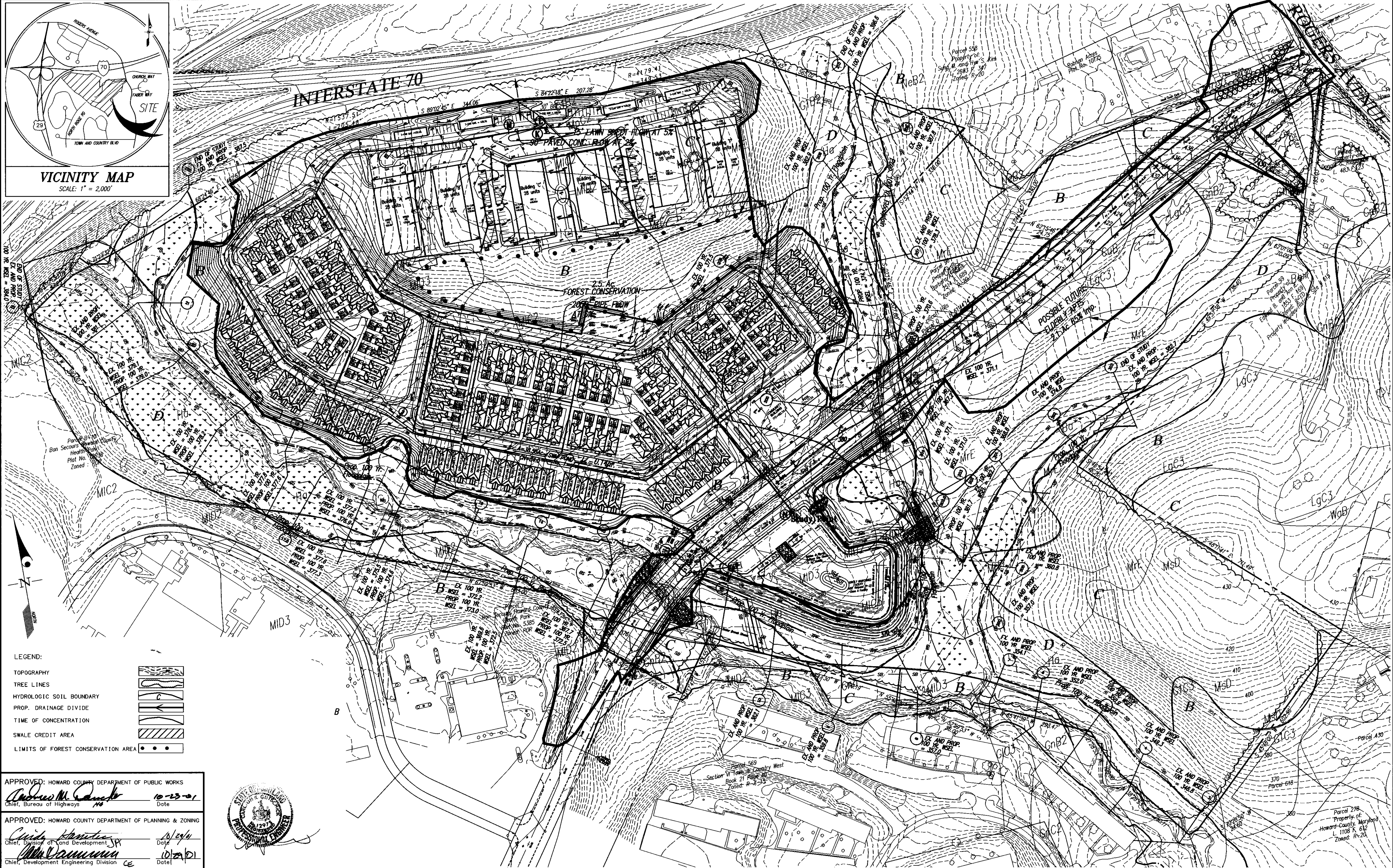
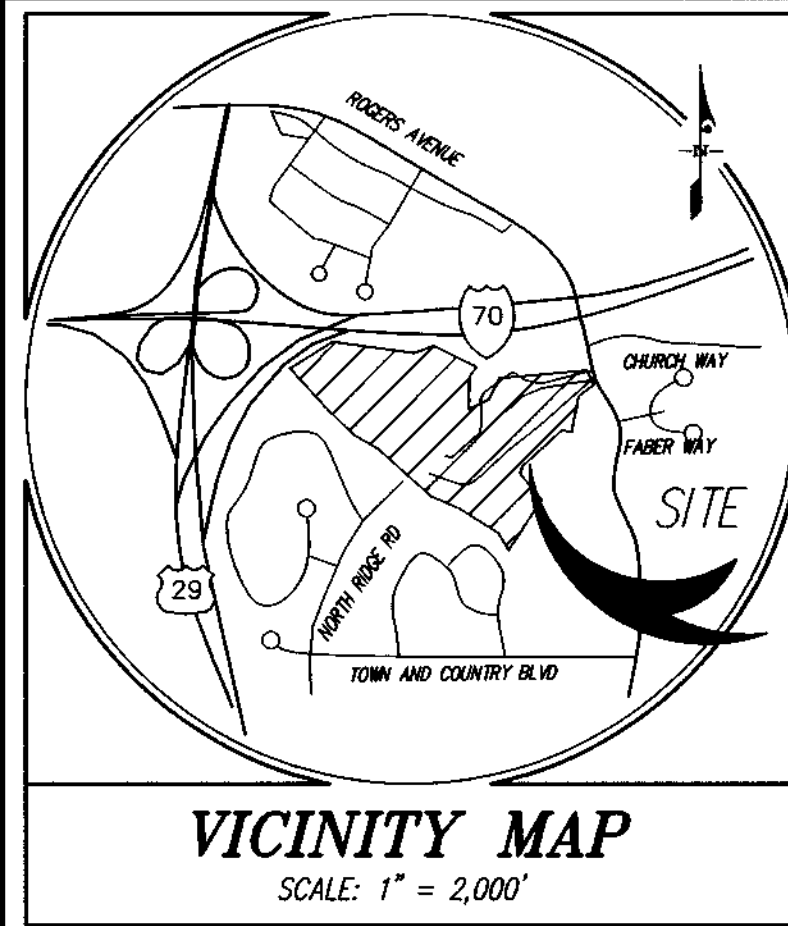
DATE	REVISION	BY	APP'R

PREPARED FOR:
 (Owner/Developer)
EXIT SEVEN LLC
 c/o Greenebaum & Rose Associates, Inc.
 Suite 410, Woodhome Center
 1629 Reisterstown Road
 Baltimore, Maryland 21288
 Attn: Charlie O'Donovan
 Phone: 410-484-8400

EXISTING CONDITIONS STORM WATER MANAGEMENT D.A.M.
THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD
 ELLICOTT CITY ELECTION DISTRICT No. 02
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	POR	00050
DATE	TAX MAP - GRID	SHEET
Sept. 26, 2001	17-17, 18, 24	20 of 26

fp-swmdam.dwg 10-7-01 4:00:07 pm EST



- LEGEND:**
- TOPOGRAPHY
 - TREE LINES
 - HYDROLOGIC SOIL BOUNDARY
 - PROP. DRAINAGE DIVIDE
 - TIME OF CONCENTRATION
 - SWALE CREDIT AREA
 - LIMITS OF FOREST CONSERVATION AREA

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Daniels 10-23-01
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Kuntz 10/24/01
 Chief, Division of Land Development Date

Mike Dammann 10/24/01
 Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/WA: 301-989-2524 FAX: 301-421-4186

PREPARED FOR:
 Applicant/Contract Purchaser: Greenbaum & Rose Associates, Inc.
 Owner: Bon Secours Hospital, Inc.
 Suite 410, Woodholme Center
 1829 Reisterstown Road
 Baltimore, MD 21208
 Attn: Charlie O'Donovan
 Phone: 410.484.8400

PROPOSED CONDITIONS STORM WATER MANAGEMENT D.A.M.
THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD
 ELLICOTT CITY ELECTION DISTRICT No. 02
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	POR	00050
DATE	TAX MAP - GRID	SHEET
Sept. 26, 2001	17-17, 18, 24	21 of 26

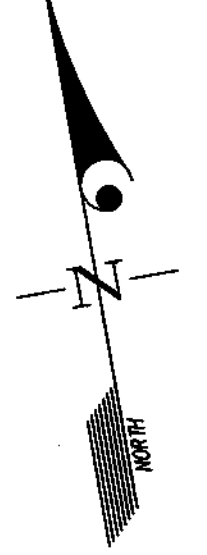
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DESIGN: DES. JAU DRN. JAU CHK. JAU

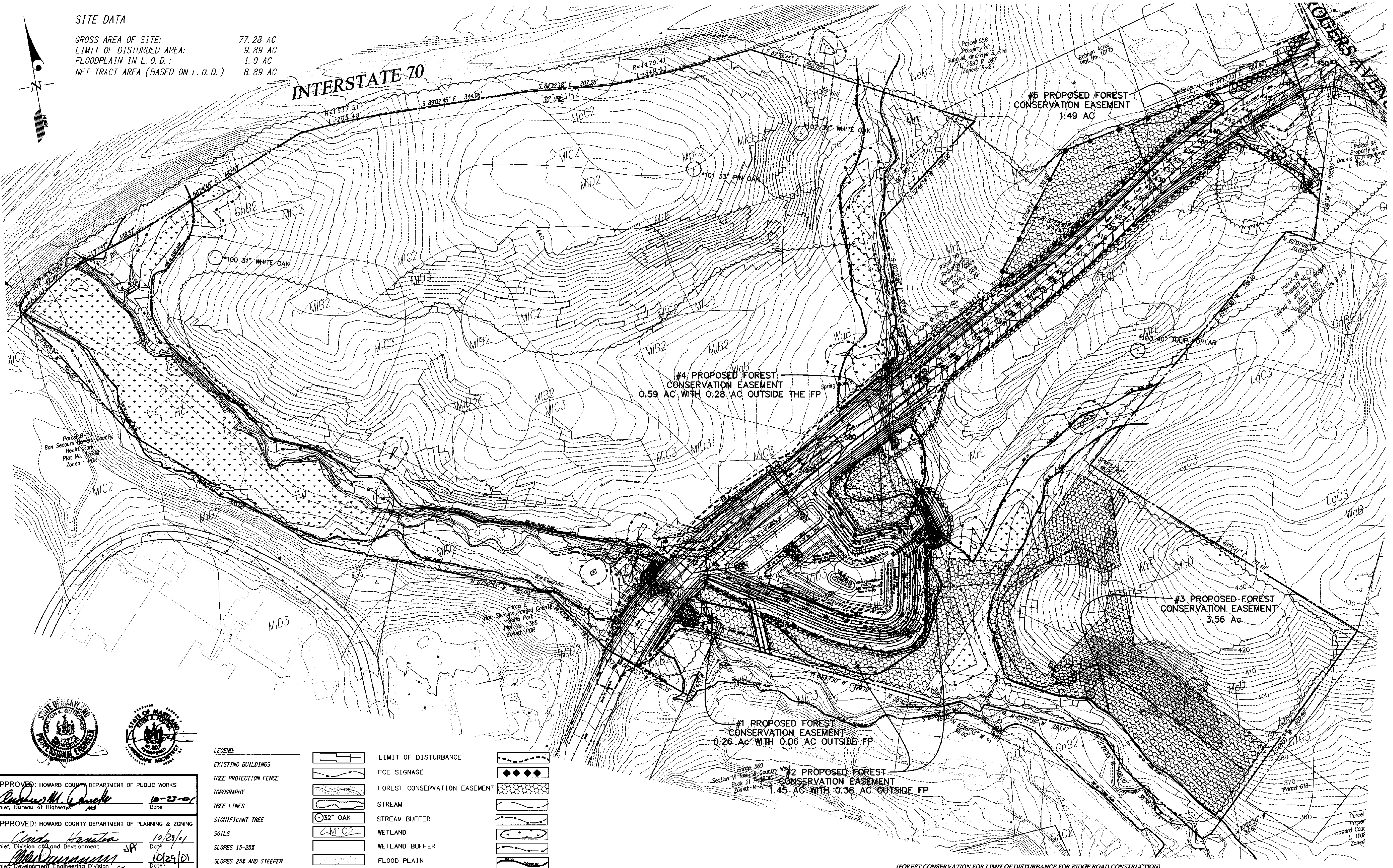
DATE	REVISION	BY	APPR.

