

LEGEND:

- EX. FIRE HYDRANT
WATER VALVE
WATER MANHOLE
STORM DRAIN MANHOLE
SEWER MANHOLE
CLEANOUT
CATCH BASIN
LIGHT POLE
POWER POLE
TRAFFIC SIGNAL VAULT
GAS METER
GAS VALVE
SIGN
TREE
TREE
TREE
PAD
OHE
OVERHEAD ELECTRIC
WETLANDS AREA
PROPOSED FOREST RETENTION AREA
EXISTING CONTOUR 2' INTERVAL
EXISTING CONTOUR 10' INTERVAL
PROPOSED CONTOUR 2' INTERVAL
PROPOSED CONTOUR 10' INTERVAL
+ 624
SPOT ELEVATION
-SF-SF- SILT FENCE
-SSF-SSF- SUPER SILT FENCE
-BERM
L.O.D.
LIMIT OF DISTURBANCE
PERIMETER FENCE (SEE DETAIL, SHEET 15)
GUARD RAIL (USE HOWARD COUNTY STANDARD GUARDRAIL)

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33B AS-BUILT SWM PLAN
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33D AS-BUILT SWM DETAILS
33E AS-BUILT SWM STRUCTURE DETAILS
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36 INLET DRAINAGE AREA MAP
37 SITE DEVELOPMENT PLAN MICRO-BIO DETAILS
38 SITE DEVELOPMENT PLAN MICRO-BIO DETAILS
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60 PAVEMENT, SIGNAGE AND STRIPING PLAN
61 PAVEMENT, SIGNAGE AND STRIPING DETAILS
62 SITE PLAN
63 SITE PLAN DETAILS



Kimley Horn
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. 21561 EXPIRATION: 01/15/2011

RED-LINE REVISION NO. 1: THE PURPOSE OF RED-LINE REVISION NO. 1, DATED 03/24/03, WAS TO REGRADE THE AREA BETWEEN SWM PONDS 2 AND 3, IN ACCORDANCE WITH WAIVER PETITION WF-02-56, APPROVED 04/02/02.

RED-LINE REVISION NO. 2: THE PURPOSE OF RED-LINE REVISION NO. 2, DATED 07/29/03, WAS TO LOCATE THE BUILDING THE PROPOSED BUILDING TO A DIFFERENT LOCATION THAN PREVIOUSLY APPROVED, AND ADD A PRIVATE SANITARY SEWER AND PRIVATE STORM DRAIN PROFILE TO THE PLANS.

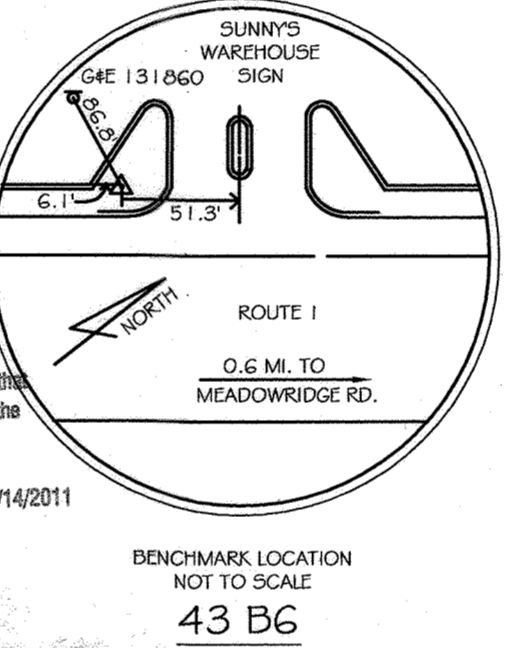
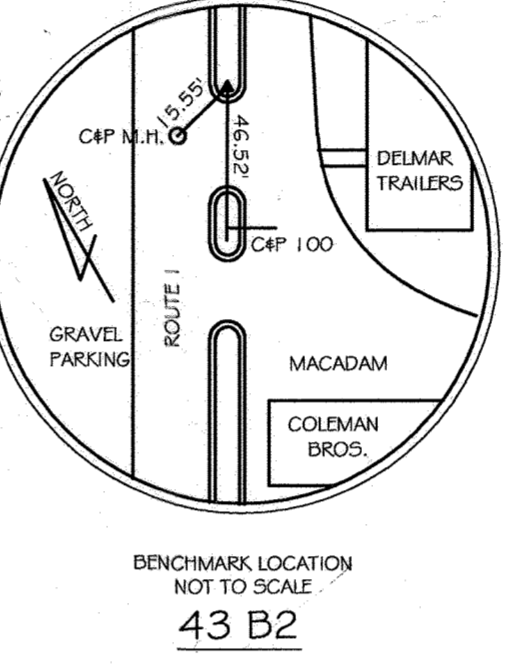
12/09 - REVISION BY MESSICK AND ASSOCIATES TO ADD RIGID TANK PUMP ON SHEET 6 AS WELL AS UPDATE SHEETS 5 & 6 TO SHOW EXISTING PAVEMENT LOT & TRUCK SITE FEATURES FOR CONTEXT.

RED-LINE REVISION NO. 7: THE PURPOSE OF THE RED-LINE REVISION DATED 9/15/09, WAS TO ADD A SOLAR CANOPY TO THE EXISTING PARKING LOT.

RED-LINE REVISION NO. 8: THE PURPOSE OF THIS RED-LINE REVISION IS TO ADD AN ADDITIONAL PRIVATE ACCESS ROAD TO THE EXISTING AUTO AUCTION SITE.

GENERAL NOTES (CONTINUED)
19. ADDITIONAL SITE SURVEY WAS COMPLETED BY CPA ON OCTOBER 11TH, 2010.
20. SITE ANALYSIS:
20.1 TOTAL PROJECT AREA: 123.253 AC ±
20.2 AREA OF CLEAR DISTURBANCE: 123.253 AC ±
20.3 LIMIT OF DISTURBED AREA: 2.930 AC ± (ACCESS DRIVEWAY/LOADING AREA)
20.4 TRUCK STORAGE LOT: 1.16 AC ±
20.5 EXISTING PROPOSED USE FOR SITE AND STRUCTURES: VEHICLE AUCTION FACILITY AND TRUCK STORAGE LOT.
21. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY AND MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
22. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
23. COORDINATES AND BEARINGS ARE BASED UPON THE STATE PLANE SYSTEM.
24. USE THE NORTH BEARING CONDITION CLASS "C" FOR THIS PROJECT.
25. ADDITIONAL WETLANDS AND WETLAND BUFFERS ON THIS SITE WERE DELINEATED BY ENVROPROJECTS, LLC ON DECEMBER 1ST, 2010.

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UNLESS OTHERWISE STATED ALL HOWARD COUNTY SURVEY CONTROLS CONSIST OF A STANDARD STAMPED BRASS OR ALUMINUM DISC SET ON CONCRETE (6" DEEP) COLUMN, USUALLY 1" OR 2" BELOW TERRAIN SURFACE.

- 1. THE WAIVER PETITION APPROVAL PERTAINS ONLY TO THE LIMITS OF DISTURBANCE TO THE STREAM AND BUFFER AREA IDENTIFIED ON THE REVISED WAIVER PETITION PLAN SUBMITTED ON 3/21/02 WHICH IS APPROXIMATELY 1.6 ACRES.
2. COMPLIANCE WITH THE ENCLOSED COMMENTS FROM THE DEVELOPMENT ENGINEERING DIVISION DATED JANUARY 31, 2002. (LIMITATION TO 10' OF COVER OVER EXISTING WATER MAIN)
3. ALL GRADING, CLEARING AND FILLING DISTURBANCES WITHIN THE STREAM AND REQUIRED BUFFER MUST BE THE MINIMUM NECESSARY TO COMPLETE THE PROPOSED WORK AND IS SUBJECT TO OBTAINING ALL NECESSARY WATER QUALITY CERTIFICATES AND PERMITS FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND NATURAL RESOURCES AND/OR THE U.S. ARMY CORPS OF ENGINEERS, PRIOR TO COMMENCEMENT OF ANY GRADING AND FILLING DISTURBANCES. REFERENCE THE APPROVED PERMITS, CERTIFICATES OR TRACKING NUMBERS ON ALL FUTURE PLAN AND PERMIT SUBMITTALS INCLUDING THE RED-LINE REVISION TO SDP-00-63.
20. IN ACCORDANCE WITH WAIVER PETITION WF-02-56, APPROVED 4/02/02, THE FOLLOWING PERMITS HAVE BEEN OBTAINED:
MDE NPDES PERMIT NO. 00H00005
WETLAND PERMIT NO. 99-NY-0526200006115
21. WETLAND BUFFER LOT MAINTENANCE MAY BE PERFORMED WITHIN THE WETLAND BUFFER INCLUDING PAINTING REPAIRS AND STRIPING.

WETLAND NOTE
It is the applicant's responsibility to obtain any state permits, if required, for any construction activity covered by this plan which impacts a State regulated wetland. Any changes to plans for development whether provided by the State or initiated by the applicant to meet State requirements, must be approved by THE DEPARTMENT OF PLANNING AND ZONING.

DEVELOPER'S CERTIFICATE
We certify that all development and construction will be done according to the 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. 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 inspection by the Howard Soil Conservation District.

ENGINEER'S CERTIFICATE
I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

SEQUENCE OF CONSTRUCTION

- 1. OBTAIN GRADING PERMIT.
2. INSTALL NEW SEDIMENT & EROSION CONTROL MEASURES AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED (1 WEEK)
3. CLEAR AND GRUB SITE TO LIMITS OF DISTURBANCE. (4 DAYS)
4. MASS GRADE SITE TO SUB-BASE AND INSTALL PERM. PERIMETER DIKES. USE DUST CONTROL METHODS PER MDE SPECS. (2 WEEKS)
5. INSTALL TEMPORARY SEEDING. (3 DAYS)
6. CONSTRUCT UTILITIES. (STORM DRAINS, WATER AND SEWER LINES)
7. INSTALL CURBS, SIDEWALKS AND SUB-BASE. (2 WEEKS)
8. CONSTRUCT BUILDINGS. (1 YEAR)
9. FINE GRADE SITE, INSTALL PERMANENT SEEDING AND LANDSCAPING, AND EROSION CONTROL MATTING (EOM). (3 WEEKS)
10. REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY EIS CONTROL INSPECTOR.

OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITIES

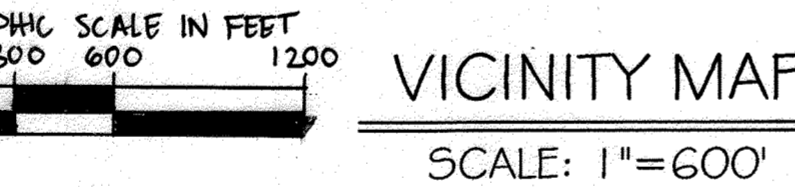
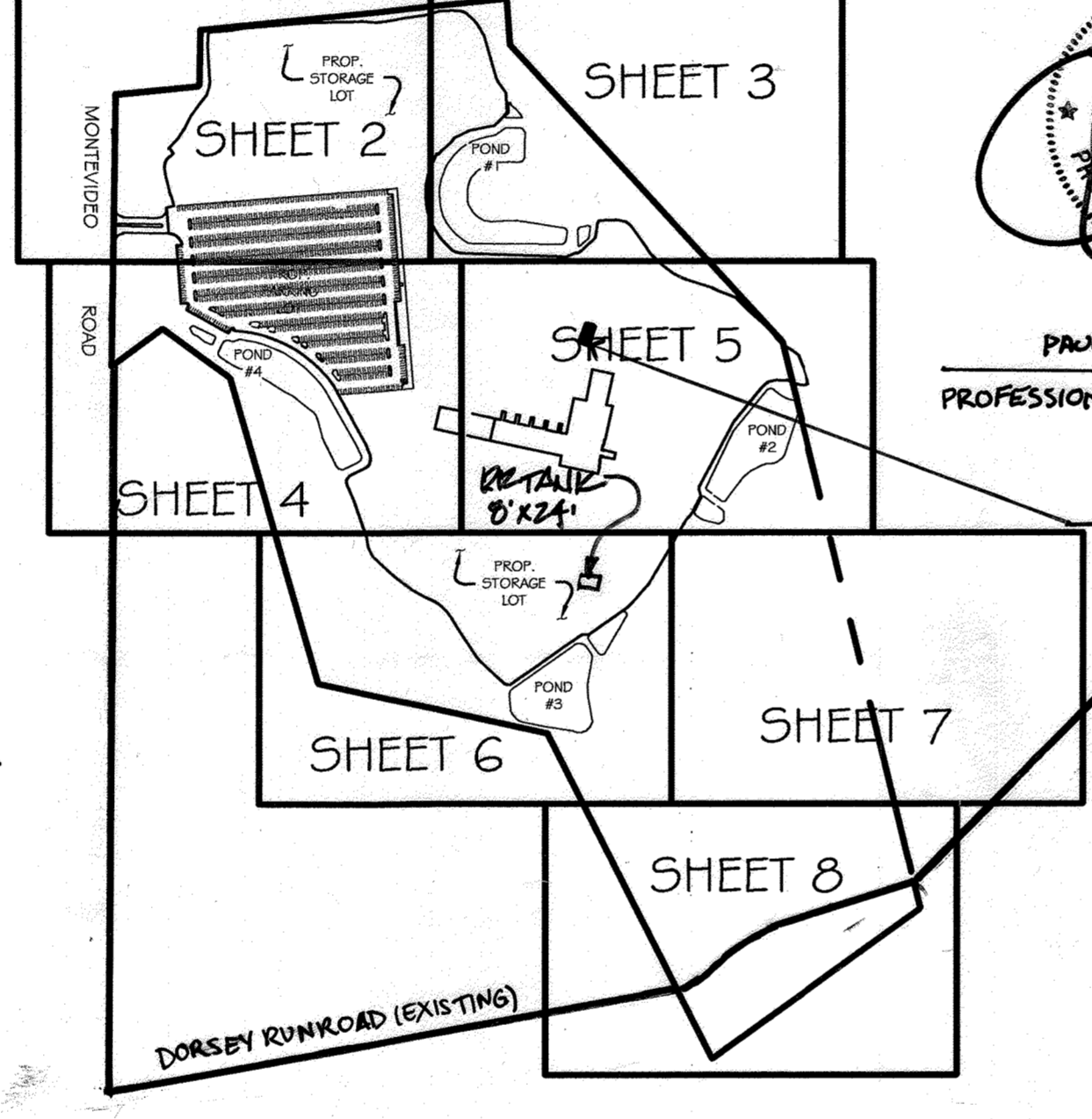
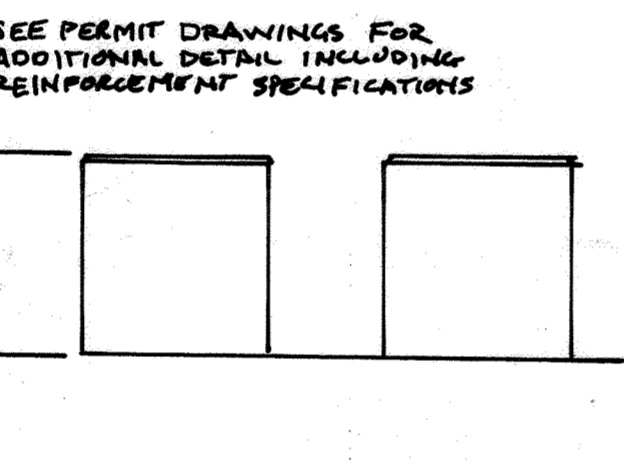
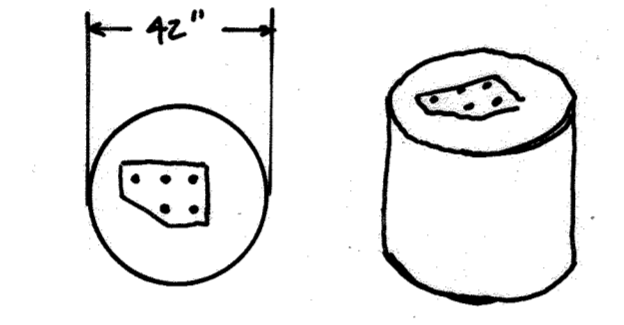
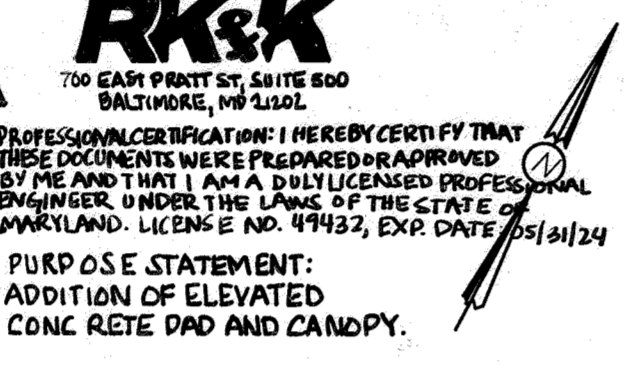
- ROUTINE MAINTENANCE:
1. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
2. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES, MAINTENANCE ACCESS AND BUFFER AREAS SHOULD BE MOWED AS NEEDED.
3. DEBRIS AND LITTER NEXT TO OUTLET STRUCTURES SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
4. VISIBLE SIGNS OF EROSION IN THE POND AND RIP-RAP OUTLETS SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
NON-ROUTINE MAINTENANCE:
1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER AND PIPES SHALL BE REPAIRED UPON DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING THE ROUTINE MAINTENANCE OPERATIONS.
2. SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE. INTERFERES WITH THE FUNCTION OF THE RISER, UNDER DRAINS, WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

GENERAL STORM DRAIN NOTES

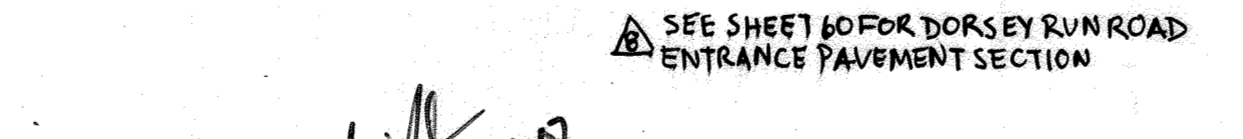
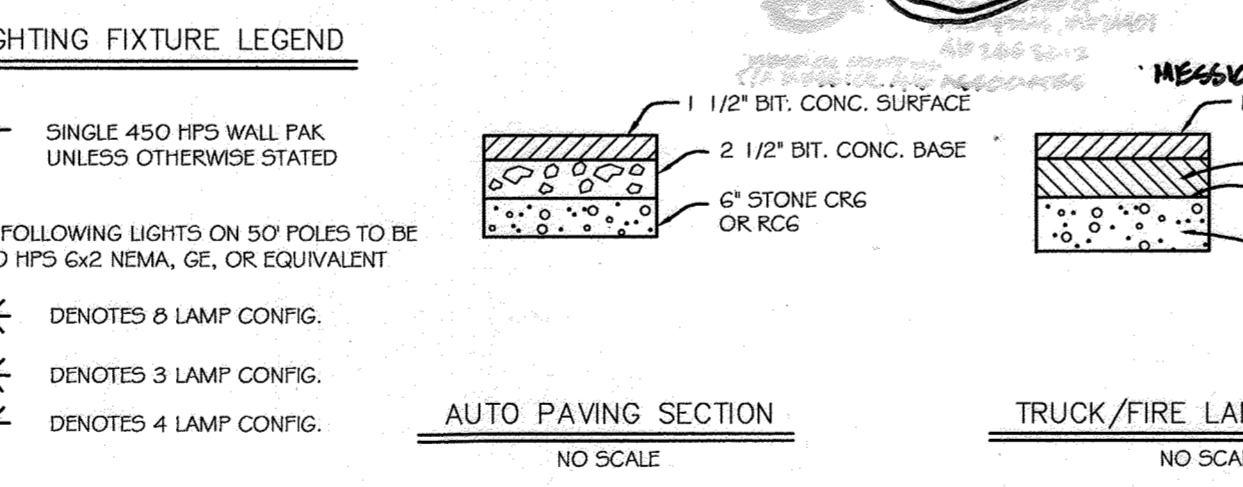
- 1. ALL STORM DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE GENERAL CONDITIONS AND STANDARD SPECIFICATIONS OF HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS AND MARYLAND STATE HIGHWAY ADMINISTRATION (MSHA), UNLESS OTHERWISE NOTED.
2. TYPES OF STRUCTURES REFER TO THE LATEST STANDARD DETAILS OF MSHA AND MDE (SOIL EROSION AND SEDIMENT CONTROL), UNLESS OTHERWISE NOTED.
3. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WILL IN ADVANCE OF TRENCHING. IF THE CLEARANCES ARE LESS THAN SPECIFIED ON THIS PLAN OR TWELVE INCHES (12") WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE OWNER OF THE OTHER INVOLVED UTILITY, BEFORE PROCEEDING WITH THE CONSTRUCTION.
4. ALL STORM DRAINS SHALL HAVE A MINIMUM OF ONE (1) FOOT OF COVER.
5. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

- 1. THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK AT (410) 313-1280.
2. PLEASE BE ADVISED THAT ANY PROJECT WHICH CREATES A DISTURBANCE OF FIVE (5) ACRES OR MORE WILL REQUIRE A NOTICE OF INTENT TO COMPLY WITH GENERAL PERMIT FOR CONSTRUCTION ACTIVITY (NOI). THE NOI IS A REQUIREMENT FROM THE EPA FOR CONSTRUCTION ACTIVITY FOR STORMWATER DISCHARGES AND IS REGULATED UNDER THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, SEDIMENT AND STORMWATER ADMINISTRATION (MDESSA). THE NOI IS TO BE COMPLETELY FILLED OUT AND SUBMITTED WITH THE APPROPRIATE FEES DIRECTLY TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT. THIS REGULATION BECOMES EFFECTIVE APRIL 15, 1994. FOR MORE INFORMATION CONTACT:
Maryland Department of the Environment
Sediment and Stormwater Administration
2500 Broening Highway
Baltimore, MD 21224

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. 49432, EXP. DATE 5/31/24



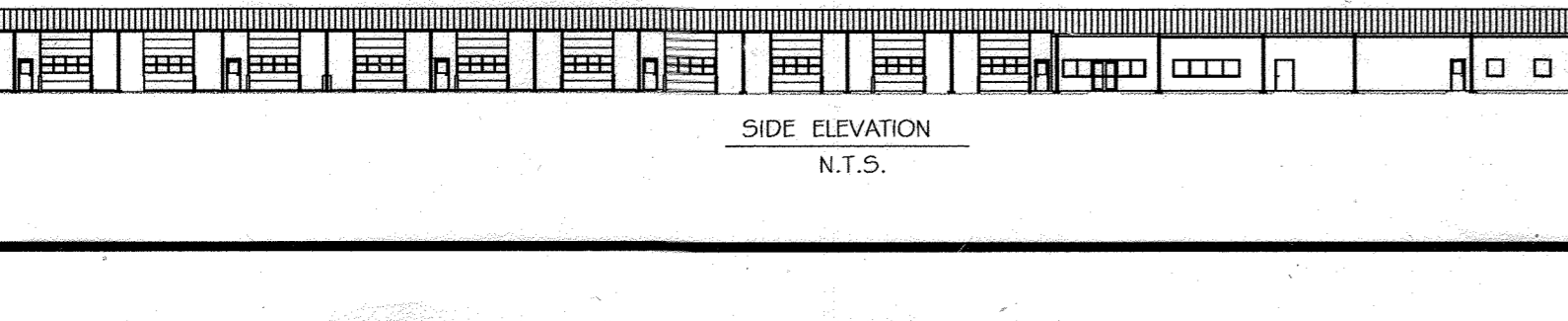
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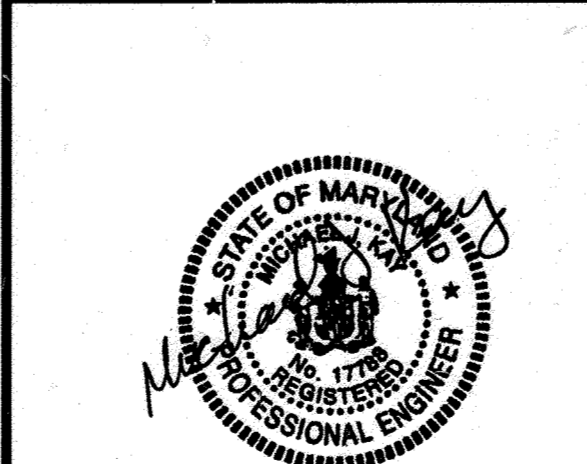
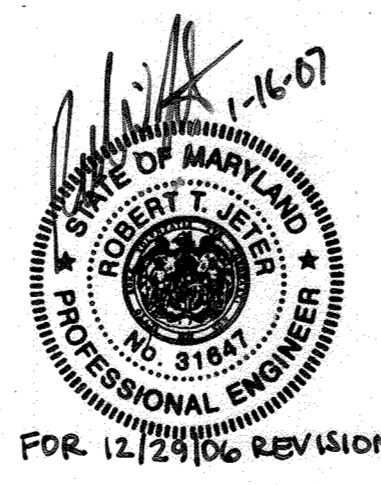
SEE SHEET 60 FOR DORSEY RUN ROAD ENTRANCE PAVEMENT SECTION



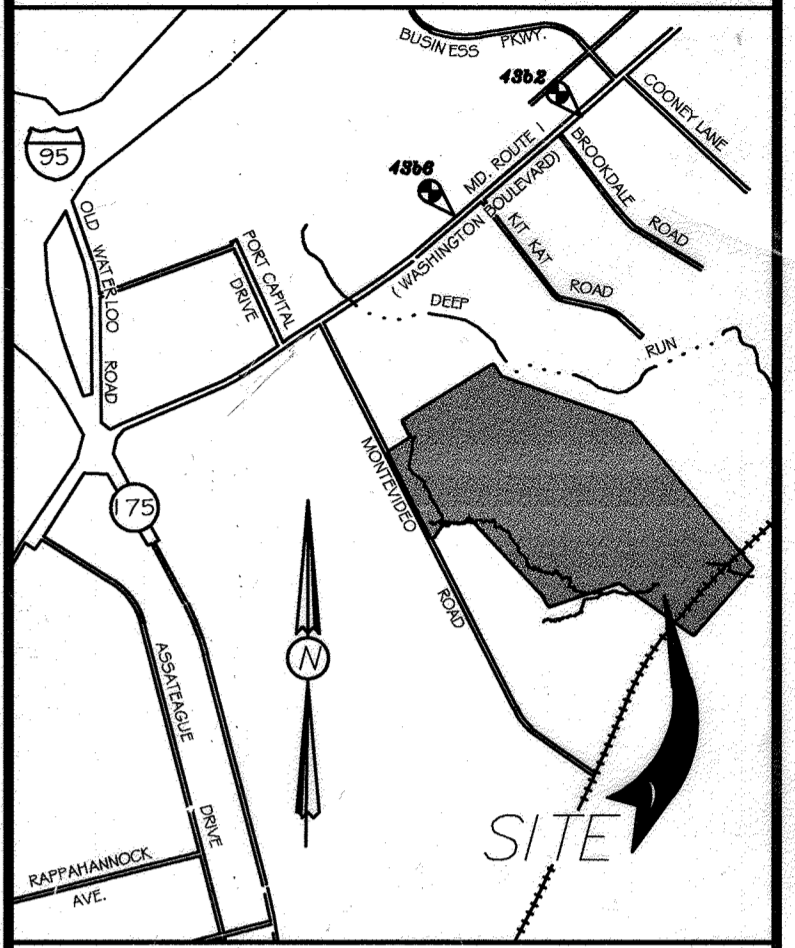
FRONT ELEVATION N.T.S.



SIDE ELEVATION N.T.S.



THAYER & ASSOCIATES INC.
2868 CONSTELLATION WAY
FINKSBURG, MD 21048-2068
PHONE/FAX: (410) 840-8797



VICINITY MAP SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Division of Planning and Zoning: Cindy Hamstra 9/5/03
Chief, Development Engineering Division: Mark 9/5/03
Director, Department of Planning and Zoning: David L. Lough 9/5/03

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
U.S.D.A.-Natural Resources Conservation Service Date
These Plans For Small Ponds And Stormwater Management Control Meet The Requirements For HOWARD SOIL CONSERVATION DISTRICT.

Revision table with columns: DATE, REVISIONS.
5/14/03 INCREASED BLOC COVERAGE AREA 1/2%
12/20/03 RED-LINE REV. W/ RIGID TANK
12-29-06 RED-LINE REVISION NO. 5 - ROADWIDENING
07/29/03 RED-LINE REVISION NO. 2: REVISED SHEETS 1,4,5,6,7,14A,14B,17,18 & 19
03/24/03 RED-LINE REVISION NO. 1

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
TAX MAP NO: 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SITE AS SHOWN DATE: APRIL 17, 2000

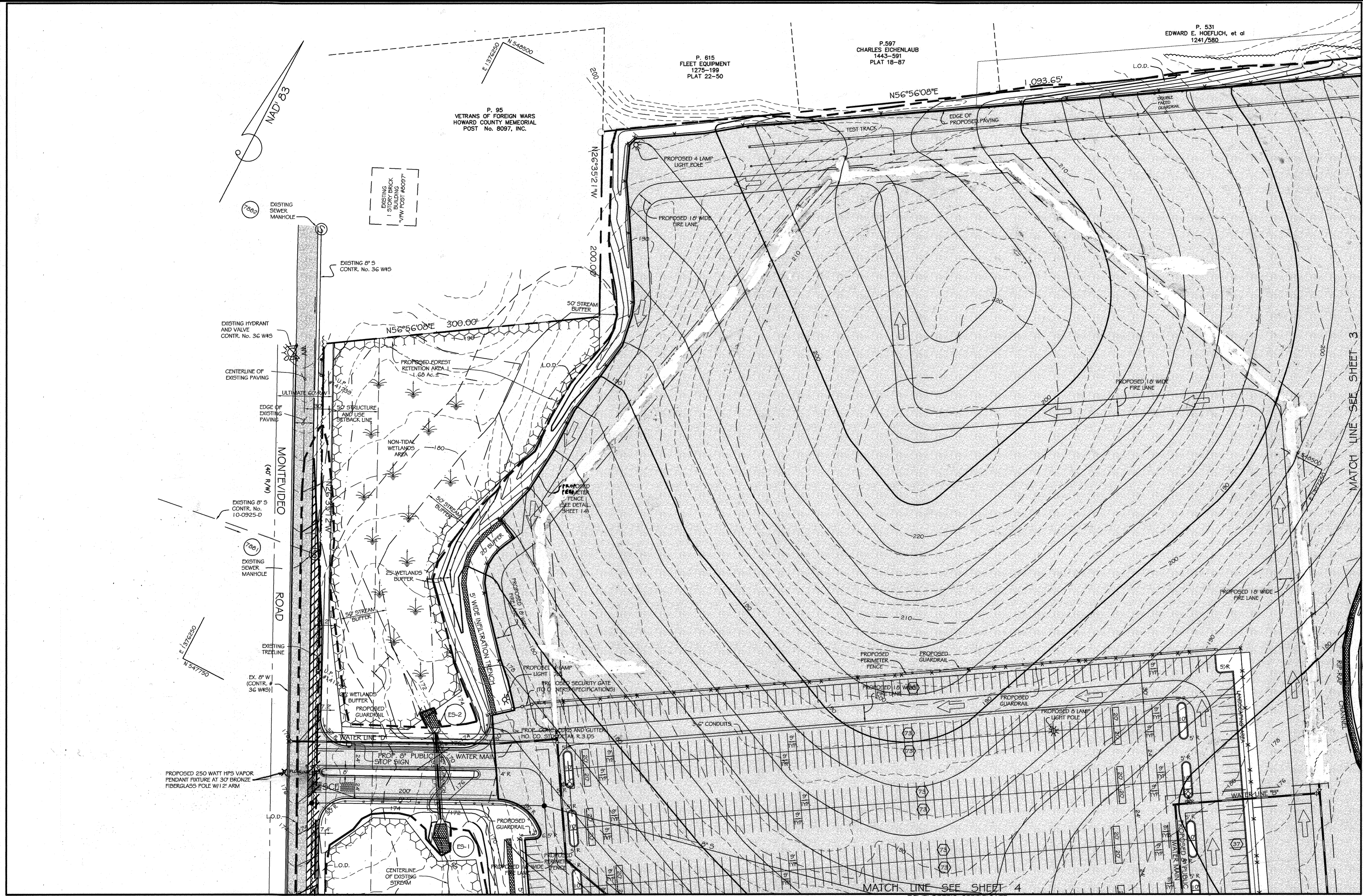
REVISIONS TO ADD ACCESS ENTRANCE
REVISION TO ADD SOLAR CANOPY
ADDITION OF ELEVATED CONCRETE PAD AND CANOPY
ENTRANCE ROAD SWM RETLINE

SDP-00-63

ADDRESS CHART
LOT / PARCEL # STREET ADDRESS
P. 371 7301 MONTEVIDEO DRIVE

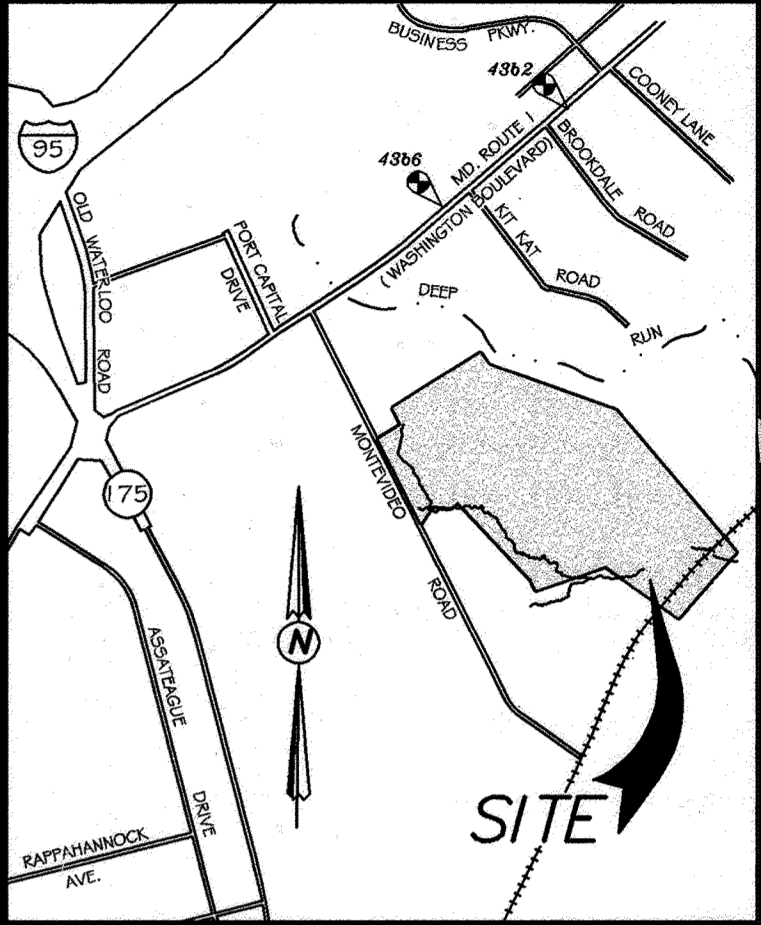
PROJECT NAME SECTION / AREA LOT / PARCEL
BALTIMORE WASHINGTON AUTO EXCHANGE 371
DEED NO. BLOCK NO. ZONE TAX ZONE ELEC. DIST. CENSUS TR.
4798/885 10 M-2 43 FIRST 6012

SHEET 1 OF 33
SDP-00-63



THAYER & ASSOCIATES INC.

2868 CONSTELLATION WAY
FINKSBURG, MD 21048-2068
PHONE/FAX: (410) 840-8797



VICINITY MAP
SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Richard Blood 11/2/00
 Chief, Division of Land Development Date
Michael J. Kay 10/1/00
 Chief, Development Engineering Division Date
Joseph S. Smith 11/2/00
 Director, Department of Planning and Zoning Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

U.S.D.A.-Natural Resources Conservation Service Date

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD Date

9/11/13 REMOVE SECTION OF WARELINE FROM DATE: REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
TAX MAP No: 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 17, 2000

SITE DEVELOPMENT PLAN SHEET

SDP-00-63

OWNER / DEVELOPER

AA PROPERTY HOLDINGS
435 METROPLEX DRIVE
NASHVILLE, TN 37211-3109
L 4780 F. 685

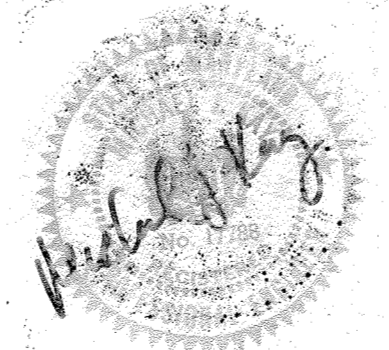
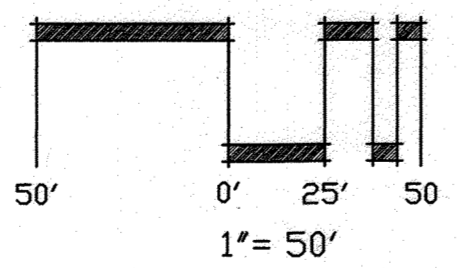
63

SHEET 2 OF 33

SDP-00-63



Andrew C. Prohm 9/11/13
for Rev #1 only



"We certify that all development and construction will be done according 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. 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 inspection by the Howard Soil Conservation District."
G. Damon Thayer 7/8/00
 G. DAMON THAYER Date

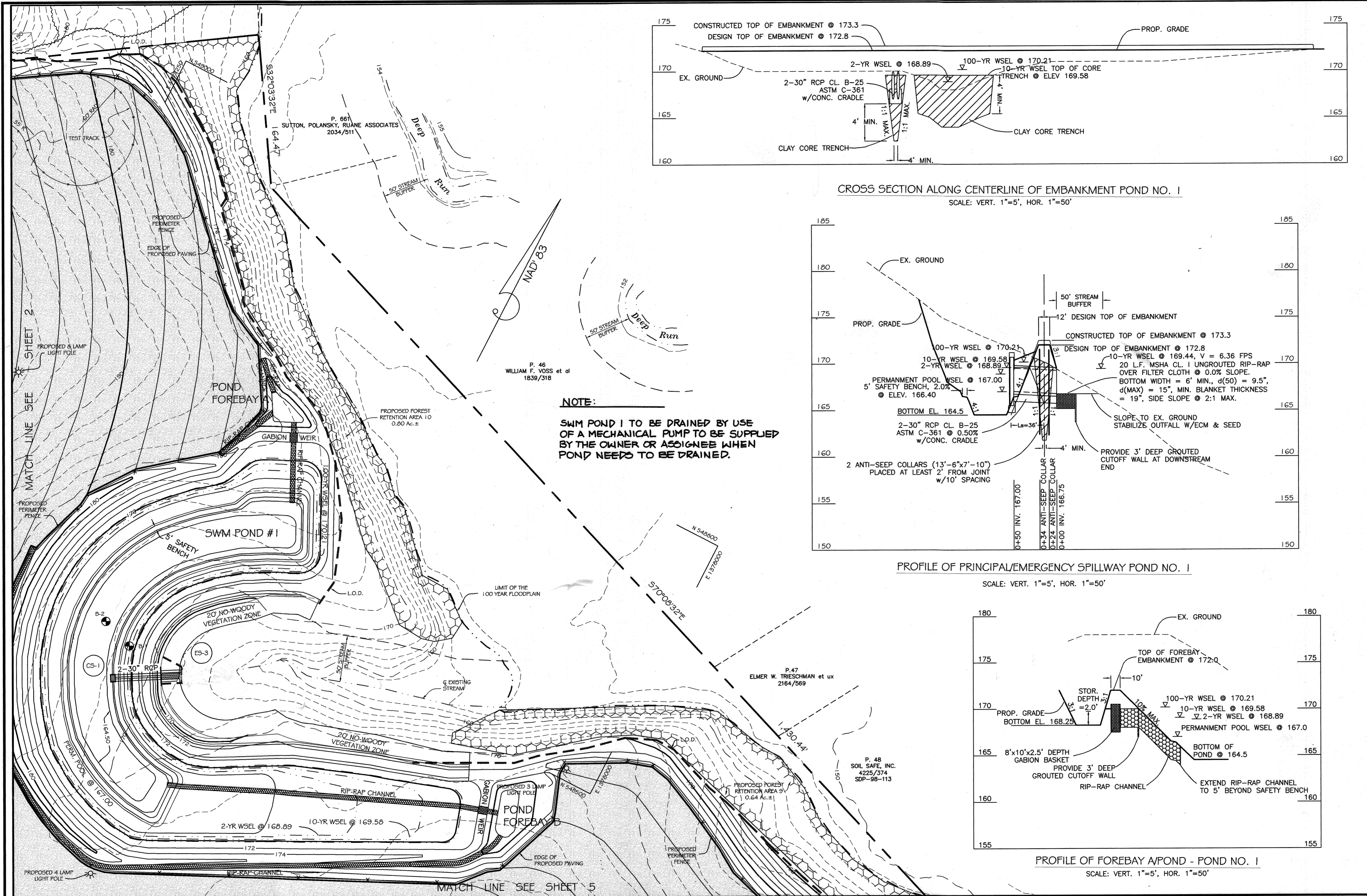
ENGINEER'S CERTIFICATE

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Michael J. Kay 7/8/00
 MICHAEL J. KAY Date

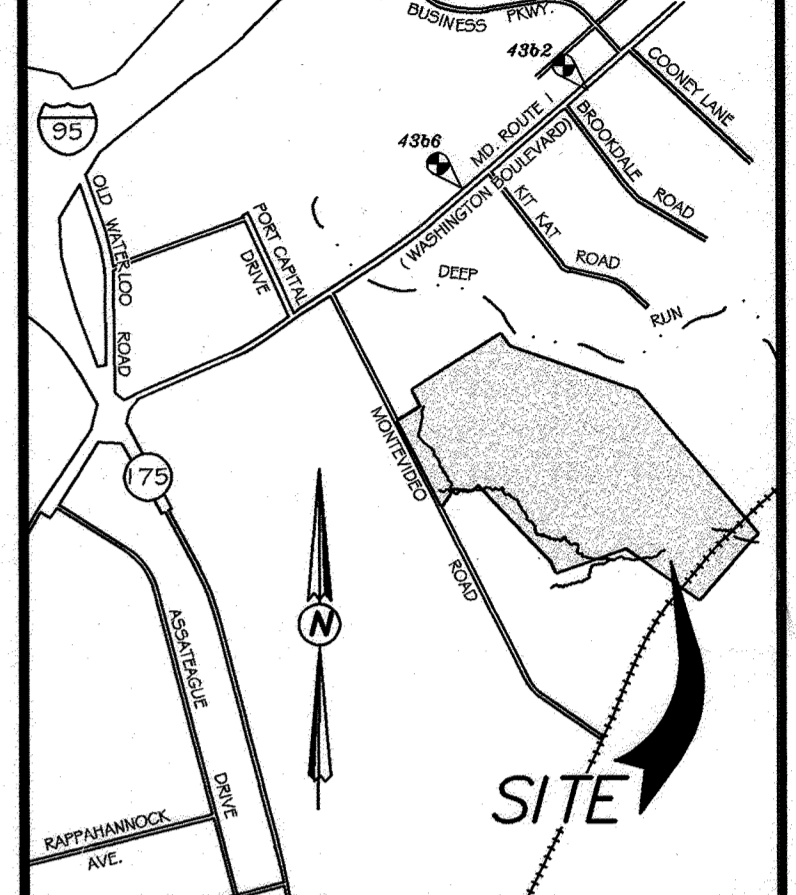
ADDRESS CHART

LOT / PARCEL #	STREET ADDRESS
P 371	7301 MONTEVIDEO ROAD

PROJECT NAME	SECTION / AREA	LOT / PARCEL
BALTIMORE WASHINGTON AUTO EXCHANGE		371
DEED NO. DRL / F	BLOCK NO.	ZONE
4798/685	10	M-2
TAX ZONE	ELEC. DIST.	CENSUS TR.
43	FIRST	6012
WATER CODE	SEWER CODE	
B-01	2221000	



THAYER & ASSOCIATES INC.
 2868 CONSTELLATION WAY
 FINKSBURG, MD 21048-2068
 PHONE/FAX: (410) 840-8797



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Michael J. Kay 11/2/00
 Chief, Division of Land Development Date

John W. Smith 10/16/00
 Chief, Development Engineering Division Date

Gregory J. Smith 11/2/00
 Director, Department of Planning and Zoning Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Carol S. Smith / GS 10/6/00
 U.S.D.A. - Natural Resources Conservation Service Date

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.

Michael J. Kay 10/6/00
 Howard SCD Date

DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

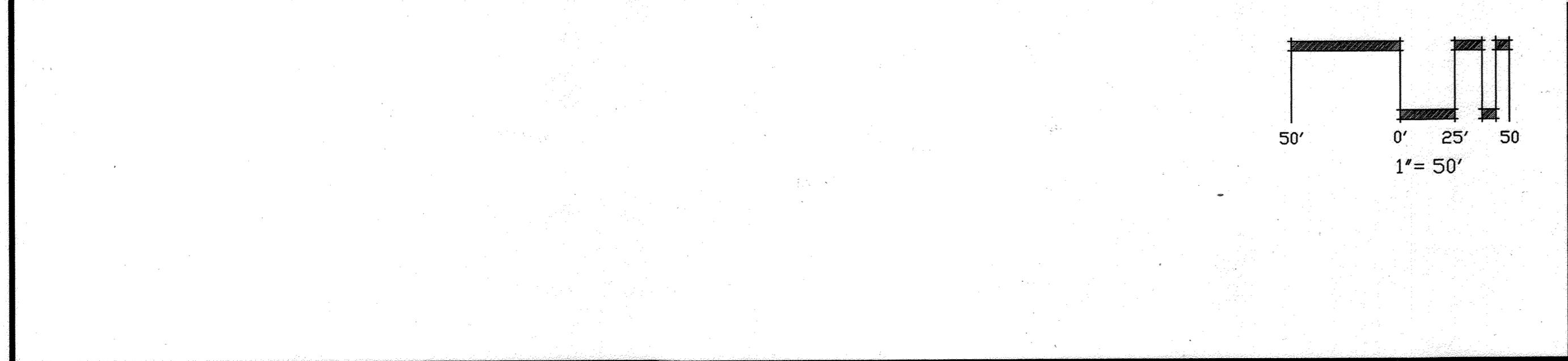
SITE DEVELOPMENT PLAN SHEET

SDP-00-63

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L. 4796 F. 685

SHEET 3 OF 33

SDP-00-63



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G. Damon Thayer 7/8/00
 G. DAMON THAYER Date

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Michael J. Kay 7/8/00
 MICHAEL J. KAY Date

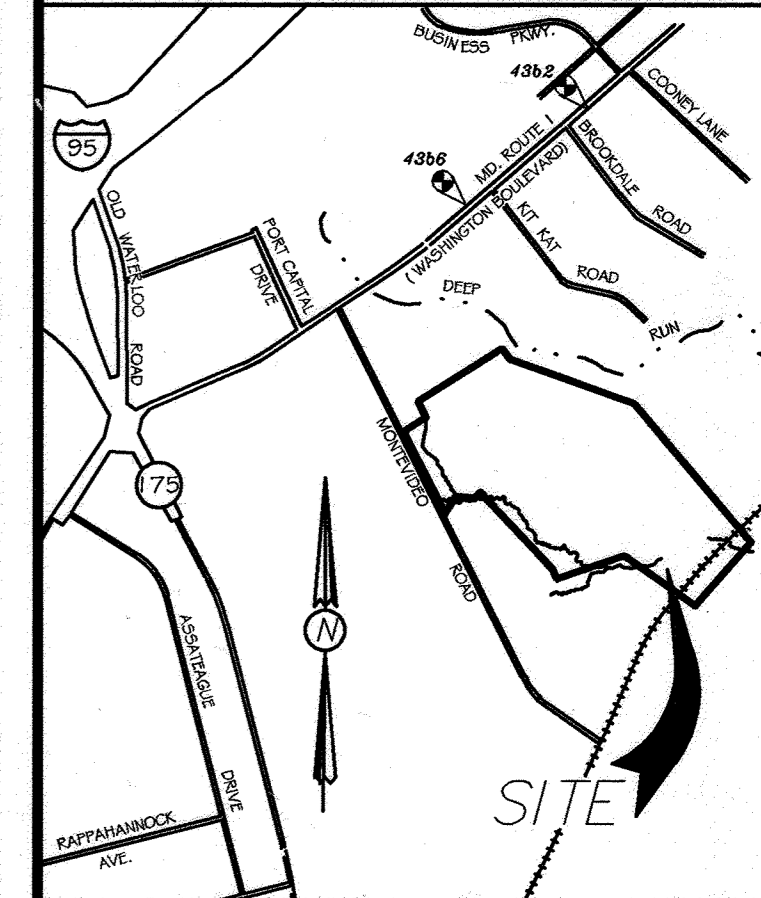
ADDRESS CHART

LOT / PARCEL #	STREET ADDRESS
P.371	7301 MONTEVIDEO ROAD

PROJECT NAME	SECTION / AREA	LOT / PARCEL
BALTIMORE WASHINGTON AUTO EXCHANGE		371

DEED NO. DRL / F	BLOCK NO.	ZONE	TAX ZONE	ELEC. DIST.	CENSUS TR.
4798/685	10	M-2	43	FIRST	6012

WATER CODE	SEWER CODE
8-01	221000



VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development *9/13/03*
 Chief, Development Engineering Division *9/13/03*
 Director, Department of Planning and Zoning *9/13/03*

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
 U.S.D.A. Natural Resources Conservation Service *8/27/03*
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
 Howard SCD *8/27/03*

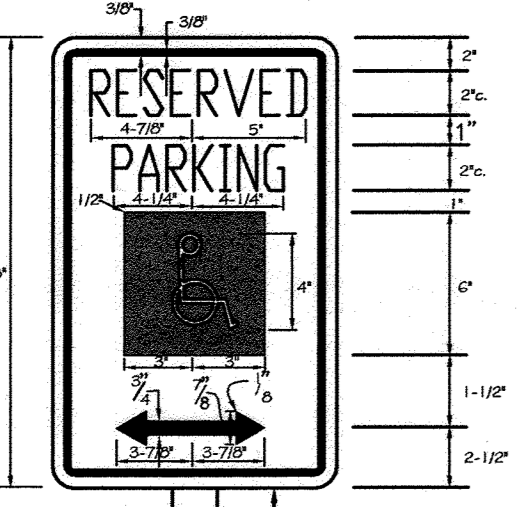
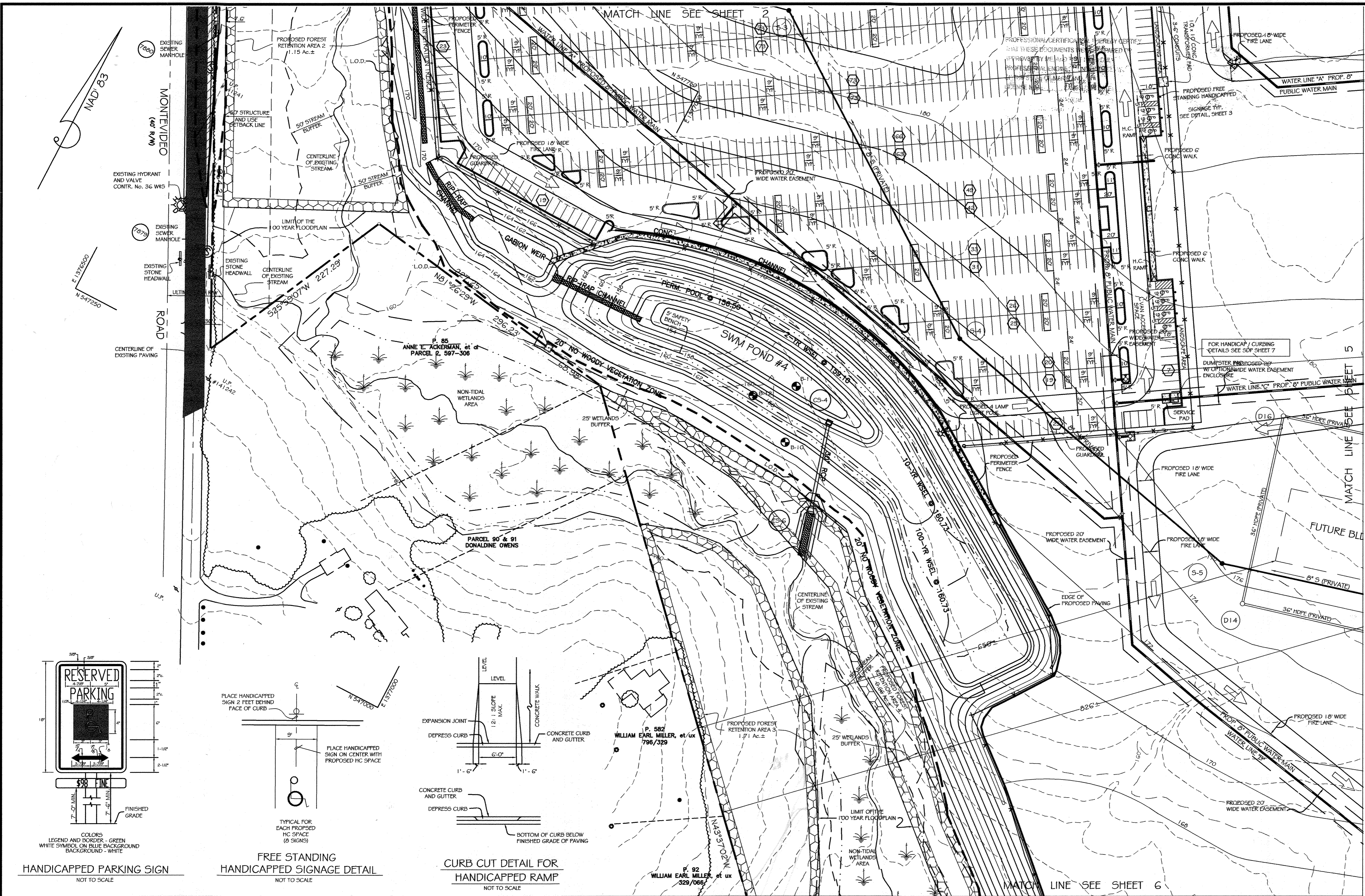
07/29/03 RED-LINE REVISION NO. 2
 03/24/03 RED-LINE REVISION NO. 1
 DATE REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

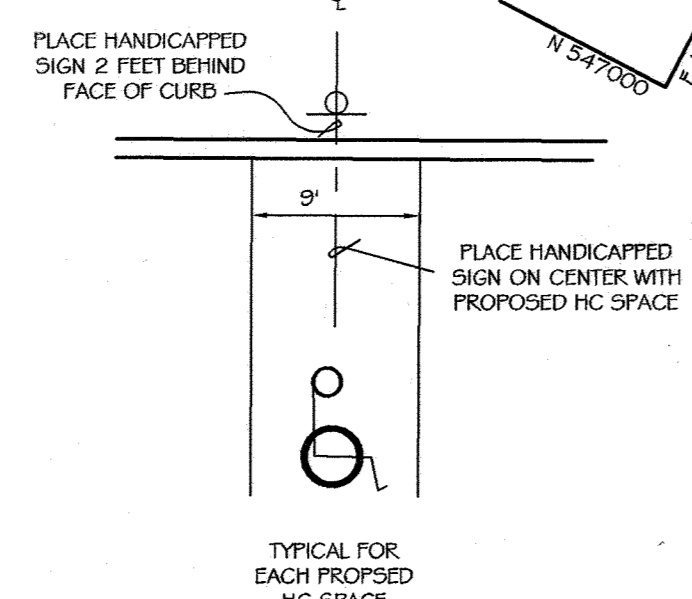
REVISED SITE DEVELOPMENT PLAN SHEET

SDP-00-63

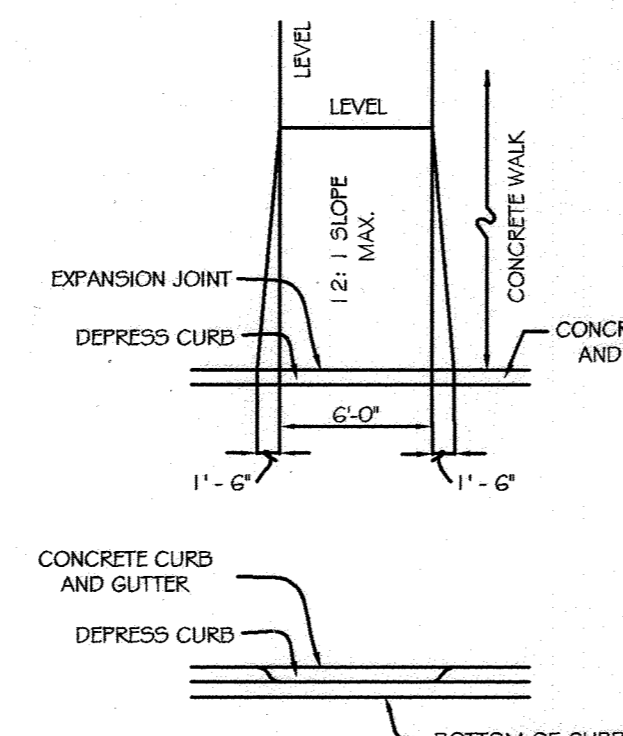
OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-5109
 L. 4798 F. 685



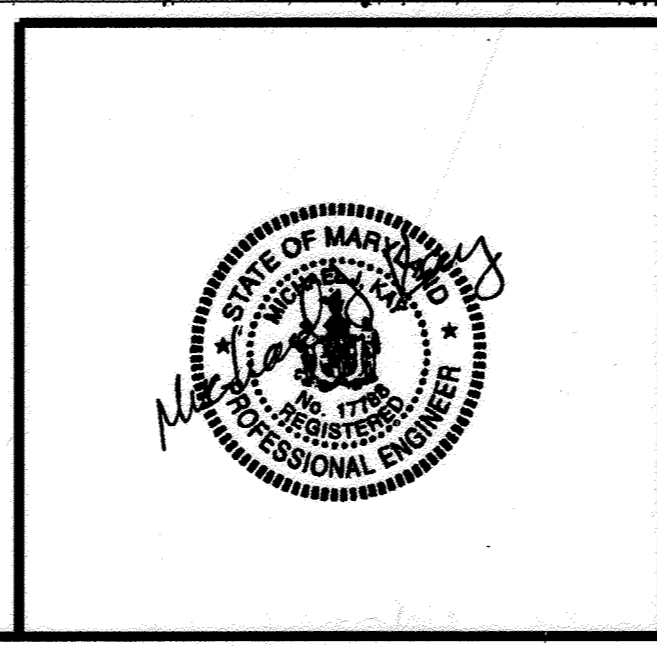
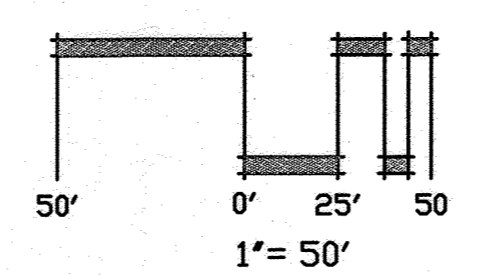
HANDICAPPED PARKING SIGN
 NOT TO SCALE



FREE STANDING HANDICAPPED SIGNAGE DETAIL
 NOT TO SCALE



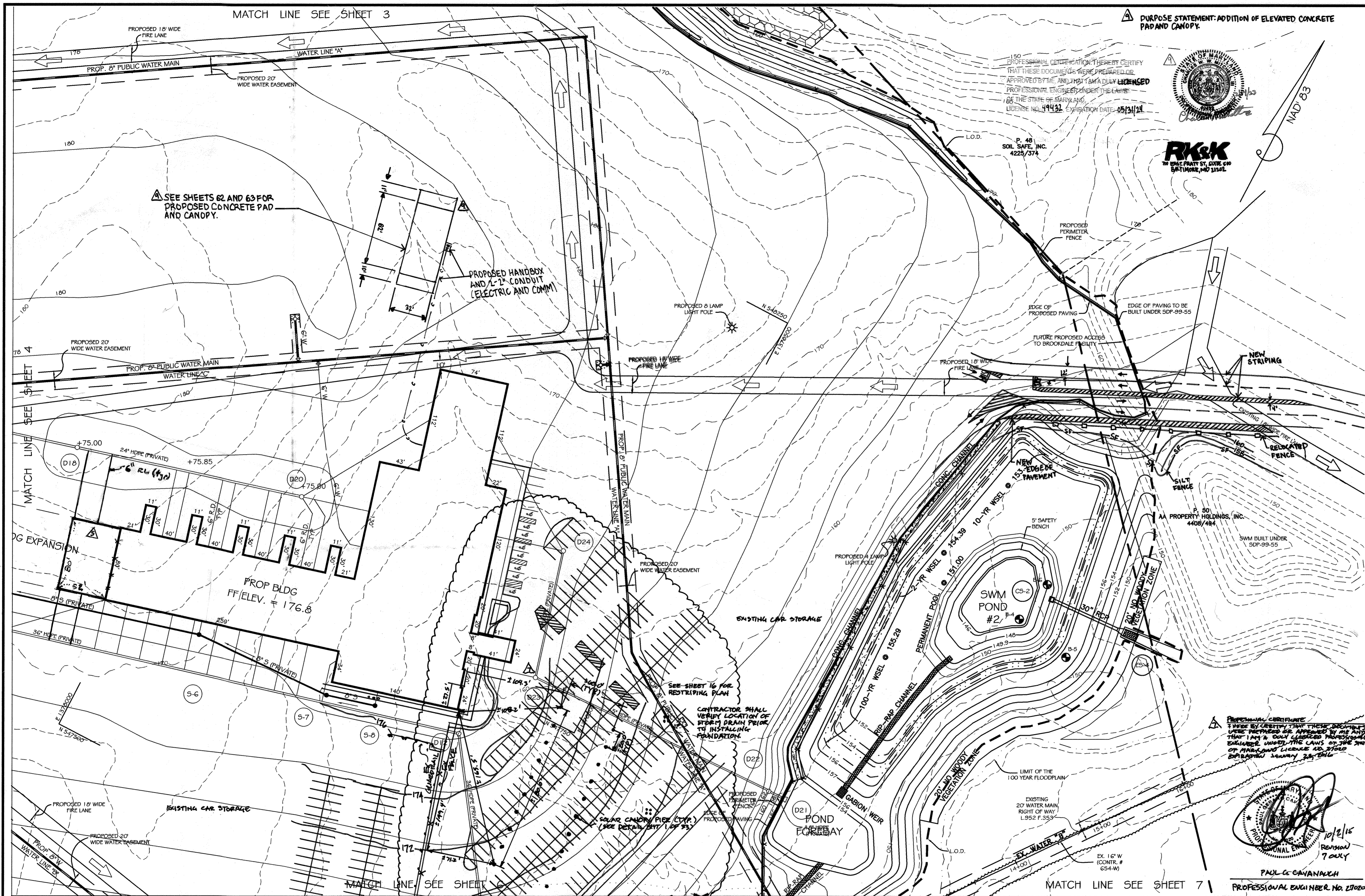
CURB CUT DETAIL FOR HANDICAPPED RAMP
 NOT TO SCALE



DEVELOPER'S CERTIFICATE
 We certify that all development and construction will be done according to the 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. 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 inspection by the Howard Soil Conservation District.
 G. DAMON THAYER *8/24/03*

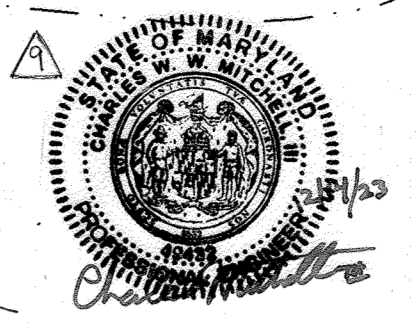
ENGINEER'S CERTIFICATE
 I certify that the plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have 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.
 MICHAEL J. KAY *8/24/03*

ADDRESS CHART					
LOT / PARCEL #	STREET ADDRESS				
P. 371	7301 MONTEVIDEO ROAD				
PROJECT NAME: BALTIMORE WASHINGTON AUTO EXCHANGE					
SECTION / AREA	LOT / PARCEL				
PLAT NO. DRL / T	BLOCK NO.	ZONE	TAX ZONE	ELEC. DIST.	CENSUS TR.
921 / 739	10	M-2	43	FIRST	6012
WATER CODE			SEWER CODE		
---			*****		

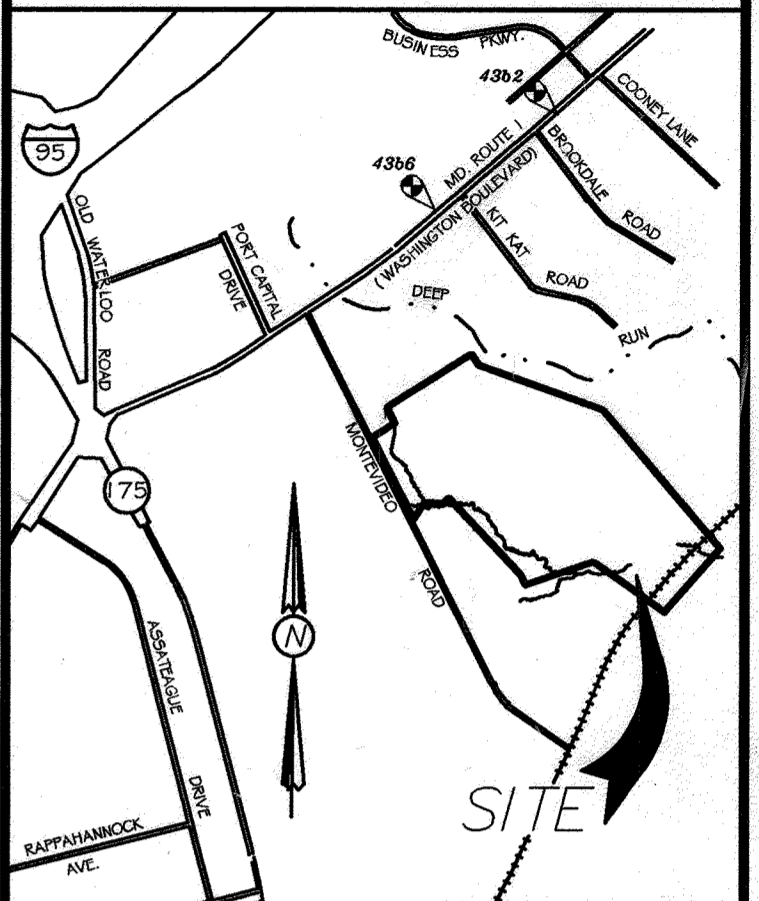


PURPOSE STATEMENT: ADDITION OF ELEVATED CONCRETE PAD AND CANOPY.

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. 49431 EXPIRATION DATE: 05/31/14



THAYER & ASSOCIATES INC.
 2868 CONSTELLATION WAY
 FINKSBURG, MD 21048-2068
 PHONE/FAX: (410) 840-8797



VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andy Hancock 9/8/03
 Chief, Division of Land Development
Paul Danner 9/10/03
 Chief, Development Engineering Division
David J. Cogan 9/16/10
 Director, Department of Planning and Zoning

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
Jim Meyer 8/17/03
 U.S.D.A. - Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
Shawn Mariani 8/17/03
 Howard SCD

12/11/13	ADDITION OF ELEVATED CONCRETE PAD & CANOPY
9/10/15	REVISION TO ADD SOLAR CANOPY
9/19/15	BUILDING ADDITION
11/07	REVISION FOR 4" RIVER TALK
12-29-06	RED-LINE REVISION NO. 2 - ROAD WIDENING
07/29/03	RED-LINE REVISION NO. 2
03/24/03	RED-LINE REVISION NO. 1
DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP NO: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

REVISED
 SITE DEVELOPMENT
 PLAN SHEET

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 6205 RECHTREE DOWNSHOP ROAD
 ATLANTA, GA 30328
 4-739-1-655

SHEET 5 OF 33

FOR REVISION #4
MESSICK & ASSOCIATES
 CONSULTING ENGINEERS
 2170 HOWARD CENTER
 ANNAPOLIS, MARYLAND 21401
 410 266-3212
 MESSICK GROUP IS A MESSICK AND ASSOCIATES COMPANY
 12/17/09
 For Rev. #4 only

Professional Certification: I hereby certify that this document was prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 21591 Expiration Date: 6/14/2011

DEVELOPER'S CERTIFICATE
 "We certify that all development and construction will be done according 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. 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 inspection by the Howard Soil Conservation District."
G. Damon Thayer 8/04/03
 G. DAMON THAYER

ENGINEER'S CERTIFICATE
 "I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."
Michael J. Kay 8/04/03
 MICHAEL J. KAY

ADDRESS CHART

LOT / PARCEL #	STREET ADDRESS
P. 371	7301 MONTEVIDEO ROAD

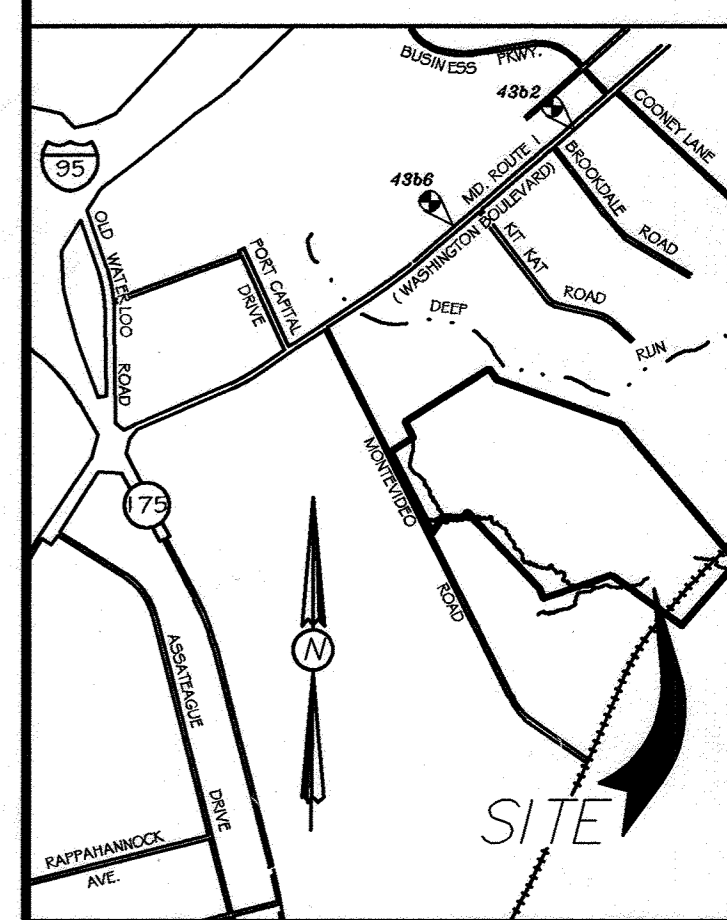
PROJECT NAME	SECTION / AREA	LOT / PARCEL
BALTIMORE WASHINGTON AUTO EXCHANGE		371

PLAT NO. DRL / F	BLOCK NO.	ZONE	TAX ZONE	ELEC. DIST.	CENSUS TR.
921 / 739	10	M-2	43	FIRST	6012

WATER CODE	SEWER CODE
---	----



THAYER & ASSOCIATES INC.
 2868 CONSTELLATION WAY
 FINKSBURG, MD 21048-2068
 PHONE/FAX: (410) 840-8797



VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Paul Hamilton 9/15/03
 Chief, Division of Land Development
John Danner 9/16/03
 Chief, Development Engineering Division
David J. Geyer 9/17/03
 Director, Department of Planning and Zoning

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.
Jan Myer 8/17/03
 U.S.D.A. - Natural Resources Conservation Service
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Sharon Mawhin 8/17/03
 Howard SOI

DATE	REVISIONS
12/03	ISSUE FOR THE FINAL
07/29/03	RED-LINE REVISION NO. 2
03/24/03	RED-LINE REVISION NO. 1

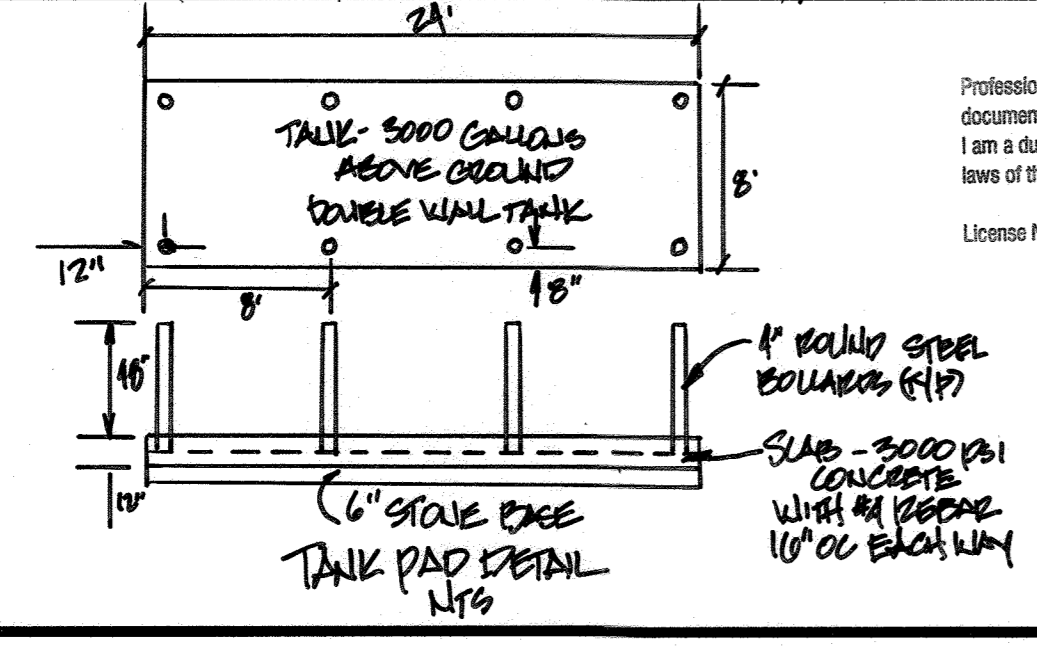
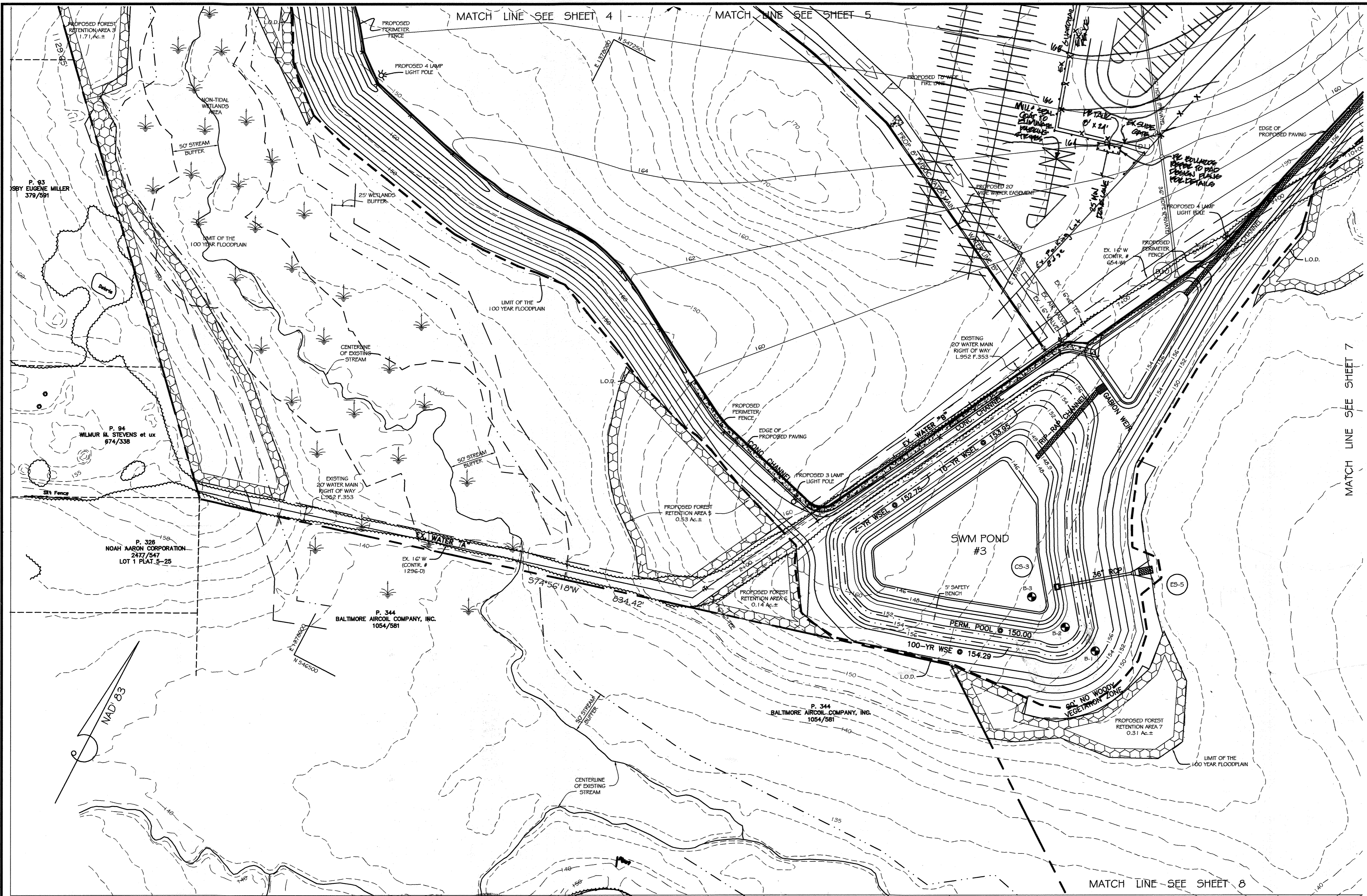
BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

REVISED SITE DEVELOPMENT PLAN SHEET

SDP-00-63

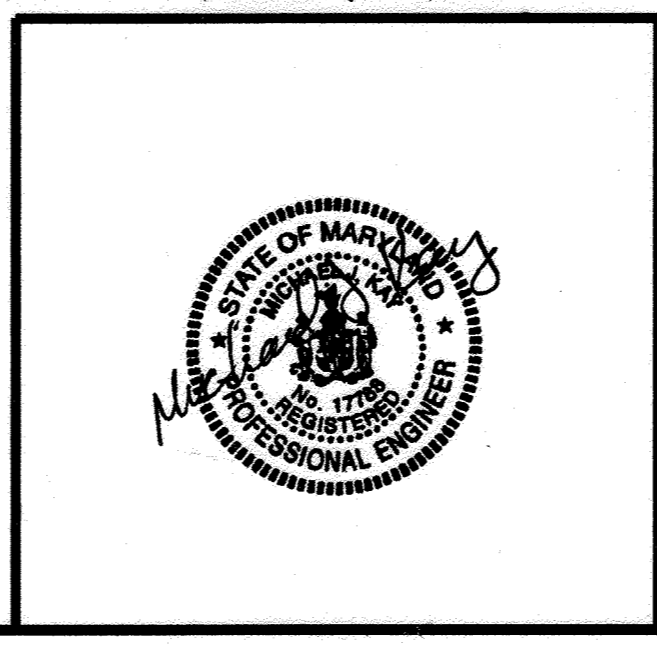
OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L. 4790 F. 685

SHEET 6 OF 33



Professional Certificate. I hereby certify that this document was prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 21591 Expiration Date: 5/14/2011

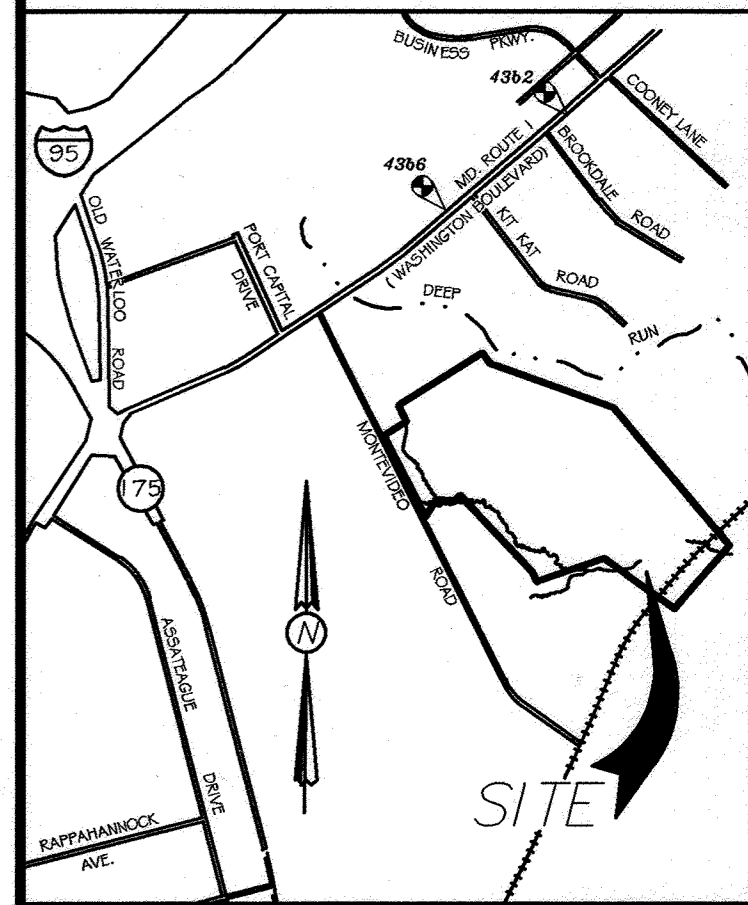
For Review Only
MESSICK & ASSOCIATES
 CONSULTING ENGINEERS
 2120 BISHOP COURT
 ANNAPOLIS, MARYLAND 21401
 410 266-3212
 MESSICK GROUP IS MESSICK AND ASSOCIATES



DEVELOPER'S CERTIFICATE
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G. Damon Thayer 8/04/03
 G. DAMON THAYER Date

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Michael J. Kay 8/04/03
 MICHAEL J. KAY Date

ADDRESS CHART					
LOT / PARCEL #	STREET ADDRESS				
P. 371	7301 MONTEVIDEO ROAD				
PROJECT NAME	SECTION / AREA				
BALTIMORE WASHINGTON AUTO EXCHANGE	371				
PLAT NO. DRL / F	BLOCK NO.	ZONE	TAX ZONE	ELEC. DIST.	CENSUS TR.
921 / 739	10	M-2	43	FIRST	6012
WATER CODE	SEWER CODE				
***	*****				



VICINITY MAP
SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Janis Howard 9/5/03
 Chief, Division of Land Development
Mark J. Legler 9/10/03
 Chief, Development Engineering Division
Mark J. Legler 9/10/03
 Director, Department of Planning and Zoning

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.
 U.S.D.A.-Natural Resources Conservation Service
 These Plans For Small Pond Construction Meet The Requirements For Erosion And Sediment Control Meet The Requirements For HOWARD SOIL CONSERVATION DISTRICT.
 Howard Soil Conservation District

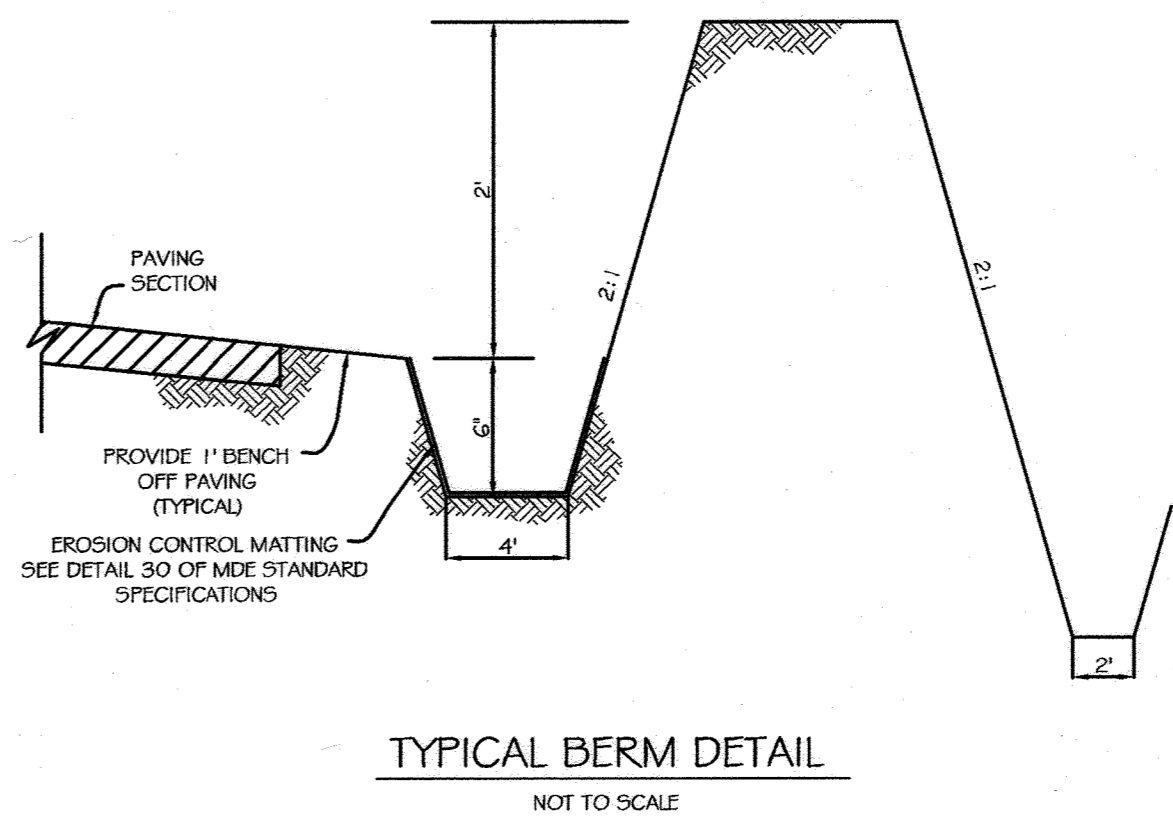
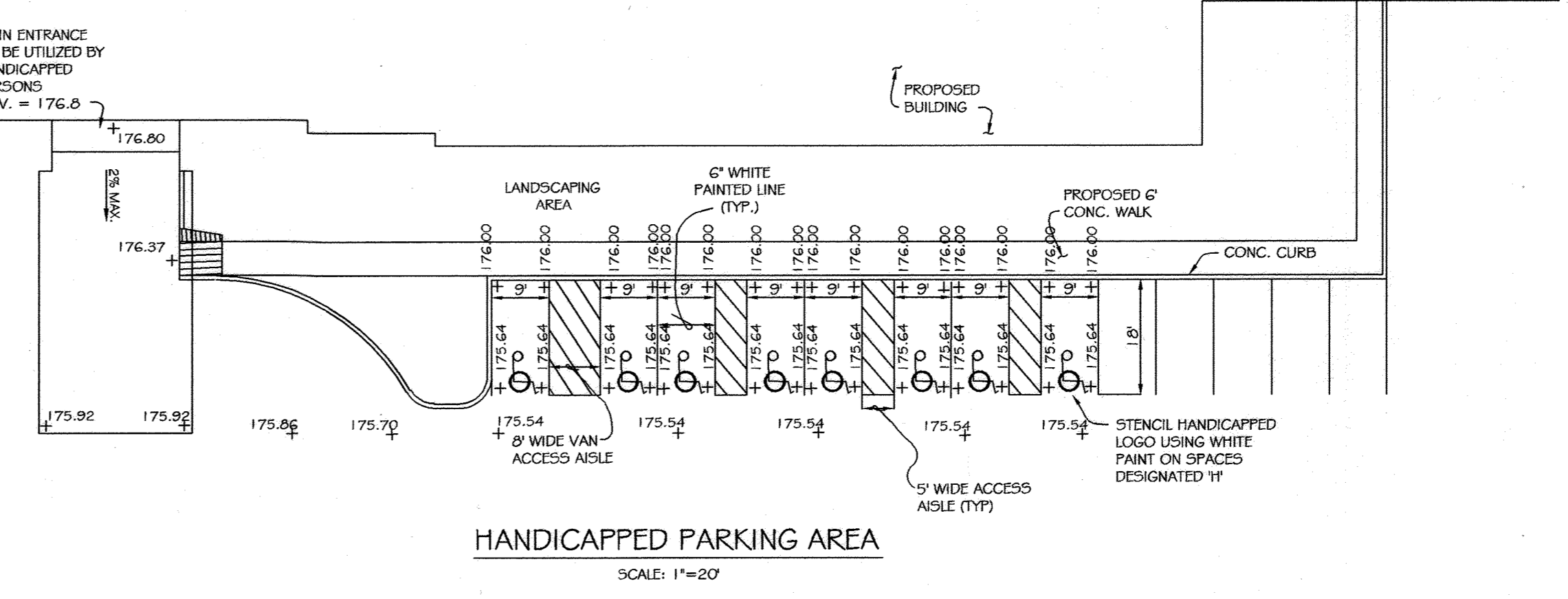
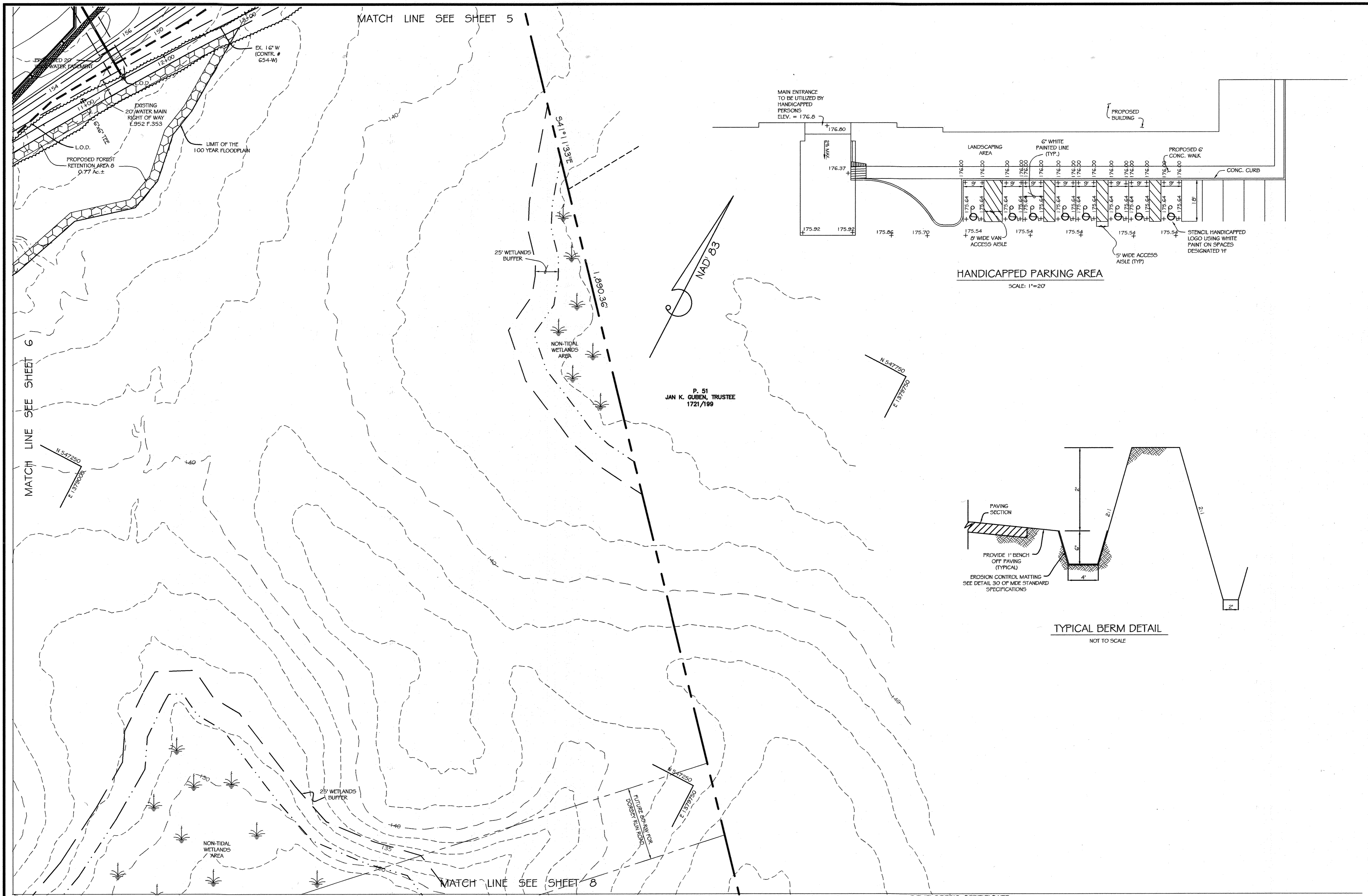
07/29/03	RED-LINE REVISION NO. 2
03/24/03	RED-LINE REVISION NO. 1
DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

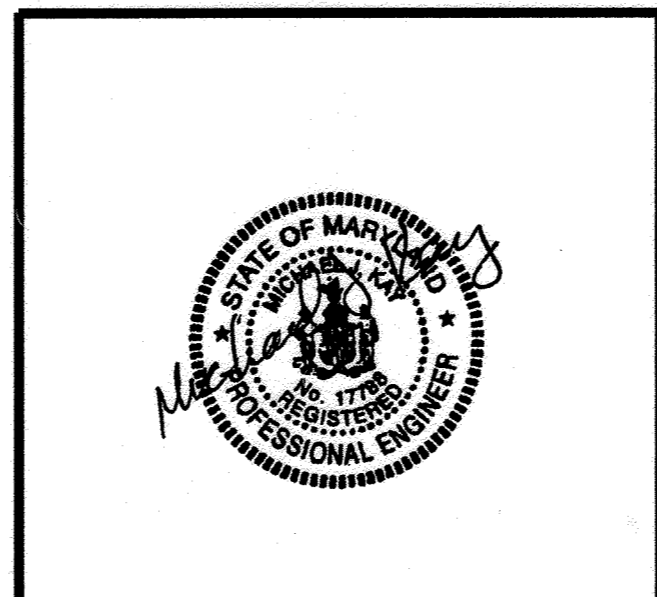
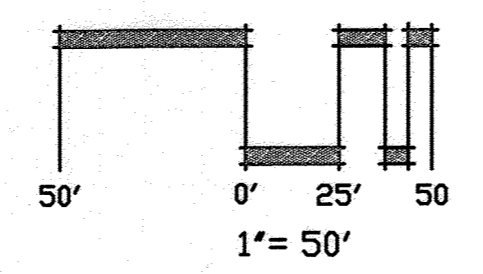
REVISED SITE DEVELOPMENT PLAN SHEET

SDP-00-63

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPOLIS DRIVE
 NASHVILLE, TN 37211-3109
 L. 4798 F. 685



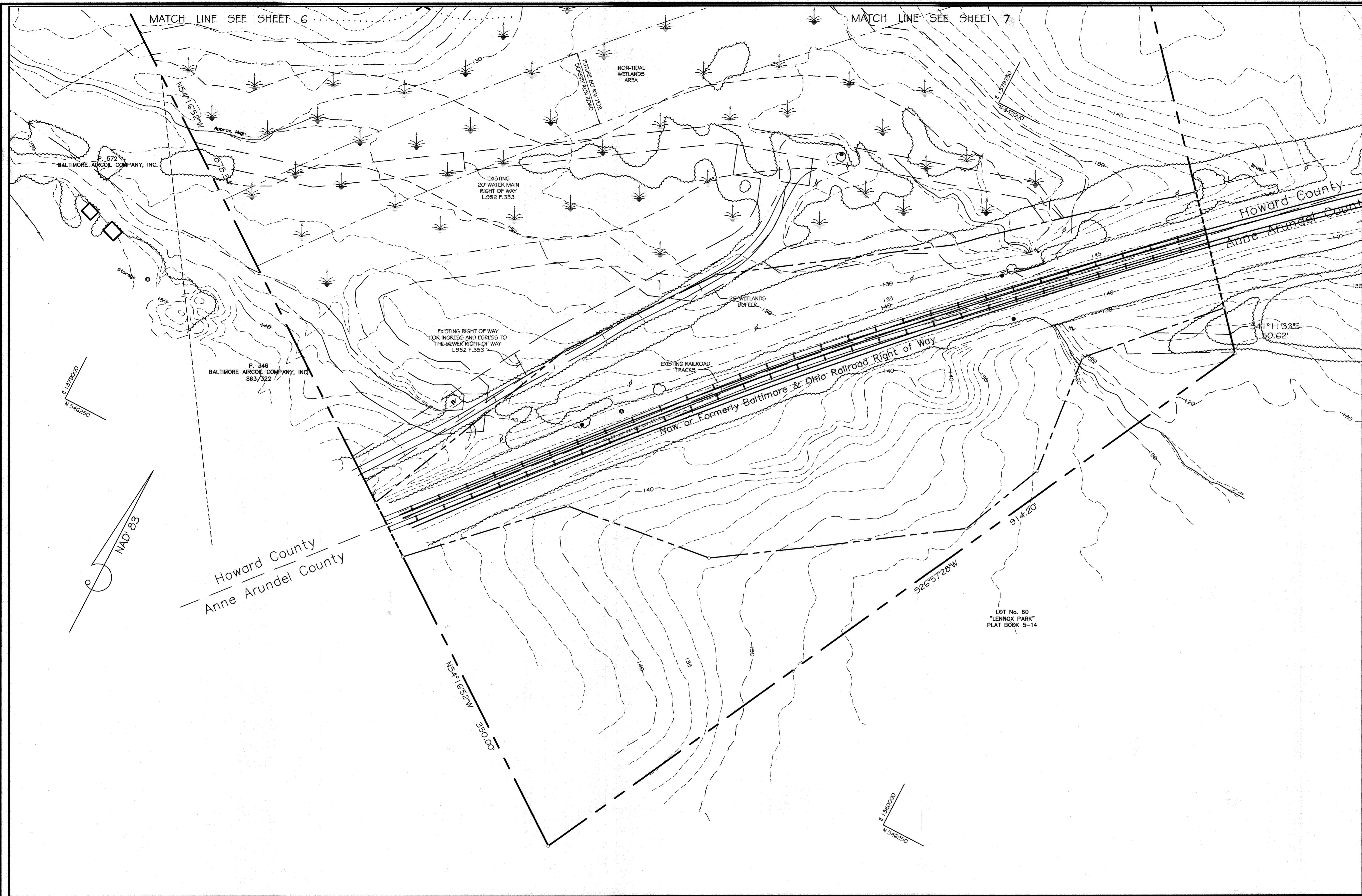
P. 51
 JAN K. GUBEN, TRUSTEE
 1721/199



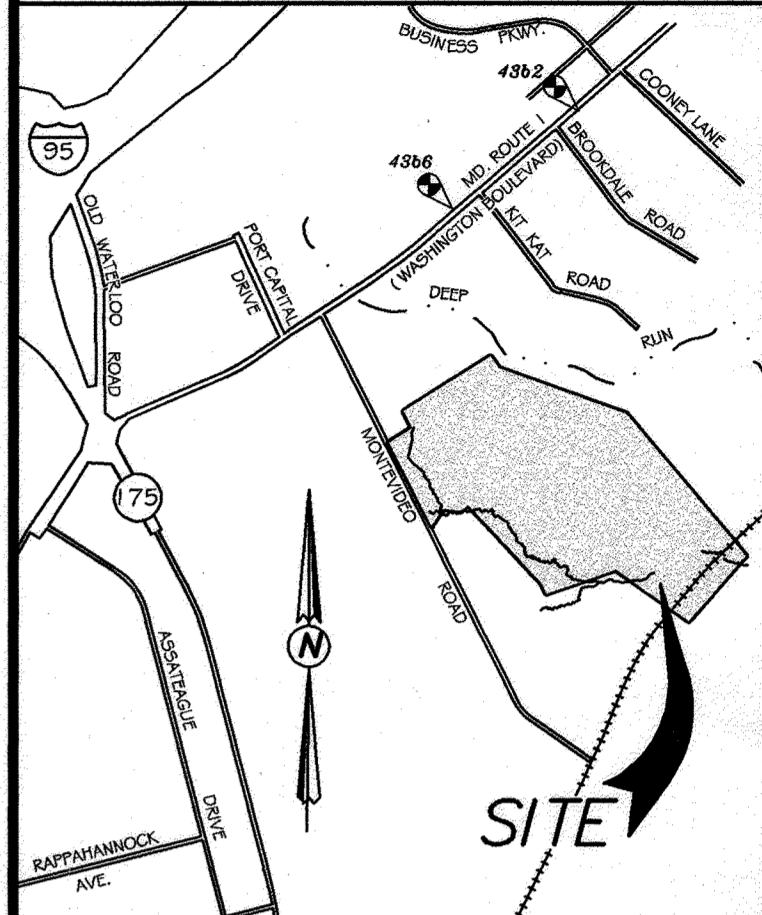
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G. Damon Thayer 9/10/03
 G. DAMON THAYER Date

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Michael J. Kay 9/10/03
 MICHAEL J. KAY Date

ADDRESS CHART	
LOT / PARCEL #	STREET ADDRESS
P. 371	7301 MONTEVIDEO ROAD
PROJECT NAME: BALTIMORE WASHINGTON AUTO EXCHANGE SECTION / AREA: 371 LOT / PARCEL: 371	
PLAT NO. OR L / F: 921 / 739	BLOCK NO.: 10 ZONE: M-2 TAX ZONE: 43 ELEC. DIST.: FIRST CENSUS TR.: 6012
WATER CODE: ***	SEWER CODE: *****



THAYER & ASSOCIATES INC.
 2868 CONSTELLATION WAY
 FINKSBURG, MD 21048-2068
 PHONE/FAX: (410) 840-8797



VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development *Richard Blund* 11/2/00
 Chief, Development Engineering Division *John D. ...* 10/11/00
 Director, Department of Planning and Zoning *John D. ...* 11/2/00

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.
 U.S.D.A. Natural Resources Conservation Service
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
 Howard SCP

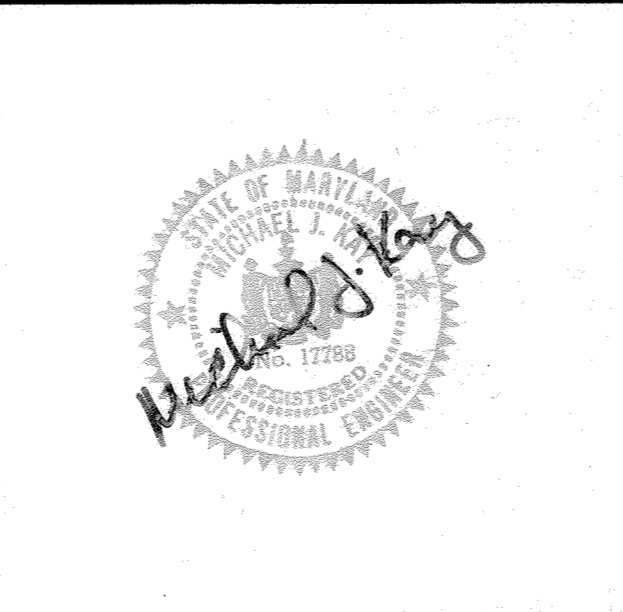
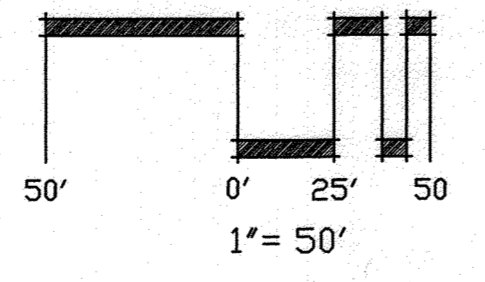
DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

SITE DEVELOPMENT PLAN SHEET

SDP-00-63

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L-4796 F. 625



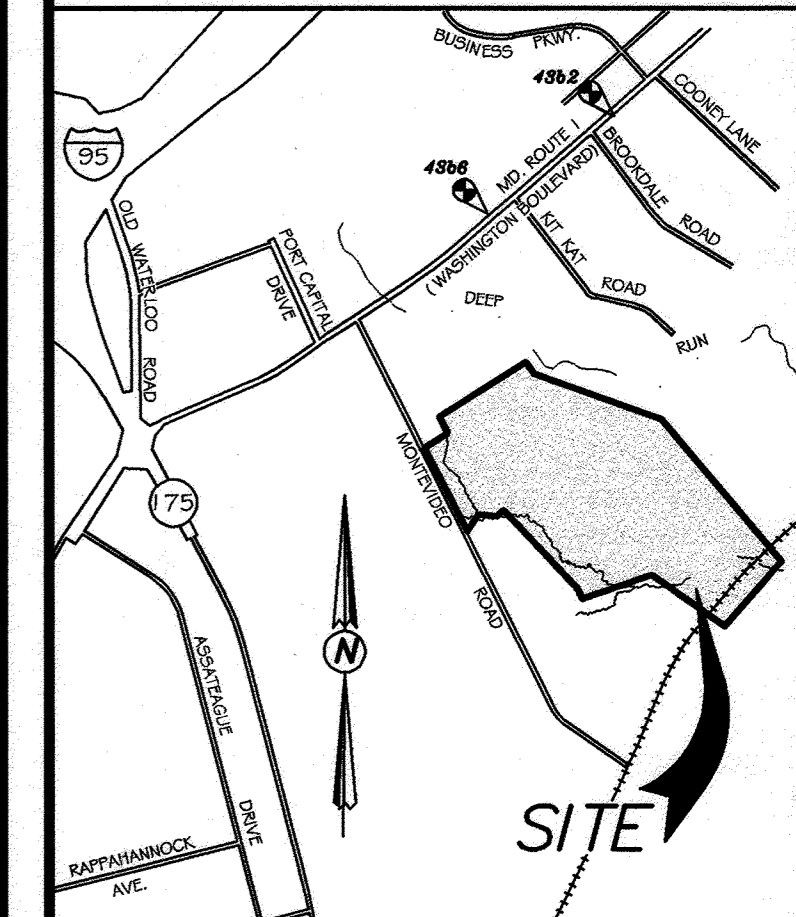
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G. Damon Thayer 7/8/00
 G. DAMON THAYER Date

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Michael J. Kay 7/8/00
 MICHAEL J. KAY Date

ADDRESS CHART					
LOT / PARCEL #	STREET ADDRESS				
P. 371	7301 MONTICIZED ROAD				
PROJECT NAME			SECTION / AREA	LOT / PARCEL	
BALTIMORE WASHINGTON AUTO EXCHANGE			43	371	
DEED NO. DRL / F	BLOCK NO.	ZONE	TAX ZONE	ELEG. DIST.	CENSUS TR.
4798 / 685	10	M-2	43	FIRST	6012
WATER CODE			SEWER CODE		
B-01			2221000		

SHEET 8 OF 33

SDP-00-63



VICINITY MAP
 SCALE: 1"=200'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/2/00
 Chief, Division of Land Development Date
[Signature] 10/11/00
 Chief, Development Engineering Division Date
[Signature] 11/2/00
 Director, Department of Planning and Zoning Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
[Signature] 10/16/00
 U.S.D.A. Natural Resources Conservation Service Date
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 10/16/00
 Howard SCD Date

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No. 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: 1"=200' DATE: JUNE 14, 2000

STORMWATER MANAGEMENT
 DETAILS AND
 DRAINAGE AREA MAP

SDP-00-63

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L. 4798 F. 685

SOILS LEGEND

SOIL	NAME	CLASS
** BeB2	Beltsville silt loam, 1 to 5 percent slopes, moderately eroded	C
** BeC2	Beltsville silt loam, 5 to 10 percent slopes, moderately eroded	C
** Em	Elkton silt loam	D
** Ha	Hatboro silt loam	D
* IaB	Iuka loam, local alluvium, 1 to 5 percent slopes	C
** Li	Leonardtown silt loam	D
ScB	Sandy and clayey land, gently sloping	?
ScD	Sandy and clayey land, moderately sloping	?
ScE	Sandy and clayey land, moderately steep	?
SIC2	Sassafras loam, 5 to 10 percent slopes, moderately eroded	B

NOTES:
 * Hydric soils and/or contains hydric inclusions
 ** May contain hydric inclusions
 † Generally only within 100-year floodplain areas

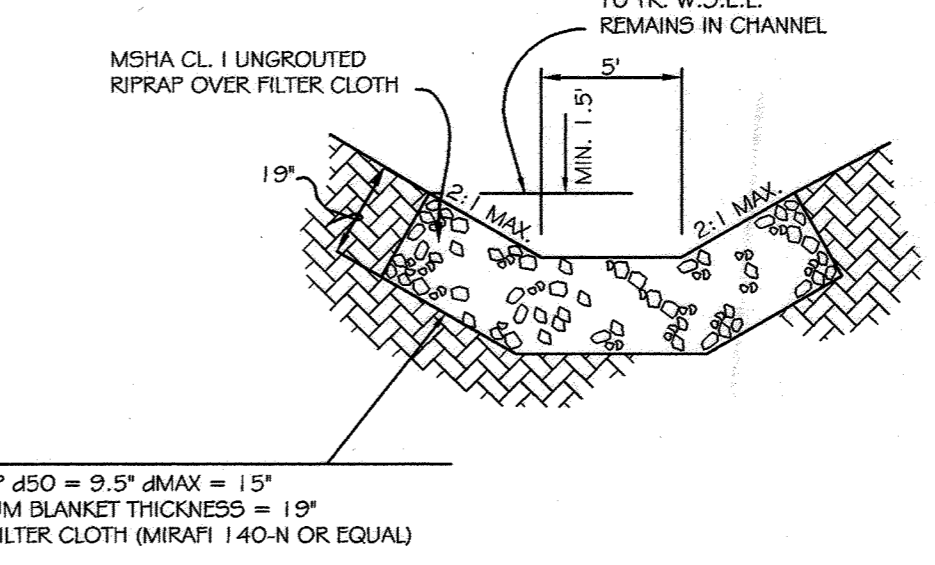
GENERAL NOTES

- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D-1557 OR AASHTO T-160)
- CONSTRUCTED TOP OF EMBANKMENT VARIED AS TO SETTLE LEVEL TO DESIGN ELEVATION.

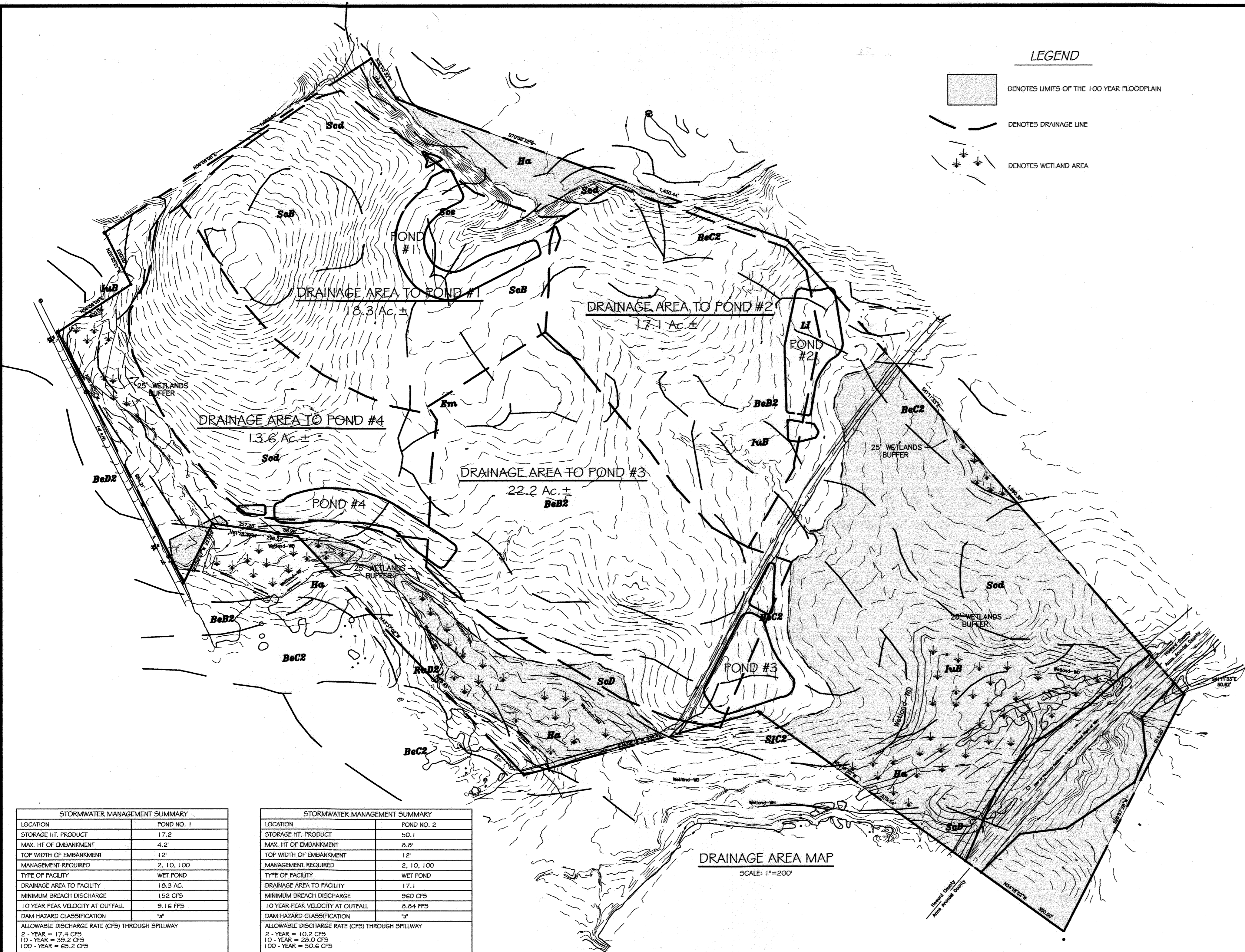
CLAY CUTOFF AND CORE TRENCH NOTES

APPROXIMATE BOTTOM OF CUTOFF TRENCH EXCAVATED TO MINIMUM OF 4 FEET DEPTH. MATERIALS TO BE USED SHOULD CONSIST OF SOILS CLASSIFIED AS GC, SC, CH OR CL PER ASTM D-2487 AND FREE OF ANY TOPSOIL OR ORGANIC MATERIAL. CORE SHALL EXTEND UP TO THE 10-YEAR WATER SURFACE ELEVATION AS INDICATED.
 MINIMUM WIDTH = 4'
 SIDE SLOPES 2:1 ABOVE GROUND
 1:1 ABOVE GROUND
 COMPACTION: ASTM D-2216 (95% OF STANDARD PROCTOR DENSITY)

NOTE: FOR ADDITIONAL CONSTRUCTION SPECIFICATIONS NOT MENTIONED SEE RIP-RAP OUTFLOW PROTECTION DETAIL AND TABLE ON SHEET 24 OF 33.



TYPICAL SECTION RIPRAP OUTFALL CHANNEL
 NOT TO SCALE



DRAINAGE AREA MAP
 SCALE: 1"=200'

STORMWATER MANAGEMENT SUMMARY

LOCATION	POND NO. 1	
STORAGE HT. PRODUCT	17.2	
MAX. HT OF EMBANKMENT	4.2'	
TOP WIDTH OF EMBANKMENT	12'	
MANAGEMENT REQUIRED	2, 10, 100	
TYPE OF FACILITY	WET POND	
DRAINAGE AREA TO FACILITY	10.3 AC.	
MINIMUM BREACH DISCHARGE	152 CFS	
10 YEAR PEAK VELOCITY AT OUTFALL	9.1 G FFS	
DAM HAZARD CLASSIFICATION	"A"	
ALLOWABLE DISCHARGE RATE (CFS) THROUGH SPILLWAY		
2 - YEAR = 17.4 CFS		
10 - YEAR = 39.2 CFS		
100 - YEAR = 65.2 CFS		
ULTIMATE CONDITION PEAK DISCHARGE RATE (CFS)		
2 - YEAR = 65.1 CFS		
10 - YEAR = 106.4 CFS		
100 - YEAR = 151.5 CFS		
DISCHARGE RATE (CFS) THROUGH SPILLWAY WITH SWM		
FREQUENCY	PEAK RATE	WATER SURFACE ELEVATION
2 - YEAR	13.8	168.89
10 - YEAR	38.6	163.58
100 - YEAR	59.1	170.21

STORMWATER MANAGEMENT SUMMARY

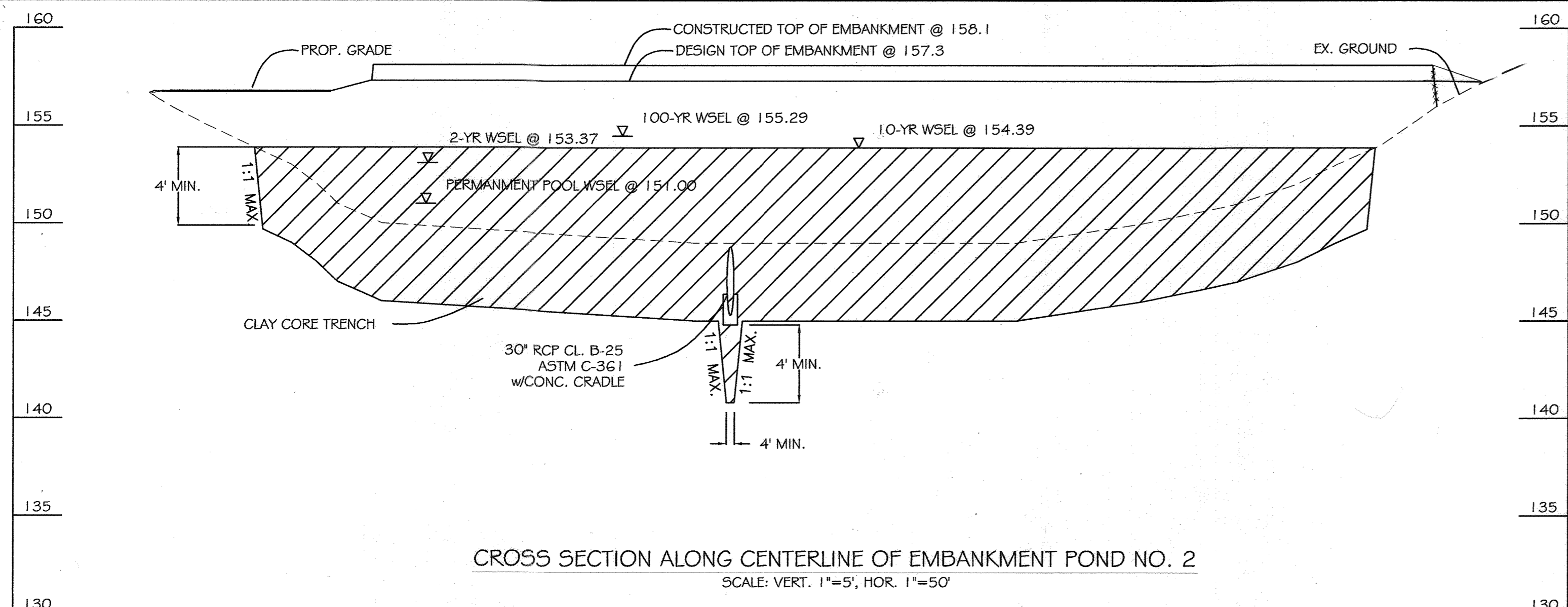
LOCATION	POND NO. 2	
STORAGE HT. PRODUCT	50.1	
MAX. HT OF EMBANKMENT	8.0'	
TOP WIDTH OF EMBANKMENT	12'	
MANAGEMENT REQUIRED	2, 10, 100	
TYPE OF FACILITY	WET POND	
DRAINAGE AREA TO FACILITY	17.1	
MINIMUM BREACH DISCHARGE	960 CFS	
10 YEAR PEAK VELOCITY AT OUTFALL	8.04 FFS	
DAM HAZARD CLASSIFICATION	"A"	
ALLOWABLE DISCHARGE RATE (CFS) THROUGH SPILLWAY		
2 - YEAR = 10.2 CFS		
10 - YEAR = 29.0 CFS		
100 - YEAR = 50.6 CFS		
ULTIMATE CONDITION PEAK DISCHARGE RATE (CFS)		
2 - YEAR = 62.2 CFS		
10 - YEAR = 102.1 CFS		
100 - YEAR = 145.4 CFS		
DISCHARGE RATE (CFS) THROUGH SPILLWAY WITH SWM		
FREQUENCY	PEAK RATE	WATER SURFACE ELEVATION
2 - YEAR	9.7	153.37
10 - YEAR	27.8	154.39
100 - YEAR	50.6	155.29

STORMWATER MANAGEMENT SUMMARY

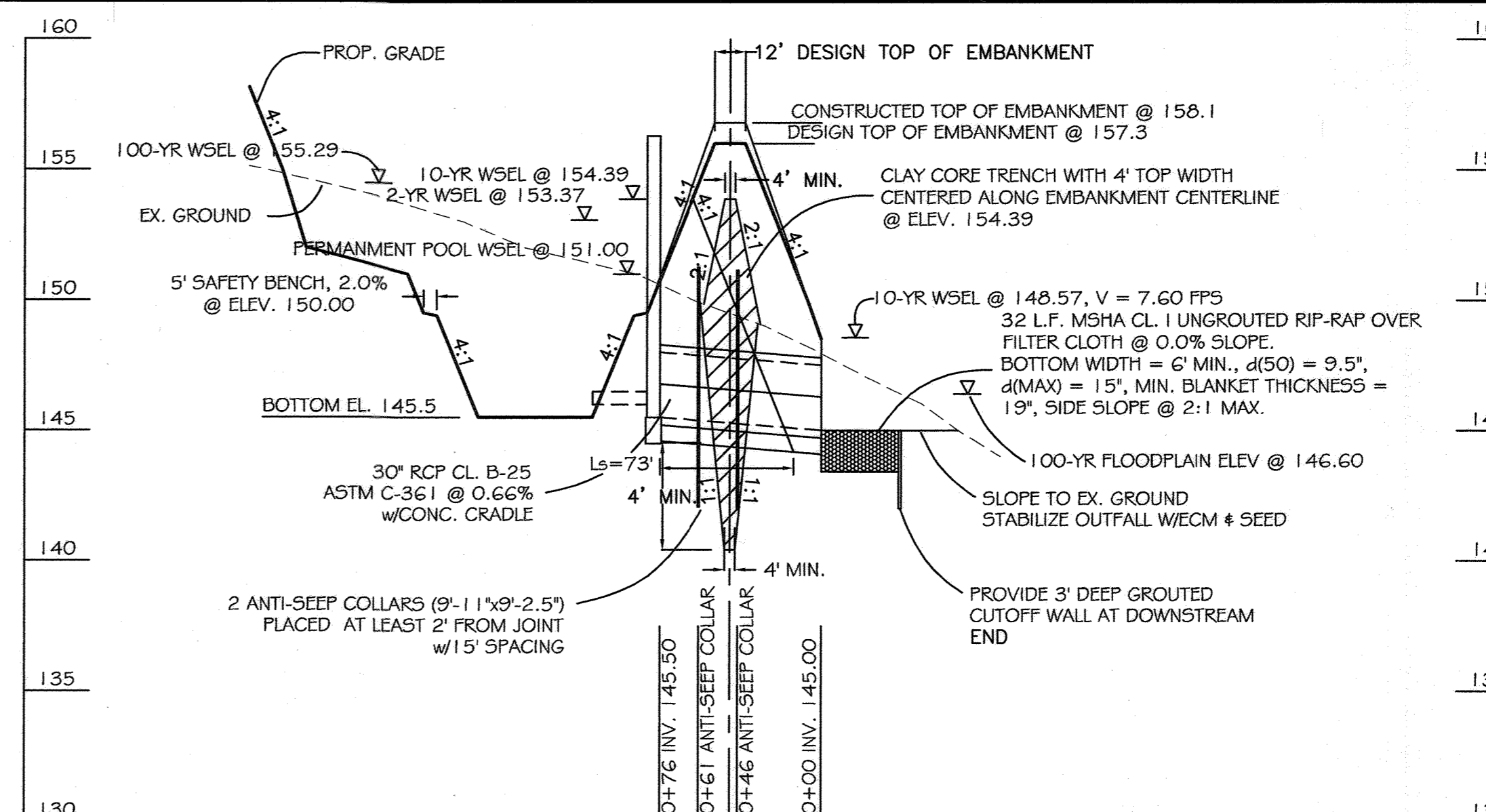
LOCATION	POND NO. 3	
STORAGE HT. PRODUCT	79.0	
MAX. HT OF EMBANKMENT	7.4'	
TOP WIDTH OF EMBANKMENT	12'	
MANAGEMENT REQUIRED	2, 10, 100	
TYPE OF FACILITY	WET POND	
DRAINAGE AREA TO FACILITY	22.2	
MINIMUM BREACH DISCHARGE	883 CFS	
10 YEAR PEAK VELOCITY AT OUTFALL	9.95 FFS	
DAM HAZARD CLASSIFICATION	"A"	
ALLOWABLE DISCHARGE RATE (CFS) THROUGH SPILLWAY		
2 - YEAR = 14.4 CFS		
10 - YEAR = 38.2 CFS		
100 - YEAR = 68.4 CFS		
ULTIMATE CONDITION PEAK DISCHARGE RATE (CFS)		
2 - YEAR = 69.3 CFS		
10 - YEAR = 114.7 CFS		
100 - YEAR = 164.3 CFS		
DISCHARGE RATE (CFS) THROUGH SPILLWAY WITH SWM		
FREQUENCY	PEAK RATE	WATER SURFACE ELEVATION
2 - YEAR	8.4	152.75
10 - YEAR	24.3	153.98
100 - YEAR	46.7	154.99

STORMWATER MANAGEMENT SUMMARY

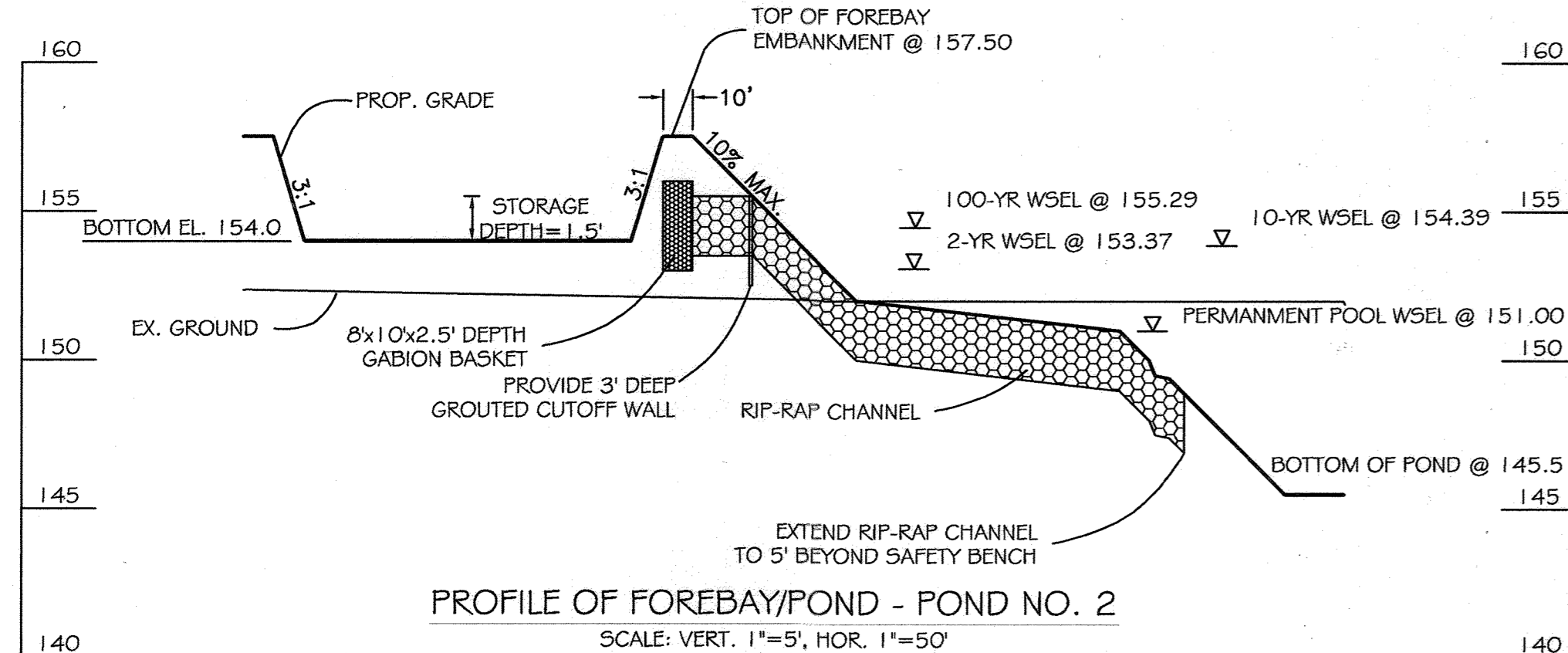
LOCATION	POND NO. 4	
STORAGE HT. PRODUCT	29.8	
MAX. HT OF EMBANKMENT	5'	
TOP WIDTH OF EMBANKMENT	12'	
MANAGEMENT REQUIRED	2, 10, 100	
TYPE OF FACILITY	WET POND	
DRAINAGE AREA TO FACILITY	13.6	
MINIMUM BREACH DISCHARGE	532 CFS	
10 YEAR PEAK VELOCITY AT OUTFALL	11.84 FFS	
DAM HAZARD CLASSIFICATION	"A"	
ALLOWABLE DISCHARGE RATE (CFS) THROUGH SPILLWAY		
2 - YEAR = 12.0 CFS		
10 - YEAR = 27.8 CFS		
100 - YEAR = 46.8 CFS		
ULTIMATE CONDITION PEAK DISCHARGE RATE (CFS)		
2 - YEAR = 48.5 CFS		
10 - YEAR = 79.5 CFS		
100 - YEAR = 112.8 CFS		
DISCHARGE RATE (CFS) THROUGH SPILLWAY WITH SWM		
FREQUENCY	PEAK RATE	WATER SURFACE ELEVATION
2 - YEAR	7.1	159.10
10 - YEAR	22.1	160.00
100 - YEAR	43.3	160.73



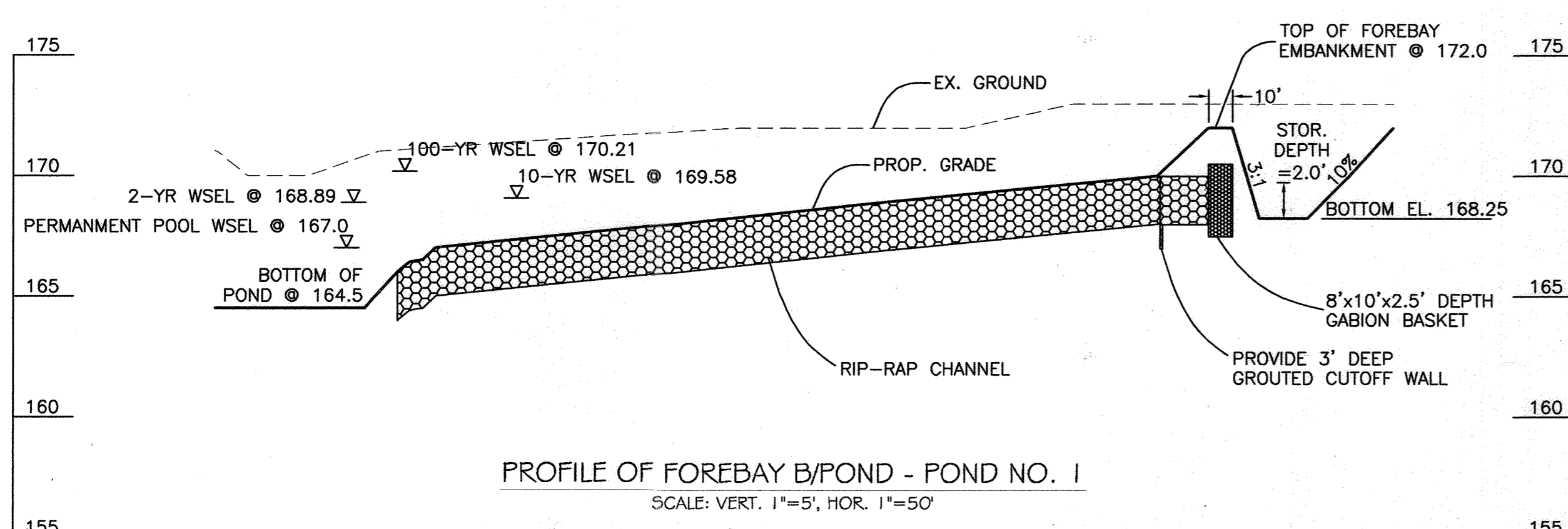
CROSS SECTION ALONG CENTERLINE OF EMBANKMENT POND NO. 2
SCALE: VERT. 1"=5', HOR. 1"=50'



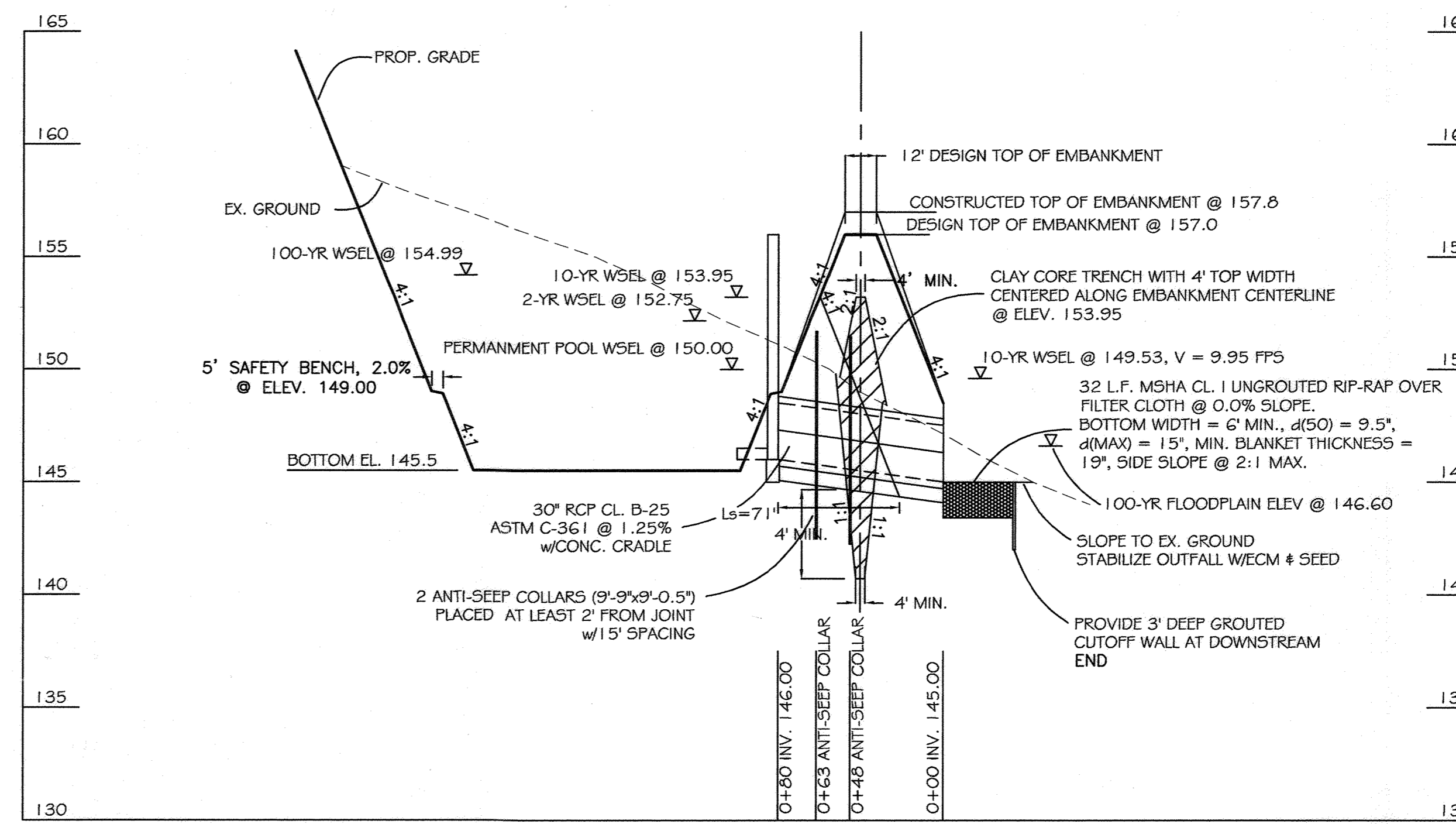
PROFILE OF PRINCIPAL/EMERGENCY SPILLWAY POND NO. 2
SCALE: VERT. 1"=5', HOR. 1"=50'



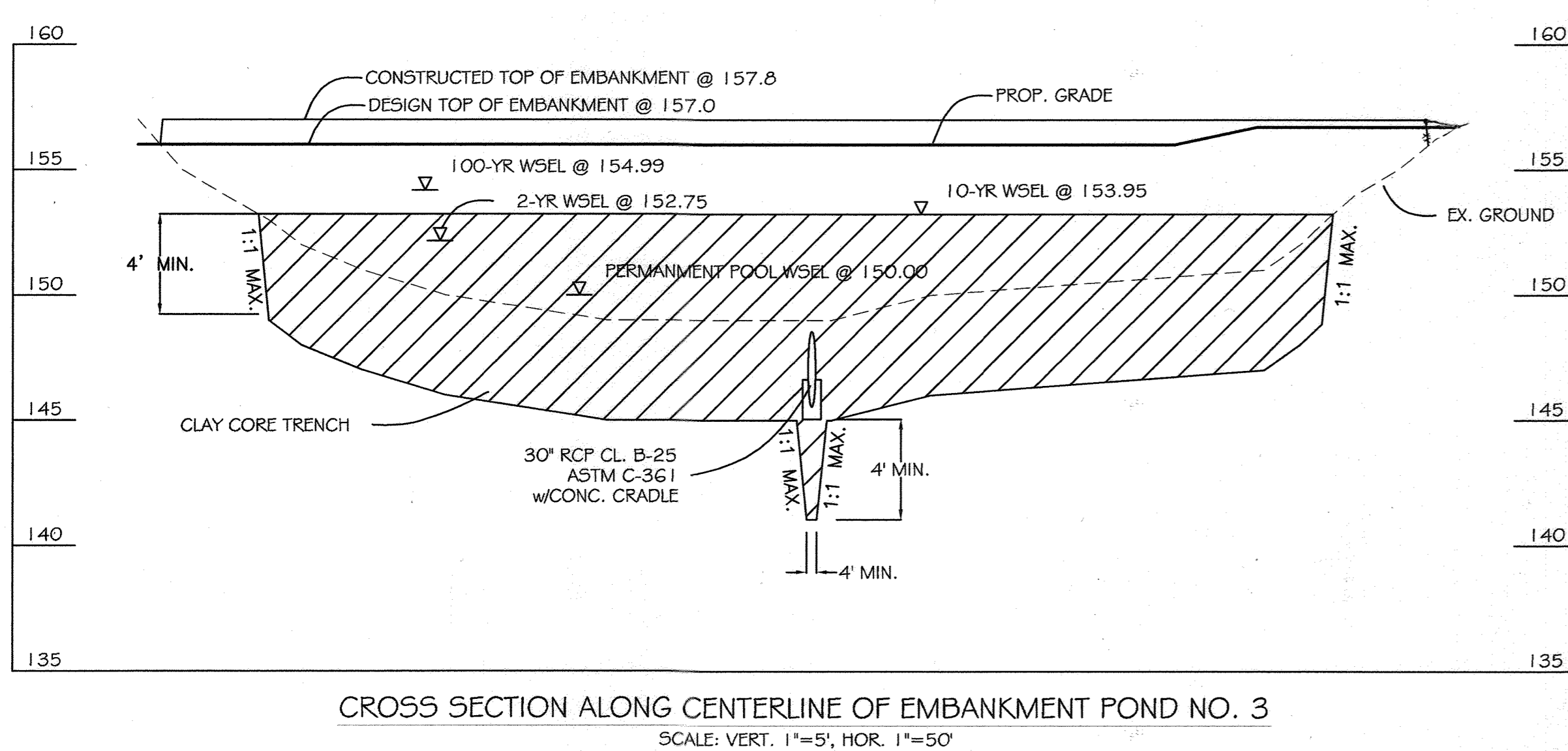
PROFILE OF FOREBAY/POND - POND NO. 2
SCALE: VERT. 1"=5', HOR. 1"=50'



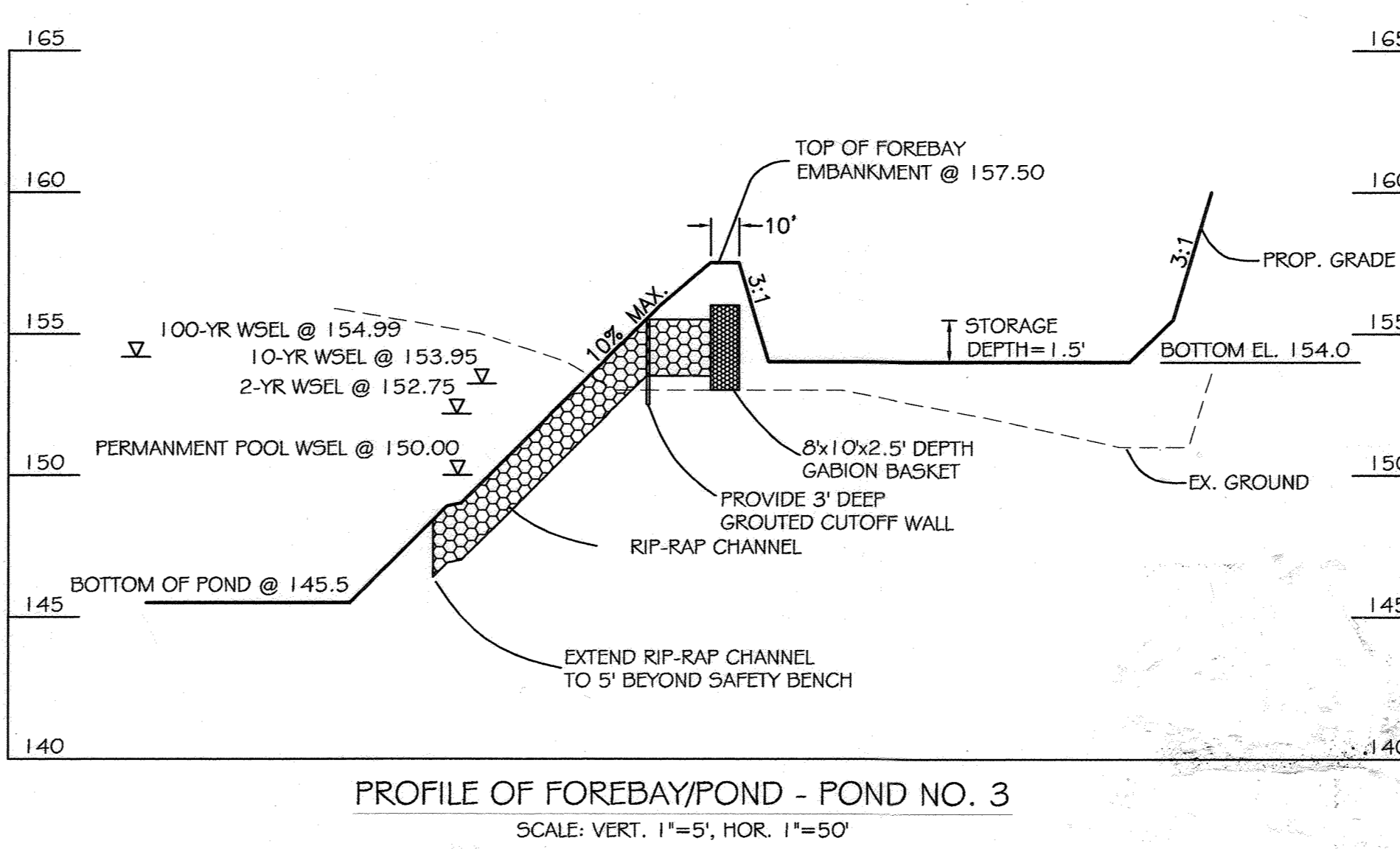
PROFILE OF FOREBAY B/POND - POND NO. 1
SCALE: VERT. 1"=5', HOR. 1"=50'



PROFILE OF PRINCIPAL/EMERGENCY SPILLWAY POND NO. 3
SCALE: VERT. 1"=5', HOR. 1"=50'



CROSS SECTION ALONG CENTERLINE OF EMBANKMENT POND NO. 3
SCALE: VERT. 1"=5', HOR. 1"=50'



PROFILE OF FOREBAY/POND - POND NO. 3
SCALE: VERT. 1"=5', HOR. 1"=50'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Richard Blood 11/2/00
Chief, Division of Land Development Date
[Signature] 11/10/00
Chief, Development Engineering Division Date
[Signature] 11/2/00
Director, Department of Planning and Zoning Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
[Signature] 10/16/00
U.S.D.A. Natural Resources Conservation Service Date
These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 10/16/00
Howard SCD Date

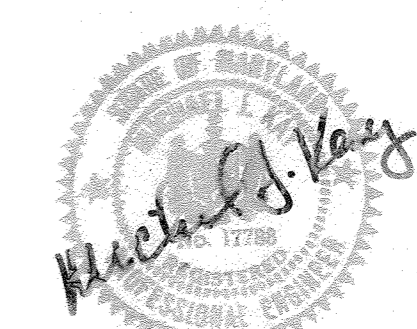
DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
TAX MAP No: 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1"=200' DATE: APRIL 17, 2000

STORMWATER MANAGEMENT DETAILS

SDP-00-63

OWNER / DEVELOPER
AA PROPERTY HOLDINGS
435 METROPLEX DRIVE
NASHVILLE, TN 37211-3109
L 4798 P. 605



GEOTECHNICAL RECOMMENDATIONS

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations pertain to the construction of stormwater management ponds (ponds #1 through #4) within the proposed Baltimore-Washington Auto Exchange, located in Howard County, Maryland. The location of the proposed stormwater management ponds are shown in Figure 2. According to the proposed stormwater management pond drawings, pond constructions will be a combination of cut and fill operations with estimated 5 and 8 feet of cut and fill, respectively. Field borings and laboratory testing indicate that most of the pond embankment will be constructed over CL and/or SM materials.

