

National Park Seminary - Sewer line repair

(HPC Case # 36/01-10A)

National Park Seminary Historic District



HISTORIC PRESERVATION COMMISSION


Isiah Leggett
County Executive

Leslie Miles
Chairperson

Date: July 25, 2012

MEMORANDUM

TO: Diane R. Schwartz Jones, Director
Department of Permitting Services

FROM: Josh Silver, Senior Planner 
Historic Preservation Section
Maryland-National Capital Park & Planning Commission

SUBJECT: Historic Area Work Permit #542916, sewer line repair

The Montgomery County Historic Preservation Commission (HPC) has reviewed the attached application for a Historic Area Work Permit (HAWP). This application was **approved with conditions** at the July 28, 2010 meeting

1. *The Applicant must comply with any conditions set forth by the Maryland Historical Trust Easement Committee.*
2. *The Applicant must comply with any conditions set forth by the M-NCPPC Environmental Planning Division.*

The HPC staff has reviewed and stamped the attached construction drawings.

THE BUILDING PERMIT FOR THIS PROJECT SHALL BE ISSUED CONDITIONAL UPON ADHERENCE TO THE ABOVE APPROVED HAWP CONDITIONS AND MAY REQUIRE APPROVAL BY DPS OR ANOTHER LOCAL OFFICE BEFORE WORK CAN BEGIN.

Applicant: Washington Suburban Sanitary Commission (WSSC)

Address: WSSC (National Park Seminary Historic District)

This HAWP approval is subject to the general condition that the applicant will obtain all other applicable Montgomery County or local government agency permits. After the issuance of these permits, the applicant must contact this Historic Preservation Office if any changes to the approved plan are made. Once the work is complete the applicant will contact the staff person assigned to this application at 301-563-3400 or joshua.silver@mncppc-mc.org to schedule a follow-up site visit.





DPS-88

HISTORIC PRESERVATION COMMISSION
301/563-3400

APPLICATION FOR HISTORIC AREA WORK PERMIT

Project Owner: WSSC - Ed Carpenetti
Contact Person: _____
Daytime Phone No.: (301) 206-7081

Tax Account No.: 03532114
Name of Property Owner: NATIONAL PARK SEMINARY LLC Daytime Phone No.: _____
Address: 145 E. BADGER RD STE #200 MADISON, WI 53713-2708
Street Number City State Zip Code
Contractor: Angler Environmental Phone No.: 703-393-2434
Contractor Registration No.: 033-08912
Agent for Project Owner: RK&K ENGINEERS - KRISTA GIGER Daytime Phone No.: (410) 462-9299

LOCATION OF BUILDING/PREMISE

House Number: _____ Street: LINDEN LA
Town/City: SIWER SPRING Nearest Cross Street: I-495
Lot: _____ Block: _____ Subdivision: _____
Liber: _____ Folio: _____ Parcel: 5

PART ONE: TYPE OF PERMIT ACTION AND USE

1A. CHECK ALL APPLICABLE:

- Construct Extend Alter/Renovate
 Move Install Wreck/Ram
 Revisions Repair Revocable

CHECK ALL APPLICABLE:

- A/C Stab Room Addition Porch Deck Shed
 Solar Fireplace Woodburning Stove Single Family
 Fence/Wall (complete Section 4) Other: Stream Channel

1B. Construction cost estimator: \$ 200,000

1C. If this is a revision of a previously approved active permit, see Permit # _____

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/AMENDMENTS

2A. Type of sewage disposal: 01 WSSC 02 Septic 03 Other: None
2B. Type of water supply: 01 WSSC 02 Well 03 Other: None

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height _____ feet _____ inches
3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:
 On party line/property line Entirely on land of owner On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

KW/Julia _____ 7/16/10
Signature of owner or authorized agent Date
Approved: [Signature] Historic Preservation Commission
Disapproved: _____ Signature: _____ Date: 7/29/12
Application/Permit No.: 5429116 Date Filed: 7/17/10 Date Issued: _____

Edk 6/21/09

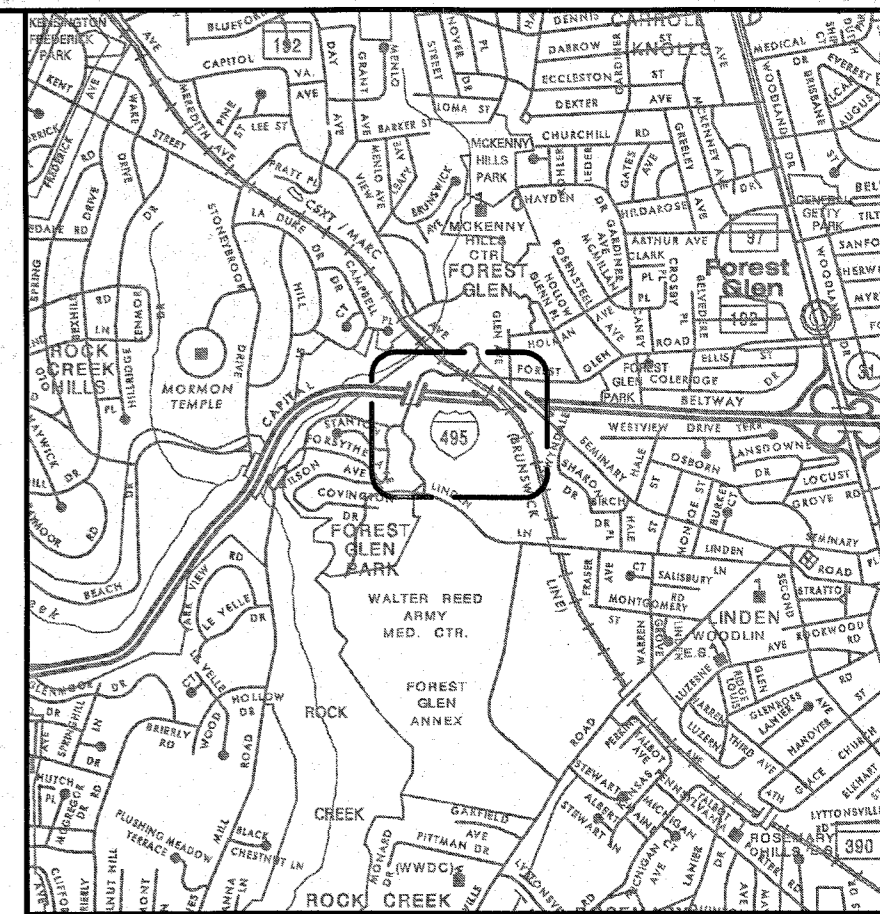
SEE REVERSE SIDE FOR INSTRUCTIONS

5

FOREST GLEN PARK STREAM CHANNEL REHABILITATION

WSSC CONTRACT NO.: CI 5071 B10

ARMORING OF MH 05027029U, SS 05027031S, SS 05027030S AND SS 05027040S



VICINITY MAP
SCALE 1" = 2,000'
Montgomery CO. MAP PAGE 1 GRID 1

FOR LOCATION OF UTILITIES
CALL 1-800-257-7777
OR LOG ON TO: <http://www.missutility.net/itcs/>
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY

DATE	REVISIONS

PERMIT REQUIREMENTS	
TREE	NOT REQ'D
NON TIDAL WETLANDS/WATERWAYS	REQ'D
M.N.C.P.&P.C.	REQ'D
FEDERAL AID	NOT REQ'D
STATE HWY. ADM.	NOT REQ'D
STATE BD. HEALTH	NOT REQ'D
MONTGOMERY CO.	NOT REQ'D
SED. CONTROL	REQ'D
P.G.CO.D.P.W.&T.	NOT REQ'D
TOWN NOTIFICATION	

AS BUILT DATA	
CONTRACT MANAGER	
CONTRACTOR	
INSPECTOR	
L & G	
DATE STARTED	
DATE COMPLETED	
TYPE PIPE W.	
TYPE MANHOLES	
DATE FINALED	
FINALED BY	

DRAWING INDEX	
See index to left	Description
1. thru 7.	Plans/Profiles/Details
E.S.1. THRU 13.	Sediment Control Details

INFRASTRUCTURE SYSTEMS GROUP			
DATE		GROUP LEADER	
CONTRACTS UNIT			
DATE		UNIT COORDINATOR	
DR.	CK.	ADEQUATE SURVEY	
WATER	SEWER	ON PROP. R/W REQ'D	
JOB NO.		OFF PROP. R/W REQ'D	
		OTHER UTILITIES	

CONTRACT		
JUNE 2012		Y
212 NW 03	NO.	1
	OF	17

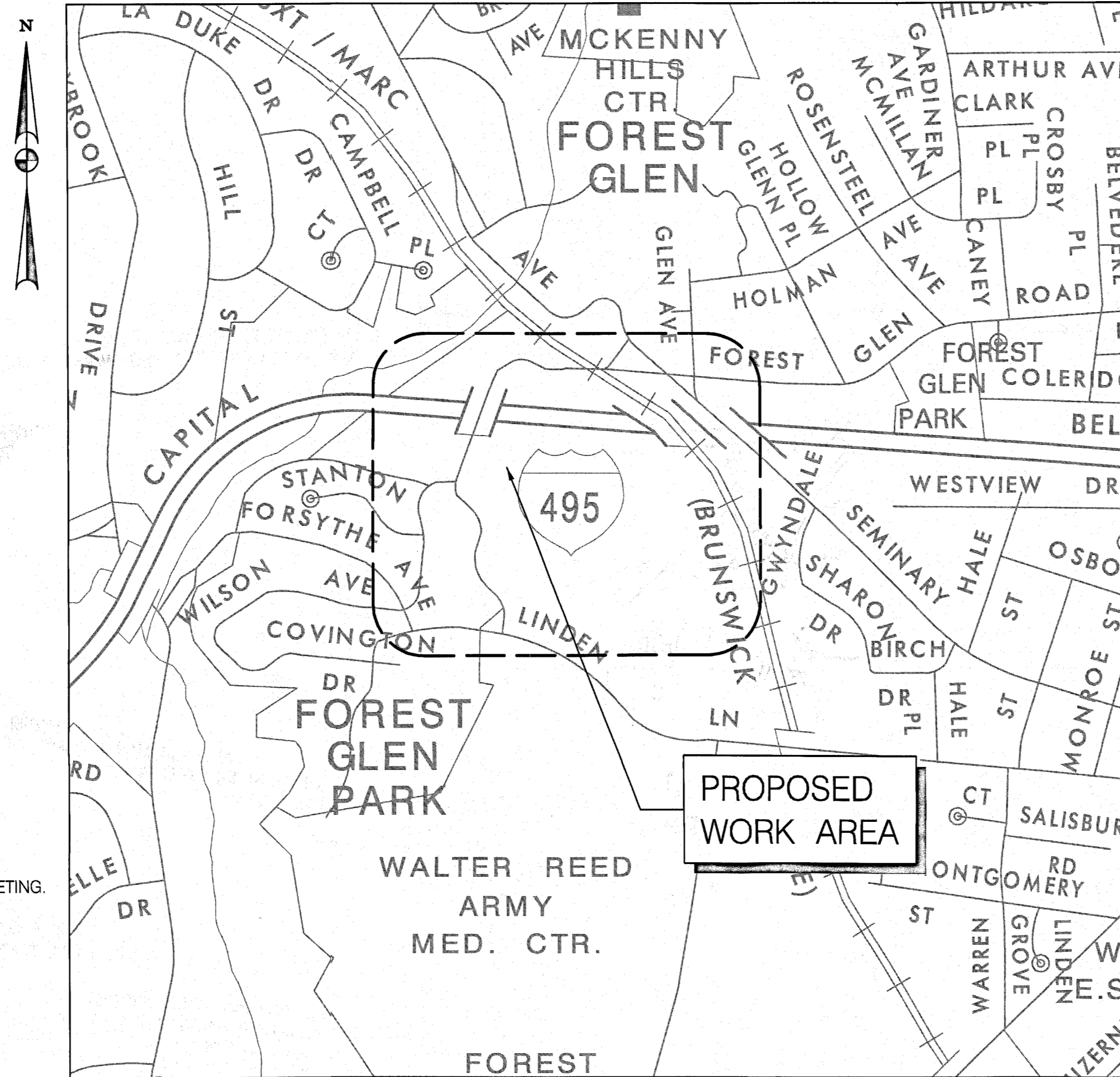
GENERAL NOTES

- CONTRACTOR SHALL NOTIFY MISS UTILITY AT LEAST FORTY EIGHT (48) HOURS IN ADVANCE OF ANY WORK IN THIS AREA, SO APPROPRIATE MARKING OF EXISTING UTILITIES CAN BE MADE.
- CONTRACTOR SHALL NOTIFY CUSTOMER CARE NORTH GROUP OF WSSC, CHARLES WEEDON, AT (301) 206-7017 AT LEAST SEVEN (7) WORKING DAYS PRIOR TO START OF ANY WORK UNDER THIS CONTRACT.
- CONTACT MDE AT (410) 537-3510.
- CONTRACTOR SHALL NOT STOCKPILE MATERIALS OR EQUIPMENT WITHIN THE DRIPLINE OF ANY TREES.
- PROVIDE TREE TRUNK PROTECTION FOR ALL TREES WITHIN 15 FEET OF ANY WORK. SEE STANDARD DETAIL SC19.00.
- ROOT CUTTING AND BRANCH TRIMMING MUST BE SUPERVISED BY A CERTIFIED TREE CARE EXPERT.
- THIS DRAWING IS BASED ON WSSC'S 200-FOOT WATER AND SEWER REFERENCE MAPS, GEOGRAPHICAL INFORMATION SYSTEMS (GIS) ACQUIRED FROM THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION UNDER LEASE AGREEMENT # 1750-2008, AND EXISTING AS-BUILTS.
- CONTRACTOR SHALL INVESTIGATE THE EXISTING CONDITIONS OF ALL ABOVE AND UNDERGROUND UTILITIES AND STRUCTURE PRIOR TO CONSTRUCTION.
- PROVIDE PROPER STABILIZATION /SHORING TO PROTECT EXISTING STRUCTURES, UTILITIES, FENCES AND TREES IN CLOSE PROXIMITY TO EXCAVATION. ANY DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPAIRED AND REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO WSSC OR ITS CUSTOMERS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING STAGING AREA(S) AND MOBILIZATION OF EQUIPMENT AND MATERIALS TO AND FROM SUCH AREA AT NO ADDITIONAL COST TO WSSC. CONTRACTORS SHALL COORDINATE LOCATIONS OF STAGING AREA(S) WITH WSSC CONSTRUCTION MANAGER.
- PROVIDE TEMPORARY BY-PASS PUMPING TO MAINTAIN SEWER FLOW DURING CONSTRUCTION FOR SEWER REPLACEMENT.
- M-NCPPC FOREST CONSERVATION INSPECTOR MUST BE PRESENT AT PRE-CONSTRUCTION MEETING.

SEDIMENT CONTROL NOTES

- CONTRACTOR SHALL CONTACT WSSC ENVIRONMENTAL GROUP AT (310 206-8077) FORTY EIGHT (48) HOURS TO STARTING ANY WORK UNDER THIS CONTRACT.
- ANY GROUND OR SURFACE WATER THAT IS PUMPED OR MOVED DURING THIS PROJECT SHALL BE DISCHARGED THROUGH A DEWATERING/FILTERING DEVICE APPROVED BY WSSC PRIOR TO BEING DISCHARGED OFFSITE.
- CONTRACTOR SHALL PROVIDE TEMPORARY STABILIZATION FOR ALL NON-PAVED DISTURBED AREAS AT THE END OF EACH BUSINESS DAY.
- ANY EXCAVATED OR STOCKPILED MATERIAL (E.G., SOIL, SAND OR GRAVEL) LEFT OVERNIGHT ON THE JOB SITE SHALL BE COVERED WITH AN IMPERMEABLE MATERIAL SEDIMENT CONTROLS SHALL BE PROVIDED FOR ALL OFFSITE STAGING/STACKPILE AREAS.
- PAVED AREAS MUST BE KEPT IN BROOM SWEEP CONDITION AT ALL TIMES.

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SCALE: 1 INCH = 500 FEET

INDEX OF SHEETS

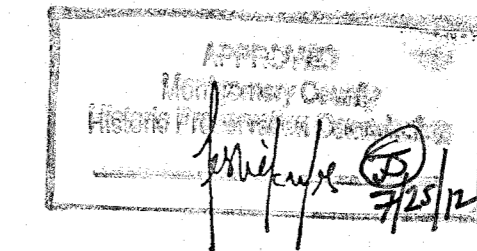
Title Sheet	CV-1	1 of 17
Geometry Plan	GE-1	2 of 17
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Stream Cross Sections	CS-2	5 of 17
Stream Plan	SR-1	6 of 17
Stream Details	SR-2	7 of 17
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E&S Plan	ES-2	9 of 17
E&S Plan	ES-3	10 of 17
E&S Notes	ES-4	11 of 17
E&S Notes	ES-5	12 of 17
E&S Details	ES-6	13 of 17
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Planting Plan	LS-2	15 of 17
Planting Plan	LS-3	16 of 17
Planting Details & Schedules	LS-4	17 of 17

LEGEND

- 275 — WATERS OF THE US
- 275 — EX. CONTOURS
- 275 — PROP. CONTOURS
- - - SAN - - - EX. SANITARY LINE
- - - W - - - EX. WATER LINE
- ⊗ SANITARY MANHOLE
- ⊙ SURVEY CONTROL POINT
- △ TREE
- ▭ PROPOSED CHANNEL AREA

ANTICIPATED LIMITS OF SEWER LINING

SS 05027033S	**OPTIONAL**
SS 05027032S	SS 05027029S
SS 05027031S	SS 05027028S
SS 05027030S	
SS 05027040S	



SEQUENCE OF CONSTRUCTION

- CONTACT THE MDE WATER MANAGEMENT ADMINISTRATION INSPECTOR AT LEAST 7 DAYS PRIOR TO BEGINNING WORK AT (410) 537-3510 TO ARRANGE A PRE-CONSTRUCTION MEETING.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE, ACCESS ROAD, TEMPORARY ACCESS BRIDGE AND SILT FENCE AROUND STAGING/STOCKPILE AREA. THE TEMPORARY ACCESS BRIDGE MUST BE INSTALLED WITHOUT DISTURBED THE STREAM BED THAT IT WILL CROSS.
- WSSC WILL UTILIZE THE ACCESS ROAD TO TV ALL SANITARY LINES FROM MH 05027034 M TO MH 05027028 M. AREAS INDICATED AS NO VEHICULAR ZONE (NVZ), AS SHOWN ON SHEETS ES1 AND ES2, ARE PROHIBITED FROM ANY VEHICULAR TRAFFIC. ONLY FOOT TRAFFIC IS ALLOWED WITH NO EARTH DISTURBANCE. THIS WORK IS TO DETERMINE THE EXISTANCE OF MH 05027031 TO MH 05027033 AND PROVIDE DIRECTION FOR CIP LINING EFFORTS LATER IN CONSTRUCTION. COMPLETE ALL TV WORK AS NEEDED.
- ONCE ALL VISUAL INSPECTIONS OF SANITARY LINES ARE COMPLETE, SANITARY LINING OPERATIONS ARE TO COMMENCE. ACCESS TO MANHOLES WITHIN NVZ IS LIMITED TO FOOT TRAFFIC WITH NO EARTH DISTURBANCE ONLY. ANY ACTIVITY THAT CREATES TURBIDITY WITHIN THE STREAM CHANNEL MUST BE PREVENTED. IF ACCESS ACROSS THE STREAM IS NECESSARY, A PUMP AROUND PRACTICE, AS SHOWN ON THESE PLANS, MUST BE USED TO MINIMIZE TRANSPORT OF SEDIMENTS. COMPLETE ALL LINING WORK.
- BEGIN REPAIR OF WATER LINE AT STATION BL 4+19. THE EXTENT OF REPAIR IS NOT KNOWN AND EXPLORATORY EXCAVATION WILL BE NEEDED. LOD IS SHOWN ON THE PLAN AS ESTIMATED TO BE NEEDED BASED ON SURFACE OBSERVATIONS OF POTABLE WATER SEEP. EXCAVATION WILL BE STABILIZED AT THE END OF EACH WORKING DAY. ADDITIONAL SEDIMENT CONTROL MEASURES MAY BE NEEDED AS THE EXTENT OF REPAIR IS REALIZED. COMPLETE REPAIR AND STABILIZE PER MDE STANDARDS AS SHOWN ON THESE PLANS.
- ALL INSTREAM STABILIZATION WORK IS TO BEGIN. REFER TO THE EROSION AND SEDIMENT CONTROL SEQUENCE FOR DETAILS ON MANNER OF WORK. ALL INSTREAM WORK MUST OCCUR IN DRY CONDITIONS WITH THE PUMP AROUND PRACTICE USED DURING ALL CONSTRUCTION ACTIVITY WITHIN THE CHANNEL'S BED AND BANKS. COMPLETE ALL INSTREAM WORK AS SHOWN ON THESE PLANS.
- PERMANENTLY STABILIZE ALL AREAS PER MDE SPECIFICATIONS. WITH PERMISSION FROM WSSC, REMOVE ALL SEDIMENT CONTROL MEASURES, SUCH AS SILT FENCE, ORANGE CONSTRUCTION FENCE, AND STABILIZED CONSTRUCTION ENTRANCE. MULCH USED FOR ACCESS ROAD MAY BE EVENLY SPREAD ON AREAS WITHIN LOD NOT INCLUDING THE STREAM CHANNEL.

WASHINGTON SUBURBAN SANITARY COMMISSION



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FOREST GLEN DISTRICT
WSSC SITE 5-11 STREAM CHANNEL REHABILITATION
UPSTREAM OF LINDEN LANE
PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

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JUNE 2012		Y
212 NW 03	NO.	1
	OF	17

FINAL FILMED

PLAN FILMED

RELEASED

RAWS ACQUIRED

SOIL BORINGS ORDERED

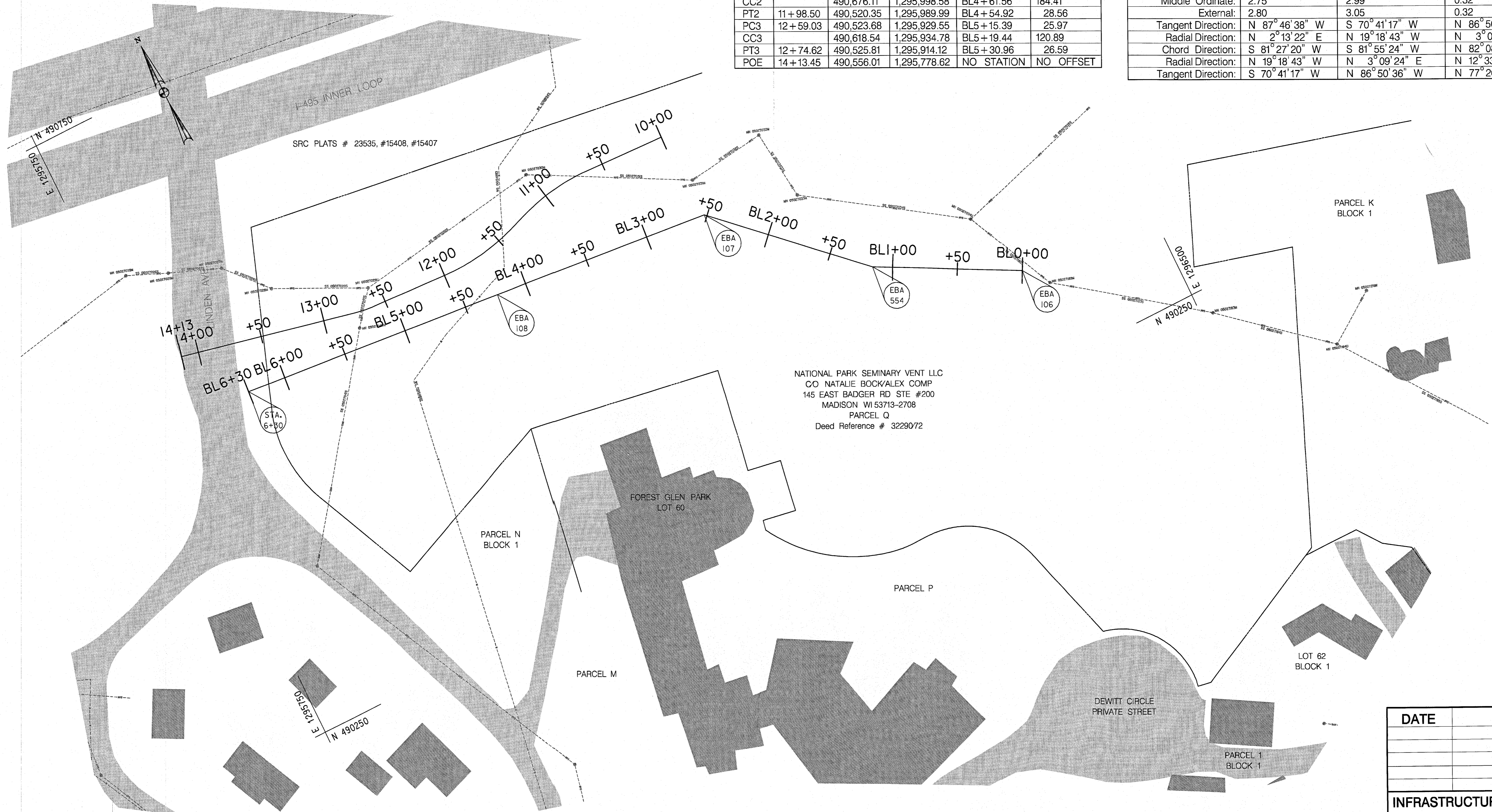
JOB AUTH.

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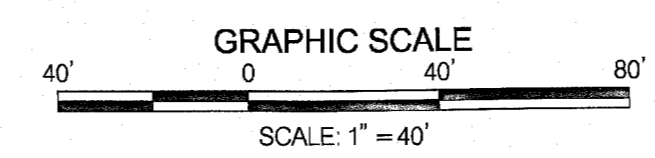
CNTRL PNT	STA.	NORTHING	EASTING	ELEV	BEARING
EBA 106	BL 0+00.00	490,324.4940	1,296,390.4946	250.94	N62° 19' 04.03" W
EBA 554	BL 1+15.61	490,378.2017	1,296,288.1193	246.97	N62° 19' 04.03" W
EBA 107	BL 2+252.26	490,472.1594	1,296,188.8983	244.31	N46° 33' 38.45" W
EBA 108	BL 4+23.62	490,488.8770	1,296,018.3519	243.69	N84° 24' 05.54" W
BL STA.6+30	BL 6+30.00	490,509.0106	1,295,812.9563	NA	N84° 24' 05.54" W

STATION	NORTHING	EASTING	BL STATION	OFFSET
POB	10+00.00	490,540.04	BL2+62.15	67.24
PC1	10+63.68	490,542.51	BL3+25.72	63.49
CC1		490,386.63	BL2+46.43	-112.28
			BL3+16.53	-92.24
PT1	11+22.31	490,533.85	BL3+82.24	49.24
PC2	11+37.32	490,528.89	BL3+95.86	42.93
CC2		490,676.11	BL4+61.56	184.41
PT2	11+98.50	490,520.35	BL4+54.92	28.56
PC3	12+59.03	490,523.68	BL5+15.39	25.97
CC3		490,618.54	BL5+19.44	120.89
PT3	12+74.62	490,525.81	BL5+30.96	26.59
POE	14+13.45	490,556.01	NO STATION	NO OFFSET

	CURVE ONE	CURVE TWO	CURVE THREE
Radius:	156.00	156.00	95.00
Delta:	21° 32' 04" Left	22° 28' 07" Right	9° 24' 16" Right
Degree of Curvature:	36° 43' 43"	36° 43' 43"	60° 18' 32"
Length:	58.63	61.17	15.59
Tangent:	29.67	30.99	7.81
Chord:	58.29	60.78	15.58
Middle Ordinate:	2.75	2.99	0.32
External:	2.80	3.05	0.32
Tangent Direction:	N 87° 46' 38" W	S 70° 41' 17" W	N 86° 50' 39" W
Radial Direction:	N 2° 13' 22" E	N 19° 18' 43" W	N 3° 09' 21" E
Chord Direction:	S 81° 27' 20" W	S 81° 55' 24" W	N 82° 08' 25" W
Radial Direction:	N 19° 18' 43" W	N 3° 09' 24" E	N 12° 33' 37" E
Tangent Direction:	S 70° 41' 17" W	N 86° 50' 36" W	N 77° 26' 23" W



NATIONAL PARK SEMINARY VENT LLC
 CO NATALIE BOCK/ALEX COMP
 145 EAST BADGER RD STE #200
 MADISON WI 53713-2708
 PARCEL Q
 Deed Reference # 3229072



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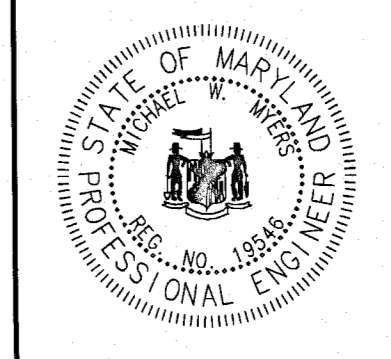
WASHINGTON SUBURBAN SANITARY COMMISSION



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PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO.: 19546
 EXPIRATION DATE: 2014-02-18



FOREST GLEN DISTRICT
WSSC SITE 5-11 STREAM CHANNEL REHABILITATION
 UPSTREAM OF LINDEN LANE
 PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

DATE		REVISIONS	
INFRASTRUCTURE SYSTEMS GROUP			
DATE		GROUP LEADER	
CONTRACTS UNIT			
DATE		UNIT COORDINATOR	
CONTRACT		CI 5071 B10	
JUNE 2012		NO.	2
212 NW 03		OF	17

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FINAL FILMED
 PLAN FILMED
 RELEASED
 RWIS ACQUIRED
 SOIL BORINGS ORDERED
 JOB AUTH.

FINAL FILMED

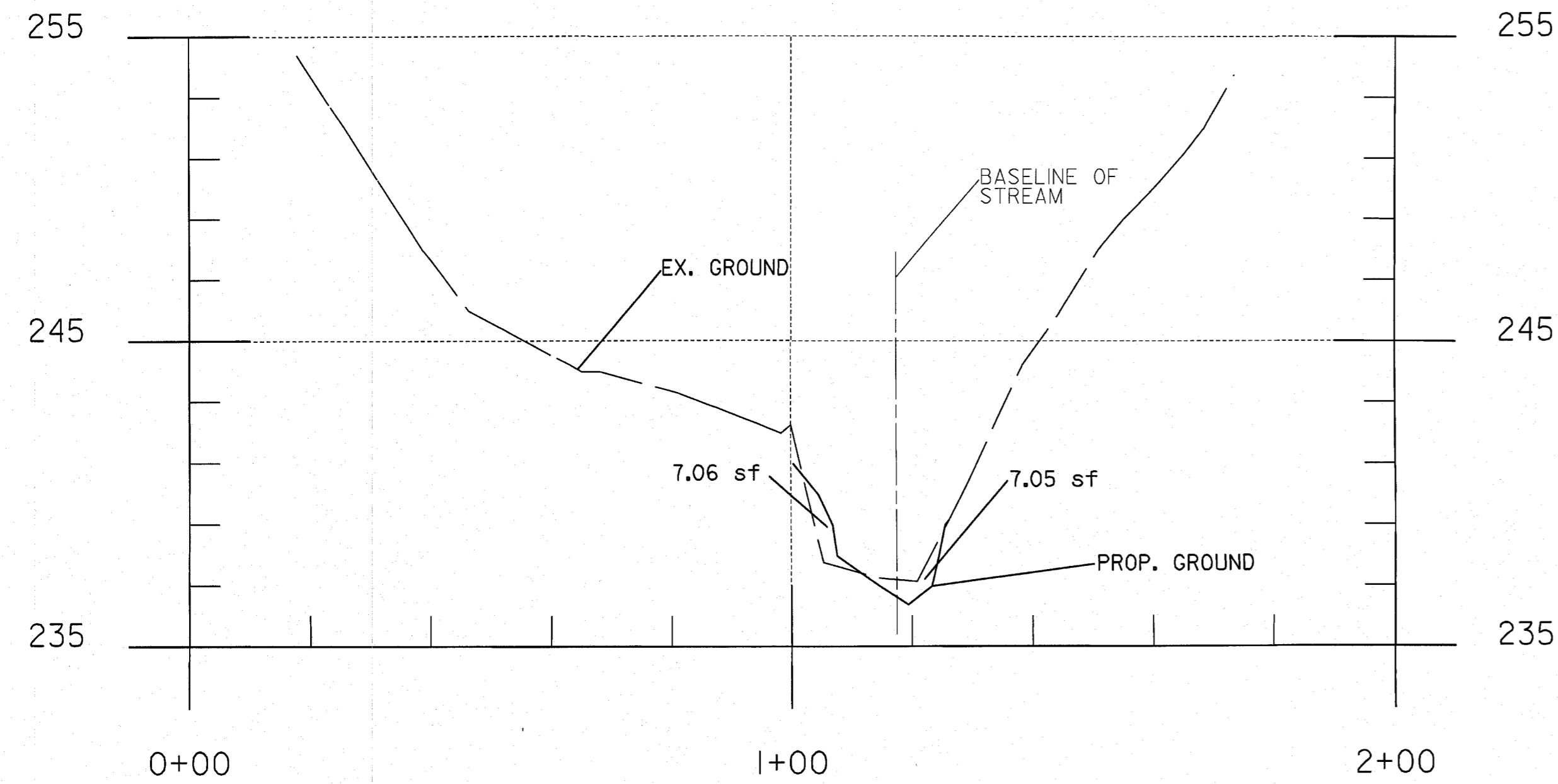
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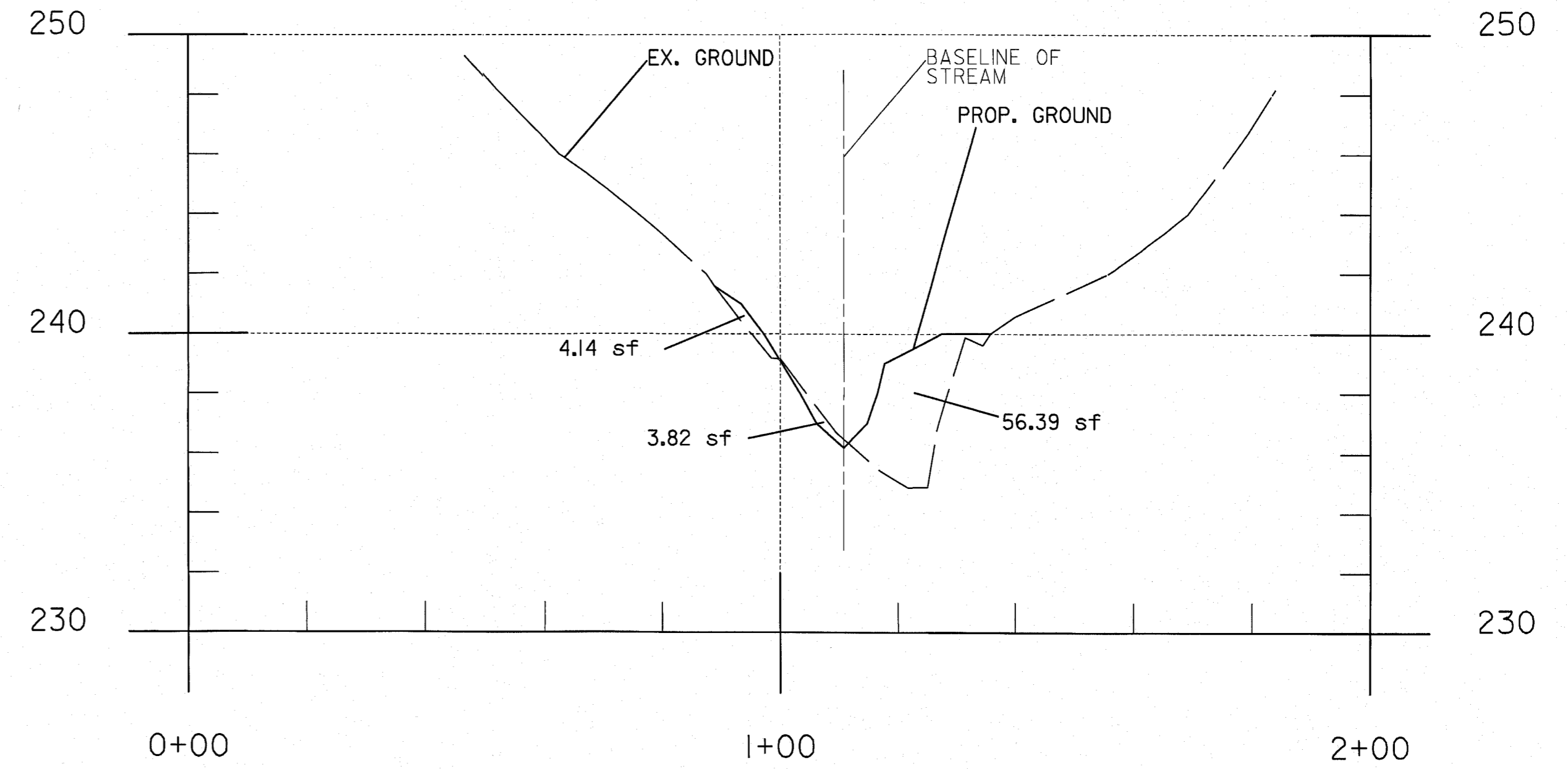
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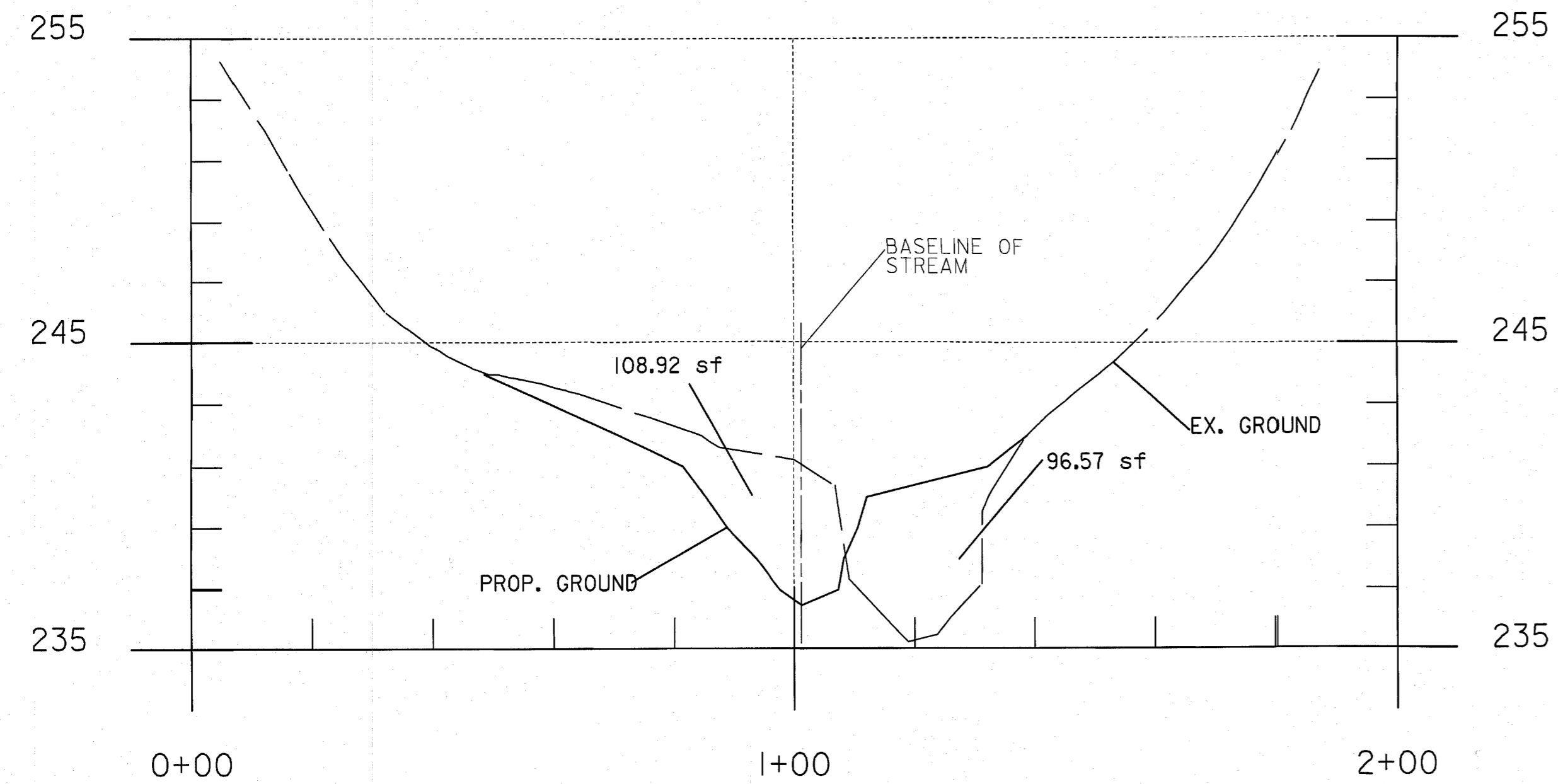
STA. 10 + 61.88

SCALE: 1" = 20' HORZ.
1" = 4' VERT.



