

SHEET INDEX

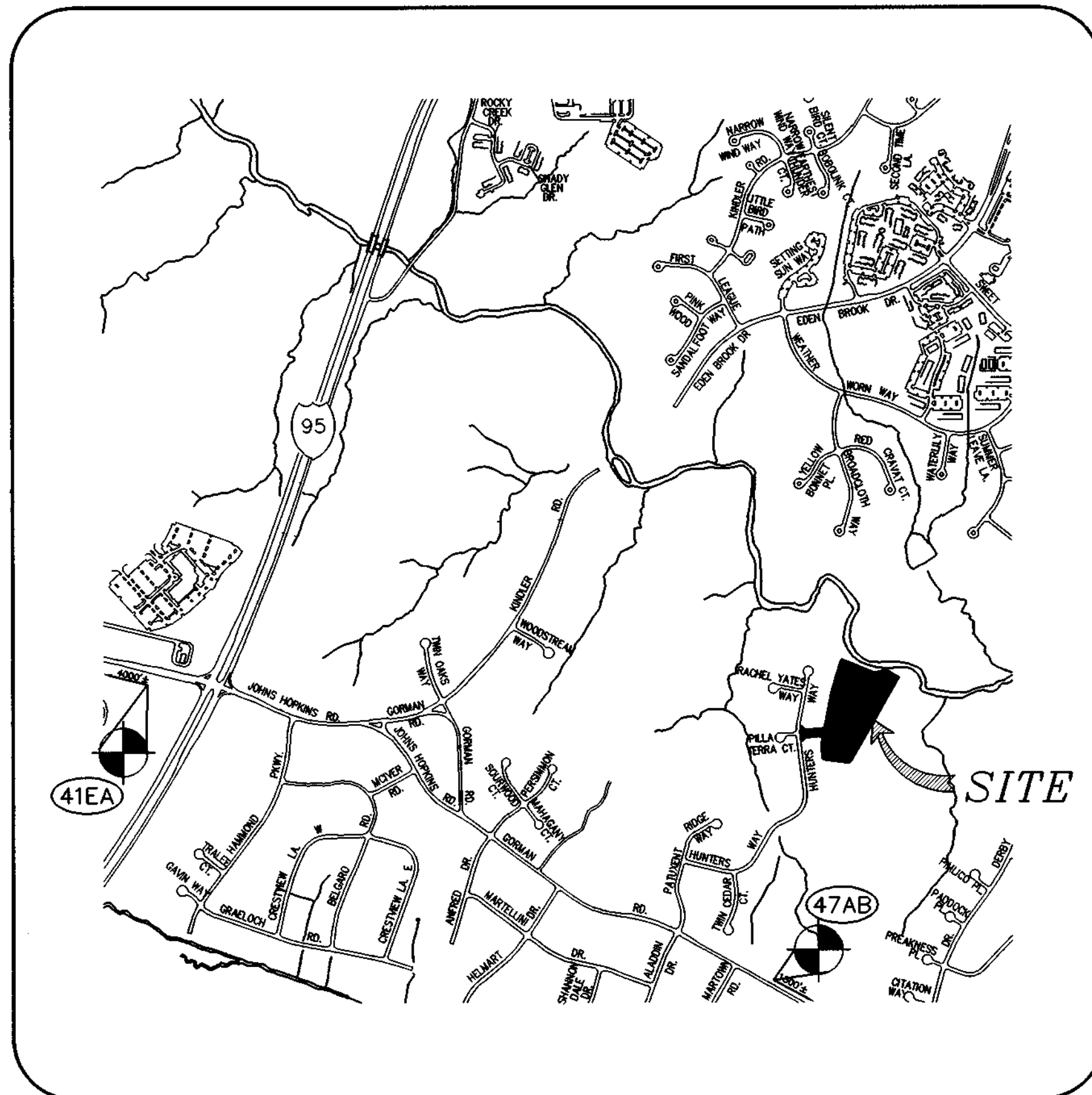
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ROAD CONSTRUCTION PLANS

WARFIELDS RANGE II

LOTS 77 THRU 92

A RESUBDIVISION OF LOT 69
WARFIELDS RANGE, SECTION 2, AREA 4
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



VICINITY MAP

SCALE: 1"=1000'

OWNER
THE ESTATE OF JANET PHELPS
C/O DONALD WYVELL
8706 CARRIAGE HILLS DRIVE
COLUMBIA, MD 21046

DEVELOPER
WARFIELDS RANGE ASSOCIATES, LLC
5570 STERRETT PLACE, SUITE 201
COLUMBIA, MD 21044
(410) 997-3815

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:

MISS UTILITY	1-800-257-7777
C&P TELEPHONE COMPANY	(410) 725-9978
HOWARD COUNTY BUREAU OF UTILITIES	(410) 313-4900
AT&T CABLE LOCATION DIVISION	(410) 393-3533
BALTIMORE GAS & ELECTRIC	(410) 685-0123
STATE HIGHWAY ADMINISTRATION	(410) 531-5533
HOWARD COUNTY DEPT. OF PUBLIC WORKS/ CONSTRUCTION INSPECTION DIVISION	(410) 313-1880
- PROJECT BACKGROUND:

LOCATION:	TAX MAP 41, P/O PARCEL 454, BLOCK , LOT 69
ZONING:	R-20
ELECTION DISTRICT:	SIXTH
TOTAL ACRES:	7.00 ±AC.
AREA OF BUILDABLE LOTS:	4.35 ±AC.
AREA OF OPEN SPACE REQUIRED:	30% x 7.00 AC = 2.10 ±AC
AREA OF OPEN SPACE PROVIDED:	2.13 ±AC
NON-CREDITED OPEN SPACE:	0.03 ±AC
NET OPEN SPACE PROVIDED:	2.10 ±AC
AREA OF RECREATIONAL OPEN SPACE:	N/A
AREA OF ROAD DEDICATION:	0.52 ±AC
NUMBER OF BUILDABLE LOTS:	13
NUMBER OF OPEN SPACE LOTS:	3
TOTAL NUMBER OF LOTS:	16
MINIMUM AREA OF BUILDABLE LOT:	14,000 SQ.FT.
DPZ FILE:	F-86-168; WP-87-132; S-99-14, P-00-11
- DEED REFERENCE: LIBER 706, FOLIO 340.
- TWO FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON AERIAL TOPOGRAPHIC SURVEY BY WINGS AERIAL MAPPING, INC. PERFORMED ON OR ABOUT FEBRUARY 2000.
- HORIZONTAL AND VERTICAL DATUMS BASED ON (NAD'83) MARYLAND STATE COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.

STA. 41EA	N 544,825,809 E 1,339,217,444
STA. 47AB	N 540,058,231 E 1,350,005,027
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- STORMWATER MANAGEMENT IS PROVIDED VIA THE METHOD OF DETENTION. STORMWATER MANAGEMENT WILL BE JOINTLY OWNED AND MAINTAINED BY HOWARD COUNTY AND THE HOA.
- GEOTECHNICAL REPORT PREPARED BY HILLIS-CARNES ENGINEERING ASSOCIATES, INC., DATED OCTOBER 1999.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- DRY WELLS OR OTHER APPROVED BEST MANAGEMENT PRACTICE SHALL BE APPLIED AT THE SITE DEVELOPMENT PLAN TO ANY ROOF DRAINAGE NOT MANAGED BY THE STORMWATER MANAGEMENT FACILITY FOR LOTS 81-86.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES ON SITE PRIOR TO COMMENCING CONSTRUCTION.
- FOREST CONSERVATION EASEMENT(S) HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.200 OF HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING OR SITE DEVELOPMENT PLAN. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OR CONSERVATION EASEMENT ARE ALLOWED.
- FOREST STAND DELINEATION PERFORMED BY ECO-SCIENCE PROFESSIONALS ON JANUARY 12, 1998.
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- SLOPES IN EXCESS OF 25% EXIST AND ARE IDENTIFIED WHERE THEY EXCEED 20,000 SQ. FT.
- ALL EXISTING STRUCTURES TO BE REMOVED.
- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY RETENTION OF EXISTING FOREST IN THE AMOUNT OF 1.16 ACRES (50,529.6 SQ. FT. AT \$10,105.92), REFORESTATION IN THE AMOUNT OF 0.17 ACRES (7,405.2 SQ. FT. AT \$3,702.60), AND BY THE PURCHASE OF CREDITS EQUAL TO 1.41 ACRES AT THE FOREST MITIGATION BANK LOCATED ON WINKLER PROPERTY. FOREST CONSERVATION SURETY IN THE AMOUNT OF \$13,808.52 FOR RETENTION AND REFORESTATION HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT.
- THE 4'X10' TRASH PAD (4" IN DEPTH) WITHIN THE PUBLIC RIGHT OF WAY SHALL BE MAINTAINED BY THE OWNERS OF LOTS 81-89 PURSUANT TO THE DECLARATION OF RIGHTS OF ACCESS AND MAINTENANCE OBLIGATIONS RECORDED AMONG THE LAND RECORDS FOR HOWARD COUNTY, MARYLAND.

AS-BUILT CERTIFICATION

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

P.E. NO.: _____
SIGNATURE: _____ DATE: _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUITABLE AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

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

Signature of Developer: James L Newburn DATE: 7-17-01
Printed Name of Developer: James L Newburn

BY THE ENGINEER:

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

Signature of Engineer: Abbas Hilmat DATE: 7/17/01
Printed Name of Engineer: Abbas Hilmat

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

USDA - NATURAL RESOURCES CONSERVATION SERVICE
Signature: [Signature] DATE: 8/9/01

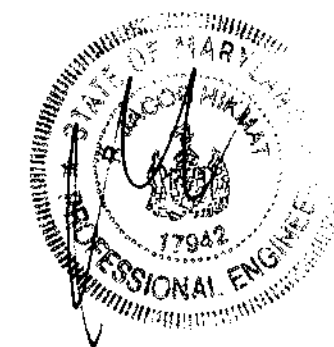
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT
Signature: [Signature] DATE: 8/9/01

APPROVED: DEPARTMENT OF PUBLIC WORKS
Signature: [Signature] DATE: 8/10/01
CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Signature: [Signature] DATE: 8/24/01
CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: [Signature] DATE: 8/15/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION

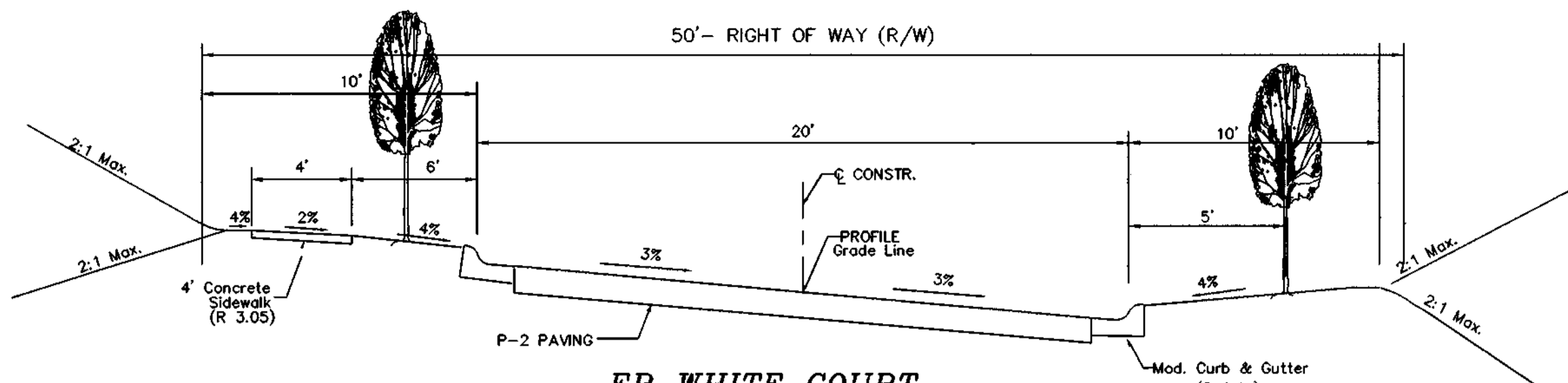


date	JULY 2001
project	98108
illustration	KR/SA
scale	WTS
approval	KR

date	7/19/01
description	SUBMITTED TO HOWARD COUNTY FOR SIGNATURE
revisions	0
no.	0

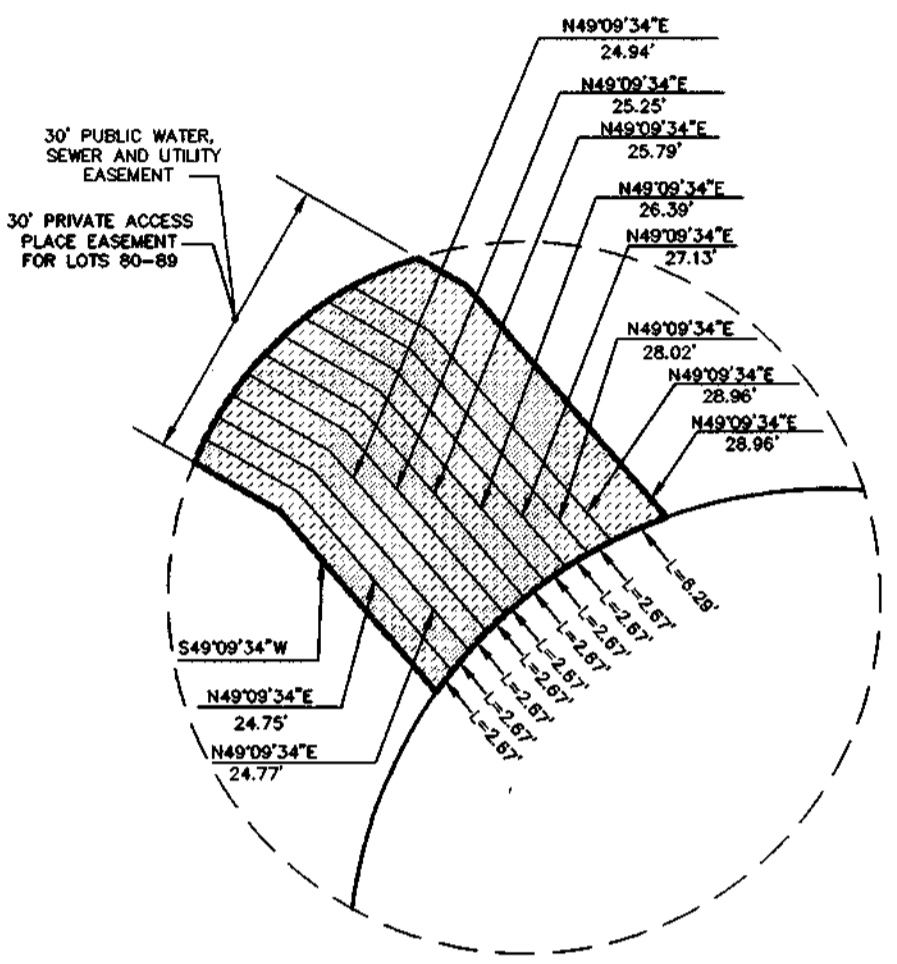
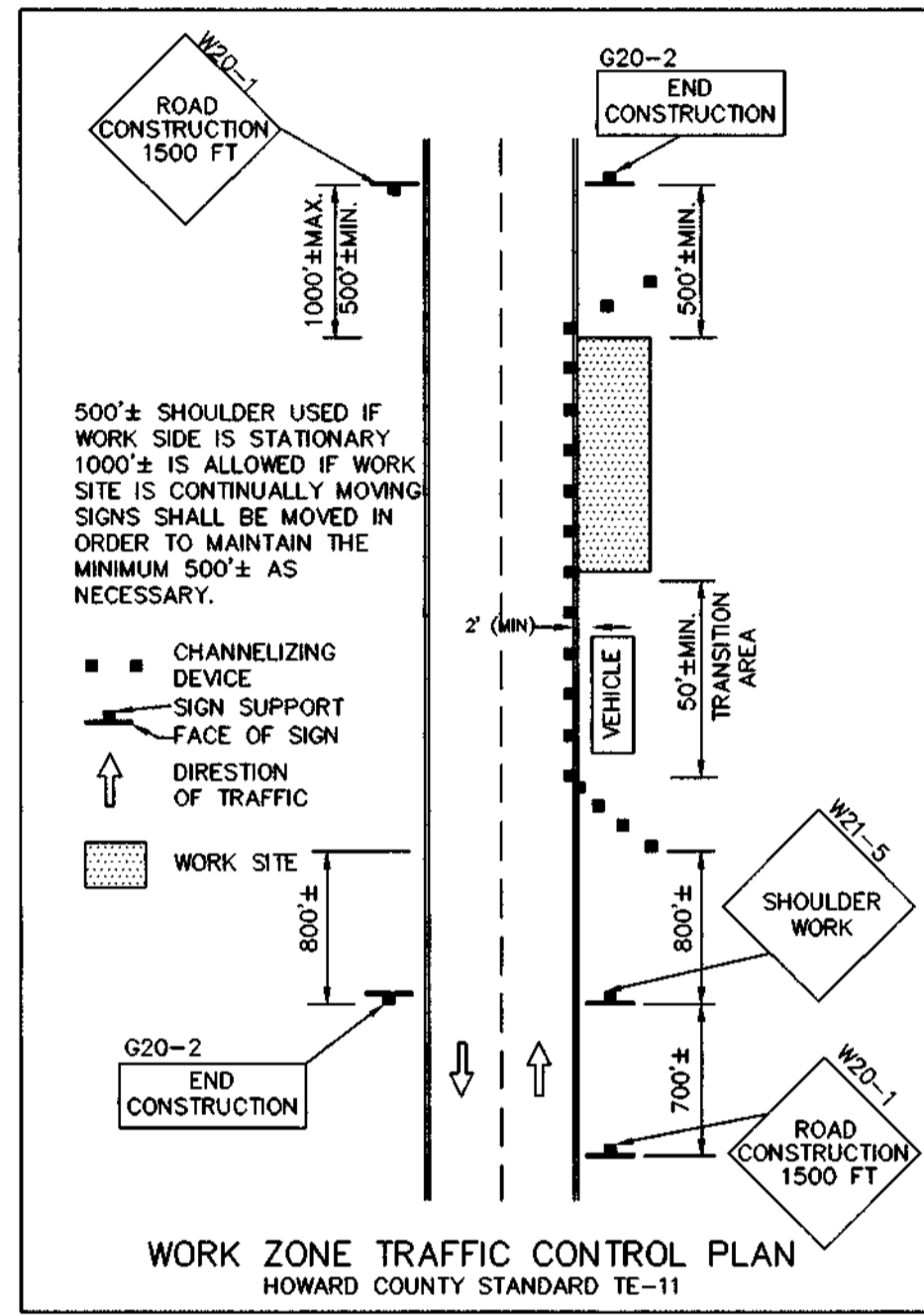
WARFIELDS RANGE II, LOTS 77 THRU 92
A RESUBDIVISION OF LOT 69 - WARFIELDS RANGE, SECTION 2, AREA 4
TAX MAP 42 - P/O PARCEL 454 - BLOCK 19
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
COVER SHEET

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Fax: (301) 621-5621 Wash. (410) 997-0298 Fax.

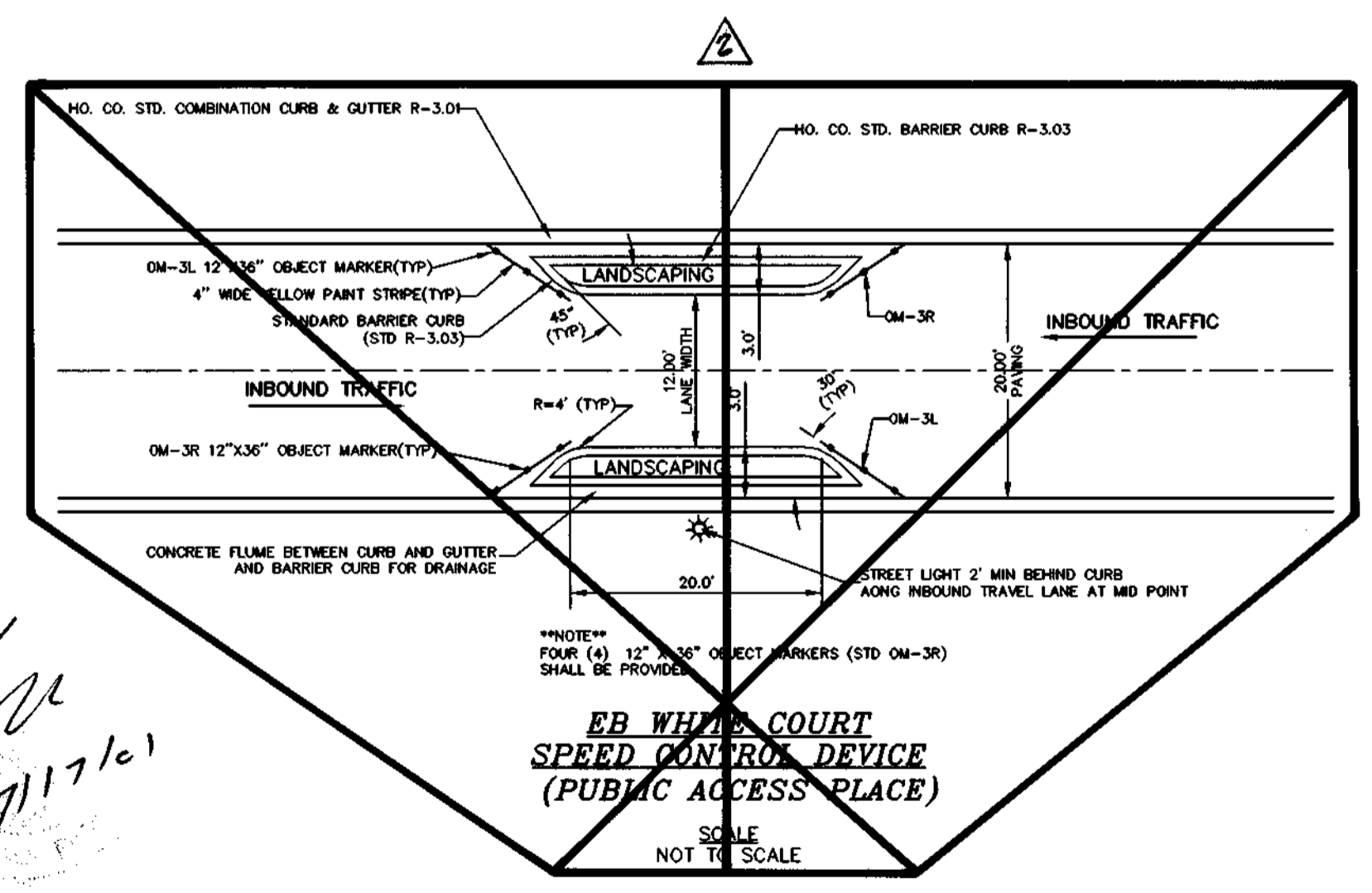


**EB WHITE COURT
ROAD SECTION**
CLASSIFICATION: PUBLIC ACCESS PLACE
HORIZONTAL DESIGN SPEED: 25 MPH
VERTICAL DESIGN SPEED: 25 MPH

SCALE
NOT TO SCALE

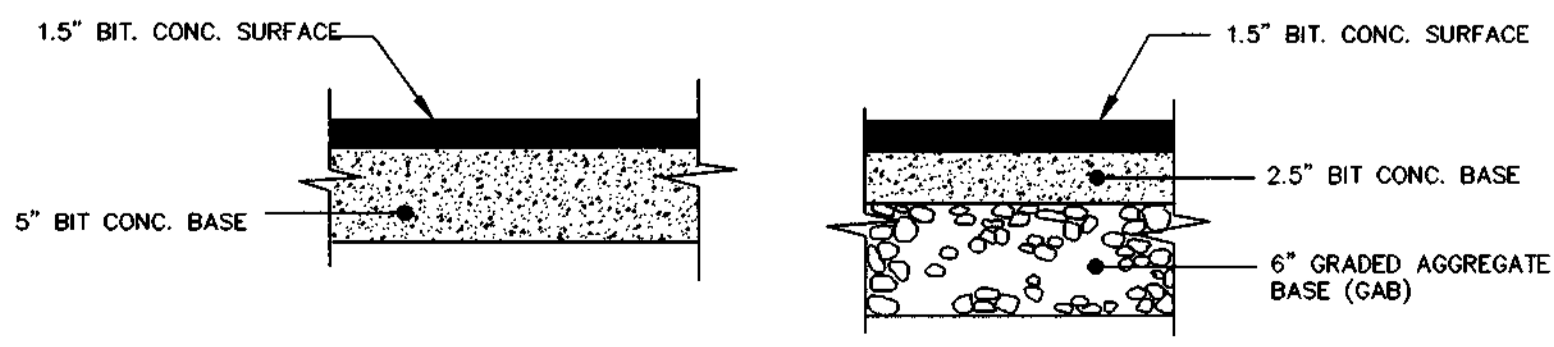


STREET LIGHT SCHEDULE	
EB WHITE COURT PUBLIC ACCESS PLACE STATION 0+4.00 TO 0+11.75	100 WATT HPS VAPOR COLONIAL POST TOP FIXTURE MOUNTED ON A 14' FIBERGLASS POLE
EB WHITE COURT PRIVATE ACCESS PLACE STATION 0+3.00, 12' LEFT	100 WATT HPS VAPOR COLONIAL POST TOP FIXTURE MOUNTED ON A 14' FIBERGLASS POLE