Proposed Stormwater Management Pond #1

According to available field data, the bottom of the proposed SWM pond #1 at 156 msl. will most likely be within the CL (clay loam) soil strata. The encountered CL (clay loam) material is considered impervious with anticipated infiltration rate of 0.09 in./hr. No groundwater table was recorded in any of the tested bore holes.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of less than 0.52 inches per hour are considered impervious and any ponds within this soil criteria should be considered and designed as a wet pond.

Proposed Stormwater Management Pond #2

According to available field data, the bottom of the proposed SWM pond #2 at elevation of 146 msl. will most likely be within the SM (sand) soil strata. The encountered SM (sand) material is considered very permeable with anticipated infiltration rate of 8.27 in./hr. Groundwater table was recorded in all test bore holes within SWM pond #2.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of greater than 0.52 inches per hour are considered permeable and any ponds within this soil criteria should be considered and designed as a dry pond. However, the presence of groundwater table at 7 feet at the completion of the drilling and 4 feet at 24-hour water table reading, dictate that the proposed SWM pond #2 should be considered and designed as a wet pond.

Proposed Stormwater Management Pond #3

According to available field data, the bottom of the proposed SWM pond #3 at 146.0 msl. will most likely be within the CL (clay loam) soil strata. The encountered CL (clay loam) material is considered impervious with anticipated infiltration rate of 0.09 in./hr. No groundwater table was recorded in any of the tested bore holes.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of less than 0.52 inches per hour are considered impervious and any ponds within this soil criteria should be considered and designed as a wet pond.

Proposed Stormwater Management Pond #4

According to available field data, the bottom of the proposed SWM pond #4 at elevation of 154.5 msl. will most likely be within the SM (sand) soil strata. The encountered SM (sand) material is considered very permeable with anticipated infiltration rate of 8.27 in./hr. No groundwater table was recorded in any of the test bore holes within SWM pond #4.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of greater than 0.52 inches per hour are considered permeable and any ponds within this soil criteria should be considered and designed as a dry pond. Based on available field and laboratory test data, it is our professional opinion that the proposed SWM pond #4 should be considered and designed as a dry pond.

Core Trench

The in-situ soil as classified as sandy lean clay and lean clay (CL) within the footprint of the investigated area could be utilized as core trench material. There should be sufficient amount of core trench material available on the site. Core-trench materials should be classified as GC, SC, CH and/or CL in accordance with Unified Soil Classification System. Other soils with a liquid limit of over 30% and plasticity index of more 10% and 50% or more passing through sieve #200 could be used as a core trench materials, as long as the placement of core materials is supervised by the geotechnical engineer of record or his/her representative.

#200 could be used as a core trench materials, as long as the placement of core materials is supervised by the geotechnical engineer of record or his/her representative.

SITE PREPARATION

The following recommendations are made for the satisfactory performance of earthwork, in order to attain the planned grade within the proposed construction of the stormwater management ponds. Based on our past experience, if construction of this pond commences between December 1 to April 1, there is a possibility that heavy construction equipment might sink into the loose and wet material. We would like to suggest, the SWM ponds be constructed during dry seasons.

Areas designated for embankment and structural work shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, stumps and other objectionable material shall be removed. Chopped limbs and sharp breaks shall be sloped to no steeper than 1:1.

The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stone greater than 12 inches, frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Other materials as investigated and approved by geotechnical engineer of record may be used for construction of the embankment.

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Richard Blood 11/2/00
Chief, Division of Land Development Date
Michael D. Kelly 10/11/00
Chief, Development Engineering Division Date
John J. Smith 11/2/00
Director, Department of Planning and Zoning Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
Cheryl Sumner 10/16/00
U.S.D.A.-Natural Resources Conservation Service Date

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
Michael D. Kelly 10/16/00
Howard SOCD Date

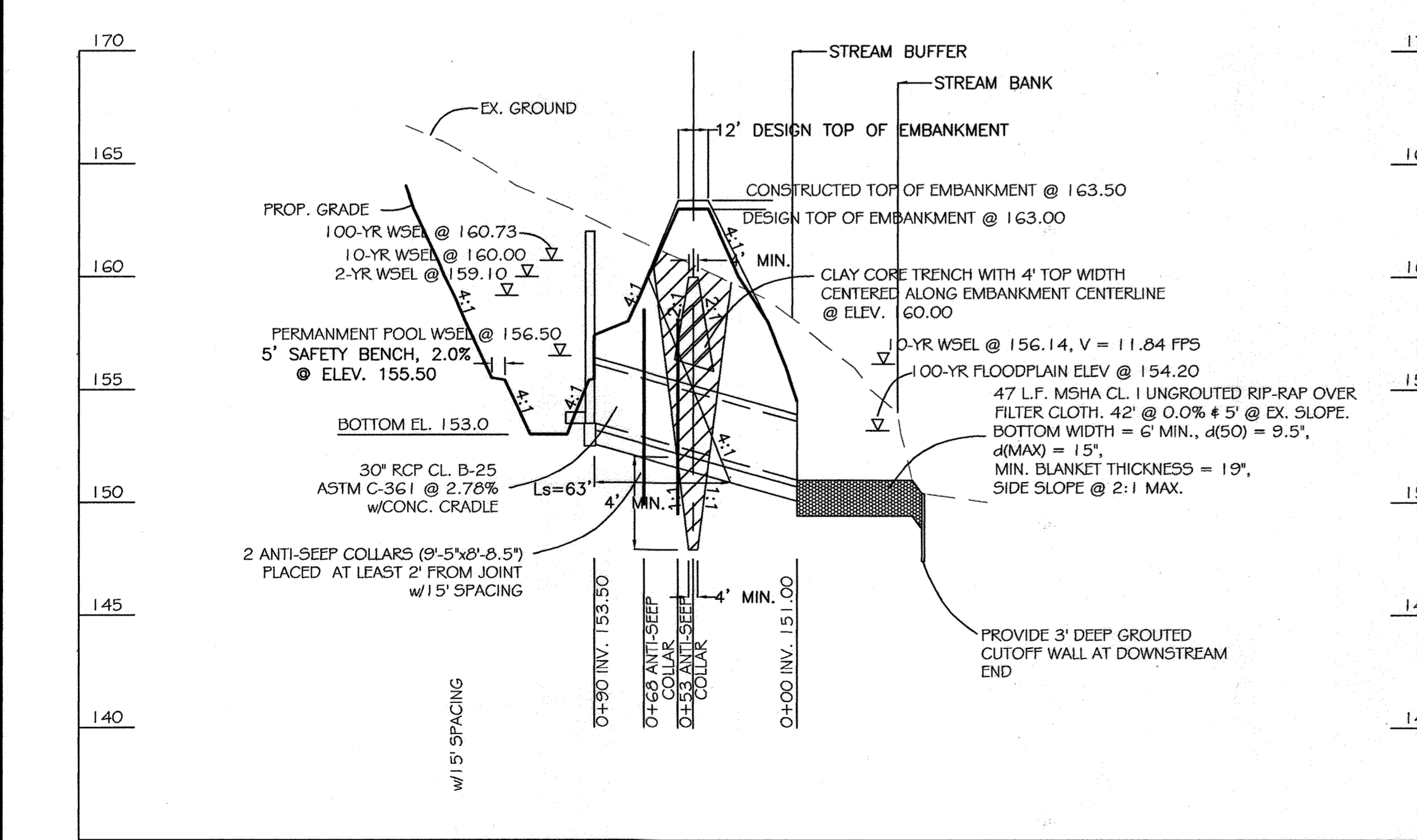
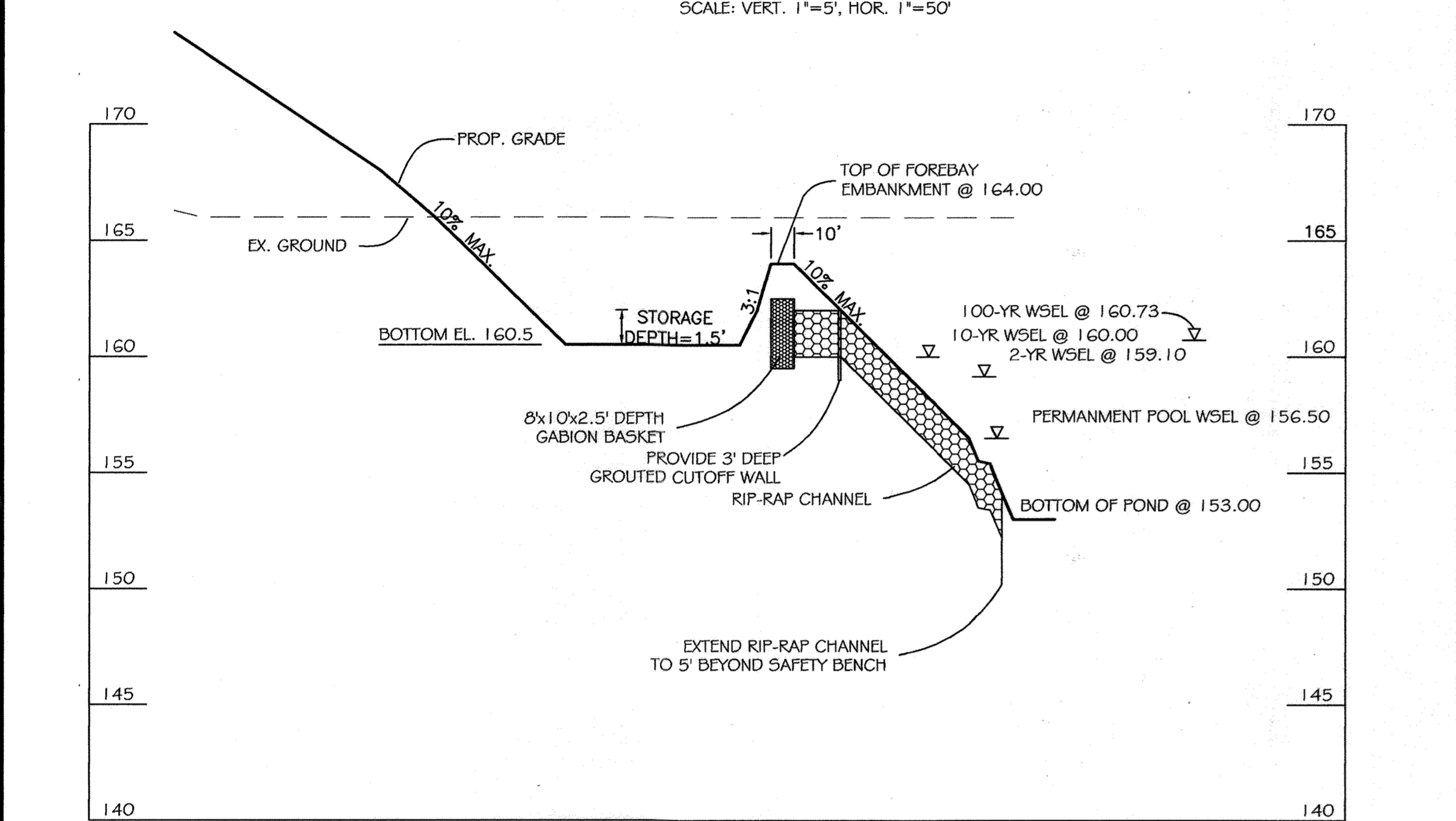
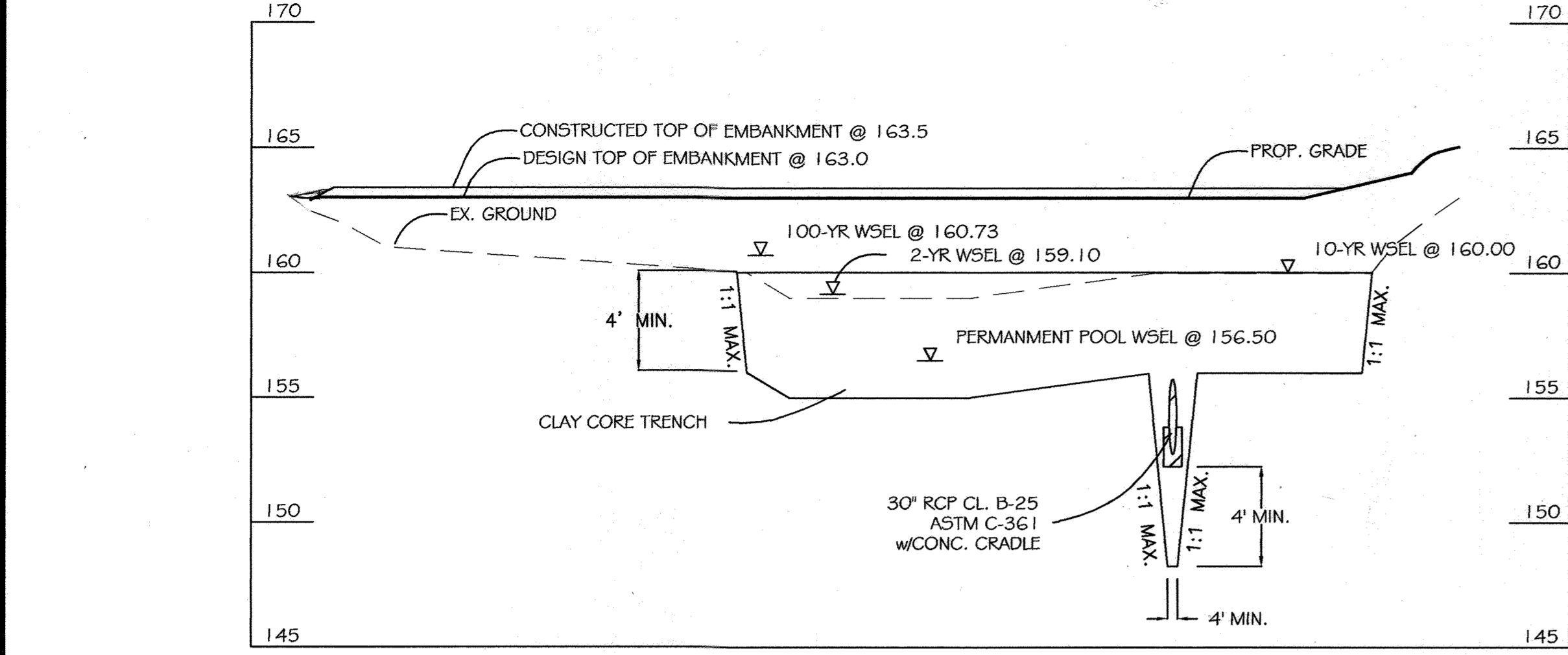
DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
TAX MAP No: 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1"=200' DATE: JANUARY 26, 2000

STORMWATER MANAGEMENT DETAILS

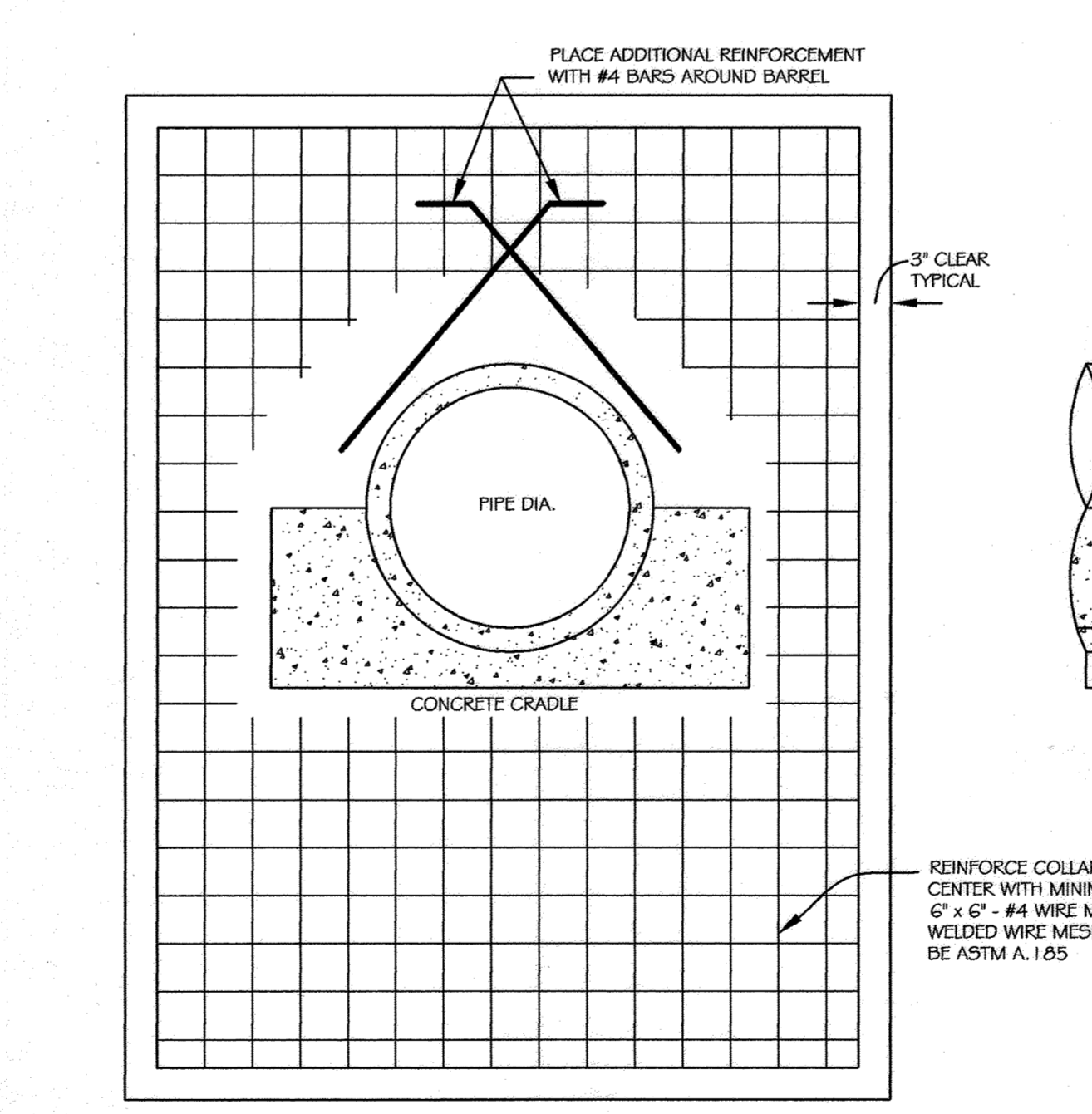
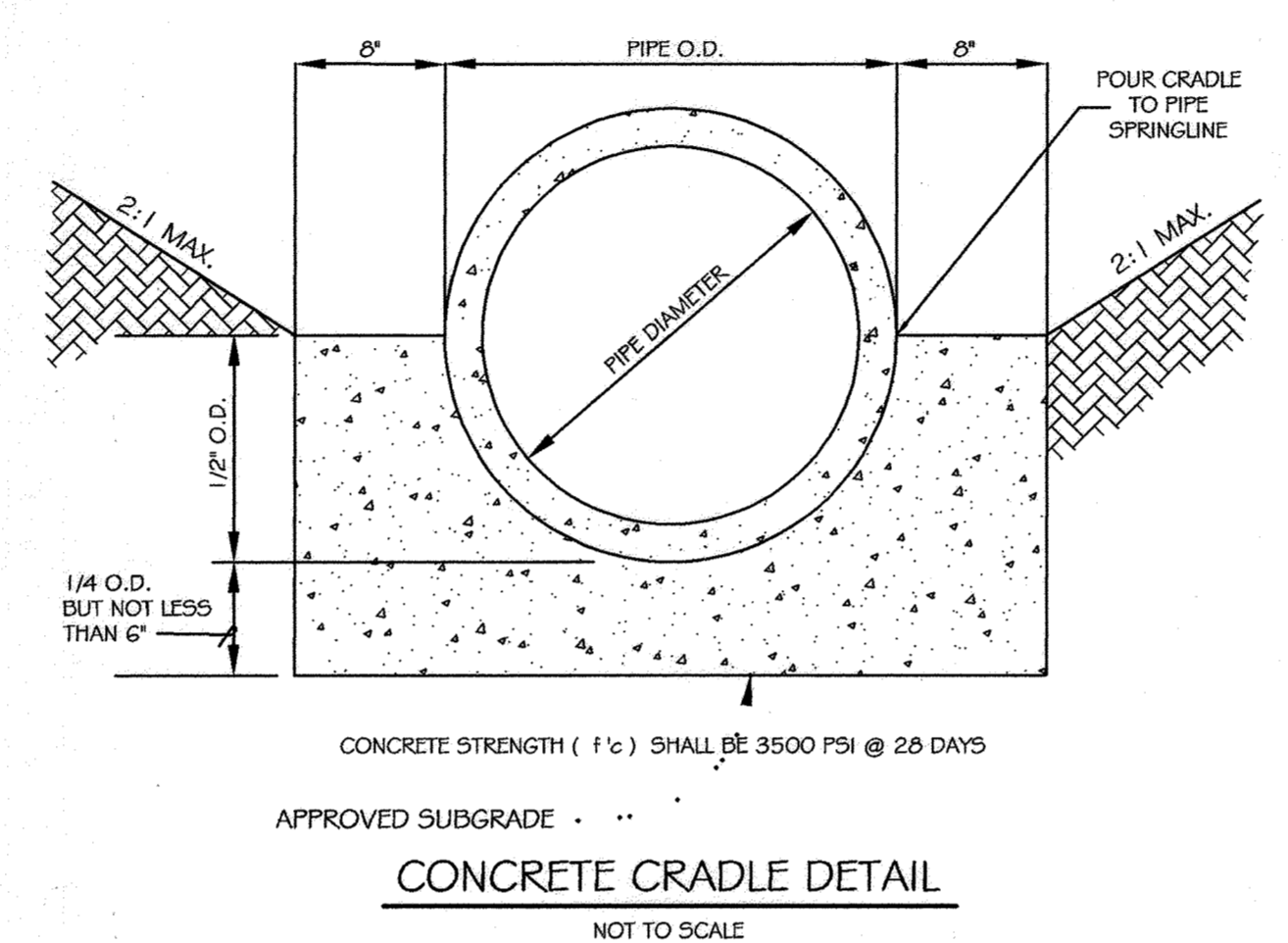
SDP-00-63

OWNER / DEVELOPER
AA PROPERTY HOLDINGS
435 METROPLEX DRIVE
NASHVILLE, TN 37211-3109
L-47398-F-625

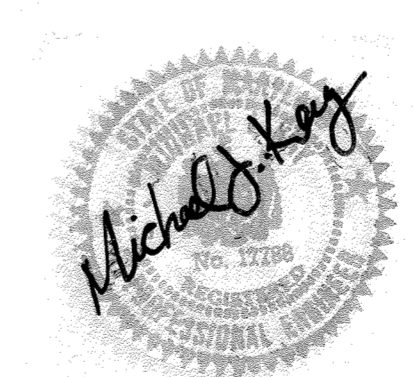


PROFILE OF PRINCIPAL/EMERGENCY SPILLWAY POND NO. 4
SCALE: VERT. 1"=5', HOR. 1"=50'

- ### GENERAL NOTES
1. CONCRETE STRENGTH (f'c) = 4000 PSI @ 28 DAYS.
 2. ALL REINFORCING STEEL TO BE ASTM A615 GR. 60.
 3. ALL LAP REINFORCING TO BE 32 TIMES BAR DIAMETER (MINIMUM).
 4. IF STRUCTURE IS PRECAST, SHOP DRAWINGS MUST BE APPROVED BY AN ENGINEER BEFORE CONSTRUCTION.
 5. ALL CONCRETE EXPOSED EDGES MUST HAVE 3/4" x 3/4" CHAMFER OR AS DIRECTED.



TYPICAL ANTI - SEEP COLLAR REINFORCEMENT DETAIL
NOT TO SCALE



MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Mottled reddish brownish gray sandy loam clay, moist, silt, moisture content 21.5%, "CL"	10"-10"	14.0		HAB
0-3	M.C. 18.9%, "CL"				HAB
0-4	M.C. 18.3%, trace of gravel, "CL"				HAB
0-5	M.C. 22.8%, "CL"				HAB
END OF SOIL BORING AT 10 FEET					

MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Mottled reddish brownish gray sandy loam clay, moist, silt, moisture content 22.4%, "CL"	10"-10"	14.0		HAB
0-3	M.C. 20.7%, "CL"				HAB
0-4	M.C. 19.2%, trace of gravel, "CL"				HAB
0-5	M.C. 19.5%, "CL"				HAB
END OF SOIL BORING AT 10 FEET					

MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Mottled reddish brownish gray sandy loam clay, moist, silt, moisture content 21.4%, "CL"	10"-10"	14.0		HAB
0-3	M.C. 22.7%, "CL"				HAB
0-4	M.C. 18.4%, trace of gravel, "CL"				HAB
0-5	M.C. 19.2%, "CL"				HAB
END OF SOIL BORING AT 10 FEET					

MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Brown fine sand (SM), moist, medium dense, moist, trace of clay, moisture content 15.2%, "SM"	10"-2.5"	14.0		HAB
0-3	White fine to medium coarse sand (SM), moist, medium dense, moisture content 17.7%, "SM"	2.5"-10"	14.0		HAB
0-4	M.C. 31.2%, wet, "SM"				HAB
0-5	M.C. 28.4%, wet, "SM"				HAB
END OF SOIL BORING AT 10 FEET					

MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Brown fine sand (SM), moist, medium dense, moist, trace of clay, moisture content 16.2%, "SM"	10"-2"	14.0		HAB
0-3	White fine to medium coarse sand (SM), moist, medium dense, moisture content 21.2%, "SM"	2"-10"	14.0		HAB
0-4	M.C. 33.2%, wet, "SM"				HAB
0-5	M.C. 41.1%, wet, "SM"				HAB
END OF SOIL BORING AT 10 FEET					

MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Brown sandy silt, moist, silt, trace of clay, moisture content 14.2%, "SI"	10"-2"	14.0		HAB
0-3	Mottled reddish brownish yellowish tan loam clay, moist, silt, moisture content 17.7%, "SI"	2"-10"	14.0		HAB
0-4	M.C. 33.2%, wet, "SI"				HAB
0-5	M.C. 37.2%, wet, "SI"				HAB
END OF SOIL BORING AT 10 FEET					

MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Brown sandy silt, moist, silt, trace of clay, moisture content 14.2%, "SI"	10"-2"	14.0		HAB
0-3	Mottled reddish brownish yellowish tan loam clay, moist, silt, moisture content 17.7%, "SI"	2"-10"	14.0		HAB
0-4	M.C. 14.7%, "CL"				HAB
0-5	M.C. 14.1%, "CL"				HAB
END OF SOIL BORING AT 10 FEET					

MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Brown sandy silt, moist, silt, trace of clay, moisture content 15.2%, "SI"	10"-2"	14.0		HAB
0-3	Mottled reddish brownish yellowish tan loam clay, moist, silt, moisture content 15.9%, "CL"	2"-10"	14.0		HAB
0-4	M.C. 14.8%, "CL"				HAB
0-5	M.C. 16.8%, "CL"				HAB
END OF SOIL BORING AT 10 FEET					

MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Brown sandy silt, moist, silt, trace of clay, moisture content 14.8%, "SI"	10"-2.5"	14.0		HAB
0-3	Mottled reddish brownish yellowish tan loam clay, moist, silt, moisture content 13.6%, "CL"	2.5"-10"	14.0		HAB
0-4	M.C. 13.1%, "CL"				HAB
0-5	M.C. 14.7%, "CL"				HAB
END OF SOIL BORING AT 10 FEET					

MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Brown silty clay, trace of sand, moist, silt, moisture content 14.7%, "CL"	10"-2"	14.0		HAB
0-3	Light brownish silty sand, trace of gravel, moist, medium dense, moisture content 12.2%, "SM"	2"-10"	14.0		HAB
0-4	Light brownish silty sand, moist, medium dense, moisture content 12.6%, "SM"				HAB
0-5	M.C. 13.8%, "SM"				HAB
END OF SOIL BORING AT 10 FEET					

MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

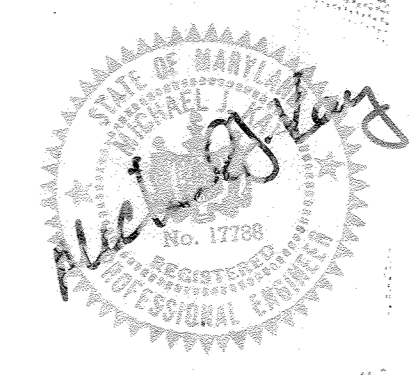
Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Brown silty clay, trace of sand, moist, silt, moisture content 13.1%, "CL"	10"-2"	14.0		HAB
0-3	Light brownish silty sand, trace of gravel, moist, medium dense, moisture content 11.2%, "SM"	2"-10"	14.0		HAB
0-4	Light brownish silty sand, moist, medium dense, moisture content 12.0%, "SM"				HAB
0-5	M.C. 14.2%, "SM"				HAB
END OF SOIL BORING AT 10 FEET					

MAFI ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION

Project Name: Baltimore-Washington Auto Exchange
 Project No: 1189-03

Coordinates: NAD 83, UTM, Zone 18T, Easting: 1151386, Northing: 5711189

Sample #	SOIL DESCRIPTION	DEPTH	COG	MOISTURE	LEGEND
0-1	Organic top soil	0-10"	0		
0-2	Brown silty clay, trace of sand, moist, silt, moisture content 12.2%, "CL"	10"-2"	14.0		HAB
0-3	Light brownish silty sand, trace of gravel, moist, medium dense, moisture content 14.1%, "SM"	2"-10"	14.0		HAB
0-4	Light brownish silty sand, moist, medium dense, moisture content 14.0%, "SM"				HAB
0-5	M.C. 15.6%, "SM"				HAB
END OF SOIL BORING AT 10 FEET					



APPROVED: DEPARTMENT OF PLANNING AND ZONING
Michael Kelly 11/2/00
 Chief, Division of Land Development Date

John DeWitt 11/2/00
 Chief, Development Engineering Division Date

John DeWitt 11/2/00
 Director, Department of Planning and Zoning Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

U.S.D.A.-Natural Resources Conservation Service Date

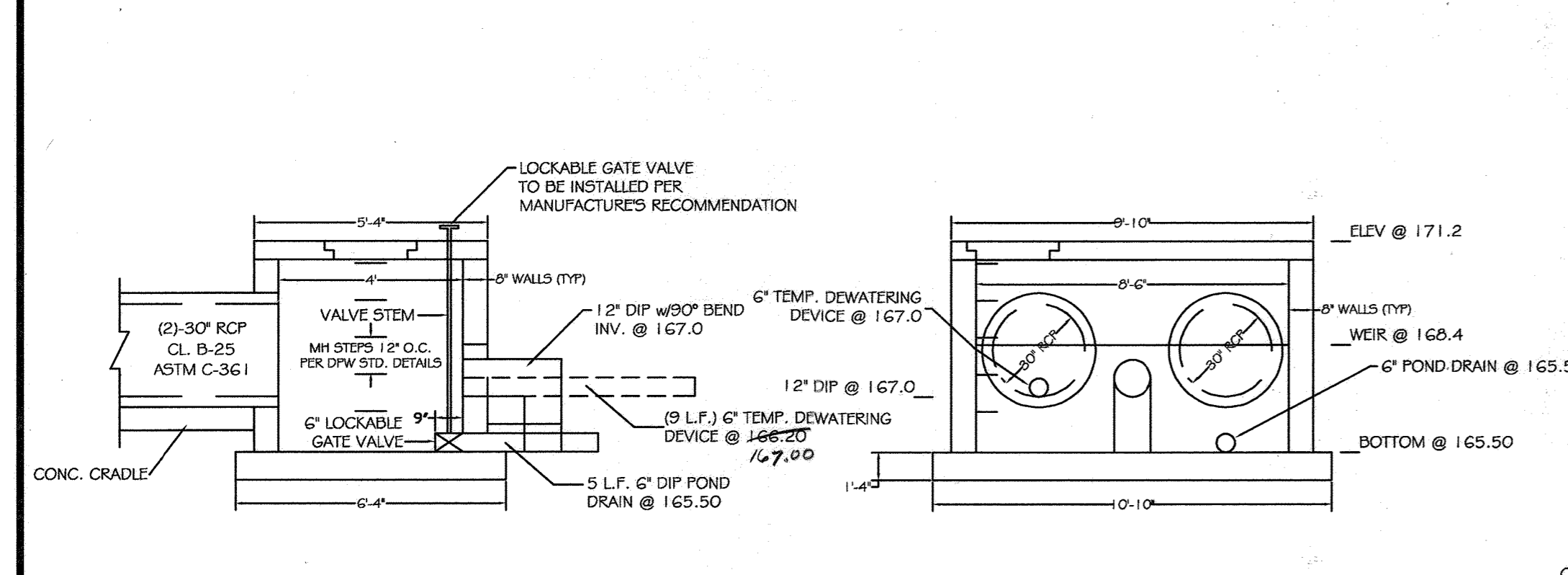
These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD Date

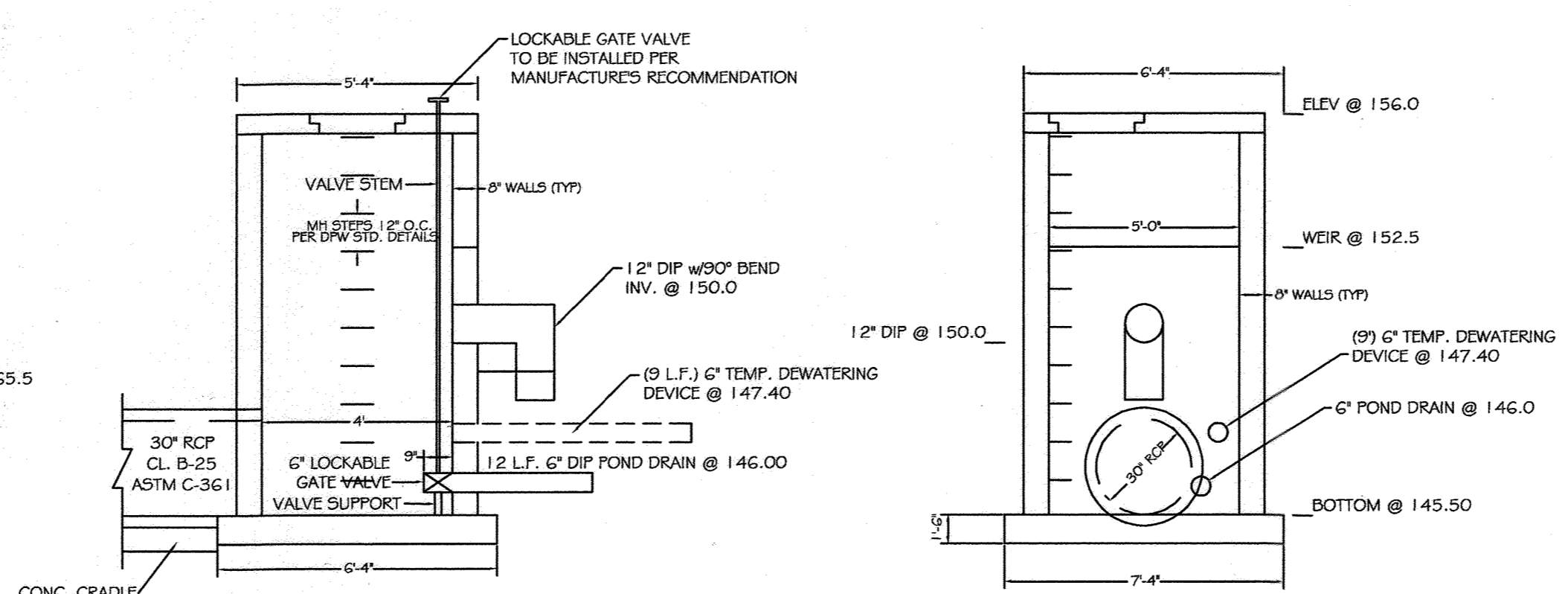
BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: 1"=200' DATE: APRIL 17, 2000

STORMWATER MANAGEMENT
 DETAILS
 SDP-00-63

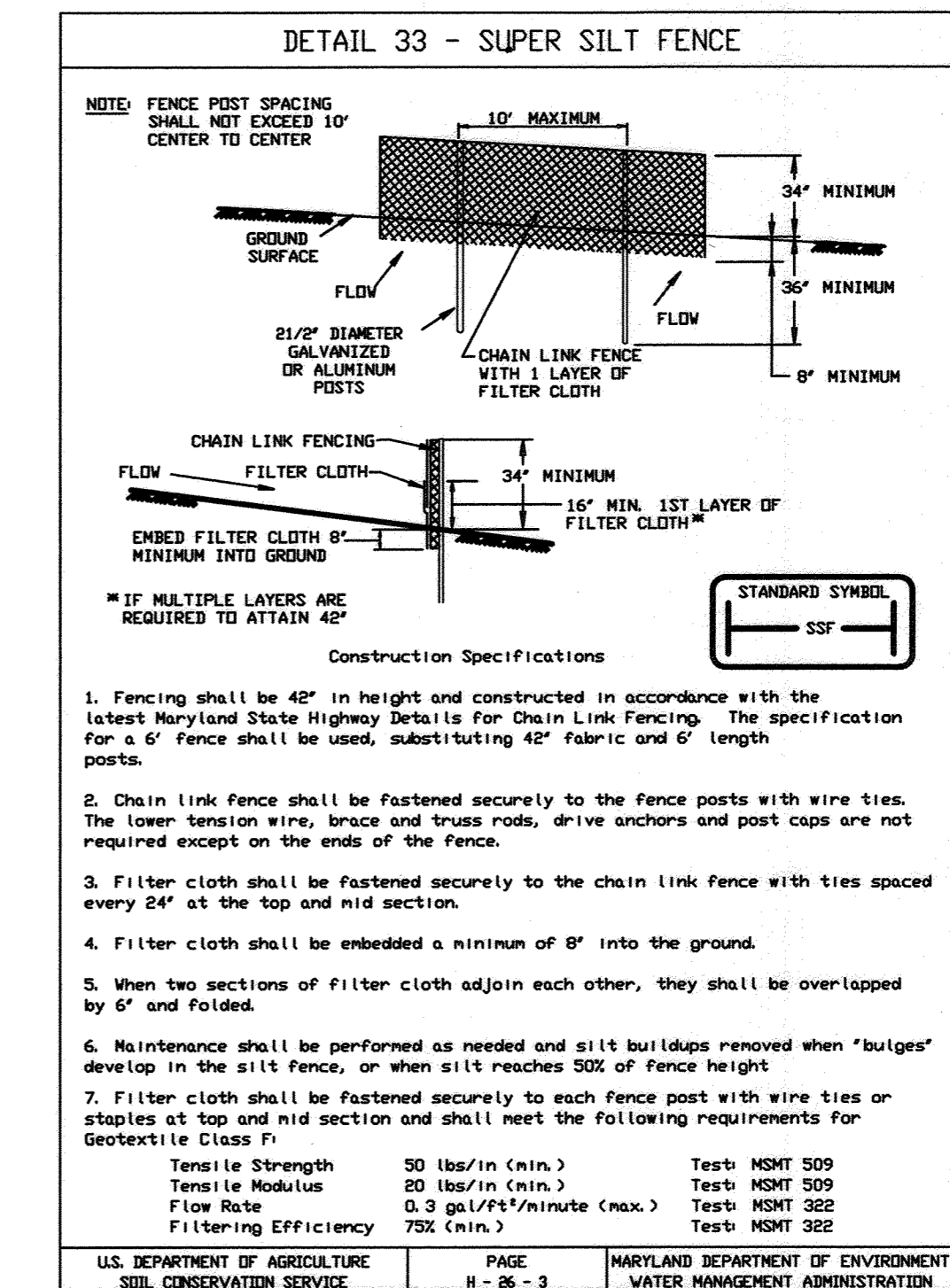
OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-5109
 L. 4798 F. 685



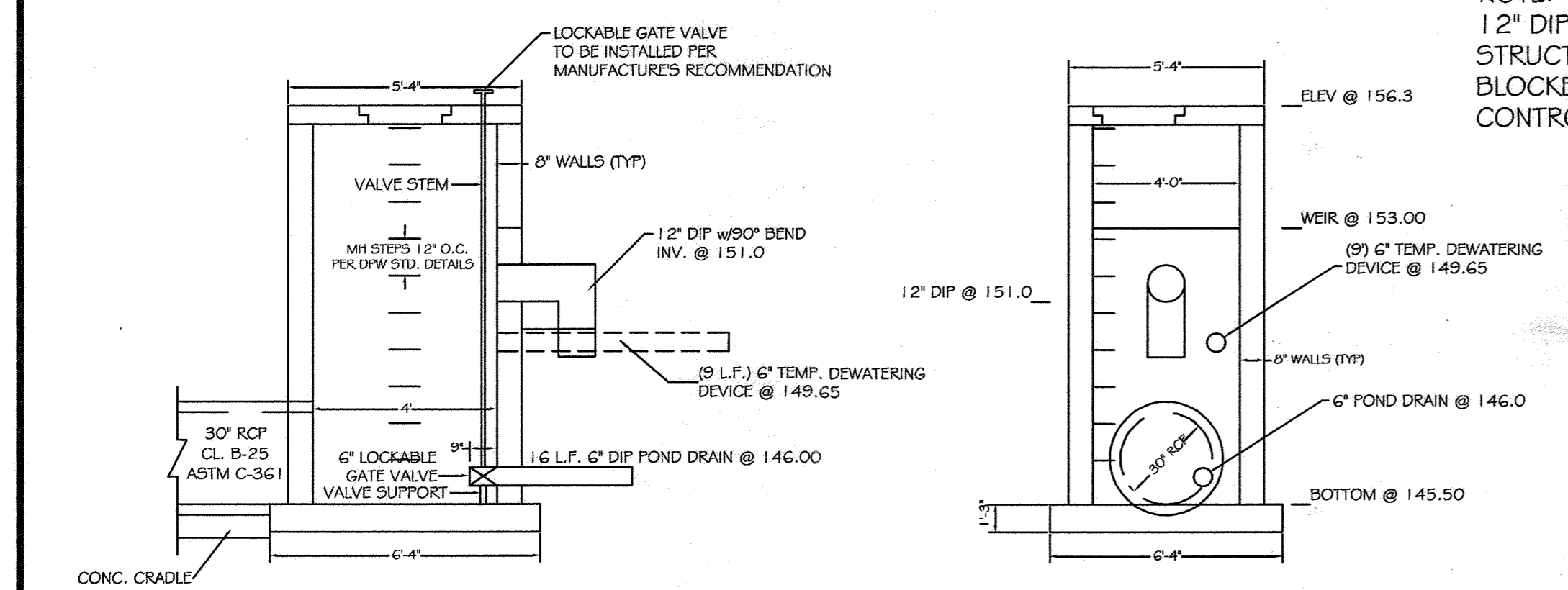
RISER STRUCTURE POND NO. 1



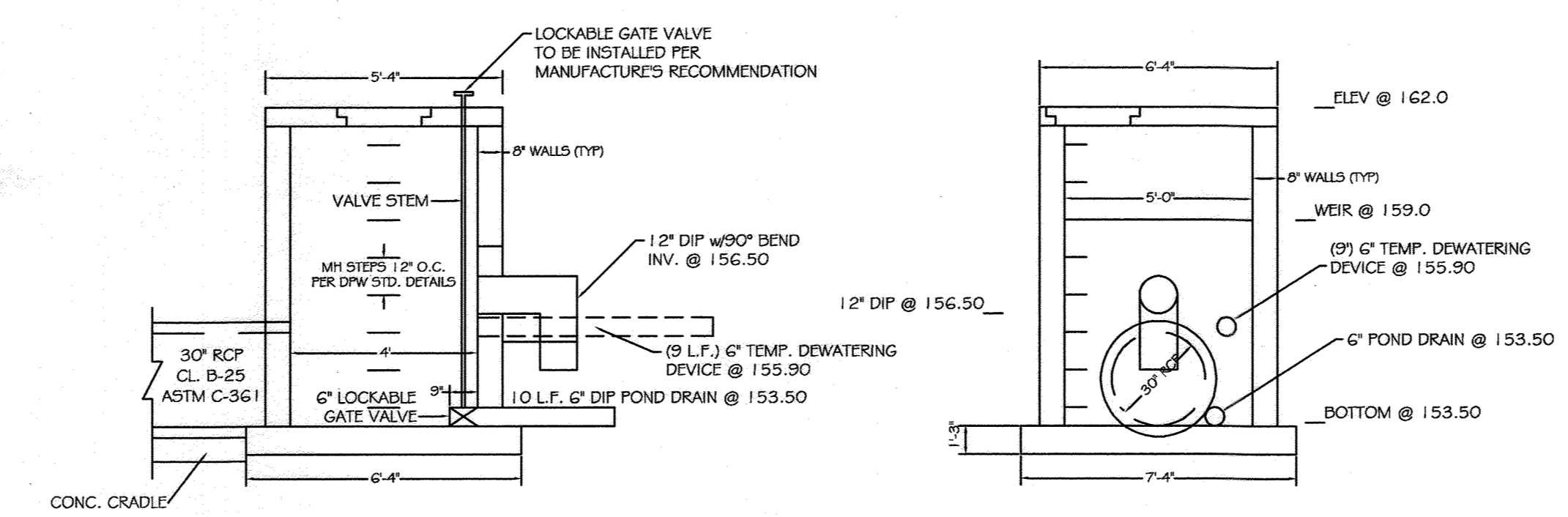
RISER STRUCTURE POND NO. 3



NOTE:
 1 2" DIP ORIFICE AT EACH RISER STRUCTURE TO BE TEMPORARY BLOCKED DURING THE SEDIMENT CONTROL PHASE OF CONSTRUCTION



RISER STRUCTURE POND NO. 2



RISER STRUCTURE POND NO. 4

SUPER SILT FENCE

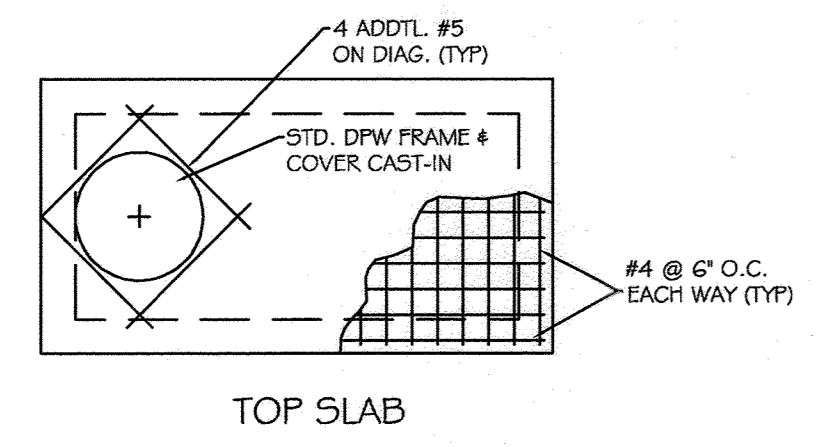
Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 Feet	1,500 Feet
20 - 30%	5:1 - 3:1	100 Feet	1,000 Feet
30 - 50%	3:1 - 2:1	100 Feet	500 Feet
50% +	2:1 +	50 Feet	250 Feet

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 Chief, Development Engineering Division
 Chief, Department of Planning and Zoning

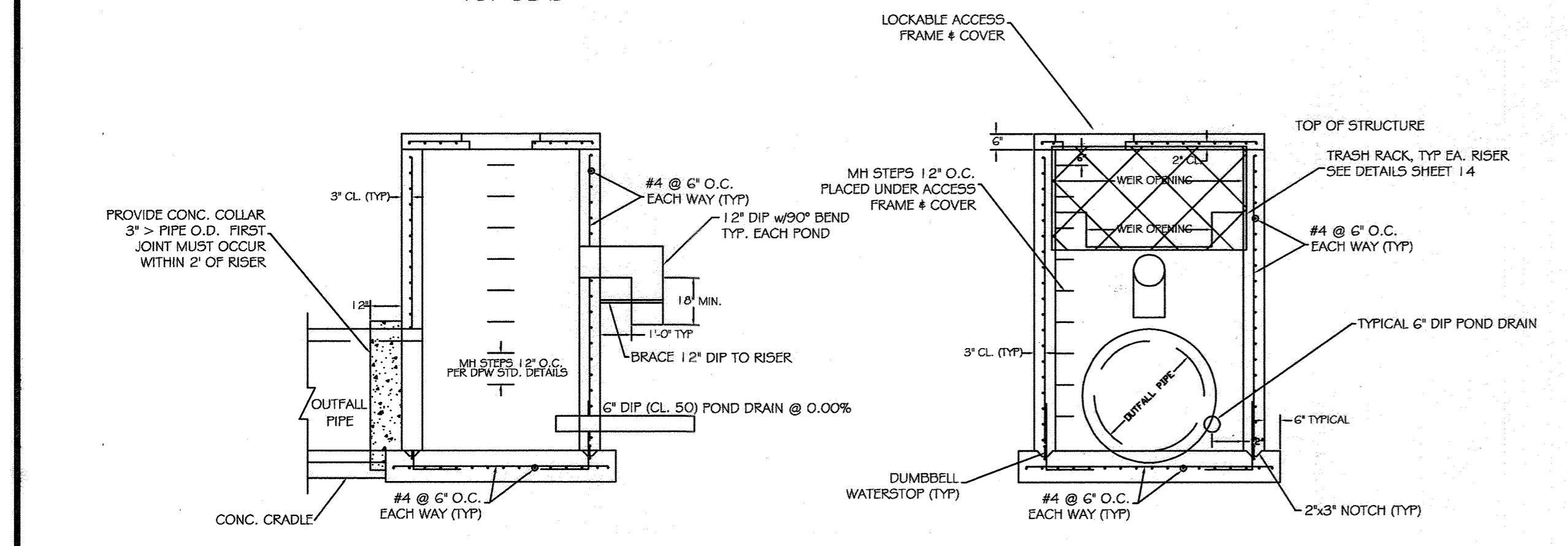
These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
 U.S.D.A. - Natural Resources Conservation Service
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

GENERAL NOTES

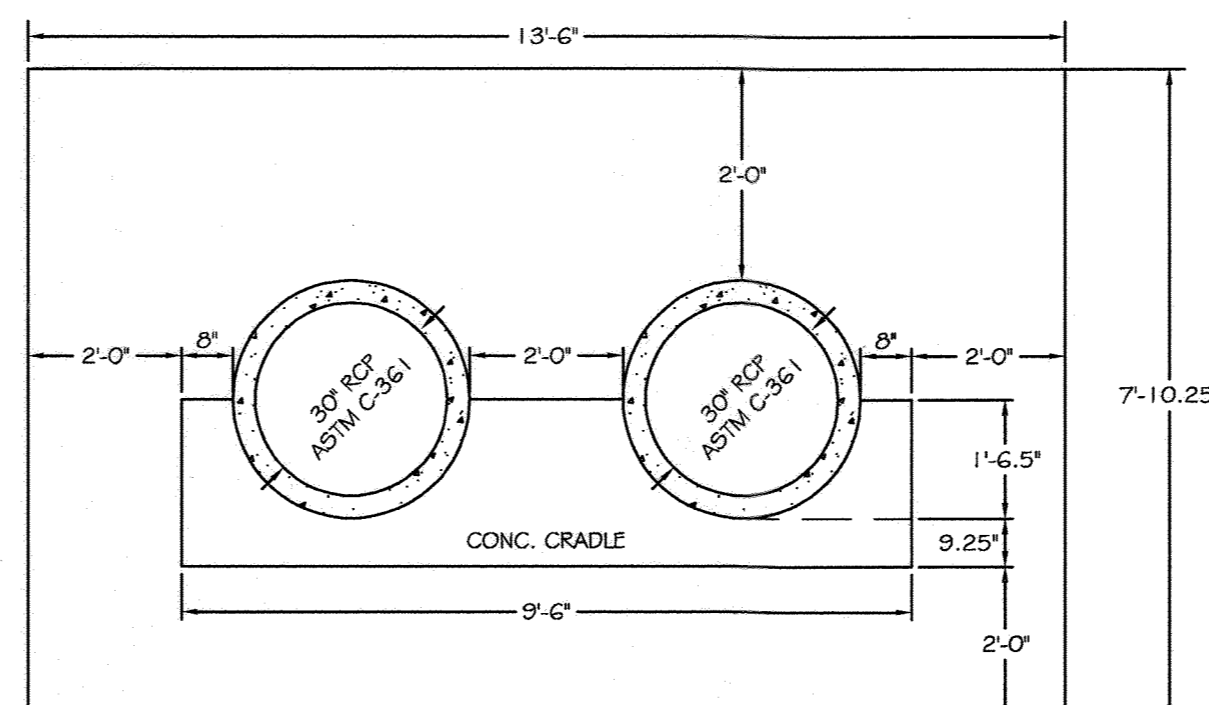
1. CONCRETE STRENGTH (f'c) = 4000 PSI @ 28 DAYS.
2. ALL REINFORCING STEEL TO BE ASTM A615 GR. 60.
3. ALL LAP REINFORCING TO BE 32 TIMES BAR DIAMETER (MINIMUM).
4. IF STRUCTURE IS PRECAST, SHOP DRAWINGS MUST BE APPROVED BY AN ENGINEER BEFORE CONSTRUCTION.
5. ALL CONCRETE EXPOSED EDGES MUST HAVE 3/4" x 3/4" CHAMFER OR AS DIRECTED.



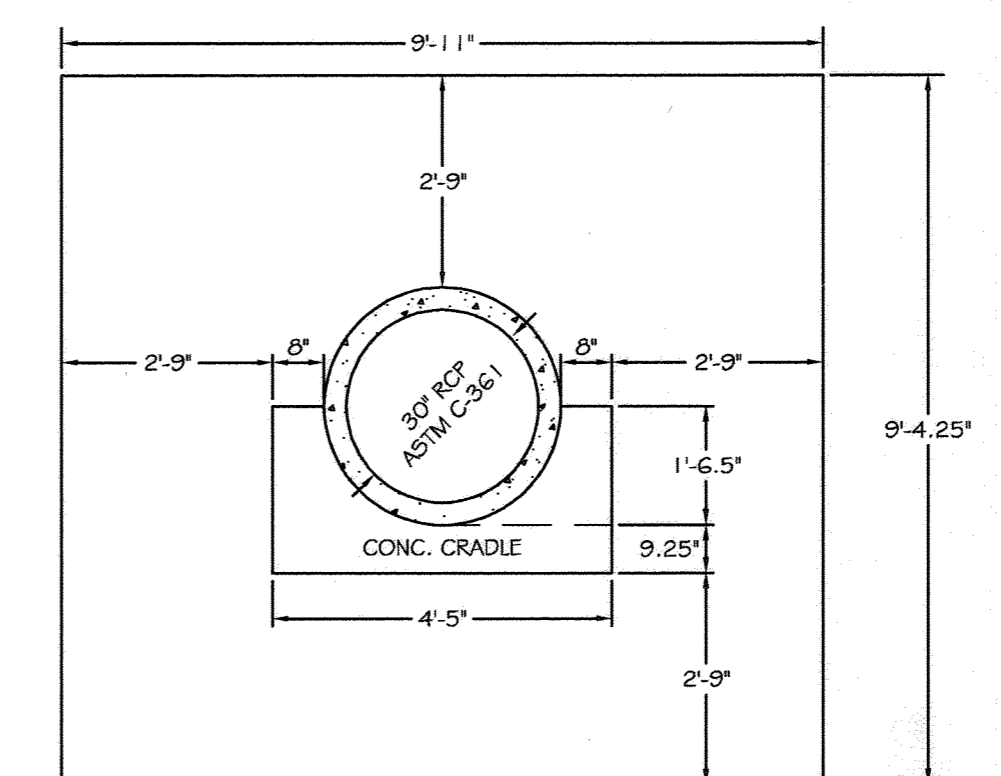
TOP SLAB



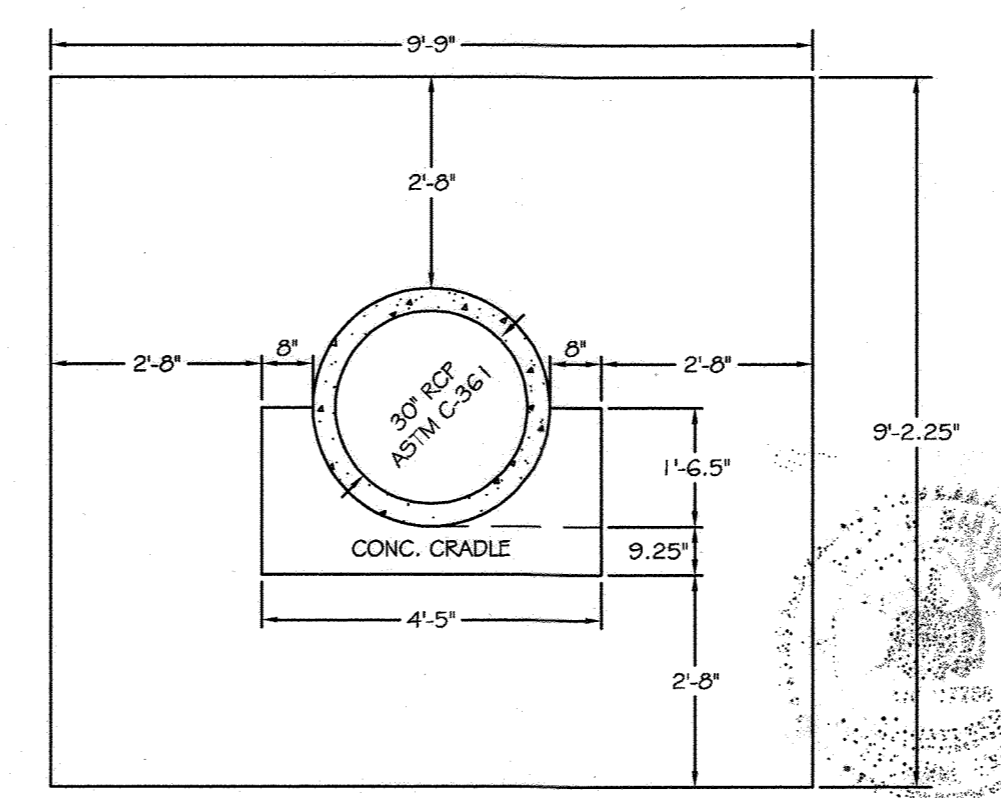
TYPICAL RISER STRUCTURE REINFORCEMENT DETAILS



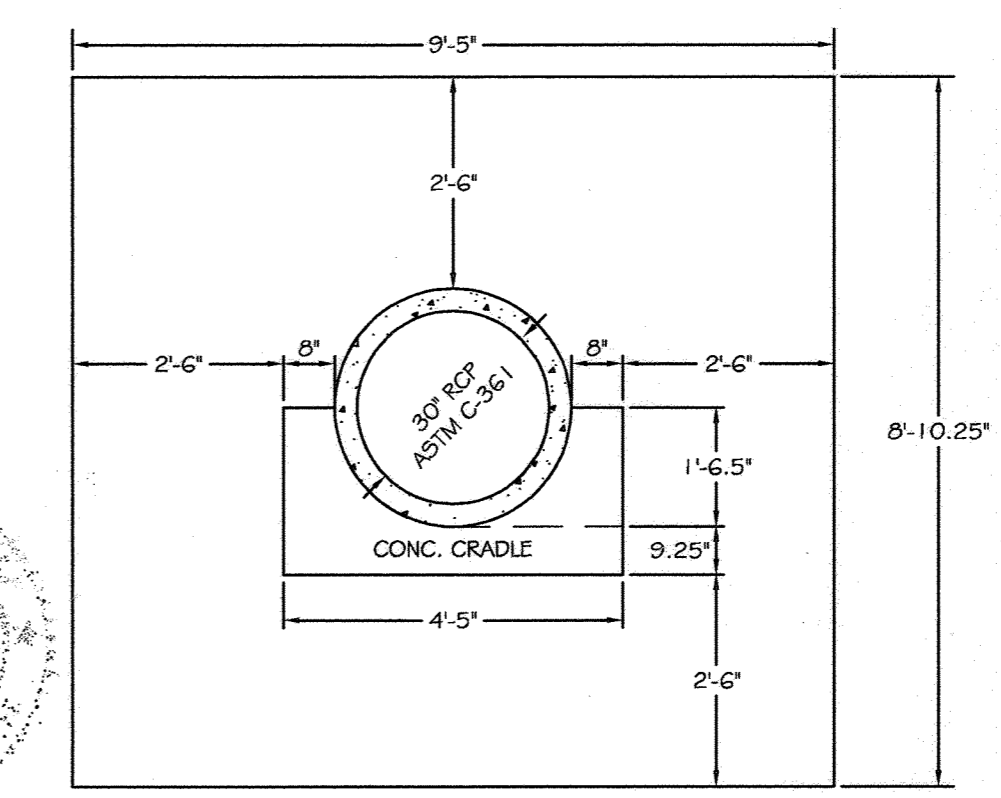
ANTI-SEEP COLLARS - POND NO. 1



ANTI-SEEP COLLARS - POND NO. 2



ANTI-SEEP COLLARS - POND NO. 3



ANTI-SEEP COLLARS - POND NO. 4

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	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

RISER STUCTURE DETAILS

SDP-00-63

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L 4795 F 665

2868 CONSTELLATION WAY
FINKSBURG, MD 21048-2068
PHONE/FAX: (410) 840-8797

GEOTECHNICAL RECOMMENDATIONS

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations pertain to the construction of stormwater management ponds (#1 through #4) within the proposed Baltimore-Washington Auto Exchange, located in Howard County, Maryland. The location of the proposed stormwater management ponds are shown in Figure 2. According to the proposed stormwater management pond drawings, pond construction will be a combination of cut and fill operations with estimated 5 and 8 feet of cut and fill, respectively. Field borings and laboratory testing indicate that most of the pond embankment will be constructed over CL and/or SM materials.

Proposed Stormwater Management Pond #1

According to available field data, the bottom of the proposed SWM pond #1 at 156 msl. will most likely be within the CL (clay loam) soil strata. The encountered CL (clay loam) material is considered impervious with anticipated infiltration rate of 0.09 in./hr. No groundwater table was recorded in any of the tested bore holes.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of less than 0.52 inches per hour are considered impervious and any ponds within this soil criteria should be considered and designed as a wet pond.

Proposed Stormwater Management Pond #2

According to available field data, the bottom of the proposed SWM pond #2 at elevation of 146 msl. will most likely be within the SM (sand) soil strata. The encountered SM (sand) material is considered very permeable with anticipated infiltration rate of 8.27 in./hr. Groundwater table was recorded in all test bore holes within SWM pond #2.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of greater than 0.52 inches per hour are considered permeable and any ponds within this soil criteria should be considered and designed as a dry pond. However, the presence of groundwater table at 7 feet at the completion of the drilling and 4 feet at 24-hour water table reading, dictate that the proposed SWM pond #2 should be considered and designed as a wet pond.

Proposed Stormwater Management Pond #3

According to available field data, the bottom of the proposed SWM pond #3 at 146.0 msl. will most likely be within the CL (clay loam) soil strata. The encountered CL (clay loam) material is considered impervious with anticipated infiltration rate of 0.09 in./hr. No groundwater table was recorded in any of the tested bore holes.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of less than 0.52 inches per hour are considered impervious and any ponds within this soil criteria should be considered and designed as a wet pond.

Proposed Stormwater Management Pond #4

According to available field data, the bottom of the proposed SWM pond #4 at elevation of 154.5 msl. will most likely be within the SM (sand) soil strata. The encountered SM (sand) material is considered very permeable with anticipated infiltration rate of 8.27 in./hr. No groundwater table was recorded in any of the test bore holes within SWM pond #4.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of greater than 0.52 inches per hour are considered permeable and any ponds within this soil criteria should be considered and designed as a dry pond. Based on available field and laboratory test data, it is our professional opinion that the proposed SWM pond #4 should be considered and designed as a dry pond.

Core-Trench

The in-situ soil as classified as sandy lean clay and lean clay (CL) within the footprint of the investigated area could be utilized as core trench material. There should be sufficient amount of core trench material available on the site. Core-trench materials should be classified as GC, SC, CH and/or CL in accordance with Unified Soil Classification System. Other soils with a liquid limit of over 30% and plasticity index of more than 10% and 50% or more passing through sieve #200 could be used as a core trench material, as long as the placement of core materials is supervised by the geotechnical engineer of record or higher representative.

Site Preparation

The following recommendations are made for the satisfactory performance of each work, in order to insure the planned goals within the proposed construction of the stormwater management ponds. Based on our past experience, if construction of this pond commences between December 1 to April 1, there is a possibility that heavy construction equipment might cut into the bore and wet materials. We would like to suggest, the SWM ponds be constructed during dry periods.

Areas designated for embankment and structural work shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, stumps and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

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

Earth Fill: The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut of trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement: Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 12 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Connections: The movement of the hauling and spreading equipment over the fill shall be controlled by the use of approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut of trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Other materials as investigated and approved by geotechnical engineer of record may be used for construction of the embankment.

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 12 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Richard Blood 11/2/00
Chief, Division of Land Development Date
John Damann 12/11/00
Chief, Department of Engineering Division Date
John Smith 11/2/00
Director, Department of Planning and Zoning Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
Carol Seay 10/26/00
U.S.D.A.-Natural Resources Conservation Service Date

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
John L. Seay 10/4/00
Howard Soil Conservation District Date

DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
TAX MAP No. 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JANUARY 26, 2000

POND SPECIFICATION NOTES, PIPE AND STRUCTURE SCHEDULES AND POND DETAILS

SDP--00-63

OWNER/DEVELOPER
AA PROPERTY HOLDINGS
435 METROPOLIS DRIVE
NASHVILLE, TN 37211-3109
L. 4798 F. 605

SPECIFICATIONS

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

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

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, stumps and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared. All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill
The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut of trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 12 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Connections - The movement of the hauling and spreading equipment over the fill shall be controlled by the use of approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut of trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully luminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any luminous coating damaged or otherwise removed shall be replaced with cold applied luminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nepon, Plast-Core, Black-Road, and Benth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any luminous coating damaged or otherwise removed shall be replaced with cold applied luminous coating compound.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

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

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

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be sealed with a neoprene gasket when joining pipe sections. The end of each pipe shall be sealed with a neoprene gasket when joining pipe sections. The end of each pipe shall be sealed with a neoprene gasket when joining pipe sections.

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

- Materials - PVC pipe shall be PVC-120 or PVC-1203 conforming to ASTM D-1785 or ASTM D-2241.
- Joints and connections to anti-seep collars shall be completely watertight.
- Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
- Backfilling shall conform to "Structure Backfill".
- Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete

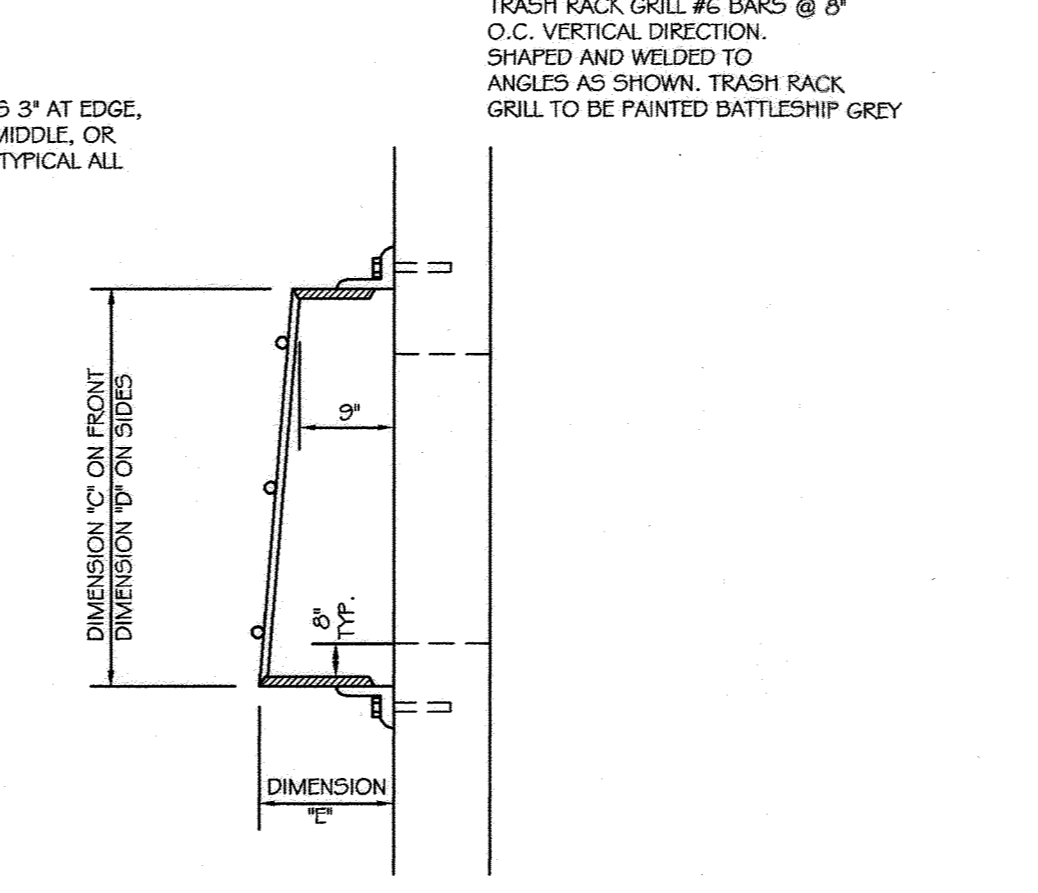
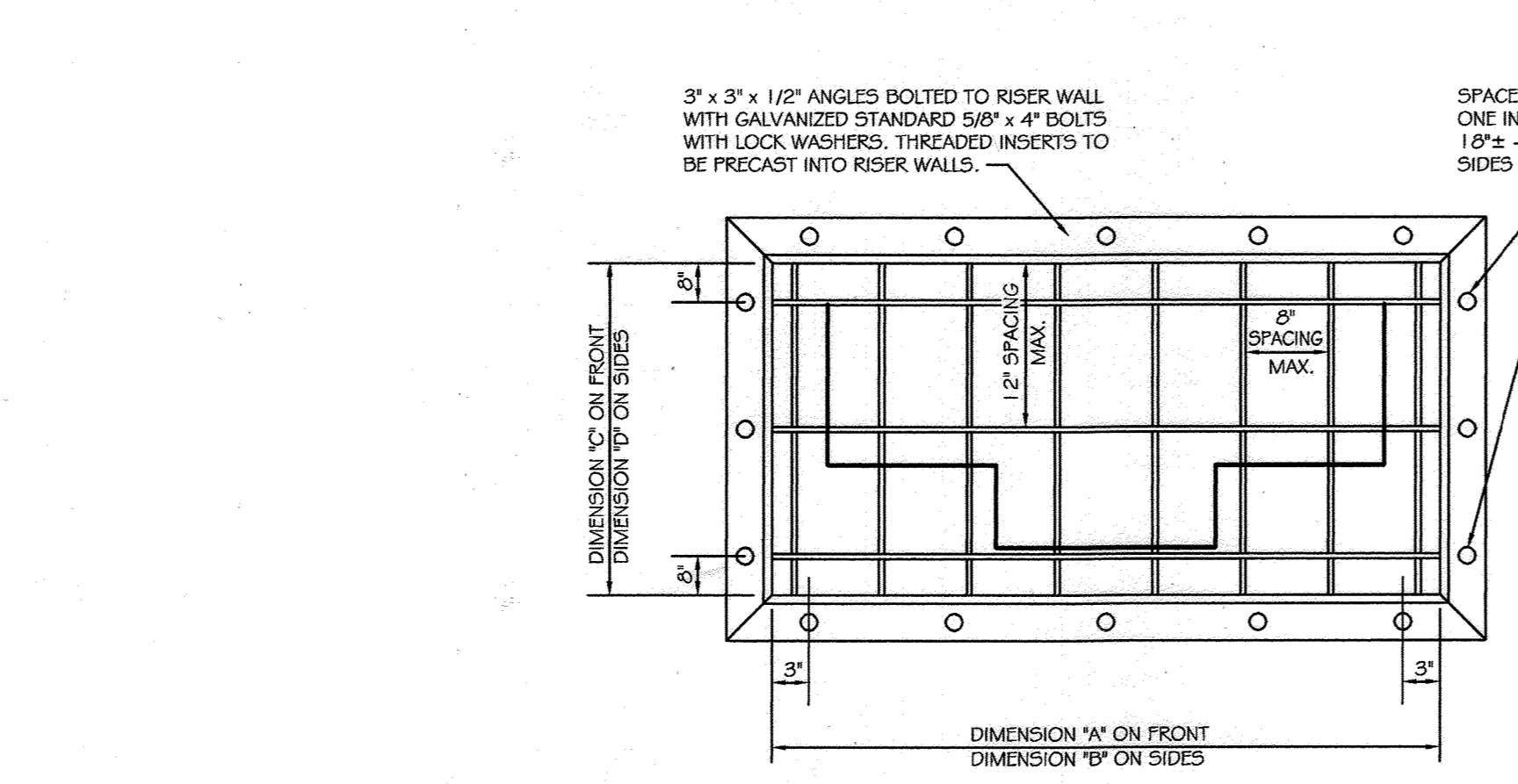
Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 608, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905. The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct



TRASH RACK DIMENSION TABLE

POND #	DIMENSION 'A'	DIMENSION 'B'	DIMENSION 'C'	DIMENSION 'D'	DIMENSION 'E'
1	8' - 0"	N/A	3' - 2"	N/A	1' - 10"
2	10' - 0"	N/A	3' - 3"	N/A	1' - 10"
3	6' - 0"	N/A	3' - 2"	N/A	2' - 0"
4	5' - 0"	N/A	3' - 9"	N/A	2' - 6"

TRASH RACK DETAIL

NOT TO SCALE

PIPE SCHEDULE

FROM	TO	SIZE	TYPE	LENGTH
ES-2	ES-1	60"x4"	CMP-ARCH PIPE	93 LF.
CS-1	ES-3	30"	RCP, ASTM C-361, TWIN	50 LF.
CS-2	ES-4	30"	RCP, ASTM C-361	76 LF.
CS-3	ES-5	30"	RCP, ASTM C-361	80 LF.
CS-4	ES-6	30"	RCP, ASTM C-361	90 LF.

STRUCTURE SCHEDULE

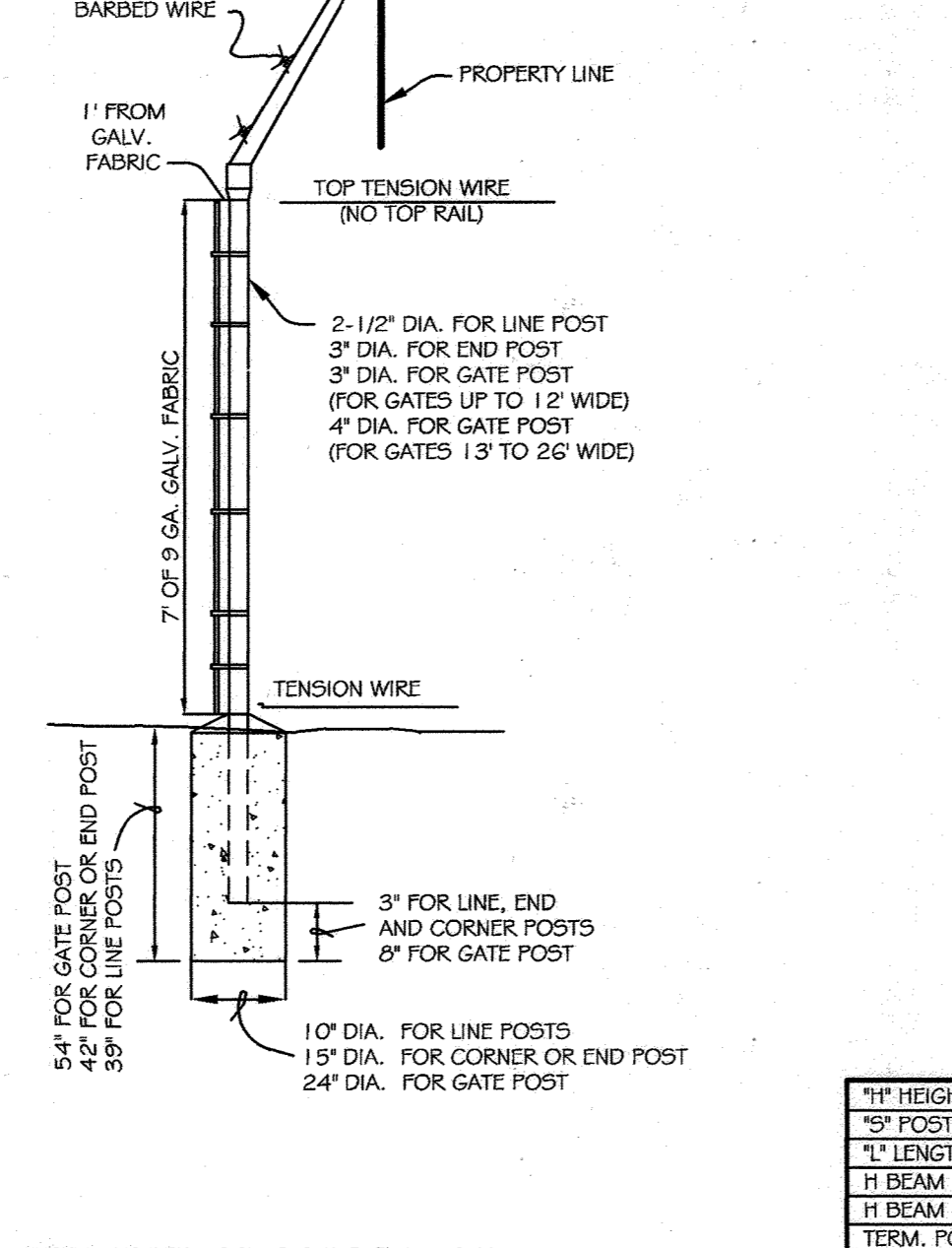
NO.	TYPE	WIDTH DIAM.	INV. ELEV.	TOP ELEV.		STANDARD DETAIL
				UPPER	LOWER	
CS-1	RISER STRUCTURE	8.5' x 4'	165.50	171.20		SEE STRUCTURE DETAIL
CS-2	RISER STRUCTURE	4' x 4'	145.50	156.30		SEE STRUCTURE DETAIL
CS-3	RISER STRUCTURE	5' x 4'	145.50	156.00		SEE STRUCTURE DETAIL
CS-4	RISER STRUCTURE	5' x 4'	153.50	162.00		SEE STRUCTURE DETAIL
ES-1	STANDARD METAL END SECTION	60" x 46"	166.85	N/A		MSHA NO. MD-371.01
ES-2	STANDARD METAL END SECTION	60" x 46"	169.00	N/A		MSHA NO. MD-371.01
ES-3	STANDARD CONCRETE END SECTION, TWIN	30"	167.00	N/A		MSHA NO. MD-368.01
ES-4	STANDARD CONCRETE END SECTION	30"	145.00	N/A		MSHA NO. MD-368.01
ES-5	STANDARD CONCRETE END SECTION	30"	145.00	N/A		MSHA NO. MD-368.01
ES-6	STANDARD CONCRETE END SECTION	30"	151.00	N/A		MSHA NO. MD-368.01

NOTCH WEIR IN GABION BASKET

NOT TO SCALE

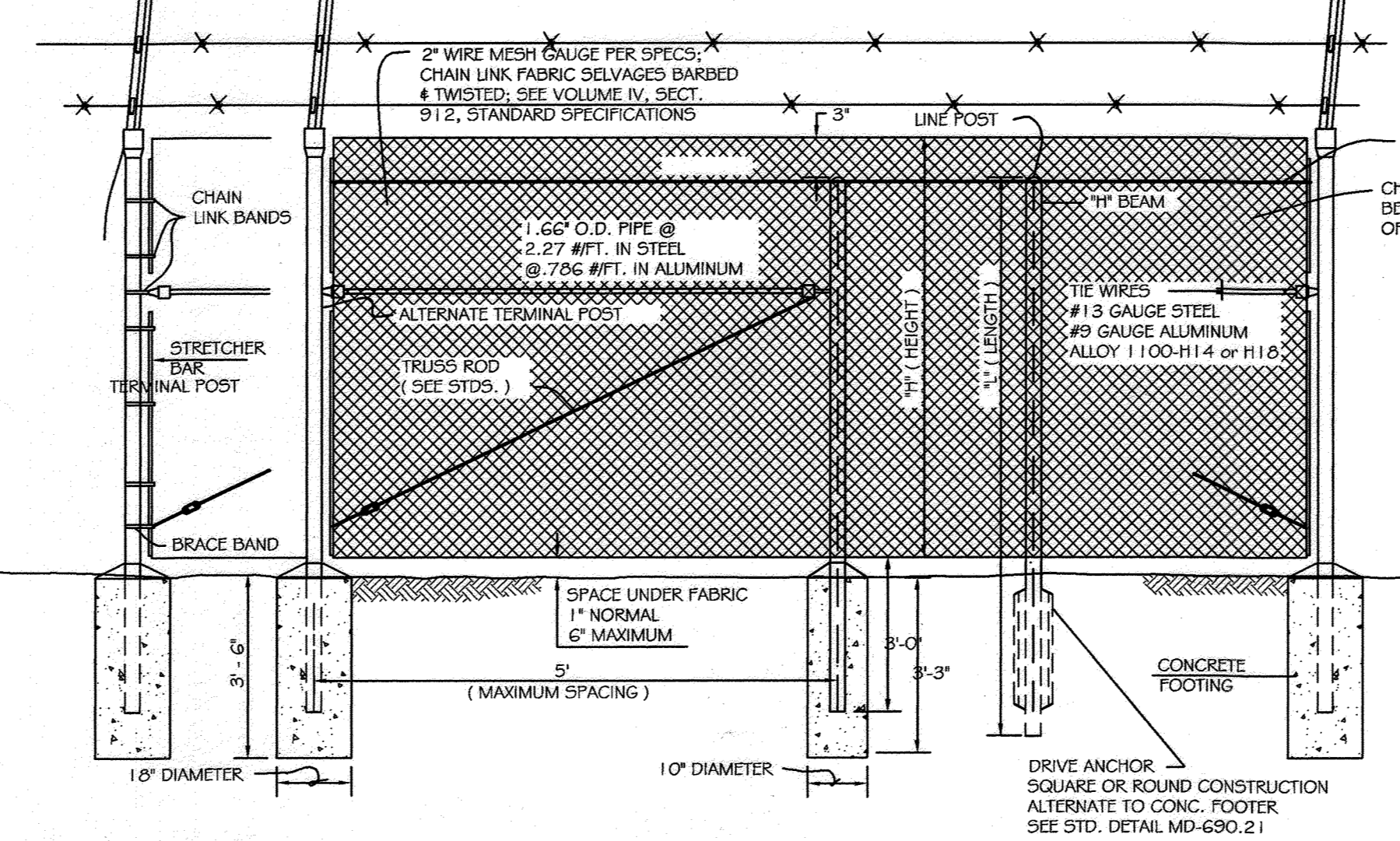
NOTCH WEIR ELEVATION TABLE

POND #	ELEVATION 'A'	ELEVATION 'B'	LENGTH
1A	172.0	170.25	6'
1B	172.0	170.25	10'
2	157.5	155.5	14'
3	157.5	155.5	16'
4	164.0	162.0	11'



PERIMETER FENCE POST DETAIL

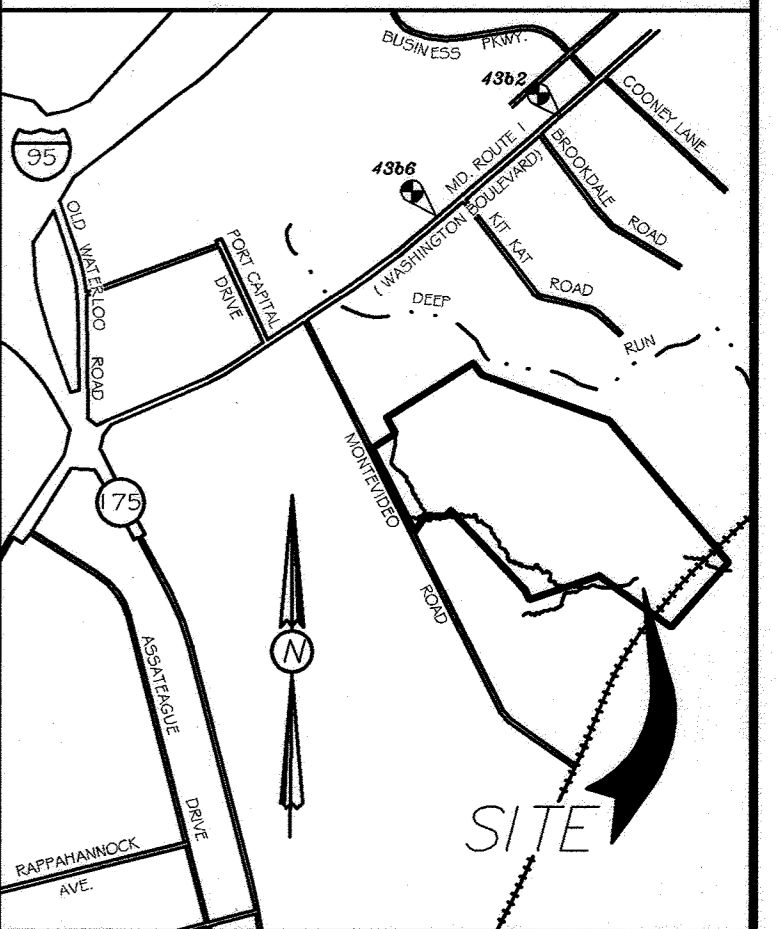
NO SCALE



4" H HEIGHT OF FENCE	7'-0"
5" POST SPACING MAX.	8'-0"
L' LENGTH OF H BEAM	8'-0" MIN.
H BEAM STEEL	2.25" x 1.95" @ 4.10 #/FT.
H BEAM ALUMINUM	2.25" x 1.95" @ 1.25 #/FT.
TERM. POST STEEL	2.875" O.D. @ 5.79 #/FT.
TERM. POST ALUMINUM	2.875" O.D. @ 2.00 #/FT.
ALT. TERM POST STEEL	2.50" SQ. @ 3.70 #/FT.
ALT. TERM POST ALUMINUM	3.00" SQ. @ 2.00 #/FT.

PERIMETER LINK FENCE DETAIL

NO SCALE



VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andy Hamrick 9/5/03
 Chief, Division of Land Development HB
John Dammann 9/16/03
 Chief, Development Engineering Division MAT
Frank A. Leary 9/17/03
 Director, Department of Planning and Zoning

~~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.~~
 U.S.D.A. Natural Resources Conservation Service
 These Plans For Small Pond Construction Meet The Requirements For Soil Conservation District.
 Howard County

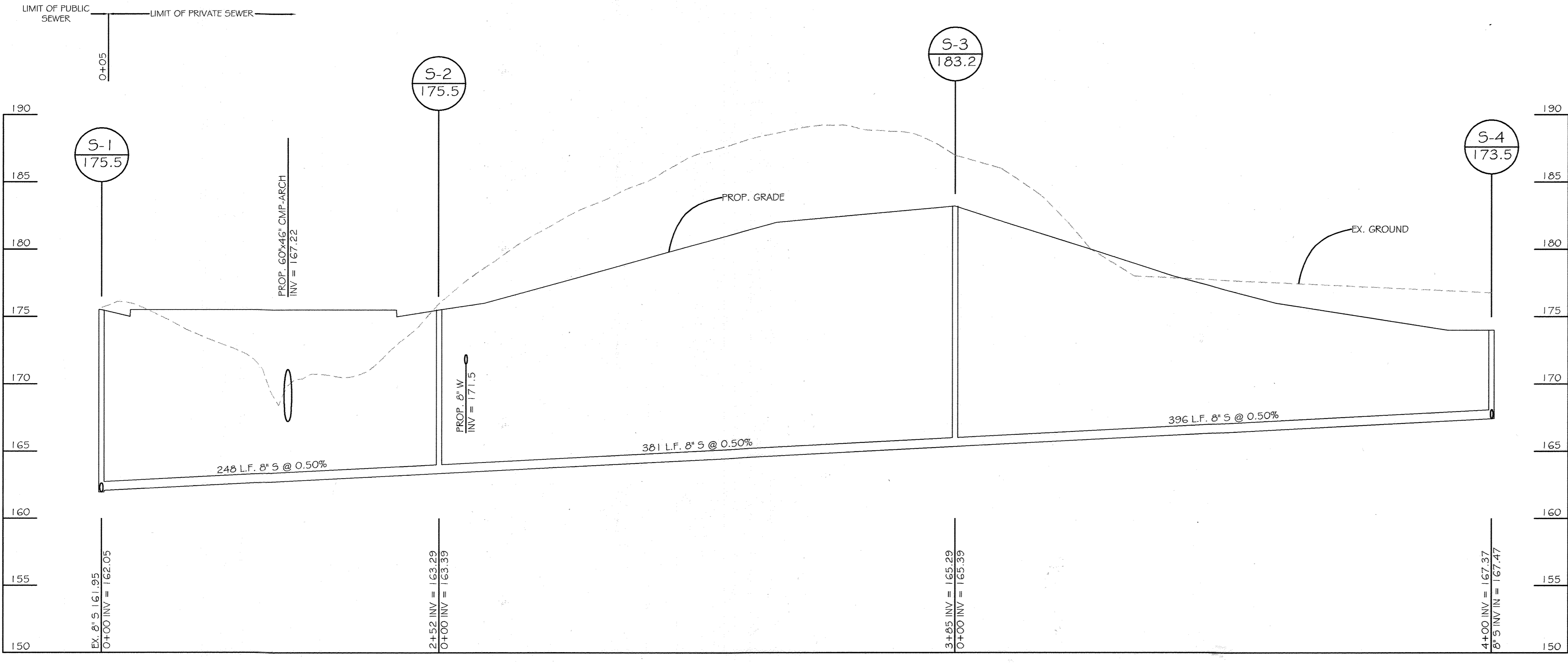
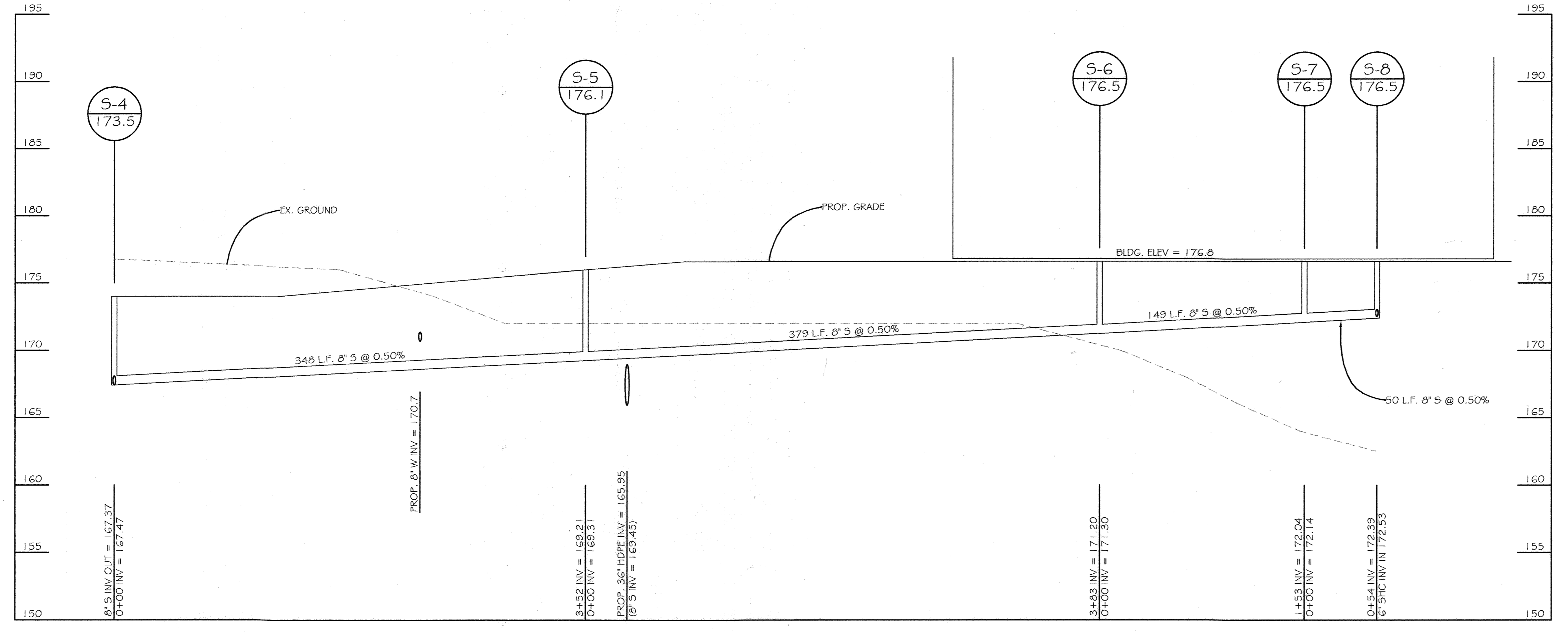
DATE	REVISIONS
07/29/03	RED-LINE REVISION NO. 2: ADDED SHEET 14A
03/24/03	RED-LINE REVISION NO. 1

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
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 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
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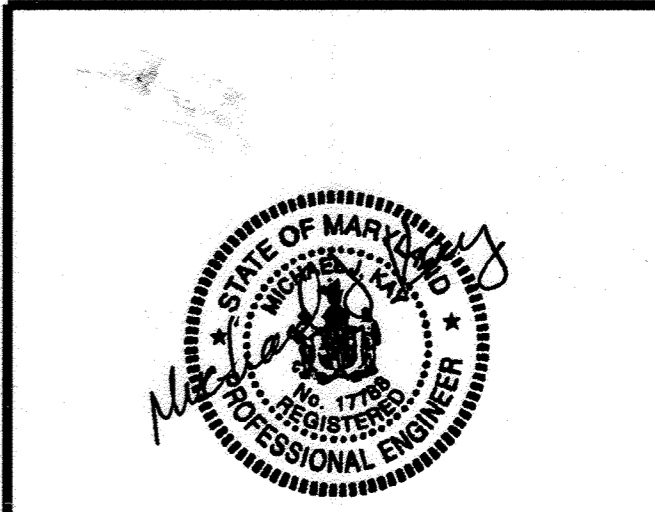
REVISED UTILITY PROFILES

SDP-00-63

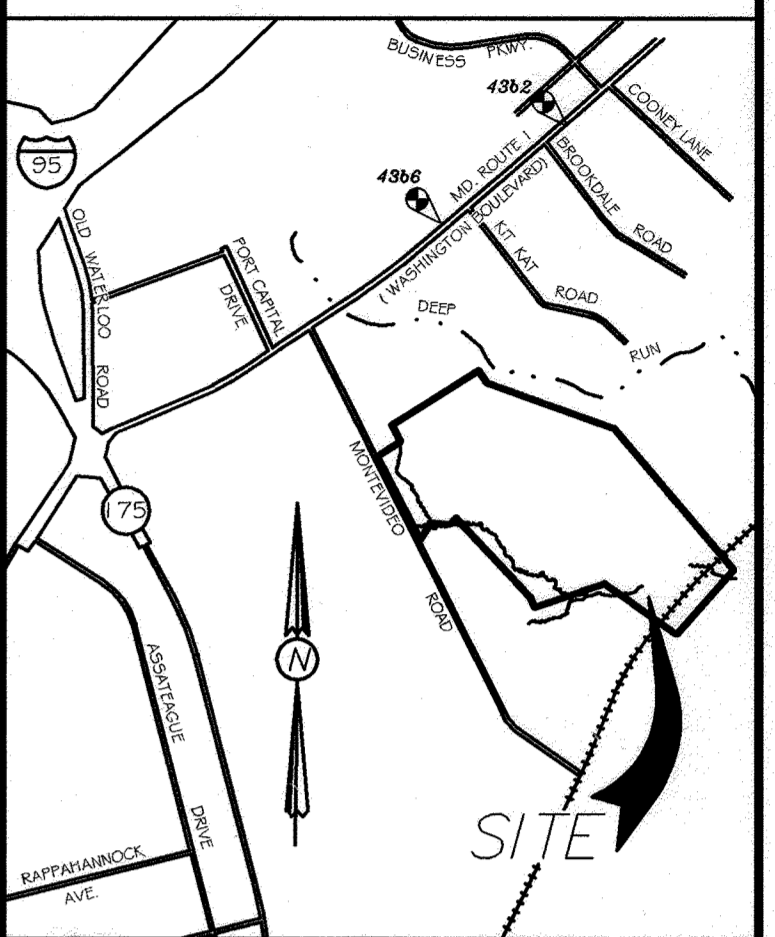
OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 455 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L. 4798 F. 605



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



63



VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hernandez 9/5/13
 Check Engineer/Development
Paul Dammann 9/13/13
 Staff, Development Engineering Division MRO Date
Paul J. Carroll 9/17/13
 Director, Department of Planning and Zoning Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 U.S.D.A. - Natural Resources Conservation Service Date
 These Plans For Small Pond Construction, Sedimentation and Siltment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
~~Howard Soil Conservation District~~

07/29/03 RED-LINE REVISION NO. 2: ADDED SHEET 14B
 03/24/03 RED-LINE REVISION NO. 1
 DATE REVISIONS

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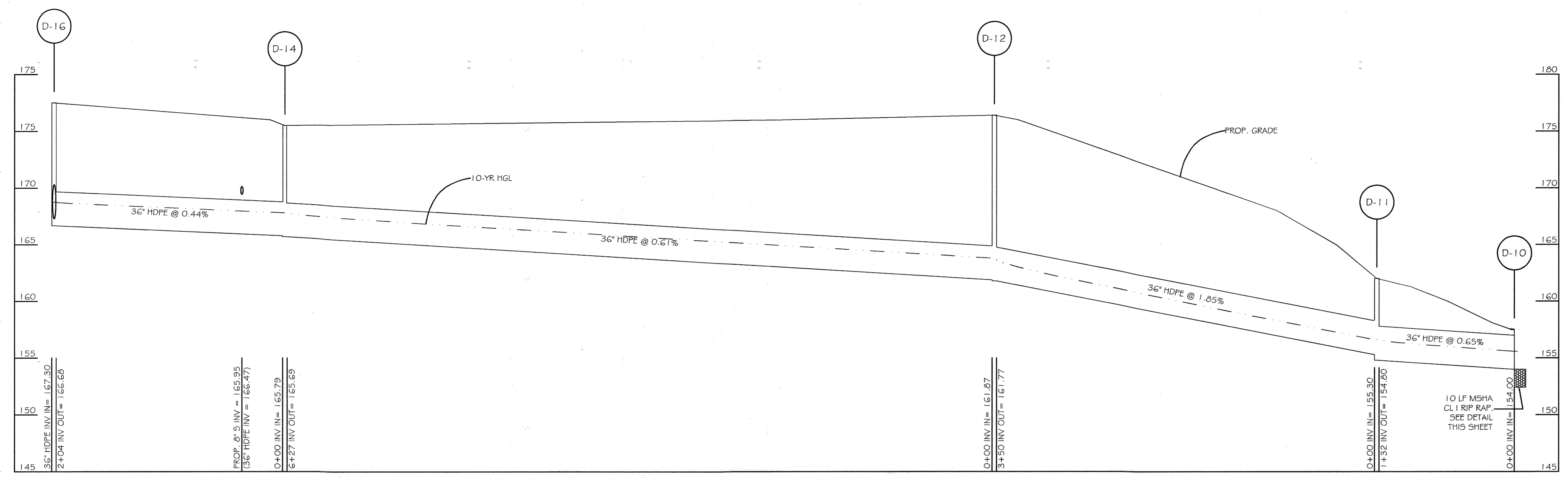
REVISED
 UTILITY PROFILES

SDP-00-63

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 455 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L. 4796 F. 685

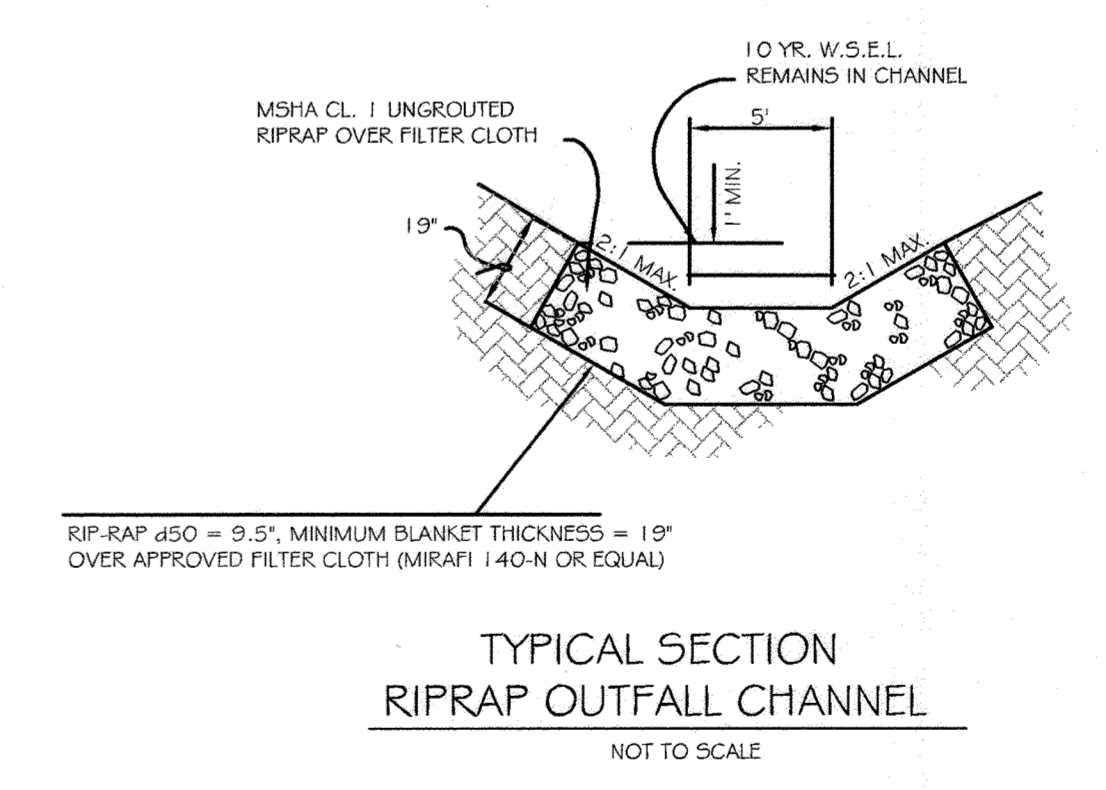
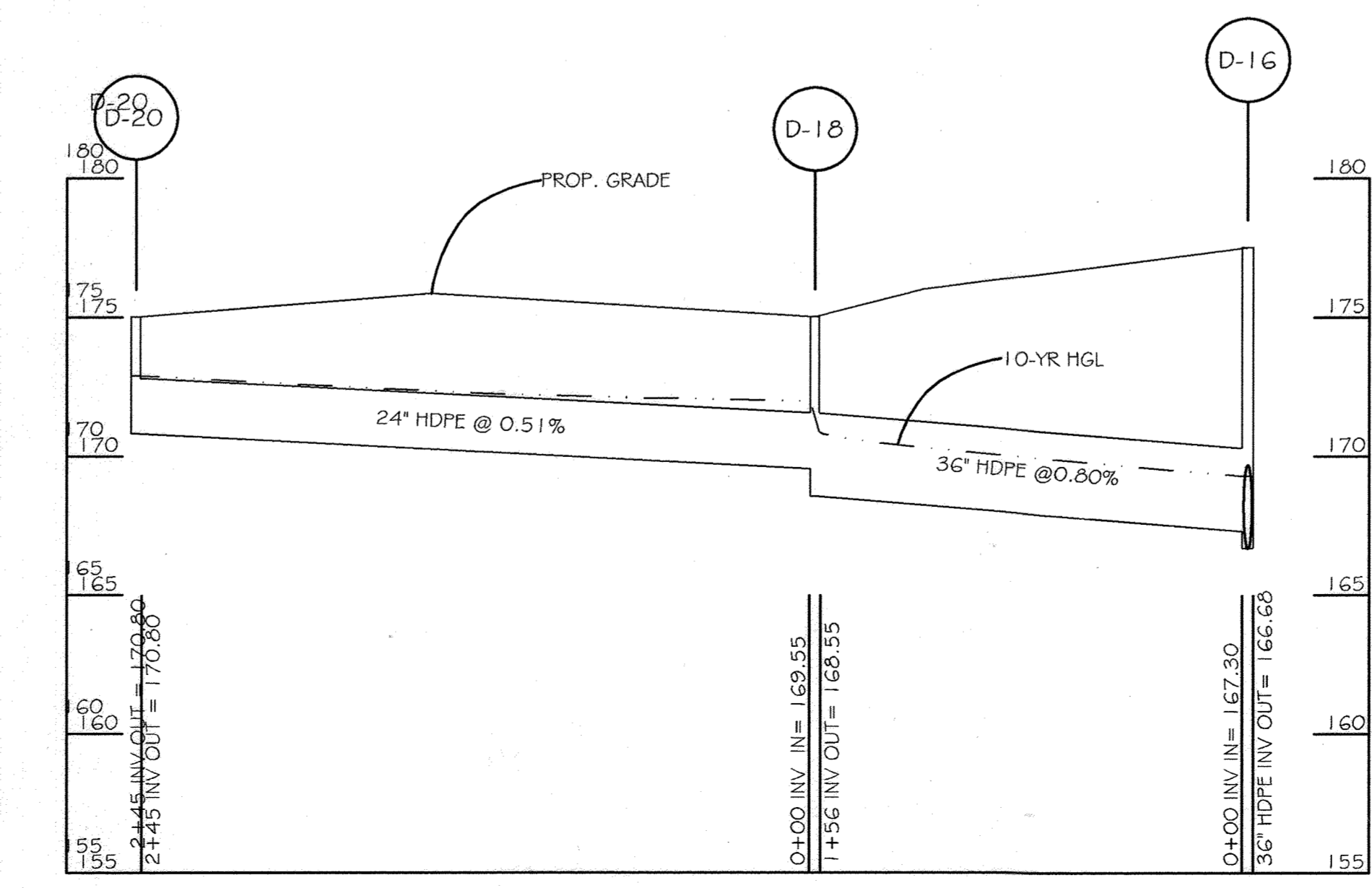
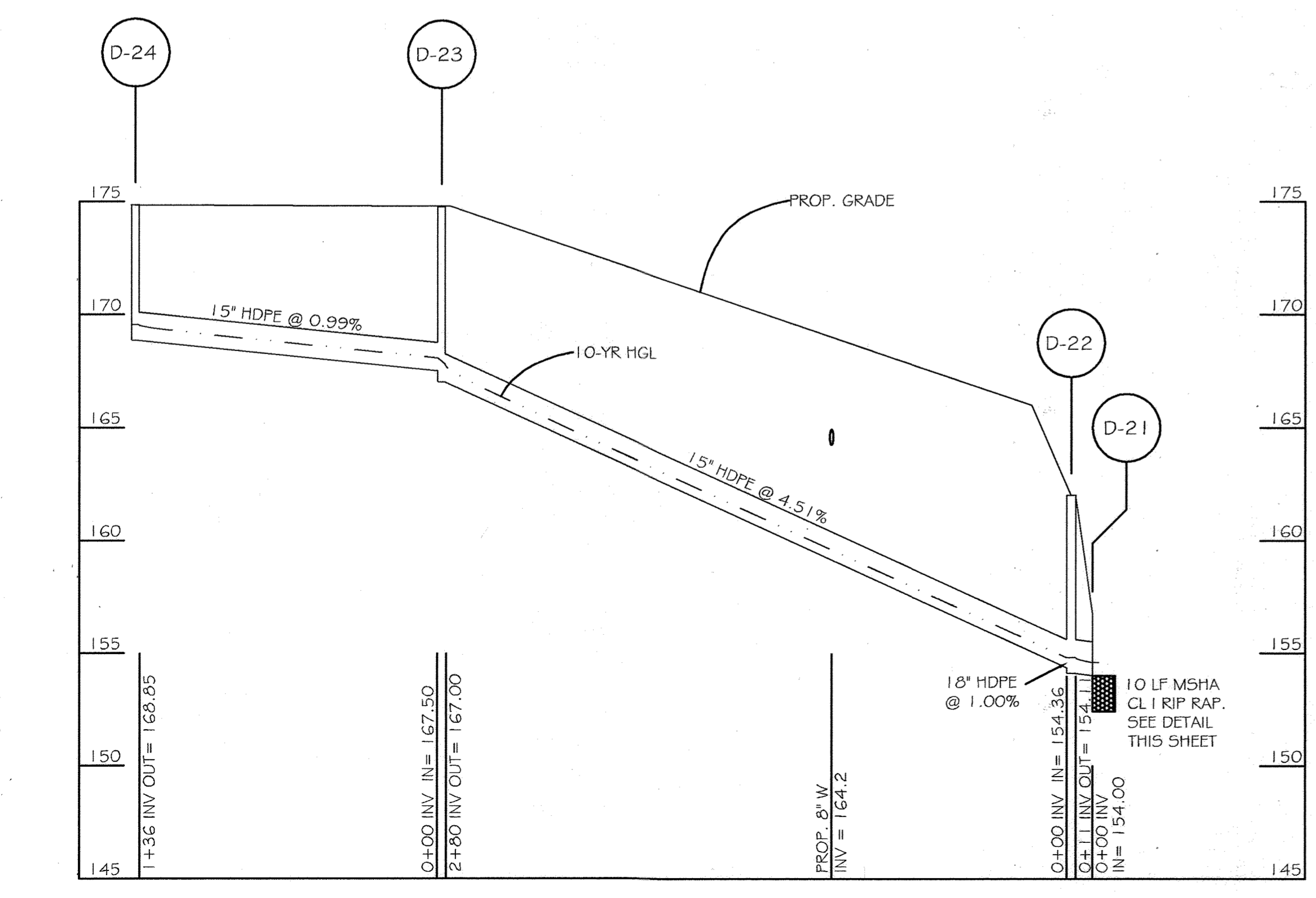
SHEET 14B OF 33

SDP-00-63



NO.	TYPE	INV. IN	INV. OUT	TOPRIM ELEV.	STANDARD DETAIL
D-24	4'-0" STANDARD MANHOLE	NA	168.85	174.85	G-5.12
D-23	4'-0" STANDARD MANHOLE	167.50	167.00	174.75	G-5.12
D-22	4'-0" STANDARD MANHOLE	154.36	154.11	162.00	G-5.12
D-21	21" CONCRETE END SECTION	154.00	NA	NA	SD-5.51
D-20	TYPE "S" INLET	NA	170.80	175.00	SD-4.22
D-18	TYPE "S" INLET	169.55	168.55	175.00	SD-4.22
D-16	5'-0" STANDARD MANHOLE	167.30	166.68	177.50	G-5.13
D-14	5'-0" STANDARD MANHOLE	165.79	165.69	175.50	G-5.13
D-12	5'-0" STANDARD MANHOLE	161.87	161.77	176.40	G-5.13
D-11	5'-0" SHALLOW MANHOLE	155.30	154.80	162.00	G-5.13
D-10	36" CONCRETE END SECTION	154.00	NA	NA	SD-5.51

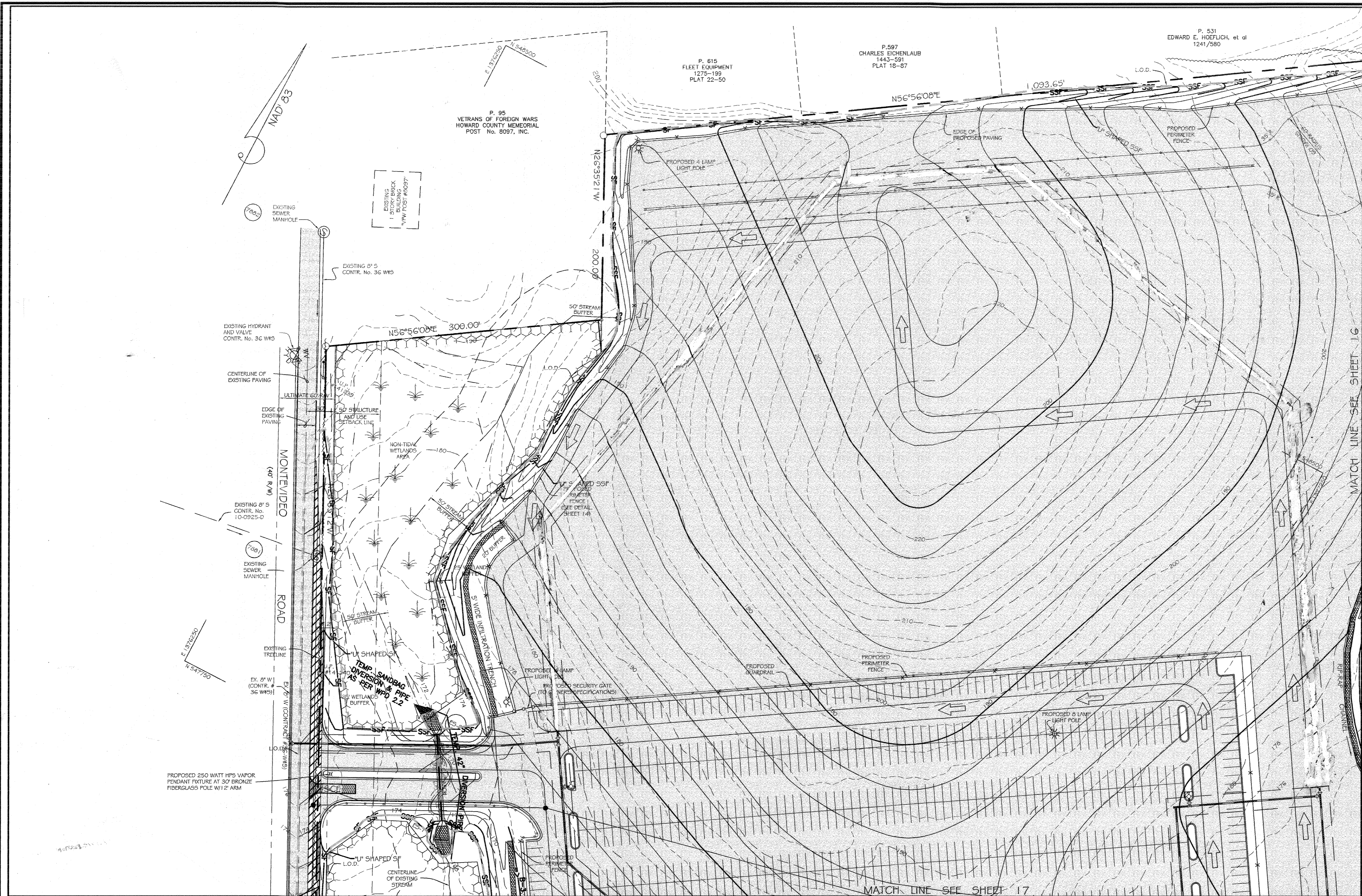
FROM	TO	SIZE	TYPE	LENGTH
D-24	D-23	15"	HDPE	136 L.F.
D-23	D-22	15"	HDPE	280 L.F.
D-22	D-21	18"	HDPE	11 L.F.
D-20	D-18	24"	HDPE	245 L.F.
D-18	D-16	36"	HDPE	156 L.F.
D-16	D-14	36"	HDPE	204 L.F.
D-14	D-12	36"	HDPE	627 L.F.
D-12	D-11	36"	HDPE	338 L.F.
D-11	D-10	36"	HDPE	123 L.F.