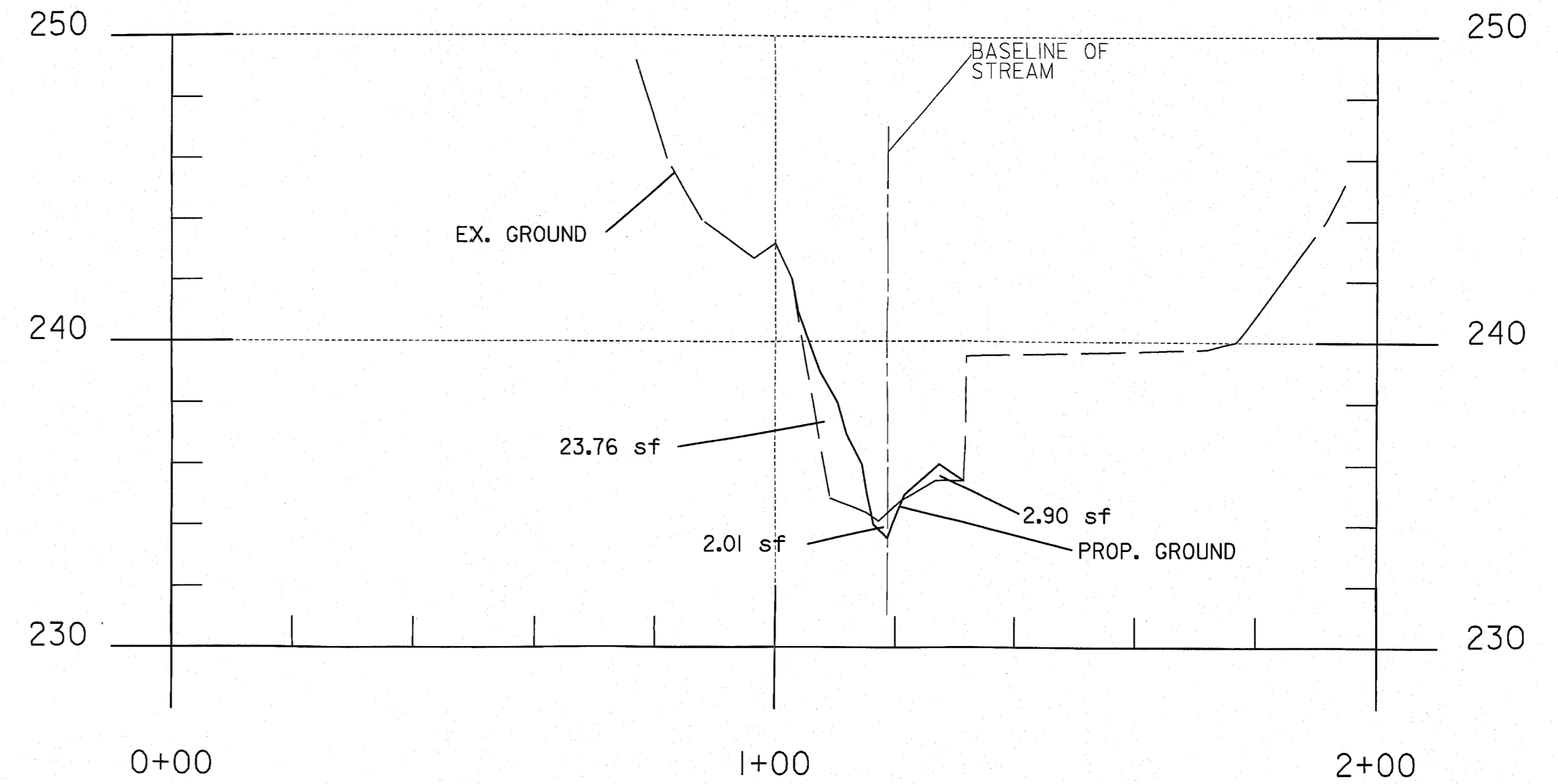
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STA. 10 + 97.31

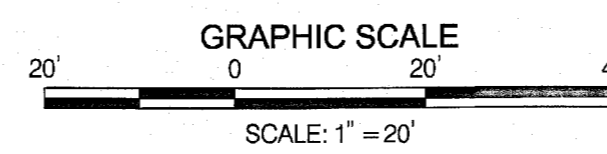
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1" = 4' VERT.



STA. 11 + 69.64

SCALE: 1" = 20' HORZ.
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RK&K
Rummel, Klepper & Kahl, LLP
61 MOSHER STREET | BALTIMORE, MD 21217
PH: (410) 728-2800 FAX: (410) 728-3160
www.rkk.com

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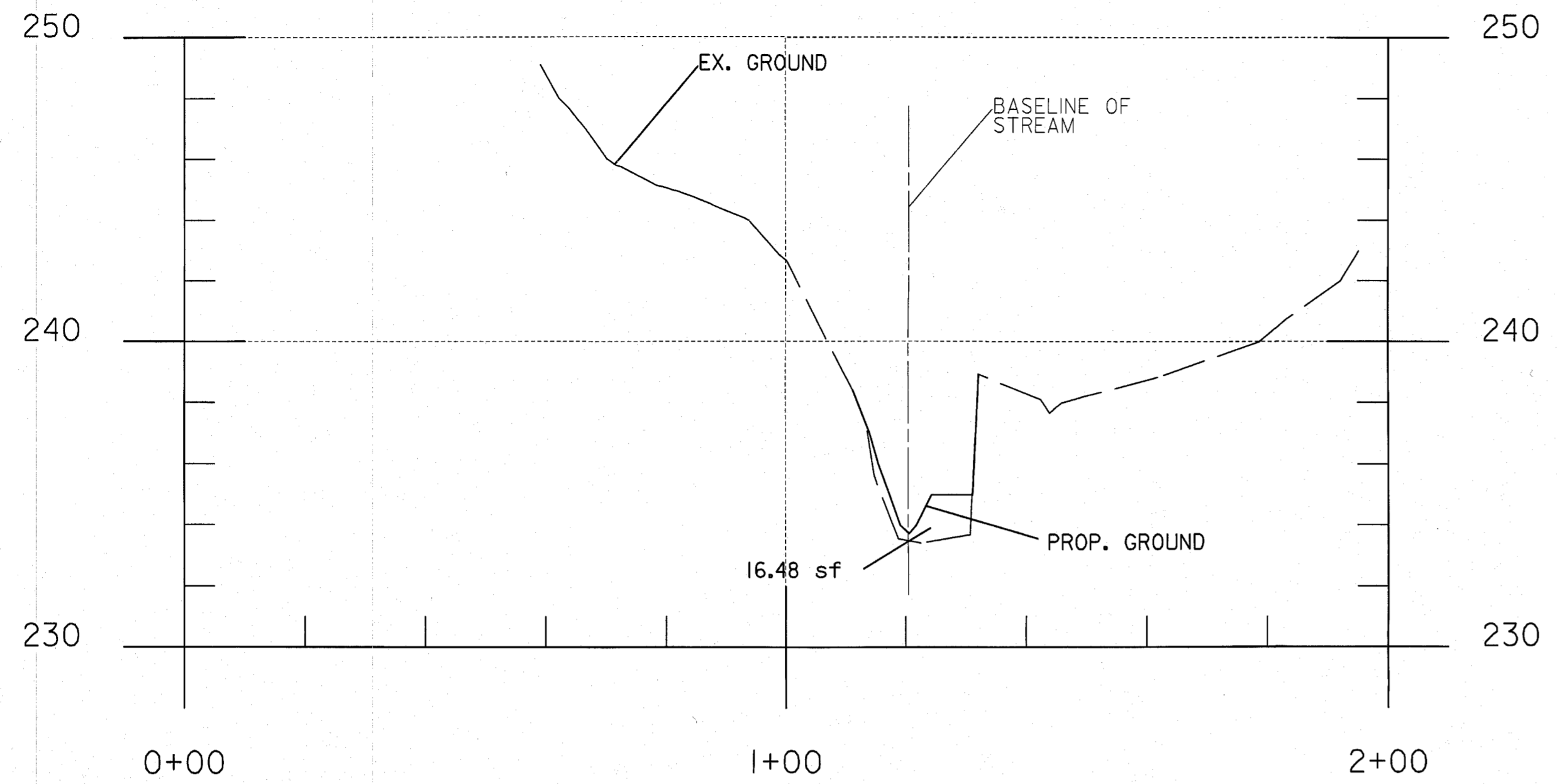
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RELEASED

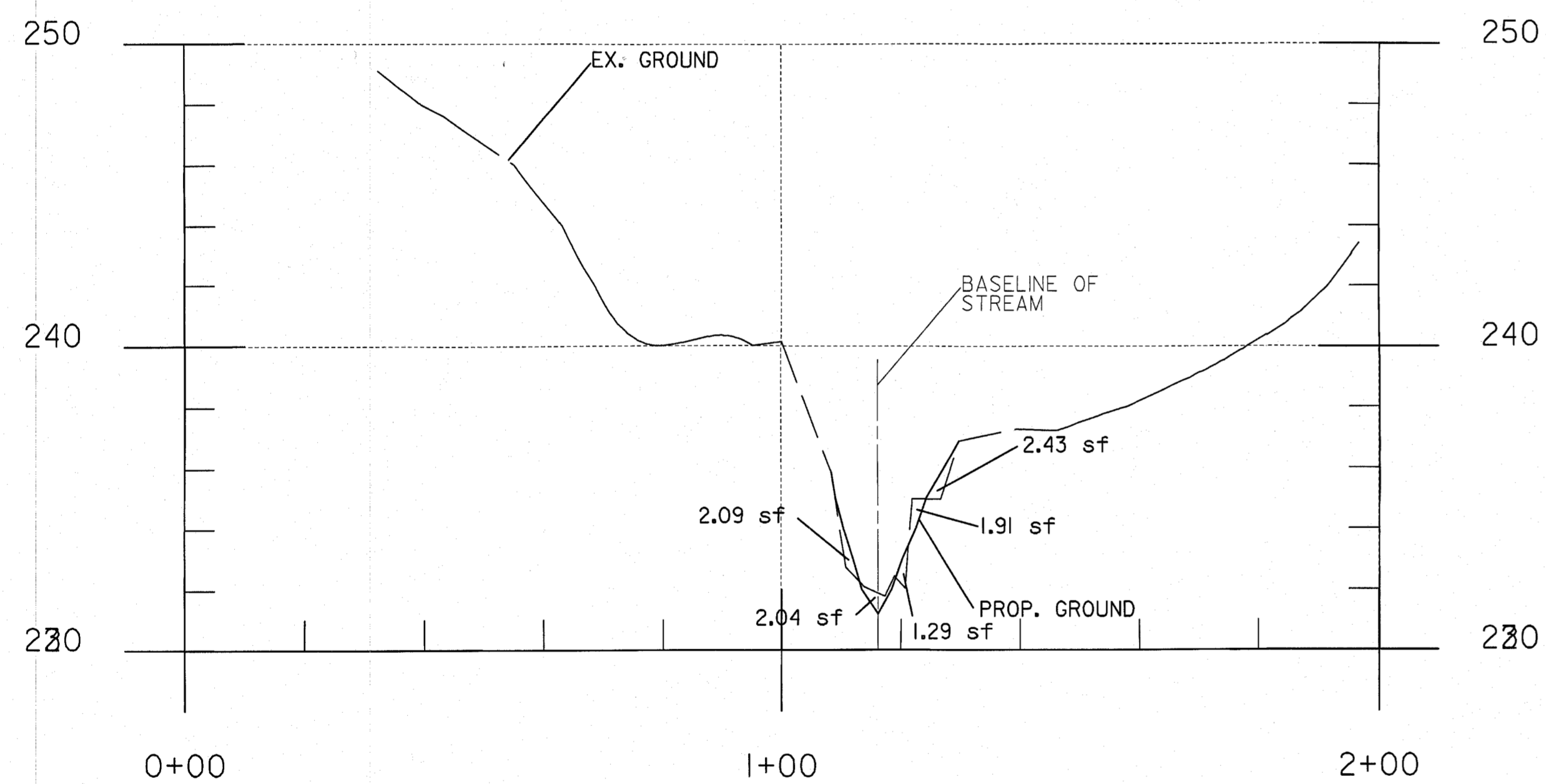
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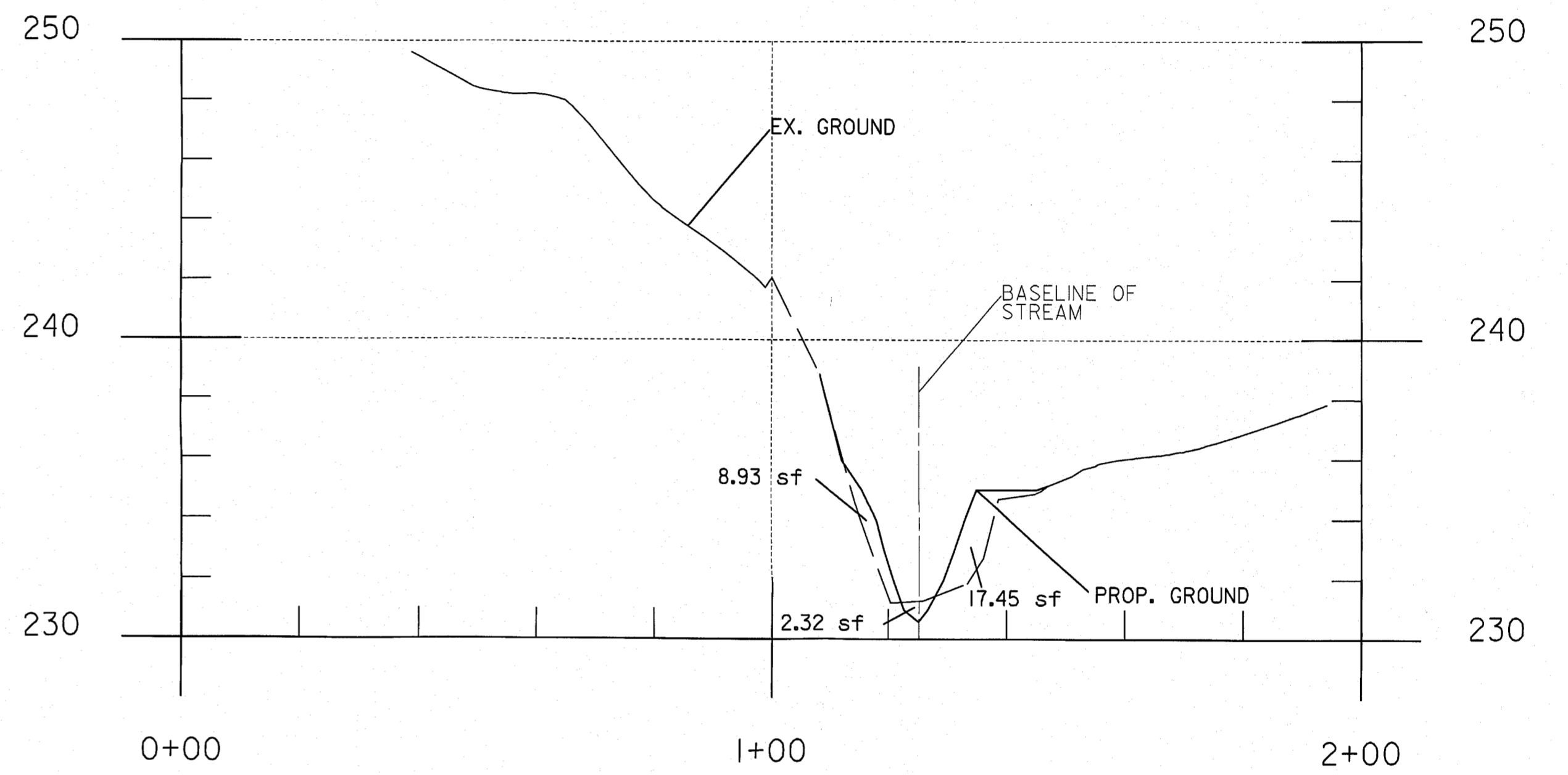
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 1" = 4' VERT.

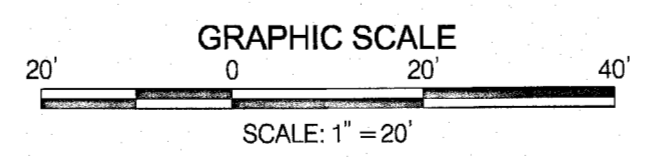


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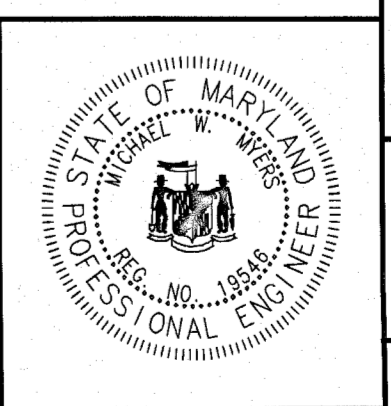
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RK&K
 Rummel, Klepper & Kahl, LLP
 81 MOSHER STREET | BALTIMORE, MD 21217
 PH: (410) 728-2000 FAX: (410) 728-3100
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com

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WSSC SITE 5-11 STREAM CHANNEL REHABILITATION
 UPSTREAM OF LINDEN LANE
 PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

CS-2	
DATE	REVISIONS
INFRASTRUCTURE SYSTEMS GROUP	
DATE	GROUP LEADER
CONTRACTS UNIT	
DATE	UNIT COORDINATOR
CONTRACT	CI 5071 B10
JUNE 2012	NO. 5
212 NW 03	OF 17

WASHINGTON SUBURBAN SANITARY COMMISSION



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JUNE 2012	NO. 5
212 NW 03	OF 17

FINAL FILMED

PLAN FILMED

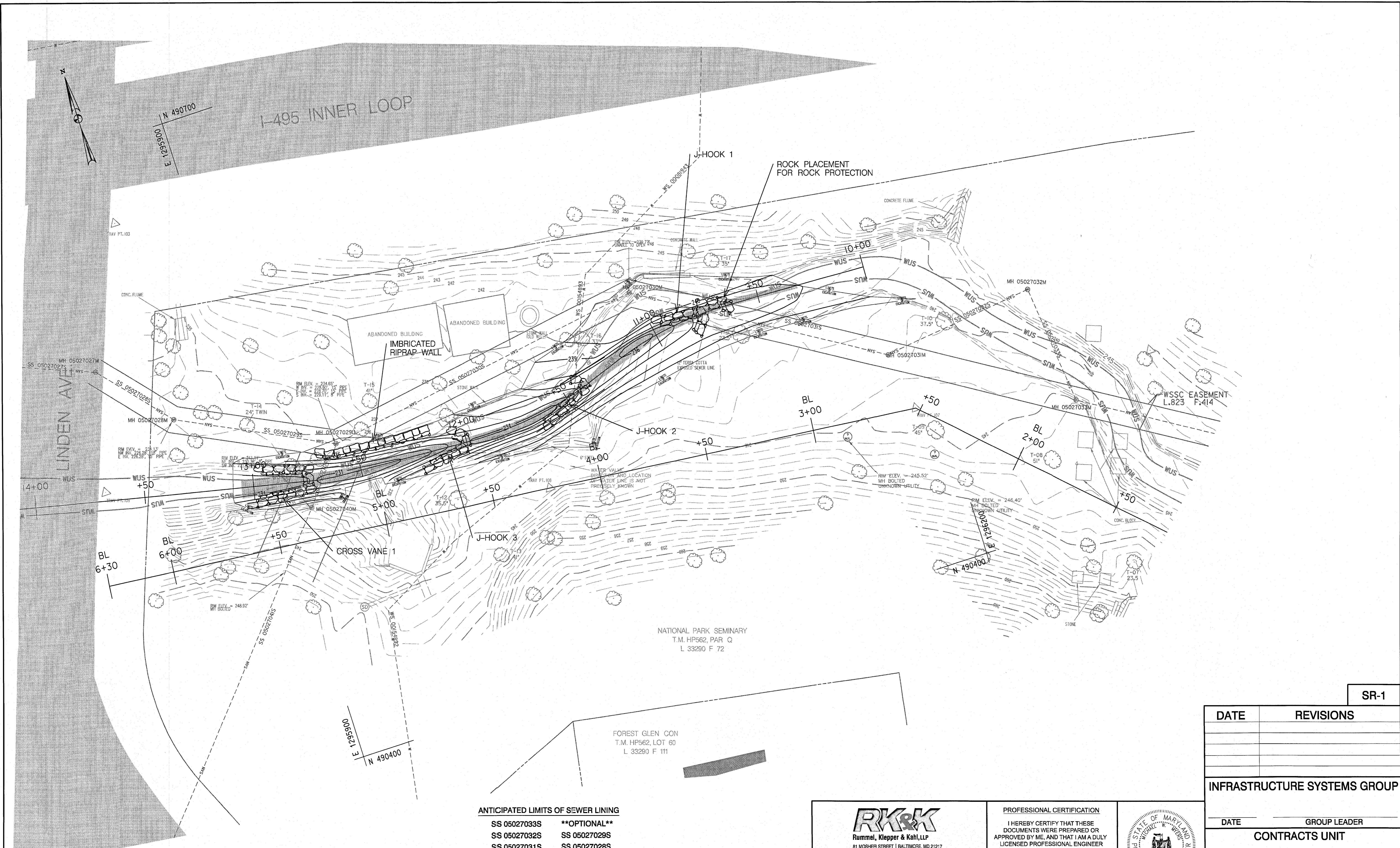
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RWS ACQUIRED

SOIL BORINGS ORDERED

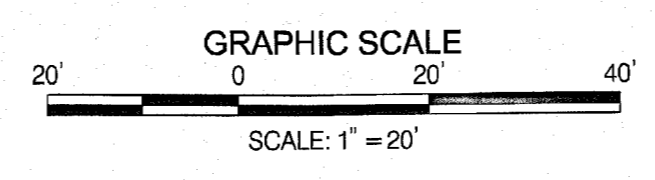
JOB AUTH.

JOB



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- ANTICIPATED LIMITS OF SEWER LINING**
- SS 05027033S ****OPTIONAL****
 - SS 05027032S SS 05027029S
 - SS 05027031S SS 05027028S
 - SS 05027030S
 - SS 05027040S



WASHINGTON SUBURBAN SANITARY COMMISSION

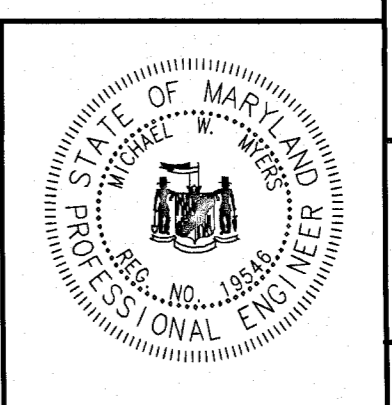


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LICENSE NO.: 19546
EXPIRATION DATE: 2014-02-18



**FOREST GLEN DISTRICT
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SR-1	
DATE	REVISIONS
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DATE	GROUP LEADER
CONTRACTS UNIT	
DATE	UNIT COORDINATOR
CONTRACT	CI 5071 B10
JUNE 2012	NO. 6
212 NW 03	OF 17

kgreer - Monday, June 18, 2012 AT 04:58 PM

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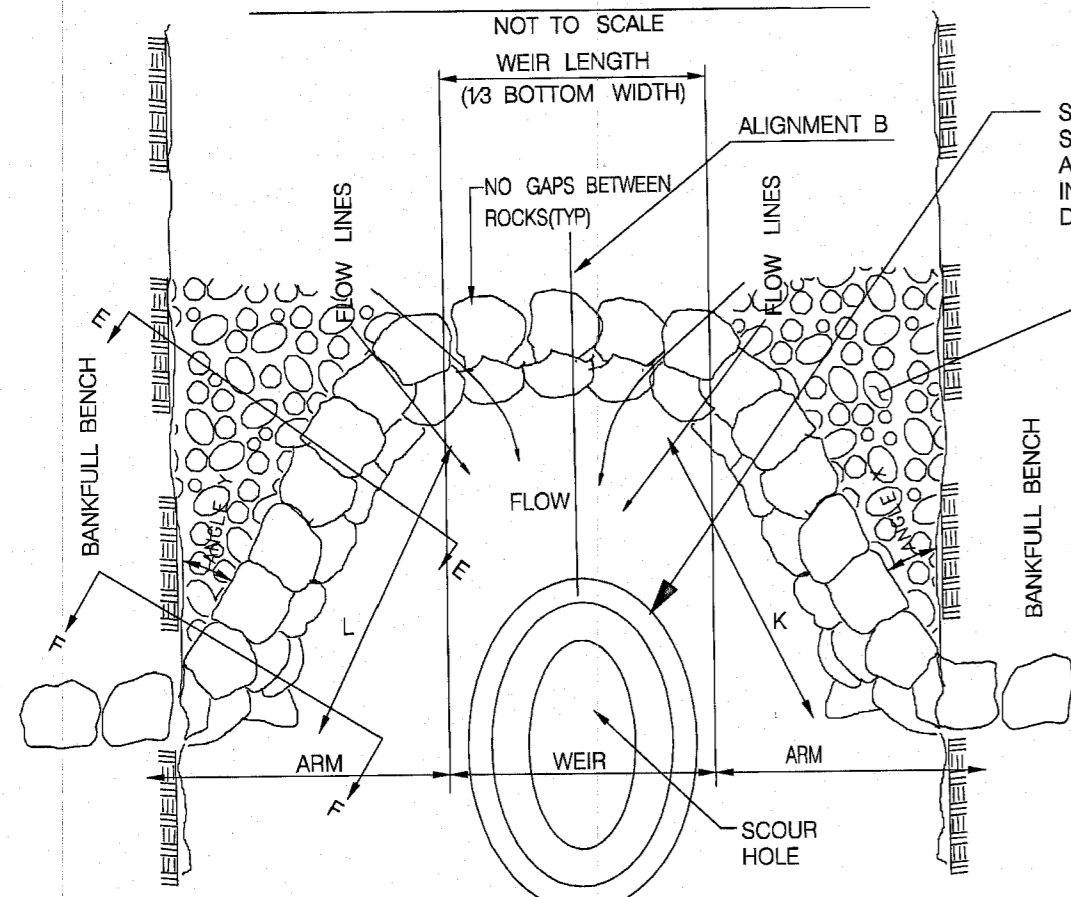


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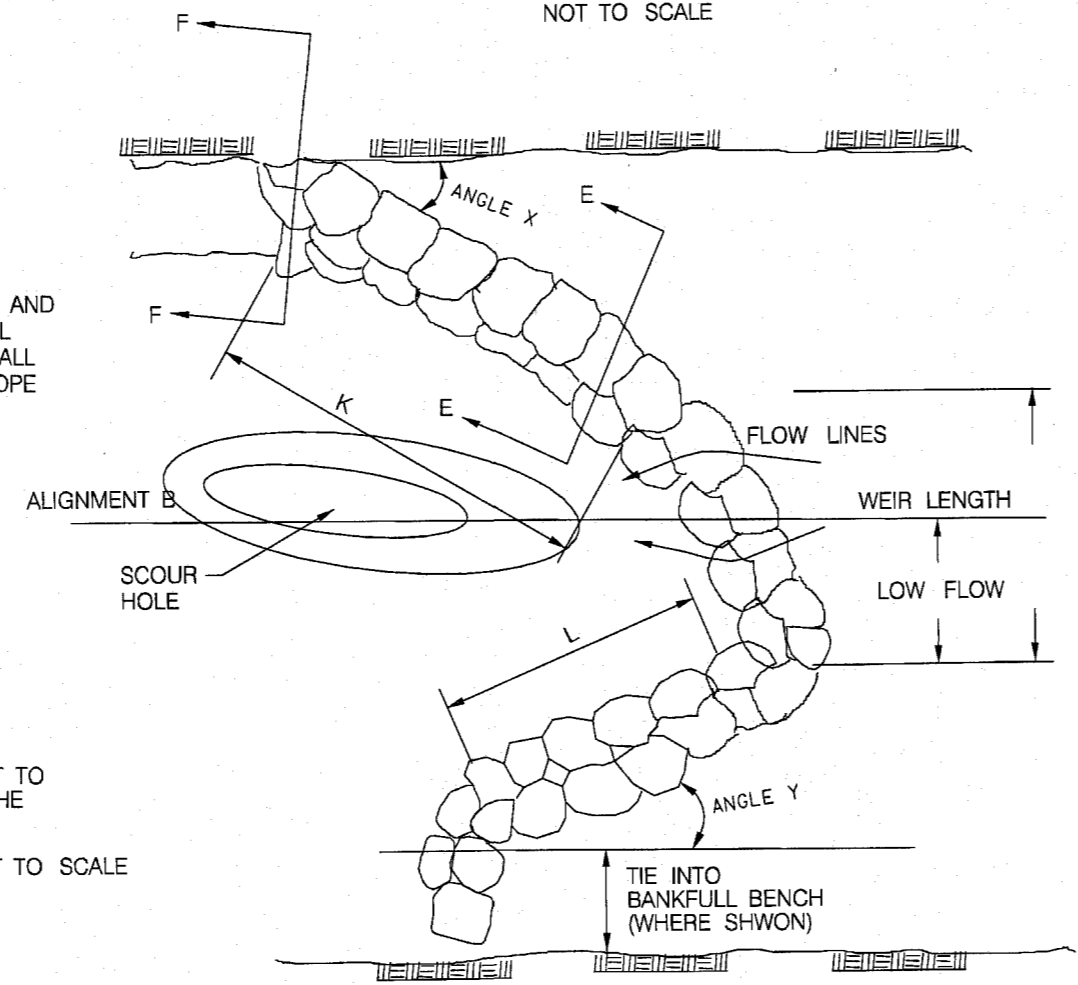
JUNE 2012	NO. 6
212 NW 03	OF 17

CROSS VANE STRUCTURE



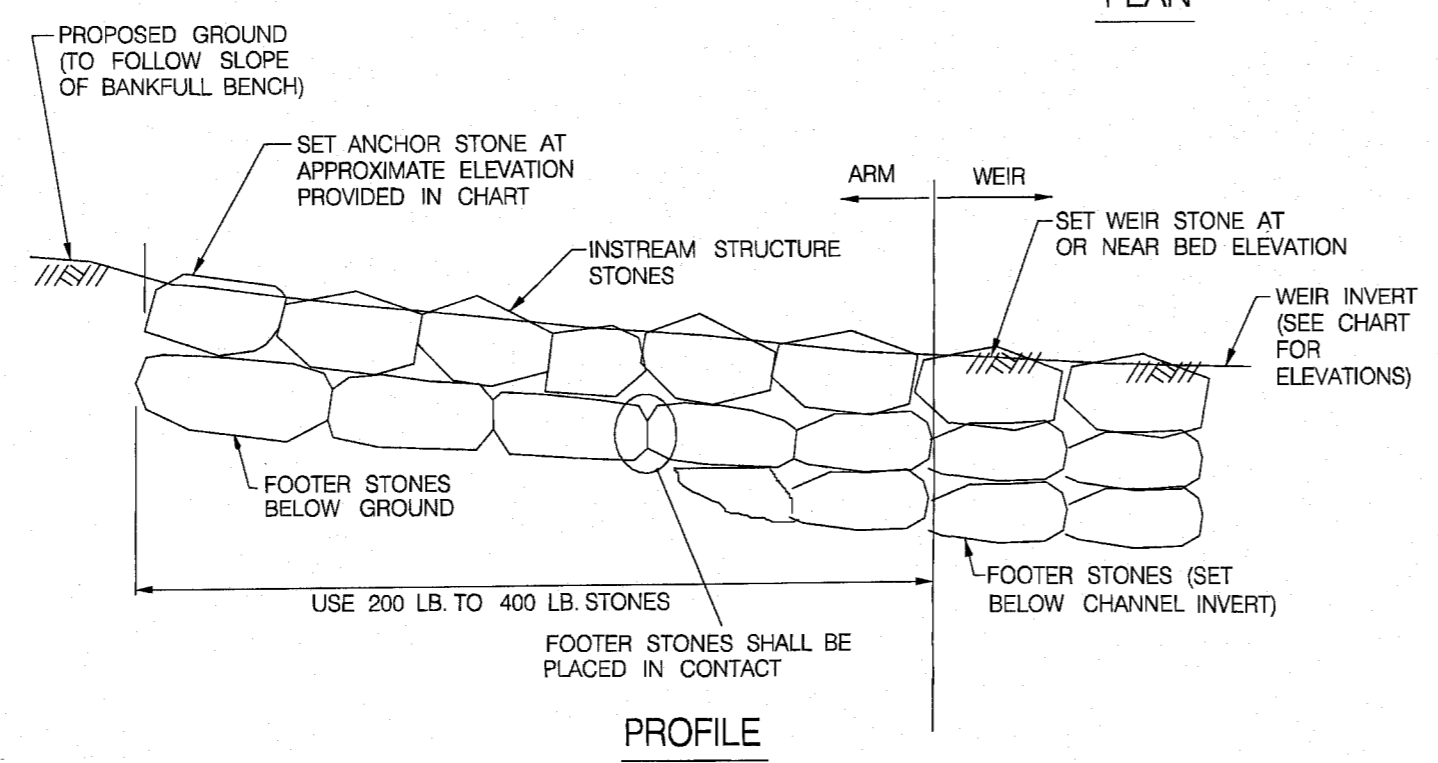
PLAN VIEW
EXTEND TO SPECIFIED ELEVATION AS PER PLAN OR AS DIRECTED BY DESIGNATED SPECIALIST.

J-HOOK VANE

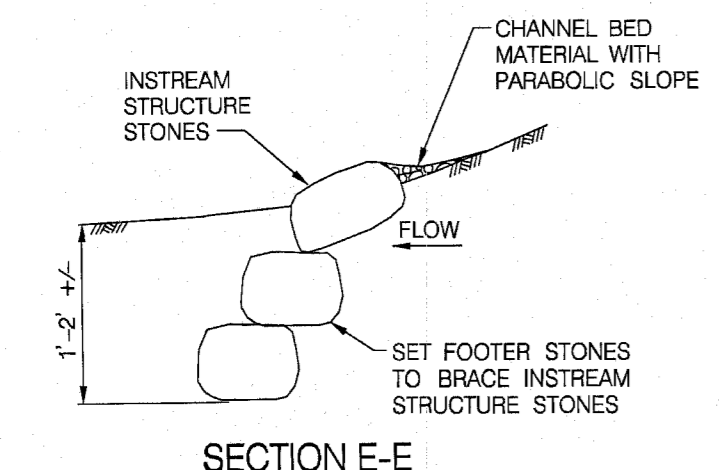


PLAN

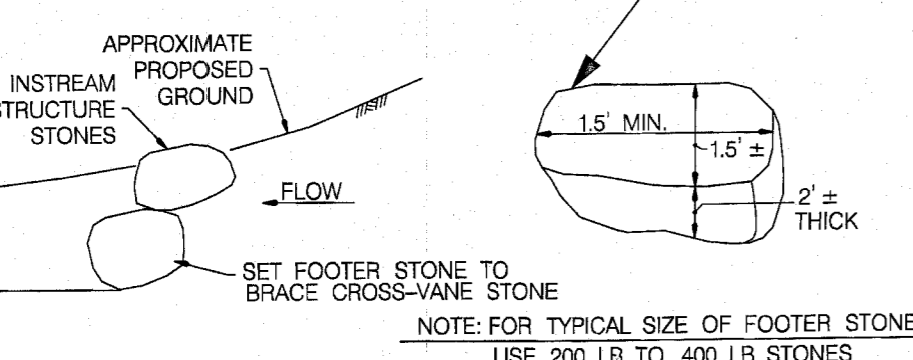
- NOTES:**
1. ALL ROCKS ARE SUBJECT TO VISUAL INSPECTION BY THE DESIGNATED SPECIALIST
 2. ROCKS SHOWN ARE NOT TO SCALE



PROFILE (ALONG CENTERLINE OF STRUCTURE)

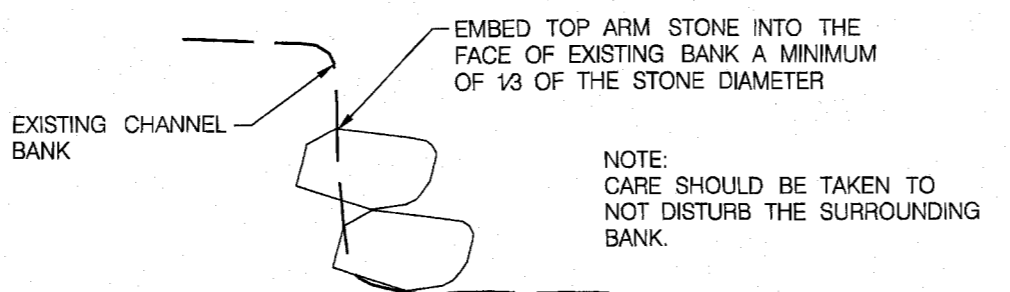


SECTION E-E

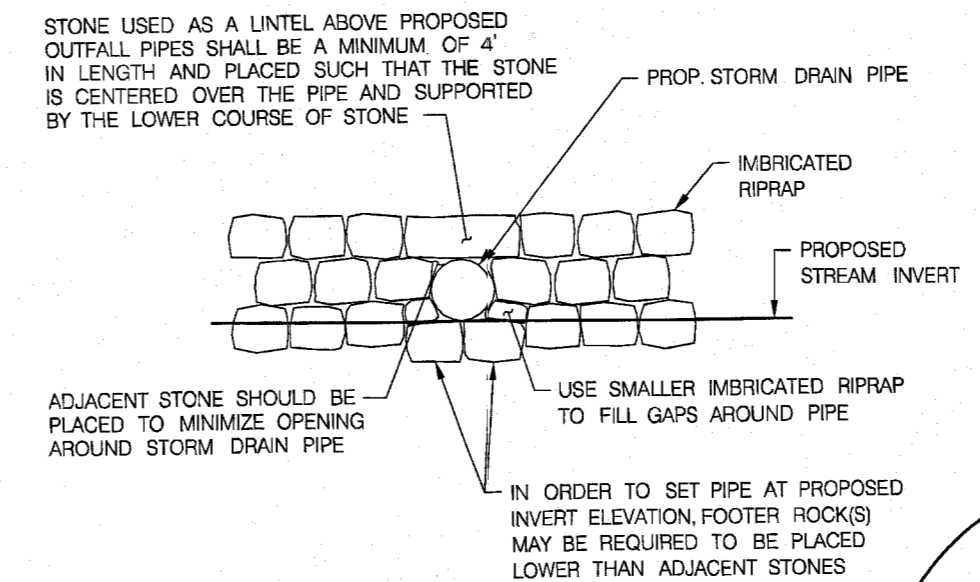


SECTION F-F

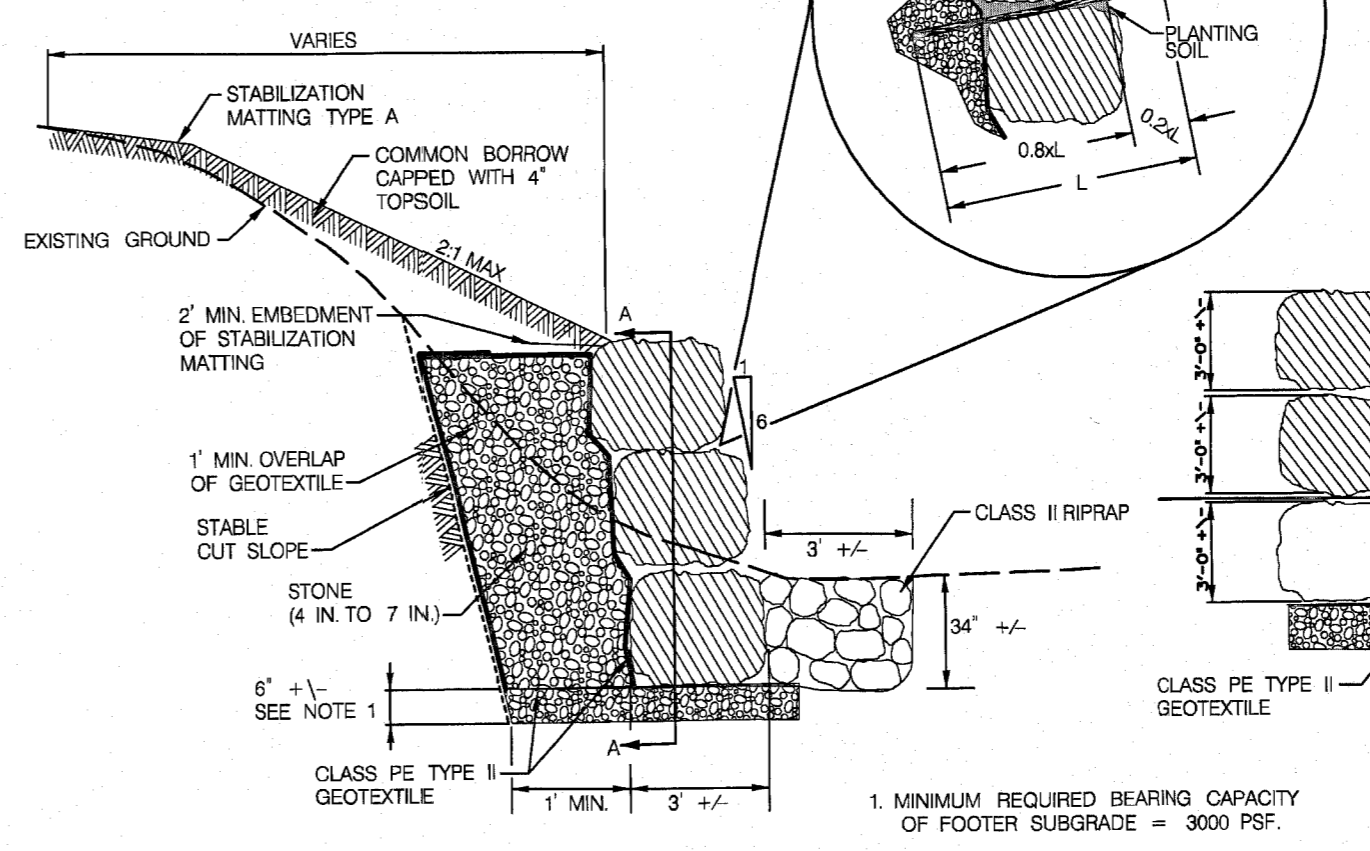
NOTE: FOR TYPICAL SIZE OF FOOTER STONES USE 200 LB. TO 400 LB. STONES



VANE ARM TIE-IN (DOWNES ROAD SITE)



STORM DRAIN OUTFALL THROUGH IMBRICATED WALL
NOT TO SCALE



IMBRICATED RIPRAP WALL SECTION
NOT TO SCALE

IMBRICATED RIPRAP WALL DETAILS
NOT TO SCALE

- LIVE STAKES FOR IMBRICATED WALLS NOTES:**
1. IMBRICATED WALL LIVE STAKES TO CONSIST OF 20 SILKY DOGWOOD AND 20 SILKY WILLOW CUTTINGS. LIVE STAKES TO BE 3' MIN LENGTH AND ARE TO BE PLACED 10' ON-CENTER IN ALL LOCATIONS OF TWO-TIER IMBRICATED WALLS.
 2. REFER TO SHEET 17 OF 17 LIVE STAKE DETAIL FOR SIZE REQUIREMENTS AND REQUIRED CUTS.
 3. REFER TO SHEET 18 OF 17 FOR LIVE STAKE - IMBRICATED WALL SCHEDULE.
 4. PLACE LIVE STAKES INTO SPACES BETWEEN THE ROCKS. USE A STEEL ROD OR PROBE TO PREPARE PILOT HOLES.
 5. PROVIDE PLANTING SOIL AND FIRM SOIL SO THAT LIVE STAKE CANNOT BE EASILY MOVED OR PULLED OUT.
 6. KEEP CUTTINGS MOIST AND COOL UNTIL PLANTED.
 7. LIVE STAKES CUTTINGS SHALL HAVE 80% OF LENGTH WITHIN PLANTING SOIL AND 20% EXPOSED.
 8. PLANT CUTTINGS WHILE DORMANT.
 9. PLANTING SOIL TO CONSIST OF SALVAGED TOPSOIL.