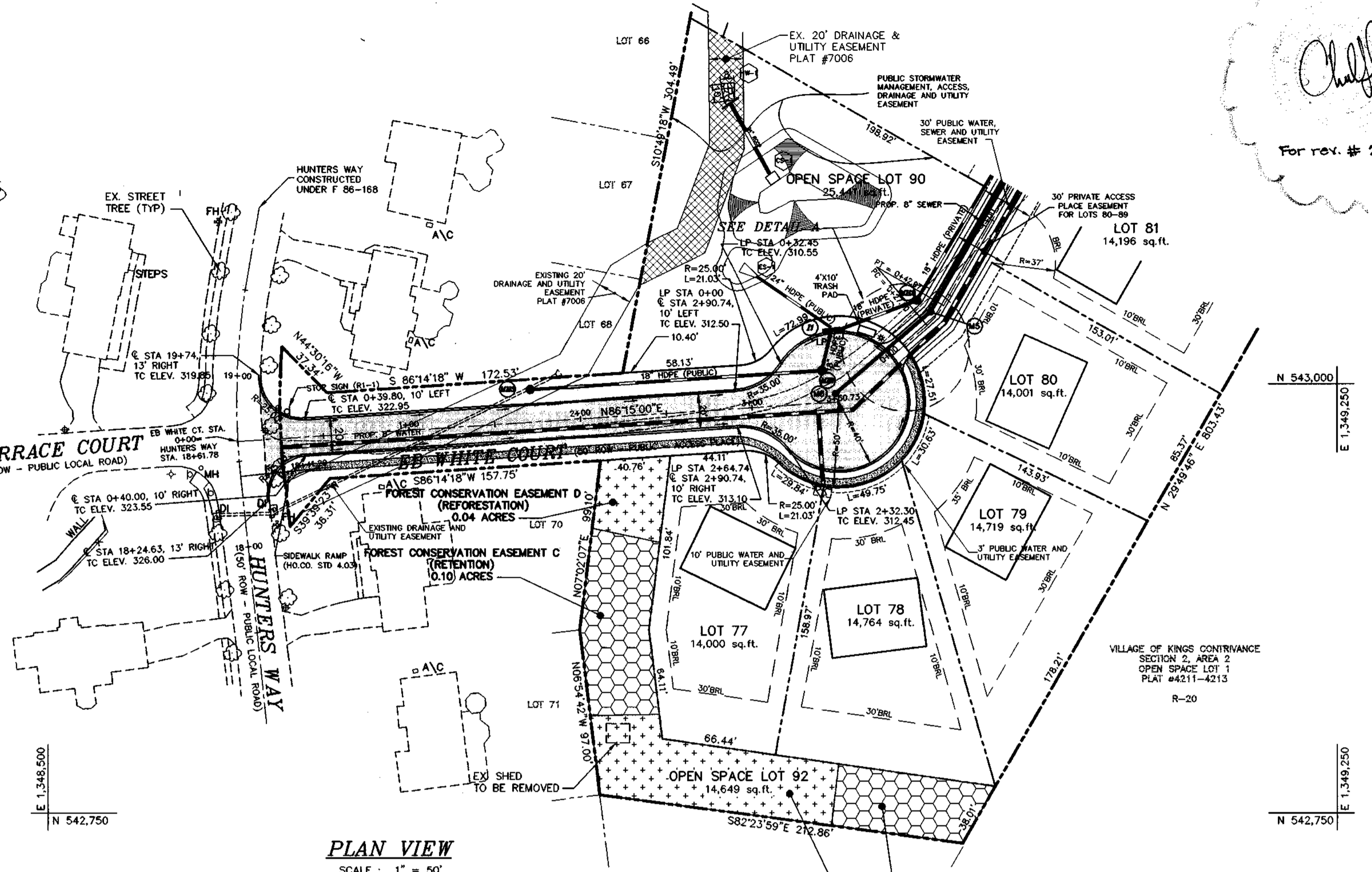
**EB WHITE COURT
SPEED CONTROL DEVICE
(PUBLIC ACCESS PLACE)**

SCALE
NOT TO SCALE



PAVING SECTION P-2

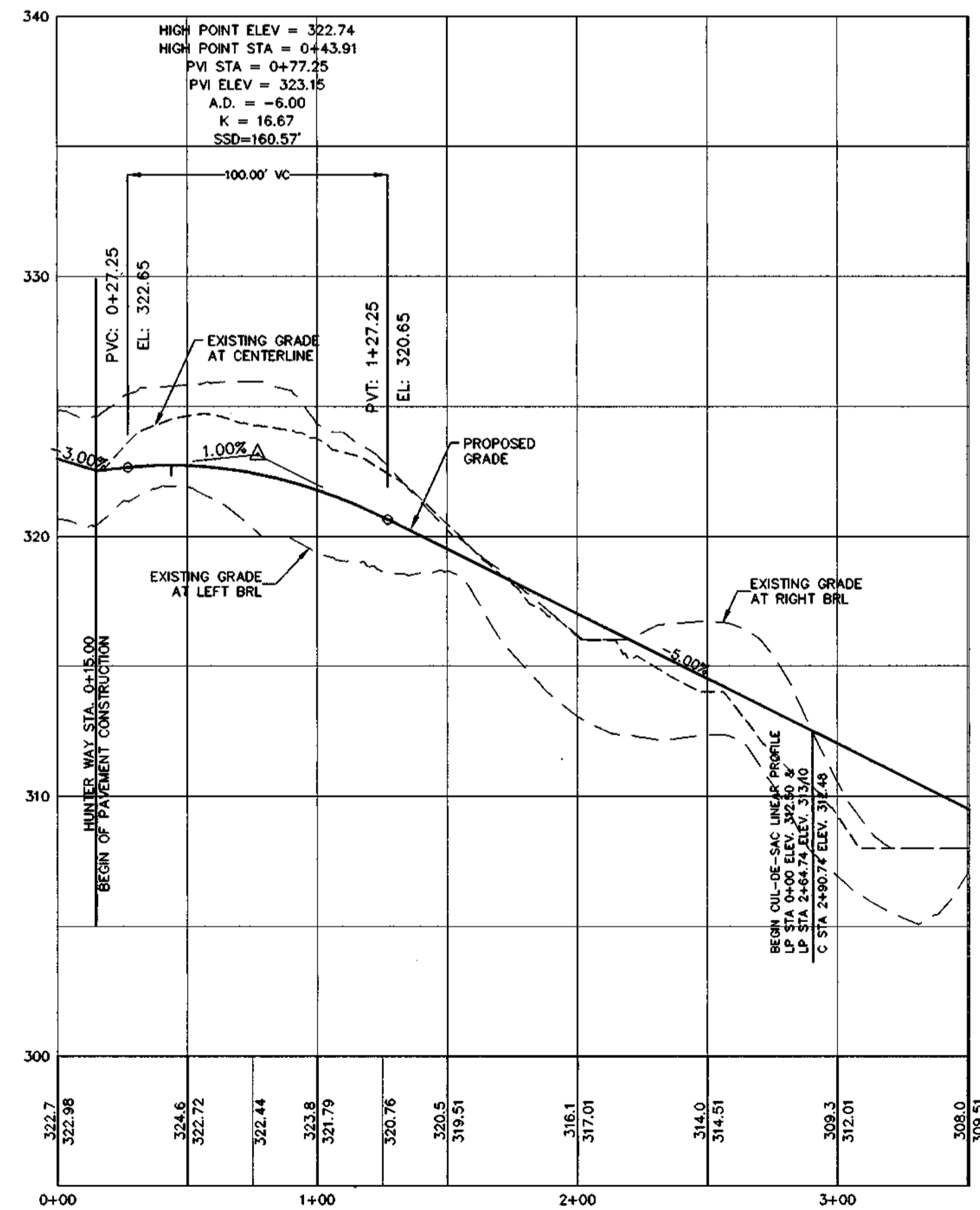
SCALE
NOT TO SCALE



PLAN VIEW

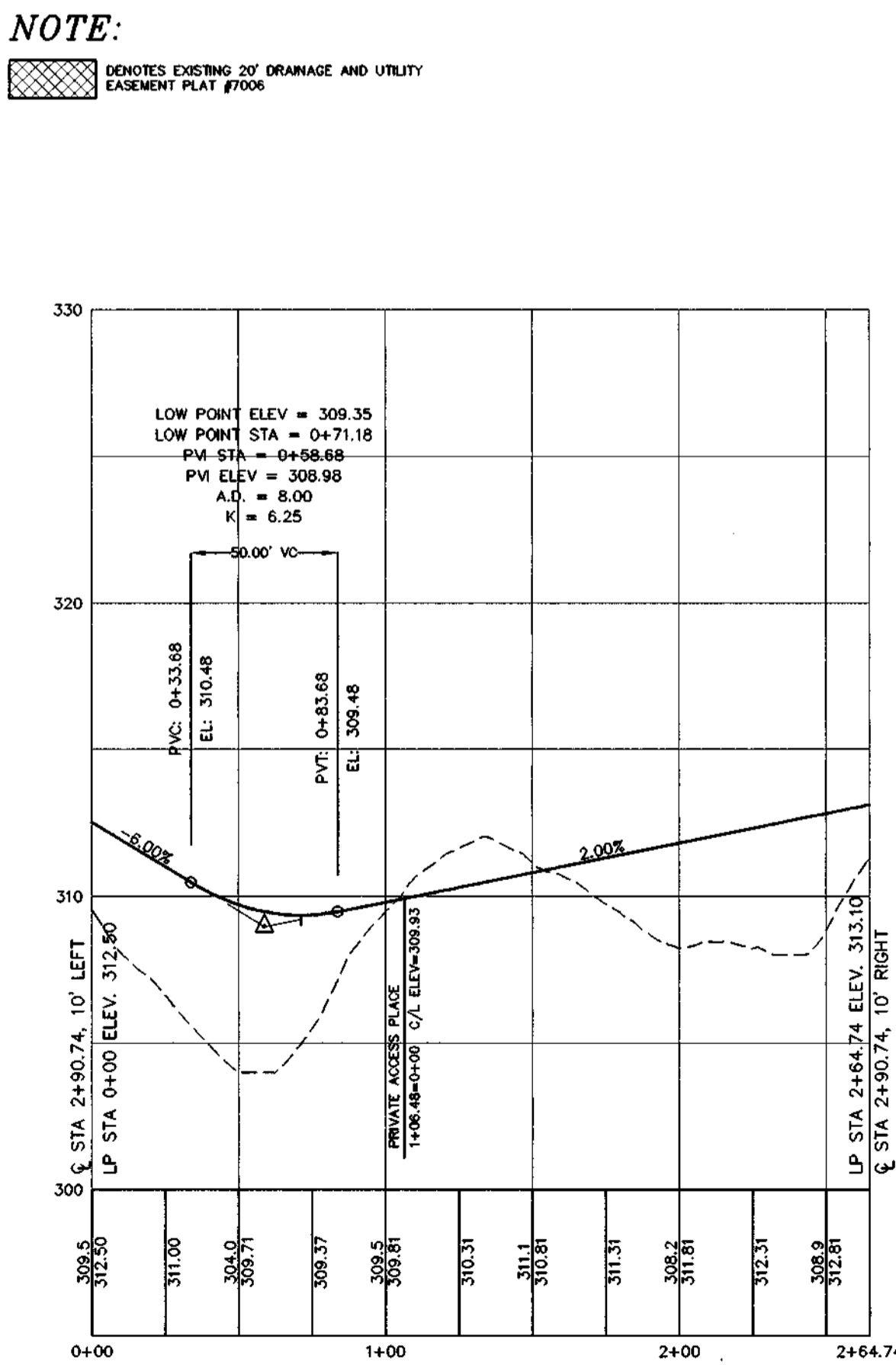
SCALE: 1" = 50'

NOTE: FOR STREET TREE LOCATIONS, SEE LANDSCAPE PLAN, SHEET 12 OF 13.



**EB WHITE COURT
ROAD PROFILE**
CLASSIFICATION: PUBLIC ACCESS PLACE
HORIZONTAL DESIGN SPEED: 25 MPH
VERTICAL DESIGN SPEED: 25 MPH

SCALE
1" = 50' HORIZONTAL
1" = 5' VERTICAL



**EB WHITE COURT
CUL-DE-SAC PROFILE**
CLASSIFICATION: PUBLIC ACCESS PLACE

SCALE
1" = 50' HORIZONTAL
1" = 5' VERTICAL

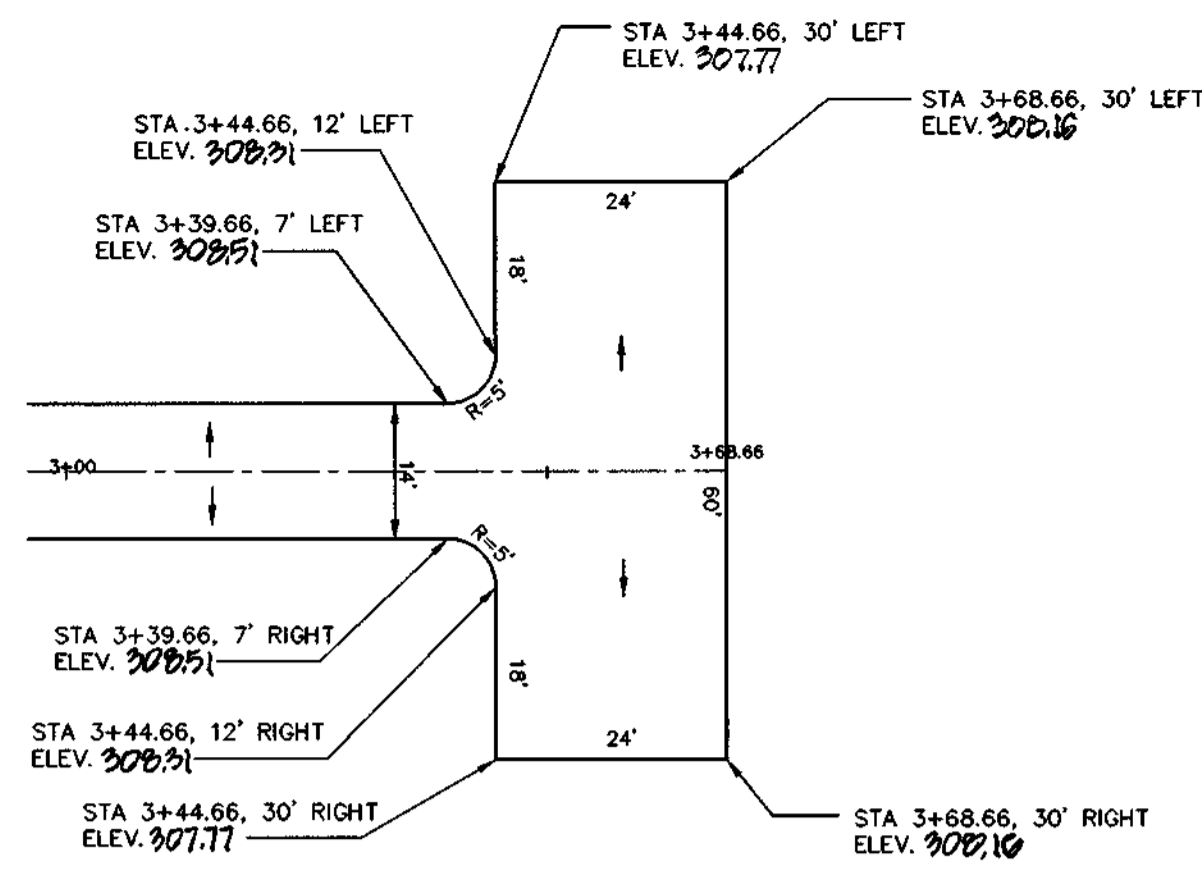
For rev. # 2 2-18-02

Project	98108	date	JULY 2001
Illustration	KR/SJD	engineering	SJD
scale	AS SHOWN	approval	AS SHOWN

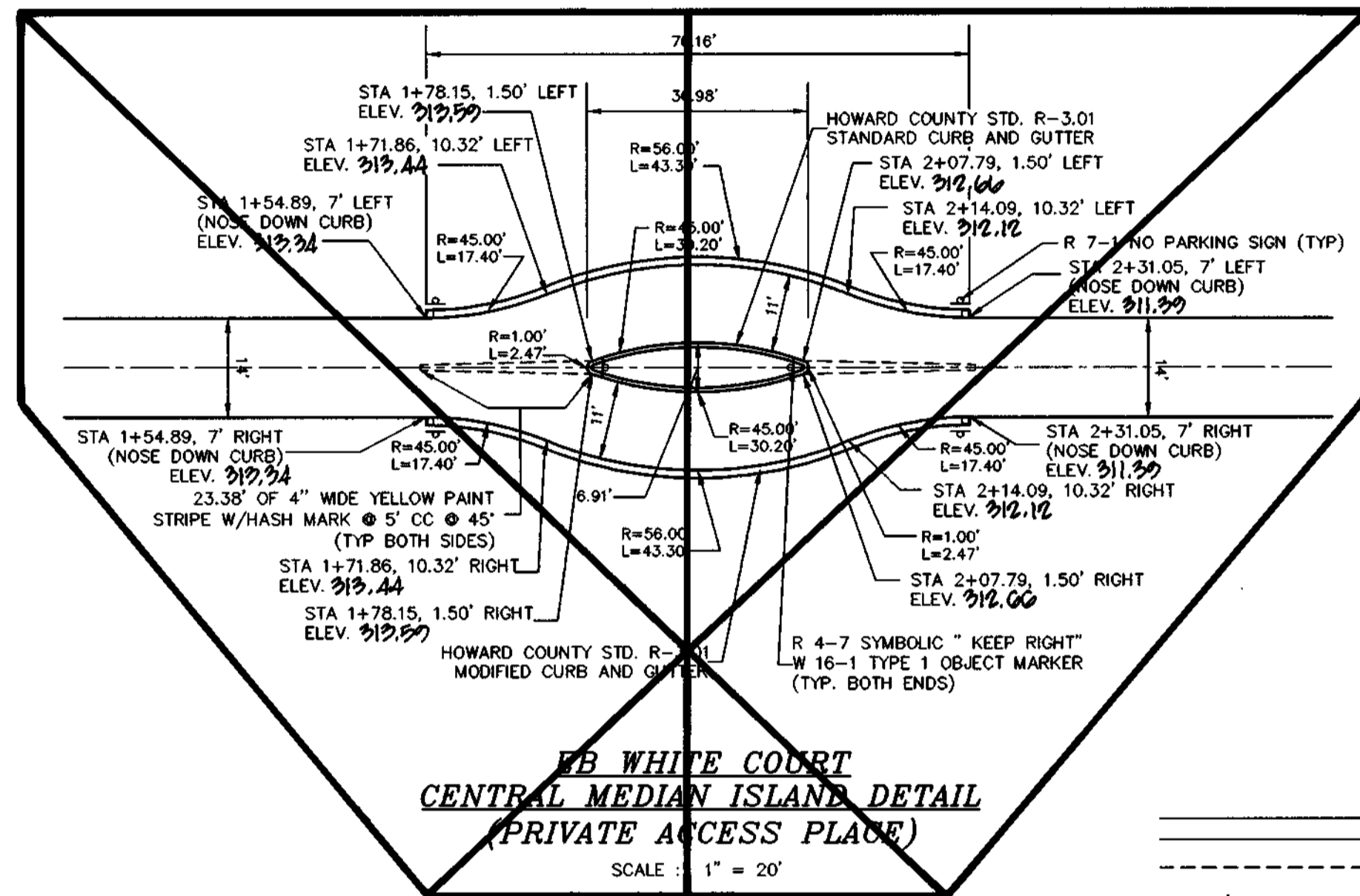
Project	WARFIELDS RANGE II, LOTS 77 THRU 92	date	11/17/01
Illustration	AS SHOWN	engineering	SJD
scale	AS SHOWN	approval	AS SHOWN

WARFIELDS RANGE II, LOTS 77 THRU 92
A RESUBDIVISION OF LOT 69 - WARFIELDS RANGE, SECTION 2, AREA 4
TAX MAP 42 - P/O PARCEL 454 - BLOCK 19
HOWARD COUNTY, MARYLAND
SIXTH ELECTION DISTRICT

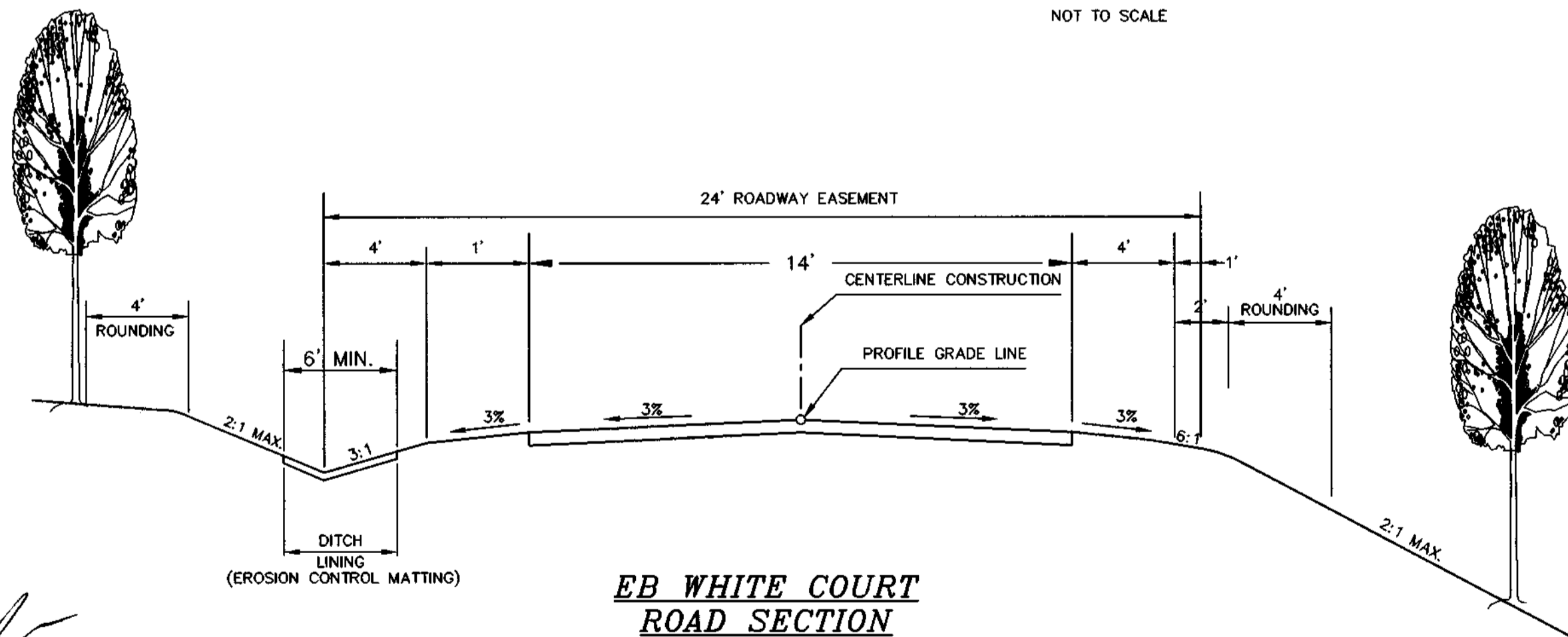
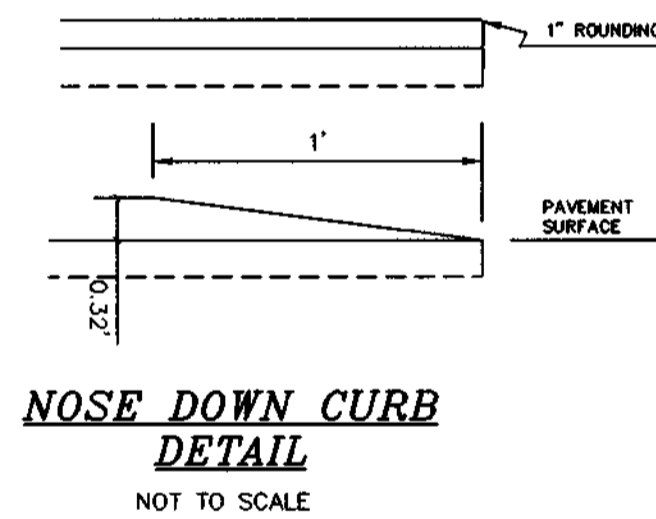
**MILDENBERG,
BOENDER & ASSOC., INC.**
Engineers Planners Surveyors
5072 Dorsey Hill Drive Suite 202, Ellicott City, Maryland 21042
(410) 997-0286 Fax: (801) 621-5521 Wash. (410) 997-0288 Fax.



**EB WHITE COURT
TEE TURN-AROUND DETAIL
(PRIVATE ACCESS PLACE)**
SCALE: 1" = 20'

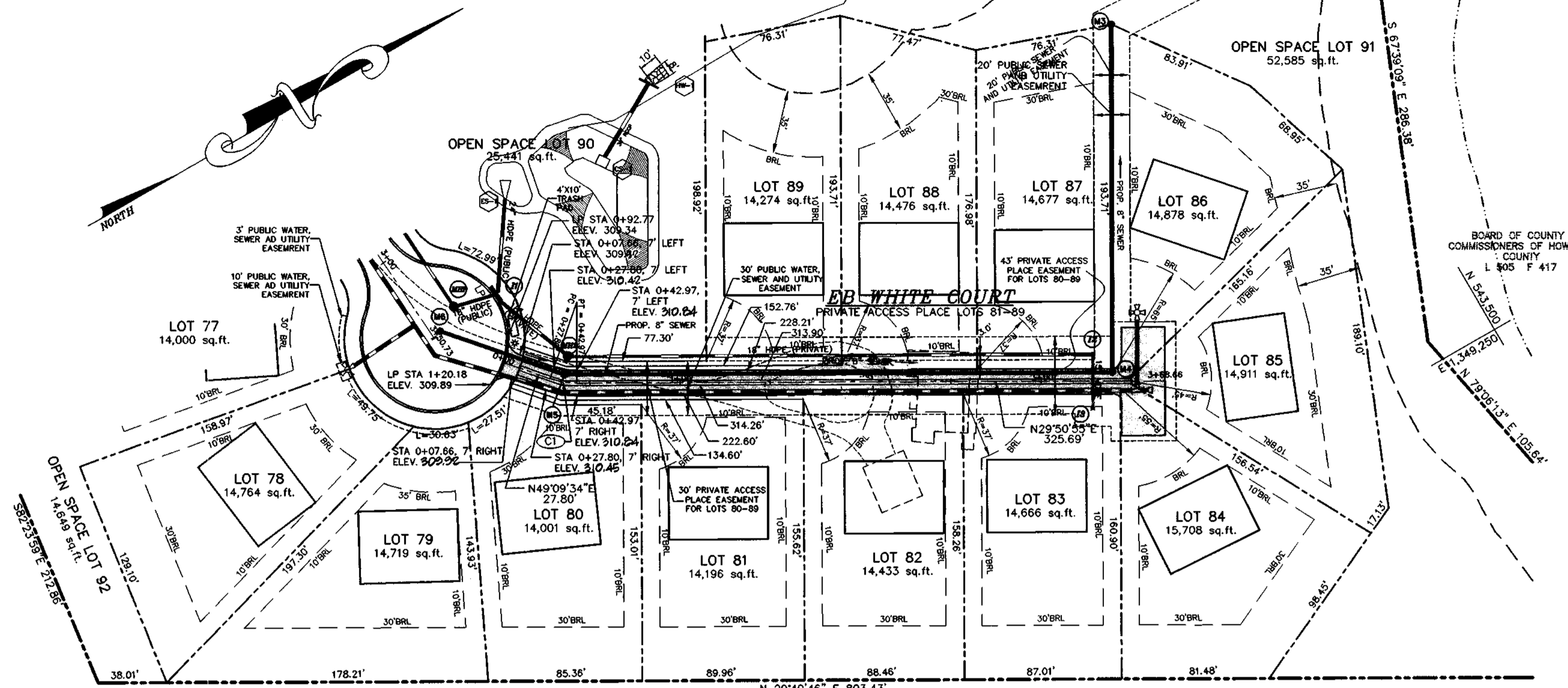


**EB WHITE COURT
CENTRAL MEDIAN ISLAND DETAIL
(PRIVATE ACCESS PLACE)**
SCALE: 1" = 20'



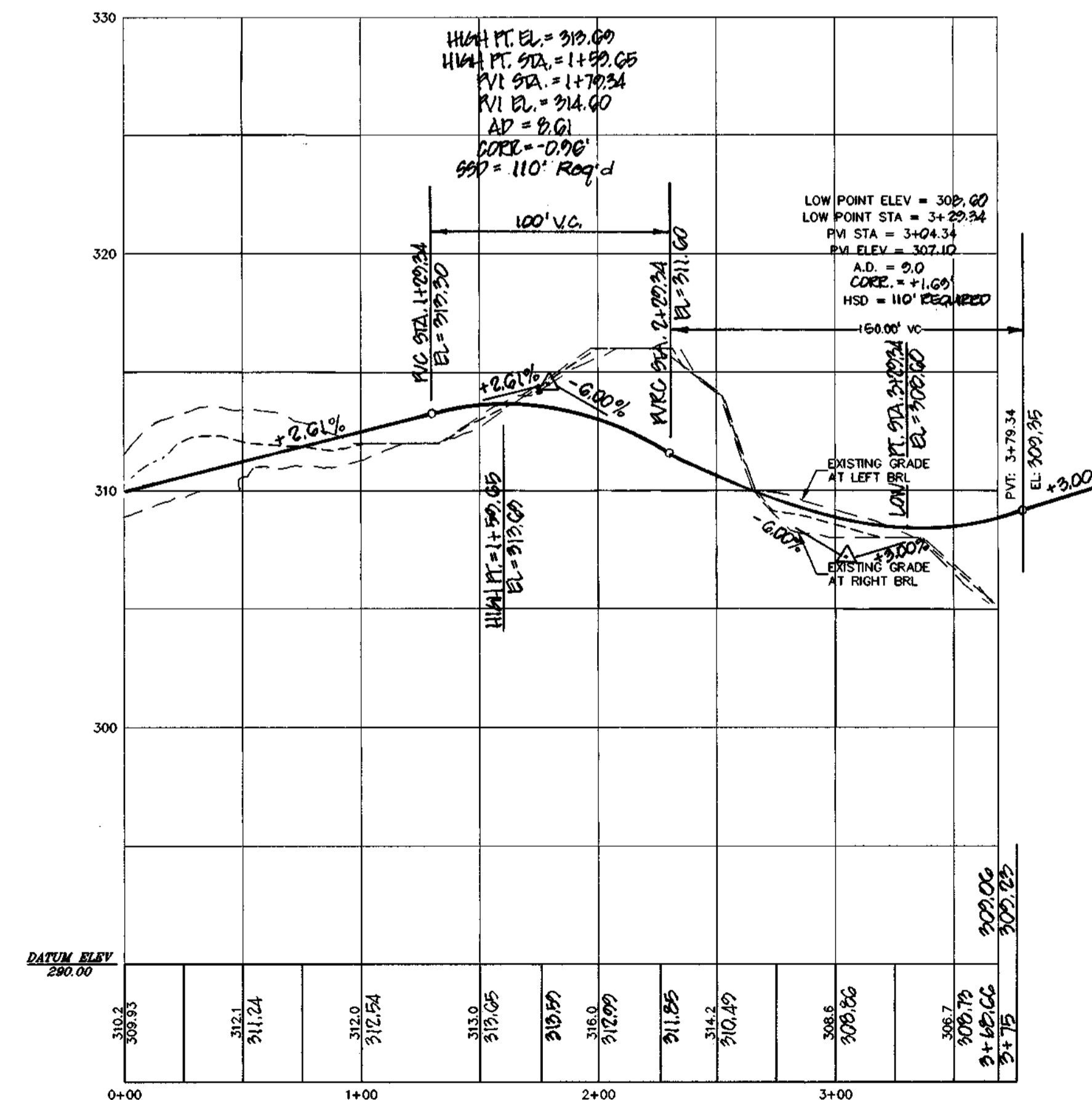
**EB WHITE COURT
ROAD SECTION
CLASSIFICATION: PRIVATE ACCESS PLACE
HORIZONTAL DESIGN SPEED: 15 MPH
VERTICAL DESIGN SPEED: 15 MPH**
SCALE: NOT TO SCALE

CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD
C1	45.00'	15.17'	7.66'	19°18'39"	N39°30'14"E 15.09'



PLAN VIEW
SCALE: 1" = 50'

NOTE: FOR STREET TREE LOCATIONS, SEE LANDSCAPE PLAN, SHEET 12 OF 13.