SITE DATA

GROSS AREA OF SITE: 77.28 AC
 LIMIT OF DISTURBED AREA: 9.89 AC
 FLOODPLAIN IN L. O. D.: 1.0 AC
 NET TRACT AREA (BASED ON L. O. D.): 8.89 AC



INTERSTATE 70



#4 PROPOSED FOREST CONSERVATION EASEMENT
 0.59 AC WITH 0.28 AC OUTSIDE THE FP

#5 PROPOSED FOREST CONSERVATION EASEMENT
 1.49 AC

#3 PROPOSED FOREST CONSERVATION EASEMENT
 3.56 AC

#1 PROPOSED FOREST CONSERVATION EASEMENT
 0.26 AC WITH 0.06 AC OUTSIDE FP

#2 PROPOSED FOREST CONSERVATION EASEMENT
 1.45 AC WITH 0.38 AC OUTSIDE FP

LEGEND:

	EXISTING BUILDINGS		LIMIT OF DISTURBANCE
	TREE PROTECTION FENCE		FCE SIGNAGE
	TOPOGRAPHY		FOREST CONSERVATION EASEMENT
	TREE LINES		STREAM
	SIGNIFICANT TREE		STREAM BUFFER
	SOILS		WETLAND
	SLOPES 15-25%		WETLAND BUFFER
	SLOPES 25% AND STEEPER		FLOOD PLAIN

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. D'Amico 10-23-01
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hamilton 10/29/01
 Chief, Division of Land Development Date

John D'Amico 10/29/01
 Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTOWNSVILLE OFFICE PARK
 BURTOWNSVILLE, MARYLAND, 20886
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

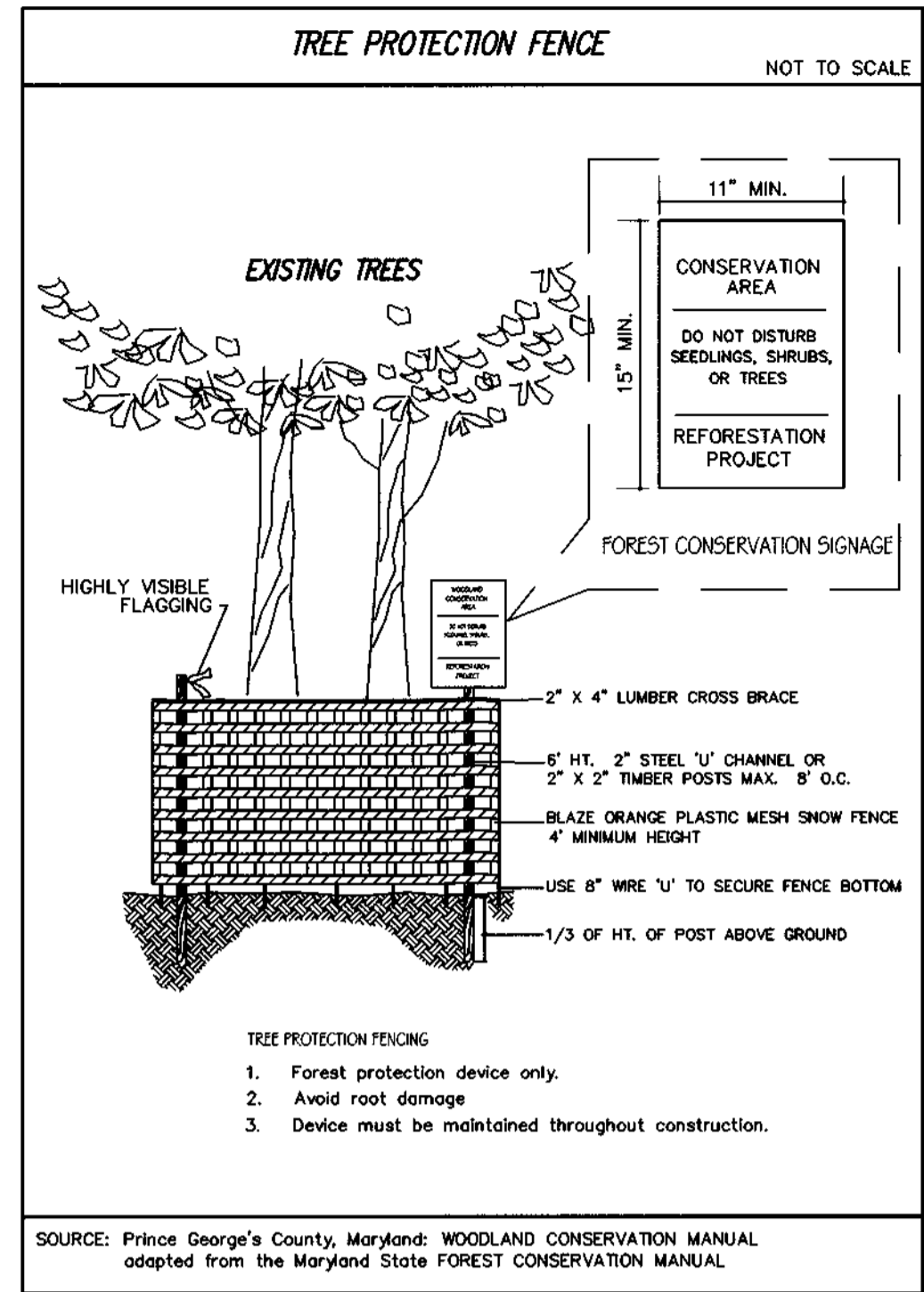
PREPARED FOR:
 (Owner/Developer)
 EXIT SEVEN LLC
 c/o Greenebaum & Rose Associates, Inc.
 Suite 410, Woodholme Center
 1829 Reisterstown Road
 Baltimore, MD 21208
 Attn: Mark Bennett or Charlie O'Donovan
 Phone: 410.484.8400

FOREST CONSERVATION PLAN (ROAD AND SWM CONSTRUCTION)
THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD
 ELECTION DISTRICT No. 2

SCALE 1"=100'	ZONING POR, R-ED, R-20	G. L. W. FILE No. 00050
DATE Sept. 26, 2001	TAX MAP - GRID 17-17, 18, 24	SHEET 22 OF 26

00050fc.dwg 10-7-01 4:15:34 pm EST

11/29/01 ADDED FC AREA 5 Signs
 DATE IN-HOUSE REVISION
 DES: LMM DRN: LMM CHK: BSL



- TREE PROTECTION FENCING
1. Forest protection device only.
 2. Avoid root damage.
 3. Device must be maintained throughout construction.

SOURCE: Prince George's County, Maryland: WOODLAND CONSERVATION MANUAL adopted from the Maryland State FOREST CONSERVATION MANUAL

- NOTES:
1. THE TREE PROTECTION FENCING SHOWN ON THESE PLANS IS TEMPORARY AND SHALL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITY, BUT THE FOREST CONSERVATION SIGNAGE IS PERMANENT AND SHALL REMAIN IN PLACE AROUND THE FOREST CONSERVATION EASEMENTS AFTER THE REMOVAL OF THE TREE PROTECTION FENCING.
 2. FOREST CONSERVATION SIGNAGE SHALL BE INSTALLED ALONG THE PERIMETER OF THE CONSERVATION EASEMENT AT 50' TO 100' APART AND AT ALL CORNERS WHERE THE EASEMENT CHANGES DIRECTION.
 3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

TABULATION OF PROPOSED FOREST CONSERVATION EASEMENTS

FOREST CONSERVATION EASEMENT AREA No.	1	2	3	4	5	TOTAL
FOREST RETENTION OUTSIDE THE 100-YR FLOOD PLAIN	0.06 Ac.	0.38 Ac.	3.56 Ac.	0.28 Ac.	1.49 Ac.	5.77 Ac.
FOREST RETENTION INSIDE THE 100-YR FLOOD PLAIN	0.20 Ac.	1.07 Ac.	0.00 Ac.	0.31 Ac.	0.00 Ac.	1.58 Ac.
TOTAL AREA OF EACH FOREST CONSERVATION EASEMENT	0.26 Ac.	1.45 Ac.	3.56 Ac.	0.59 Ac.	1.49 Ac.	7.35 Ac.