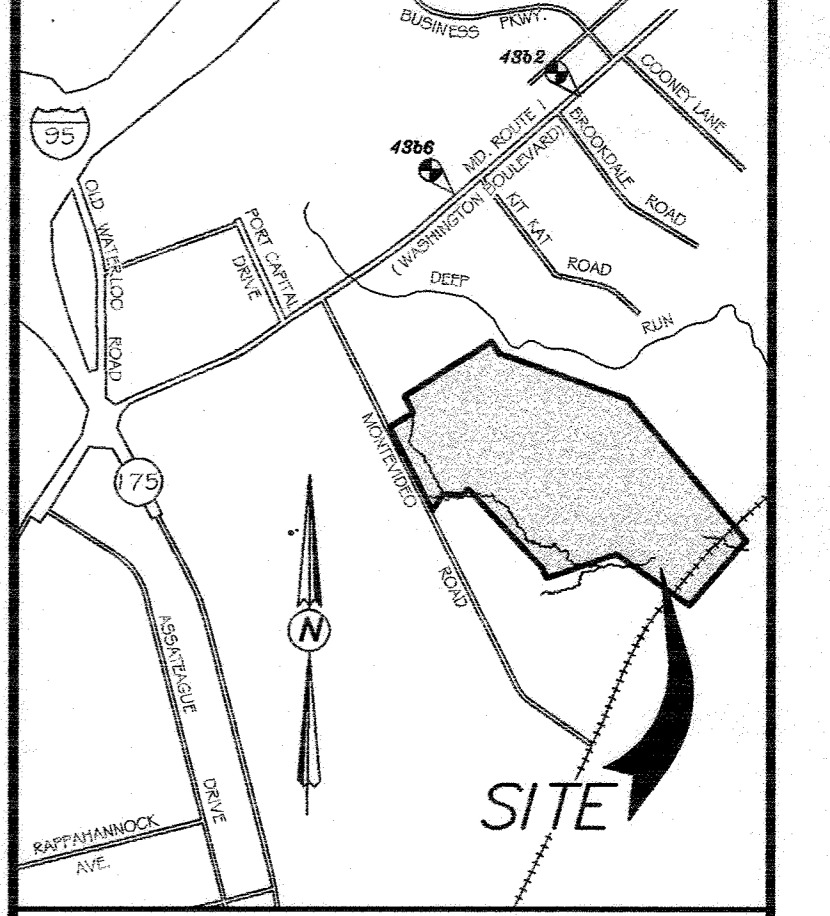
STORM DRAIN PROFILE
 SCALE: VERT. 1"=5'; HOR. 1"=50'



63
 67



THAYER & ASSOCIATES INC.
 2868 CONSTELLATION WAY
 FINKSBURG, MD 21048-2068
 PHONE/FAX: (410) 840-8797



VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Richard Board 11/2/00
 Chief, Division of Land Development
William D. ... 10/11/00
 Chief, Development Engineering Division
Ray ... 11/2/00
 Chief, Department of Planning and Zoning

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.
Charles ... 10/16/00
 U.S.D.A. - Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
Yvette ... 10/14/00
 Howard SCD

DATE	REVISIONS
9/11/15	REMOVE PORTION OF WATERWAY 1/4"

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

GRADING AND SEDIMENT CONTROL PLAN

SDP-00-63

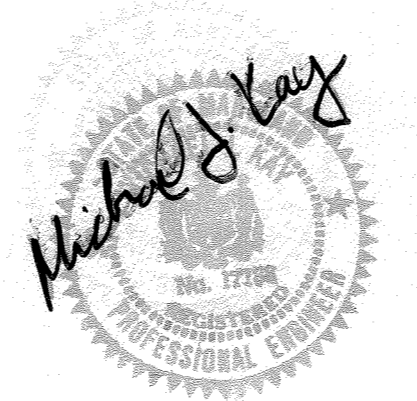
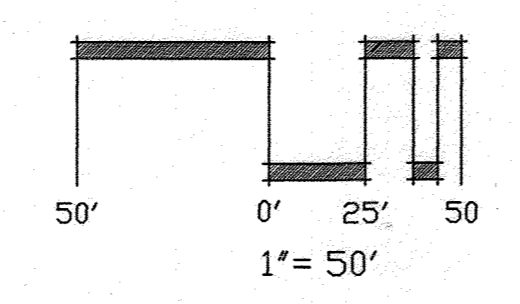
OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L-4750 P. 625

SHEET 15 OF 33

SDP-00-63

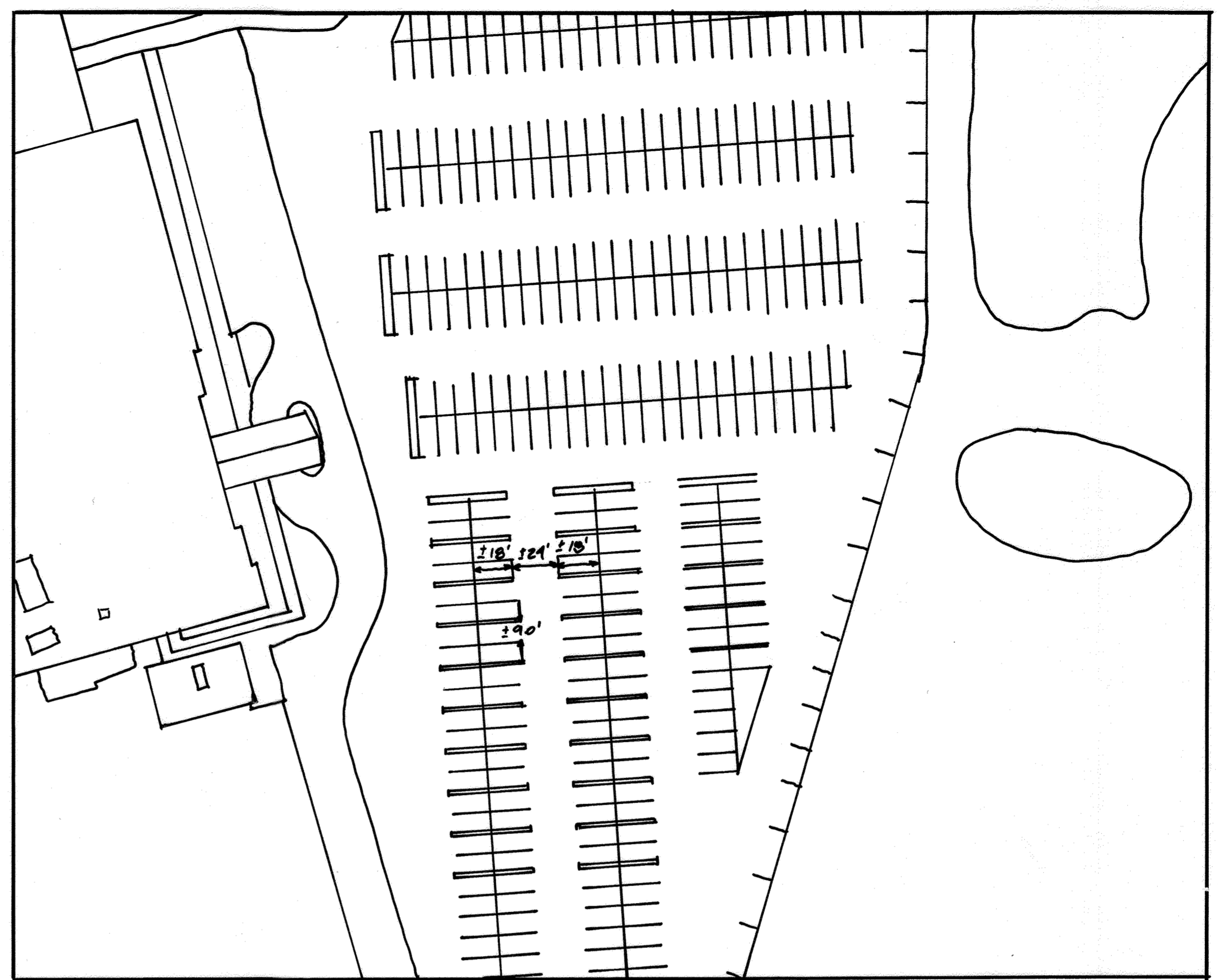
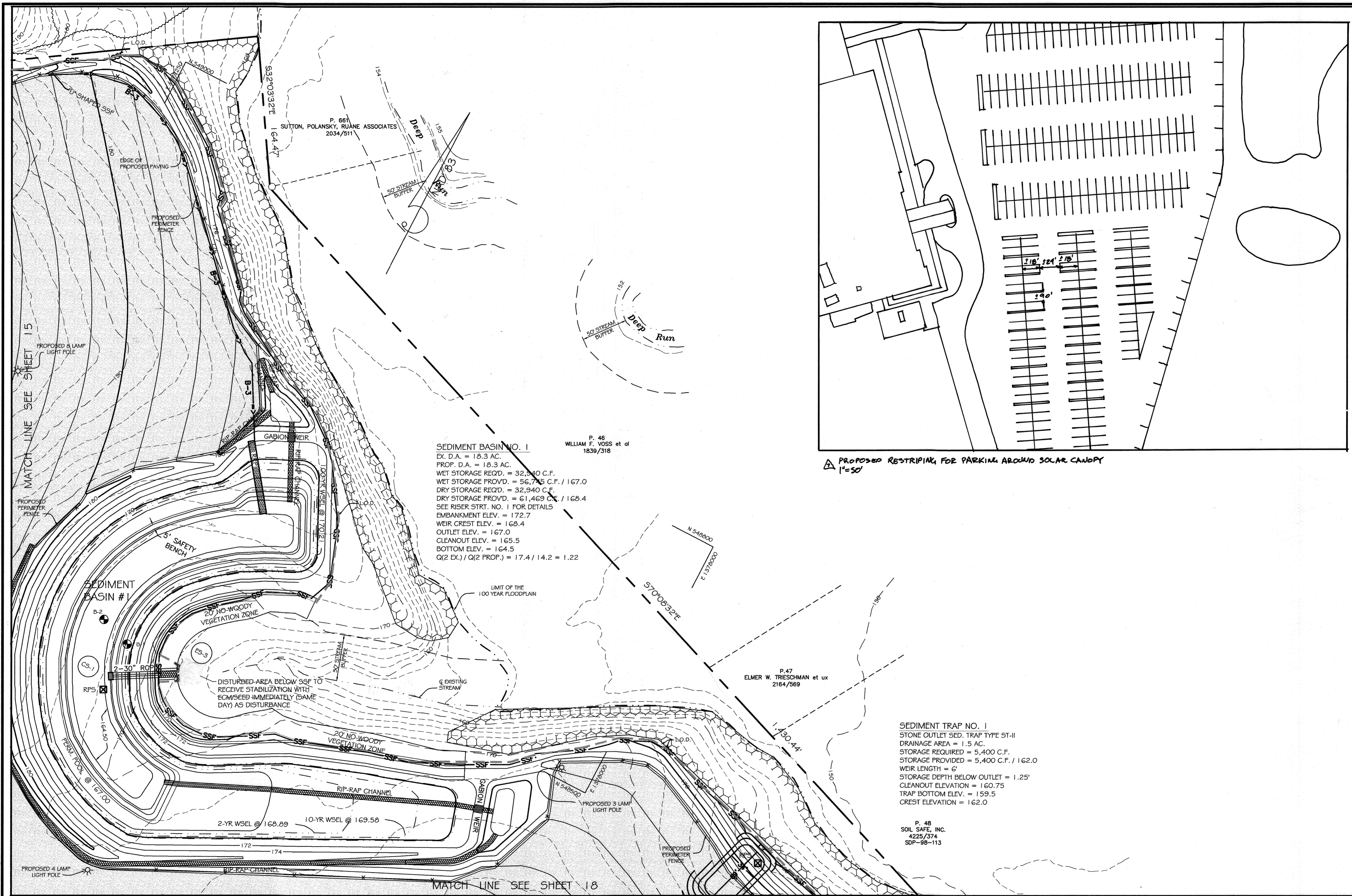


Andrew L. Pater 9/11/15
 for rev. #1 only

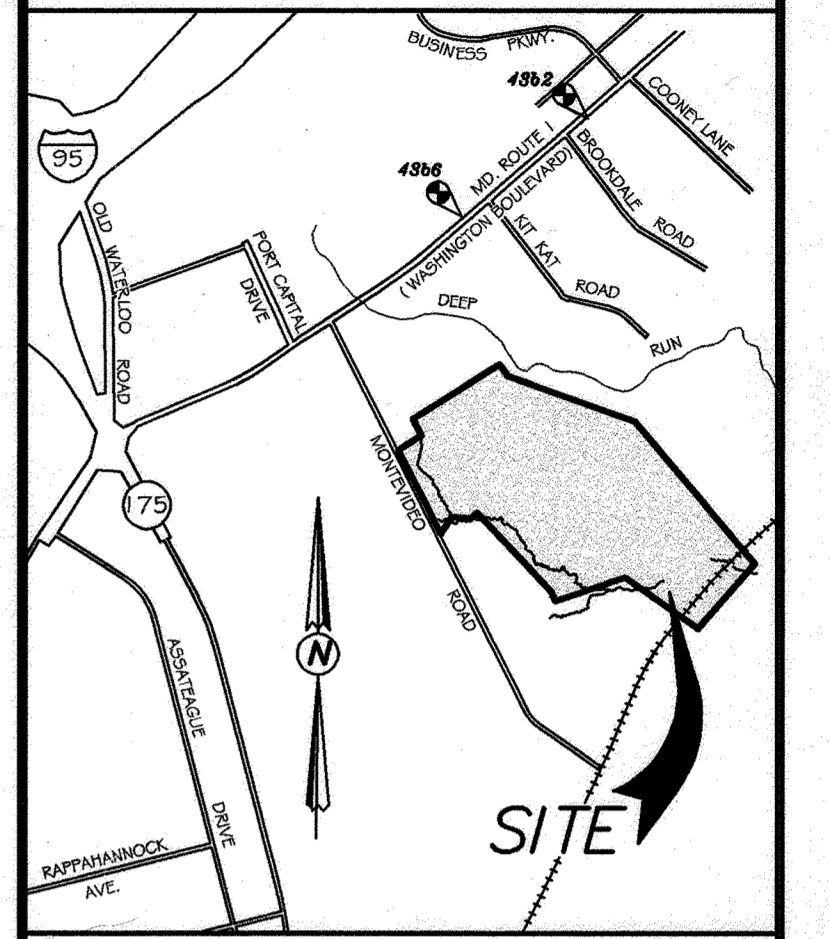


DEVELOPER'S CERTIFICATE
 "We certify that all development and construction will be done according to the plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. 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 inspection by the Howard Soil Conservation District."
G. Damon Thayer 7/8/00
 G. DAMON THAYER Date

ENGINEER'S CERTIFICATE
 "I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an 'as-built' plan of the pond within 30 days of completion."
Michael J. Kay 7/8/00
 MICHAEL J. KAY Date



THAYER & ASSOCIATES INC.
 2868 CONSTELLATION WAY
 FINKSBURG, MD 21048-2068
 PHONE/FAX: (410) 840-8797



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Michael Blood 10/26/00
 Chief, Division of Land Development
 [Signature] 10/11/00
 Chief, Development Engineering Division
 [Signature] 11/2/00
 Director, Department of Planning and Zoning

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] 10/26/00
 U.S.D.A. 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] 10/26/00
 Planning SCB

DATE	REVISIONS
9/28/15	Redline Reason to Add Solar Canopy

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

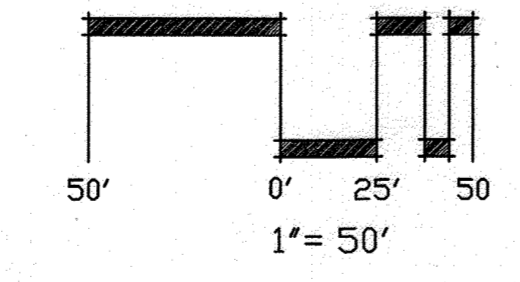
GRADING AND SEDIMENT CONTROL PLAN
 SDP-00-63

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 605 POKITREE QUARRY DRIVE
 ATLANTA, GA 30328
 L. 4758 F. 695

SHEET 16 OF 33

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. 27020 EXP. DATE 1/25/16

PAUL G. CAVANAGH
 PROFESSIONAL ENGINEER NO. 27020

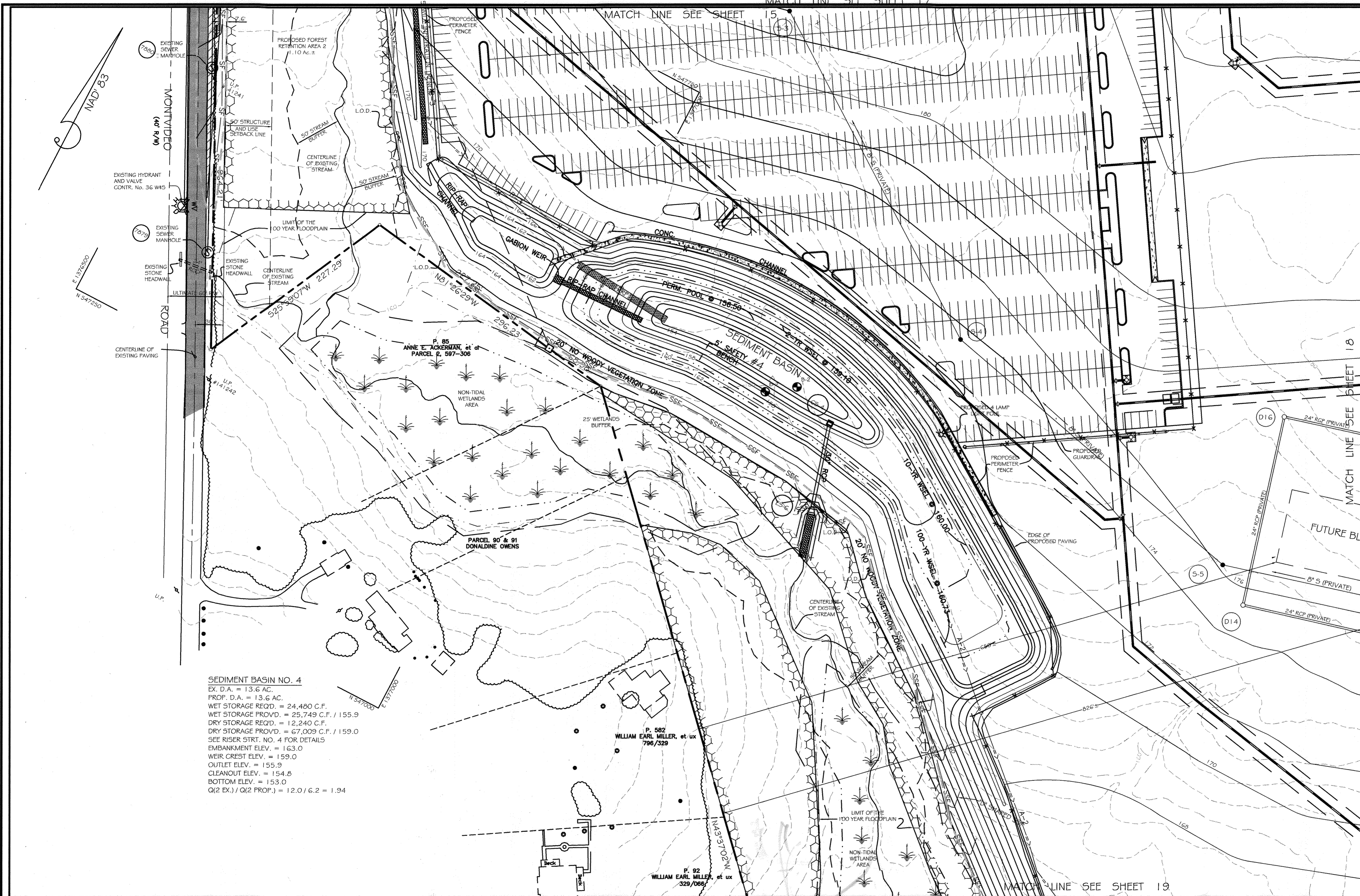


DEVELOPER'S CERTIFICATE
 "We certify that all development and construction will be done according to the plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. 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 inspection by the Howard Soil Conservation District."

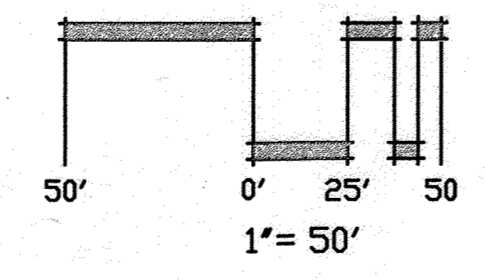
G. Damon Thayer 7/8/00
 G. DAMON THAYER Date

ENGINEER'S CERTIFICATE
 "I certify that the 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."

Michael J. Kay 7/8/00
 MICHAEL J. KAY Date



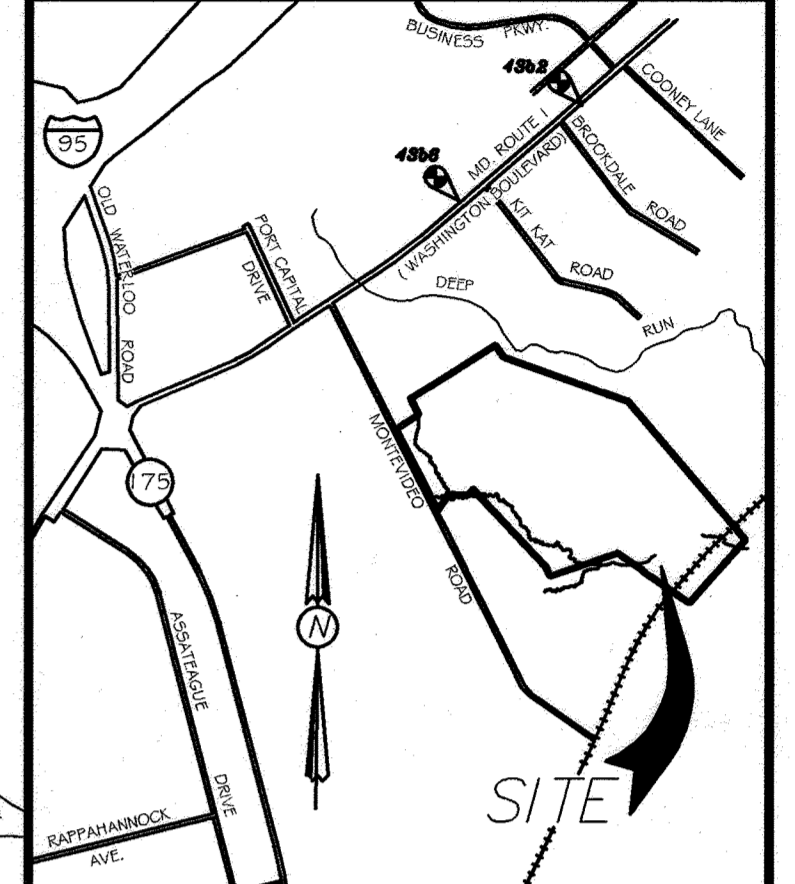
SEDIMENT BASIN NO. 4
 EX. D.A. = 13.6 AC.
 PROP. D.A. = 13.6 AC.
 WET STORAGE REQ'D. = 24,480 C.F.
 WET STORAGE PROVD. = 25,749 C.F. / 155.9
 DRY STORAGE REQ'D. = 12,240 C.F.
 DRY STORAGE PROVD. = 67,009 C.F. / 159.0
 SEE RISER STR. NO. 4 FOR DETAILS
 EMBANKMENT ELEV. = 163.0
 WEIR CREST ELEV. = 159.0
 OUTLET ELEV. = 155.9
 CLEANOUT ELEV. = 154.8
 BOTTOM ELEV. = 153.0
 Q(2 EX.) / Q(2 PROP.) = 12.0 / 6.2 = 1.94



DEVELOPER'S CERTIFICATE
 "We certify that all development and construction will be done according to the 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. 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 inspection by the Howard Soil Conservation District."
 G. Damon Thayer 8/04/03
 G. DAMON THAYER Date PROPOSED 4 LAMP LIGHT POLE

ENGINEER'S CERTIFICATE
 "I certify that the 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."
 Michael J. Kay 8/16/03
 MICHAEL J. KAY Date

THAYER & ASSOCIATES INC.
 2868 CONSTELLATION WAY
 FINKSBURG, MD 21048-2068
 PHONE/FAX: (410) 840-8797



VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Cindy Hamstra 9/5/03
 Chief, Department of Planning and Zoning
 Chad Danner 9/16/03
 Chief, Development Engineering Division
 Robyn Campbell 9/17/03
 Director, Department of Planning and Zoning

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 Jim Meyer 8/27/03
 U.S. Natural Resources Administration Service
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
 Shannon Monahan 8/27/03
 Howard SCD

07/29/03	RED-LINE REVISION NO. 2
03/24/03	RED-LINE REVISION NO. 1
DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT: HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

REVISED GRADING AND SEDIMENT CONTROL PLAN

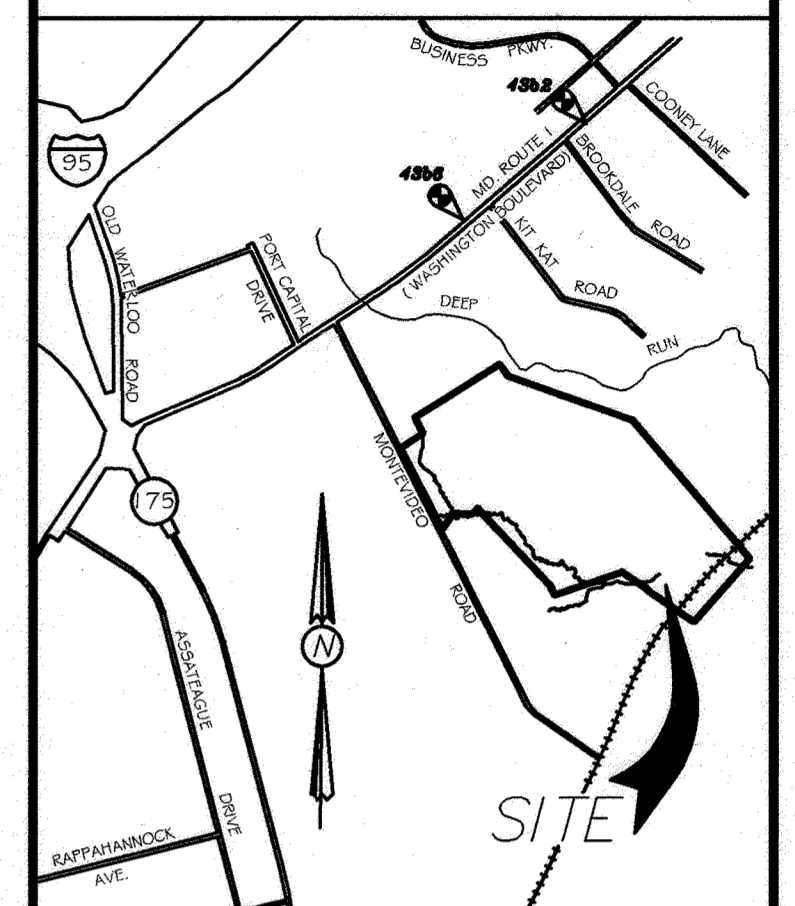
SDP-00-63
 MATCH LINE SEE SHEET 18

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L. 4796 F. 625

MATCH LINE SEE SHEET 16



2868 CONSTELLATION WAY
FINKSBURG, MD 21048-2068
PHONE/FAX: (410) 840-8797



VICINITY MAP
SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris Stamat 1/5/03
Chris Stamat 7/2/03
Mark S. Caylor 5/6/03

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEASURES THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT
Sharon Mowbray 8/27/03

DATE	REVISIONS
12/14/03	ADDITION OF ELEVATED CONCRETE PAD & CANOPY
9/26/05	RED-LINE REVISION TO ADD SEDIMENT CANOPY
11-29-06	RED-LINE REVISION NO 3 - ROAD WIDENING
07/29/03	RED-LINE REVISION NO. 2
03/24/03	RED-LINE REVISION NO. 1

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
TAX MAP NO: 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 17, 2000

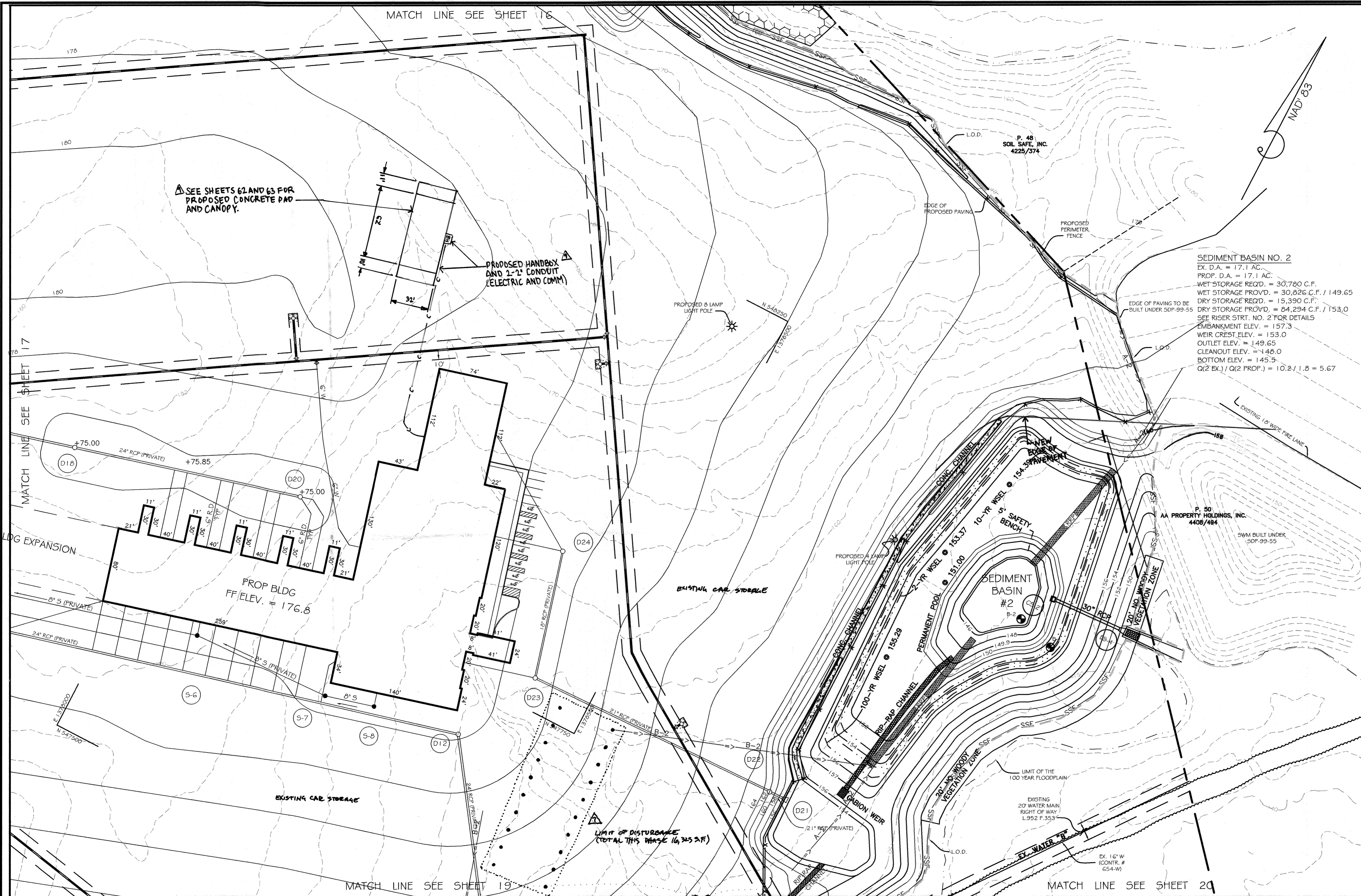
REVISED
GRADING AND SEDIMENT CONTROL PLAN

SDP-00-63

OWNER / DEVELOPER
AA PROPERTY HOLDINGS
6105 PERCENTRE DUNWOODY DRIVE
ATLANTA, GA 30328
L. 4739 F. 625

SHEET 18 OF 33

SDP-00-63



SEDIMENT BASIN NO. 2
EX. D.A. = 17.1 AC.
PROP. D.A. = 17.1 AC.
WET STORAGE REQD. = 30,780 C.F.
WET STORAGE PROVD. = 30,826 C.F. / 149.65
DRY STORAGE REQD. = 15,390 C.F.
DRY STORAGE PROVD. = 84,294 C.F. / 153.0
SEE RISER STRT. NO. 2 FOR DETAILS
EMBANKMENT ELEV. = 157.3
WEIR CREST ELEV. = 153.0
OUTLET ELEV. = 149.65
CLEANOUT ELEV. = 148.0
BOTTOM ELEV. = 145.5
Q(2 EX.) / Q(2 PROP.) = 10.2 / 1.8 = 5.67

P. 50
AA PROPERTY HOLDINGS, INC.
4408/484
SWM BUILT UNDER
SDP-99-55

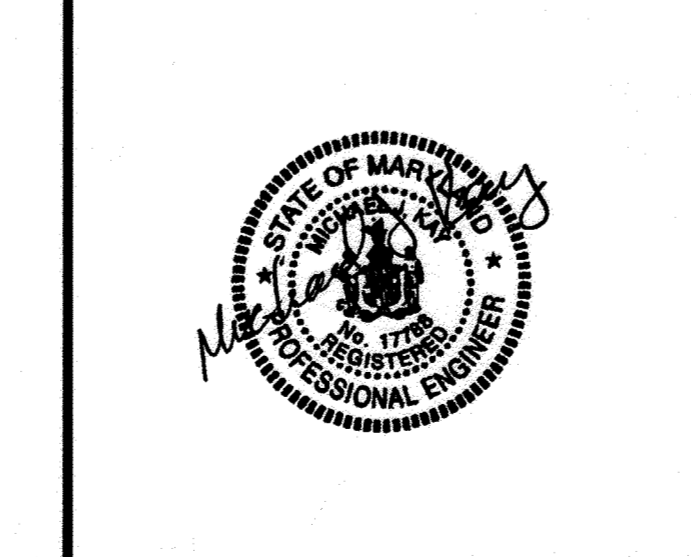
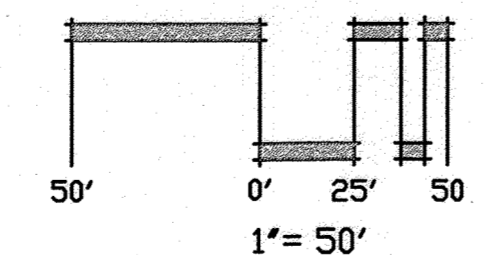
LIMIT OF DISTURBANCE
(TOTAL THIS SHEET 16,325 S.F.)

MATCH LINE SEE SHEET 18

MATCH LINE SEE SHEET 18

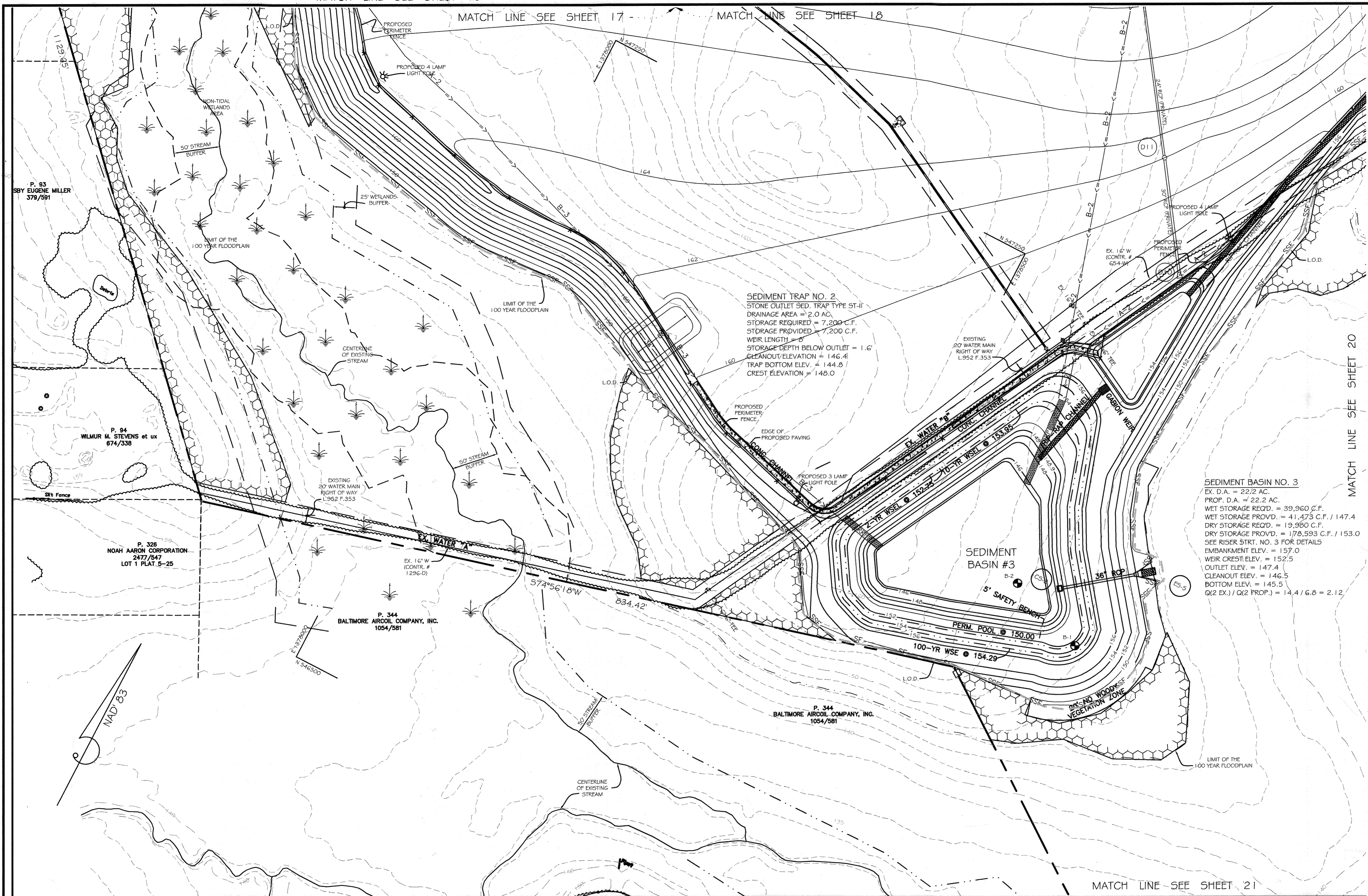
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR SUPERVISED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 21020 EXP. DATE 1/25/16
Paul G. Chavindach
PAUL G. CHAVINDACH
PROFESSIONAL ENGINEER NO. 21020

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR SUPERVISED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 19426 EXP. DATE 03/31/24 FOR 12/24/06 REVISION
Michael J. Kay
MICHAEL J. KAY
PROFESSIONAL ENGINEER

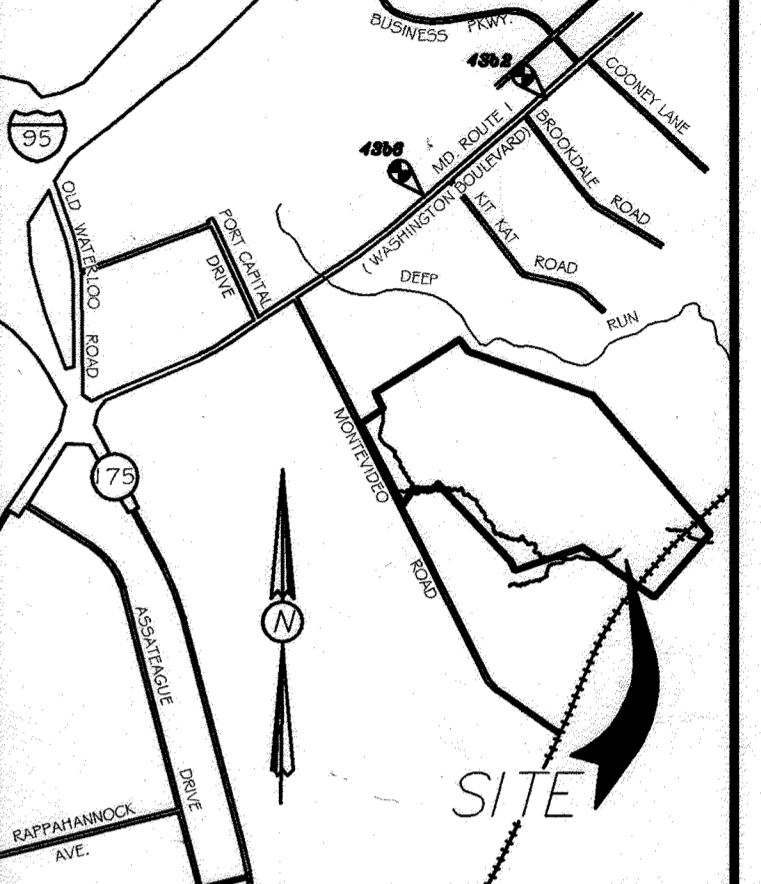


DEVELOPER'S CERTIFICATE
I certify that all development and construction will be done according to the plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. 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 the on-site inspection by the Howard Soil Conservation District.
G. Damon Thayer
G. DAMON THAYER
LOD.

ENGINEER'S CERTIFICATE
I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. The 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.
Michael J. Kay
MICHAEL J. KAY
LOD.



THAYER & ASSOCIATES INC.
 2868 CONSTITUTION WAY
 FINKSBURG, MD 21048-2068
 PHONE/FAX: (410) 840-8797



VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Department of Planning and Zoning
 Chief, Development Engineering Division
 Director, Department of Planning and Zoning

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.
 U.S. National Resources Conservation Service
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.

07/29/03	RED-LINE REVISION NO. 2
03/24/03	RED-LINE REVISION NO. 1
DATE	REVISIONS

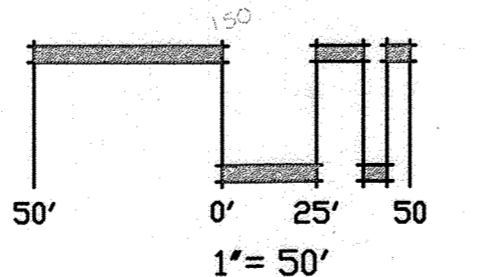
BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

REVISED GRADING AND SEDIMENT CONTROL PLAN

SDP-00-63

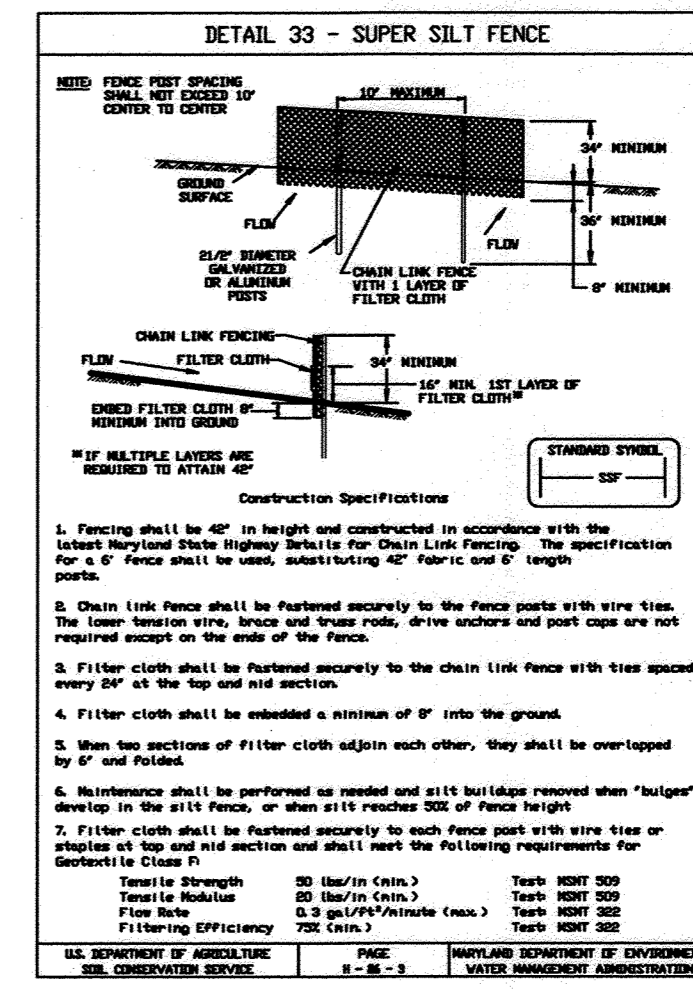
OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L. 4790 F. 625

SHEET 19 OF 33



DEVELOPER'S CERTIFICATE
 "We certify that all development and construction will be done according to the 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. I shall engage a registered professional engineer to supervise field 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 inspection by the Howard Soil Conservation District."
 G. DAMON THAYER 8/04/03 Date

ENGINEER'S CERTIFICATE
 "I certify that the plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. The 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."
 MICHAEL J. KAY 8/10/03 Date



CONSTRUCTION SPECIFICATIONS

- Fencing shall be 40' in height and constructed in accordance with the latest Maryland State Highway Safety for Chain Link Fencing. The specification for a fence shall be minimum construction of 40' height and 2' length.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and frame rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 20' at the top and mid section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and fasten.
- Reinforcing shall be performed on needed and all holes required when "batter" develops in the 12" fence, or when at 18 inches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Section 11.03.01:

Tensile Strength	UV Inhibitor	UV Inhibitor	UV Inhibitor
100 lbs/in ²	0.25%	0.25%	0.25%
100 lbs/in ²	0.25%	0.25%	0.25%
100 lbs/in ²	0.25%	0.25%	0.25%
100 lbs/in ²	0.25%	0.25%	0.25%

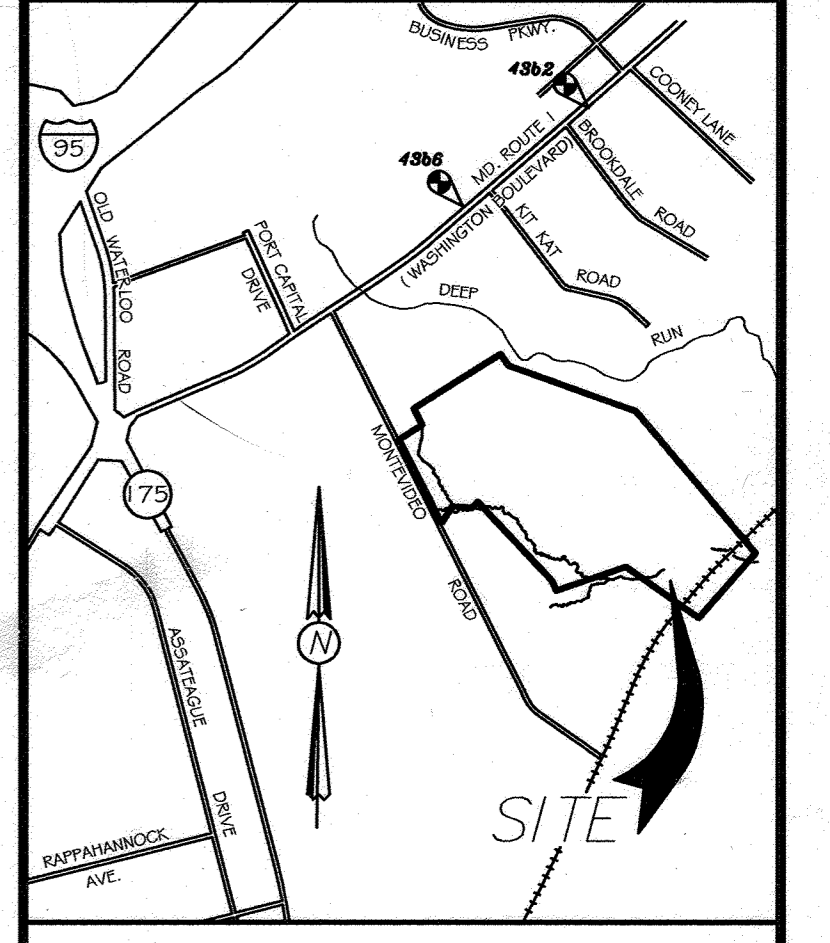
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

U.S. DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATER POLLUTION CONTROL

SUPER SILT FENCE

Slope	Slope	Slope Length	51% Fence Length
0 - 10%	0 - 10'	Unlimited	Unlimited
10 - 20%	10 - 20'	200 Feet	1,000 Feet
20 - 30%	20 - 30'	100 Feet	500 Feet
30 - 50%	30 - 50'	50 Feet	250 Feet
50% +	50' +	50 Feet	250 Feet

THAYER & ASSOCIATES INC.
2868 CONSTELLATION WAY
FINKSBURG, MD 21048-2068
PHONE/FAX: (410) 840-8797



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Development: *[Signature]* 4/15/03
 Chief, Development Engineering Division: *[Signature]* 4/16/03
 Director, Department of Planning and Zoning: *[Signature]* 4/16/03

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
[Signature] 4/3/03
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 4/3/03
 For Stream Fill only

03/24/03 RED-LINE REVISION NO. 1
 DATE REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

GRADING AND SEDIMENT CONTROL PLAN
 SDP-00-63

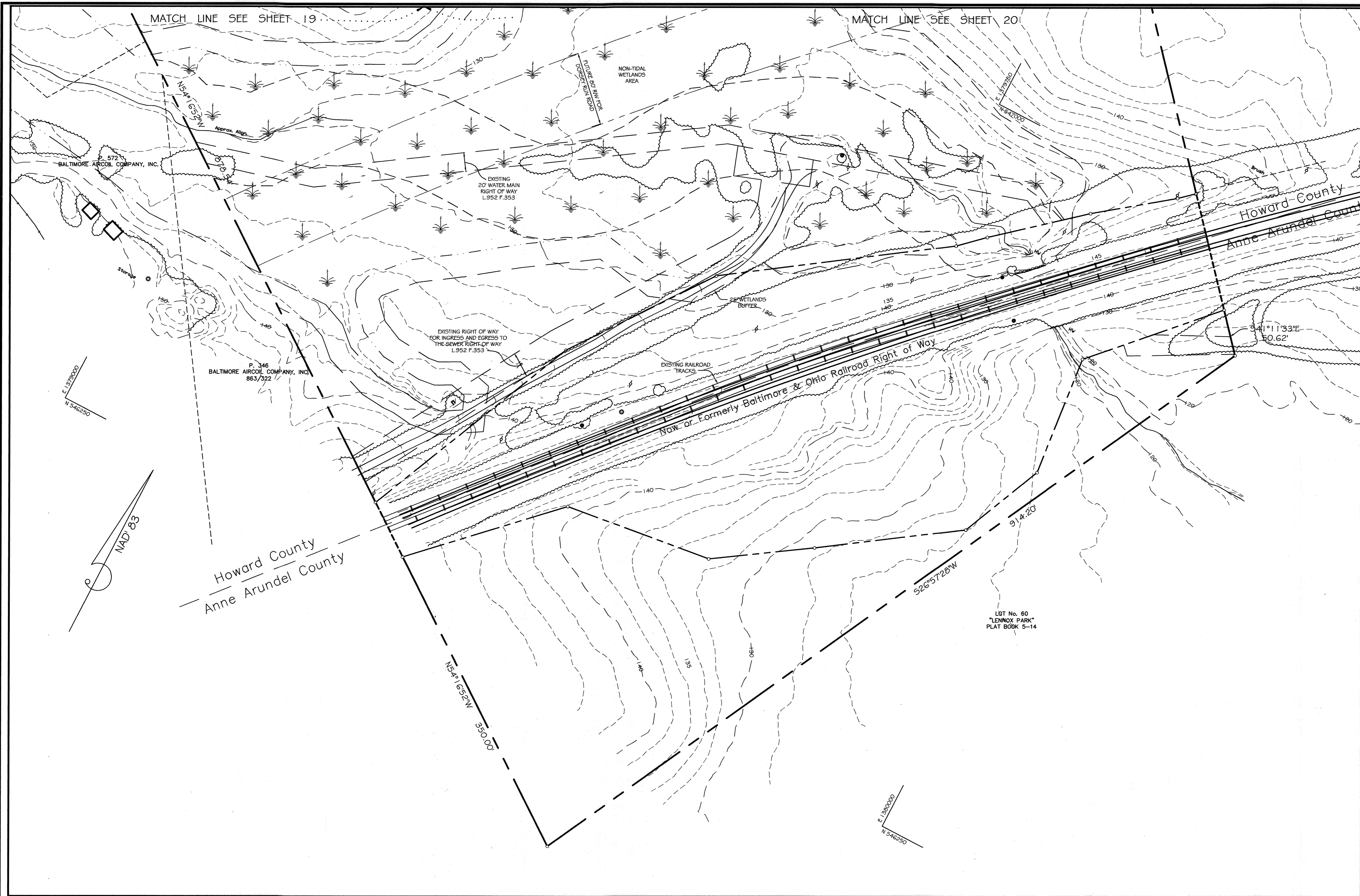
OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L. 4738 F. 605

SUBMITTER
SHEET 20 OF 33

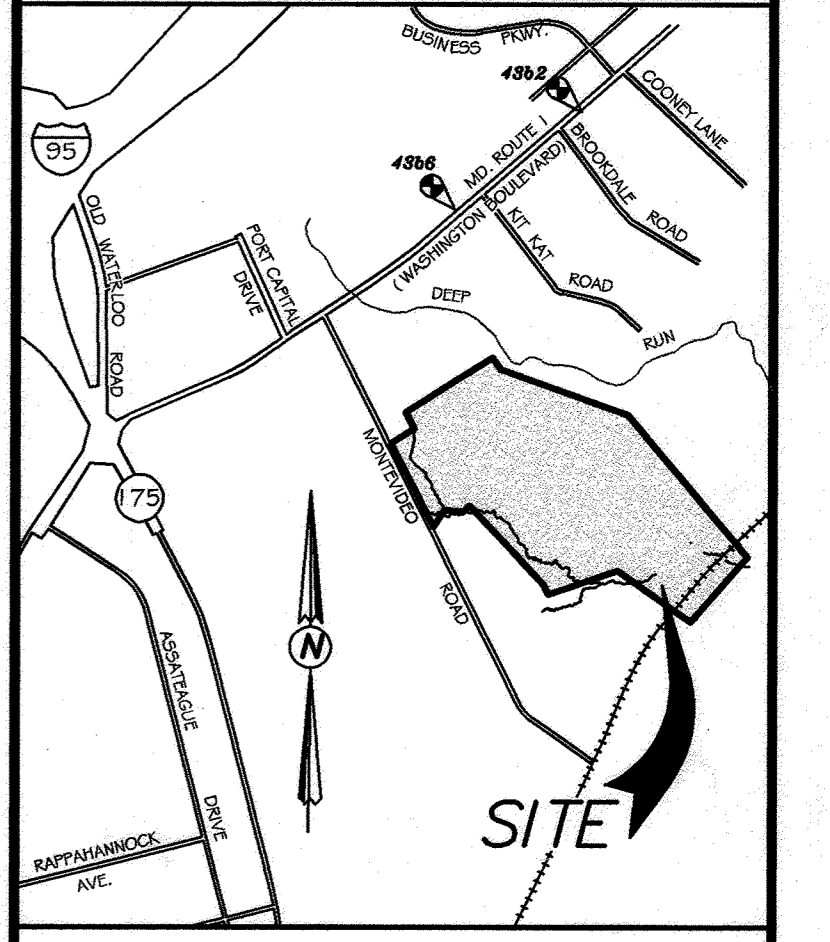
DEVELOPER'S CERTIFICATE
 "We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. 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 inspection by the Howard Soil Conservation District."
[Signature] 3/24/03
 G. DAMON THAYER Date

ENGINEER'S CERTIFICATE
 "I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."
[Signature] 3/24/03
 MICHAEL J. KAY Date

1" = 50'



THAYER & ASSOCIATES INC.
 2868 CONSTELLATION WAY
 FINKSBURG, MD 21048-2068
 PHONE/FAX: (410) 840-8797



VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Michael Blood 11/2/00
 Chief, Division of Land Development Date
Michael Blood 11/2/00
 Chief, Development Engineering Division Date
Frank Rantz 11/2/00
 Director, Department of Planning and Zoning Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
 U.S.D.A.-Natural Resources Conservation Service Date
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
 Howard SCP Date

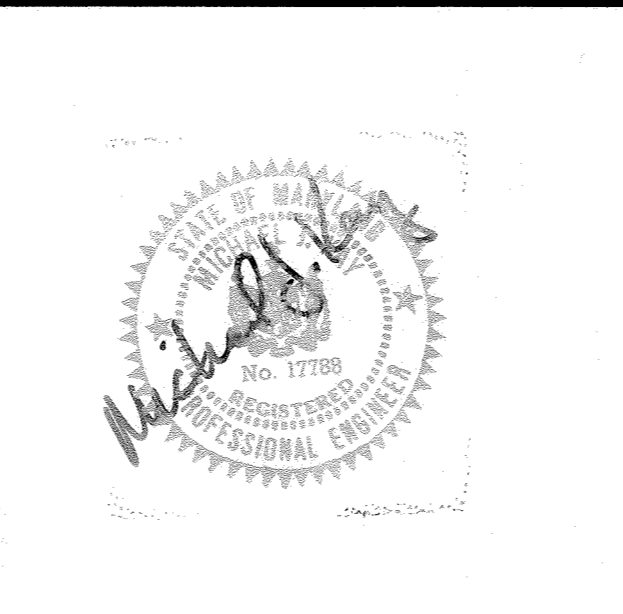
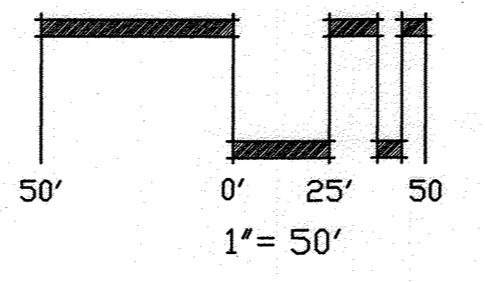
DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

GRADING AND SEDIMENT CONTROL PLAN

SDP-00-63

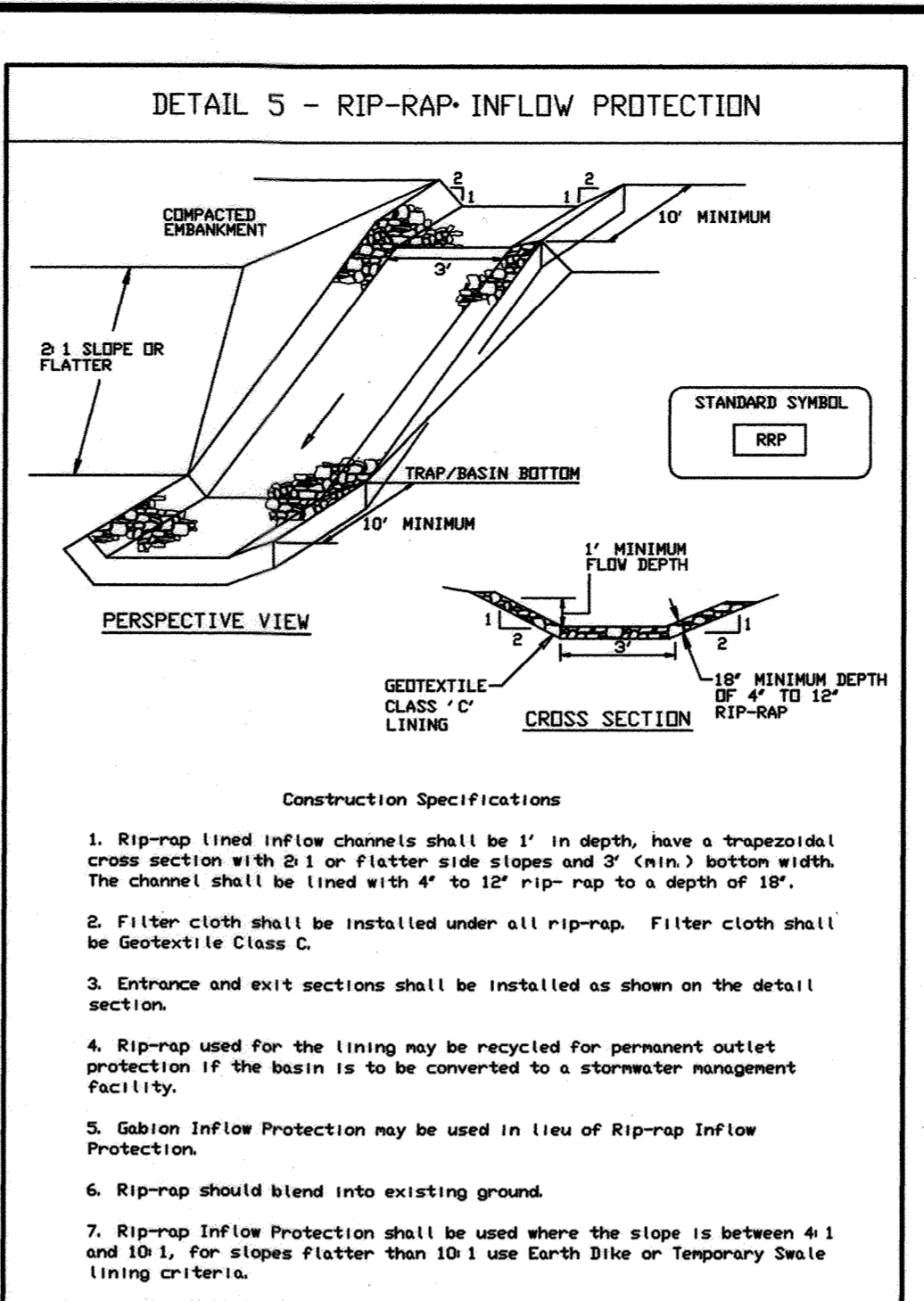
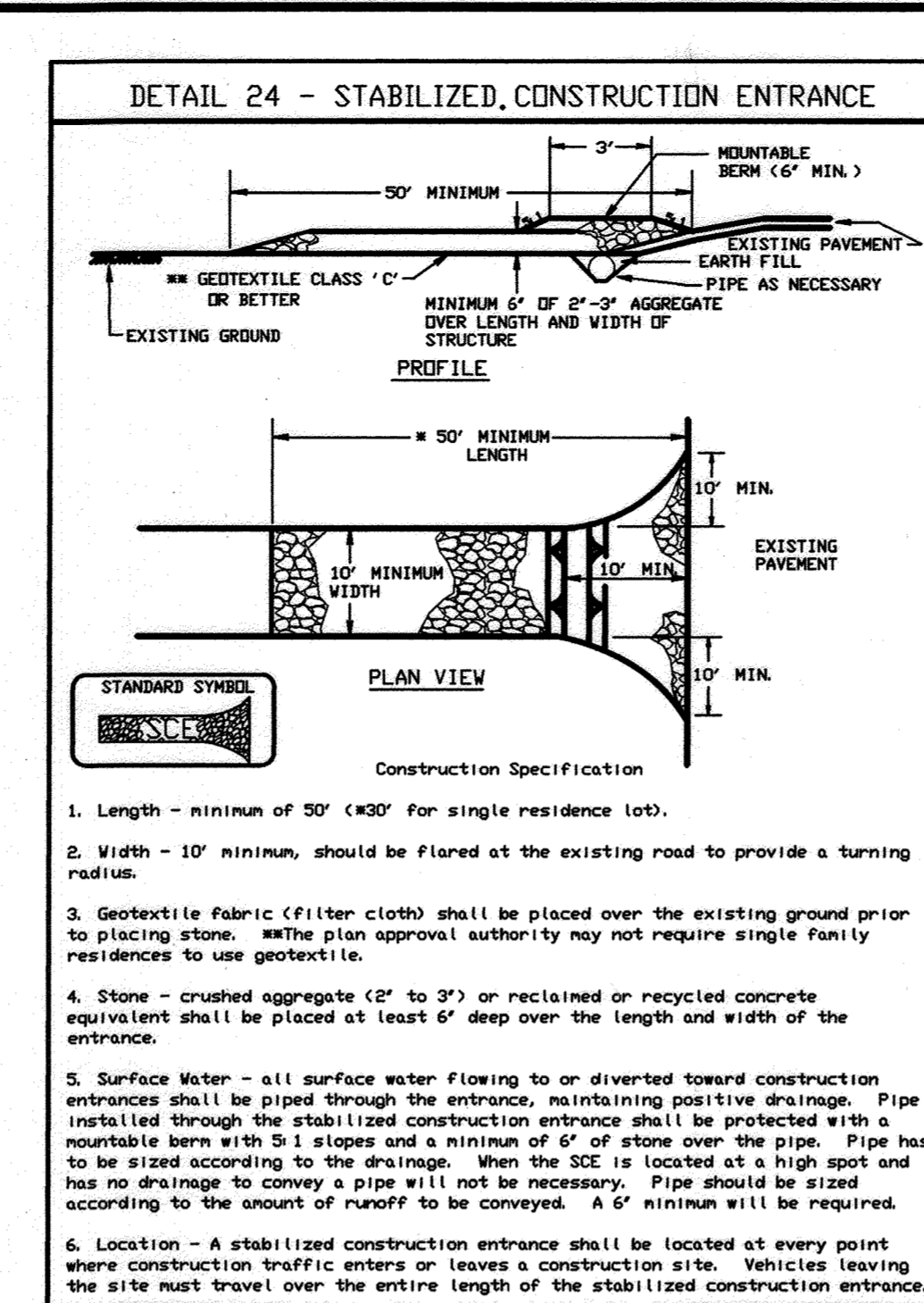
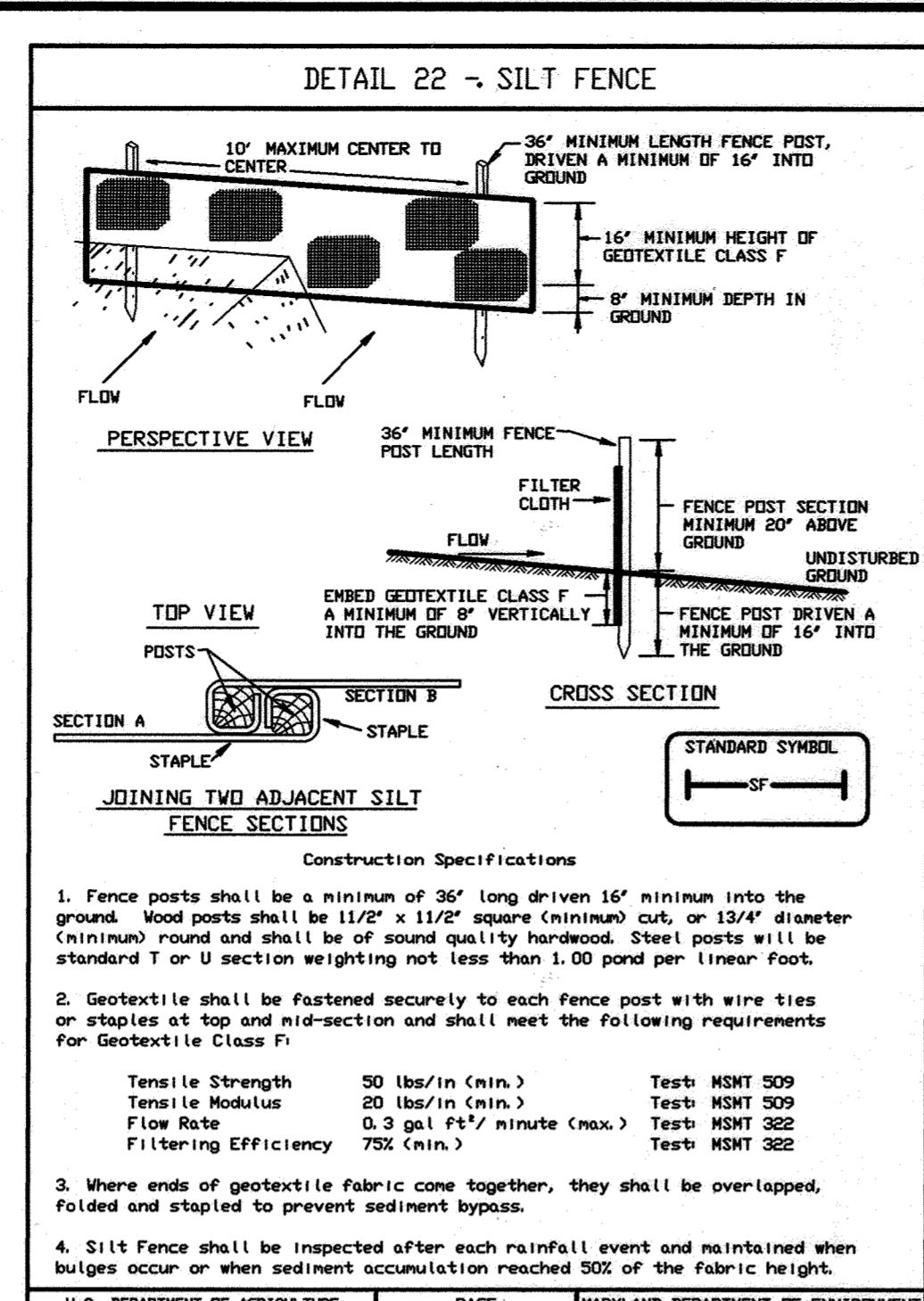
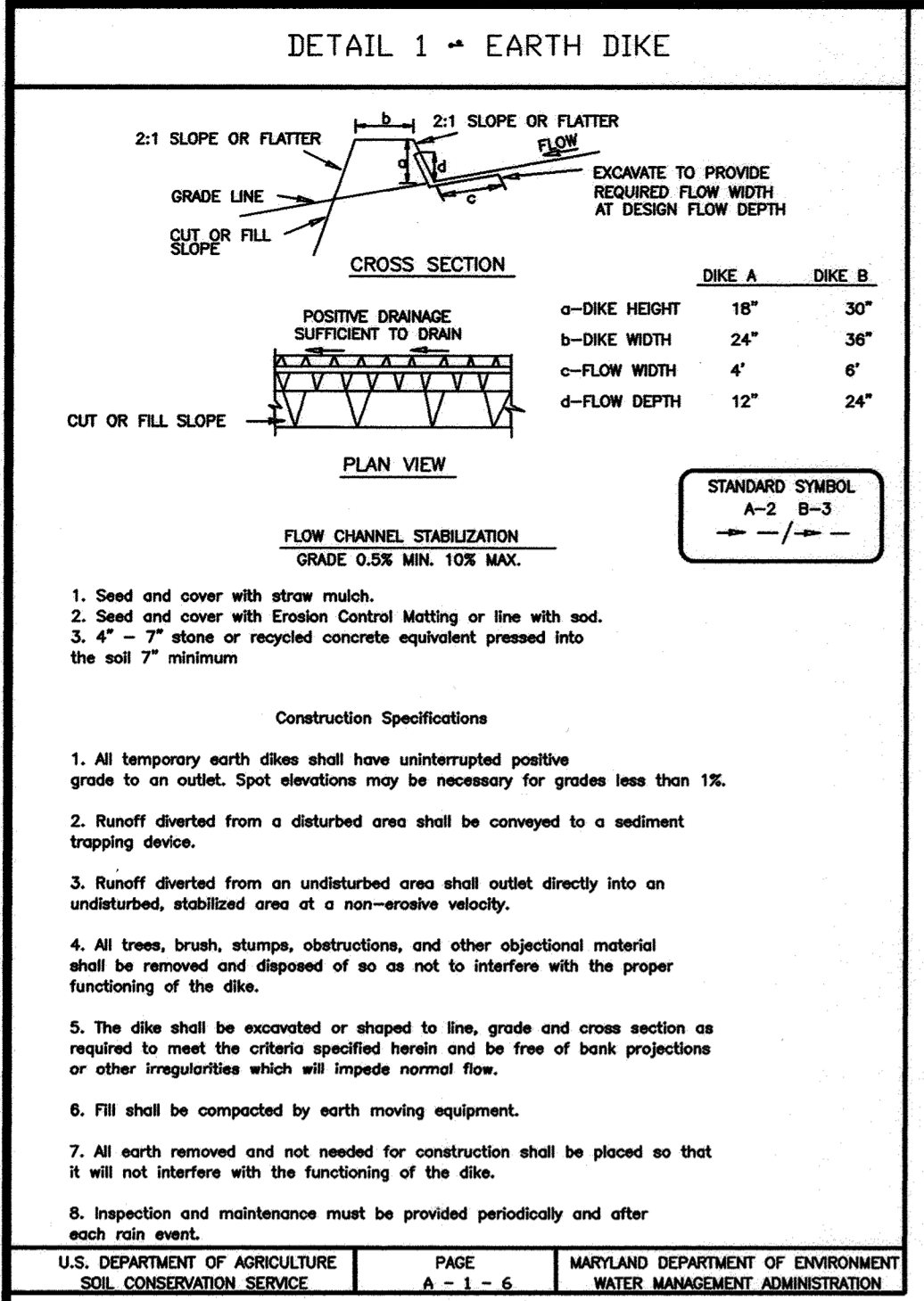
OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L. 4795 F. 685



DEVELOPER'S CERTIFICATE
 "We certify that all development and construction will be done according 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. 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 inspection by the Howard Soil Conservation District."
G. Damon Thayer
 G. DAMON THAYER Date: 7/9/00

ENGINEER'S CERTIFICATE
 "I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."
Michael J. Kay
 MICHAEL J. KAY Date: 7/9/00

[THAYER AUTO EXCHANGE] - [DWG: GRDG AND SED CNTRL BASE SHEET]



14. STANDARDS AND SPECIFICATIONS FOR EARTH DIKES

Definition: A temporary berm or ridge of soil, compacted, stabilized and located in such a manner as to direct water to a desired location.

Purpose: The purpose of the earth dike is to direct runoff to a sediment trapping device which reduces the potential for erosion and sedimentation. Earth dikes can also be used for diverting clean water away from disturbed areas.

Conditions Where Practice Applies: Earth dikes are often constructed across disturbed areas and around construction sites such as parking lots and subdivisions. The dikes shall remain in place until the disturbed areas are permanently stabilized.

Earth Dikes are constructed:

- To divert sediment laden runoff from a disturbed area to a sediment trapping device.
- Across disturbed areas to shorten overland flow distances.
- To direct sediment laden water along the base of slopes to a trapping device.
- To divert clear water from an undisturbed area to a stabilized outlet. Runoff shall be discharged at non-erosive rates.

Table 1: Design Criteria

Drainage Area (See Table 2)	Dike A	Dike B
Slope of dikes (See Table 2)	18 in.	30 in.
Dike Height (a)	24 in.	36 in.
Dike Width (b)	4 ft.	6 ft.
Flow Width (c)	12 in.	24 in.
Flow Depth in Channel (d)	12 in.	24 in.
Slope Sides	2:1 or flatter	2:1 or flatter

Table 2: Standards and Specifications

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	E-18-2A	

15.0 STANDARDS AND SPECIFICATIONS FOR SILT FENCE

Definition: Temporary barriers of woven geotextile fabric used to intercept, reduce velocity and filter runoff from disturbed areas.

Purpose: Silt fences filter sediment from runoff so that deposition of transported sediment can occur. Silt fences can be used to intercept sheet flow only. They cannot be used as velocity checks in ditches or swales, or placed where they will intercept concentrated flow.

Conditions Where Practice Applies: Silt fence is limited to intercepting sheet flow runoff from limited distances according to slope. Silt fence provides filtering and velocity dissipation to promote gravity settling of sediments.

Table 1: Standards and Specifications

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	F-18-2A	

17.0 STANDARDS AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ENTRANCE

Definition: A stabilized layer of aggregate that is underlain with Geotextile Class C. Stabilized entrances are located at any point where traffic enters or leaves a construction site.

Purpose: Stabilized construction entrances reduce tracking of sediment onto streets or public rights-of-way and provide a stable area for entrance or exit from the construction site.

Conditions Where Practice Applies:

- Stabilized construction entrances shall be located at points of construction ingress and egress.
- For single family residences, the entrance should be located at the permanent driveway.
- Stabilized construction entrances should not be used on existing pavement.

Design Criteria:

- Length - minimum of 50' (30' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile Class C shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a roundable berm with 2:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

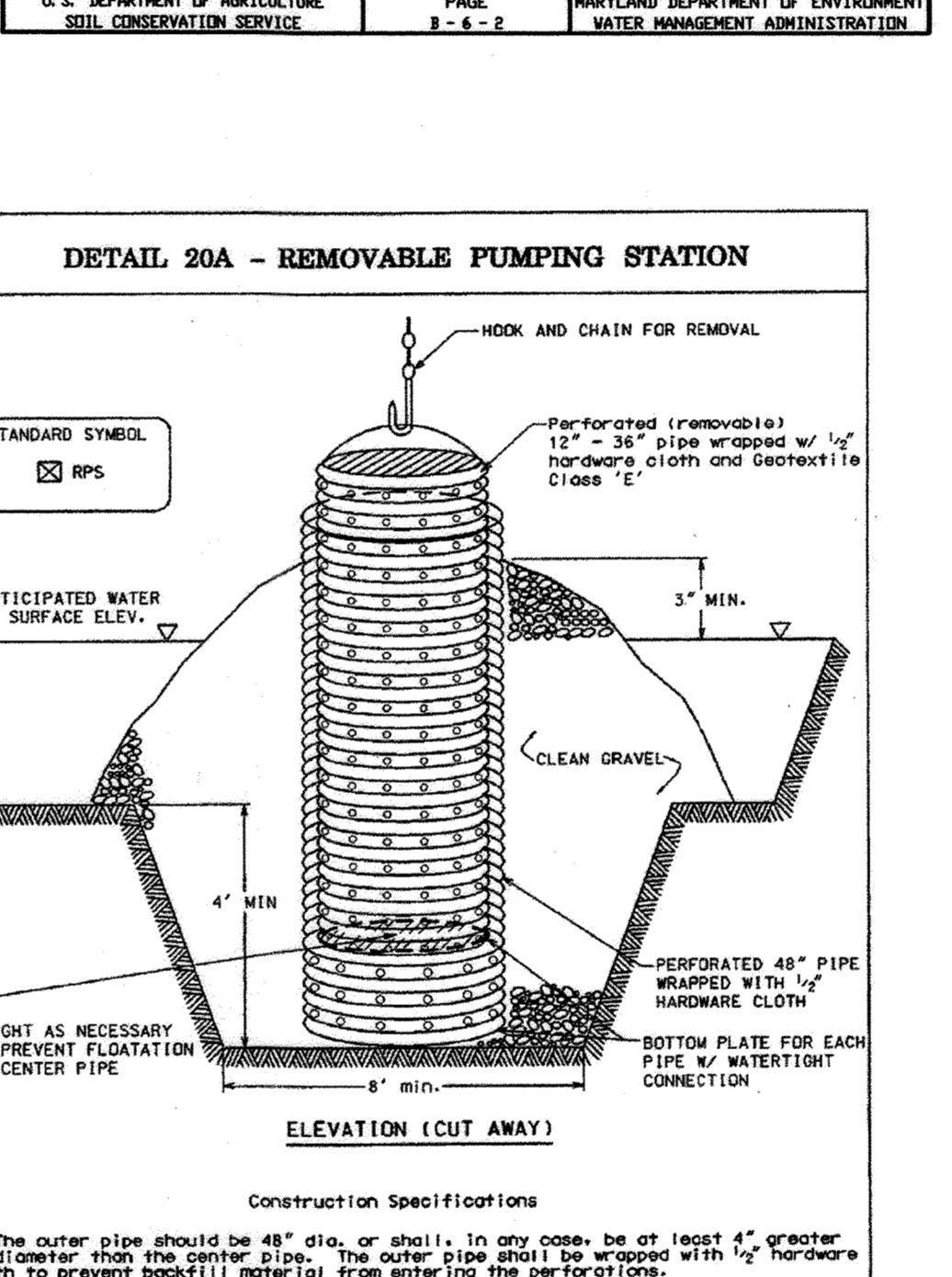
Maintenance: The entrance shall be maintained in a condition which will minimize tracking of sediment onto public rights-of-way. This may require adding stone or other repairs as conditions demand. All sediment spilled, dropped, or tracked onto public rights-of-way must be removed immediately by vacuum sweeping, scraping, or sweeping.

When necessary, wheels shall be cleaned or washed to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device. Daily inspection and maintenance is required.

General: After construction is complete and the site is stabilized, the stabilized construction entrance will be removed and the area stabilized unless it will be used as an underdrain for a driveway.

Table 1: Standards and Specifications

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	D-18-6	



6.0 STANDARDS AND SPECIFICATIONS FOR RIP-RAP INFLOW PROTECTION

Definition: A temporary or permanent, lined drainageway installed to convey concentrated runoff into sediment traps and basins or down slope slopes as applicable. Rip-rap Inflow Protection consists of the installation of rock or recycled concrete equivalent in a flow channel for stabilization.

Purpose: The purpose of Rip-rap Inflow Protection is to provide stable conveyance of concentrated runoff down steep slopes, (i.e. into temporary sediment traps and basins) thereby preventing erosion of the flow channel.

Conditions Where Practice Applies: Rip-rap Inflow Protection is required where the slope of a drainage way contributing to a sediment trap or basin exceeds 10:1 but is less than 4:1. Runoff may be directed to the inflow device by means of dikes or swales.

Design Criteria: Rip-rap Inflow protection shall be 4"-12" rip-rap (min.), underlain with Geotextile Class C and placed from the ditch overall elevation to the bottom of the trap or basin when the inflow slope is between 4:1 and 10:1. Slopes flatter than 10:1 shall be stabilized in accordance with Temporary Swale or Earth Dike criteria as applicable. For slopes steeper than 4:1, see Gabion Inflow Protection.

Construction Specifications:

- Rip-rap Inflow Protection shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and a 3' minimum bottom width. The channel shall be lined with 4" - 12" rip-rap to a depth of 18".
- Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
- Entrance and exit sections shall be installed as shown on the detail section.
- Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
- Gabion Inflow Protection may be substituted for Rip-rap Inflow Protection.
- Rip-rap should extend into existing ground.
- Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1. For slopes flatter than 10:1 use Earth Dike or Temporary Swale.
- Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1. For slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.

Table 2: Standards and Specifications

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	B-4-2	

Table 27 Geotextile Fabrics

CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30	250	500
B	0.60	300	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80*	90	190

* US Silt Fence CW-02215

Table 28 Stone Size

NUMBER	SIZE RANGE	D ₅₀	D ₁₀₀	AASHTO	WEIGHT
NUMBER 57*	3/8" - 1 1/2"	1/2"	1 1/2"	M-43	N/A
NUMBER 1	2" - 3"	2 1/2"	3"	M-43	N/A
RIP-RAP**	4" - 7"	5 1/2"	7"	N/A	N/A
CLASS I	N/A	9.5"	15"	N/A	150lb max
CLASS II	N/A	16"	24"	N/A	700lb max
CLASS III	N/A	23"	34"	N/A	2000lb max

** This classification is to be used on the inside face of stone outlets and check dams.
* This classification is to be used when ever small rip-rap is required. The State Highway Administration designation for this stone is Stone For Gabions (#905.01.04).

14. STANDARDS AND SPECIFICATIONS FOR EARTH DIKES (Continued)

Table 1: Standards and Specifications

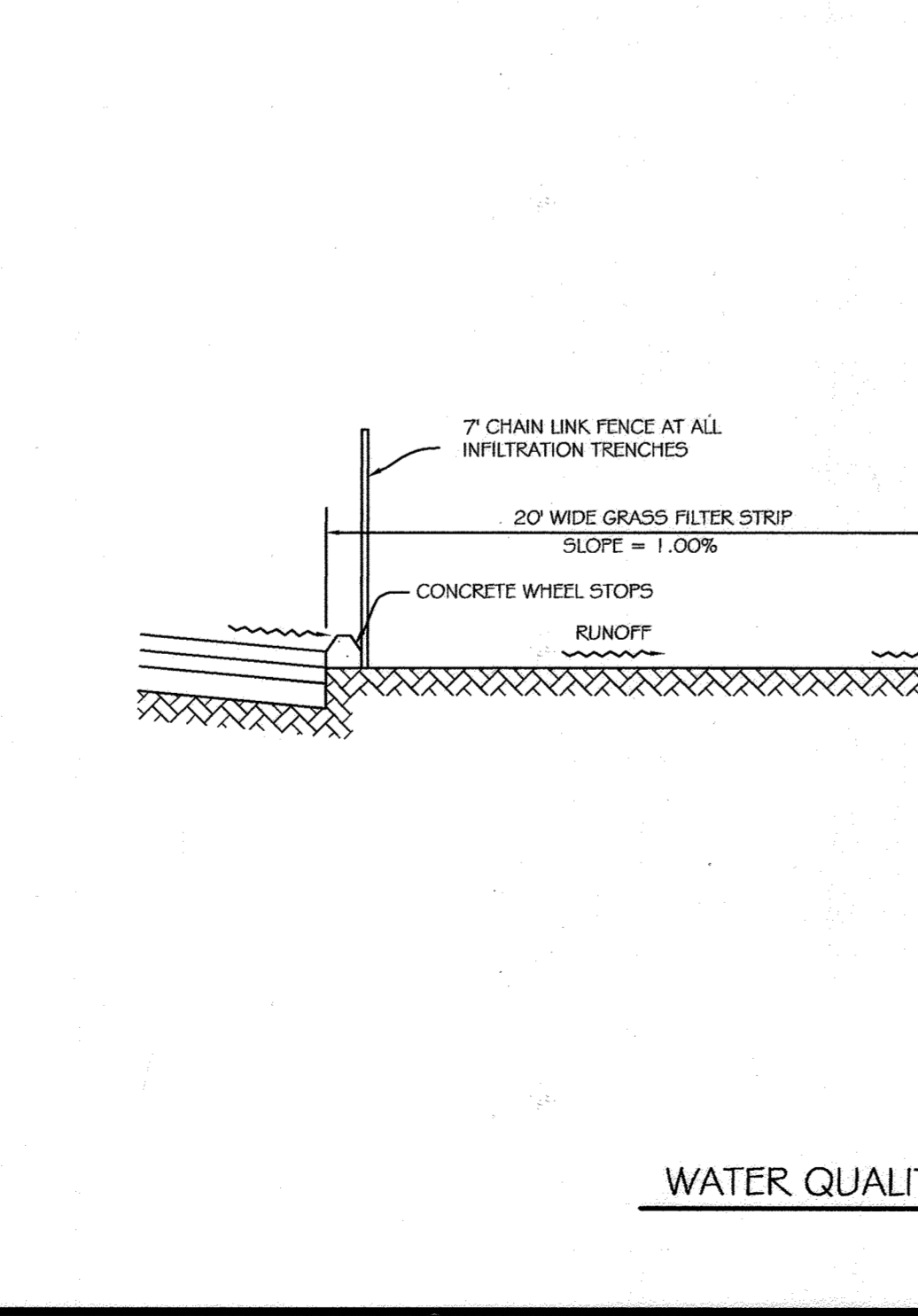
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	A-2 B-3	

Flow Channel Stabilization:

- Seed and cover with straw mulch.
- Seed and cover with Erosion Control Matting or lime with sod.
- 4" - 7" stone or recycled concrete equivalent pressed into the soil in a minimum 7" layer.

The earth dike type (A or B) and lining (1, 2, or 3) shall be shown on the plans using the standard symbol and A-1, or B-3, etc. Earth dike type and lining may vary along its length.

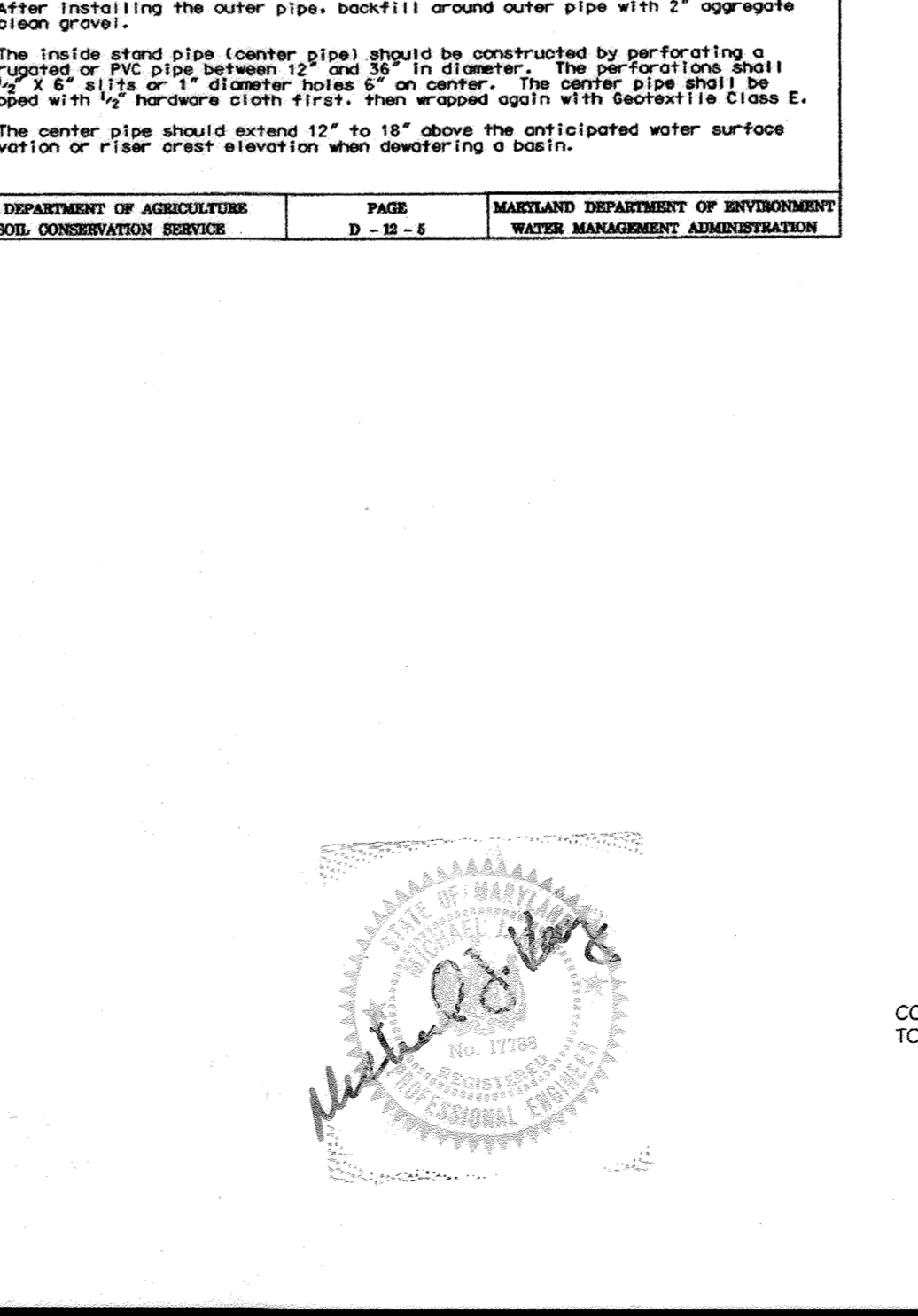
In highly erodible soils, as defined by the local approval agency, refer to the next higher slope grade for the type of stabilization method.



17.0 STANDARDS AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ENTRANCE (Continued)

Table 1: Standards and Specifications

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	D-18-6	



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Richard Board 10/16/00
Chief, Division of Land Development Date

Michael D. ... 10/16/00
Chief, Development Engineering Division Date

James ... 11/13/00
Director, Department of Planning and Zoning Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Richard ... 10/16/00
U.S.D.A. Natural Resources Conservation Service Date

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.

Jeffery ... 10/16/00
Howard SOCD Date

DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
TAX MAP No: 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 15, 2000

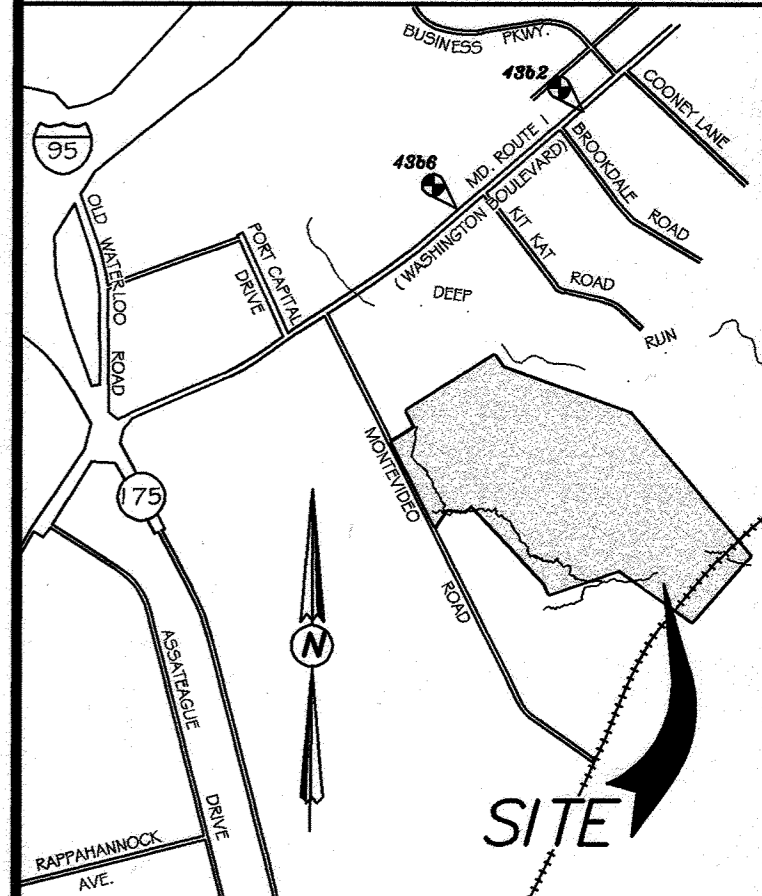
SEDIMENT CONTROL DETAILS

SDP-00-63

OWNER / DEVELOPER
AA PROPERTY HOLDINGS
435 METROPLEX DRIVE
NASHVILLE, TN 37211-3109
L 4798 F. 685

63
64
SHEET 22 OF 33

SDP-00-63



VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Michael Bloom	11/2/00	Date
Chief, Division of Land Development		
MD [Signature]	10/11/00	Date
Chief, Development Engineering Division		
[Signature]	11/2/00	Date
Director, Department of Planning and Zoning		

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Swell Pond Construction, Soil Erosion And Sediment Control.

U.S.D.A. Natural Resources Conservation Service Date

Howard SCP Date

DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: 1"=200' DATE: APRIL 17, 2000

**FOREST STAND DELINEATION PLAN
 WETLAND AND SOILS MAP**

SDP-00-63

OWNER / DEVELOPER

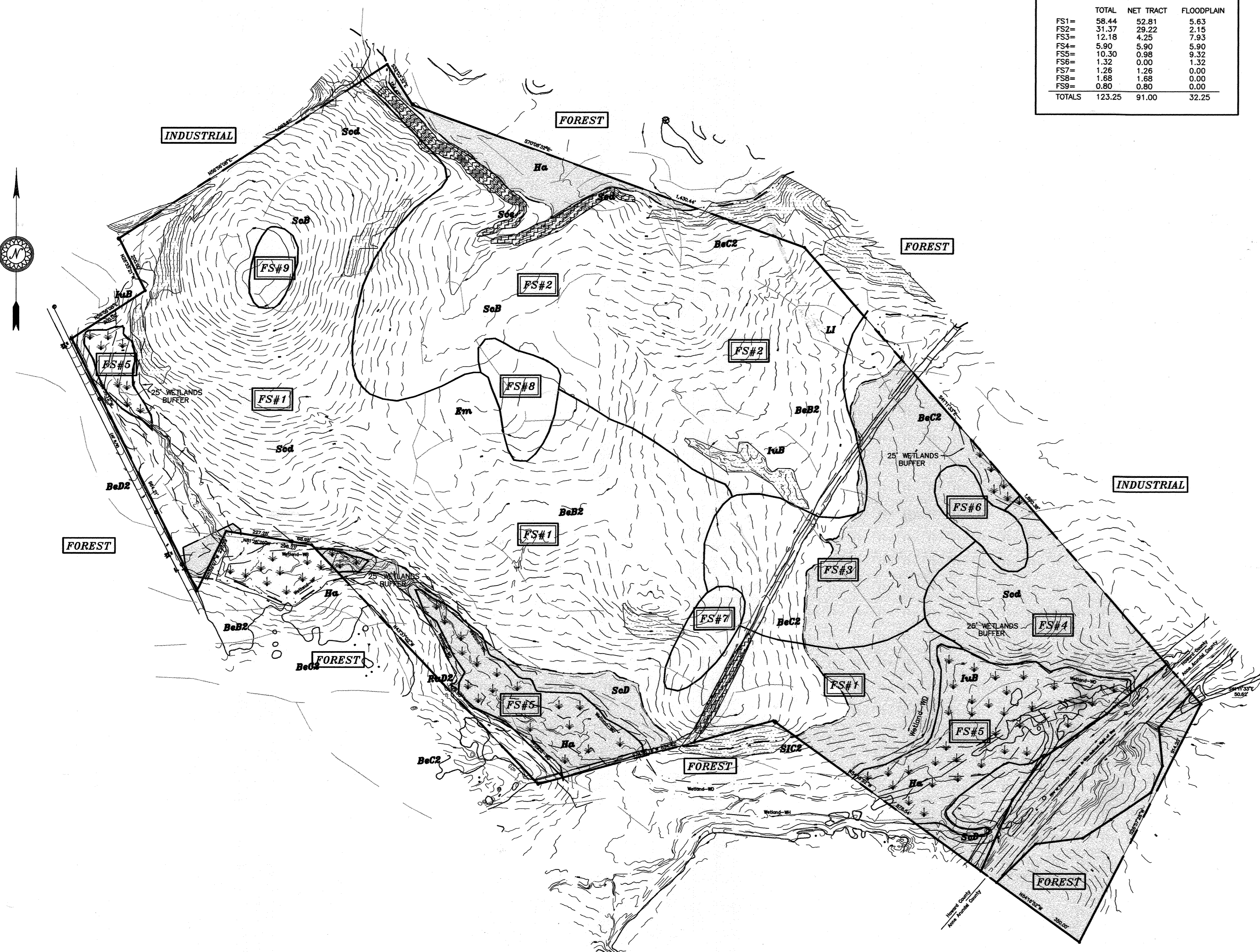
AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L. 4798 P. 625

AREA SUMMARY (ACRES±)

	TOTAL	NET TRACT	FLOODPLAIN
FS1=	58.44	52.81	5.63
FS2=	31.37	29.22	2.15
FS3=	12.18	4.25	7.93
FS4=	5.90	5.90	0.00
FS5=	10.30	0.98	9.32
FS6=	1.32	0.00	1.32
FS7=	1.26	1.26	0.00
FS8=	1.66	1.66	0.00
FS9=	0.80	0.80	0.00
TOTALS	123.25	91.00	32.25

- I. BASIC SITE DATA
- GROSS SITE AREA 123.30 Ac.±
 - AREA WITHIN 100 YEAR FLOODPLAIN 41.33 Ac.±
 - AREA WITHIN EXISTING COUNTY WATER R/W 0.60 Ac.±
 - NET TRACT AREA 81.37 Ac.±
 - ZONING M-2
- II. INFORMATION FOR CALCULATIONS
- A. NET TRACT AREA 81.37 Ac.±
 - B. FOREST CONSERVATION THRESHOLD (FCT) (15%xA) 12.20 Ac.±
 - C. AFFORESTATION THRESHOLD (15%xA) N/A
 - D. EXISTING FOREST ON NET TRACT AREA 81.37 Ac.±
 - E. EXISTING FOREST ABOVE FCT 69.17 Ac.±
 - F. BREAK EVEN POINT (the amount of forest to be retained w/o mitigation) : {(E x 0.2) + B}
 - G. FOREST TO BE RETAINED -----
 - H. FOREST TO BE CLEARED -----
- III. REFORESTATION CALCULATIONS
- A. NET TRACT AREA 81.37 Ac.±
 - B. FOREST CONSERVATION THRESHOLD (FCT) (15%xA) 12.20 Ac.±
 - C. EXISTING FOREST ON NET TRACT AREA 81.37 Ac.±
 - D. EXISTING FOREST ABOVE FCT 69.17 Ac.±
 - E. FOREST AREAS TO BE CLEARED AND/OR NOT IN EASEMENT -----
 - F. FOREST AREAS TO BE RETAINED IN EASEMENT -----
 - G. FOREST AREAS CLEARED BELOW FCT -----
 - H. FOREST AREAS CLEARED BELOW FCT -----
 - I. FOREST AREAS RETAINED ABOVE FCT -----
 - J. REFORESTATION FOR CLEARING ABOVE FCT (I x 1/4) -----
 - K. REFORESTATION FOR CLEARING BELOW FCT (J x 2) -----
 - L. TOTAL REFORESTATION REQUIRED (I x 1/4) + (J x 2) -----

- LEGEND**
- [Symbol] DENOTES LIMITS OF THE 100 YEAR FLOODPLAIN
 - [Symbol] DENOTES FOREST STAND DELINEATION LINE
 - [Symbol] DENOTES WETLAND AREA
 - [Symbol] DENOTES LIMITS OF SLOPES 15% TO 25%
 - [Symbol] DENOTES LIMITS SLOPES > 25%

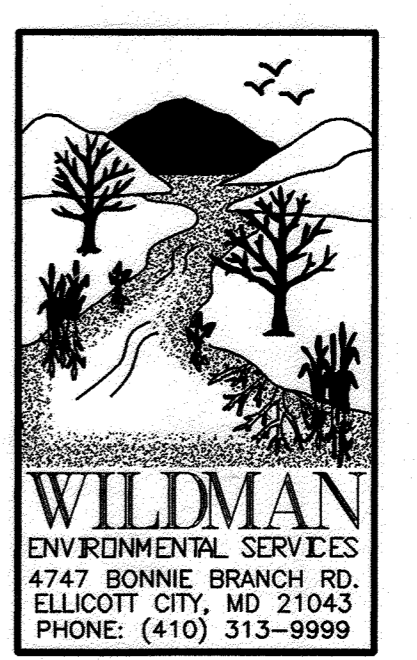


SOILS LEGEND

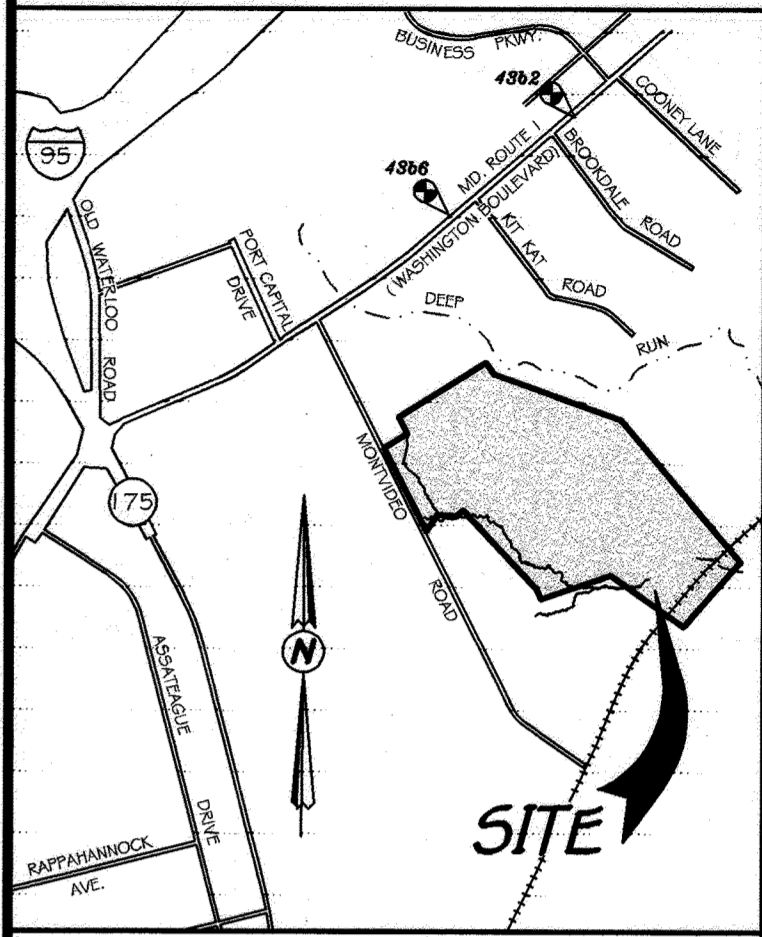
SOIL	NAME	CLASS
** BeB2	Beltville silt loam, 1 to 5 percent slopes, moderately eroded	C
** BeC2	Beltville silt loam, 5 to 10 percent slopes, moderately eroded	C
** Em	Elkton silt loam	D
** Ha	Hatboro silt loam	D
** IaB	Iuka loam, local alluvium, 1 to 5 percent slopes	C
** LI	Leonardtown silt loam	D
SoB	Sandy and clayey land, gently sloping	?
SoD	Sandy and clayey land, moderately sloping	?
SoE	Sandy and clayey land, moderately steep	?
SIC2	Sassafras loam, 5 to 10 percent slopes, moderately eroded	B

NOTES:

- * Hydric soils and/or contains hydric inclusions
- ** May contain hydric inclusions
- † Generally only within 100-year floodplain areas



Qualified Professional Seal



VICINITY MAP
SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Richard Blom 11/6/00
Chief, Division of Land Development Date

John Damm 10/11/00
Chief, Development Engineering Division Date

Paul Smith 11/21/00
Director, Department of Planning and Zoning Date

U.S.D.A. Natural Resources Conservation Service Date

Howard SCD Date

12-21-06 RED-LINE REVISION NO. 3 - ROAD WIDENING

DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS

TAX MAP No: 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1"=200' DATE: MAY 30, 2000

FOREST CONSERVATION PLAN
PLNTS 14488 to 14493

SDP-00-63

OWNER / DEVELOPER

AA PROPERTY HOLDINGS
435 METROPLEX DRIVE
NASHVILLE, TN 37211-5109
L 4798 F. 625

SHEET 26 OF 33

I. BASIC SITE DATA

GROSS SITE AREA	123.25 Ac.±
AREA WITHIN 100 YEAR FLOODPLAIN	33.90 Ac.±
AREA WITHIN EXISTING COUNTY WATER R/W	0.60 Ac.±
AREA WITHIN COUNTY ROAD R/W	0.24 Ac.±
NET TRACT AREA	88.51 Ac.±
ZONING	M-2

II. INFORMATION FOR CALCULATIONS

A. NET TRACT AREA	88.51 Ac.±
B. FOREST CONSERVATION THRESHOLD (FCT) (15%xA)	13.28 Ac.±
C. AFFORESTATION THRESHOLD (15%xA)	N/A
D. EXISTING FOREST ON NET TRACT AREA	88.51 Ac.±
E. EXISTING FOREST ABOVE FCT	75.23 Ac.±
F. BREAK EVEN POINT (the amount of forest to be retained w/o mitigation): [(E x 0.2) + B]	28.33 Ac.±
G. FOREST TO BE RETAINED (EXCL. DA-1&2(*) STREAM w/BUFFER)	8.39 Ac.±
H. FOREST TO BE CLEARED AND/OR NOT IN AN EASEMENT	79.95 Ac.±

III. REFORESTATION CALCULATIONS

A. NET TRACT AREA	88.51 Ac.±
B. FOREST CONSERVATION THRESHOLD (FCT) (15%xA)	13.28 Ac.±
C. EXISTING FOREST ON NET TRACT AREA	88.51 Ac.±
D. EXISTING FOREST ABOVE FCT	75.23 Ac.±
E. FOREST AREAS TO BE CLEARED AND/OR NOT IN EASEMENT	79.95 Ac.±
F. FOREST AREAS TO BE RETAINED IN EASEMENT	8.39 Ac.±
G. FOREST AREAS CLEARED ABOVE FCT	75.23 Ac.±
H. FOREST AREAS CLEARED BELOW FCT	4.89 Ac.±
I. FOREST AREAS RETAINED ABOVE FCT	0.00 Ac.±
J. REFORESTATION FOR CLEARED ABOVE FCT (I x 1/4)	18.80 Ac.±
K. REFORESTATION FOR CLEARED BELOW FCT (J x 2)	9.78 Ac.±
L. TOTAL REFORESTATION REQUIRED (I x 1/4) + (J x 2)	28.58 Ac.±

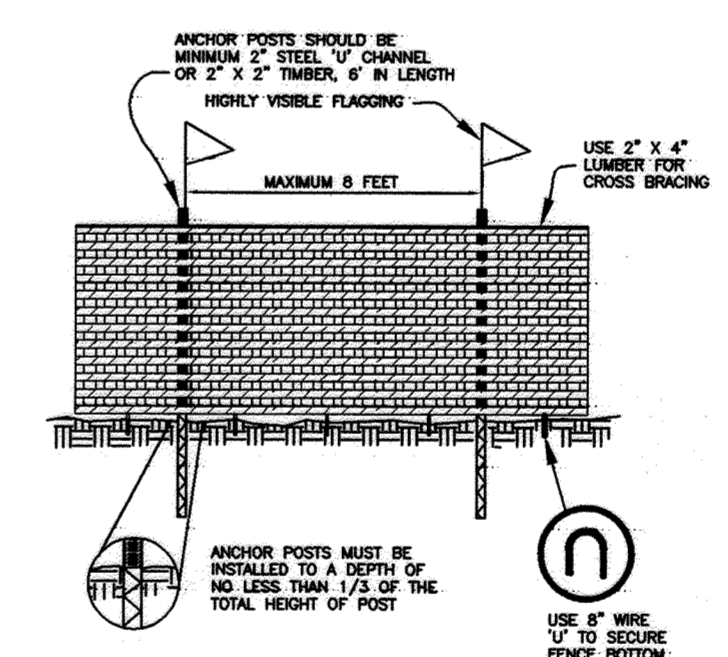
AREA SUMMARY (ACRES±)

	TOTAL	NET TRACT	FLOODPLAIN
FS1=	57.11	51.48	5.63
FS2=	31.37	29.22	2.15
FS3=	12.18	4.25	7.93
FS4=	5.90	5.90	5.90
FS5=	10.30	0.98	9.32
FS6=	1.32	1.32	1.32
FS7=	1.26	1.26	0.00
FS8=	1.68	1.68	0.00
FS9=	0.80	0.80	0.00
TOTALS	121.92	96.89	32.25

PROPOSED FOREST RETENTION AREA SUMMARY (ACRES±)

AREA No.	TOTAL
1 =	1.68
2 =	1.15
3 =	1.71
4 =	0.66
5 =	0.53
6 =	0.14
7 =	0.31
8 =	0.77
9 =	0.64
10 =	0.80
TOTAL	8.39

- LEGEND**
- DENOTES LIMITS OF THE 100 YEAR FLOODPLAIN
 - DENOTES FOREST STAND DELINEATION LINE
 - ~ DENOTES WETLAND AREA
 - ▨ DENOTES RETENTION AREA
 - - - DENOTES LIMIT OF DISTURBANCE AND PROTECTIVE FENCE
 - ● ● DENOTES FOREST RETENTION SIGNS



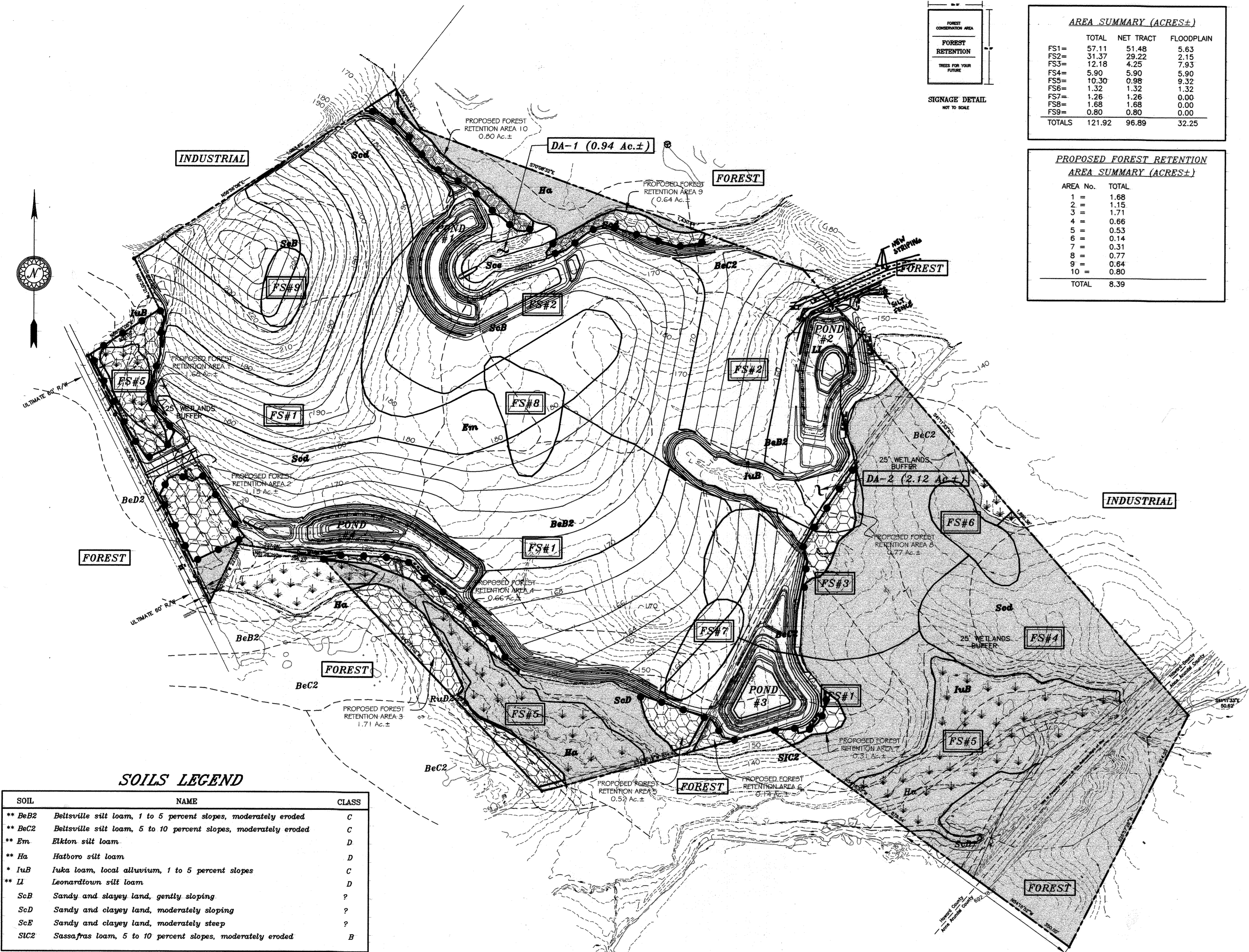
NO CLEARING, GRADING, DUMPING OR ANY OTHER ACTIVITIES NOT PERMITTED UNDER THE TERMS OF AN AGREEMENT AND/OR THE DEED OF FOREST CONSERVATION EASEMENT FOR THIS PROJECT ARE ALLOWED WITHIN ANY FOREST CONSERVATION EASEMENTS SHOWN ON THIS PLAN. AGREEMENT REFERRING TO INSTALLATION AND MAINTENANCE AGREEMENTS.

NOTE

23.54 ACRES OF REFORESTATION REQUIREMENT WILL BE PROVIDED ON THE ROMIT FARM PROPERTY (Tax Map 2, Parcel 24). PLEASE REFER TO SHEET Nos. 31 AND 32 OF THIS SET. THE REMAINING OBLIGATION OF 5.04 ACRES WILL BE PROVIDED ON BRANTWOOD. PLEASE REFER TO SHEET No. 33.

WILDMAN ENVIRONMENTAL SERVICES
4747 BONNIE BRANCH RD.
ELLCOTT CITY, MD 21043
PHONE: (410) 313-9999

David B. Wildman 9/10/00
QUALIFIED PROFESSIONAL DATE: 63



SOILS LEGEND

SOIL	NAME	CLASS
** BeB2	Beltsville silt loam, 1 to 5 percent slopes, moderately eroded	C
** BeC2	Beltsville silt loam, 5 to 10 percent slopes, moderately eroded	C
** Em	Elkton silt loam	D
** Ha	Hathoro silt loam	D
* IaB	Iuka loam, local alluvium, 1 to 5 percent slopes	C
** Ii	Leonardtown silt loam	D
ScB	Sandy and clayey land, gently sloping	?
ScD	Sandy and clayey land, moderately sloping	?
ScE	Sandy and clayey land, moderately steep	?
SIC2	Sassafras loam, 5 to 10 percent slopes, moderately eroded	B

NOTES:

- * Hydric soils and/or contains hydric inclusions
- ** May contain hydric inclusions
- † Generally only within 100-year floodplain areas

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

OWNERS CERTIFICATION

AA Property Holdings, Inc., owner(s) of the property shown and described herein, hereby adopts this plan in consideration of the approval of this Forest Conservation Easement Plan by the Department of Planning and Zoning, to establish the Forest Conservation Easement(s).

Larry C. Reese President Date
A.A. Property Holdings, Inc.

PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

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

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects, latest edition, including all agenda.

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

Contractor shall be responsible for notifying utility companies, utility contractors and "Mesa Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

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

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

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

Positive drainage shall be maintained in planting beds 2 percent slope).

Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

GENERAL NOTES

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISION OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$ 8400.00. THIS AMOUNT IS BASED ON THE NUMBER OF SHADE TREES REQUIRED TIMES \$300.00 PER TREE.

THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

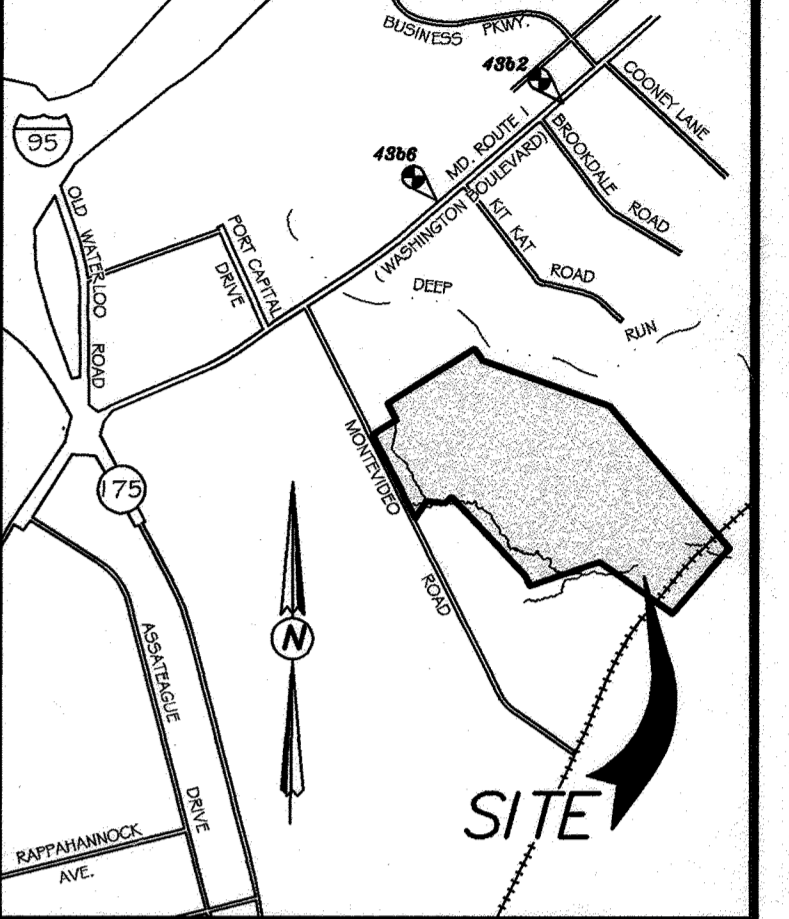
Developers/Builder's Certificate

We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. We further certify that upon completion a Certification of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Name: G. J. Thayer Date: 7/8/00

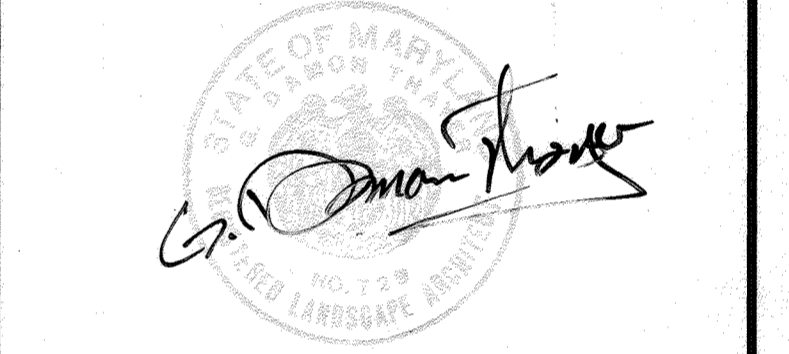


THAYER & ASSOCIATES INC.
2868 CONSTELLATION WAY
FINKSBURG, MD 21048-2068
PHONE/FAX: (410) 840-8797



VICINITY MAP
SCALE: 1"=2000'

APPROVED, DEPARTMENT OF PLANNING AND ZONING
Name: Richard Blood Date: 11/6/00
Name: [Signature] Date: 10/16/00
Name: [Signature] Date: 11/2/00



DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
TAX MAP No: 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1"=200' DATE: APRIL 17, 2000

PERIMETER LANDSCAPING PLAN

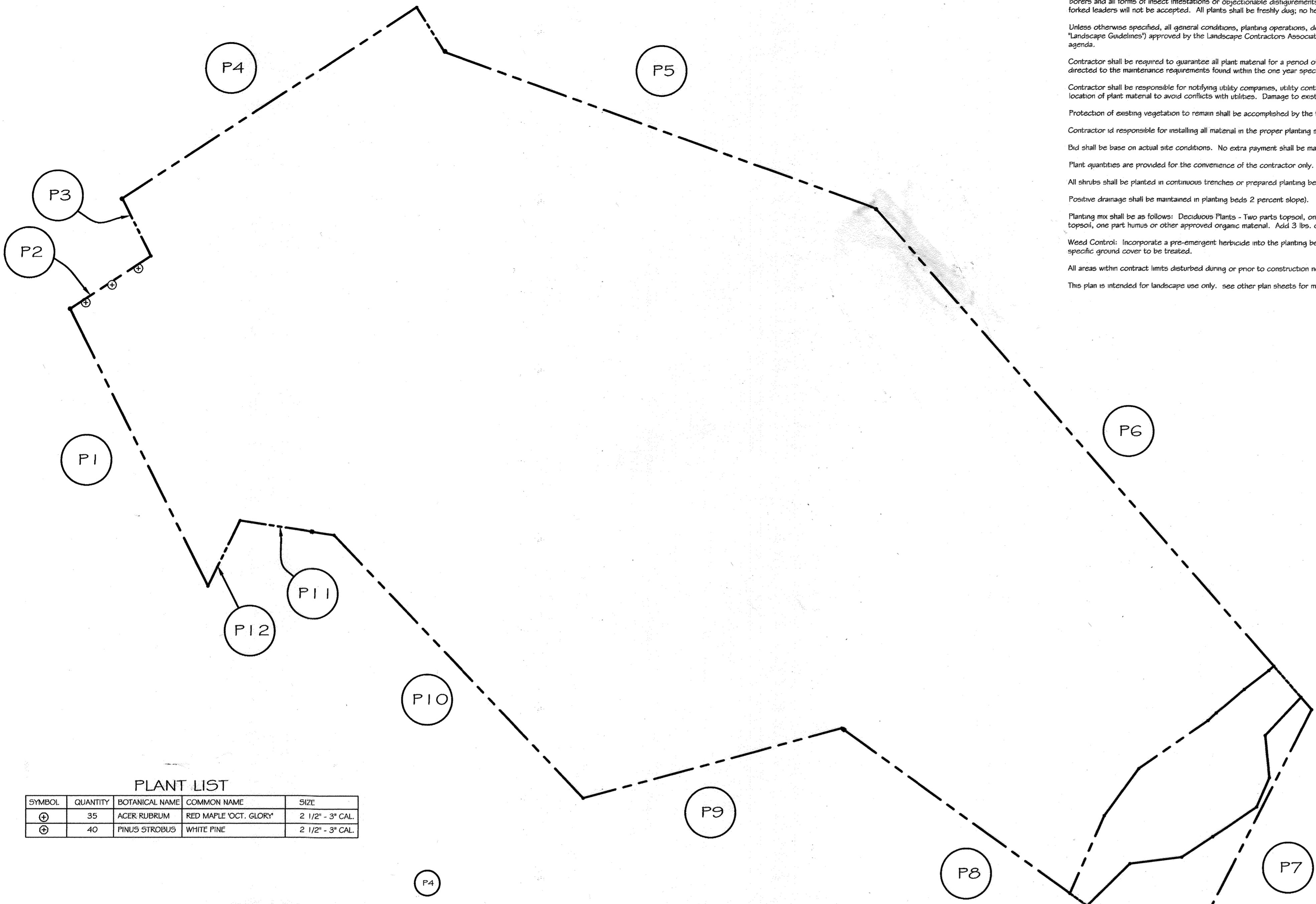
SDP-00-63

OWNER / DEVELOPER

AA PROPERTY HOLDINGS
435 METROPLEX DRIVE
NASHVILLE, TN 37211-3109
L 4798 F, 685

SHEET 27 OF 33

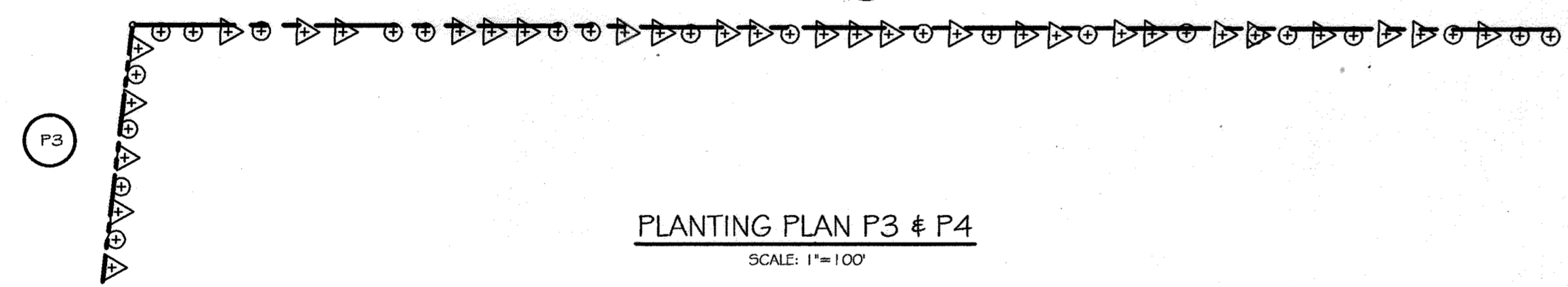
SDP-00-63



DRAINAGE AREA MAP
SCALE: 1"=200'

PLANT LIST

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
⊕	35	ACER RUBRUM	RED MAPLE 'OCT. GLORY'	2 1/2" - 3" CAL.
⊙	40	PINUS STROBUS	WHITE PINE	2 1/2" - 3" CAL.