**EB WHITE COURT
ROAD PROFILE
CLASSIFICATION: PRIVATE ACCESS PLACE
HORIZONTAL DESIGN SPEED: 15 MPH
VERTICAL DESIGN SPEED: 15 MPH**
SCALE: 1"=50' HORIZONTAL, 1"=5' VERTICAL

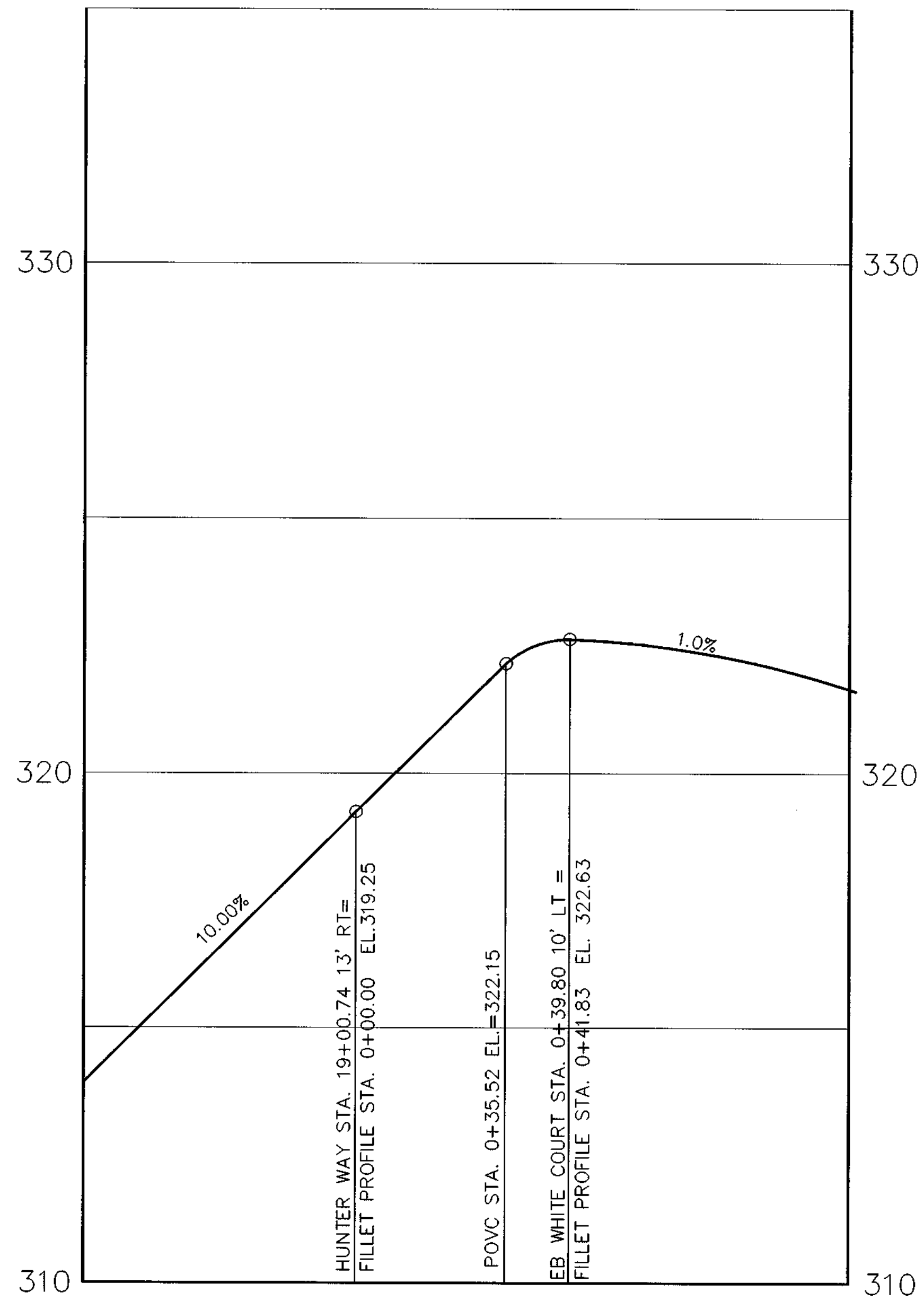
FOR REV #1: 11-29-01
FOR REV #2: 2-18-02

Project	98108	date	JULY 2001
Illustration	KR/SID	engineering	
scale	AS SHOWN	approval	

NO.	1	description	REVISIONS
NO.	2	REVISIONS	DATE
		REVISIONS	DATE

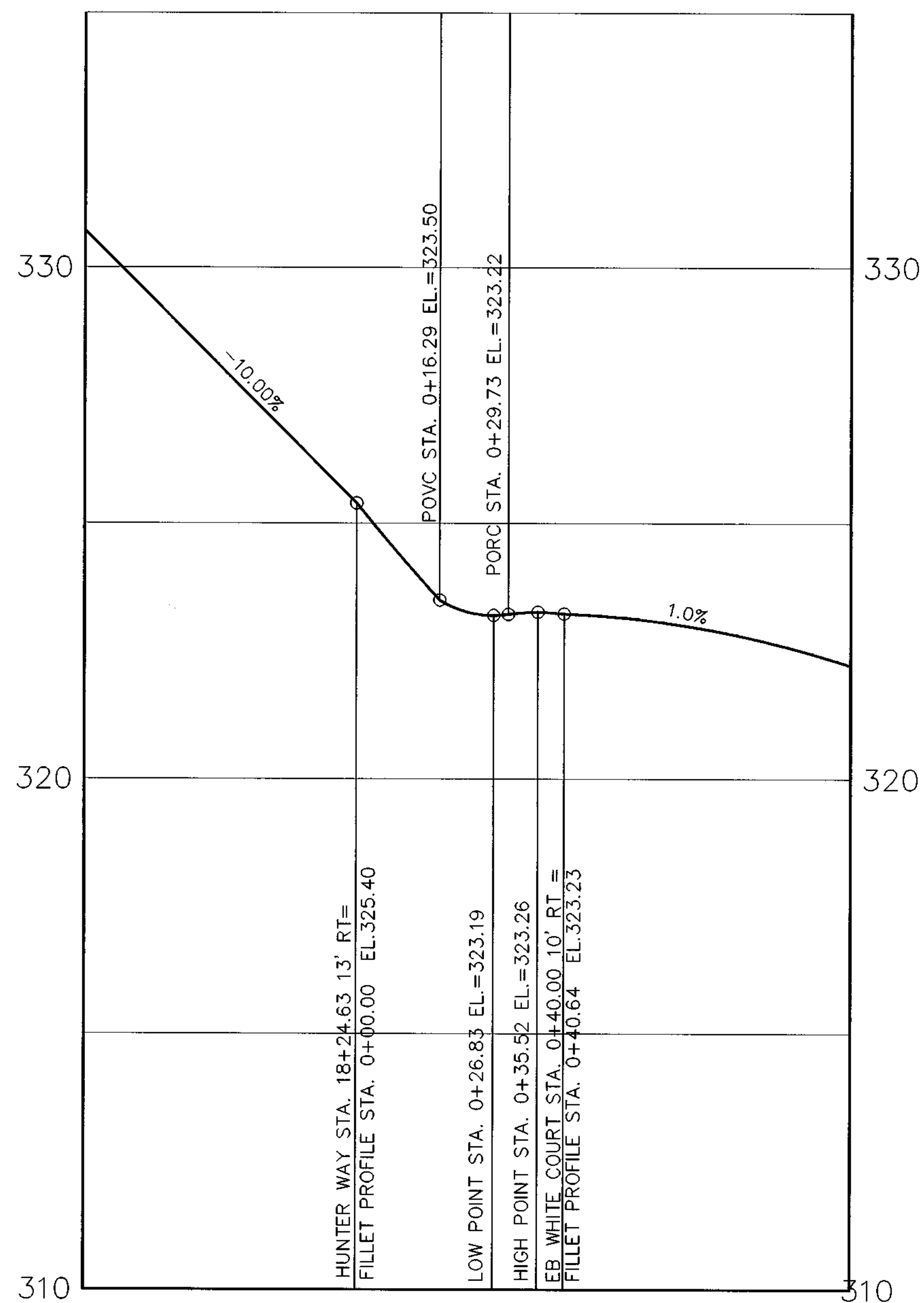
WARFIELDS RANGE II LOTS 77 THRU 92
A RESUBDIVISION OF LOT 69 - WARFIELDS RANGE, SECTION 2, AREA 4
TAX MAP 42 - P/O PARCEL 454 - BLOCK 19
HOWARD COUNTY, MARYLAND
SIXTH ELECTION DISTRICT

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0286 Fax: (301) 621-5521 Wash. (410) 997-0288 Fax.



HUNTERS WAY LEFT TURN TO EB WHITE COURT

SCALE: HOR. 1" = 20'
VER. 1" = 2'



HUNTERS WAY RIGHT TURN TO EB WHITE COURT

SCALE: HOR. 1" = 20'
VER. 1" = 2'

6/28/01

APPROVED: DEPARTMENT OF PUBLIC WORKS

Samuel S. Hill 8/14/01
CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Wanda Horvath 8/24/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

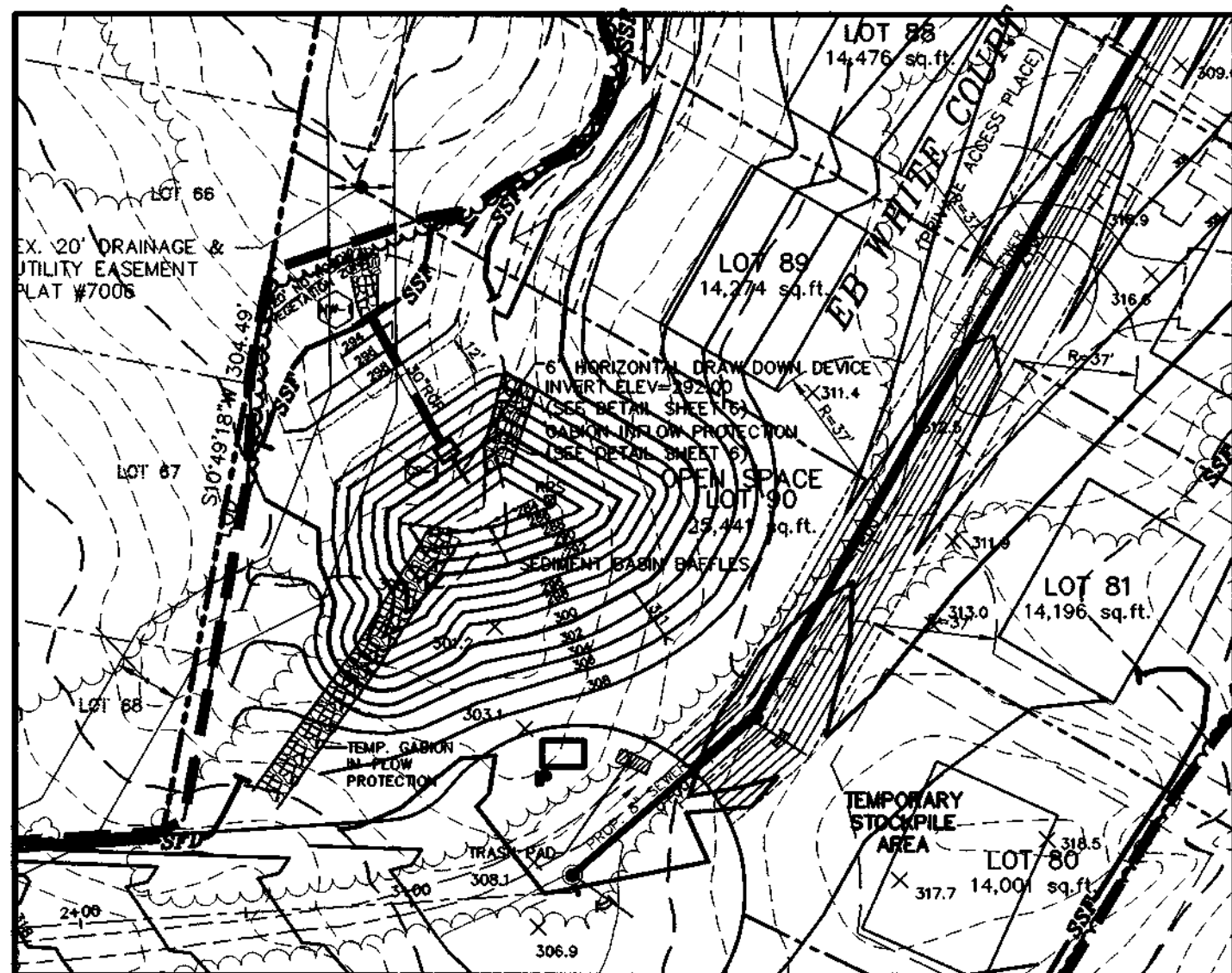
John P. ... 8/15/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Project	98108	date	APR 2001
Illustration	SAA	engineering	RR/SAA
scale	1"=60'	approval	

no.		description	revisions

WARFIELDS RANGE II, LOTS 77 THRU 92
A RESUBDIVISION OF LOT 69 - WARFIELDS RANGE, SECTION 2, AREA 4
TAX MAP 42 - P/O PARCEL 454 - BLOCK 19
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Balt. (301) 621-5321 Wash. (410) 997-0298 Fax

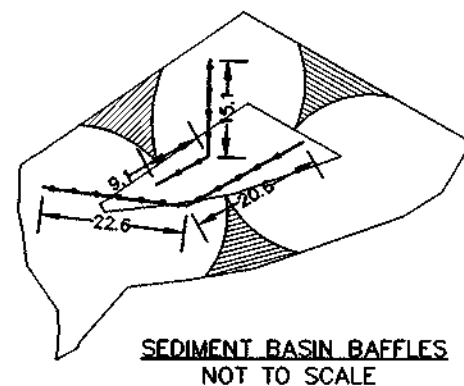


SEDIMENT BASIN DETAIL

SCALE: 1" = 50'

SEDIMENT BASIN # 1

MAX. DRAINAGE AREA: 5.5 AC
 TOP OF EMBANKMENT: 300.00
 WEIR CREST EL.: 296.30
 BOTTOM OF BASIN: 284.00
 WET STORAGE REQUIRED: 9,900
 WET STORAGE PROVIDED: 10,725 C.F. (AT ELEV. 292.00)
 DRY STORAGE REQUIRED: 9,900 C.F.
 DRY STORAGE PROVIDED: 27,600 C.F. (AT ELEV. 296.30)
 CREST LENGTH = 6.5'
 Q2 PRE = 4.3 CFS
 Q2 POST = 1.7 CFS



SEDIMENT BASIN BAFFLES
 NOT TO SCALE



AS-BUILT CERTIFICATION

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

P.E. NO.: _____
 SIGNATURE: _____ DATE: _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES THE ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

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

Signature of Developer: *James L. Newburn* DATE: 7-17-01
 PRINTED NAME OF DEVELOPER: James L. Newburn

BY THE ENGINEER:

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

Signature of Engineer: *R. JAGS HIKMAT* DATE: 7/17/01
 PRINTED NAME OF ENGINEER: R. JAGS HIKMAT

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

Signature: *Jim Magnus* DATE: 8/9/01
 USDA - NATURAL RESOURCES CONSERVATION SERVICE

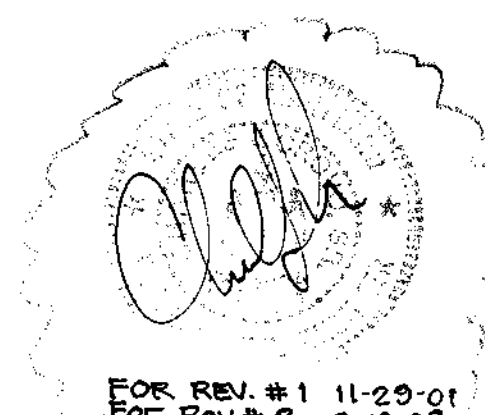
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *John A. ...* DATE: 8/9/01
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: *...* DATE: 8/10/01
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *...* DATE: 8/29/01
 CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: *...* DATE: 8/15/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



FOR REV. #1 11-29-01
 FOR REV. #2 2-18-02

NOTE
 FOR DETAILS OF STORMWATER MANAGEMENT FACILITY SEE SHEET 8

project	98108	date	JULY 2001
illustration	KR	engineering	KR/MMP
scale	1" = 50'	approval	

no.	1	date	11-29-01
description	REMOVED CRITICAL MESSY ISLAND FROM THE COVER (REMOVED) SPEED CONTROL DEVICE FROM THE WHITE COURT, STATION 1+10.00 TO 1+10.00. RELOCATED MESSY ISLAND FROM LOT 77 TO LOT 78. RELOCATED MESSY ISLAND FROM LOT 77 TO LOT 78.		
revisions			

WARFIELDS RANGE II, LOTS 77 THRU 92
 A RESUBDIVISION OF LOT 69 - WARFIELDS RANGE, SECTION 2, AREA 4
 TAX MAP 42 - P/O PARCEL 454 - BLOCK 19
 HOWARD COUNTY, MARYLAND
 SIXTH ELECTION DISTRICT
GRADING, EROSION AND SEDIMENT CONTROL PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 987-0286 Bldg. (301) 621-5521 Wash. (410) 987-0288 Fax.

HOWARD SOIL CONSERVATION DISTRICT

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED. SEEDING PREPARATION: LOOSEN TOP THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING...

Table with 2 columns: Item, Description, and Quantity. Includes site analysis, soil amendments, and seeding rates for various crops.

STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW pH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRAINIZATION.

CONDITIONS WHERE PRACTICE APPLIES: THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE...

CONSTRUCTION AND MATERIAL SPECIFICATIONS: TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THIS SPECIFICATION.