THE FOREST CONSERVATION IN THIS FOREST CONSERVATION PLAN COVERS THE AREA ENCOMPASSING THE ROAD CONSTRUCTION AND THE STORMWATER MANAGEMENT CONSTRUCTION AREAS OF LIMIT OF DISTURBANCE ONLY. THERE ARE 5 FOREST CONSERVATION EASEMENT AREAS. THE SURETY AMOUNT FOR THE DEVELOPER'S AGREEMENT IS FOR THE AREA OUTSIDE THE FLOODPLAIN (5.77 AC) * (\$0.20 PER SF) IS \$50,268.00

FOREST CONSERVATION WORKSHEET

1. SITE DATA

GROSS SITE AREA	9.89 *
AREA WITHIN 100-YEAR FLOOD PLAIN	1.00
NET TRACT AREA	8.89
LAND USE CATEGORY	R-ED

2. INFORMATION FOR CALCULATIONS

A. NET TRACT AREA	8.89
B. REFORESTATION THRESHOLD (20% x A)	1.78
C. AFFORESTATION THRESHOLD (15% x A)	1.33
D. EXISTING FOREST ON NET TRACT AREA	7.25
E. FOREST AREAS TO BE CLEARED ON NET TRACT AREA	7.25
F. FOREST AREAS TO BE RETAINED	0.00 **

3. REFORESTATION CALCULATIONS

A. NET TRACT AREA	8.89
B. REFORESTATION THRESHOLD (20% x A)	1.78
C. EXISTING FOREST ON NET TRACT AREA	7.25
D. FOREST AREAS TO BE CLEARED	7.25
E. FOREST AREAS TO BE RETAINED	0.00 **
G. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD	5.47
F. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD	1.78
H. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD	0.00

4. REQUIRED FOREST CONSERVATION

A. REFORESTATION FOR CLEARING ABOVE THRESHOLD (3G x 1/4)	1.37
B. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (1.74X2)	3.56
C. TOTAL REFORESTATION PLANTING REQUIRED (4A+4B)	4.93

5. PROPOSED METHODS OF FULFILLING FOREST CONSERVATION OBLIGATIONS

FOREST CONSERVATION FOR THIS SUBMISSION ASSUMES THAT THE "GROSS SITE AREA" IS THE LIMIT OF DISTURBANCE NECESSARY FOR THE CONSTRUCTION OF RIDGE ROAD EXTENSION AND THE STORM WATER MANAGEMENT FACILITY. SUBSEQUENT DEVELOPMENT PLAN STAGE WILL REASSESS AND ACCOUNT FOR GROSS SITE AREA. THE SUBSEQUENT SUBMISSION WILL INCLUDE THE POR AND THE RED PORTION.

SINCE THE LIMIT OF DISTURBANCE IS LIMITED TO WHAT IS NECESSARY FOR ROAD AND STORMWATER MANAGEMENT CONSTRUCTION, THE FOREST CONSERVATION OBLIGATION OF 4.93 AC. CANNOT BE MET WITHIN THE LIMIT OF DISTURBANCE. THEREFORE, THIS OBLIGATION WILL BE MET OUTSIDE THE L.O.D. WITHIN THE PROJECT BOUNDARY.

THE TOTAL ACREAGE OF FOREST CONSERVATION EASEMENT AREA TO BE RECORDED IS 7.35 AC WHICH IS COMPRISED OF:
 5.77 AC OF FOREST RETENTION OUTSIDE THE 100 YEAR FLOOD PLAIN EASEMENT (NET TRACT RETENTION).
 1.58 AC OF FOREST RETENTION INSIDE THE 100 YEAR FLOOD PLAIN EASEMENT.

* REFERS TO AREA OF LIMIT OF DISTURBANCE OF ROAD AND SWM CONSTRUCTION.
 ** REFERS TO FOREST AREA TO BE RETAINED OUTSIDE THE LIMIT OF DISTURBANCE WITHIN THE PROPOSED FENCE LINE

- CONSTRUCTION PERIOD PROTECTION PROGRAM
1. The limit of forest retention shall be staked and flagged.
 2. A pre-construction meeting at the site should be held to confirm the limits of clearing specified. The meeting should include the owner or the owner's representative, the on-site foreman in charge of land disturbance, the environmental consultant and the appropriate Howard County inspectors.
 3. Forest protection devices and signs (see details) shall be installed prior to any clearing or grading. The protection devices and signs shall be maintained during the entire construction period. None of the devices shall be anchored or attached in any way to the trees to be saved. The maintenance time frame may be extended to accommodate subsequent phases of development.
 4. Equipment, vehicles and building materials shall not be within the protected area. Activities strictly to implement any reforestation planting and maintenance (i.e. watering, fertilizing thinning, pruning, removal of dead and diseased trees where necessary, etc.) of the conservation area are permitted. Clearing for the purpose of sodding or planting grass is not permitted within the forest conservation area once it's established.
 5. At the end of the construction period, the designated qualified professional shall convey certification to the administrator of the Howard County Forest Conservation Program that all forest retention areas have been preserved, all reforestation and/or afforestation plantings (if applicable) have been installed as required by the forest conservation plan, and that all protection measures required for the post-construction period have been installed.
- Upon notice to Howard County by final certification document for proof of retention and forest protection measures, Howard County DPZ (Program Coordinator) will notify the owner of release from the construction period obligations. The 2-year (min.) post-construction management and protection period then commences.

- FOREST CONSERVATION PROGRAM SEQUENCE
1. OBTAIN ALL NECESSARY PERMITS.
 2. STAKEOUT LIMITS OF DISTURBANCE.
 3. FIELD MEETING TO REVIEW AND VERIFY LIMIT OF DISTURBANCE FOR THE LIMITS OF GRADING AND CONSTRUCTION.
 4. INSTALL FOREST CONSERVATION SIGNS (SEE DETAIL ON THIS SHEET) AND FOREST PROTECTION DEVICES ALONG THE FCE AREAS. (FENCES) ALONG THE PORTION OF THE LIMIT OF DISTURBANCE (THAT INVOLVES CLEARING AND/OR RETENTION OF TREES) SEE ALSO THE SEDIMENT CONTROL PLANS FOR OTHER PROTECTION MEASURES.
 5. COMMENCE SITE CONSTRUCTION.
 6. INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE CONSTRUCTION PERIOD OBLIGATIONS; START OF POST-CONSTRUCTION MANAGEMENT PERIOD.
 7. POST-CONSTRUCTION MANAGEMENT FOR A PERIOD OF 2 YEARS (MIN.).
 8. FINAL INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE OWNER'S FOREST CONSERVATION OBLIGATION.

- GENERAL NOTES
1. This forest conservation plan is provided in accordance with the requirements of Subtitle 12 "Forest Conservation" of the Howard County Code.
 2. Implementation of this plan must be performed by a contractor that is knowledgeable and experienced in afforestation/reforestation techniques and practices.
 3. The owner is responsible for a 2-year (min.) post-construction maintenance period which involves activities necessary to ensure survival and growth of the conservation area.

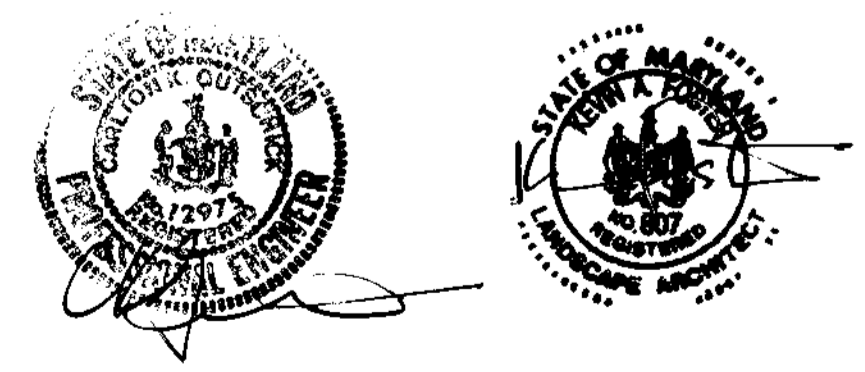
Two inspection per year by a qualified professional at beginning and end of the growing season, are recommended in order to take remedial steps as necessary. If, after one year, the possibility exists that the original planting (if applicable) will not meet survival rate standards, the applicant may choose to establish reinforcement plantings.
 4. At the end of the post-construction management and protection period, certification by a qualified consultant will be required before to the owner can be released from his/her forest conservation obligation to the administrator of the Howard County Forest Conservation program.
 5. The contractor is responsible for the location of any existing utilities. The repair of any utilities damaged by the contractor shall be at the contractor's expense.

00050FCD.dwg 10-7-01 4:19:35 pm EST

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Quack 10/23/01
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Christy Hanula 10/29/01
 Chief, Division of Land Development

John Dammann 10/29/01
 Chief, Development Engineering Division



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
10/2/01	REVISED TABULATION OF PROPOSED FC EASEMENTS AND REVISED SURETY AMOUNT.	LMW	BSL
	IN-HOUSE REVISION		

PREPARED FOR:
 (Owner/Developer)
 EIT SEVEN LLC
 c/o Greenebaum & Rose Associates, Inc.
 Suite 410, Woodholme Center
 1629 Reisterstown Road
 Baltimore, MD 21208
 Attn: Mark Bennet or Charlie O'Donovan
 Phone: 410.484.8400

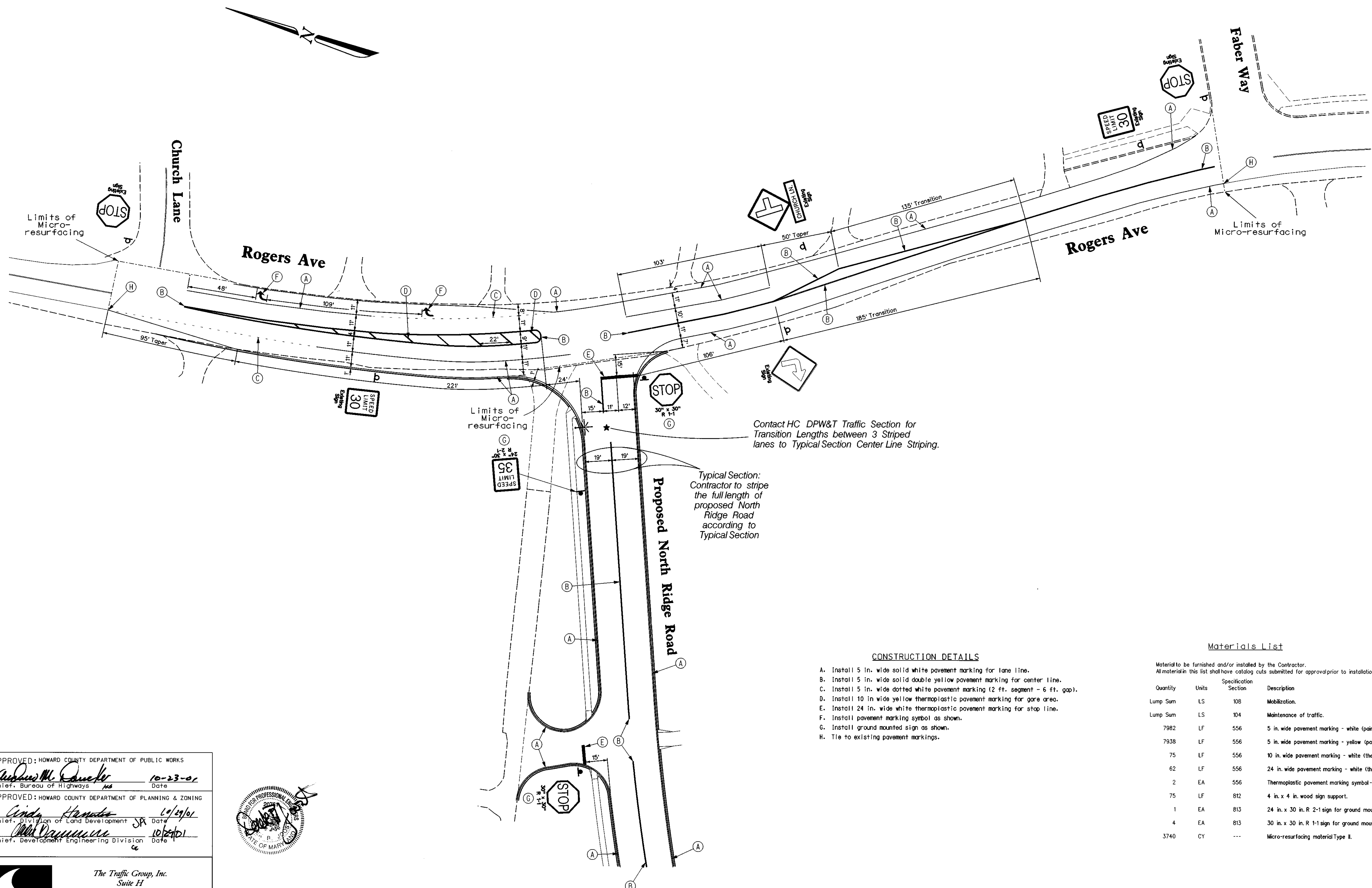
FOREST CONSERVATION NOTES, SCHEDULES and DETAILS

THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD

ELECTION DISTRICT No. 2

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	POR, R-ED, R-20	00050
DATE	TAX MAP - GRID	SHEET
Sept. 26, 2001	17-17, 18, 24	23 OF 26

HOWARD COUNTY, MARYLAND



Contact HC DPW&T Traffic Section for Transition Lengths between 3 Striped lanes to Typical Section Center Line Striping.

Typical Section: Contractor to stripe the full length of proposed North Ridge Road according to Typical Section

CONSTRUCTION DETAILS

- A. Install 5 in. wide solid white pavement marking for lane line.
- B. Install 5 in. wide solid double yellow pavement marking for center line.
- C. Install 5 in. wide dotted white pavement marking (2 ft. segment - 6 ft. gap).
- D. Install 10 in. wide yellow thermoplastic pavement marking for gore area.
- E. Install 24 in. wide white thermoplastic pavement marking for stop line.
- F. Install pavement marking symbol as shown.
- G. Install ground mounted sign as shown.
- H. Tie to existing pavement markings.

Materials List

Material to be furnished and/or installed by the Contractor. All material in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
7982	LF	556	5 in. wide pavement marking - white (paint).
7938	LF	556	5 in. wide pavement marking - yellow (paint).
75	LF	556	10 in. wide pavement marking - white (thermoplastic).
62	LF	556	24 in. wide pavement marking - white (thermoplastic).
2	EA	556	Thermoplastic pavement marking symbol - "Right" arrow - white.
75	LF	812	4 in. x 4 in. wood sign support.
1	EA	813	24 in. x 30 in. R 2-1 sign for ground mounting.
4	EA	813	30 in. x 30 in. R 1-1 sign for ground mounting.
3740	CY	---	Micro-resurfacing material Type II.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Quicke 10-23-01
 Chief, Bureau of Highways MS Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hamaker 10/29/01
 Chief, Division of Land Development JH Date

John P. ... 10/24/01
 Chief, Development Engineering Division ce Date



The Traffic Group, Inc.
 Suite H
 9900 Franklin Square Drive
 Baltimore, Maryland 21236
 410-931-6600
 1-800-583-8411
 Fax 410-931-6601

DATE	REVISION	BY	APP'R.
10/07/01	Revised 50' turning Radius @ Rogers Ave, Revised stop bar location, Showed new striping on North Ridge Road & added transition note.	fjh	

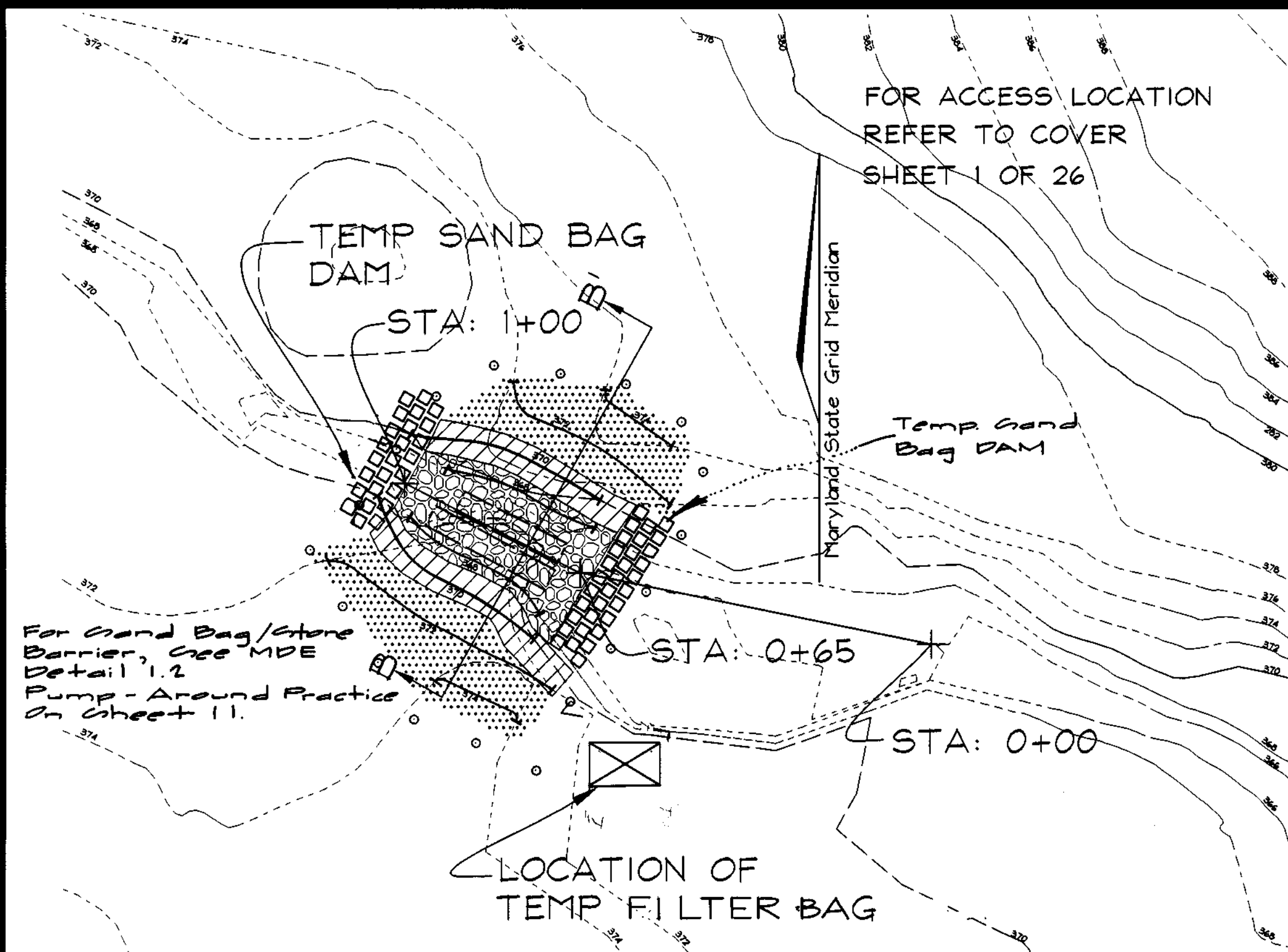
PREPARED FOR:
 (Owner/Developer)
 EXIT SEVEN LLC
 c/o Greenbaum & Rose Assoc., Inc.
 Suite 410, Woodholme Center
 1829 Reisterstown Road
 Baltimore, MD 21208
 Phone: 410-484-8400
 Attn.: Mark Bennett or Charles O'Donovan

STRIPING PLAN
 THE ENCLAVE AT ELLICOTT HILLS
 NORTH RIDGE ROAD
 ELECTION DISTRICT No. 2

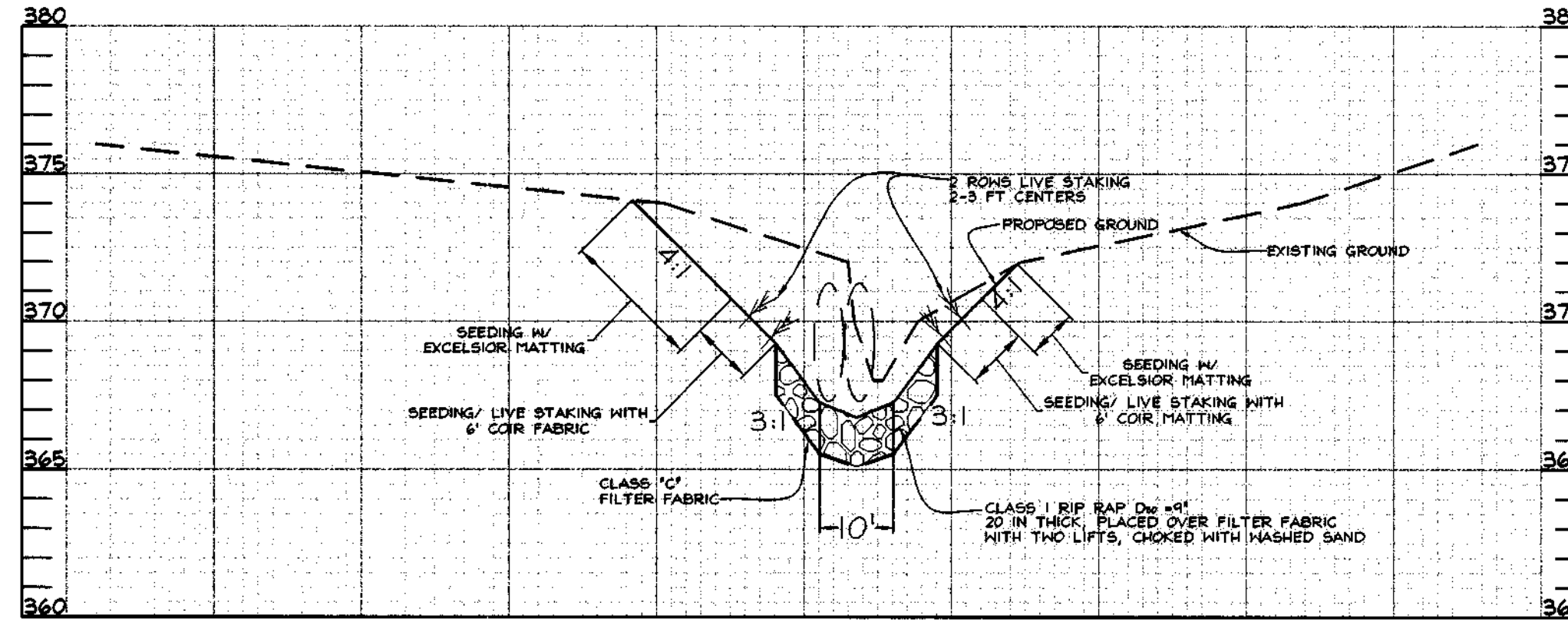
SCALE	ZONING	G. L. W. FILE No.
1" = 30'	POR, R-ED, R-20	00050
DATE	TAX MAP - GRID	SHEET
Sept. 26, 2001	17 - 17.18.24	24 OF 26