CONSTRUCTION NOTES:

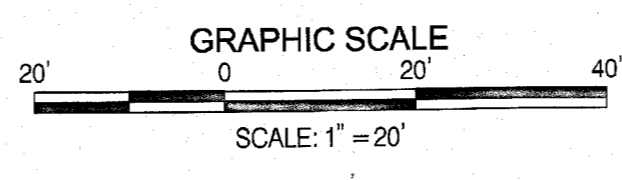
1. NOTIFY THE DESIGNATED SPECIALIST ONE WEEK PRIOR TO STARTING THE INSTREAM GRADING AND STONE STRUCTURES WORK. AN ACCURATE SCHEDULE SHALL BE SUBMITTED TO THE DESIGNATED SPECIALIST INDICATING THE DAYS TO BE DEDICATED BY THE CONTRACTOR TO PERFORM THE INSTREAM GRADING AND STONE STRUCTURE WORK. THE DESIGNATED SPECIALIST WILL BE AVAILABLE AT THE SITE DURING THESE DAYS.
2. SEE PROFILE FOR DEPTH OF SCOUR HOLE FOR ALL STRUCTURES.
3. FOOTER STONES SHALL EXTEND TO 2' BELOW THE SCOUR DEPTH SPECIFIED AT THE WEIR OF THE STRUCTURE.
4. ALL DIMENSIONS SHOWN HERE ARE APPROXIMATE AND SHALL BE INSTALLED AS DIRECTED BY DESIGNATED SPECIALIST.

INSTREAM STRUCTURE TABLE

STRUCTURE TYPE/I.D.	STATION	ANGLE X	ANGLE Y	K	L	WEIR LENGTH	SCOUR HOLE DEPTH	WEIR ROCK ELEVATION	TOP ROCK ELEV ARM K	TOP ROCK ELEV ARM L
J-HOOK VANE #1	3+38	8-13°	30-35°	21.2'	12.2'	4.3'	1.36'	238.90	239.5	239.3
J-HOOK VANE #2	3+98	8-13°	25-30°	25.4'	7.4'	4.0'	1.36'	236.43	237.5	237.3
J-HOOK VANE #3	4+56	8-13°	30-35°	21.7'	7.8'	5.3'	1.39'	234.09	236.0	235.8
CROSS VANE #1	5+29	5-10°	5-10°	24.7'	25.2'	6.5'	1.39'	231.13	232.5	233.5

- NOTES:**
1. ALL DIMENSIONS ARE APPROXIMATE AND MAY BE ADJUSTED BY THE DESIGNATED SPECIALIST
 2. STATIONING POINT IS UPSTREAM EDGE OF WEIR STONE USING BASELINE OF CONSTRUCTION

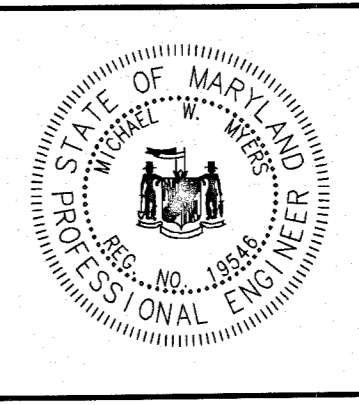
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INFRASTRUCTURE SYSTEMS GROUP	
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CONTRACTS UNIT	
DATE	UNIT COORDINATOR
CONTRACT	CI 5071 B10
JUNE 2012	NO. 7
212 NW 03	OF 17

DATE	NO.
212 NW 03	OF 17

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PLAN FILMED

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RAW'S ACQUIRED

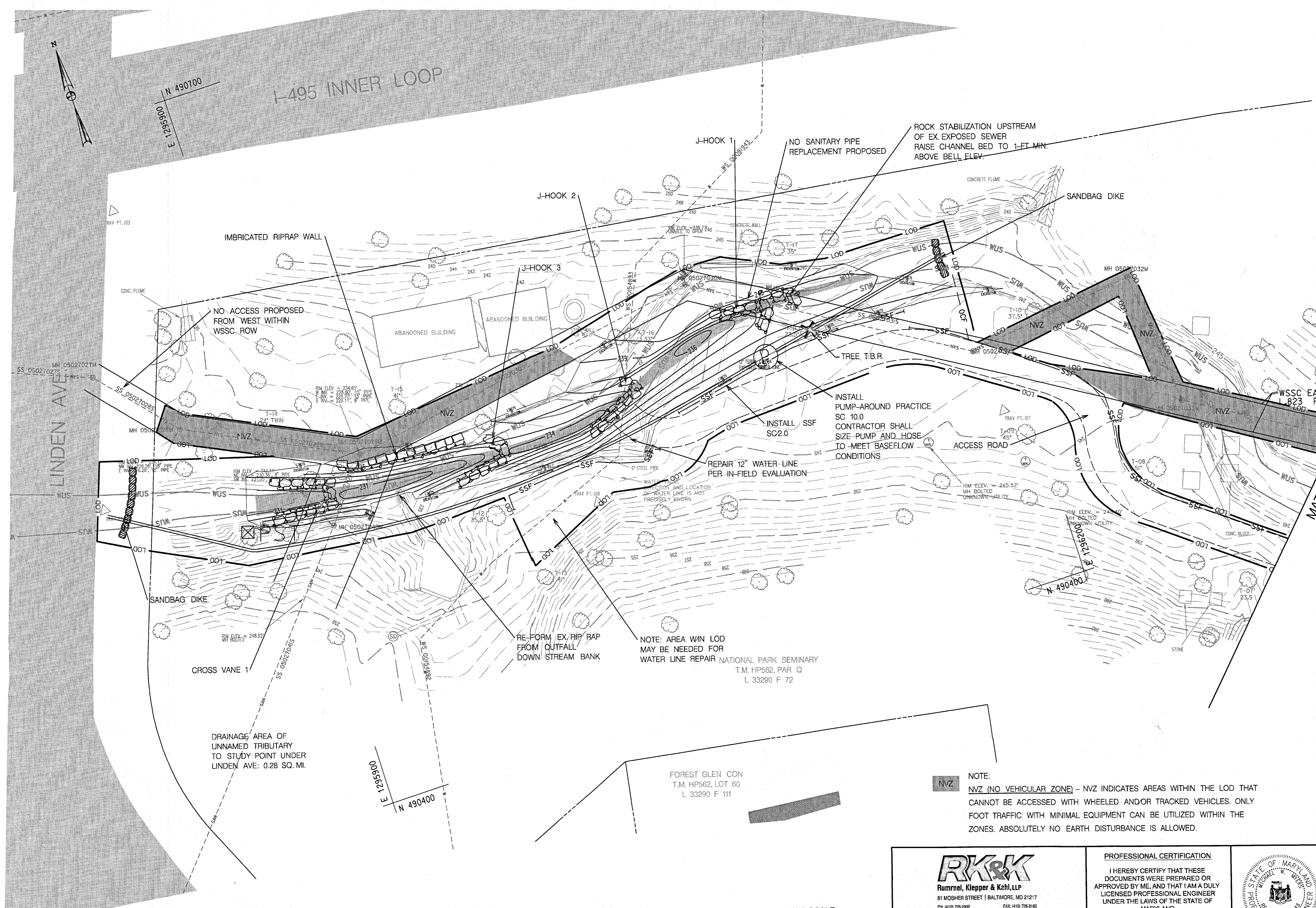
SOIL BORINGS ORDERED

JOB AUTH.

JOE

LEGEND

- ☒ PST PORTABLE SEDIMENT TANK
- ▨ SANDBAG DIKE
- PUMP AROUND
- NVZ NO VEHICLE ZONE
- LOD — LIMIT OF DISTURBANCE
- TPF — TREE PROTECTION FENCE
- OCF — ORANGE CONSTRUCTION FENCE
- — — ACCESS ROAD
- ✂ TREE TO BE REMOVED
- SSF — SUPER SILT FENCE



- NOTE:**
1. ALL EX. SEWERS TO REMAIN. SEWER LINES SHALL BE LINED PER WSSC DIRECTION.
 2. WORK TO REPAIR EX. 12" WATER LINE SHALL BE DETERMINED BY WSSC AT TIME OF CONSTRUCTION.
 3. NO WETLANDS WERE INDICATED WITHIN THE PROJECT LIMITS.
 4. LOD=TPF. ENTIRE LOD SHALL BE LINED WITH TPF. INDIVIDUAL TREES MAY BE PROTECTED BY DIRECTION OF M-NCPPC AT PRE-CONSTRUCTION MEETING.

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ES-1	
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Rummel, Klepper & Kahl, LLP
 81 MOSHER STREET | BALTIMORE, MD 21217
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Engineers | Construction Managers | Planners | Scientists

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212 NW 03	OF 17

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PLAN FILMED
RELEASED
RMS ACQUIRED
SOIL BORINGS ORDERED
JOB AUTH. JOE

FINAL FILMED

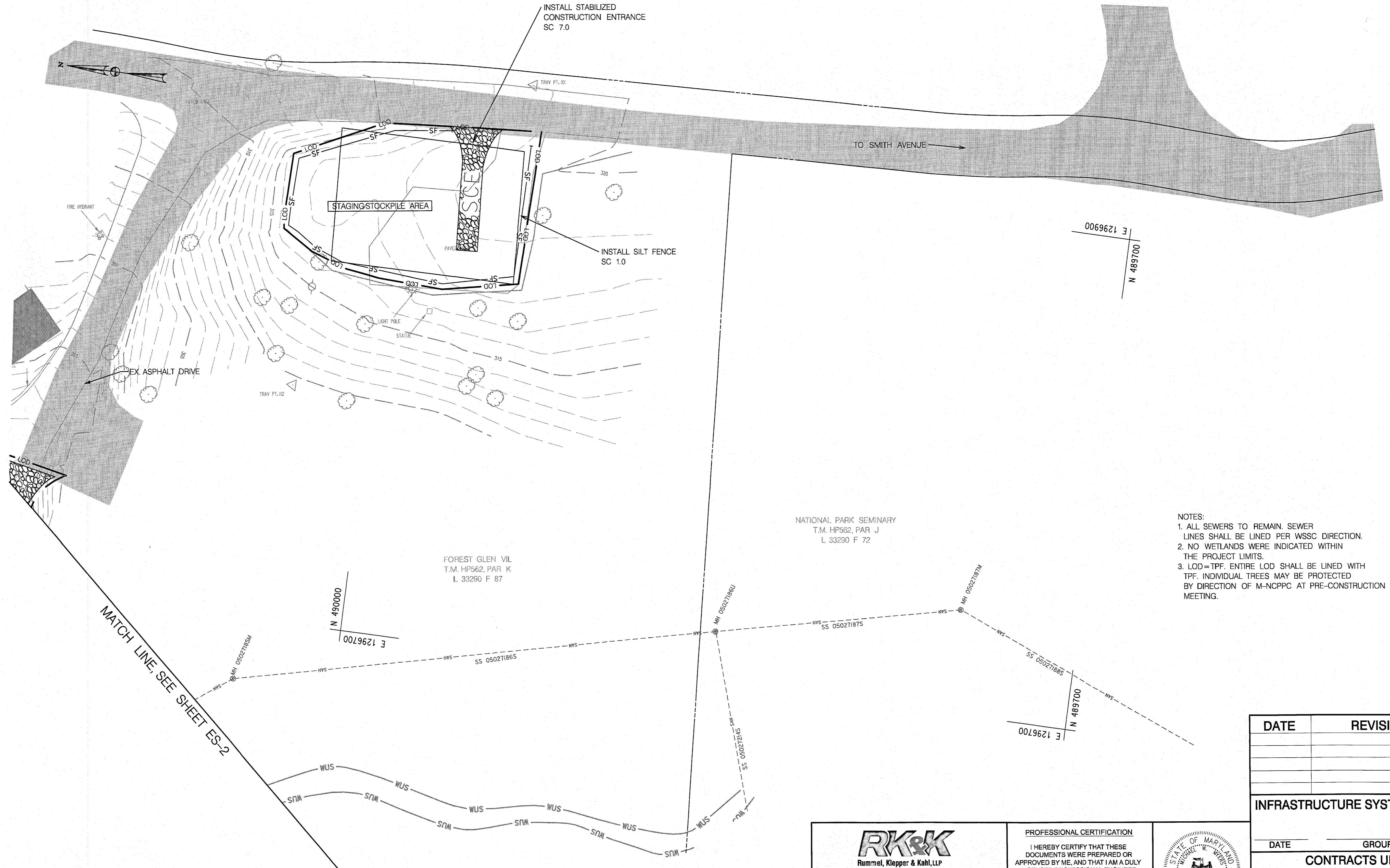
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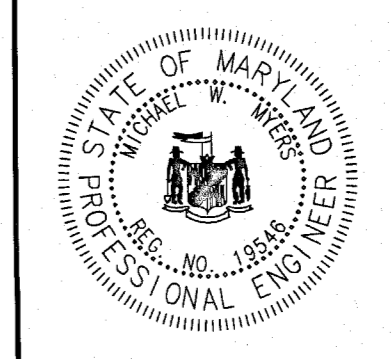
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ES-3	
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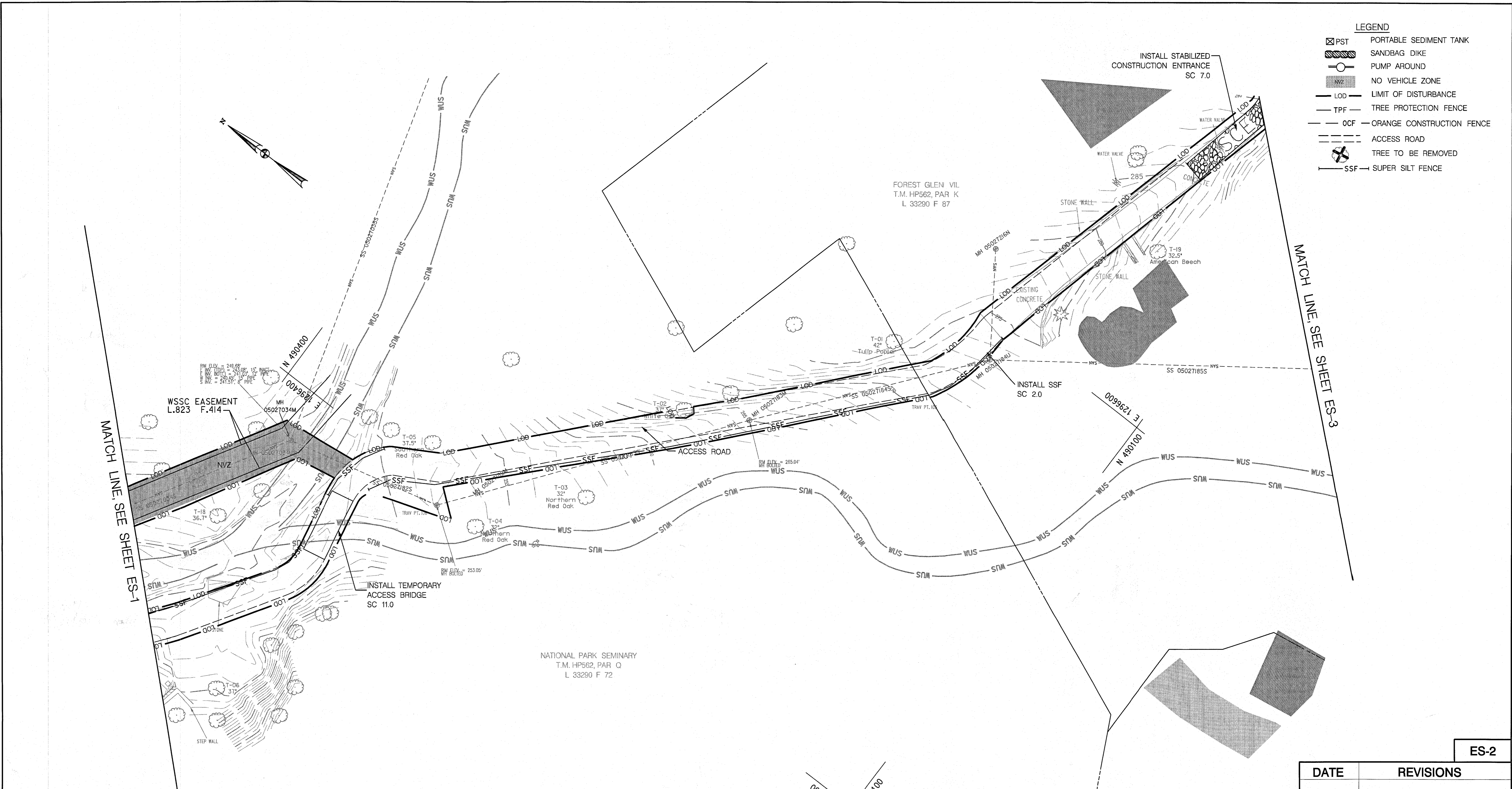
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LEGEND

	PORTABLE SEDIMENT TANK
	SANDBAG DIKE
	PUMP AROUND
	NO VEHICLE ZONE
	LIMIT OF DISTURBANCE
	TREE PROTECTION FENCE
	ORANGE CONSTRUCTION FENCE
	ACCESS ROAD
	TREE TO BE REMOVED
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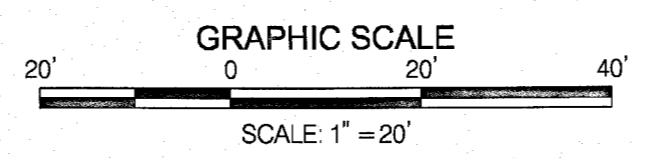
MATCH LINE SEE SHEET ES-1

MATCH LINE SEE SHEET ES-3

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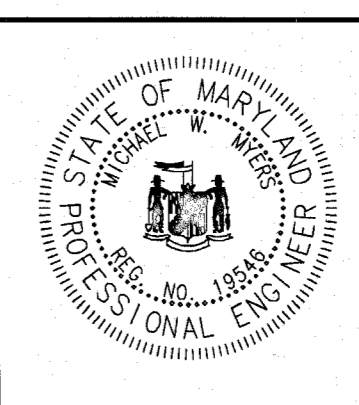
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DATE _____ GROUP LEADER _____

CONTRACTS UNIT

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CONTRACT CI 5071 B10

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JOB

EROSION AND SEDIMENT CONTROL GENERAL NOTES

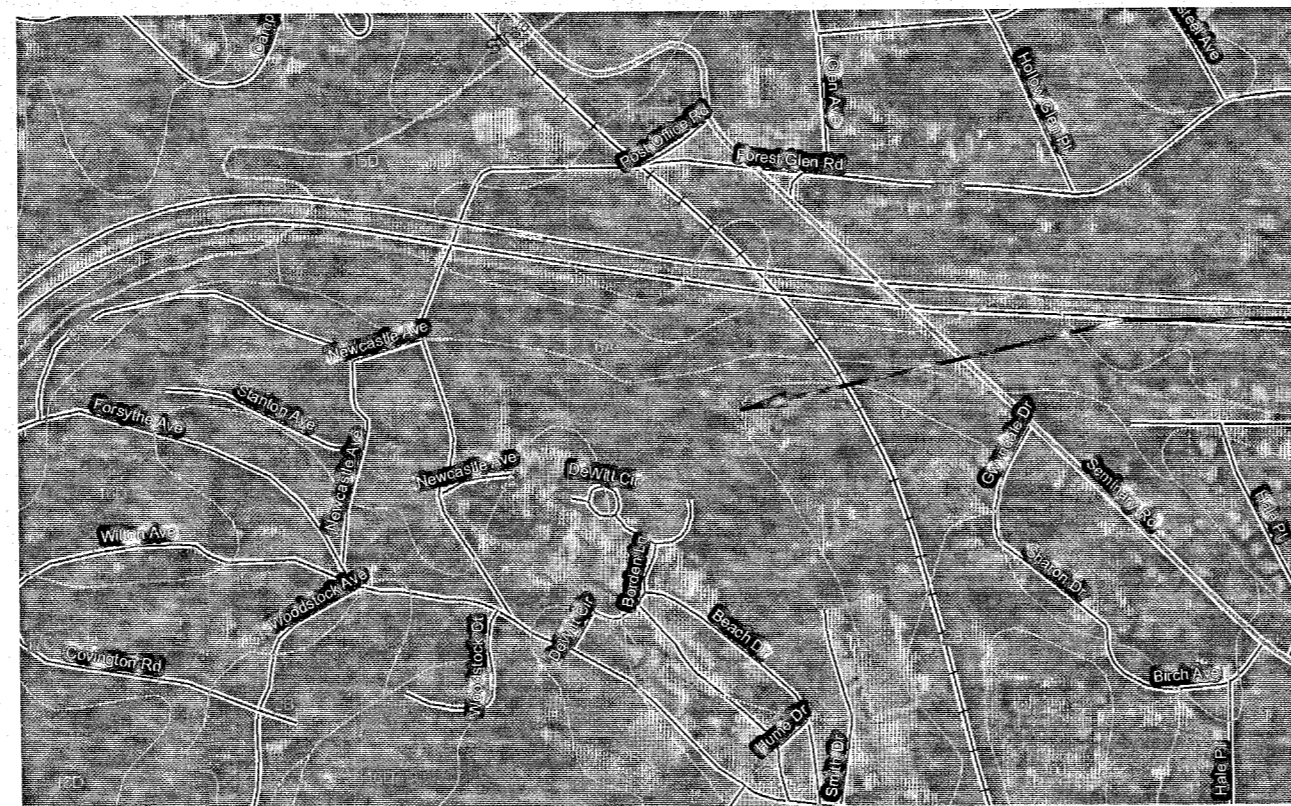
- A. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL REQUIRED EASEMENT, RIGHT AND/OR RIGHTS-OF-WAY PURSUANT TO THE DISCHARGE FROM THE EROSION AND SEDIMENT CONTROL PRACTICES, STORMWATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORMWATER ONTO OR ACROSS AND GRADING OR OTHER WORK TO BE PERFORMED ON ADJACENT OR DOWNSTREAM PROPERTIES AFFECTED BY THIS PLAN.
- B. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) SEVEN CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN THREE HORIZONTAL TO ONE VERTICAL (3:1) AND B) FOURTEEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE, THE IN-PLACE SEDIMENT CONTROL MEASURES WILL BE MAINTAINED ON A CONTINUING BASIS UNTIL THE SITE IS PERMANENTLY STABILIZED AND ALL PERMIT REQUIREMENTS ARE MET.
- C. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF TWO ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS WILL NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- D. APPROVAL SHALL BE REQUESTED UPON FINAL STABILIZATION OF ALL SITES WITH DISTURBED AREAS IN EXCESS OF TWO ACRES BEFORE REMOVAL OF CONTROLS.
- E. THE OWNER/DEVELOPER THAT SIGNS THE CERTIFICATION ON AN EROSION AND SEDIMENT CONTROL PLAN IS THE RESPONSIBLE PARTY REGARDLESS OF ANY SALE OF THE PROPERTY OR WORK OF SUBCONTRACTORS. EROSION AND SEDIMENT CONTROL PLANS ARE APPROVED FOR ONE OWNER/DEVELOPER ONLY. ALL PERMITS UNDER AN EROSION AND SEDIMENT CONTROL PLAN MUST AND CAN ONLY BE ISSUED TO THE OWNER/DEVELOPER THAT SIGNS THE CERTIFICATION ON THE PLAN.
- F. PGSCD APPROVAL OF A EROSION AND SEDIMENT CONTROL PLAN, PURSUANT TO MEETING LOCAL PERMIT REQUIREMENTS FOR GRADING, BUILDING OR STREET PERMITS, ETC., IS VALID ONLY WHEN THE WORK TO BE PERFORMED UNDER THE PERMIT IS THE SAME AS (NO MORE/NO LESS THAN) THAT CONTAINED IN THE PLAN AS APPROVED BY THE PGSCD.
- G. ANY CHANGES OR MODIFICATIONS TO AN APPROVED EROSION AND SEDIMENT CONTROL PLAN, NOT APPROVED BY THE PGSCD, SHALL INVALIDATE THE PLAN APPROVAL.
- H. OFFSITE BORROW OR SPOIL AREAS MUST HAVE AN APPROVED AND ACTIVE EROSION AND SEDIMENT CONTROL PLAN.
 - I. TEMPORARY DESIGNED SEDIMENT BASINS SHALL BE REMOVED WITHIN 36 MONTHS AFTER THE BEGINNING OF CONSTRUCTION OF THE BASIN.
 - J. ON SMALL POND APPROVALS:
 - 1) THE OWNER OR ENGINEER WILL NOTIFY PGSCD PROMPTLY IN WRITING WHEN CONSTRUCTION IS BEGUN AND WHEN CONSTRUCTION IS COMPLETED.
 - 2) THE PROJECT SHALL BE CONSTRUCTED UNDER THE SUPERVISION OF THE ENGINEER-IN-CHARGE. WITHIN 30 DAYS OF THE COMPLETION OF CONSTRUCTION, THE ENGINEER-IN-CHARGE THAT DESIGNED THE STRUCTURE SHALL PROVIDE PGSCD WITH AN AS-BUILT PLAN AND SHALL CERTIFY, WITH THE ENGINEER'S SEAL, THAT THE MD378 POND WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS.
 - 3) THE APPROVAL IS VALID ONLY FOR USE BY THE APPLICANT AND MAY NOT BE TRANSFERRED TO ANOTHER UNLESS WRITTEN APPROVAL FOR SUCH TRANSFER IS OBTAINED FROM PGSCD.
- K. DISTURBED SURFACE AREA: 0.88 AC.
 VOLUME OF SPOIL MATERIAL: 115 C.Y.
 VOLUME OF BORROW MATERIAL: 317 C.Y.

L. LIST PREDOMINANT SOIL TYPES AND GENERAL DESCRIPTION PER PGSCD SOIL SURVEY:

SYMBOL	DESCRIPTION	HSG
1C	GAILA SILT LOAM	B
6A	BAILE SILT LOAM	D
16D	BRINKLOW-BLOCKTOWN CHANNEY SILT LOAMS	B

TOPSOIL SPECIFICATIONS

- I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA - SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.



PROJECT LOCATION: MONTGOMERY COUNTY
Scale: 1" = 6,000'

II. TOPSOIL SPECIFICATIONS

SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

- I. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
- II. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
- III. WHERE 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.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

- I. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS FROM 1994 MARYLAND STANDARDS AND SPECIFICATIONS.

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

- I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 - A. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
 - B. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 - C. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
 - D. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

- II. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS FROM 1994 MARYLAND STANDARDS AND SPECIFICATIONS.

V. TOPSOIL APPLICATION

- I. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
- II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION.
- III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- IV. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

VI. ALTERNATIVE FOR PERMANENT SEEDING

INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:

- I. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - A. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 - B. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
 - C. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
- II. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

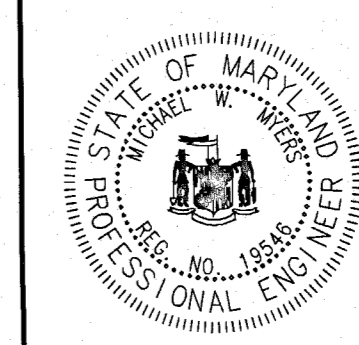
NOTES:

- 1. USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL THE REQUIREMENTS OF THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL VEGETATIVE PRACTICES.
- 2. FOR TEMPORARY AND PERMANENT SEEDING TABLES SEE SHEET NO. SC-5.
- 3. THE CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION WITHIN THE PROJECT AREA.

ES-4

DATE		REVISIONS	
INFRASTRUCTURE SYSTEMS GROUP			
DATE	GROUP LEADER		
CONTRACTS UNIT			
DATE	UNIT COORDINATOR		
CONTRACT	CI 5071 B10		
JUNE 2012		NO.	11
212 NW 03		OF	17

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO.: 19546
 EXPIRATION DATE: 2014-02-18



FOREST GLEN DISTRICT
WSSC SITE 5-11 STREAM CHANNEL REHABILITATION
 UPSTREAM OF LINDEN LANE
 PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

WASHINGTON SUBURBAN SANITARY COMMISSION



THESE DOCUMENTS CONTAIN PRIVILEGED AND CONFIDENTIAL INFORMATION WHICH SHALL NOT BE REDISTRIBUTED WITHOUT PRIOR WSSC APPROVAL

WASHINGTON SUBURBAN SANITARY COMMISSION



AND CONFIDENTIAL INFORMATION WHICH SHALL NOT BE REDISTRIBUTED WITHOUT PRIOR WSSC APPROVAL

WSSC SITE 5-11 STREAM CHANNEL REHABILITATION
 UPSTREAM OF LINDEN LANE
 PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

JUNE 2012		NO.	11
212 NW 03		OF	17

FINAL FILMED

PLAN FILMED

RELEASED

R/W'S ACQUIRED

SOIL BORINGS ORDERED

JOB AUTH.

Temporary Seeding Summary

Table with 7 columns: No., Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, Fertilizer Rate (10-10-10), Lime Rate. Includes rows for ANNUAL RYEGRASS, RYE, and MULCH.

Permanent Seeding Summary

Table with 9 columns: No., Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, N, P205, K20, Lime Rate. Includes rows for Tall Fescue, Weeping Lovegrass, Serecia Lespedeza, Temporary Seeding, and Mulch.

LAND GRADING

1. PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR TO STABLE WATER COURSES TO ENSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS.

2. CUT AND FILL SLOPES THAT ARE STABILIZED WITH GRASSES SHALL NOT BE STEEPER THAN 2:1. (WHERE THE SLOPE IS TO BE MOWED THE SLOPE SHOULD BE NO STEEPER THAN 3:1; 4:1 IS PREFERRED BECAUSE OF SAFETY FACTORS RELATED TO MOWING STEEP SLOPES.) SLOPES EXCEEDING 2:1 SHALL REQUIRE SPECIAL DESIGN AND STABILIZATION CONSIDERATIONS THAT SHALL BE ADEQUATELY SHOWN ON THE PLANS.

3. REVERSE BENCHES SHALL BE PROVIDED WHENEVER THE VERTICAL INTERVAL (HEIGHT) OF ANY 2:1 SLOPE EXCEEDS 20 FEET; FOR 3:1 SLOPE IT SHALL BE INCREASED TO 30 FEET AND FOR 4:1 TO 40 FEET. BENCHES SHALL BE LOCATED TO DIVIDE THE SLOPE FACE AS EQUALLY AS POSSIBLE AND SHALL CONVEY WATER TO A STABLE OUTLET. SOILS, SEEPS, ROCK OUTCROPS, ETC. SHALL ALSO BE TAKEN INTO CONSIDERATION WHEN DESIGNING BENCHES.

A. BENCHES SHALL BE A MINIMUM OF SIX-FOOT WIDE TO PROVIDE FOR EASE OF MAINTENANCE.

B. BENCHES SHALL BE DESIGNED WITH A REVERSE SLOPE OF 6:1 OR FLATTER TO THE TOE OF THE UPPER SLOPE AND WITH A MINIMUM OF ONE FOOT IN DEPTH. BENCH GRADIENT TO THE OUTLET SHALL BE BETWEEN 2 PERCENT AND 3 PERCENT, UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS.

C. THE FLOW LENGTH WITHIN A BENCH SHALL NOT EXCEED 800' UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS. FOR FLOW CHANNEL STABILIZATION SEE TEMPORARY SWALE.

4. SURFACE WATER SHALL BE DIVERTED FROM THE FACE OF ALL CUT AND/OR FILL SLOPES BY THE USE OF EARTH DIKES, DITCHES AND SWALES OR CONVEYED DOWNSLOPE BY THE USE OF A DESIGNATED STRUCTURE, EXCEPT WHERE:

A. THE FACE OF THE SLOPE IS OR SHALL BE STABILIZED AND THE FACE OF ALL GRADED SLOPES SHALL BE PROTECTED FROM SURFACE WATER RUNOFF UNTIL THEY ARE STABILIZED.

B. THE FACE OF THE SLOPE SHALL NOT BE SUBJECT TO ANY CONCENTRATED FLOWS OF SURFACE WATER SUCH AS FROM NATURAL DRAINAGEWAYS, GRADED SWALES, DOWNSPOUTS, ETC.

C. THE FACE OF THE SLOPE WILL BE PROTECTED BY SPECIAL EROSION CONTROL MATERIALS, TO INCLUDE, BUT NOT LIMITED TO: APPROVED VEGETATIVE STABILIZATION PRACTICES (SEE SECTION G), RIP-RAP OR OTHER APPROVED STABILIZATION METHODS.

5. CUT SLOPES OCCURRING IN RIPABLE ROCK SHALL BE SERRATED AS SHOWN ON THE FOLLOWING DIAGRAM. THESE SERRATIONS SHALL BE MADE WITH CONVENTIONAL EQUIPMENT AS THE EXCAVATION IS MADE. EACH STEP OR SERRATION SHALL BE CONSTRUCTED ON THE CONTOUR AND WILL HAVE STEPS CUT AT NOMINAL TWO-FOOT INTERVALS WITH NOMINAL THREE FOOT HORIZONTAL SHELVES. THESE STEPS WILL VARY DEPENDING ON THE SLOPE RATIO OR THE CUT SLOPE. THE NOMINAL SLOPE LINE IS 1:1. THESE STEPS WILL WEATHER AND WILL ACT TO HOLD MOISTURE, LIME, FERTILIZER AND SEED THUS PRODUCING A MUCH QUICKER AND LONGER LOVED VEGETATIVE COVER AND BETTER SLOPE STABILIZATION. OVERLAND FLOW SHALL BE DIVERTED FROM THE TOP OF ALL SERRATED CUT SLOPES AND CARRIED TO A SUITABLE OUTLET.

6. SUBSURFACE DRAINAGE SHALL BE PROVIDED WHERE NECESSARY TO INTERCEPT SEEPAGE THAT WOULD OTHERWISE ADVERSELY AFFECT SLOPE STABILITY OR CREATE EXCESSIVELY WET SITE CONDITIONS.

7. SLOPES SHALL NOT BE SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATELY PROTECTING SUCH PROPERTIES AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGES.

8. FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS AND OTHER OBJECTIONABLE MATERIAL. IT SHOULD BE FREE OF STONES OVER TWO (2) INCHES IN DIAMETER WHERE COMPACTED BY HAND OR MECHANICAL TAMPERS OR OVER EIGHT (8) INCHES IN DIAMETER WHERE COMPACTED BY ROLLERS OR OTHER EQUIPMENT. FROZEN MATERIAL SHALL NOT BE PLACED IN THE FILL NOR SHALL THE FILL MATERIAL BE PLACED ON A FROZEN FOUNDATION.

9. STOCKPILES, BORROW AREAS AND SPOIL SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATIONS.

10. ALL DISTURBED AREAS SHALL BE STABILIZED STRUCTURALLY OR VEGETATIVELY IN COMPLIANCE WITH 20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION FROM 1994 MARYLAND STANDARDS AND SPECIFICATIONS.

TABLE 27 GEOTEXTILE FABRICS

Table with 4 columns: CLASS, APPARENT OPENING SIZE MM. MAX., GRAB TENSILE STRENGTH LB. MIN., BURST STRENGTH PSI. MIN. Includes rows A through F (SILT FENCE).