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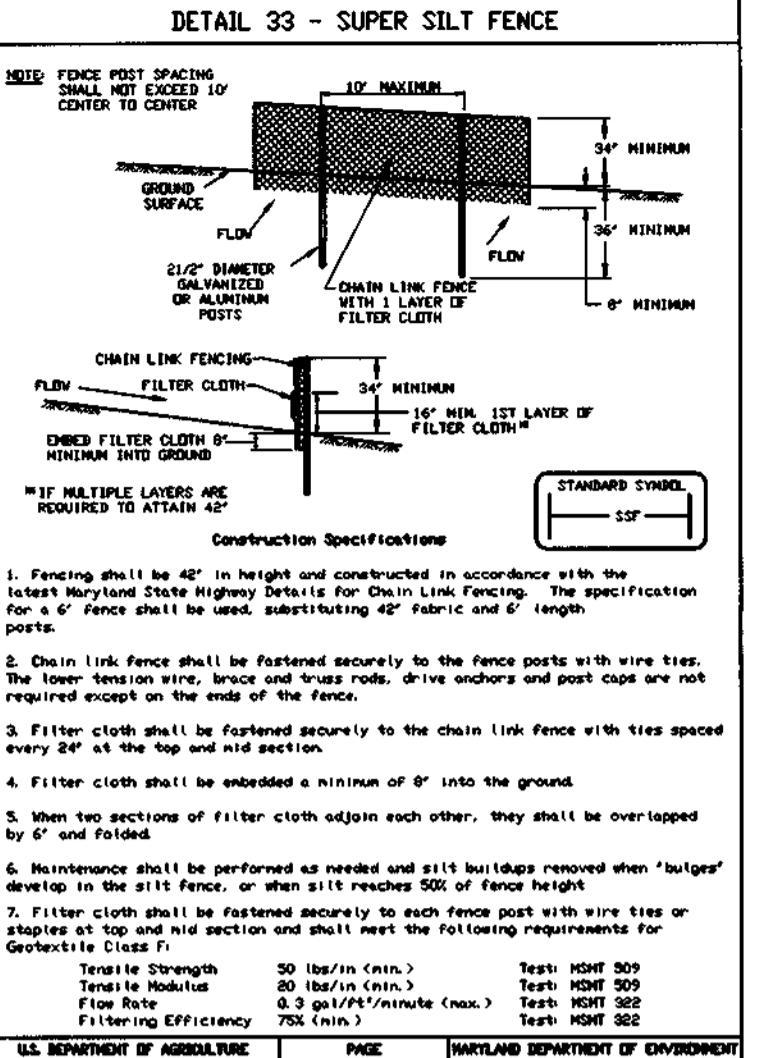
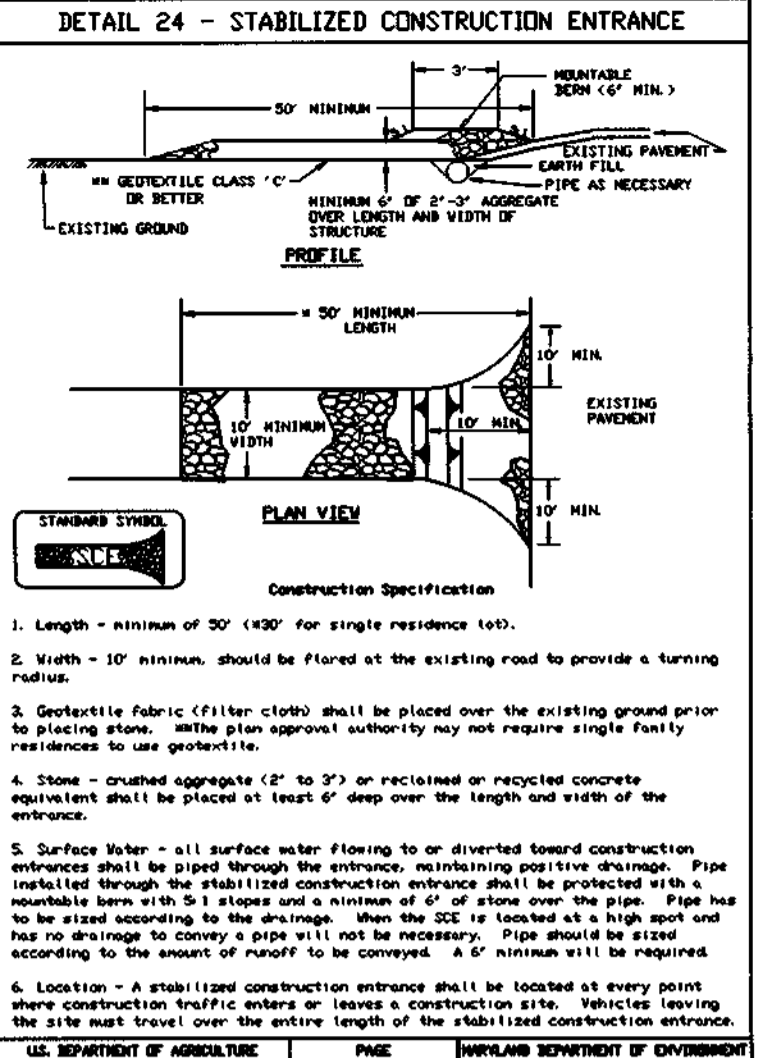
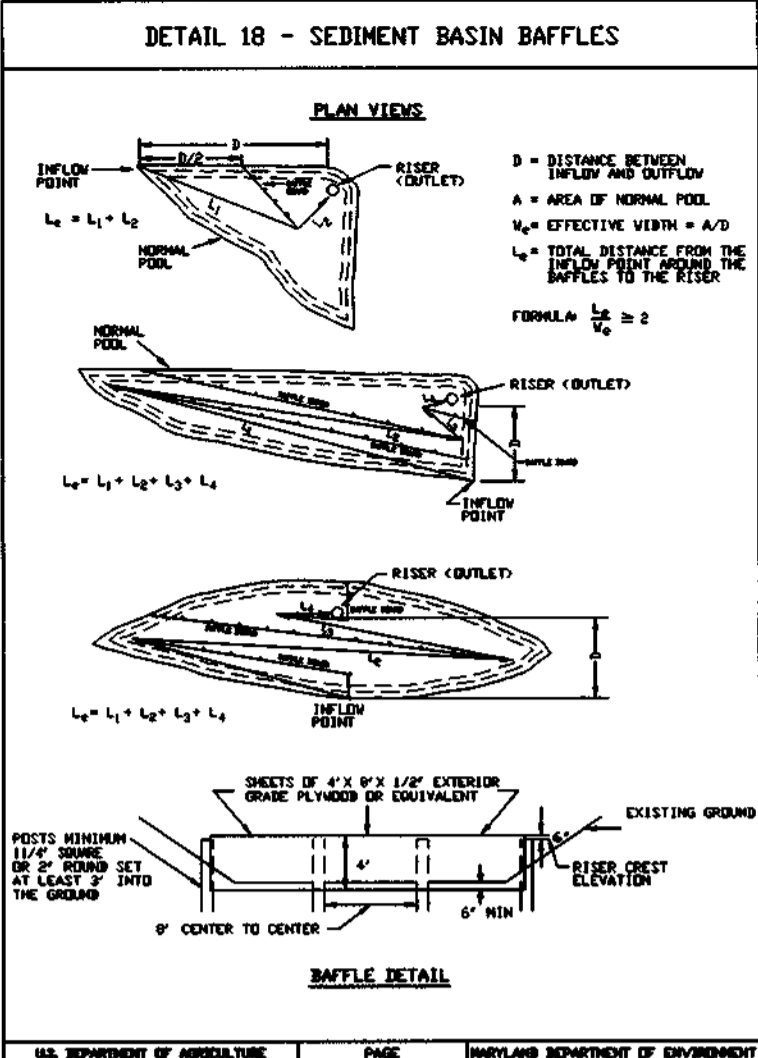
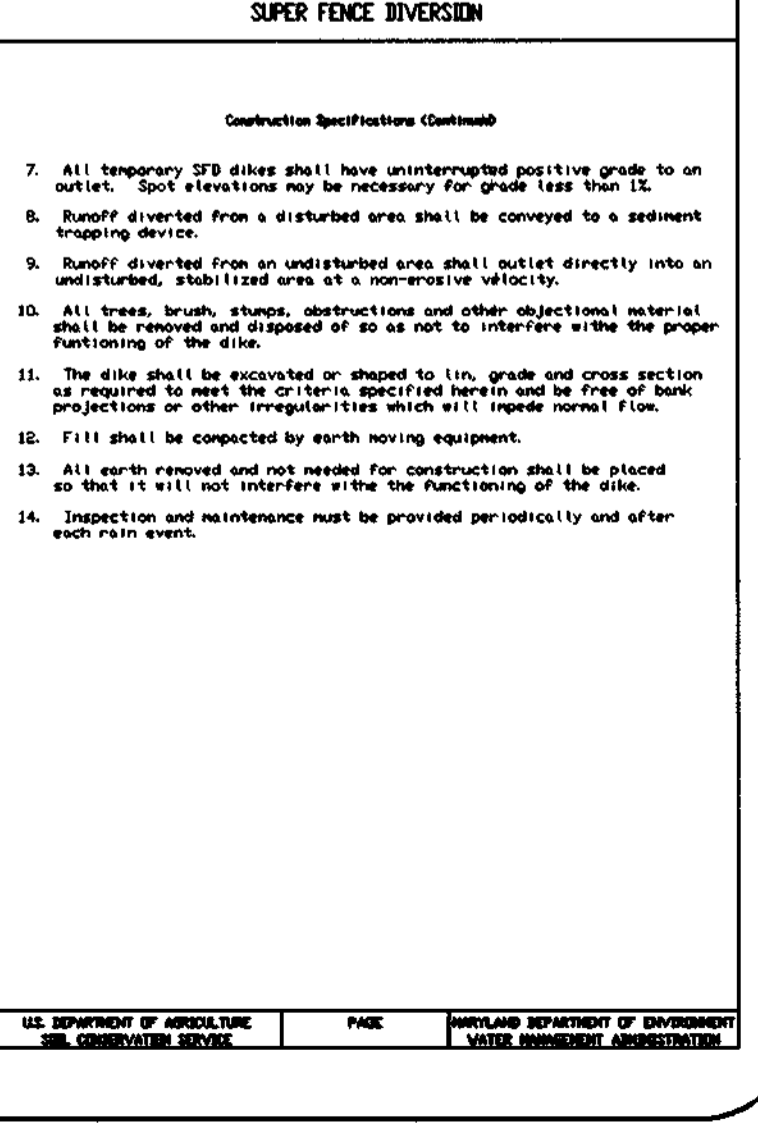
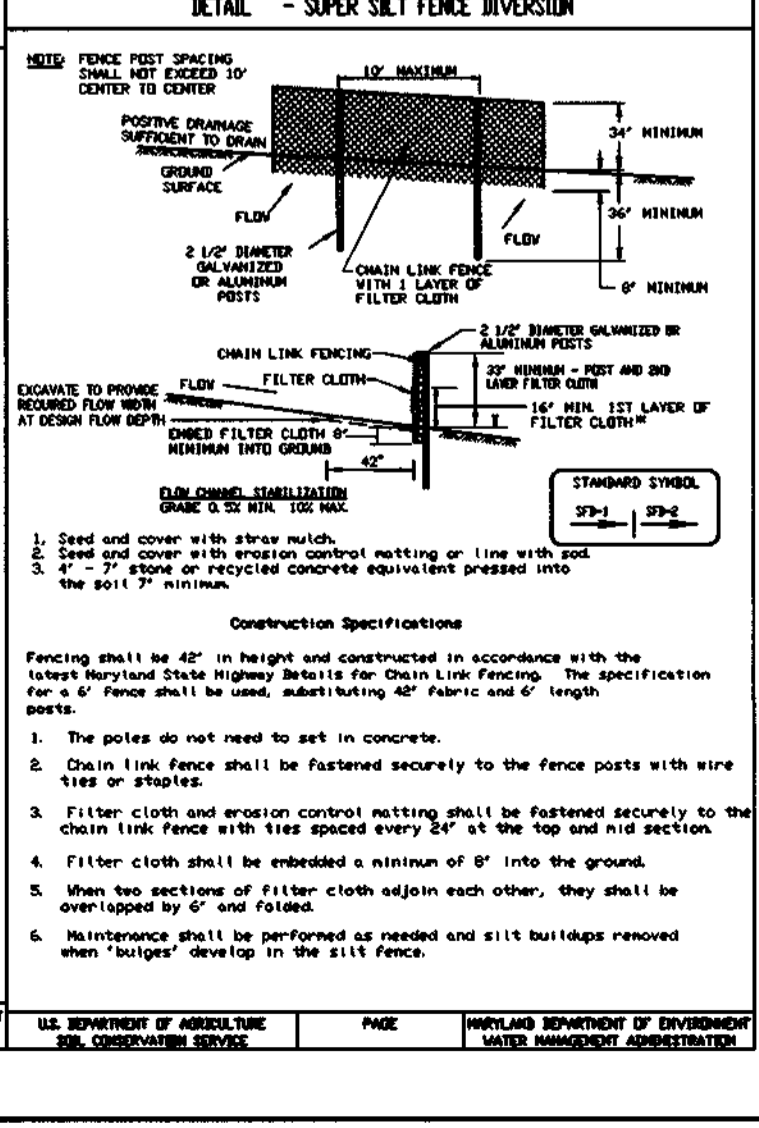
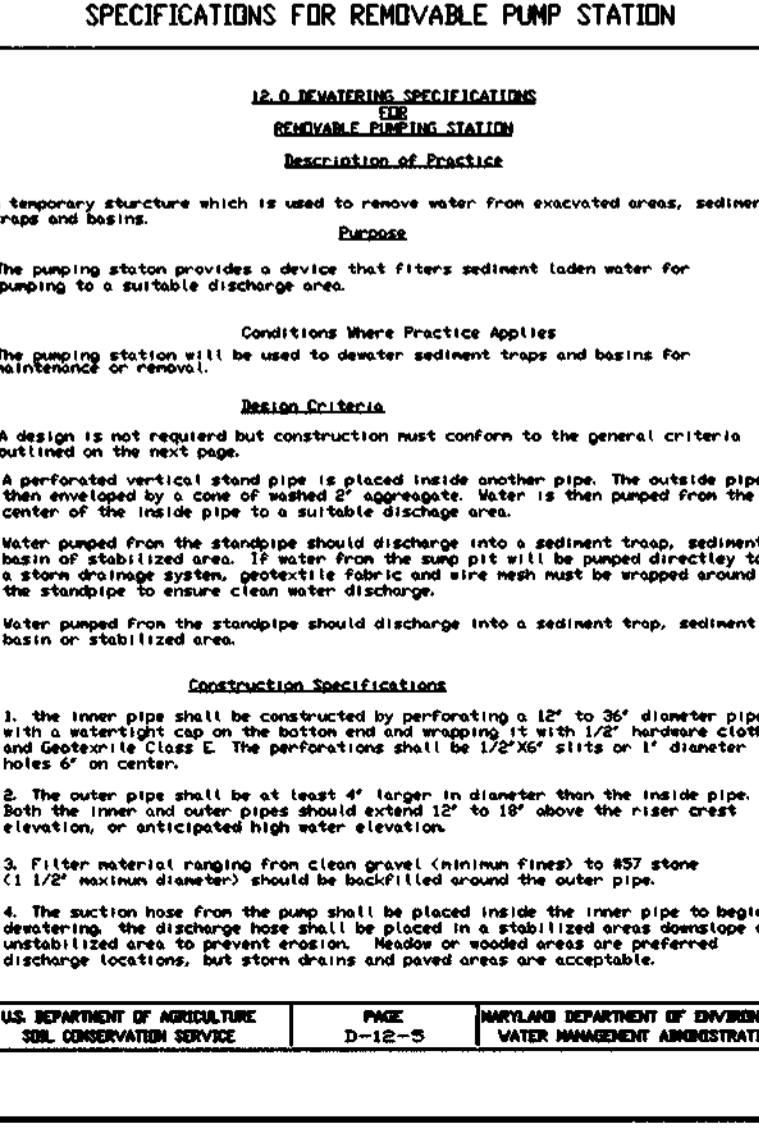
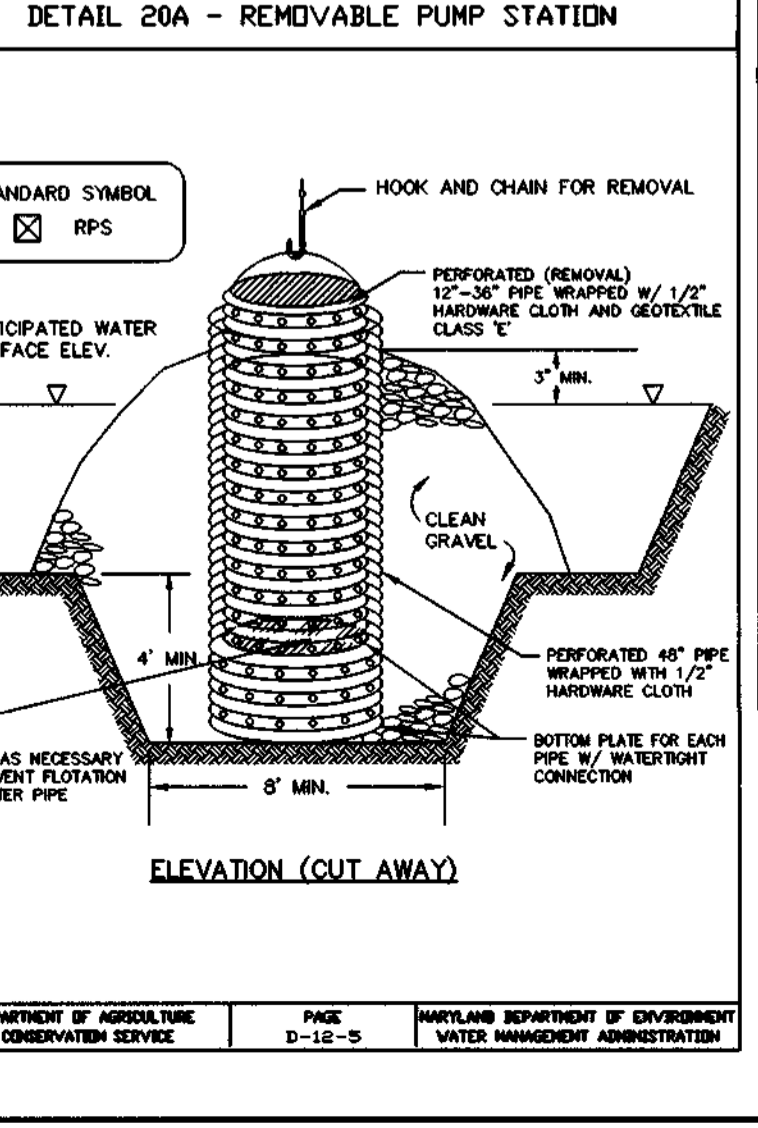
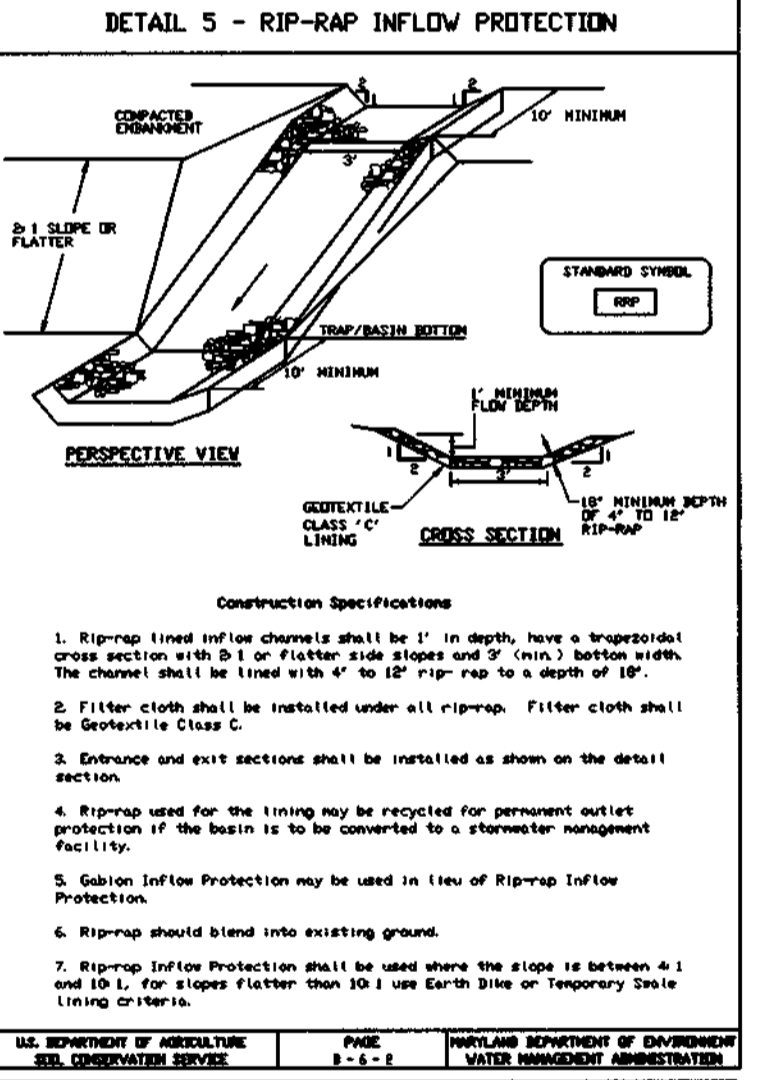
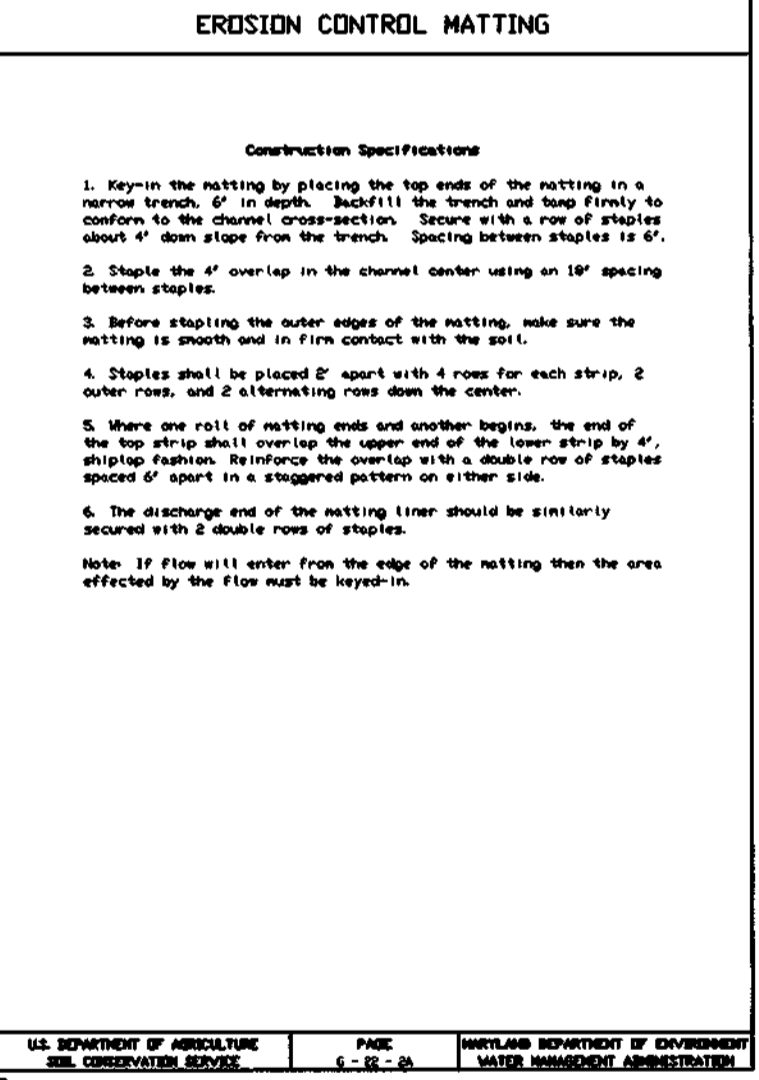
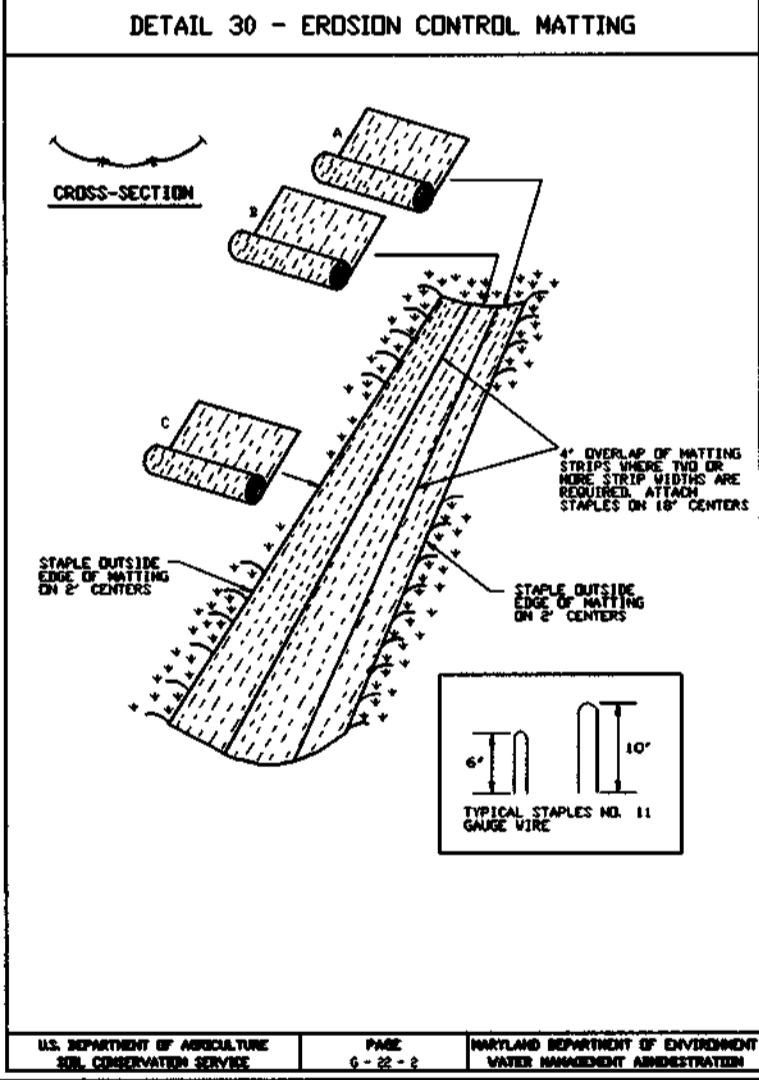
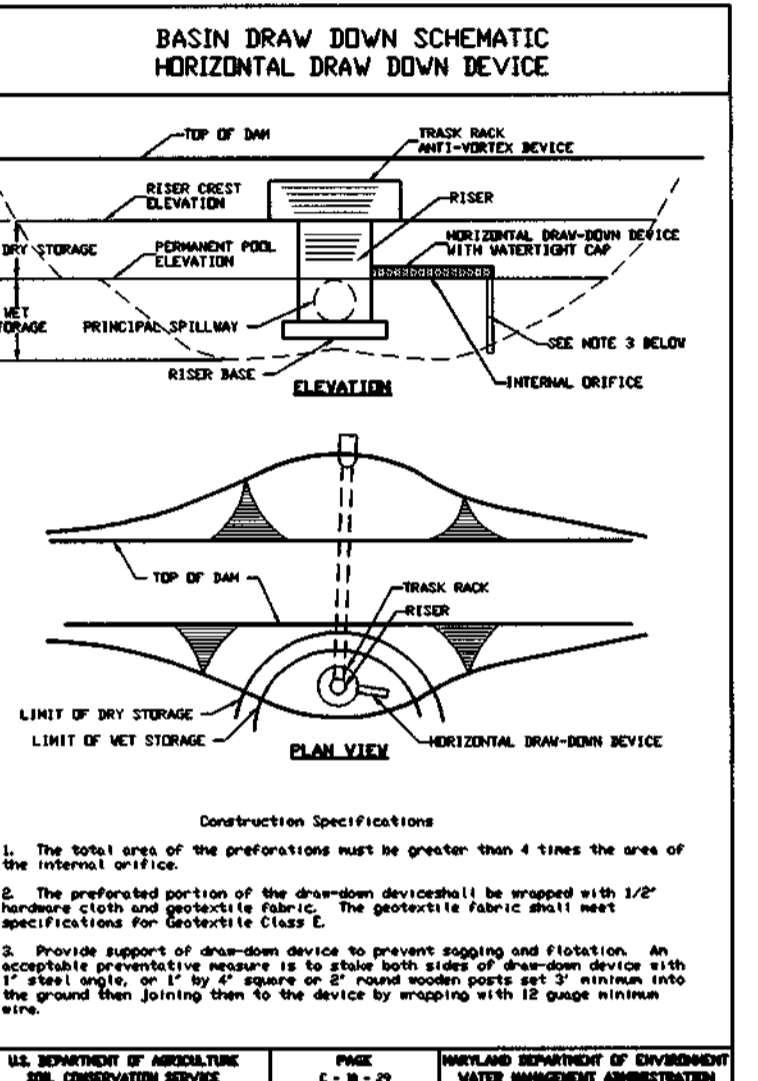
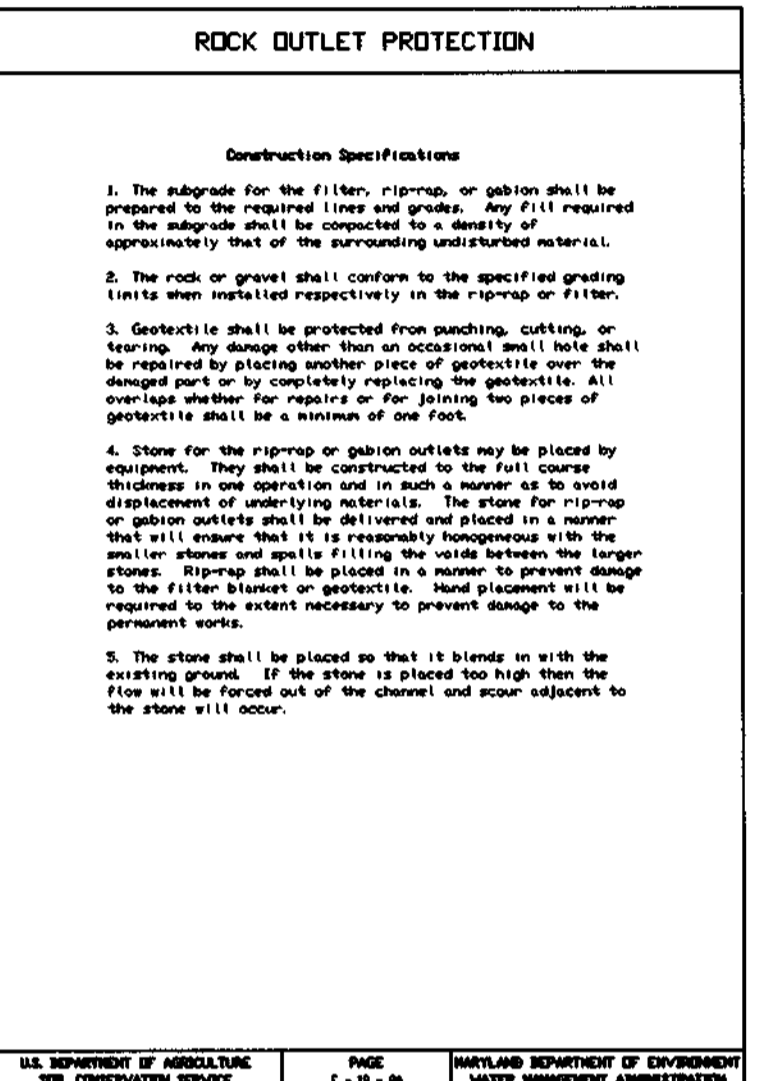
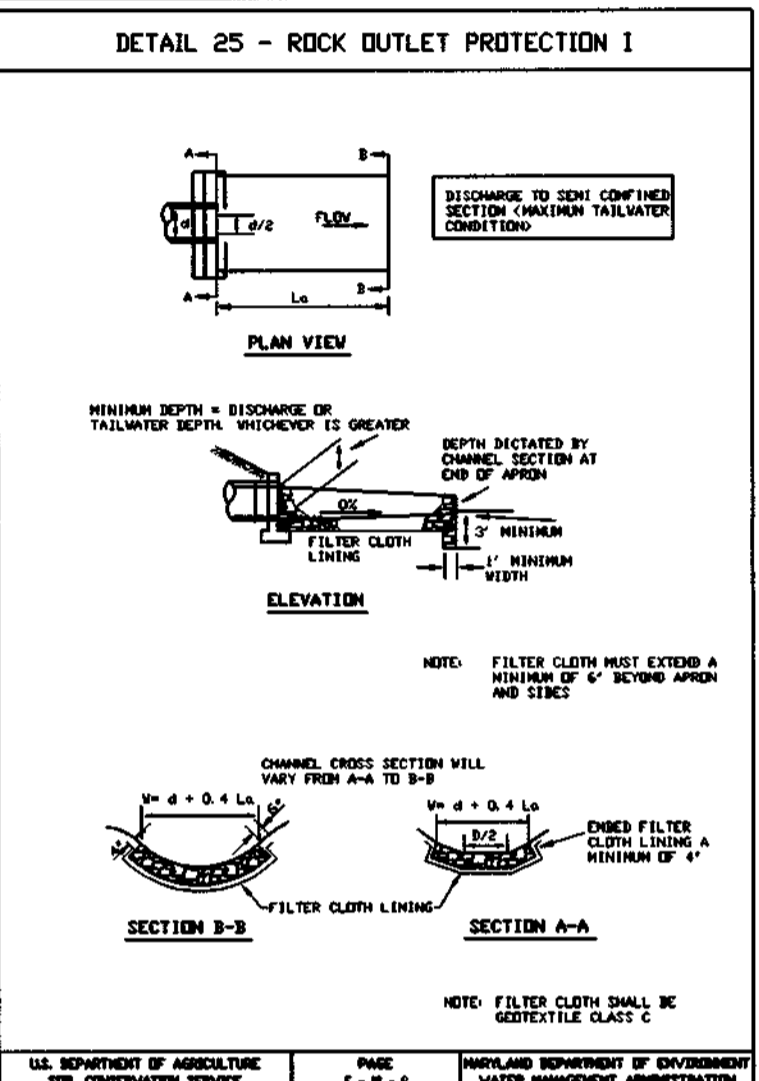
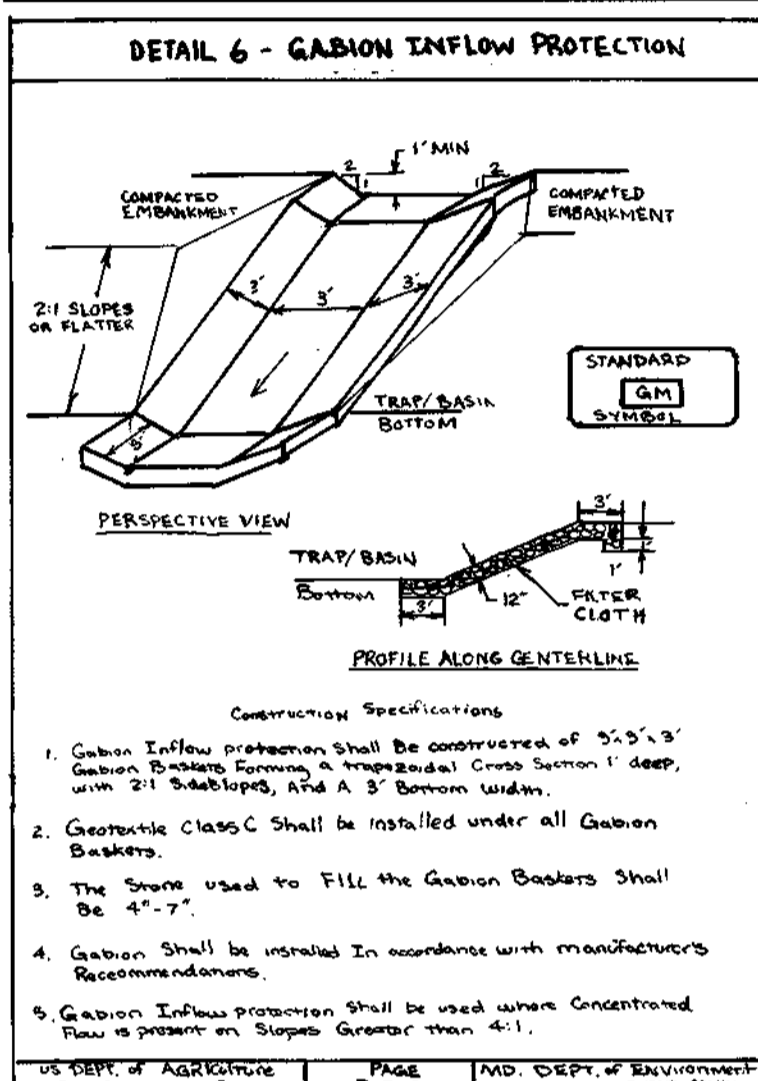


Table with 4 columns: Slope, Slope Steepness, Slope Length (Maximum), and 214' Face Length (Maximum). Lists various slope configurations and their corresponding face lengths.