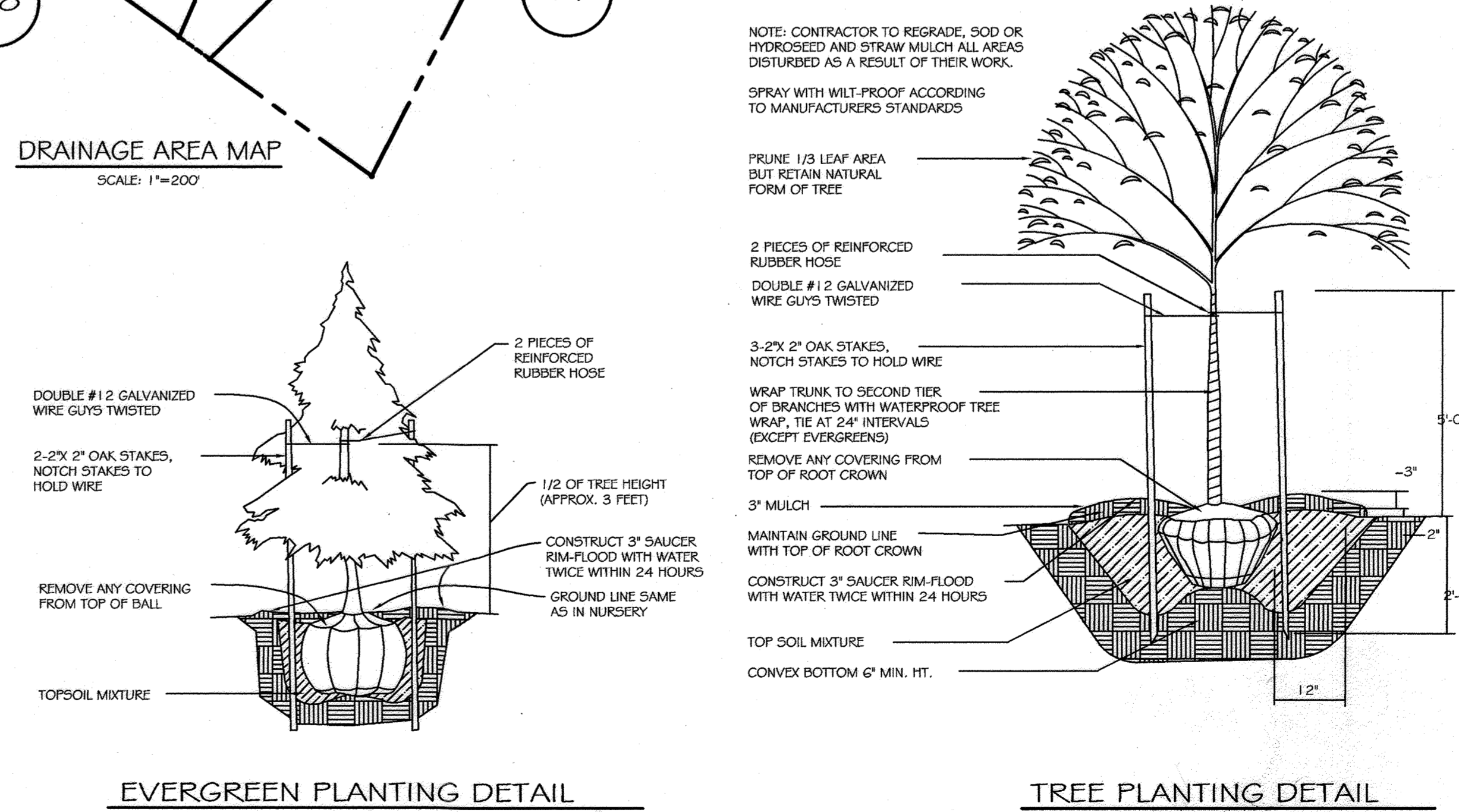


PLANTING PLAN P3 & P4
SCALE: 1"=100'

SCHEDULE A PERIMETER LANDSCAPE EDGE

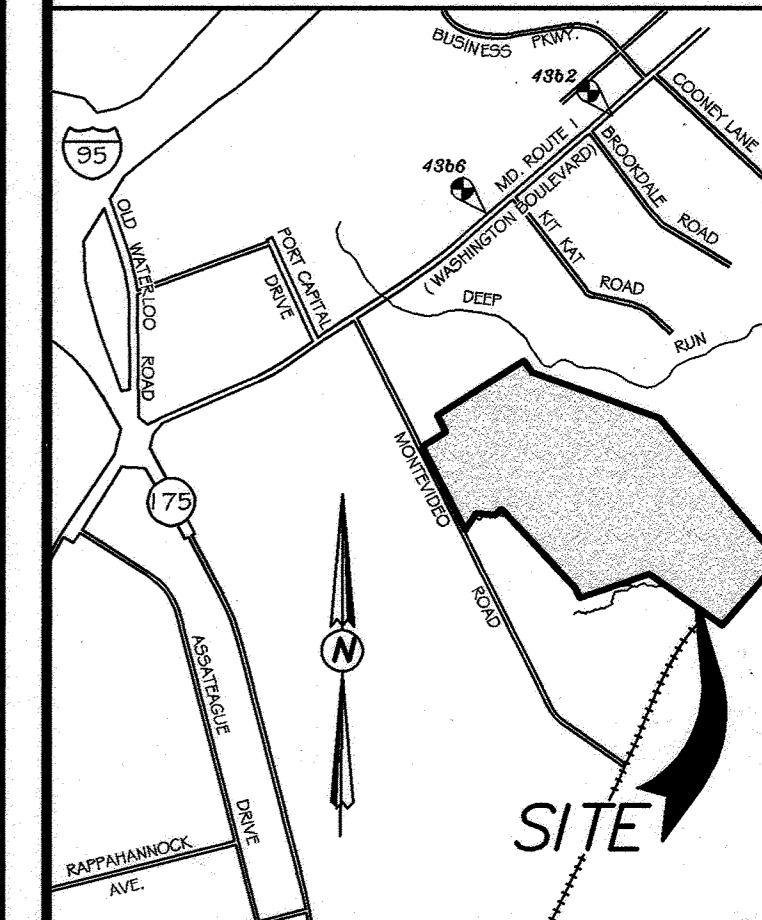
CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES		ADJACENT TO PERIMETER PROPERTIES		ADJACENT TO PERIMETER PROPERTIES		ADJACENT TO PERIMETER PROPERTIES		ADJACENT TO PERIMETER PROPERTIES		ADJACENT TO PERIMETER PROPERTIES	
	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'
LANDSCAPE TYPE REQUIRED/PROVIDED	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'	TYPE 'A'	TYPE 'B'
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	965' (P1)	300' (P2)	200' (P3)	1,004' (P4)	1,600' (P5)	400' (P6)	1,540' (P7)	915' (P8)	1,230' (P9)	835' (P10)	1,130' (P11)	524' (P12)		
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES, 965'	YES, 300'	NO	NO	YES, 1600'	YES, 1400'	YES, 1540'	YES, 915'	YES, 1230'	YES, 835'	YES, 1130'	YES, 524'		
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		
NUMBER OF PLANTS PROVIDED	0	0	4	17	0	7	0	0	0	0	0	0		
SHADE TREES	0	0	0	0	0	0	0	0	0	0	0	0		
EVERGREEN TREES	0	0	0	0	0	0	0	0	0	0	0	0		
SHRUBS (10:1 SUBSTITUTION)	0	0	0	0	0	0	0	0	0	0	0	0		
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0	0	0	0	0	0	0	0	0		
SHRUBS (10:1 SUBSTITUTION)	0	0	0	0	0	0	0	0	0	0	0	0		
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED														

CREDIT FOR EXISTING WOODS ALONG ENTIRE TRACT OF LAND



EVERGREEN PLANTING DETAIL

TREE PLANTING DETAIL



VICINITY MAP
SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/2/00 Date
 Chief, Division of Land Development
[Signature] 11/1/00 Date
 Chief, Development Engineering Division
[Signature] 11/2/00 Date
 Project, Department of Planning and Zoning

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] 10/9/00 Date
 U.S.D.A. National Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 10/9/00 Date
 Howard SCD

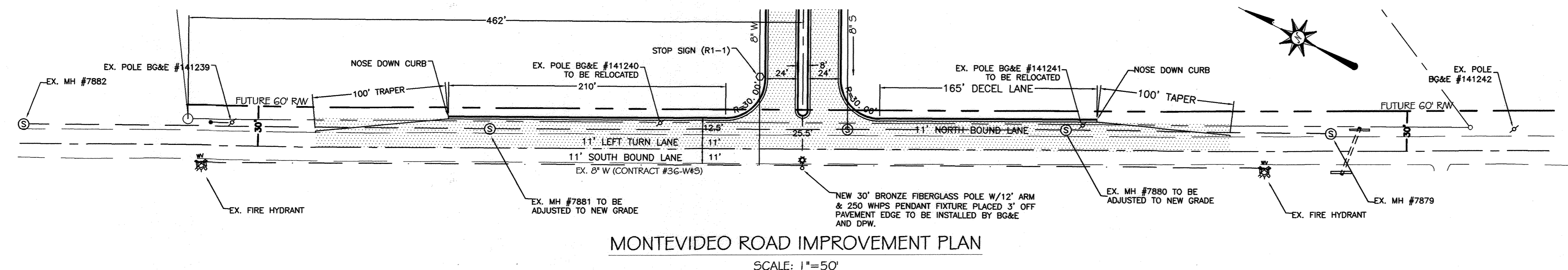
DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: JANUARY 26, 2000

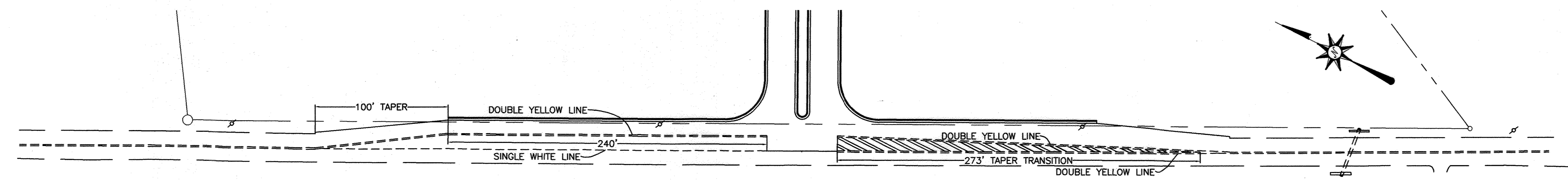
MONTEVIDEO ROAD IMPROVEMENT PLAN AND TRAFFIC CONTROL PLAN

SDP-00-63

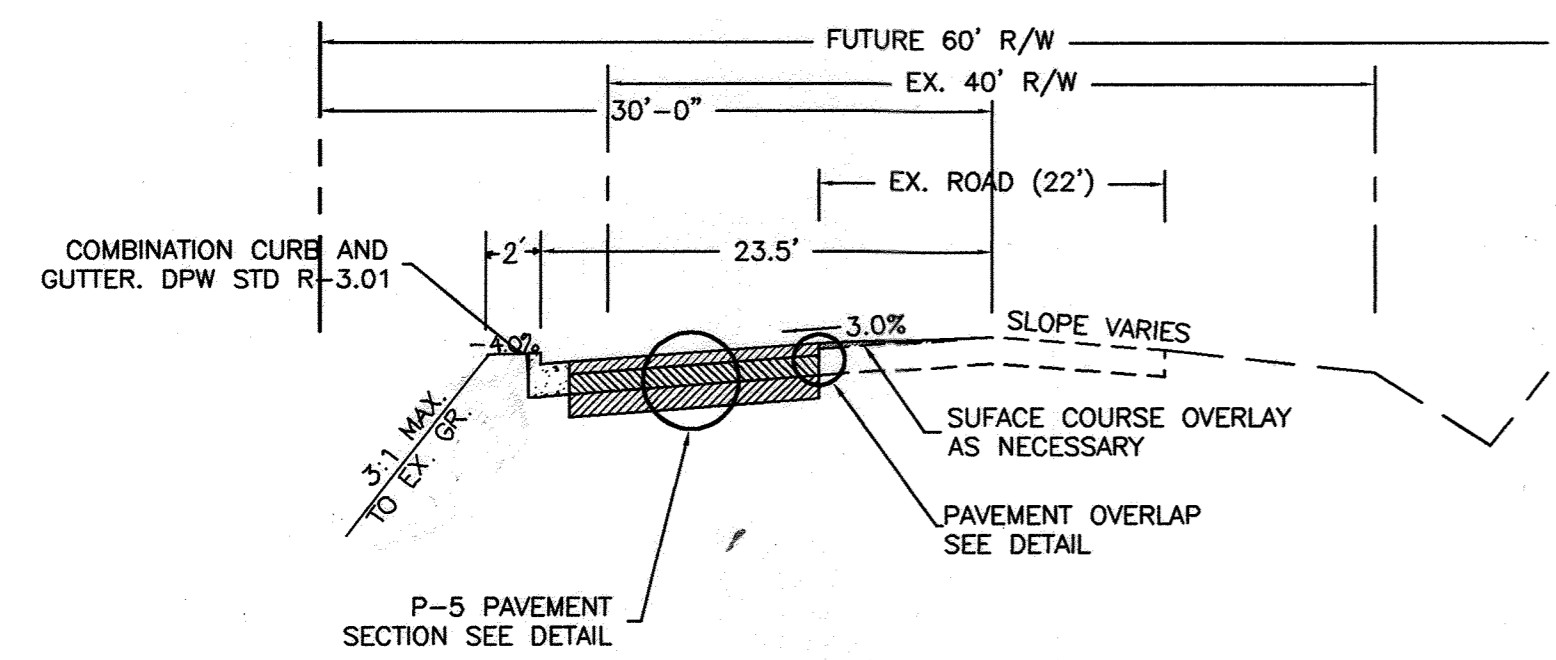
OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L 4798 F. 625



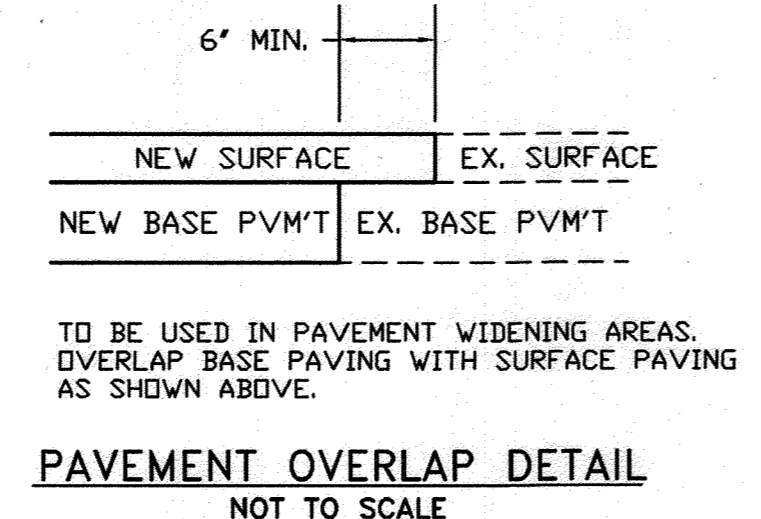
MONTEVIDEO ROAD IMPROVEMENT PLAN
SCALE: 1"=50'



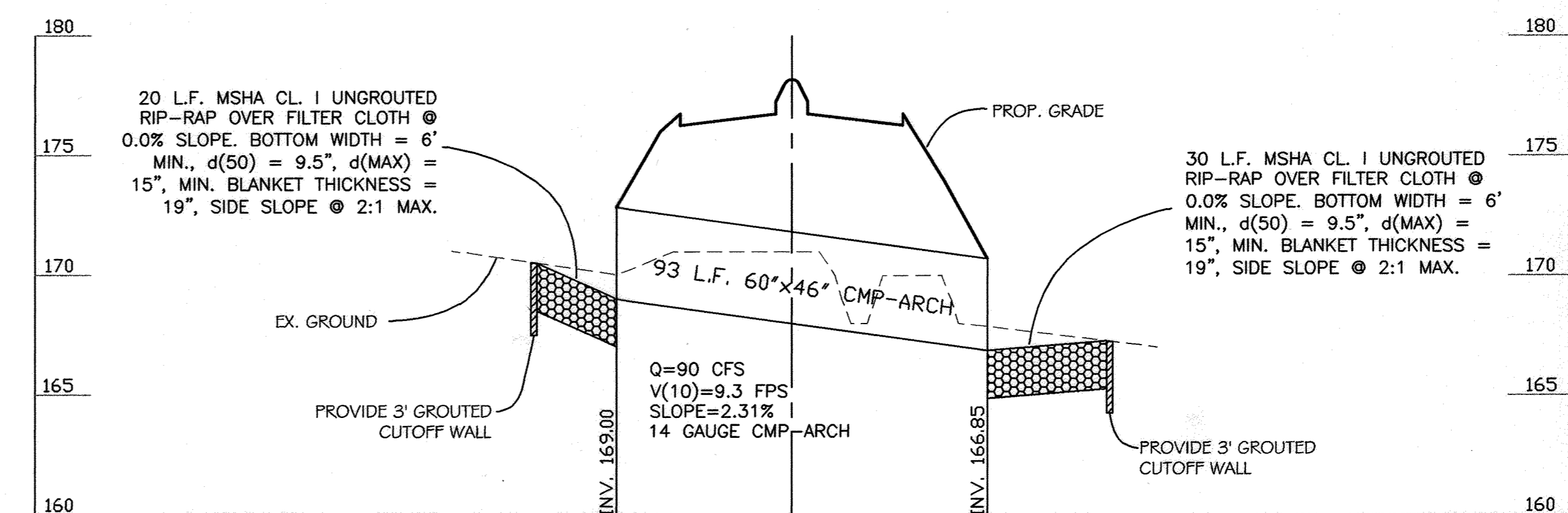
MONTEVIDEO ROAD PAVEMENT MARKING PLAN
SCALE: 1"=50'



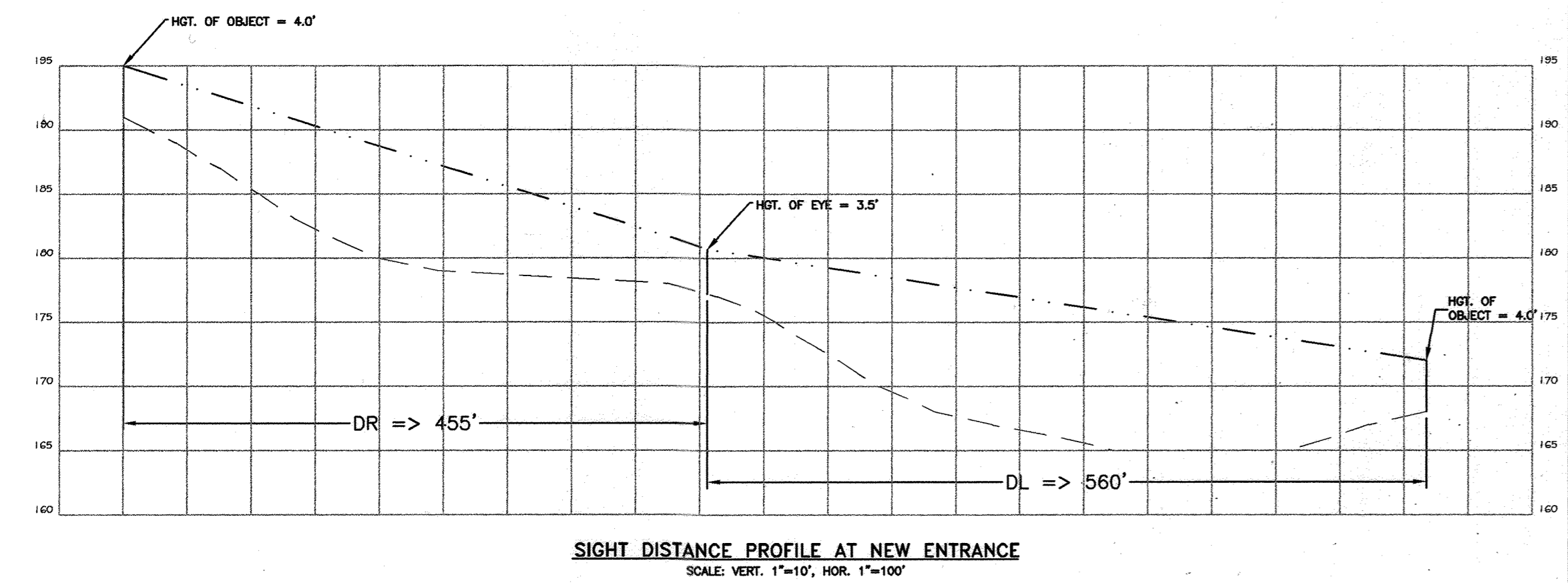
MONTEVIDEO ROAD TYPICAL SECTION
NOT TO SCALE



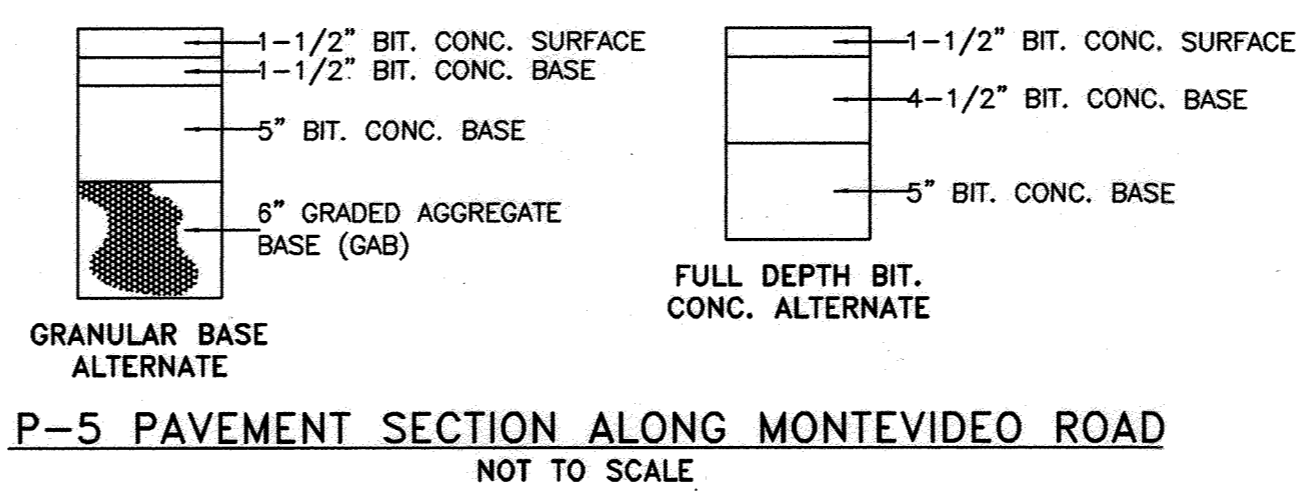
PAVEMENT OVERLAP DETAIL
NOT TO SCALE



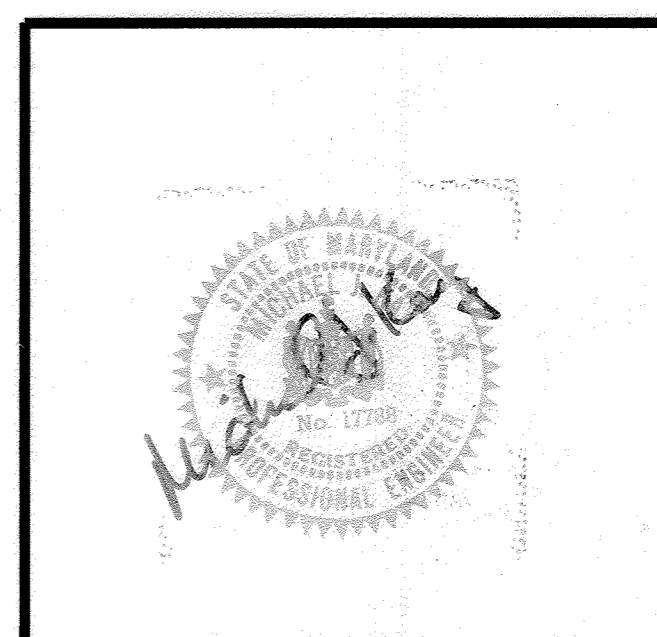
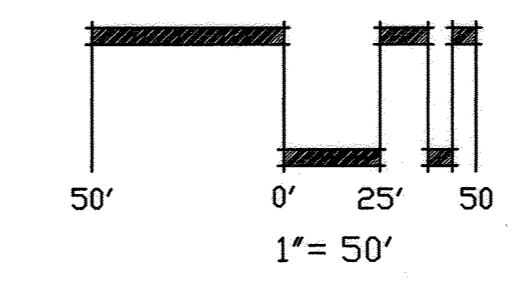
ENTRANCE CULVERT
SCALE: VER. 1"=5', HOR. 1"=30'

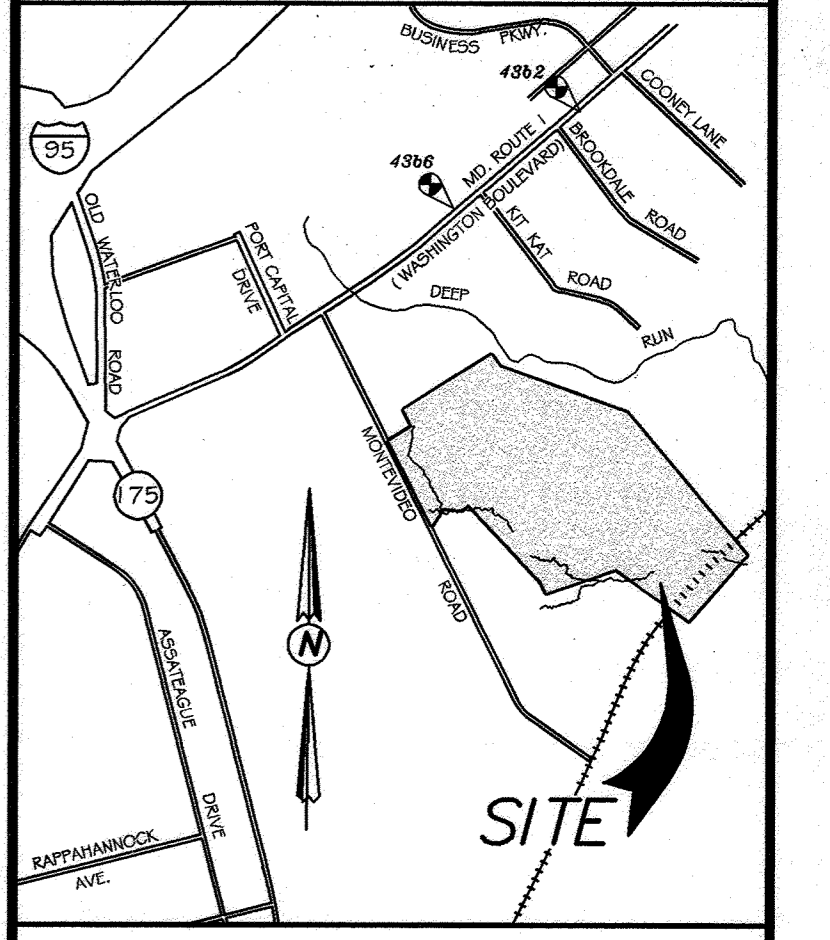


SIGHT DISTANCE PROFILE AT NEW ENTRANCE
SCALE: VERT. 1"=10', HOR. 1"=100'



P-5 PAVEMENT SECTION ALONG MONTEVIDEO ROAD
NOT TO SCALE





VICINITY MAP
 SCALE: 1"=2000'

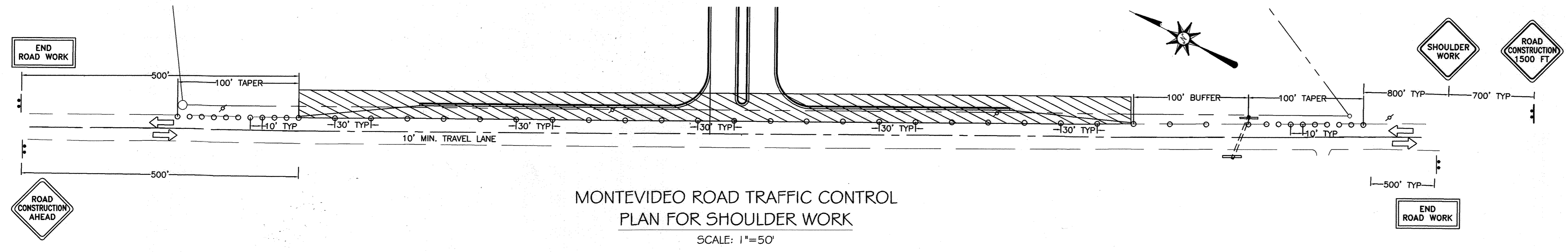
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Michael Blood 11/2/00
 Chief, Division of Land Development Date
Michael Blood 11/2/00
 Chief, Development Engineering Division Date
Michael Blood 11/2/00
 Director, Department of Planning and Zoning Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

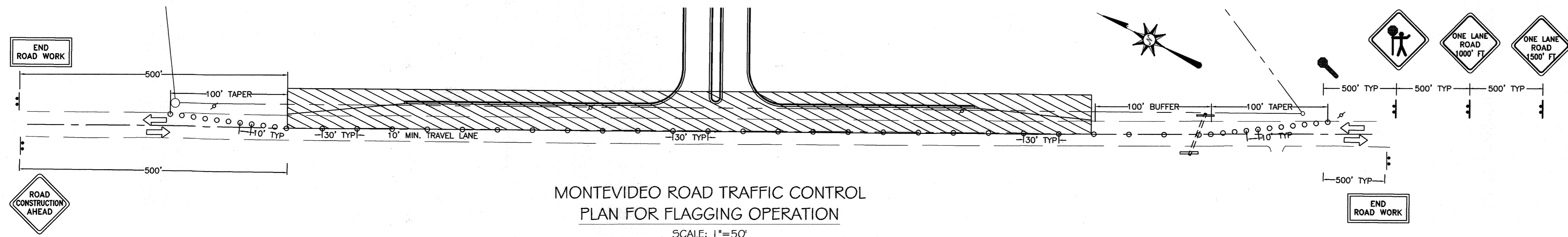
U.S.D.A.-Natural Resources Conservation Service Date

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.

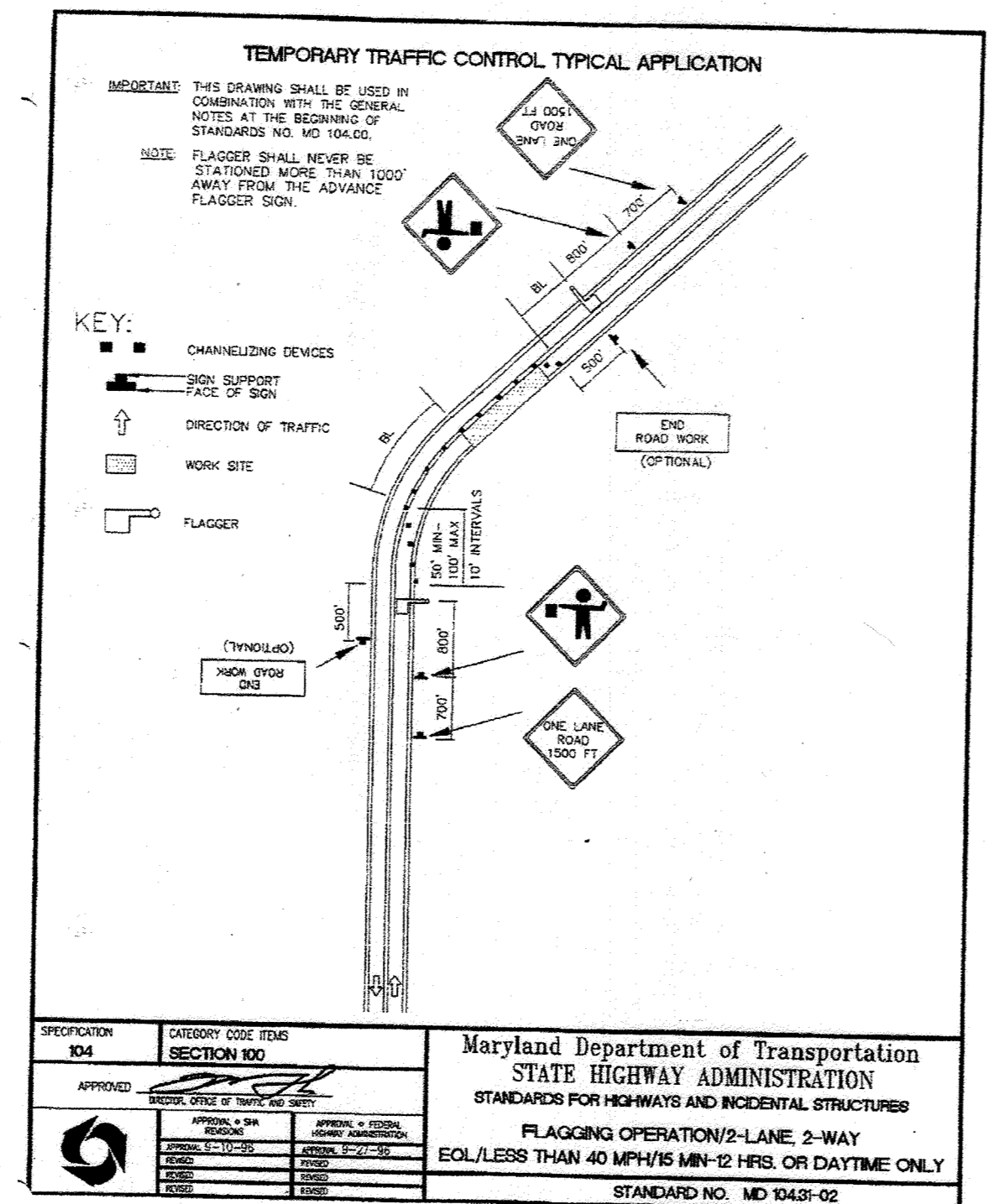
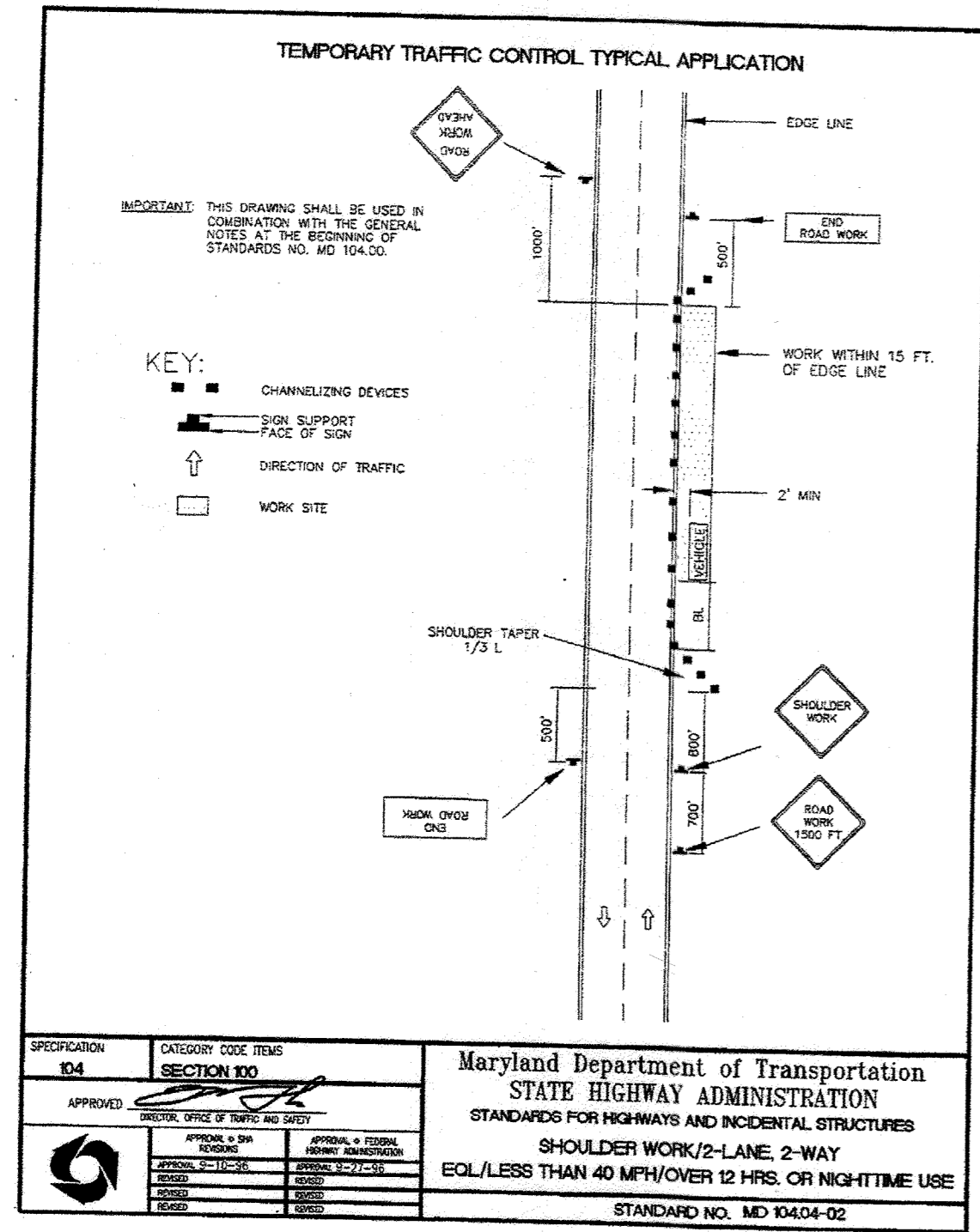
Howard SCD Date



MONTEVIDEO ROAD TRAFFIC CONTROL
 PLAN FOR SHOULDER WORK
 SCALE: 1"=50'



MONTEVIDEO ROAD TRAFFIC CONTROL
 PLAN FOR FLAGGING OPERATION
 SCALE: 1"=50'



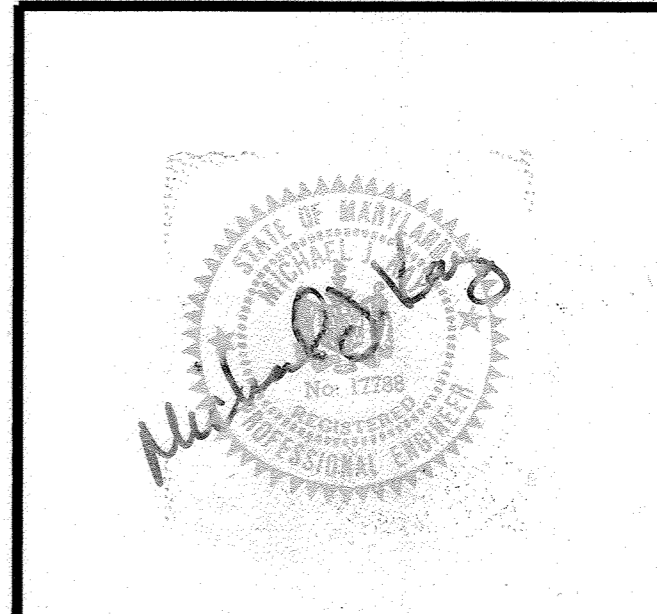
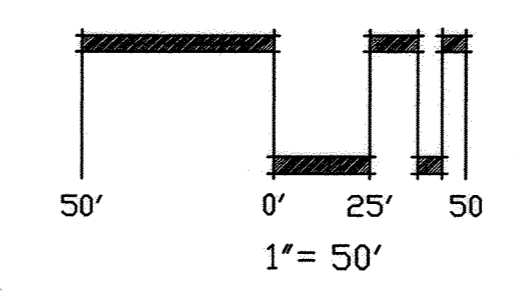
- TRAFFIC CONTROL LEGEND**
- ← DIRECTION OF TRAFFIC
 - SIGN
 - TRAFFIC DRUM OR CONE
 - ⚡ FLAGGER
 - ▨ WORK AREA

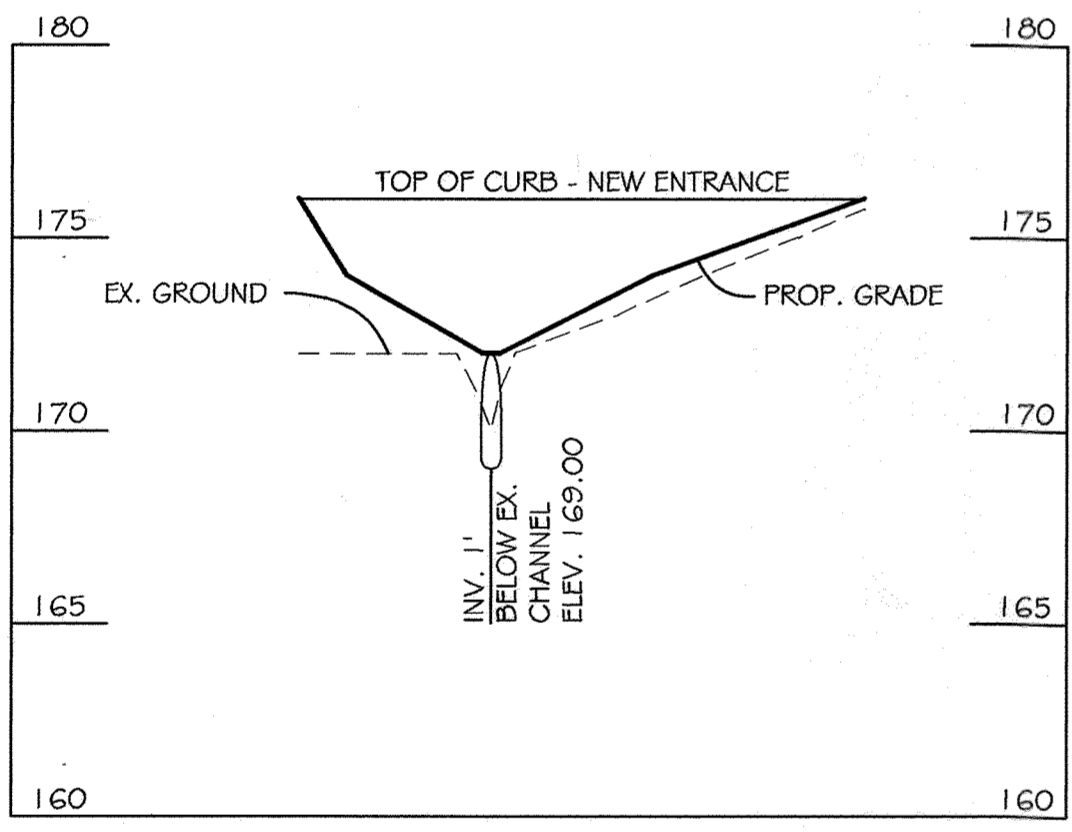
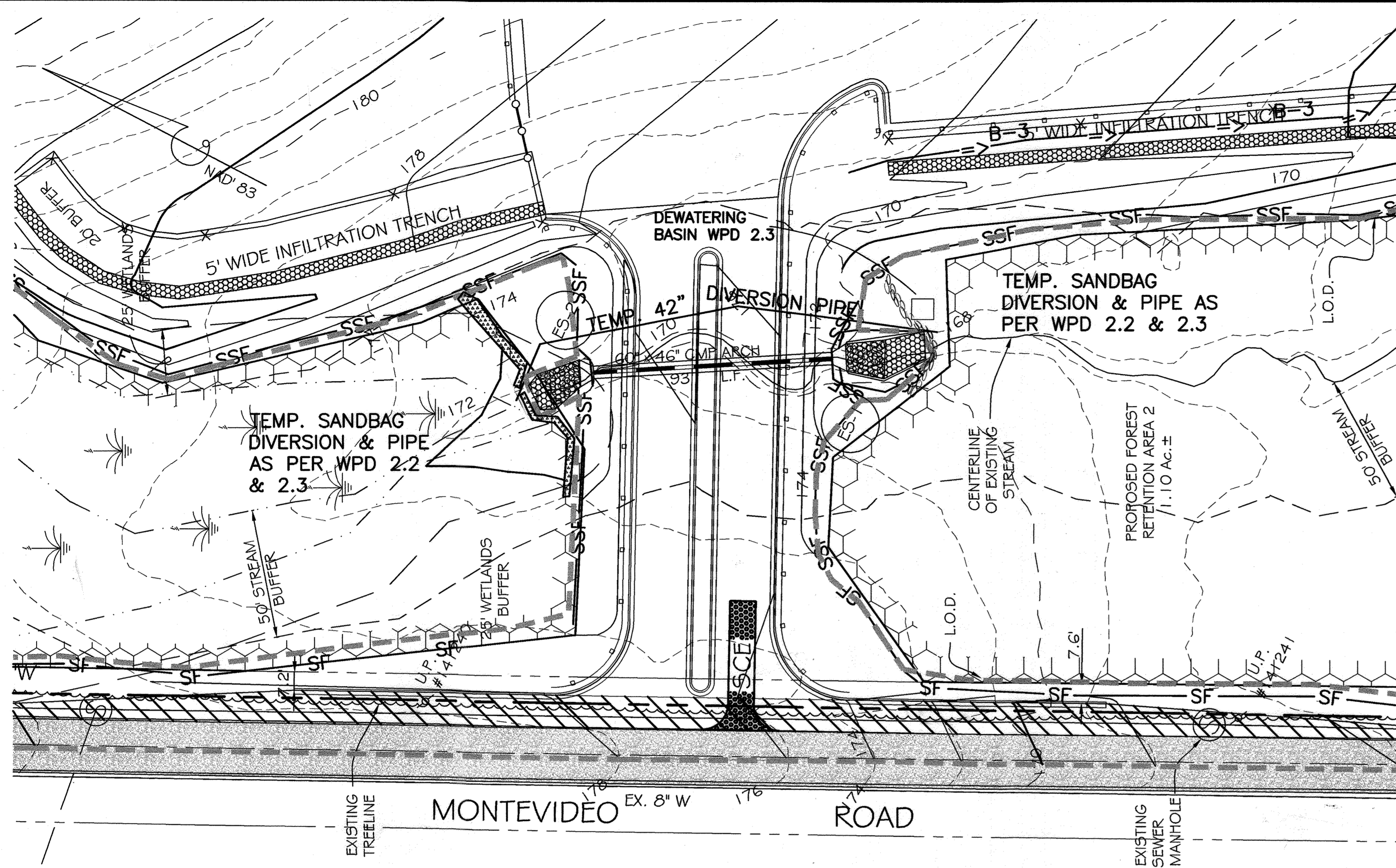
BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: JANUARY 26, 2000

MONTEVIDEO ROAD
 IMPROVEMENT PLAN AND
 TRAFFIC CONTROL PLAN
 SDP-00-63

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L 4796 F. 685

SHEET 29 OF 33

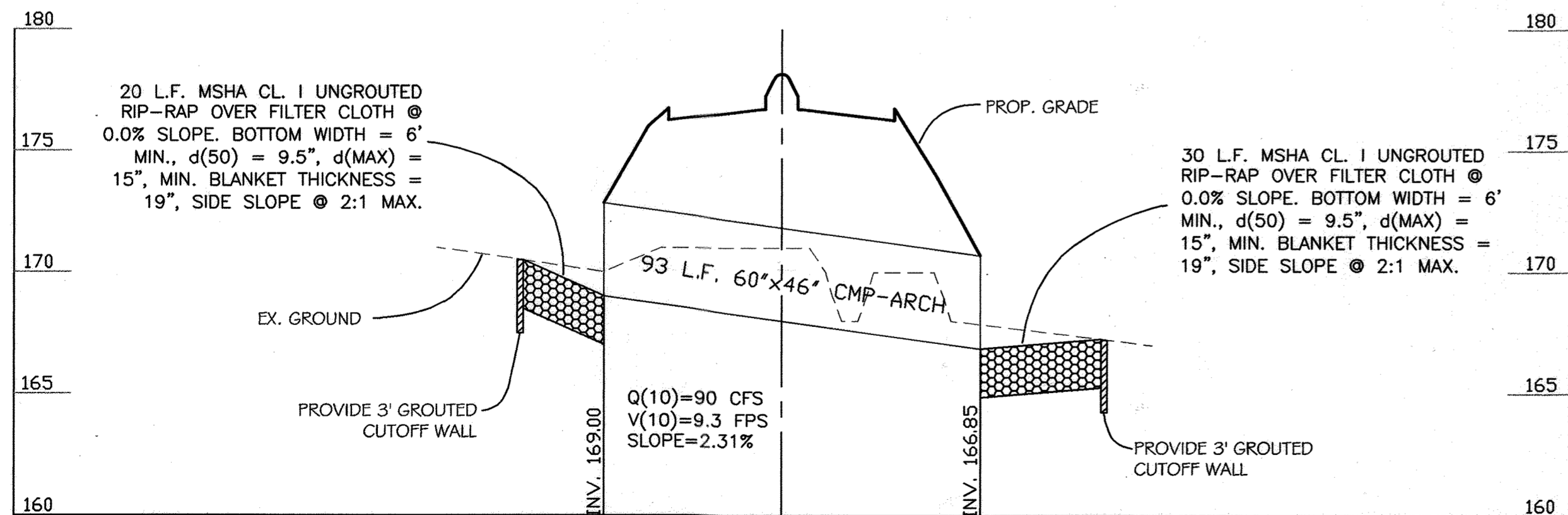




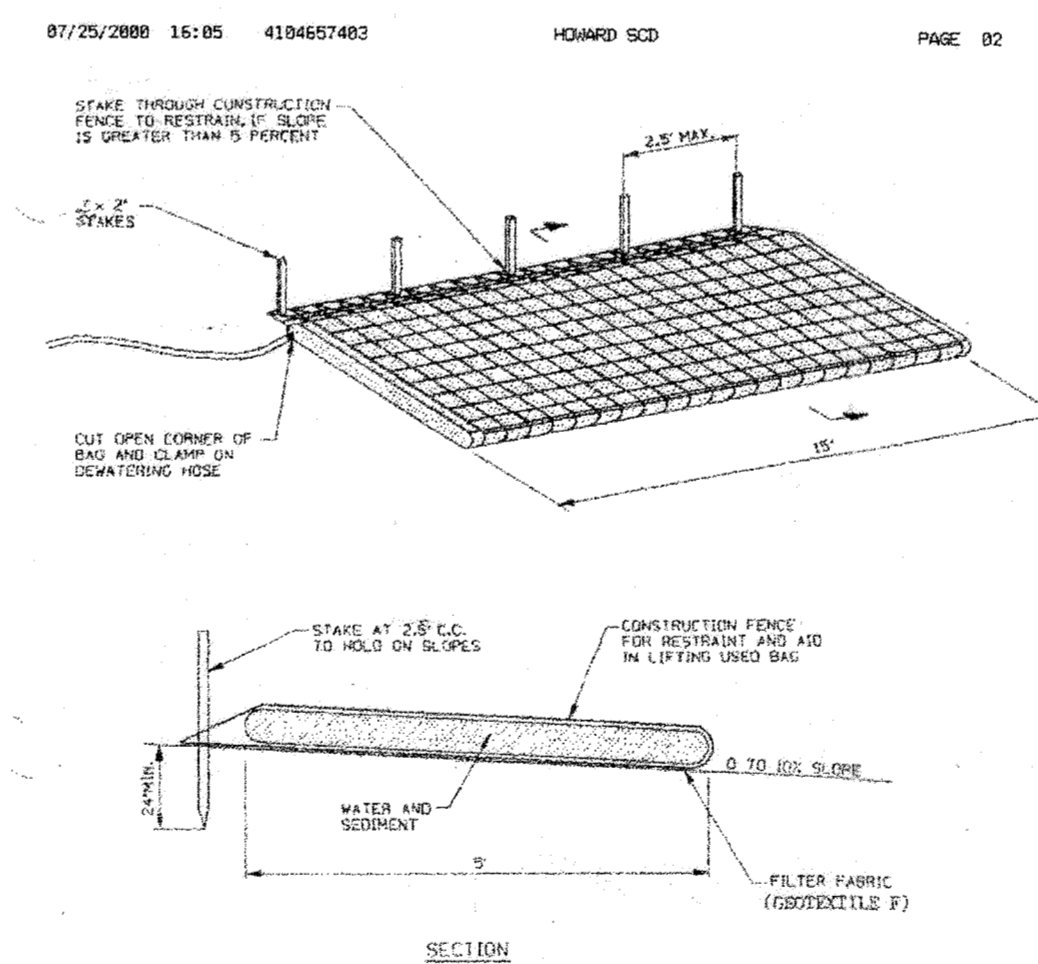
ENTRANCE CULVERT SECTION
SCALE: VER. 1=5', HOR. 1=50'

SEQUENCE OF CONSTRUCTION

1. OBTAIN ALL REGULATORY CONSTRUCTION PERMITS.
2. CONDUCT A PRE-CONSTRUCTION MEETING ON-SITE WITH MDE AND HOWARD COUNTY INSPECTORS.
3. THE LIMITS OF DISTURBANCE AND TREE PROTECTION MUST BE FIELD MARKED PRIOR TO ANY LAND DISTURBANCE ACTIVITIES.
4. INSTALL TEMP. DIVERSION PIPE AND SANDBAG/STONE DIVERSION MEASURES.
5. CONSTRUCT NEW ENTRANCE CULVERT.
6. REMOVE TEMP. DIVERSION MEASURES AND ALLOW WATER TO PASS THROUGH THE NEWLY CONSTRUCTED CULVERT.
7. INSTALL SITE FENCE AND SUPER SILT FENCE AS SHOWN.
8. BEGIN GRADING OPERATION TO CONSTRUCT THE ENTRANCE IMPROVEMENTS.
9. STABILIZE ALL DISTURBED AREAS, AND WITH PERMISSION OF THE MDE AND HOWARD COUNTY INSPECTORS, REMOVE ANY REMAINING SEDIMENT CONTROL DEVICES.



ENTRANCE CULVERT
SCALE: VER. 1=5', HOR. 1=30'

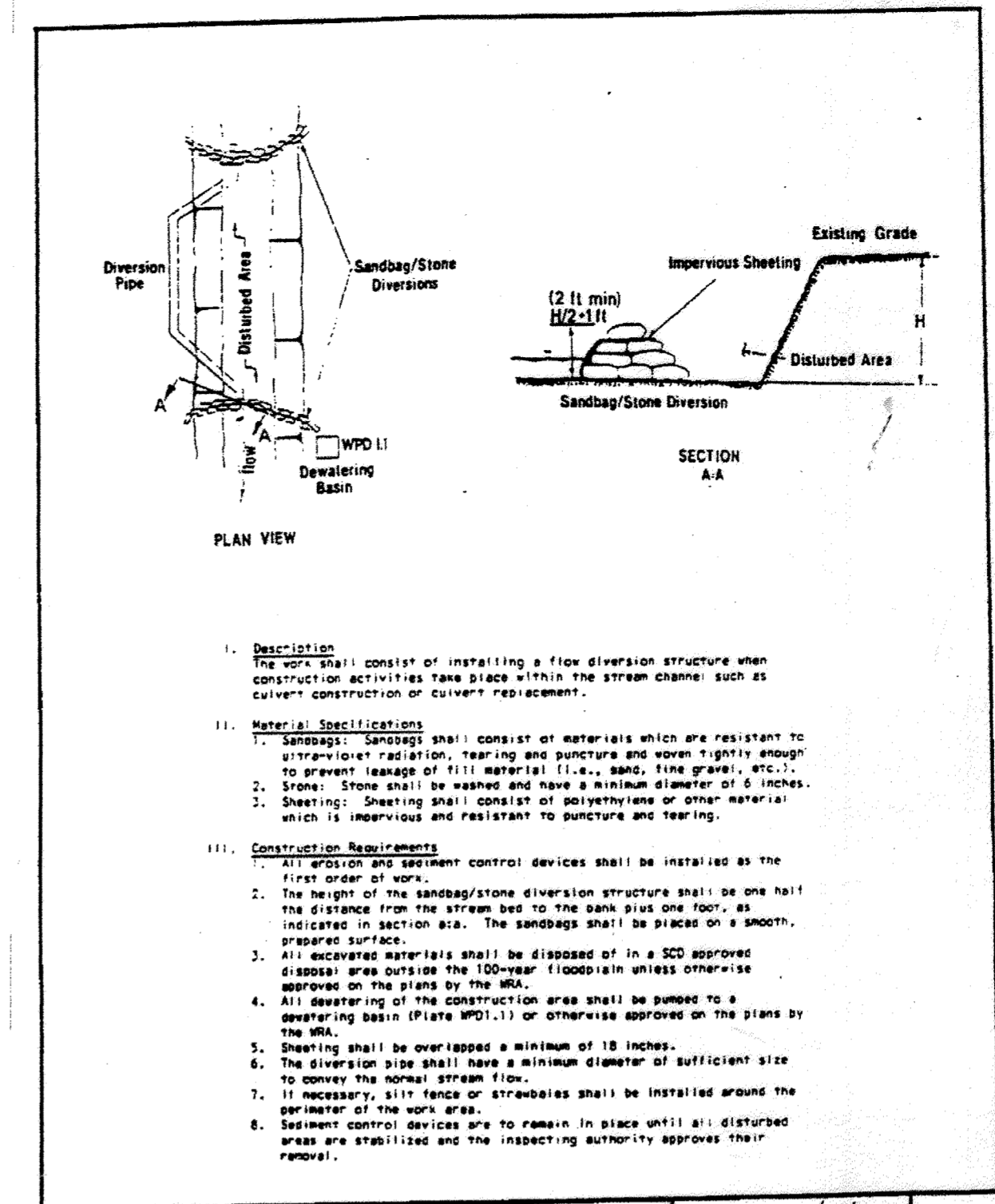


NOTES:

1. FILTER BAG SHALL BE PLACED ON A SLOPING OR LEVEL, WELL GRADED VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM DEVICE AND ANY WORK AREAS.
2. WIDTH AND LENGTH SHALL BE AS SHOWN.
3. THE FILTER BAG MUST BE STAKED IN PLACE AND SECURED TO THE PUMP DISCHARGE LINE.
4. FILTER BAG SHALL NOT BE USED FOR DISCHARGE FLOW GREATER THAN 300 GPM.
5. DEVICE SHALL BE REMOVED AND DISPOSED OF AFTER BAG IS FILLED WITH SEDIMENT. SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.
6. FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILES:

CLASS #1	Weight Strength	Tensile Modulus	Flow Rate	Filtering Efficiency	TEST METHOD
	50 lbs/ft ² (min.)	25 (lbs/ft ²) (min.)	0.3 gals./ft ² (min.)	15% (min.)	TEST METHOD 508 TEST METHOD 509 TEST METHOD 332 TEST METHOD 332

FILTER BAG
TEMPORARY EROSION CONTROL MEASURE (FB)



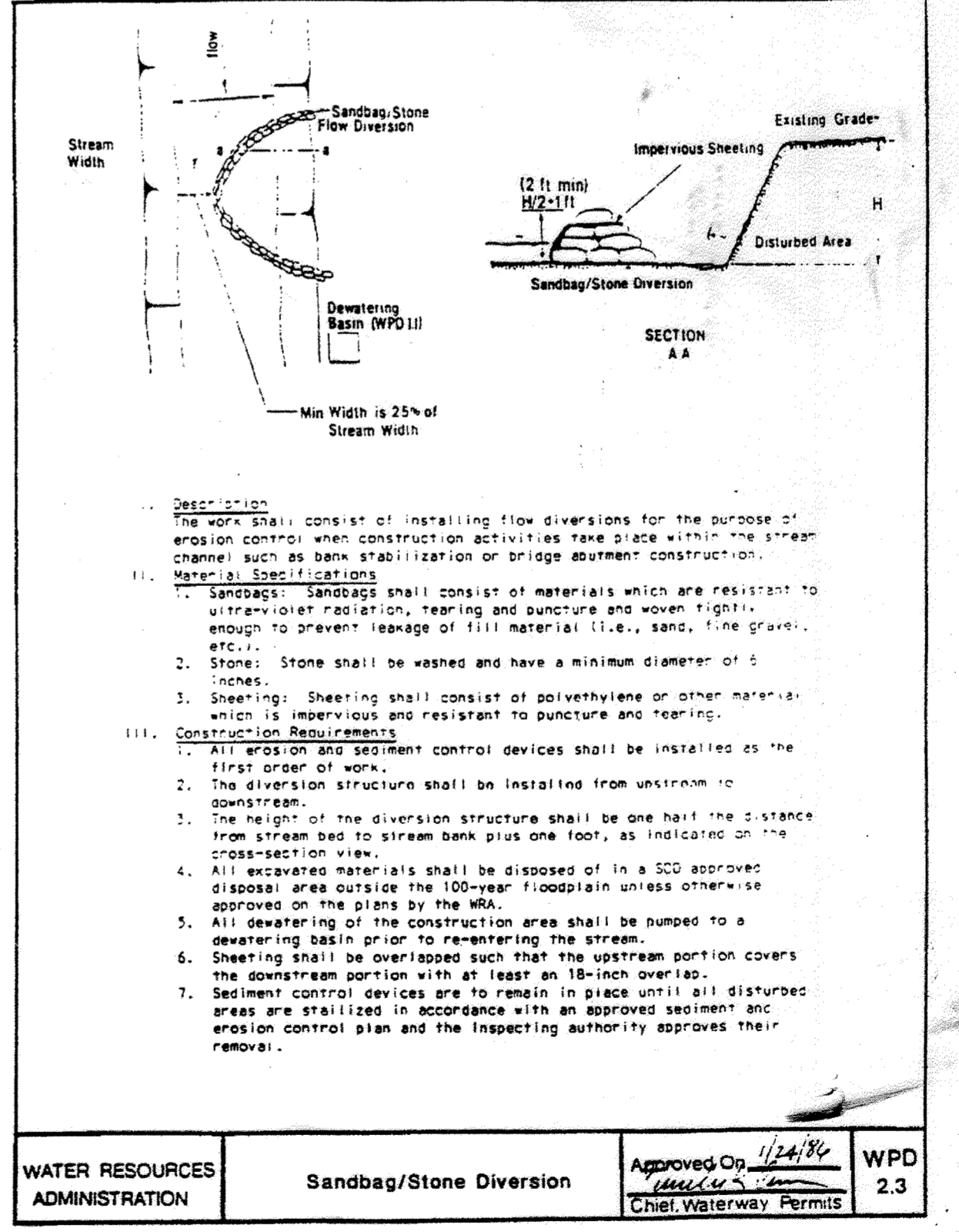
WATER RESOURCES ADMINISTRATION

Diversion Pipe

Approved On: 1/24/06
Chief Waterway Permits

WPD 2.2

NOTE:
MODIFY *CONSTRUCTION REQUIREMENT #4* TO *DEWATERING BASIN (WPD 2.3)*

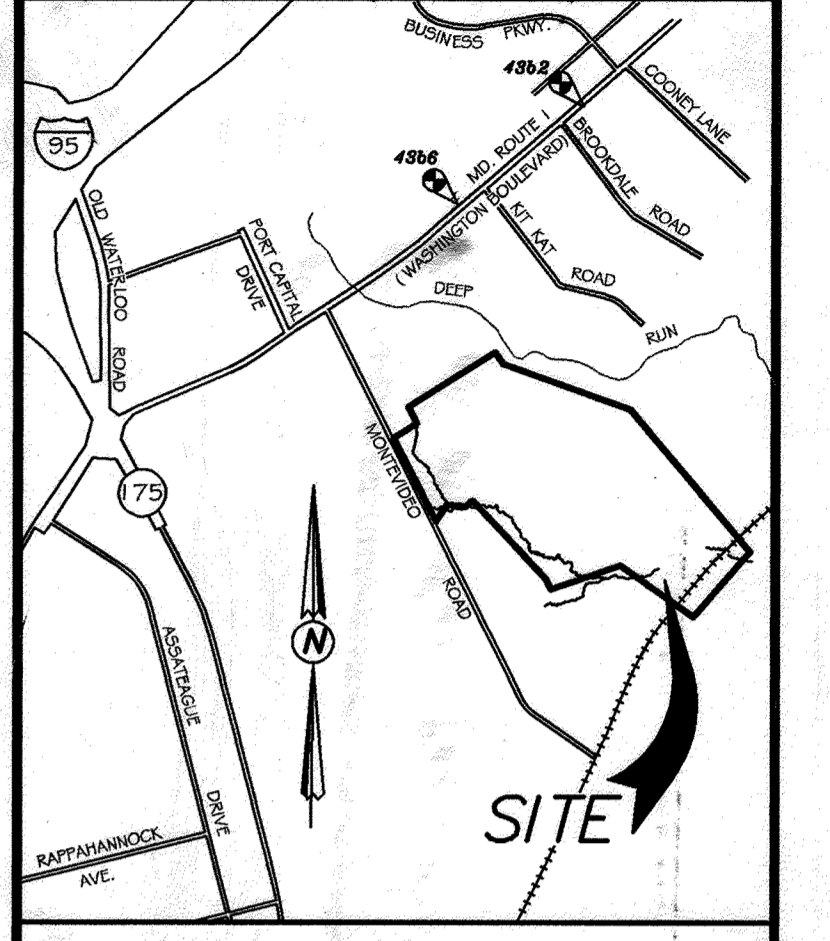


WATER RESOURCES ADMINISTRATION

Sandbag/Stone Diversion

Approved On: 1/24/06
Chief Waterway Permits

WPD 2.3



VICINITY MAP
SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Richard Blood, 1/12/06, Date
Chief, Division of Land Development

Chief, Development Engineering Division, 1/12/06, Date

1/12/06, Date

These Plans Have Been Reviewed For The HOWARD SOIL CONSERVATION DISTRICT And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

U.S.D.A. Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD

DATE	REVISIONS

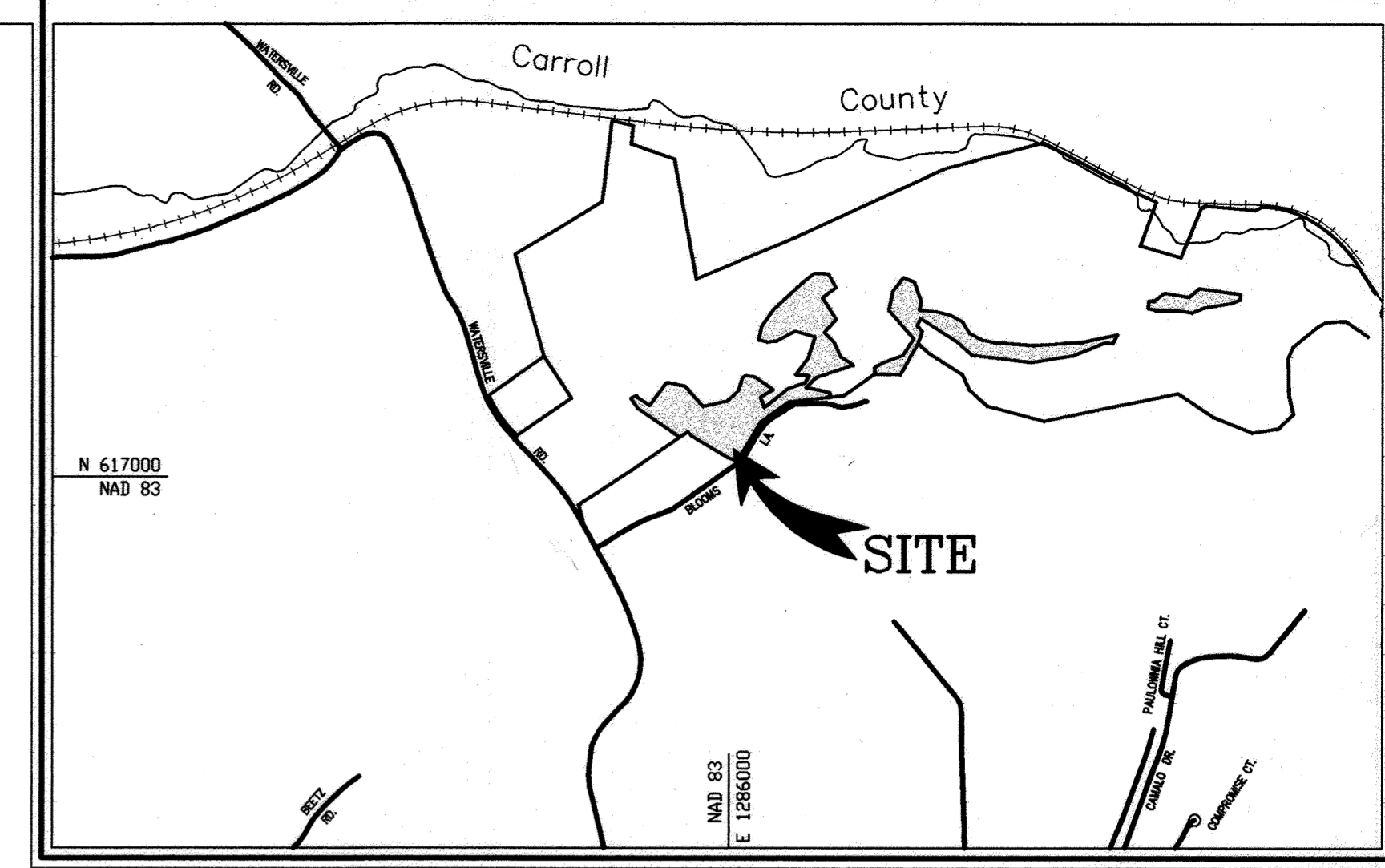
BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
TAX MAP No: 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 17, 2000

ENTRANCE SEDIMENT CONTROL PLAN

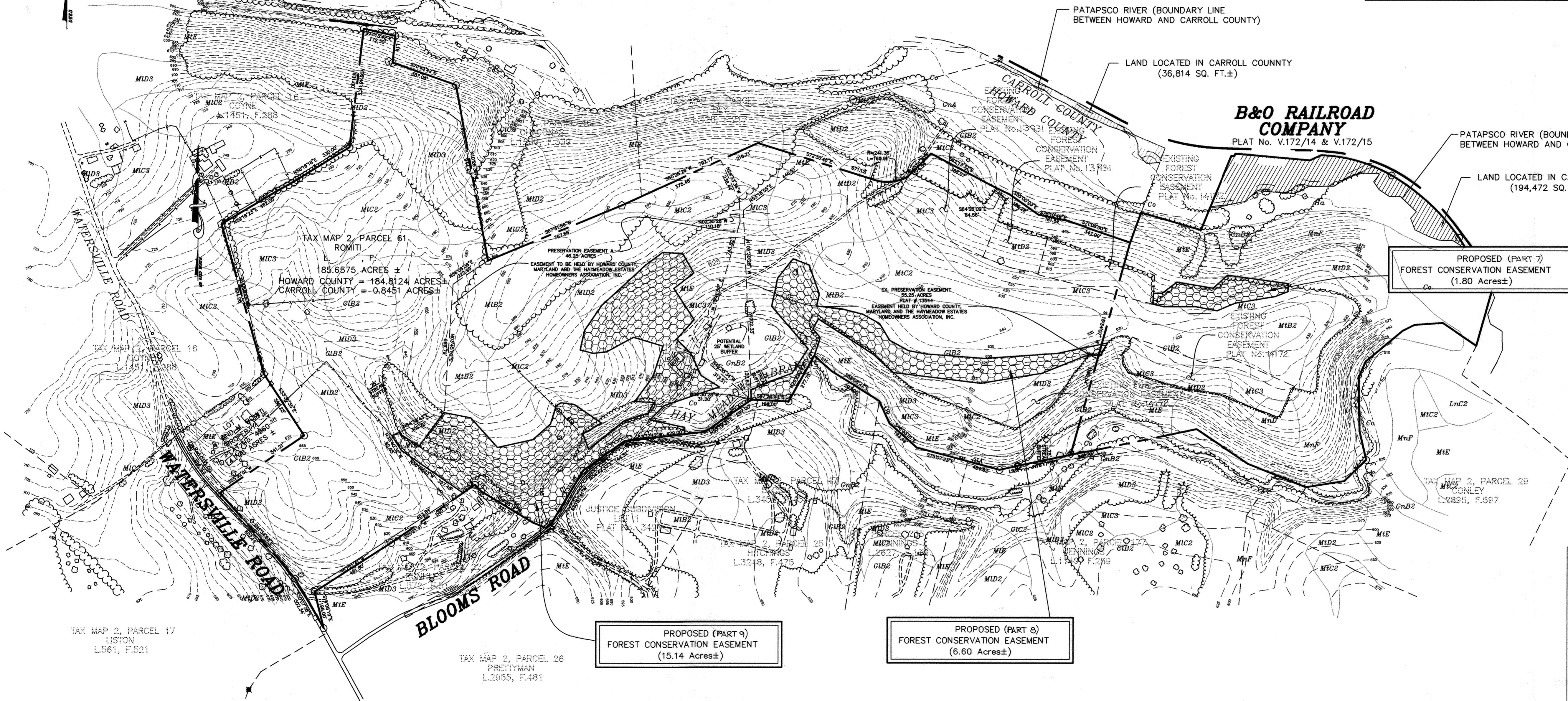
OWNER / DEVELOPER

AA PROPERTY HOLDINGS
435 METROPLEX DRIVE
NASHVILLE, TN 37211-3109
L 4788 F 605

LINE	BEARING & DISTANCE
L12	S54°20'00"W 128.87'
L13	S53°51'41"W 30.00'
L14	N00°00'00"W 74.00'
L15	N43°36'19"W 48.50'
L16	S00°00'00"W 141.40'



VICINITY MAP
SCALE: 1"=1200'



DATE NO.	REVISION
PROJECT:	BALTIMORE WASHINGTON AUTO EXCHANGE VEHICLE AUCTION FACILITY AND STORAGE LOTS TAX MAP No: 43 PARCEL: 371 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SCALE: 1"=200' DATE: APRIL 17, 2000
TITLE:	OFF-SITE FOREST MITIGATION PLAN
AREA:	ROMITI FARM TAX MAP, 2 PARCEL 24 HOWARD COUNTY MARYLAND L2895, F.587 PLAT 14486-14487
TITLE:	BALTIMORE WASHINGTON AUTO EXCHANGE
OWNER/GRANTOR:	MR. ROBERT ROMITI MR. LORENZO ROMITI MS. THERESA ROMITI 6723 HOLBIRD AVENUE BALTIMORE, MARYLAND 21222
GRANTEE:	AA PROPERTY HOLDINGS 435 METROPLEX DRIVE NASHVILLE, TN 37211-3109 L. 4798 F. 685
DESIGNED BY:	R.B.W.
DRAWN BY:	J.E.P.
PROJECT NO.	99301
DATE:	4/17/00
SCALE:	1"=300'
SHEET NO.	31 OF 33 6/3

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Richard Hood 11/2/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John Deane 10/11/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Paul Suter 11/2/00
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

OWNERS CERTIFICATION

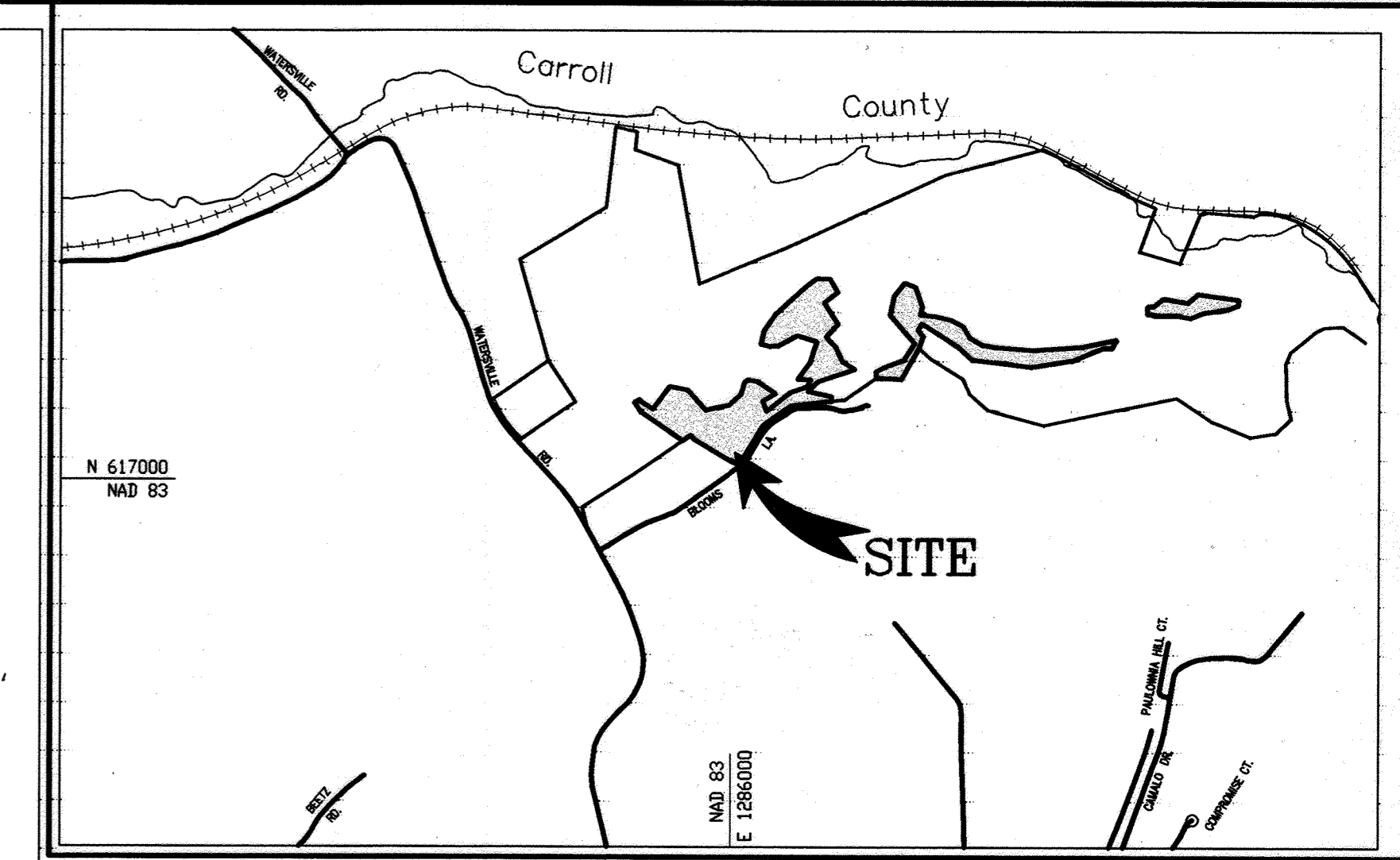
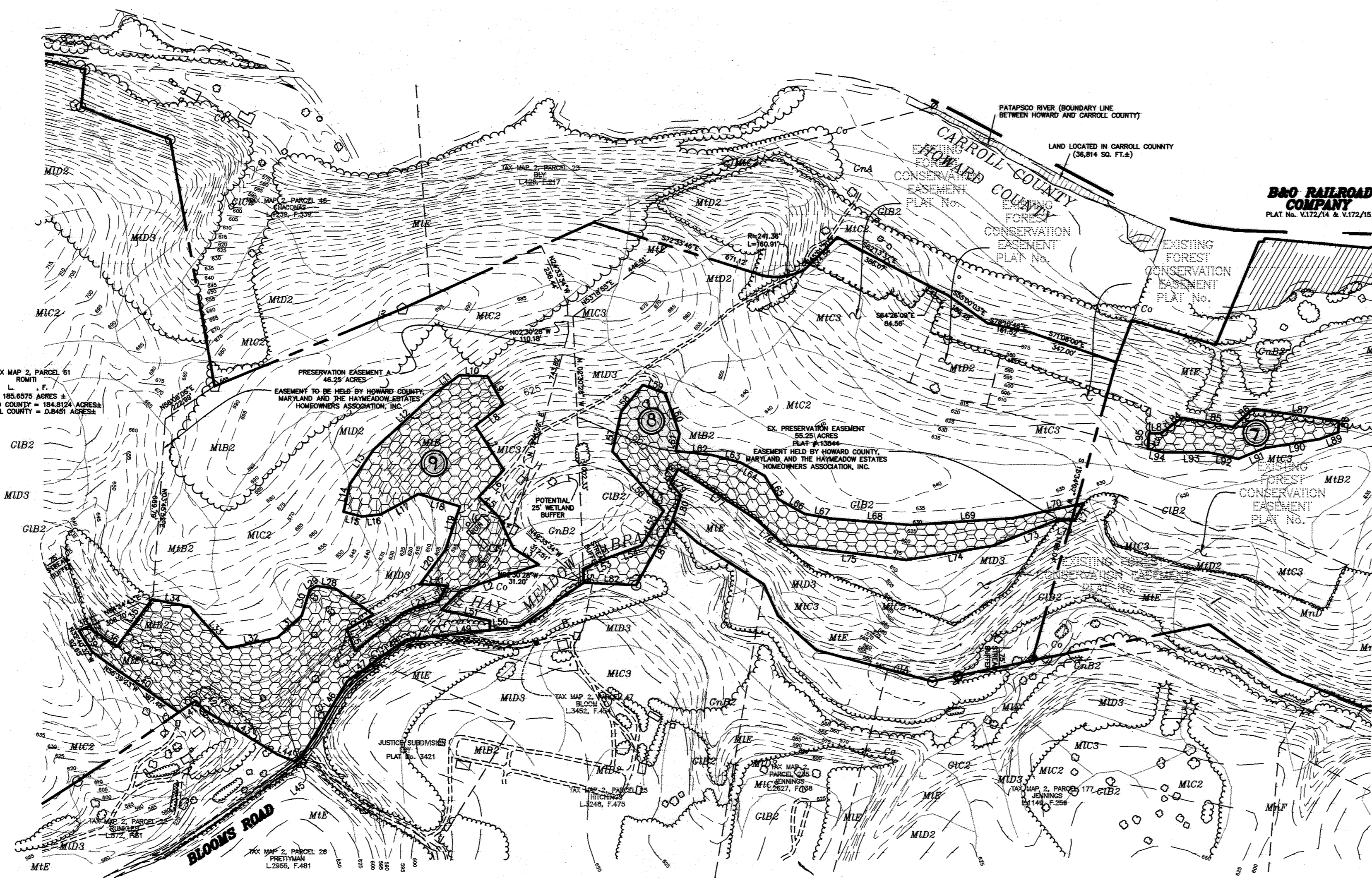
I/We Mr. Robert Romiti, Mr. Lorenzo Romiti and Ms. Theresa Romiti, owner(s) of the property shown and described hereon, hereby adopts this plan in consideration of the approval of this Forest Conservation Easement Plan by the Department of Planning and Zoning, to establish the Forest Conservation Easement(s)

Robert Romiti 11/1/00 DATE
Lorenzo Romiti 11/1/00 DATE
Theresa Romiti 11/1/00 DATE

NO CLEARING, GRADING, DUMPING OR ANY OTHER ACTIVITIES NOT PERMITTED UNDER THE TERMS OF AN AGREEMENT AND/OR THE DEED OF FOREST CONSERVATION EASEMENT FOR THIS PROJECT ARE ALLOWED WITHIN ANY FOREST CONSERVATION EASEMENTS SHOWN ON THIS PLAN, AGREEMENT REFERRING TO INSTALLATION AND MAINTENANCE AGREEMENTS.

FOREST CONSERVATION EASEMENT SUMMARY TABULATION

Table with 3 columns: LINE, BEARING, DISTANCE. It lists 195 numbered lines with their respective bearings and distances.



VICINITY MAP SCALE: 1"=1200'

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.
2. SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT...
3. SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL...
4. SOIL MIX FOR ERICACEOUS MATERIAL...
5. ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY...

- 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.
3. VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED...
4. REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FEET RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
5. REMOVE AND DISPOSE OF MAN-MADE TRASH...
6. A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD...

- 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.
3. PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING...
4. UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.

- 1. THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD...
2. PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION...
3. CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THRU LARGER EXISTING ROOTS...
4. CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL...
5. FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL...
6. FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FOUR (4), PER SPECIES...
7. AVOID PLANTING IN A STRAIGHT GRID PATTERN...
8. NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON...

- 1. DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING...
2. NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
3. IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC...
4. BASED PRODUCTS ARE AVAILABLE COMMERCIALY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

FOREST CONSERVATION EASEMENT AREA TABULATION

Table with 3 columns: PART NO., AREA. Lists three areas: 9 (15.14 Ac.), 8 (6.60 Ac.), and 7 (1.80 Ac.).

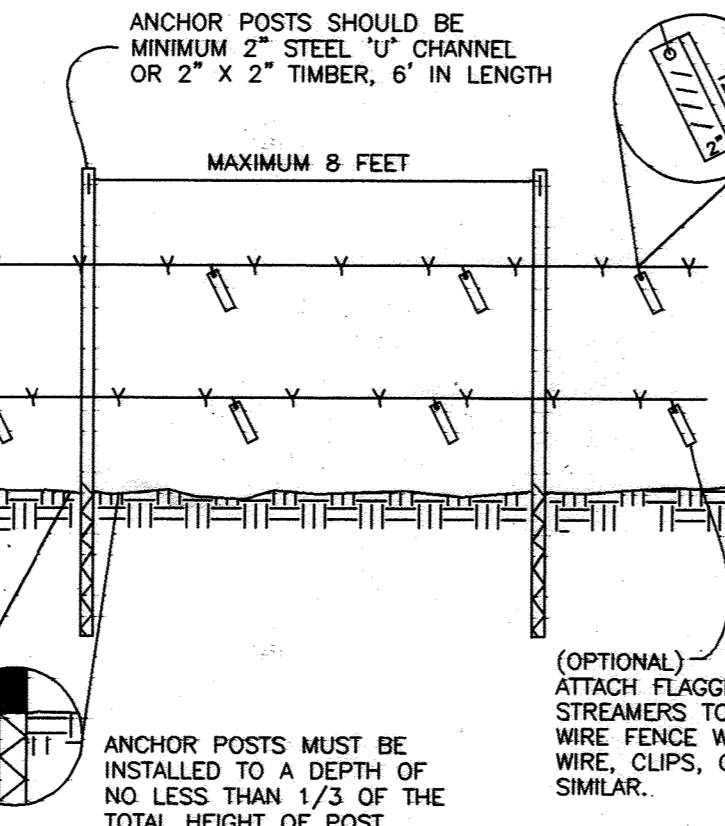
General Notes

- 1) Area, Per Section 16.1216 Of The Howard County Forest Conservation Act, No Clearing, Grading Or Construction Is Permitted Within The Forest Conservation Easement...
2) (No.) Denotes Forest Conservation Easement.

REFORESTATION PLANT LIST

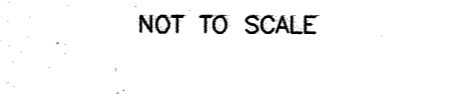
Table with columns: QTY., SPECIES, SHADE TOL., MOIST. REGIME, WET. STATUS, MIN.O.C. SPACING, SIZE & REMARKS. Lists various tree species like Prunus serotina, Quercus alba, etc.

PROTECTIVE FENCE DETAIL TWO STRAND BARBED WIRE



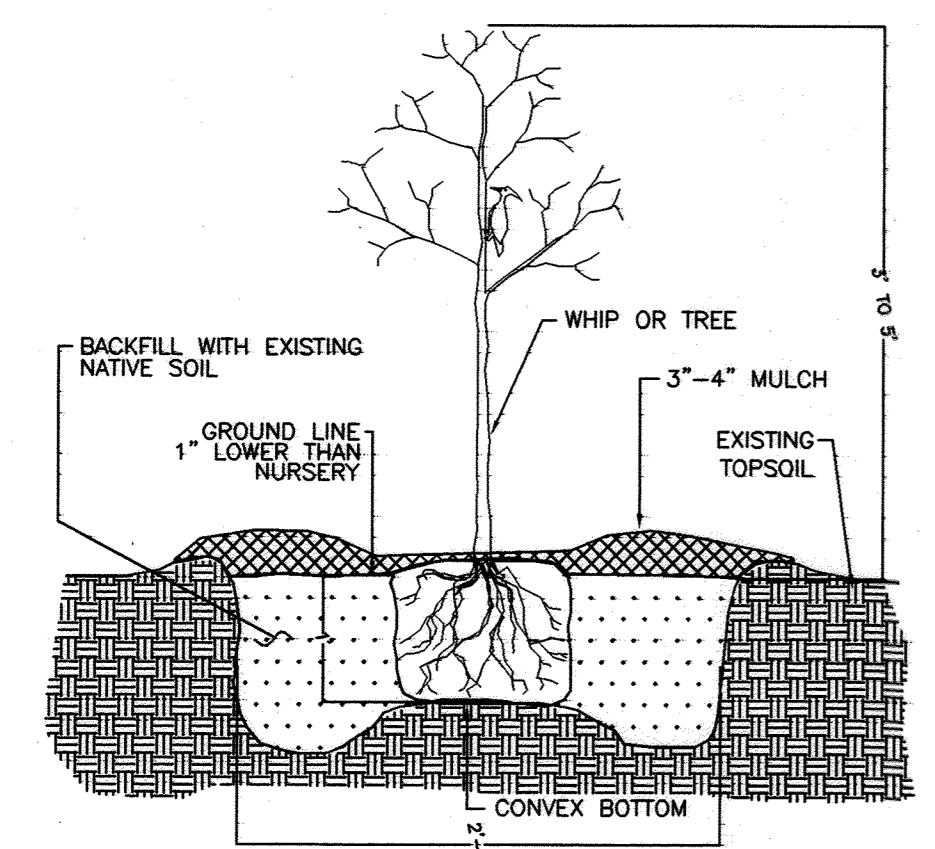
- 1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.
7. BARBED WIRE SHOULD BE ATTACHED SECURELY TO POSTS.

SIGNAGE DETAIL



NOT TO SCALE

TO BE PLACED ALONG THE OUTER EDGE OF THE EASEMENTS ADJACENT TO OPEN AREAS INSIDE OF TRACT BOUNDARY



TREE PLANTING DETAIL CONTAINER GROWN

AUTOCAD FILE NAME C:\Land Projects\THAYER AUTO EXCHANGE\BVAE MASTER OFFSITE FCE2.dwg

THIS PLAN IS FOR FOREST CONSERVATION EASEMENT PLANTING PURPOSES ONLY

Approval signatures and dates for Department of Planning and Zoning, Chief, Development Engineering Division, and Director, Planning and Zoning.

Owner/Grantor and Owner/Developer information, including names and addresses for Robert Romiti and AA Property Holdings.

Project information: BALTIMORE WASHINGTON AUTO EXCHANGE VEHICLE AUCTION FACILITY AND STORAGE LOTS. OFF-SITE REFORESTATION PLAN. AREA: ROMITI FARM.

Logo for Wildman Environmental Services and contact information for Ronald W. Wildman, including address and phone numbers.

PLANTING SPECIFICATIONS AND NOTES

SITE PREPARATION AND SOILS

- PROTECTION FENCING AND SILT FENCES FOR SEDIMENT AND EROSION CONTROL ARE TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
- DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT. AS SHOWN ON THE DETAIL VIEW, A PLANTING FIELD OF RADIUS = 5 X DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
- SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE.
- SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF PEAT MOSS.
- ALL MIXING IN 3" AND 4" SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

PLANT STORAGE AND INSPECTION

- FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
- FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
- PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
- UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL AND MOISTENED ENVIRONMENT.

PLANT INSTALLATION

- THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL. BACKFILL AROUND TREES.
- PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST.
- CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THRU LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1/2 INCH ARE ENCOUNTERED PLEASE TRY TO DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES. THEY WERE HERE FIRST.
- CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. J-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
- FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
- FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FOUR (4), PER SPECIES, OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
- AVOID PLANTING IN A STRAIGHT GRID PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LISTS TO OBTAIN A MORE NATURAL APPEARANCE.
- NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE WELL DRAINED NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS AFTER THAT PERIOD. TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.

FERTILIZING

- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. SO MUCH AS A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
- NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
- IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE COMMERCIALY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

MAINTENANCE SCHEDULE

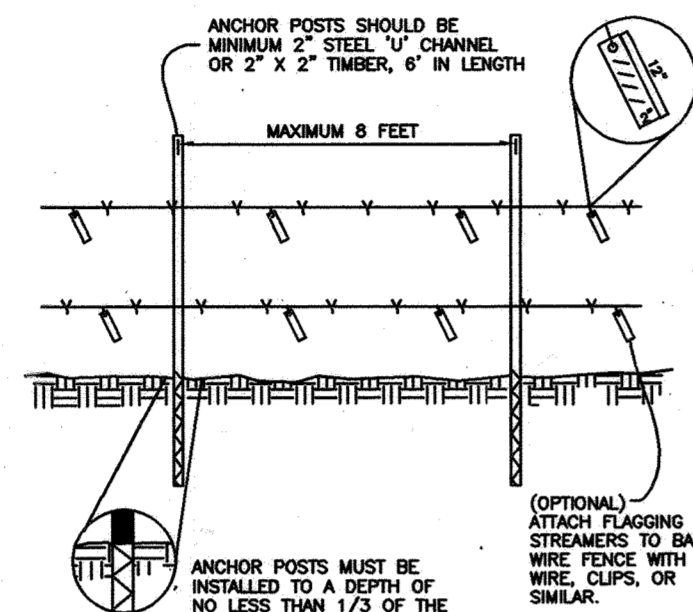
- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
- ASSESS TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
- VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS NEGATIVELY AFFECTING THE PLANTED STOCK.
- REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
- REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN ENTIRE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS SMOTHERING PLANTING STOCK.
- A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS MAY BE REQUIRED TO ACHIEVE THIS GOAL.

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.

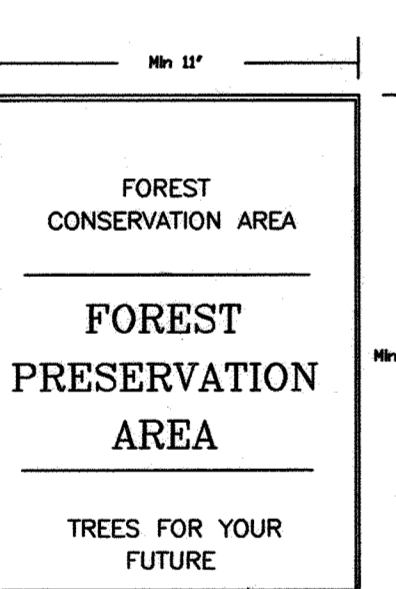
PROTECTIVE FENCE DETAIL

TWO STRAND BARBED WIRE



- FOREST PROTECTION DEVICE ONLY.
- RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
- BOUNDARIES OF AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
- ROOT DAMAGE SHOULD BE AVOIDED.
- PROTECTIVE SIGNAGE MAY ALSO BE USED.
- DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.
- BARBED WIRE SHOULD BE ATTACHED SECURELY TO POSTS.

- FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
- FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FOUR (4), PER SPECIES, OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
- AVOID PLANTING IN A STRAIGHT GRID PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LISTS TO OBTAIN A MORE NATURAL APPEARANCE.
- NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE WELL DRAINED NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS AFTER THAT PERIOD. TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.



SIGNAGE DETAIL

OWNERS CERTIFICATION

I/We David A. Carney and Laurence B. Raber, owner(s) of the property shown and described hereon, hereby adopts this plan in consideration of the approval of this Forest Conservation Easement Plan by the Department of Planning and Zoning, to establish the Forest Conservation Easement(s)

David A. Carney 8/22/00
DATE

Laurence B. Raber 8/22/00
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Richard Blood 4/2/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris Devariana 10/11/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Paul Smith 11/2/00
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

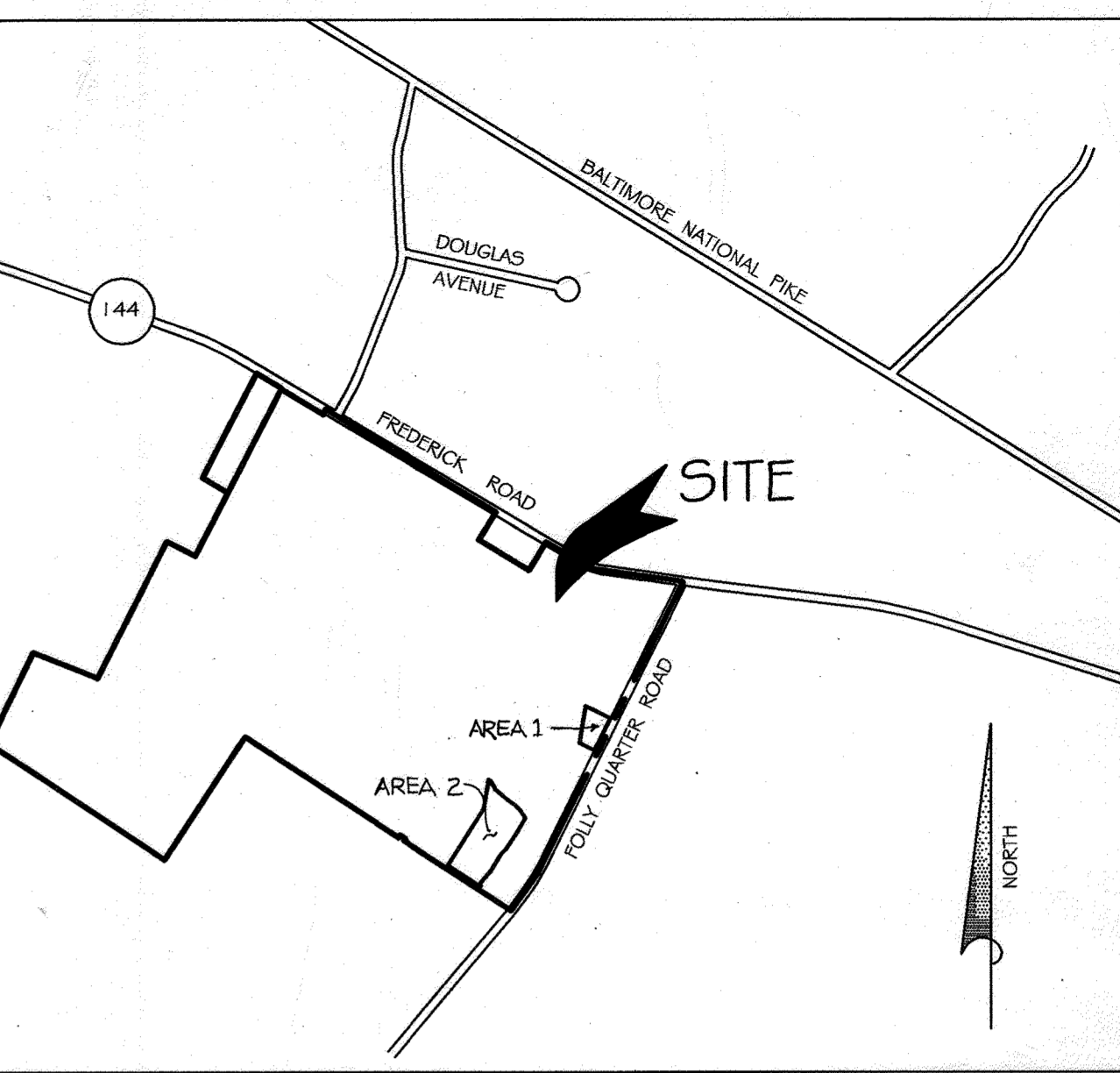
General Notes

- The Forest Conservation Easement Has Been Established As An Offsite Forest Mitigation Area, Per Section 16.1216 Of The Howard County Forest Conservation Act. No Clearing, Grading Or Construction Is Permitted Within The Forest Conservation Easement; However, Forest Management Practices As Defined In The Deed Of Forest Conservation easement Are Allowed.
- Denotes Forest Conservation Easement.
- Denotes Forest Preservation Signage

REFORESTATION PLANT LIST

QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN. O.C. SPACING	SIZE & REMARKS
175	Prunus serotina Wild Black Cherry	I	M	FACU	10'	CONT./BROOT 3'-5' HEIGHT
175	Robinia pseudoacacia Black Locust	VI	D-M	FACU	10'	CONT./BROOT 3'-5' HEIGHT
175	Quercus alba White Oak	MT	D-M	FACU	10'	CONT./BROOT 3'-5' HEIGHT
175	Quercus rubra Red Oak	MT	D-M	UPL	10'	CONT./BROOT 3'-5' HEIGHT
175	Fraxinus americana White Ash	MT	D-M	FACU	10'	CONT./BROOT 3'-5' HEIGHT
175	Nyssa sylvatica Black Gum	T	M-W	FAC	10'	CONT./BROOT 3'-5' HEIGHT
175	Platanus occidentalis American Sycamore	I	D-W	FAC	10'	CONT./BROOT 3'-5' HEIGHT
175	Juglans nigra Black Walnut	VT	M	FACU	10'	CONT./BROOT 3'-5' HEIGHT
175	Liriodendron tulipifera Yellow Poplar	I	M	FACU	10'	CONT./BROOT 3'-5' HEIGHT
175	Acer rubrum Red Maple	VT	D-W	FAC	10'	CONT./BROOT 3'-5' HEIGHT

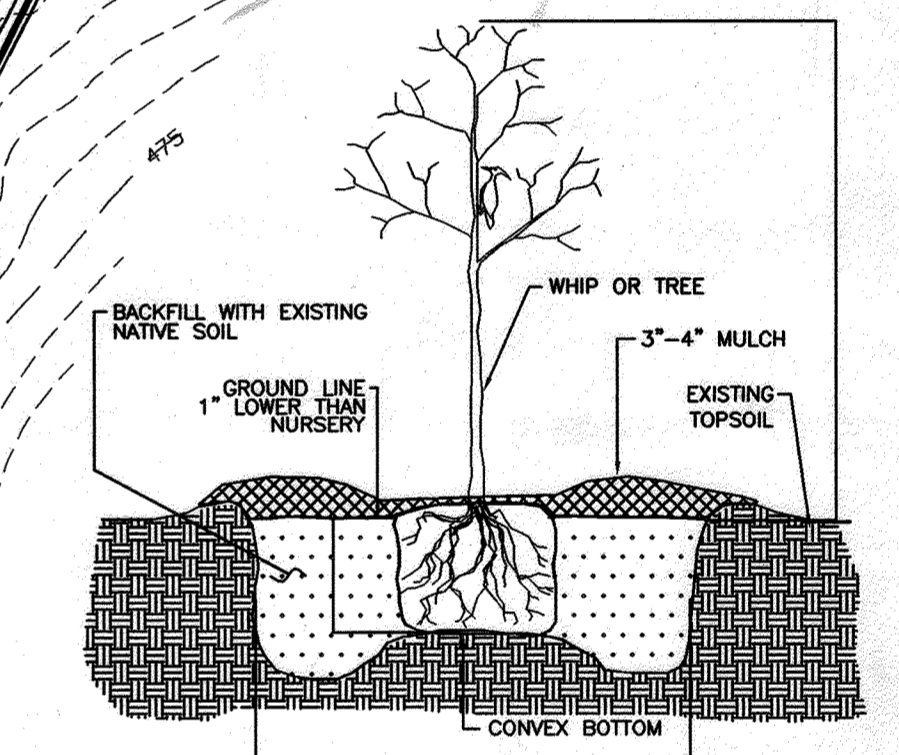
Quantities Of Individual Species And Species Composition May Change Depending On Availability At Time Of Planting. Total Quantity Of Trees For Entire Easement Area Will Not Change.



VICINITY MAP

SCALE: 1"=1200'

No.	AREA
5	0.91 Ac.±
6	4.13 Ac.±



TREE PLANTING DETAIL

CONTAINER GROWN

OWNER/GRANTOR	OWNER / DEVELOPER
BRANTWOOD, LLC EASEMENT HOLDERS: BRANTWOOD COMMUNITY ASSOCIATION, INC. HOWARD COUNTY, MD.	AA PROPERTY HOLDINGS 435 METROPLEX DRIVE NASHVILLE, TN 37211-3109 L-4789 P. 655

DATE	NO.	REVISION

PROJECT: **BALTIMORE WASHINGTON AUTO EXCHANGE**
VEHICLE AUCTION FACILITY AND STORAGE LOTS
TAX MAP No: 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1"=200' DATE: APRIL 17, 2000

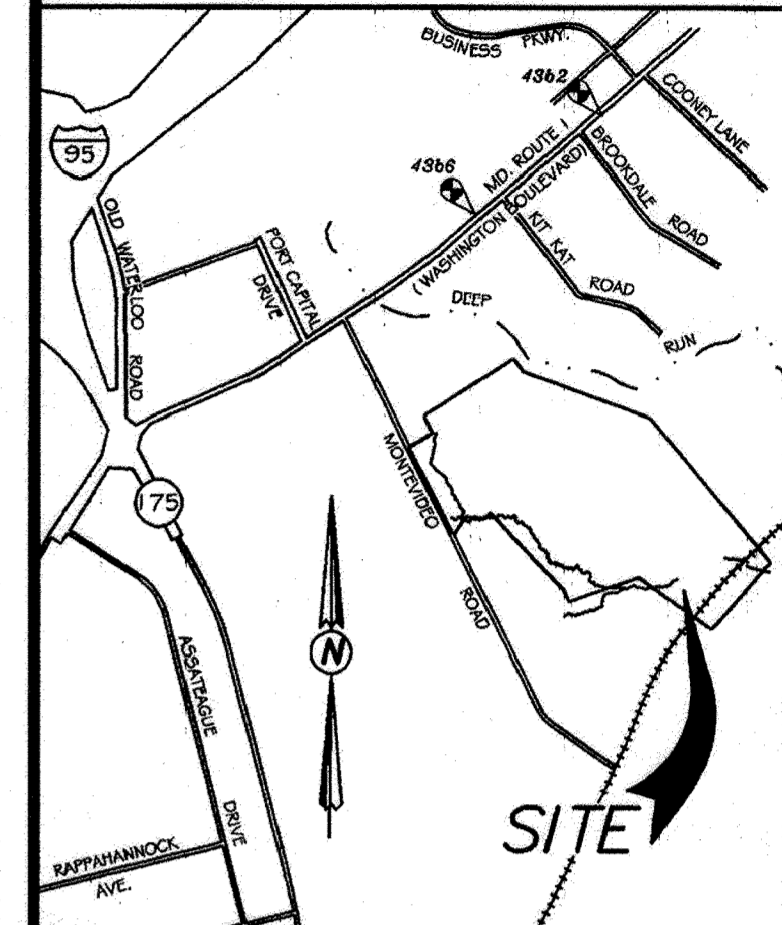
TITLE: **OFF-SITE FOREST MITIGATION PLAN**

AREA: **BRANTWOOD - SECTION ONE**
TAX MAPS 16 & 23 PARCELS 54, 214 & 390
HOWARD COUNTY MARYLAND
PLAT No. 14494

TITLE: **WILDMAN ENVIRONMENTAL SERVICES**
4747 BONNIE BRANCH RD.
ELLCOTT CITY, MD. 21043
PHONE: (410) 313-9099
FAX: (410) 313-9099
9-12-00
DESIGNED BY: R.B.W.
DRAWN BY: J.E.P.
PROJECT NO.
DATE: MAY 2000
SCALE: 1"= 200'
SHEET NO. 33 OF 33-161 6 2

THIS PLAN IS FOR FOREST CONSERVATION EASEMENT PLANTING PURPOSES ONLY

NO CLEARING, GRADING, DUMPING OR ANY OTHER ACTIVITIES NOT PERMITTED UNDER THE TERMS OF AN AGREEMENT AND/OR THE DEED OF FOREST CONSERVATION EASEMENT FOR THIS PROJECT ARE ALLOWED WITHIN ANY FOREST CONSERVATION EASEMENTS SHOWN ON THIS PLAN.



VICINITY MAP
SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/2/00
 Chief, Division of Land Development
[Signature] 10/16/00
 Chief, Development Engineering Division
[Signature] 11/2/00
 Director, Department of Planning and Zoning
 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] 10/16/00
 U.S.D.A. 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] 10/16/00
 Howard Soil

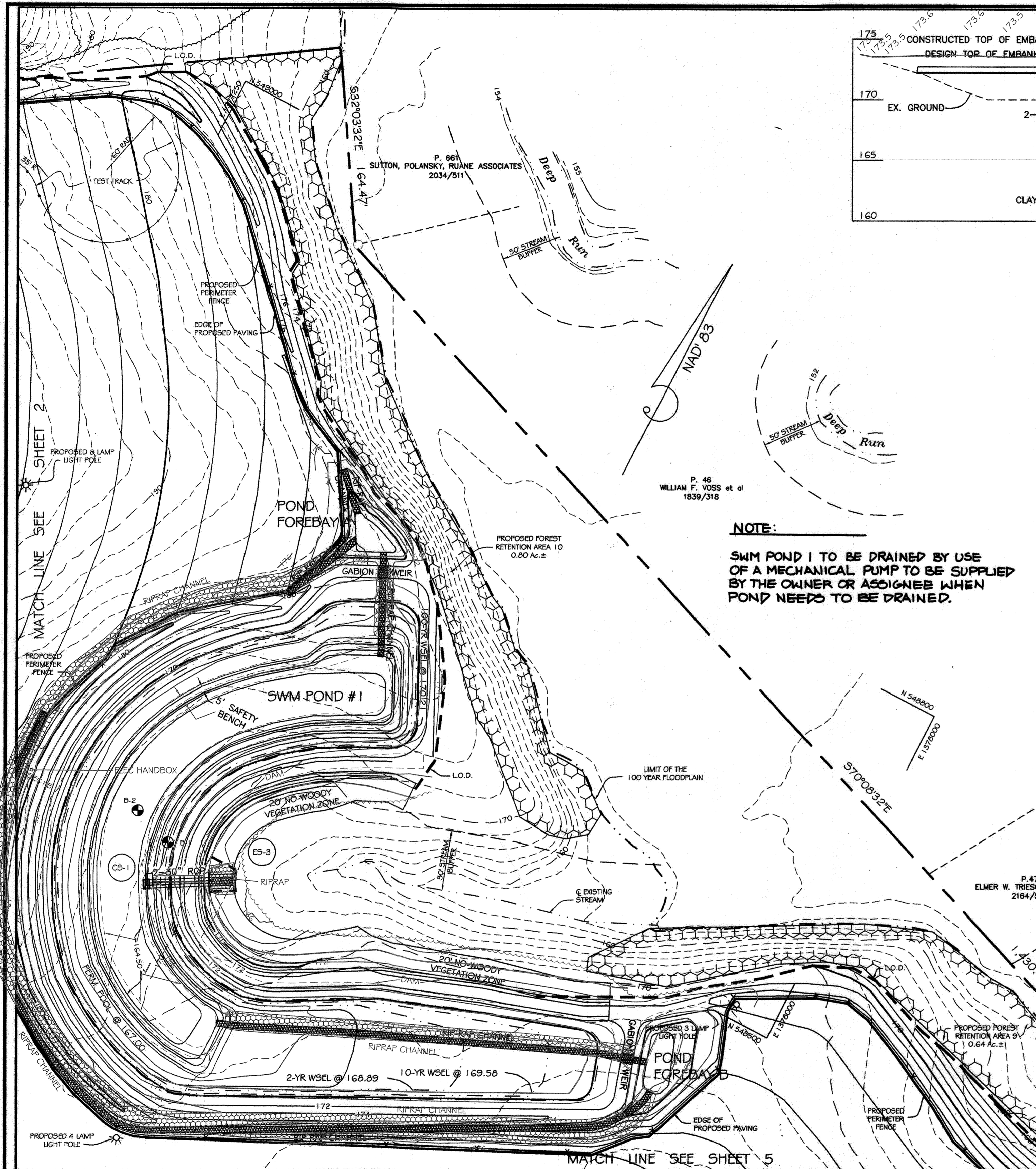
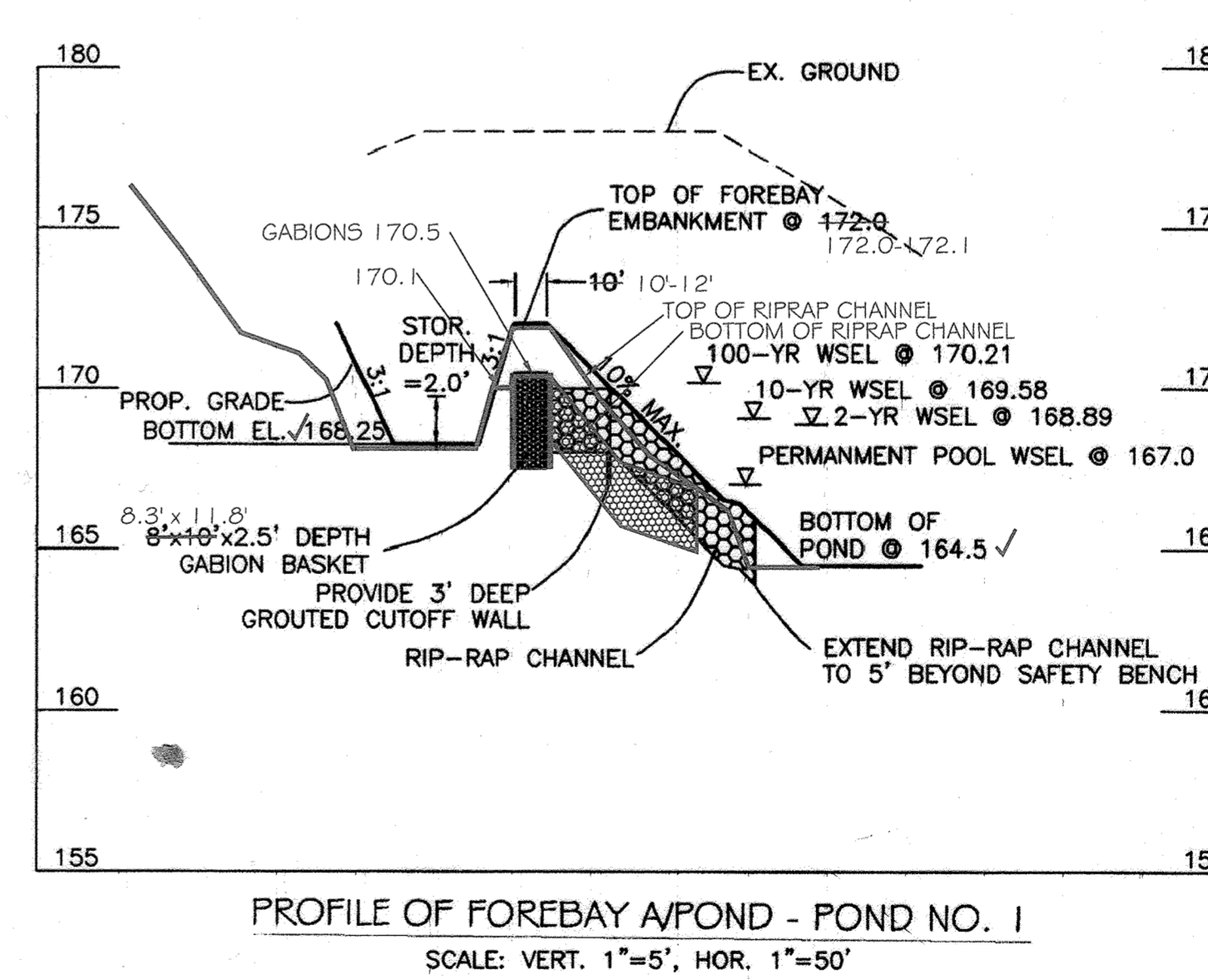
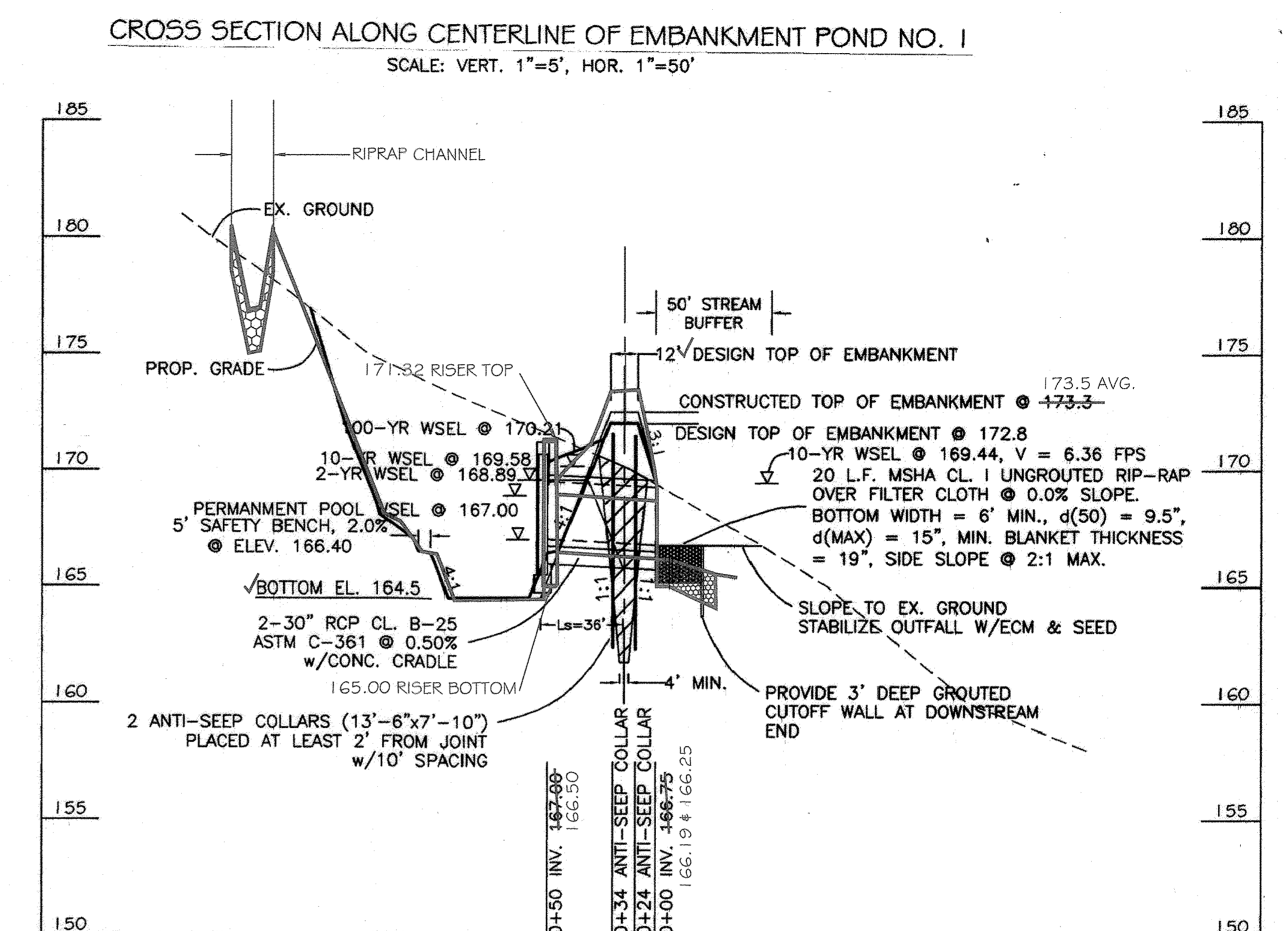
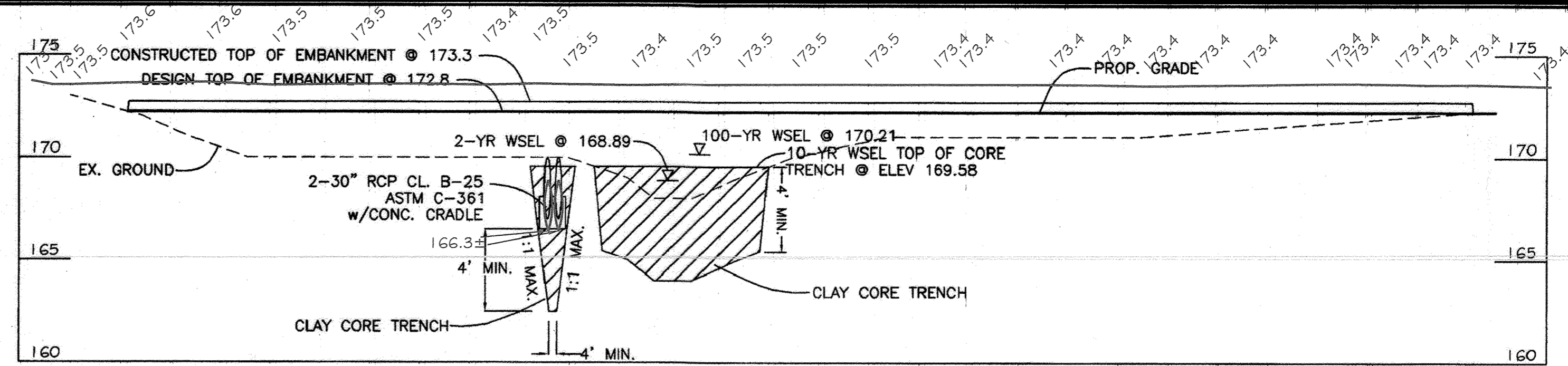
BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

SITE DEVELOPMENT PLAN SHEET
 AS-BUILTS
 STORMWATER MANAGEMENT PONDS #1 and #4 ONLY

SDP-00-63

OWNER / DEVELOPER

AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L 4786 P. 625



NOTE:
 SWM POND 1 TO BE DRAINED BY USE OF A MECHANICAL PUMP TO BE SUPPLIED BY THE OWNER OR ASSIGNEE WHEN POND NEEDS TO BE DRAINED.

DEVELOPER'S CERTIFICATE

"We certify that all development and construction will be done according 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. 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 inspection by the Howard Soil Conservation District."
[Signature] 7/8/00
 G. DAMON THAYER

ENGINEER'S CERTIFICATE

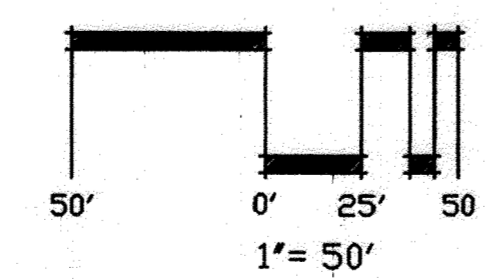
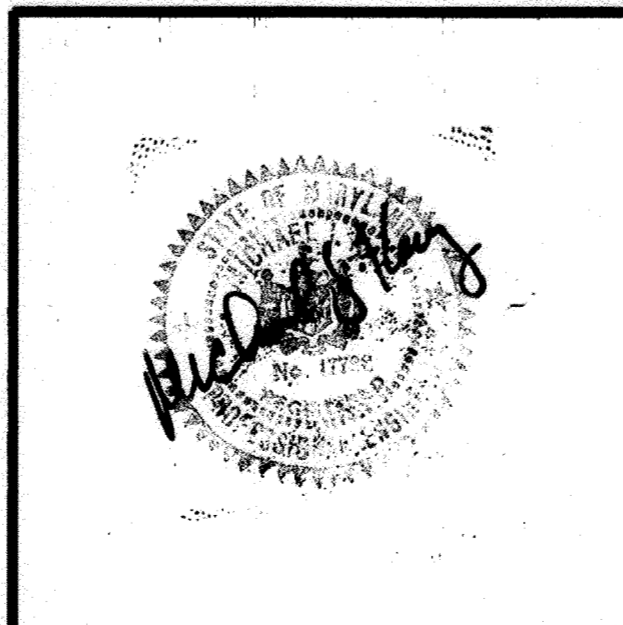
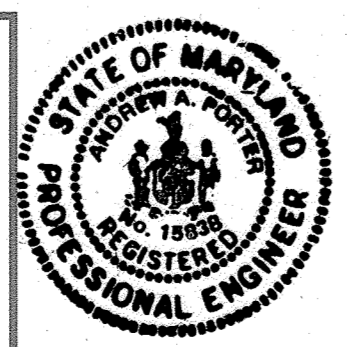
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. The plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer 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] 7/8/00
 MICHAEL J. KAY

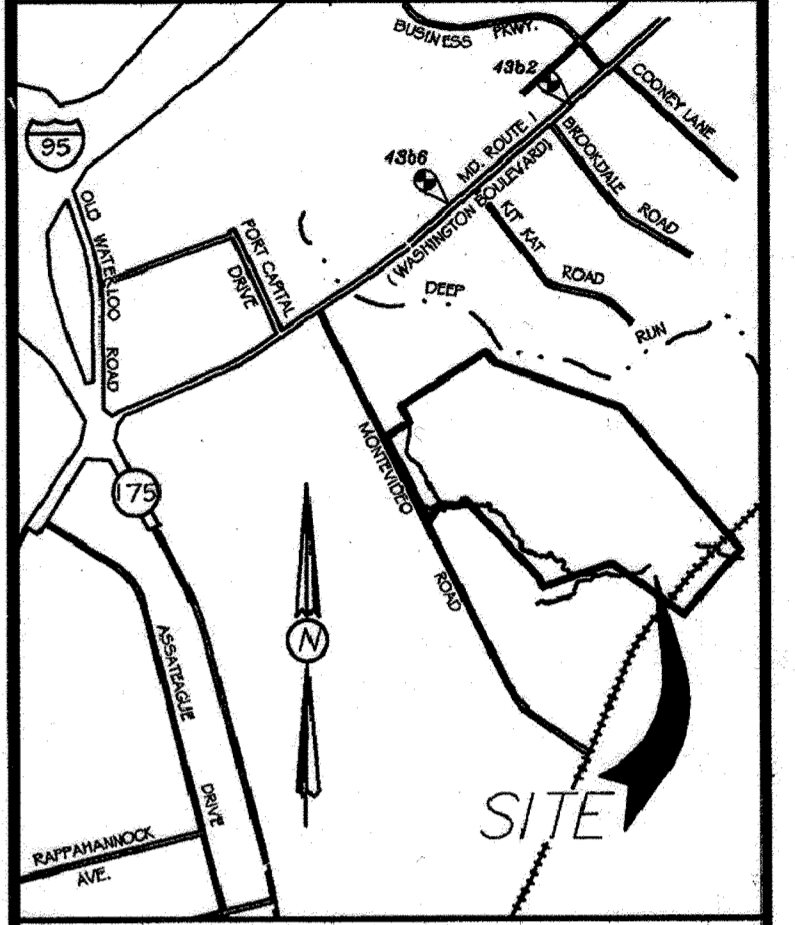
ADDRESS CHART					
LOT / PARCEL #	STREET ADDRESS				
P. 371	7321 MONTEVIDEO ROAD				
PROJECT NAME: BALTIMORE WASHINGTON AUTO EXCHANGE					
SECTION / AREA	LOT / PARCEL				
4798/685	371				
DEED NO. DRL / F	BLOCK NO.	ZONE	TAX ZONE	ELEC. DIST.	CENSUS TR.
4798/685	10	M-2	43	FIRST	6012
WATER CODE: 8-01		SEWER CODE: 2221000			

AS-BUILT SURVEY DATES:
 2/3/14 TO 2/14/14, 8/15/14

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY SIGNING THESE PLANS, THAT THE FACILITIES SHOWN ON THESE PLANS WERE CONSTRUCTED AS SHOWN AND MEET THE CURRENT APPROVED PLAN SPECIFICATIONS.
[Signature]
 G. SCOTT SHANABERGER, PE
 SHANABERGER & LANE
 PROFESSIONAL LAND SURVEYORS #10849
 LICENSE EXPIRATION DATE 4/2/2016

AS-BUILT CERTIFICATION
 I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan and meet the Approved Plans and Specifications and is in accordance with the AS-Built Report for Ponds #1 and #4 prepared by CIVIL DESIGN SERVICES, LC, dated September 17, 2014.
[Signature] 11/7/2014
 Andrew A. Porter, PE #15,838 (license expiration date 12/17/15)





VICINITY MAP
 SCALE: 1"=2000'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development *7/16/10*
 Chief, Development Engineering Division *7/16/10*
 Director, Department of Planning and Zoning *7/16/10*
 THIS SHEET IS FOR AS-BUILTS OF STORMWATER MANAGEMENT PONDS #1 and #4 ONLY.
 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.
 U.S.D.A.-Natural Resources Conservation Service
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.

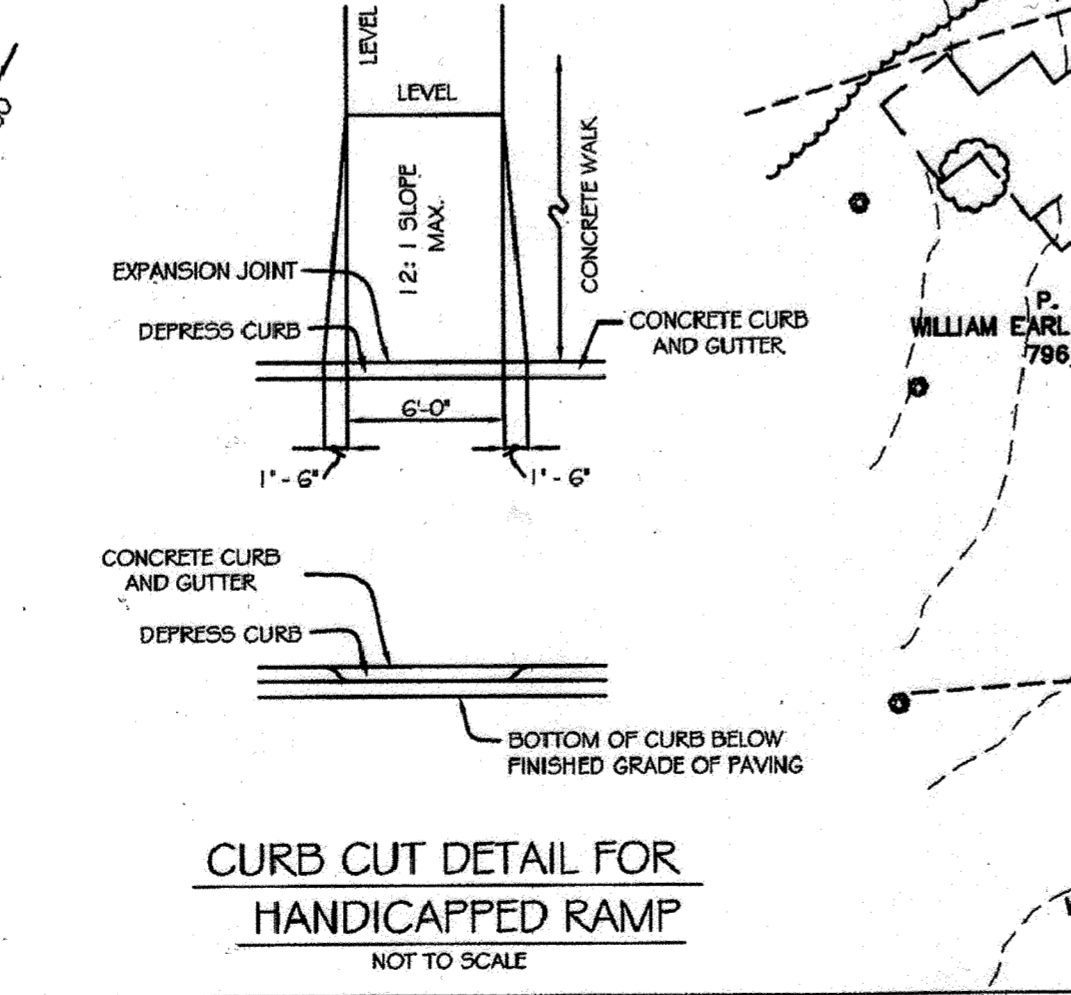
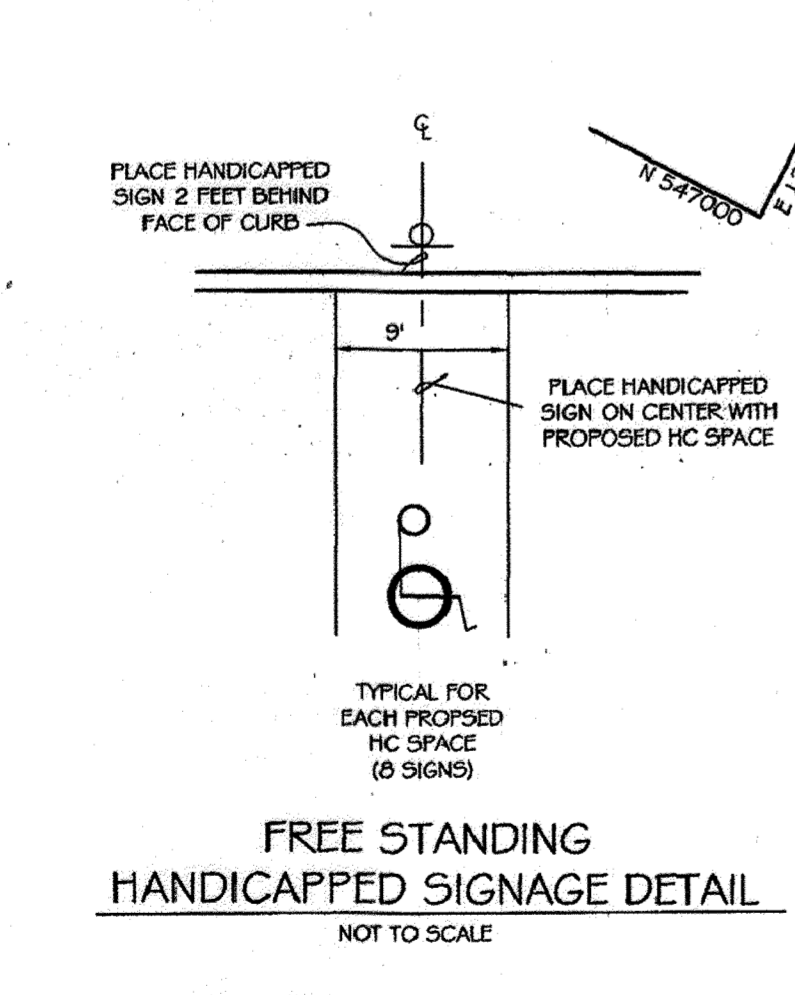
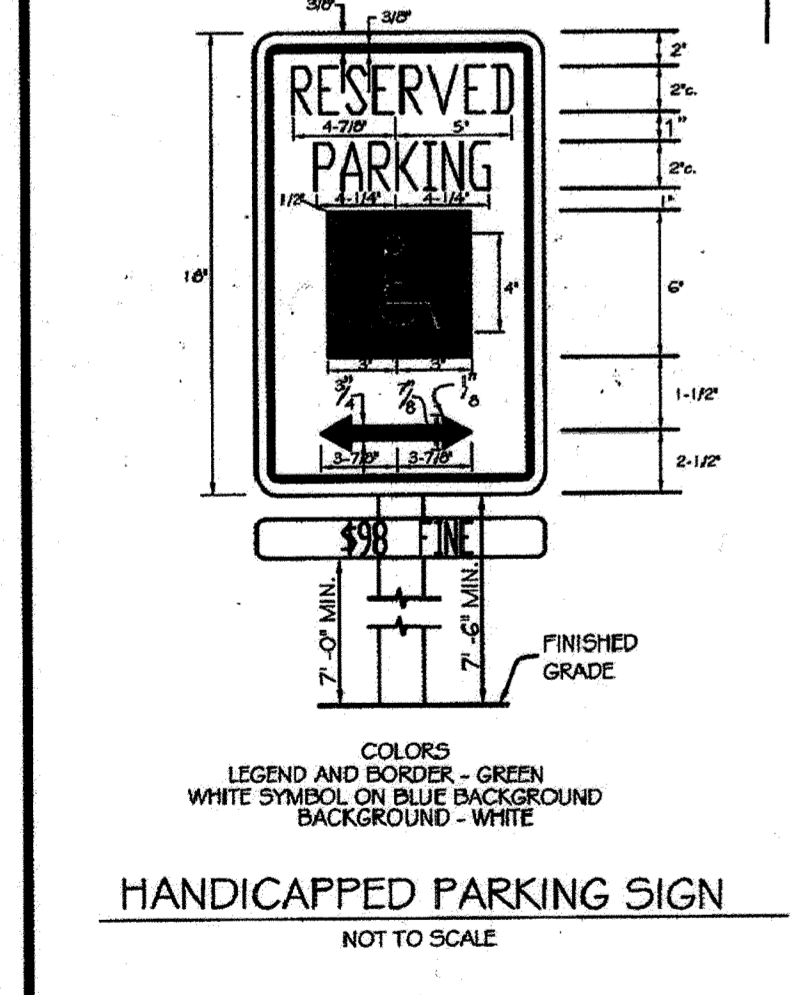
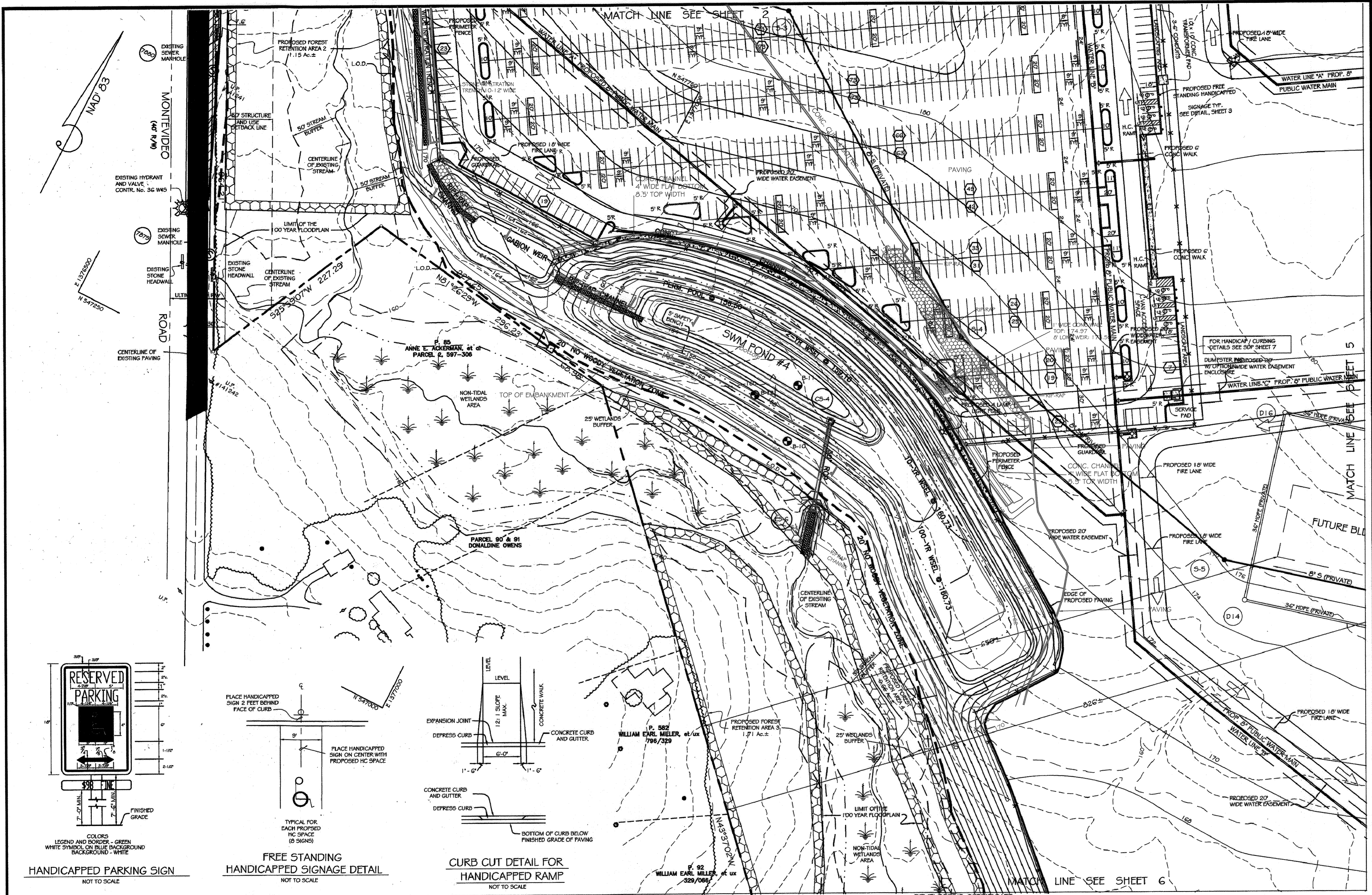
07/29/03 RED-LINE REVISION NO. 2
 03/24/03 RED-LINE REVISION NO. 1
 DATE REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

REVISED
SITE DEVELOPMENT PLAN SHEET
 AS-BUILTS
 STORMWATER MANAGEMENT PONDS #1 and #4 ONLY
 SDP-00-63

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPOLIS DRIVE
 NASHVILLE, TN 37211-3109
 L. 4798 P. 625

33B
SHEET 4 OF 33



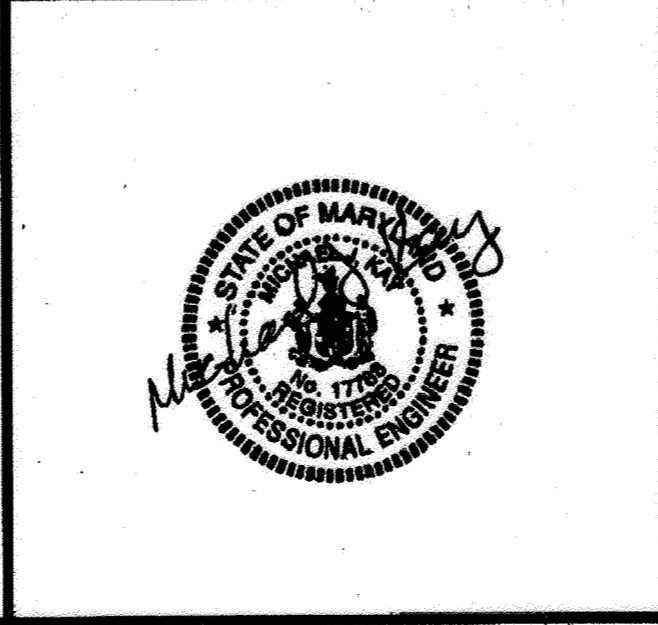
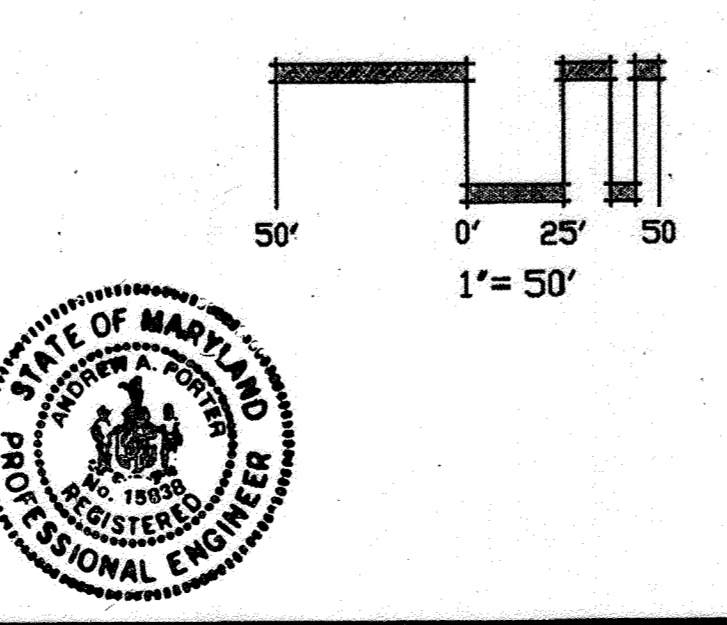
AS-BUILT SURVEY DATES:
 2/3/14 TO 2/14/14, 8/15/14

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN AND MEET THE CURRENT REGULATORY REQUIREMENTS AND SPECIFICATIONS.