PLAN SUMMARY

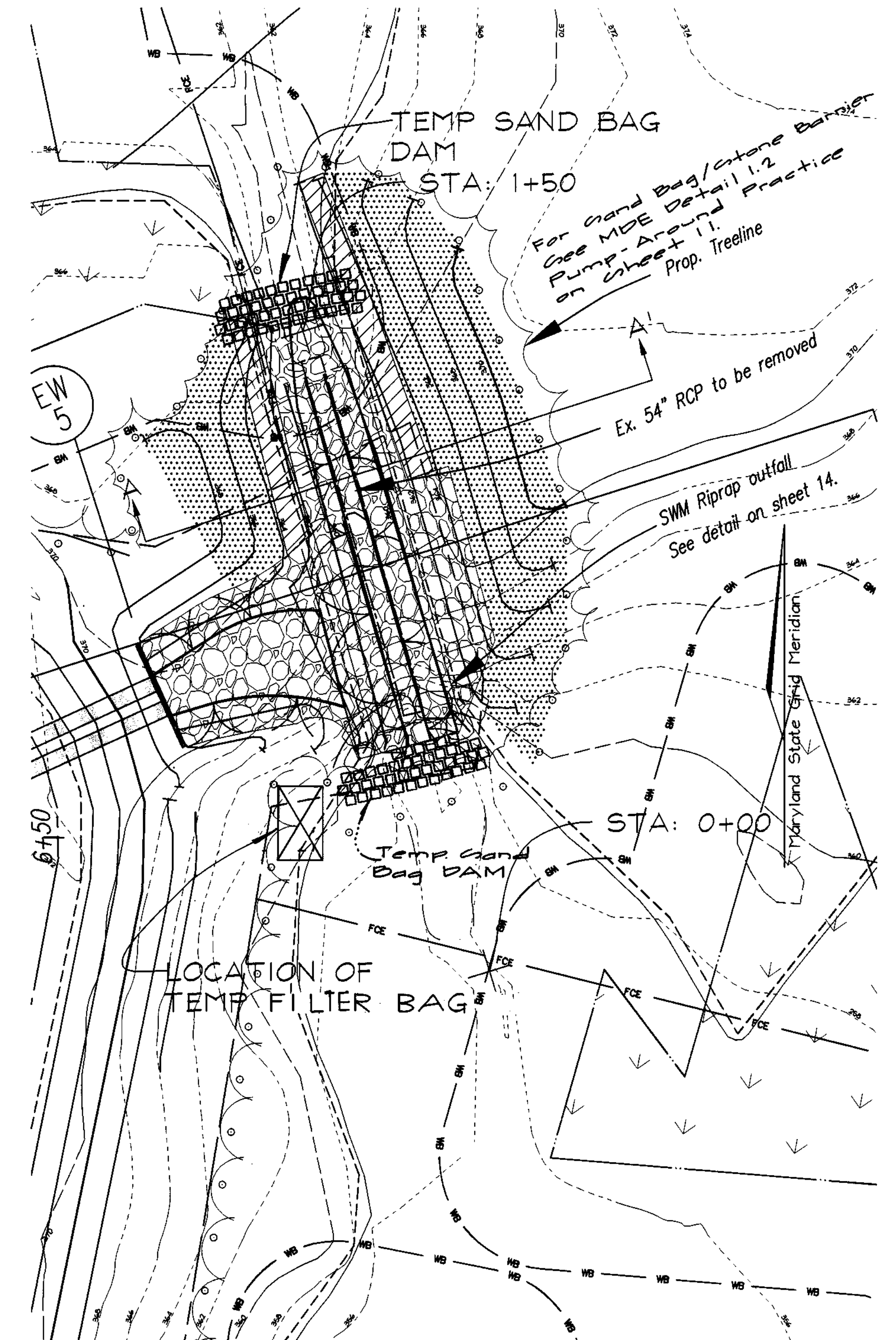
THE WORK WILL INVOLVE THE REMOVAL OF TWO SEPARATE CHANNEL OBSTRUCTIONS. AREA 1 INVOLVES THE REMOVAL OF AN EXISTING 54 INCH CULVERT WHICH CURRENTLY DISCHARGES THE STREAM FLOW SEVERAL FEET AT THE OUTLET INTO AN ERODED PLUNGE POOL BELOW. THIS CULVERT CURRENTLY ALLOWS NO UPSTREAM MIGRATION OF FISH AND APPEARS TO BE UNSTABLE. AREA 2 INVOLVES THE REMOVAL OF TWO CONCRETE CULVERTS AND A JUNK AUTOMOBILE WITHIN THE MAIN STEM OF THE SUCKER BRANCH. THIS CHANNEL OBSTRUCTION PRESENTS A SIMILAR CHALLENGE FOR FISH PASSAGE AND HAS CREATED A PLUNGE POOL BELOW. STABILIZATION MEASURES WILL INVOLVE THE PLACEMENT OF ROCK BOULDERS, COIR FABRIC AND LIVE STAKING TO RE-ESTABLISH A NATURAL STREAM CHANNEL CONFIGURATION IN THESE AREAS.



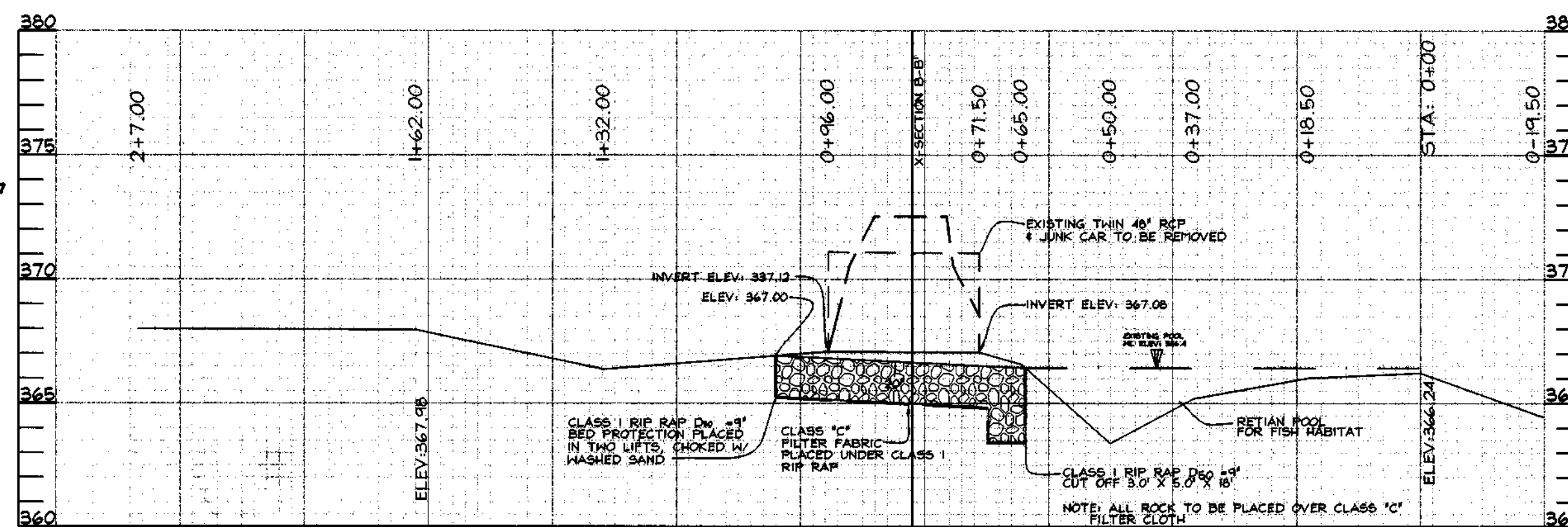
PLAN VIEW AREA II
SCALE 1" = 20'



STREAM CROSS SECTION B-B' - AREA II
SCALE: HORIZONTAL - 1"=20'
VERTICAL - 1"=5'



PLAN VIEW AREA I
SCALE 1" = 20'