AS-BUILT CERTIFICATION

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

SIGNATURE: _____ P.E. NO.: _____ DATE: _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DESCRIBED IN APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS...

BY THE DEVELOPER: _____ DATE: _____

BY THE ENGINEER: _____ DATE: _____

BY THE ENGINEER: _____ DATE: _____

BY THE ENGINEER: _____ DATE: _____

BY THE ENGINEER: _____ DATE: _____

BY THE ENGINEER: _____ DATE: _____

BY THE ENGINEER: _____ DATE: _____

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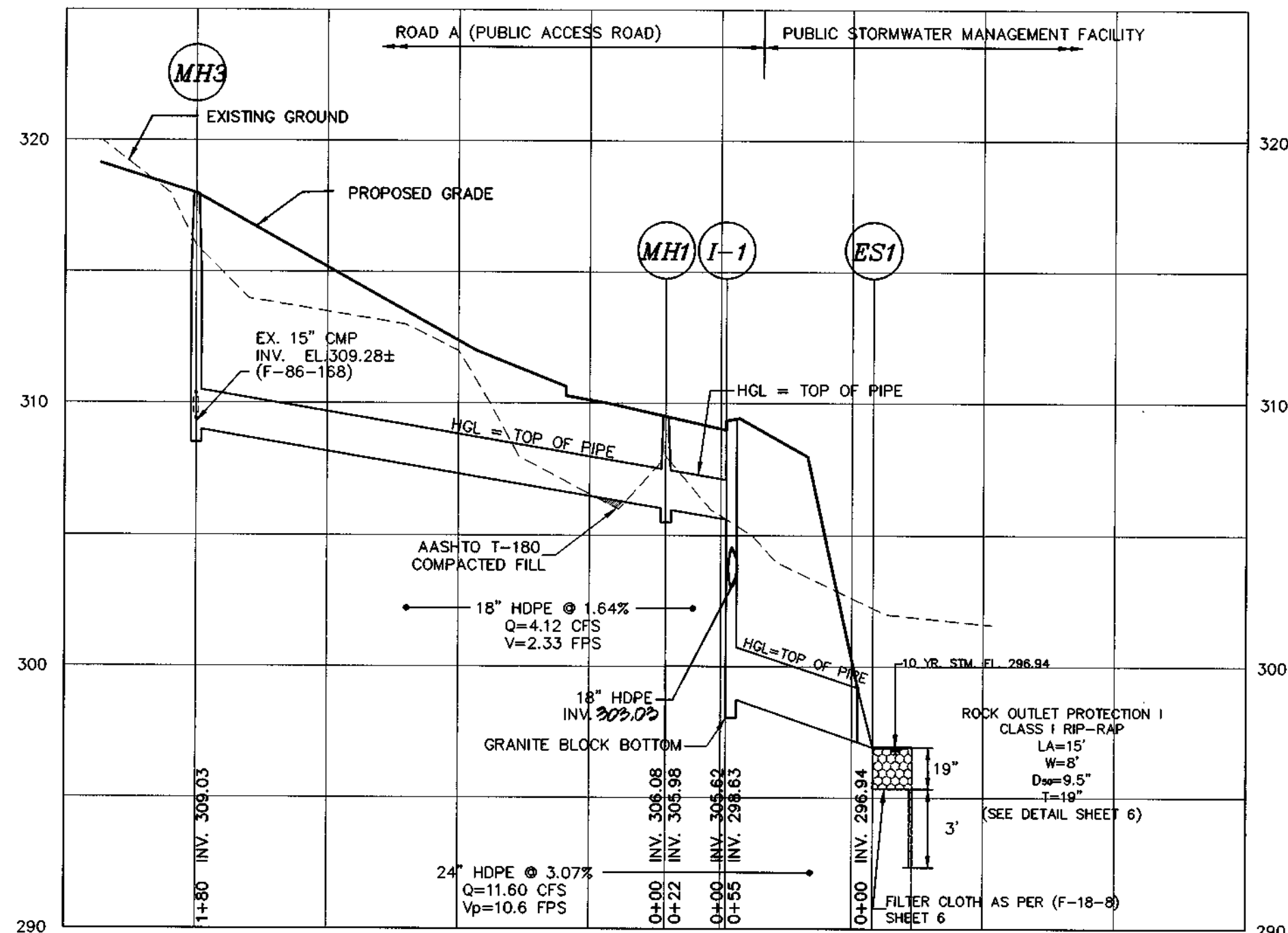
BY THE ENGINEER: _____ DATE: _____

BY THE ENGINEER: _____ DATE: _____

SEQUENCE OF CONSTRUCTION

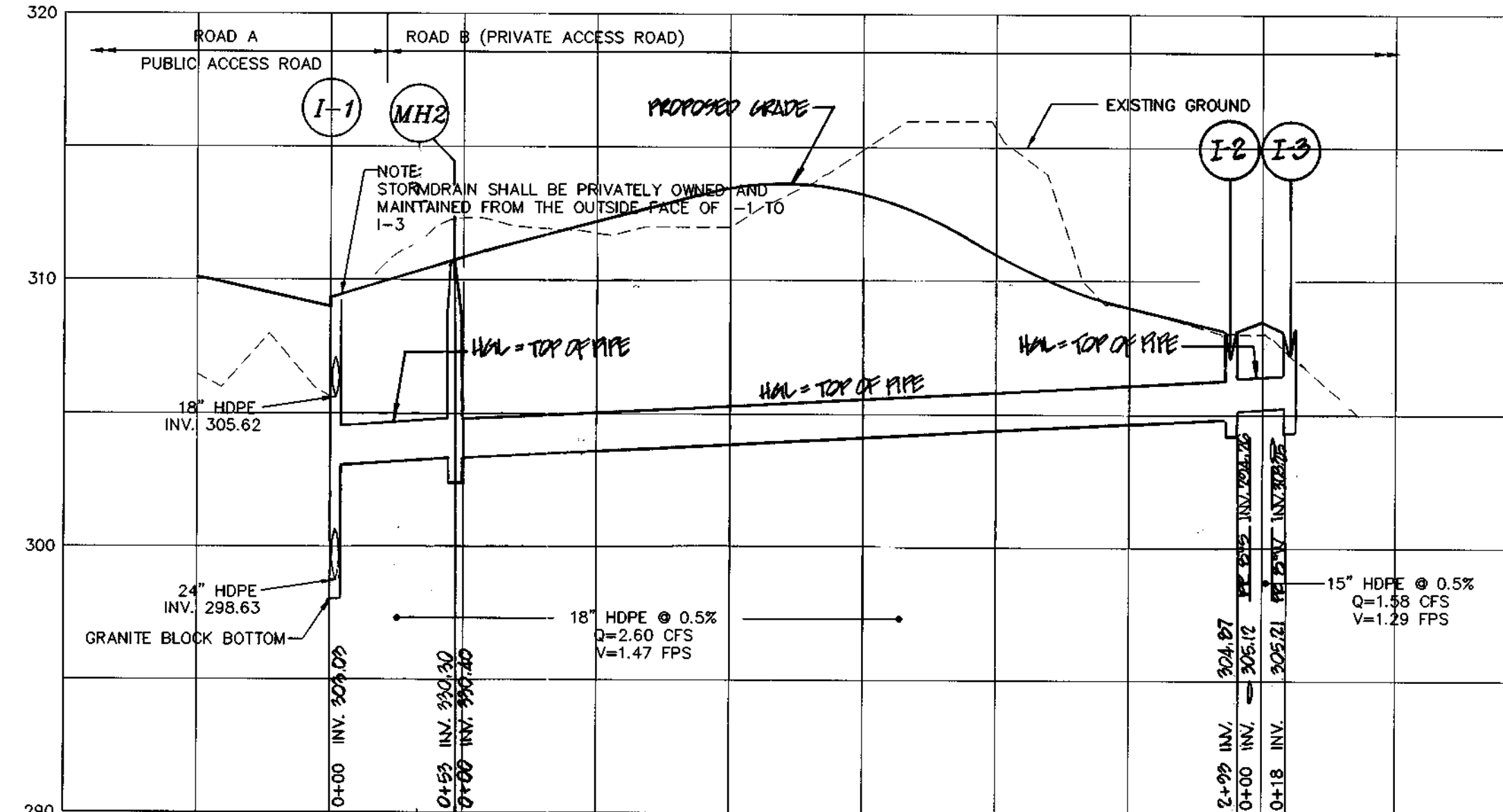
- 1. OBTAIN GRADING PERMIT (1 DAY)
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AT LOCATION SHOWN (1 DAY)
3. INSTALL TREE PROTECTIVE FENCES AS SHOWN ON THE FOREST CONSERVATION PLAN (1 DAY)
4. INSTALL SEDIMENT CONTROL MEASURES (SILT FENCES) (1 DAY)
5. CONSTRUCT SEDIMENT BASIN. PROCEED ONLY UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR. (5 DAYS)
6. GRADE SITE (1 DAY)
7. CONSTRUCT STORM DRAIN SYSTEM AND BLOCK WITH INLET PROTECTION. (3 DAYS)
8. BRING SITE TO FINAL GRADE AND PAVE ROAD. (5 DAYS)
9. STABILIZE ALL DISTURBED AREAS. (3 DAYS)
10. CONSTRUCT ALL FLUSH STORM DRAINAGE AND CLEAN POND. (2 DAYS)
11. WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, CONVERT SEDIMENT BASIN TO STORMWATER MANAGEMENT FACILITY. (2 DAYS)
12. WHEN ALL CONTRIBUTING DRAINAGE AREAS TO SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS. (3 DAYS)

WARFIELDS RANGE II, LOTS 77 THRU 92. A RESUBDIVISION OF LOT 69 - WARFIELDS RANGE, SECTION 2, AREA 4. TAX MAP 42 - P/O PARCEL 454 - BLOCK 19. HOWARD COUNTY, MARYLAND. EROSION AND SEDIMENT CONTROL NOTES AND DETAILS. MILDENBERG & ASSOC., INC. 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042. (410) 997-0296. FAX: (410) 997-0298.



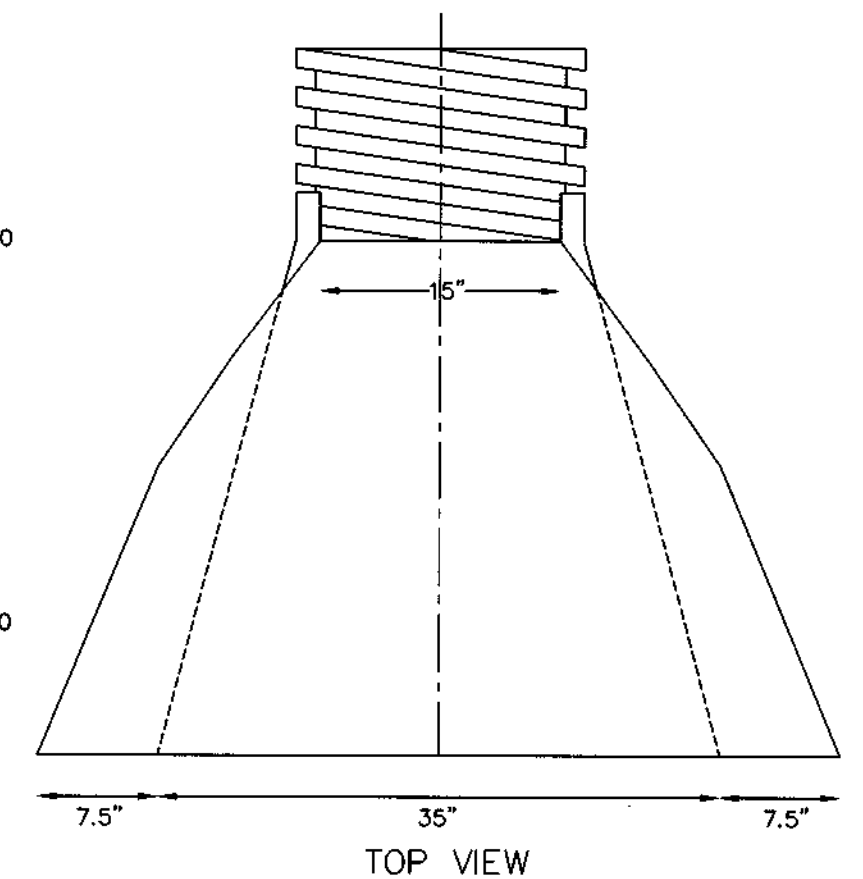
STORM DRAIN PROFILE - MH3 TO ES1

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

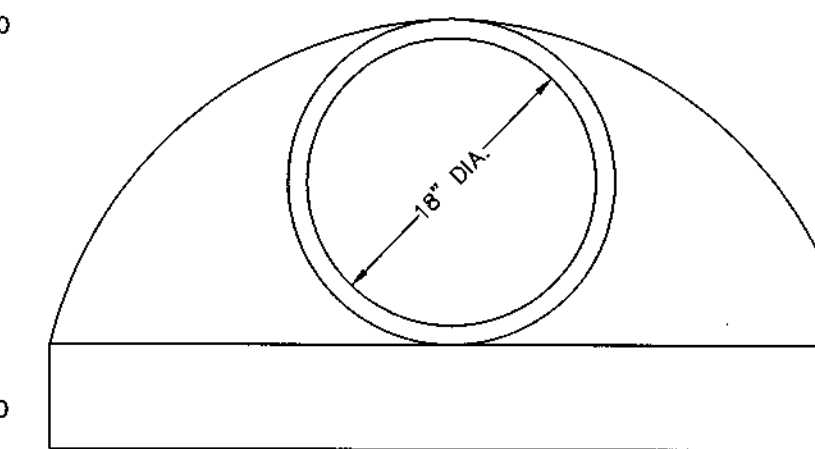


STORM DRAIN PROFILE - I-1 TO I-3

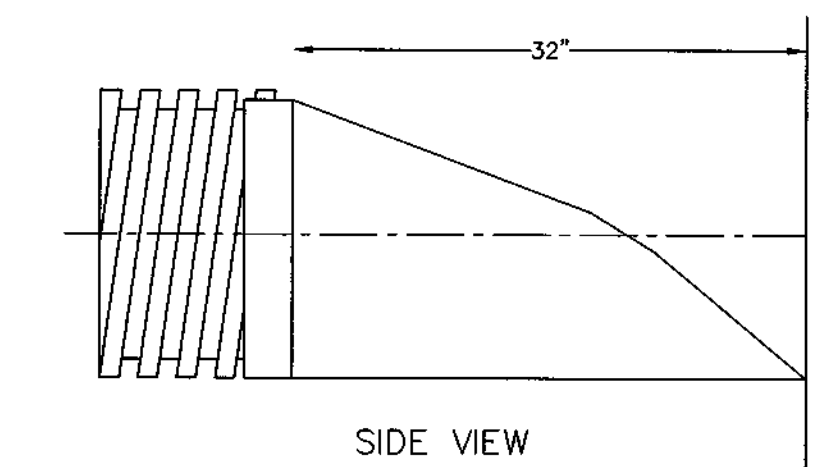
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



TOP VIEW



END VIEW



SIDE VIEW

18" HDPE END SECTION
(PART NO. 1810 NP)
NOT TO SCALE

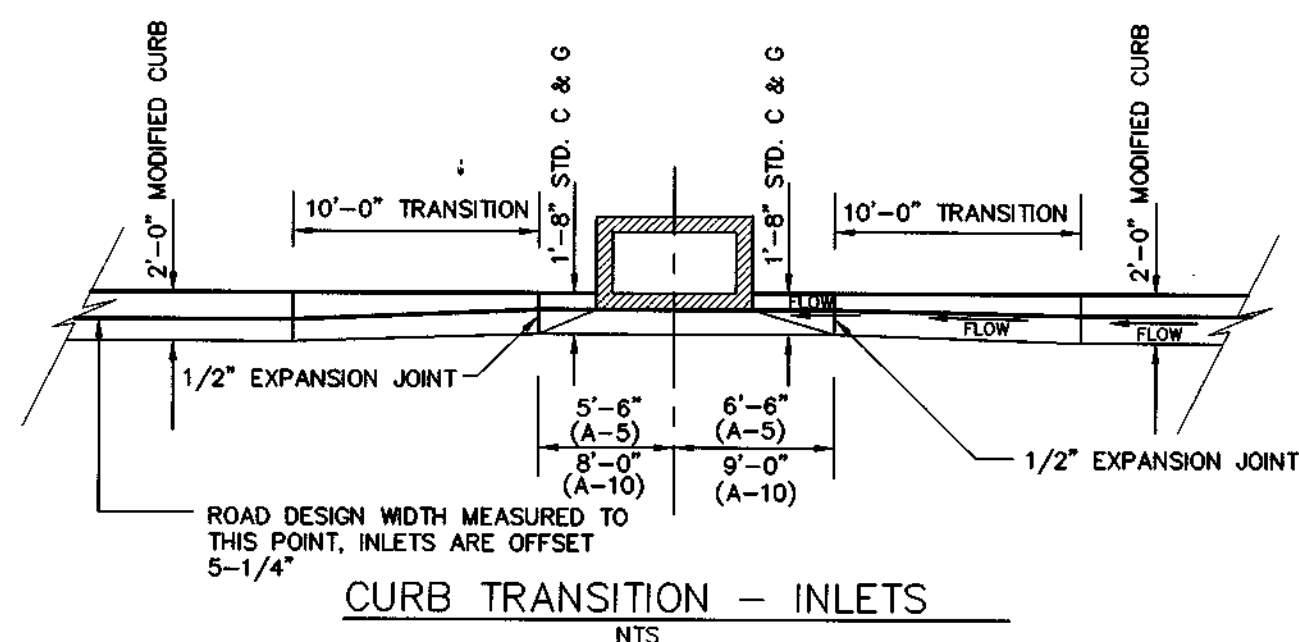
INSTALLATION INSTRUCTIONS

1. SPREAD THE END SECTION COLLAR AND PLACE IT OVER THE LAST PIPE CORRUGATION. MAKE SURE THE COLLAR SEATS PROPERLY IN THE CORRUGATION VALLEY.
2. INSERT THREADED ROD THROUGH THE PRE-DRILLED HOLES IN THE END SECTION COLLAR. TIGHTEN WING NUTS.
3. PLACE BACKFILL AROUND THE END SECTION AND OVER THE TOE PLATE. USE CARE DURING COMPACTION ALONG THE SIDES TO PREVENT DISTORTION.

STRUCTURE SCHEDULE

NO.	LOCATION*	TOP**	INV. IN	INV. OUT	COMMENTS
I-1	EB WHITE COURT (PUBLIC ACCESS PLACE) STA 3+48.86 - 40.88' LEFT	309.03	305.82 309.03	298.63	INLET TYPE A-10 (HO. CO. STD SD 4.02) - PUBLIC
I-2	EB WHITE COURT (PRIVATE ACCESS PLACE) STA 3+29.34 - 0' LEFT	308.39	305.12	304.87	INLET TYPE K (HO. CO. STD SD 4.12) - PRIVATE
I-3	EB WHITE COURT (PRIVATE ACCESS PLACE) STA 3+29.34 - 0' RIGHT	308.39	---	305.21	INLET TYPE K (HO. CO. STD SD 4.12) - PRIVATE
MH-1	EB WHITE COURT (PUBLIC ACCESS PLACE) STA 3+42 - 18.9' LEFT	309.50	306.08	305.98	PRECAST MANHOLE (HO. CO. STD SD 5.11) - PUBLIC
MH-2	EB WHITE COURT (PRIVATE ACCESS PLACE) STA 0+35.39 - 14.57' LEFT	310.34	309.40	309.30	PRECAST MANHOLE (HO. CO. STD SD 5.11) - PRIVATE
MH-3	EB WHITE COURT (PUBLIC ACCESS PLACE) STA 1+72 - 18.9' LEFT	318.00	309.28±	309.03	PRECAST MANHOLE (HO. CO. STD SD 5.11) - PUBLIC
ES-1	EB WHITE COURT (PUBLIC ACCESS PLACE) STA 3+07.72 - 76.00' LEFT	---	---	296.94	24" HDPE END SECTION (SEE DETAIL) - PUBLIC

- * LOCATIONS SHOWN ARE AT L OF INLET AT FACE OF CURB
- ** ELEVATIONS MEASURED TO CENTER OF ALL INLETS
- ** ALL "A" TYPE STRUCTURES ARE 2.5' WIDE UNLESS OTHERWISE NOTED



CURB TRANSITION - INLETS

PIPE SCHEDULE

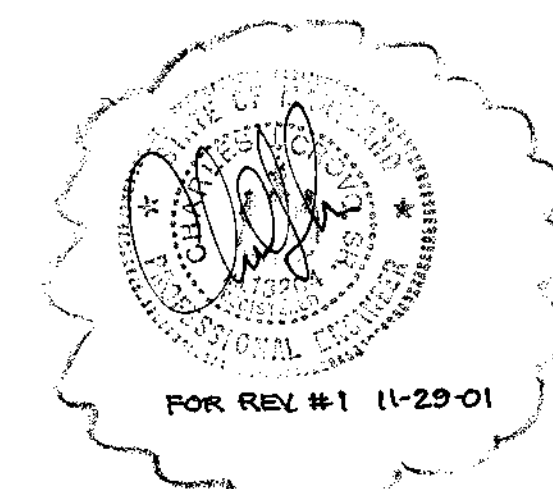
	SIZE	LENGTH
PRIVATE	15" HDPE	18'
	18" HDPE	350'
PUBLIC	24" HDPE	55'
	18" HDPE	202'



APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew S. Hill 8/10/01
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andy Hamble 8/21/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris Domonick 8/15/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

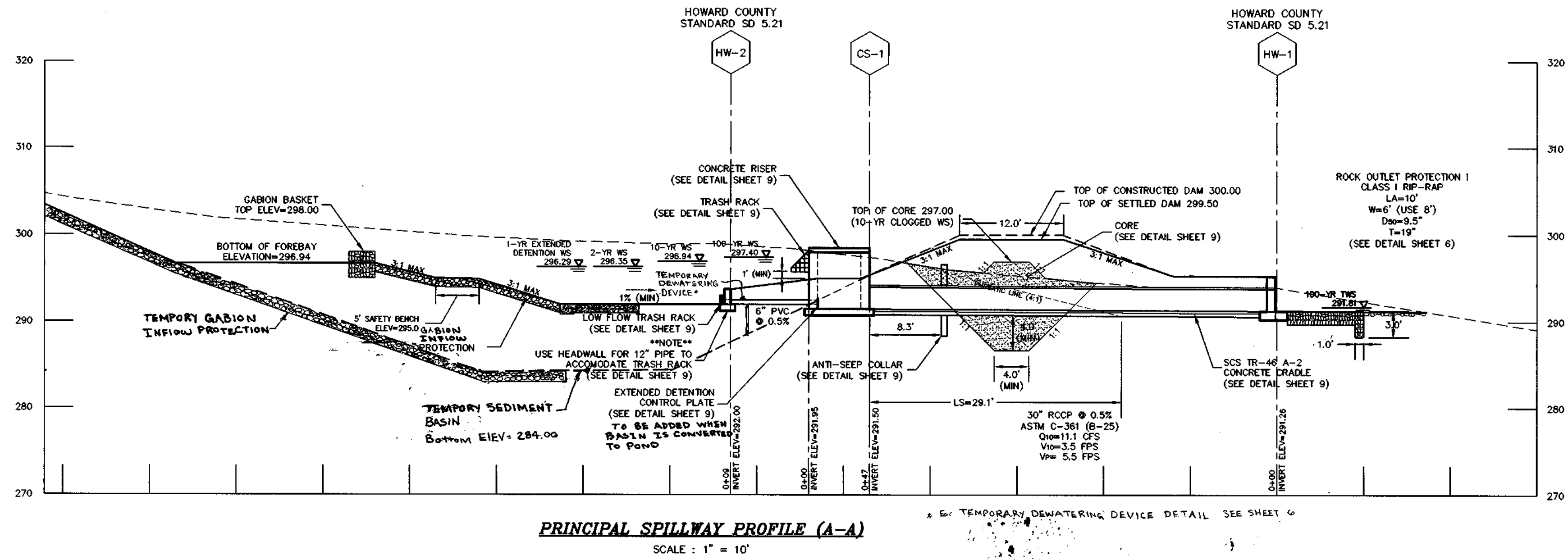


PROJECT: 98108
 DATE: JUNE 2001
 ILLUSTRATION: PL/KR
 ENGINEERING: approval
 SCALE: 1" = 50'