G. SCOTT SHANBERGER, PE, 10849
 SHANBERGER & LANE, INC.
 PROFESSIONAL LAND SURVEYOR #10849
 LICENSE EXPIRATION DATE 4/2/2016

AS-BUILT CERTIFICATION
 I hereby certify, by my seal, that the facilities shown on this "AS-BUILT" plan and meet the Approved Plans and Specifications and is in accordance with the As-Built Report for Ponds #1 and #4 prepared by CIVIL DESIGN SERVICES, LC, dated September 17, 2014.

Andrew A. Porter 11/7/2014
 Andrew A. Porter, PE #15,838 (license expiration date 12/17/15)



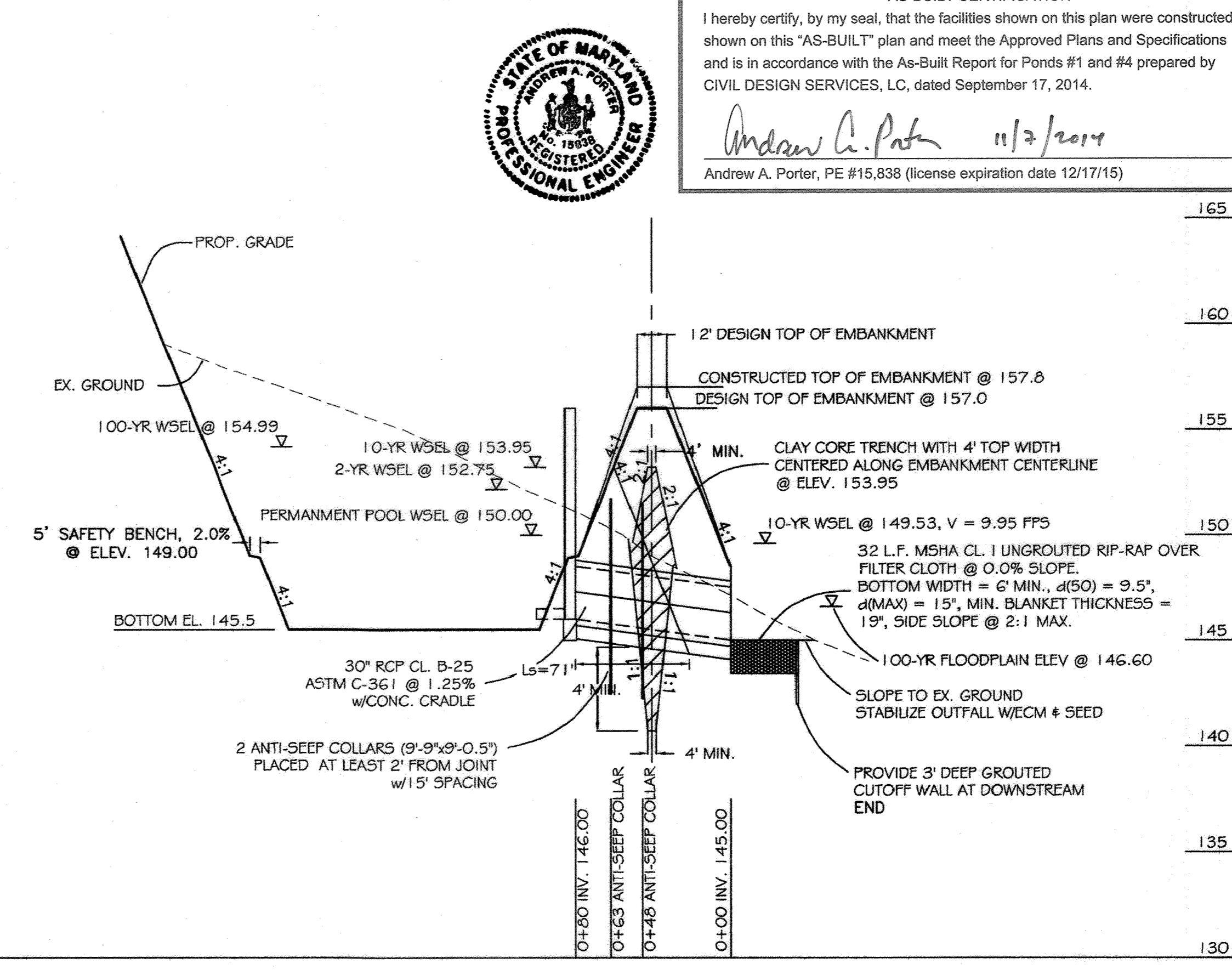
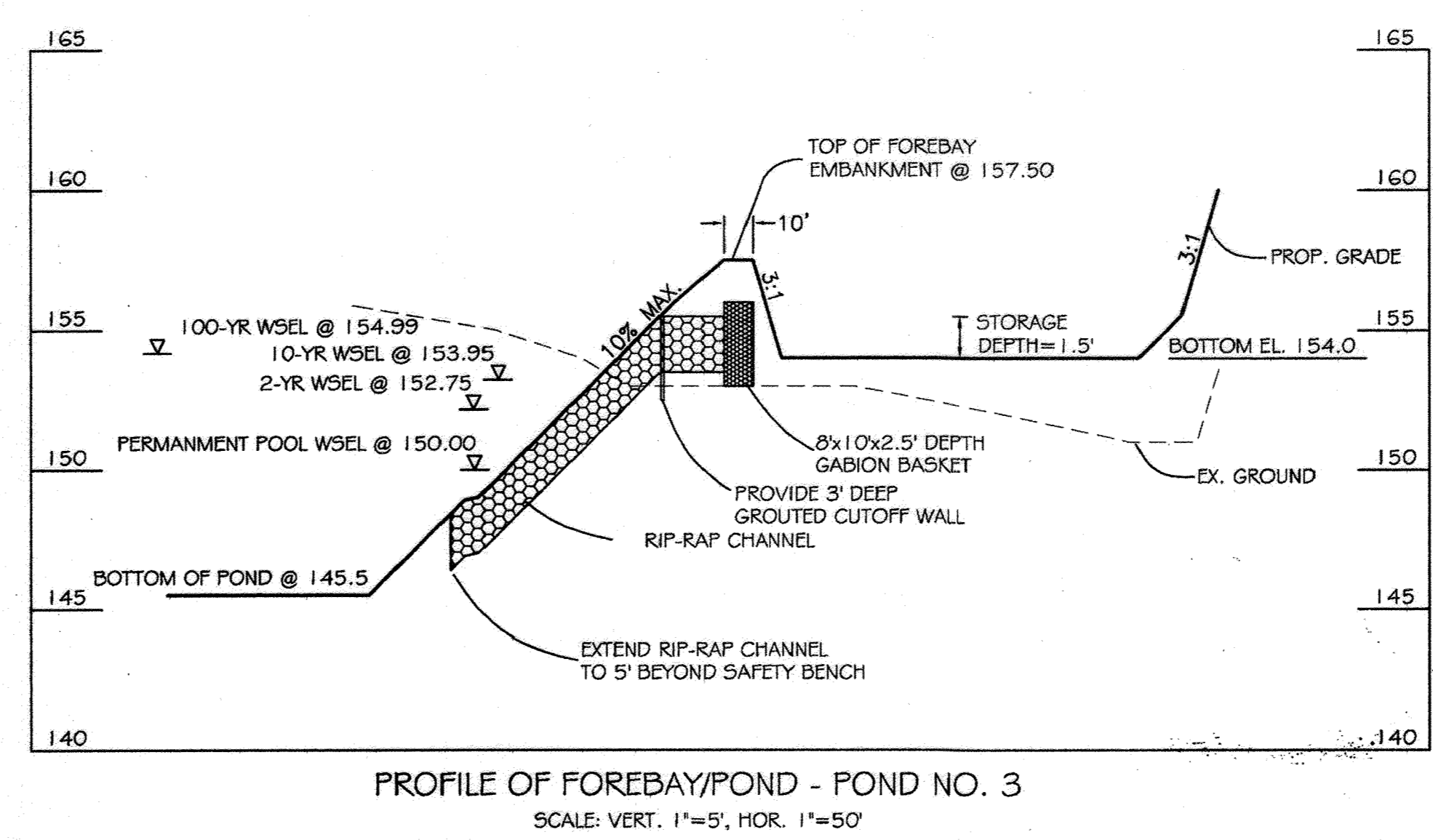
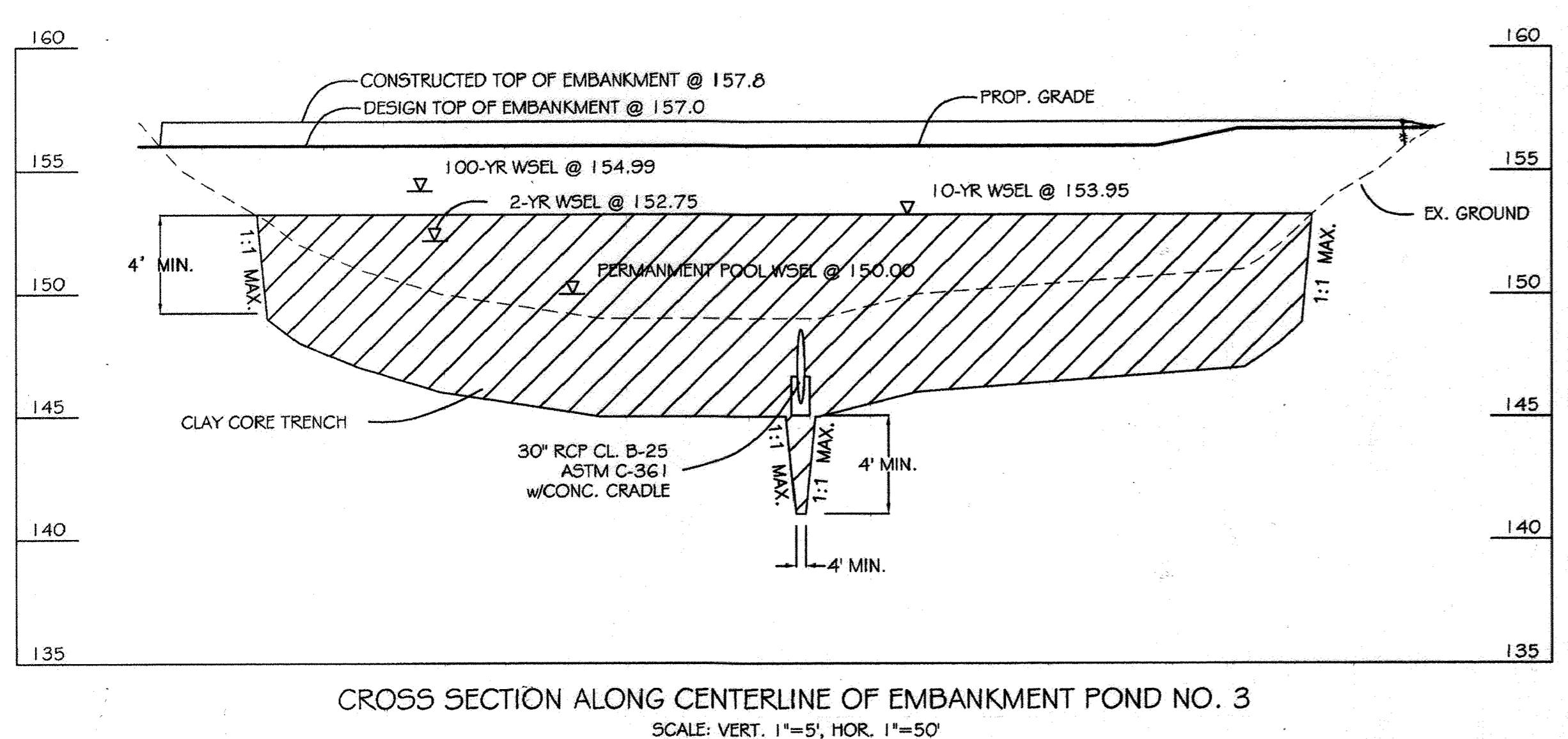
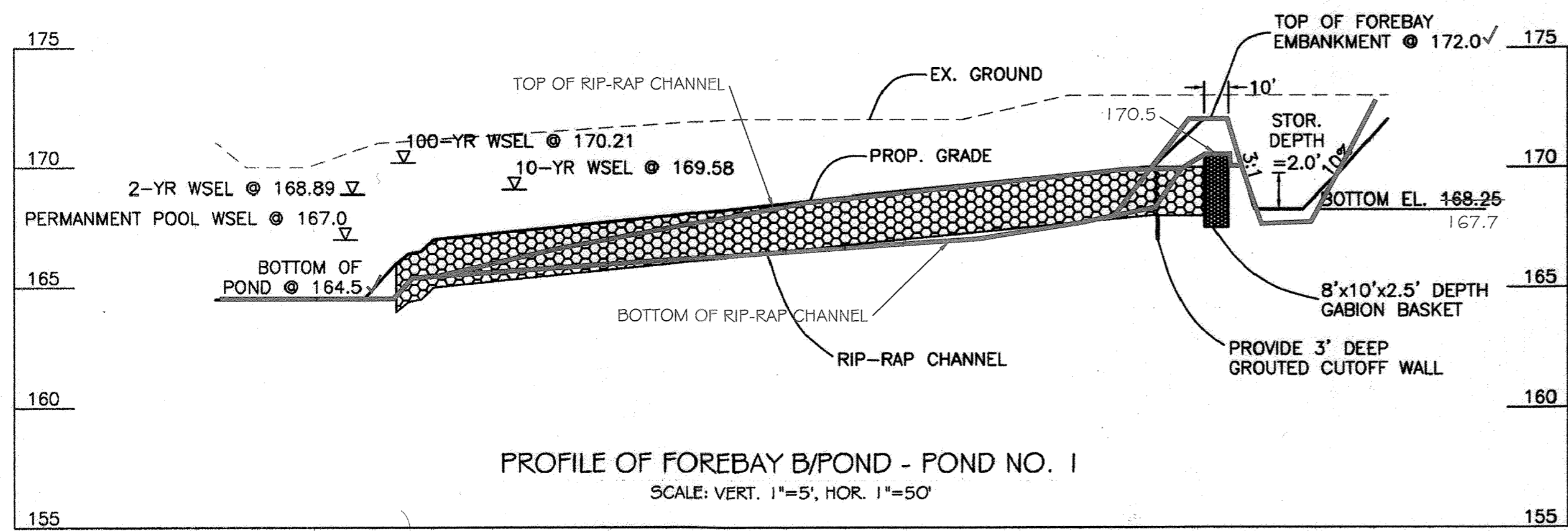
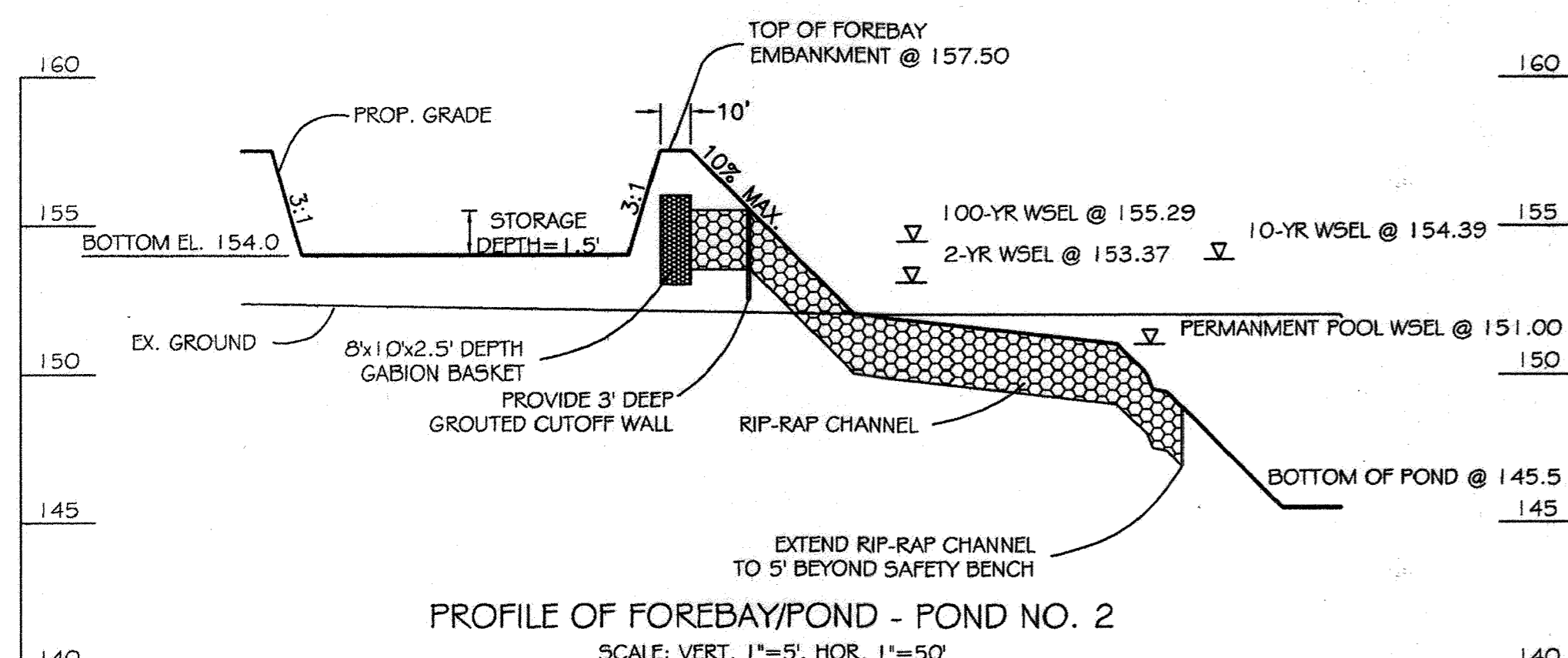
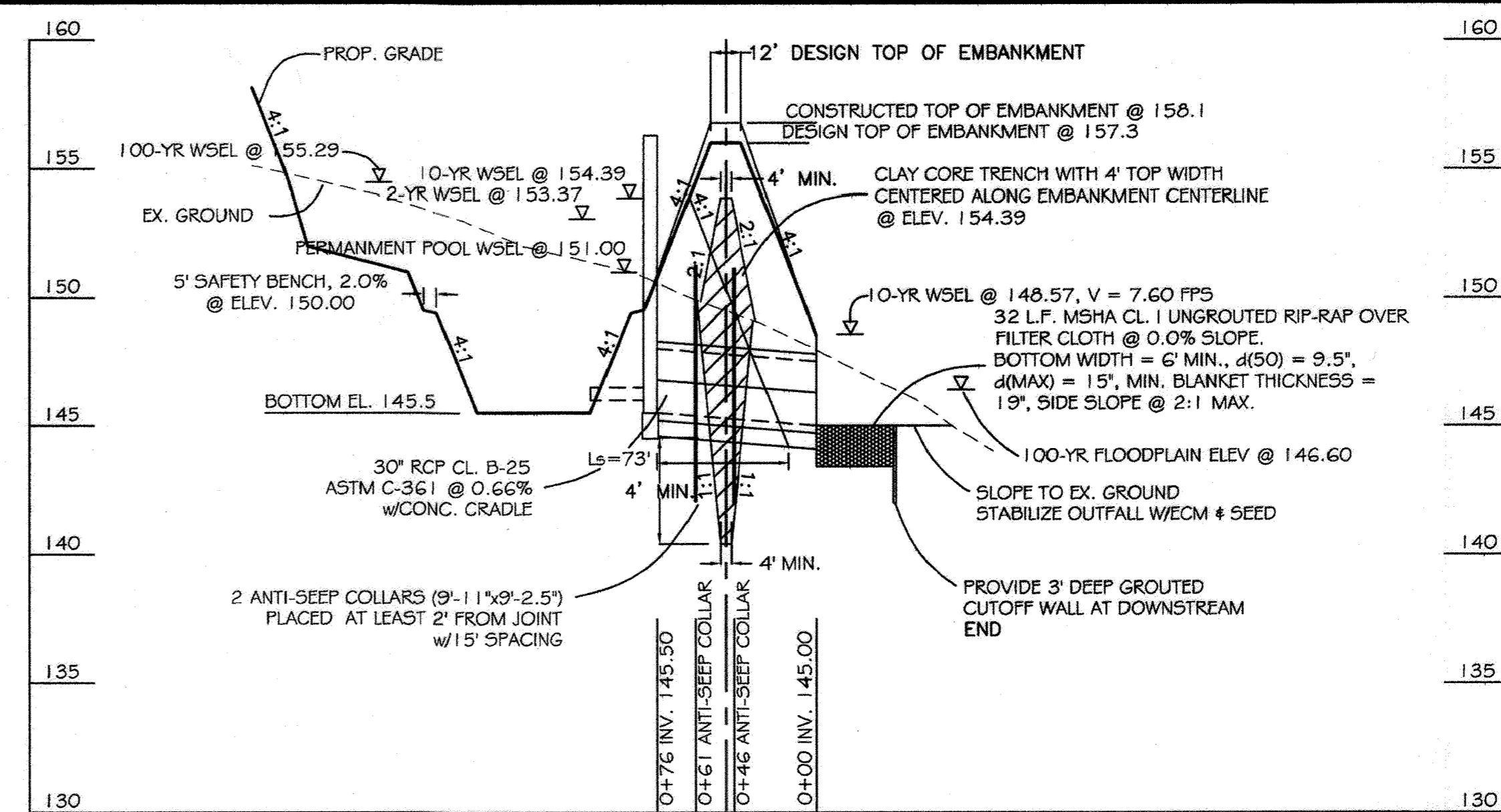
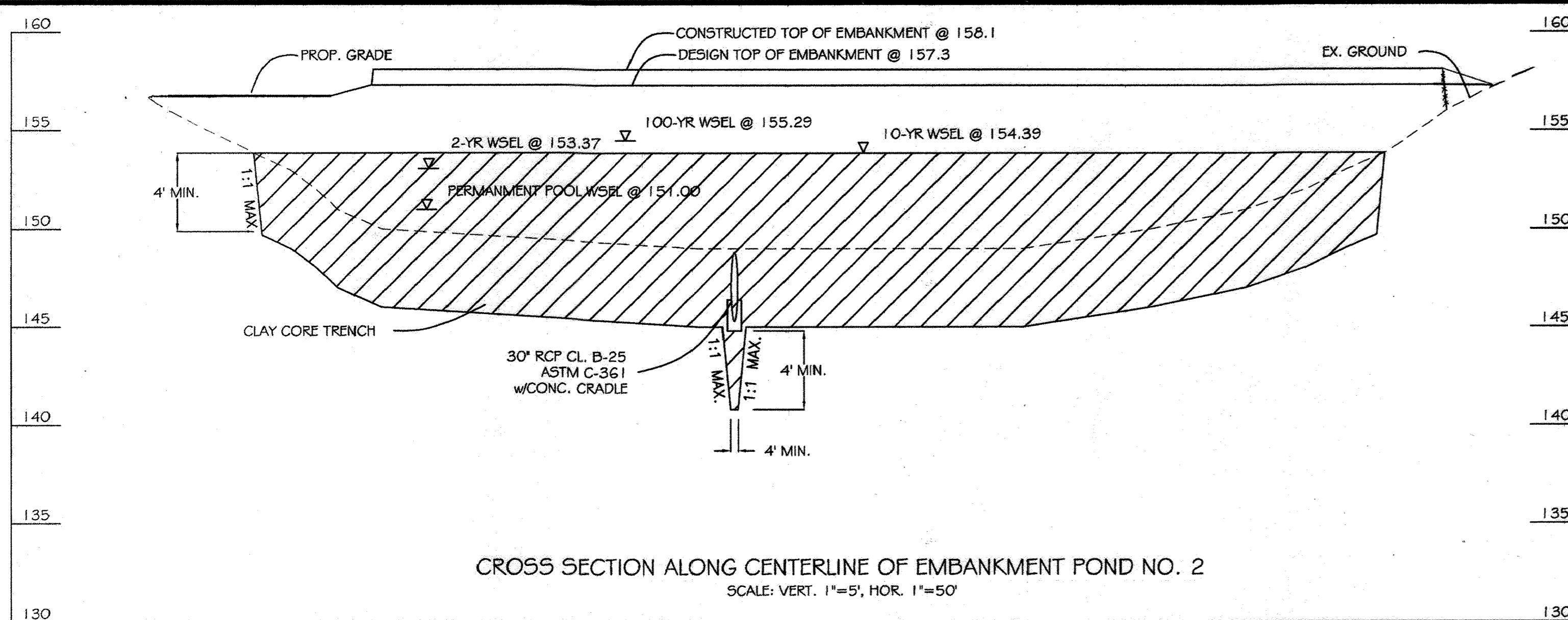
DEVELOPER'S CERTIFICATE
 "We certify that all development and construction will be done according to the plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. 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 inspection by the Howard Soil Conservation District."

G. Damon Thayer 8/16/13
 G. DAMON THAYER

ENGINEER'S CERTIFICATE
 "I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an 'as-built' plan of the pond within 30 days of completion."

Michael J. Kay 8/16/13
 MICHAEL J. KAY

ADDRESS CHART					
LOT / PARCEL #	STREET ADDRESS				
P. 371	7301 MONTEVIDEO ROAD				
PROJECT NAME: BALTIMORE WASHINGTON AUTO EXCHANGE					
SECTION / AREA		LOT / PARCEL			
921 / 739		371			
FLAT NO. DRL / F	BLOCK NO.	ZONE	TAX ZONE	ELEC. DIST.	CENSUS TR.
921 / 739	10	M-2	43	FIRST	6012
WATER CODE			SEWER CODE		
---			*****		



AS-BUILT CERTIFICATION
 I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan and meet the Approved Plans and Specifications and is in accordance with the As-Built Report for Ponds #1 and #4 prepared by CIVIL DESIGN SERVICES, LC, dated September 17, 2014.
 Andrew A. Porter, PE #15,838 (license expiration date 12/17/15)
 11/2/2014



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signatures and Dates]
 THIS SHEET IS FOR AS-BUILTS OF STORMWATER MANAGEMENT PONDS #1 and #4 ONLY.
 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.
 [Signatures and Dates]

DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 43 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: 1"=200' DATE: APRIL 17, 2000

STORMWATER MANAGEMENT DETAILS
 AS-BUILTS
 STORMWATER MANAGEMENT PONDS #1 and #4 ONLY

SDP-00-63

OWNER / DEVELOPER
 AA PROPERTY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L 4798 P. 605

33C
 SHEET 10 OF 33

GEOTECHNICAL RECOMMENDATIONS

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations pertain to the construction of stormwater management ponds (#1 through #4) within the proposed Baltimore-Washington Auto Exchange, located in Howard County, Maryland. The location of the proposed stormwater management ponds are shown in Figure 2. According to the proposed stormwater management pond drawings, pond constructions will be a combination of cut and fill operations with estimated 5 and 8 feet of cut and fill, respectively. Field borings and laboratory testing indicate that most of the pond embankment will be constructed over CL and/or SM materials.

Proposed Stormwater Management Pond #1

According to available field data, the bottom of the proposed SWM pond #1 at 156 msf will most likely be within the CL (clay loam) soil strata. The encountered CL (clay loam) material is considered impervious with anticipated infiltration rate of 0.09 in./hr. No groundwater table was recorded in any of the tested bore holes.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of less than 0.52 inches per hour are considered impervious and any ponds within this soil criteria should be considered and designed as a wet pond.

Proposed Stormwater Management Pond #2

According to available field data, the bottom of the proposed SWM pond #2 at elevation of 146 msf. will most likely be within the SM (sand) soil strata. The encountered SM (sand) material is considered very permeable with anticipated infiltration rate of 8.27 in./hr. Groundwater table was recorded in all test bore holes within SWM pond #2.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of greater than 0.52 inches per hour are considered permeable and any ponds within this soil criteria should be considered and designed as a dry pond. However, the presence of groundwater table at 7 feet at the completion of the drilling and 4 feet at 24-hour water table reading, dictate that the proposed SWM pond #2 should be considered and designed as a wet pond.

Proposed Stormwater Management Pond #3

According to available field data, the bottom of the proposed SWM pond #3 at 146.0 msf. will most likely be within the CL (clay loam) soil strata. The encountered CL (clay loam) material is considered impervious with anticipated infiltration rate of 0.09 in./hr. No groundwater table was recorded in any of the tested bore holes.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of less than 0.52 inches per hour are considered impervious and any ponds within this soil criteria should be considered and designed as a wet pond.

Proposed Stormwater Management Pond #4

According to available field data, the bottom of the proposed SWM pond #4 at elevation of 154.5 msf. will most likely be within the SM (sand) soil strata. The encountered SM (sand) material is considered very permeable with anticipated infiltration rate of 8.27 in./hr. No groundwater table was recorded in any of the test bore holes within SWM pond #4.

Based upon the "Standards and Specifications For Infiltration Practice", Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division, soils with an infiltration rate of greater than 0.52 inches per hour are considered permeable and any ponds within this soil criteria should be considered and designed as a dry pond. Based on available field and laboratory test data, it is our professional opinion that the proposed SWM pond #4 should be considered and designed as a dry pond.

Core-Trench

The in-situ soil as classified as sandy lean clay and lean clay (CL) within the footprint of the investigated area could be utilized as core trench material. There should be sufficient amount of core trench material available on the site. Core-trench materials should be classified as GC, SC, CH and/or CL in accordance with Unified Soil Classification System. Other soils with a liquid limit of over 30% and plasticity index of more 10% and 50% or more passing through sieve #200 could be used as a core trench material, as long as the placement of core materials is supervised by the geotechnical engineer of record or his/her representative.

#200 could be used as a core trench material, as long as the placement of core materials is supervised by the geotechnical engineer of record or his/her representative.

SEE PREPARATION

The following recommendations were made for the satisfactory performance of earthwork, in order to obtain the planned grade within the proposed construction of the stormwater management ponds. Based on our past experience, if construction of this pond commences between December 1 to April 1, there is a possibility that heavy construction equipment might soil the stone and wet materials. We would like to suggest, the SWM ponds be constructed during dry season.

Areas designated for embankment and structural work shall be cleared, graded and stripped of topsoil. All trees, vegetation, roots and other obstructions material shall be removed. Channel banks and steep breaks shall be sloped to no steeper than 1:1.

The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubble, ice or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Other materials as investigated and approved by geotechnical engineer of record may be used for embankment of the embankment.

Areas on which fill is to be placed shall be marked prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick lifts (before compaction) layers which are to be compacted over the maximum length of 60 ft. The most permeable borrow material shall be placed in the downstream portions of the embankment. The proposed gateway must be installed consistently with fill placement and not encroach into the embankment.

page 7



2868 CONSTELLATION WAY
FINKSBURG, MD 21048-2068
PHONE/FAX: (410) 840-8797

THIS SHEET IS FOR AS-BUILTS OF STORMWATER MANAGEMENT PONDS #1 AND #4 ONLY.

APPROVED:	DEPARTMENT OF PLANNING AND ZONING	DATE
<i>Richard Blood</i>	Chief, Division of Land Development	11/2/10
<i>Michael D'Amico</i>	Chief, Development Engineering Division	10/11/10
<i>Joseph S. Smith</i>	Director, Department of Planning and Zoning	11/2/10

APPROVED:	HOWARD SOIL CONSERVATION DISTRICT	DATE
<i>John Sim</i>	U.S.D.A. Natural Resources Conservation Service	11/16/10

DATE	REVISIONS

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICLE AUCTION FACILITY AND STORAGE LOTS
TAX MAP No. 43 PARCEL: 371
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1"=200' DATE: JANUARY 26, 2000

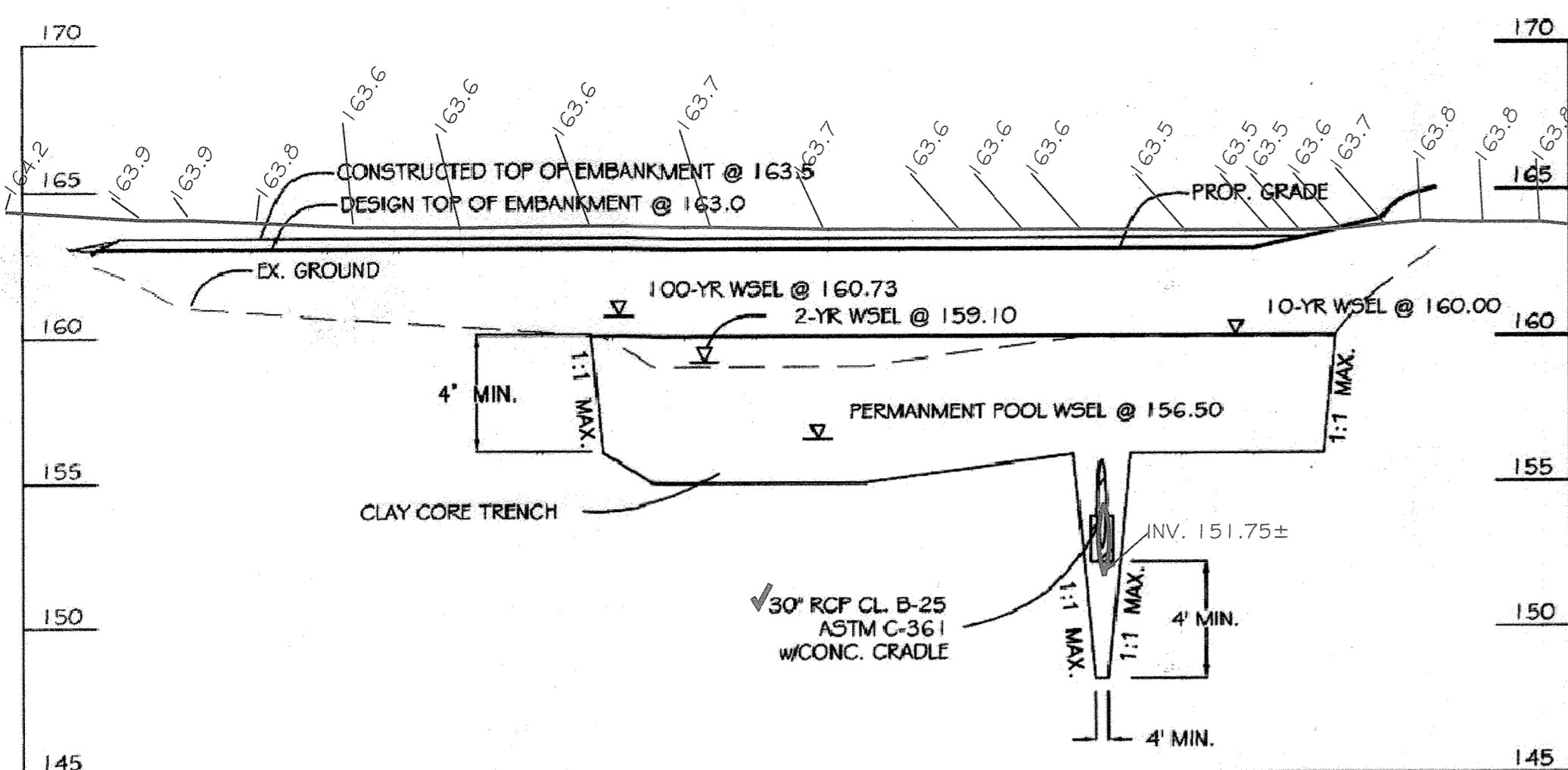
STORMWATER MANAGEMENT DETAILS
AS-BUILTS
STORMWATER MANAGEMENT PONDS #1 AND #4 ONLY

SDP-00-63

OWNER / DEVELOPER
AA PROPERTY HOLDINGS
435 METROPOLIS DRIVE
NASHVILLE, TN 37211-3109
L. 4798 P. 685

33D
SHEET M OF 33

SDP-00-63



CROSS SECTION ALONG CENTERLINE OF EMBANKMENT POND NO. 4
SCALE: VERT. 1"=5', HOR. 1"=50'

GENERAL NOTES

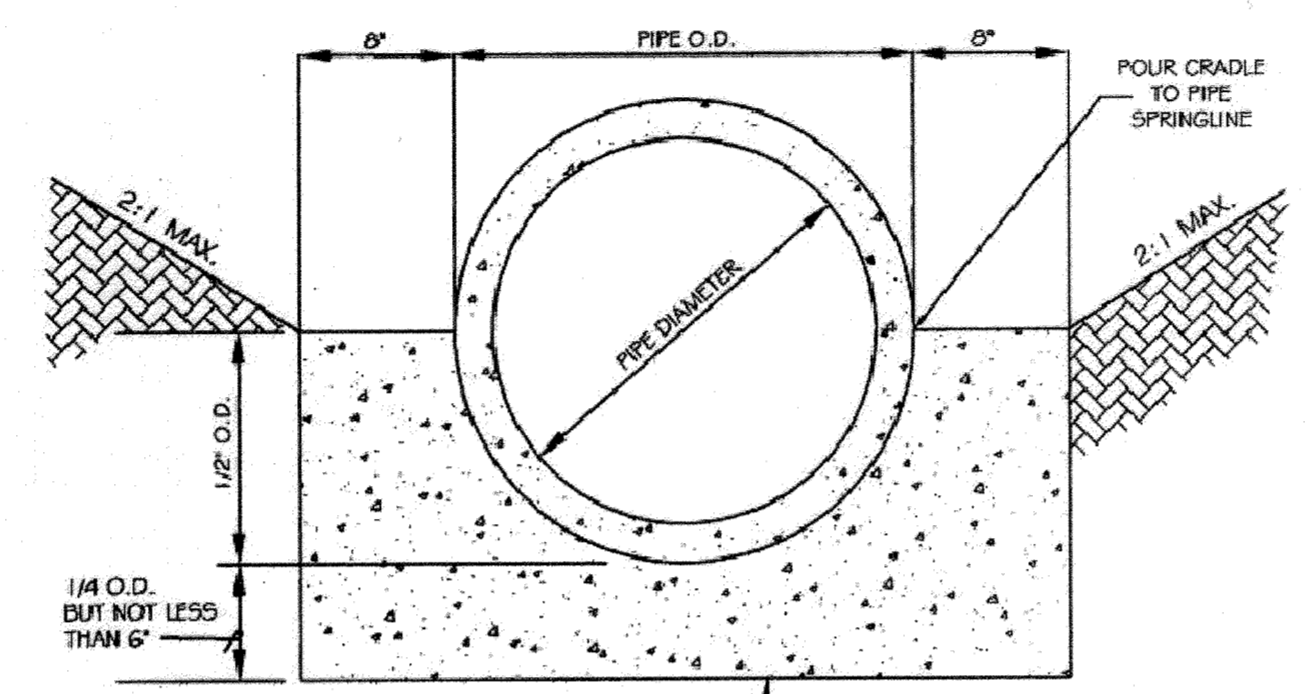
1. CONCRETE STRENGTH (f'c) = 4000 PSI @ 28 DAYS.
2. ALL REINFORCING STEEL TO BE ASTM A615 GR. 60.
3. ALL LAP REINFORCING TO BE 32 TIMES BAR DIAMETER (MINIMUM).
4. IF STRUCTURE IS PRECAST, SHOP DRAWINGS MUST BE APPROVED BY AN ENGINEER BEFORE CONSTRUCTION.
5. ALL CONCRETE EXPOSED EDGES MUST HAVE 3/4" x 3/4" CHAMFER OR AS DIRECTED.

AS-BUILT CERTIFICATION

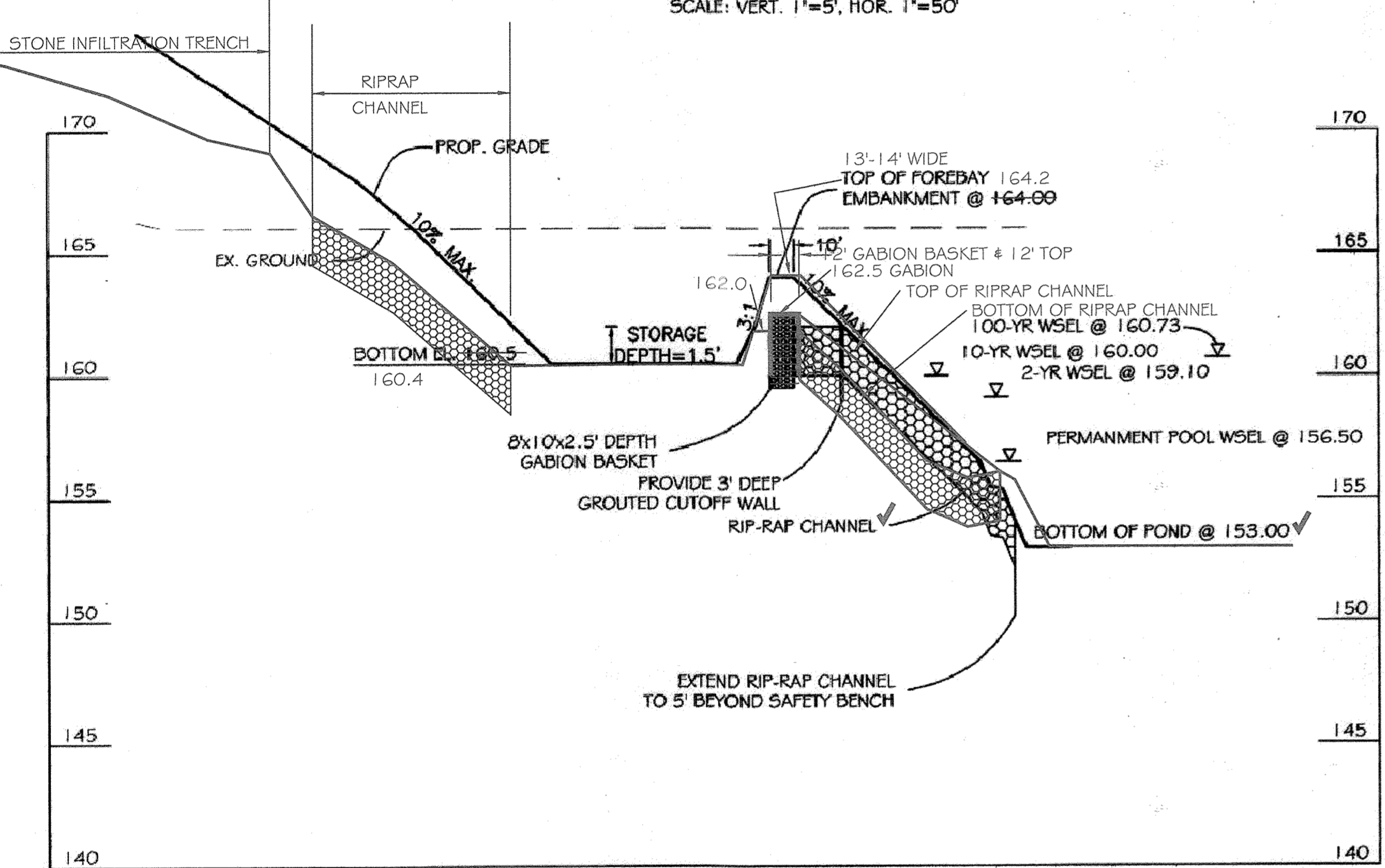
I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan and meet the Approved Plans and Specifications and is in accordance with the As-Built Report for Ponds #1 and #4 prepared by CIVIL DESIGN SERVICES, LC, dated September 17, 2014.



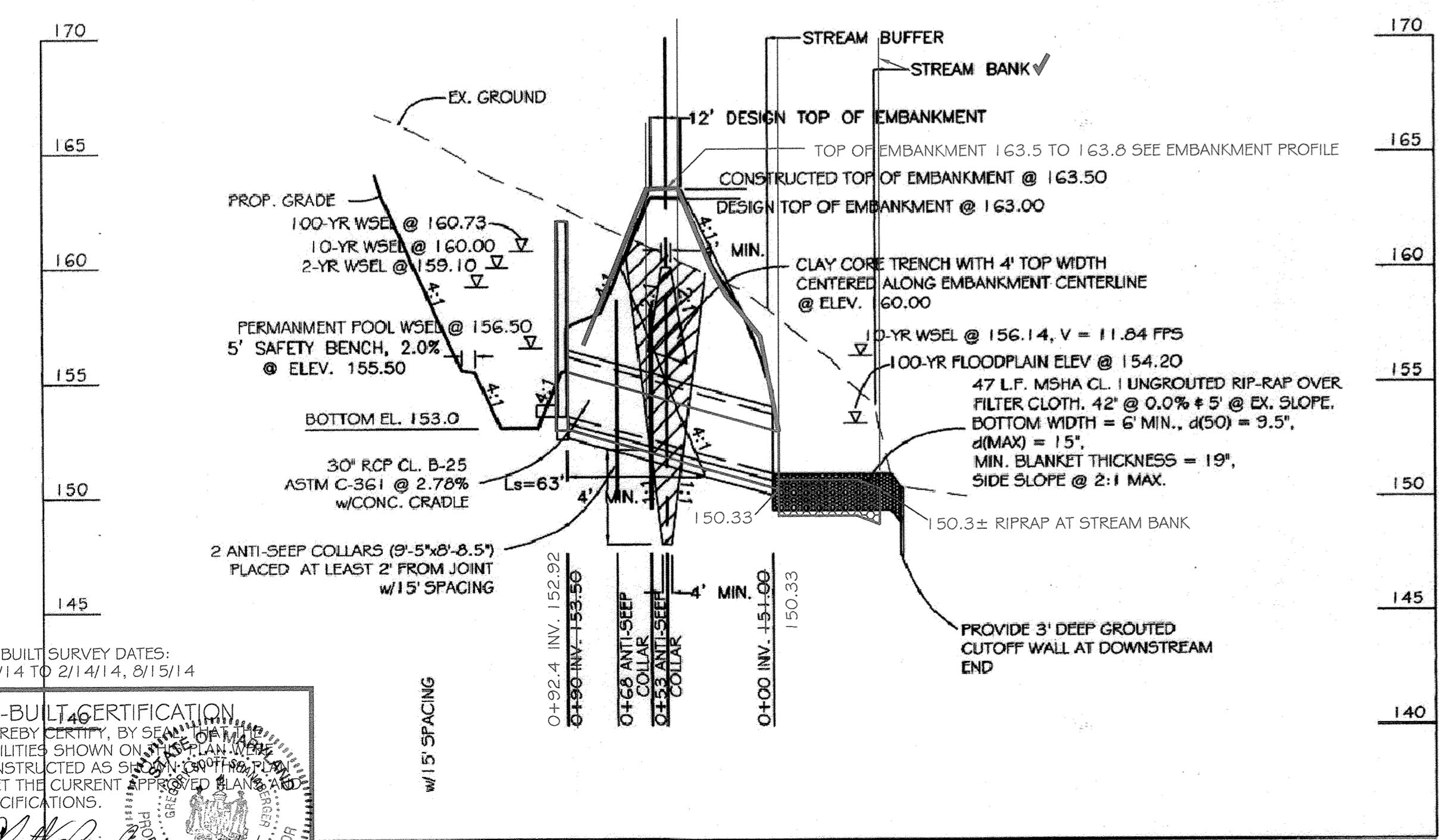
Andrew A. Porter 11/2/2014
Andrew A. Porter, PE #15,838 (license expiration date 12/17/15)



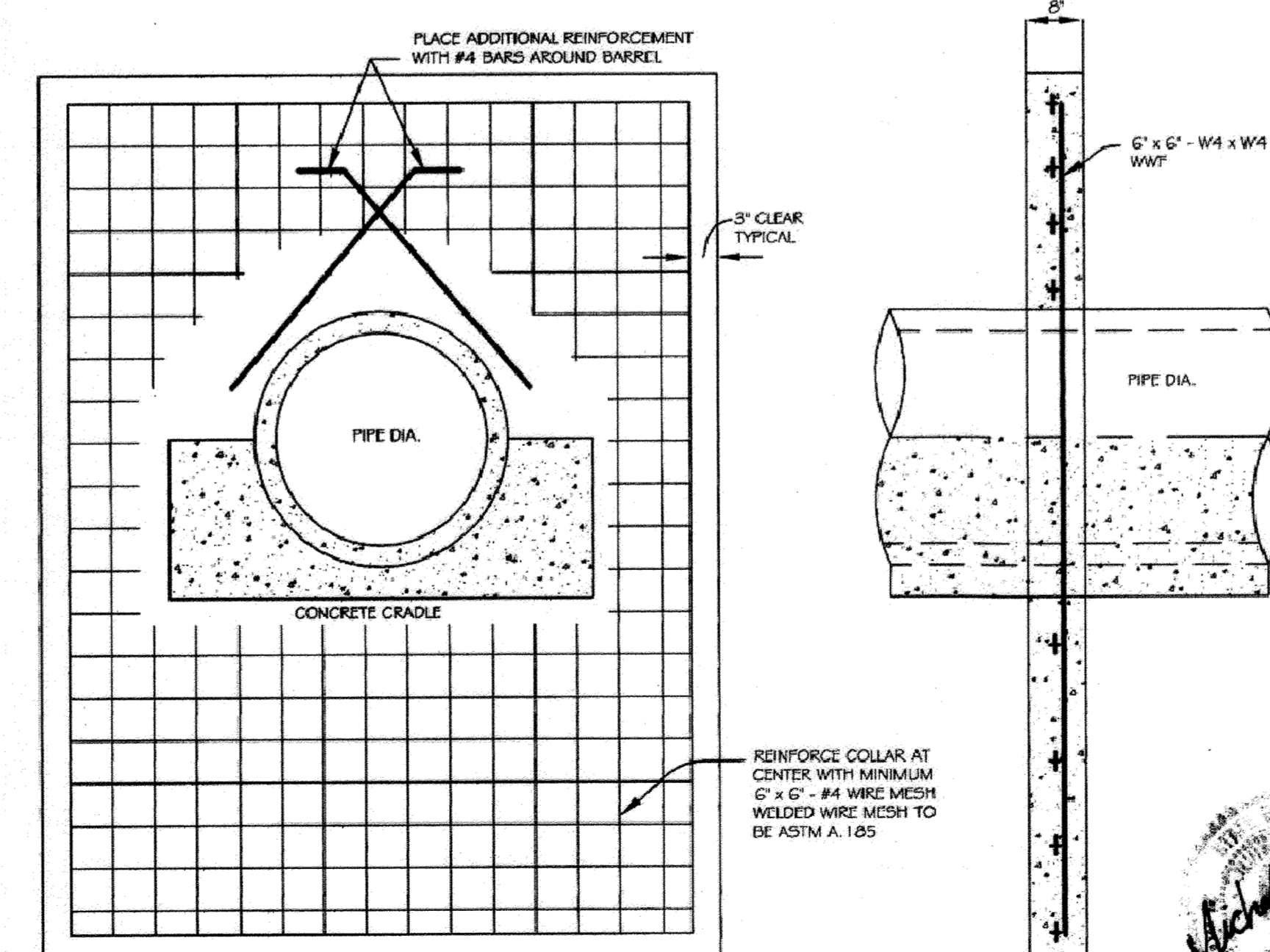
CONCRETE CRADLE DETAIL
NOT TO SCALE



PROFILE OF FOREBAY/POND - POND NO. 4
SCALE: VERT. 1"=5', HOR. 1"=50'



PROFILE OF PRINCIPAL/EMERGENCY SPILLWAY POND NO. 4
SCALE: VERT. 1"=5', HOR. 1"=50'

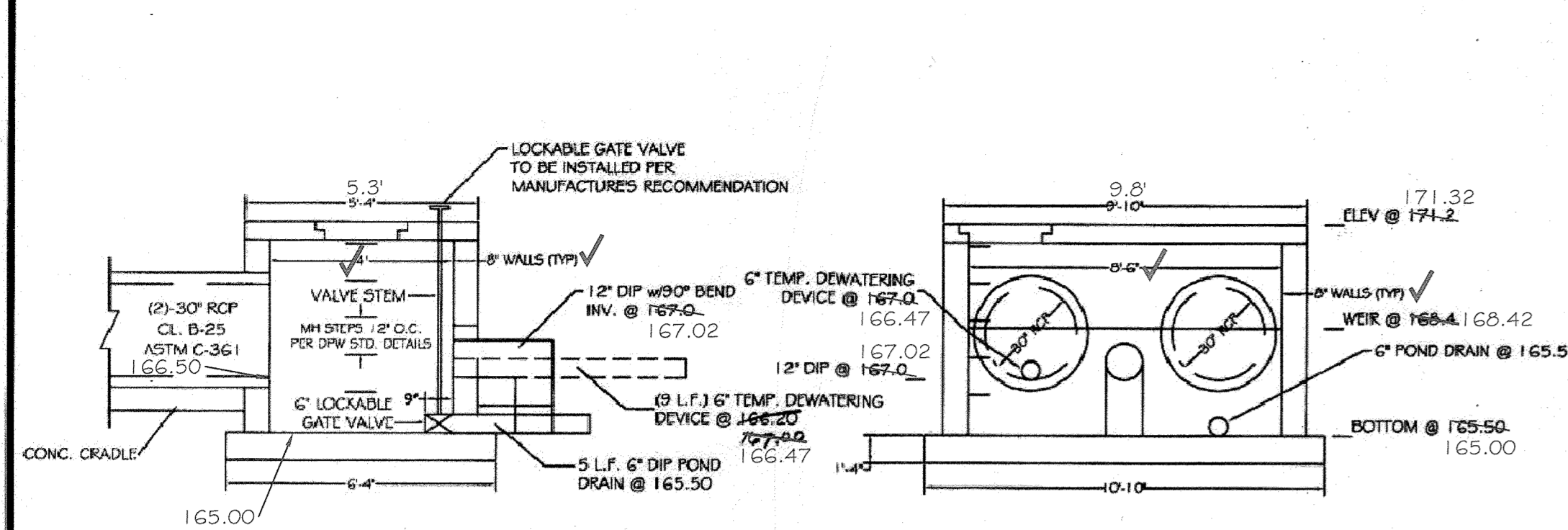


TYPICAL ANTI-SEEP COLLAR REINFORCEMENT DETAIL
NOT TO SCALE

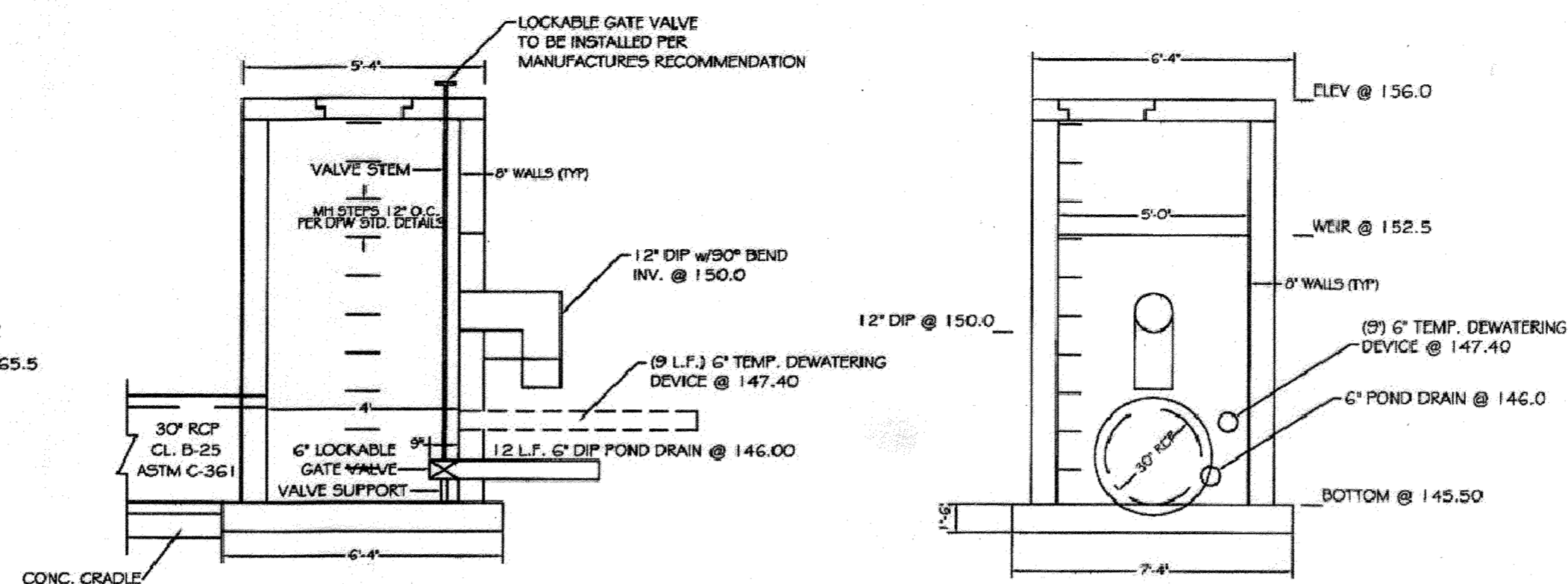
AS-BUILT SURVEY DATES:
2/3/14 TO 2/14/14, 8/15/14

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS PLAN AND MEET THE CURRENT APPROVED PLAN SPECIFICATIONS.

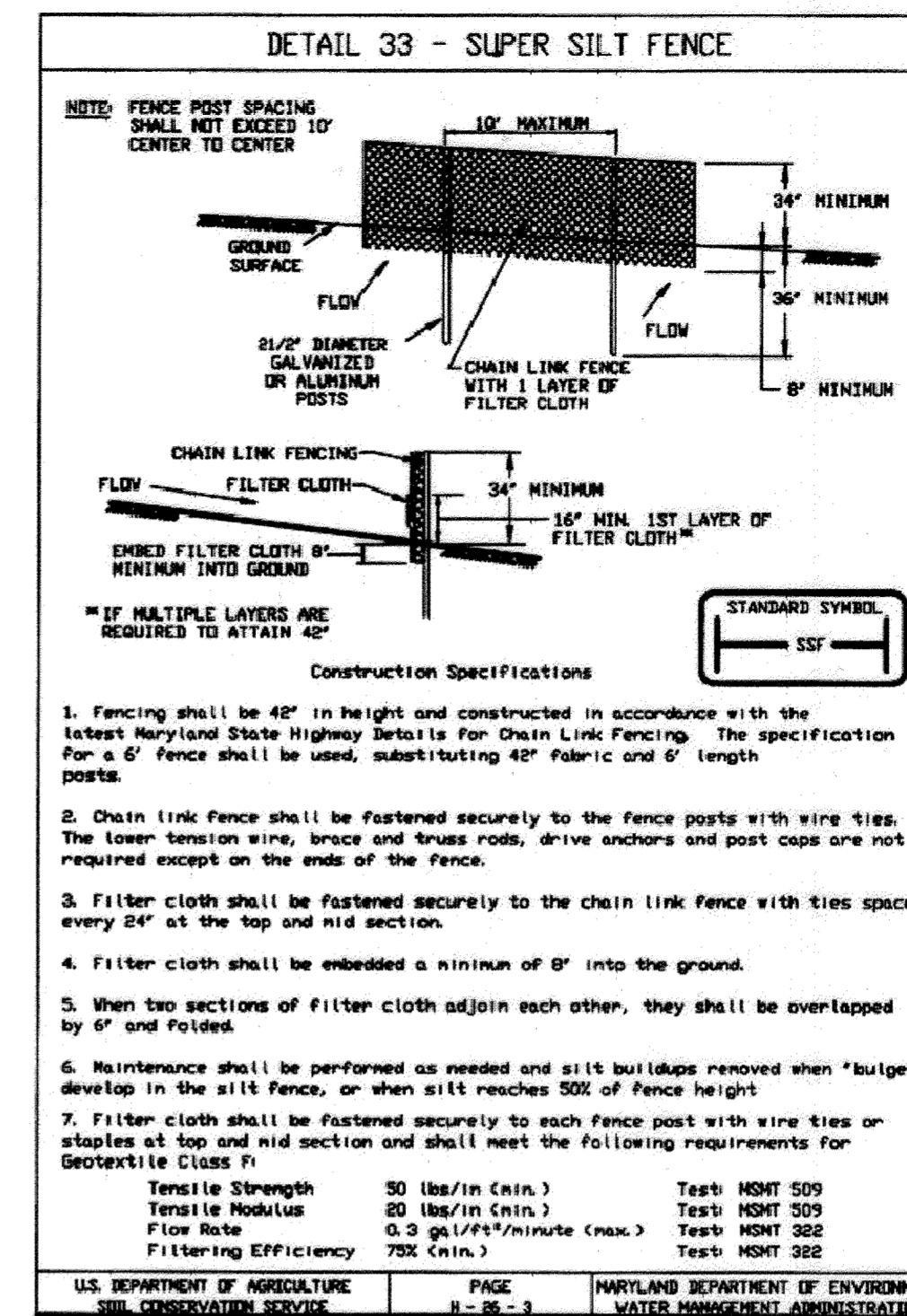
G. Scott Shanabarger
G. SCOTT SHANABARGER, PROFESSIONAL LAND SURVEYOR #10849
LICENSE EXPIRATION DATE 4/2/2016



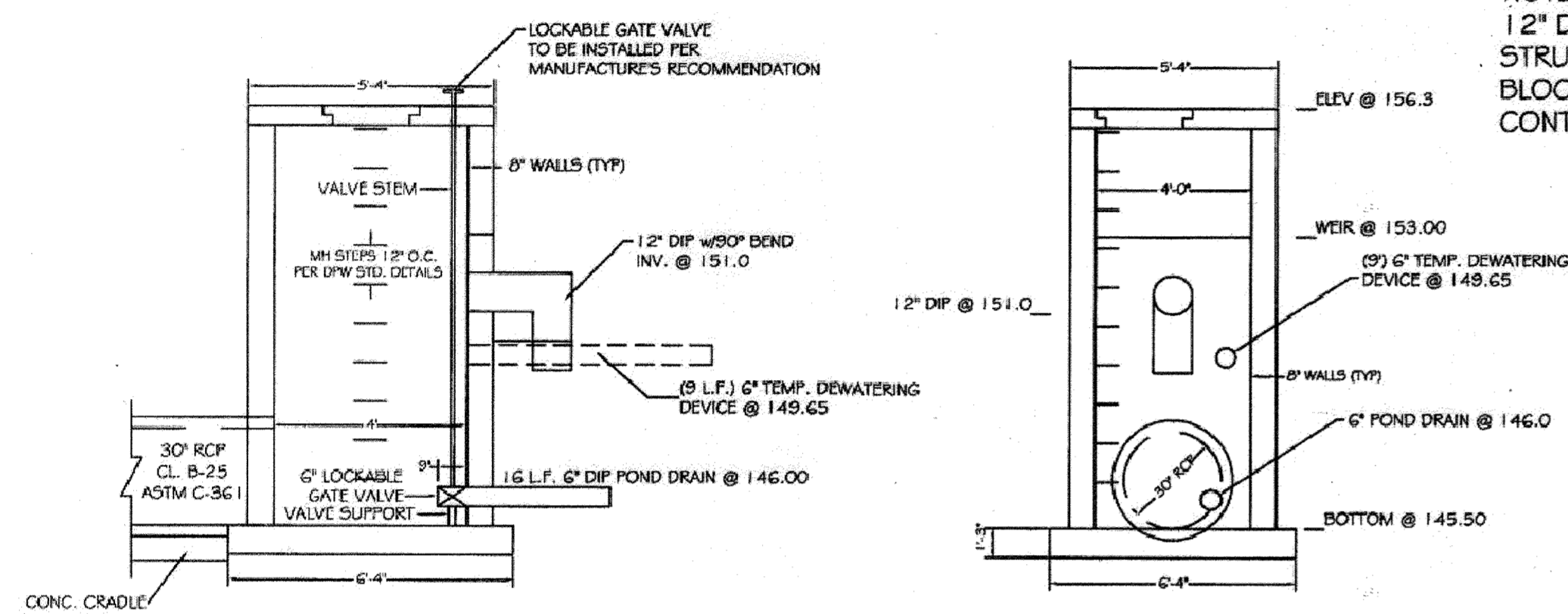
RISER STRUCTURE POND NO. 1



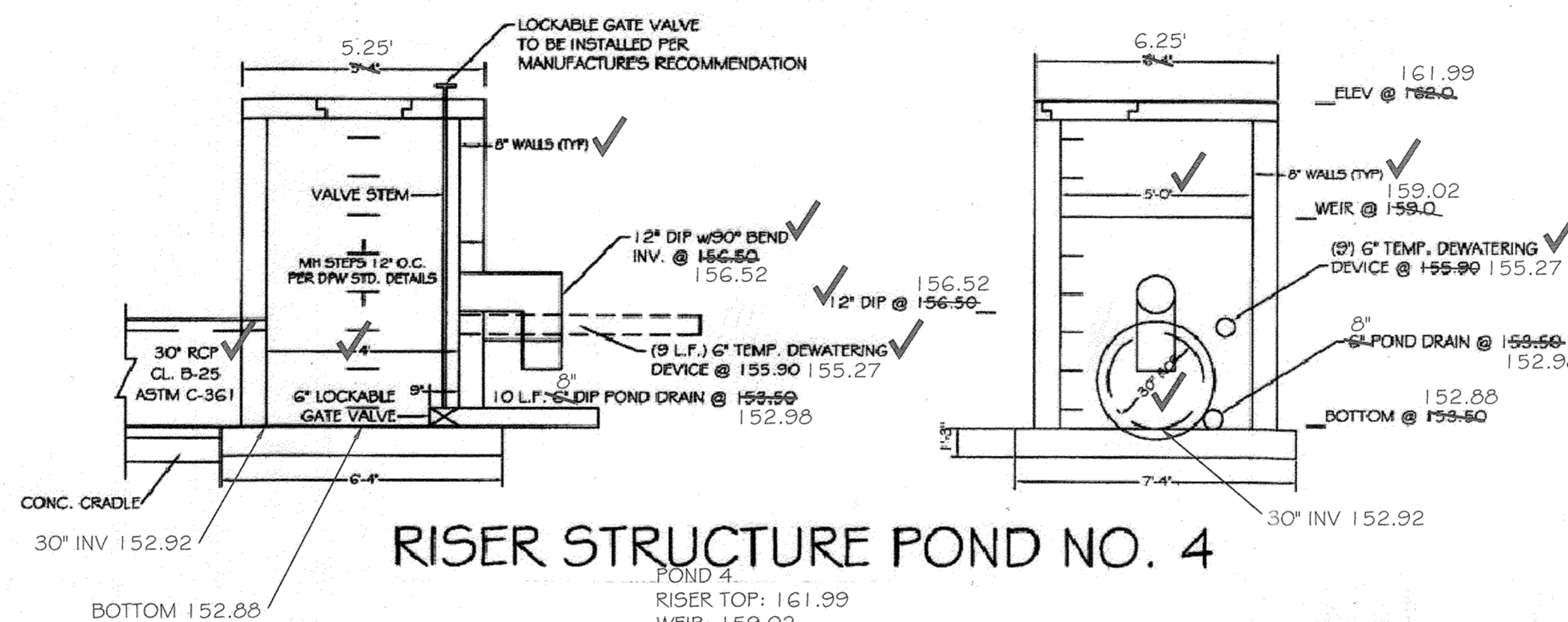
RISER STRUCTURE POND NO. 3



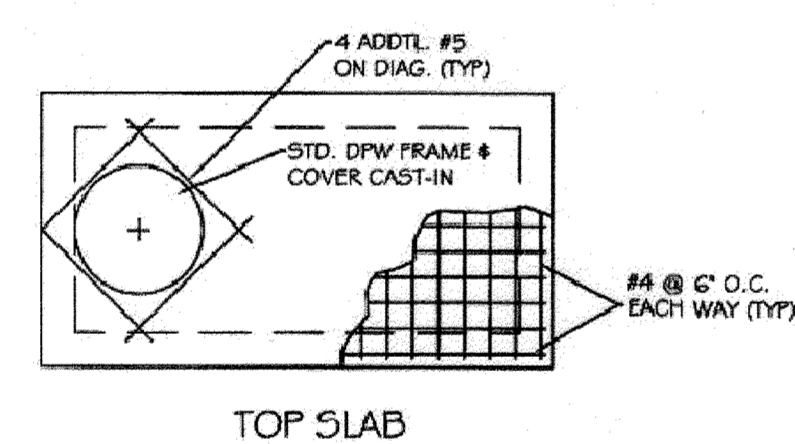
NOTE:
 12" DIP ORIFICE AT EACH RISER STRUCTURE TO BE TEMPORARY BLOCKED DURING THE SEDIMENT CONTROL PHASE OF CONSTRUCTION



RISER STRUCTURE POND NO. 2

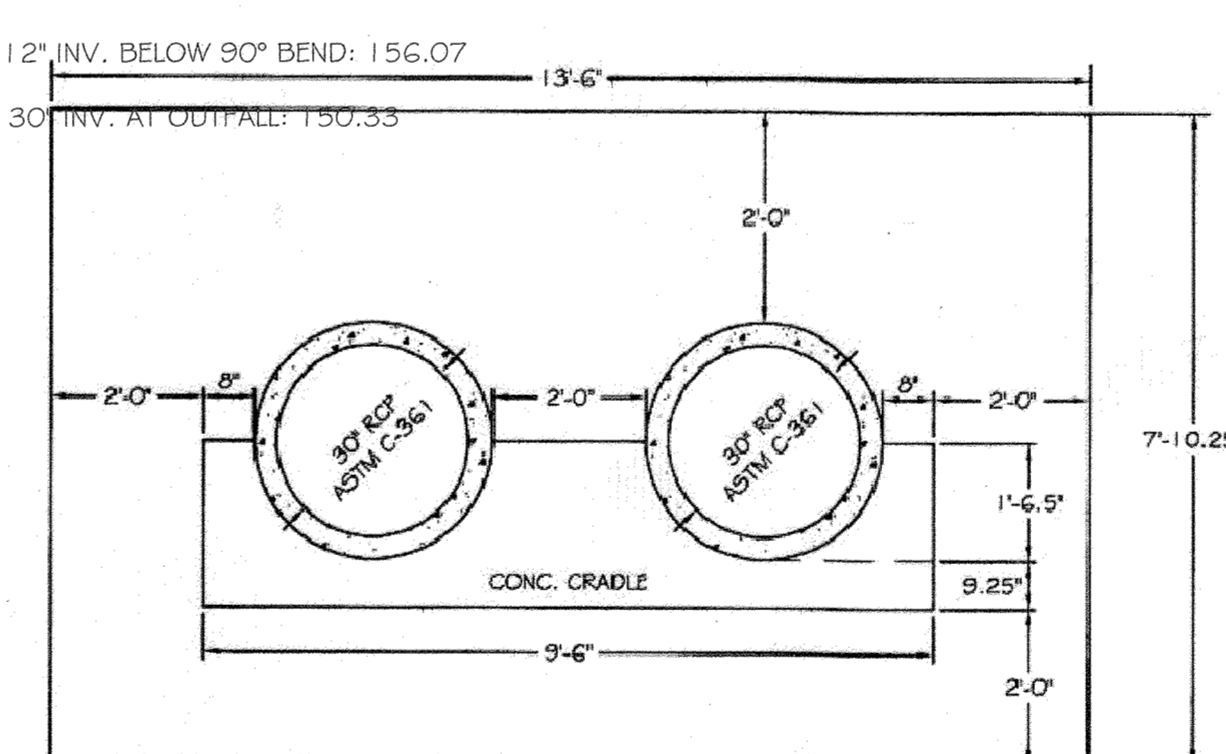


RISER STRUCTURE POND NO. 4

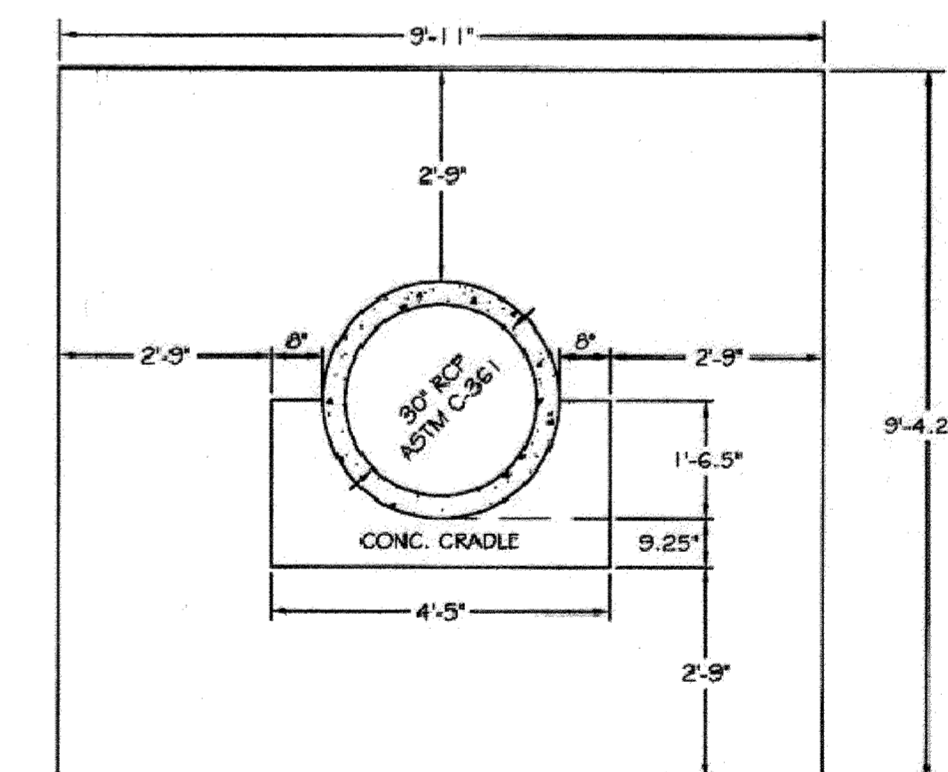


GENERAL NOTES

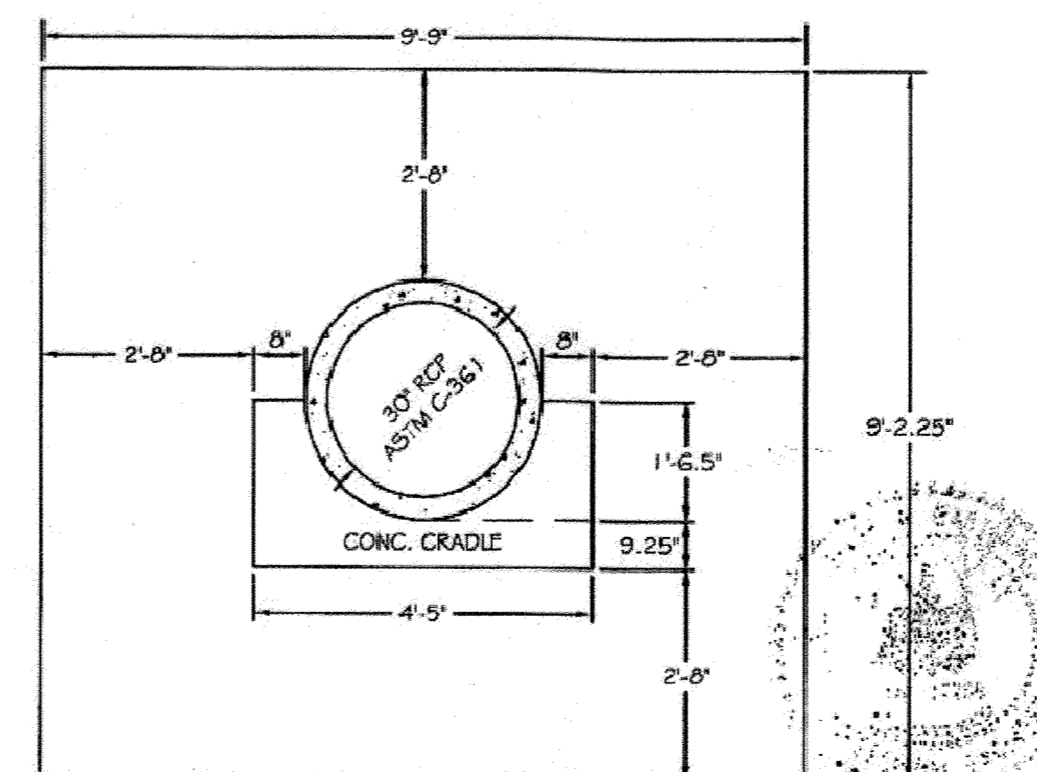
1. CONCRETE STRENGTH (f'c) = 4000 PSI @ 28 DAYS.
2. ALL REINFORCING STEEL TO BE ASTM A615 GR. 60.
3. ALL LAP REINFORCING TO BE 32 TIMES BAR DIAMETER (MINIMUM).
4. IF STRUCTURE IS PRECAST, SHOP DRAWINGS MUST BE APPROVED BY AN ENGINEER BEFORE CONSTRUCTION.
5. ALL CONCRETE EXPOSED EDGES MUST HAVE 3/4" x 3/4" CHAMFER OR AS DIRECTED.



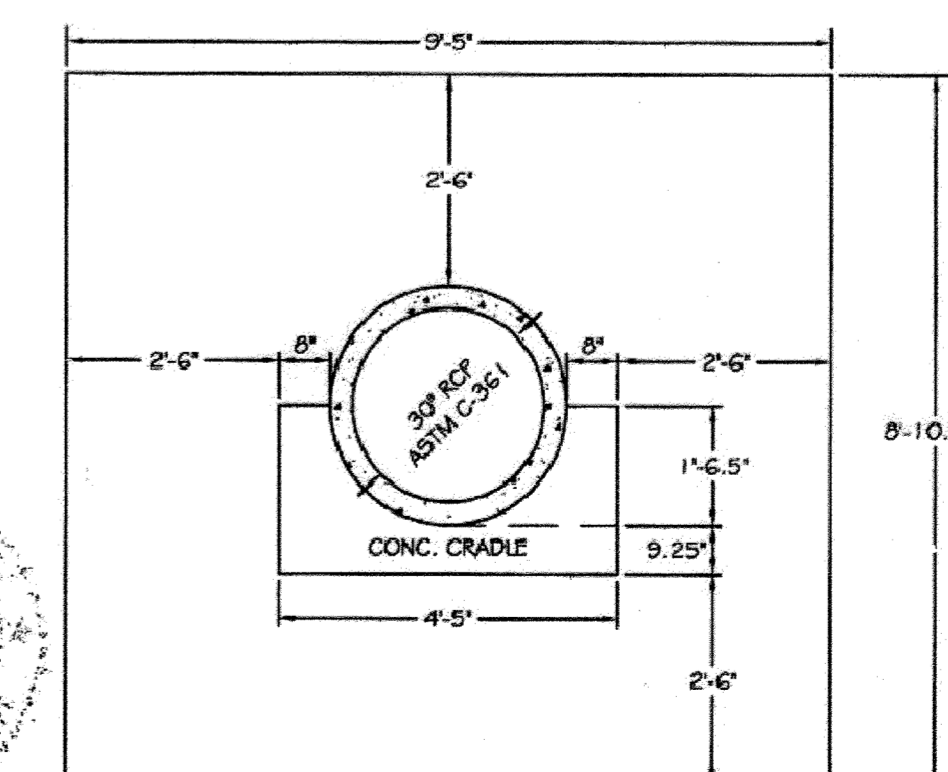
ANTI-SEEP COLLARS - POND NO. 1



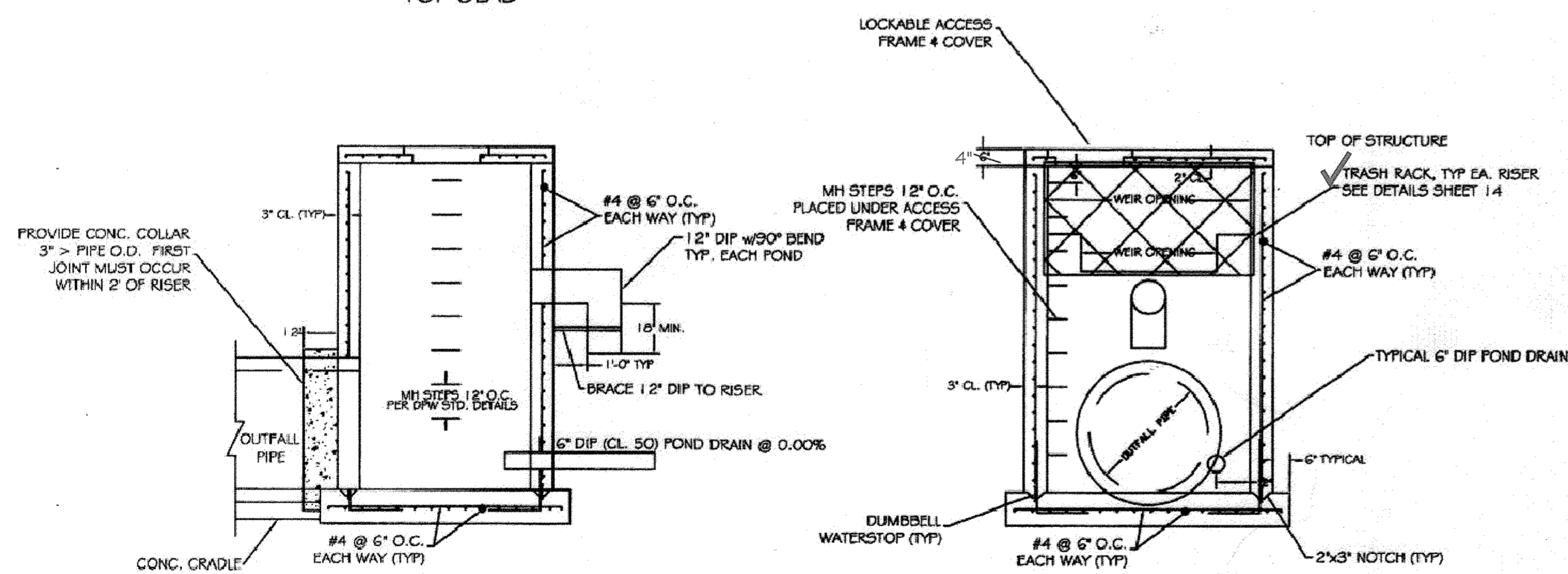
ANTI-SEEP COLLARS - POND NO. 2



ANTI-SEEP COLLARS - POND NO. 3



ANTI-SEEP COLLARS - POND NO. 4



TYPICAL RISER STRUCTURE REINFORCEMENT DETAILS

AS-BUILT SURVEY DATES:
 2/3/14 TO 2/11/14, 8/15/14

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY SEAL, THAT THE DIMENSIONS SHOWN ON THIS PLAN WERE CORRECTLY OBTAINED AND SPECIFICATIONS.

G. SCOTT SHANBERGER
 SHANBERGER & LANE
 PROFESSIONAL LAND SURVEYOR
 LICENSE EXPIRATION DATE 4/2/2016

AS-BUILT CERTIFICATION
 I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan and meet the Approved Plans and Specifications and is in accordance with the As-Built Report for Ponds #1 and #4 prepared by CIVIL DESIGN SERVICES, LC, dated September 17, 2014.

Andrew A. Porter, PE #15,838 (license expiration date 12/17/15)



THIS SHEET IS FOR AS-BUILTS OF STORMWATER MANAGEMENT PONDS #1 and #4 ONLY.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Richard Blood, 11/20/14
 Director of Land Development

Paul Dammann, 11/17/14
 Chief, Development Engineering Division

11/16/14
 Director, Department of Planning and Zoning

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.

David Scott, 10/16/14
 U.S.D.A. Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The HOWARD SOIL CONSERVATION DISTRICT.

10/16/14
 David Scott

BALTIMORE WASHINGTON AUTO EXCHANGE
 VEHICLE AUCTION FACILITY AND STORAGE LOTS
 TAX MAP No: 48 PARCEL: 371
 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL 17, 2000

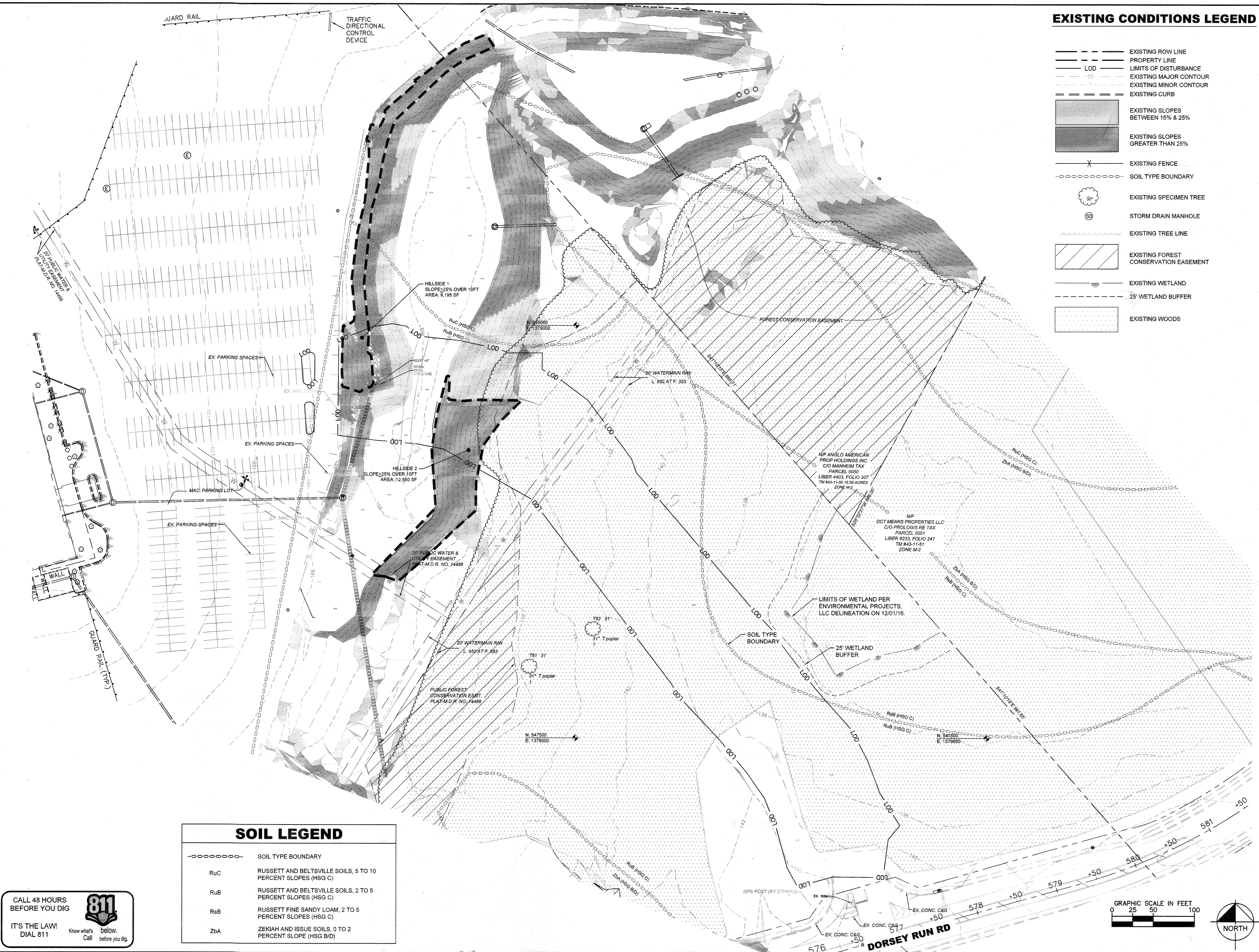
RISER STRUCTURE DETAILS
 AS-BUILTS
 STORMWATER MANAGEMENT PONDS #1 and #4 ONLY

SDP-00-63

OWNER / DEVELOPER
 AA PRIORITY HOLDINGS
 435 METROPLEX DRIVE
 NASHVILLE, TN 37211-3109
 L 4789 F 685

33E
 SHEET 13 OF 33

Plotted By: J. Lopez, Jessica, Sheet: S4-Dorsey Run Road - Access Road Layout 34 - EXISTING CONDITIONS PLAN June 15, 2022 10:25:07am K:\BAL-DVA\10204002 - 7120 Dorsey Run Road\CAD\PlanSheets\34 - Existing Conditions Plan.dwg
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EXISTING CONDITIONS LEGEND

- EXISTING ROW LINE
- PROPERTY LINE
- LOD LIMITS OF DISTURBANCE
- - - -10 EXISTING MAJOR CONTOUR
- - - -7 EXISTING MINOR CONTOUR
- EXISTING CURB
- [Shaded Area] EXISTING SLOPES BETWEEN 15% & 25%
- [Dark Shaded Area] EXISTING SLOPES GREATER THAN 25%
- X- EXISTING FENCE
- - - - SOIL TYPE BOUNDARY
- (Tree Symbol) EXISTING SPECIMEN TREE
- (Manhole Symbol) STORM DRAIN MANHOLE
- (Dotted Line) EXISTING TREE LINE
- [Hatched Area] EXISTING FOREST CONSERVATION EASEMENT
- (Wetland Symbol) EXISTING WETLAND
- - - - 25' WETLAND BUFFER
- [Dotted Area] EXISTING WOODS

SOIL LEGEND

- - - - -	SOIL TYPE BOUNDARY
RuC	RUSSETT AND BELTSVILLE SOILS, 5 TO 10 PERCENT SLOPES (HSG C)
RuB	RUSSETT AND BELTSVILLE SOILS, 2 TO 5 PERCENT SLOPES (HSG C)
RsB	RUSSETT FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES (HSG C)
ZbA	ZEKIAH AND ISSUE SOILS, 0 TO 2 PERCENT SLOPE (HSG B/D)

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COX AUTOMOTIVE, INC.
 6205 PEACHTREE DUNWOODY ROAD
 ATLANTA, GA 30328
 PHONE: 678-645-2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING	DATE: 9-9-22	DATE: 9/16/22	DATE: 9-8-22
CHIEF DEVELOPMENT ENGINEERING DIVISION			
CHIEF DIVISION OF LAND DEVELOPMENT			
DIRECTOR			

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
 SCALE: AS SHOWN
 DATE: 06/15/2022
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 DRAWN BY: RLH
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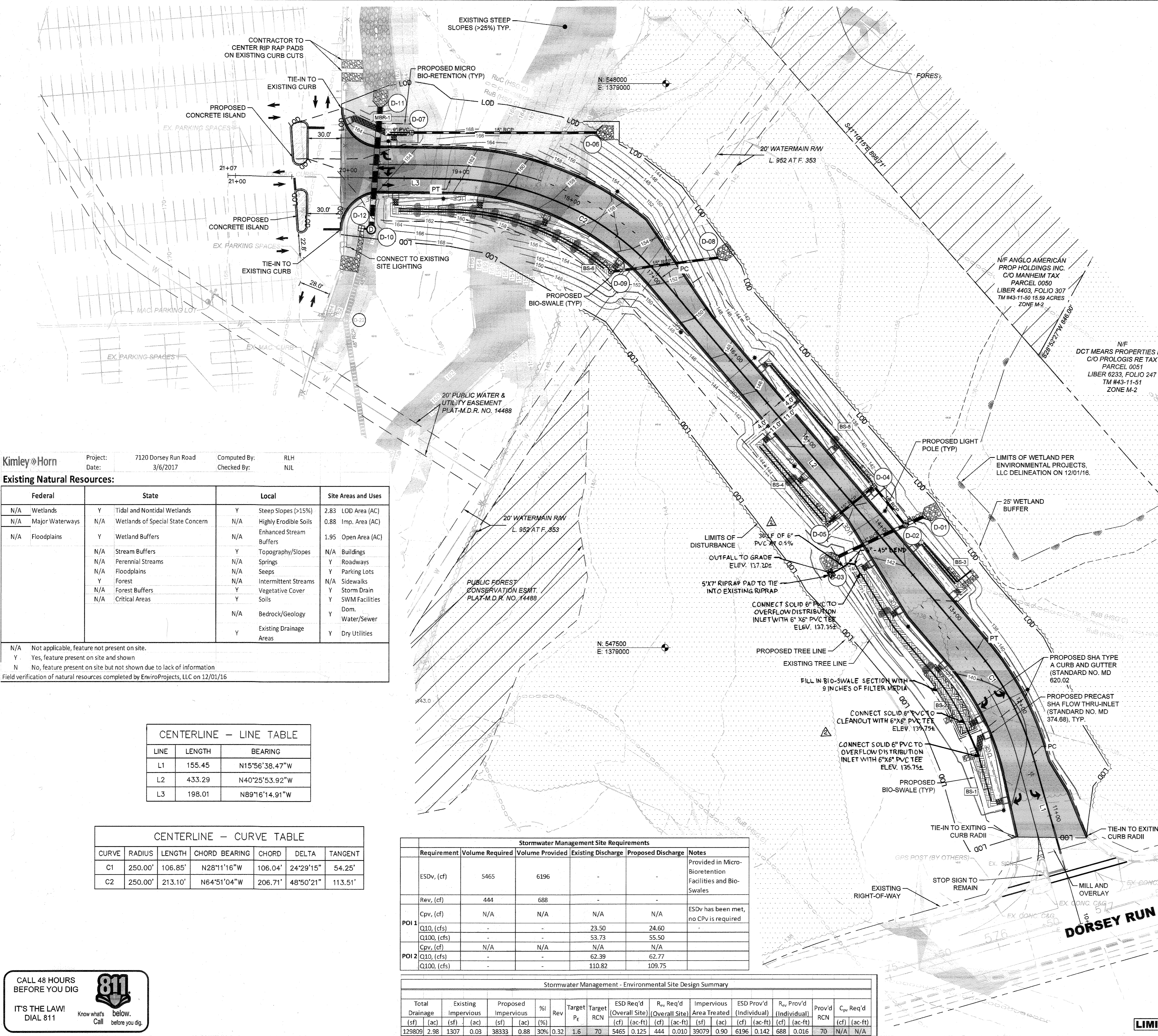
EXISTING CONDITIONS PLAN

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 HOWARD COUNTY MD

SHEET NUMBER
34 OF 61

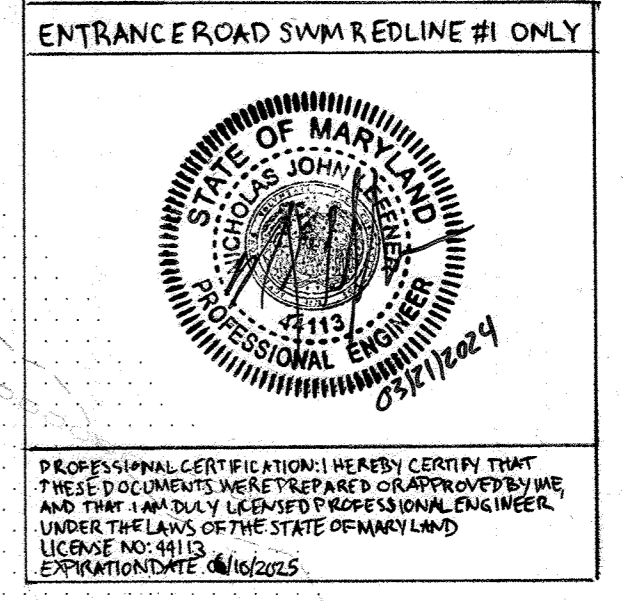
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Plotted By: jessica... Sheet: Set-Dorsey Run Road - Access Road - Layout: 35 SITE DEVELOPMENT PLAN June 15, 2022 10:25:44am K:\BAL_CIV\110204002 - 7120 Dorsey Run Road CAD Plan Sheets 35 - Site Development Plan.dwg
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SITE DEVELOPMENT PLAN LEGEND

- EXISTING ROW LINE
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED CURB AND GUTTER
- PROPOSED TREE LINE
- ⊙ STORM DRAIN MANHOLE
- ⊕ PROPOSED ESD FACILITY OVERFLOW
- ⊖ PROPOSED RIP-RAP INFLOW & OUTFLOW PROTECTION
- ⊘ SHA FLOW THRU INLET
- ⊙ CHECK DAM
- ⊙ LIGHT POLE
- UGE UNDERGROUND CONDUIT
- STORM PIPE
- PROPOSED BIO-SWALE
- PROPOSED MICRO BIO-RETENTION
- PROPOSED IMPERVIOUS AREA
- REPLACED IMPERVIOUS AREA



Kimley Horn
Project: 7120 Dorsey Run Road
Date: 3/6/2017
Computed By: RLH
Checked By: NJL

Existing Natural Resources:

Federal	State	Local	Site Areas and Uses
N/A Wetlands	Y Tidal and Nontidal Wetlands	Y Steep Slopes (>15%)	2.83 LOD Area (AC)
N/A Major Waterways	N/A Wetlands of Special State Concern	N/A Highly Erodible Soils	0.88 Imp. Area (AC)
N/A Floodplains	Y Wetland Buffers	N/A Enhanced Stream Buffers	1.95 Open Area (AC)
	N/A Stream Buffers	Y Topography/Slopes	N/A Buildings
	N/A Perennial Streams	N/A Springs	Y Roadways
	N/A Floodplains	N/A Seeps	Y Parking Lots
	Y Forest	N/A Intermittent Streams	N/A Sidewalks
	N/A Forest Buffers	Y Vegetative Cover	Y Storm Drain
	N/A Critical Areas	Y Soils	Y SWM Facilities
		N/A Bedrock/Geology	Y Dom.
		Y Existing Drainage Areas	Y Water/Sewer
			Y Dry Utilities

N/A Not applicable, feature not present on site.
 Y Yes, feature present on site and shown
 N No, feature present on site but not shown due to lack of information
 Field verification of natural resources completed by ErwiProjects, LLC on 12/01/16

CENTERLINE - LINE TABLE

LINE	LENGTH	BEARING
L1	155.45	N15°56'38.47"W
L2	433.29	N40°25'53.92"W
L3	198.01	N89°16'14.91"W

CENTERLINE - CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	250.00'	106.85'	N28°11'16"W	106.04'	24°29'15"	54.25'
C2	250.00'	213.10'	N64°51'04"W	206.71'	48°50'21"	113.51'

Stormwater Management Site Requirements

Requirement	Volume Required	Volume Provided	Existing Discharge	Proposed Discharge	Notes
ESDv, (cf)	5465	6196	-	-	Provided in Micro-Bioretentation Facilities and Bio-Swales
Rev, (cf)	444	688	-	-	
Cpv, (cf)	N/A	N/A	N/A	N/A	ESDv has been met, no Cpv is required
POI 1					
Q10, (cfs)	-	-	23.50	24.60	
Q100, (cfs)	-	-	53.73	55.50	
POI 2					
Cpv, (cf)	N/A	N/A	N/A	N/A	
Q10, (cfs)	-	-	62.39	62.77	
Q100, (cfs)	-	-	110.82	109.75	

Stormwater Management - Environmental Site Design Summary

Total Drainage (sf)	Existing Impervious (sf)	Proposed Impervious (sf)	% Impervious	Target Rev	Target RCN	ESD Req'd (Overall Site) (cf)	R _w Req'd (Overall Site) (ac-ft)	Impervious Area Treated (sf)	ESD Prov'd (Individual) (cf)	R _w Prov'd (Individual) (ac-ft)	Prov'd RCN	C _{pv} Req'd (cf)										
129809	298	1307	0.03	38333	0.88	30%	0.32	1.6	70	5465	0.125	444	0.010	39079	0.90	6196	0.142	688	0.016	70	N/A	N/A

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NO.	DATE	BY	REVISIONS
1	06/15/2022	KH	ACCESS ROAD, SWM AND GRADING
2	11/29/2023	KH	ENTRANCE ROAD SWM REDLINE #1

APPROVED: DEPARTMENT OF PLANNING AND ZONING

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DATE: 9-8-22
 CHIEF DIVISION OF LAND DEVELOPMENT

DATE: 9-8-22
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7120 DORSEY RUN ROAD
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 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

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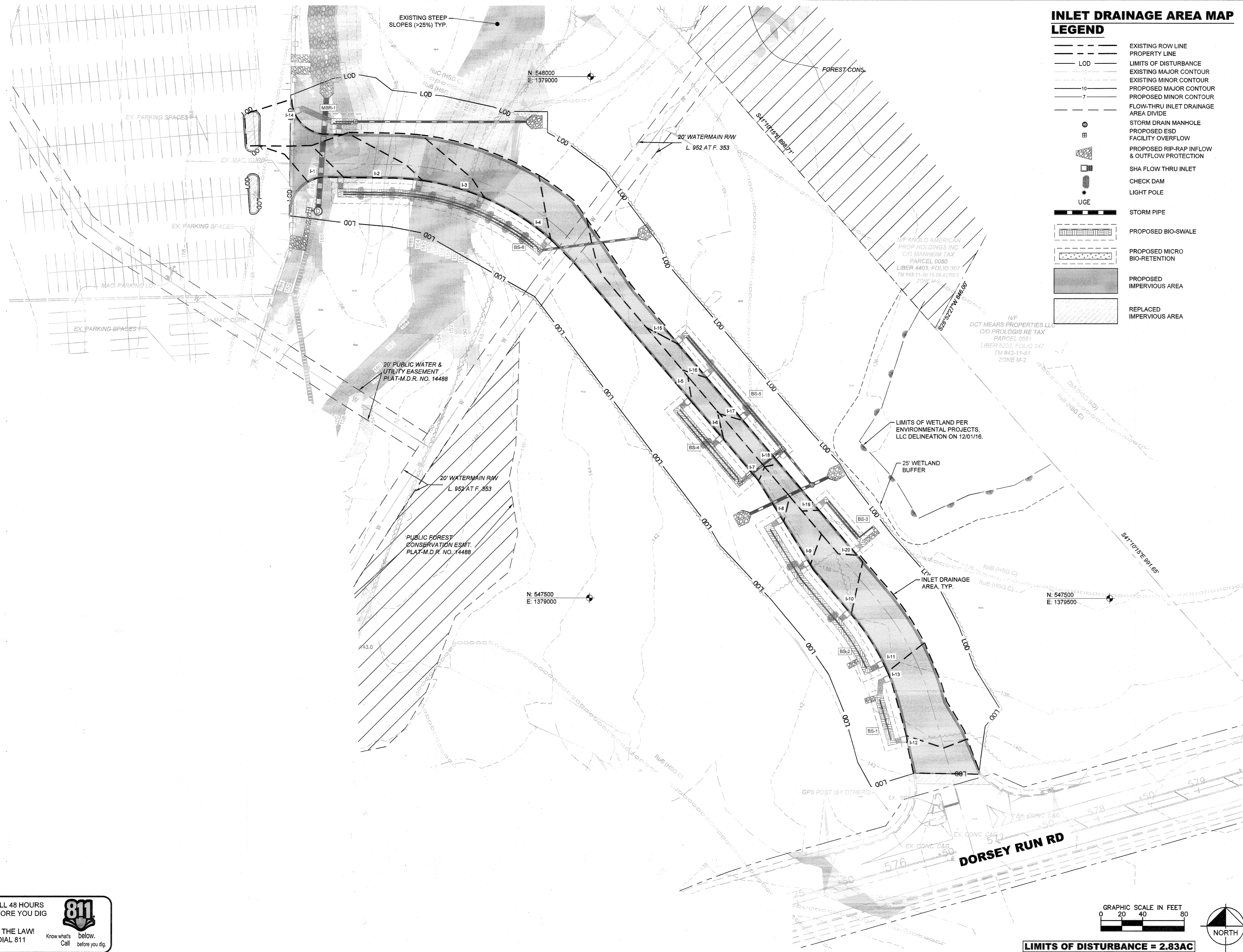
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Plotted By: J. Moyer, Jessica - Sheet Set: Dorsey Run Road - Access Road - Layout: 36 INLET DRAINAGE AREA MAP - June 15, 2022 10:28:14am - K:\BAL_CIV\110204002 - 7120 Dorsey Run Road_CADD_PlanSheets\40 - Inlet Drainage Area_Map.dwg
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INLET DRAINAGE AREA MAP LEGEND

- EXISTING ROW LINE
- PROPERTY LINE
- - - LOD
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- - - 10
- - - 7
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- FLOW-THRU INLET DRAINAGE AREA DIVIDE
- STORM DRAIN MANHOLE
- ⊕ PROPOSED ESD
- FACILITY OVERFLOW
- ▨ PROPOSED RIP-RAP INFLOW & OUTFLOW PROTECTION
- ▨ SHA FLOW THRU INLET
- CHECK DAM
- ★ LIGHT POLE
- UGE
- STORM PIPE
- ▨ PROPOSED BIO-SWALE
- ▨ PROPOSED MICRO BIO-RETENTION
- ▨ PROPOSED IMPERVIOUS AREA
- ▨ REPLACED IMPERVIOUS AREA

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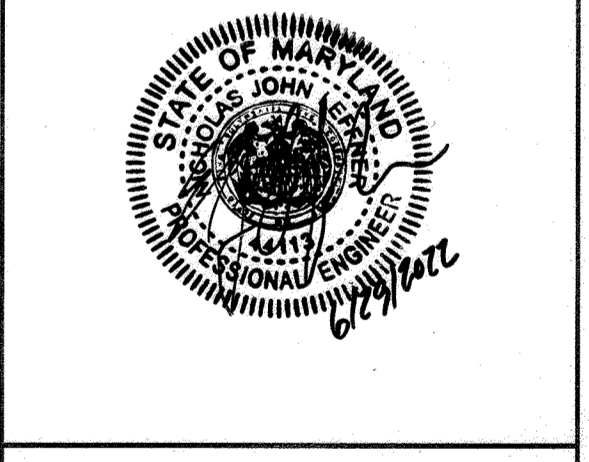
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CHIEF DIVISION OF LAND DEVELOPMENT					
DIRECTOR					

7120 DORSEY RUN ROAD
HOWARD COUNTY, MARYLAND
TAX MAP NO. 43 PARCEL: 371
ZONING: M-2 BLOCK: 10
FIRST ELECTION DISTRICT

KHA PROJECT NO.:	110204002
SCALE:	AS SHOWN
DATE:	06/15/2022
DESIGNED BY:	RLH
DRAWN BY:	RLH
CHECKED BY:	NJL

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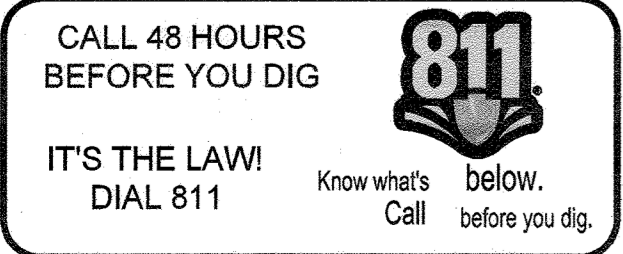


INLET DRAINAGE AREA MAP

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HOWARD COUNTY MD

SHEET NUMBER
36 OF 63

SDP-00-063



B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDENS, LANDSCAPE INFILTRATION & INFILTRATION BERMS

- MATERIAL SPECIFICATIONS**
THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.
- FILTERING MEDIA OR PLANTING SOIL**
THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:

- SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
- ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974), IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
- CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
- PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM ANY EQUIPMENT.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE. IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE. ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED WITH THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.

TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL. GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY, ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

- PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OR HDPE).
- PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/2" (NO. 4 OR 4X4) GALVANIZED HARDWARE CLOTH.
- GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
- THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
- A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT POINT AND MONITOR PERFORMANCE OF THE FILTER.
- A 4" LAYER OF PEA GRAVEL (1/2" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

Appendix D.4. Construction Specifications for Environmental Site Design Practices

Table B.4.1. Materials Specifications for Micro-Bioretenion, Rain Gardens & Landscape Infiltration-

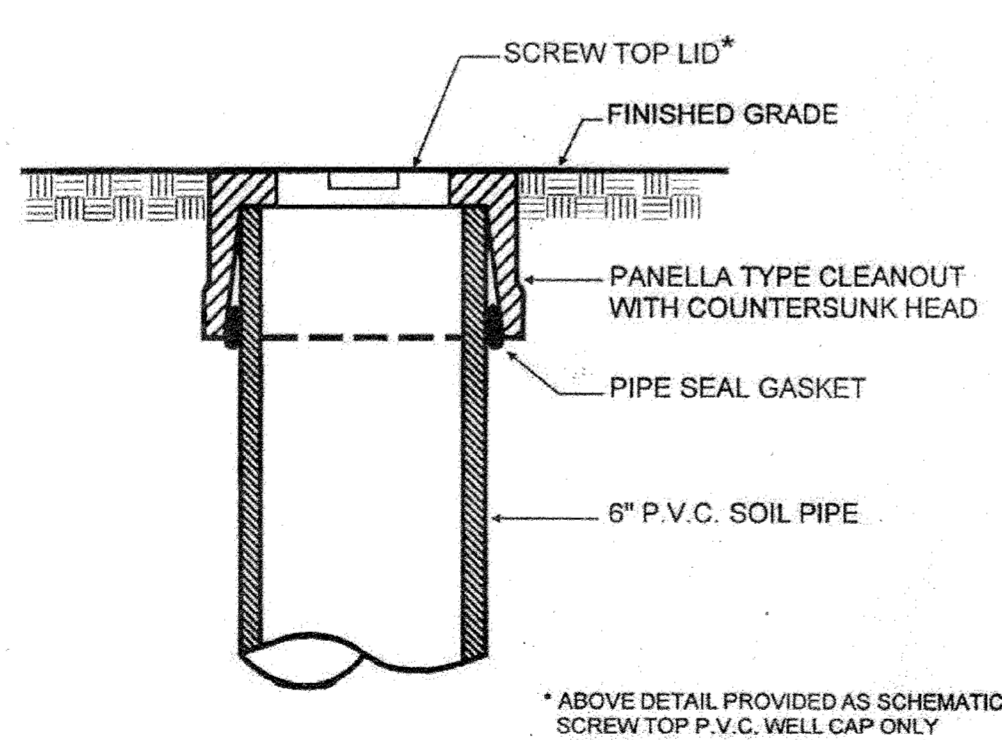
Material	Specification	Size	Notes
Planting soil [2" to 4" deep]	see Appendix A, Table A.4 loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	plantings are site-specific USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary under most pipes. Perforated pipe shall be wrapped with 1/2-inch galvanized hardware cloth.
Poured in place concrete (if required)	MSHA Mix No. 3; F _c = 3500 psi @ 28 days, normal weight, air-entrained, reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required; 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350 R89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking.
Sand	AASHTO M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO #10) are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

B.4.7 Stormwater Maintenance Schedule Environmental Sensitive Design

Practice	Frequency of Inspection	Preventive Maintenance	Maintenance Requirement
Micro-Bioretenion	Seasonally (and after a major storm)		Irrigate during prolonged dry periods.
		If specific plants are not surviving, replace with more appropriate species.	Remove any dead or dying vegetation and revegetate.
			Prune vegetation occasionally.
			Remove accumulated sediment from surface of filter bed when accumulation exceeds one inch.
			If water ponds for more than 48 hours, remove and replace the top few inches of filter media.
			Replace mulch annually where practice treats areas with high concentrations of heavy metals. Otherwise, replace top 2-3 inches as necessary.

Appendix D.8. Miscellaneous Details for Compliance with Performance Criteria

Detail 4 Observation Well for Infiltration Practices

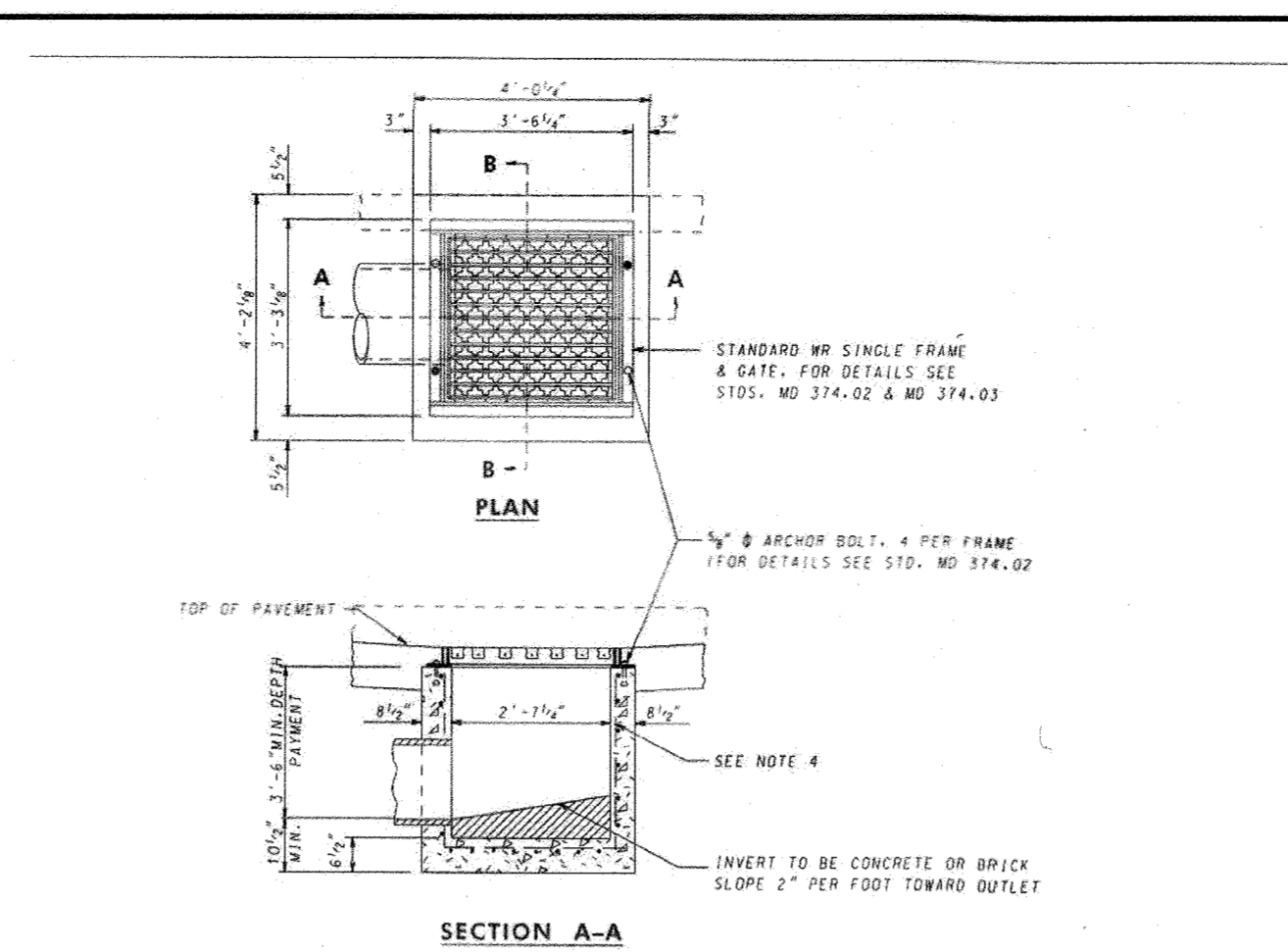


EACH OBSERVATION WELL / CLEANOUT SHALL INCLUDE THE FOLLOWING:

- FOR AN UNDERGROUND FLUSH MOUNTED OBSERVATION WELL / CLEANOUT, PROVIDE A TUBE MADE OF NON-CORROSIVE MATERIAL, SCHEDULE 40 OR EQUAL, AT LEAST THREE FEET LONG WITH AN INSIDE DIAMETER OF AT LEAST 6 INCHES.
- THE TUBE SHALL HAVE A FACTORY ATTACHED CAST IRON OR HIGH IMPACT PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING SCREW TOP LID. THE SCREW TOP LID SHALL BE CAST IRON OR HIGH IMPACT PLASTIC THAT WILL WITHSTAND ULTRA-VIOLET RAYS.

OBSERVATION WELL DETAIL

D.8.5

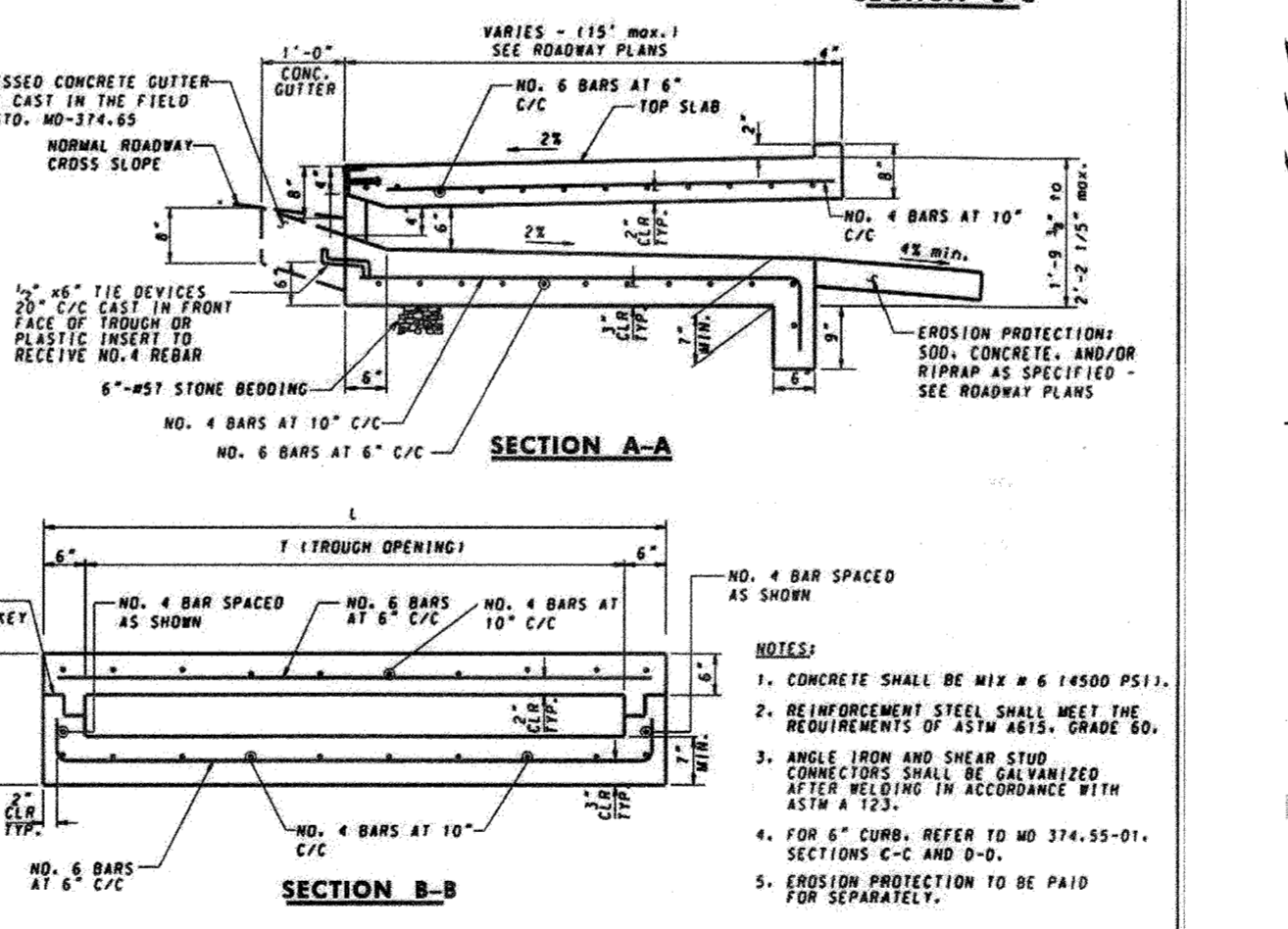
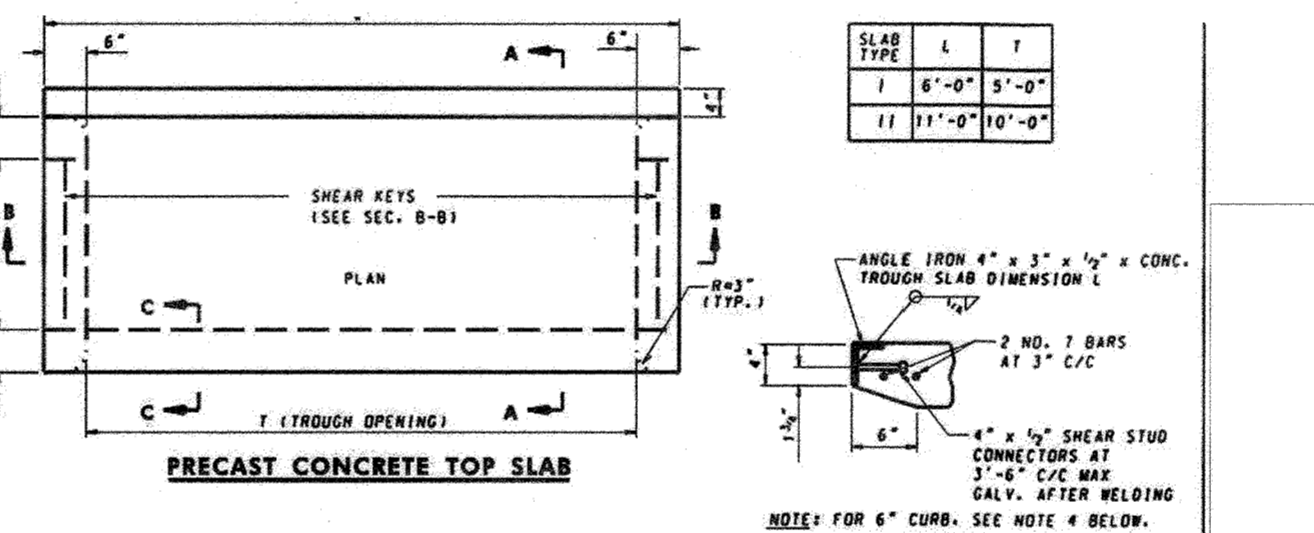


- GENERAL NOTES**
- CONCRETE TO BE MIX NO. 2 (3,000 PSI).
 - SIZE, TYPE, AND DIRECTION OF INLET CONNECTION SHALL VARY TO SUIT CONDITIONS.
 - SEE SHA LATEST SPECIFICATIONS FOR INLETS.
 - WALL REINFORCEMENT SHALL BE ONE LAYER OF NO. 4 DEFORMED BARS @ 6" C/C. TWO WAYS, AND HAVE 3-3" COVER FROM INSIDE WALL.
 - BASE REINFORCEMENT SHALL BE ONE LAYER OF NO. 4 DEFORMED BARS @ 6" C/C. TWO WAYS, WITH 2" COVER FROM TOP OF BASE.
 - PLACE 1/4" EXPANSION MATERIAL OF THE SAME TYPE APPROVED FOR PAVEMENT IN BETWEEN THE FRAME AND ADJOINING ROAD PAVEMENT AND BETWEEN ENDS OF INLET CURB AND NORMAL CURB.
 - BRICK FOR MASONRY TO COMPLY WITH THE SHA SPECIFICATION.
 - FOR UNPERFORATED INLETS USE NORMAL PAVEMENT SLOPE.
 - LARGER RINGS SHALL BE IN ACCORDANCE WITH STD NO 343.91 AND MD 343.92 OR AS DIRECTED BY THE ENGINEER.
 - FROM THE CURB LINE, INLET HAS BEEN DESIGNED FOR HS-20 LOADING ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATION CONDITIONS AND FOR A MAXIMUM DEPTH OF 15'-0".

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

SINGLE WR INLET

STANDARD NO. MD 374.06

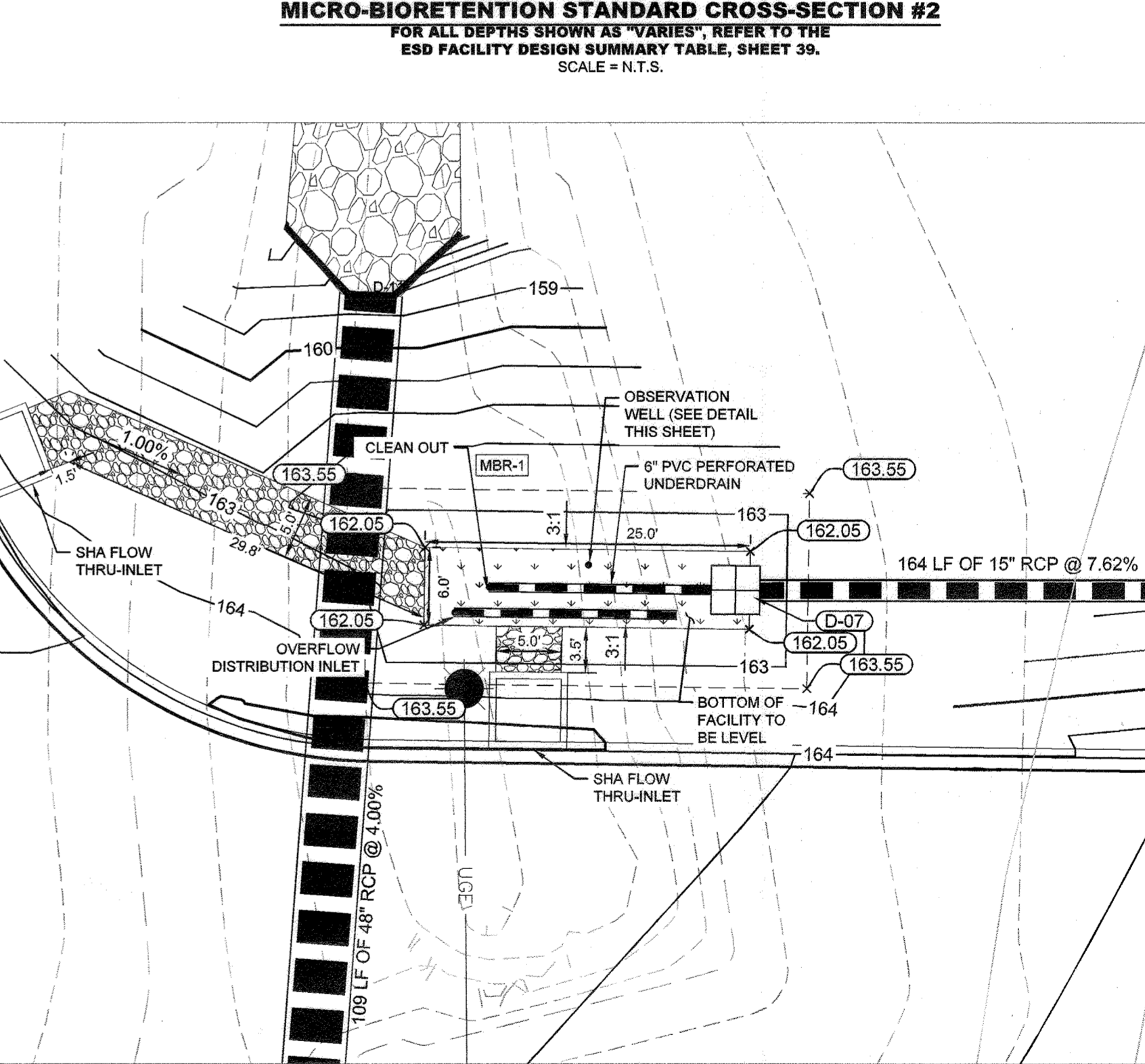
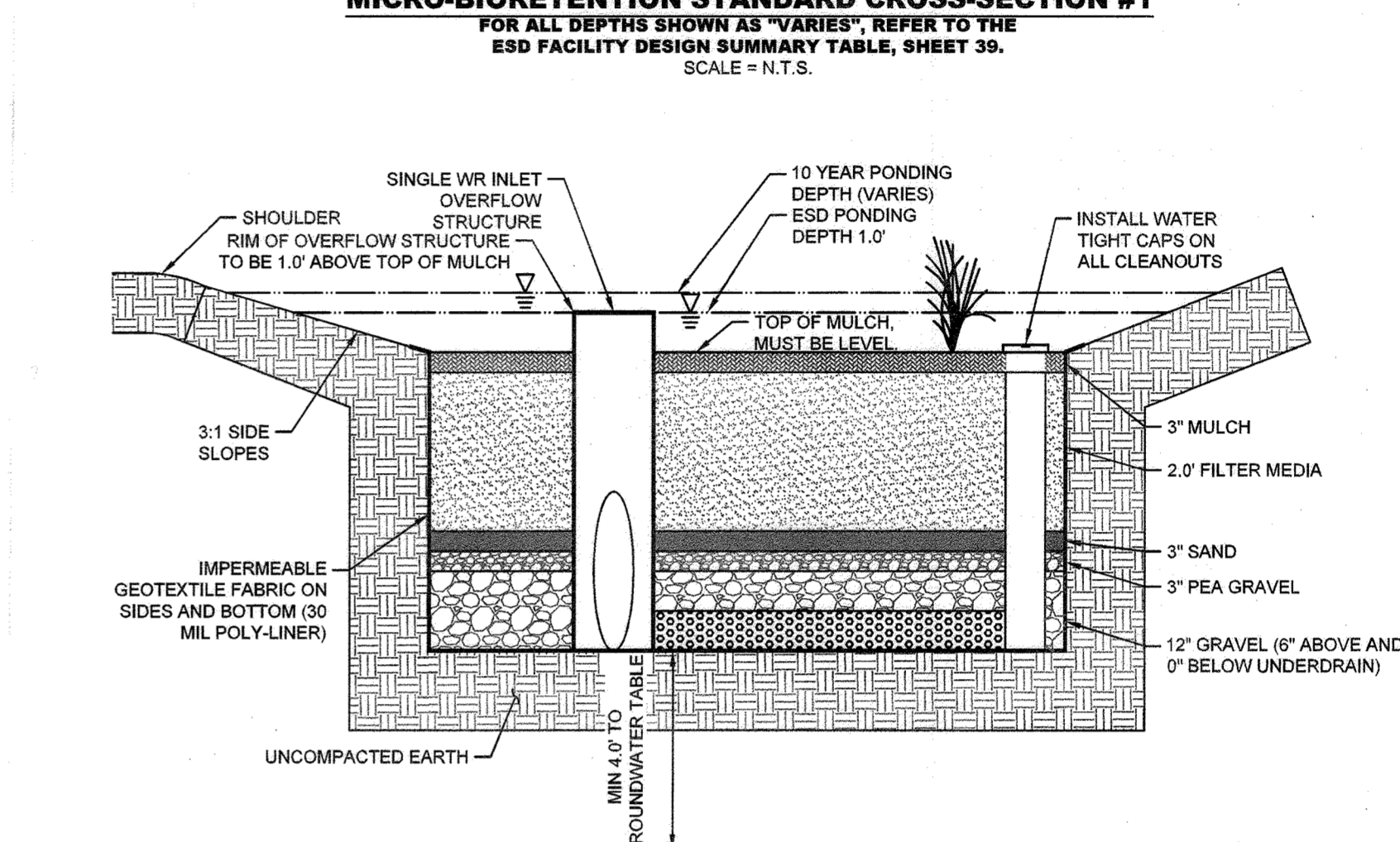
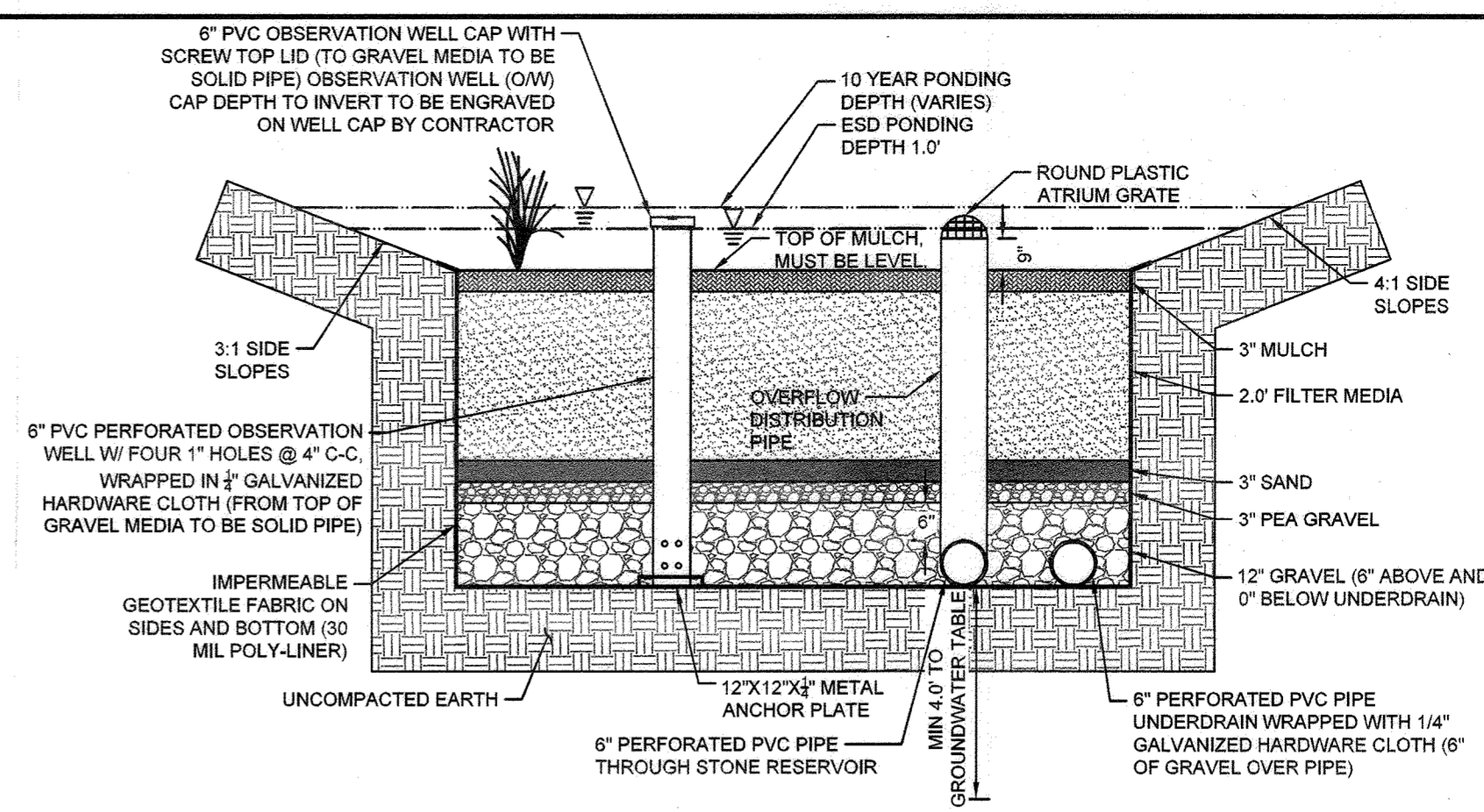


Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST OR CAST-IN-PLACE COG / COS OPENING FOR 8" CURB 5" OR 10" ONLY

STANDARD NO. MD 374.68

- OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-8), BIORETENTION SWALE (M-9),
- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL volume II, TABLE A-4.1 AND 2.
 - SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
 - MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
 - SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.