* US STD. SEIVE CW-02215

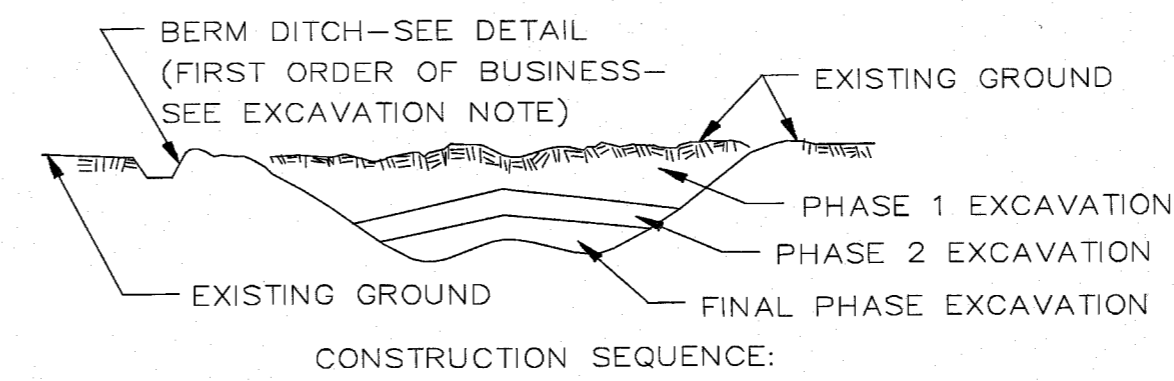
TABLE 28 STONE SIZE

Table with 6 columns: CLASS, SIZE RANGE, D50, D100, AASHTO, WEIGHT. Includes rows for NUMBER 57, NUMBER 1, RIP-RAP, CLASS I, CLASS II, CLASS III.

* THIS CLASSIFICATION IS TO BE USED ON THE INSIDE FACE OF STONE OUTLETS AND CHECK DAMS.

** THIS CLASSIFICATION IS TO BE USED WHENEVER SMALL RIP-RAP IS REQUIRED. THE STATE HIGHWAY ADMINISTRATION DESIGNATION FOR THIS STONE IS "STONE FOR GABIONS" (905.01.04).

PHASING PLAN-CUT SECTION



- (1) EXCAVATE AND STABILIZE BERM SIDE AND OUTLET DITCHES.
(2) PERFORM PHASE 1 EXCAVATION, DRESS SEED & MULCH SLOPES WITH PERMANENT SEED & MULCH.
(3) PERFORM PHASE 2 EXCAVATION, DRESS SEED & MULCH SLOPES WITH PERMANENT SEED & MULCH. OVERSEED PHASE 1 SLOPES, IF REQUIRED.
(4) PERFORM FINAL PHASE EXCAVATION, DRESS, SEED & MULCH SLOPES WITH PERMANENT SEED & MULCH. STABILIZE SURFACE, DRAIN DITCHES, OVERSEED PHASE 1 & 2 SLOPES, IF REQUIRED AS DETERMINED BY THE ENGINEER.

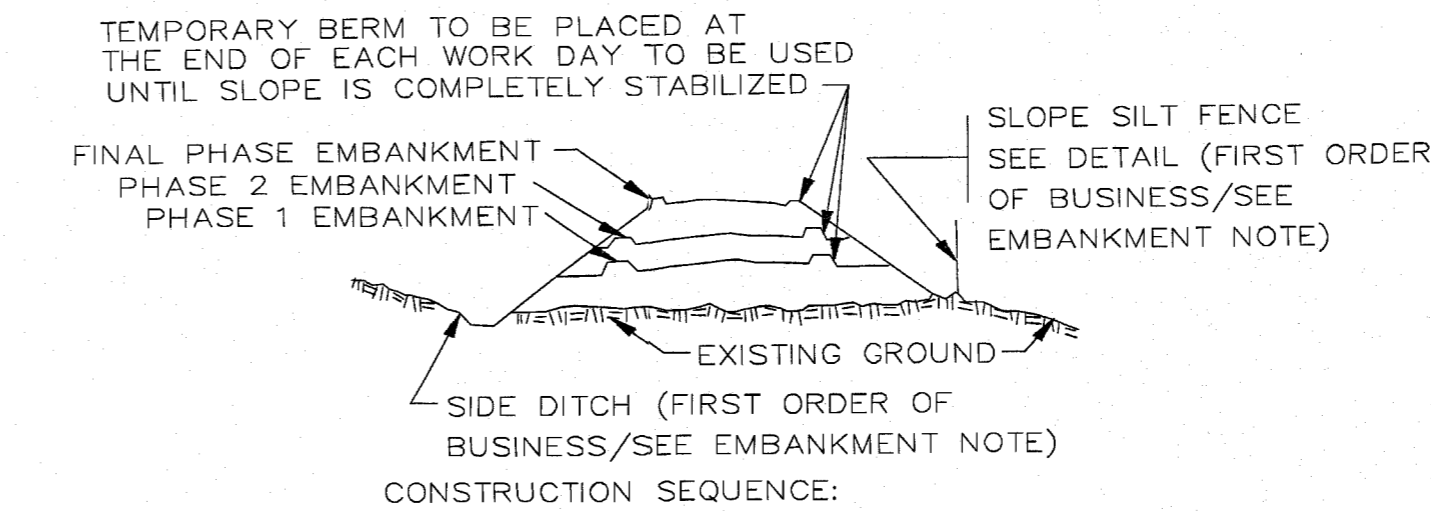
NOTE: ONCE THE EXCAVATION WITHIN A SPECIFIC AREA HAS BEGUN, THE OPERATION SHALL BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF THE GRADING AND PLACEMENT OF PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OF 14 DAYS OR MORE MUST BE APPROVED BY THE ENGINEER, ANY VIOLATION OF THIS REQUIREMENT WILL RESULT IN THE CONTRACTOR ASSUMING THE RESPONSIBILITY OF PLACING TEMPORARY STABILIZATION AT HIS OWN COST AND EXPENSE.

VIII. EMBANKMENT

THE FIRST ORDER OF BUSINESS WILL BE THE EXCAVATION AND STABILIZATION OF SIDE DITCHES AND PLACEMENT OF PERIMETER CONTROLS (SILT FENCE, ETC.) THE EMBANKMENT WILL BE MADE IN LIFTS MEETING THE SAME HEIGHT REQUIREMENTS AS PREVIOUSLY STATED FOR CUT SECTIONS. THE SLOPES WILL BE STABILIZED IMMEDIATELY FOLLOWING THE COMPLETION OF THE INTERMEDIATE STAGES(S).

AT THE END OF EACH WORK DAY TEMPORARY BERMS (EARTH) AND SLOPE DRAINS WILL BE CONSTRUCTED ALONG THE TOP EDGE(S) OF THE EMBANKMENT TO INTERCEPT SURFACE RUNOFF.

PHASING PLAN-FILL SECTION



- (1) EXCAVATE AND STABILIZE CONTROLS AT TOP OF SLOPE.
(2) PLACE PHASE 1 EMBANKMENT, PROVIDE TEMPORARY SEEDING OR STRAW MULCH.
(3) PLACE PHASE 2 EMBANKMENT, PROVIDE TEMPORARY SEEDING OR STRAW MULCH.
(4) PLACE FINAL PHASE EMBANKMENT, PREPARE & PLACE PERMANENT SEED & MULCH ON THE ENTIRE SLOPE.

NOTE: USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL OF THE REQUIREMENTS OF THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL VEGETATIVE PRACTICES.

WETLAND NOTE

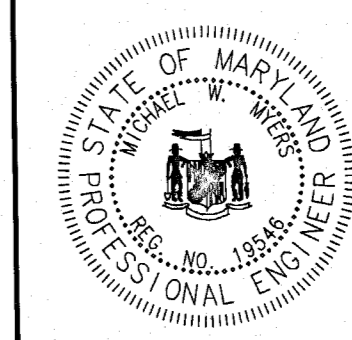
It is the applicant's responsibility to obtain any permits, if required, for any any construction activity covered by this plan which impacts a State regulated wetland. Any changes to plans for this development, whether required by the State or initiated by the applicant to meet State requirements, must be approved by PGSCD.

Logo for Rummel, Klepper & Kahl, LLP with contact information: 81 MOSHER STREET | BALTIMORE, MD 21217. PH: (410) 728-2900 FAX: (410) 728-3160

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO.: 19546 EXPIRATION DATE: 2014-02-18



FOREST GLEN DISTRICT WSSC SITE 5-11 STREAM CHANNEL REHABILITATION UPSTREAM OF LINDEN LANE PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

WSSC SITE 5-11 STREAM CHANNEL REHABILITATION UPSTREAM OF LINDEN LANE PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

OWNER'S/DEVELOPER'S CERTIFICATION

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

SIGNATURE: _____ DATE: _____

NAME: _____ TITLE: _____

PHONE No.: _____

ENGINEER'S/APPLICANT'S CERTIFICATION

"I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICABLE AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PRINCE GEORGE'S SOIL CONSERVATION DISTRICT STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL."

I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER AND/OR DEVELOPER.

SIGNATURE: _____

MD. P.E. LICENSE No.: 19546 DATE: _____

NAME: MICHAEL W. MYERS

ES-5

Table with 2 columns: DATE, REVISIONS. Includes a section for INFRASTRUCTURE SYSTEMS GROUP with fields for DATE, GROUP LEADER, CONTRACTS UNIT, DATE, UNIT COORDINATOR, CONTRACT, CI 5071 B10, JUNE 2012, NO. 12, 212 NW 03, OF 17.

WASHINGTON SUBURBAN SANITARY COMMISSION



THESE DOCUMENTS CONTAIN PRIVILEGED AND CONFIDENTIAL INFORMATION WHICH SHALL NOT BE REDISTRIBUTED WITHOUT PRIOR WSSC APPROVAL

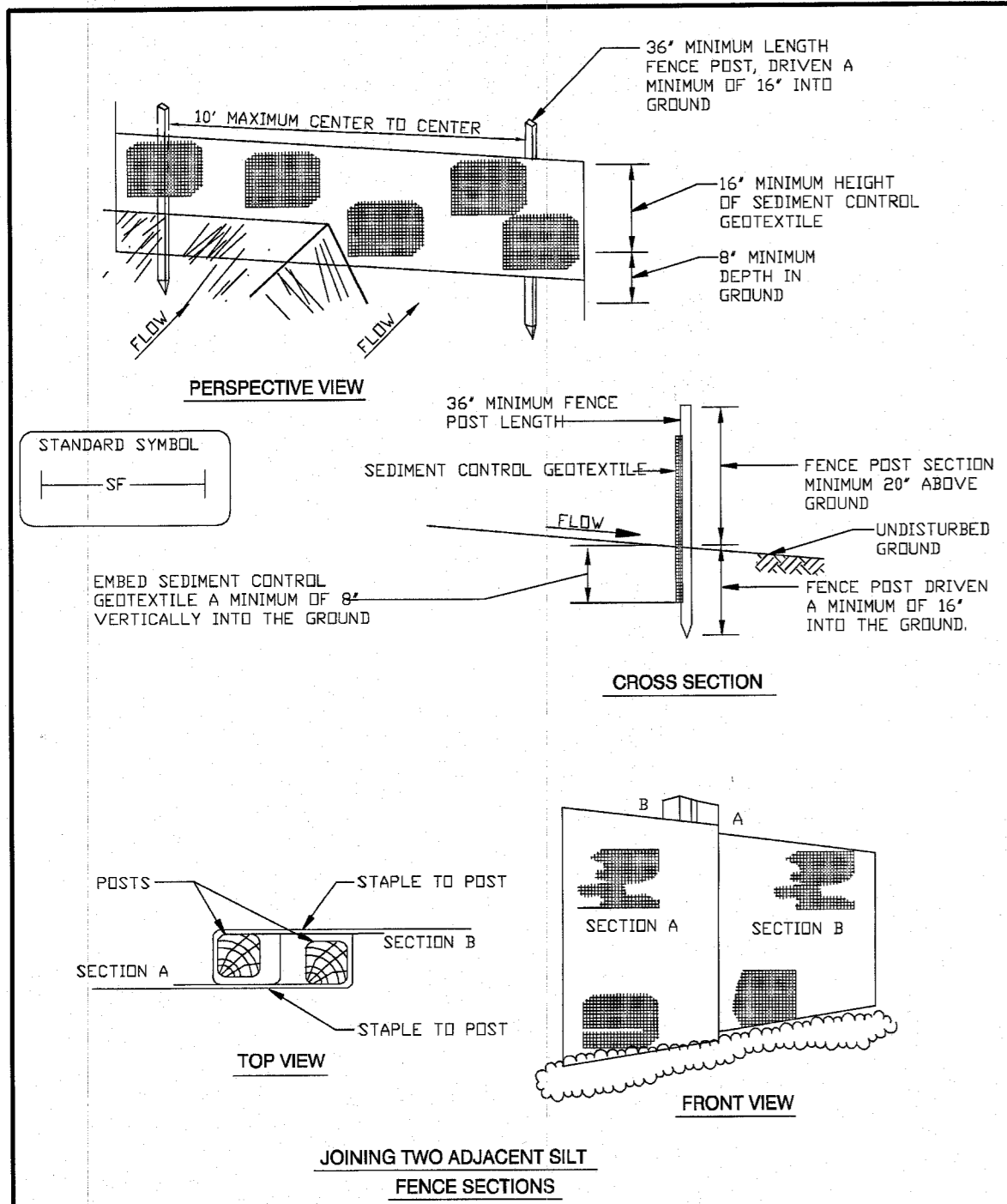
WASHINGTON SUBURBAN SANITARY COMMISSION



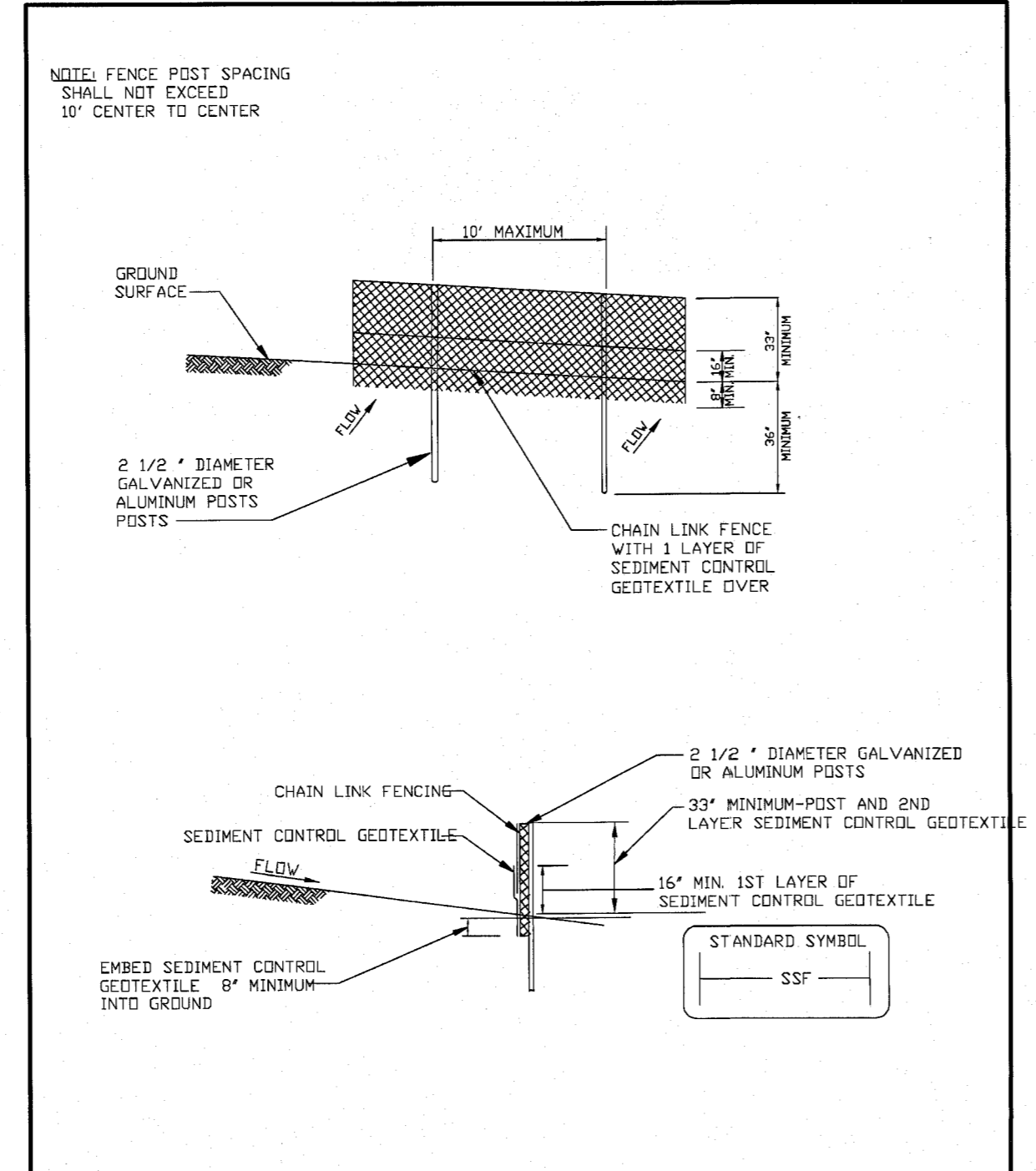
AND CONFIDENTIAL INFORMATION WHICH SHALL NOT BE REDISTRIBUTED WITHOUT PRIOR WSSC APPROVAL

WSSC SITE 5-11 STREAM CHANNEL REHABILITATION UPSTREAM OF LINDEN LANE PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

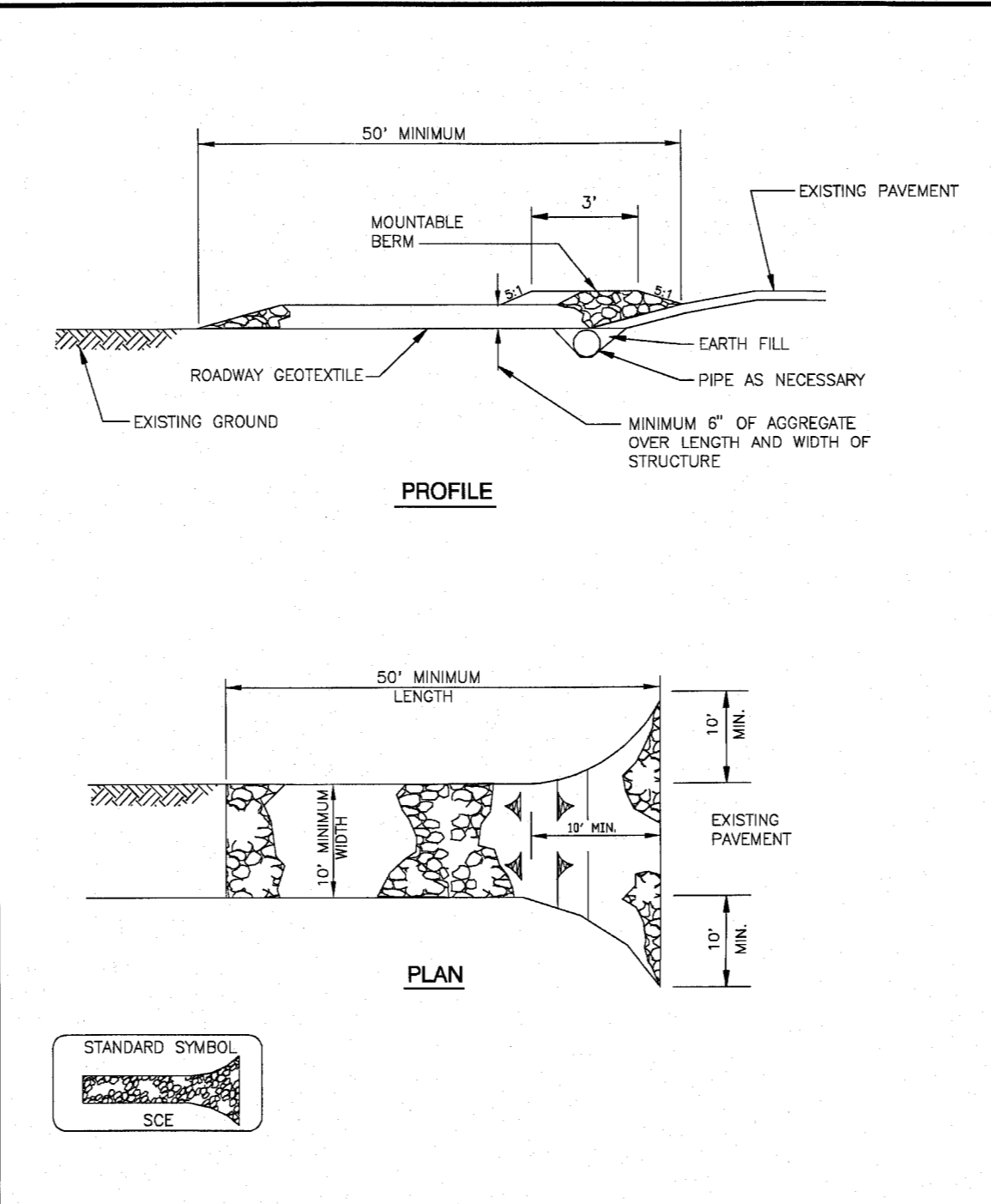
Table with 2 columns: DATE, REVISIONS. Includes fields for 212 NW 03, NO. 12, OF 17.



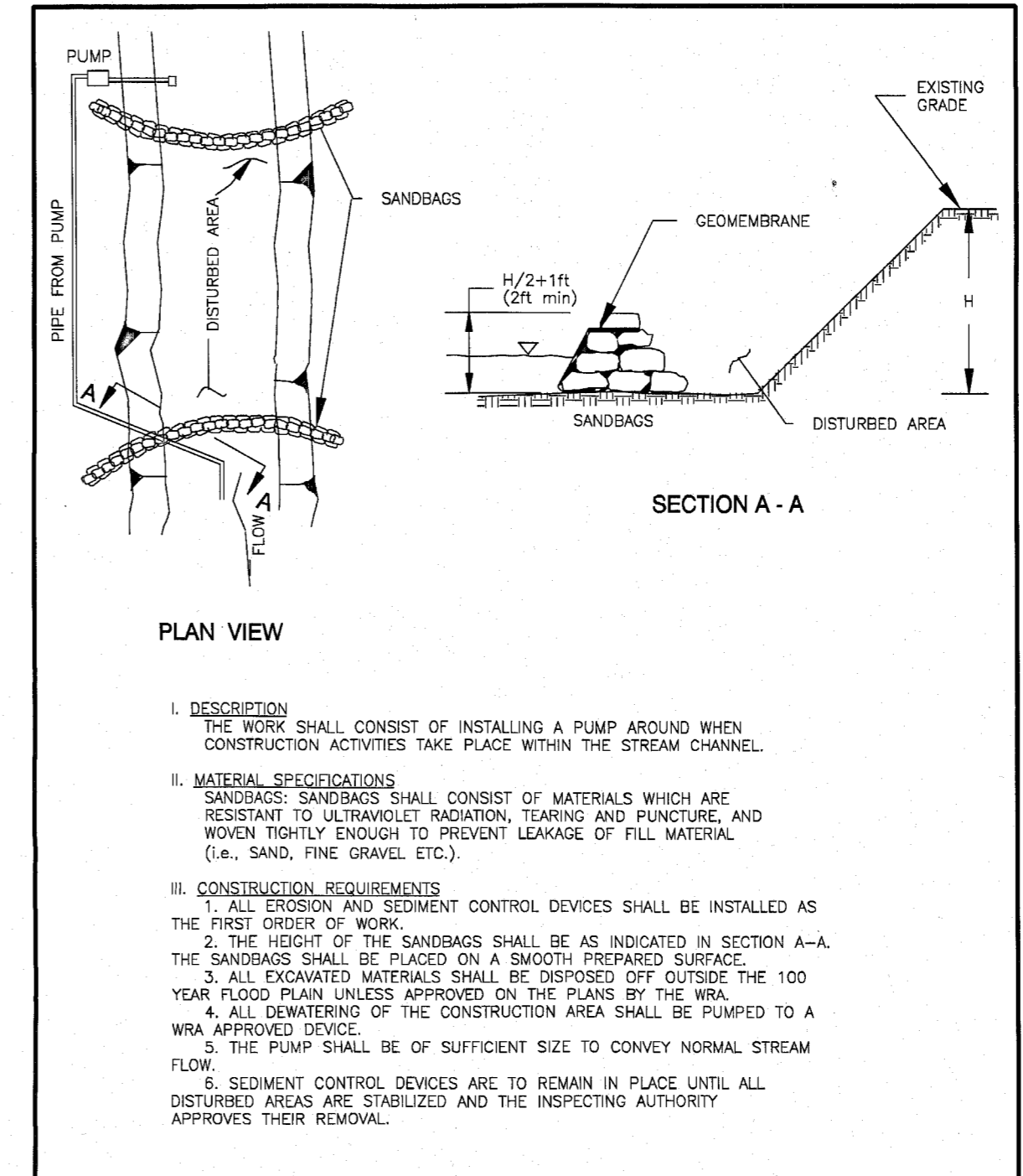
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: JULY 1, 2005 <i>Rail P. Huppert</i> Chief Engineer	STANDARD DETAIL SILT FENCE	SC 1.0
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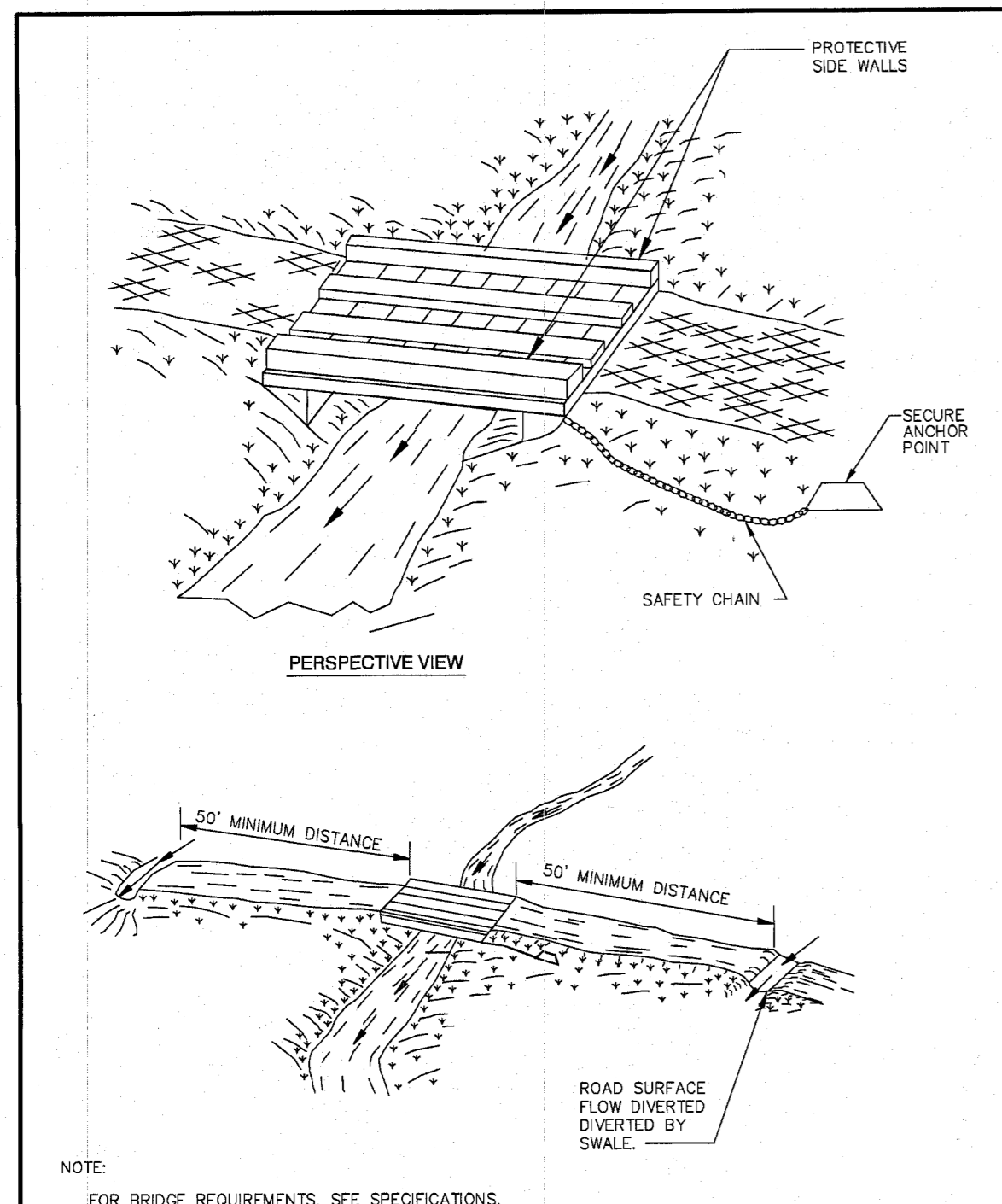
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: JULY 1, 2005 <i>Rail P. Huppert</i> Chief Engineer	STANDARD DETAIL SUPER SILT FENCE	SC 2.0
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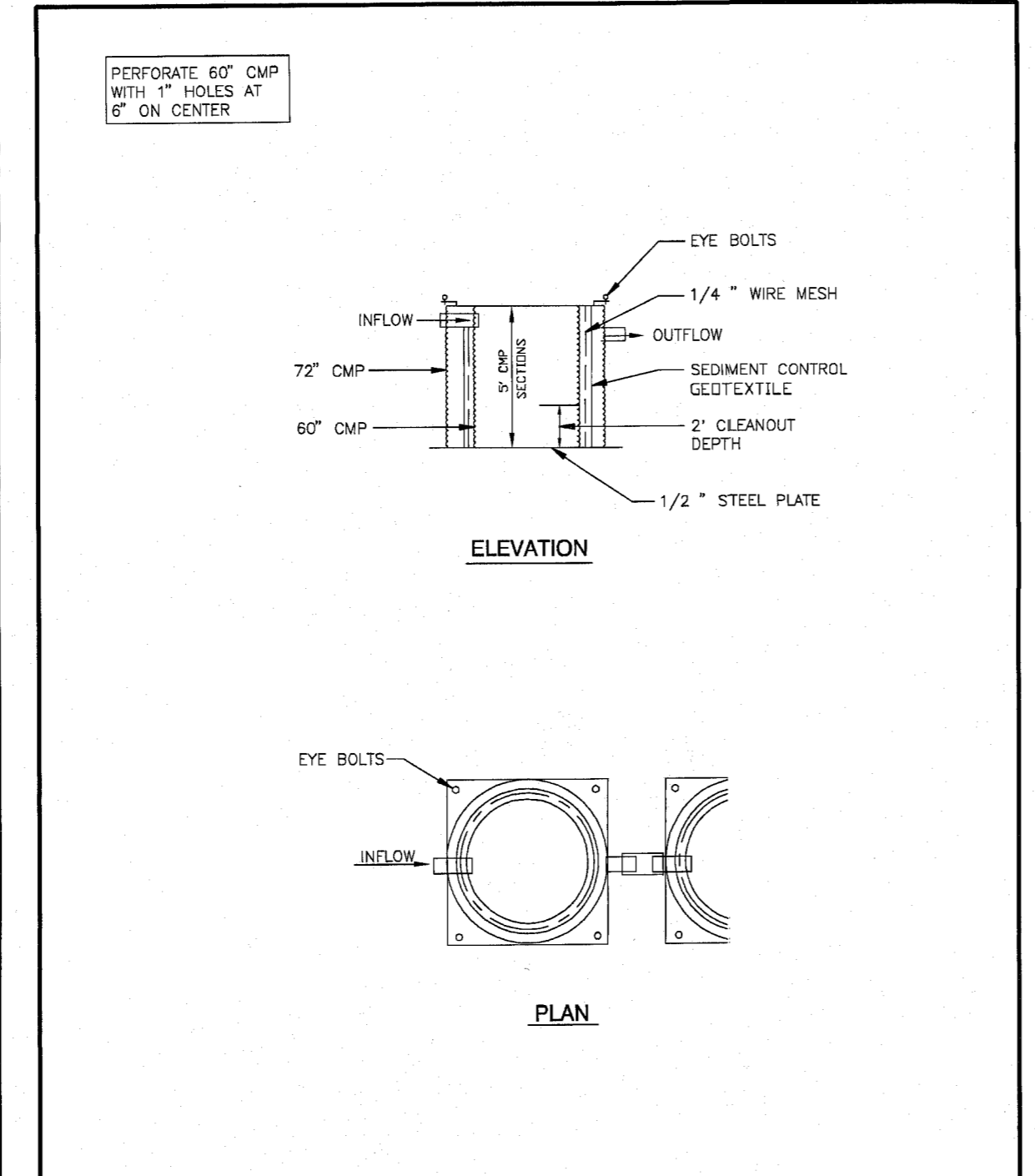
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: JULY 1, 2005 <i>Rail P. Huppert</i> Chief Engineer	STANDARD DETAIL STABILIZED CONSTRUCTION ENTRANCE	SC 7.0
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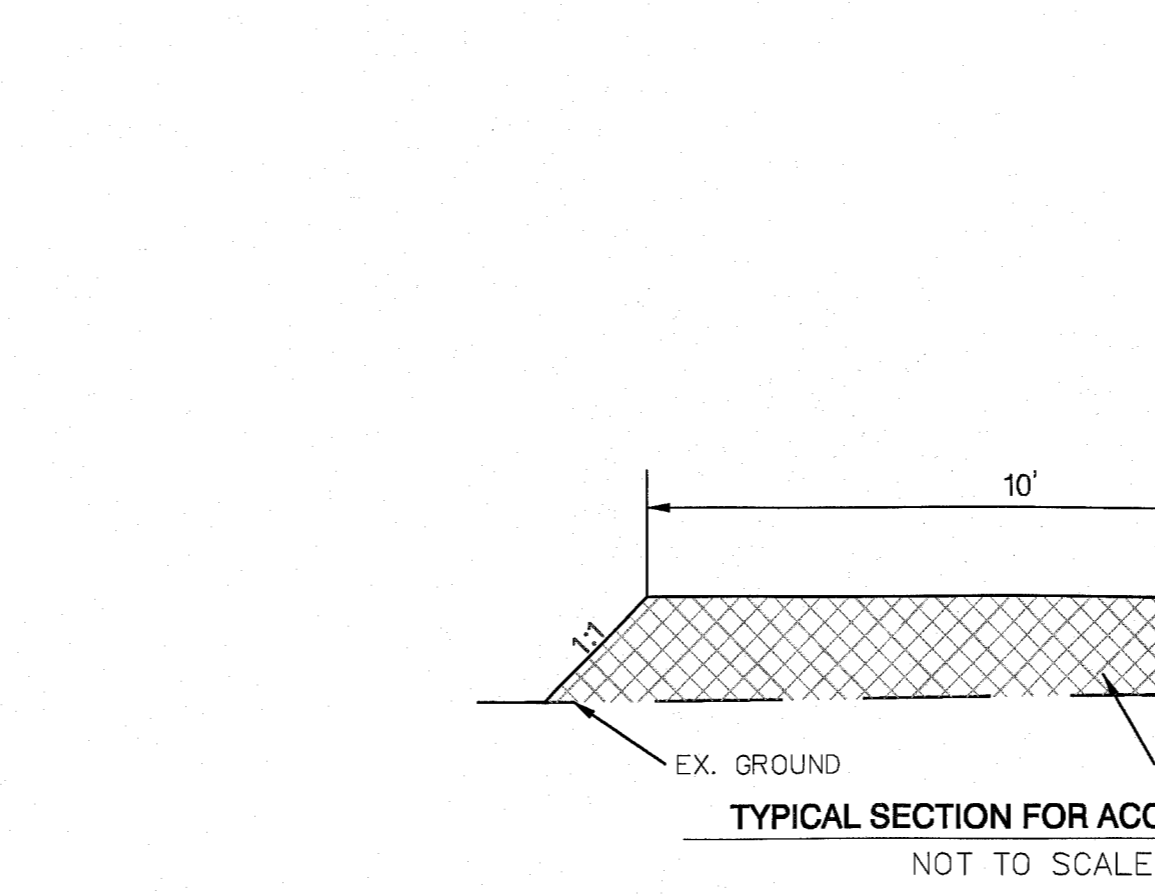
WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: JULY 1, 2005 <i>Rail P. Huppert</i> Chief Engineer	STANDARD DETAIL PUMP AROUND	SC 10.0
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WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: JULY 1, 2005 <i>Rail P. Huppert</i> Chief Engineer	STANDARD DETAIL TEMPORARY ACCESS BRIDGE	SC 11.0
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WASHINGTON SUBURBAN SANITARY COMMISSION	APPROVED: JULY 1, 2005 <i>Rail P. Huppert</i> Chief Engineer	STANDARD DETAIL PORTABLE SEDIMENT TANK	SC 15.0
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ES-6

DATE	REVISIONS

INFRASTRUCTURE SYSTEMS GROUP

DATE _____ GROUP LEADER _____
CONTRACTS UNIT

DATE _____ UNIT COORDINATOR _____

CONTRACT CI 5071 B10

JUNE 2012	NO. 13
212 NW 03	OF 17

WASHINGTON SUBURBAN SANITARY COMMISSION

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FOREST GLEN DISTRICT
WSSC SITE 5-11 STREAM CHANNEL REHABILITATION
 UPSTREAM OF LINDEN LANE
 PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

JUNE 2012	NO. 13
212 NW 03	OF 17

WASHINGTON SUBURBAN SANITARY COMMISSION

AND CONFIDENTIAL INFORMATION WHICH SHALL NOT BE REDISTRIBUTED WITHOUT PRIOR WSSC APPROVAL.

WSSC SITE 5-11 STREAM CHANNEL REHABILITATION
 UPSTREAM OF LINDEN LANE
 PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

JUNE 2012	NO. 13
212 NW 03	OF 17

FINAL FILMED

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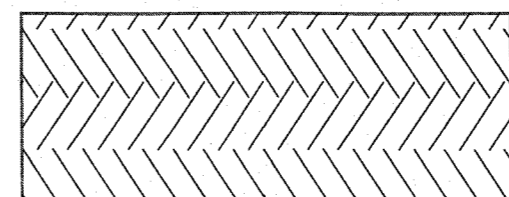
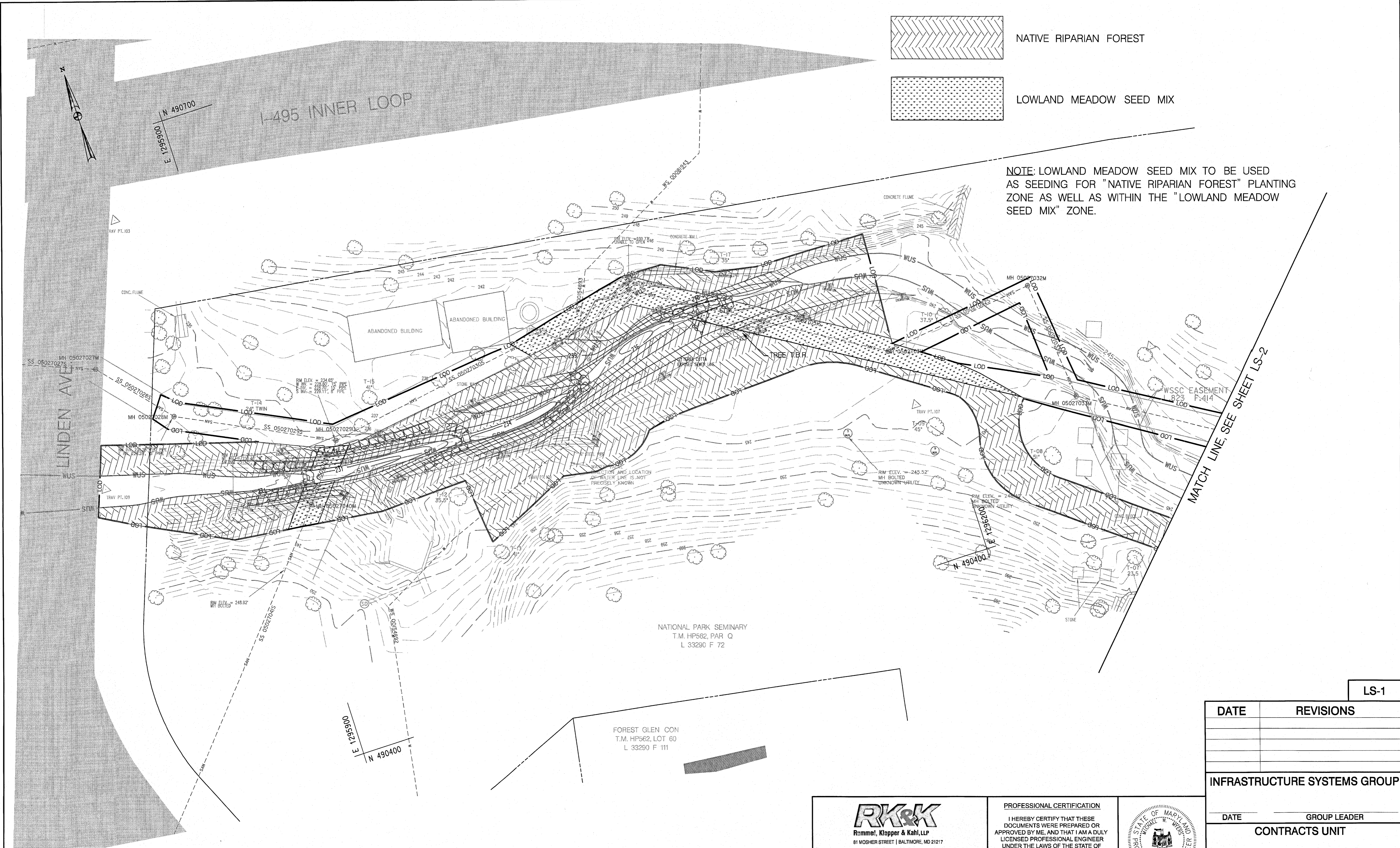
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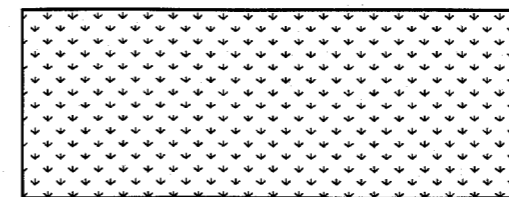
SOIL BORINGS ORDERED

JOB AUTH.