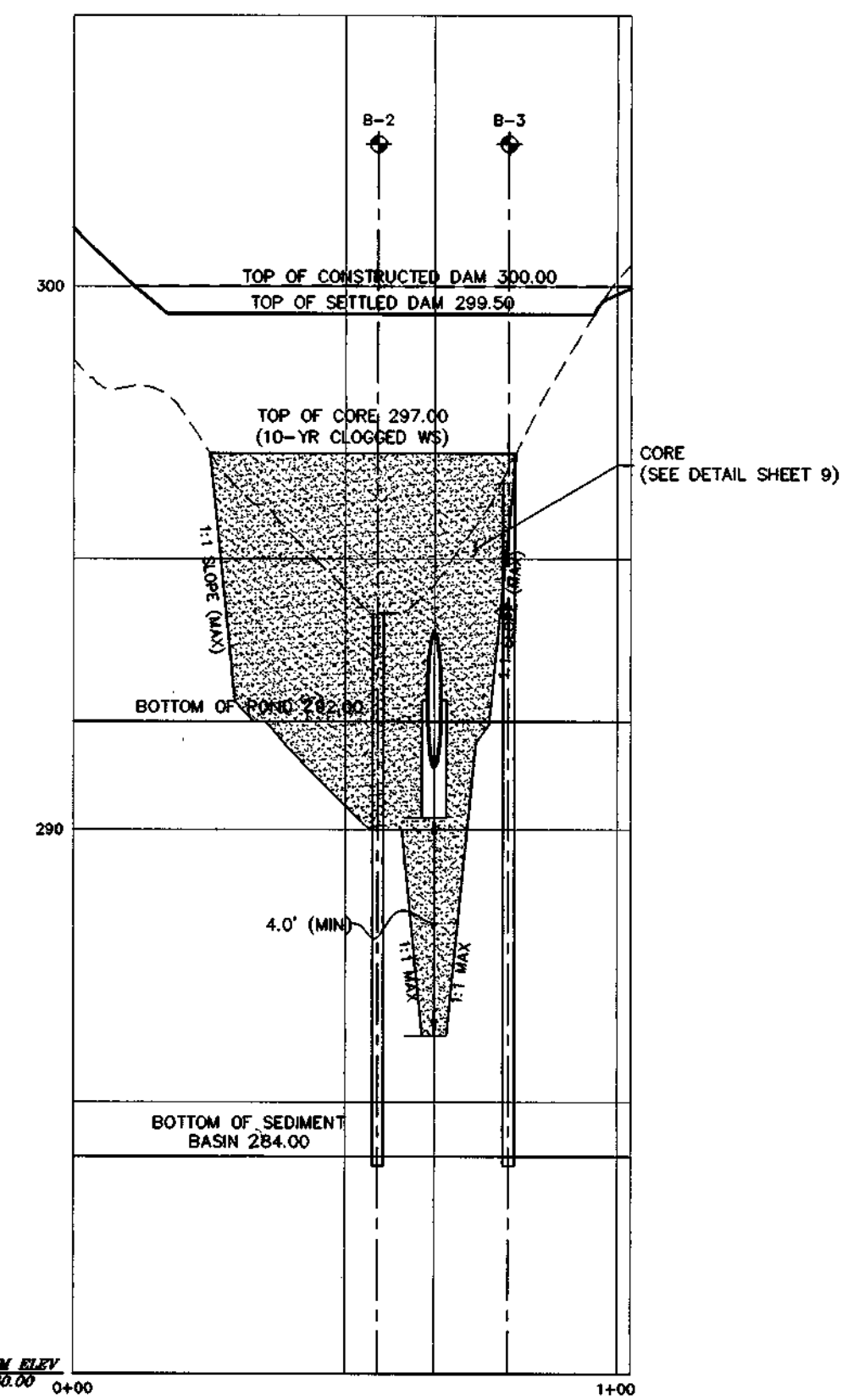
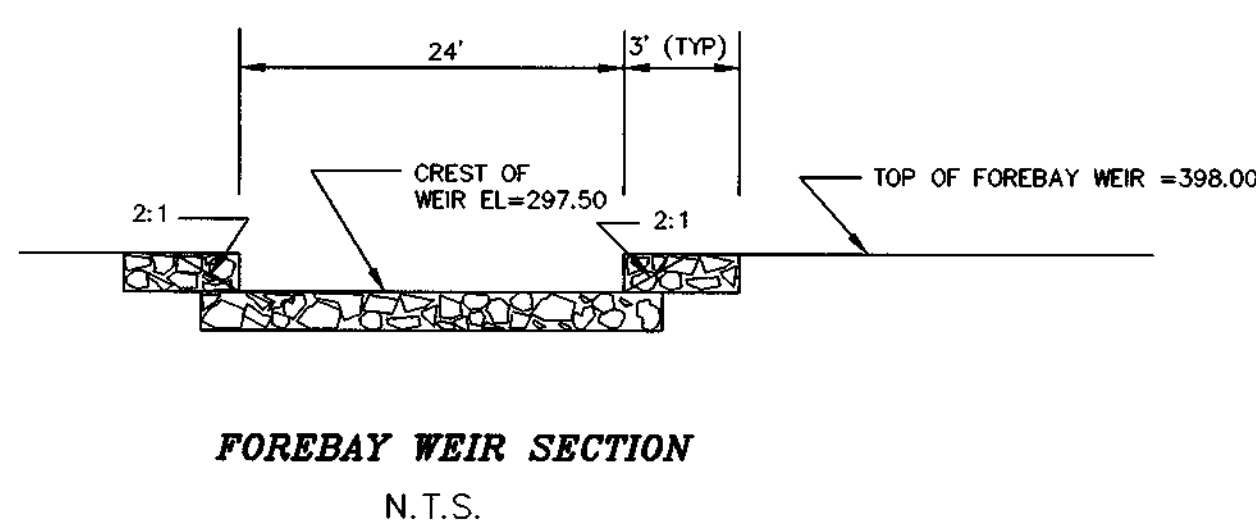
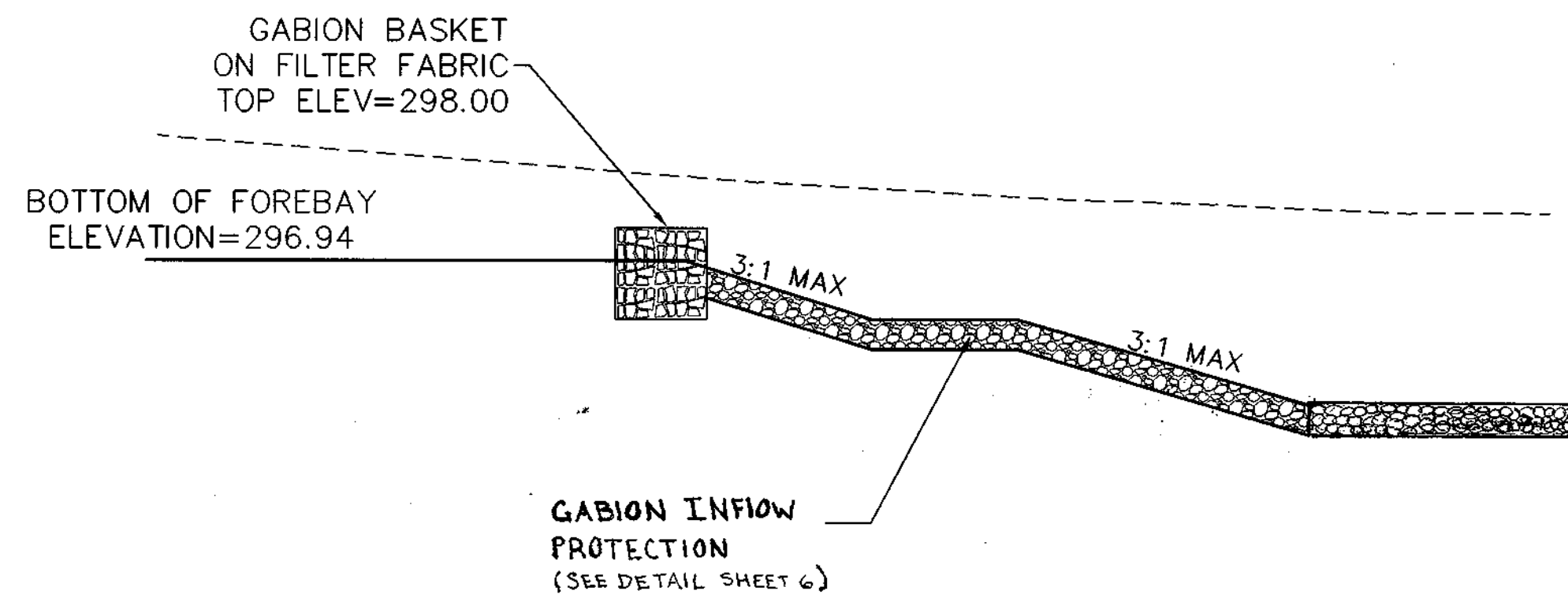
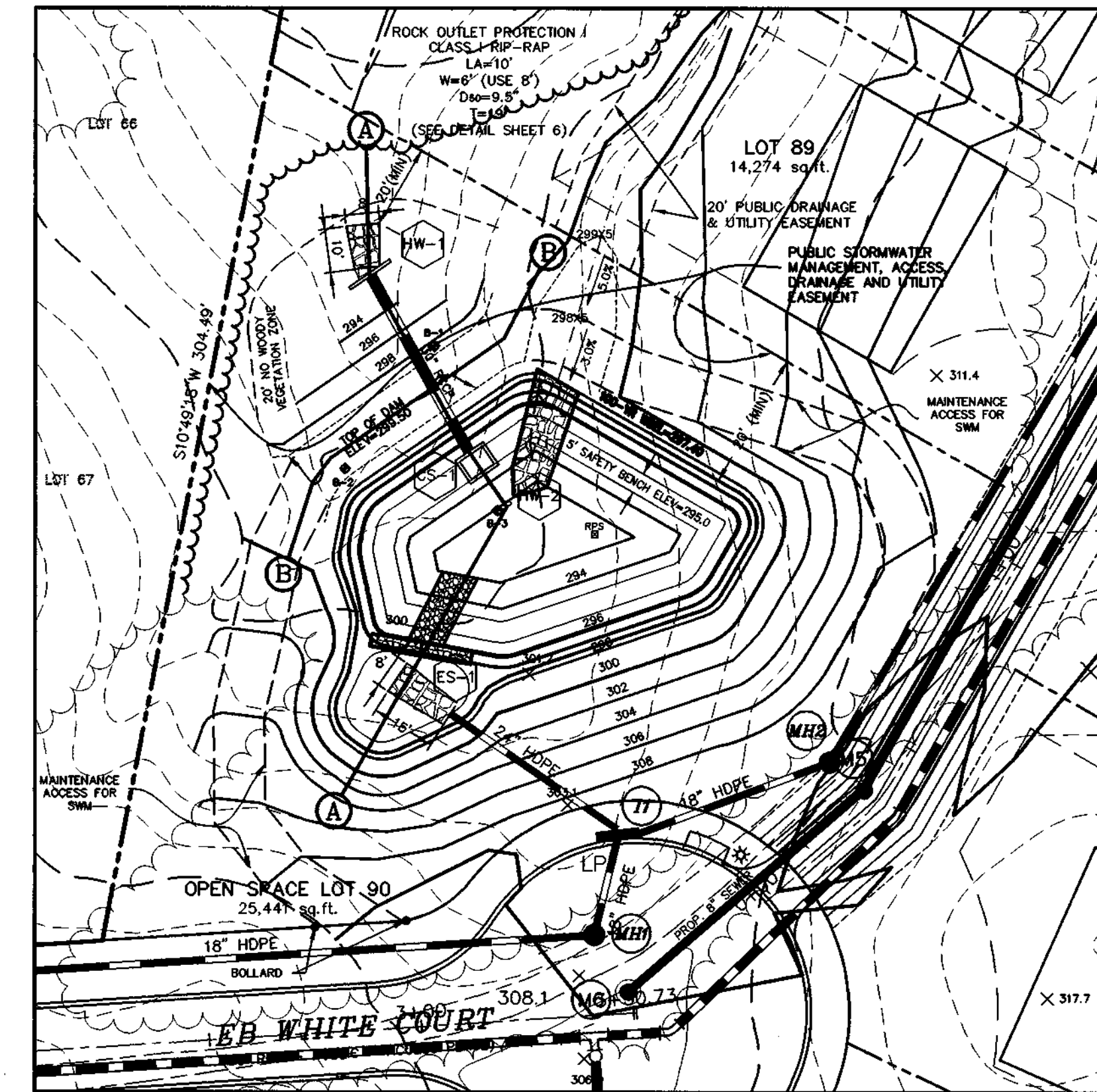
REVIEWED BY: [Signature]
 DATE: 11-29-01
 REVISIONS:

WARFIELDS RANGE II, LOTS 77 THRU 92
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 SIXTH ELECTION DISTRICT

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 Engineers Planners Surveyors
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DETENTION POND DATA
 HAZARD CLASSIFICATION - "A"
 DRAINAGE AREA - 5.5 ACRES
 PROPOSED RCN - 71
 PROPOSED TC - 0.25 HR
 WATER QUALITY TYPE - EXTENDED DETENTION
 1 YEAR WS ELEVATION - 296.29
 2 YEAR WS ELEVATION - 296.35
 10 YEAR WS ELEVATION - 296.94
 100 YEAR WS ELEVATION - 297.40
 OUTF=1.0 CFS, QIN=5.4 CFS
 OUTF=10.9 CFS, QIN=14.5 CFS
 OUTF=24.9 CFS, QIN=25.9 CFS
 OWNERSHIP - PRIVATE/PUBLIC
 MAINTENANCE - PRIVATE/PUBLIC



AS-BUILT CERTIFICATION

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

P.E. NO.: _____
 SIGNATURE: _____ DATE: _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER FOR CODES AND ENGINEER'S CERTIFICATION BELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

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

Signature of Developer: *James L. Newbarr* DATE: 7-17-01
 PRINTED NAME OF DEVELOPER: James L. Newbarr

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

Signature of Engineer: *R. Jacob Hkmat* DATE: 7/17/01
 PRINTED NAME OF ENGINEER: R. JACOB HKMAT

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

Signature: *Jim Mays/CS* DATE: 8/9/01
 USDA - NATURAL RESOURCE CONSERVATION SERVICE

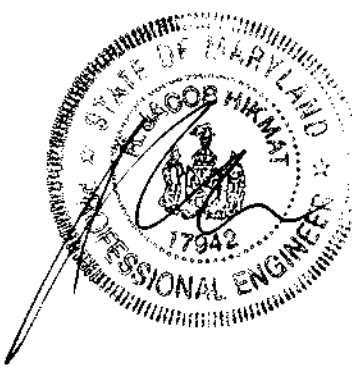
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *John A. ...* DATE: 8/9/01
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: *Howard S. ...* DATE: 8/9/01
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *Candy ...* DATE: 8/24/01
 CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: *...* DATE: 8/15/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

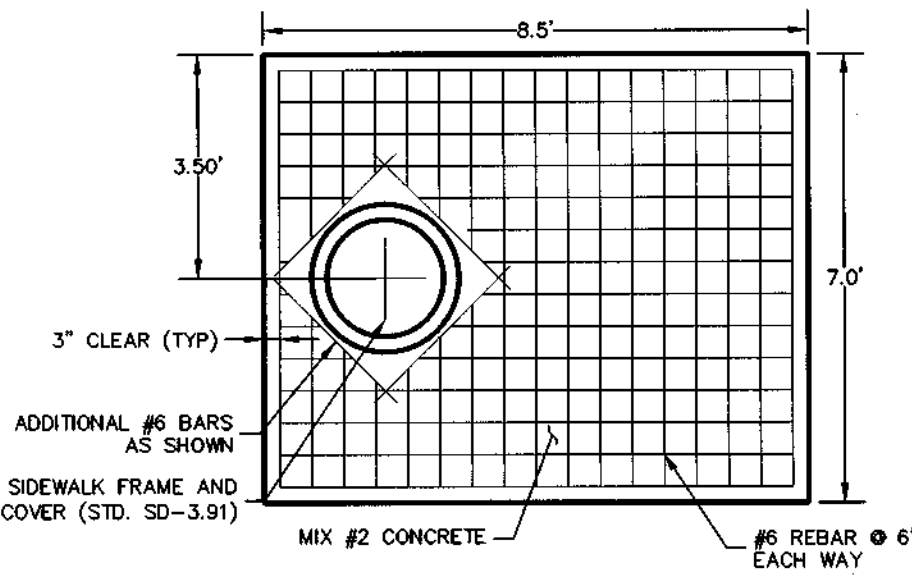


Project	date	scale	description	revisions
98108	JUNE 2001	KR	engineering	AS SHOWN

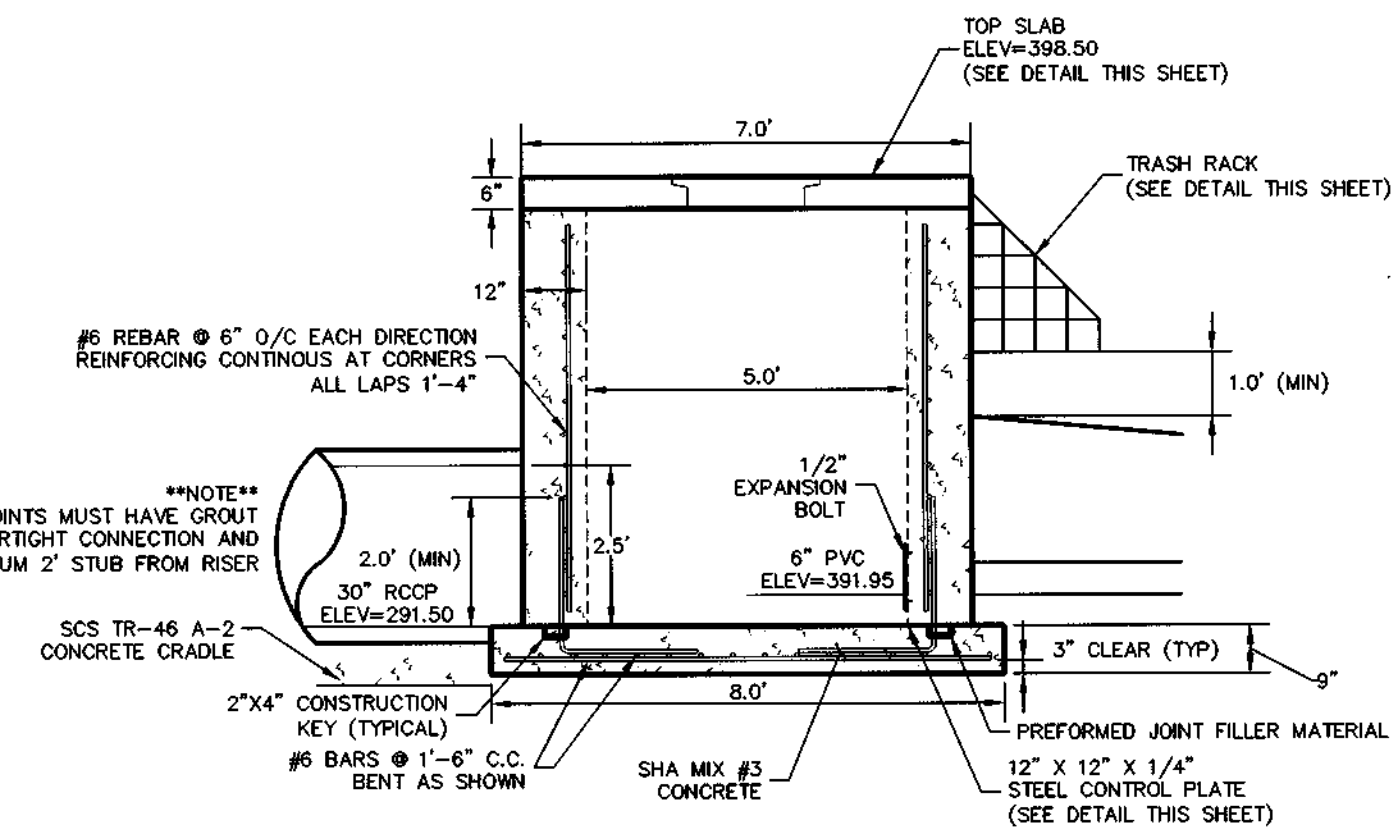
no.	date	description	revisions
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 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
STORMWATER MANAGEMENT PROFILES AND DETAILS

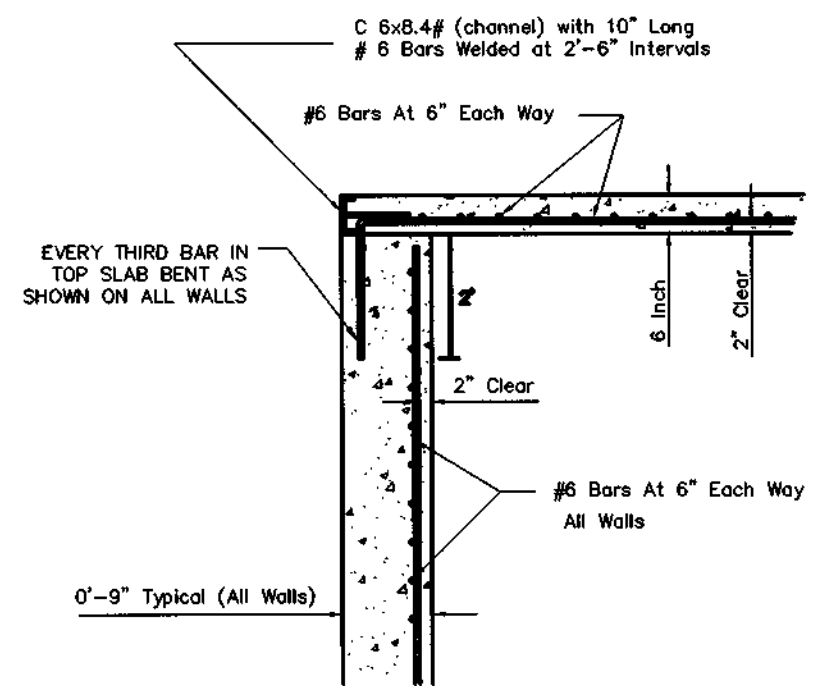
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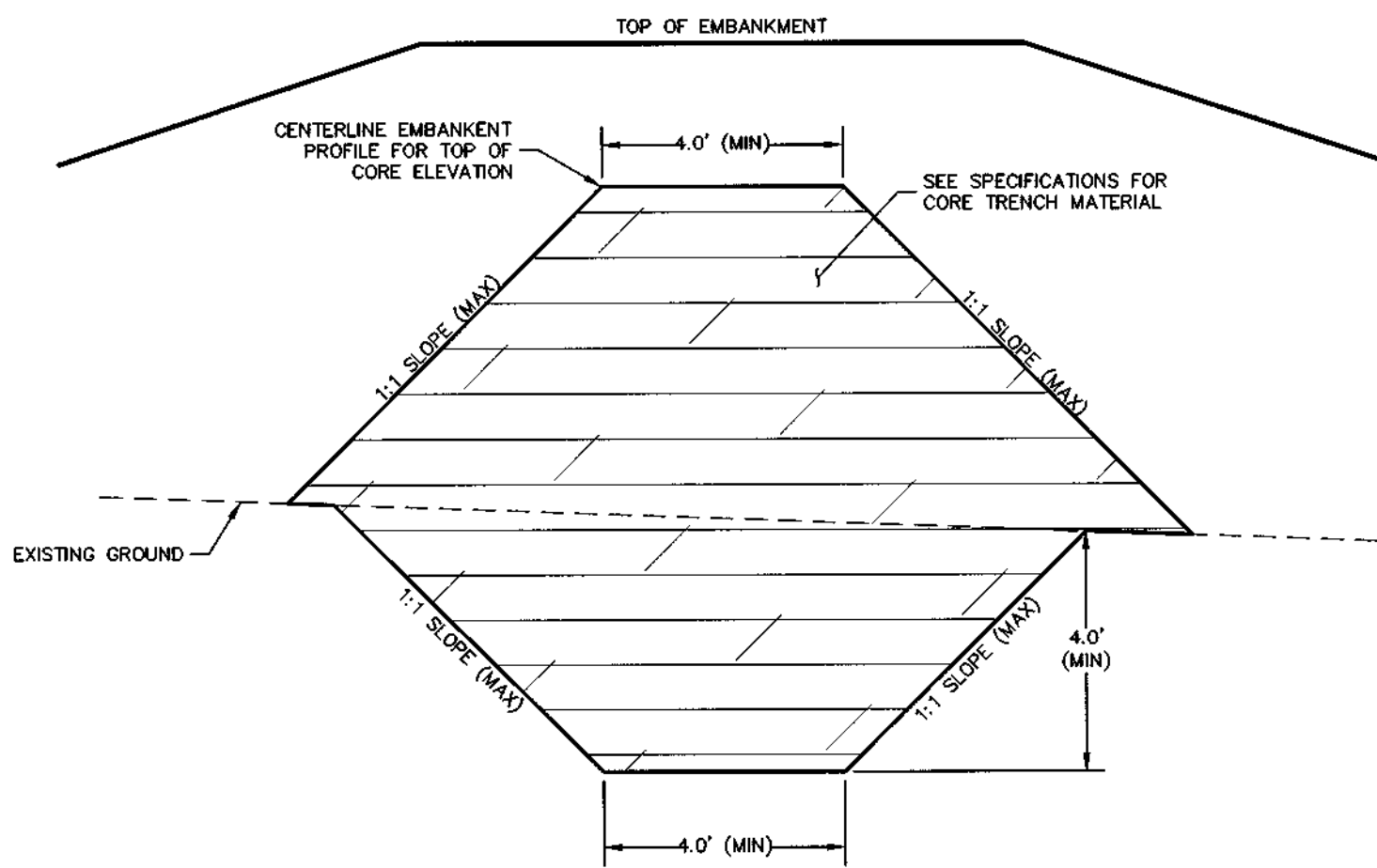
TOP SLAB DETAIL
SCALE: 1" = 3'



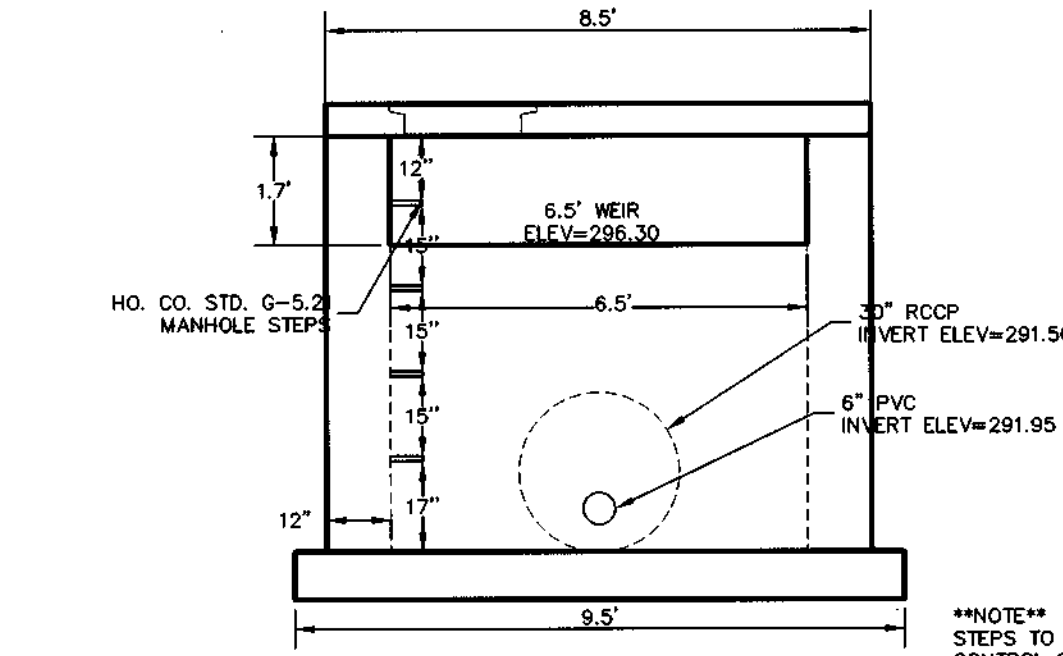
CONTROL STRUCTURE DETAIL (PROFILE)
SCALE: 1" = 3'