AS-BUILT DATA FOR MICRO-BIO MBR 1
*TO BE COMPLETED BY THE CERTIFYING ENGINEER

TYPE OF FACILITY: MICRO-BIO	DESIGN	AS-BUILT
FILTER BED DIMENSIONS	6.0' X 25.0'	
FILTER BED AREA (SF)	150	
VOLUME PROVIDED (CF)	200	
MULCH TOP ELEVATION	162.05	
PLANTING MEDIA / SOIL TOP ELEVATION	161.80	
PLANTING SOIL BOTTOM ELEVATION	159.80	
UNDERDRAIN INVERT	158.55	
BOTTOM OF GRAVEL ELEVATION	158.30	
TOP OBSERVATION WELL ELEVATION	163.05	
INLET TOP ELEVATION	163.05	
OVERFLOW WEIR ELEVATION	163.35	
TOP OF FACILITY	163.55	

AS-BUILT IS ACCURATE AND COMPLETE; DESIGN STORAGE VOLUME IS PROVIDED.

Kimley-Horn

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COX AUTOMOTIVE, INC.
6205 PEACHTREE DUNWOODY ROAD
ATLANTA, GA 30328
PHONE: 678-645-2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 9-22-23

CHIEF DEVELOPMENT ENGINEERING DIVISION

DATE: 9/8/22

CHIEF DIVISION OF LAND DEVELOPMENT

DATE: 9-8-23

DIRECTOR

7120 DORSEY RUN ROAD
HOWARD COUNTY, MARYLAND
TAX MAP NO. 43 PARCEL: 371
ZONING: M-2 BLOCK: 10
FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
SCALE: AS SHOWN
DATE: 06/15/2022
DESIGNED BY: RLH
DRAWN BY: RLH
CHECKED BY: NUL

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LICENSE NO. 44112
EXPIRATION DATE: 09/30/2023

SITE DEVELOPMENT PLAN MICRO-BIO DETAILS

PROPOSED CUSTOMER ENTRANCE

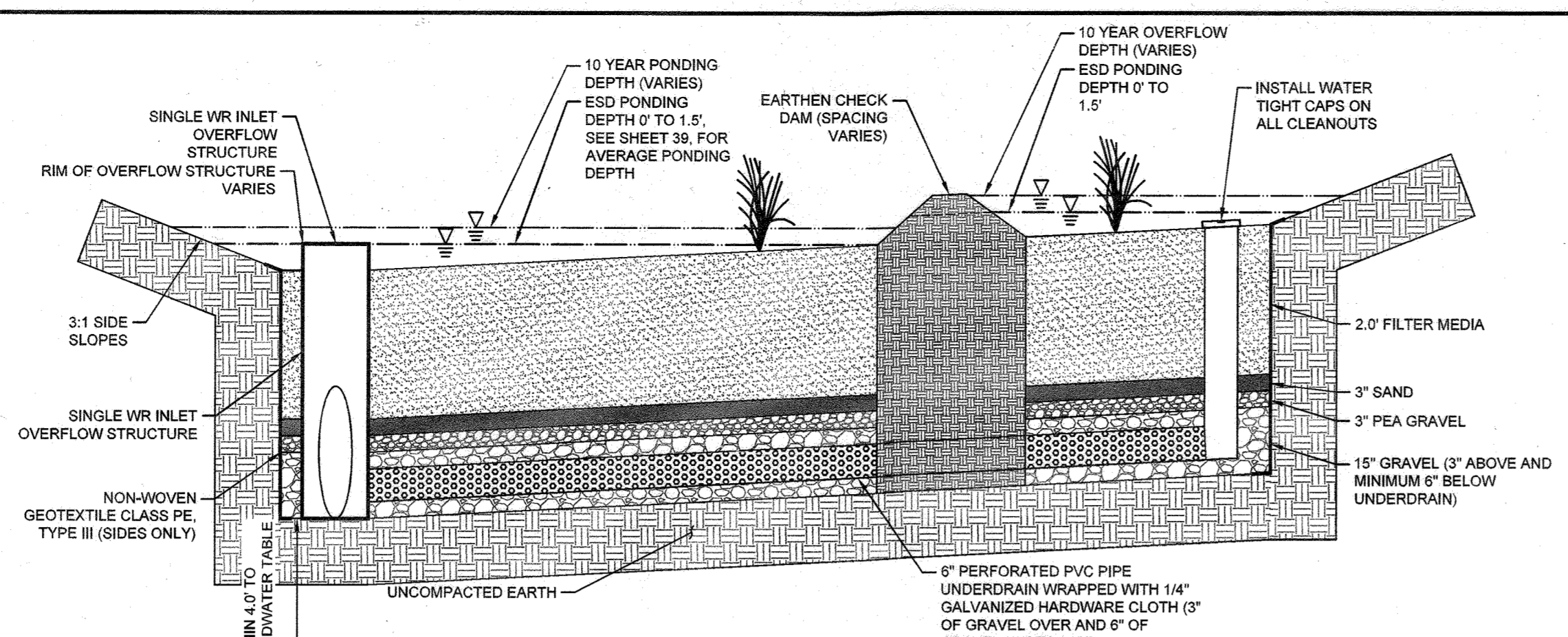
PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
HOWARD COUNTY MD

SHEET NUMBER
37 OF 6163

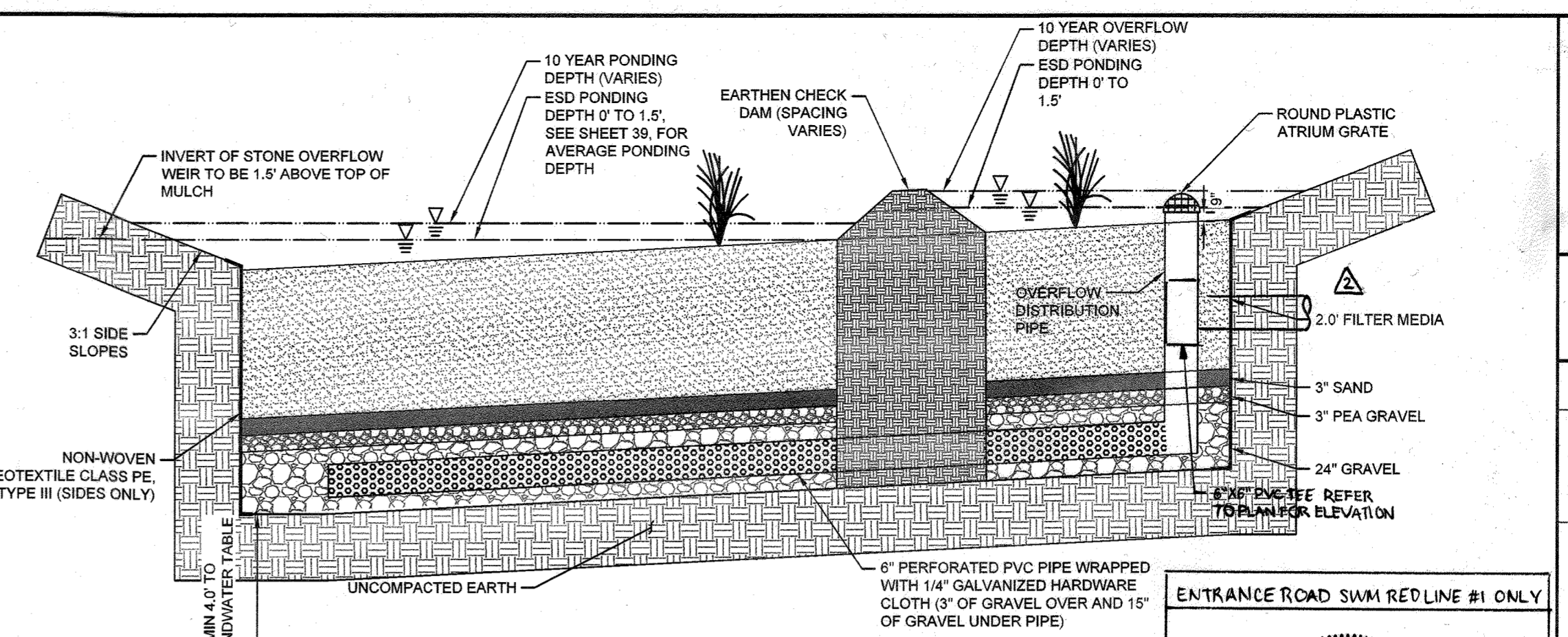
SDP-00-063

Printed By: Moyer, Jessica / Sheet: Set-Dorsey_Run_Road - Access Road / Layout: 37 - SITE DEVELOPMENT PLAN MICRO-BIO DETAILS / June 15, 2022 / 10:26:55am / K:\BAL-OVA\110204002 - 7120 Dorsey_Run_Road\CAD_Plan\Sheet37.dwg / SITE DEVELOPMENT PLAN SWM DETAILS.dwg / This document and design presented herein, on an instrument of service, is intended for the specific purpose and shall not be used for any other purpose without the written consent of Kimley-Horn and Associates, Inc. Kimley-Horn and Associates, Inc. shall be held harmless by Kimley-Horn and Associates, Inc.

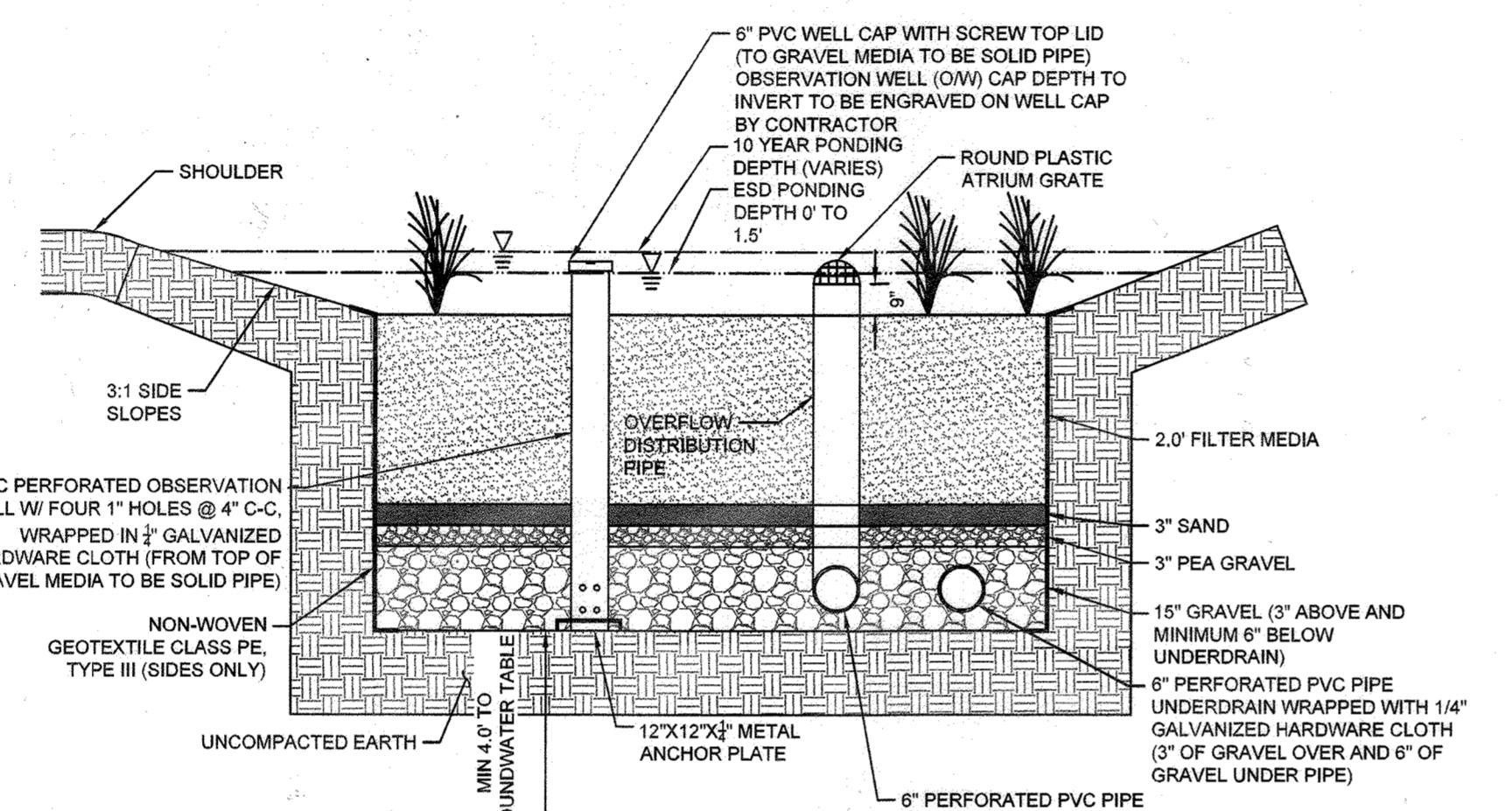
Plotted By: Jovier, Jessica - Sheet Set: Dorsey Run Road - Access Road - Layout: 38 - SITE DEVELOPMENT PLAN BIO-SWALE DETAILS - June 15, 2022 - 10:27:03am - K:\BAL_OVA\110204002 - 7120 Dorsey Run Road\CAD\PlanSheets\41 - SITE DEVELOPMENT PLAN SWM DETAILS.dwg
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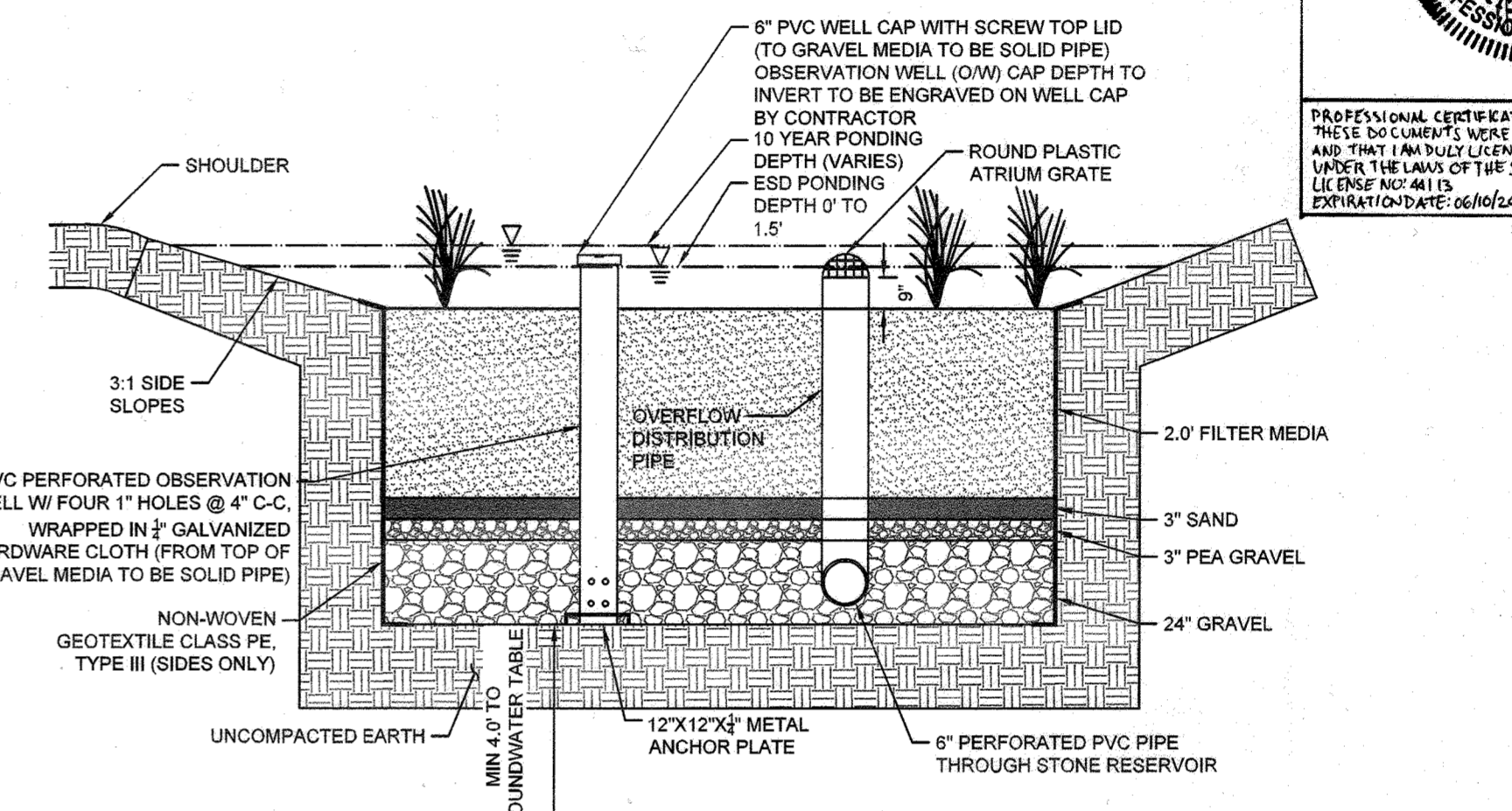
**BIO-SWALE STANDARD CROSS-SECTION #1
BS-4 & BS-5 (WITH OVERFLOW STRUCTURE)**
FOR ALL DEPTHS SHOWN AS "VARIES", REFER TO THE
ESD FACILITY DESIGN SUMMARY TABLE, SHEET 39.
SCALE = N.T.S.



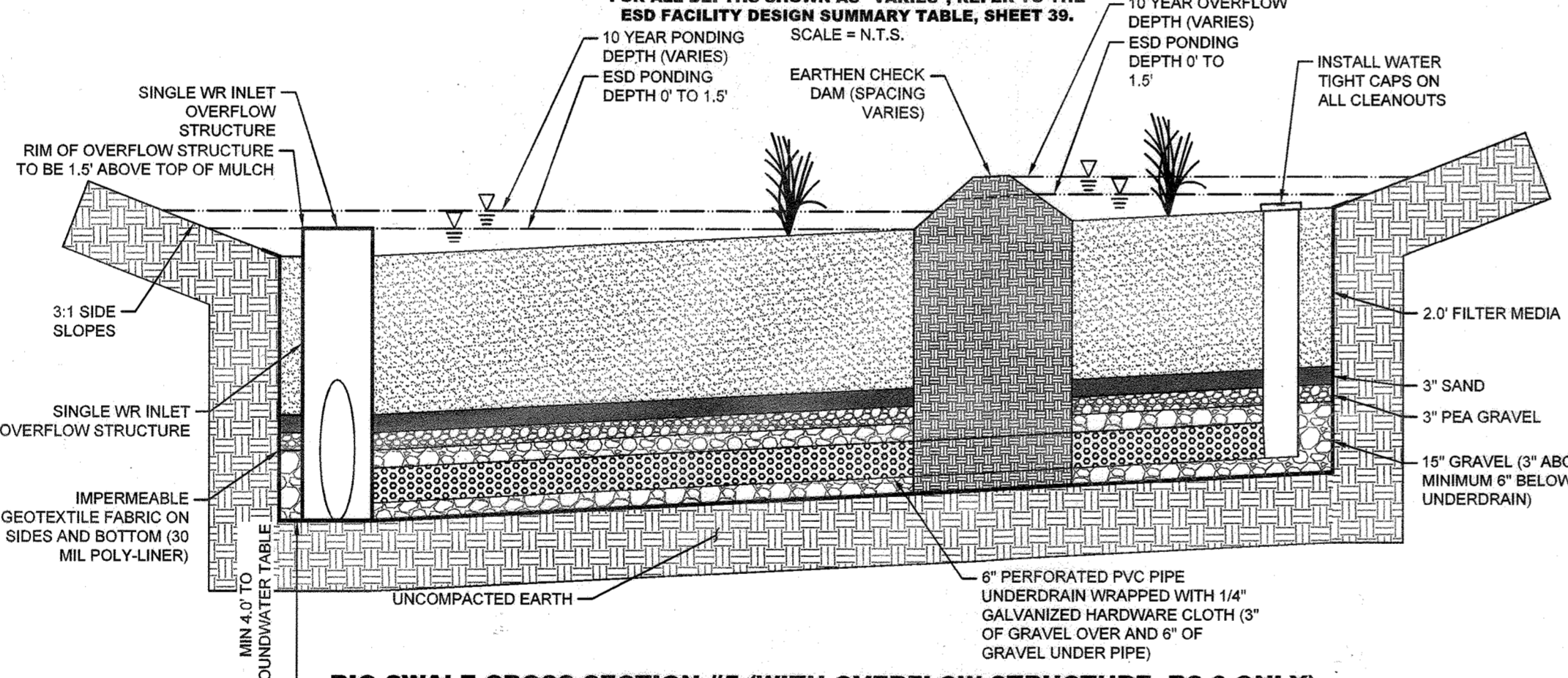
**BIO-SWALE STANDARD CROSS-SECTION #3
BS-1 & BS-2 (W/O OVERFLOW STRUCTURE)**
FOR ALL DEPTHS SHOWN AS "VARIES", REFER TO THE
ESD FACILITY DESIGN SUMMARY TABLE, SHEET 39.
SCALE = N.T.S.



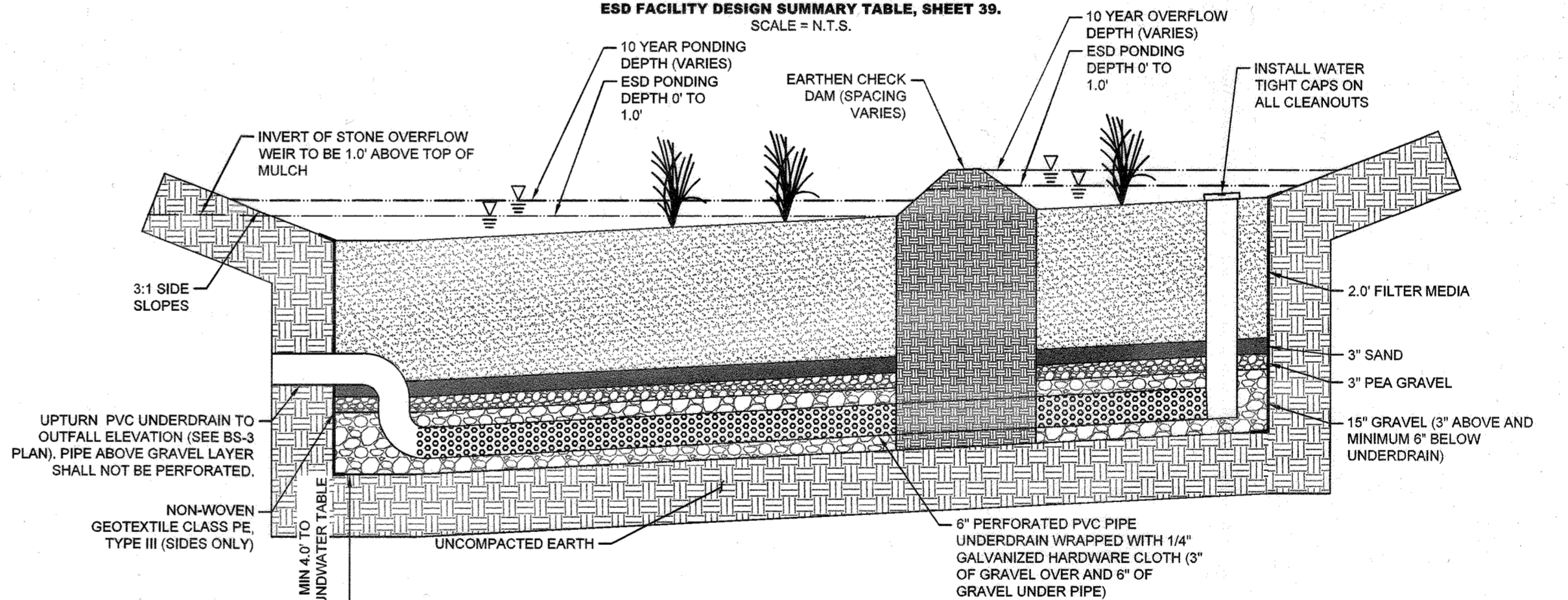
**BIO-SWALE STANDARD CROSS-SECTION #2
BS-4 & BS-5 (WITH OVERFLOW STRUCTURE)**
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ESD FACILITY DESIGN SUMMARY TABLE, SHEET 39.
SCALE = N.T.S.



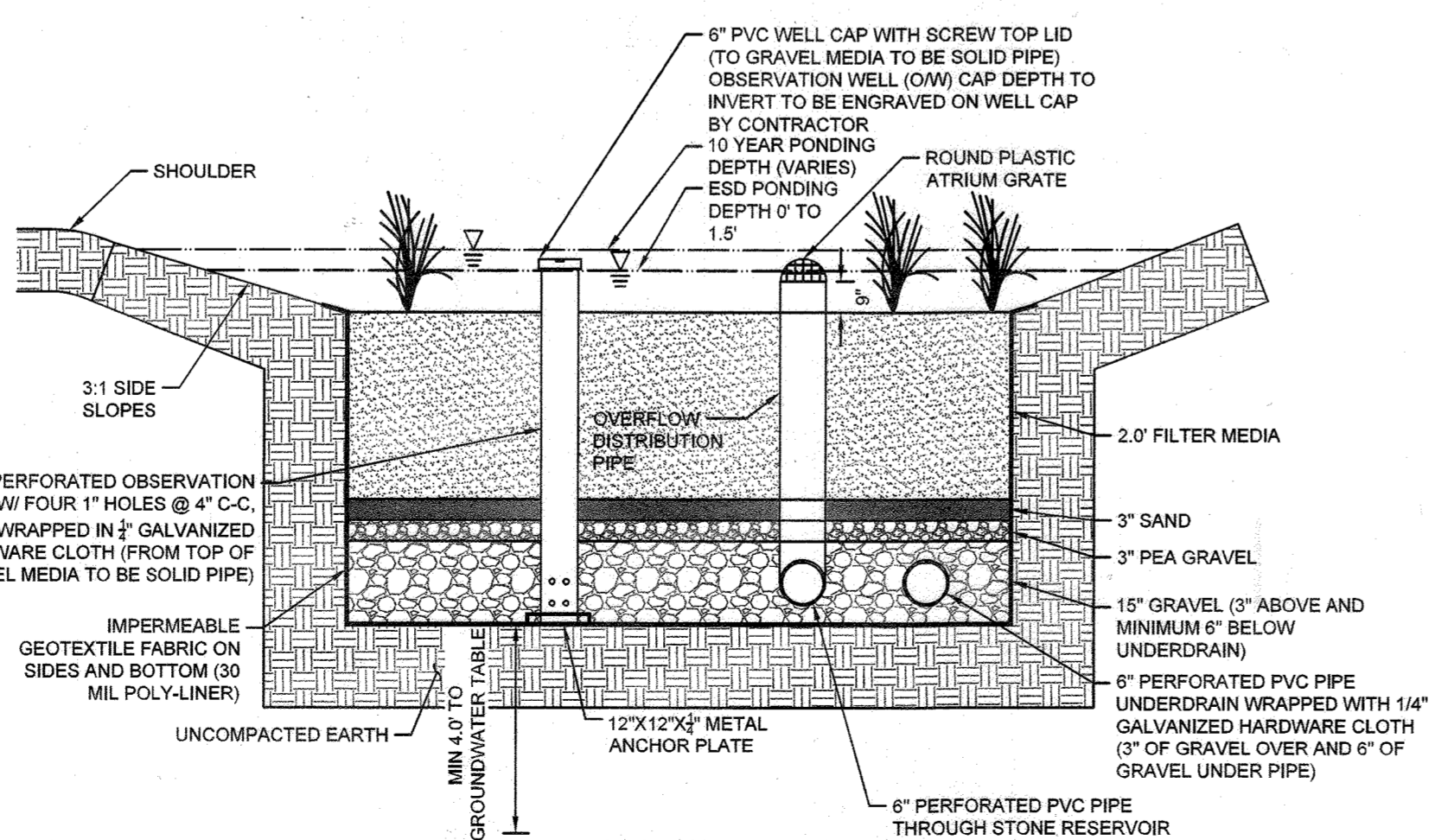
**BIO-SWALE STANDARD CROSS-SECTION #4
BS-1 & BS-2 (W/O OVERFLOW STRUCTURE)**
FOR ALL DEPTHS SHOWN AS "VARIES", REFER TO THE
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SCALE = N.T.S.



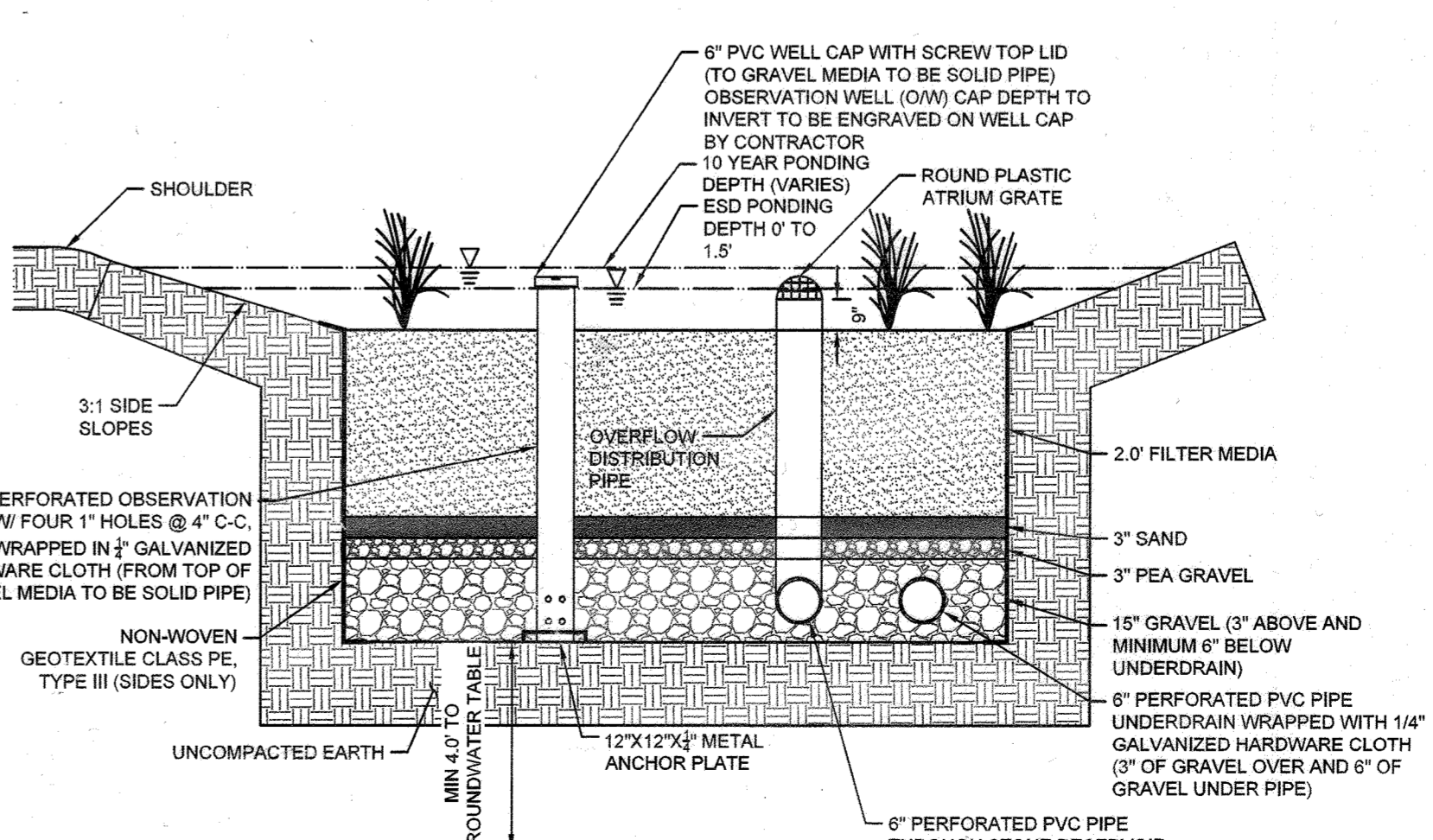
BIO-SWALE CROSS-SECTION #5 (WITH OVERFLOW STRUCTURE, BS-6 ONLY)
FOR ALL DEPTHS SHOWN AS "VARIES", REFER TO THE
ESD FACILITY DESIGN SUMMARY TABLE, SHEET 39.
SCALE = N.T.S.



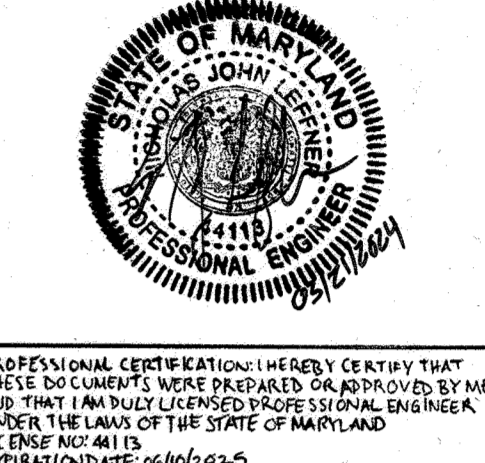
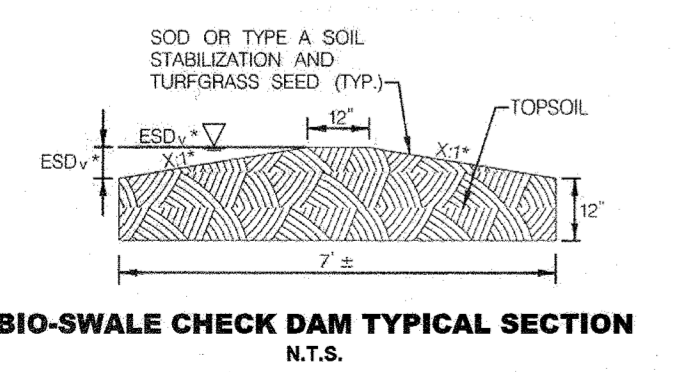
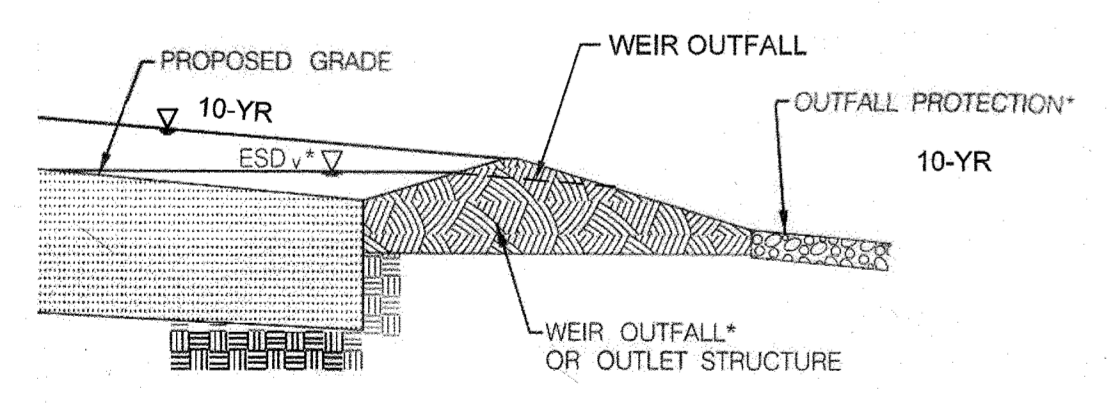
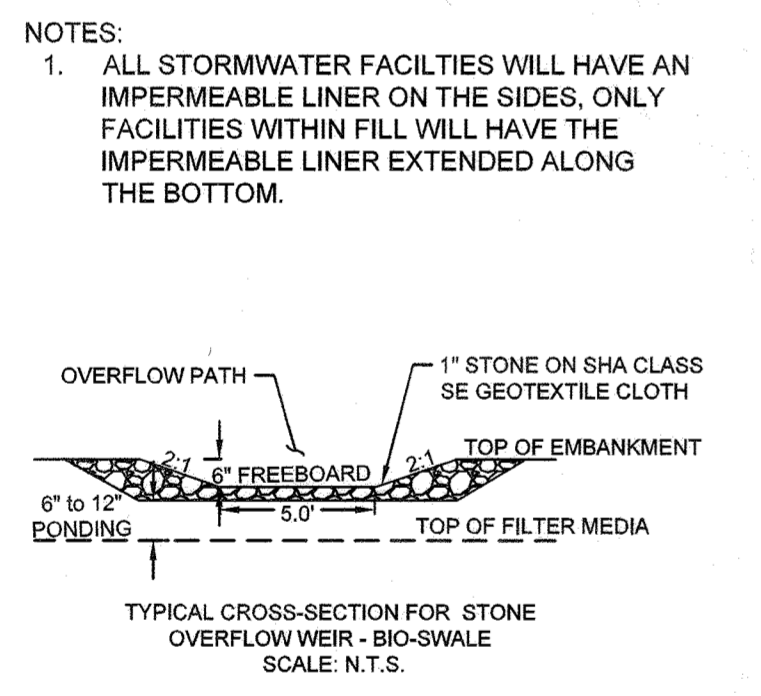
BIO-SWALE CROSS-SECTION #7 (WITHOUT OVERFLOW STRUCTURE, BS-3 ONLY)
FOR ALL DEPTHS SHOWN AS "VARIES", REFER TO THE
ESD FACILITY DESIGN SUMMARY TABLE, SHEET 39.
SCALE = N.T.S.



BIO-SWALE CROSS-SECTION #6 (WITH OVERFLOW STRUCTURE, BS-6 ONLY)
FOR ALL DEPTHS SHOWN AS "VARIES", REFER TO THE
ESD FACILITY DESIGN SUMMARY TABLE, SHEET 39.
SCALE = N.T.S.



BIO-SWALE CROSS-SECTION #8 (WITHOUT OVERFLOW STRUCTURE, BS-3 ONLY)
FOR ALL DEPTHS SHOWN AS "VARIES", REFER TO THE
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6205 PEACHTREE DUNWOODY ROAD
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PHONE: 678-645-2013

NO.	DATE	REVISIONS	BY
1	06/15/2022		KH
2	11/18/2023		KH

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF DEVELOPMENT ENGINEERING DIVISION

DATE: 9/22

DATE: 9/15/22

CHIEF DIVISION OF LAND DEVELOPMENT

DATE: 9-8-22

DIRECTOR

7120 DORSEY RUN ROAD
HOWARD COUNTY, MARYLAND
TAX MAP NO. 43 PARCEL: 371
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FIRST ELECTION DISTRICT

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SITE DEVELOPMENT PLAN BIO-SWALE DETAILS

PROPOSED CUSTOMER ENTRANCE BALTIMORE WASHINGTON AUTO EXCHANGE

HOWARD COUNTY MD

SHEET NUMBER
38 OF 6163

SDP-00-063

CALL 48 HOURS BEFORE YOU DIG

IT'S THE LAW! DIAL 811

Know what's below. Call before you dig.

ESD ID	ESD Type	Mulch Top Elev	Filter Top Elev	Filter Bed Depth	Top of Sand Elev	Depth of Sand	Top of Pea Gravel	Depth of Pea Gravel	Top of Gravel Elev	Underdrain In Size	Invert Elev of Underdrain	Depth of Gravel	Bottom of Facility	Max Depth of Ponding	Overflow Inlet Elev	10-Yr Overtopping 1st Slope	Check Dam Spacing - 1st Slope	Check Dam Spacing - 2nd Slope
BS-1	Bio-Swale	-	137.33	2	135.33	3	135.08	3	134.83	-	-	12	133.83	18	138.83	139.13	50	-
BS-2	Bio-Swale	-	136.48	2	134.48	3	134.23	3	133.98	-	-	12	132.98	18	137.98	138.28	35	61
BS-3	Bio-Swale	-	139.41	2	137.41	3	137.16	3	136.91	6	136.16	12	135.91	12	140.41	140.71	77	-
BS-4	Bio-Swale	-	140.79	2	138.79	3	138.54	3	138.29	6	137.54	12	137.29	18	142.29	142.59	50	-
BS-5	Bio-Swale	-	140.67	2	138.67	3	138.42	3	138.17	6	137.42	12	137.17	12	141.67	141.97	38	-
BS-6*	Bio-Swale	-	150.64	2	148.64	3	148.39	3	148.14	6	147.39	12	147.14	18	152.14	152.44	18	30
MBR-1*	Micro-Bio	162.05	161.80	2	159.80	3	159.55	3	159.30	6	158.55	12	158.30	12	163.05	163.35	-	-

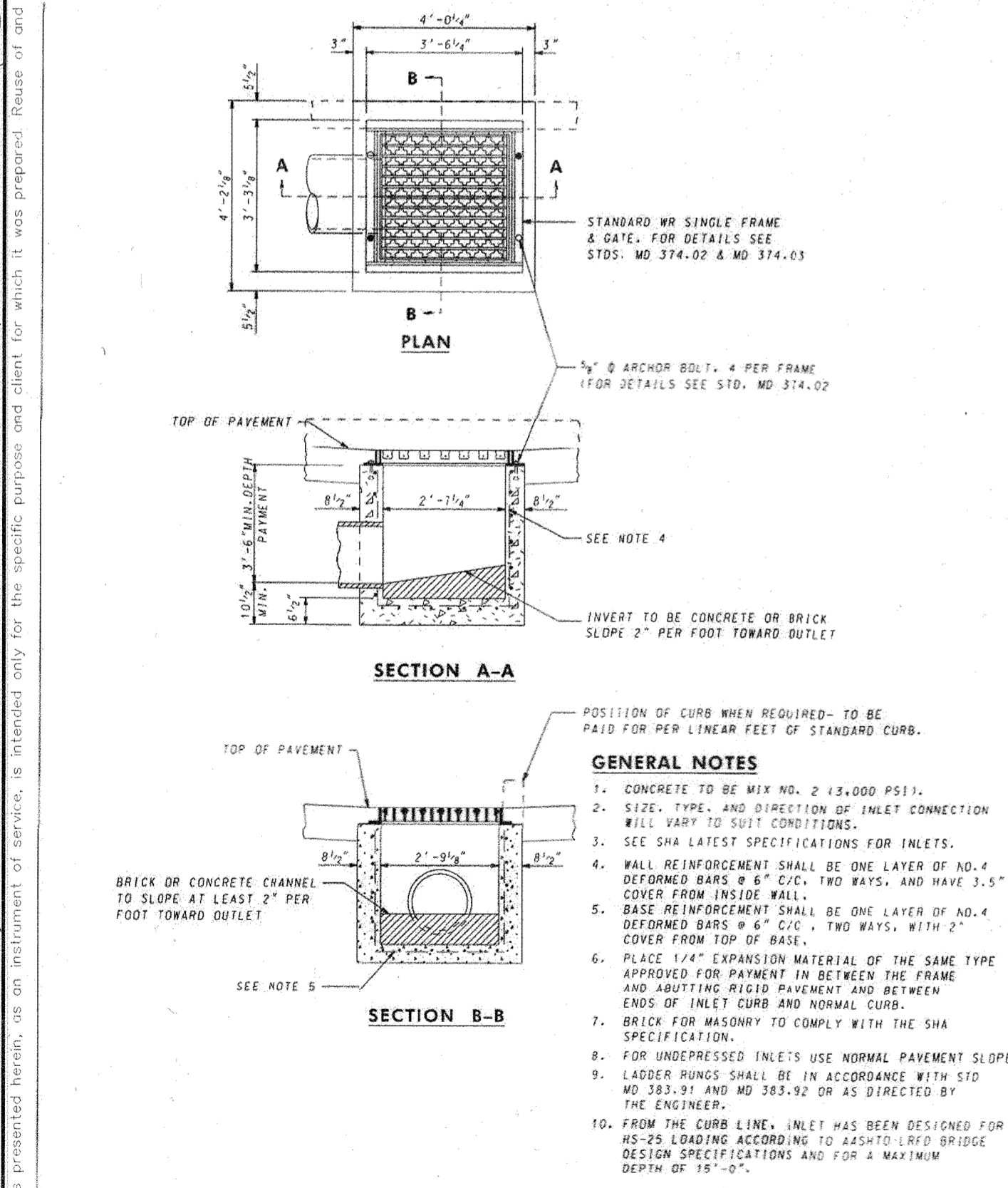
ESD ID	Type of Swale	Total Drainage Area, DA (sf)	Imp Area (sf)	Imp Area Treated (ac)	% I	Rv	Target Rainfall Depth (inches)	Length (ft)	Width (ft)	A _s (Prov'd) (sf)	A _s Req'd (min 2%) (sf)	Average Ponding Depth (ft)	Check Dam Height (ft)	Surface Storage (cf)	Filter Depth (ft)	Porosity, n	Filter Bed Storage (cf)	ESDv Storage Temp (cf)	ESDv Obtained (cf)	ESDv (Max)* (cf)	ESDv Prov'd (cf)	Rev Prov'd (cf)	Pe Prov'd (in)																							
BS-1	Bio-Swale	8150	0.19	6213	0.14	0.14	76%	0.74	1.60	80	8	400	163	1	1.5	400	2	0.4	320	400	533	1300	533	80	1.07																					
BS-2	Bio-Swale	12738	0.29	7657	0.18	0.18	60%	0.59	1.60	175	8	1400	255	1	1.5	400	1.14	2	0.4	1120	1400	1631	1091	1352	280	2.00																				
BS-3	Bio-Swale	3592	0.06	1698	0.04	0.04	47%	0.48	1.60	60	4	240	72	0.5	1.0	120	2	0.4	192	120	160	370	160	48	1.12																					
BS-4	Bio-Swale	13200	0.30	6506	0.15	0.15	49%	0.49	1.60	100	8	800	264	1	1.5	800	2	0.4	640	800	1067	1412	1067	160	1.96																					
BS-5	Bio-Swale	8242	0.19	4260	0.10	0.10	52%	0.52	1.60	150	4	600	165	0.5	1.0	300	2	0.4	480	300	400	920	400	120	1.13																					
BS-6*	Bio-Swale	16517	0.38	10391	0.24	0.24	63%	0.62	1.60	270	8	2160	331	1	1.5	2160	2	0.4	1728	2160	2880	2205	2205	0	2.60																					
MBR-1*	Micro-Bio	3559	0.08	2354	0.05	0.05	66%	0.65	1.60	25	6	150	72	1	N/A	150	2	0.4	120	150	200	496	200	0	1.05																					
																					Total Provided	66669		688																						
																					Total Required	5465		444																						

Notes and Equations

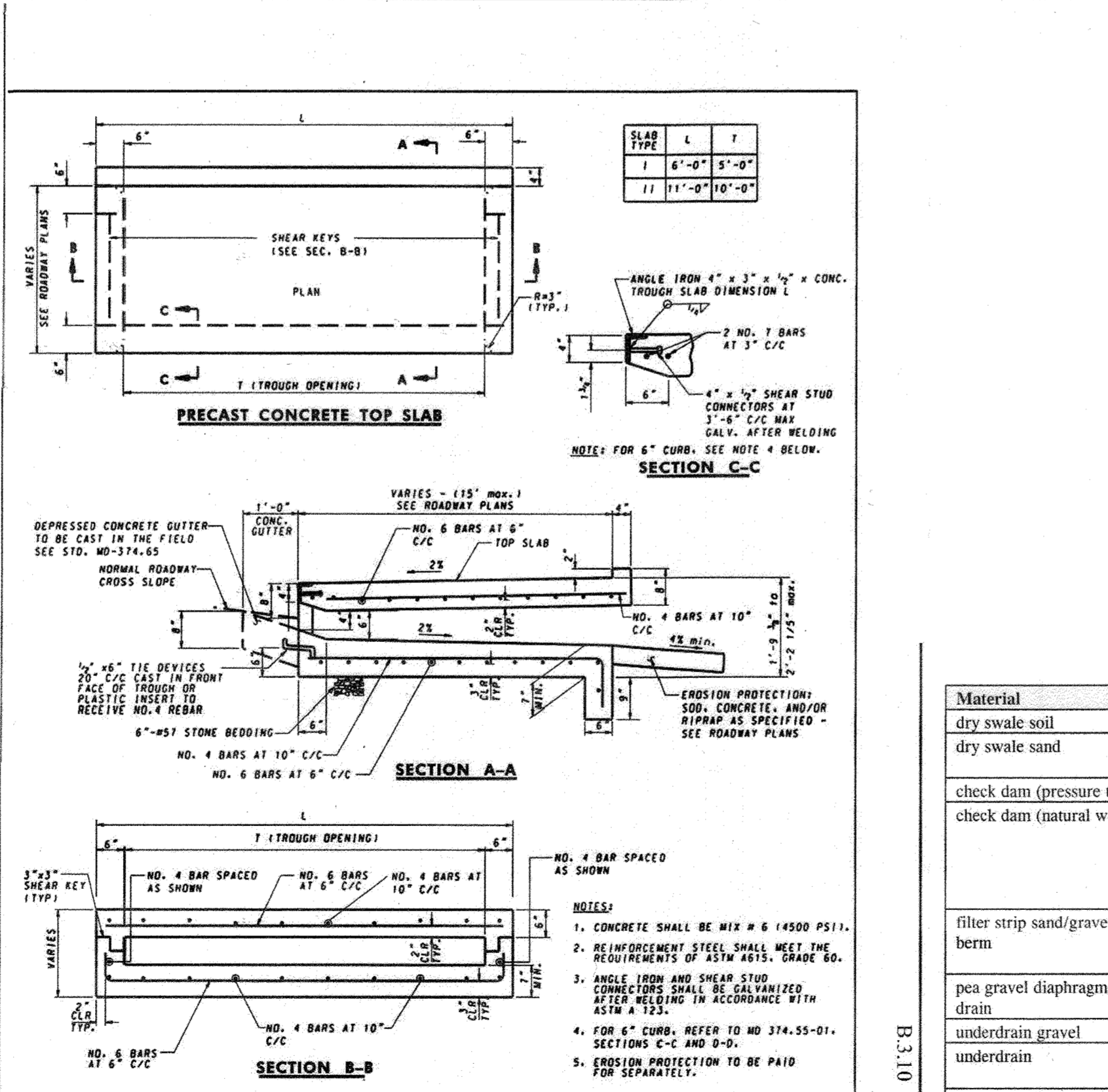
(D) %I = Imp Area / Total DA
(E) Rv = 0.05 + 0.009*(%I)
(F)* Target Rainfall Depth = Overall Site Target Rainfall Depth & is Not Calculated Individually For Each Facility
(I) A_s (Prov'd) = Length * Width
(J) A_s (min) = Total Drainage * 2% (per MDE Manual)
(L) Height = Ponding Depth * 2

(M) Surface Storage = A_s (Prov'd) * Ponding Depth (Note: Per MDE Manual 75% Temporary Storage Required for treatment)
(P) Filter Bed Storage = A_f (Prov'd) * Filter Depth * Porosity
(Q) ESDv Storage = Surface Storage
(R) ESDv Obtained = ESDv Storage / 75%
(S) ESDv (max) = (2.6 * Rv * DA) / 12
(T) ESDv Prov'd = Minimum of ESDv Obtained and ESD (max) (Note: Maximum Storage for 1-yr storm event, P = 2.6")
(V) Pe Prov'd = (ESDv Prov'd * 12) / (Rv * DA)
(U) Rev Prov'd = Porosity * Filter Area * Gravel Depth Below Underdrain (6")

NOTE: THE CHANGE IN SURFACE STORAGE ACCOUNTS FOR THE 9 INCHES OF FILTER MEDIA ADDED TO THE DOWNSTREAM SECTION OF BS-2. ADDITIONAL FILTER MEDIA STORAGE NOT CREDITED.



Specification 305
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SINGLE WR INLET
STANDARD NO. MD 374.06

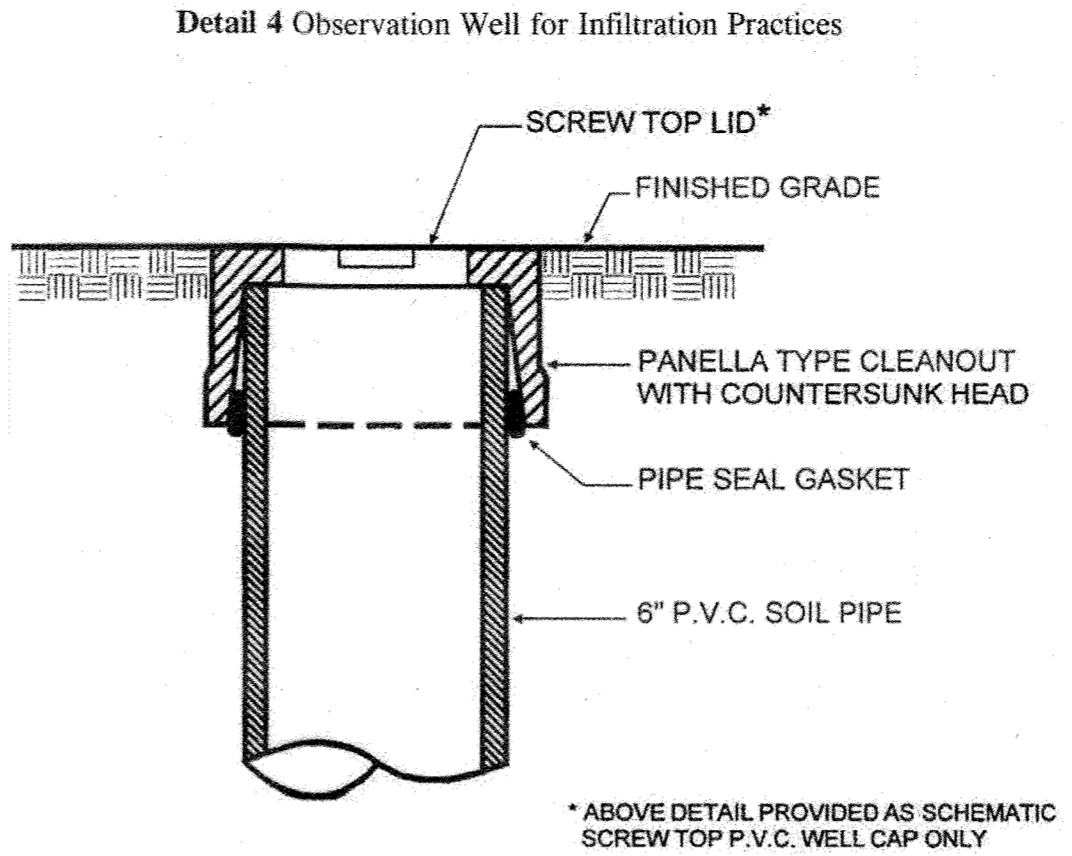


Specification 305
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PRECAST OR CAST-IN-PLACE COG /COS OPENING FOR 6" CURB 5' OR 10' ONLY
STANDARD NO. MD 374.68



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Appendix D.8 - Miscellaneous Details for Compliance with Performance Criteria



EACH OBSERVATION WELL / CLEANOUT SHALL INCLUDE THE FOLLOWING:

- FOR AN UNDERGROUND FLUSH MOUNTED OBSERVATION WELL / CLEANOUT, PROVIDE A TUBE MADE OF NON-CORROSIVE MATERIAL, SCHEDULE 40 OR EQUIVALENT, AT LEAST THREE FEET LONG WITH AN INSIDE DIAMETER OF AT LEAST 6 INCHES.
- THE TUBE SHALL HAVE A FACTORY ATTACHED CAST IRON OR HIGH IMPACT PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING SCREW TOP LID. THE SCREW TOP LID SHALL BE CAST IRON OR HIGH IMPACT PLASTIC THAT WILL WITHSTAND ULTRA-VIOLET RAYS.

OBSERVATION WELL DETAIL

D.8.5 STORMWATER MAINTENANCE SCHEDULE ENVIRONMENTAL SENSITIVE DESIGN

Practice	Frequency of Inspection	Preventive Maintenance	Maintenance Requirement
BIO-SWALE	Seasonally (and after a major storm)	Stabilize eroded side slopes, check dams, and bottom as needed. If specific plants are not surviving, replace with more appropriate species.	Irrigate during prolonged dry periods. Remove any dead or dying vegetation and re-vegetate. Prune vegetation occasionally. Remove accumulated sediment from surface of filter bed when accumulation exceeds one inch. If water ponds for more than 48 hours, remove and replace the top few inches of filter media. Replace mulch annually where practice treats areas with high concentrations of heavy metals. Otherwise, replace top 2-3 inches as necessary.

Table B.3.3 Open Channel Systems and Filter Strip Materials Specifications

Material	Specification	Size	Notes
dry swale soil	USCS, ML, SM, SC	n/a	soil with a higher percent organic content is preferred
dry swale sand	ASTM C-33 fine aggregate concrete sand	0.02" to 0.04"	
check dam (pressure treated)	AWPA Standard C6	6" by 6" or 8" by 8"	do not coat with creosote; embed at least 3" into side slopes
check dam (natural wood)	Black Locust, Red Mulberry, Cedars, Catalpa, White Oak, Chestnut Oak, Black Walnut	6" to 12" diameter; notch as necessary	do not use the following, as these species have a predisposition towards rot: Ash, Beech, Birch, Elm, Hackberry, hemlock, Hickories, Maples, Red and Black Oak, Pines, Poplar, Spruce, Sweetgum, Willow
filter strip sand/gravel pervious berm	sand: per dry swale sand; gravel: AASHTO M-43	sand: 0.02" to 0.04" gravel: 1/2" to 1"	mix with approximately 25% loam soil to support grass cover crop; sand (35-60%), silt (30-55%), and gravel (10-25%) see Bioretention planting soil notes for more detail.
pea gravel diaphragm and curtain drain	ASTM D 448	varies (No. 6) or (1/8" to 3/8")	use clean bank-run gravel
underdrain gravel	AASHTO M-43	0.25" to 0.75"	
underdrain	F 758 Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes
geotextile	Class "C" - apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D-4632), puncture resistance (ASTM-D-4833)	n/a	
rip rap	per county criteria; if none given, use MSHA Standards and Specs Section 905	size per county DOT requirements based on 10-year design flows	

B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDENS, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS
THE ALLOWABLES TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL
THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMIUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
• SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
• ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974), IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
• CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 6%.
• PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL IF TOPSOIL IS IMPORTED. WHEN A TEXTURAL ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TIRE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION SHALL BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILL TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTO TILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTO TILLING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING AN INFILTRATION FACILITY, PLACE SOIL IN LIFTS 12" TO 18" DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE LAYED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE. ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALLS SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.

TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL. GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY, ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
• PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS 28, OR AASHTO M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OR HDPE).
• PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 1/2" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4) GALVANIZED STEEL GAVARE CLOTH.
• GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
• THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
• A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
• A 4" LAYER OF PEA GRAVEL (1/4" TO 3/4" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.



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COX AUTOMOTIVE, INC.
6205 PEACHTREE DUNWOODY ROAD
ATLANTA, GA 30328
PHONE: 678-645-2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING	DATE	REVISIONS
KH	06/15/2022	
KH	11/26/2023	
1	9.5.22	DATE
2	9/18/22	DATE
	9-8-2023	DATE

7120 DORSEY RUN ROAD
HOWARD COUNTY, MARYLAND
TAX MAP NO. 4-3 PARCEL 371
ZONING: M-2 BLOCK 10
FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
SCALE: AS SHOWN
DATE: 06/15/2022
DESIGNED BY: RLH
DRAWN BY: RLH
CHECKED BY: NUL

PROFESSIONAL CERTIFICATION 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. 44113
EXPIRATION DATE: 06/15/2023



SITE DEVELOPMENT PLAN BIO-SWALE DETAILS

PROPOSED CUSTOMER ENTRANCE BALTIMORE WASHINGTON AUTO EXCHANGE
HOWARD COUNTY MD

SHEET NUMBER
39 OF 6163

Plotted By: Moyer, Jessica - Sheet Set: Dorsey Run Road - Access Road - Layout: 40 SITE DEVELOPMENT PLAN BIO-SWALE DETAILS - June 15, 2022 - 10:27:20am - K:\BAL_OVA\110204002 - 7120 Dorsey Run Road\CAD\PlanSheets\41 - SITE DEVELOPMENT PLAN SWM DETAILS.dwg
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COX AUTOMOTIVE, INC.
 6205 PEACHTREE DUNWOODY ROAD
 ATLANTA, GA 30328
 PHONE: 678-645-2013

NO.	DATE	REVISIONS	BY
1	06/15/2022	ACCESS ROAD, SWM AND GRADING	KH
2	11/28/2023	ENTRANCE ROAD SWM REDLINE #1	KH

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 9/22

CHIEF DEVELOPMENT ENGINEERING DIVISION

DATE: 9/18/22

CHIEF DIVISION OF LAND DEVELOPMENT

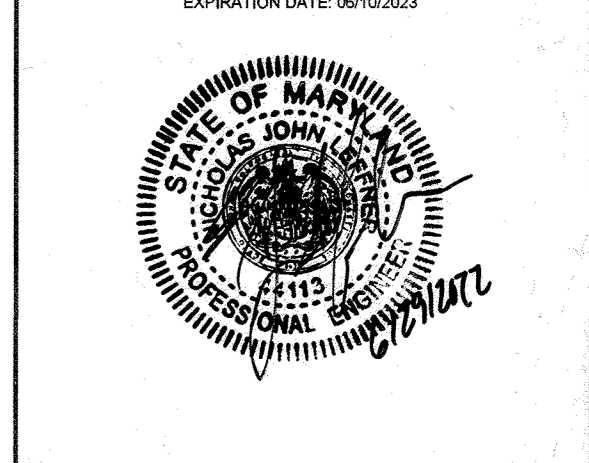
DATE: 9-8-22

DIRECTOR

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
 SCALE: AS SHOWN
 DATE: 06/15/2022
 DESIGNED BY: RLH
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 LICENSE NO. 44113
 EXPIRATION DATE: 06/15/2025



SITE DEVELOPMENT PLAN BIO-SWALE DETAILS

PROPOSED CUSTOMER ENTRANCE
 PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
 HOWARD COUNTY MD

SHEET NUMBER
40 OF 61 63

SDP-00-013

AS-BUILT DATA FOR BIO-SWALE BS 3
 *TO BE COMPLETED BY THE CERTIFYING ENGINEER

TYPE OF FACILITY: BIO-SWALE	DESIGN	AS-BUILT
FILTER BED DIMENSIONS	4.0' X 60.0'	
FILTER BED AREA (SF)	240	
VOLUME PROVIDED (CF)	160	
PLANTING MEDIA / SOIL TOP ELEVATION	139.41	
PLANTING SOIL BOTTOM ELEVATION	137.41	
UNDERDRAIN INVERT	136.16	
BOTTOM OF GRAVEL ELEVATION	135.91	
TOP OBSERVATION WELL ELEVATION	140.41	
INLET TOP ELEVATION	140.41	
OVERFLOW WEIR ELEVATION	140.71	
TOP OF FACILITY	140.91	

AS-BUILT IS ACCURATE AND COMPLETE; DESIGN STORAGE VOLUME IS PROVIDED.

AS-BUILT DATA FOR BIO-SWALE BS 2
 *TO BE COMPLETED BY THE CERTIFYING ENGINEER

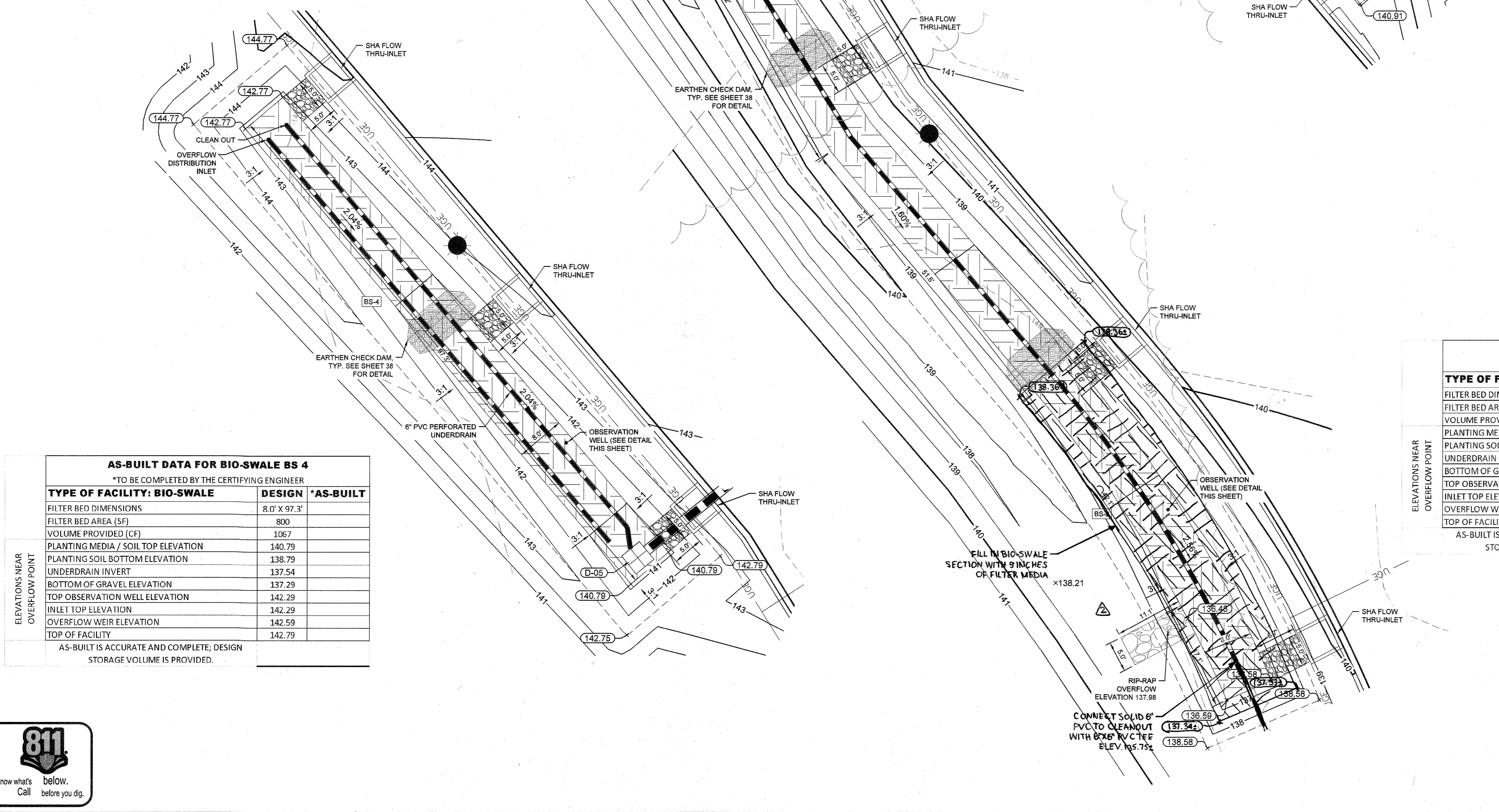
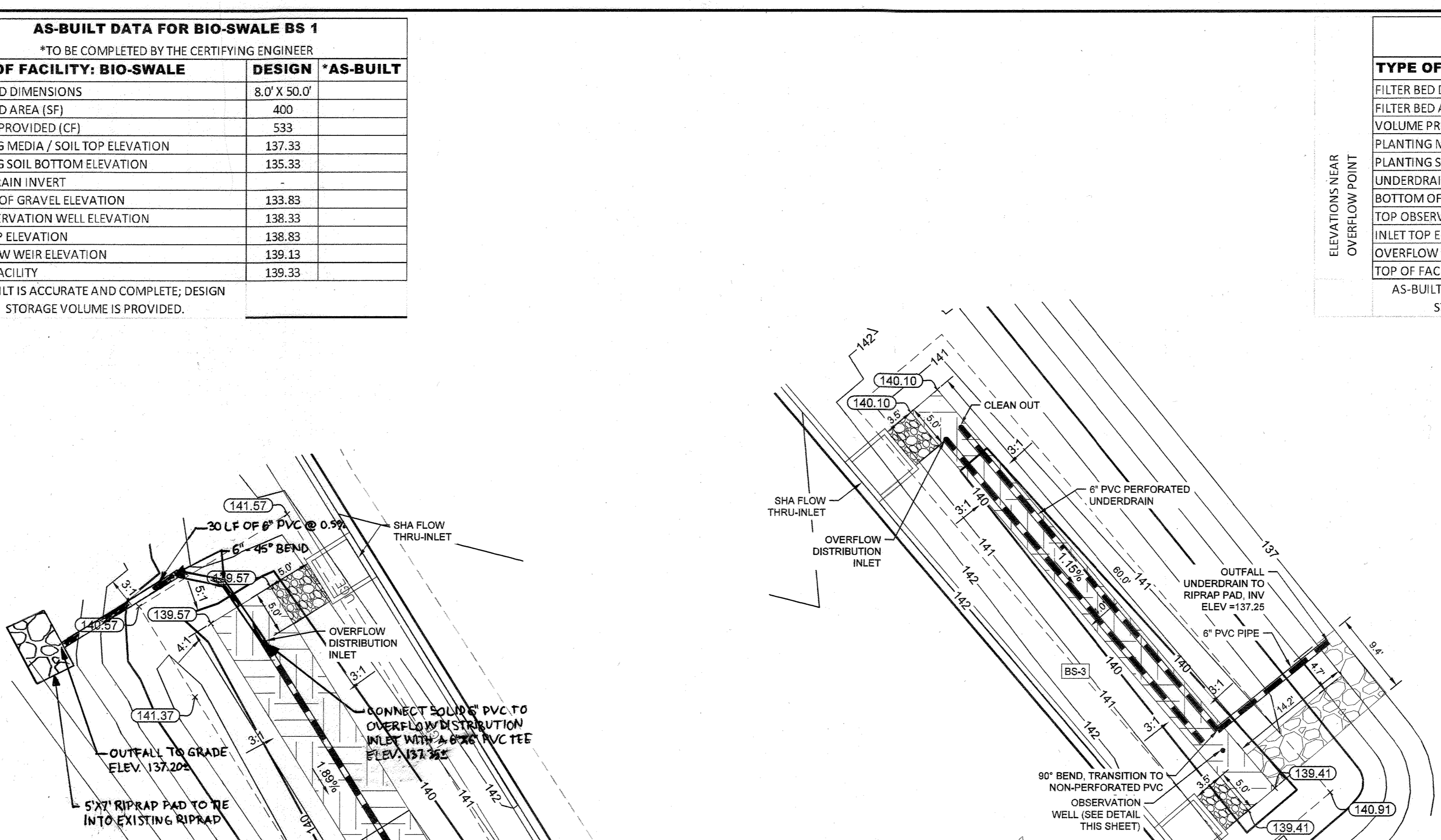
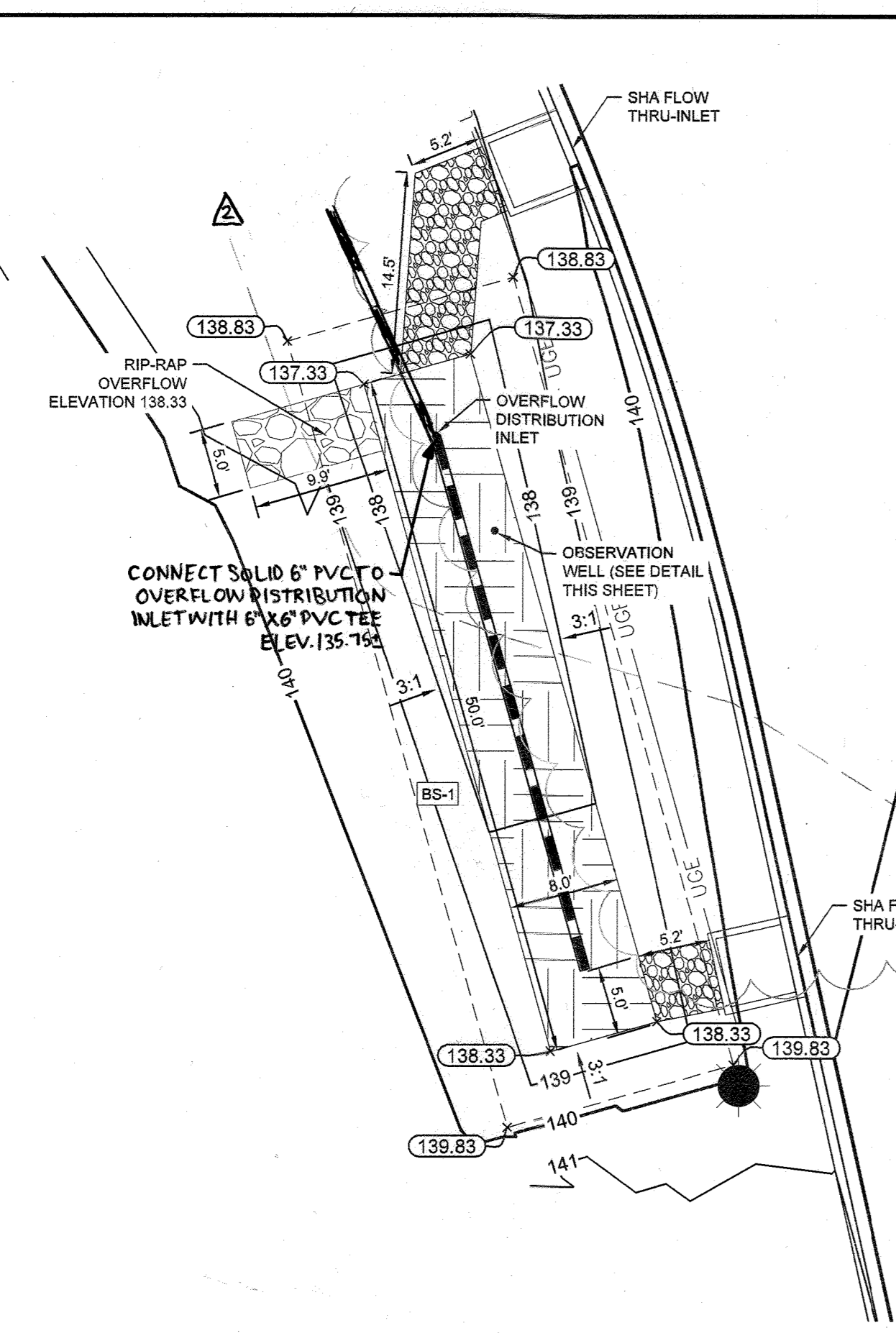
TYPE OF FACILITY: BIO-SWALE	DESIGN	AS-BUILT
FILTER BED DIMENSIONS	8.0' X 172.0'	
FILTER BED AREA (SF)	1400	
VOLUME PROVIDED (CF)	1631	
PLANTING MEDIA / SOIL TOP ELEVATION	136.48	
PLANTING SOIL BOTTOM ELEVATION	134.48	
UNDERDRAIN INVERT	132.98	
BOTTOM OF GRAVEL ELEVATION	132.98	
TOP OBSERVATION WELL ELEVATION	137.48	
INLET TOP ELEVATION	137.98	
OVERFLOW WEIR ELEVATION	138.28	
TOP OF FACILITY	138.48	

AS-BUILT IS ACCURATE AND COMPLETE; DESIGN STORAGE VOLUME IS PROVIDED.

AS-BUILT DATA FOR BIO-SWALE BS 1
 *TO BE COMPLETED BY THE CERTIFYING ENGINEER

TYPE OF FACILITY: BIO-SWALE	DESIGN	AS-BUILT
FILTER BED DIMENSIONS	8.0' X 50.0'	
FILTER BED AREA (SF)	400	
VOLUME PROVIDED (CF)	533	
PLANTING MEDIA / SOIL TOP ELEVATION	137.33	
PLANTING SOIL BOTTOM ELEVATION	135.33	
UNDERDRAIN INVERT	133.83	
BOTTOM OF GRAVEL ELEVATION	133.83	
TOP OBSERVATION WELL ELEVATION	138.33	
INLET TOP ELEVATION	138.83	
OVERFLOW WEIR ELEVATION	139.13	
TOP OF FACILITY	139.33	

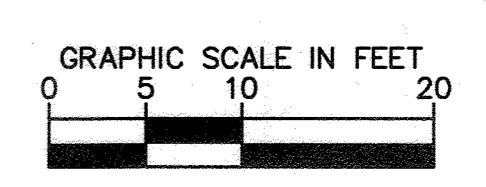
AS-BUILT IS ACCURATE AND COMPLETE; DESIGN STORAGE VOLUME IS PROVIDED.



AS-BUILT DATA FOR BIO-SWALE BS 4
 *TO BE COMPLETED BY THE CERTIFYING ENGINEER

TYPE OF FACILITY: BIO-SWALE	DESIGN	AS-BUILT
FILTER BED DIMENSIONS	8.0' X 97.3'	
FILTER BED AREA (SF)	800	
VOLUME PROVIDED (CF)	1067	
PLANTING MEDIA / SOIL TOP ELEVATION	140.79	
PLANTING SOIL BOTTOM ELEVATION	138.79	
UNDERDRAIN INVERT	137.54	
BOTTOM OF GRAVEL ELEVATION	137.29	
TOP OBSERVATION WELL ELEVATION	142.29	
INLET TOP ELEVATION	142.29	
OVERFLOW WEIR ELEVATION	142.59	
TOP OF FACILITY	142.79	

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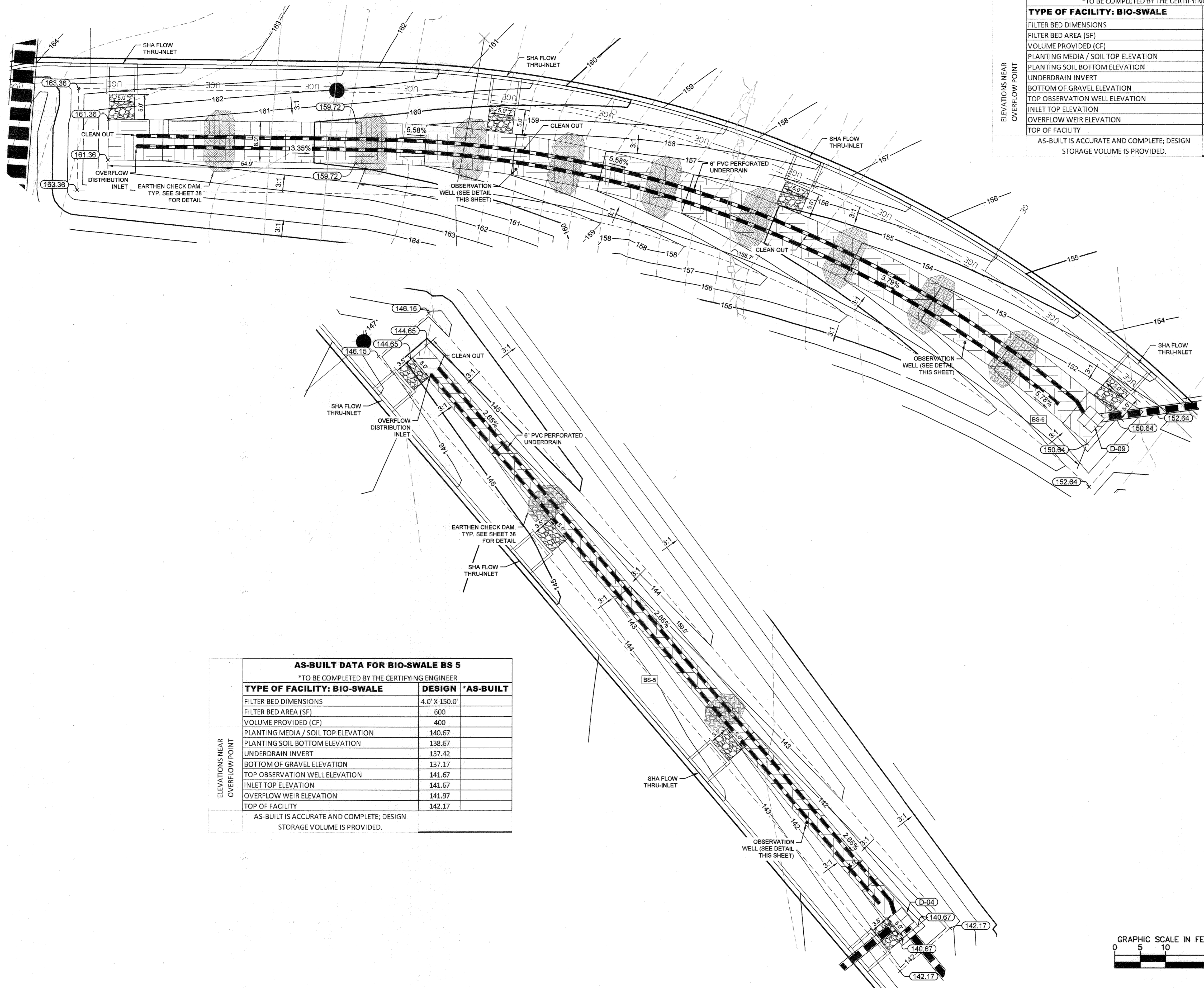
CALL 48 HOURS BEFORE YOU DIG

811

IT'S THE LAW! DIAL 811

Know what's below. Call before you dig.

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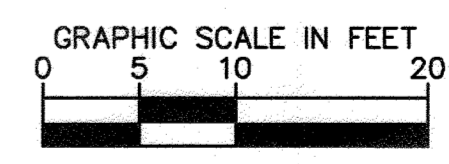


AS-BUILT DATA FOR BIO-SWALE BS 6		
*TO BE COMPLETED BY THE CERTIFYING ENGINEER		
TYPE OF FACILITY: BIO-SWALE	DESIGN	AS-BUILT
FILTER BED DIMENSIONS	8.0' X 210.6'	
FILTER BED AREA (SF)	2160	
VOLUME PROVIDED (CF)	2244	
PLANTING MEDIA / SOIL TOP ELEVATION	150.64	
PLANTING SOIL BOTTOM ELEVATION	148.64	
UNDERDRAIN INVERT	147.39	
BOTTOM OF GRAVEL ELEVATION	147.14	
TOP OBSERVATION WELL ELEVATION	152.14	
INLET TOP ELEVATION	152.14	
OVERFLOW WEIR ELEVATION	152.44	
TOP OF FACILITY	152.64	

AS-BUILT IS ACCURATE AND COMPLETE; DESIGN STORAGE VOLUME IS PROVIDED.

AS-BUILT DATA FOR BIO-SWALE BS 5		
*TO BE COMPLETED BY THE CERTIFYING ENGINEER		
TYPE OF FACILITY: BIO-SWALE	DESIGN	AS-BUILT
FILTER BED DIMENSIONS	4.0' X 150.0'	
FILTER BED AREA (SF)	600	
VOLUME PROVIDED (CF)	400	
PLANTING MEDIA / SOIL TOP ELEVATION	140.67	
PLANTING SOIL BOTTOM ELEVATION	138.67	
UNDERDRAIN INVERT	137.42	
BOTTOM OF GRAVEL ELEVATION	137.17	
TOP OBSERVATION WELL ELEVATION	141.67	
INLET TOP ELEVATION	141.67	
OVERFLOW WEIR ELEVATION	141.97	
TOP OF FACILITY	142.17	

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NO.	REVISIONS	DATE	BY
1	ACCESS ROAD, SWM AND GRADING	06/15/2022	KH

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 8/22
 CHIEF DEVELOPMENT ENGINEERING DIVISION
 DATE: 9/8/22
 CHIEF DIVISION OF LAND DEVELOPMENT
 DATE: 9-8-22
 DIRECTOR

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

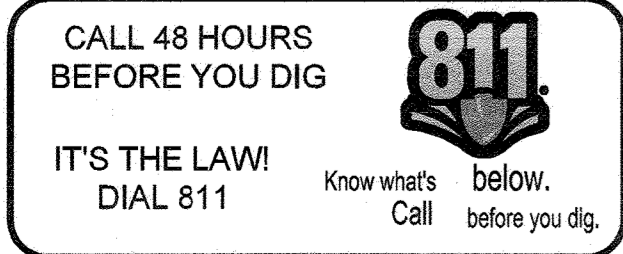
KHA PROJECT NO.: 110204002
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 DESIGNED BY: RLH
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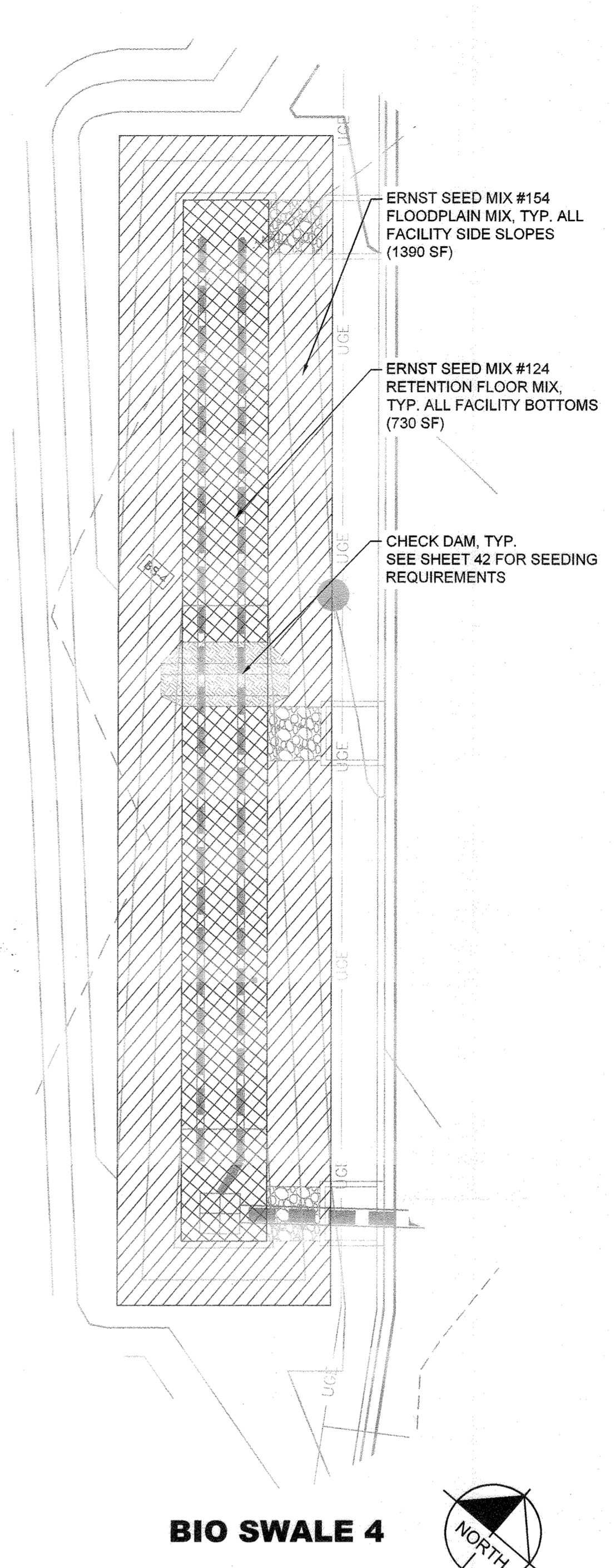
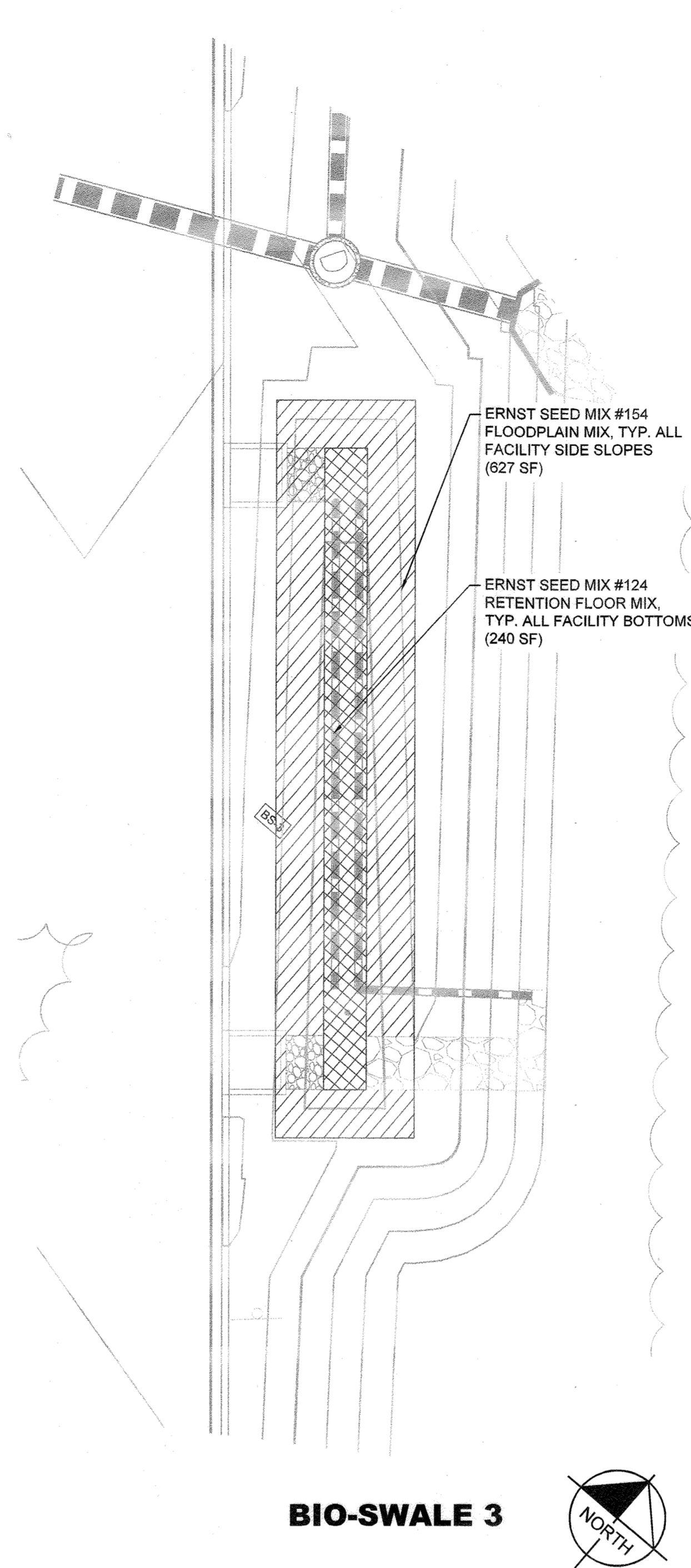
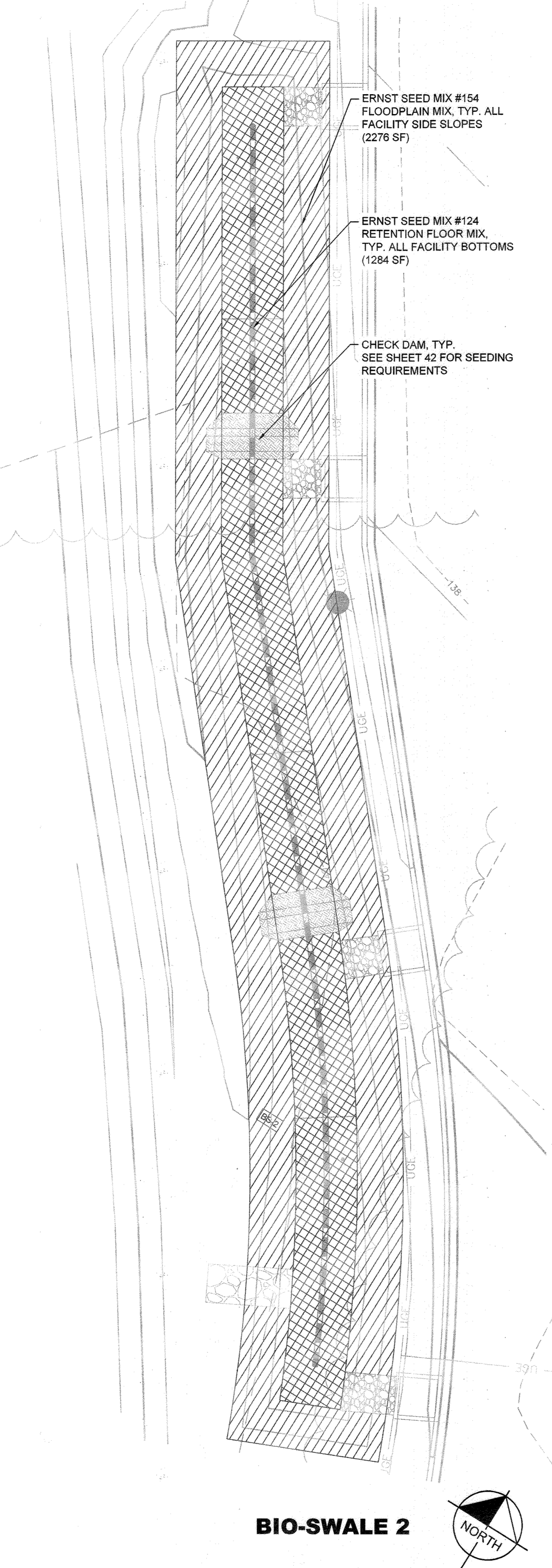
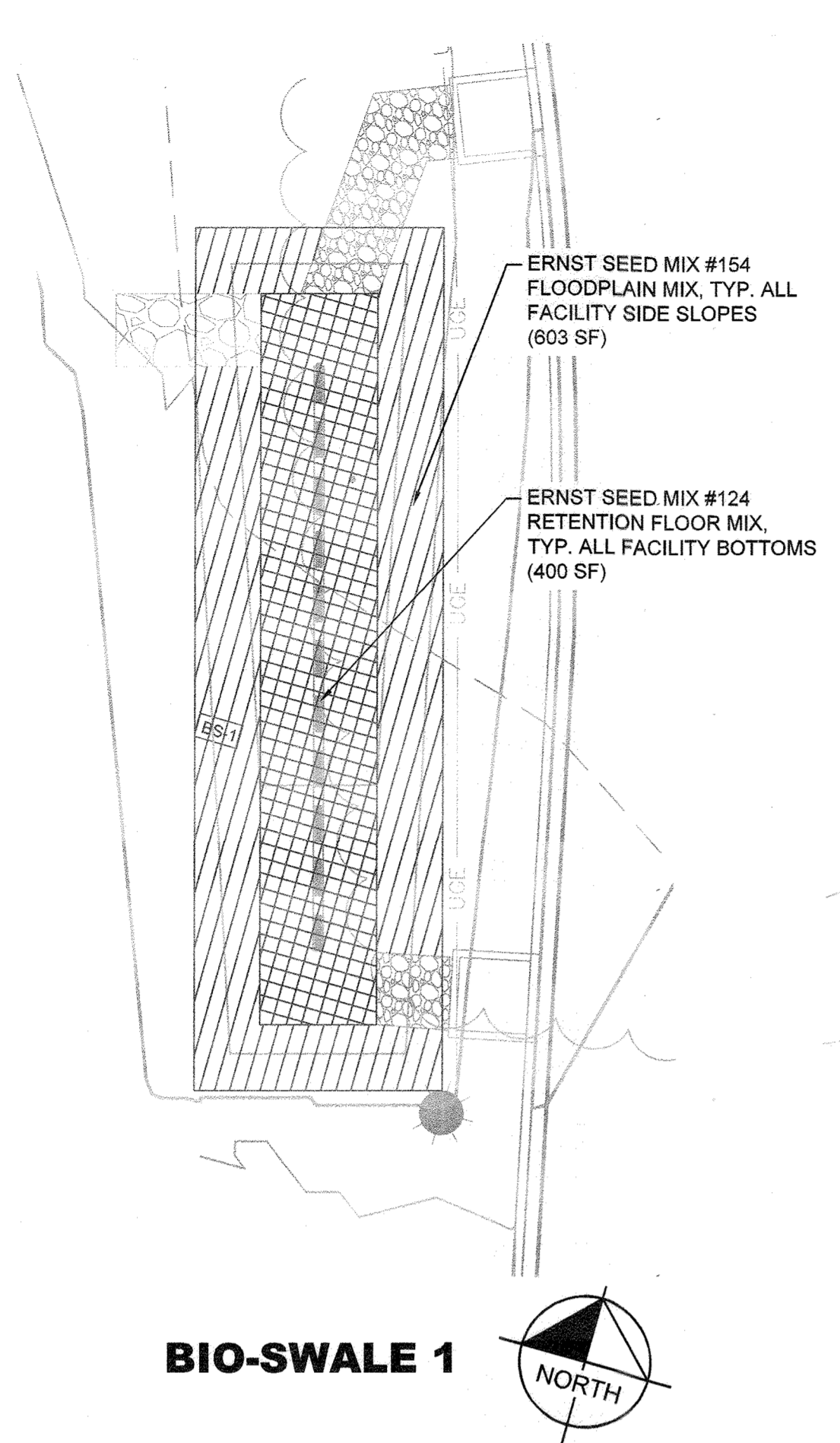
SITE DEVELOPMENT PLAN BIO-SWALE DETAILS

PROPOSED CUSTOMER ENTRANCE
 PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
 HOWARD COUNTY MD

SHEET NUMBER
41 OF 61



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PLANT SCHEDULE

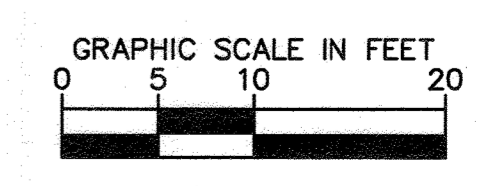
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT
IG	3	Ilex glabra	Inkberry Holly	24" HT. MIN.

GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING
	IVE	37	Iris versicolor	Blue Flag	2 qt	15" o.c.
	JEF	139	Juncus effusus	Soft Rush	2 qt	8" o.c.

SEED SCHEDULE

SEED MIXES	CODE	SIZE (AREA)	SEED MIX TYPE
	126	9,313 S.F.	Ernst Mix #124 - Retention Basin Floor Mix - Low Maintenance
	154	4,452 S.F.	Ernst Mix #154 - Floodplain Mix

NOTE: REFER TO SHEET 47 FOR SEED AND PLOT SCHEDULE



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 DATE: 9-5-22
 CHIEF DEVELOPMENT ENGINEERING DIVISION

CHIEF DIVISION OF LAND DEVELOPMENT
 DATE: 9-8-22
 DIRECTOR

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

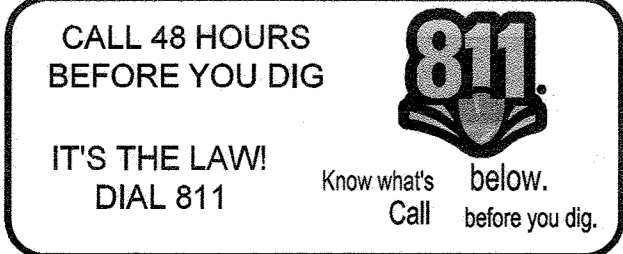
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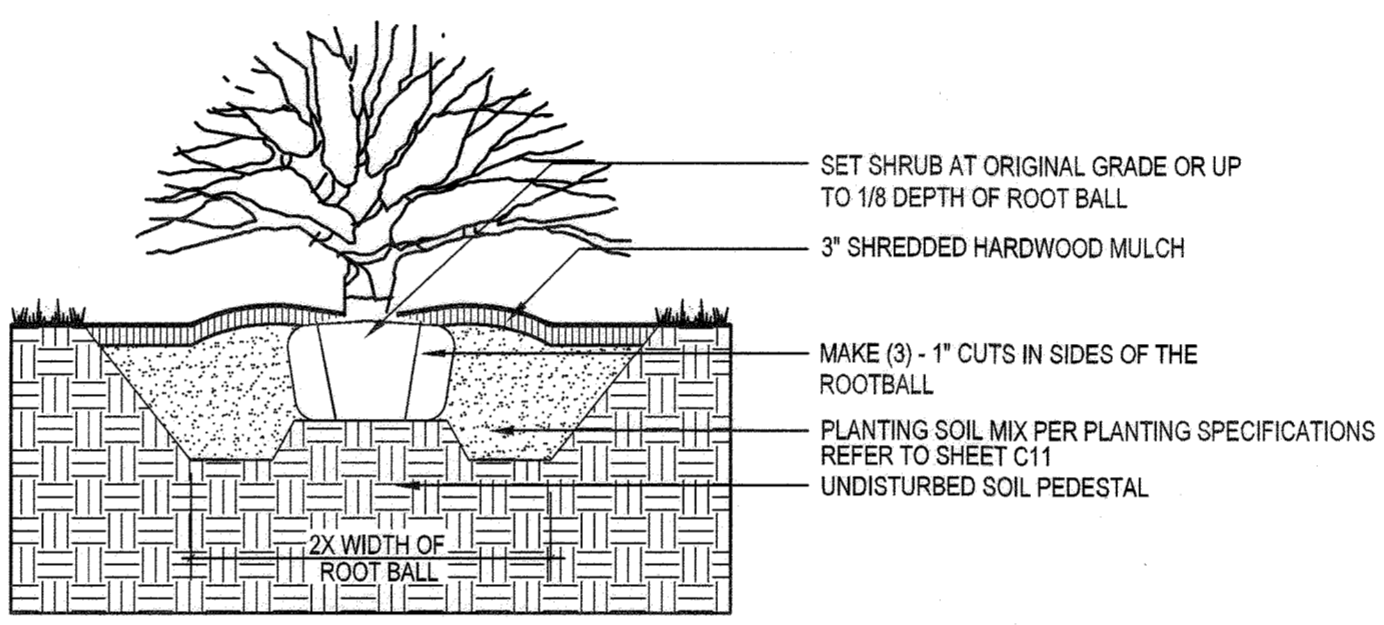
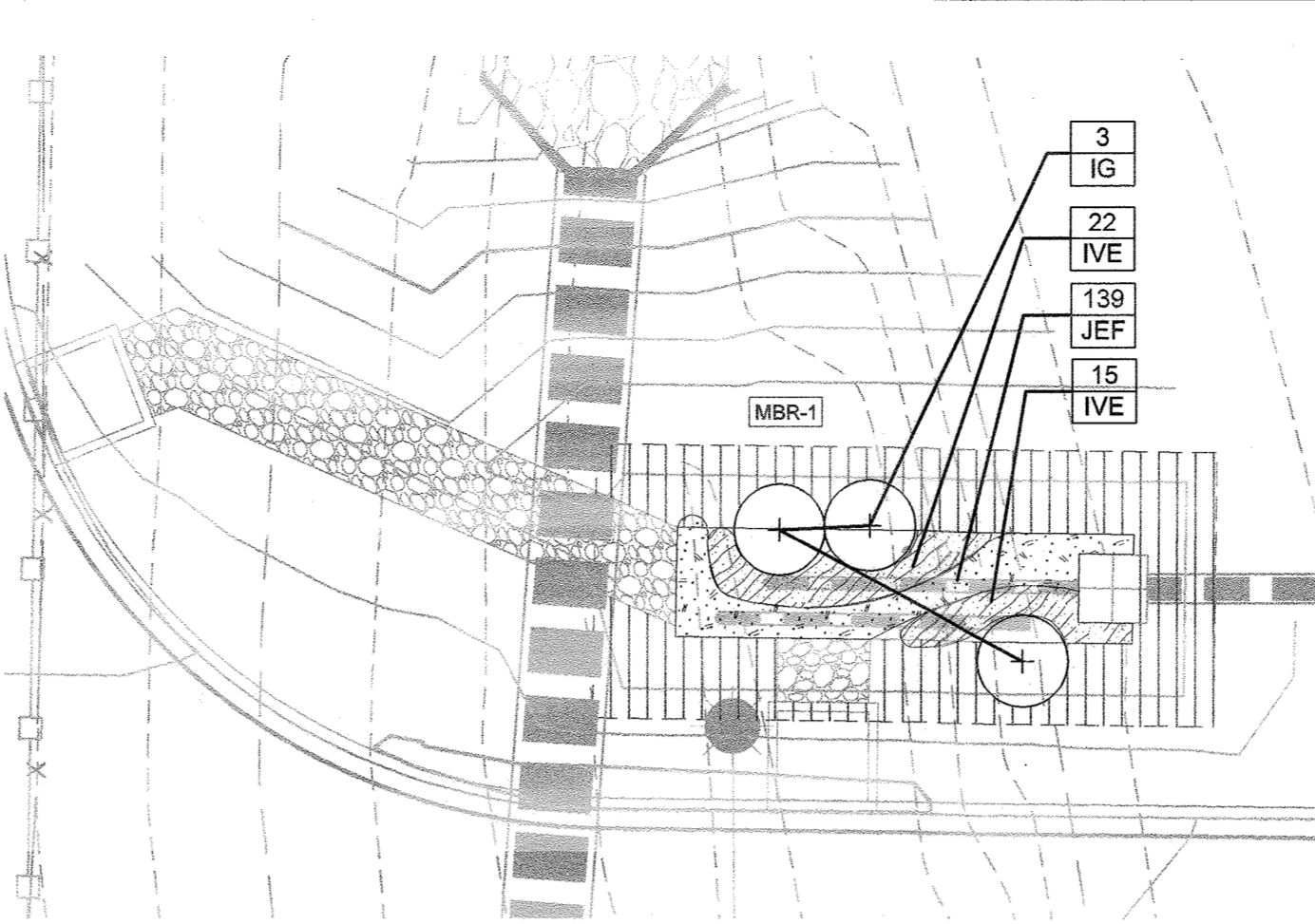
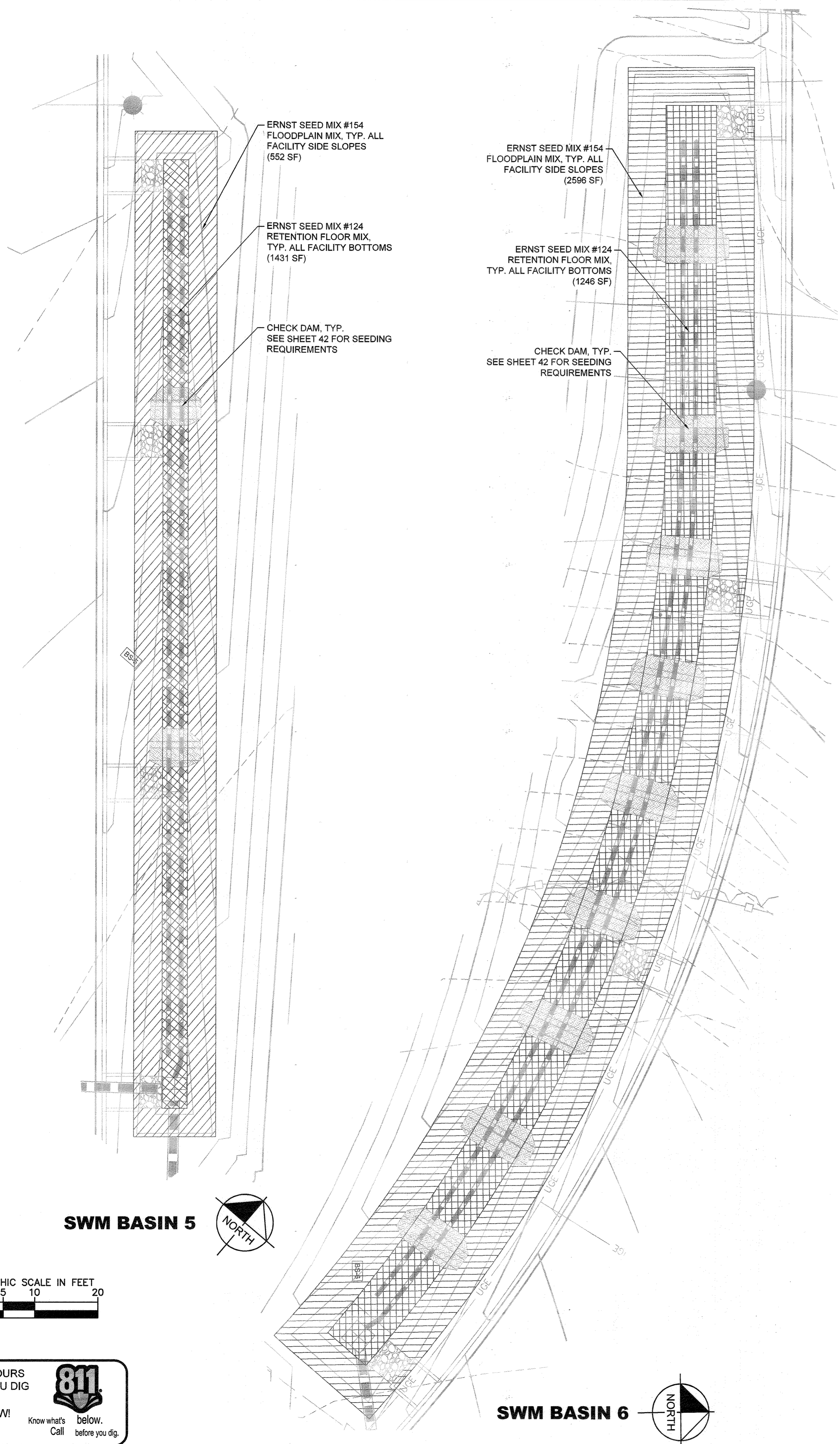
SWM LANDSCAPE PLANS

PROPOSED CUSTOMER ENTRANCE
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BALTIMORE WASHINGTON AUTO EXCHANGE
 HOWARD COUNTY MD

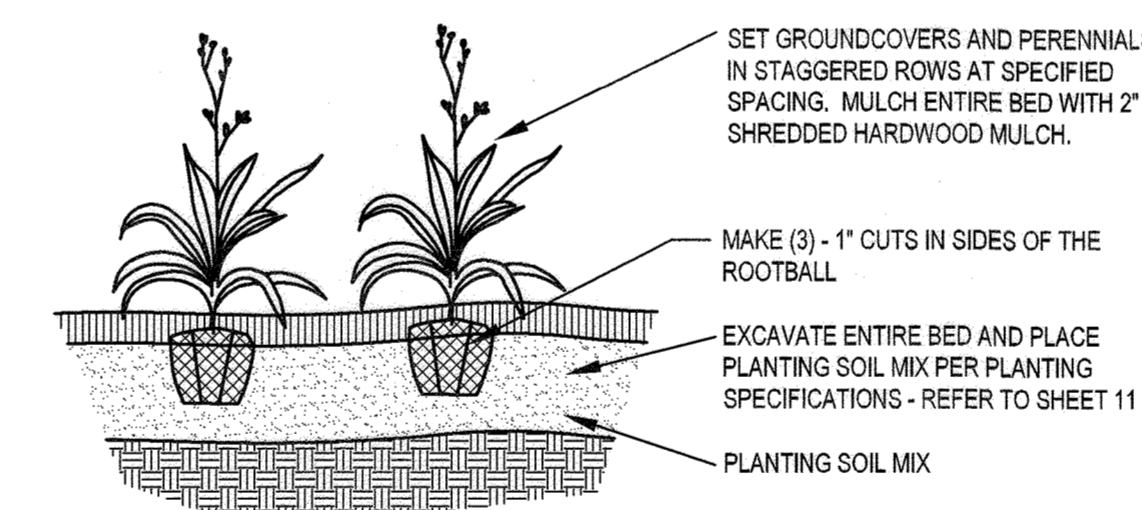
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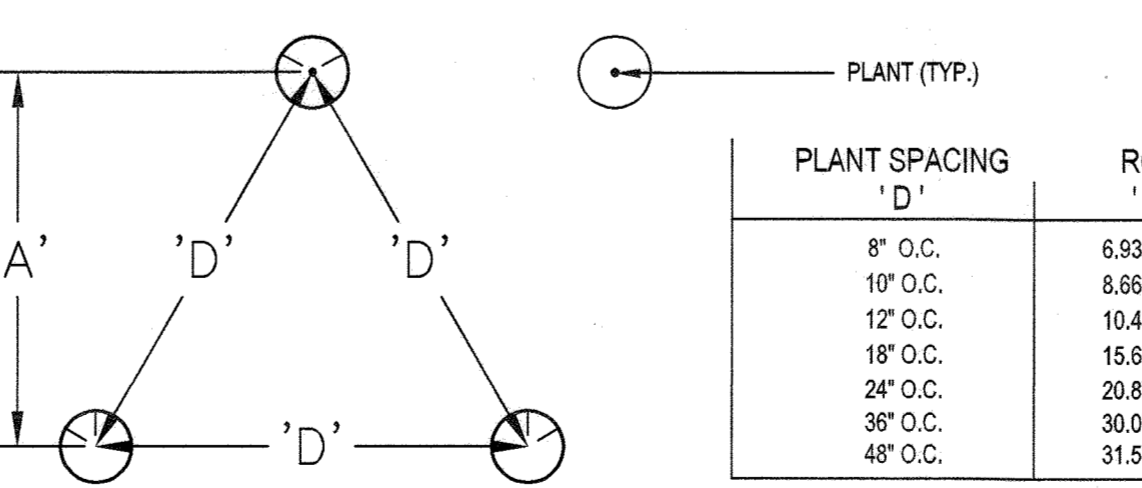


1 SHRUB PLANTING
NTS



2 GROUNDCOVER PLANTING
NTS

NOTE: GROUNDCOVERS AND PERENNIALS TO BE INSTALLED WITH TRIANGULAR SPACING



3 GROUNDCOVER SPACING
NTS

PLANT SCHEDULE

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT
IG	3	Ilex glabra	Inkberry Holly	24" HT. MIN.

GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING
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	JEF	139	Juncus effusus	Soft Rush	2 qt	8" o.c.

SEED SCHEDULE

SEED MIXES	CODE	SIZE (AREA)	SEED MIX TYPE
	126	9,313 S.F.	Ernst Mix #124 - Retention Basin Floor Mix - Low Maintenance
	154	4,452 S.F.	Ernst Mix #154 - Floodplain Mix

PLANTING NOTES

Plant Identification - All plants shall be properly marked for identification and checking.

List of Plant Material - The quantities given in the plant list are approximate only. The contractor will verify plant quantities prior to bidding and any discrepancies shall be brought to the attention of the landscape architect. The contractor shall furnish, and plant, all plants required to complete the work as shown on the drawings. Substitutions shall not be made without the written approval of Kimley-Horn and the owner. This contract will be based on the bidder having verified prior to bidding the availability of the required plant materials as specified on the Plant Materials List.

Plant Quality - All shrubs shall be dense, heavy to the ground, and well grown, showing evidence of having been pruned regularly, and shall be vigorous, healthy and of good color. All plants shall be sound, free of plant disease, infestation, or insect eggs and shall have a healthy, normal root system. Plants shall be freshly dug and not heated-in stock, nor stock from cold storage. All plants shall be nursery grown. Plants shall not be pruned prior to delivery. The shape of the plant shall, in general, conform to its natural growth proportions unless otherwise specified. All plants, including container grown, shall conform to the branching, coliper and height specifications of the American Association of Nurserymen's Publication entitled American Standard for Nursery Stock, ANSIZ60.1-2004 or latest edition, and shall have a well-shaped, heavy-branched structure for the species. Evergreen trees are to have an internode no greater than 24" and shall be uniformly well-shaped. Plants of a given size shall not measure less than the minimum size as set forth in the American Standard for Nursery Stock, ANSIZ60.1-2004 or latest edition.

Plant Tagging - The contractor shall prepare a list of nurseries supplying the specified plant material for the owner and Kimley-Horn to inspect, at their option, and tag prior to digging.

Plant Spacing - Plant spacing is to scale on plan. No shrub material shall be closer than 30" to building walls.

Rootball Size - The ball size shall conform to the American Association of Nurserymen's Publication entitled American Standard for Nursery Stock, ANSIZ60.1-2004 or latest edition, and shall be wrapped in untreated burlap.

Excavation - Holes for shrubs shall be 12" wider than the root ball. Beds for mass planting shall be entirely rototilled to a depth of 8" and shall be 18" beyond the average outside edge of plant balls. Organic material (leafmold) will be incorporated into plant beds by tilling again to a depth of 8". Proportions of soil to organic material will be two parts existing soil to one part organic material.

Maintenance - The Contractor shall be responsible during the contract and up to the time of acceptance for keeping the planting and work incidental thereto in good condition by replanting, plant replacement, watering, weeding, cultivating, pruning, spraying, restaking and cleaning up, and by performing all other necessary operations of care for the promotion of good plant growth so that all work is in satisfactory condition at the time of acceptance at no additional cost to the owner.

Fertilizer & Inoculation - All fertilizer shall be granular, with 35 to 80 percent of the total nitrogen in a slowly available form. For shrubs, and groundcover, fertilizer shall be a complete fertilizer with a minimum analysis of 10 percent nitrogen, 5 percent phosphorus and 4 percent potassium. For perennials, annuals, and bulbs, fertilizer shall be a time-released, high-phosphate fertilizer; i.e., osmocote. For bulbs, fertilizer shall be bone meal (commercial, raw and finely-round), with an analysis of 4 percent nitrogen and 20 percent phosphoric acid.

Fertilizer shall be added depending on the size of the plant and the manufacturer's recommendation using the following application rates:

- Shrubs: Use 1/4 lb. of 10-6-4 fertilizer per foot of height or spread per plant, or 3-5lbs of 10-6-4 fertilizer per 100 square feet of bed area.
- Groundcover: Use 3 lbs. of 10-6-4 fertilizer per 100 square feet of bed area.
- Perennials, Annuals, Bulbs: Use 3 lbs. of time-release, high-phosphate fertilizer (5-10-5) per 100 square feet of bed area.

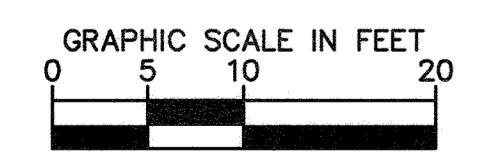
Ground Cover - All areas of groundcover shall be rototilled to a depth of 6" Apply 2" of organic material (leafmold) and rototill until thoroughly mixed. Apply fertilizer as stated above.

Guarantee and Replacement - All plant material shall be unconditionally guaranteed for one year. The guarantee will begin on the date of final acceptance of the work. After a plant has been determined to be dead, dying or damaged from handling or installation, it will be replaced during the next growing season. For example, if a plant is found dead during the summer months, it will be replaced during the fall planting season. The guarantee will end for all plant material one year after acceptance. During the guarantee period, the Contractor will not be responsible for mechanical injury or vandalism caused by other parties.

Material Inspection - Owner and/or Kimley-Horn shall, at their discretion, inspect plant material before and during delivery and installation. Plant material will be properly delivered in covered trucks, and promptly uncovered when delivered to prevent damage. Material will be unloaded and properly handled in such a way as not to damage plants. Plants will be inspected and may be rejected upon delivery and/or installation by the owner for mechanical damage, and damage that will subsequently cause misshapen or deformed material. Owner will have authority to observe site preparation and planting installations, and have the right to reject any work if the specifications and construction documents are not followed. All plant material shall be of the quality specified and installed as described above, and unless these minimum standards are satisfied, the plants will be rejected.

Erosion Control Matting: All basin side slopes to be lined with Premier Straw/Coconut Blend Erosion Control Blanket. All basin floors to be lined with Premier Coconut Erosion Control Blanket. Manufacturer: American Excelsior Company based out of Arlington, Texas.

