

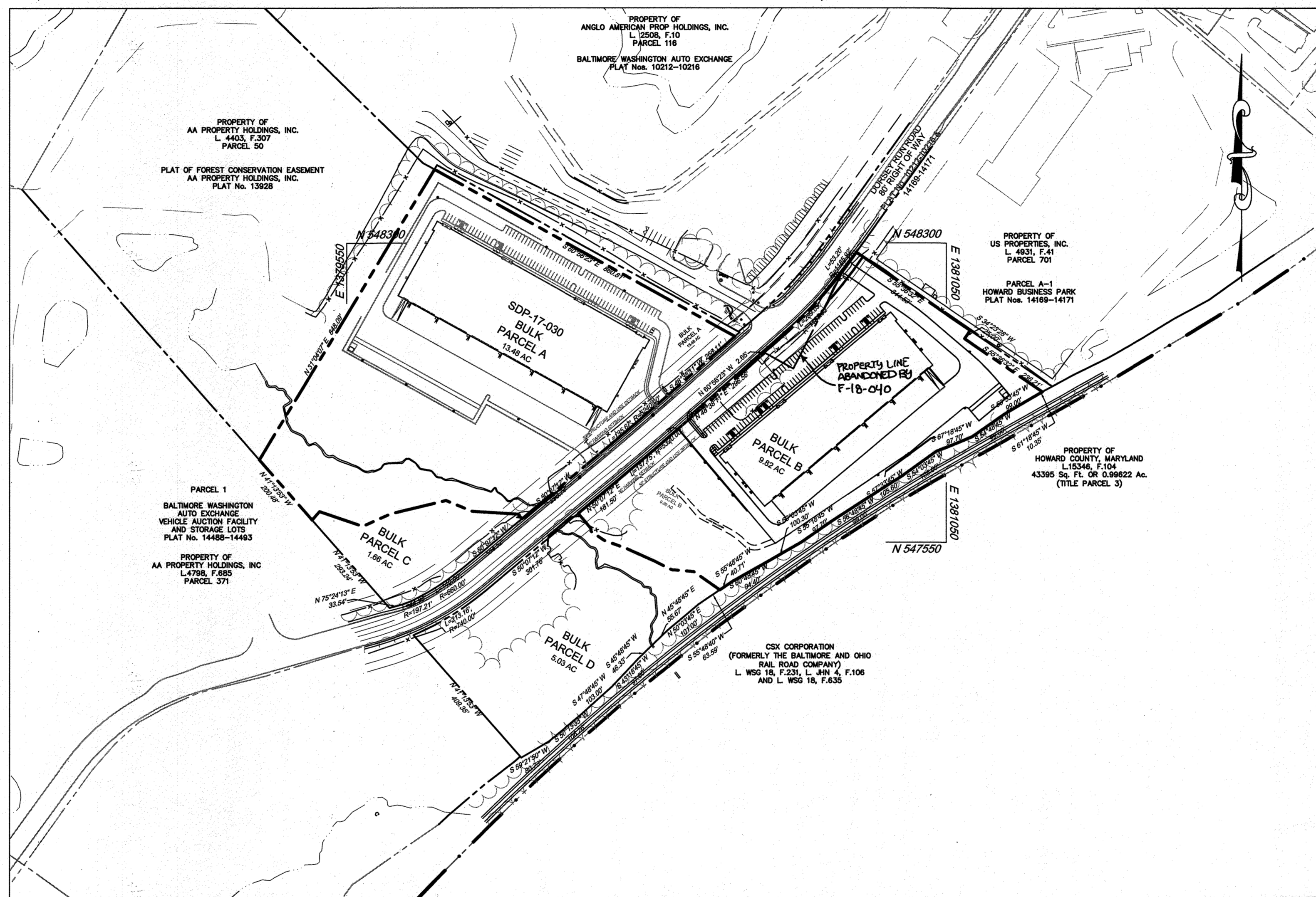
SHEET INDEX

Table with 4 columns: NO, DESCRIPTION, NO, DESCRIPTION. Lists 18 items including cover sheet, overall plan, existing conditions, site development, grading and sediment control, stormwater management, site details, utility plan, storm drain drainage area map, storm drain profiles and schedules, private utility profiles and schedules.

GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
...
33. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL.