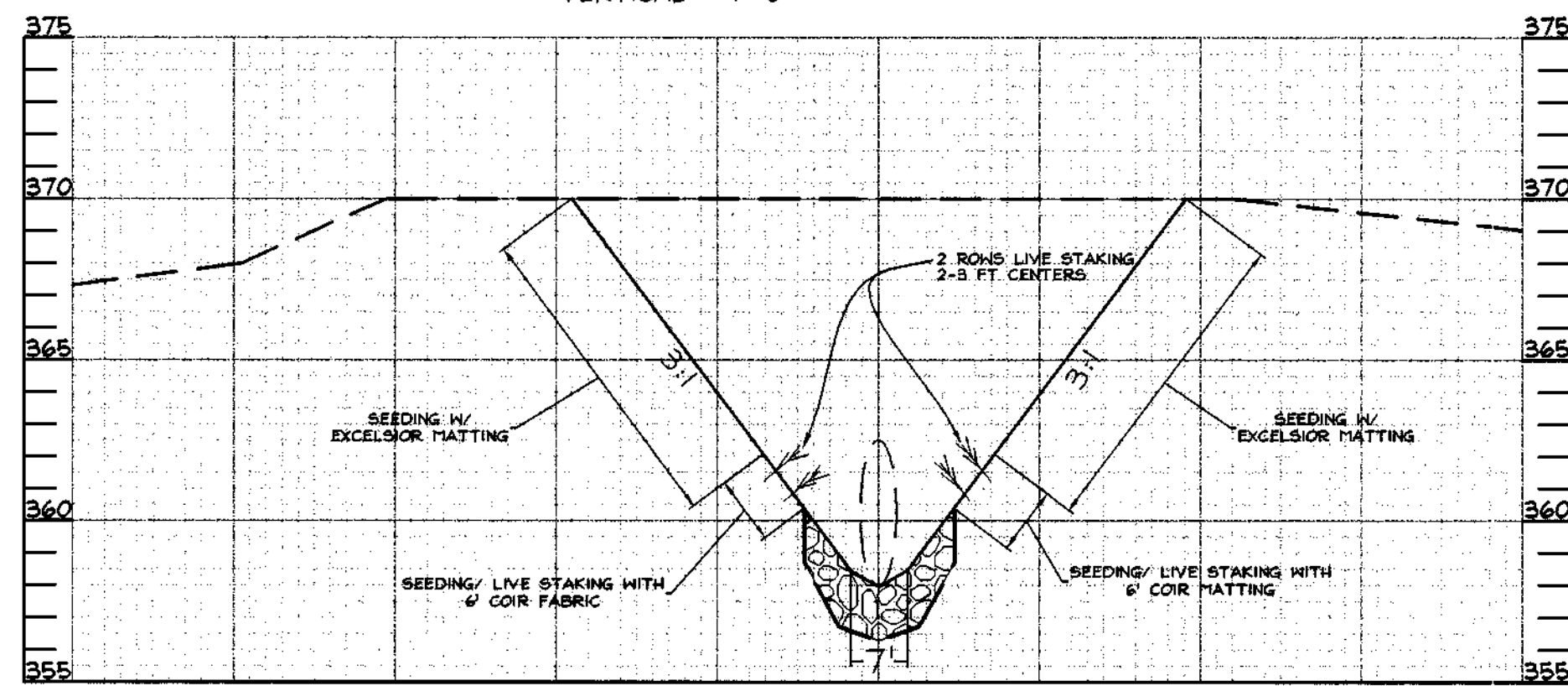


STREAM PROFILE MITIGATION AREA II
SCALE: HORIZONTAL - 1"=20'
VERTICAL - 1"=5'

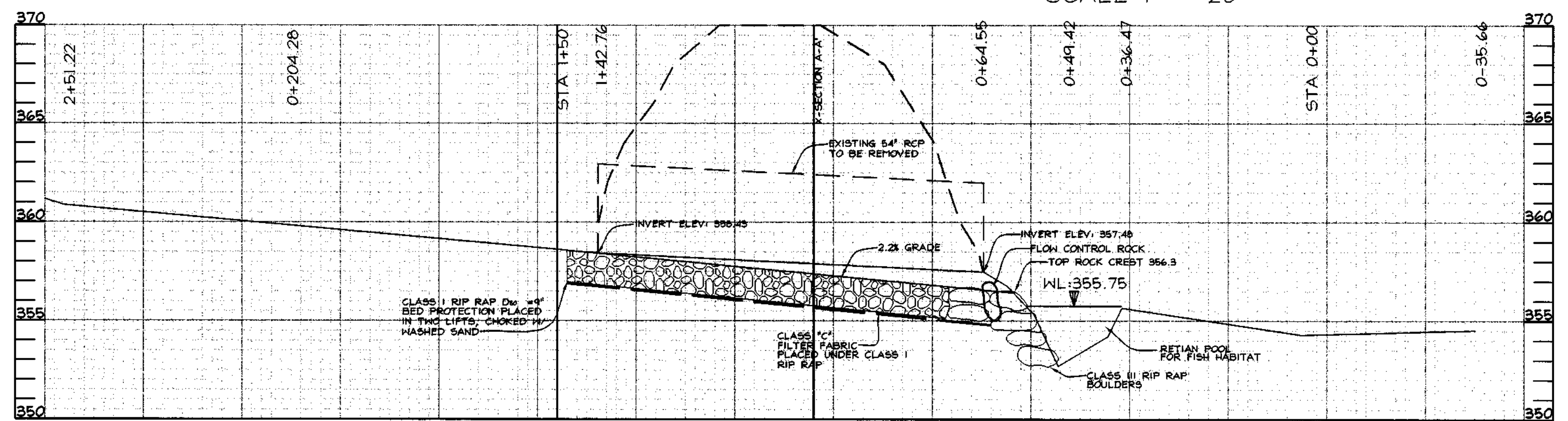
LEGEND

- LIMIT OF DISTURBANCE
- SEEDING & EXCELSIOR MATTING
- SEEDING, LIVE STAKING & COIR MATTING
- PROPOSED RIPRAP TREATMENT

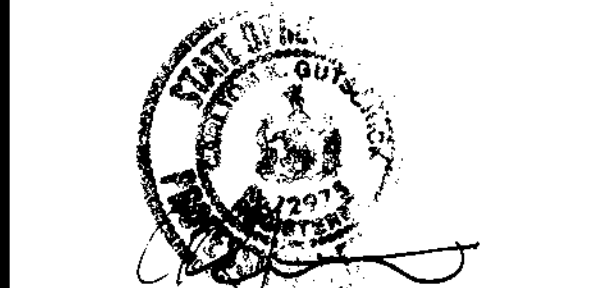
NOTE:
1. TOPOGRAPHY AND EXISTING CULVERT LOCATION, PROVIDED BY GLW
2. HYDROLOGY STUDY PROVIDED BY GLW



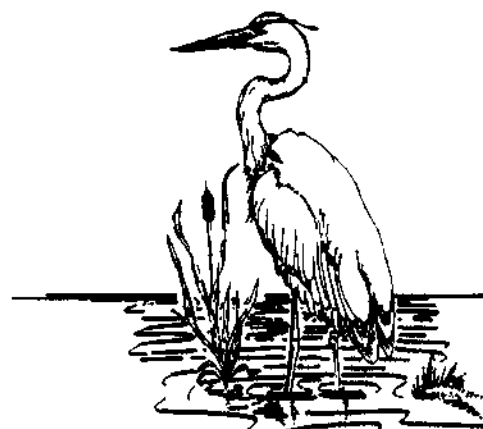
STREAM CROSS SECTION A-A' AREA I
SCALE: HORIZONTAL - 1"=20'
VERTICAL - 1"=5'



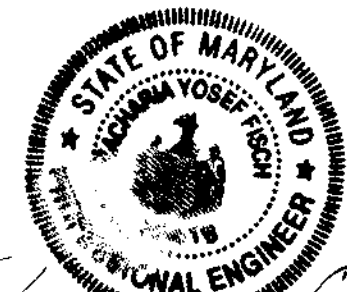
STREAM PROFILE MITIGATION AREA I
SCALE: HORIZONTAL - 1"=20'
VERTICAL - 1"=5'



(Applies to all base information incl. topo, grading and proposed work covered by Sheets 1-24)



EXPLORATION RESEARCH, INC.
ENVIRONMENTAL CONSULTANTS
8318 FOREST STREET
ELLICOTT CITY, MARYLAND 21045
TEL (410) 750-1150 FAX (410) 750-7260



Zacharia Y. Fisch
10/3/01

ENGINEERS CERTIFICATE
"I HEREBY 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."

Zacharia Y. Fisch 10/3/01
SIGNATURE OF ENGINEER DATE
ZACHARIA Y. FISCH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Sanchez 10-25-01
Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
John J. Smith 10/29/01
Chief, Division of Land Development Date

William J. Williams 10/29/01
Chief, Development Engineering Division Date

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

Zacharia Y. Fisch 10-25-01
SIGNATURE OF DEVELOPER DATE

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

Jim Moran 10/17/01
USDA-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.

John A. ... 10/17/01
HOWARD SOIL CONSERVATION DISTRICT DATE

FSH Associates
Engineers Planners Surveyors
8318 Forest Street, Ellicott City, MD 21043
Tel: 410-750-2251 Fax: 410-750-7260
E-mail: FSHassociates@cs.com

PREPARED FOR:
EXIT SEVEN LLC
Greenbaum & Rose Associates, Inc.
Suite 410, Woodhome Center
1829 Reisterstown Road
Baltimore, MD, 21208
Phone: 410-484-3400
Attn: Mark Bennett or Charlie O'Donovan

CULVERT REMOVAL/ STREAM STABILIZATION & SEDIMENT CONTROL
THE ENCLAVE AT ELLICOTT HILLS
NORTH RIDGE ROAD

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	POR, R-ED, R-20	00050
DATE	TAX MAP - GRID	SHEET
9/26/01	17-17,18,24	25 OF 26

DES. SH	DRN. CH	CHK. ZF	DATE	REVISION	BY	APPR.

SEQUENCE OF CONSTRUCTION

- AREA I & II:
1. NOTIFY MDE INSPECTOR 48 HOURS PRIOR TO START OF GRADING.
 2. ESTABLISH "PUMP AROUND" AND DENATERING DEVICE. (1 DAY)
 3. REMOVE EXISTING PIPE GRADE AND INSTALL ROCK PROTECTION, REMOVE "PUMP AROUND". (3 DAYS)
 4. INSTALL FINAL STABILIZATION MEASURES INCLUDING COIR FABRIC, LIVE STAKING AND SEEDING STABILIZATION. (1 DAY)

MGWC 1.2: PUMP-AROUND PRACTICE

Temporary measure for dewatering in-channel construction sites

DESCRIPTION

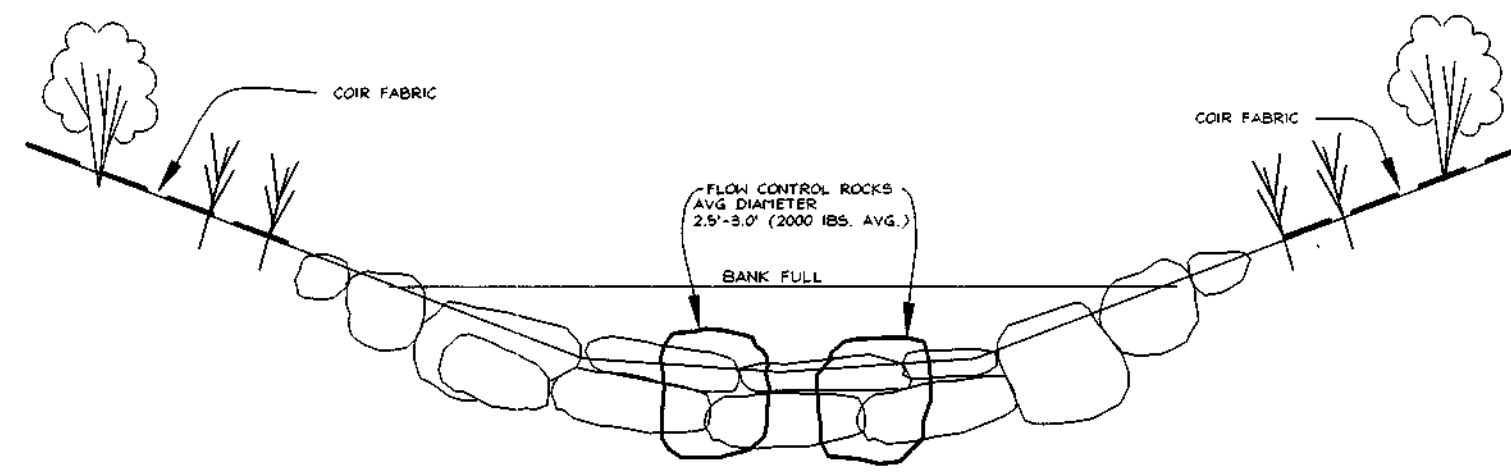
The work should consist of installing a temporary pump around and supporting measures to divert flow around in-stream construction sites.