Mulch: Install 3" of Soil Mix for Mulched Shrub and Perennial Beds on Grade which shall consist of clay loam to sandy clay loam soil, sand, and composted pine bark fines at a rate of 5.5:1 to 10.5:1.5



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Kimley-Horn

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COX AUTOMOTIVE, INC.
 6205 PEACHTREE DUNWOODY ROAD
 ATLANTA, GA 30328
 PHONE: 678-645-2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 9-22-22
 CHIEF DEVELOPMENT ENGINEERING DIVISION

DATE: 9-22-22
 CHIEF DIVISION OF LAND DEVELOPMENT

DATE: 9-28-22
 DIRECTOR

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
 SCALE: AS SHOWN
 DATE: 06/15/2022
 DESIGNED BY: RLH
 DRAWN BY: RLH
 CHECKED BY: NJL

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. 44113
 EXPIRATION DATE: 09/02/23

SWM LANDSCAPE PLANS

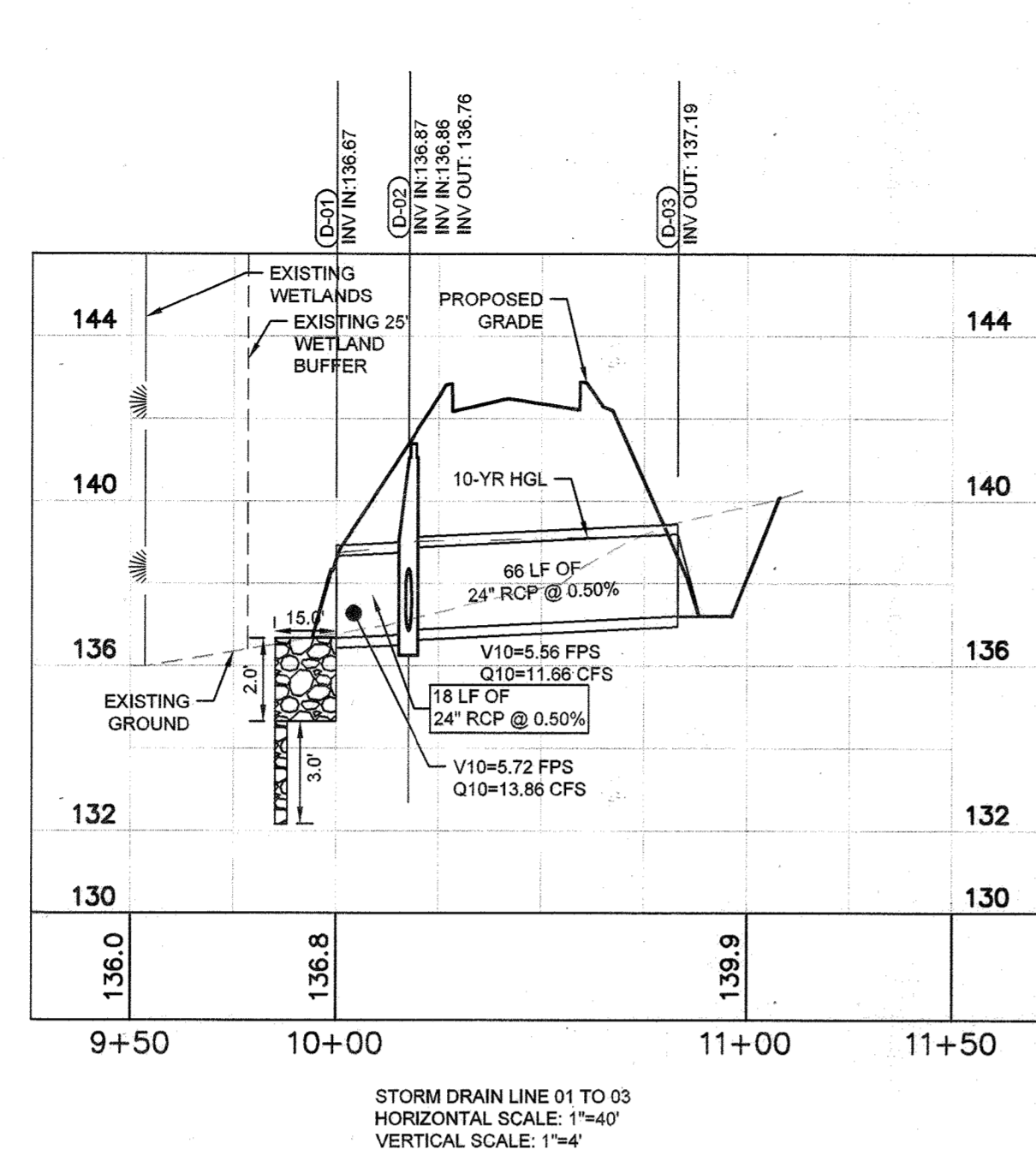
PROPOSED CUSTOMER ENTRANCE
 PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
 HOWARD COUNTY MD

SHEET NUMBER
43 OF 6163

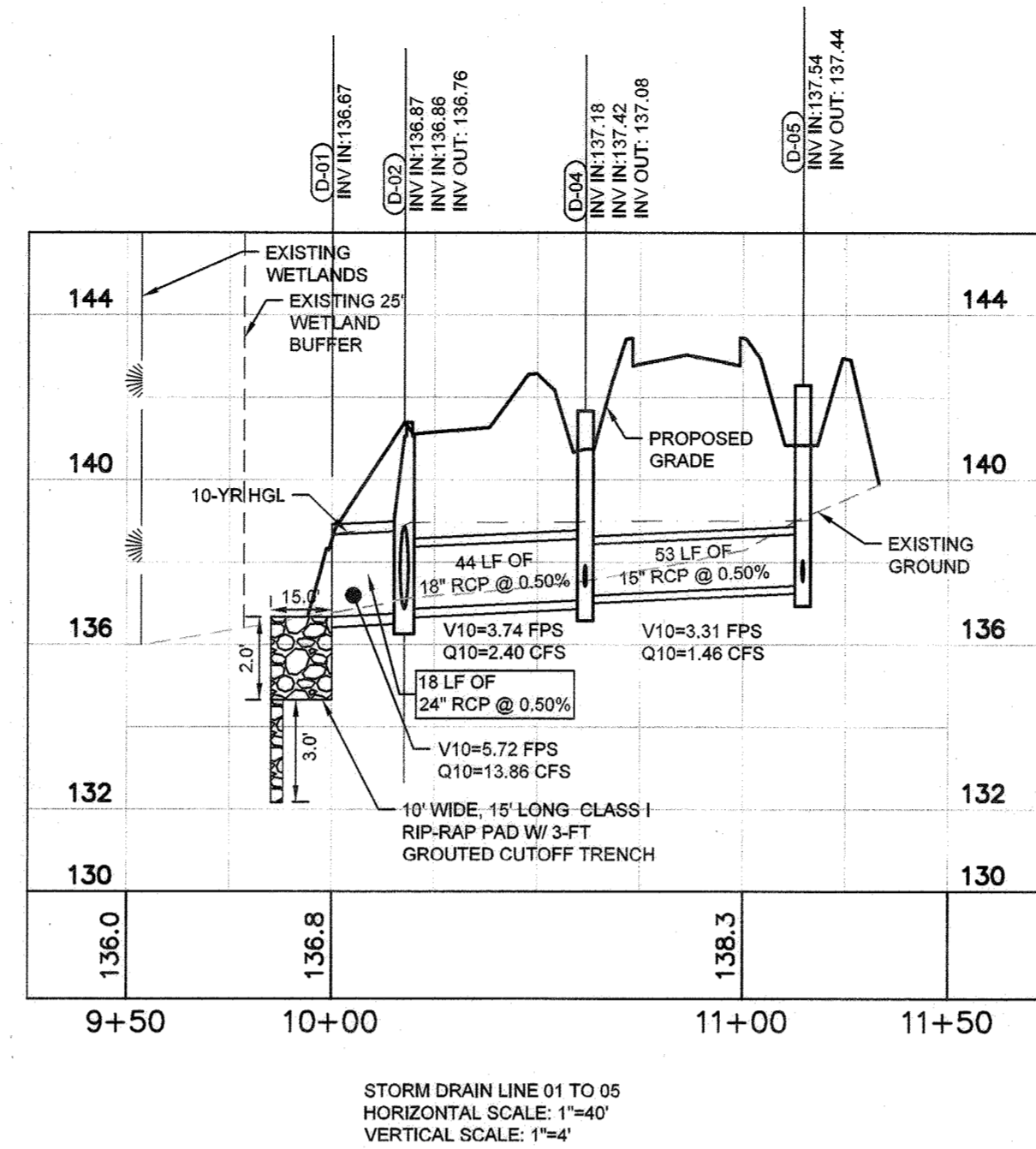
SDP-00-063

Plotted By: Moyer, Jessica - Sheet Set: Dorsey Run Road - Access Road - Layout: 44 - STORM DRAIN PROFILES - June 15, 2022, 10:28:53am - K:\BAL_OIV\110204002 - 7120 Dorsey Run Road\CAD\Plan\Sheet\44 - STORM DRAIN PROFILES.dwg

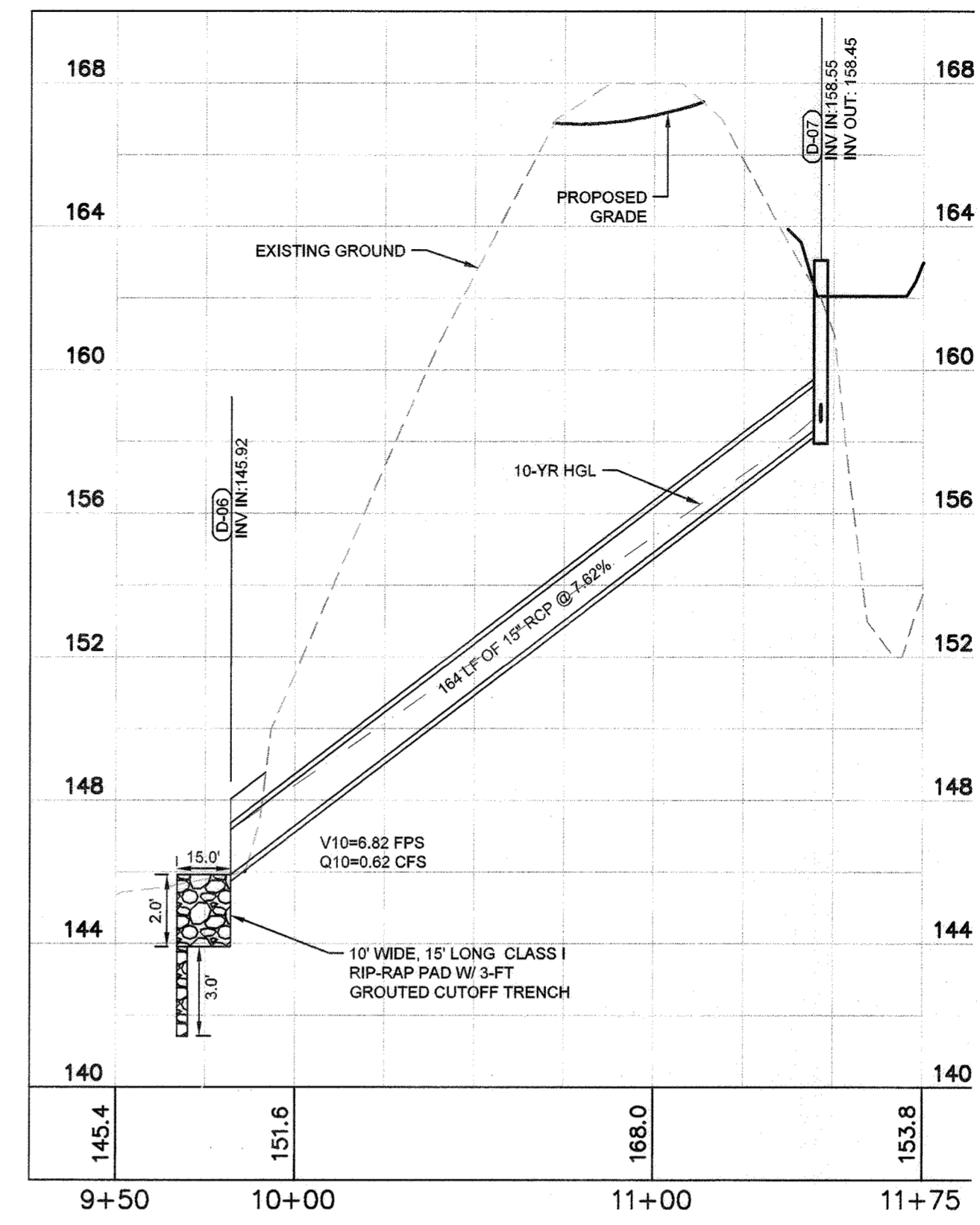
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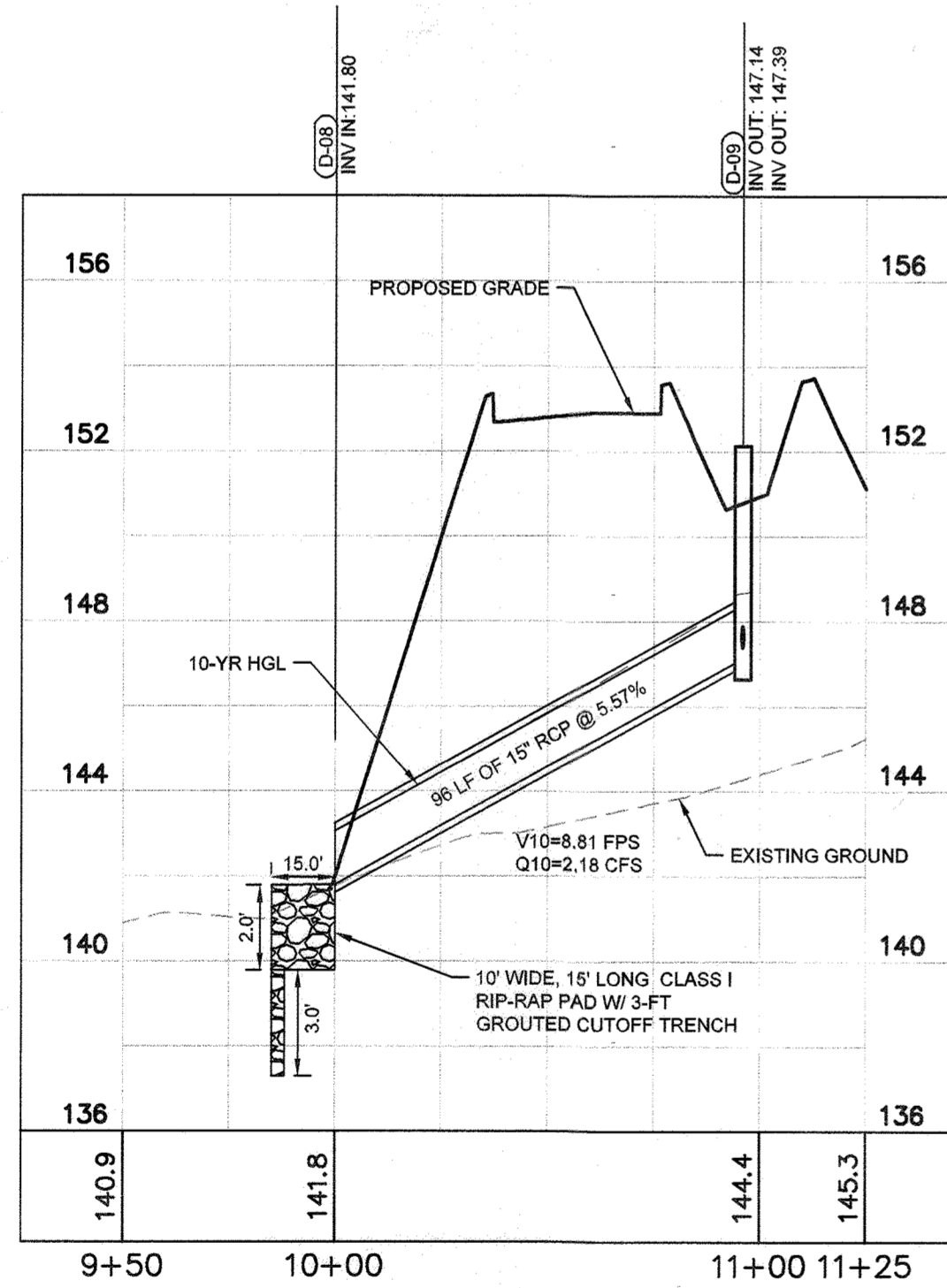
STORM DRAIN LINE 01 TO 03
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=4'



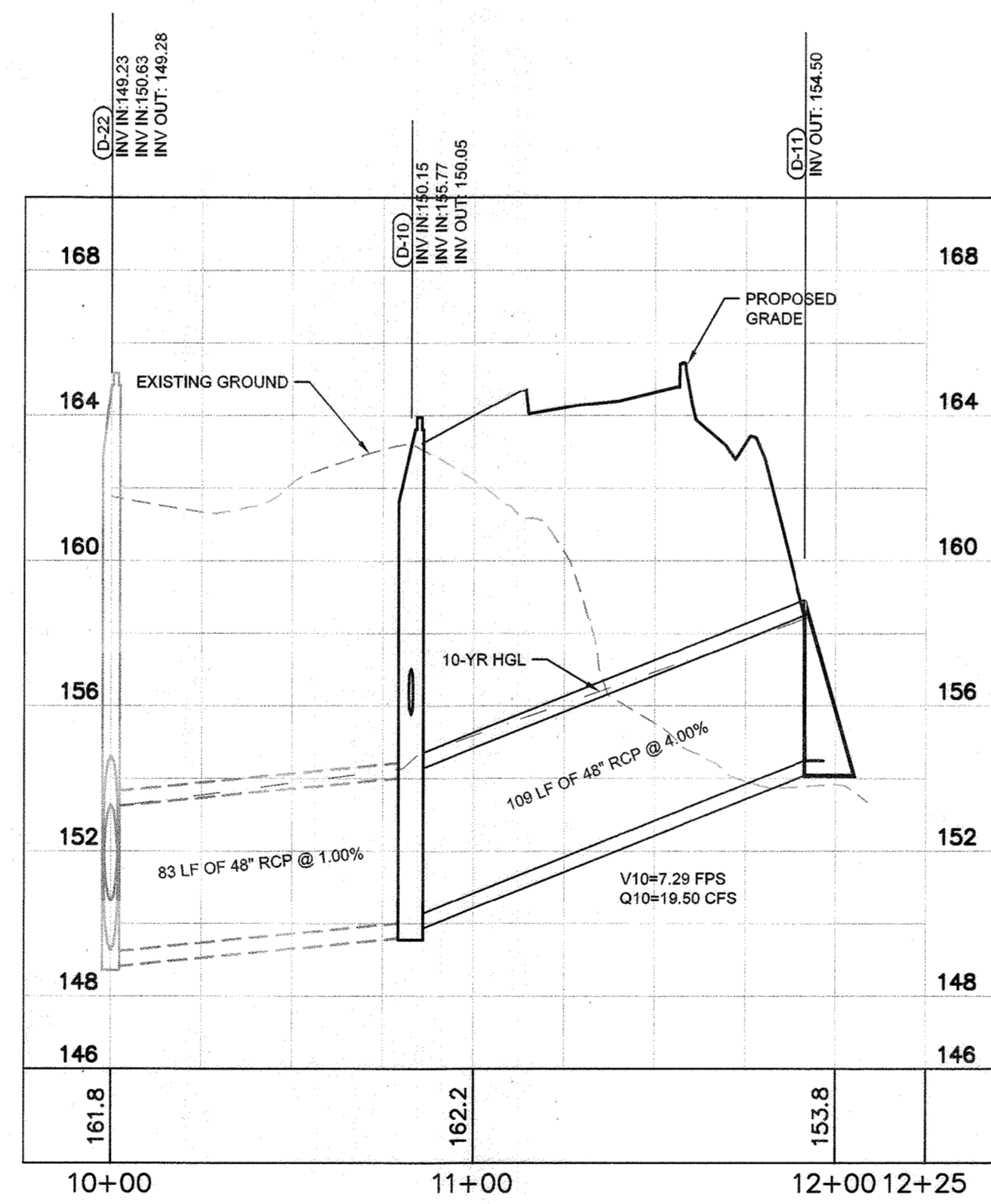
STORM DRAIN LINE 01 TO 05
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=4'



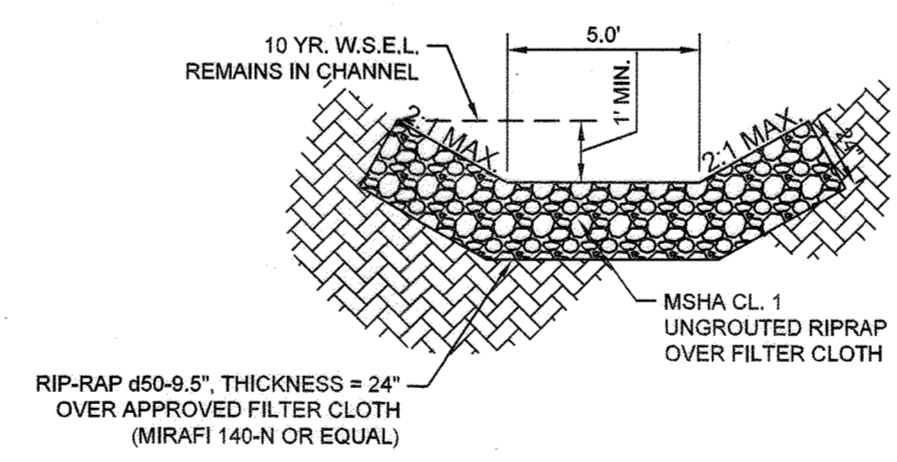
STORM DRAIN LINE 06 TO 07
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=4'



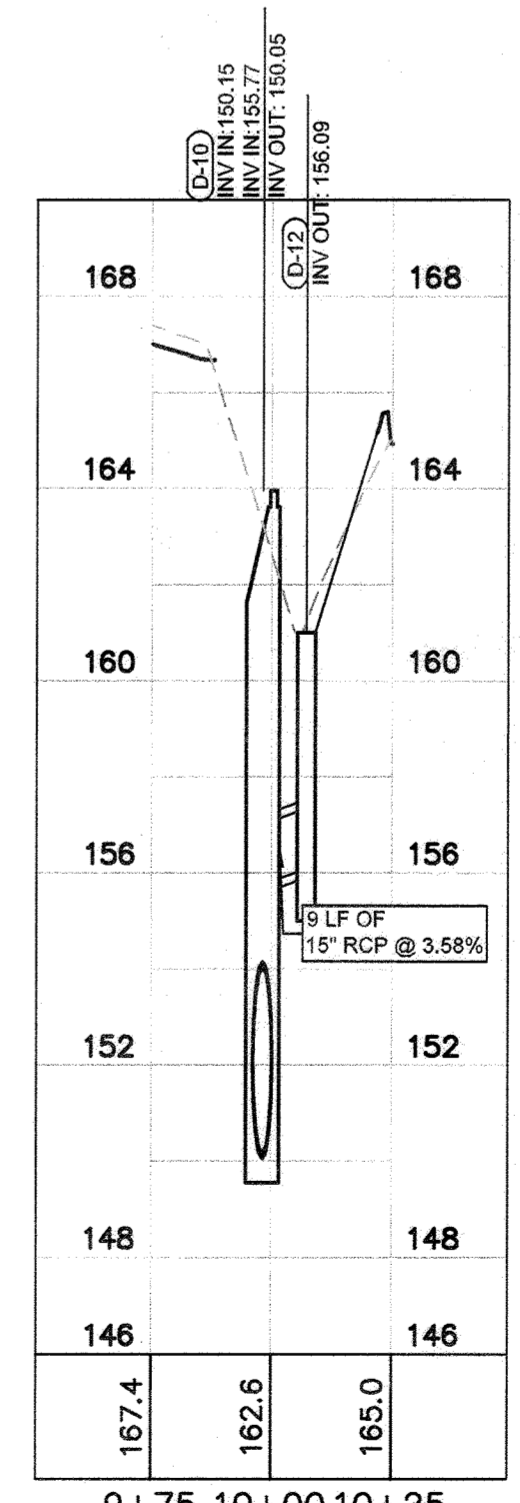
STORM DRAIN LINE 09 TO 09
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=4'



STORM DRAIN LINE 10 TO 11
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=4'



**TYPICAL SECTION RIPRAP
OUTFALL CHANNEL**
NOT TO SCALE



STORM DRAIN LINE 10 TO 12
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=4'

LIMITS OF DISTURBANCE = 2.83AC

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6205 PEACHTREE DUNWOODY ROAD
ATLANTA, GA 30328
PHONE: 678-645-2013

NO.	REVISIONS	DATE	BY
1	ACCESS ROAD, SWM AND GRADING	06/15/2022	KH

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 9/22/22

CHIEF DEVELOPMENT ENGINEERING DIVISION

CHIEF DIVISION OF LAND DEVELOPMENT

DIRECTOR: 9-2-22

7120 DORSEY RUN ROAD
HOWARD COUNTY, MARYLAND
TAX MAP NO. 43 PARCEL: 371
ZONING: M-2 BLOCK: 10
FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
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LICENSE NO. 44113
EXPIRATION DATE: 09/30/2023

STORM DRAIN PROFILES

PROPOSED CUSTOMER ENTRANCE
PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
HOWARD COUNTY MD

SHEET NUMBER
44 OF 63

539-00-063

Printed By: Meyer, Jessica, Set: Dorsey Run Road - Access Road - Layout: 45 STORM DRAIN TABLES AND DETAILS June 15, 2022 10:28:56am K:\BAL-CV\110204002 - 7120 Dorsey Run Road CAD Plan Sheets\48 - STORM DRAIN PROFILES.dwg
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ELEVATION
4 #6 BENT BARS HORIZONTAL
2 #4 STRAIGHT BARS VERTICAL
1'-6" MAX TO 2'-0" MAX. FRONT FACE

SECTION A-A
1/2" 2:1 OR 4:1 SLOPE
#4 BARS HORIZONTAL @ 1'-0" C/C BOTH ENDS
#4 BARS HORIZONTAL @ 1'-0" C/C BELOW OPENING

PLAN
#4 BARS HORIZONTAL @ 1'-0" MAX. C/C BOTH FACES BOTTOM BARS BENT ALONG ENDWALL OTHERS STRAIGHT.
1 #4 BENT BAR HORIZONTAL
1 #4 BENT BAR HORIZONTAL

ISOMETRIC VIEW
#4 BENT BARS @ 1'-0" C/C BOTH WINDWALLS ALL ENDWALLS
#4 STRAIGHT BARS HORIZONTAL @ 1'-0" C/C @ BOTH SIDES OF OPENING

DISPOSITION OF BARS DETAIL

NOTES
SPECIFICATIONS: LATEST S.H.A. CONCRETE SHALL BE MIX NO. 2 REINFORCING DEFORMED STEEL BARS #4 #6 CHAMFER: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED.

OPENING DIMENSIONS	D	E	F	G	H	I	J	K	L	M	N	O	VOL. CONC. C.Y.	STEEL LBS.	
48	12.57	1'-4"	10'	3'-2"	2'-9"	1'-10 1/2"	5'-0"	4'-10"	6'-3 1/2"	6'-8 1/2"	5'-9"	2'-10 1/4"	5'-4"	4.3	262
54	15.9	1'-8"	1'-0"	3'-8"	3'-0"	1'-8 1/2"	5'-6"	5'-4"	6'-10 1/2"	7'-3 1/2"	6'-2 1/2"	3'-1 1/2"	6'-2"	5.3	301
60	19.64	1'-8"	1'-0"	3'-8"	3'-3"	8'-5"	6'-0"	5'-10"	7'-3 1/2"	8'-0 1/2"	6'-11"	3'-2 1/2"	6'-8"	6.0	351

QUANTITIES IN TABLE TO BE USED FOR ESTIMATING ONLY

SPECIFICATION 305 CATEGORY CODE ITEMS

Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD HEADWALLS B-48 B-54 B-60
STANDARD NO. MD 352.01

CASE 1 STANDARD TYPE "F" ENDWALL

CASE 2 WHEN A WATER COURSE IS PERPENDICULAR OR ASKEW TO THE E, AND THE SIDE DITCH DRAINAGE IS IN BOTH DIRECTIONS AND IT IS MORE ECONOMICAL OR BETTER PRACTICE TO PLACE THE PIPE AT RIGHT ANGLES TO THE E, THE "F" ENDWALL CAN BE USED BY MAKING THE SHORTER WING EQUAL IN LENGTH AND ANGLE TO THE LONGER WING.

CASE 3 WHEN THE DRAINAGE CONDITIONS ARE SIMILAR TO CASE 2 BUT IT IS DESIRED TO PLACE THE PIPE ASKEW, THE "F" ENDWALL CAN BE USED AS FOLLOWS: A. DETERMINE DIRECTION OF PIPE. B. COMPUTE "S". THEN A LINE WHICH IS PERPENDICULAR TO THE E OF THE PIPE AND TANGENT TO THE ARC WHOSE RADIUS IS R + S DETERMINES THE LOCATION OF THE HEADWALL. THE LENGTH OF THE WINGWALLS IS STANDARD BUT THE ANGLE IS SUCH THAT THE END OF THE WINGWALL IS 5' FROM THE TOE OF THE SLOPE, AS SHOWN. "S" IS COMPUTED IN THE MANNER, AND THE LOCATION OF THE HEADWALL IS THE INTERSECTION OF THE ARC R + S AND THE E OF THE PIPE. THE WINGS ARE LOCATED AS DESCRIBED ABOVE, OR AS SHOWN.

CASE 4 WHEN A PIPE IS PLACED ASKEW TO FOLLOW THE NATURAL WATER COURSE AND THE SIDE DITCH DRAINAGE IS IN ONE DIRECTION, THE "F" ENDWALL WILL BE USED WITH THE EXCEPTION THAT THE HEADWALL WILL BE LENGTHENED DUE TO THE INCREASED AREA OF THE PIPE.

CASE 5 WHEN AN ASKEWED ROAD OR ENTRANCE INTERSECTS THE MAIN LINE AND THE DRAINAGE IS PARALLEL TO THE MAIN LINE AND INTERSECTING ROAD OR ENTRANCE, THE "F" ENDWALL CAN BE USED AS FOLLOWS: A. DETERMINE DIRECTION OF PIPE. B. COMPUTE "S". THEN A LINE WHICH IS PERPENDICULAR TO THE E OF THE PIPE AND TANGENT TO THE ARC WHOSE RADIUS IS R + S DETERMINES THE LOCATION OF THE HEADWALL. THE LENGTH OF THE WINGWALLS IS STANDARD BUT THE ANGLE IS SUCH THAT THE END OF THE WINGWALL IS 5' FROM THE TOE OF THE SLOPE, AS SHOWN. "S" IS COMPUTED IN THE MANNER, AND THE LOCATION OF THE HEADWALL IS THE INTERSECTION OF THE ARC R + S AND THE E OF THE PIPE. THE WINGS ARE LOCATED AS DESCRIBED ABOVE, OR AS SHOWN.

SPECIFICATION 305 CATEGORY CODE ITEMS

Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD TYPE F ENDWALL MODIFICATIONS
STANDARD NO. MD 358.03

ISOMETRIC VIEW

PLAN
TOE OF SLOPE
#6 BENT BARS 12" C/C
#4 STRAIGHT BARS 12" C/C

ELEVATION
GENERAL NOTES
SPECIFICATIONS: LATEST S.H.A. CONCRETE SHALL BE MIX NO. 2 REINFORCING DEFORMED STEEL BARS VERTICAL NO. 6 BARS 12" C/C HORIZONTAL NO. 4 BARS 12" C/C HOOKED ON ONE END ALL EXPOSED EDGES 1"x1" OR AS DIRECTED.
CHAMFER:

QUANTITIES FOR ESTIMATING PURPOSES ONLY

PIPE D. DIA.	OPENING AREA	DIMENSIONS											QUANTITIES				
		L	B	H	W	X	Z	K1	K2	P	CONC. C.Y.	STEEL LBS.					
12"	0.79	1'-9"	9"	1'-9"	2'-0"	1'-9"	2'-0"	1'-9"	2'-0"	1'-9"	2'-0"	1'-9"	2'-0"	1'-9"	2'-0"	0.51	30
15"	1.23	2'-0"	9"	1'-11"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	0.63	42
18"	1.77	2'-3"	9"	2'-3"	2'-3"	2'-3"	2'-3"	2'-3"	2'-3"	2'-3"	2'-3"	2'-3"	2'-3"	2'-3"	2'-3"	0.77	48
24"	2.40	2'-6"	9"	2'-7"	3'-1"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	1.10	67
30"	3.14	3'-0"	12"	3'-0"	3'-4"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	1.43	73
36"	3.98	3'-3"	12"	3'-3"	3'-7"	3'-3"	3'-3"	3'-3"	3'-3"	3'-3"	3'-3"	3'-3"	3'-3"	3'-3"	3'-3"	1.66	85
42"	4.91	3'-6"	12"	3'-6"	4'-1"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	1.88	96
48"	5.94	3'-9"	12"	3'-9"	4'-5"	3'-9"	3'-9"	3'-9"	3'-9"	3'-9"	3'-9"	3'-9"	3'-9"	3'-9"	3'-9"	2.10	107
54"	7.07	4'-0"	12"	4'-0"	5'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	2.36	118
60"	8.28	4'-6"	12"	4'-6"	5'-6"	4'-6"	4'-6"	4'-6"	4'-6"	4'-6"	4'-6"	4'-6"	4'-6"	4'-6"	4'-6"	2.65	144
66"	12.57	5'-0"	12"	5'-0"	6'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	3.37	170

SLOPE 2:1

SLOPE 4:1

SPECIFICATION 305 CATEGORY CODE ITEMS

Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD TYPE F ENDWALL METAL OR CONCRETE ROUND PIPE
STANDARD NO. MD 358.01

ISOMETRIC VIEW 1

ISOMETRIC VIEW 2

ISOMETRIC VIEW 3

PLAN
APPROX BY CONTRACTOR (SEE ISOMETRIC VIEW 2)
PIPE BY CONTRACTOR OPENING BY MANUFACTURER

ELEVATION
APPROX BY CONTRACTOR (SEE ISOMETRIC VIEW 2)
PIPE BY CONTRACTOR OPENING BY MANUFACTURER

NOTES
1. THIS TYPE F ENDWALL SHALL NOT BE USED WITHIN THE CLEAR RECOVERY ZONE.
2. CONCRETE SHALL BE MIX NO. 6 (4500 PSI).
3. REINFORCEMENT SHALL BE DEFORMED BARS AS SHOWN OR HELIXED WIRE FABRIC WITH AN EQUIVALENT AREA PER SQUARE FOOT. DEFORMED BARS SHALL CONFORM TO ASTM A 615, GRADE 60. HELIXED WIRE FABRIC SHALL CONFORM TO ASTM A 105 AND A 95.
4. SEE CHARTS ON STANDARD NO. 358.05 FOR DIMENSIONS NOT SHOWN.
5. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED FOR HANDLING.
6. EXCAVATION: BACKFILL CONCRETE REINFORCEMENT FOR APPROX. AND NO. 57 AGGREGATE WILL BE INCIDENTAL TO THE CONTRACT PRICE PER EACH FOR THE ENDWALL.
7. CHAMFER ALL EXPOSED EDGES 1"x1" OR AS DIRECTED.

SPECIFICATION 305 CATEGORY CODE ITEMS

Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PRECAST TYPE F ENDWALL METAL OR CONCRETE ROUND PIPE
STANDARD NO. MD 358.04

PIPE TABLE

PIPE NAME	SIZE	LENGTH	SLOPE	MATERIAL
D-10 TO D-12	15"	9.10	3.58%	RCP
D-03 TO D-02	24"	65.63	0.50%	RCP
D-02 TO D-01	24"	17.55	0.50%	RCP
D-05 TO D-04	15"	52.90	0.50%	RCP
D-04 TO D-02	18"	44.08	0.50%	RCP
D-09 TO D-08	15"	95.90	5.57%	RCP
D-07 TO D-06	15"	164.35	7.62%	RCP
D-11 TO D-10	48"	108.68	4.00%	RCP

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT:
D-01	MD 358.01 RIM: 139.42 INV IN: 136.67	FROM D-02, 24" RCP INV IN: 136.67 @ 0.50%	
D-02	MD 383.00 RIM: 141.39 INV IN: 136.87	FROM D-03, 24" RCP INV IN: 136.87 @ 0.50% FROM D-04, 18" RCP INV IN: 136.86 @ 0.50%	TO D-01, 24" RCP INV OUT: 136.76 @ 0.50%
D-03	MD 358.01 RIM: 139.94 INV OUT: 137.19		TO D-02, 24" RCP INV OUT: 137.19 @ 0.50%
D-04	BS-5 OUTFALL MD 374.06 RIM: 141.67 INV IN: 137.18 INV OUT: 137.42	FROM D-05, 15" RCP INV IN: 137.18 @ 0.50% FROM 6" PVC INV IN: 137.42 @ 0.00%	TO D-02, 18" RCP INV OUT: 137.08 @ 0.50%
D-05	BS-4 OUTFALL MD 374.06 RIM: 142.29 INV IN: 137.54	FROM 6" PVC INV IN: 137.54 @ 0.00%	TO D-04, 15" RCP INV OUT: 137.44 @ 0.50%
D-06	MD 358.01 RIM: 147.86 INV IN: 145.92	FROM D-07, 15" RCP INV IN: 145.92 @ 7.62%	
D-07	MBR-1 OUTFALL MD 374.06 RIM: 163.05 INV IN: 158.55 INV OUT: 158.45	FROM 6" PVC INV IN: 158.55 @ 0.00%	TO D-06, 15" RCP INV OUT: 158.45 @ 7.62%
D-08	MD 358.01 RIM: 143.72 INV IN: 141.80	FROM D-09, 15" RCP INV IN: 141.80 @ 5.57%	
D-09	BS-6 OUTFALL MD 374.06 RIM: 152.14 INV OUT: 147.14		TO D-08, 15" RCP INV OUT: 147.14 @ 5.57% TO 6" PVC INV OUT: 147.39 @ 0.00%
D-10	MD 384.05 - 72" MH RIM: 163.95 INV IN: 150.15 INV IN: 155.77	FROM D-11, 48" RCP INV IN: 150.15 @ 4.00% FROM D-12, 15" RCP INV IN: 155.77 @ 3.58%	TO D-22, 48" RCP INV OUT: 150.05 @ 1.00%
D-11	MD STANDARD NO. 352.01 B-48 RIM: 159.50 INV OUT: 154.50		TO D-10, 48" RCP INV OUT: 154.50 @ 4.00%
D-12	MD 374.06 RIM: 161.00 INV OUT: 156.09		TO D-10, 15" RCP INV OUT: 156.09 @ 3.58%
D-22	EXISTING MANHOLE RIM: 165.18 INV IN: 149.23 INV IN: 150.63 INV OUT: 149.28	FROM D-10, 48" RCP INV IN: 149.23 @ 1.00% FROM 48" RCP INV IN: 150.63 @ 0.00%	TO 48" RCP INV OUT: 149.28 @ 0.00%

Kimley Horn
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PHONE: 443-743-3470
WWW.KIMLEY-HORN.COM

COX AUTOMOTIVE INC.
6205 PEACHTREE DUNWOODY ROAD
ATLANTA, GA 30328
PHONE: 678-645-2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING
ACCESS ROAD, SIMM AND GRADING
06/15/2022 KH

DATE: 9-5-22
DATE: 9/16/22
DATE: 9-8-22

CHIEF DEVELOPMENT ENGINEERING DIVISION
CHIEF DIVISION OF LAND DEVELOPMENT
DIRECTOR

7120 DORSEY RUN ROAD
HOWARD COUNTY, MARYLAND
TAX MAP NO. 43 PARCEL: 371
ZONING: M-2 BLOCK: 10
FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
SCALE: AS SHOWN
DATE: 06/15/2022
DESIGNED BY: RLH
DRAWN BY: JHN
CHECKED BY: NUL

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. 44113
EXPIRATION DATE: 06/30/2023

STATE OF MARYLAND
NICHOLAS J. LEFFNER
PROFESSIONAL ENGINEER
EXPIRES 06/30/2023

STORM DRAIN TABLES AND DETAILS

PROPOSED CUSTOMER ENTRANCE
PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
HOWARD COUNTY MD

SHEET NUMBER
45 OF 6163

SDP.00.063

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
Know what's below. Call before you dig.

DIMENSIONS - Slope 1:2														LAG BOLTS FOR WING WALLS	
PIPE SIZE D	L	X	L ₁	L ₂	W	L ₃	L ₄	Z	H	A	B	P	SPACING NO. REQ. C/C	EA. WALL	
12"	4'-0"	1'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
15"	4'-0"	1'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
18"	5'-0"	2'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
21"	5'-0"	2'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
24"	5'-0"	2'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
27"	5'-0"	2'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
30"	6'-0"	3'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
33"	6'-0"	3'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
36"	6'-0"	3'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
42"	7'-0"	4'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
48"	8'-0"	5'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	

DIMENSIONS - Slope 2:1														LAG BOLTS FOR WING WALLS	
PIPE SIZE D	L	X	L ₁	L ₂	W	L ₃	L ₄	Z	H	A	B	P	SPACING NO. REQ. C/C	EA. WALL	
12"	3'-3"	2'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
15"	3'-6"	2'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
18"	3'-9"	3'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
21"	4'-0"	3'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
24"	4'-3"	3'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
27"	4'-6"	3'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
30"	5'-0"	3'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
33"	5'-3"	3'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
36"	5'-6"	3'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
42"	6'-0"	3'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
48"	7'-0"	4'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	

DIMENSIONS - Slope 4:1														LAG BOLTS FOR WING WALLS	
PIPE SIZE D	L	X	L ₁	L ₂	W	L ₃	L ₄	Z	H	A	B	P	SPACING NO. REQ. C/C	EA. WALL	
12"	3'-3"	4'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
15"	3'-6"	5'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
18"	3'-9"	6'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
21"	4'-0"	7'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
24"	4'-3"	8'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
27"	4'-6"	9'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2	2	
30"	5'-0"	10'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
33"	5'-3"	11'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
36"	5'-6"	12'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
42"	6'-0"	13'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	
48"	7'-0"	14'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3	3	

SPECIFICATION	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED	<i>K.M.G. McCall</i> DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	PRECAST TYPE F ENDWALL DIMENSIONS METAL OR CONCRETE ROUND PIPE STANDARD NO. MD 358.05

GENERAL NOTES

- FRAMES & GRATES TO BE SQUARE, FLAT AND TRUE.
- STRUCTURAL STEEL SHALL BE A.S.T.M. A-36.
- FRAMES AND GRATES TO BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH A.S.T.M. A-103.
- GRADE AND SLOPE ADJUSTMENTS COMPLETED IN THE FIELD USING CONCRETE MIX # 6.
- MANUFACTURER TO VERIFY THAT GRATE AND FRAME HAVE BEEN DESIGNED FOR HS-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
- GALVANIZED 5/8\"/>

FRAME ANCHORAGE DETAIL

DRILL, SET AND GROUT IN FIELD AS DIRECTED BY THE ENGINEER.

SPECIFICATION	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED	<i>Latt</i> DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	STANDARD WR & WRM INLET FRAME & GRATE STANDARD NO. MD 374.02

SPECIFICATION	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED	<i>K.M.G. McCall</i> DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	STANDARD WR & WRM INLET FRAME & GRATE STANDARD NO. MD 374.03

GENERAL NOTES

- CONCRETE TO BE MIX NO. 2 (13,000 PSI).
- SIZE, TYPE, AND DIRECTION OF INLET CONNECTION WILL VARY TO SUIT CONDITIONS.
- SEE SHA LATEST SPECIFICATIONS FOR INLETS.
- WALL REINFORCEMENT SHALL BE ONE LAYER OF NO. 4 DEFORMED BARS @ 6\"/>

SPECIFICATION	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED	<i>Latt</i> DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	SINGLE WR INLET STANDARD NO. MD 374.06

NOTES

- THIS MANHOLE IS FOR PIPES UP TO 36\"/>

SPECIFICATION	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED	<i>Latt</i> DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	48\"/>

SPECIFICATION	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED	<i>Latt</i> DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	STANDARD MANHOLE TYPE A FRAME STANDARD NO. MD 383.31

Kimley Horn

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 CONTACT: NICHOLAS J. LEFFNER
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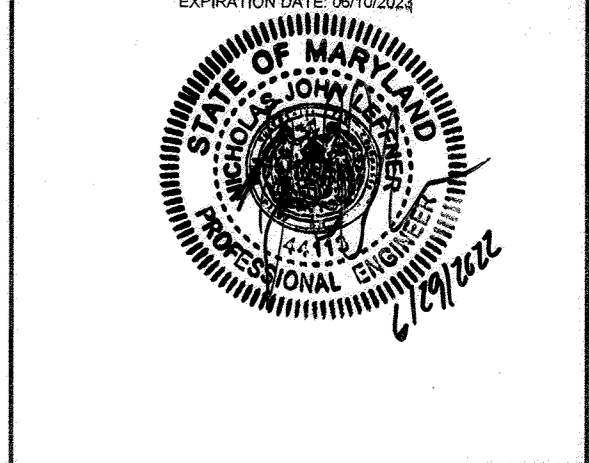
COX AUTOMOTIVE, INC.
 6205 PEACHTREE DUNWOODY ROAD
 ATLANTA, GA 30328
 PHONE: 678-645-2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING	DATE: 9/15/22	DATE: 9/15/22	DATE: 9-8-20	DATE:
CHIEF DEVELOPMENT ENGINEERING DIVISION	<i>Paul Clark</i>	CHIEF DIVISION OF LAND DEVELOPMENT	<i>Moy</i>	DIRECTOR
REVISIONS				
NO.				

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
 SCALE: AS SHOWN
 DATE: 06/15/2022
 DESIGNED BY: RLH
 DRAWN BY: JHN
 CHECKED BY: N.J.L.

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. 44112
 EXPIRATION DATE: 09/30/2025



STORM DRAIN DETAILS

PROPOSED CUSTOMER ENTRANCE

PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
 HOWARD COUNTY MD

SHEET NUMBER
46 OF 6163

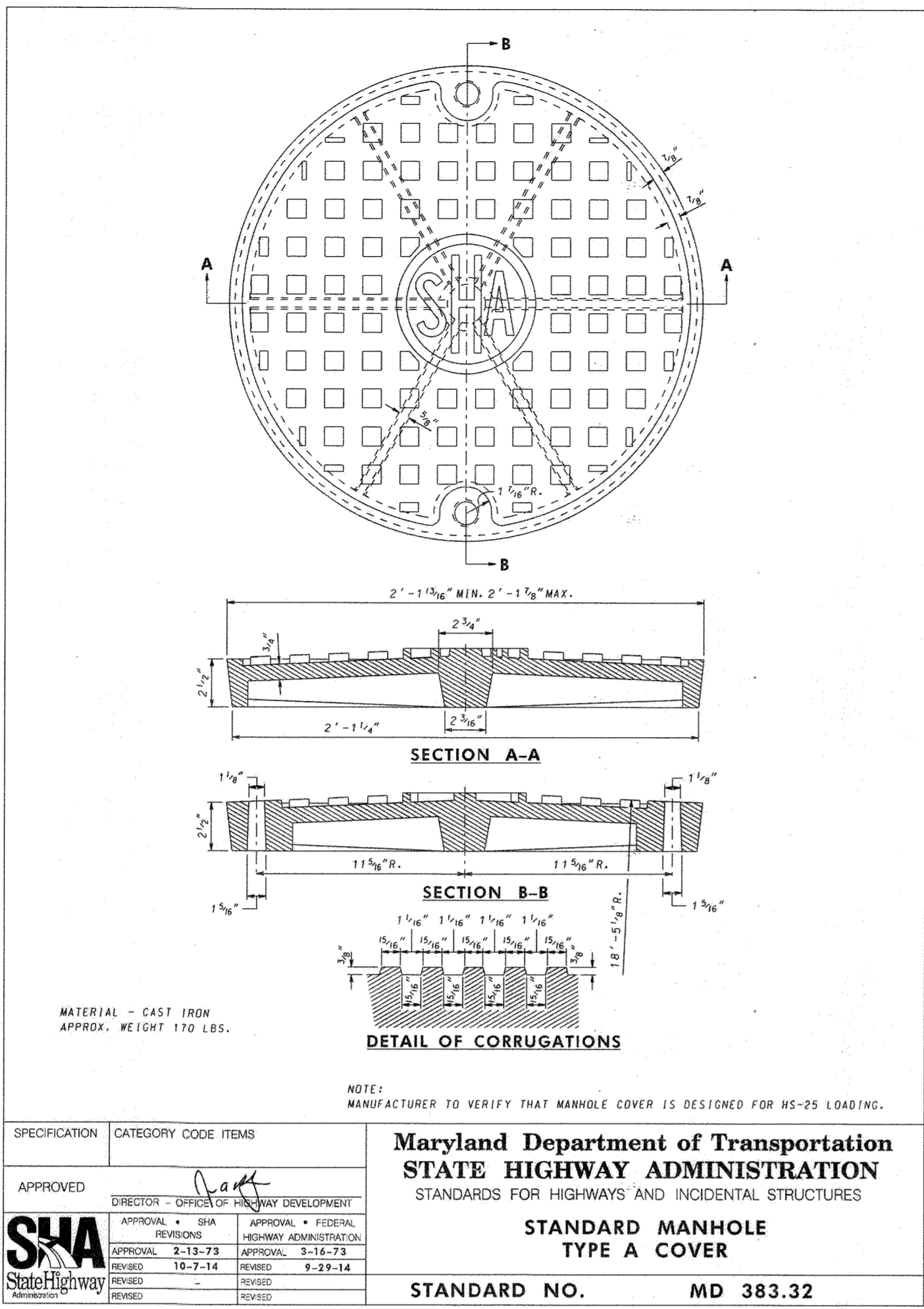
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811

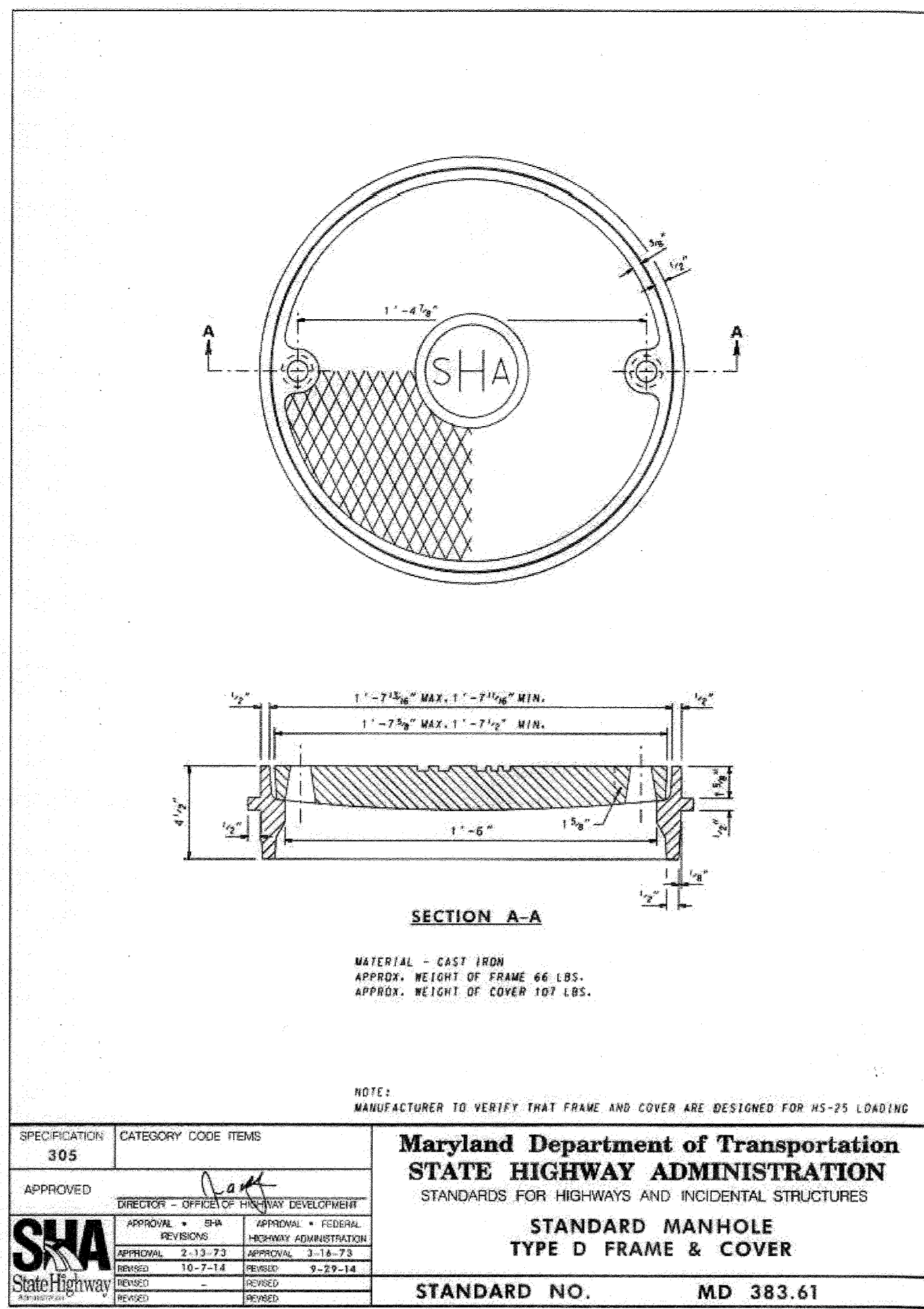
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Know what's below. Call before you dig.

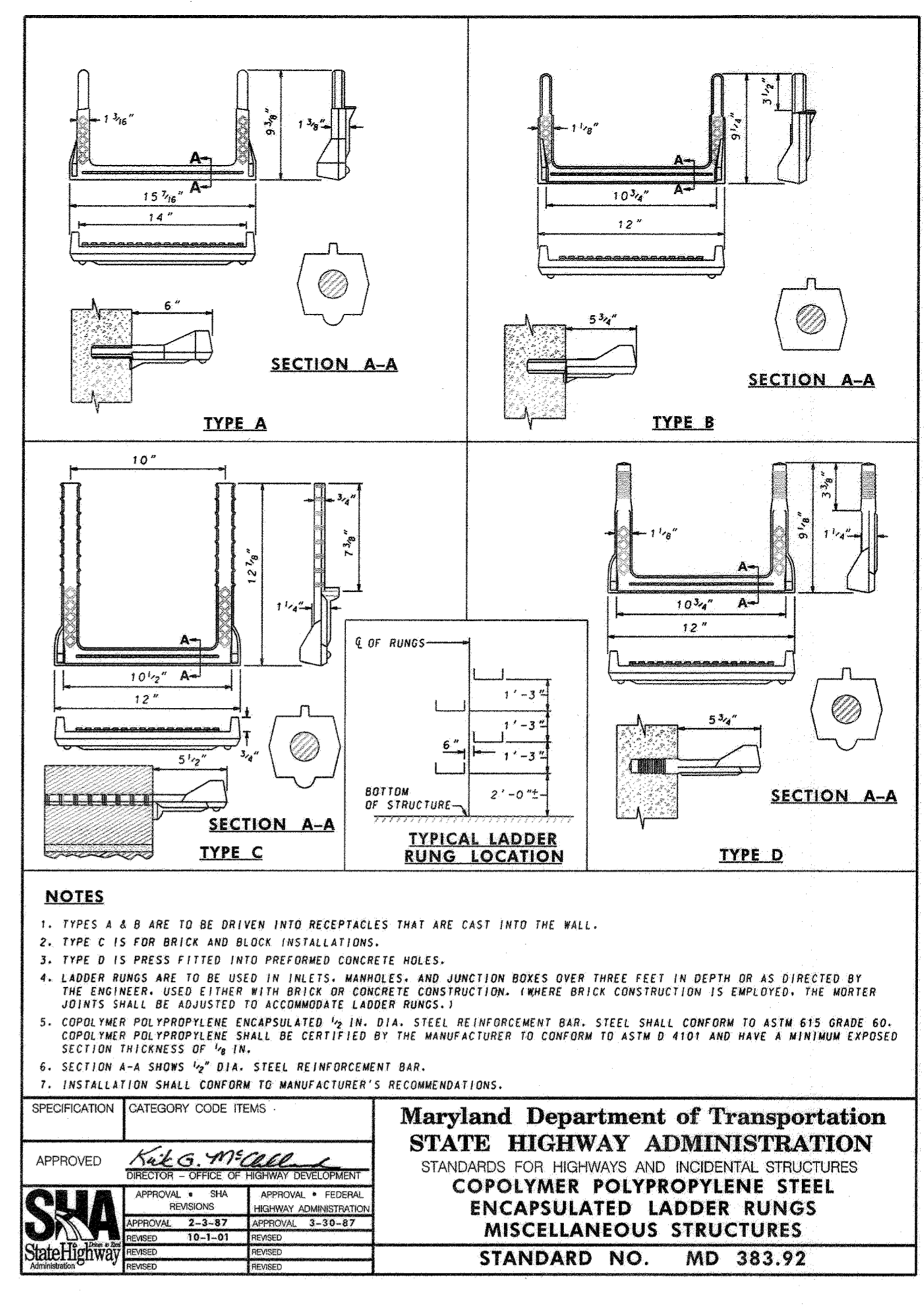
Plotted By: Moyer, Jessica - Sheet Set: Dorsey Run Road - Access Road - Layout: 47 STORM DRAIN DETAILS - June 15, 2022 10:29:06am - K:\BAL_CIV\110204002 - 7120 Dorsey Run Road CAD PlanSheets\47 - STORM DRAIN PROFILES.dwg
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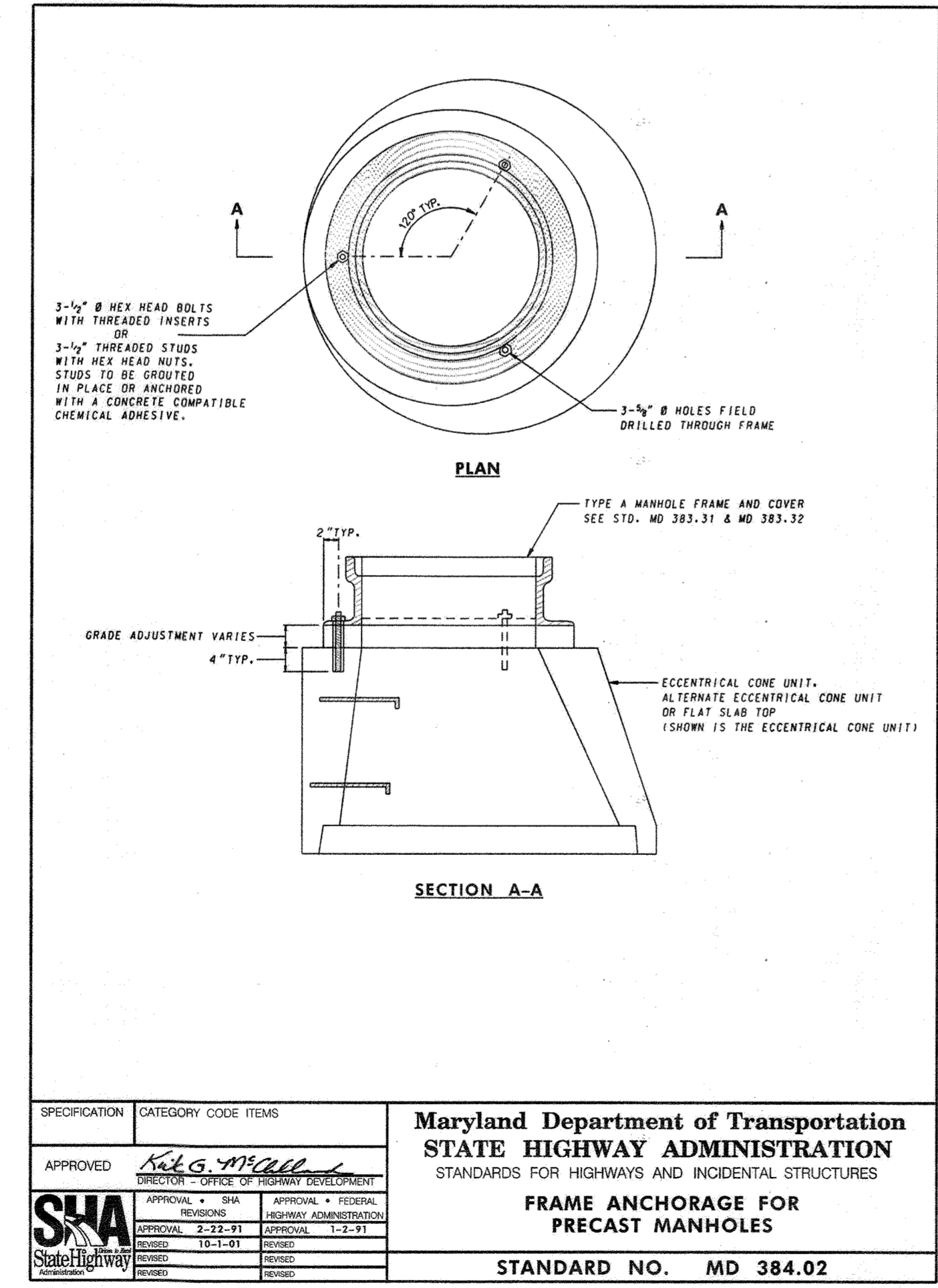
SPECIFICATION		CATEGORY CODE ITEMS	
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES STANDARD MANHOLE TYPE A COVER			
APPROVED		APPROVED	
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT <i>Kat</i> APPROVAL - SHA REVISIONS APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS		APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS	
STANDARD NO.		MD 383.32	



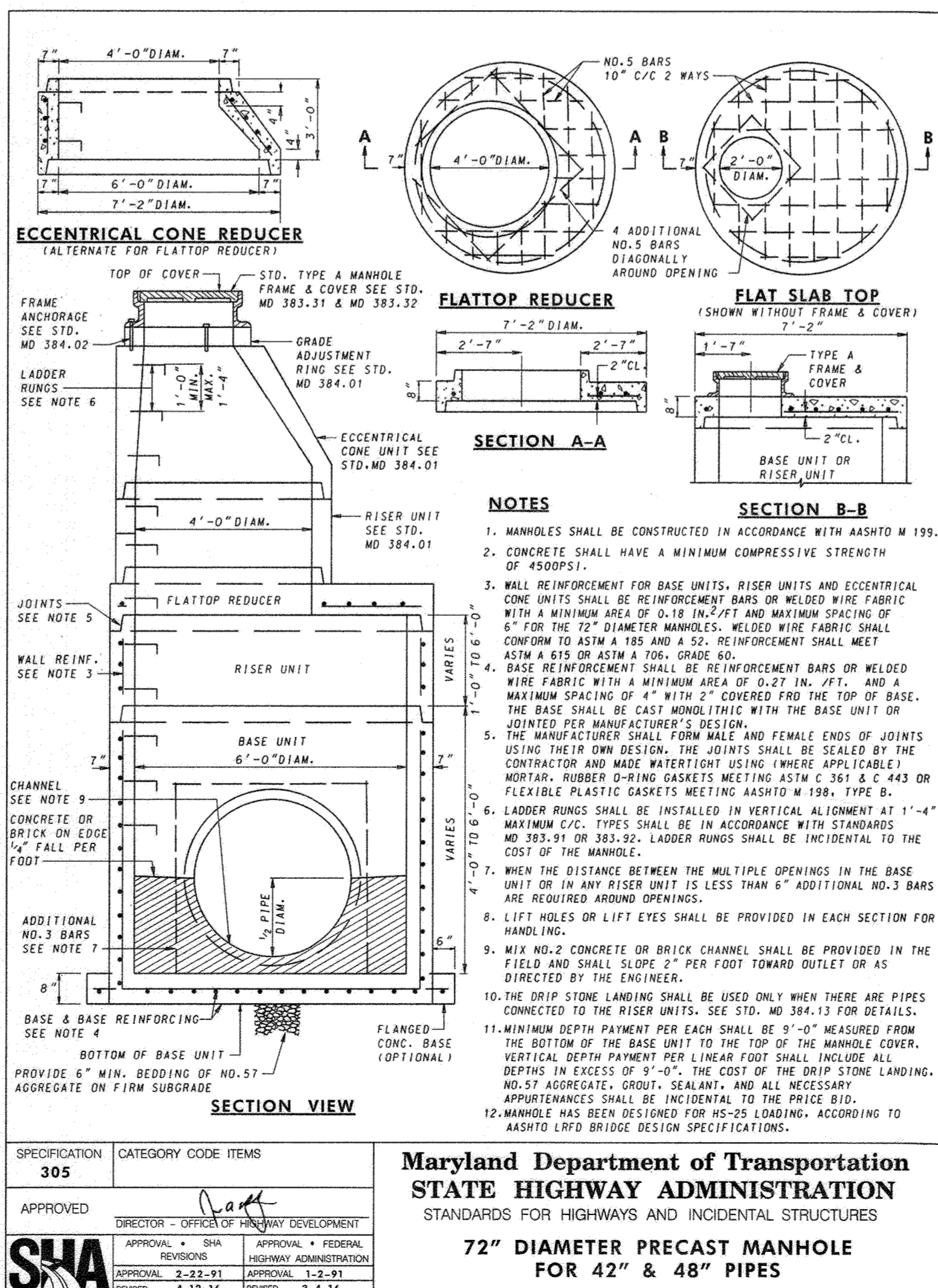
SPECIFICATION		CATEGORY CODE ITEMS	
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES STANDARD MANHOLE TYPE D FRAME & COVER			
APPROVED		APPROVED	
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT <i>Kat</i> APPROVAL - SHA REVISIONS APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS		APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS	
STANDARD NO.		MD 383.61	



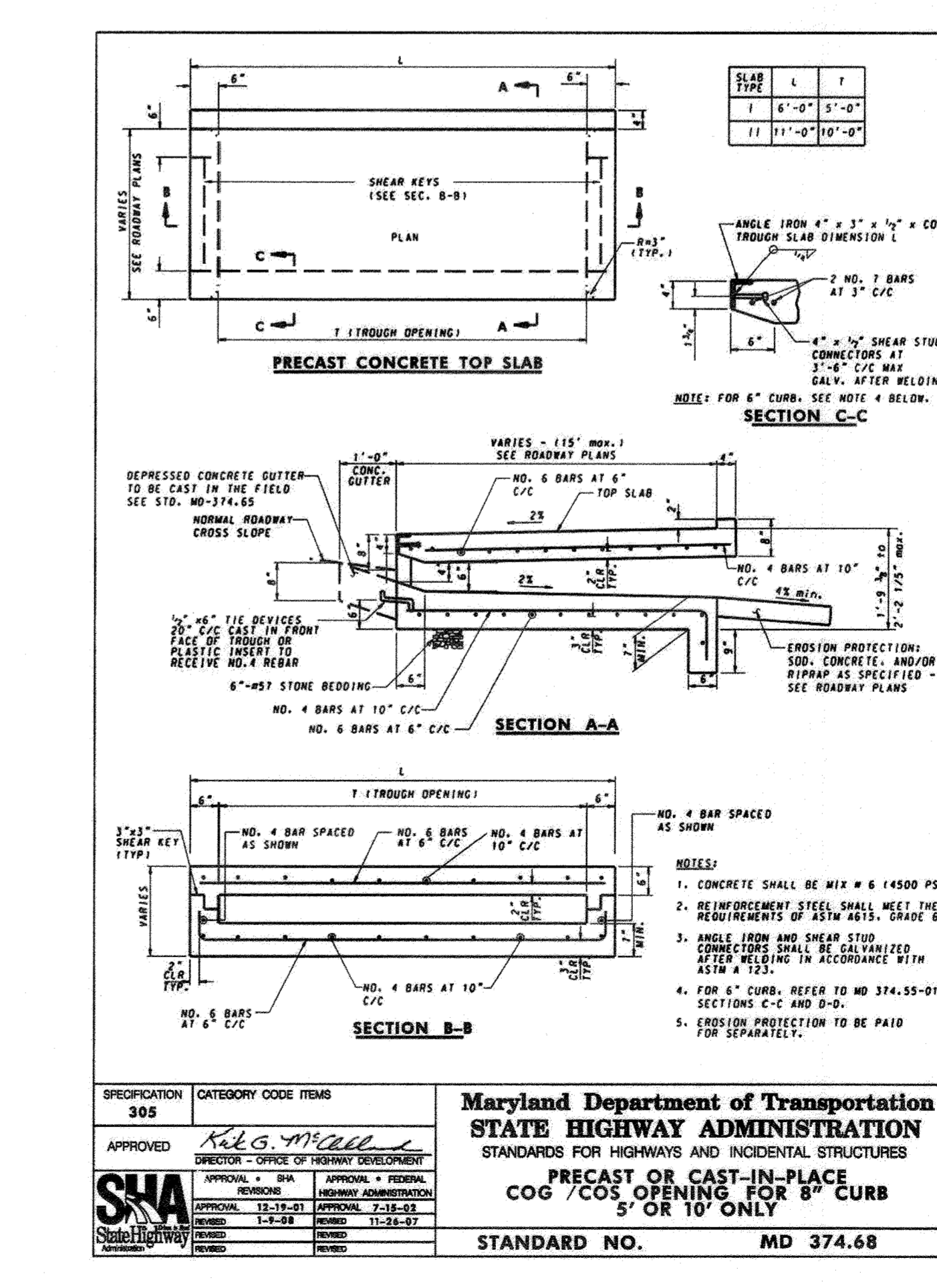
SPECIFICATION		CATEGORY CODE ITEMS	
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES COPOLYMER POLYPROPYLENE STEEL ENCAPSULATED LADDER RUNGS MISCELLANEOUS STRUCTURES STANDARD NO. MD 383.92			
APPROVED		APPROVED	
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT <i>Kat</i> APPROVAL - SHA REVISIONS APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS		APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS	
STANDARD NO.		MD 383.92	



SPECIFICATION		CATEGORY CODE ITEMS	
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES FRAME ANCHORAGE FOR PRECAST MANHOLES			
APPROVED		APPROVED	
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT <i>Kat</i> APPROVAL - SHA REVISIONS APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS		APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS	
STANDARD NO.		MD 384.02	



SPECIFICATION		CATEGORY CODE ITEMS	
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES 72\"/> 			
APPROVED		APPROVED	
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT <i>Kat</i> APPROVAL - SHA REVISIONS APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS		APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS	
STANDARD NO.		MD 384.05	



SPECIFICATION		CATEGORY CODE ITEMS	
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES PRECAST OR CAST-IN-PLACE COG /COS OPENING FOR 8\"/> 			
APPROVED		APPROVED	
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT <i>Kat</i> APPROVAL - SHA REVISIONS APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS		APPROVAL - FEDERAL HIGHWAY ADMINISTRATION APPROVED 2-13-73 REVISIONS APPROVED 10-7-14 REVISIONS APPROVED 9-29-14 REVISIONS	
STANDARD NO.		MD 374.68	

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 COX AUTOMOTIVE, INC.
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 PHONE: 678-645-2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING	DATE	DATE	DATE
	9-22-22	9/22/22	9-8-2022
CHIEF DEVELOPMENT ENGINEERING DIVISION			
CHIEF DIVISION OF LAND DEVELOPMENT			
DIRECTOR			

7120 DORSEY RUN ROAD
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 TAX MAP NO. 43 PARCEL 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

KHA PROJECT NO.:	110204002
SCALE:	AS SHOWN
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DESIGNED BY:	RLH
DRAWN BY:	JHN
CHECKED BY:	NJL

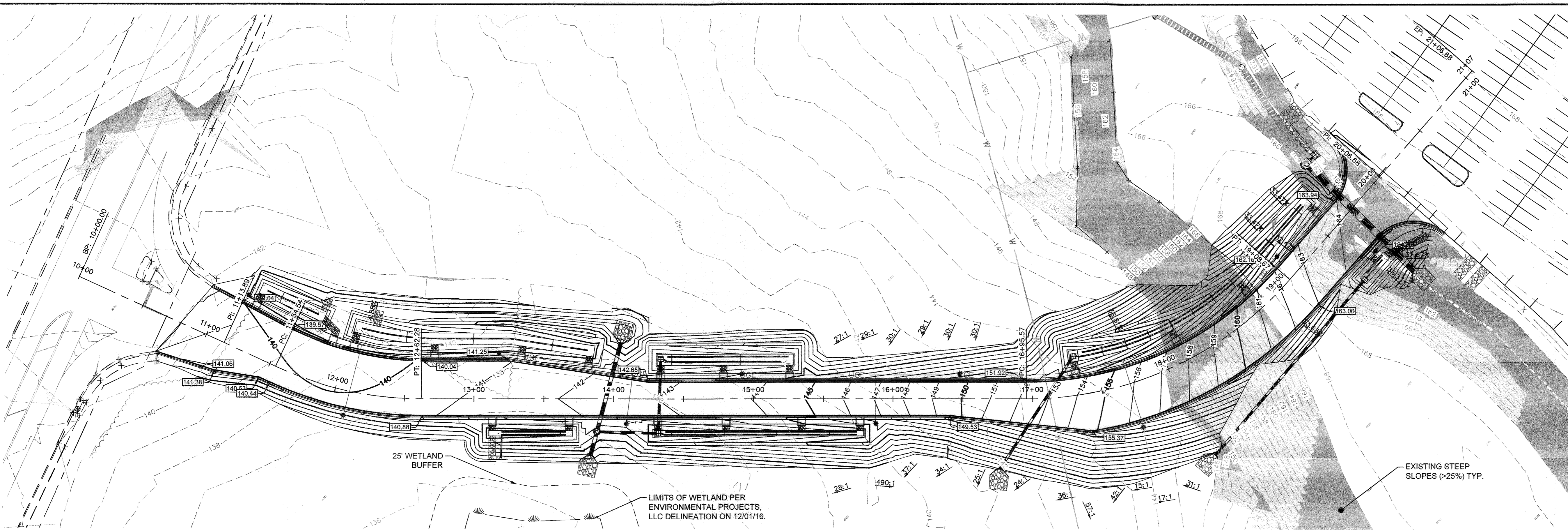


STORM DRAIN DETAILS

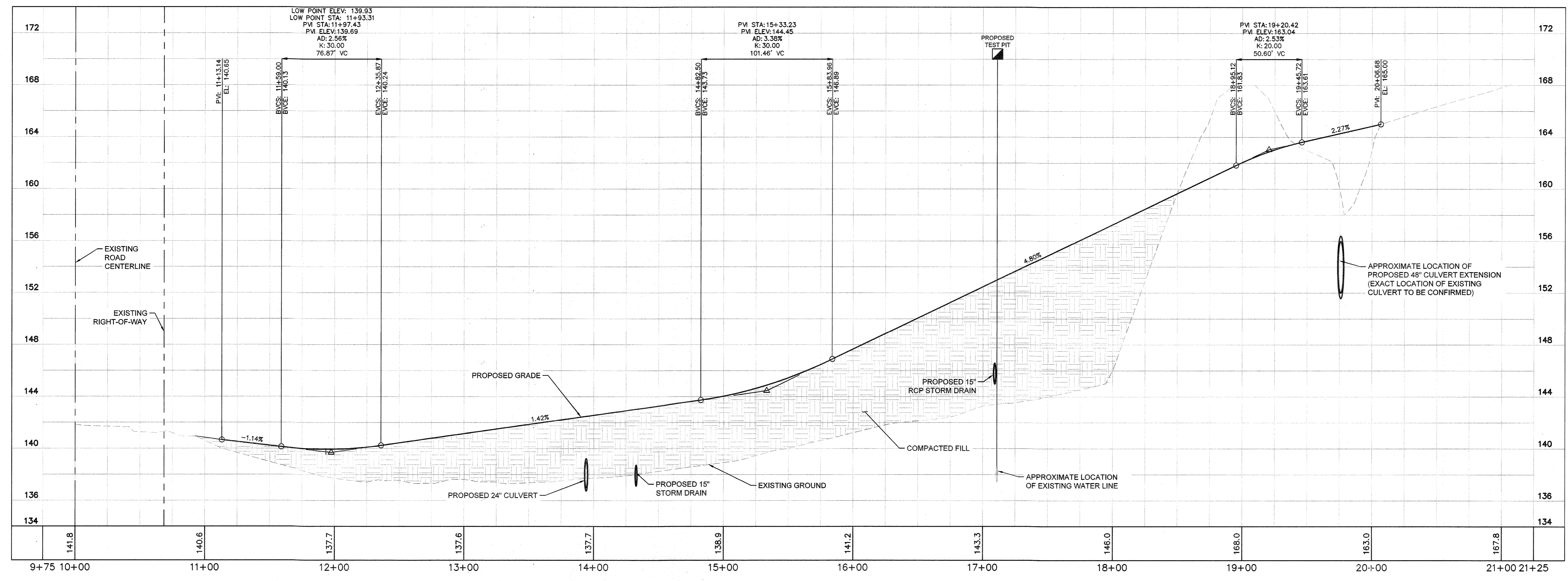
PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
 HOWARD COUNTY MD

CALL 48 HOURS BEFORE YOU DIG
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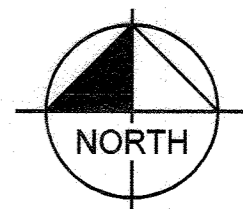
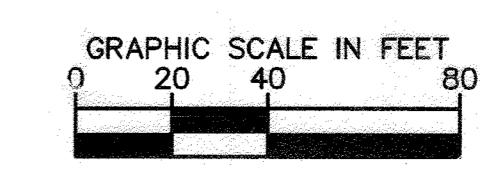


NOTE:
ALL SPOT ELEVATIONS ARE AT THE FLOWLINE, UNLESS OTHERWISE NOTED.



PROPOSED PRIVATE CUSTOMER ENTRANCE ACCESS DRIVE

ROADWAY PROFILE
 HORIZONTAL SCALE: 1"=40'
 VERTICAL SCALE: 1"=4'



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811
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 Know what's below. Call before you dig.

Kimley-Horn

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COX AUTOMOTIVE, INC.
 6205 PEACHTREE DUNWOODY ROAD
 ATLANTA, GA 30328
 PHONE: 678-645-2013

NO.	REVISIONS	DATE	BY
1	ACCESS ROAD, SWIM AND GRADING	06/15/2022	KH

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature]
CHIEF DEVELOPMENT ENGINEERING DIVISION

DATE: 9/5/22

DATE: 9/15/22

DATE: 9-8-22

DATE: 9/5/22

DATE: 9/15/22

DATE: 9-8-22

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
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 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

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 LICENSE NO. 44113
 EXPIRATION DATE: 06/30/2023

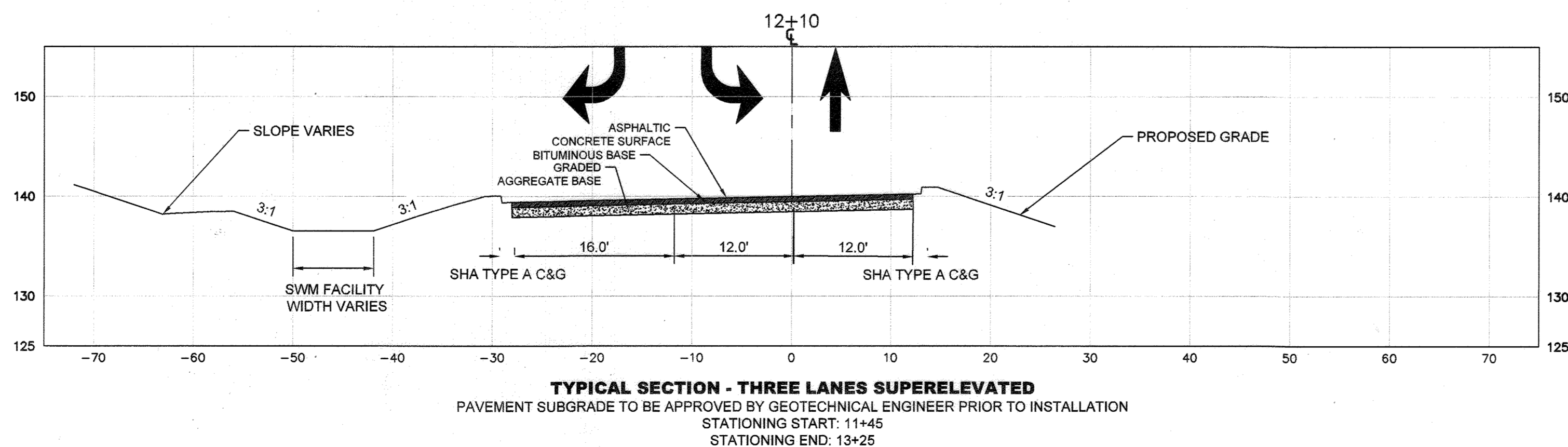
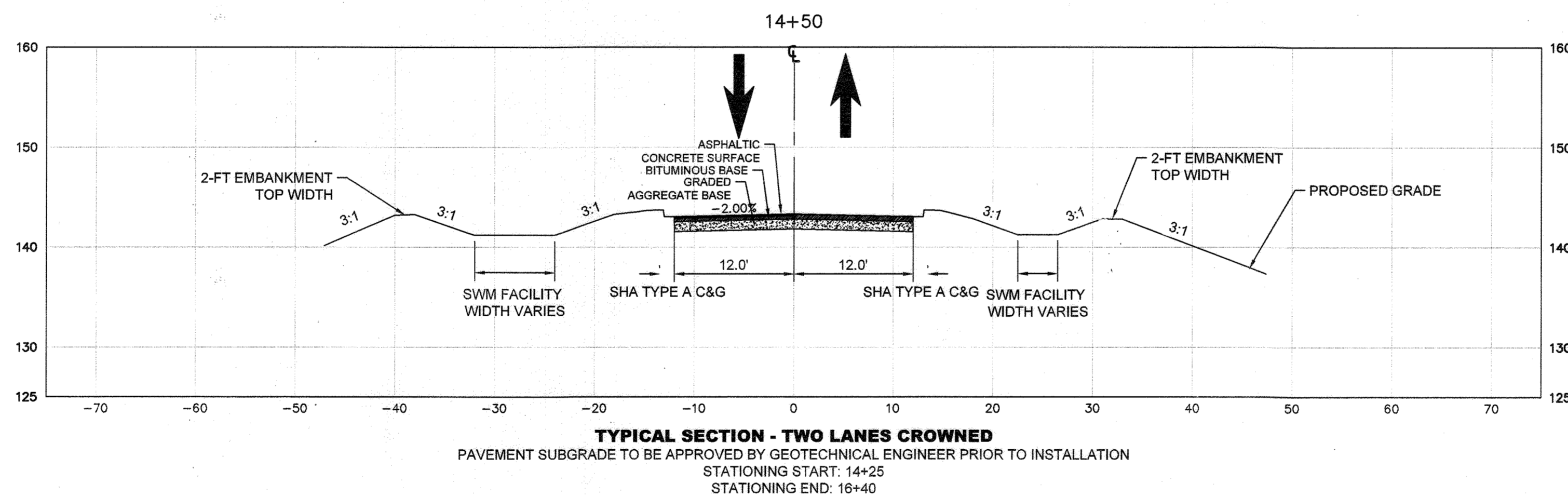
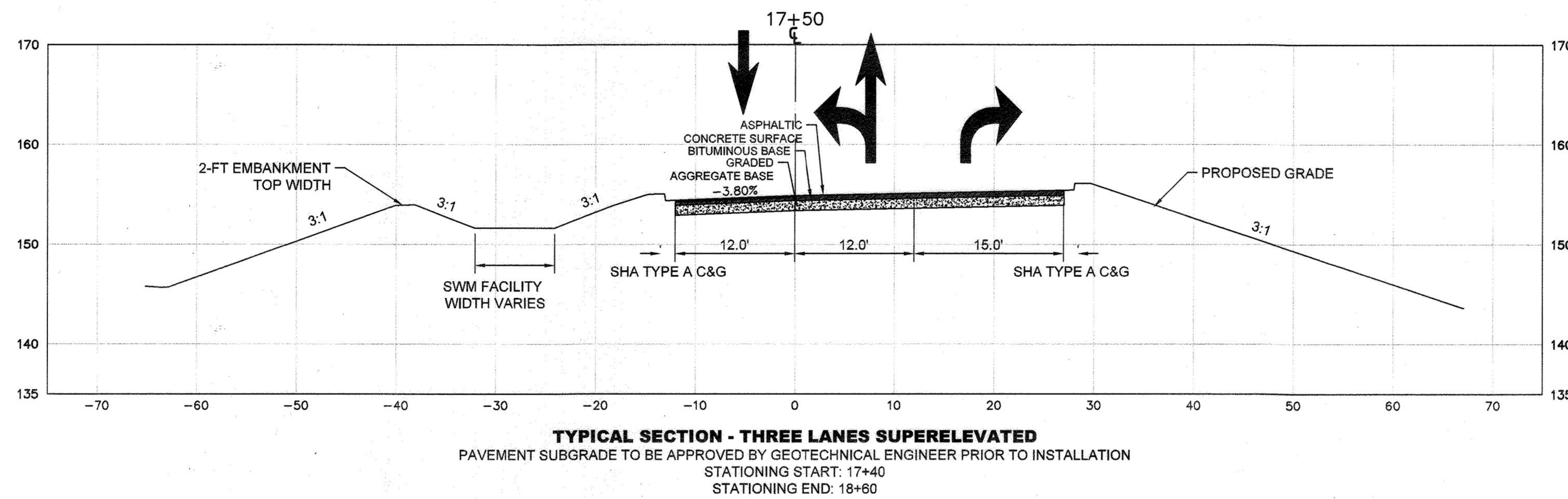
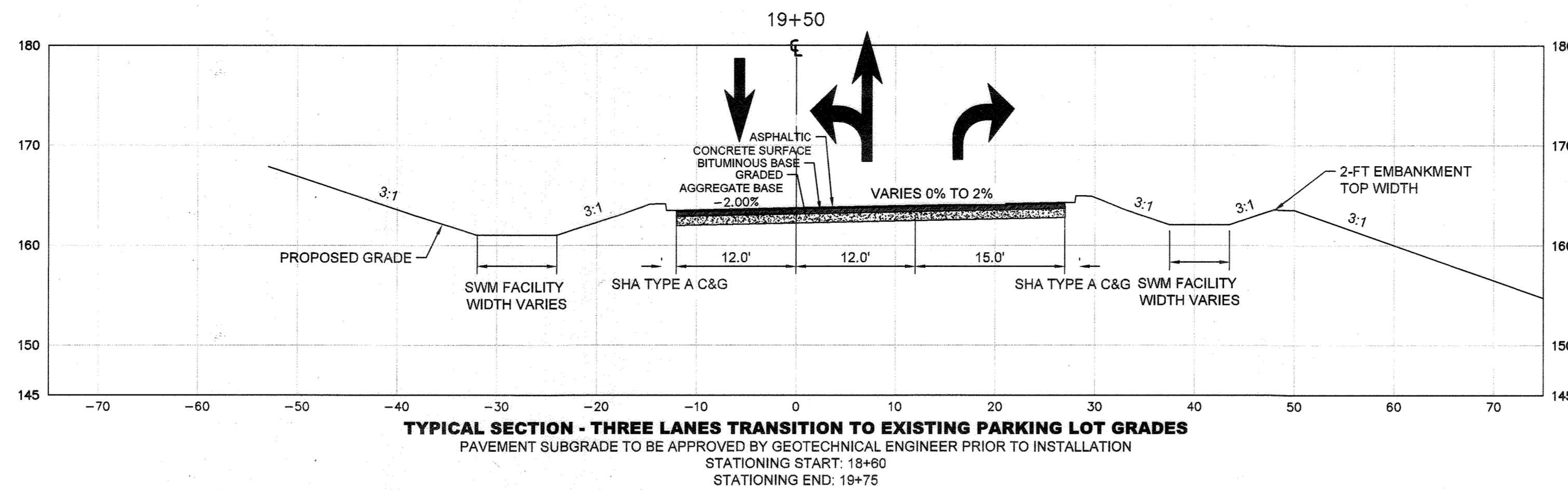
SITE DEVELOPMENT PLAN ROAD PROFILE

PROPOSED CUSTOMER ENTRANCE

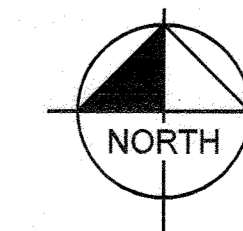
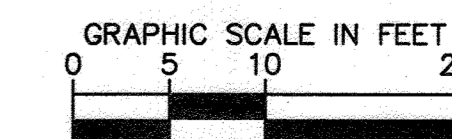
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SHEET NUMBER
49 OF 63

Plotted By: Moyer, Jessica - Sheet Set: Dorsey Run Road - Access Road - Layout: 50 ENVIRONMENTAL CONCEPT PLAN ROAD SECTIONS - June 15, 2022 - 10:30:14am - K:\BAL_CIVIL\10204002 - 7120 Dorsey Run Road\CAD\Plan\Sheet\53 - Environmental Concept Plan Road Sections.dwg
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TYPICAL ROADWAY SECTIONS
 HORIZONTAL SCALE: 1"=10'
 VERTICAL SCALE: 1"=10'



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COX AUTOMOTIVE, INC.
 6205 PEACHTREE DUNWOODY ROAD
 ATLANTA, GA 30328
 PHONE: 678-645-2013

NO.	REVISIONS	DATE	BY
1	ACCESS ROAD, SWM AND GRADING	06/15/2022	KH

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 9/1/22
 CHIEF DEVELOPMENT ENGINEERING DIVISION
 DATE: 9/1/22
 CHIEF DIVISION OF LAND DEVELOPMENT
 DATE: 9-2-22
 DIRECTOR

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO: 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
 SCALE: AS SHOWN
 DATE: 06/15/2022
 DESIGNED BY: RLH
 DRAWN BY: RLH
 CHECKED BY: NJL
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. 44113 EXPIRATION DATE: 09/30/2023



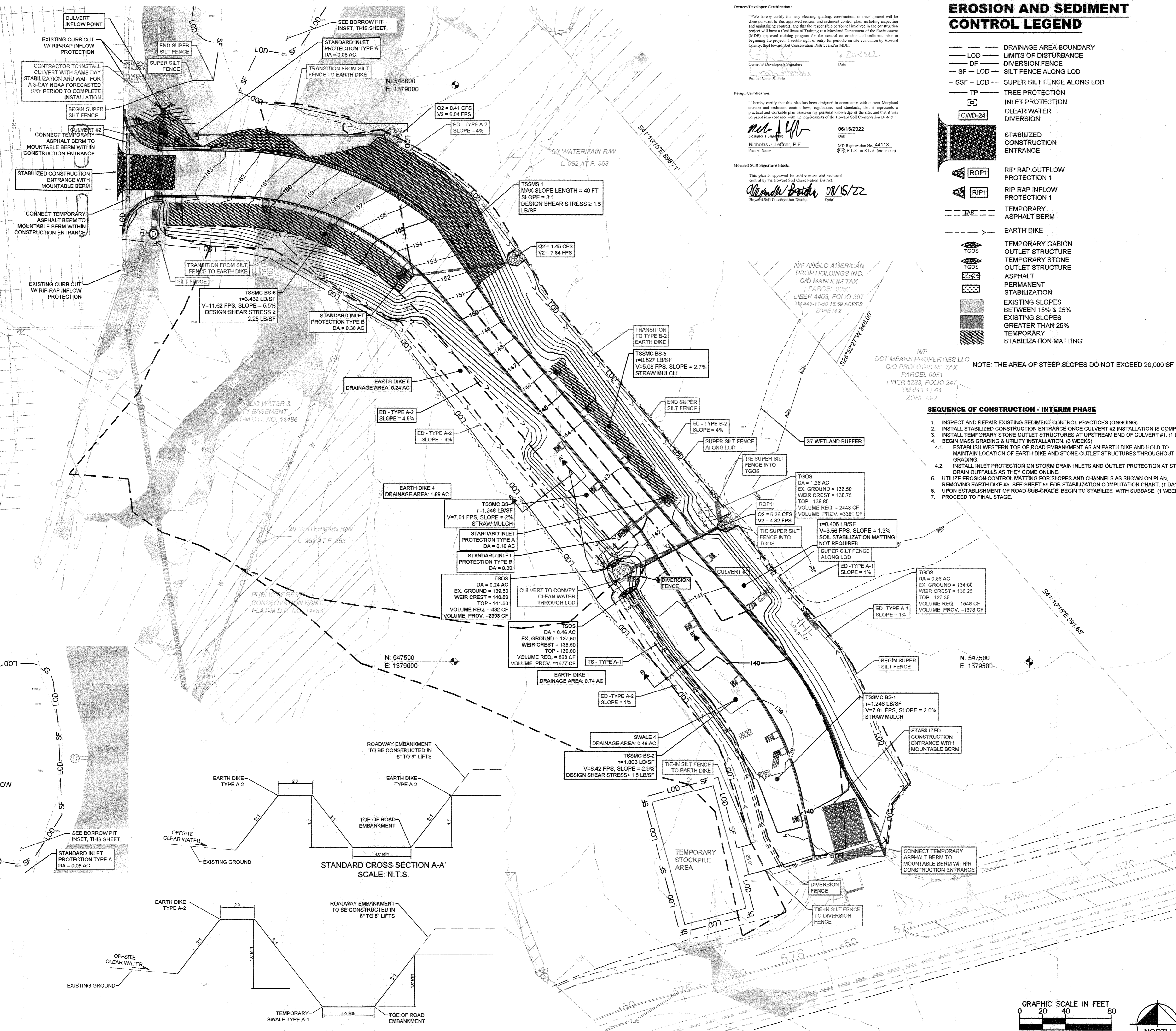
ENVIRONMENTAL CONCEPT PLAN ROAD SECTIONS

PROPOSED CUSTOMER ENTRANCE
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 HOWARD COUNTY MD

SHEET NUMBER
50 OF 63

SDP-00-063

Printed By: J. Lopez, Jessica Sheet: Sd-Dorsey Run Road - Access Road - Layout: S2 GRADING AND SEDIMENT CONTROL - INTERIM STAGE - June 15, 2022 10:31:03am K:\BAL CIV\110204002 - Interim Stage - Erosion and Sediment Control - Interim.dwg
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EROSION AND SEDIMENT CONTROL LEGEND

- DRAINAGE AREA BOUNDARY
- - - LOD LIMITS OF DISTURBANCE
- - - DF DIVERSION FENCE
- - - SF - LOD SILT FENCE ALONG LOD
- - - SF - LOD SUPER SILT FENCE ALONG LOD
- - - TP TREE PROTECTION
- - - INLET PROTECTION
- - - CLEAR WATER DIVERSION
- CWD-24
- STABILIZED CONSTRUCTION ENTRANCE
- ROP1 RIP RAP OUTFLOW PROTECTION 1
- ROP1 RIP RAP INFLOW PROTECTION 1
- TAE TEMPORARY ASPHALT BERM
- EARTH DIKE
- TGOS TEMPORARY GABION OUTLET STRUCTURE
- TGOS TEMPORARY STONE OUTLET STRUCTURE
- ASPHALT PERMANENT STABILIZATION
- EXISTING SLOPES BETWEEN 15% & 25%
- EXISTING SLOPES GREATER THAN 25%
- TEMPORARY STABILIZATION MATTING

Owner/Developer Certification:
 I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including implementing and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training as a Licensed Professional Engineer (LPE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-way for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and the MDC.

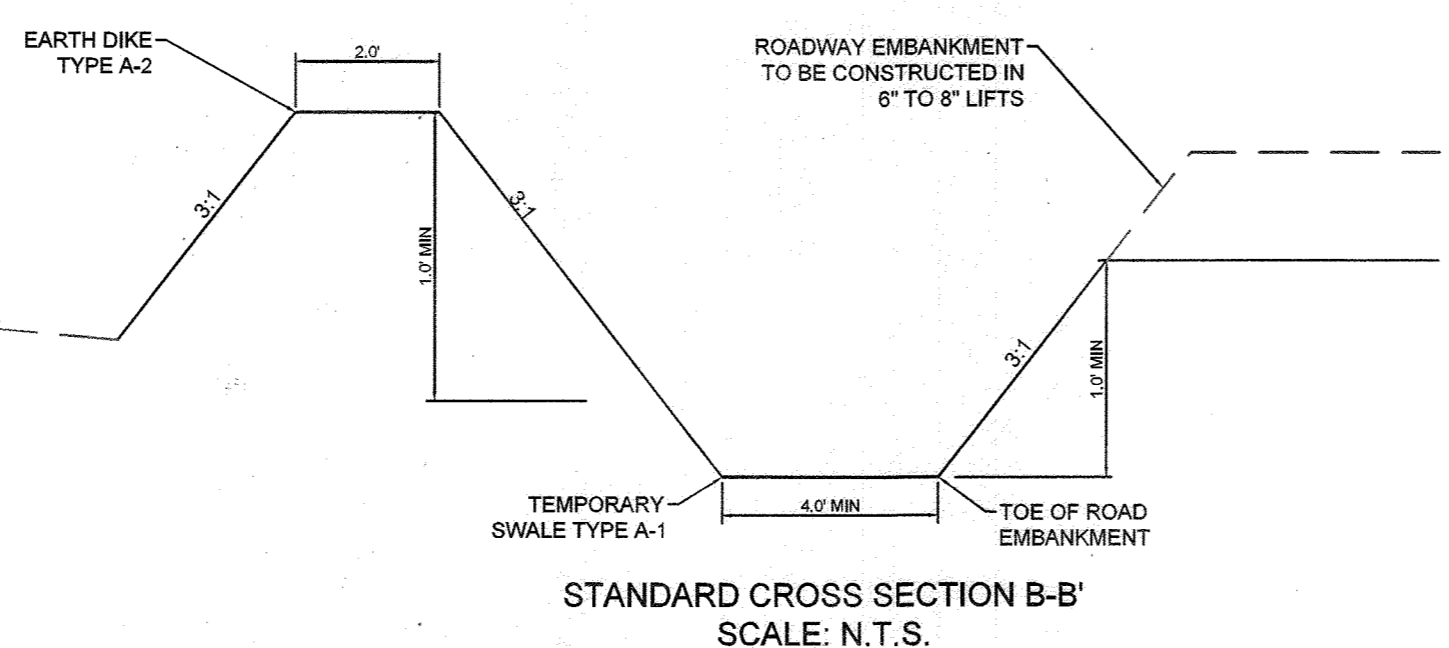
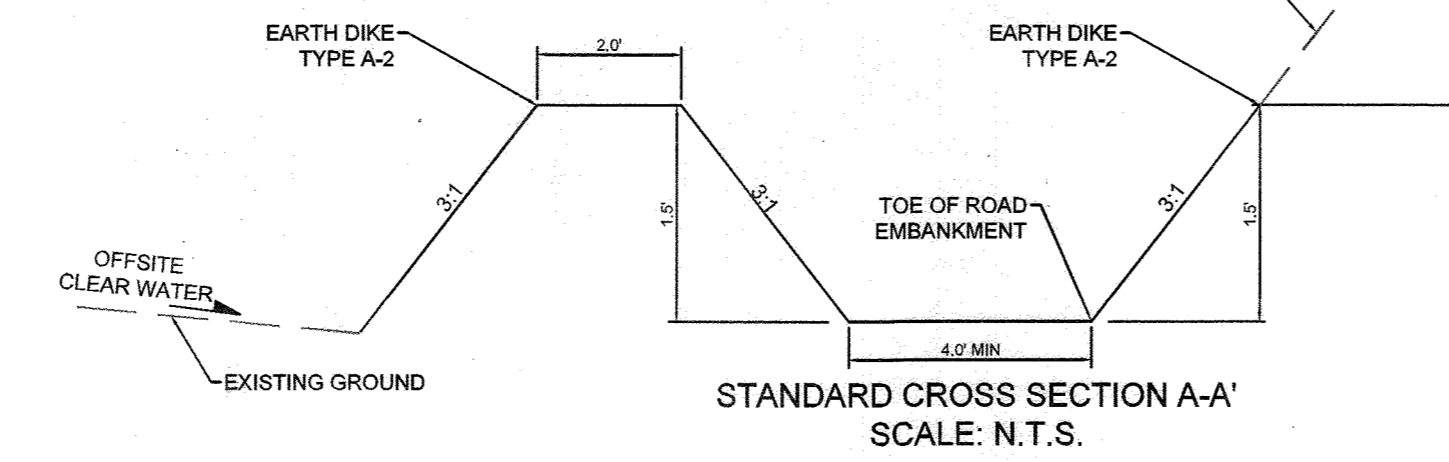
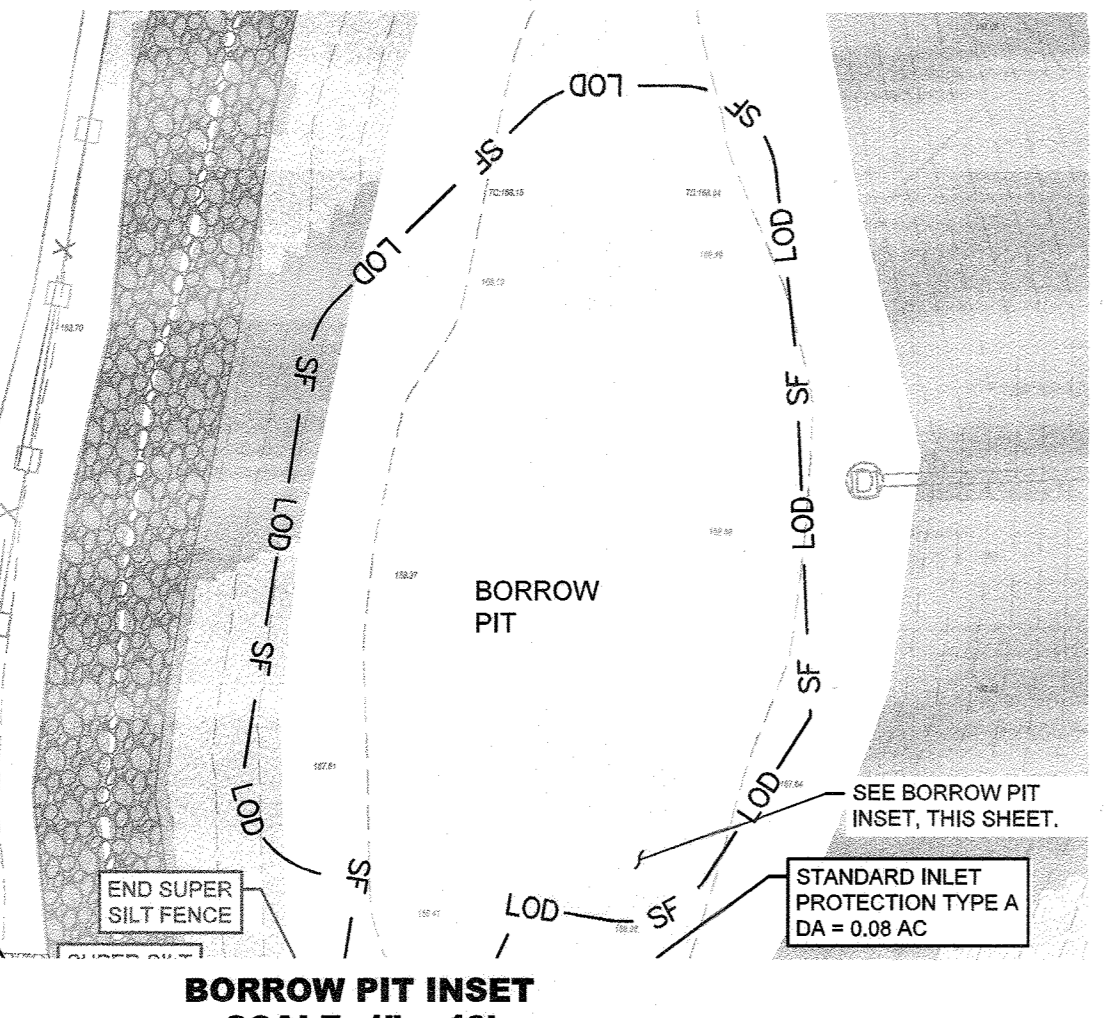
Owner's/Developer's Signature: [Signature]
 Date: 06/15/2022
 Printed Name & Title: Nicholas J. Leffner, P.E.
 M.D. Registration No. 44113
 (P.E., R.L.S., or R.L.A. (circle one))

Design Certification:
 I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

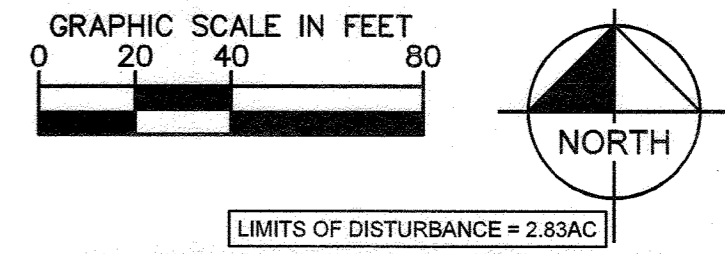
Howard SCD Signature Block:
 This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
 [Signature]
 Date: 08/15/22
 Howard Soil Conservation District

- SEQUENCE OF CONSTRUCTION - INTERIM PHASE**
- INSPECT AND REPAIR EXISTING SEDIMENT CONTROL PRACTICES (ONGOING)
 - INSTALL STABILIZED CONSTRUCTION ENTRANCE ONCE CULVERT #2 INSTALLATION IS COMPLETE
 - INSTALL TEMPORARY STONE OUTLET STRUCTURES AT UPSTREAM END OF CULVERT #1 (1 DAY)
 - BEGIN MASS GRADING & UTILITY INSTALLATION (3 WEEKS)
 - ESTABLISH WESTERN TOE OF ROAD EMBANKMENT AS AN EARTH DIKE AND HOLD TO MAINTAIN LOCATION OF EARTH DIKE AND STONE OUTLET STRUCTURES THROUGHOUT MASS GRADINGS.
 - INSTALL INLET PROTECTION ON STORM DRAIN INLETS AND OUTLET PROTECTION AT STORM DRAIN OUTFALLS AS THEY COME ONLINE.
 - UTILIZE EROSION CONTROL MATTING FOR SLOPES AND CHANNELS AS SHOWN ON PLAN, REMOVING EARTH DIKE #5. SEE SHEET 59 FOR STABILIZATION COMPUTATION CHART. (1 DAY)
 - UPON ESTABLISHMENT OF ROAD SUB-GRADE, BEGIN TO STABILIZE WITH SUBBASE. (1 WEEK)
 - PROCEED TO FINAL STAGE.

NOTE: THE AREA OF STEEP SLOPES DO NOT EXCEED 20,000 SF



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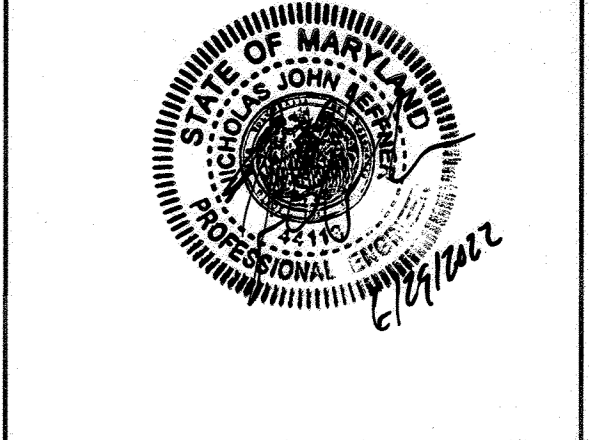
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NO.	REVISIONS	DATE	BY
1	ACCESS ROAD, SWIM AND GRADING	06/15/2022	KH

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 6/15/22
 CHIEF DEVELOPMENT ENGINEERING DIVISION
 DATE: 6/15/22
 CHIEF DIVISION OF LAND DEVELOPMENT
 DATE: 6/15/22
 DIRECTOR

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
 SCALE: AS SHOWN
 DATE: 06/15/2022
 DESIGNED BY: NJL
 DRAWN BY: JHN
 CHECKED BY: NJL



GRADING AND SEDIMENT CONTROL - INTERIM STAGE -

PROPOSED CUSTOMER ENTRANCE
 PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
 HOWARD COUNTY MD

SHEET NUMBER
52 OF 6163

SDP-00-043

Plotted By: J. L. ... 7/13/2022 10:31:30am ... K:\BAL_CIV\110204002 - June 15, 2022 - 10:31:30am ... Erosion and Sediment Control - Final Stage - Final.dwg

EROSION AND SEDIMENT CONTROL LEGEND

- — — DRAINAGE AREA BOUNDARY
- LOD — LIMITS OF DISTURBANCE
- DF — DIVERSION FENCE
- SF — SILT FENCE ALONG LOD
- SF - LOD — SUPER SILT FENCE ALONG LOD
- TP — TREE PROTECTION
- [Symbol] — INLET PROTECTION
- [Symbol] — CLEAR WATER DIVERSION
- [Symbol] CWD-24
- [Symbol] STABILIZED CONSTRUCTION ENTRANCE
- [Symbol] RIP RAP OUTFLOW PROTECTION 1
- [Symbol] RIP RAP INFLOW PROTECTION 1
- [Symbol] TEMPORARY ASPHALT BERM
- [Symbol] EARTH DIKE
- [Symbol] TEMPORARY GABION OUTLET STRUCTURE
- [Symbol] TEMPORARY STONE OUTLET STRUCTURE
- [Symbol] ASPHALT PERMANENT STABILIZATION
- [Symbol] EXISTING SLOPES BETWEEN 15% & 25%
- [Symbol] EXISTING SLOPES GREATER THAN 25%
- [Symbol] TEMPORARY STABILIZATION MATTING

NOTE: THE AREA OF STEEP SLOPES DO NOT EXCEED 20,000 SF

SEQUENCE OF CONSTRUCTION - FINAL PHASE

1. INSPECT AND REPAIR EXISTING EROSION AND SEDIMENT CONTROL PRACTICES. (ONGOING)
2. INSTALL INLET PROTECTION (1 DAY)
3. CONTINUE MASS GRADING AS SHOWN (2 WEEKS)
- 3.1. UTILIZE STABILIZATION MATTING AS SHOWN, REMOVING EARTH DIKE. SEE SHEET 59 FOR STABILIZATION COMPUTATION CHART.
- 3.2. DIVERT ROADSIDE DITCH TO INLET
4. COMPLETE ROAD ESTABLISHMENT & STABILIZE WITH SUBBASE. (2 WEEKS)
5. BEGIN ROAD PAVING. (2 WEEKS)
6. COMPLETE FINE GRADING, TEMPORARILY STABILIZE STORMWATER AREAS & PERMANENTLY ALL OTHER AREAS. (2 WEEKS)
7. COMPLETE PAVING UP TO BASE COURSE, OMITTING FINAL WEARING COURSE. (2 WEEKS)
8. UPON STABILIZATION OF ALL CONTRIBUTING DRAINAGE AREAS, INSTALL STORMWATER MANAGEMENT FACILITIES. (1 WEEK)
9. UPON INSTALLATION OF ALL STORMWATER MANAGEMENT FACILITIES, PERMANENTLY STABILIZE ALL DISTURBED AREAS. (1 WEEK)
10. COMPLETE FINAL WEARING COURSE AND PAVING. (1 WEEK)
11. COMPLETE STRIPING AND SIGNAGE. (1 WEEK)
12. WITH INSPECTOR APPROVAL, REMOVE SEDIMENT AND EROSION CONTROL MEASURES AND PERMANENTLY STABILIZE. (1 WEEK)

Owner/Developer Certification:

"We hereby certify that any clearing, grading, construction, or development will be done pursuant to the approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control of erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Owner's Developer's Signature: *[Signature]* Date: 06/15/2022
 Printed Name & Title: Nicholas J. Leffner, P.E.

Design Certification:

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Designer's Signature: *[Signature]* Date: 06/15/2022
 Printed Name: Nicholas J. Leffner, P.E. MD Registration No. 44113
 (R.S., or R.L.A., circle one)

Howard SCD Signature Block:

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

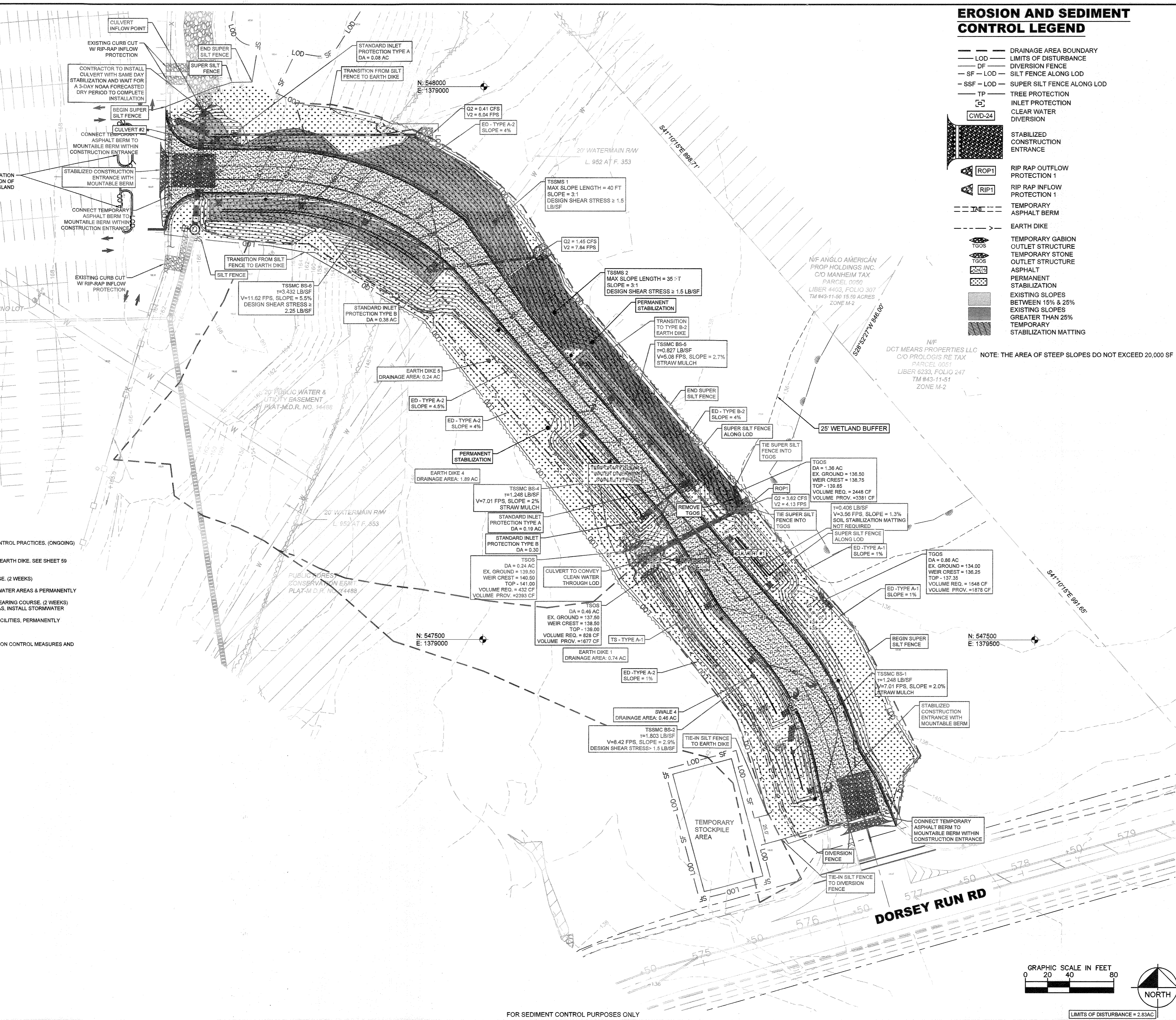
[Signature] Date: 08/15/22
 Howard Soil Conservation District

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FOR SEDIMENT CONTROL PURPOSES ONLY



GRAPHIC SCALE IN FEET

0 20 40 80

NORTH

LIMITS OF DISTURBANCE = 2.83AC

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 6205 PEACHTREE DUNWOODY ROAD
 ATLANTA, GA 30328
 PHONE: 678-645-2013

NO.	REVISIONS	DATE	BY
1			

APPROVED: DEPARTMENT OF PLANNING AND ZONING

9-22 DATE

CHIEF DEVELOPMENT ENGINEERING DIVISION

9-22 DATE

CHIEF DIVISION OF LAND DEVELOPMENT

9-22 DATE

DIRECTOR

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002

SCALE: AS SHOWN

DATE: 06/15/2022

DESIGNED BY: NJL

DRAWN BY: JHN

CHECKED BY: NJL

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. 44113
 EXPIRES 06/30/2025

GRADING AND SEDIMENT CONTROL - FINAL STAGE -

PROPOSED CUSTOMER ENTRANCE

PREPARED FOR

BALTIMORE WASHINGTON AUTO EXCHANGE

HOWARD COUNTY MD

SHEET NUMBER

53 OF 6163

SDP-00-063

Printed By: Moyer, Jessica - Sheet: Sat-Dorsey Run Road - Access Road - Layout: 54 - SOIL EROSION AND SEDIMENT CONTROL - NOTES - June 15, 2022 - 10:40:57am - K:\BAL\CVN\10204002 - 7120 Dorsey Run Road (CAD)\PlanSheets\54 - Erosion and Sediment Control - Details.dwg

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION
USING VEGETATION AS COVER TO PROTECT EXPOSED SOIL FROM EROSION.

PURPOSE
TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL.

CONDITIONS WHERE PRACTICE APPLIES
ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS. THIS SPECIFICATION IS DIVIDED INTO SECTIONS ON INCREMENTAL STABILIZATION; SOIL PREPARATION, SOIL AMENDMENTS AND TOPSOILING; SEEDING AND MULCHING; TEMPORARY STABILIZATION; AND PERMANENT STABILIZATION.

EFFECTS ON WATER QUALITY AND QUANTITY

STABILIZATION PRACTICES ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED WITH VEGETATION, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUNOFF TO DOWNSTREAM AREAS.

PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF, INFILTRATION, EVAPORATION, TRANSPIRATION, CONDENSATION, AND GROUNDWATER RECHARGE. OVER TIME, VEGETATION WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL AND SUBSEQUENT PLANT GROWTH.

VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICALS CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITHIN THE ROOT ZONE.

SEEDING AND MULCHING PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

ADEQUATE VEGETATIVE ESTABLISHMENT

INSPECT SEEDED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.

- 1. ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95 PERCENT GROUND COVER.
- 2. IF AN AREA HAS LESS THAN 40 PERCENT GROUND COVER, RESTABILIZE FOLLOWING THE ORIGINAL RECOMMENDATIONS FOR LIME, FERTILIZER, SEEDBED PREPARATION, AND SEEDING.
- 3. IF AN AREA HAS BETWEEN 40 AND 94 PERCENT GROUND COVER, OVER-SEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY SPECIFIED.
- 4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE B.6.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

DEFINITION
ESTABLISHMENT OF VEGETATIVE COVER ON CUT AND FILL SLOPES.

PURPOSE

TO PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES.

CONDITIONS WHERE PRACTICE APPLIES

ANY CUT OR FILL SLOPE GREATER THAN 15 FEET IN HEIGHT. THIS PRACTICE ALSO APPLIES TO STOCKPILES.

CRITERIA

- A. INCREMENTAL STABILIZATION - CUT SLOPES
 - 1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE WORK PROGRESSES.
 - 2. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.1):
 - A. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO CONVEY RUNOFF AROUND THE EXCAVATION.
 - B. PERFORM PHASE 1 EXCAVATION, PREPARE SEEDBED, AND STABILIZE.
 - C. PERFORM PHASE 2 EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
 - D. PERFORM FINAL PHASE EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

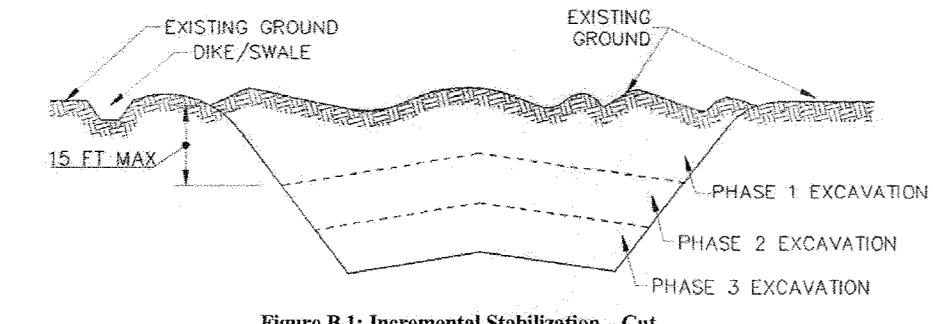


Figure B.1: Incremental Stabilization - Cut

- B. INCREMENTAL STABILIZATION - FILL SLOPES
 - 1. CONSTRUCT AND STABILIZE FILL SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL SLOPES AS THE WORK PROGRESSES.
 - 2. STABILIZE SLOPES IMMEDIATELY WHEN THE VERTICAL HEIGHT OF A LIFT REACHES 15 FEET, OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
 - 3. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
 - 4. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.2):
 - A. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SILT FENCE ON LOW SIDE OF FILL UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
 - B. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
 - C. PLACE PHASE 1 FILL, PREPARE SEEDBED, AND STABILIZE.
 - D. PLACE PHASE 2 FILL, PREPARE SEEDBED, AND STABILIZE.
 - E. PLACE FINAL PHASE FILL, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

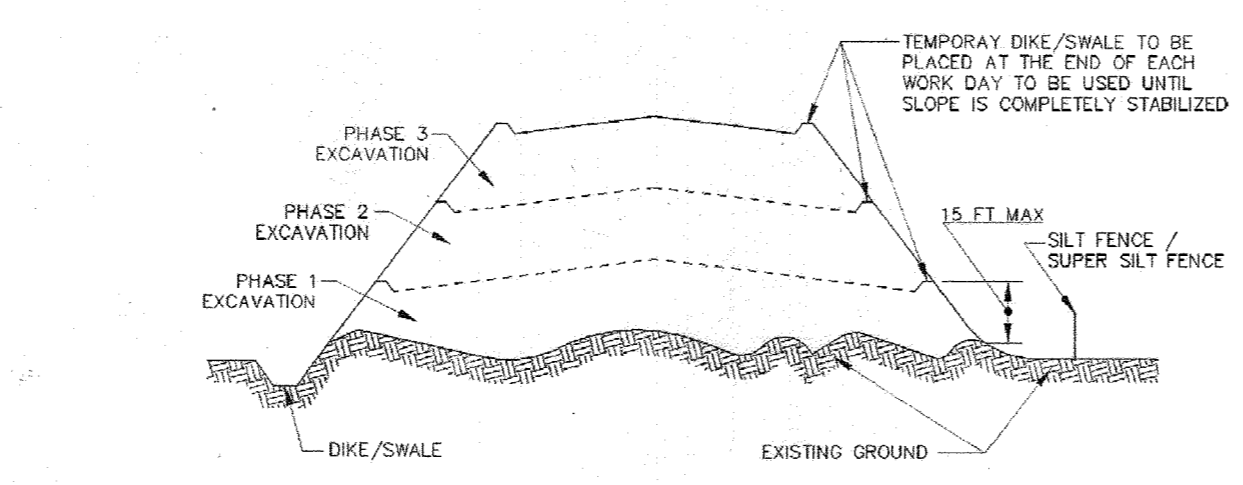


Figure B.2: Incremental Stabilization - Fill

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION

THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES

WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

- A. SOIL PREPARATION
 - 1. TEMPORARY STABILIZATION
 - A. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
 - B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
 - C. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
 - 2. PERMANENT STABILIZATION
 - A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - I. SOIL PH BETWEEN 6.0 AND 7.0.
 - II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
 - V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
 - B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
 - C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES. B.13
 - D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
 - E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED 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-NRCS.

3. TOPSOILING IS LIMITED TO AREAS HAVING 3:1 OR FLATTER SLOPES WHERE:

- A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
- B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
- C. THE ORIGINAL SOIL BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
- D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:

- A. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1/4 INCHES IN DIAMETER.
- B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
- C. 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.

6. TOPSOIL APPLICATION

- A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
- B. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO 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 MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- C. TOPSOIL MUST NOT BE PLACED IF 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.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.

2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.

3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.

4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION

A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE

TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES

STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

CRITERIA

- 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
- 2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
- 3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
- 4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
- 5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
- 6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
- 7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 37 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
- 8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

- 1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given at the following stages:
 - a. Prior to the start of earth disturbance.
 - b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading.
 - c. Prior to the start of another phase of construction or opening of another grading unit.
 - d. Prior to the removal or modification of sediment control practices.

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.

- 2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.

- 3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 1 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.

- 4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (for topsoil) (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).

- 5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.

Site Analysis:

Total Area of Site:	123.523	Acres
Area Disturbed:	2.83	Acres
Area to be roofed or paved:	0.88	Acres
Area to be vegetatively stabilized:	1.95	Acres
Total Cut:	1,803	Cu. Yds.
Total Fill:	11,931	Cu. Yds.

Offsite waste/borrow area location: **ONSITE**

- 7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

- 8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly; and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:

- Inspection date
- Inspection type (routine, pre-storm event, during rain event)
- Name and title of inspector
- Weather information (current conditions as well as time and amount of last recorded precipitation)
- Brief description of project's status (e.g., percent complete) and/or current activities
- Evidence of sediment discharges
- Identification of plan deficiencies
- Identification of sediment controls that require maintenance
- Identification of missing or improperly installed sediment controls
- Compliance status regarding the sequence of construction and stabilization requirements
- Photographs
- Monitoring/sampling
- Maintenance and/or corrective action performed
- Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).

- 9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter.

- 10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may be allowed by the CID per the list of HSCD-approved field changes.

- 11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.

- 12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.

- 13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.

- 14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled up hill by 2" in elevation.

- 15. Stream channels must not be disturbed during the following restricted time periods (inclusive):
 - Use I and IP March 1 - June 15
 - Use III and IIP October 1 - April 30
 - Use IV March 1 - May 31

- 16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

Owner/Developer Certification:

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control of erosion and sediment prior to beginning the project. I certify, right-of-entry for periodic on-site evaluation by Howard County, and the Howard Soil Conservation District and MDE."

Owner's/Developer's Signature: *Michael J. Leffner* Date: *06/15/2022*
Printed Name & Title: *Michael J. Leffner, P.E.*

Design Certification:

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Designer's Signature: *Nicholas J. Leffner, P.E.* Date: *06/15/2022*
Printed Name: *Nicholas J. Leffner, P.E.* MD Registration No. *44113*
(P.E., R.L.S., or R.L.A., (expired only))

Howard SCD Signature Block:

"This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District."
Alexander Brantley *08/15/22*
Howard Soil Conservation District Date

Kimley-Horn

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1801 PORTER STREET, SUITE 401
BALTIMORE, MD 21230
CONTACT: NICHOLAS J. LEFFNER
PHONE: 443-743-3470
WWW.KIMLEY-HORN.COM

COX AUTOMOTIVE, INC.
6205 PEACHTREE DUNWOODY ROAD
ATLANTA, GA 30328
PHONE: 678-645-2013

NO.	REVISIONS	DATE	BY
1			

APPROVED: DEPARTMENT OF PLANNING AND ZONING	DATE	DATE	DATE
<i>Michael J. Leffner</i>	<i>9-2-22</i>	<i>9/8/22</i>	<i>9-8-22</i>
CHIEF DEVELOPMENT ENGINEERING DIVISION		CHIEF DIVISION OF LAND DEVELOPMENT	DIRECTOR

7120 DORSEY RUN ROAD
HOWARD COUNTY, MARYLAND
TAX MAP NO. 43 PARCEL 371
ZONING: M-2 BLOCK 10
FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002

SCALE: AS SHOWN

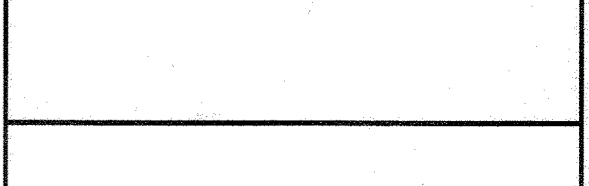
DATE: 06/15/2022

DESIGNED BY: N.J.L.

DRAWN BY: J.H.N.

CHECKED BY: N.J.L.

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. 44113
EXPIRATION DATE: 06/15/2023



SOIL EROSION AND SEDIMENT CONTROL - NOTES

PROPOSED CUSTOMER ENTRANCE
PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
HOWARD COUNTY MD

SHEET NUMBER
54 OF 6163

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
Know what's below. Call before you dig.

Printed By: Mover, Jessica Sheet: Sat-Dorsey Run Road - Access Road - Lovetts ES - SOIL EROSION AND SEDIMENT CONTROL - NOTES - June 15, 2022 10:40:59am K:\B\1\CV\10204002 - 7120 Dorsey Run Road (CAD) PlanSheet\38 - Erosion and Sediment Control - Details.dwg

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

A. SEEDING

1. SPECIFICATIONS

- A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
D. SOD OR SEED MUST NOT 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.

2. APPLICATION

- A. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES DESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
B. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
I. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
C. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
I. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P 2 O 5 (PHOSPHOROUS), 200 POUNDS PER ACRE; K 2 O (POTASSIUM), 200 POUNDS PER ACRE.
II. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
III. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
IV. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

- A. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
B. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
I. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
II. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
III. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER. ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
IV. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
V. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM. B.17

2. APPLICATION

- A. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
B. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
C. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

3. ANCHORING

- A. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD.
I. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
II. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
III. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
IV. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

- 1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES, AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS DESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY table with columns: NO., SPECIES, APPLICATION RATE (LB/AC), SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE (10-10-20), LIME RATE. Includes rows for BARLEY and FOXTAIL MILLET.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA

A. SEED MIXTURES

1. GENERAL USE

- A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
B. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 42 - CRITICAL AREA PLANTING.
C. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
D. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.

2. TURFGRASS MIXTURES

- A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
I. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
II. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
IV. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

NOTES:

SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES: WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)

CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)

SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

D. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1/4 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

E. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/4 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

PERMANENT SEEDING SUMMARY table with columns: HARDINESS ZONE, SEED MIXTURE, SPECIES, APPLICATION RATE, SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE (N, P205, K20), LIME RATE. Includes rows for TALL FESCUE, KENTUCKY BLUE GRASS, and PERENNIAL RYEGRASS.

NOTE: DURING TIMES OUTSIDE OF THE INCLUDED "SEEDING DATES" SOD MAY BE USED TO ESTABLISH PERMANENT STABILIZATION.

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

1. GENERAL SPECIFICATIONS

- A. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
B. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 1/4 INCH, PLUS OR MINUS 1/8 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
C. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
D. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
E. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

2. SOD INSTALLATION

- A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
B. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
C. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
D. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.

3. SOD MAINTENANCE

- A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.
B. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
C. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

H-5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

DEFINITION

CONTROLLING THE SUSPENSION OF DUST PARTICLES FROM CONSTRUCTION ACTIVITIES

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

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

CRITERIA

- 1. MULCHES: SEE SECTION B-4-2 SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS, SECTION B-4-3 SEEDING AND MULCHING, AND SECTION B-4-4 TEMPORARY STABILIZATION. MULCH MUST BE ANCHORED TO PREVENT BLOWING.
2. VEGETATIVE COVER: SEE SECTION B-4-4 TEMPORARY STABILIZATION.
3. TILLAGE: TILL TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACES ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT THAT MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION: SPRINKLE SITE WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. THE SITE MUST NOT BE IRRIGATED TO THE POINT THAT RUNOFF OCCURS.
5. BARRIERS: SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENT AND SOIL BLOWING.
6. CHEMICAL TREATMENT: USE OF CHEMICAL TREATMENT REQUIRES APPROVAL BY THE APPROPRIATE PLAN REVIEW AUTHORITY.

Kimley Horn

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COX AUTOMOTIVE, INC. 6205 PEACHTREE DUNWOODY ROAD ATLANTA, GA 30328 PHONE: 678-645-2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING. Includes signatures and dates for Chief Development Engineering Division and Chief Division of Land Development.