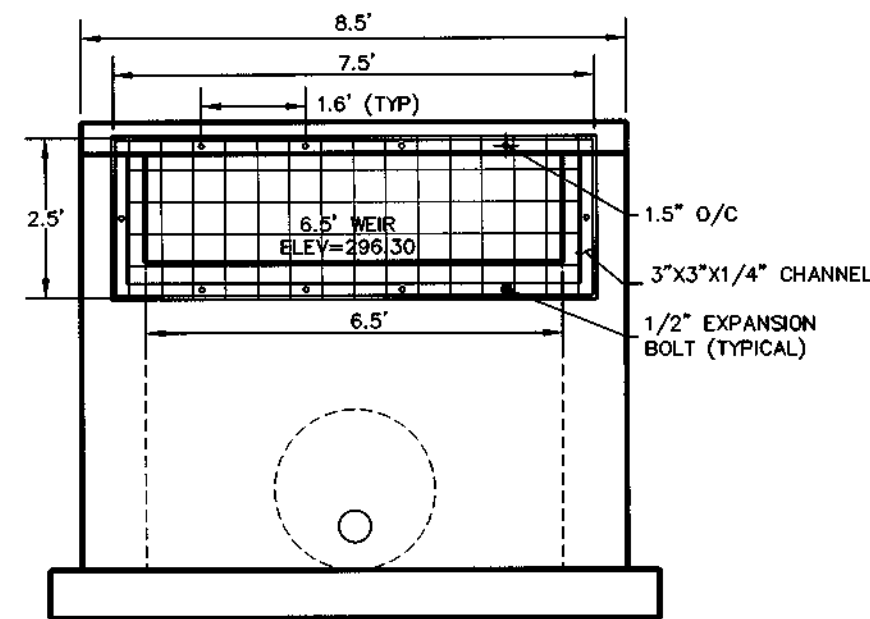
TOP SLAB CONNECTION DETAIL
NOT TO SCALE



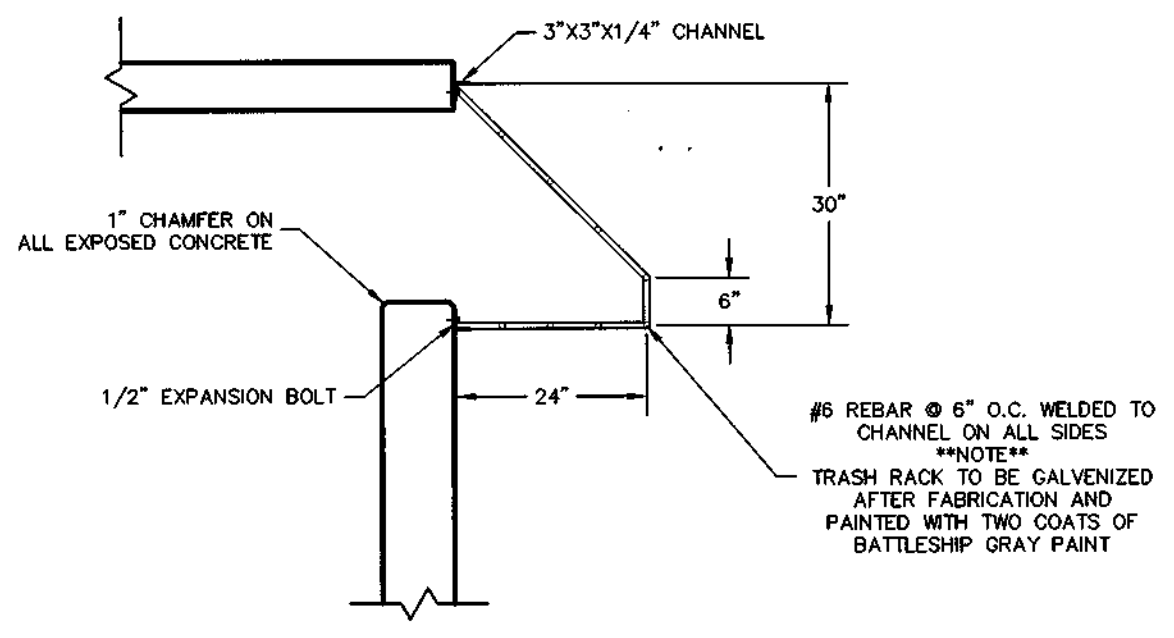
CORE TRENCH DETAIL
NOT TO SCALE



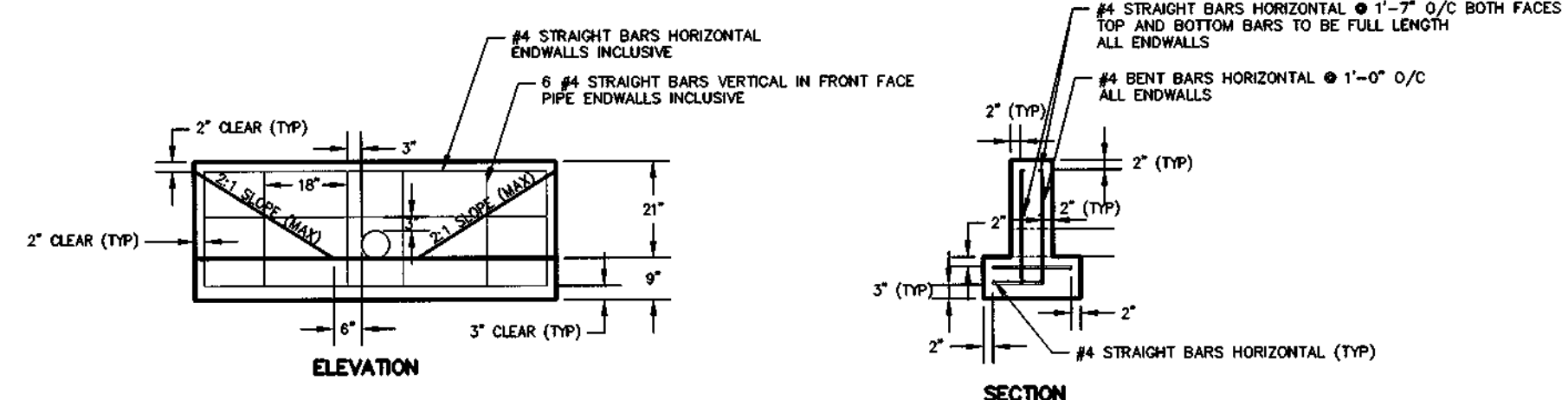
CONTROL STRUCTURE DETAIL (ELEVATION)
SCALE: 1" = 3'



TRASH RACK ELEVATION
SCALE: 1" = 3'



TRASH RACK DETAIL
SCALE: 1" = 2'



MODIFIED 12" TYPE "C" ENDWALL (SD 5-21)
NOT TO SCALE

- GENERAL NOTES**
1. THE ENDWALL IS A STANDARD HOWARD COUNTY TYPE "C" ENDWALL FOR USE WITH A 12" PIPE. ALL REINFORCEMENT SHALL BE PLACED IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL SD-5.21.
 2. ALL GENERAL NOTES FROM DETAIL SD-5.21 SHALL APPLY.
 3. ALL DIMENSIONS SHOWN ON THIS DETAIL WILL SUPERSEDE ANY CONFLICTING DIMENSIONS SHOWN ON DETAIL SD-5.21.
 4. REINFORCING: DEFORMED STEEL BARS (1/2" DIA.)
 5. CHAMFER: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED.
 6. CONCRETE SHALL BE SHA MIX NO. 2.

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

P.E. NO. _____
DATE: _____
SIGNATURE: _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES THE ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

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

Signature of Developer: *James L. Newborn* DATE: 7-17-01
PRINTED NAME OF DEVELOPER: James L. Newborn

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

Signature of Engineer: *R. Jacob Hkmat* DATE: 6/28/01
PRINTED NAME OF ENGINEER: R. JACOB HKMAT

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

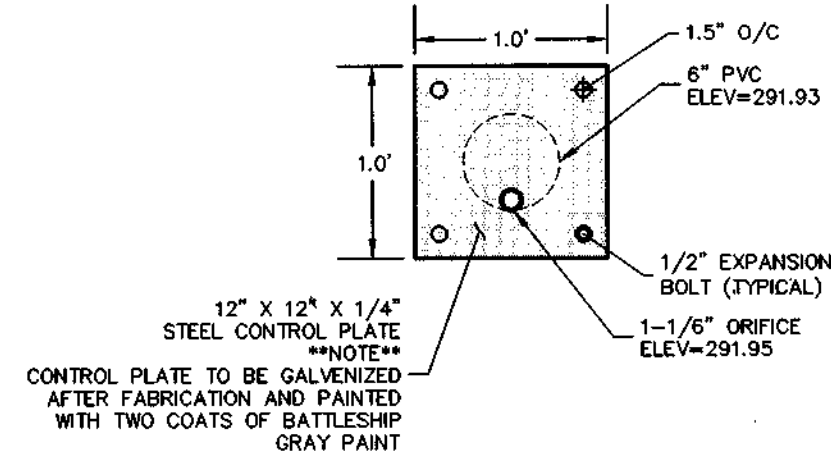
Signature: *Jim Mays / Co.* DATE: 8/9/01
USDA NATURAL RESOURCES CONSERVATION SERVICE

Signature: *John A. ...* DATE: 8/9/01
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS
Signature: *Thomas ...* DATE: 8/10/01
CHIEF BUREAU OF HIGHWAYS

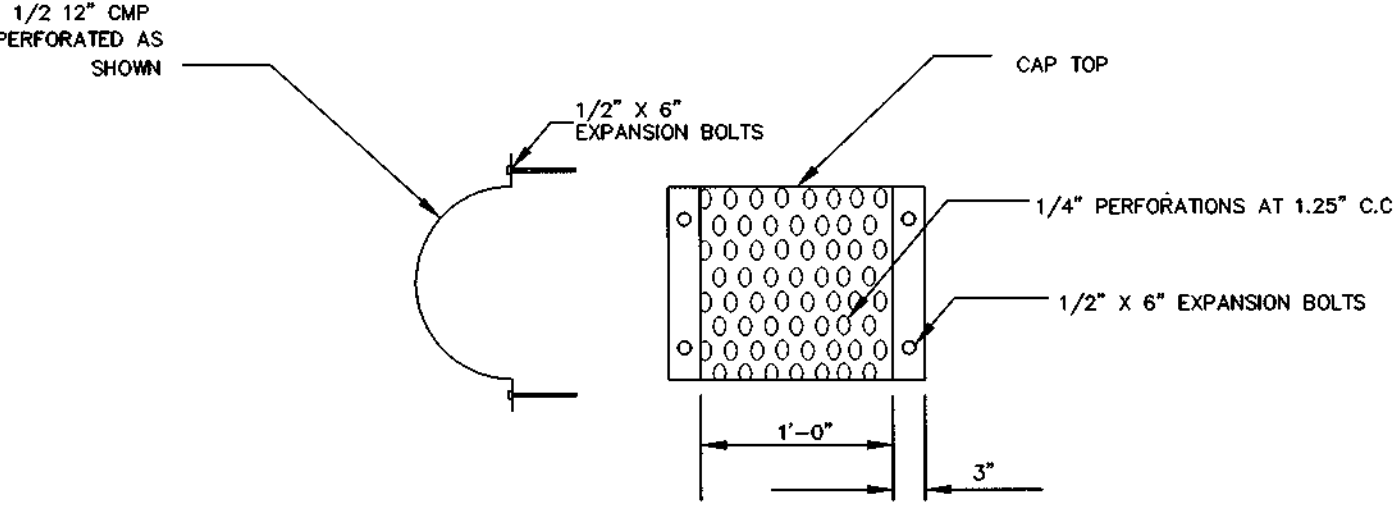
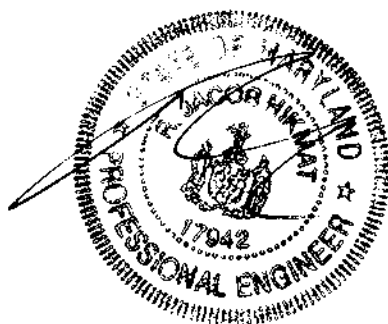
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Signature: *Cathy ...* DATE: 8/14/01
CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: *...* DATE: 8/15/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION

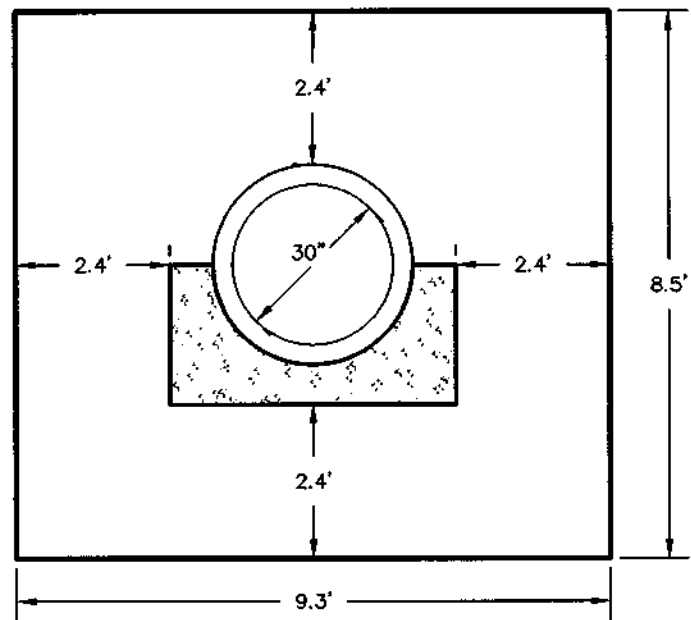


CONTROL PLATE DETAIL
SCALE: 1" = 1'

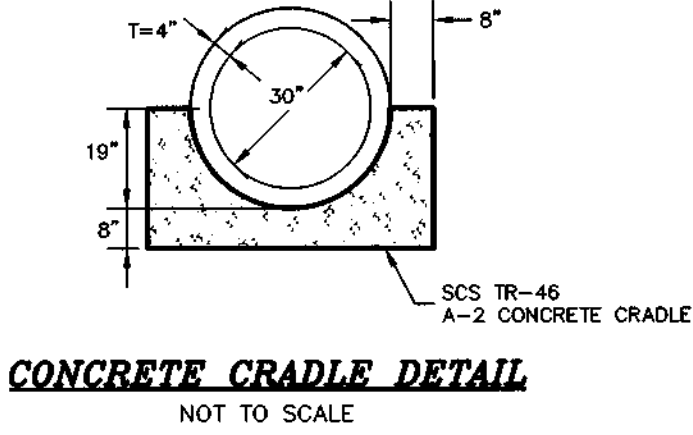
CONTROL PLATE TO BE INSTALLED UPON CONVERSION FROM SEDIMENT BASIN TO POND



HALF SHELL TRASH RACK
NOT TO SCALE



ANTI-SEEP COLLAR DETAIL
SCALE: 1" = 3'



CONCRETE CRADLE DETAIL
NOT TO SCALE

date	JUNE 2001
project	98108
illustration	KR
scale	AS SHOWN
approval	KR

description	revisions
no.	date

WARFIELDS RANGE II, LOTS 77 THRU 92
A RESUBDIVISION OF LOT 69 - WARFIELDS RANGE, SECTION 2, AREA 4
TAX MAP 42 - P/O PARCEL 454 - BLOCK 19
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
STORMWATER MANAGEMENT DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Belcoort City, Maryland 21042
(410) 997-0296 Fax: (301) 621-5521 Wash. (410) 997-0298 Fax.

MD-378 POND SPECIFICATIONS (JANUARY 2000)

CONSTRUCTION SPECIFICATIONS
THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD-378...

SITE PREPARATION
AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL...

EARTH FILL
MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS...

CONSTRUCTION AND FINISHING
MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS...

COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK...

EMBANKMENT CORE - THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS...

CUT OFF TRENCH - THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT...

STRUCTURAL BACKFILL
BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL...

CONCRETE
CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 414, MIX NO. 3.

ROCK RIPRAP
ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 311.

CARE OF WATER DURING CONSTRUCTION
ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER...

STABILIZATION
ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY CONDITION ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPIGOT AND BORROW AREAS...

EROSION AND SEDIMENT CONTROL
CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED...

OPERATION AND MAINTENANCE
ROUTINE MAINTENANCE
1. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER ALL MAJOR STORMS...

NON-ROUTINE MAINTENANCE
1. STRUCTURAL COMPONENTS OF THE POND (DAM, RISER, AND PIPES) SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE...

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

SIGNATURE AND DATE OF DEVELOPER
James L. Newburn 7-17-01

SIGNATURE AND DATE OF ENGINEER
J. Jacob Himmatt 7/17/01

USDA - NATURAL RESOURCE CONSERVATION SERVICE
8/9/01

APPROVED: DEPARTMENT OF PUBLIC WORKS
8/10/01

APPROVED: DEPARTMENT OF PLANNING AND ZONING
8/24/01

APPROVED: CHIEF, DIVISION OF LAND DEVELOPMENT
8/15/01

PIPE CONDUIT
ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CORRUGATED METAL PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:
1. MATERIALS - (POLYMER COATED STEEL PIPE) - STEEL PIPES WITH POLYMERIC COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (10 MIL) ON BOTH SIDES OF THE PIPE...

2. COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC., MUST BE COMPOSED OF THE SAME MATERIAL AND COATINGS AS THE PIPE, METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE OF RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 24 MILS IN THICKNESS.

3. CONNECTIONS - ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATER TIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL.

ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE REINFORCED BY AN ANGLE OF CORRUGATION TO ACCOMMODATE THE BANDWIDTH. THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPES LESS THAN 24 INCHES IN DIAMETER...

4. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNDESIRABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

5. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:
1. MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C-361.

2. BEDDING - REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING/CRADLE FOR THEIR ENTIRE LENGTH. THIS BEDDING/CRADLE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP TO THE FULL TOP OF THE PIPE AT LEAST 3/8 OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES...

3. LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL...

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL"

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

PLASTIC PIPE - THE FOLLOWING CRITERIA SHALL APPLY FOR PLASTIC PIPE:
1. MATERIALS - PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D1785 OR ASTM D-2241 CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE...

2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATER TIGHT.

3. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNDESIRABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

4. BACKFILL SHALL CONFORM TO "STRUCTURE BACKFILL"

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ROCK RIPRAP
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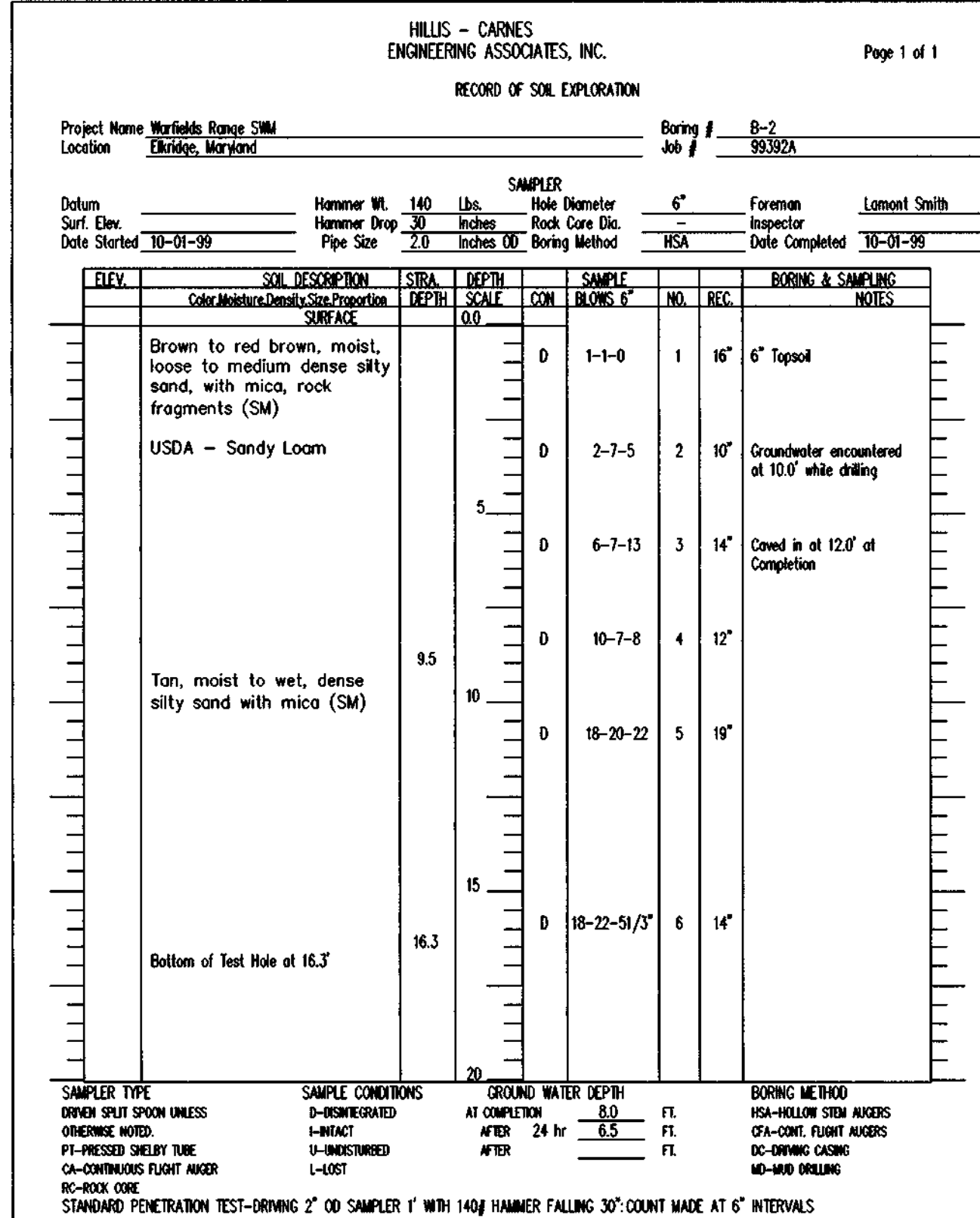
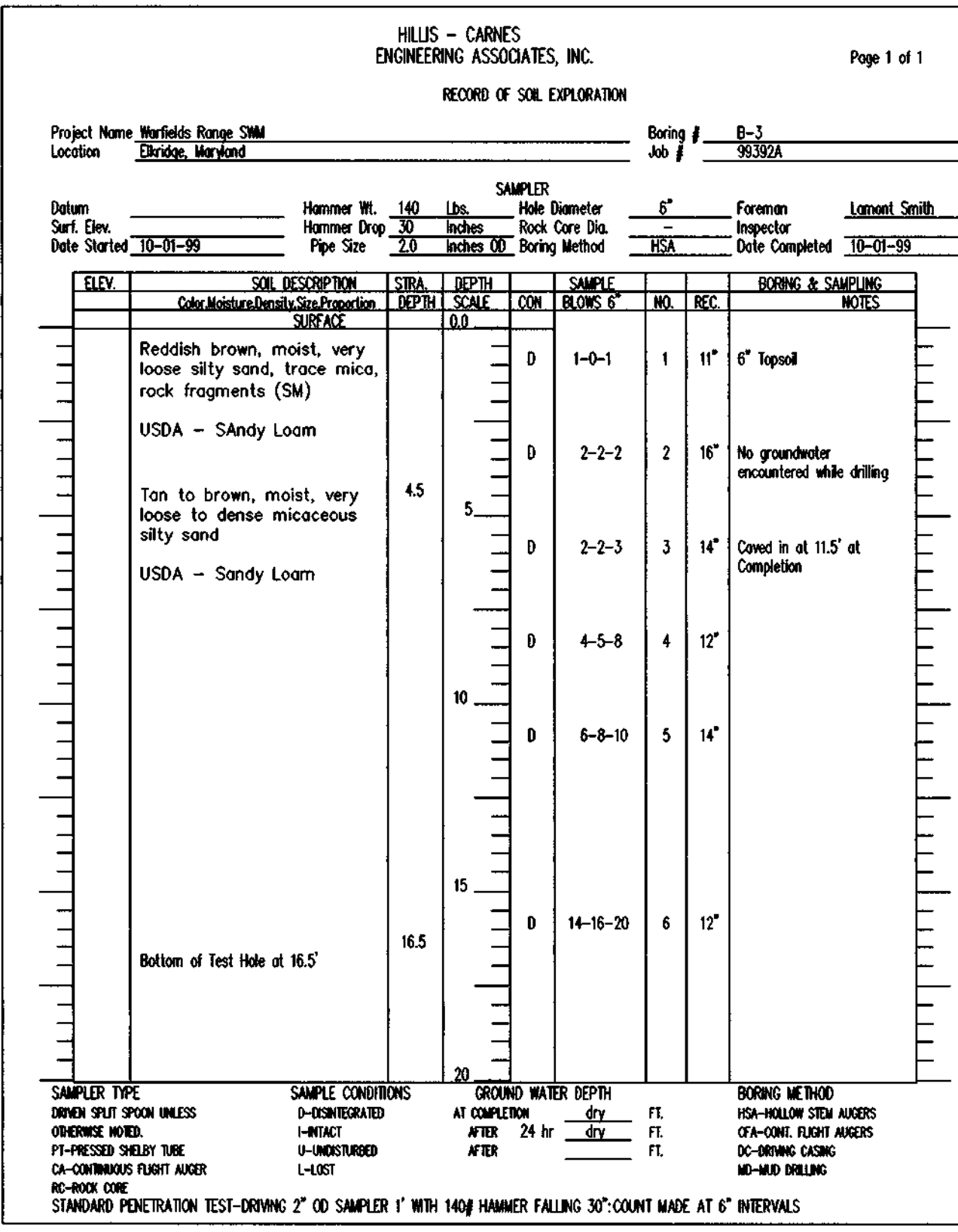
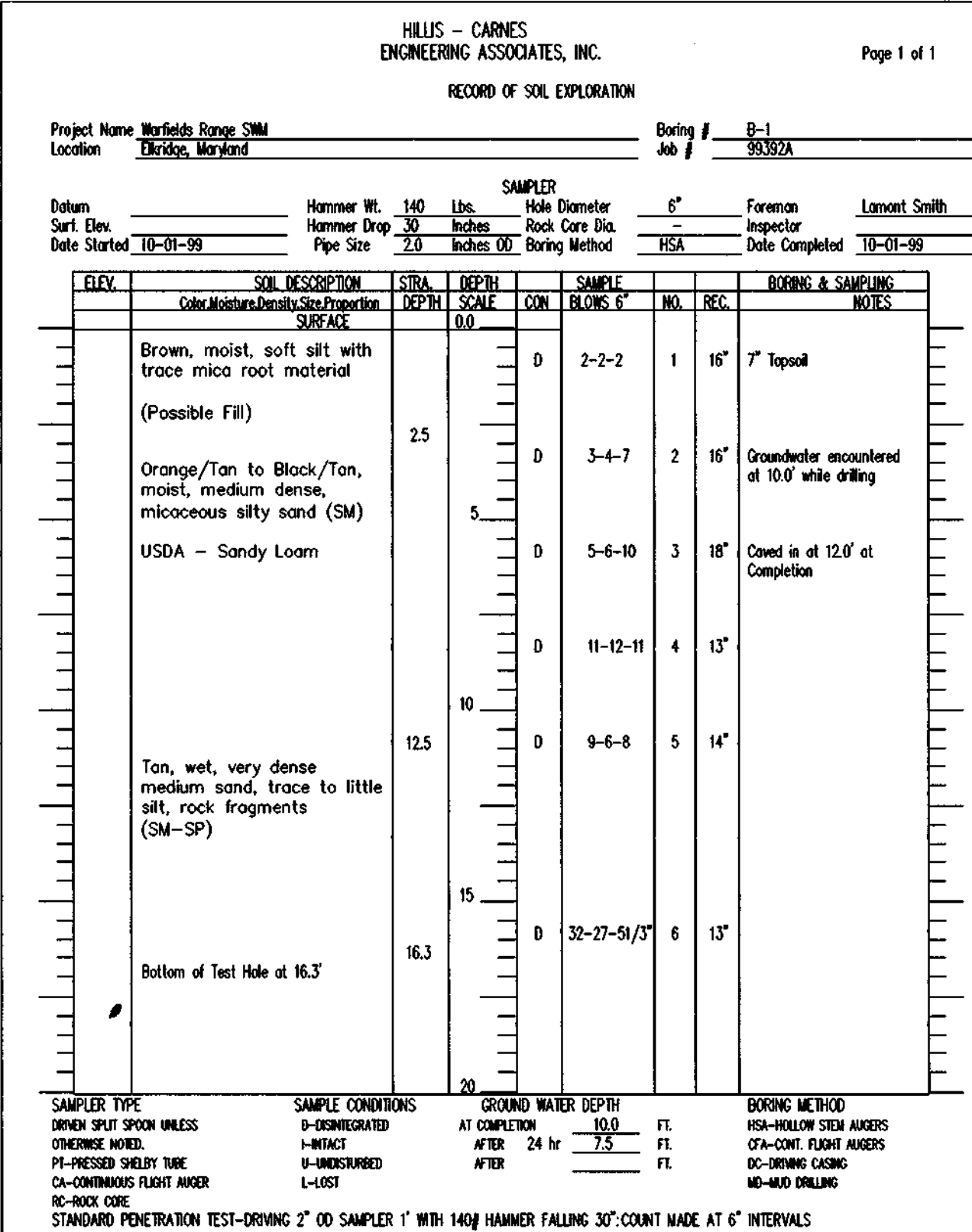
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CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED...