IMPLEMENTATION SEQUENCE

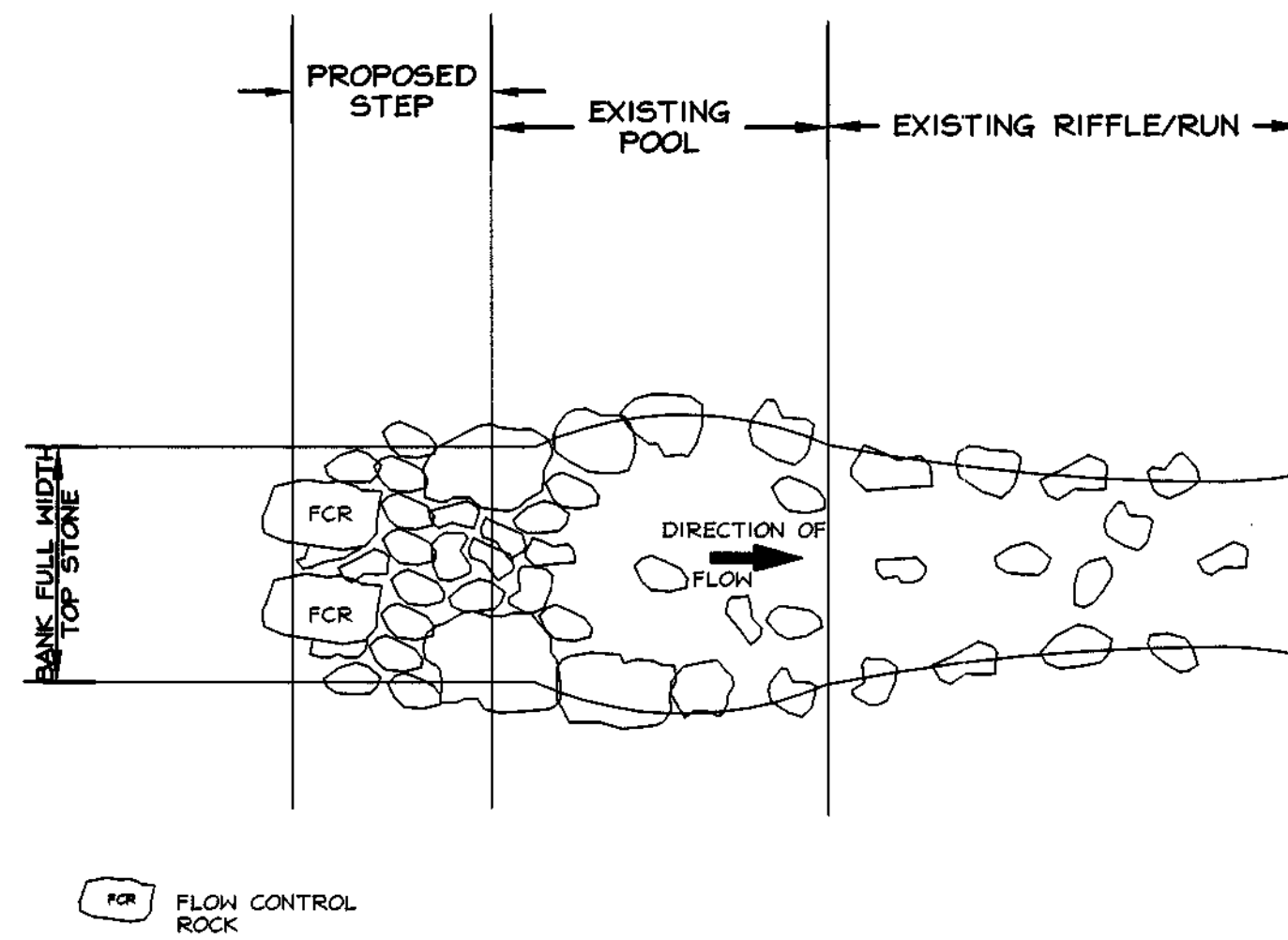
Sediment control measures, pump-around practices, and associated channel and bank construction should be completed in the following sequence (refer to Detail 1.2):

1. Construction activities including the installation of erosion and sediment control measures should not begin until all necessary easements and/or right-of-ways have been acquired. All existing utilities should be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and should repair the damage at his/her own expense to the county's or utility company's satisfaction.
2. The contractor should notify the Maryland Department of the Environment or WMA sediment control inspector at least 5 days before beginning construction. Additionally, the contractor should inform the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
3. The contractor should conduct a pre-construction meeting on site with the WMA sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sequence of construction. The contractor should stake out all limits of disturbance prior to the pre-construction meeting so they may be reviewed. The participants will also designate the contractor's staging areas and flag all trees within the limit of disturbance which will be removed for construction access. Trees should not be removed within the limit of disturbance without approval from the WMA or local authority.
4. Construction should not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor should stay within the limits of the disturbance as shown on the plans and minimize disturbance within the work area whenever possible.
5. Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor should begin work at the upstream section and proceed downstream beginning with the establishment of stabilized construction entrances. In some cases, work may begin downstream if appropriate. The sequence of construction must be followed unless the contractor gets written approval for deviations from the WMA or local authority. The contractor should only begin work in an area which can be completed by the end of the day including grading adjacent to the channel. At the end of each work day, the work area must be stabilized and the pump around removed from the channel. Work should not be conducted in the channel during rain events.
6. Sandbag dikes should be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow should be pumped around the work area. The pump should discharge onto a stable velocity dissipater made of riprap or sandbags.
7. Water from the work area should be pumped to a sediment filtering measure such as a dewatering basin, sediment bag, or other approved source. The measure should be located such that the water drains back into the channel below the downstream sandbag dike.
8. Traversing a channel reach with equipment within the work area where no work is proposed should be avoided. If equipment has to traverse such a reach for access to another area, then timber mats or similar measures should be used to minimize disturbance to the channel. Temporary stream crossings should be used only when necessary and only where noted on the plans or specified. (See Section 4, Stream Crossing, Maryland Guidelines to Water Way Construction.)
9. All stream restoration measures should be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical cross-sections. All grading must be stabilized at the end of each day with seed and mulch or seed and matting as specified on the plans.
10. After an area is completed and stabilized, the clean water dike should be removed. After the first sediment flush, a new clean water dike should be established upstream from the old sediment dike. Finally, upon establishment of a new sediment dike below the old one, the old sediment dike should be removed.
11. A pump around must be installed on any tributary or storm drain outfall which contributes baseflow to the work area. This should be accomplished by locating a sandbag dike at the downstream end of the tributary or storm drain outfall and pumping the stream flow around the work area. This water should discharge onto the same velocity dissipater used for the main stem pump around.
12. If a tributary is to be restored, construction should take place on the tributary before work on the main stem reaches the tributary confluence. Construction in the tributary, including pump around practices, should follow the same sequence as for the main stem of the river or stream. When construction on the tributary is completed, work on the main stem should resume. Water from the tributary should continue to be pumped around the work area in the main stem.
13. The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approves their removal.
14. After construction, all disturbed areas should be regraded and revegetated as per the planting plan.

**TEMPORARY IN-STREAM CONSTRUCTION MEASURES
MARYLAND DEPARTMENT OF THE ENVIRONMENT
WATERWAY CONSTRUCTION GUIDELINES
REVISED NOVEMBER 2000**