7120 DORSEY RUN ROAD HOWARD COUNTY, MARYLAND TAX MAP NO. 43 PARCEL 371 ZONING: M-2 BLOCK: 10 FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002 SCALE: AS SHOWN DATE: 06/15/2022 DESIGNED BY: NJL DRAWN BY: JHN CHECKED BY: NJL

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. 44113 EXPIRATION DATE: 06/30/2023



SOIL EROSION AND SEDIMENT CONTROL - NOTES

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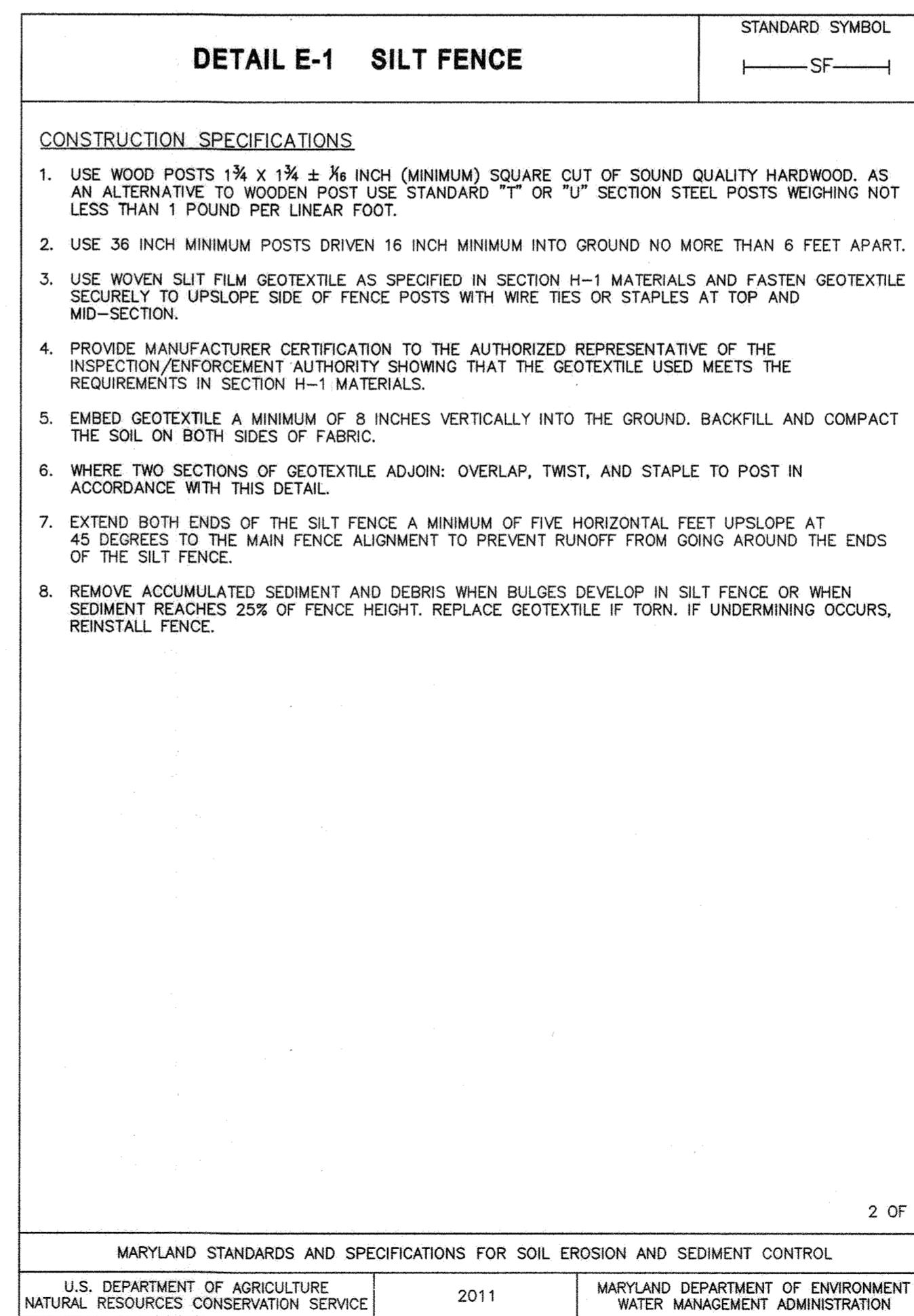
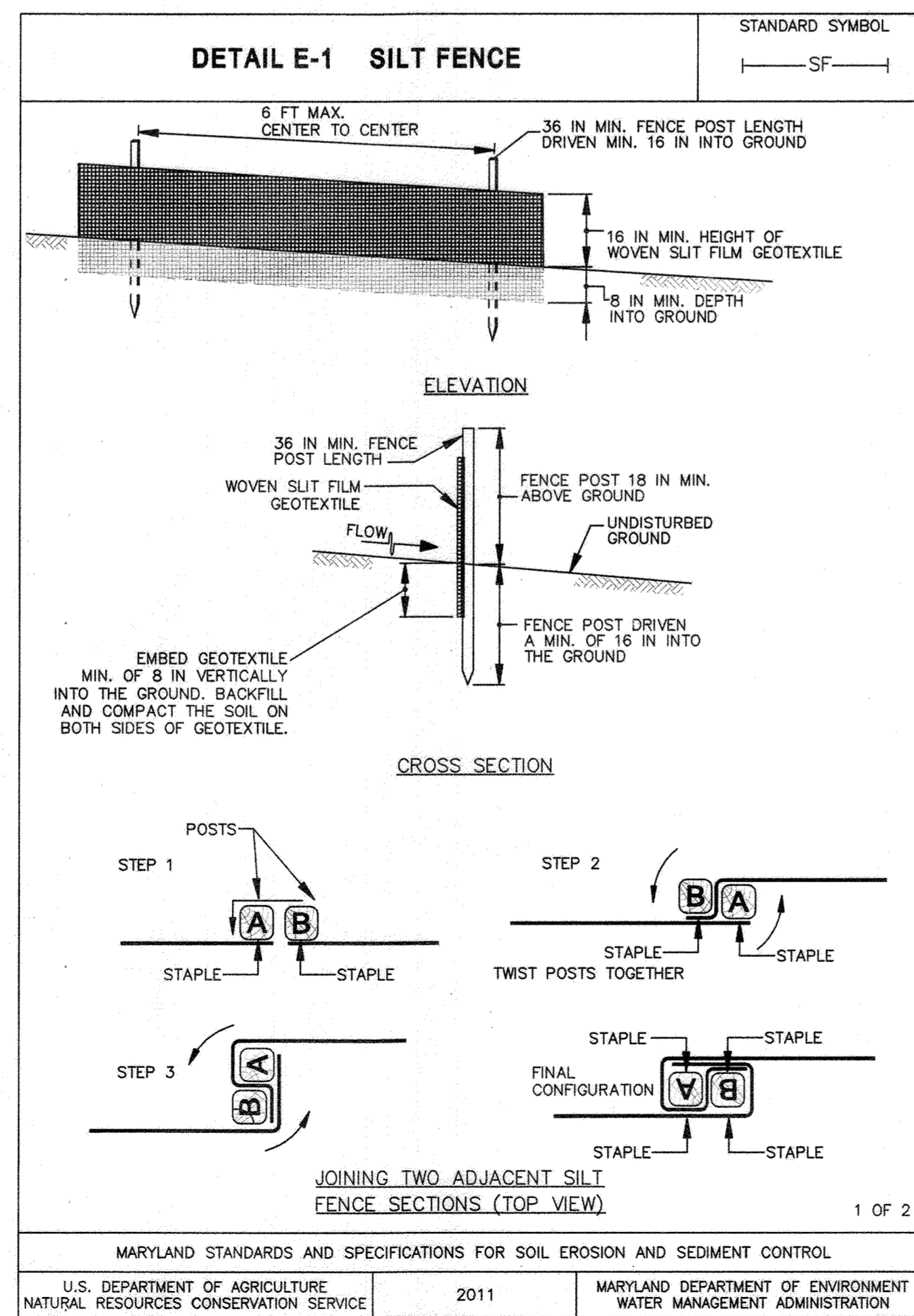
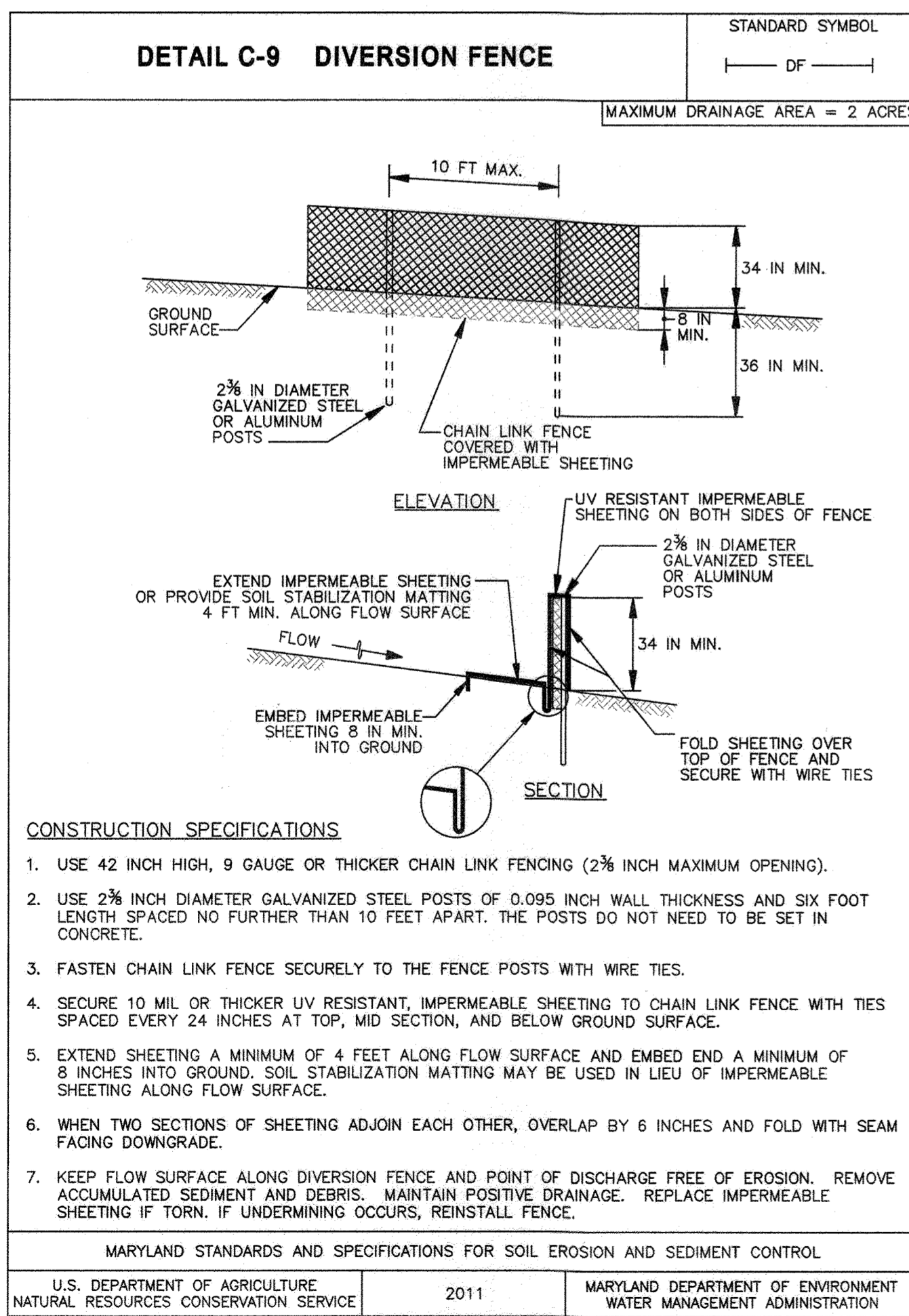
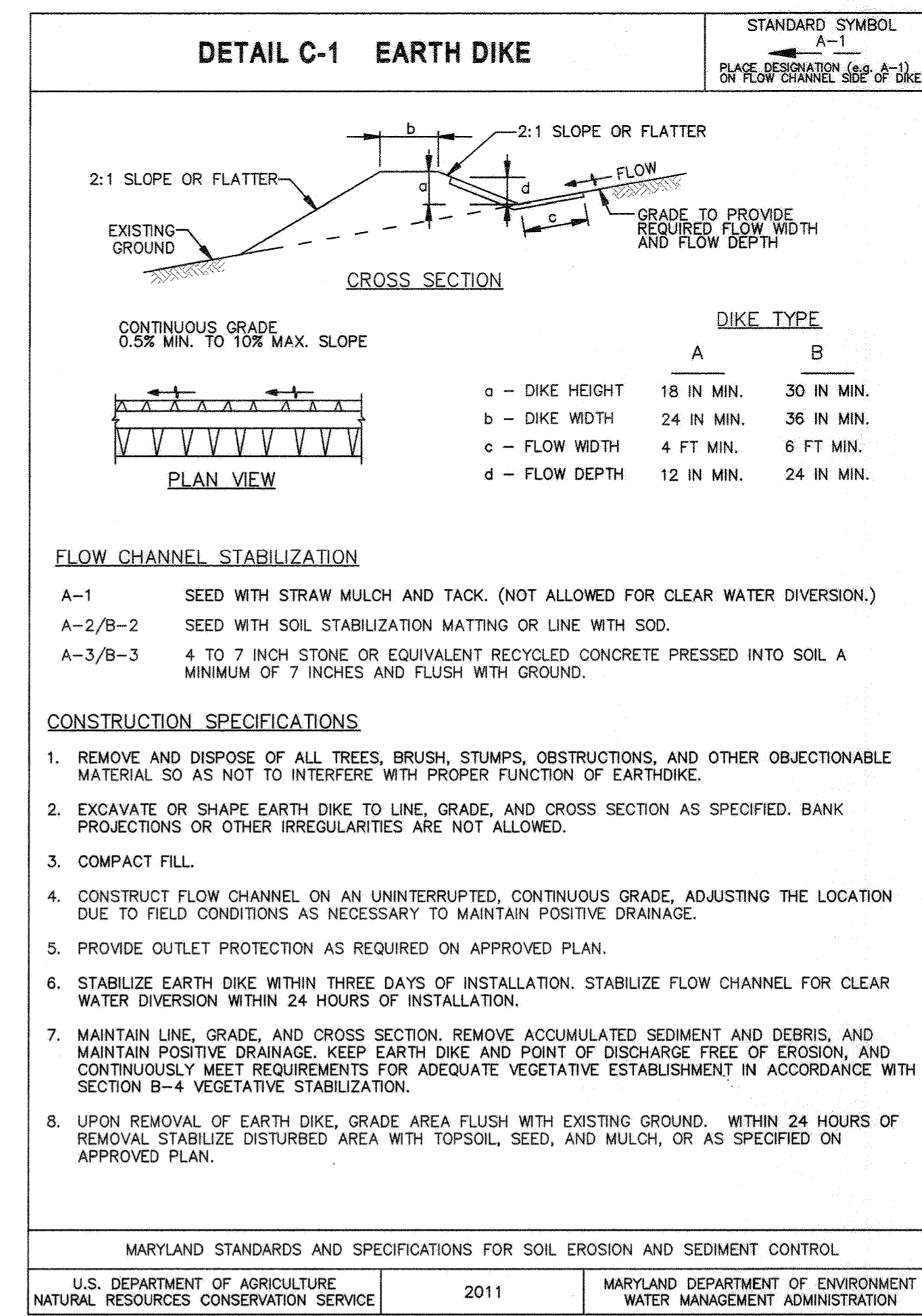
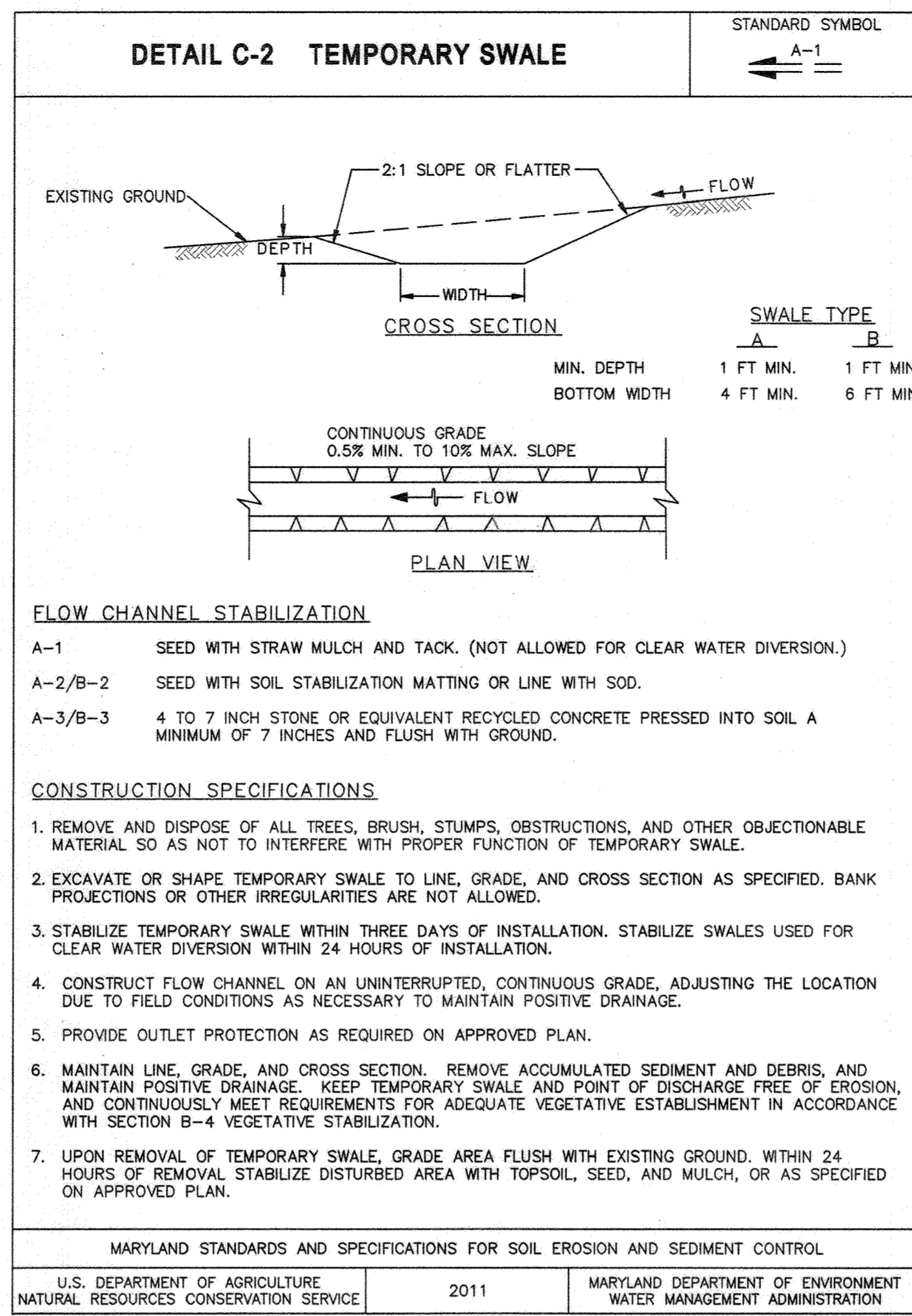
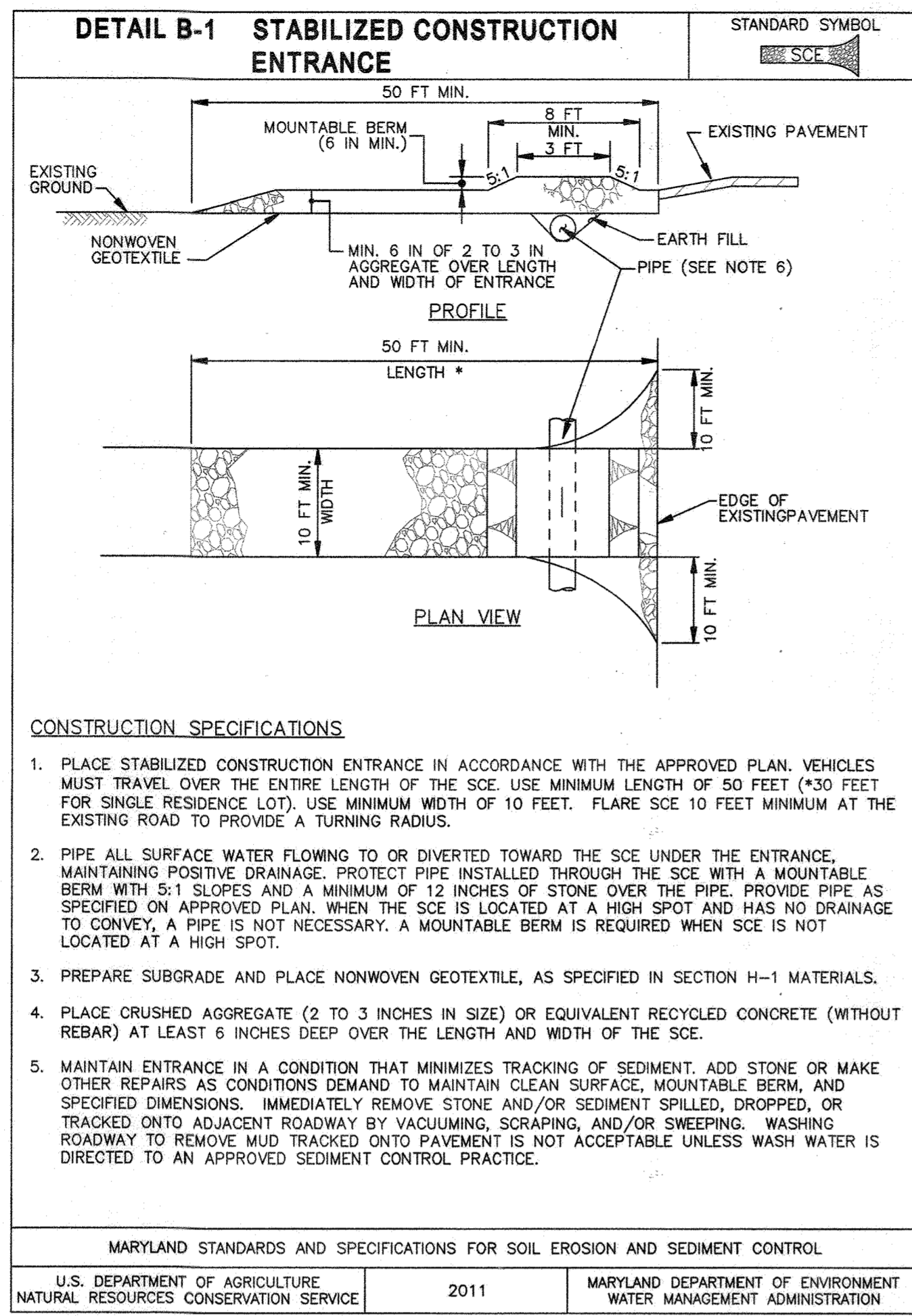
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SHEET NUMBER 55 OF 6163

SDP-00-043

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APPROVED: DEPARTMENT OF PLANNING AND ZONING	DATE: 9/5/22
CHIEF DEVELOPMENT ENGINEERING DIVISION	DATE: 9/16/22
CHIEF DIVISION OF LAND DEVELOPMENT	DATE: 9/20/22
DIRECTOR	

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

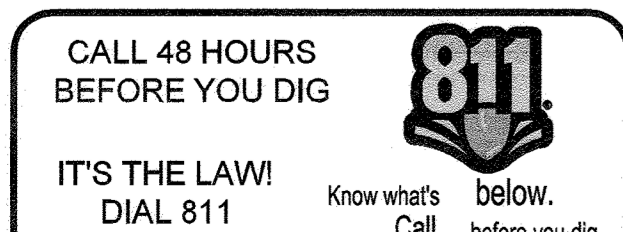
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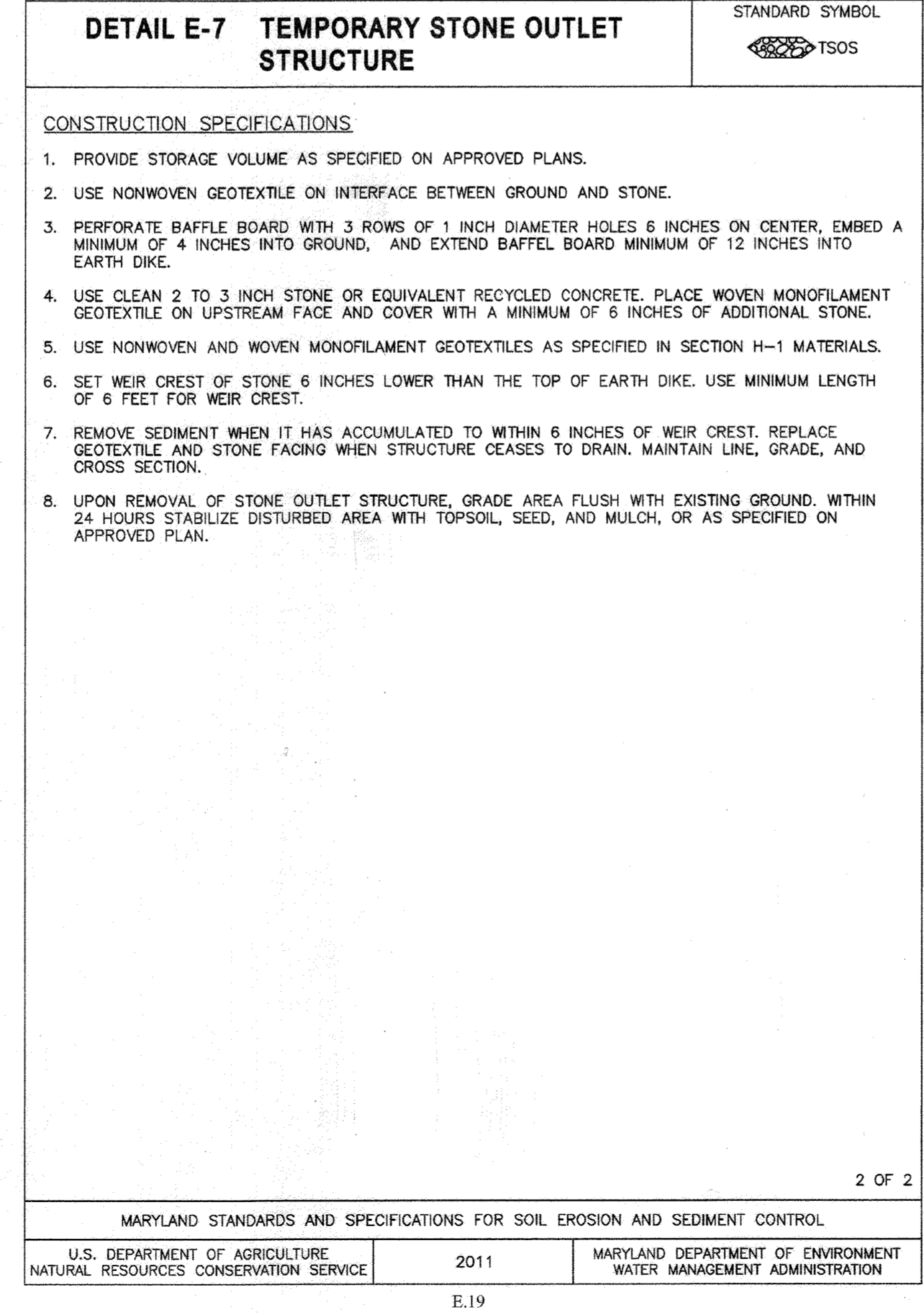
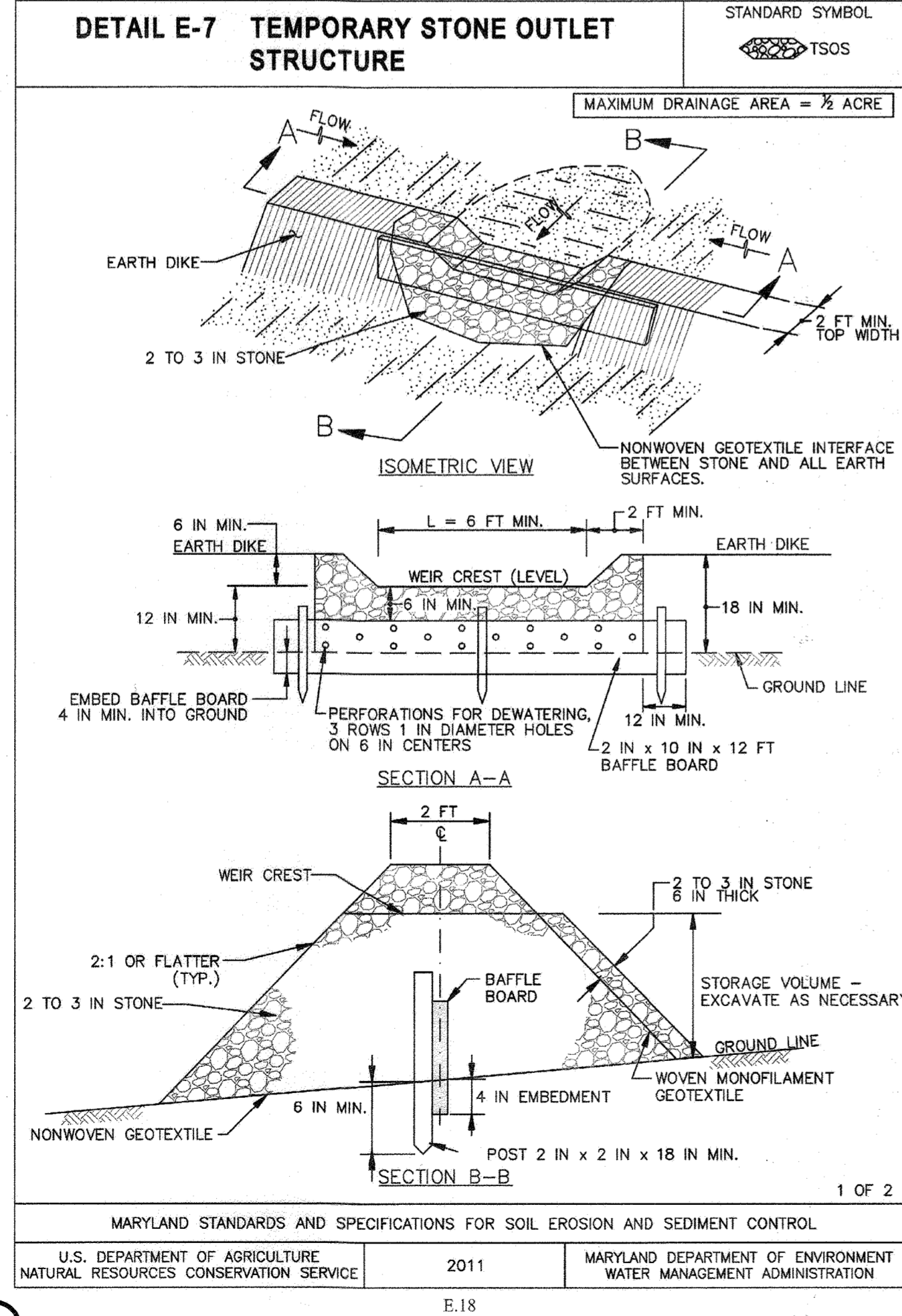
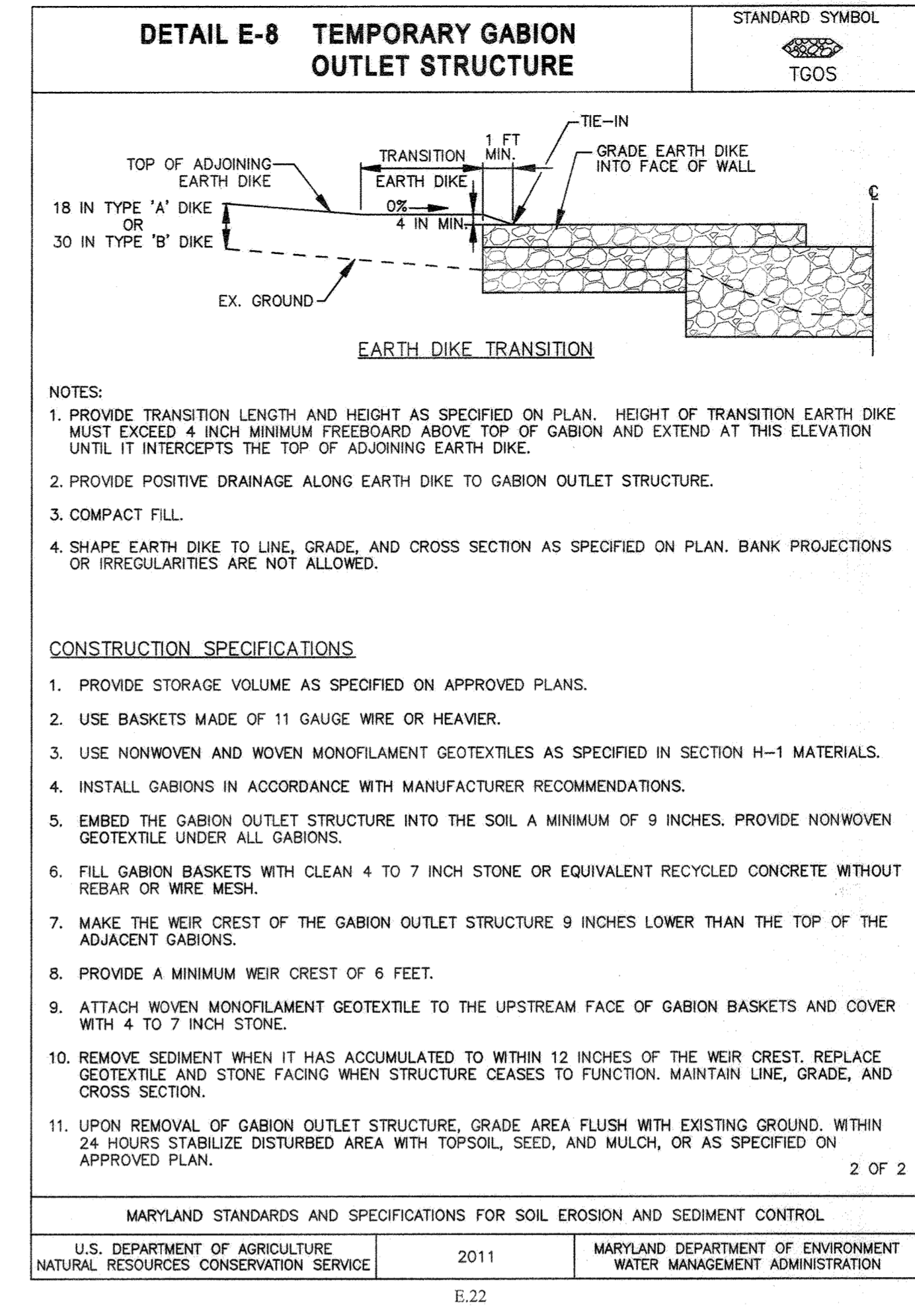
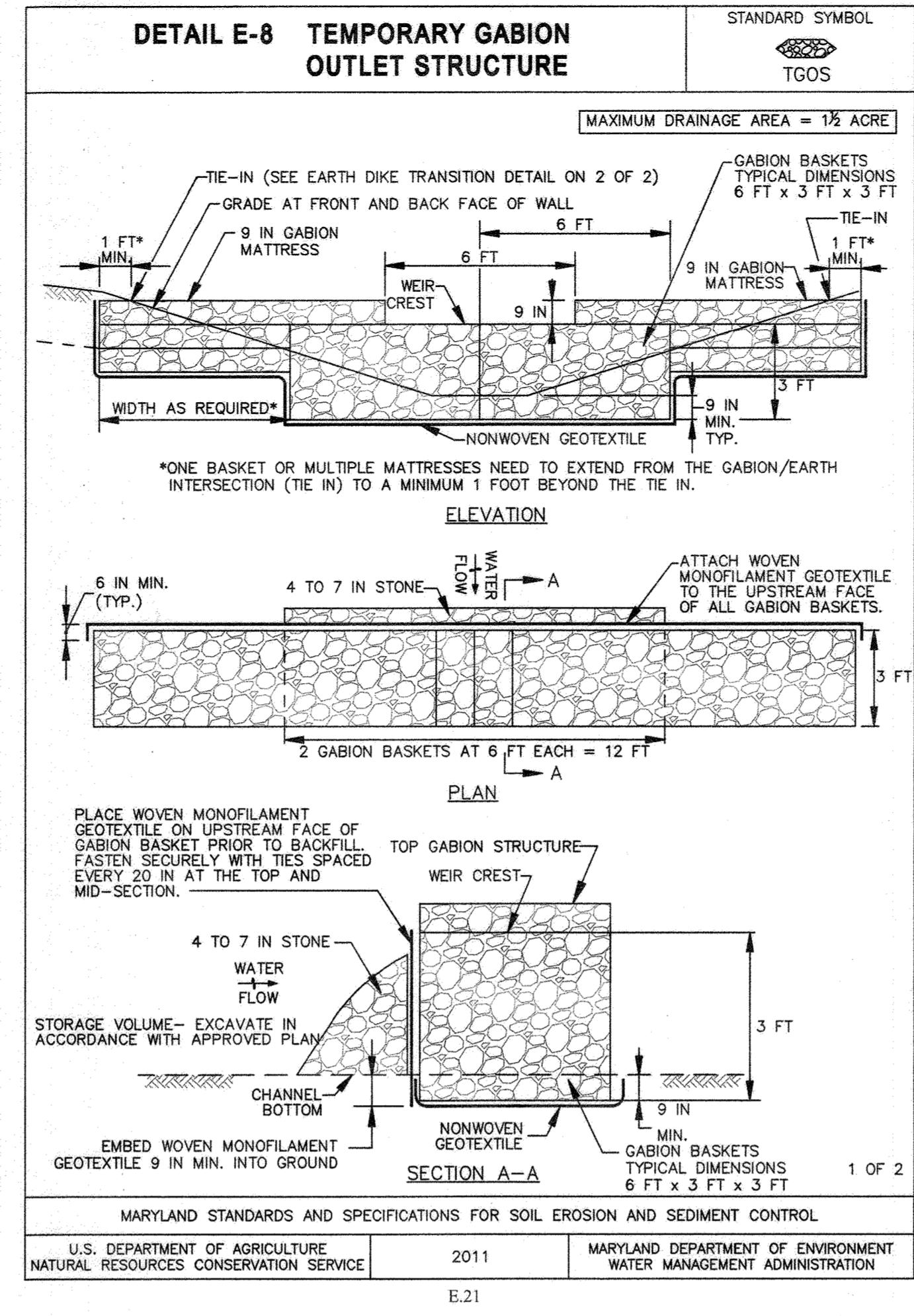
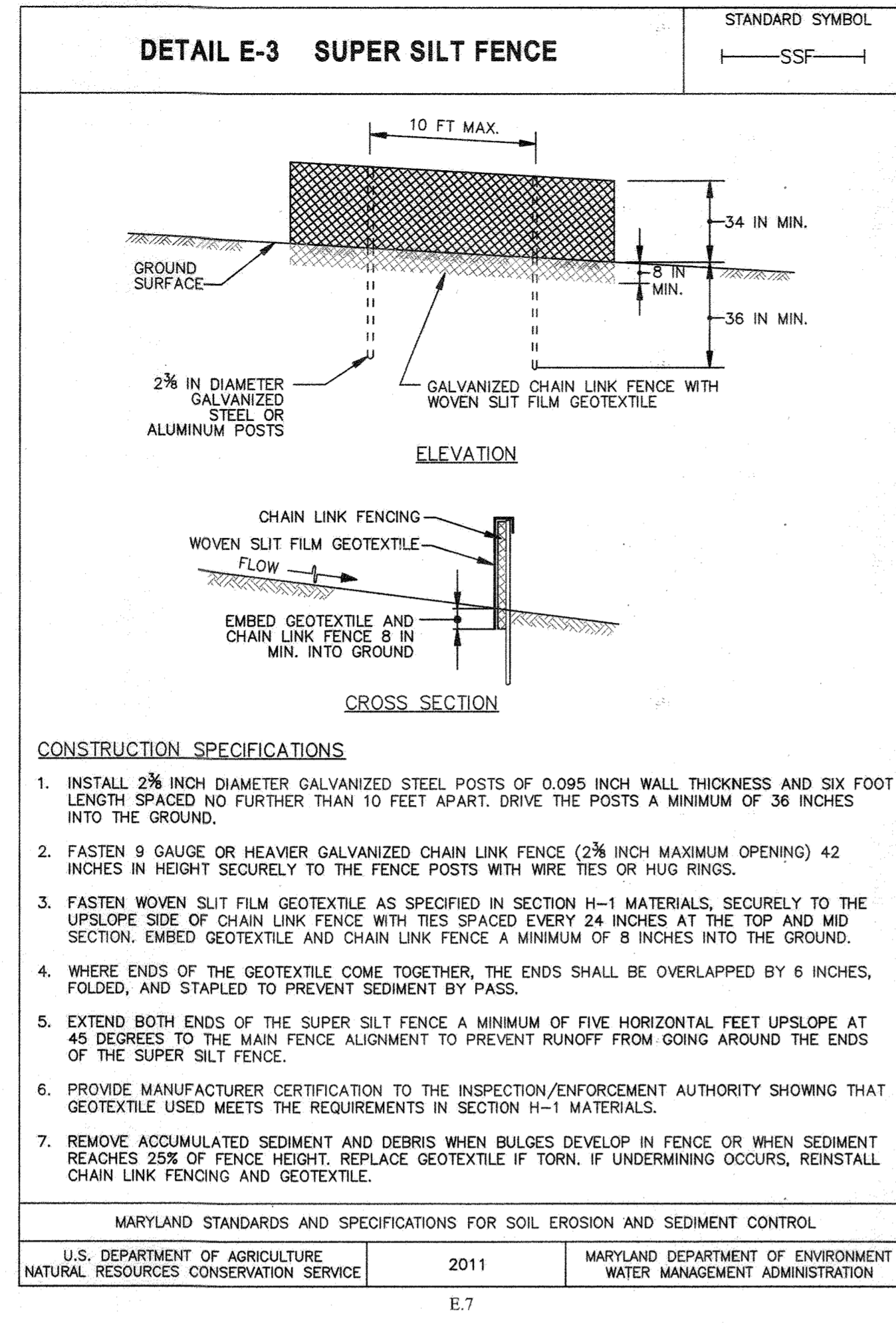
SOIL EROSION AND SEDIMENT CONTROL - DETAILS

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APPROVED: DEPARTMENT OF PLANNING AND ZONING	DATE: 9-22
CHIEF DEVELOPMENT ENGINEERING DIVISION	DATE: 9/22
CHIEF DIVISION OF LAND DEVELOPMENT	DATE: 9-22
DIRECTOR	DATE: 9-22

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
 SCALE: AS SHOWN
 DATE: 06/15/2022
 DESIGNED BY: NJL
 DRAWN BY: JHN
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SOIL EROSION AND SEDIMENT CONTROL - DETAILS

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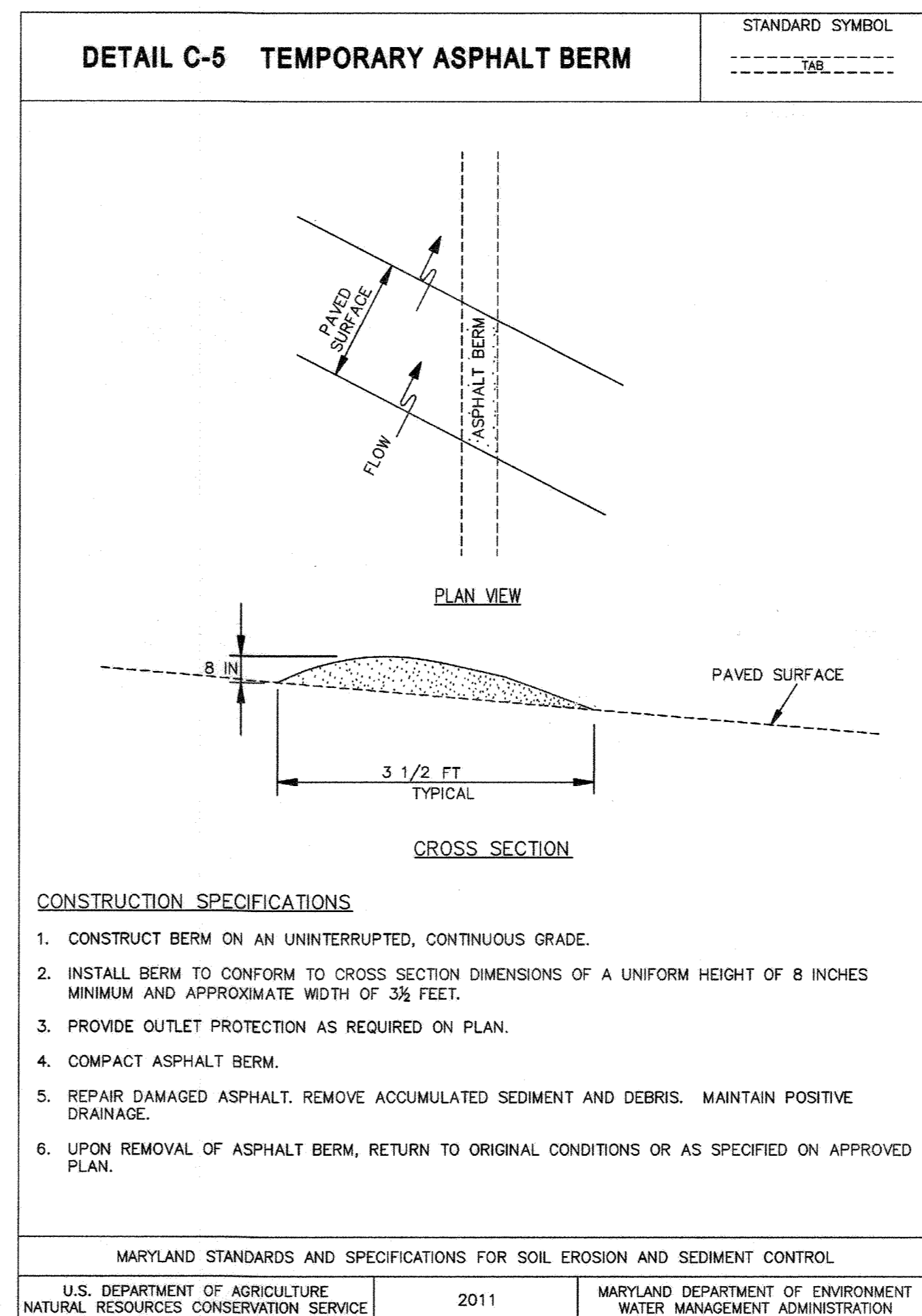
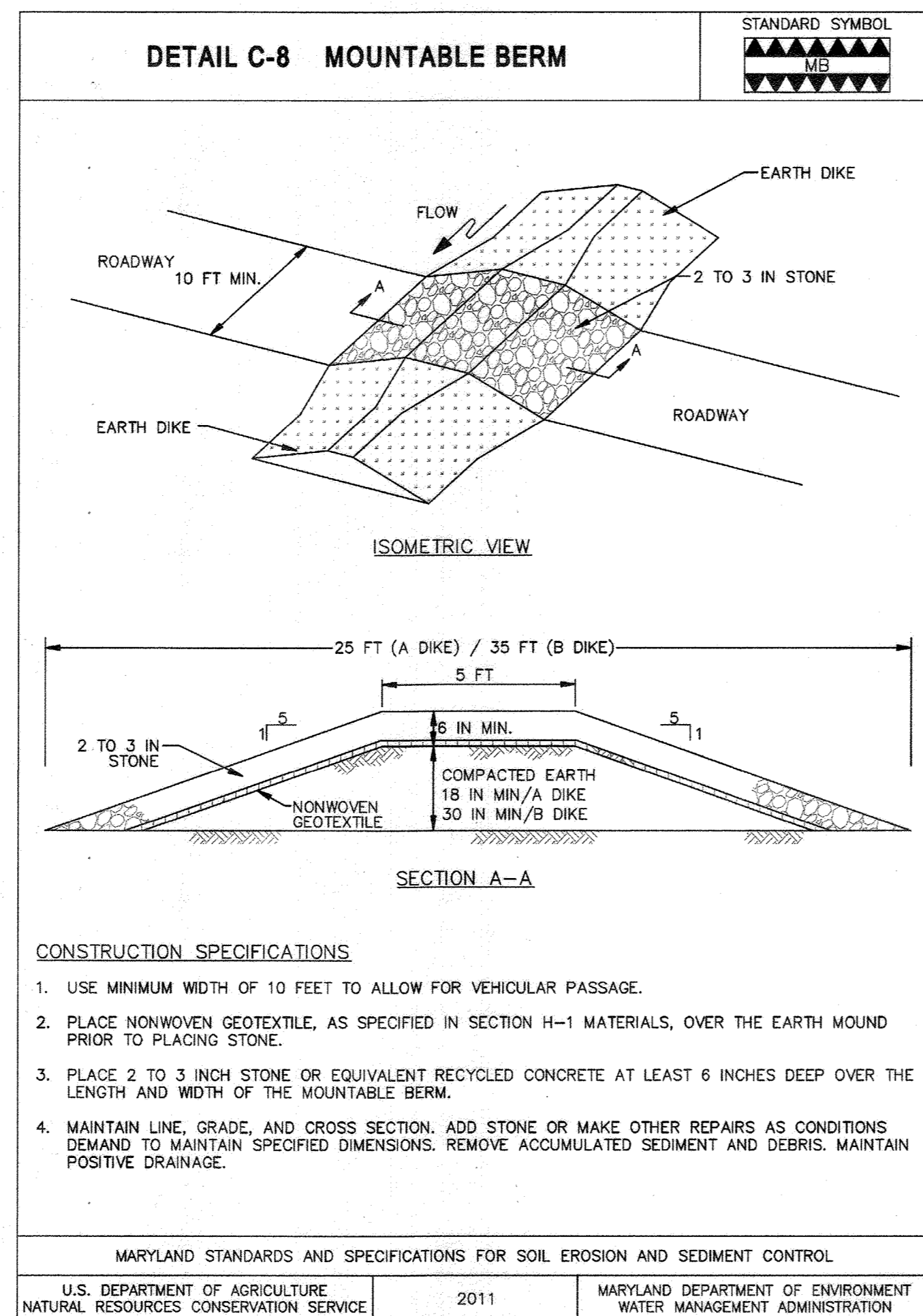
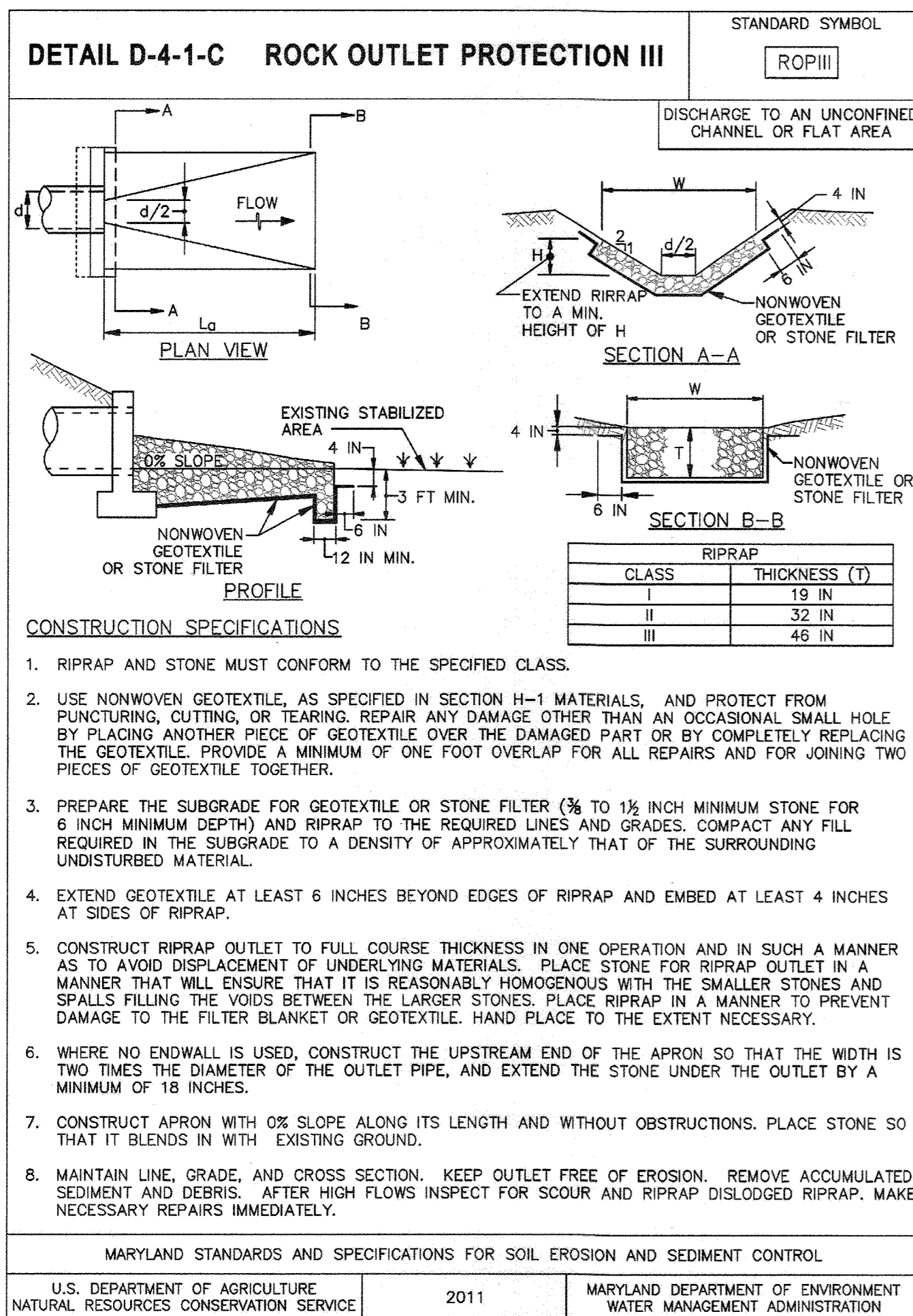
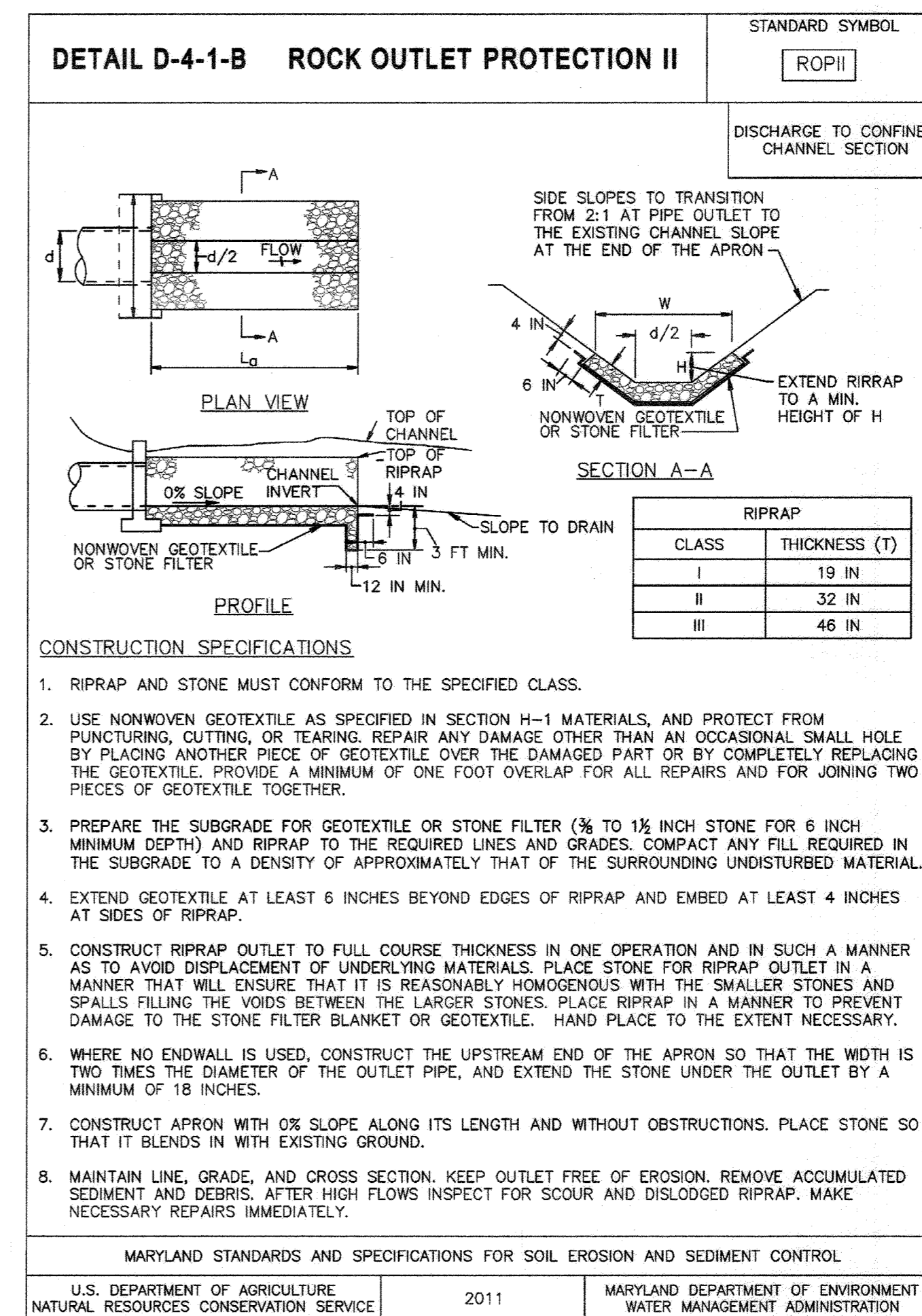
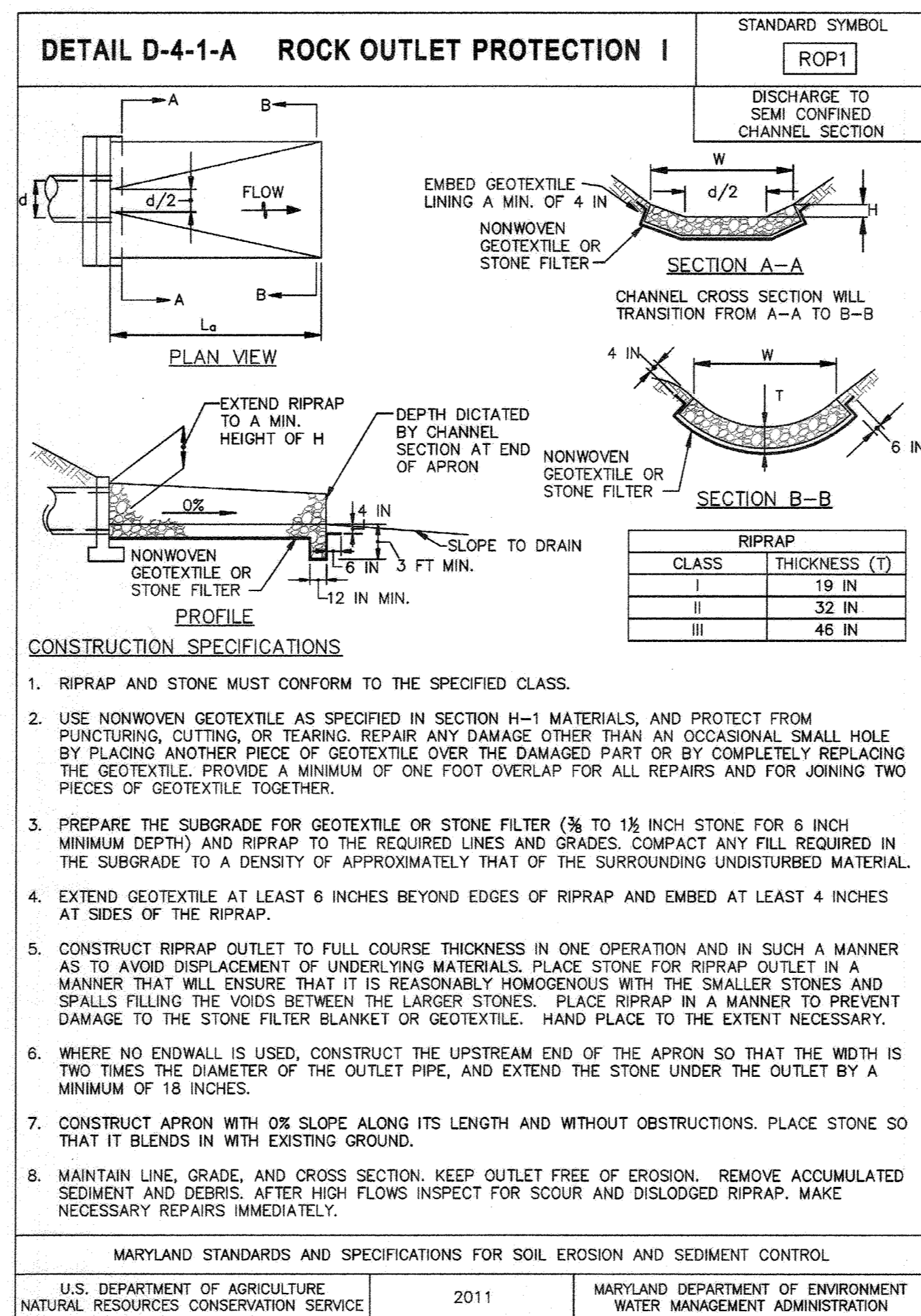
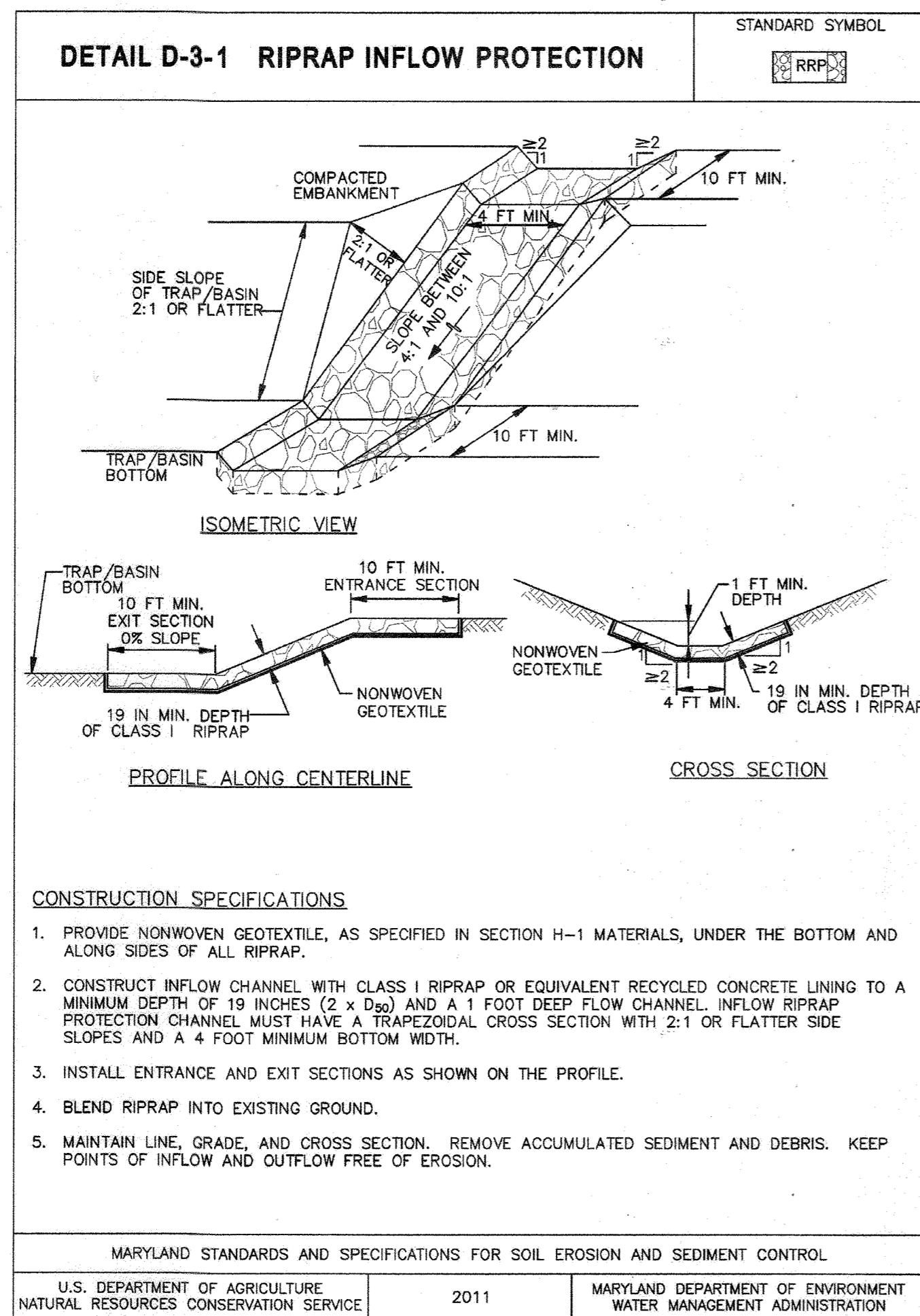
Owner/Developer Certification:
 "I hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."
 Owner's/Developer's Signature: [Signature] Date: [Date]
 Printed Name & Title: [Name & Title]

Design Certification:
 "I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."
 Designer's Signature: [Signature] Date: 06/15/2022
 Nicholas J. Leffner, P.E. MD Registration No. 44113
 Printed Name: [Name] R.L.S. or R.L.A. (circle one)

Howard SCD Signature Block:
 This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
 [Signature] 08/15/22
 Howard Soil Conservation District

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 U.S. Department of Agriculture, Natural Resources Conservation Service, 2011
 Maryland Department of Environment, Water Management Administration, 2011
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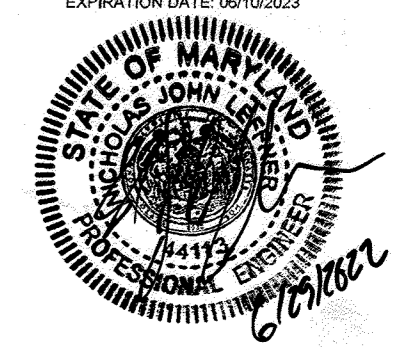


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APPROVED: DEPARTMENT OF PLANNING AND ZONING	DATE: 6-22-22	DATE: 9/16/22	DATE: 9-8-22
CHIEF DEVELOPMENT ENGINEERING DIVISION		CHIEF DIVISION OF LAND DEVELOPMENT	DIRECTOR

7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT

KHA PROJECT NO.:	110204002
SCALE:	AS SHOWN
DATE:	06/15/2022
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SOIL EROSION AND SEDIMENT CONTROL - DETAILS

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DETAIL B-4-6-A TEMPORARY SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL
TSSMC - * lb/ft²
(* INCLUDE SHEAR STRESS)

CONSTRUCTION SPECIFICATIONS

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDBED SURFACE. AVOID STRETCHING THE MATTING.
- KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
- OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	B.38	

DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL
TSSMS - * lb/ft²
(* INCLUDE SHEAR STRESS)

CONSTRUCTION SPECIFICATIONS

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
- UNROLL MATTING DOWN SLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDBED SURFACE. AVOID STRETCHING THE MATTING.
- OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
- KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	B.39	

DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL
PSSMC - * lb/ft²
(* INCLUDE SHEAR STRESS)

CONSTRUCTION SPECIFICATIONS:

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDBED SURFACE. AVOID STRETCHING THE MATTING.
- OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
- KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYS AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	B.40	

DETAIL B-4-6-D PERMANENT SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL
PSSMS - * lb/ft²
(* INCLUDE SHEAR STRESS)

CONSTRUCTION SPECIFICATIONS

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- UNROLL MATTING DOWN SLOPE. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDBED SURFACE. AVOID STRETCHING THE MATTING.
- OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
- KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYS AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	B.41	

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL
SIP

CONSTRUCTION SPECIFICATIONS

- USE SOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH 1/2 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
- FOR TYPE B, USE 2 3/4 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
- BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	E.24	

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL
SIP

CONSTRUCTION SPECIFICATIONS

- USE SOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH 1/2 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
- FOR TYPE B, USE 2 3/4 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
- BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	E.25	

Table B.7: Soil Stabilization on Slopes

Slope	20:1 or Flatter (≤5%)	<20:1 to 4:1 (>5 - 25%)	<4:1 to 3:1 (>25 - 33%)	<3:1 to 2.5:1 (>33 - 40%)	<2.5:1 to 2:1 (**>(>40 - 50%)				
Slope Length (feet)*	0-30	30-60	60-120	0-30	30-60	60-120	0-30	30-60	60-120
Straw Mulch/Wood Cellulose Fiber	BS-1	BS-4	BS-5	for K ≤ 0.35***					
Temporary Matting with Design Shear Stress ≥ 1.5 lbs/ft ²	BS-2								
Temporary Matting with Design Shear Stress ≥ 1.75 lbs/ft ²									
Temporary Matting with Design Shear Stress ≥ 2.0 lbs/ft ²									
Temporary Matting with Design Shear Stress ≥ 2.25 lbs/ft ²									
Temporary Matting with Design Shear Stress ≥ 2.5 lbs/ft ²									

* Slope length includes contributing flow length.
** Slopes steeper than 2:1 must be engineered.
*** Soil having a K value less than or equal to 0.35 can be stabilized effectively with straw mulch or wood cellulose fiber when located on slopes steeper than 5%. Soil stabilization matting is required on all slopes steeper than 5% that have soil with a K factor greater than 0.35. K factor ratings are published in the NRCS Soil Survey <http://websoilsurvey.nrcs.usda.gov/app>. During construction or reclamation, the soil-erodibility K value should represent the upper 6 inches of the final fill material re-spread as the last lift. Only the effects of rock fragments within the soil profile are considered in the estimation of the K value. Do not adjust K values to account for rocks on the soil surface or increases in soil organic matter related to management activities.

NOTE: THE NUMBERS IN THE SOIL STABILIZATION TABLE CORRESPOND TO THE NUMBERS ON EACH SECTION OF SLOPE OR CHANNEL STABILIZATION.

Bio-Swale Shear Stress and Velocity Calculation

ESD ID	Density of Water, γ (lb/ft ³)	Average Depth of Water, R (ft)	Slope, Sw (ft/ft)	Shear Stress, τ (lb/ft ²)	Velocity, v (ft/s)	Requires Stabilization Matting?
BS-1	62.4	1	0.020	1.248	7.01	YES
BS-2	62.4	1	0.029	1.803	8.42	YES
BS-3	62.4	0.5	0.013	0.406	3.56	NO
BS-4	62.4	1	0.020	1.248	7.01	YES
BS-5	62.4	0.5	0.027	0.827	5.08	YES
BS-6	62.4	1	0.055	3.432	11.62	YES

* Assumed Manning's coefficient of 0.03

Owner/Developer Certification:
"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training as a Maryland Department of the Environment (MDE) approved training program for the control of erosion and sediment prior to beginning the project. I/We certify that the plan has been designed in accordance with the Howard Soil Conservation District and/or MDE."

Design Certification:
"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it is prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature: Nicholas J. Leffner, P.E.
Date: 06/15/2022
MDE Registration No. 44113
P.E. License No. 41113

Kimley-Horn

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1801 PORTER STREET, SUITE 401
BALTIMORE, MD 21230
CONTACT: NICHOLAS J. LEFFNER
PHONE: 443-743-3470
WWW.KIMLEY-HORN.COM

COX AUTOMOTIVE, INC.
6205 PEACHTREE DUNWOODY ROAD
ATLANTA, GA 30328
PHONE: 678-645-2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 9-5-22
CHIEF DEVELOPMENT ENGINEERING DIVISION

DATE: 9/8/22
CHIEF DIVISION OF LAND DEVELOPMENT

DATE: 9-8-22
DIRECTOR

7120 DORSEY RUN ROAD
HOWARD COUNTY, MARYLAND
TAX MAP NO. 43 PARCEL 371
ZONING: M-2 BLOCK 10
FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
SCALE: AS SHOWN
DATE: 06/15/2022
DESIGNED BY: NJL
DRAWN BY: JHN
CHECKED BY: NJL

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 44113
EXPIRES 06/30/2025

SOIL EROSION AND SEDIMENT CONTROL - DETAILS

PROPOSED CUSTOMER ENTRANCE
PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
HOWARD COUNTY MD

SHEET NUMBER
59 OF 63

SDP.00.063

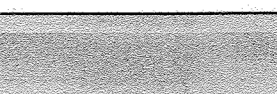
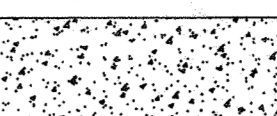


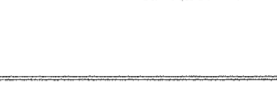
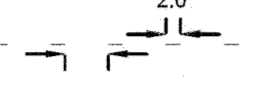

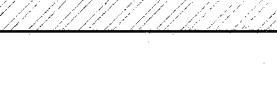

CALL 48 HOURS BEFORE YOU DIG

IT'S THE LAW! DIAL 811

Know what's below. Call before you dig.

Printed By: Moyer, Jessica; Sheet: Set: Dorsey Run Road - Access Road Layout: 60 PAVEMENT, SIGNAGE AND STRIPING PLAN - June 15, 2022 10:32:22am K:\BAL-CVA\10204002 - 7120 Dorsey Run Road (CAD) Plans\Sheets\65 - Pavement, Signage and Striping Plan.dwg
 This document, together with the concepts and designs presented herein, is an instrument of service, and its preparation, issue, and implementation are intended to be a continuous process, and shall be without liability to Kimley-Horn and Associates, Inc.

PAVING, STRIPING, AND SIGNAGE LEGEND

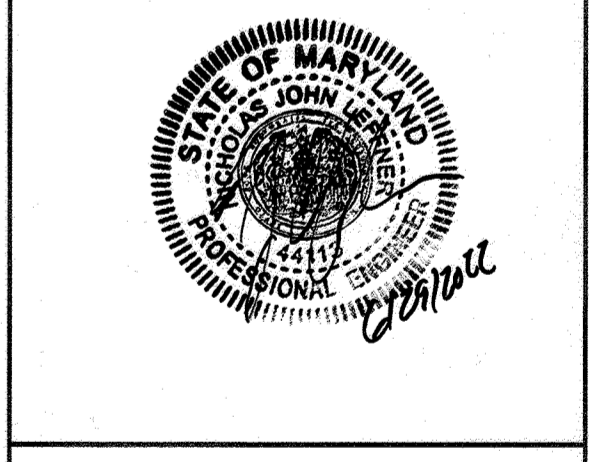
-  PROPOSED PAVEMENT
-  PROPOSED CONCRETE
-  STOP BAR
-  DIRECTIONAL ARROWS
-  PROPOSED SIGNAGE
-  PROPOSED 5' SOLID WHITE LINE
-  PROPOSED 5' SOLID DOUBLE YELLOW LINE
-  PROPOSED PUPPY TRACKS (5' DASHED WHITE LINE)
-  REPLACED IMPERVIOUS AREA

Kimley-Horn
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 1801 PORTER STREET, SUITE 401
 BALTIMORE, MD 21230
 CONTACT: NICHOLAS J. LEFFNER
 PHONE: 443-743-3470
 WWW.KIMLEY-HORN.COM
 COX AUTOMOTIVE, INC.
 6205 PEACHTREE DUNWOODY ROAD
 ATLANTA, GA 30328
 PHONE: 678-645-2013

NO.	REVISIONS	DATE	BY
1	ACCESS ROAD, SWM AND GRADING	06/15/2022	KH

APPROVED: DEPARTMENT OF PLANNING AND ZONING	DATE	DATE	DATE
<i>[Signature]</i>	9-5-22	9/16/22	9-8-22
CHIEF DEVELOPMENT ENGINEERING DIVISION		CHIEF DIVISION OF LAND DEVELOPMENT	
		DIRECTOR	

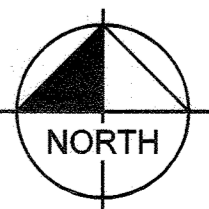
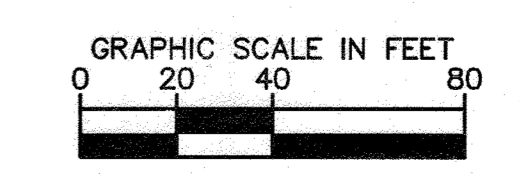
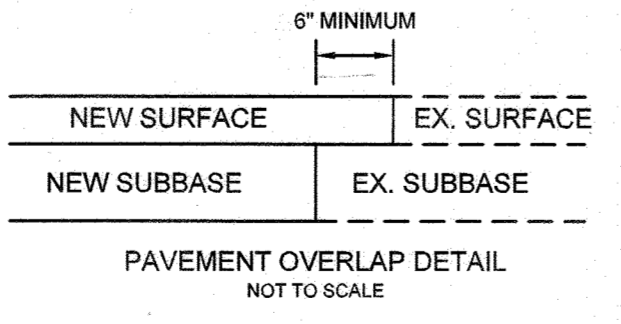
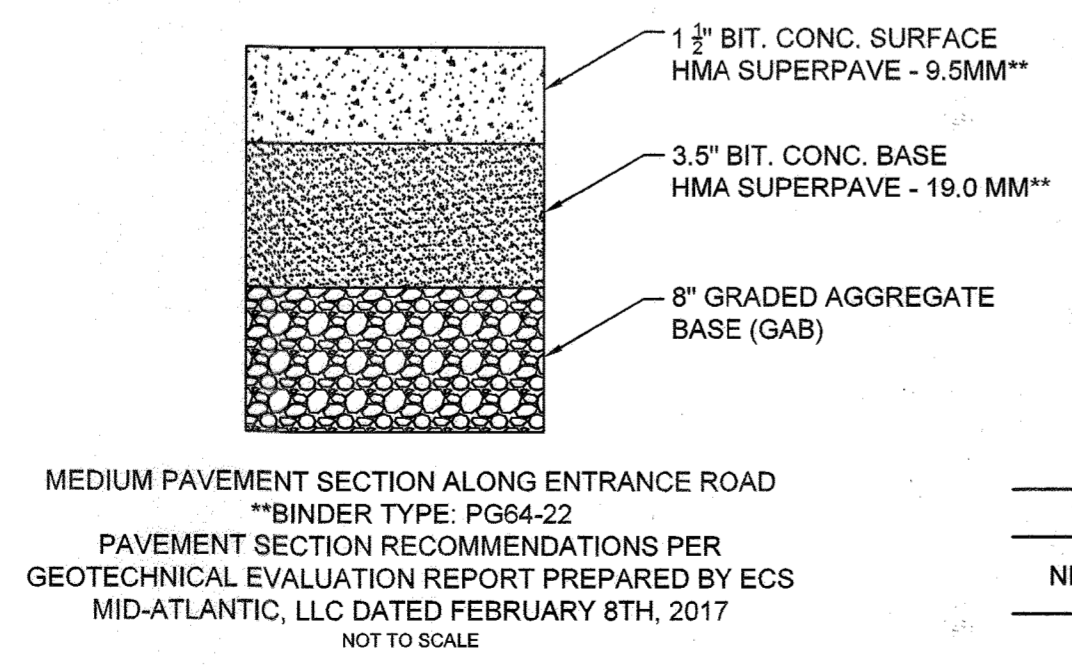
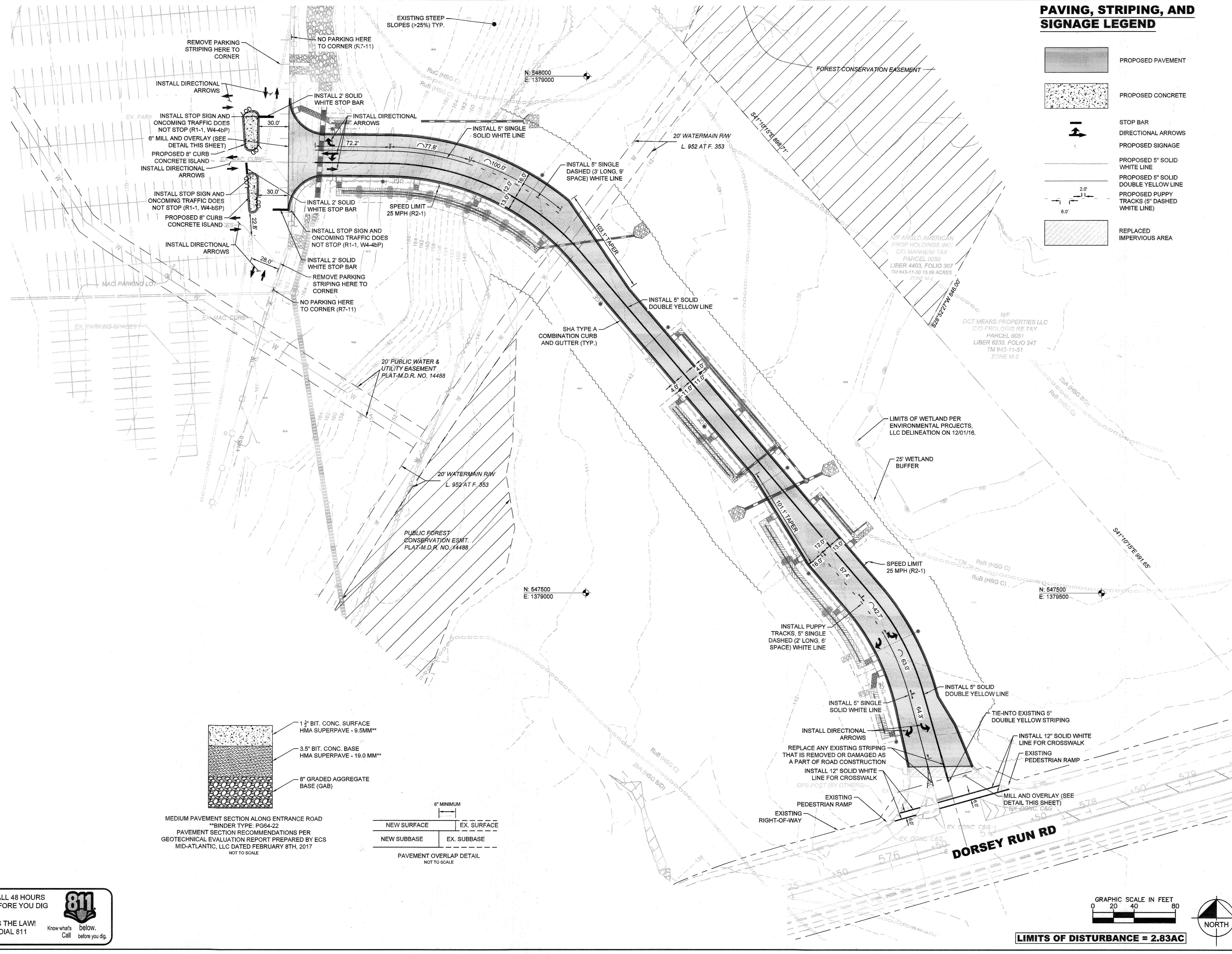
7120 DORSEY RUN ROAD
 HOWARD COUNTY, MARYLAND
 TAX MAP NO. 43 PARCEL: 371
 ZONING: M-2 BLOCK: 10
 FIRST ELECTION DISTRICT
 KHA PROJECT NO.: 110204002
 SCALE: AS SHOWN
 DATE: 06/15/2022
 DESIGNED BY: RLH
 DRAWN BY: RLH
 CHECKED BY: N.J.L.
PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS 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. 44113 EXPIRATION DATE: 06/15/2023



PAVEMENT, SIGNAGE AND STRIPING PLAN

PROPOSED CUSTOMER ENTRANCE
 PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
 HOWARD COUNTY MD

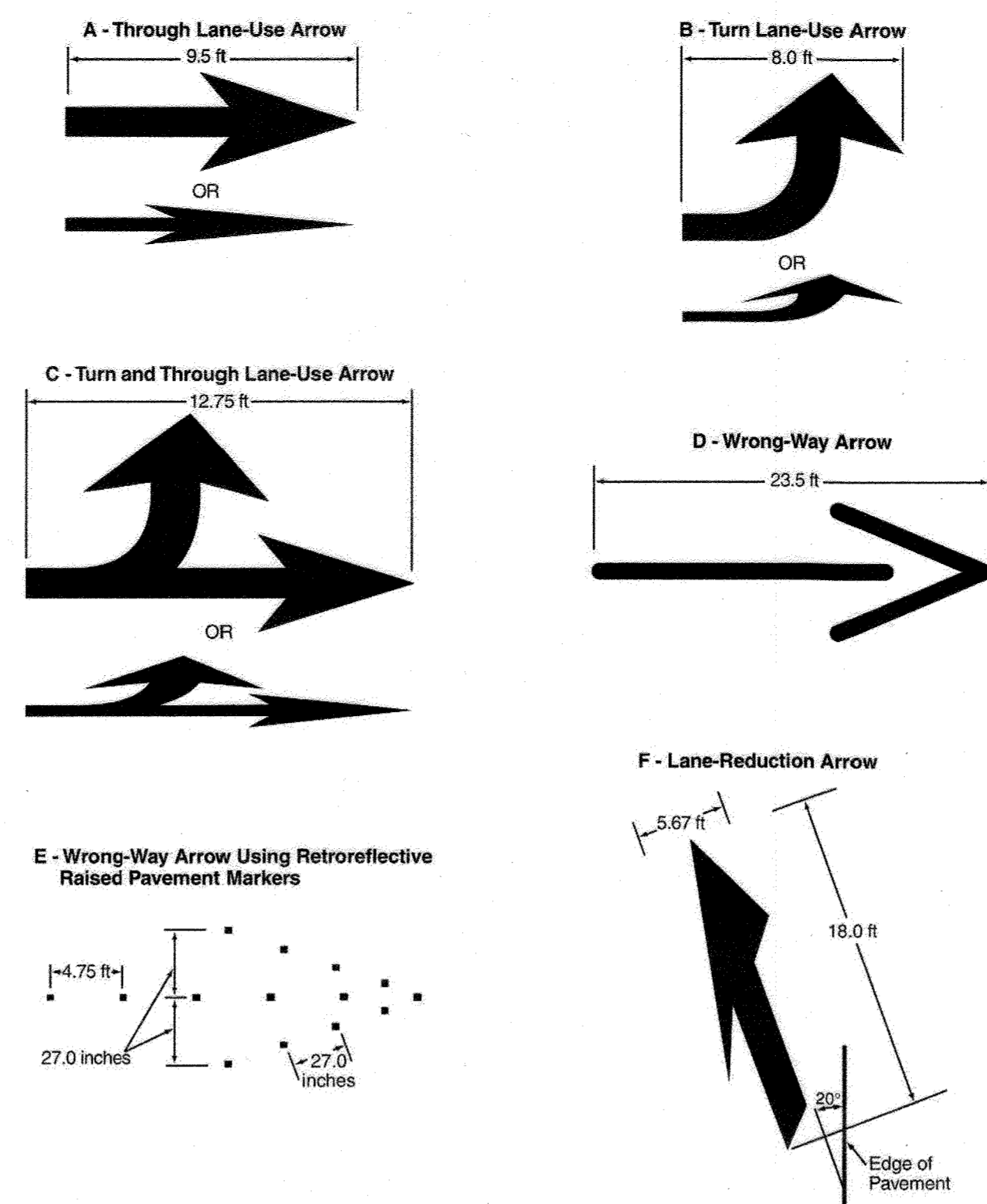
SHEET NUMBER
60 OF 61



LIMITS OF DISTURBANCE = 2.83AC

CALL 48 HOURS BEFORE YOU DIG
811
 IT'S THE LAW! DIAL 811
 Know what's below. Call before you dig.

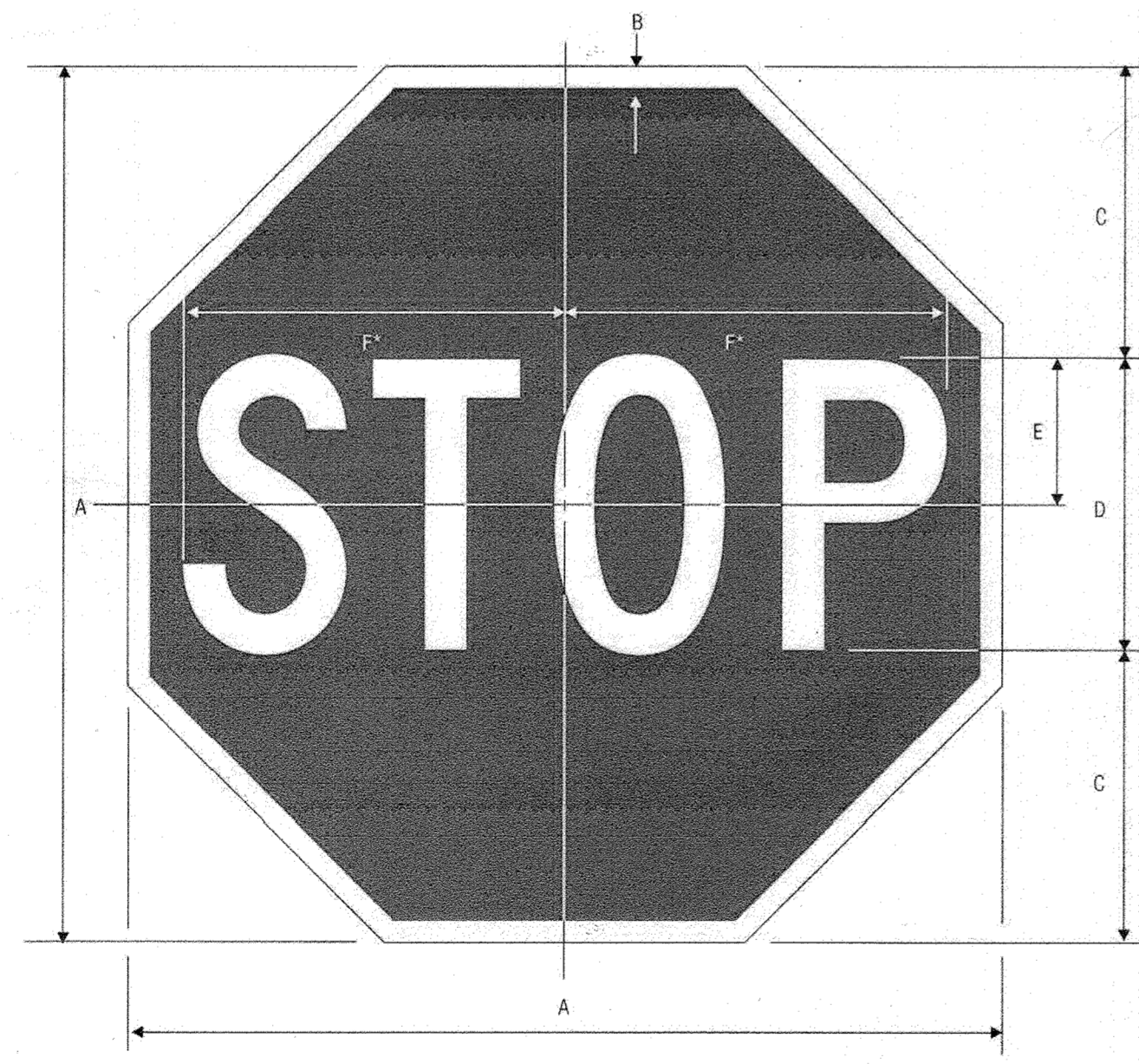
Figure 3B-24. Examples of Standard Arrows for Pavement Markings



- Notes:
1. Typical sizes for normal installation; sizes may be reduced approximately one-third for low-speed urban conditions; larger sizes may be needed for freeways, above average speeds, and other critical locations.
 2. The narrow elongated arrow designs shown in Drawings A, B, and C are optional.
 3. For proper proportion, see the Pavement Markings chapter of the "Standard Highway Signs and Markings" book (see Section 1A.11).

Sept. 3B.20

December 2011

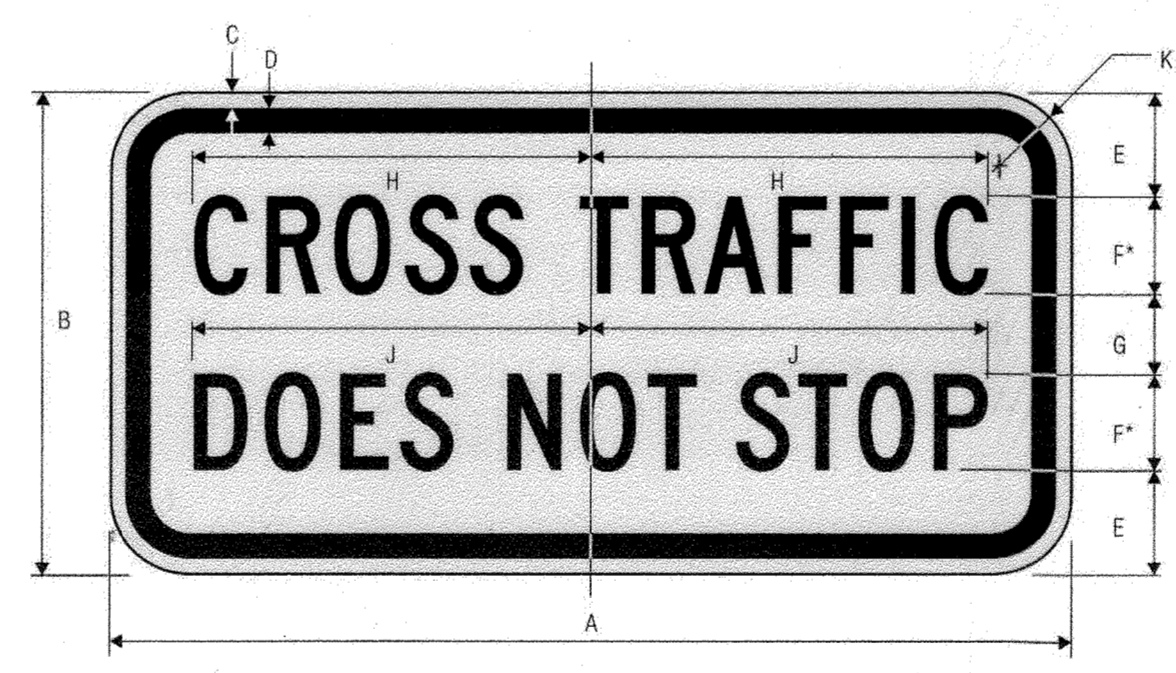


R1-1 STOP *Reduce spacing 40%

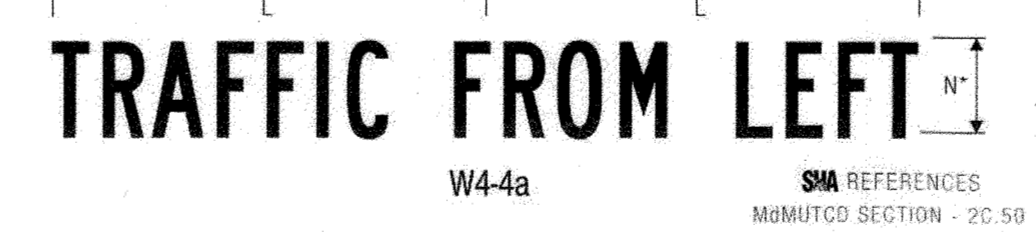
A	B	C	D	E	F
18	.375	6	6 C	3	7.75
24	.625	8	8 C	4	10
30	.75	10	10 C	5	12.5
36	.875	12	12 C	6	15
48	1.25	16	16 C	8	20

SMA REFERENCES
M&MUTCD SECTION - 2B.04, 2B.05, 2B.06, 2B.07, 2B.10, 5B.02, 5F.04, 8B.03, 8B.08, 9B.03, 10C.02, 10C.04

COLORS: LEGEND - WHITE (RETROREFLECTIVE)
BACKGROUND - RED (RETROREFLECTIVE)



W4-4 CROSS TRAFFIC DOES NOT STOP SMA REFERENCES M&MUTCD SECTION - 2C.50



W4-4a TRAFFIC FROM LEFT ONCOMING TRAFFIC SMA REFERENCES M&MUTCD SECTION - 2C.50

SMA SIGN SHALL NOT BE USED ALONG STATE OWNED, OPERATED AND MAINTAINED ROADWAYS.

W4-4b FOR USE WITH R1-1 STOP SIGN

A	B	C	D	E	F	G	H	J	K	L	M	N
24	12	.375	.625	3	2.25 C	1.5	9.314	9.63	1.5	10.106	9.779	2.25 B
30	15	.5	.75	3.5	3 C	2	12.423	12.423	1.875	12.902	13.039	3 B
36	18	.625	.875	4	3.5 C	3	14.487	14.978	2.25	15.721	15.212	3.5 B
48	24	.75	1.25	5.5	4.5 C	4	18.628	19.259	3	20.214	19.56	4.5 B

COLORS: LEGEND - BLACK
SMA BACKGROUND - FLUORESCENT YELLOW (RETROREFLECTIVE)

TYPE 'A'
COMBINATION CURB & GUTTER
DESIGN SPEED 25-45 MPH

TYPE 'B'
COMBINATION CURB & GUTTER
DESIGN SPEED 50 MPH

NOTES

1. SLOPE GUTTER PAN 1/4" PER FOOT TOWARD FLOW LINE ON ALL ROADWAYS INCLUDING SUPERELEVATED SECTIONS, EXCEPT INTERCHANGE RAMP.
2. ROADWAY PAVEMENT CONSTRUCTION JOINT.
3. PROVIDE LONGITUDINAL TIE DEVICE "J" BAR MODIFIED. REFER TO STANDARD NO 572-61.
4. FLOW LINE.

NOTES

- A. RIGID PAVEMENT ROADWAY ADJACENT TO COMBINATION CURB AND GUTTER AND CLOSED SECTION ROADWAY USING RIGID PAVEMENT WITH COMBINATION CURB AND GUTTER SHALL BE TIED AT THE ROADWAY PAVEMENT CONSTRUCTION JOINT. REFER TO STANDARD NO 572-61 FOR METHOD OF LONGITUDINAL TIE DEVICES. SPACING OF THE TIE BARS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. RIGID PAVEMENT AND CURB SHALL BE CONSTRUCTED AS INDICATED. TIE DEVICES ARE NOT REQUIRED WHEN USING FLEXIBLE PAVEMENT FOR ROADWAY.
- B. MAXIMUM JOINT SPACING FOR CONCRETE CURB AND COMBINATION CURB & GUTTER IS 10'. SEE SPECIFICATION FOR LOCATIONS AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.
- C. TYPE A OR B COMBINATION CURB AND GUTTER SHALL BE USED FOR ALL APPLICABLE NEW CONSTRUCTION AND IN THOSE AREAS WHERE THE COMBINATION CURB AND GUTTER IS TO BE REPLACED IN KIND.
- D. TYPE A OR B CURB SHALL BE USED FOR THE REPLACEMENT OF LIKE KIND OF CURB ONLY. NOT TO BE USED FOR NEW CONSTRUCTION EXCEPT WHERE INDICATED ON APPROPRIATE INLET STANDARDS.

APPROVED: [Signature] DATE: 9-5-22
CHIEF DEVELOPMENT ENGINEERING DIVISION

APPROVED: [Signature] DATE: 9-18-22
CHIEF DIVISION OF LAND DEVELOPMENT

APPROVED: [Signature] DATE: 9-8-22
DIRECTOR

MD 620.02



R2-1 SPEED LIMIT (ENGLISH)

A	B	C	D	E	F	G	H	J	K	L
18	24	.375	.625	3	3 E	2	8 E	7.188	5.5	1.5
24	30	.375	.625	4	4 E	2	10 E	9.563	7.313	1.5
36	48	.625	.875	6	6 E	5	14 E	14.375	11	2.25
48	60	.75	1.25	8	8 E	6	16 E	19.125	14.625	3

SMA REFERENCES
M&MUTCD SECTION - 2B.13, 2B.15, 2B.18, 5B.05, 7B.08, 7B.11, 2C.30

COLORS: LEGEND - BLACK
BACKGROUND - WHITE (RETROREFLECTIVE)

NOTE: REFER TO PLAN FOR POSTED SPEED LIMIT

Kimley Horn

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1801 PORTER STREET, SUITE 401
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PHONE: 443-743-3470
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NO.	REVISIONS	DATE	BY
1		06/15/2022	KH

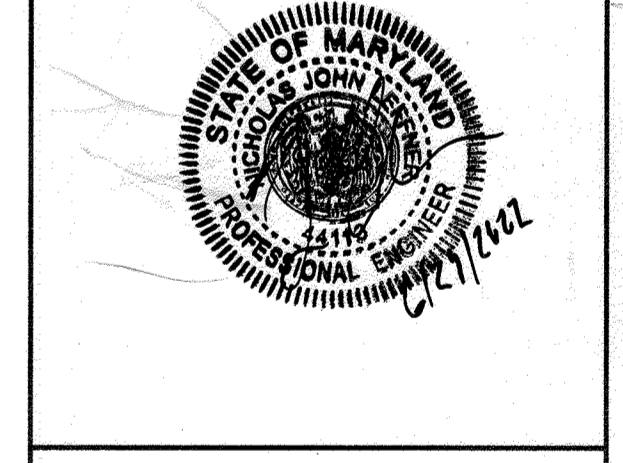
APPROVED: DEPARTMENT OF PLANNING AND ZONING [Signature] DATE: 9-5-22
CHIEF DEVELOPMENT ENGINEERING DIVISION

APPROVED: DIVISION OF LAND DEVELOPMENT [Signature] DATE: 9-18-22
CHIEF DIVISION OF LAND DEVELOPMENT

APPROVED: [Signature] DATE: 9-8-22
DIRECTOR

7120 DORSEY RUN ROAD
HOWARD COUNTY, MARYLAND
TAX MAP NO: 43 PARCEL: 371
ZONING: M-2 BLOCK: 10
FIRST ELECTION DISTRICT

KHA PROJECT NO.: 110204002
SCALE: AS SHOWN
DATE: 06/15/2022
DESIGNED BY: RLH
DRAWN BY: RLH
CHECKED BY: NJL



PAVEMENT SIGNAGE AND STRIPING DETAILS

PROPOSED CUSTOMER ENTRANCE
PREPARED FOR
BALTIMORE WASHINGTON AUTO EXCHANGE
HOWARD COUNTY MD

SHEET NUMBER
61 OF 63

Plotted By: Jessica, Sheet Set: Dorsey Run Road - Access Road - Pavement, Signage and Striping Details - June 15, 2022, 10:32:12am, K:\BAL-DVA\110204002 - 7120 Dorsey Run Road\CAD\PlanSheets\65 - Pavement, Signage and Striping Plan.dwg

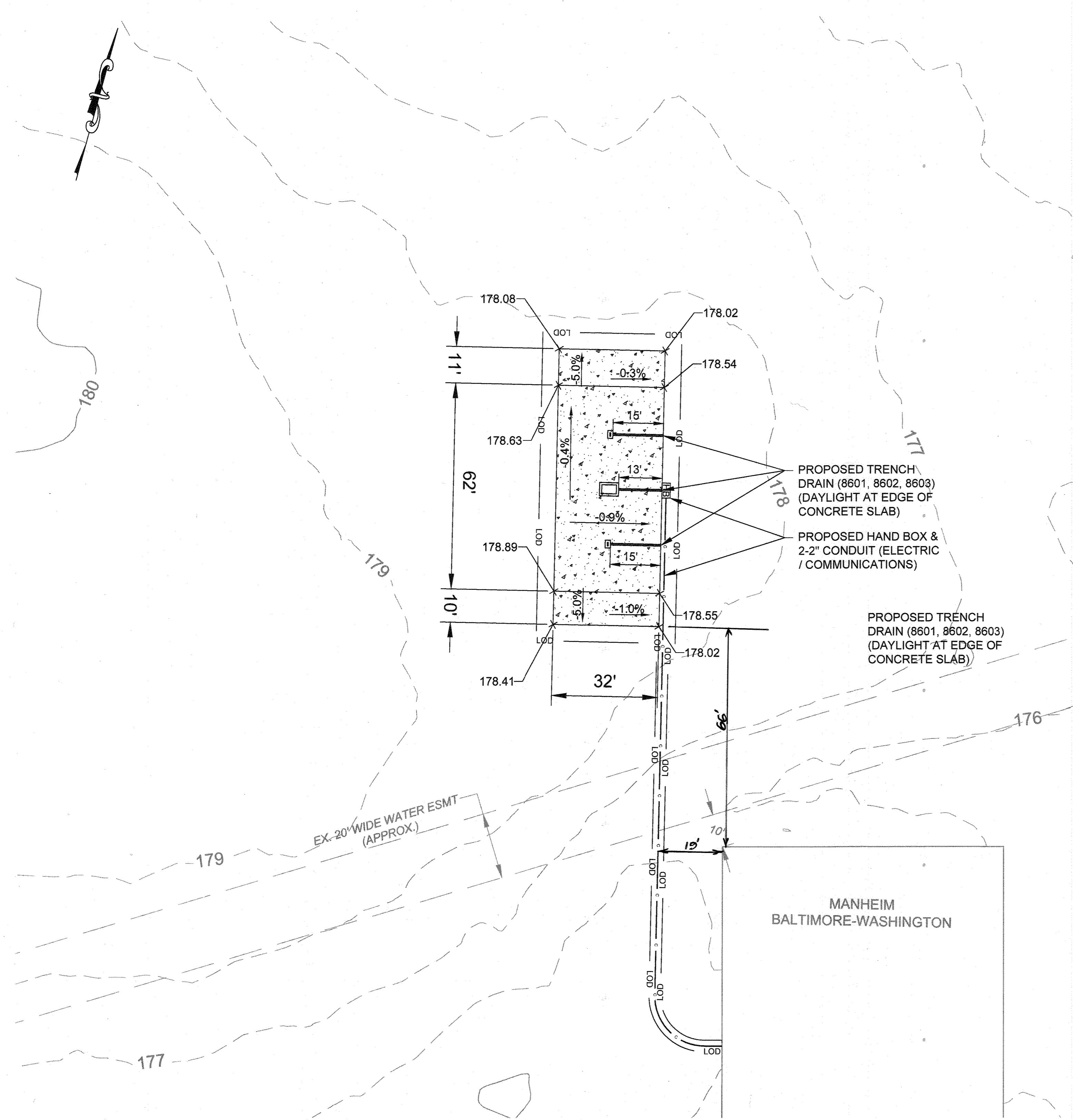
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\\ad.rkk.com\fsa\Cloud\Projects\2023\23271_CovAutosDPR\CADD\Plans\C2.00_Site_Plan.dwg



LEGEND

- 175
178.02
EXISTING CONTOURS
- SPOT ELEVATION
- PROPOSED CONCRETE
- 5%
SLOPE
- LOD
LIMIT OF DISTURBANCE
- 2" ELECTRIC CONDUIT
- 2" COMMUNICATIONS CONDUIT

HOWARD COUNTY STANDARD SEDIMENT CONTROL NOTES

- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.
- SITE ANALYSIS:
 - *TOTAL AREA OF SITE: 0.088 ACRES
 - *AREA DISTURBED: 0.088 ACRES
 - *AREA TO BE ROOFED OR PAVED: 0.06 ACRES
 - *AREA TO BE VEGETATIVELY STABILIZED: 0 ACRES
 - *TOTAL CUT: 88 CU. YDS.
 - *TOTAL FILL: 0 CU. YDS.
 - OFFSITE WASTE/BORROW AREA LOCATION: TO BE DETERMINED BY CONTRACTOR.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY OWNER. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY, AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
 - INSPECTION DATE
 - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
 - NAME AND TITLE OF INSPECTOR
 - WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
 - BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
 - EVIDENCE OF SEDIMENT DISCHARGES
 - IDENTIFICATION OF PLAN DEFICIENCIES
 - IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
 - IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
 - COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
 - PHOTOGRAPHS
 - MONITORING/SAMPLING
 - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
 - OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE)
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D.
- WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
- TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
- A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

GENERAL NOTES

- THE TOPOGRAPHIC INFORMATION SHOWN HEREON, WAS OBTAINED FROM NEARMAP. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ACTUAL SITE CONDITIONS PRIOR TO THE START OF ANY WORK. THERE IS NO WARRANTY OR GUARANTEE ON THE COMPLETENESS OR CORRECTNESS OF THE EXISTING CONDITION INFORMATION. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER PRIOR TO THE START OF ANY WORK.
- BEARINGS, COORDINATES AND ELEVATIONS SHOWN ON THIS PLAN ARE SHOWN IN MARYLAND STATE PLANE. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88.
- ALL WORK MUST BE IN COMPLIANCE WITH THE HOWARD COUNTY VOLUME IV DESIGN MANUAL (STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION).

SITE & UTILITY PLAN GENERAL NOTES

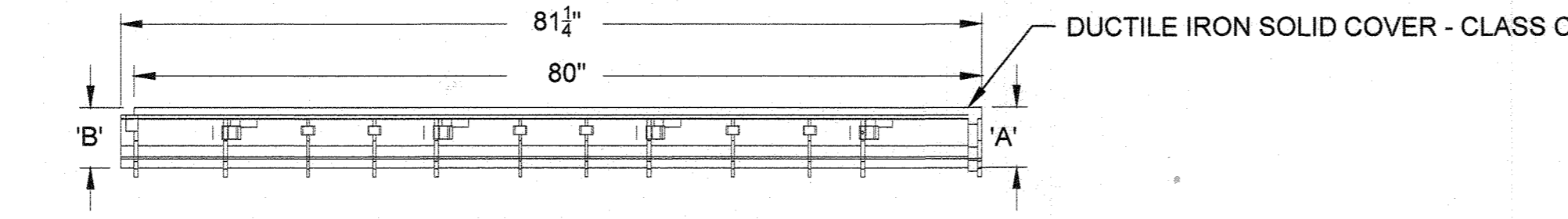
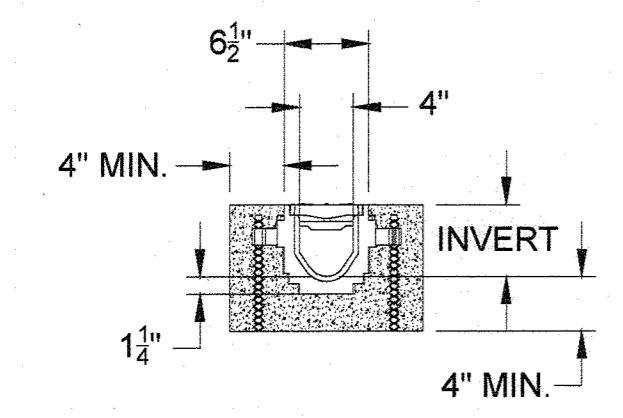
- THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES PRIOR TO STARTING WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT EXIST.
- ALL EXISTING UTILITY SURFACE FEATURES INCLUDING BUT NOT LIMITED TO INLETS, MANHOLES, HAND HOLES, MECHANICAL LIDS, FIRE HYDRANTS, VALVE BOXES, ETC. WITHIN THE LIMITS OF DISTURBANCE TO BE ADJUSTED TO FINISHED GRADE UNLESS OTHERWISE NOTED.
- ALL EXISTING FEATURES OUTSIDE OF THE LIMITS OF DISTURBANCE ARE TO REMAIN, UNLESS OTHERWISE NOTED.
- ALL CUTS OF EXISTING PAVEMENT SHALL BE NEAT AND IN A STRAIGHT LINE TO FACILITATE NEW PAVING. CONTRACTOR SHALL REMOVE TWO FEET OF THE SURFACE COURSE OF PAVEMENT (2" DEPTH) BEYOND ANY SAW CUTS TO OVERLAP PAVEMENT PATCHES.
- CONTRACTOR TO PROTECT EXISTING UTILITIES TO REMAIN WITHIN LOD DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" AT 1-800-257-7777 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION WORK.
- THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL EXISTING BUILDING ENTRANCES DURING ALL PHASES OF CONSTRUCTION, UNLESS OTHERWISE NOTED IN THESE DOCUMENTS. CONTRACTOR SHALL NOTIFY ENGINEER / OWNER IF EXISTING OR PROPOSED CONDITIONS RESTRICT ABILITY TO ACHIEVE POSITIVE DRAINAGE FROM BUILDINGS PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO SUPPORT AND PROTECT ALL EXISTING UTILITIES WHEN WORKING ADJACENT TO OR CROSSING EXISTING UTILITIES.
- PROTECT PERIMETER OF WORK AREA WITH SILT FENCE ON PAVEMENT PER MDE DETAIL E-2.

EROSION SEDIMENT CONTROL NOTES (PROJECTS < 30,000 SF)

- CUTS/FILLS SHALL NOT EXCEED 10' IN DEPTH.
- NO EARTH DISTURBANCE SHALL OCCUR WITHIN THE LIMITS OF ANY 100 YEAR FLOORPLAIN OR 100 FEET OF ANY STREAM OR WATER BODY.
- THE PROPOSED WORK DOES NOT REQUIRE A STATE WATERWAY OR WETLAND PERMIT.
- EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCE) SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBANCE EXCEPT THAT NECESSARY FOR INSTALLATION OF THE CONTROLS.
- ALL EROSION SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE CRITERIA CONTAINED IN THE MOST CURRENT VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- ALL CLEARING AND GRADING SHALL BE COMPLETED IN THE FOLLOWING SEQUENCE:
 - LIMIT INITIAL CLEARING AND GRUBBING FOR THE INSTALLATION OF THE CONSTRUCTION ENTRANCE, PERIMETER CONTROLS AND ANY REMAINING CONTROLS.
 - CLEAR, GRUB AND GRADE THE REMAINDER OF THE SITE AS SPECIFIED BY THE LIMITS OF DISTURBANCE SHOWN ON THE ATTACHED PLAN.
 - CONSTRUCT ANY STRUCTURES AND UTILITIES.
 - PROVIDE FINAL GRADING AND STABILIZATION ACCORDING TO THE SEEDING OR SODDING SPECIFICATIONS (MINIMUM STABILIZATION BY SEEDING AND MULCHING).
 - AFTER THE SITE HAS BEEN STABILIZED WITH ADEQUATE VEGETATION REMOVE SEDIMENT CONTROL PRACTICES AND STABILIZE REMAINING DISTURBED AREAS.
- ALL EROSION SEDIMENT CONTROL DEVICES REQUIRE CONTINUAL MAINTENANCE. ANY CONTROLS THAT ARE DAMAGED OR DISTURBED SHALL BE RESTORED OR REPAIRED BEFORE THE END OF EACH DAY.
- DEVELOPMENT ACTIVITIES SHALL NOT IMPAIR ANY DRAINAGE, CREATE AN EROSION HAZARD, OR CREATE A SOURCE OF SEDIMENT TO ANY ADJACENT WATERCOURSE, WETLAND OR PROPERTY.
- ANY PUMPING OF WATER MUST BE FILTERED OR DONE ACCORDING TO THE CRITERIA CONTAINED IN THE MOST CURRENT VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS FOR ALL SEDIMENT CONTROL STOCKPILES, AND 3:1 OR GREATER SLOPES AND SEVEN (7) DAYS FOR ALL OTHER DISTURBED AREAS ON THE SITE NOT BEING ACTIVELY GRADED.
- ALL CONCRETE AND ASPHALT PAVEMENT AREAS REQUIRE SAME DAY STABILIZATION.

LANDCOVER SUMMARY

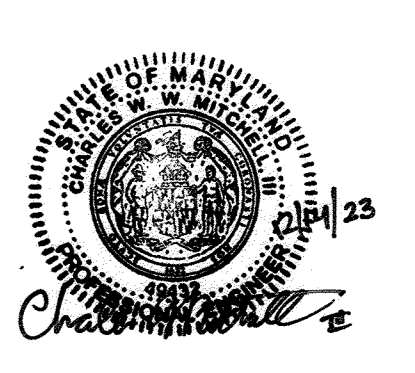
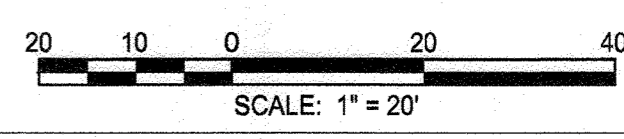
LIMITS OF DISTURBANCE.....	4,380 SF
EX. IMPERVIOUS AREA.....	4,380 SF
PROP. IMPERVIOUS AREA.....	4,380 SF
CUT.....	93 CY
FILL.....	5 CY



- NOTES:
- ACTUAL CHANNEL LENGTH IS 81 1/2" TO ALLOW FOR OVERLAP.
 - CONTRACTOR TO CUT IN FIELD PER DIMENSIONS SPECIFIED ON PLAN.
 - SECTION 8603 SHALL HAVE NO CAP AT DOWNSTREAM END.

TRENCH No.	'A' INV.	'B' INV.
8601	3.50"	4.10"
8602	4.10"	4.70"
8603	4.70"	5.30"

ZURN Z886 6" WIDE REVEAL TRENCH DRAIN SYSTEM
NOT TO SCALE



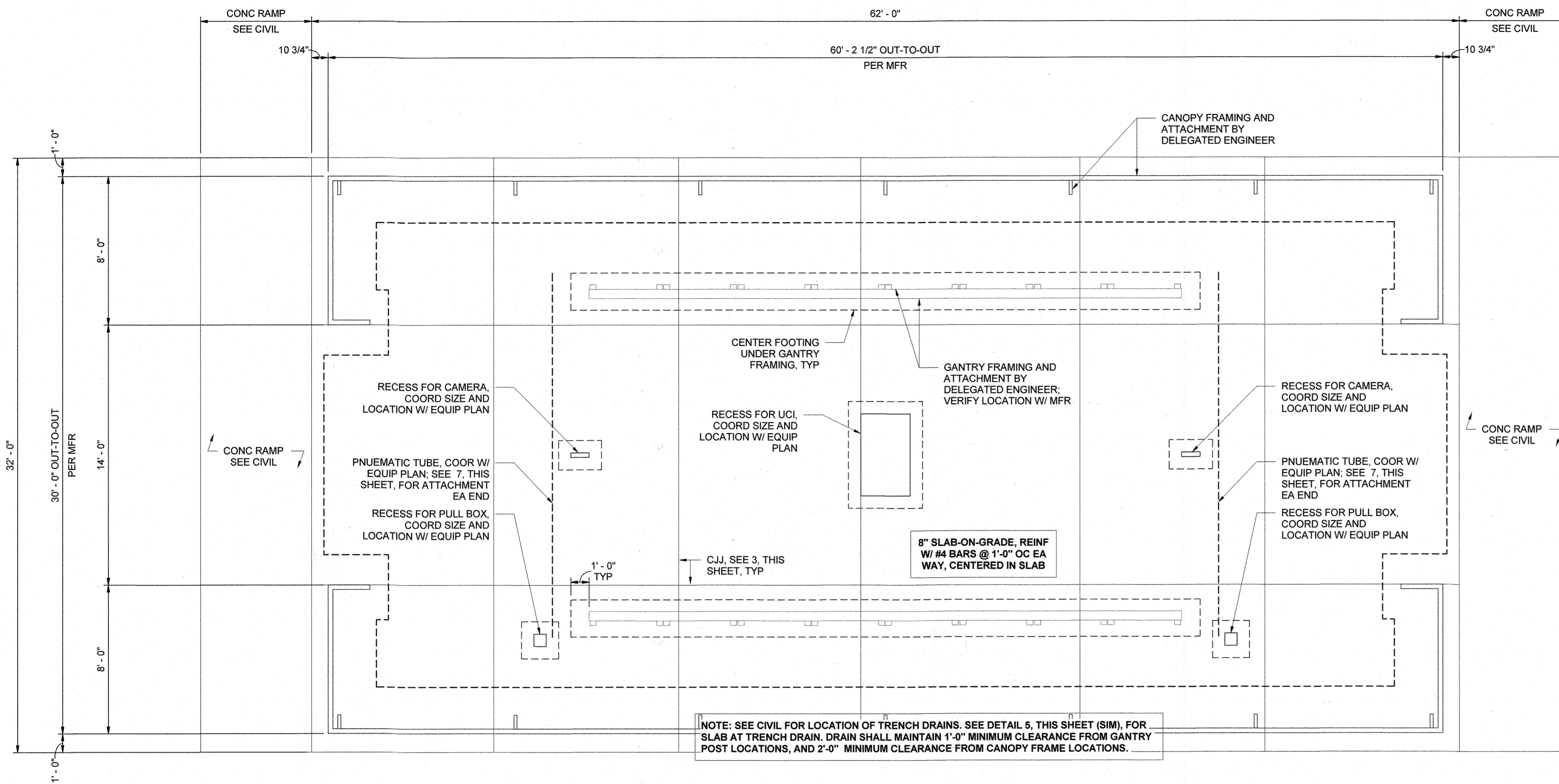
PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND,
LICENSE NO. 49432
EXPIRATION DATE: May 31, 2024

NO.	REVISIONS	DATE	BY
12/14/23			
NEW SHEET: ADDITION OF ELEVATED CONCRETE PAD AND CANOPY			
1			

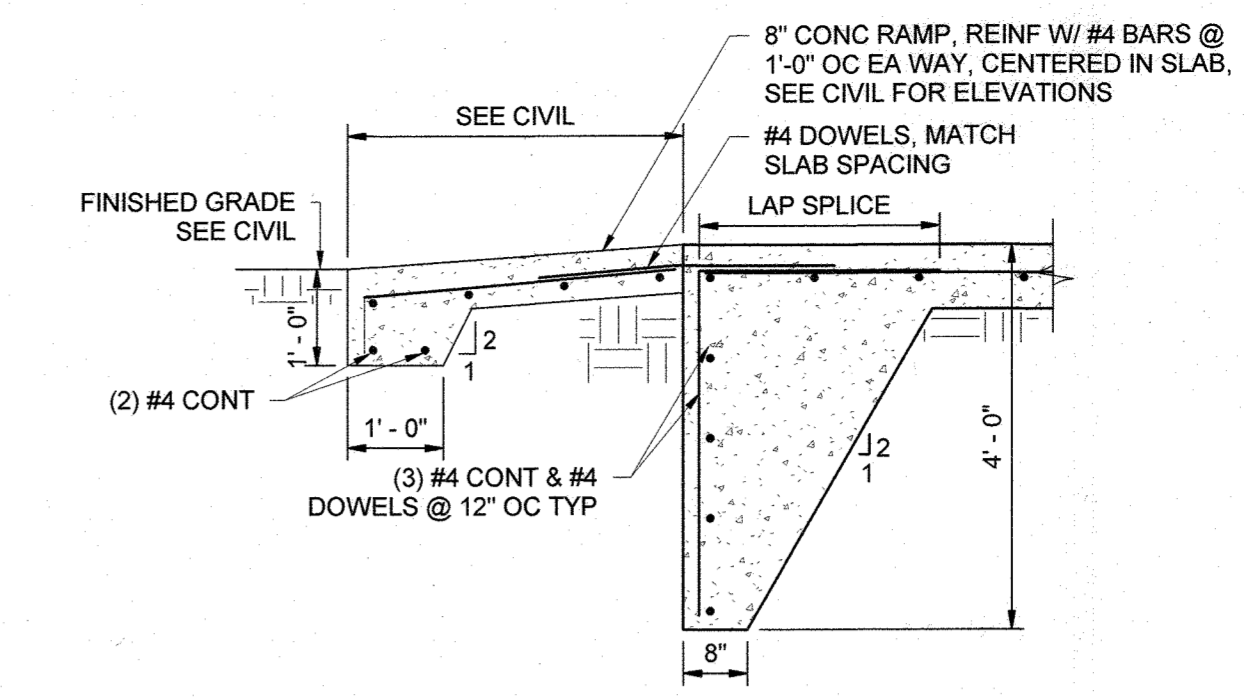
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division 1/31/24
Chief, Division of Land Development 2/18/24
Director 2/18/24
Cyrnda Eisenberg

BALTIMORE WASHINGTON AUTO EXCHANGE
VEHICULAR AUCTION AND STORAGE LOTS
TAX MAP No: 43 PARCEL: 371
FIRST ELECTION, HOWARD COUNTY, MD
SCALE: AS SHOWN DATE: 12/14/2023

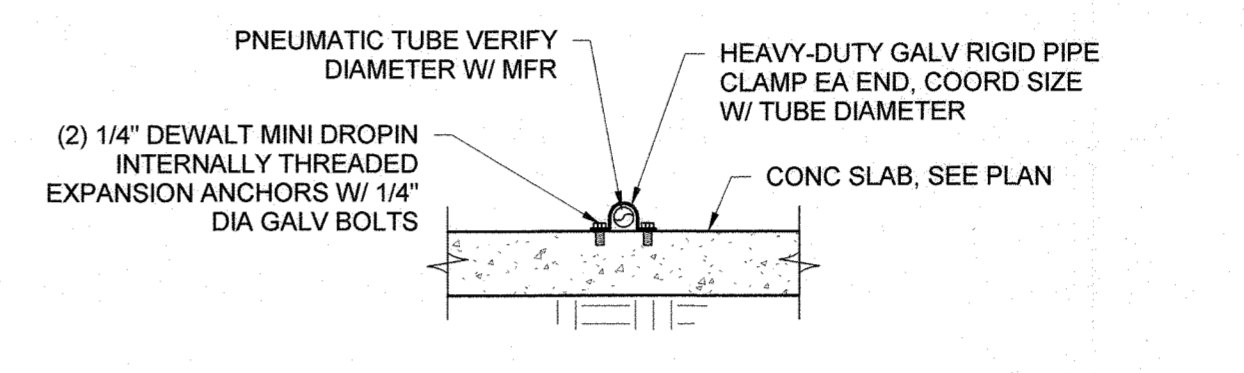
SITE DEVELOPMENT PLAN SHEET
SDP-00-063
OWNER / DEVELOPER
AA PROPERTY HOLDINGS
135 METROPLEX DRIVE
NASHVILLE, TN 37211.3109



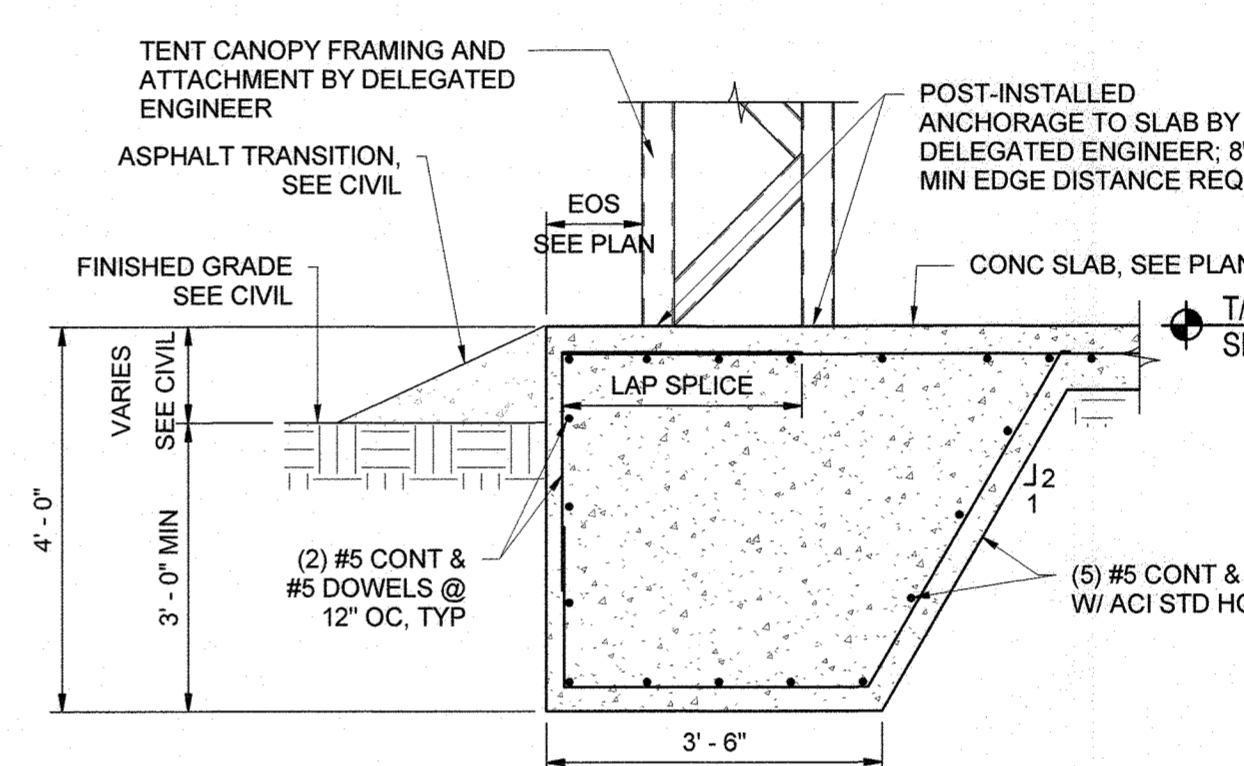
1 PRE-CR GANTRY FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



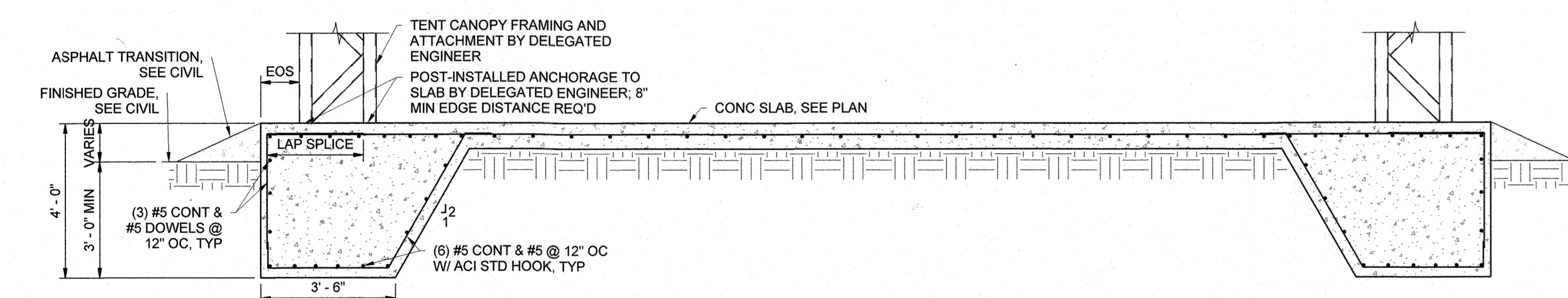
6 TYP PERIMETER TURNDOWN DETAIL
SCALE: NTS



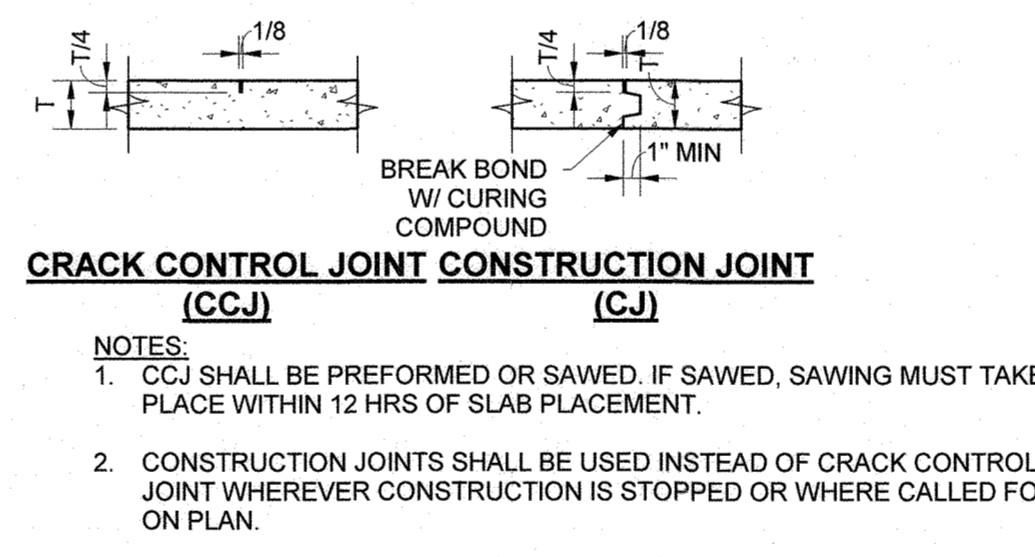
7 TYP PNEUMATIC TUBE CLAMP DETAIL
SCALE: NTS



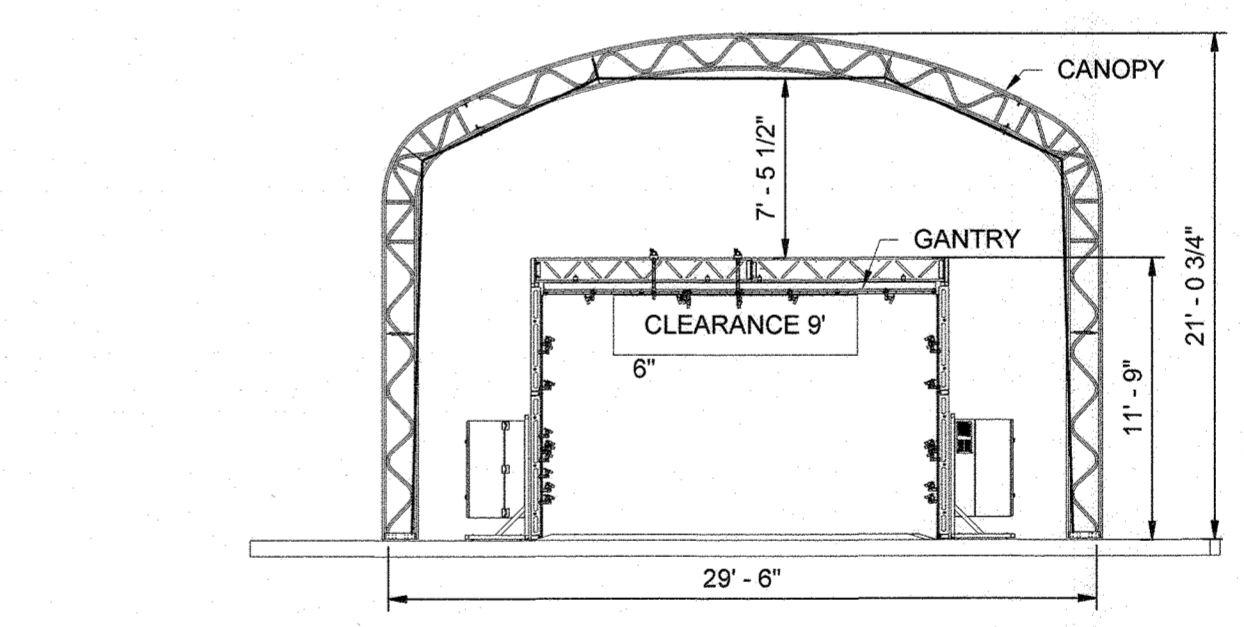
8 TYP PERIMETER COL FTG DETAIL
SCALE: NTS



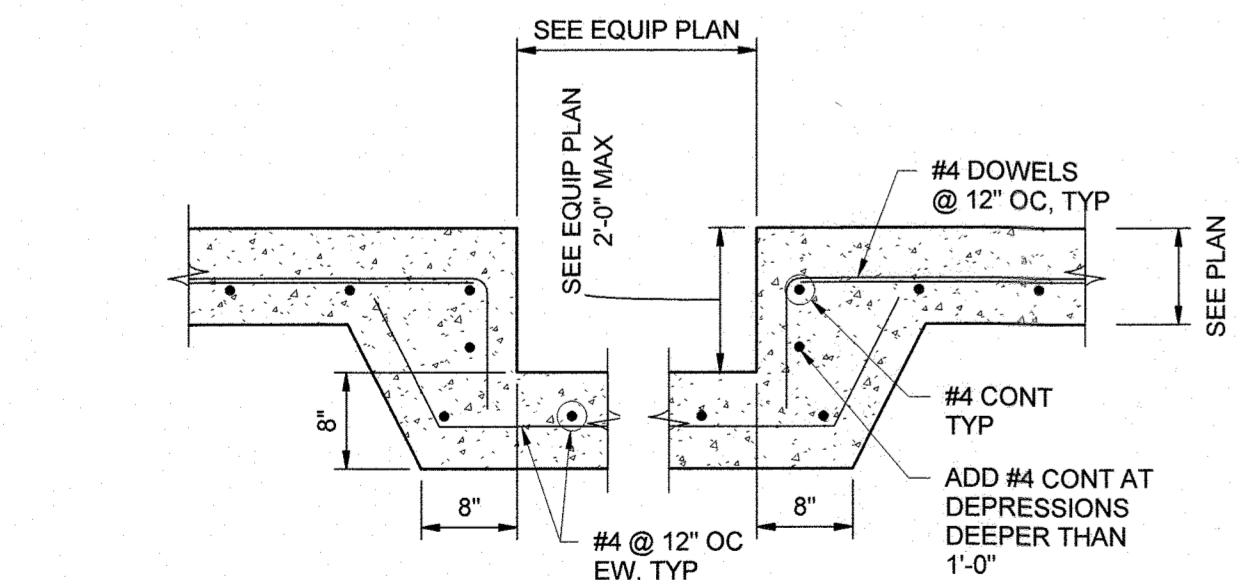
2 FOUNDATION SECTION
SCALE: NTS



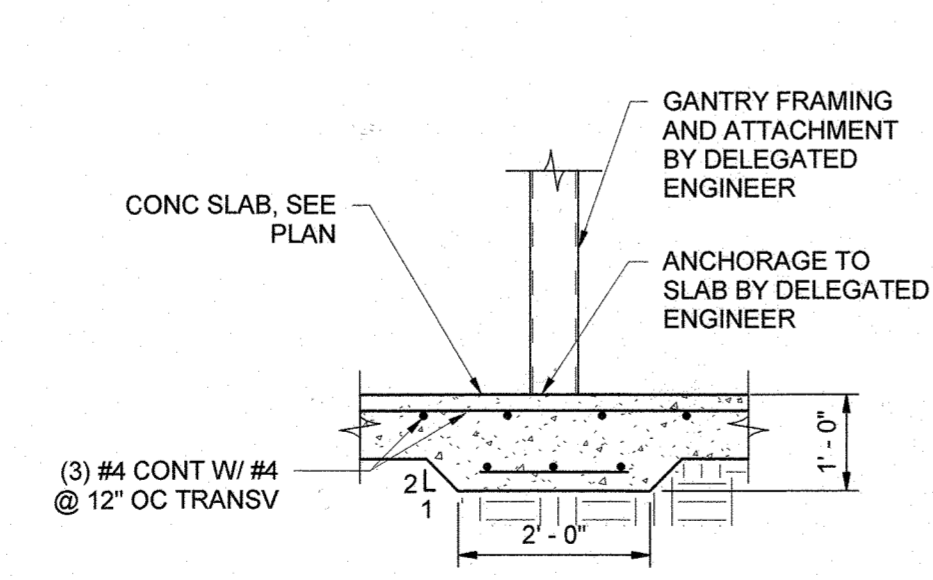
3 TYP CONC SLAB-ON-GRADE JOINTS
SCALE: NTS



9 FRONT/REAR ELEVATION
SCALE: NTS

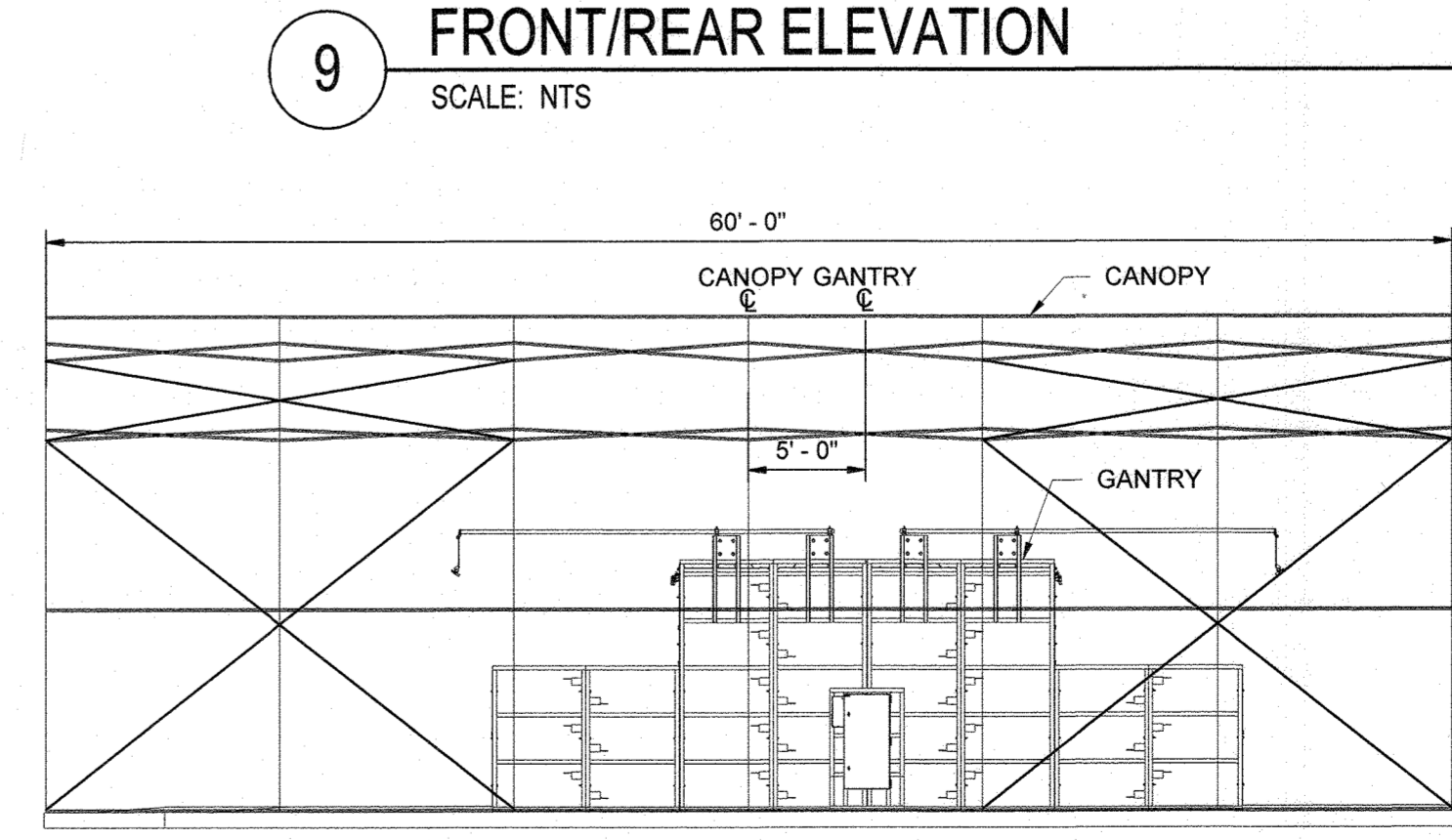


4 TYP RECESS DETAIL
SCALE: 3/4" = 1'-0"



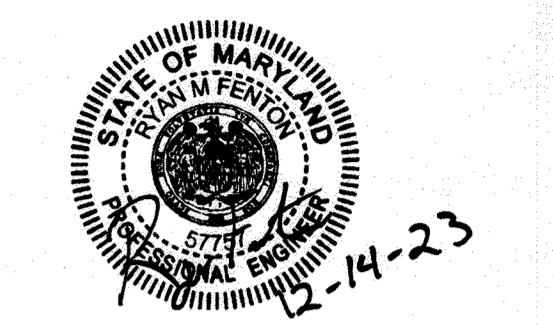
5 TYP INTERIOR FTG DETAIL
SCALE: NTS

UNFACTORED CANOPY BASE REACTIONS			
LOAD CASES		REACTIONS	
		Ry (kip)	Rz (kip)
DEAD LOAD, SELF WEIGHT	DL	0.54	-0.04
SNOW LOAD/ ROOF LIVE LOAD	SL/RL	4.86	-0.95
WIND LOAD, MAXIMUM	WLZ	-2.80	3.03
WIND LOAD, MINIMUM	WLZ	-4.14	2.49



10 SIDE ELEVATION
SCALE: NTS

RS&H
Reynolds, Smith and Hills, Inc. a/k/a
RS&H, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256-0597
904-266-2500 Fax: 904-266-2503
www.rsandh.com



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. 57757
EXPIRATION DATE: 06/07/2025

DATE	BY	REVISIONS
12/14/23	RR&K	
		NEW SHEET: ADDITION OF ELEVATED CONCRETE PAD AND CANOPY

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Date: 1-31-24
Chief, Division of Land Development
Date: 2/18/24
Director
Date: 2/18/24

BALTIMORE WASHINGTON
AUTO EXCHANGE
VEHICULAR AUCTION AND
STORAGE LOTS
TAX MAP No: 43 PARCEL: 371
FIRST ELECTION, HOWARD COUNTY, MD
SCALE: AS SHOWN DATE: 12/14/23

SITE PLAN DETAILS
SDP-00-063
OWNER / DEVELOPER
AA PROPERTY HOLDINGS
135 METROPLEX DRIVE
NASHVILLE, TN 37211.3109