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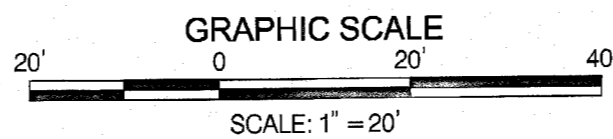
NATIVE RIPARIAN FOREST



LOWLAND MEADOW SEED MIX

NOTE: LOWLAND MEADOW SEED MIX TO BE USED AS SEEDING FOR "NATIVE RIPARIAN FOREST" PLANTING ZONE AS WELL AS WITHIN THE "LOWLAND MEADOW SEED MIX" ZONE.

NOTE: THE INFORMATION DEPICTED ON THIS PLAN SET IS BASED ON THE BEST INFORMATION AT THE TIME OF PLAN COMPILATION. THE CONTRACTOR MUST VERIFY, VALIDATE AND/OR LOCATE ANY AND ALL UTILITIES, GRADES, AND OTHER PERTINENT INFORMATION TO COMPLETE THE WORK SAFELY.



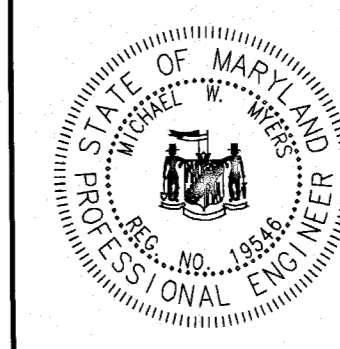
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LICENSE NO.: 19546
EXPIRATION DATE: 2014-02-18

FOREST GLEN DISTRICT
WSSC SITE 5-11 STREAM CHANNEL REHABILITATION
UPSTREAM OF LINDEN LANE
PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

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WSSC SITE 5-11 STREAM CHANNEL REHABILITATION
UPSTREAM OF LINDEN LANE
PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

LS-1

DATE	REVISIONS

INFRASTRUCTURE SYSTEMS GROUP

DATE _____ GROUP LEADER _____
CONTRACTS UNIT

DATE _____ UNIT COORDINATOR _____

CONTRACT **CI 5071 B10**

JUNE 2012	NO. 14
212 NW 03	OF 17

212 NW 03	NO. 14
	OF 17

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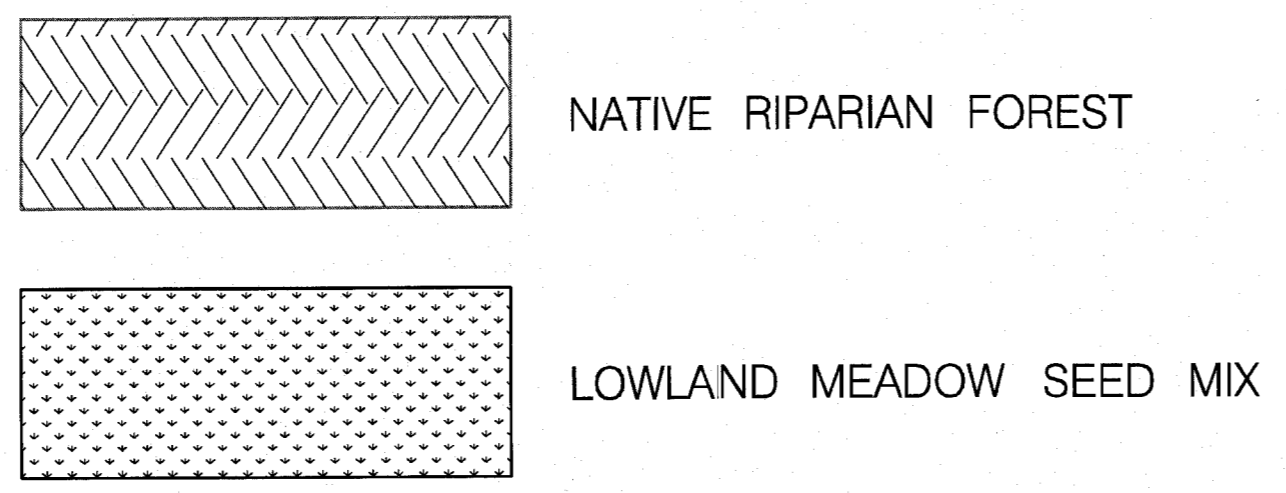
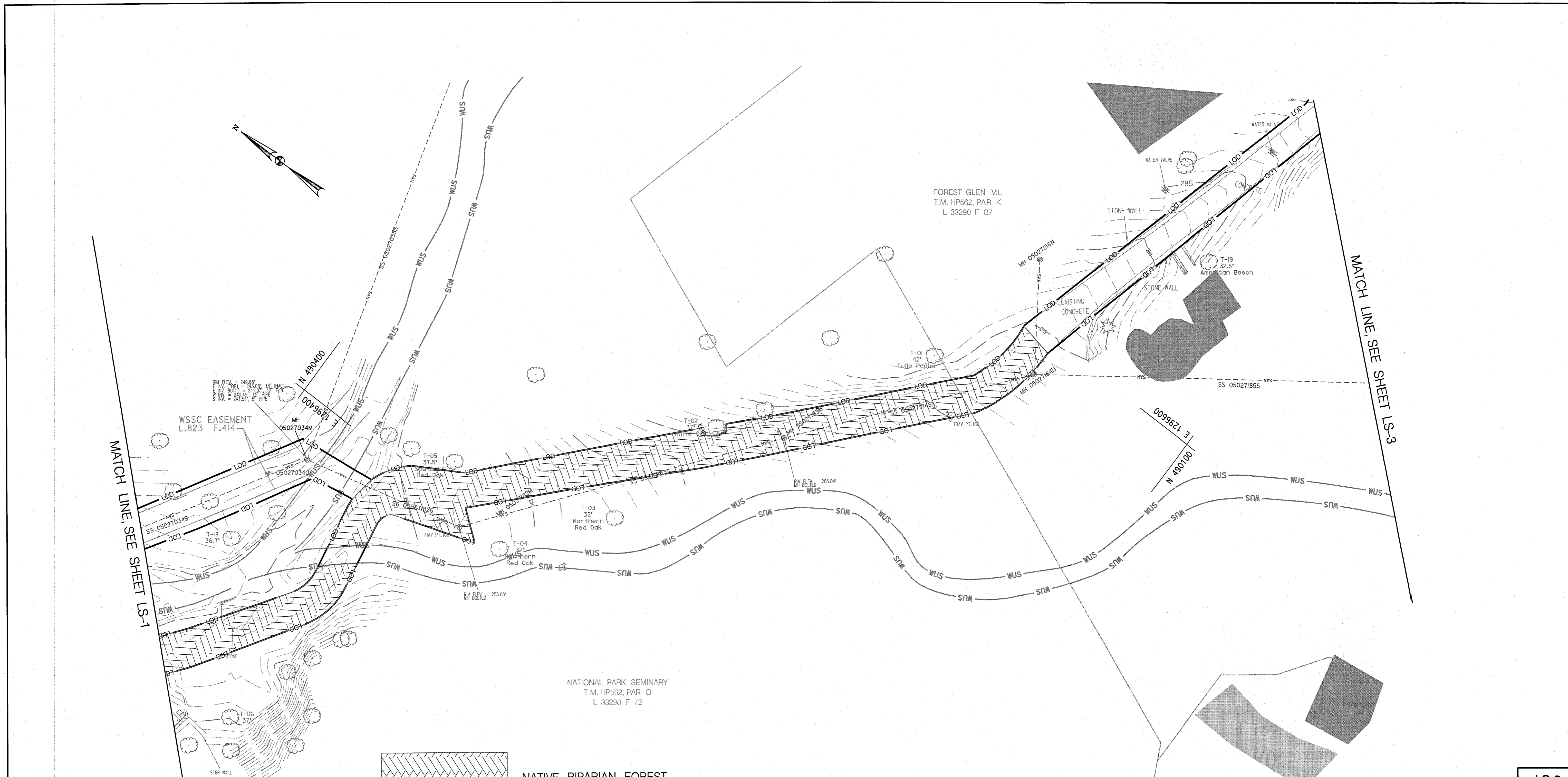
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RW/S ACQUIRED

SOIL BORINGS ORDERED

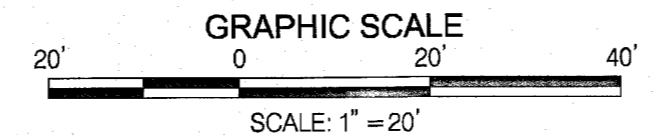
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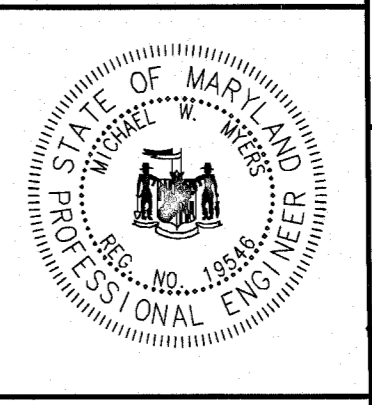
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FOREST GLEN DISTRICT
WSSC SITE 5-11 STREAM CHANNEL REHABILITATION
 UPSTREAM OF LINDEN LANE
 PART OF BLOCK 1, FOREST GLEN PARK SUBDIVISION

Monday, June 18, 2012 AT 04:48 PM

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212 NW 03		OF	17

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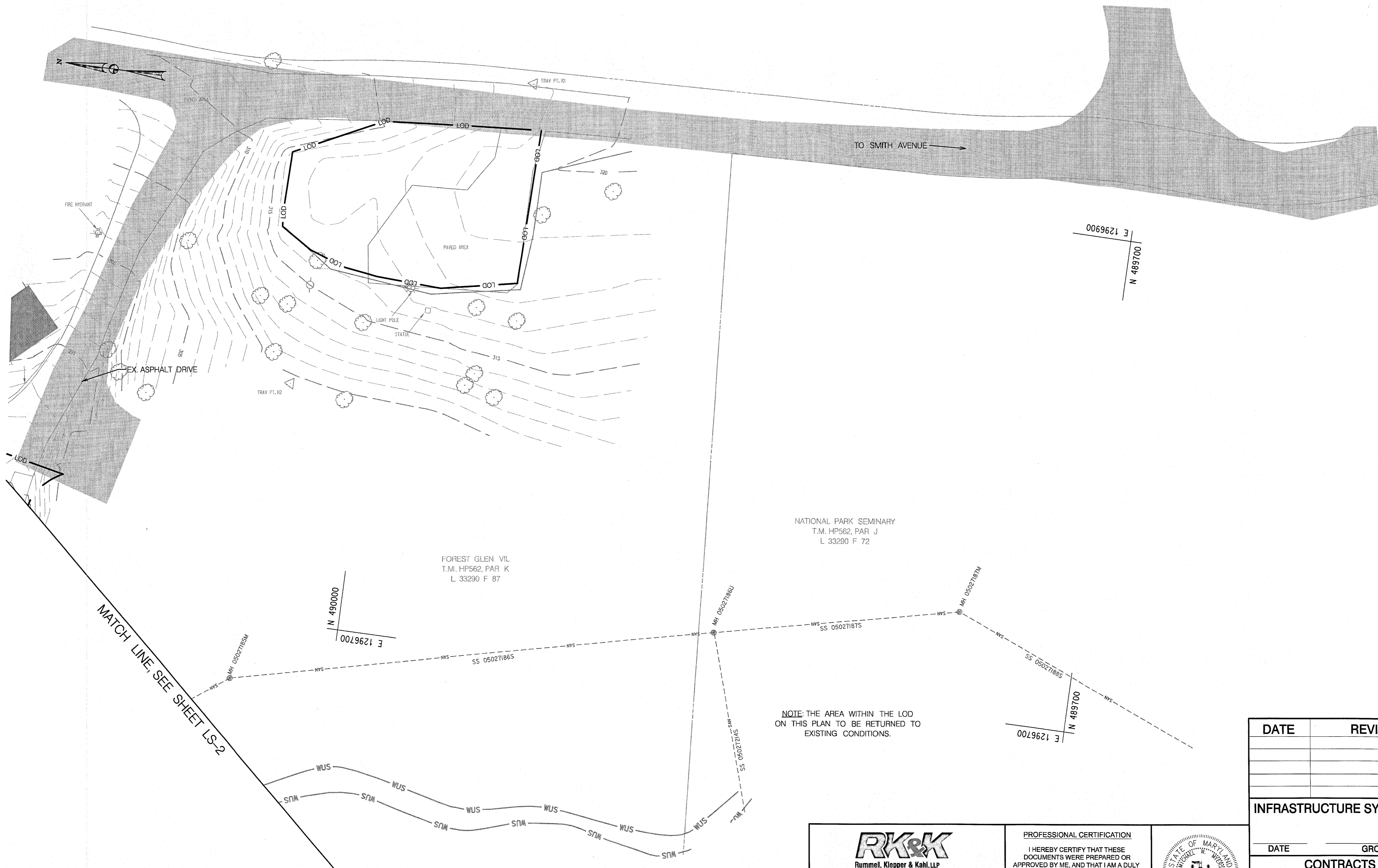
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RWS ACQUIRED

SOIL BORINGS ORDERED

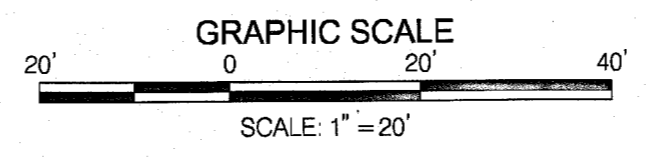
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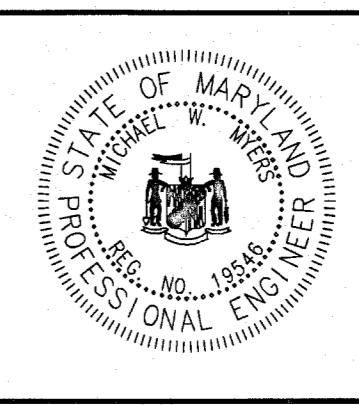
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NOTE: THE AREA WITHIN THE LOD ON THIS PLAN TO BE RETURNED TO EXISTING CONDITIONS.



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**FOREST GLEN DISTRICT
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UPSTREAM OF LINDEN LANE
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LS-3	
DATE	REVISIONS
INFRASTRUCTURE SYSTEMS GROUP	
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JUNE 2012	NO. 16
212 NW 03	OF 17

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212 NW 03	OF 17

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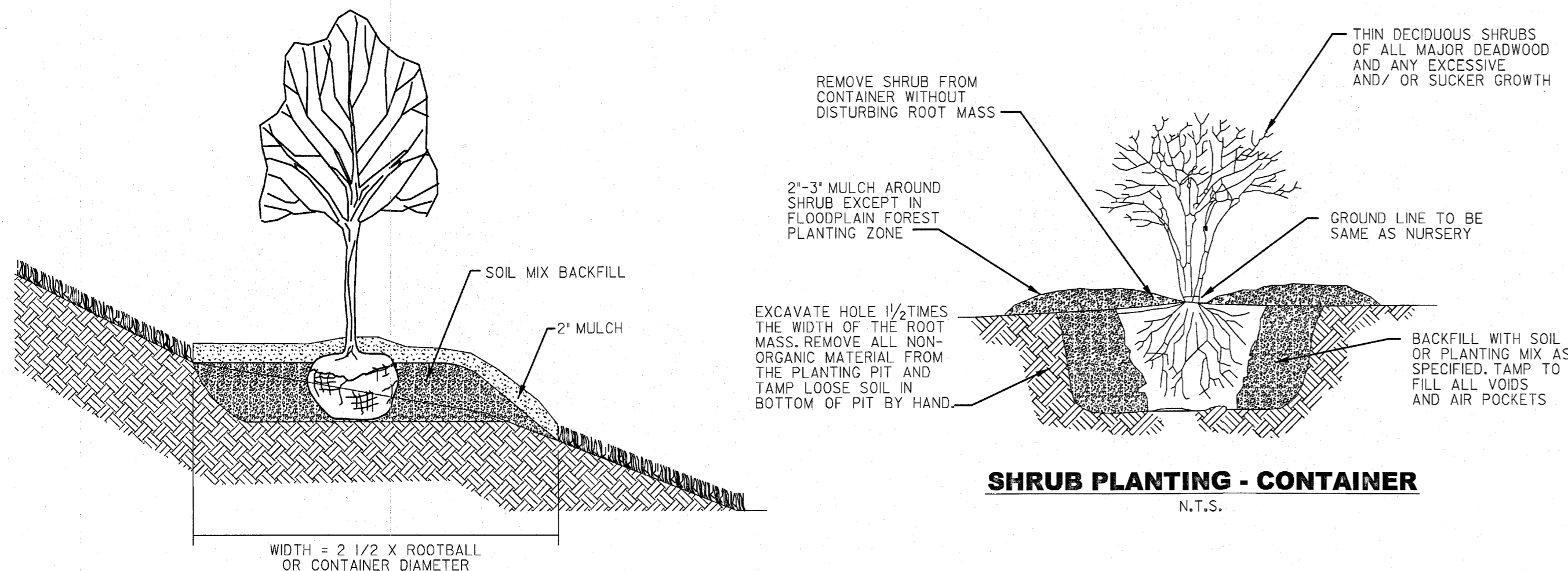
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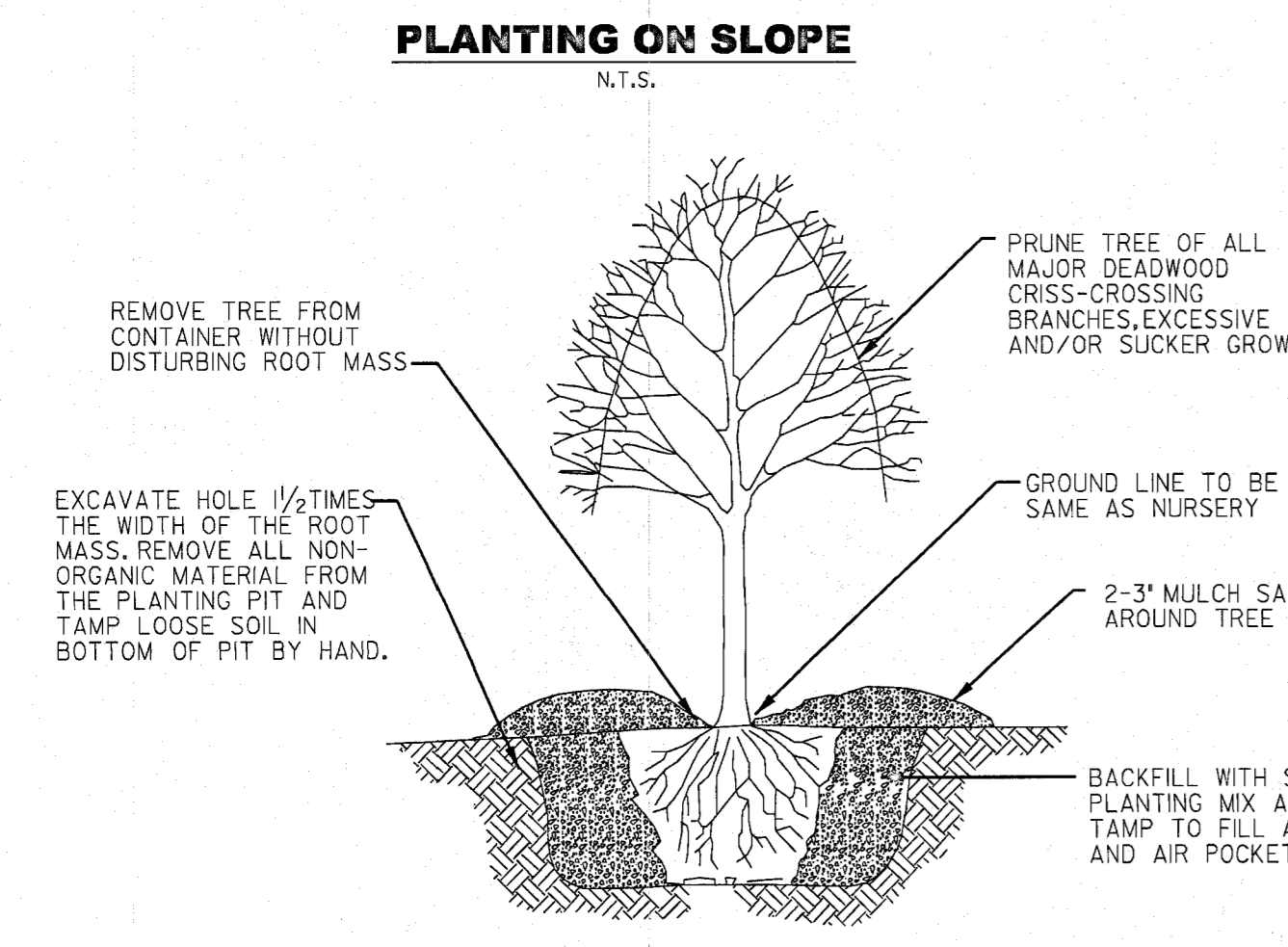
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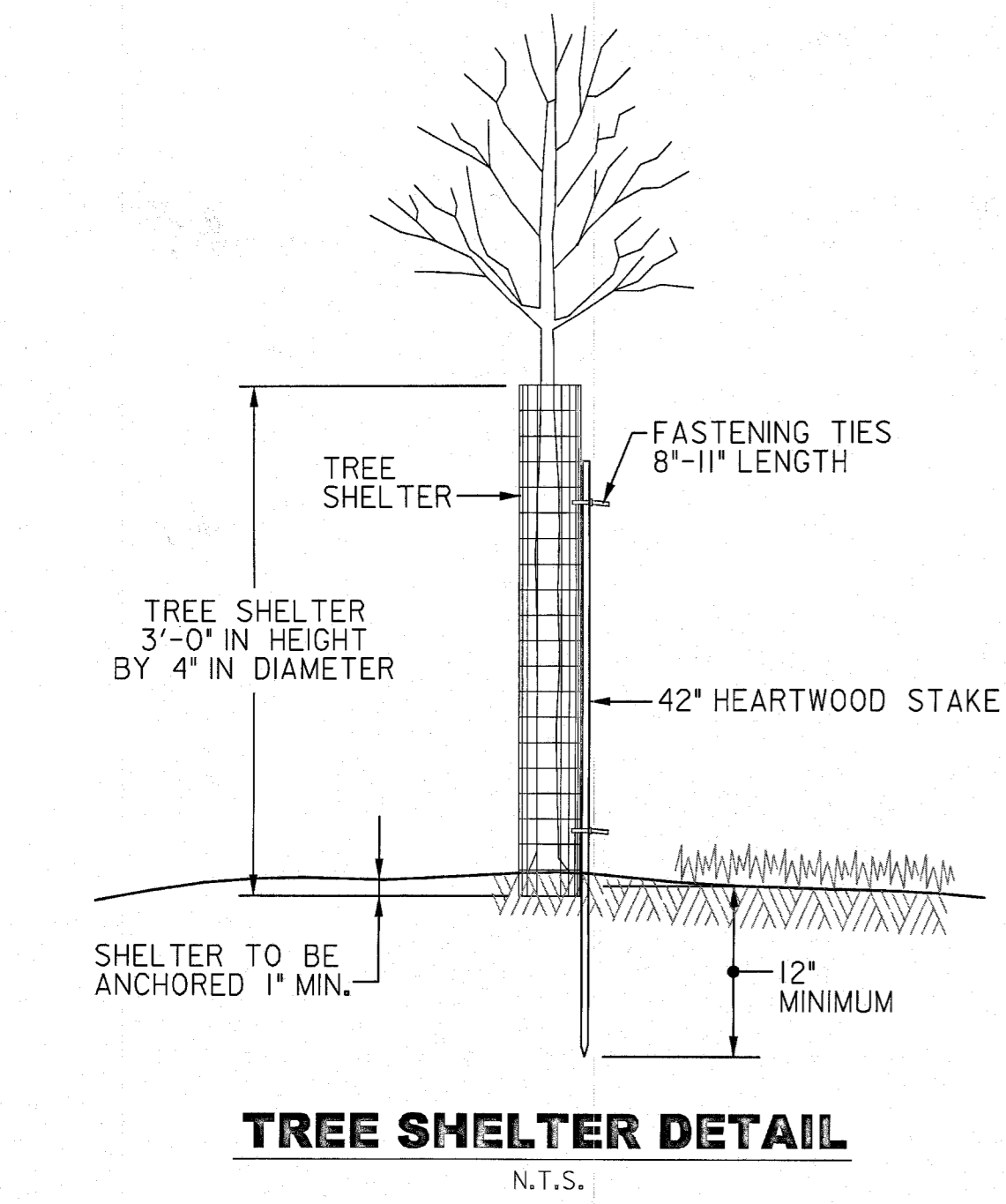
SHRUB PLANTING - CONTAINER

N.T.S.



TREE PLANTING - CONTAINER GROWN

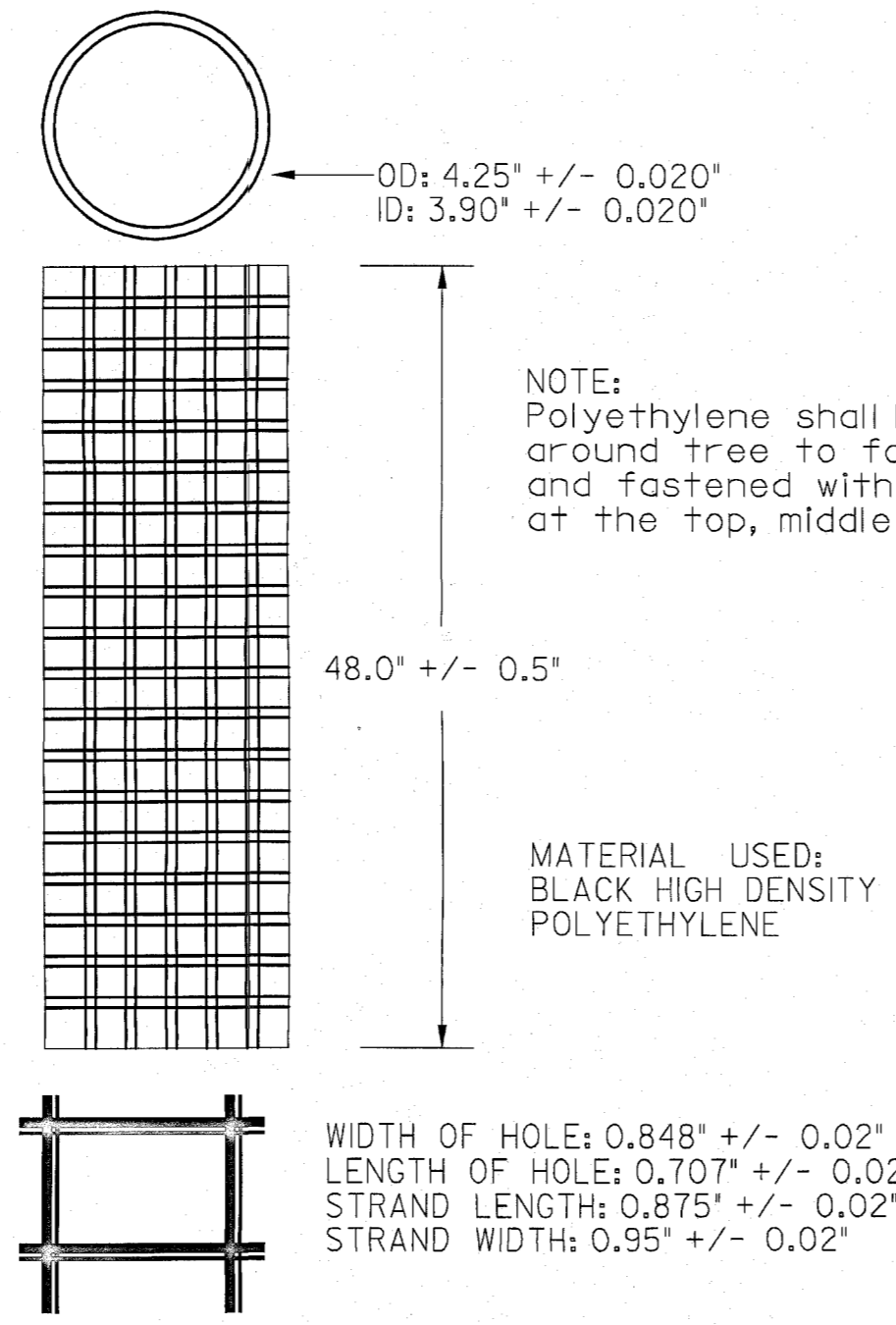
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TREE SHELTER DETAIL

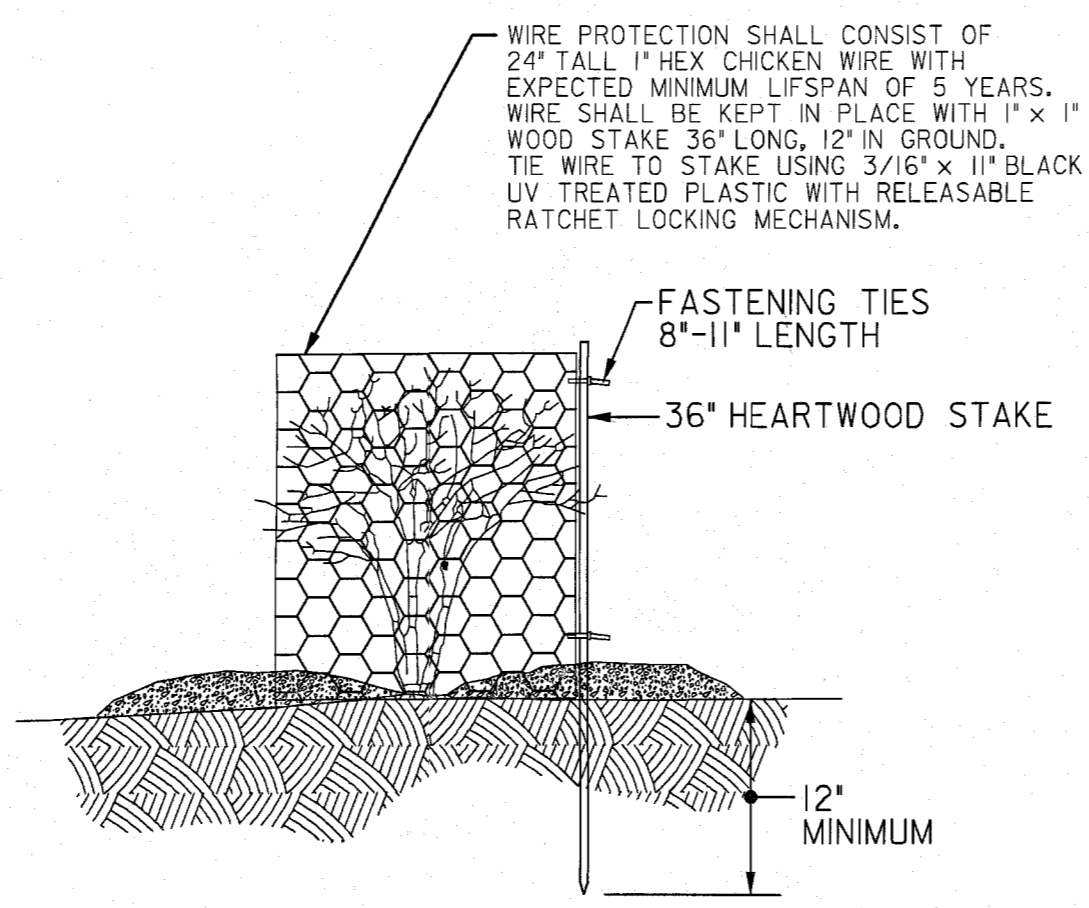
N.T.S.

- NOTES:
- UP TO 2" OF SOIL CAN BE MOUNTED AROUND THE OUTSIDE OF TREE SHELTER.
 - REFER TO TREE SHELTER SPECIFICATION FOR ADDITIONAL INFORMATION.



DEER PROTECTION

N.T.S.



SHRUB DEER PROTECTION

N.T.S.

NATIVE RIPARIAN FOREST

Size (acres): 0.51

Overall Minimum Spacing - feet on center (OC)	Quantity per acre	Frequency (%)	Species Quantity	Vegetation Strata/ Species Name	Common Name	Wetland Indicator Status	Size	Type	Placement
TREES									
15	200								
		10	5	<i>Acer rubrum</i>	Red Maple	FAC	2.5' cal.	B&B	Naturalized at 15' OC
		15	8	<i>Betula nigra</i>	River Birch	FACW	2.5' cal.	B&B	Naturalized at 15' OC
		20	10	<i>Liriodendron tulipifera</i>	Tulip Poplar	FACU	2.5' cal.	B&B	Naturalized at 15' OC
		10	5	<i>Nyssa sylvatica</i>	Black Gum	FAC	2.5' cal.	B&B	Naturalized at 15' OC
		15	8	<i>Platanus occidentalis</i>	American Sycamore	FAC-	2.5' cal.	B&B	Naturalized at 15' OC
		20	10	<i>Quercus palustris</i>	Pin Oak	FACW	2.5' cal.	B&B	Naturalized at 15' OC
		10	5	<i>Quercus bicolor</i>	Swamp White Oak	FAC+	2.5' cal.	B&B	Naturalized at 15' OC
		100.0	51	=total					
SHRUBS									
10	80								
		25	10	<i>Cornus amomum</i>	Silky Dogwood	FACW	18'	Cont.	Naturalized at 23' OC
		25	10	<i>Photinia melanocarpa</i>	Black Chokeberry	FACW+	18'	Cont.	Naturalized at 23' OC
		50	20	<i>Viburnum dentatum</i>	Arrowwood	FAC	18'	Cont.	Naturalized at 23' OC
		100.0	40	=total					

LOWLAND MEADOW SEED MIX

Size (acres): 0.57

Common Name	PURE LIVE SEED Oz per 1,000 ft	Size	Type	Placement
NATIVE SEED				
SELECT 8				
common boneset	0.04	0.1	0.06 lbs	seed
eastern purple coneflower	0.44	1.2	0.68 lbs	seed
evening primrose	0.07	0.2	0.11 lbs	seed
landleaf tickseed	0.55	1.5	0.86 lbs	seed
Maximilian sunflower	0.18	0.5	0.29 lbs	seed
New England aster	0.07	0.2	0.11 lbs	seed
New York Ironweed	0.07	0.2	0.11 lbs	seed
showy tickseed	0.04	0.1	0.06 lbs	seed
stiff goldenrod	0.11	0.3	0.17 lbs	seed
swamp verbena	0.26	0.7	0.40 lbs	seed
trumpetweed or spotted trumpetweed	0.07	0.2	0.11 lbs	seed
INCLUDE ALL				
big bluestem	2.0	0.73	0.42 lbs	seed
gamagrass	2.0	0.73	0.42 lbs	seed
Indiangrass	2.0	0.73	0.42 lbs	seed
switchgrass	1.0	0.36	0.21 lbs	seed

LS-4

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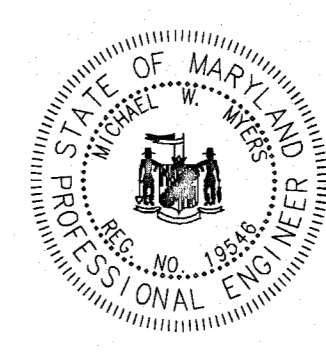
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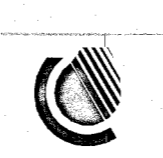
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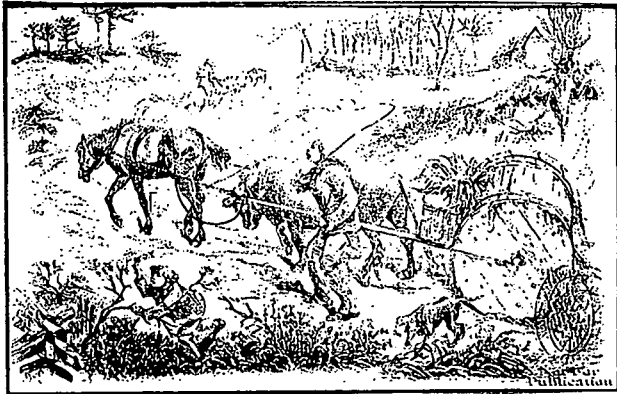
The History of the Carriage Trail

(aka Ireland Drive)

from 1774 to 2008

Summary: (enjoy the Full Story after the Summary)

This Trail has a long and colorful history, dating back more than two hundred years to the American Revolution. It has been an Indian trail, a "rolling road" to transport tobacco, a bridle path, a carriage trail and Ireland Drive.



The Trail was established in 1774 as a "rolling road" so large wooden barrels of tobacco known as "hogsheads" could be rolled from the Edgewood plantation at the top of the hill down to Rock Creek to reach the Port of Georgetown for export to England. The plantation and the trail were established by the illustrious Brent/Carroll family that played a prominent role in the American Revolution. There was Daniel Carroll, one of the 39 signers of the Constitution, Robert Brent, the first Mayor of Washington D.C., and John Carroll, the first Roman Catholic bishop and archbishop in the United States and the founder of Georgetown University. Two Presidents; Jefferson and Madison, may well have walked this adjacent Trail during their visits to the Brent/Carroll home known as Edgewood.

crossing it in August, 1880, and [in 1888] Robert Fulton tested a model of the Clermont in Rock Creek." (*Washington Post*, May 1, 1975)

It is not known how the hogsheads were transported on Rock Creek, but two solutions were common at the time:—Thomas Jefferson recorded the purchase of a "bateau" or flatboat in 1775 to carry hogsheads of tobacco, designed for freight in the shallow rocky waters of Virginia's Upper James River. The bateau "was used extensively across North America, especially in the colonial period. It was traditionally pointed at both ends but came in a wide variety of sizes." ~~The bateau had no keel and a draft of as little as 12 inches.~~ A second solution was described by another contemporary observer in Virginia: "It is common...to see two of those tottering vehicles (tobacco canoes) when lashed together side by side, carrying down our upland streams, eight or nine hogsheads of tobacco." (<http://www.bateau.net/>)

Moving the hogsheads from Edgewood Plantation down to Rock Creek required wooden bridges over the ravines that are crossed by the Trail's concrete bridges today. The Carriage Trail was the corduroy rolling road from the Edgewood Plantation down to the Creek, linking to another road that continued across the Creek via a primitive log bridge to reach the neighboring Clean Drinking plantation (today's Chevy Chase) along Jones Mill Road. The Carriage Trail was therefore, at the time of the American Revolution, a vital connector trail for local commerce, what was known at the time as a tobacco "rolling road".