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ROUTINE MAINTENANCE
1. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER ALL MAJOR STORMS...

NON-ROUTINE MAINTENANCE
1. STRUCTURAL COMPONENTS OF THE POND (DAM, RISER, AND PIPES) SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE...

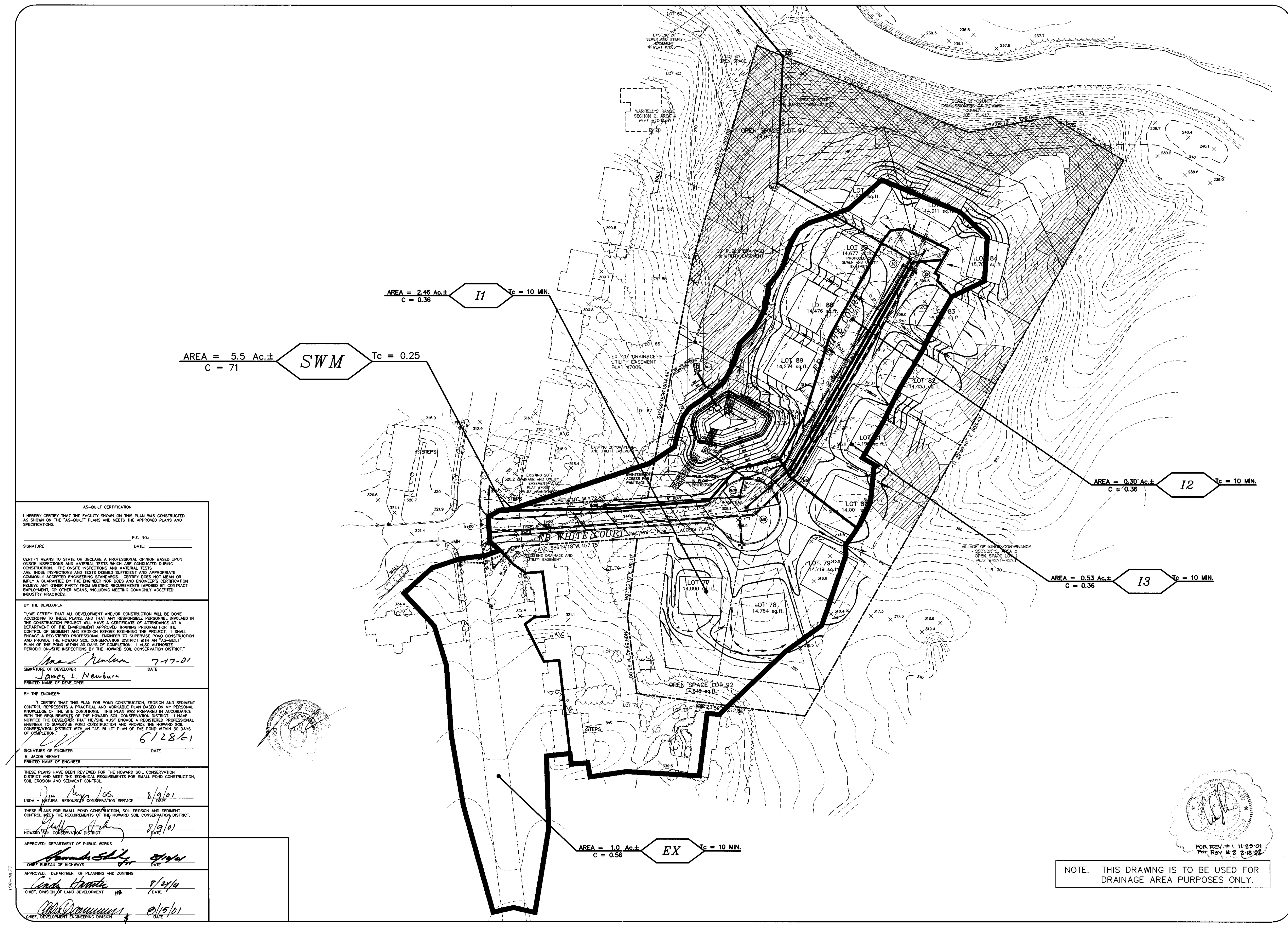


Project information table including project name, scale, and approval status.

Revision table with columns for date, description, and revisions.

WARFIELDS RANGE II, LOTS 77 THRU 92
A RESUBDIVISION OF LOT 69 - WARFIELDS RANGE, SECTION 2, AREA 4
TAX MAP 42 - P/O PARCEL 454 - BLOCK 19
HOWARD COUNTY, MARYLAND

MILDENBERG, BOENDER & ASSOC., INC. logo and contact information including address and phone number.



AS-BUILT CERTIFICATION

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

SIGNATURE DATE: _____
P.E. NO. _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER FOR DOES AND ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

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

SIGNATURE OF DEVELOPER DATE: 7/17/01
James L. Newburn
PRINTED NAME OF DEVELOPER

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER DATE: 6/28/01
R. JACOB HIRSHAT
PRINTED NAME OF ENGINEER

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

USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE: 8/9/01

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

HOWARD SOIL CONSERVATION DISTRICT DATE: 8/9/01

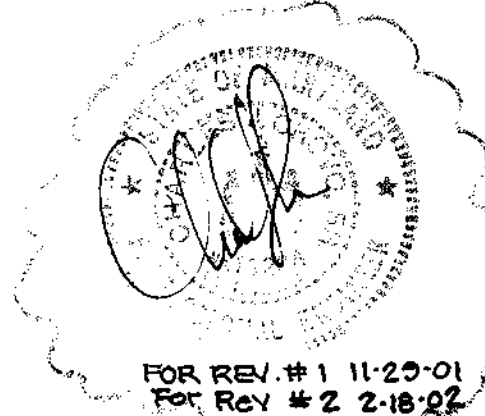
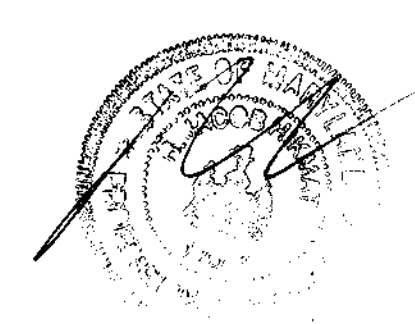
APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF BUREAU OF HIGHWAYS DATE: 8/10/01

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 8/21/01

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 8/15/01



NOTE: THIS DRAWING IS TO BE USED FOR DRAINAGE AREA PURPOSES ONLY.

date	JUNE 2001
project	98108
illustration	engineering
scale	KR/FL
approval	approval
no.	1"

no.	1	description	REMOVED CAPITAL MERRILL ISLAND FROM THE COAST (MERRILL) & GREEN CENTER DRIVE FROM THE WHITE COURT STATION (1-B) (PUBLIC) REIMPOSED STATION	date	2/10/02
no.	2	description		date	11-09-01

WARFIELDS RANGE II, LOTS 77 THRU 92
 A RESUBDIVISION OF LOT 69 - WARFIELDS RANGE, SECTION 2, AREA 4
 TAX MAP 42 - P/O PARCEL 454 - BLOCK 19
 HOWARD COUNTY, MARYLAND
 SIXTH ELECTION DISTRICT
 DRAINAGE AREA MAP

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hill Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0286 Bldg. (301) 621-5521 Wash. (410) 997-0286 Fax.

SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES					TOTAL
	A (PERIMETER 1)	A (PERIMETER 2)	A (PERIMETER 3)	A (PERIMETER 4)	A (PERIMETER 5)	
LANDSCAPE TYPE	A (PERIMETER 1)	A (PERIMETER 2)	A (PERIMETER 3)	A (PERIMETER 4)	A (PERIMETER 5)	TOTAL
LINEAR FEET OF PERIMETER	584.58 LF	465.83 LF (EXCLUDES EASEMENT)	803.43 LF	212.86 LF	196.10 LF	2262.80 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 375 LF OF EXISTING VEGETATION	YES, 440.93 LF OF EXISTING VEGETATION	YES, 803.43 LF OF EXISTING VEGETATION	YES, 75 LF OF EXISTING VEGETATION	YES, 170 LF OF EXISTING VEGETATION	YES, 1864.36 LF OF EX. VEGETATION
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED						
SHADE TREES	4 SHADE TREE	0 SHADE TREES	0 SHADE TREES	2 SHADE TREES	1 SHADE TREE	7 SHADE TREES
EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES
SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS
NUMBER OF PLANTS PROVIDED						
SHADE TREES	4 SHADE TREE	0 SHADE TREES	0 SHADE TREES	2 SHADE TREES	1 SHADE TREE	7 SHADE TREES
EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES
SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS

SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING

PERIMETER EDGE	A	B	C	D	TOTAL
LINEAR FEET OF PERIMETER	80 LF	40 LF	80 LF	120 LF	320 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	NO	NO	NO	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	N/A	N/A	N/A	N/A	N/A
NUMBER OF TREES REQUIRED					
SHADE TREES	2 SHADE TREES	1 SHADE TREES	2 SHADE TREE	2 SHADE TREES	7 SHADE TREES
EVERGREEN TREES	2 EVERGREEN TREES	1 EVERGREEN TREES	2 EVERGREEN TREES	3 EVERGREEN TREES	8 EVERGREEN TREES
NUMBER OF TREES PROVIDED					
SHADE TREES	2 SHADE TREES	1 SHADE TREES	2 SHADE TREE	2 SHADE TREES	7 SHADE TREES
EVERGREEN TREES	2 EVERGREEN TREES	1 EVERGREEN TREES	2 EVERGREEN TREES	3 EVERGREEN TREES	8 EVERGREEN TREES
SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES

LANDSCAPING REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
3	(Symbol)	ACER RUBRUM 'RED SUNSET' OR EQUIVALENT	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
11	(Symbol)	ACER SACCHARUM 'GREEN MOUNTAIN' OR EQUIVALENT	GREEN MOUNTAIN SUGAR MAPLE	2 1/2" - 3" CAL.
8	(Symbol)	PINUS STROBUS OR EQUIVALENT	WHITE PINE	6' - 8' HT.
6	(Symbol)	TAXUS MEDIA 'HICKSII' OR EQUIVALENT (TRASH PAD SCREENING)	HICKS YEW	2 1/2" - 3" HT.
TOTAL				
28 TREES & SHRUBS (14 SHADE TREES, 8 EVERGREENS, AND 6 SHRUBS FOR TRASH PAD SCREENING)				

STREET TREE PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
41	(Symbol)	ACER RUBRUM 'RED SUNSET' OR EQUIVALENT	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
TOTAL				
41 STREET TREES (20 PUBLIC, 21 PRIVATE)				

STREET TREE CALCULATIONS

EB WHITE COURT (PUBLIC) - 786 / 40 = 20
 EB WHITE COURT (PRIVATE) - 820 / 40 = 21
 TOTAL TREES REQUIRED = 41 STREET TREES
 TOTAL TREES PROVIDED = 41 STREET TREES



LEGEND

- (Symbol) PERIMETER LANDSCAPE EDGE
- (Symbol) FOREST CONSERVATION EASEMENT (RETENTION)
- (Symbol) FOREST CONSERVATION EASEMENT (REFORESTATION)
- (Symbol) SLOPES 25% OR GREATER
- (Symbol) 15% TO 25% SLOPES

AS-BUILT 5-24-04
 Fisher, Collins & Carter, Inc.

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 No. 13184

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 No. 13184

FOR REV # 1 11-29-01
 FOR REV # 2 2-18-02

NOTE: THIS DRAWING IS TO BE USED FOR LANDSCAPE PLAN PURPOSES ONLY.

NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT FOR THE REQUIRED LANDSCAPE PLANTINGS (14 SHADE TREES, 8 EVERGREENS, 21 PRIVATE STREET TREES, AND 6 SHRUBS) IN THE AMOUNT OF \$11,880.00.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 8/14/01
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 8/24/01
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: [Signature] 8/15/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Project	98108
date	JUNE 2001
illustration	engineering
scale	KR/SID
revision	SID
approval	approval

date	8/16/02
description	REMOVED CRITICAL VEGETATION FROM LOT 88 (PRIVATE) & REED CONTROL PLANT FROM LOT 88 (PUBLIC), SECTION 197 (PUBLIC)
revision	2

WARFIELDS RANGE II, LOTS 77 THRU 92
 A RESUBDIVISION OF LOT 69 - WARFIELDS RANGE, SECTION 2, AREA 4
 TAX MAP 42 - P/O PARCEL 454 - BLOCK 19
 HOWARD COUNTY, MARYLAND
 SIXTH ELECTION DISTRICT
LANDSCAPE PLAN

MILDENBERG & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
 (410) 997-0299 Bal. (301) 621-5521 Wash. (410) 997-0298 Fax.

GENERAL NOTES

- 1. ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.

PRE-CONSTRUCTION MEETING

- 1. AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND BEFORE THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND THE PURPOSE OF THIS MEETING WILL BE:

CONSTRUCTION MONITORING

- 1. THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS.

** FOR FOREST STAND DELINEATION, SEE REPORT PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. ON JANUARY 12, 1999.

NOTE:

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENTS EXCEPT AS AUTHORIZED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

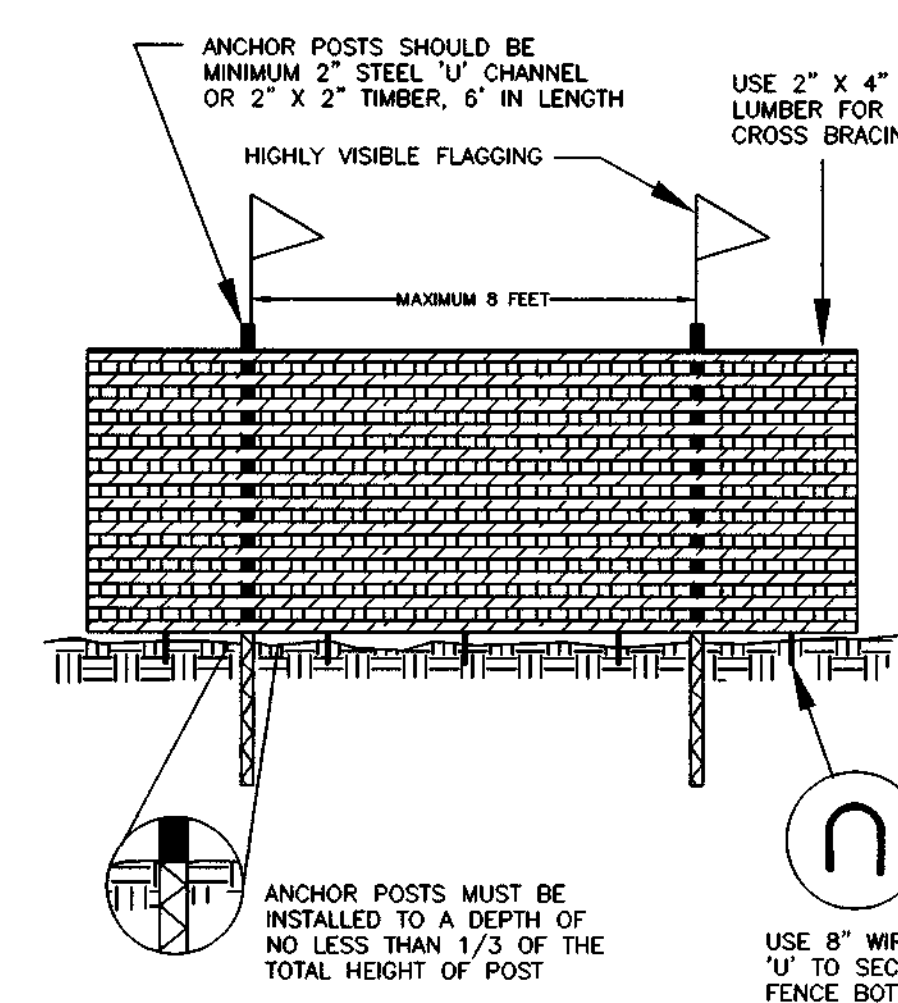
THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION, SOIL COMPACTION, OR EXCAVATION, INTRODUCTION OF TOXIC CHEMICALS OR OTHER DISTURBANCES DETRIMENTAL TO THE LIVE SPECIMEN TREES OR CRITICAL ROOT ZONES FOR THESE TREES EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

PLANTING SPECIFICATIONS AND NOTES

- 1. PROTECTION FENCING AND SILT FENCES FOR SEDIMENT AND EROSION CONTROL ARE TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.

PROTECTIVE FENCE DETAIL

BLAZE ORANGE PLASTIC MESH



- 1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.

APPROVED: DEPARTMENT OF PUBLIC WORKS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

APPROVED: CHIEF DIVISION OF LAND DEVELOPMENT

APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION

PLANT STORAGE AND INSPECTION

- 1. FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
2. FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.

PLANT INSTALLATION

- 1. THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, BACK SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL.

FERTILIZING

- 1. DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.

MAINTENANCE SCHEDULE

- 1. ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
2. ASSESS TREE MORTALITY OF PLANTING STOCK. REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.

SUPERVISION

ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER QUALIFIED PROFESSIONAL AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

FOREST CONSERVATION DATA

Table with columns: ACRES, GROSS SITE AREA (7.00), AREA WITHIN 100 YEAR FLOODPLAIN (0.00), AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (0.00), NET TRACT AREA (7.00), LAND USE CATEGORY (RESIDENTIAL - SUBURBAN).

Table with columns: ACRES, REFORESTATION THRESHOLD (20%), AFFORESTATION MINIMUM (15%), EXISTING FOREST ON NET TRACT AREA (4.64), FOREST AREAS TO BE RETAINED (1.86).

Table with columns: ACRES, FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD (4.40), FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (0.24), FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD (0.00).

Table with columns: ACRES, REFORESTATION REQUIRED FOR CLEARING ABOVE THRESHOLD (1.10), REFORESTATION REQUIRED FOR CLEARING BELOW THRESHOLD (0.48), TOTAL REFORESTATION REQUIRED (1.58).

Table with columns: ACRES, TOTAL REFORESTATION PROVIDED (0.17), TOTAL CREDITS PURCHASED AT FOREST MITIGATION BANK (1.41).

REFORESTATION PLANT LISTS

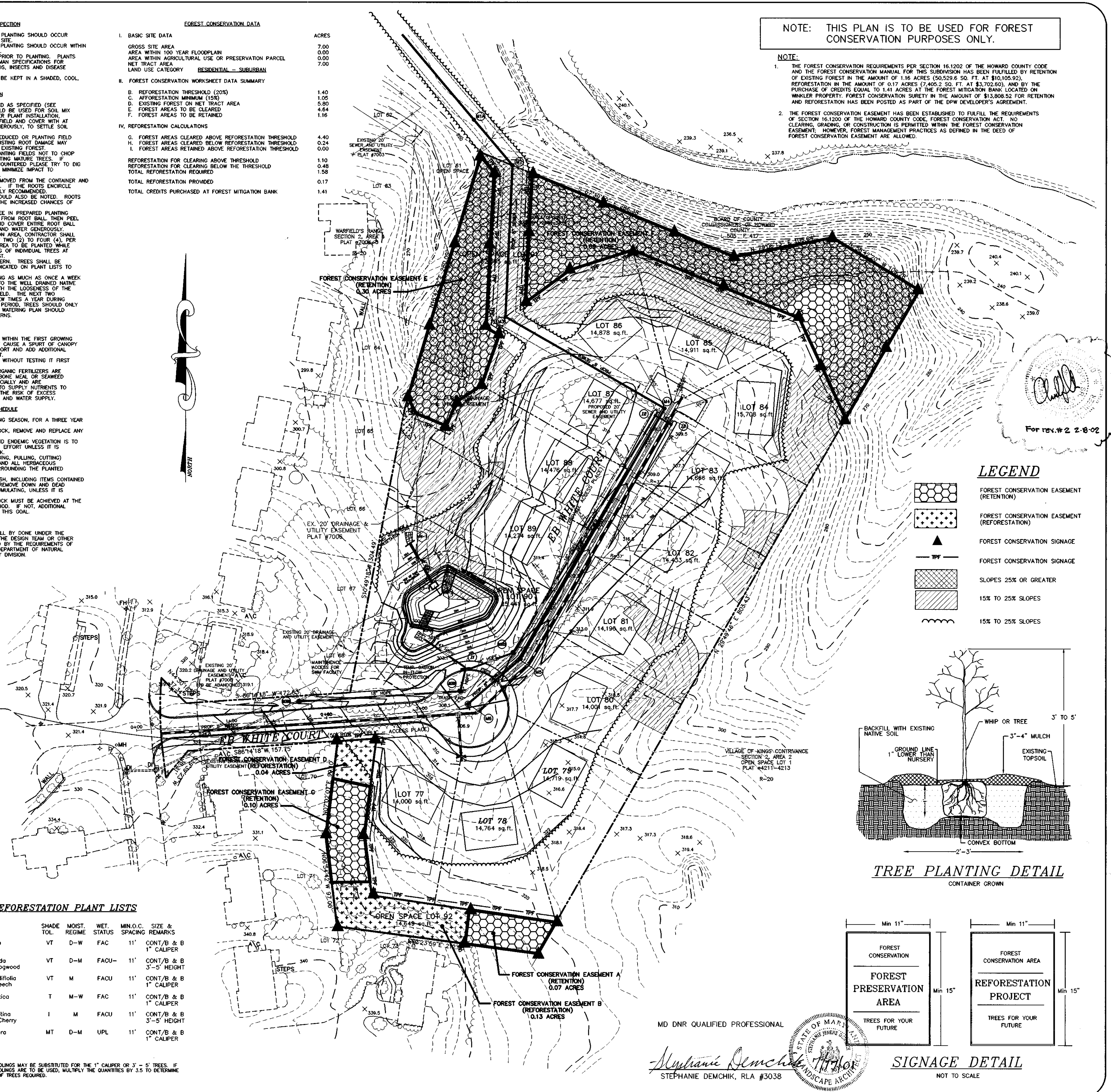
Table with columns: QTY., SPECIES, SHADE TOL., MOIST. REGIME, WET. STATUS, MIN. O.C., SIZE & SPACING, REMARKS.

NOTE: WHIPS OR SEEDLINGS MAY BE SUBSTITUTED FOR THE 1" CALIPER OR 3" - 5" TREES, IF WHIPS OR SEEDLINGS ARE TO BE USED, MULTIPLY THE QUANTITIES BY 3.5 TO DETERMINE THE NUMBER OF TREES REQUIRED.

NOTE: THIS PLAN IS TO BE USED FOR FOREST CONSERVATION PURPOSES ONLY.

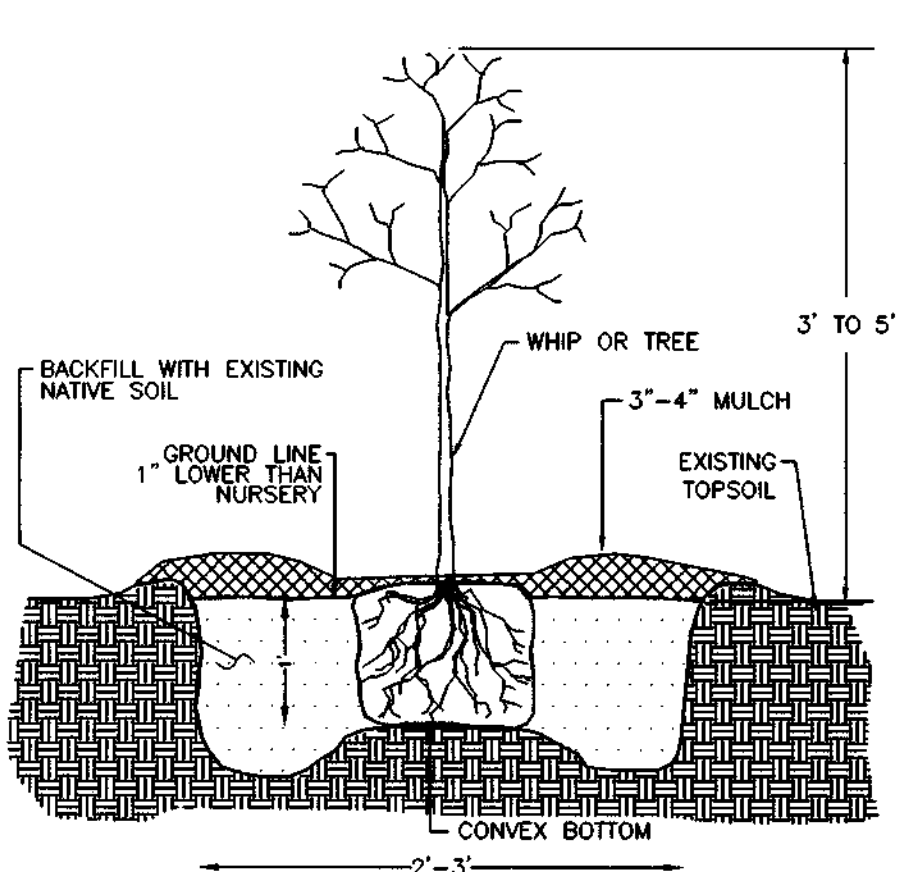
NOTE:

- 1. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY RETENTION OF EXISTING FOREST IN THE AMOUNT OF 1.16 ACRES (50,529.6 SQ. FT. AT \$10,105.92).

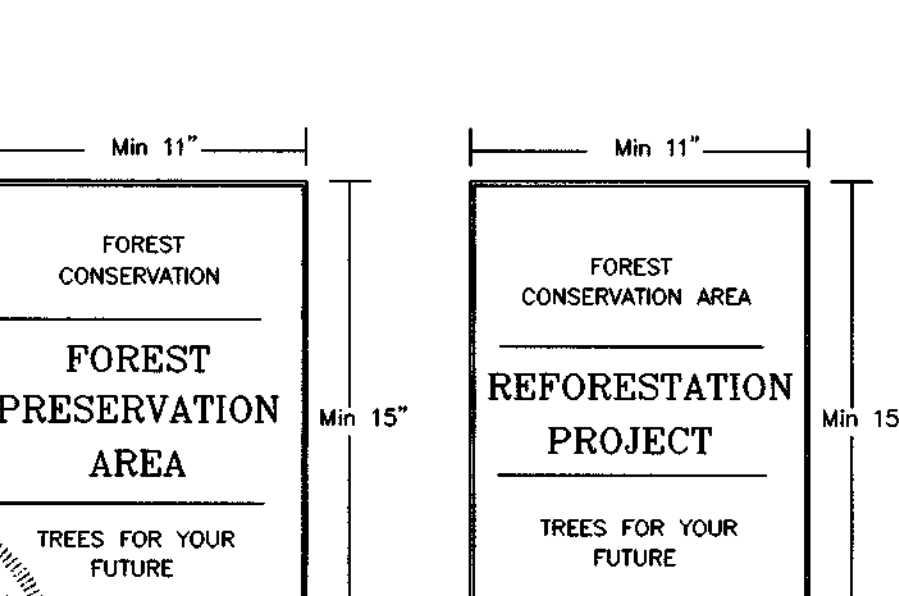


LEGEND

- FOREST CONSERVATION EASEMENT (RETENTION)
FOREST CONSERVATION EASEMENT (REFORESTATION)
FOREST CONSERVATION SIGNAGE
FOREST CONSERVATION SIGNAGE
SLOPES 25% OR GREATER
15% TO 25% SLOPES
15% TO 25% SLOPES



TREE PLANTING DETAIL



SIGNAGE DETAIL

Project information table with columns: date, illustration, project, scale, approval.

Revisions table with columns: no., description, date.

WARFIELDS RANGE II, LOTS 77 THRU 92
A RESUBDIVISION OF LOT 69 - WARFIELDS RANGE, SECTION 2, AREA 4
TAX MAP 42 - P/O PARCEL 454 - BLOCK 19
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