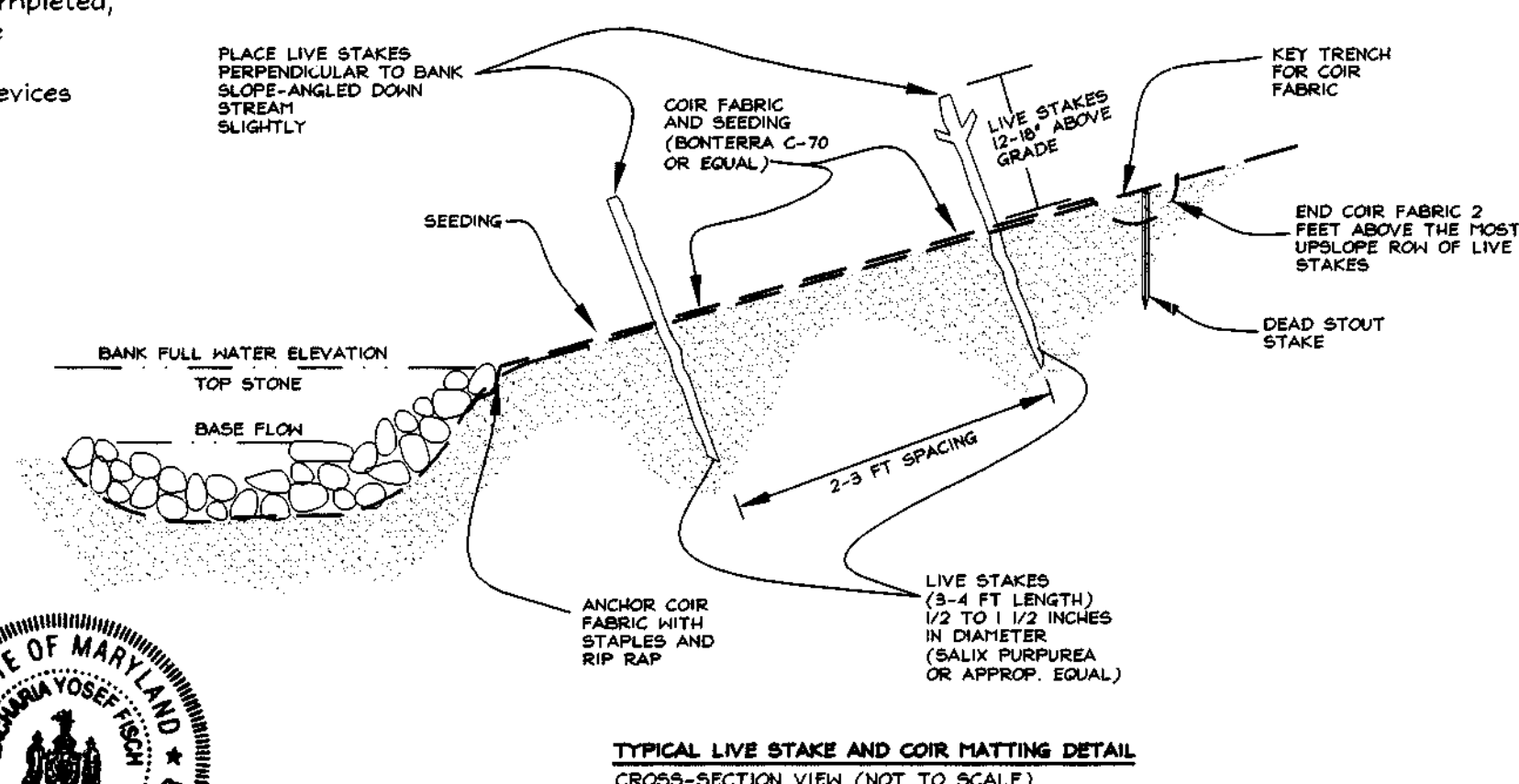
**TYPICAL STEP GRADING AND STONE PLACEMENT
CROSS SECTION (N.T.S.)**



**TYP. STEP-POOL GRADING AND
STONE PLACEMENT AREA I (N.T.S.)**

STEP POOL CONSTRUCTION AND STONE PLACEMENT

STEP-POOL STRUCTURE TO BE CONSTRUCTED WITH LARGE BOULDERS AND IRREGULAR SHAPED STONES. CONTRACTORS TO INSURE THAT BOULDERS/STONES ARE PROPERLY KEPT-IN WITH EACH UPSTREAM STONE PARTIALLY PLACED OVER TOP OF THE ADJACENT DOWNSTREAM STONE.



**TYPICAL LIVE STAKE AND COIR MATTING DETAIL
CROSS-SECTION VIEW (NOT TO SCALE)**

SCHEDULE OF RIPARIAN BUFFER PLANTINGS

BOTANICAL NAME	COMMON NAME	APPLICATION RATE	PERCENT OF THIX	REMARKS
LOLIUM MULTIFLORA	ANNUAL RYE GRASS	20	25	
AGROSTIS ALBA	RED TOP	4	40	
PANICUM CLANDESTINUM	DEER TONGUE GRASS	18	25	
BROMUS ARVENSIS	FIELD BROMEGRASS	9	10	WINTER SEED
OR	OR	OR	OR	OR
ANICUM RAMOSUM	BROWN TOP MILLET	9	10	SUMMER SEED

SPECIFICATIONS FOR LIVE STAKING

1. All cuttings shall be freshly cut from live woody plants of the species indicated, such as willow, alder, and shrub dogwood, during the dormant season.
2. Basal end of stake should be cut on an angle with the top cut square.
3. Prepare cuttings from dormant 1 in. to 2 in. diameter stock cut in 2 feet to 3 feet long stakes.
4. Keep cuttings moist at all times.
5. Install stakes with deadblow hammer, angled downstream, on 2ft.- 3.0 ft. centers.
6. Replace live stakes that split or become mushroomed.
7. Install stakes with buds pointing upwards.

CONSTRUCTION NOTES/SPECIFICATIONS

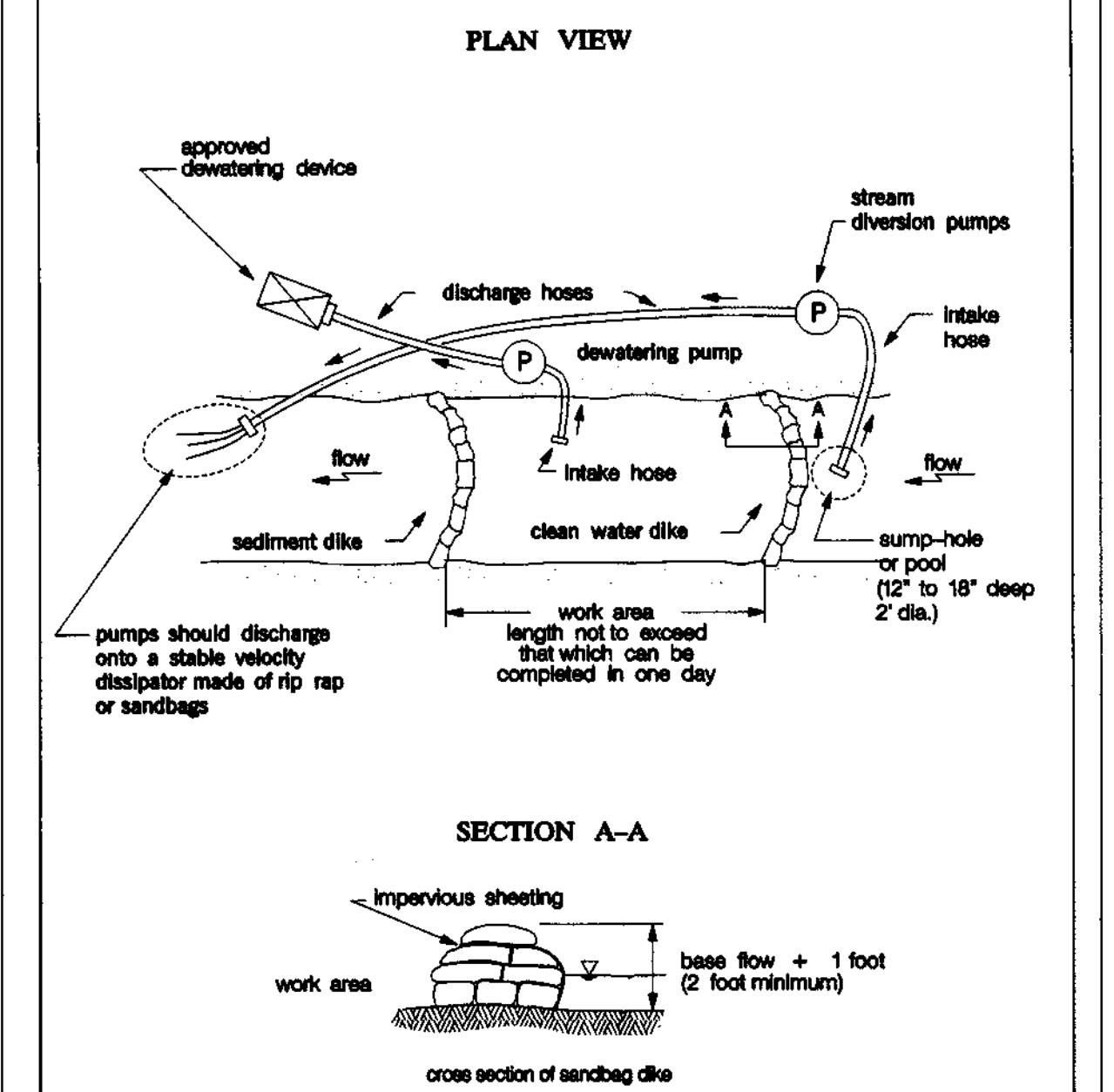
1. The contractor shall install appropriate sediment and erosion control devices before beginning project. All work to be performed at the direction of the stream restoration specialist and these drawings.
2. The foundation area shall be cleared of trees, stumps, roots, sod, loose rock, or other objectionable material.
3. The cross-section shall be excavated to the neat lines and grades as shown on the plans. Over-excavated areas shall be backfilled with moist soil compacted to the density of the surrounding material.
4. No abrupt deviations from the design grade or horizontal alignment shall be permitted unless authorized by the ERI Stream Restoration Specialist.
5. Filter, bedding, and rock rip-rap shall be placed to line and grade in the manner specified.
6. Construction operations shall be done in such a manner that erosion, air, and water pollution will be minimized and held within legal limits. The completed job shall present a workmanlike appearance. All disturbed areas shall be vegetated or otherwise protected against soil erosion.
7. Filter cloth shall be placed beneath rip-rap where indicated. The filter cloth shall consist of either woven or non-woven monofilament fiber and shall conform to the ASTM D 1777, ASTM D 1682, Having a thickness of 20-60 Mills, and a grab strength of 90-120 LBS.
8. All boulders shall be selected Class III Rip-rap boulders, natural in color and pre-approved by the Stream Restoration Specialist.
9. 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.
10. The rock or gravel shall conform to the specified grading limits when installed.
11. 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.
12. Stone and boulders for the rip-rap may be placed by equipment. It shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. 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. Exact placement will be required as directed by the ERI Stream Specialist in the field.
13. The stone shall be placed so that it blends in with the existing grade. 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.

BEST MANAGEMENT PRACTICES

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

1. NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR 100 YEAR FLOODPLAIN.
2. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOOD PLAIN.
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 RYE GRASS (LOLIUM MULTIFLORUM)
MILLET (SETARIA ITALICA)
BARLEY (HORDEUM SPECIES)
OATS (ULIOLA SPP.)
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 SEEDING 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 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.

**Maryland's Guidelines To Waterway Construction
DETAIL 1.2: PUMP-AROUND PRACTICE**



ENGINEERS CERTIFICATE

I HEREBY 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.

Zacharia J. Fisch 10/3/01
SIGNATURE OF ENGINEER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Robert M. Dandy 10/23/01
Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 10/23/01
Chief, Development Engineering Division Date

EXPLORATION RESEARCH, INC.
ENVIRONMENTAL CONSULTANTS
8218 FOREST STREET
ELLCOTT CITY, MARYLAND 21043
TEL: (410) 750-1150 FAX: (410) 750-7550

Zacharia J. Fisch 10/3/01
SIGNATURE OF DEVELOPER DATE

DEVELOPER'S CERTIFICATE

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

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

[Signature] 10/12/01
USDA-NATIONAL RESOURCES CONSERVATION SERVICE DATE

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

[Signature] 10/17/01
HOWARD SOIL CONSERVATION DISTRICT DATE

FSH Associates
Engineers Planners Surveyors
8318 Forest Street Ellicott City, MD 21043
Tel: 410-750-2251 Fax: 410-750-7350
E-mail: FSHAssociates@gs.com

DESIGN	DRN. DH	CHK. ZF	DATE	REVISION	BY	APP'R.

PREPARED FOR:
EMT SEVEN LLC
Greenbaum & Rose Associates, Inc.
Suite 410, Woodholme Center
1829 Reisterstown Road
Baltimore, MD, 21208
Phone: 410-484-8400
Attn: Mark Bennett or Charlie O'Donovan

CULVERT REMOVAL / STREAM STABILIZATION & SEDIMENT CONTROL

THE ENCLAVE AT ELLICOTT HILLS
NORTH RIDGE ROAD

ELECTION DISTRICT No. 2

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
NO SCALE	POR, R-ED, R-20	00050
DATE	TAX MAP - GRID	SHEET
9/26/01	17-17,18,24	26 OF 26