From all this, we take away one main point: **There is clear evidence that the Carriage Trail has been in continuous use at least since 1774--234 years--**and it may well be that its use by settlers and native Americans began much earlier than that. (Sources on early history of Edgewood Plantation: *Forest Glen*, by Rich Schaffer and Ric Nelson, Arcadia Publishing, 2004, pp. 7-20, and *Enchanted Forest Glen* published by Save Our Seminary at Forest Glen, 1999, p. 8.)

The Carriage Trail was established by an Illustrious Family

It is also interesting that the family that established this Trail in 1774 played a significant role in the American Revolution.

Anne Carroll Brent, with her husband Robert, founded Edgewood Plantation and the trail in 1774. Her brothers were Daniel Carroll, who lived in an estate called Highlands where the Mormon Temple stands today, and John Carroll, who lived in the "Rock Creek" mansion where today Seminary Road and Hale Street intersect.

Daniel Carroll was one of the 39 original signers of the Constitution of the United States on September 17, 1787; played a key role in securing the First Amendment guarantee of freedom of religion; was elected to the U.S. House of Representatives on January 13, 1789; and laid the first boundary stone of Washington D.C. at Jones' Point on April 15, 1791. Daniel was a close friend of George Washington and James Madison. (M. Virginia Geiger, *Daniel Carroll II: One Man and His Descendants*, 1979, p. 45).

Anne's brother, John Carroll, was appointed by Pope Pius VI to be the first bishop of the Roman Catholic Church in the United States on November 6, 1789 and he became its first archbishop in 1808. John also founded Georgetown University on January 23, 1789. In 1774, while Anne was establishing Edgewood and the Trail, John established one of the first Roman Catholic parishes in America on his mother's estate, a short walk from the top of the Trail. A replica of the original Saint John the Evangelist parish church, stands near what is today 9700 Rosensteel Avenue off Forest Glen Road.

At the time of the American Revolution, a road originating at the cemetery of John Carroll's church, passed the Carroll family Rock Creek mansion, and continued (what we now call the Carriage Trail) via the Edgewood house down to Rock Creek.

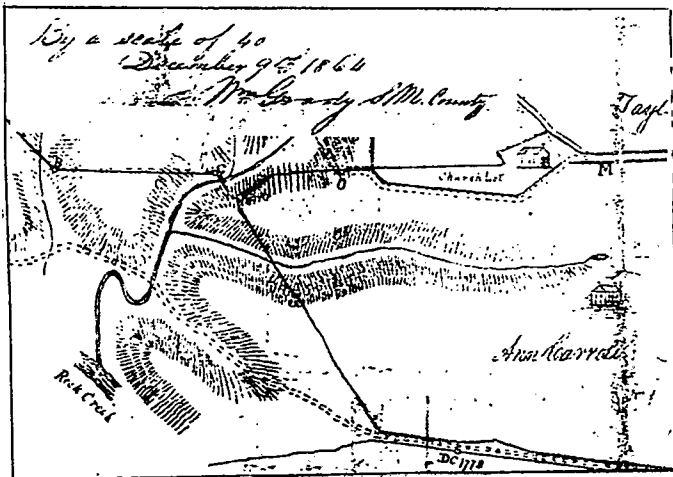
In 1774 when Robert and Anne Brent established the Trail leading from their house down to Rock Creek, they were also raising their son Robert, born in 1763. Robert Brent went on to be appointed by President Thomas Jefferson on June 3, 1802, to be the first mayor of Washington D.C. He was reappointed nine times by Presidents Jefferson and Madison. "During the Brent years,...Edgewood was a favorite haunt of Jefferson, Madison, Clay, and others." (http://www.operant.com/Seminary/early_history.html and Irene S. Gordon, *Forest Glen Park Looks Back*, Forest Glen Park Citizen's Association, 1988, p. 15)

Washington's first Mayor grew up walking on this Trail. It is likely that his illustrious uncles, Daniel and John, occasionally accompanied him. It is reported that he later hosted two Presidents of the United States at Edgewood and may have walked this Trail with them as well!

The Carriage Trail in the 1800's

The Brent/Carroll family sold the Edgewood plantation, including the early trails that later were paved as the Carriage Trail, to the Mosher family in the 1830s. In 1853, Mosher sold it to John Johnson. Around the time of the Civil War (September, 1862) Charles Keys acquired the property, which his heirs kept until 1928.

A few decades after it began in 1774, the cultivation of tobacco on this property stopped because the tobacco market was saturated and the soil was depleted. Hogsheads no longer rolled down to Rock Creek. The opening of the Metropolitan Branch of the Baltimore and Ohio Railroad in 1873, probably ended any remaining local need for commercial transport via Rock Creek. But as Edgewood and other plantations in the area continued farming, wagons carried their produce down the Trail to cross Rock Creek and continue south on Jones Mill Road. The Trail remained in continuous use in the 1800s, as shown on a Civil War era map dated December 1864 (reproduced on page 13 of *Forest Glen* by Rich Schaffer and Ric Nelson, Arcadia Publishing, 2004.)



Civil War era Map of Trail from Edgewood house

In the later part of the 19th Century the Keys family raised race horses at Edgewood Farm. One of their legendary champions, McPhonso, was buried on the farm. (source: Farquhar, "Edgewood," p. 142.) The Carriage Trail was used to exercise the horses and bring them down to and along Rock Creek.

The earliest known photo of the Carriage Trail appeared in 1888 in a sales booklet published by the Forest Glen Improvement Company, called "Forest Glen Park and The Forest Inn."



1888 photograph of the Carriage Trail

The creation of the National Park Seminary in 1894 increased demand for trails in the neighborhood. Its enrollment grew from 48 in 1894 to

279 in 1909. Students enjoyed hiking and horseback riding on the main Trail and on a system of bridle paths throughout the woods. Getting to Rock Creek, and the paths along the creek, would have been natural goals. "Girls could bring their own horses and board them at the stables or ride the school's horses...Horseback riding was a necessity and an enjoyable sport before automobiles, and nearly every NPS girl rode...By 1912, the Seminary had to build new stables [today's Carroll House], because the first stables burned down in 1910." By 1940, "many miles of trails leading into Rock Creek Park were heavily trotted." --*Enchanted Forest Glen* published by Save Our Seminary at Forest Glen, 1999, pp. 43 and 76.

It was common practice for private farms to permit neighbors on horseback a right of way to traverse their land. The girls were allowed access to Rock Creek Park via the Trail before 1928, while the land was still owned by the neighboring Keys family. As evidence, there are photos of Seminary girls sitting on the wooden bridges of the Trail before it was purchased by the Seminary. And, in a November 28, 2007 letter, the Army acknowledged to M-NCPPC that "footpaths and trails through the woods on neighboring property [the Edgewood Farm] may have been used by [NPS] students" prior to acquisition of Edgewood by NPS in 1928. A recent Report by the Parks Department says that National Park Seminary usage of the Trail prior to 1928 "appears to have been informal and based on a neighborly agreement."

The Seminary Acquired the Carriage Trail in 1928

In 1928, James Eli Ament, the President of the Seminary, bought Edgewood farm from the Keys family. It included 150 acres of adjacent woods and the Trail. He renamed the farm Amentdale, and used it to provide fresh food and recreation for students.

The Seminary Paves the Carriage Trail

Improvement of the Trail was apparently one of Ament's immediate objectives when he bought Edgewood in 1928, because within a short time he spent great sums to pave the roadway and bridges to a very



National Park Seminary students in the 1930's on the Carriage Trail

high standard, as we see them today. The first photo of the completed paving appeared in the National Park Seminary catalog for 1931-32.

It is possible that the paving of the Trail was supported with public funds. One of the five bridges is two lanes wide and all of it was built to standards beyond the level that would have been needed for a small academy or for horses or carriages. It seems unlikely that the school would have invested its own funds so lavishly on a lightly used facility, during the early years of the Great Depression.

The Army Acquired the Carriage Trail in 1942 and renamed it Ireland Drive

During World War II, the United States Army used powers granted by Section 2 of the Second War Powers Act of 1942, to take possession of the National Park College for use by Walter Reed Army Hospital as an annex for convalescing soldiers. In August 1942 the Army handed down condemnation proceedings, and on September 3, 1942, the property became an annex to the Walter Reed Army Medical Center. The Army paid \$890,000 for the land, buildings and furnishings of the Seminary.

Ownership of the Carriage Trail was incidental to this transaction. It was not central to the Army's interest in the property. The Army renamed the Carriage Trail "Ireland Drive," to honor Merritte Weber

Ireland, the Army Surgeon General from 1918 to 1931, and used it for training and exercises.

The pavement and five concrete bridges of the Trail were nearly new when the Army took the property. But the Army did not have an allocation for the maintenance and repair of the Trail. Today, after 66 years of Army ownership, the Trail and especially some of the bridges are in deteriorated condition, but no funds are currently available for their restoration.

In response to appeals by the Save Our Trail Coalition, the Army is now investigating the possibility of repairing the most deteriorated of the five bridges.

In recent years, the Army has returned to public use other portions of the Edgewood plantation that it acquired with the condemnation of the National Park College. In 1987, the Army transferred to M-NCPPC ownership of 5 acres of woodland and dirt trails south and east of Woodstock Avenue, to be added to Rock Creek Stream Valley Park (using the National Park Service's Federal Lands to Parks Program (Section 203 (k)(2) of Public Law 91-485, as amended (40 U.S.C. 484 (k)(2))). In 1994, the Army transferred to the M-NCPPC an additional 11 acres south of Woodstock Court and to the north and west of Ireland Drive, because this was mandated by the National Defense Authorization Act for Fiscal Year 1993, (Sec. 2837). According to the Parks Department, in this 1994 transaction, the Army was also prepared to transfer the Carriage Trail but, at that time, the Parks and Planning Commission declined to accept it because repair and maintenance would deplete scarce budgetary resources.

In 2004, the Army gave to Montgomery County an additional 27 acres in the National Park Seminary Historic District including the historic buildings that the Army had taken by condemnation in 1942. The County awarded the property to the National Park Seminary Partnership for the restoration and residential redevelopment project that is proceeding today.

The Carriage Trail Today

Many Carriage Trail users do not realize that the 3/4 mile Trail and 15-20 acres of adjoining parkland belong to the United States Army, NOT the Parks Department. The Army permits public use of the Trail, up to the present time, but reserves their right to close access and does not have a budget for its maintenance.

The North and West Silver Spring Master Plan, adopted by the Montgomery County Council in August 2000, recognized the importance of the Carriage Trail (Ireland Drive) link. It recommended (pp. 74-75) that the county:

Improve and expand the inter-connected system of bikeways and trails in Silver Spring and beyond....Connecting the two north-south regional bikeways [the Rock Creek and Sligo Creek bikeways] is an important goal of this Plan....Walter Reed [Annex], adjacent to Rock Creek Park, could provide critical connections to nearby neighborhoods, directly linking them to the Park and ultimately to the Georgetown Branch/Capital Crescent Trail. A deteriorated trail [the north end of Ireland Drive] bordering Rock Creek Park and federal property should be repaired. Trail proposals involving federal property should also address maintenance responsibility and ownership issues.

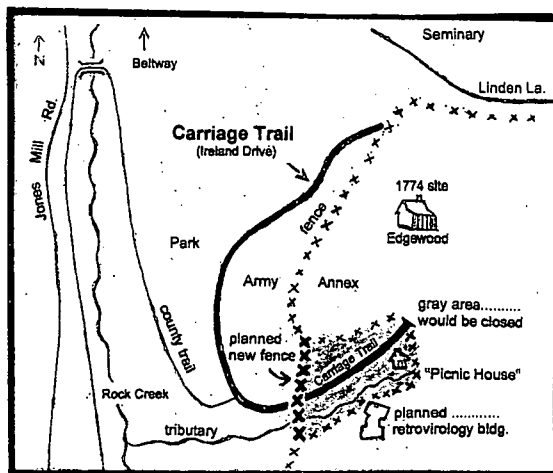
An Army letter to the Parks Department dated August 8, 2006 notes the importance of the Carriage Trail loop and says that the Trail "may be eligible for listing on the National Register of Historic Places."

On January 17, 2008 the Carriage Trail (Ireland Drive) was officially designated part of the Maryland-National Capital Park and Planning Commission's Legacy Open Space Program, as a unique heritage and natural resource for the County, putting on the record the interest of the Commission and the public in keeping these trails and woodlands open to the public and incorporating them into the public trail network.

The Army Plans to Close Part of the Carriage Trail in 2011

In November 2007, the Army revealed that its Master Plan for the future of the Water Reed Army Medical Center Forest Glen Annex includes a proposed new perimeter fence that will close to the public most of the southern section of the Carriage Trail/Ireland Drive (beginning at a point near where the Minihaha Creek--aka Lower Donnybrook Tributary--joins Rock Creek, and ending at the Annex's locked "turnstile"). The Army says that the new fence will be necessary to increase security for buildings that it plans to construct in FY-2011, especially a five-story, 140,000-square-foot infectious disease research laboratory to absorb the Division of Retrovirology that will move from Rockville in accordance with a 2005 BRAC re-stationing action. No funds for the new buildings have been appropriated.

The Army's Master Plan shows the security boundary requirements for



each building. They all appear to fit within the existing fence. The Plan does not explain why a new perimeter fence is needed to expand security beyond their own requirements as indicated in this planning document.

On January 7, 2008, in response to a request by Save Our Trail Coalition, Congressman Chris Van Hollen's office hosted a meeting with high level representatives of the M-NCPPC Parks Department, the Army, Save Our Seminary, and Save Our Trail.

The Director of Parks stated the Commission's interest in keeping the trail open to the public and incorporating it and the surrounding woodlands into the public trail network, but emphasized the need for adequate funding to restore any bridges that come under its maintenance responsibility as part of an easement or transfer of the land. Given the expected shortfall in County funds, she requested that the Congressional staff and the Army look for federal funding sources to pay for current repair needs. Both parties agreed to do so.

The Army recognizes that the West Silver Spring Master Plan of 2000 designates the northern section of Ireland Drive as a "vital transportation connector" between Sligo Creek trails and Rock Creek trails. It proposes to give the Commission a perpetual trail easement from Linden Lane to just beyond where the Carriage Trail (Ireland Drive) meets the county trail that is part of the Rock Creek Stream Valley Park. The easement does not include any of the woodlands. They also agreed to consider a transfer instead of an easement. However, the Army continues to say that its Master Plan requires a new fence that will close to public use most of the southern section of the trail that includes some of the grandest trees, most of the tributary and the ruins of the historic "Picnic House." The Army agreed, at this meeting, to seek funds to repair the worst of the five Trail bridges, and to make possible a comprehensive cost analysis to repair all of the Trail and bridges.

In March 2008, it was reported that the Army is examining the most deteriorated bridge with the intention of repairing it.

In response to the January 7 meeting, Save Our Trail Coalition said that it is not enough to protect the cement trail. The woodlands too are in danger of decay due to invasive non-native vines and other plants

that smother trees, shrubs and wild flowers. In addition, the tributary suffers from occasional pollution that would go undetected if people have no access to it.

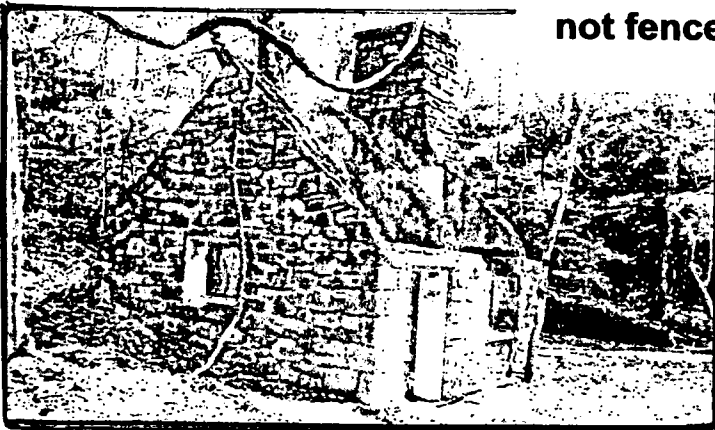
The charming "Picnic House" at the head of the southern leg of the Trail is also significant as an historic structure that ought to be restored, not closed to the public. Reportedly it was built on the site of an earlier "Spring House" or "Mill House," and designed by a Seminary student before 1915.

The Army is willing to allow occasional, specially planned access to these closed off sites, but Save Our Trail Coalition contends that, though this is a generous offer, it would require a cumbersome process that would hinder normal access and environmental stewardship.



1920's

**The Picnic House
should be restored,
not fenced in.**

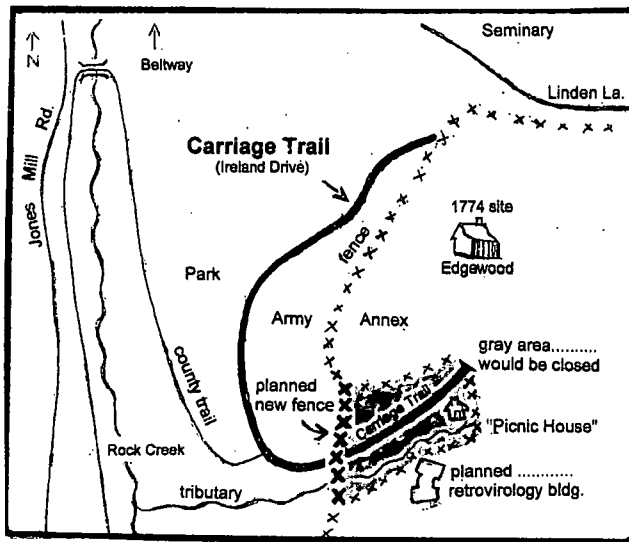


2008



Will the Carriage Trail and the "picnic house" be allowed to perish like the Seminary's grand Odeon Theatre, which burned during a period of neglect in 1993; Edgewood house, the historic home of Washington's first mayor, which was burned down in the mid 1960s to make way for the Army Commissary; five slave cabins on the Annex site that were destroyed; or the beloved Indian Rock landmark, that was blasted away with dynamite in October 1968 as part of Beltway construction?

Or will Save Our Trail Coalition, in partnership with the Army and the M-NCPPC Parks Department under the leadership of Congressman Chris Van Hollen, succeed in preserving access, historic heritage and stewardship for these paved and dirt trails, woodlands and streams that have been enjoyed by hikers since before the signing of the Declaration of Independence two centuries ago?



Prepared and published by Save Our Trail Coalition
SaveOurTrail1@aol.com



HISTORIC PRESERVATION COMMISSION


Isiah Leggett
County Executive

Leslie Miles
Chairperson

Date: October 13, 2011

MEMORANDUM

TO: Washington Suburban Sanitary Commission (WSSC)
WSSC (National Park Seminary Historic District)

FROM: Josh Silver, Senior Planner 
Historic Preservation Section
Maryland-National Capital Park & Planning Commission

SUBJECT: Historic Area Work Permit Application #542916, sewer line repair

Your Historic Area Work Permit (HAWP) application for sewer line repairs within the boundaries of the National Park Seminary Historic District was **approved with (2) conditions** by the Historic Preservation Commission at its July 28, 2010 meeting.

The conditions of approval were:

1. *The Applicant must comply with any conditions set forth by the Maryland Historical Trust Easement Committee.*
2. *The Applicant must comply with any conditions set forth by the M-NCPPC Environmental Planning Department.*

Before applying for permits from the Montgomery County Department of Permitting Services (DPS), you must schedule a meeting with your assigned staff person to bring your three (3) final permit sets of drawings in to the Historic Preservation Office at 1400 Spring Street, Suite 500, Silver Spring for stamping. Please note that although the Historic Preservation Commission has approved your work, it may also need to be approved by DPS or another local government office before work can begin.

When you file for your permit at DPS, you must take with you stamped drawings, the official approval letter, and the signed HAWP Application. These forms will be issued when the drawings are stamped by your assigned staff person and are proof that the Historic Preservation Commission has reviewed your project. For further information about filing procedures or materials for your county building permit review, please call DPS at 240-777-6370.

If your project changes in **any way** from the approved plans, either before you apply for your building permit or even after the work has begun, you must contact the Historic Preservation Commission staff at 301-563-3400. After your project is completed, please send photos of the finished work to HPC staff. Thank you very much for your patience and good luck with your project!



PAULA S. REED AND ASSOCIATES, INC.



ONE WEST FRANKLIN STREET, SUITE 300 • HAGERSTOWN, MD 21740 • 301-739-2070 • FAX 301-739-4596
WWW.PaulaSReed.com

July 23, 2010

National Park Seminary Historic District Assessment of Standing Historic Structures Potentially Affected by WSSC Sewer Line Repair

General description of the project area and its setting:

The National Park Seminary Historic District (NRHP 1972) contains approximately 23 acres of wooded and formerly landscaped grounds approximately bounded by the Capital Beltway on the north, Smith Drive on the east, and Linden Lane on the south and west. Within this landscape are numerous fanciful buildings, which were once part of the National Park Seminary for women, established in 1894 and in existence through the first third of the 20th century. The buildings are clustered around the edge of a deep ravine known as "the Glen." At the base of the ravine is a small unnamed stream that flows to the northwest, and empties into Rock Creek. In addition to the buildings, the landscape contains remnants of various manmade components, including statuary, stone and concrete walkways, abutments for foot bridges spanning the ravine, niches and a grotto, crenellated stone walls and retaining walls. These landscape features are in poor condition, some destroyed when the Capital Beltway was constructed, and others deteriorating as the decorative landscape has not been maintained for many years.

Description of the APE (Area of Potential Effect):

This project involves emergency repairs of a leaking sewer line. The APE for this project constitutes a relatively narrow area along the WSSC sewer line, roughly following the old road right-of-way to the stream bed running southeast to northwest (see attached map). Historic above-ground resources (structures) identified along the projected sewer repair area include 1) Stone Retaining Wall, located along the north edge of the old road; 2) The Grotto, located on the south bank of the feeder stream; 3) Stone and Concrete Road Bridge Remnant, located at the confluence of the primary and feeder streams; 4) Concrete Foot Bridge Piers, located on the south bank of the primary stream bed, along with corresponding stone piers at the south base of the ravine with an adjacent flight of steps with crenellated stone walls leading up the hill.

1. Stone Retaining Wall

Running along the north edge of the old road leading into the Glen from the Villa dormitory is a dry-laid stone retaining wall (EAC/A Location 2, photos ???). The section of the wall still visible runs approximately 125 feet along the base of the hill on which the Villa is sited.

Although the Stone Retaining Wall is in degraded condition it is still considered a contributing resource in the National Park Seminary Historic District.

2. The Grotto

On the south edge of the APE at the east end of the Glen (EAC/A Location 3, photos ???), is a stone grotto structure, which is part of the fantasy collection of buildings and structures that make up the National Park Seminary Historic District. The grotto includes a hollow ovoid stone structure set into a crevasse or recess in the natural stone embankment of a feeder stream, adjacent to the stone niche structure is a flat stone ledge or bench and a walkway leading to the niche defined by stone walls. The walkway continues over a small stone arched bridge which spans the stream. The stone walls follow the south edge of the stream and then turn north to border the walkway and form the sides of the bridge.

The construction is of limestone with roughly coursed stones. Characteristic of early 20th century stone walls, the tops of the walls are finished with jagged upright stones or crenellation. The bridge span consists of a radial arch. The beehive-shaped niche structure is likewise formed with a radial arched opening. The grotto structure and its accompanying walls and bridge were built between 1907 and 1918, according to historic maps.

While the grotto structure and much of the accompanying stone wall and bridge remain in good condition, the southeast end of the side wall of the bridge is missing, probably from stream flooding, and the northeast end is cracked and separated from the rest of the wall.

The grotto feature is part of the historic fabric of the district and is considered contributing to its significance.

3. Stone and Concrete Road Bridge Remnant

Just downstream of the confluence of the Glen stream and its feeder stream is a stone and concrete road bridge (EAC/A location 4, photos ???). This structure is located near the east end of the Glen. The bridge, consisting of one intact stone sidewall and three roadbed slabs (two are stone slabs and one is a concrete slab), appears to have been displaced. A metal pipe runs under and appears to be attached to the stone sidewall. The mortared limestone sidewall has jagged upright stones as coping, or crenellation typical of the early 20th century and is consistent in style, materials and workmanship with other stone walls in the historic district. Historic maps of the campus dating from 1918 to 1929 suggest that these features are the remains of a bridge carrying the county road that ran from the Forest Glen train station through the Glen to the Sphinx Bridge on the National Park Seminary campus.

The Stone and Concrete Road Bridge Remnant contributes to the significant history of the National Park Seminary Historic District, however the integrity of the bridge resource is compromised because most of its structure is missing.

4. Concrete Foot Bridge Piers

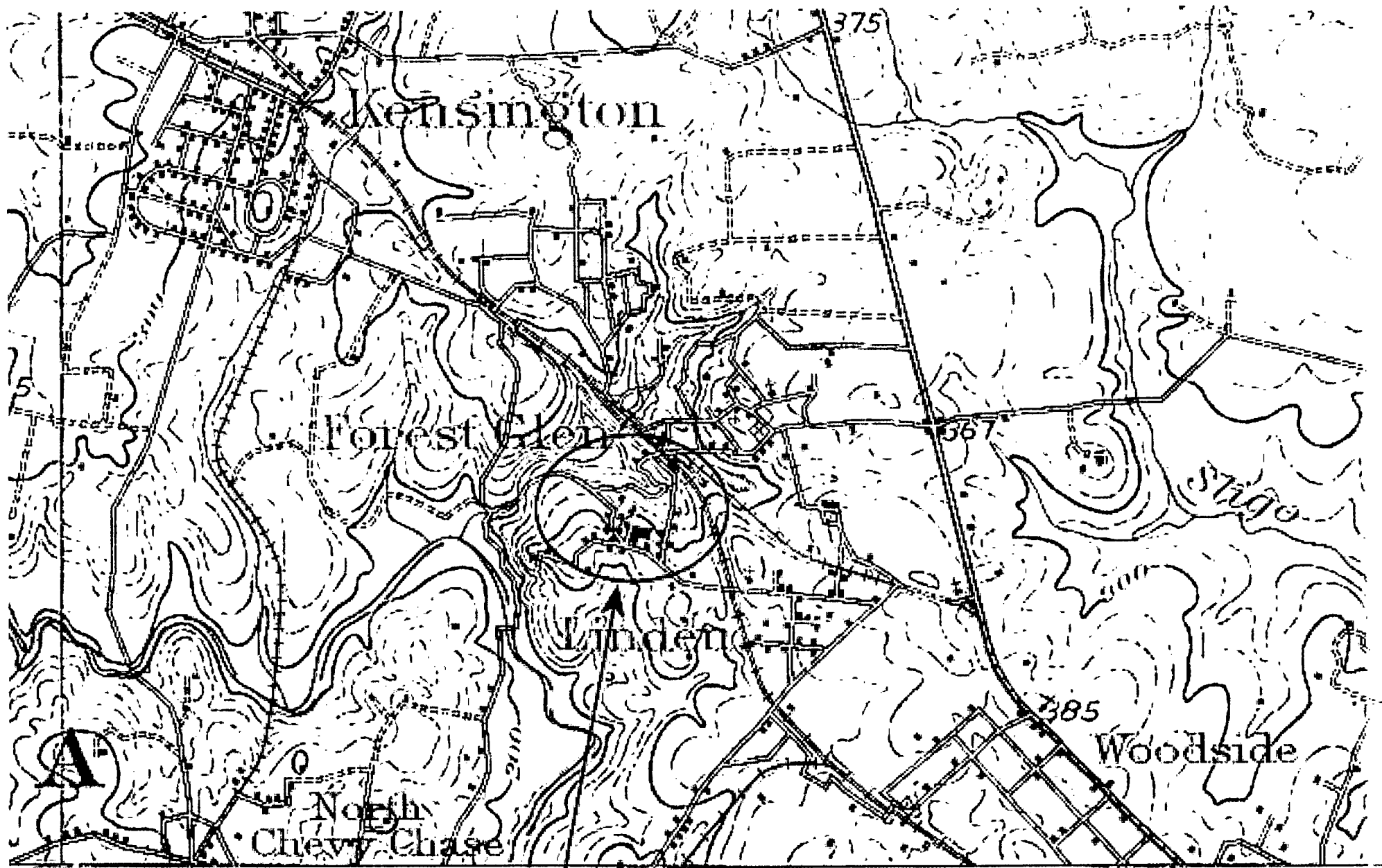
Located just down stream of the road bridge remnant are several features associated with an elevated pedestrian bridge that was an important part of the historic scene (EAC/A Location 5, photos ???). Remnants of this elevated steel truss pedestrian bridge, known as "the Foot Bridge," include two stone piers located approximately 25 feet up the slope on the south side of the Glen (just outside the APE) where a set of concrete steps with stone walled sides lead up the slope, and four piers formed from poured concrete over stone cores located in the middle of the Glen on the south bank of the primary stream. The pedestrian Foot Bridge is seen in all four campus maps (1907 to 1929). The west stone wall of the steps has toppled over and lies on its side.

The Concrete Foot Bridge Piers along with the adjacent stone piers and steps are contributing resources in the National Park Seminary Historic District.

Assessment of effects on historic structures:

There is an existing sewer line extending along the creek bed through the glen within the National Park Seminary Historic District. The repairs, and thus the area of disturbance are for the most part limited to the creek bed and the route of the sewer. However, the movement and maneuvering of large equipment traveling to and from the work site could impact some of the close-by standing structures. No buildings will be affected. The scope of the project appears to be limited to the sewer line itself and stream banks, and the dense tree canopy and vegetation around the glen reduce visibility from the Villa, Castle and other buildings in the district. Moreover, the Villa is in a state of partial collapse and suffers from diminished visual integrity due to lost materials, workmanship and design features.

Closer to the work zone, stone retaining walls line part of the access route and could be threatened by passing equipment and vehicles. Also in the approach to the work zone is the remnant of a bridge which may have part of a county road which passed through the campus, and the poured concrete piers for the foot bridge, with their associated structures (stone piers, steps and stone walls). These resources could be affected indirectly by the work.



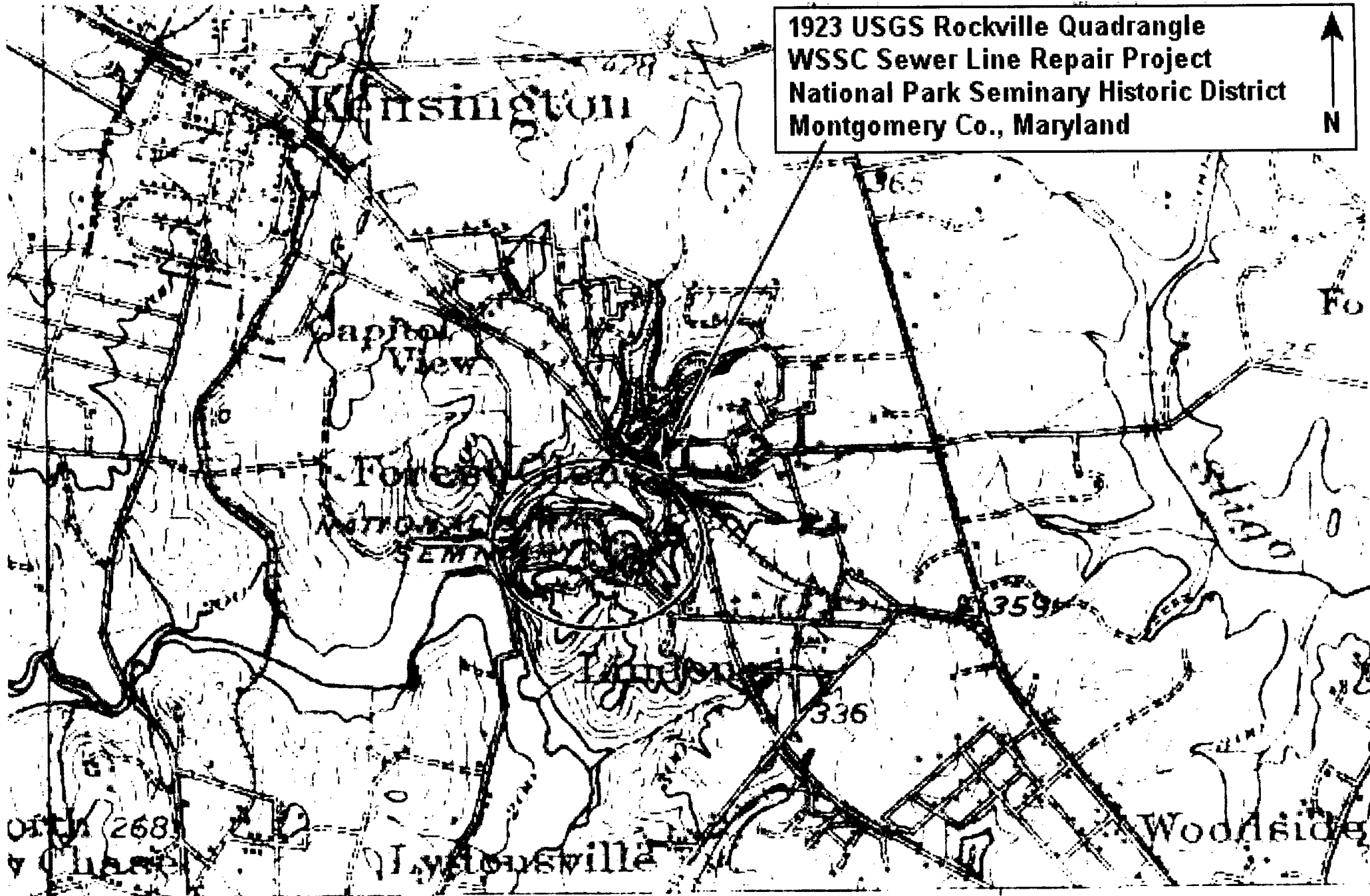
5'

**1908 USGS Rockville Quadrangle
WSSC Sewer Line Repair Project
National Park Seminary Historic District
Montgomery Co., Maryland**



Edition of Mar 190

1923 USGS Rockville Quadrangle
WSSC Sewer Line Repair Project
National Park Seminary Historic District
Montgomery Co., Maryland



Prior to the work conducted by EAC/A, Dr. Dan Wagner conducted a geomorphological evaluation of the Study Area as a consultant to EAC/A. His conclusion was that the stream floodplain demonstrated considerable disturbance. "The floodplain is not only much too unstable to have ever supported occupation, but over most of its extent it has also been severely disturbed by the installation of a sewer or other construction activities." He found these conditions to be true even on a tested bench over a meter above the floodplain on the adjacent slope. He did consider that the upper portions of the surrounding uplands may have small areas of intact soils suitable for prehistoric utilization, but these areas are above the proposed area of earthmoving activities. Pedestrian survey of the slopes adjacent to the creek did not identify any relatively flat surfaces suitable for human utilization.

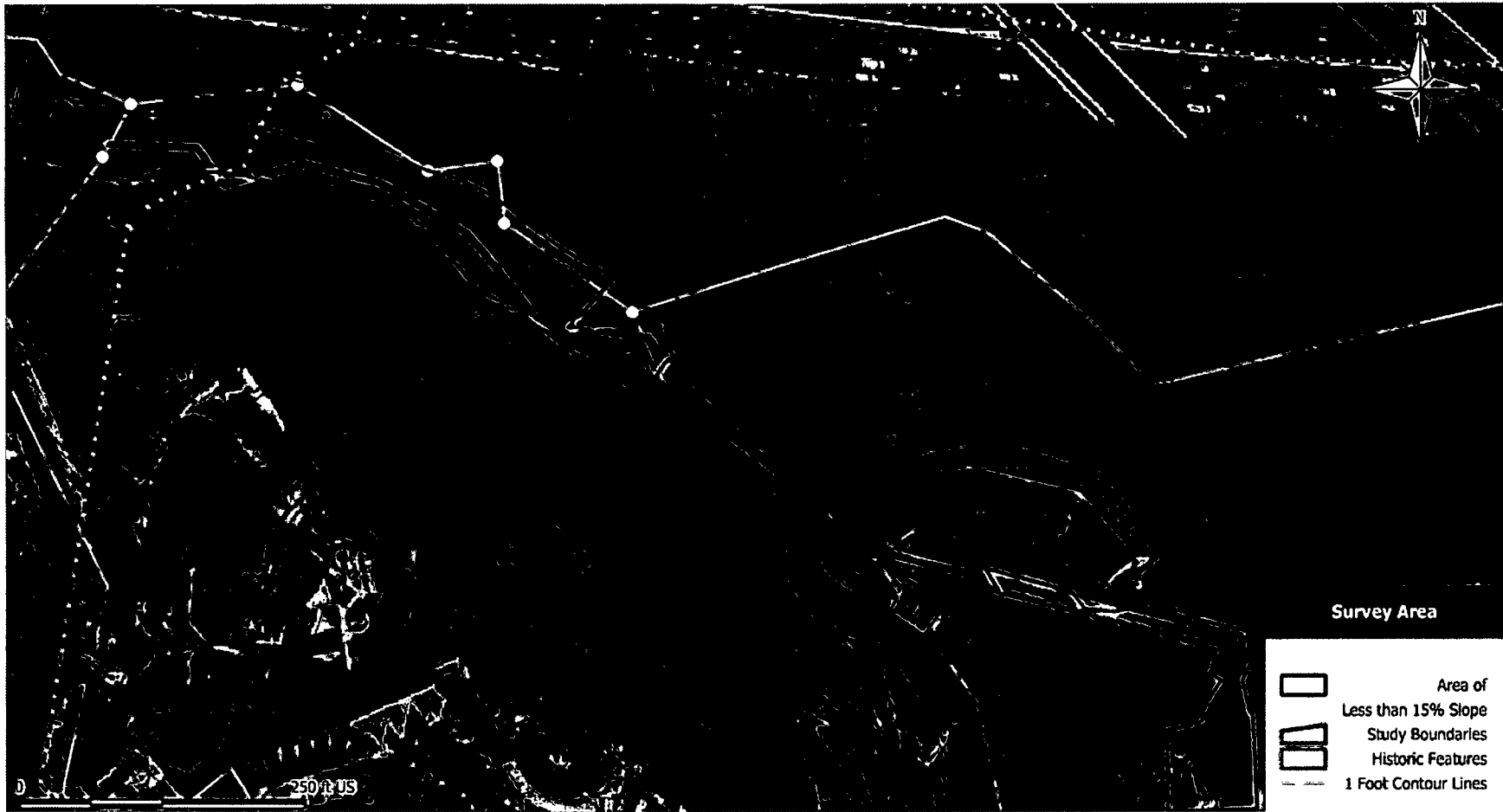
Given the findings of the geomorphological evaluation and the perimeters established for required testing by MHT, EAC/A restricted their physically testing to that portion of the Study Area believed to be subject to direct impacts either through proposed excavation activities or through planned movement of heavy machinery. This equated to the actual stream and two adjacent flats in the western portion of the Study Area. The eastern portion of the Study Area consisted of a mixture of strong slope exempted under MHT guidelines, already disturbed areas visually identified, or paved areas. The extreme eastern end appears to include recently disturbed soils in the area of the parking pad up to but not including the treeline, where the Statue of Athena faces back towards the main NPS campus. As this area is proposed for material storage rather than excavation, testing in this area was restricted to pedestrian survey.

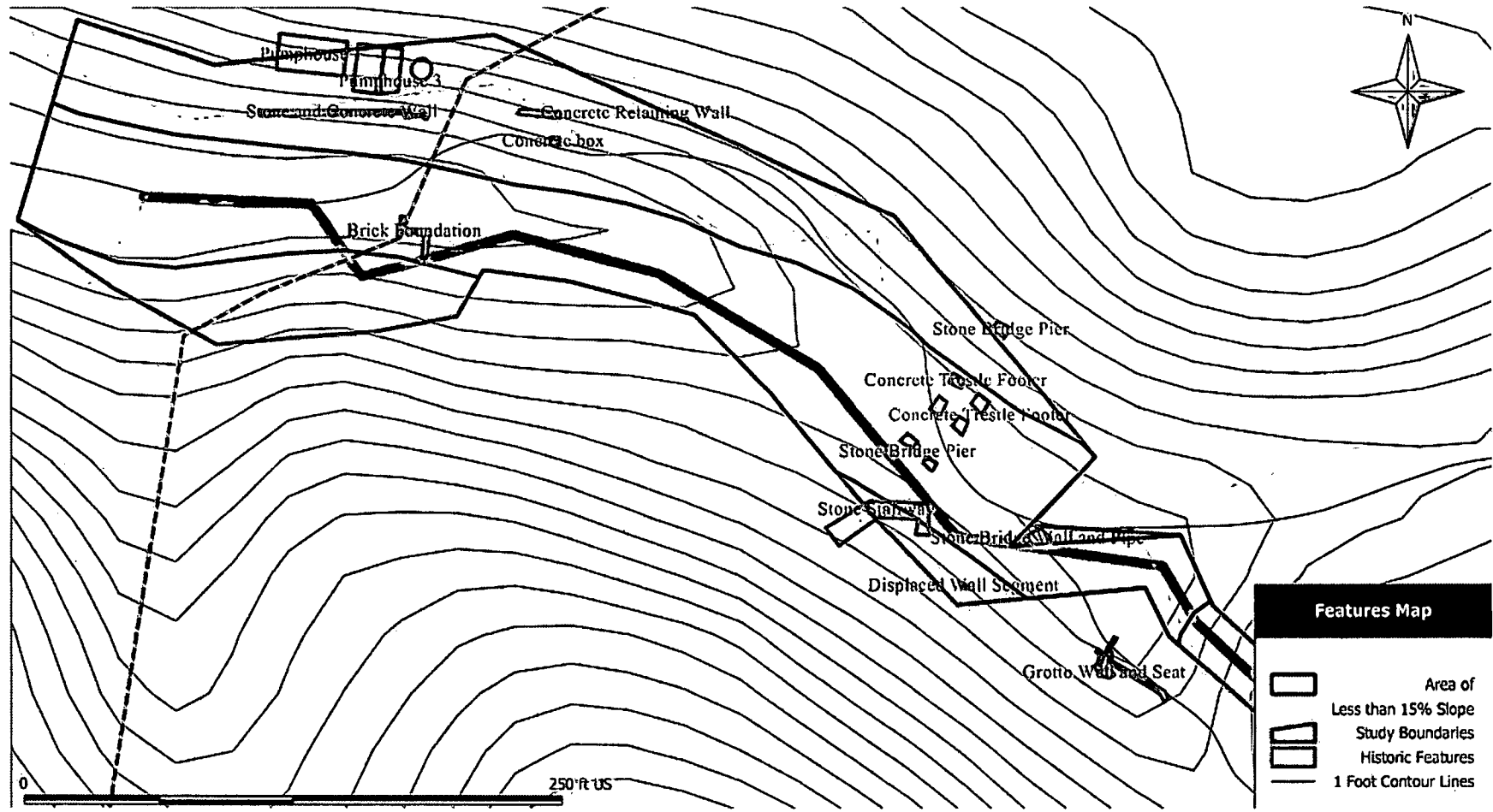
EAC/A conducted pedestrian survey over all of the Study Area defined by RK&K (outer red line). This resulted in the location of one previously unnoted historic feature, an additional stone pier from the NPS Footbridge located on the north side of the creek. All surface features were mapped, using visible manhole locations to tie field maps into the GIS files. This was less successful than we hoped, as several manhole covers could not be located, and the GPS units were less than successful due to tree cover.

A total of 16 excavation locations were placed within the area which GIS analysis determined was less than 15% slope (the limit established under MHT Guidelines) (inner black line). Of these 16 testing locations, four were determined to fall on greater than 15% slope after field examination. Six of the remaining 12 excavated locations produced historic cultural material only, as expected. These represent two clusters, the western cluster centered on the GIS mapped waterline crossing, and the eastern cluster located on the large flat between the Footbridge piers and footings and the waterline crossing. The six STPs produced a total of 49 artifacts, of which 24 consisted of redware sewer pipe or building block fragments. The remaining material included domestic glass, sherds of a possible milk glass lamp globe, a large cut spike, metallic lumps, coal, and two pieces of a tile formed from a pressed composite material.

Given the history of this area during the early and mid-twentieth century, these materials appear to reflect debris from past sewer installation and repair works, demolition of several bridges which previously traversed the stream valley, and some minimal evidence of occasional recreational or residential use (represented by the bottle glass). With Doctor Wagner's evaluation in mind, it is very possible that these materials also represent some flood displacement. The recovered deposits all came from the surface soil layer. All test locations which produced cultural material also exhibited the coarse gravel and rocks noted in Dr. Wagner's report, at depths well below the cultural material.

In summary, none of the cultural material recovered from excavation appears to represent *in situ* potentially significant cultural deposits. The primary concerns for this project will be the Stone and Concrete wall along the north stream bank in the western portion of the area of proposed stream excavation, and the brick foundation just southwest of the current sewer repair location. STPs 8 and 9 were placed around this foundation, but produced only very minimal domestic material, providing no clue as to the buildings past use. If either of these walls is to be impacted or removed, EAC/A recommends that archaeological monitoring and recording of these features be included in the project work schedules. Monitoring will provide a faster option than a more controlled excavation around the brick foundation.





Dininghouse
Pantryhouse 3

Stone and Concrete Wall

Concrete Retaining Wall
Concrete box

Brick foundation

Stone Bridge Pier

Concrete Trestle Footing

Concrete Trestle Footing

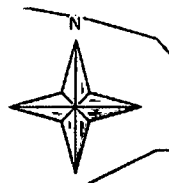
Stone Bridge Pier

Stone Signway

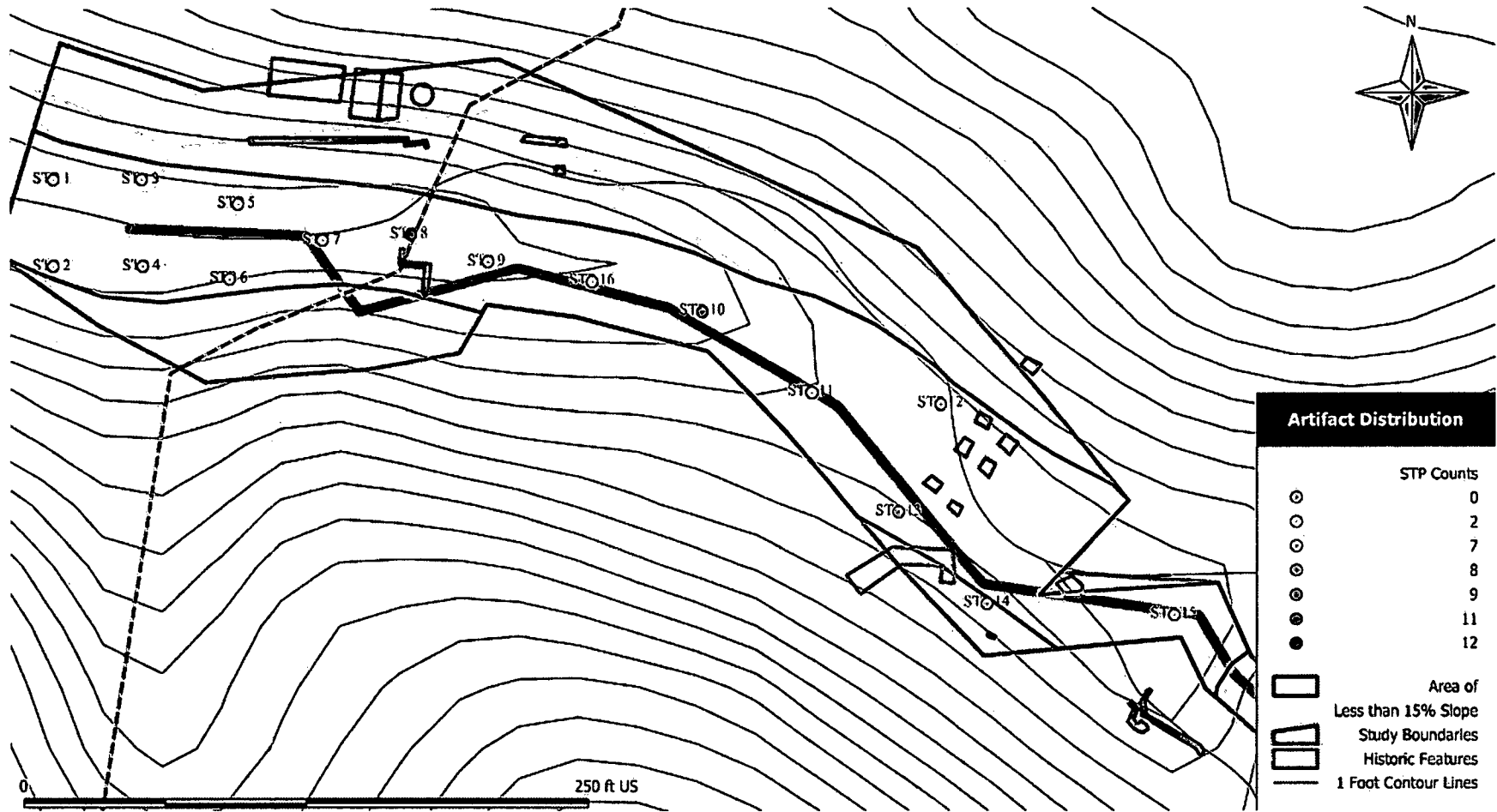
Stone Bridge Wall and Pipe

Displaced Wall Segment

Grotto Well and Seat



0 250' ft US





Maryland Department of Planning
Maryland Historical Trust

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor

Richard Eberhart Hall
Secretary

Matthew J. Power
Deputy Secretary

January 10, 2011

Elizabeth A. Comer, Principal
EAC/A
4303 North Charles Street
Baltimore, Maryland 21218-1054

Re: WSSC Sewer Alignment Repairs
National Park Seminary Historic District (M: 36-1/18MO514)
MHT Easement Property
Montgomery County, Maryland

Dear Ms. Comer:

Thank you for providing the Maryland Historical Trust (MHT) with copies of the archeological and architectural documentation EAC/A produced for the above-referenced project. The National Park Seminary is listed in the National Register of Historic Places and MHT holds a perpetual historic preservation easement on the historic district. The completed documentation represents the results of ongoing consultation with the Trust regarding actions at the National Park Seminary Historic District under MHT's Rehabilitation Tax Credit and Easement programs.

Trust staff examined the following two documents included with your submittal: 1) *Phase I Investigations of the Proposed WSSC Sewer Alignment Repairs, within 18MO514, the Lower Glen, National Park Seminary Historic District, Montgomery County, Silvery Spring, Maryland* (Harris 2010) and 2) architectural assessment with updated photography of resources and continuation sheets for the National Park Seminary Historic District (M: 36-01) prepared by Paula S. Reed and Assoc., Inc. The documentation provides useful recordation of archeological and architectural features located within the existing WSSC sewer alignment across the easement property and makes a welcome addition to MHT's Inventory and Library holdings on the historic district. We appreciate WSSC's efforts to design and implement its sewer repairs in a manner that avoided adverse effects to contributing resources within the historic district.

The property owner and project sponsor should continue to coordinate future changes, alterations and repairs within the historic district through MHT's Easement Committee. Contact MHT's Easement Administrator, Amy Skinner, for further assistance on easement issues at askinner@mdp.state.md.us. If you have questions please contact me at 410-514 7631 or bcole@mdp.state.md.us.

Sincerely,

Beth Cole
Administrator, Project Review and Compliance

EJC/201004473

cc: Collin Ingraham (MHT)
Amy Skinner (MHT)
Charlie Hall (MHT)

MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION
STAFF REPORT

Address:	WSSC (National Park Seminary Historic District)	Meeting Date:	7/28/2010
Resource:	National Park Seminary Historic District	Report Date:	7/21/2010
Applicant:	WSSC (Ed Carpenetti, Agent)	Public Notice:	7/14/2010
Review:	HAWP	Tax Credit:	No
Case Number:	36/01-A	Staff:	Josh Silver
PROPOSAL:	Sewer line repair		

STAFF RECOMMENDATION

Staff recommends that the HPC approve the HAWP application with two conditions:

1. The Applicant must comply with any conditions set forth by the Maryland Historical Trust Easement Committee.
2. The Applicant must comply with any conditions set forth by the M-NCPPC Environmental Planning Division.

ARCHITECTURAL DESCRIPTION

SIGNIFICANCE: Master Plan Historic District
DATE: 1887, 1884

PROPOSAL:

The Washington Suburban Sanitary Commission (the Applicant) is proposing to repair an exposed section of a cracked sewer line that has evidence of active inflow and infiltration. The proposed undertaking will be executed entirely within a heavily wooded stream valley bed located in the northern section of the historic district that has evidence of significant modern disturbance. A 10' wide pathway will provide access to the project area and cracked sewer line. An existing asphalt road will serve as the primary entrance to the project area before entering a cleared path that was part of another project. The remainder of site will be accessed via a 10' wide access path designed by the project engineer.

The stream valley is bounded by the Washington Capital Beltway (I-495) on the north, a steep slope to the south and is heavily wooded on all four sides. The proposed work is limited to the confines of the stream bed channel and the proposed access path.

The only modifications proposed within the limits of disturbance (LOD) are minor grading to the channel banks and a change in the height ± 2 feet of the channel. The proposed grading and height modification will directly impact the remnants of an existing stone wall (Area 6 and 7), located on the right bank of the stream directly at the exposed sewer.

The project area includes several historic/cultural resources associated with the historical development of the district. These features were part of a network of trails established on the campus grounds. No additional modifications to the identified historic/cultural resources are contemplated as part of the proposed undertaking. A phase I (investigative) archaeological survey has been conducted to document all historic and/or cultural features identified within the LOD. Due to the environmental and historic conditions of the stream valley bed the Applicant is proposing protection measures to mitigate potential impacts to identified features within the LOD. The proposed protection measures are outlined in the project description.

The proposal also includes the removal of one 23.5" Tulip Poplar.

APPLICABLE GUIDELINES

When reviewing alterations and new construction within the National Park Seminary Historic District several documents are to be utilized as guidelines to assist the Commission in developing their decision. These documents include the *Montgomery County Code Chapter 24A (Chapter 24A)*, and the *Secretary of the Interior's Standards for Rehabilitation (Standards)*. The pertinent information in these documents is outlined below.

Montgomery County Code; Chapter 24A

- (a) The commission shall instruct the director to deny a permit if it finds, based on the evidence and information presented to or before the commission that the alteration for which the permit is sought would be inappropriate, inconsistent with or detrimental to the preservation, enhancement or ultimate protection of the historic site or historic resource within an historic district, and to the purposes of this chapter.
- (b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to insure conformity with the purposes and requirements of this chapter, if it finds that:
 - (1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or
 - (2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter; or
 - (3) The proposal would enhance or aid in the protection, preservation and public or private utilization of the historic site or historic resource located within an historic district in a manner compatible with the historical, archeological, architectural or cultural value of the historic site or historic district in which an historic resource is located; or
 - (4) The proposal is necessary in order that unsafe conditions or health hazards be remedied; or
 - (5) The proposal is necessary in order that the owner of the subject property not be deprived of reasonable use of the property or suffer undue hardship; or
 - (6) In balancing the interests of the public in preserving the historic site or historic resource located within an historic district, with the interests of the public from the use and benefit of the alternative proposal, the general public welfare is better served by granting the permit.
- (c) It is not the intent of this chapter to limit new construction, alteration or repairs to any 1 period or architectural style.
- (d) In the case of an application for work on an historic resource located within an historic district, the commission shall be lenient in its judgment of plans for structures of little historical or design significance or for plans involving new construction, unless such

plans would seriously impair the historic or architectural value of surrounding historic resources or would impair the character of the historic district. (Ord. No. 9-4, § 1; Ord. No. 11-59.)

Secretary of the Interior's Standards for Rehabilitation:

- #9 New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- #10 New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

STAFF DISCUSSION

Staff supports the proposed sewer line repair project. The proposed work is confined to a heavily wooded forested area below and away from the main historic building complex area; as such there will be no impact to character defining features of the historic district. Appropriate protection measures will be used to protect the identified historic/cultural features. The protection measures will be implemented prior to any work commencing at the site.

The proposed widening and height modifications to the exposed sewer location (Area 6) will require modifications to the archaeological remains of an existing stone wall. The stone wall feature is not a character defining feature of the historic district. Modifications to the wall in this location are necessary to remedy the deficiency in the cracked sewer pipe. Staff finds modifications to stone wall as being consistent with Chapter 24-8(b) (1), (2) & (4):

- (1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or
- (2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter; or
- (4) The proposal is necessary in order that unsafe conditions or health hazards be remedied;

The Maryland Historical Trust (MHT) holds an easement on the historic district. The proposed undertaking is subject to the review and approval of the MHT Easement Committee. The Applicant should begin consultation with the MHT to initiate design review for the project.

STAFF RECOMMENDATION

Staff recommends that the Commission **approve the HAWP application with the conditions specified on Circle 1** as being consistent with Chapter 24A-8(b)(1), (2) & (4);

- (1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or
- (2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an

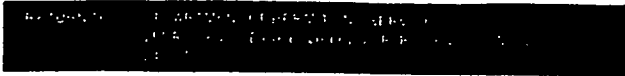
historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter; or

(4) The proposal is necessary in order that unsafe conditions or health hazards be remedied;

and with the *Secretary of the Interior's Standards for Rehabilitation*;

and with the general condition that the Applicant shall present the **3 permit sets of drawings to Historic Preservation Commission (HPC) staff for review and stamping** prior to submission for the Montgomery County Department of Permitting Services (DPS) building permits;

and with the general condition that the Applicant shall notify the Historic Preservation Staff if they propose to make **any alterations** to the approved plans. Once the work is completed the Applicant will contact the staff person assigned to this application at 301.563.3400 or joshua.silver@mncppc-mc.org to schedule a follow-up site visit.



DPS - #8

HISTORIC PRESERVATION COMMISSION
301/563-3400

APPLICATION FOR
HISTORIC AREA WORK PERMIT

Project Owner: _____
Contact Person: WSSC - Ed Carpanetti
Daytime Phone No.: (301) 206-7091

Tax Account No.: 03532114
Name of Property Owner: NATIONAL PARK SEMINARY LLC Daytime Phone No.: _____
Address: 145 E. BADGER RD STE #200 MADISON, WI 53713-2708
Street Number City State Zip Code
Contractor: Angler Environmental Phone No.: 703-393-2934
Contractor Registration No.: 033 08912
Agent for Project Owner: RK & K ENGINEERS - Krista Greer Daytime Phone No.: (410) 462-9298

LOCATION OF BUILDING/PREMISE

House Number: _____ Street: LINDEN LA.
Town/City: SILVER SPRING Nearest Cross Street: 1-495
Lot: _____ Block: 1 Subdivision: _____
Liber: _____ Folio: _____ Parcel: ⓐ

PART ONE: TYPE OF PERMIT ACTION AND USE

1A. CHECK ALL APPLICABLE: Construct Extend Alter/Renovate AC Slab Room Addition Porch Deck Shed
 Move Install Wreck/Raze Solar Fireplace Woodburning Stove Single Family
 Revision Repair Revocable Fence/Wall (complete Section 4) Other: Stream Channel
1B. Construction cost estimate: \$ 200,000
1C. If this is a revision of a previously approved active permit, see Permit # _____

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 WSSC 02 Septic 03 Other: None
2B. Type of water supply: 01 WSSC 02 Well 03 Other: None

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height _____ feet _____ inches
3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:
 On party line/property line Entirely on land of owner On public right of way/assessment

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

KM Greer
Signature of owner or authorized agent

7/6/10
Date

Approved: _____ For Chairperson, Historic Preservation Commission

Disapproved: _____ Signature: _____ Date: _____

Application/Permit No.: 542916 Date Filed: 7/7/10 Date Issued: _____

Edt 6/21/99

SEE REVERSE SIDE FOR INSTRUCTIONS

5

HAWP APPLICATION: MAILING ADDRESSES FOR NOTIFYING
 [Owner, Owner's Agent, Adjacent and Confronting Property Owners]

Owner's mailing address	Owner's Agent's mailing address
NATIONAL PARK SEMINARY VENT, LLC C/O NATALIE BOCK/ALEX COMP 145 EAST BADGER RD, STE #200 MADISON, WI 53713-2708	Project Owner: WSSC - Ed Carpenetti 14501 Sweitzer Lane Laurel, MD 20707 Agent for Project Owner R&K Engineers, Krista Greer 81 Mosher Street, Baltimore, MD 21217
Adjacent and confronting Property Owners mailing addresses	
NATIONAL PARK SEMINARY VENT, LLC C/O NATALIE BOCK/ALEX COMP 145 E. BADGER RD, STE #200 MADISON, WI 53713-2708	CSX TRANSPORTATION, INC 500 WATER STREET JACKSONVILLE, FL 32202
FOREST GLEN CONDO, LLC C/O NATALIE BOCK/ALEX COMP 145 E. BADGER RD, STE #200 MADISON, WI 53713-2708	M-NCPPC PARK & PLANNING COMMISSION 8787 GEORGIA AVE SILVER SPRING, MD 20910
FOREST GLEN VILLA, LLC C/O NATALIE BOCK/ALEX COMP 145 E BADGER RD, STE #200 MADISON, WI 53713-2708	

1a. A written description of all documented historic features.

The proposed work area is situated within the National Park Seminary Historic District. While passing between two of the contributing buildings within this district, the proposed work area is primarily within the wooded stream valley that provided the contributing historic structures with "the setting and environmental character that was so significant to the historic function of the buildings, and which continues to buffer them from nearby development" (as noted by the 2000 "Addendum of Boundary Confirmation" for the district prepared by Sara Amy Leach of KCI Technologies, Inc.).

The following description follows the proposed work area in an east-to-west direction. This descriptive text is keyed to numbers on the attached map (section 3 of this application). Several of these numbered areas include stone and concrete walls dating from the late 19th century to early 20th century, all of which served to retain embankments and/or to define spaces or walkways; these walls are considered as contributing resources in the historic district.

Within the area labeled "1" on the map, the proposed work area follows a concrete roadway between two of the contributing structures of the NRHP district: the Castle and the Villa Dormitory (Photo 1). This roadway is flanked by stone curbs and other stone walls (Photos 2 to 4); these features are considered as contributing resources in the historic district. A brick wall segment standing along the south edge of this road adjacent to a recently disturbed area east of the Castle is not considered significant (Photo 5).

The next segment of the proposed work area follows a historic roadbed downhill, along a section of this roadbed that was disturbed by installation of a sewer at sometime in the last ten years. Within the area labeled "2" on the map, the proposed work area's north edge is defined by a low stone wall (Photo 6). A displaced concrete pedestal with feet is present on the surface of this roadbed (Photo 7). At its downhill end, the stone wall meets a long flight of concrete steps leading up the hill (outside the proposed work area) toward the Villa building (Photo 8). These walls and steps are considered as contributing resources in the historic district.

At the south edge of the APE in the Glen is a stone grotto structure (labeled "3" on the map; Photos 9 to 11). The grotto is part of the fantasy collection of buildings and structures that make up the National Park Seminary Historic District. The grotto includes a hollow ovoid stone structure set into a crevasse or recess in the natural stone embankment, adjacent to the stone niche structure is a flat stone ledge or bench and a walkway leading to the niche defined by stone walls. The walkway continues over a small stone arched bridge which spans a brook. The stone walls follow the edge of the stream and then turn to border the walkway and form the sides of the bridge. The construction is of roughly coursed stones. Characteristic of early 20th century stone walls, the tops of the walls are finished with jagged upright stones. The bridge span consists of a radial arch. The beehive-shaped niche structure is likewise formed with a radial arched opening. The grotto structure and its accompanying walls and bridge were built between 1907 and 1918, according to historic maps. The grotto feature is part of the historic fabric of the district and is considered contributing to the district's significance.

1a. A written description of all documented historic features. (continued)

Just west of the grotto and downstream of the confluence of two small streams is another complex of historic features (labeled "4" on the map; Photos 12 and 13). This includes one side of a stone arch (similar to the bridge in area 3), a ca. six-inch diameter metal pipe, drilled stone slabs, and a concrete slab. The arched stone wall is consistent in style, materials and workmanship with other stone walls in the historic district, and typical of the early 20th century; the stone walls have jagged upright stones as coping, typical of their period. It is not clear whether these features are in their original location or if they have been relocated by severe floods. Historic maps of the campus dating from 1918 to 1929 suggest that these features are the remains of a pedestrian walkway bridge. This bridge feature, if it is not displaced, is part of the historic fabric of the district and is considered contributing to the district's significance; archaeological testing may be needed to determine if this complex of features is in place or displaced.

Moving slightly west, several features associated with a pedestrian bridge are present within the area labeled "5" on the map. Two stone piers oppose four supports formed from poured concrete over stone cores. The two mortared stone supports (Photo 14) stand at the foot of the slope, while the four concrete/stone supports stand along the stream bank and in the streambed (Photo 15). These six piers appear to have been supports for a pedestrian bridge. This pedestrian bridge was apparently part of the original ca. 1887 Forest Inn development, is seen in all four campus maps (1907 to 1929) and a photo is available online (<http://www.operant.com/seminary/bridges.html#foot>) A set of stone steps lead up the slope immediately east of the bridge supports (Photo 16); although these steps do not appear on the 1907-1929 campus maps the stonework appears identical to the grotto stonework in Area 3, which suggests that the steps may have been built during the same 1907-1918 period. A segment of the step stonework has fallen onto the APE surface (Photo 17). The bridge features are part of the historic fabric of the district and are considered contributing to the district's significance.

Adjacent to the sewer leak location (within the area labeled "6" on the map) is a concrete wall along the northern stream bank (Photo 18). As discussed above, such walls are considered as contributing resources in the historic district. This wall appears to be associated with several archaeological features directly south, across the stream, including brick and poured concrete features probably associated with the school's water system.

Just downstream from the sewer leak location (within the area labeled "7" on the map) is a stone wall (with some concrete and brick additions/repairs) along the northern stream bank (Photo 19). As discussed above, such walls are these considered as contributing resources in the historic district. This wall appears to be associated with several archaeological features directly to the north, including stone, brick and poured concrete features clearly associated with the school's water pumping station that appears on the 1907-1929 campus maps (Photo 20).

Ib. General description of project and its effect on the historic resource(s), the environmental setting, and, where applicable, the historic district:

This project is owned by WSSC, Ed Carpenetti as Project Manager. The project is located on property owned by National Park Seminary, LLC, however WSSC owns and maintains an easement along the sewer line. M-NCPPC also owns and maintains a Category 1 Forest Conservation Easement as well as a Historic Trail Easement. The work is being design for WSSC by RK&K Engineers and construction will be performed by Angler Environmental.

The goal of this project is to repair the existing exposed WSSC sewer crossing between manholes 05027030M and 05027031M as shown on the schematic plans. This exposed sewer (as can be seen in Photo 18) is cracked near manhole 05027030M and active I/I was witnessed by WSSC. The repair and stabilization of this sewer line was listed as an emergency. The pipe was temporarily sealed, but requires a permanent repair.

Access to the site will come from Smith Road. An approximately 10' wide access path will come down the existing asphalt road adjacent to the Villa Dormitory. The access path will be lined with Montgomery County detailed Tree Protection Fence or Super Silt Fence in order to protect the existing stone walls along the edge of the road in Area 1. The access will continue down an open clearing path from a previous work access path. This area will again be lined with Tree Protection Fencing to protect the trees and stone structures outside the LOD in Area 2. This section also has some significant and specimen trees outside the LOD, but with critical root zones crossing the access path. Here, additional plywood matting will be placed over the root zones in addition to the mulched path.

Areas 3, 4, and 5 consist of disjointed pieces of the stone bridge and the bridge abutments. Impacts to the stone pieces can be avoided by careful placement of the access path around the structures. Tree Protection Fence or Super Silt Fence will be placed around the structures to prevent any impacts. The abutments can also be avoided by placing the access path around the structures.

Area 6 consists of a stone wall located on the right bank of the stream directly at the exposed sewer. This area will most likely be directly impacted by our work. The channel bed will need to be raised approximately 2ft in elevation all along this stone wall. A portion of the wall will most likely be buried. A full architectural documentation of the area will be conducted.

Area 7 consists of the stone wall along the right stream bank downstream of the exposed crossing. This area will most likely not be affected by grading or rock placement. Tree Protection Fencing or Super Silt Fencing will be placed along the wall for protection. Photo 20 shows the remains from the water pumping station, this area is expected to be outside the limits of grading and have no impact. However, Tree Protection Fencing will be placed around the area as a precaution.

The proposed work, as described on the schematic plan, is primarily limited to the confines of the channel and the proposed access path. No realignment of the channel is proposed. The floodplain should remain in tact. There may be some minor grading of the channel banks to ensure stability. Rock will be placed in the channel upstream of the sewer crossing to create an armored, stable section. The sewer will be lined on the inside and then protected with additional rock around the outside. The elevation of the channel is required to be at least 12" above the bell of the sewer, therefore the channel around the sewer

crossing will need to be raised ± 2 ft. Downstream of the crossing, stone step pool structures, or equivalent structures will be spaced to drop the elevated stream grade back to the existing stream bed without causing additional stress to the channel. The steps will be spaced apart and will allow the channel to fill in naturally as necessary to bring the channel back to a stable slope. Riprap will be placed around the exposed manholes 05027029U and 05027040M. These manholes receive increased stress due to the new storm drain outfall located just upstream of them. An additional stone structure will be placed in the channel downstream of the exposed manholes to help hold the existing channel grade below and prevent future headcuts that would threaten to expose the sewer again.

The stone that will be used in the restoration will most likely be Class I, II and possibly III riprap. The stone structures will sit partially above the channel bed, but in time will blend into the landscape and the stream channel will conform around them.

Aside from the stone in the channel, no other permanent structures will remain. The access path and fencing will be removed following construction. During our site walk with the agencies, M-NCPPC Environmental Planning flagged some trees of concern. It is our belief that we will not impact these trees significantly. The access path will be threaded through the larger trees with plywood matting and the mulch path for protection over their root zones. Tree Protection Fence will be placed around the Limits of Disturbance and any internal tree or structure. Some small caliper trees may need to be removed, some dead/fallen/leaning trees may need to be removed. The contractor will meet with the M-NCPPC inspector prior to construction to layout the LOD and access path accordingly.

4. Materials Specifications

Temporary Materials

- Mulch access paving
- Tree protection fence
- Super silt fence
- Pump and diversion pipes
- Stone bridge and temporary culvert
- Plywood matting

Permanent Materials

- Class I and II riprap
- Class III Imbricated riprap
- Smaller filler stone and channel bed material
- Geotextile fabric



William K. Hellmann
Emeritus

July 7, 2010

David W. Wallace
Stephen G. Zentz
J. Michael Potter
Thomas E. Mohler
James A. Zito
Michael W. Myers

Montgomery County Department of Permitting Services
Montgomery County Government
255 Rockville Pike
Rockville, Maryland 20850

Office of
Permitting Services

Robert J. Halbert

Dear Sir or Madam:

Charles M. Easter, Jr.
Joseph A. Romanowski, Jr.
Michael L. Krupsaw
Lars E. Hill
J. Tommy Peacock, Jr.
Martin C. Rodgers
Kenneth A. Goon
Richard J. Adams, Jr.
John A. d'Epagnier
Barbara J. Hoage
Christopher F. Wright
Owen L. Peery
Nancy R. Bergeron
Stuart A. Montgomery
David G. Vanscoy
Henry J. Bankard, Jr.
James F. Ridenour, Jr.
Robert J. Andryszak
Raymond M. Harbeson, Jr.
B. Keith Skinner
Karen B. Kahl
Seyed A. Saadat
John C. Moore
Eric M. Klein
Todd E. Rousenberger
Donald P. Lauzon
Thomas M. Heil
Robert D. Ostermiller
Barry L. Brandt
Malachi M. Mills, III
James A. Burnett
Brian L. Hepting
Michael V. Gaffney
Lee C. Yowell
Steven L. Thomas

Rummel, Klepper & Kahl Engineers (RK&K) is submitting a Historical Area Work Permit application for the proposed work on the National Park Seminary historical site in Silver Spring, Maryland. The property is owned by National Park Seminary, LLC, however the work RK&K is performing is commissioned by WSSC, Ed Carpenetti as Project Manager.

WSSC owns a sewer easement on the property near the stream. This sewer line crosses the stream at several locations. At one location, the sewer is exposed for approximately 25ft and has a crack with active inflow and infiltration. WSSC temporarily repaired the crack, however, this scope of work is to fully repair the sewer and restore the channel around the sewer to prevent further exposures. WSSC has declared this site an emergency and is proceeding with design and construction in an expedited manner.

A meeting held on June 28, 2010 with WSSC, M-NCPPC Environmental Planning representatives, M-NCPPC Historical Preservation representatives, MDE representatives, Elizabeth Anderson Comer/Archaeology and RK&K, to discuss the progression of this project under emergency status. M-NCPPC agreed to review our application with the limited amount of information available and use the existing Forest Conservation Plan as a suitable tree survey.

Enclosed is the Historical Area Work Permit application and support material. If there are any questions or comments concerning the application, please feel free to contact me by email at kgreer@rkk.com or by phone at (410) 462-9298.

Sincerely,

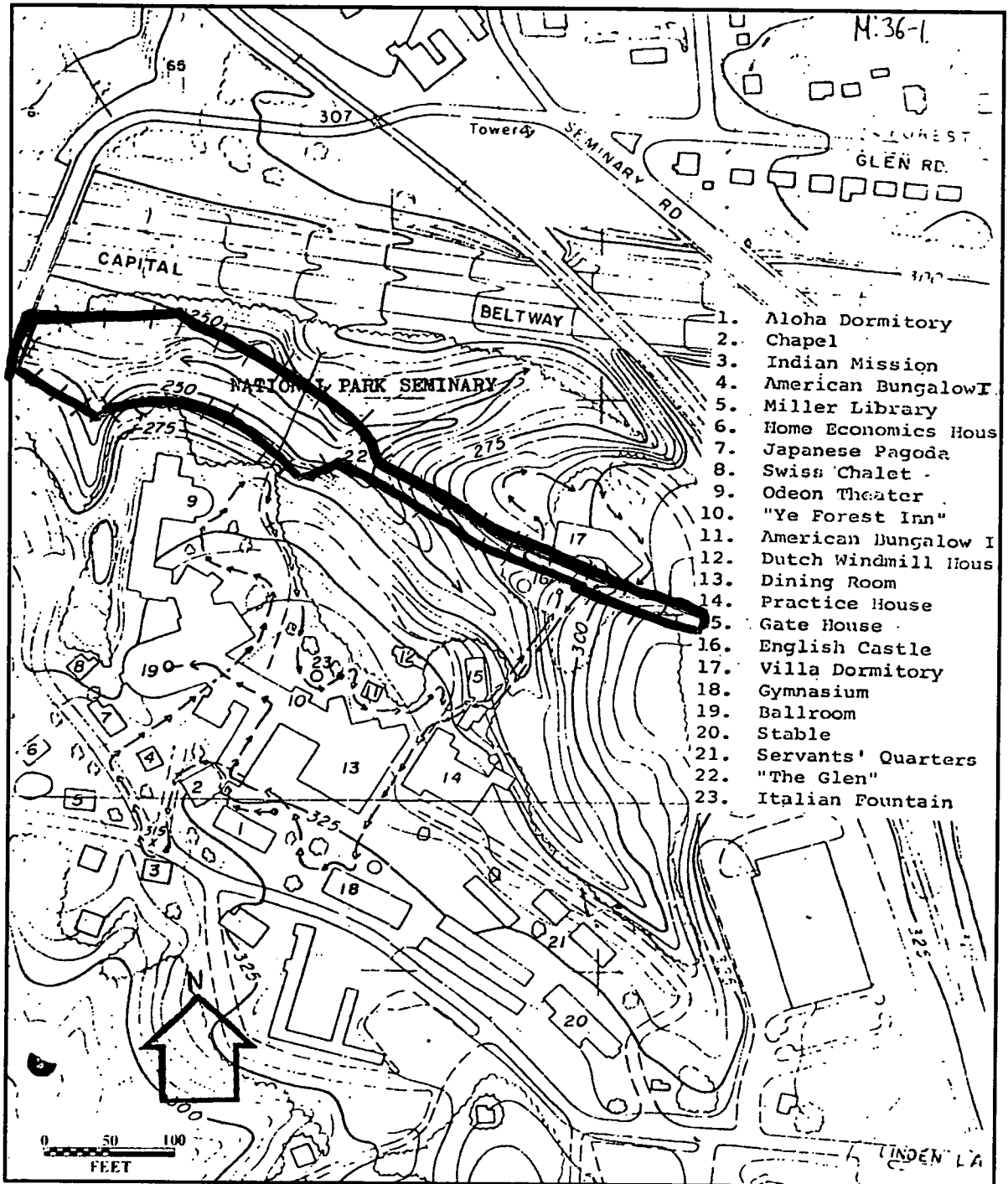
Krista Greer, PE

Enclosure

cc: Ed Carpenetti, WSSC

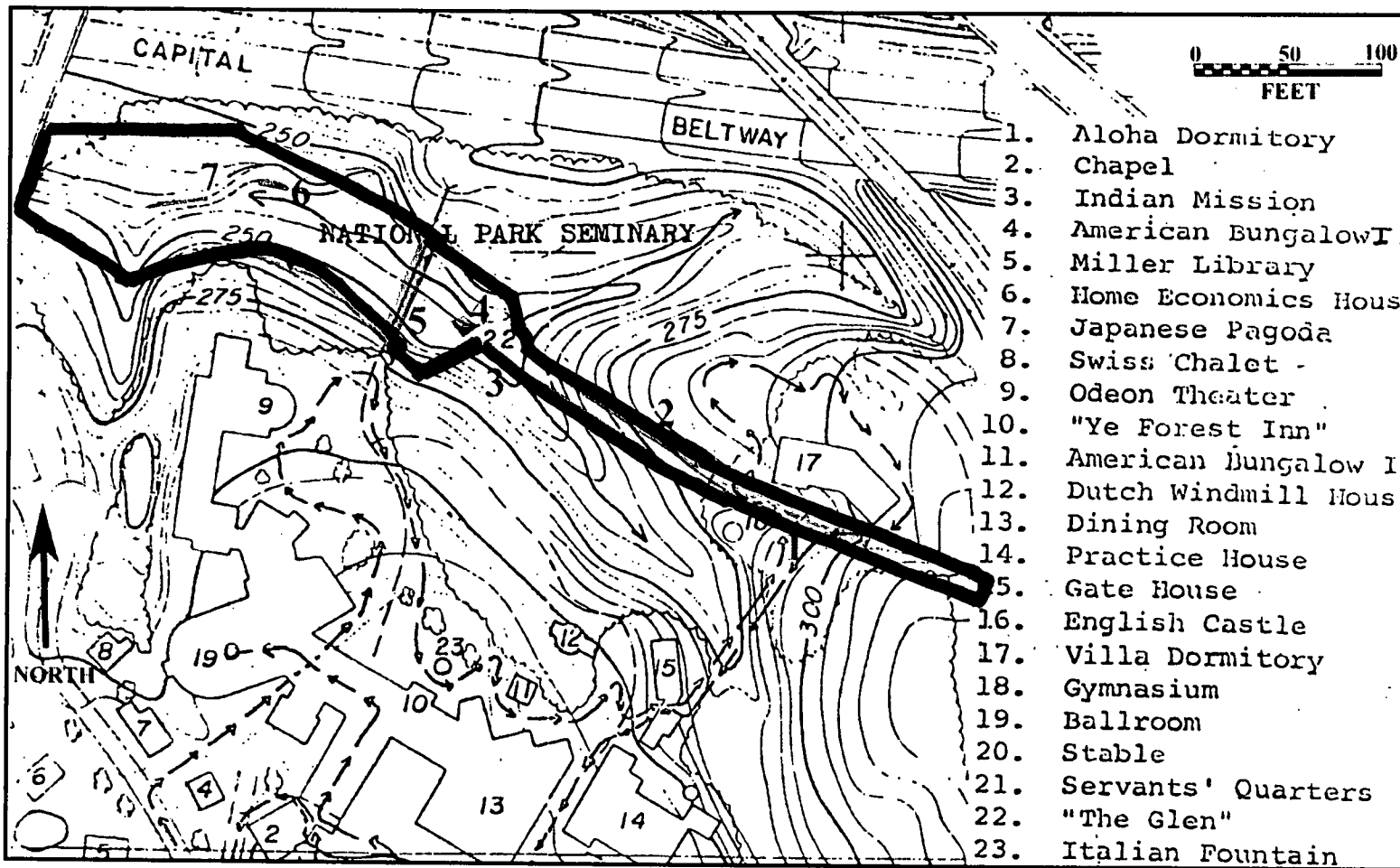
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2. Site Plan



Proposed work area on map from 1972 NRHP nomination form
Proposed Work Area is shown with red line.

3. Plans

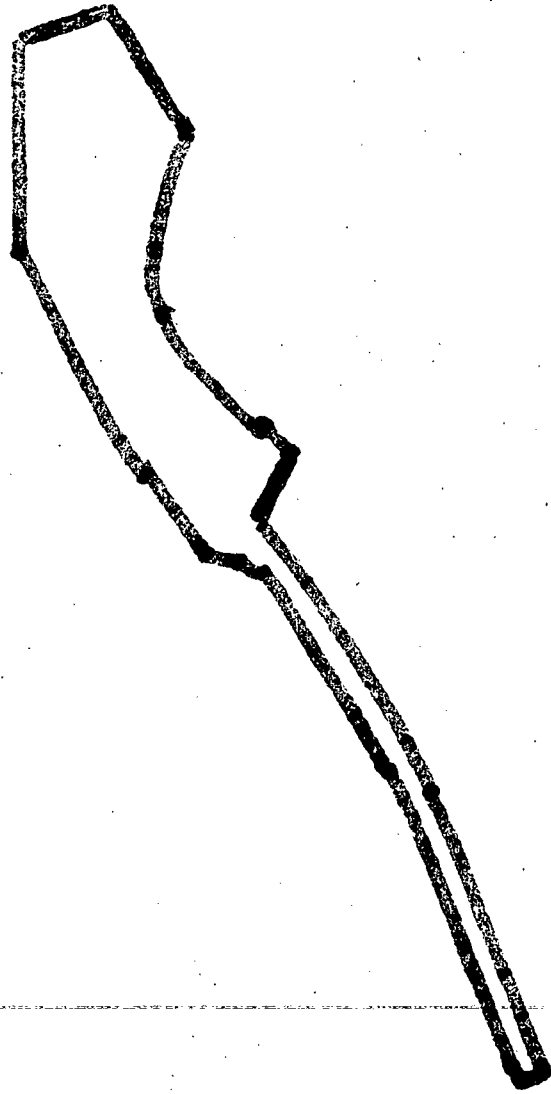


Historic Features within or Adjacent to the Proposed Work Area

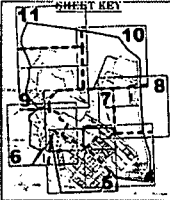
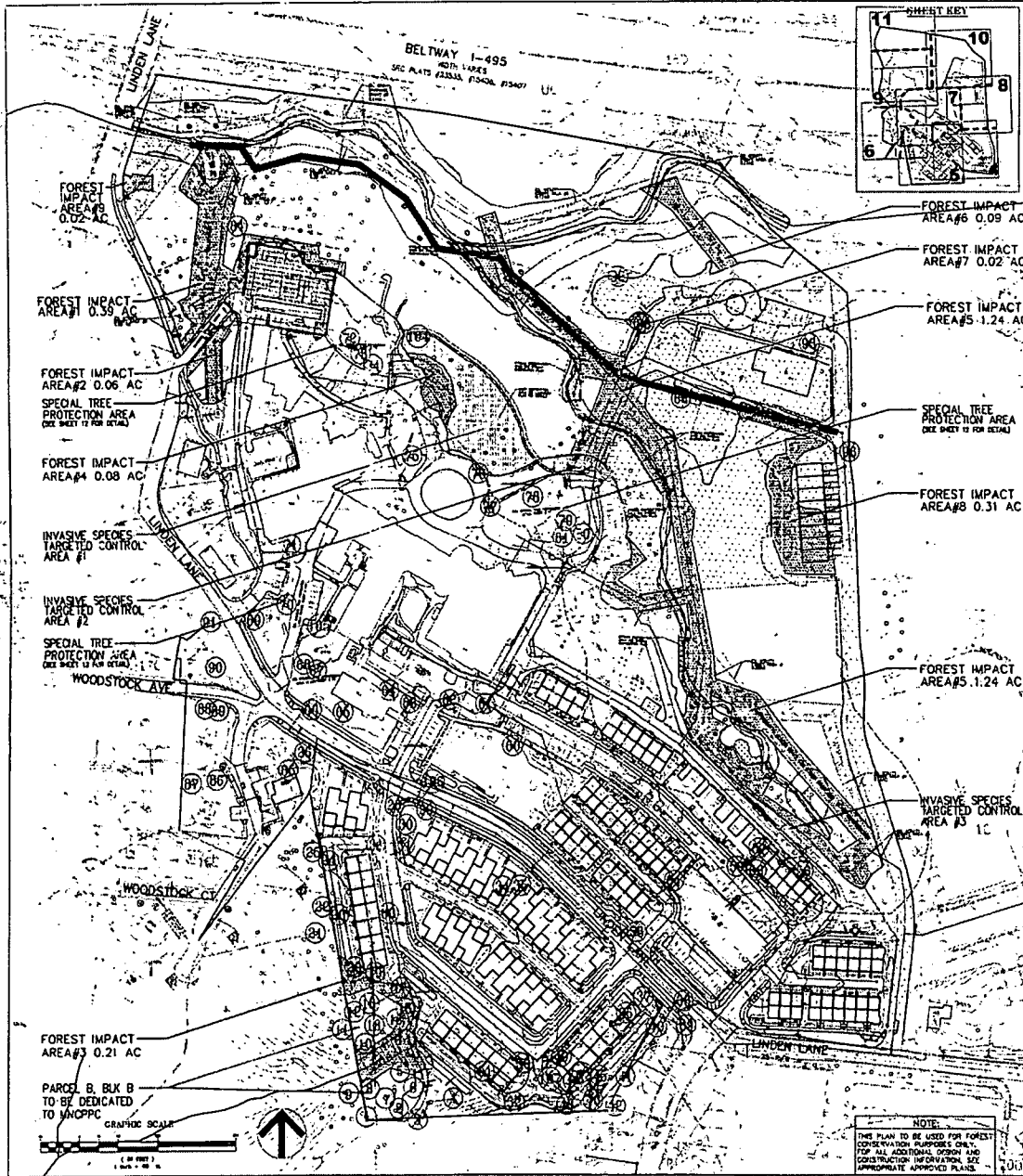
Proposed Work Area is shown with red line.

Historic feature areas within the Proposed Work Area are shaded in green (with green numbers keyed to the text)

Base map is a detail from the map included in the 1972 NRHP nomination form.



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SHEET INDEX

1. FOREST CONSERVATION PLAN - INVASIVE CONTROL IMPACTS + PROTECTION
2. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
3. FOREST CONSERVATION PLAN - CASPMENTS + FRASING
4. FOREST CONSERVATION PLAN
5. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
6. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
7. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
8. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
9. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
10. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
11. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS



PROJECT TEAM

PROJECT ID#	10000000000000000000
DATE	10/1/2000
NO. OF SHEETS	11
NO. OF SHEETS USED	11
NO. OF SHEETS LEFT	0
NO. OF SHEETS USED	11
NO. OF SHEETS LEFT	0
NO. OF SHEETS USED	11
NO. OF SHEETS LEFT	0

**FOREST CONSERVATION PLAN
INVASIVE CONTROL IMPACTS + PROTECTION
NATIONAL PARK SEMINARY**

LEGEND

(Symbol)	1. FOREST CONSERVATION PLAN - INVASIVE CONTROL IMPACTS + PROTECTION
(Symbol)	2. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
(Symbol)	3. FOREST CONSERVATION PLAN - CASPMENTS + FRASING
(Symbol)	4. FOREST CONSERVATION PLAN
(Symbol)	5. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
(Symbol)	6. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
(Symbol)	7. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
(Symbol)	8. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
(Symbol)	9. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
(Symbol)	10. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS
(Symbol)	11. FOREST CONSERVATION PLAN - SPECIAL TREE PROTECTION AREAS

FCP FOREST TABULATIONS

INVASIVE SPECIES CONTROL AREA #	TOTAL FOREST ACRES	TOTAL SPECIAL TREE PROTECTION AREAS	TOTAL SPECIAL TREE PROTECTION AREAS ACRES
1	0.02	1	0.02
2	0.06	1	0.06
3	0.21	1	0.21
4	0.08	1	0.08
5	1.24	1	1.24
6	0.09	1	0.09
7	0.02	1	0.02
8	0.31	1	0.31
9	1.24	1	1.24
10	0.06	1	0.06
11	0.02	1	0.02
TOTAL	5.35	11	5.35

FOREST CONSERVATION PLAN - INVASIVE CONTROL IMPACTS + PROTECTION

INVASIVE SPECIES CONTROL PROGRAM

SEEDBENT CONTROL - FIRE PROTECTION

NOTE:

THIS PLAN IS TO BE USED FOR FOREST CONSERVATION PURPOSES ONLY. FOR ALL ADDITIONAL DESIGN AND CONSTRUCTION INFORMATION, SEE APPROPRIATE APPROVED PLANS.

NATIONAL PARK SEMINARY

**FOREST CONSERVATION PLAN
INVASIVE CONTROL IMPACTS + PROTECTION**

VICIN REVISIONS

REVISION NO.	REVISIONS FOR	DATE
1	REVISED PER MEETING COMMENTS	10/1/2000
2	REVISED PER MEETING COMMENTS	10/1/2000
3	REVISED PER MEETING COMMENTS	10/1/2000
4	REVISED PER MEETING COMMENTS	10/1/2000
5	REVISED PER MEETING COMMENTS	10/1/2000
6	REVISED PER MEETING COMMENTS	10/1/2000
7	REVISED PER MEETING COMMENTS	10/1/2000
8	REVISED PER MEETING COMMENTS	10/1/2000
9	REVISED PER MEETING COMMENTS	10/1/2000
10	REVISED PER MEETING COMMENTS	10/1/2000
11	REVISED PER MEETING COMMENTS	10/1/2000

APPROVAL

FOR PREPARED BY: [Signature]

FOR APPROVED BY: [Signature]

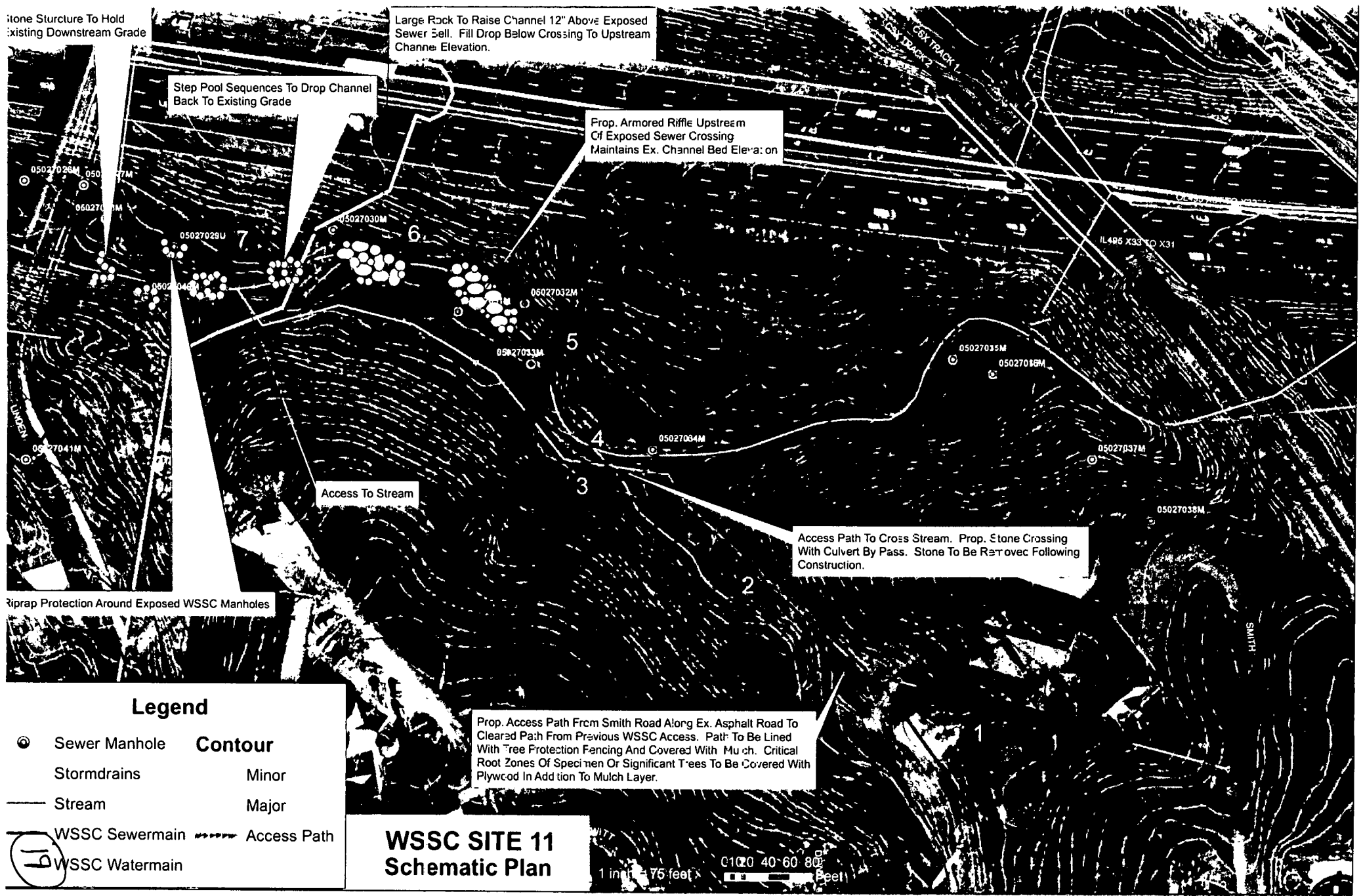
**FOREST CONSERVATION PLAN
NATIONAL PARK SEMINARY
INVASIVE CONTROL IMPACTS + PROTECTION**

DATE: 10/1/2000

SCALE: 1"=40'

PROJECT NO. 10000000000000000000

SHEET NO. 11



Stone Structure To Hold Existing Downstream Grade

Large Rock To Raise Channel 12" Above Exposed Sewer Well. Fill Drop Below Crossing To Upstream Channel Elevation.

Step Pool Sequences To Drop Channel Back To Existing Grade

Prop. Armored Riffle Upstream Of Exposed Sewer Crossing Maintains Ex. Channel Bed Elevation

Access To Stream

Access Path To Cross Stream. Prop. Stone Crossing With Culvert By Pass. Stone To Be Re-laid Following Construction.

Riprap Protection Around Exposed WSSC Manholes

Prop. Access Path From Smith Road Along Ex. Asphalt Road To Cleared Path From Previous WSSC Access. Path To Be Lined With Tree Protection Fencing And Covered With Mulch. Critical Root Zones Of Specimen Or Significant Trees To Be Covered With Plywood In Addition To Mulch Layer.

Legend

- | | | |
|---|----------------|-------------|
| ⊙ | Sewer Manhole | Contour |
| ⊙ | Stormdrains | Minor |
| — | Stream | Major |
| — | WSSC Sewermain | Access Path |
| — | WSSC Watermain | |

**WSSC SITE 11
Schematic Plan**

1 in. = 75 feet
 0 20 40 60 80 Feet



Photo 1: Area 1 on map in Section 3.
Facing northwest along the concrete road
between the Castle (on left) and the Villa Dormitory (on right).



Photo 2: Area 1 on map in Section 3.
Stone curbs along the concrete road between the Castle and the Villa Dormitory.



Photo 3: Area 1 on map in Section 3.
Stone stone features leading from the road to the Castle building.



Photo 4: Area 1 on map in Section 3.
Low stone wall along the edge of the road; Villa Dormitory building in background.

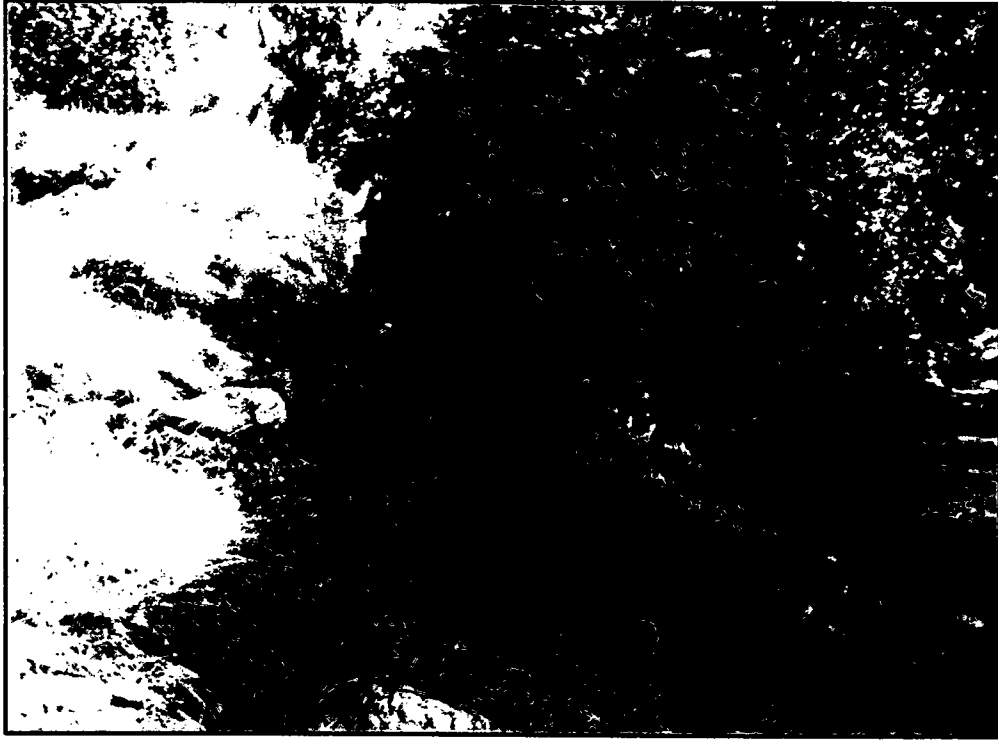


Photo 5: Area 1 on map in Section 3.
Brick wall segment on south side of road, east of the Castle building (facing west).



Photo 6: Area 2 on map in Section 3.
Low stone retaining wall on north side of road (facing north).



Photo 7: Area 2 on map in Section 3.
A displaced concrete pedestal with feet is present on the surface of this roadbed.



Photo 8: Area 2 on map in Section 3.
Concrete steps leading up the hill (outside the work area) from the road and adjacent stone wall toward the Villa building (facing east).



Photo 9: Area 3 on map in Section 3.
Grotto complex, with north end of bridge in foreground (facing southwest).



Photo 10: Area 3 on map in Section 3.
Grotto complex (facing south).



Photo 11: Area 3 on map in Section 3.
Bridge in Grotto complex (facing west).



Photo 12: Area 4 on map in Section 3.
Arched stone wall segment (facing northwest).



Photo 13: Area 4 on map in Section 3.
Drilled stone and concrete slabs adjacent to arched stone wall (facing southeast).



Photo 14: Area 5 on map in Section 3.
Stone piers at the foot of the slope (facing southeast).



Photo 15: Area 5 on map in Section 3.
Concrete/stone supports along stream bank and in streambed (facing northwest).

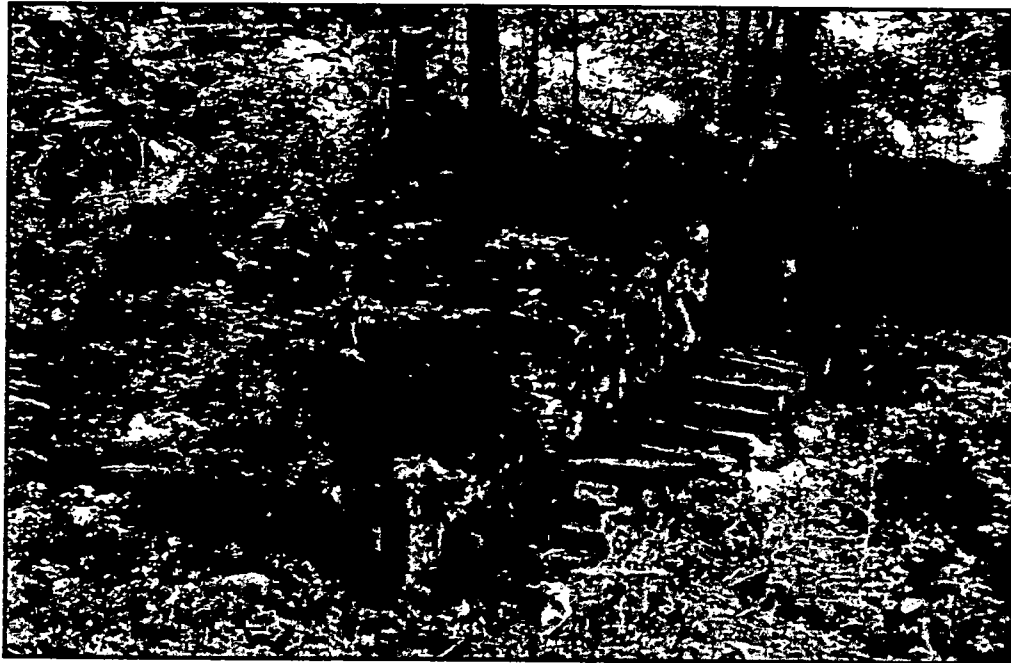


Photo 16: Area 5 on map in Section 3.
Stone steps leading up the slope immediately east of the bridge supports (facing southwest).



Photo 17: Area 5 on map in Section 3.
A displaced segment of the step stonework (facing southeast).



Photo 18: Area 6 on map in Section 3.
Concrete wall along the northern stream bank (facing northwest).



Photo 19: Area 7 on map in Section 3.
Stone wall along the northern stream bank (facing northeast).



Photo 20: Area 7 on map in Section 3.
Archaeological remains of water pumping station (facing west).

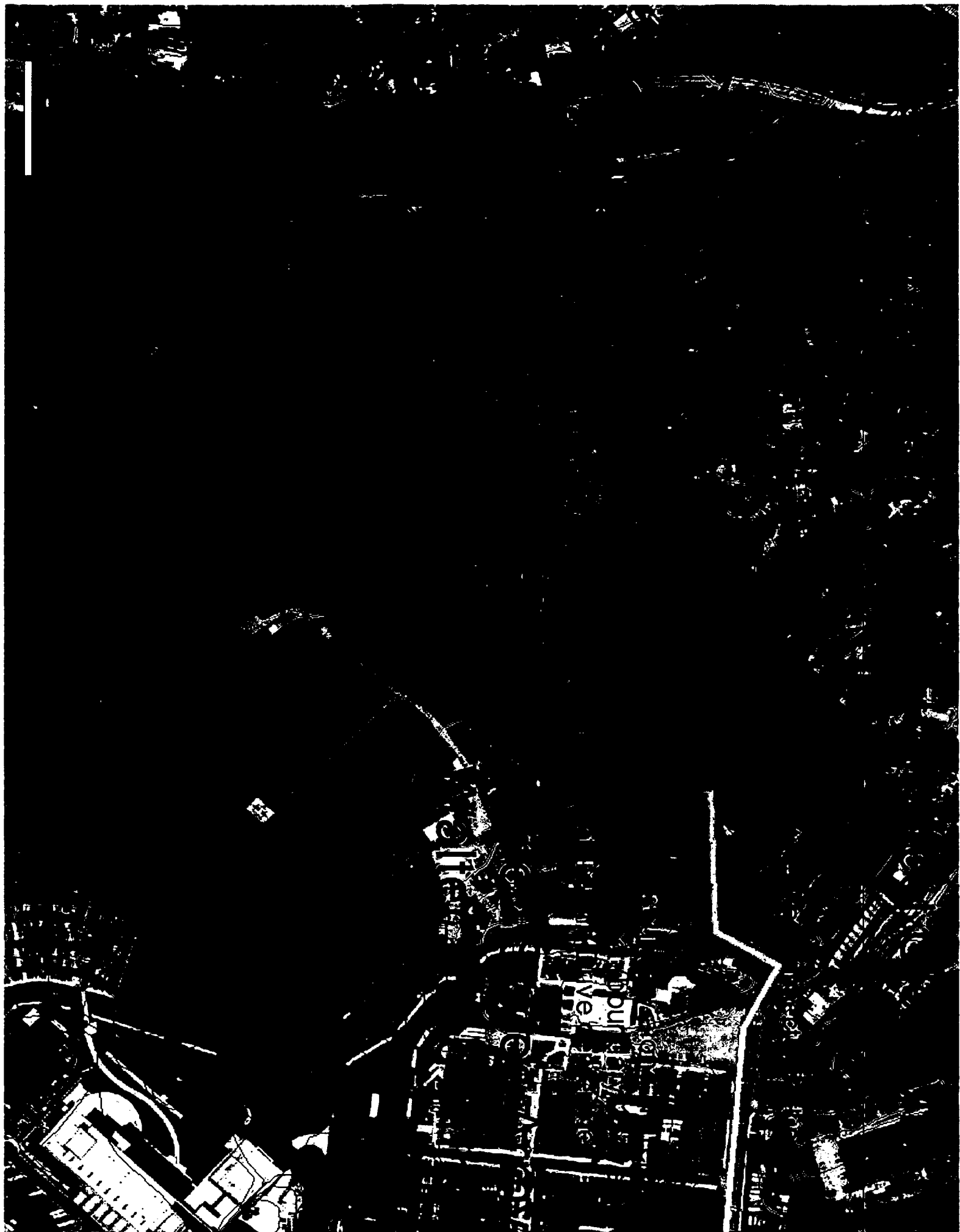
Owais E. Farooqi, P.E.*

Project Engineer
M.S., Civil Engineering; B.E., Civil Engineering
* Licensed in Maryland
B&V Water



BLACK & VEATCH
Building a world of difference.

BLACK & VEATCH CORPORATION
18310 Montgomery Village Avenue • Suite 500
Gaithersburg, MD 20879 USA
Tel: 301-921-2872 • Fax: 301-921-2862
farooqioe@bv.com



Ireland Drive Bridal Path

Background:

North Ireland Drive is an unbuilt "paper road" that historically served as a bridal or carriage road connection to Rock Creek from the National Park Seminary. Ireland Drive is directly adjacent to 9.8 acres of forested land dedicated to M-NCPPC from the Army. Approximately 3700 linear feet of the bridal path loop remains. The U.S. Army owns the trail as part of the Walter Reed Medical Center Annex. The Walter Reed Medical Center Annex has maintained Ireland Drive as a trail resource for its employees and the surrounding community for decades. In recent years, sections of the trail have fallen into disrepair and full access has been compromised due to security issues.

The National Park Seminary development plan has been approved and is currently under construction. This plan represents a complex partnership that restores numerous late 19th century buildings (part of National Registry Historic District) as part of an adaptive reuse to convert the facility to mixed used residential. This already recognized important trail connector and recreational amenity between Rock Creek Park, the Capital Crescent Trail and the Sligo Creek Trail systems is anticipated to receive greater usage once the development of the National Park Seminary is complete.

The Countywide Park Trails Plan (M-NCPPC, 1998) supports connectivity between the Rock Creek Trail and the Sligo Creek Trail. In addition, the North and West Silver Spring Master Plan (M-NCPPC, 2002) recommends providing on-road and off-road bikeways along Linden Lane between the Beltway and the Ireland Drive connection to the trail. It further recommends evaluating the Walter Reed Army Medical Center property for possible trail connections, repairing the deteriorated trail bordering Rock Creek Park and federal property, and addressing maintenance responsibilities and ownership issues.



Former bridle path from National Park Seminary to Rock Creek Park. Features include concrete road, bridges and curbs, dates unknown. Total remaining assemblage of Bridal Path is approximately 3700 linear feet. This bridge is one of nearly a dozen major and minor bridge and culvert crossings.



Bridal Path Bridge (Circa 1940) with recent graduates of the National Park Seminary



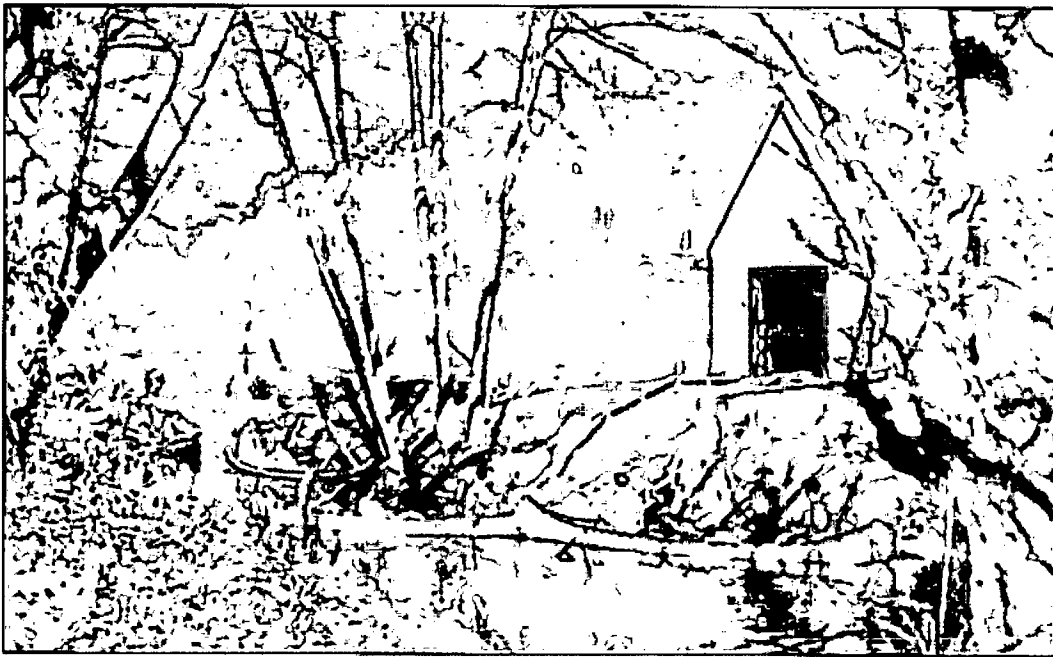
Bridal Trail affords views of mature oak dominated forest, along a steep sloping perennial stream ("Minihaha Branch") with areas of exposed bedrock and small waterfalls.



Picnic House associated with the National Park Seminary adjacent to the Minihaha Branch. Designed by a NPS student, the site is believed to be the spot of a former spring house or mill used by the Edgewood Farm. Photographic documentation of this structure dating to circa 1920 is available (*Enchanted Forest Glen, The Endangered Legacy of the National Park Seminary Historic District.*) Note: accretion of sediments and organic litter has buried approximately 2' of the original base elevation. Stonework is structurally sound and intact. Roof, doors and detailing are gone.

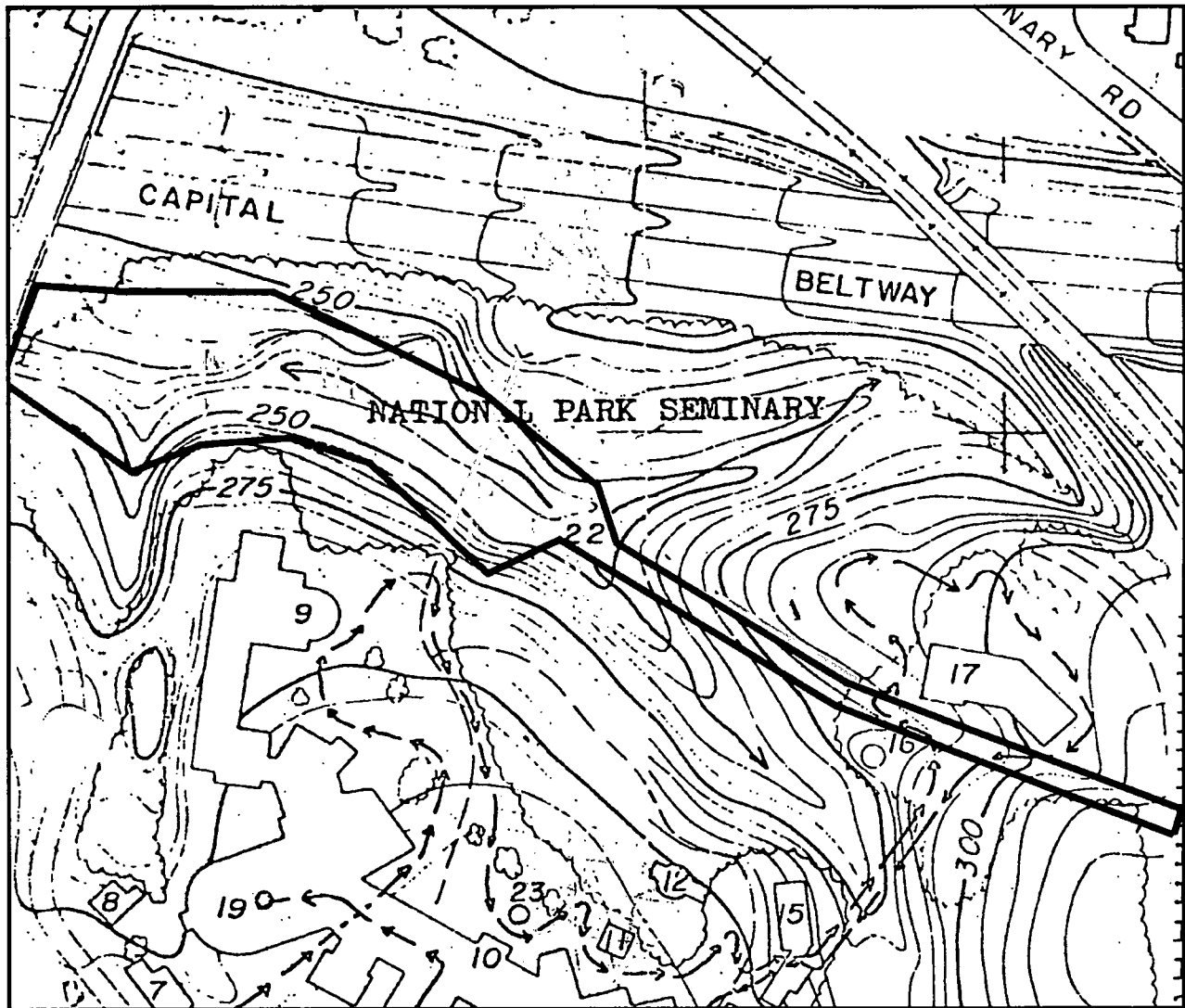


Stonework adjacent to the Picnic House is nearly identical to stonework found within the historic Glen closer to the Main Campus area of the National Park Seminary/Ye Old Forest Inn (1887).



Rock Creek with Bridal Path (North Ireland Drive in the background) National Park Seminary used Rock Creek for canoeing and other recreation activities (Photo from 1923). Remains of boat ramp infrastructure can still be found.

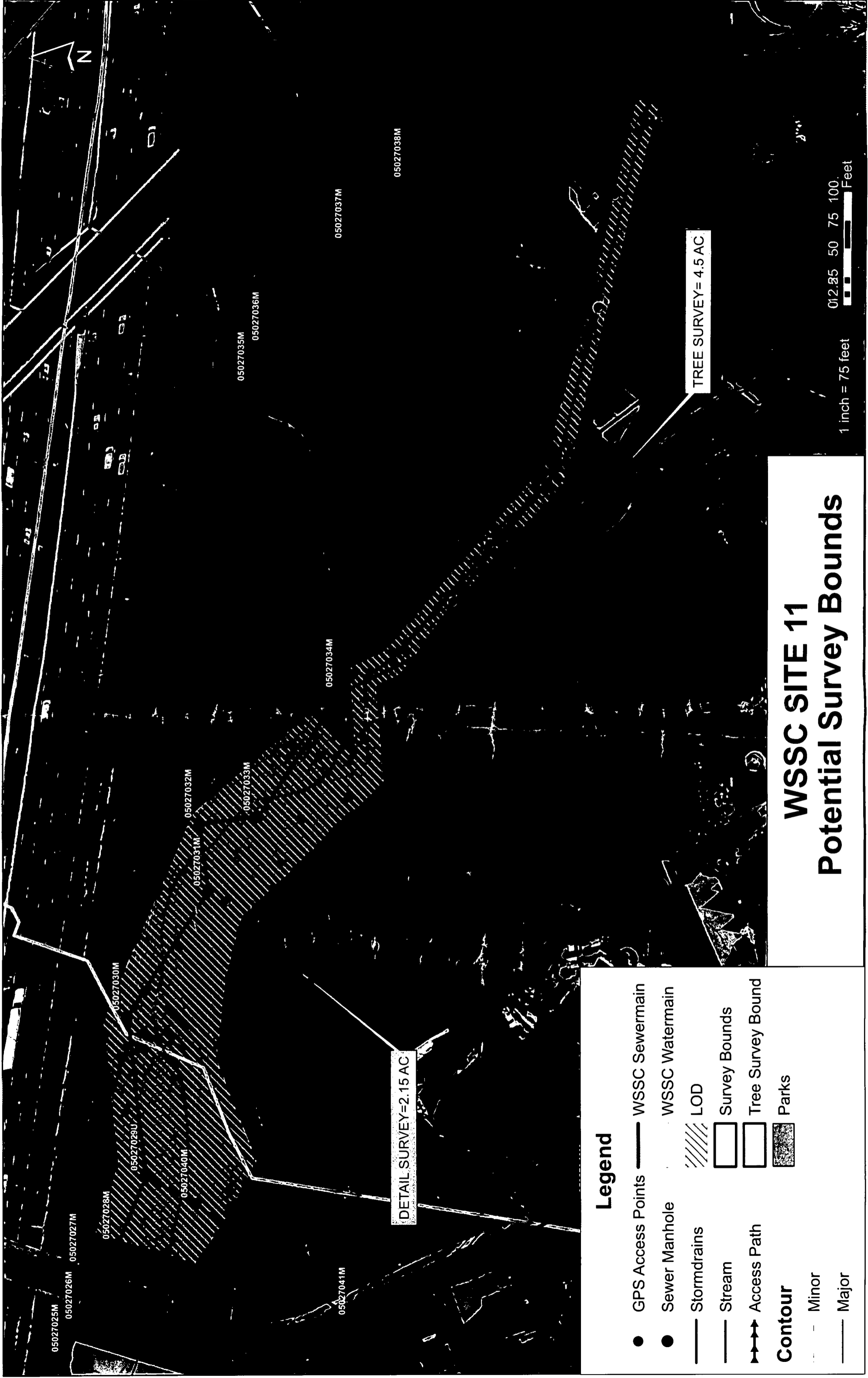
Photo images 17OCT2006 (excluding historic images)
DAQ, M-NCPPC LOS; CK, Historic Preservation



Historic Features Within or Adjacent to the APE
on a detail from the map in the NRHP nomination form (Miller 1972:11)

Green Letters are cited in the text:

- A: old roadbed with stone walls and steps adjacent to it
- B: stone architectural complex (the "grotto")
- C: parts of a stone bridge with an associated ca. six-inch diameter metal pipe
- D: stone and concrete abutments and support bases for a non-extant pedestrian bridge
- E: stone stairs up the slope south of the bridge abutments, with a scatter of historic artifacts
- F: an abandoned manhole or cleanout access
- G: a small poured concrete foundation, only partly exposed on the surface.
- H: a section of ca. six-inch diameter metal pipe exposed in the stream bed
- I: a concrete and stone wall along the north side of the stream, adjacent to the sewer leak
- J: a scatter of historic building materials
- K: a mortared stone wall.



Legend

- GPS Access Points
- Sewer Manhole
- Stormdrains
- Stream
- ↔ Access Path
- Contour**
 - - - Minor
 - Major
- WSSC Sewermain
- WSSC Watermain
- ▨ LOD
- ▭ Survey Bounds
- ▭ Tree Survey Bound
- ▨ Parks

WSSC SITE 11 Potential Survey Bounds

1 inch = 75 feet

0 25 50 75 100 Feet