SITE DEVELOPMENT PLAN
TERRAPIN COMMERCE CENTER - BUILDING B
DORSEY RUN ROAD
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



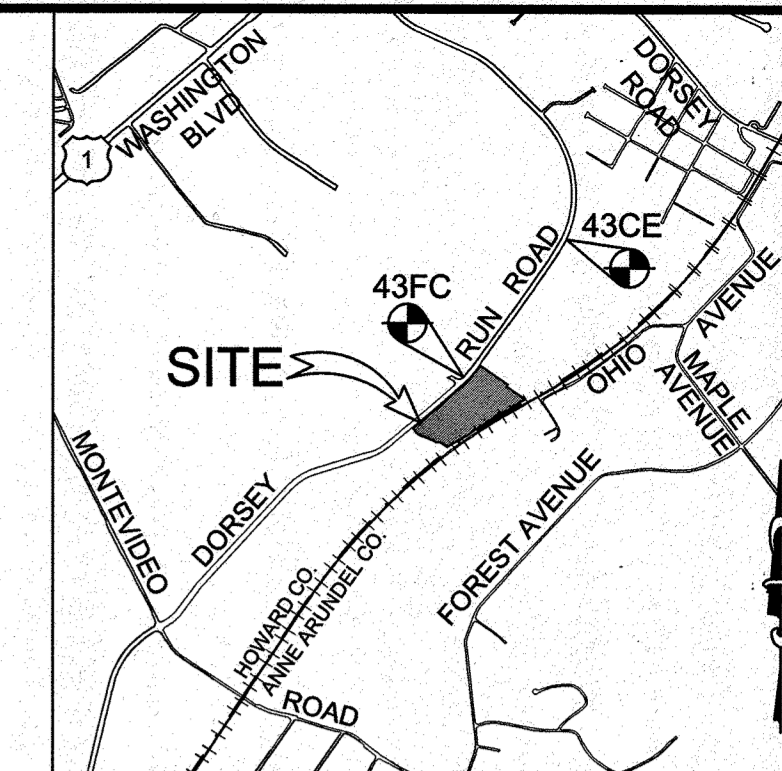
LOCATION PLAN

SCALE: 1" = 200'

- 34. AN ACCESSIBLE ROUTE SHALL BE PROVIDED BETWEEN HANDICAPPED PARKING OR PUBLIC RIGHT OF WAYS TO THE MAIN BUILDING ENTRANCE IN ACCORDANCE WITH CURRENT ADA AND LOCAL STANDARDS.
37. AN ALTERNATIVE COMPLIANCE REQUEST (MP-17-087) FOR SECTION 16.1205(A)(7) ON-SITE RETENTION HAS BEEN APPROVED FOR THIS PROJECT BY LETTER DATED MARCH 30, 2017.
...
38. A PERMIT HAS BEEN ISSUED BY THE ARMY CORPS OF ENGINEERS (PERMIT # 2016-62029-M39) AND THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (PERMIT # 201662029/16-NI-3361) FOR DISTURBANCE IN THE FLOODPLAIN ASSOCIATED WITH THE SEWER MAIN EXTENSION AND DISTURBANCE TO AN EPHEMERAL STREAM CHANNEL.

SITE ANALYSIS DATA

Table with 2 columns: Category and Value. Includes Area of Site (9.82 ACRES), Limit of Disturbance (8.60 ACRES), Present Zoning (M-2), Existing Use (VACANT, WOODED LOT), Proposed Use (WAREHOUSE), etc.



VICINITY MAP

SCALE: 1"=2,000'
HOWARD COUNTY
ADC MAP 35 GRID A7
ADC MAP USE LICENSE #3652

BENCHMARKS

HOWARD COUNTY SURVEY CONTROL: 43CE
ELEVATION 198.143
N 549,856.305 E 1,381,719.608
LOCATION IS 3' FROM FACE OF CURB ALONG DORSEY RUN ROAD.
...
HOWARD COUNTY SURVEY CONTROL: 43FC
ELEVATION 157.933
N 548,198.445 E 1,380,681.244
LOCATION IS 3.1' FROM FACE OF CURB ALONG DORSEY RUN ROAD.

PURPOSE STATEMENT OF REVISED SITE DEVELOPMENT PLAN

THE PURPOSE OF THE REVISION IS TO ADD IN THE ADJACENT TRIANGULAR PARCEL, EXPANSION OF THE PARKING LOT AND SWM REVISIONS.

PURPOSE STATEMENT:
REVISE GUARDRAIL LOCATION AND ADD GUARDRAIL DETAILS ON SHEETS 2, 4 AND 2S.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Approval signatures and dates:
Chief, Development Engineering Division: 3-19-18
Chief, Division of Land Development: 3-28-18
Director: 3-29-18

Table with 4 columns: DATE, NO., REVISION, BY. Shows revision 2 for ADD PURPOSE STATEMENT and revision 1 for ADDITION OF ADJACENT PARCEL.

DEVELOPER: DCT INDUSTRIAL
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

OWNER: DCT MEARS LLC
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
GRID NO. 11 1st ELECTION DISTRICT
ELKBRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE: COVER SHEET AS-BUILT

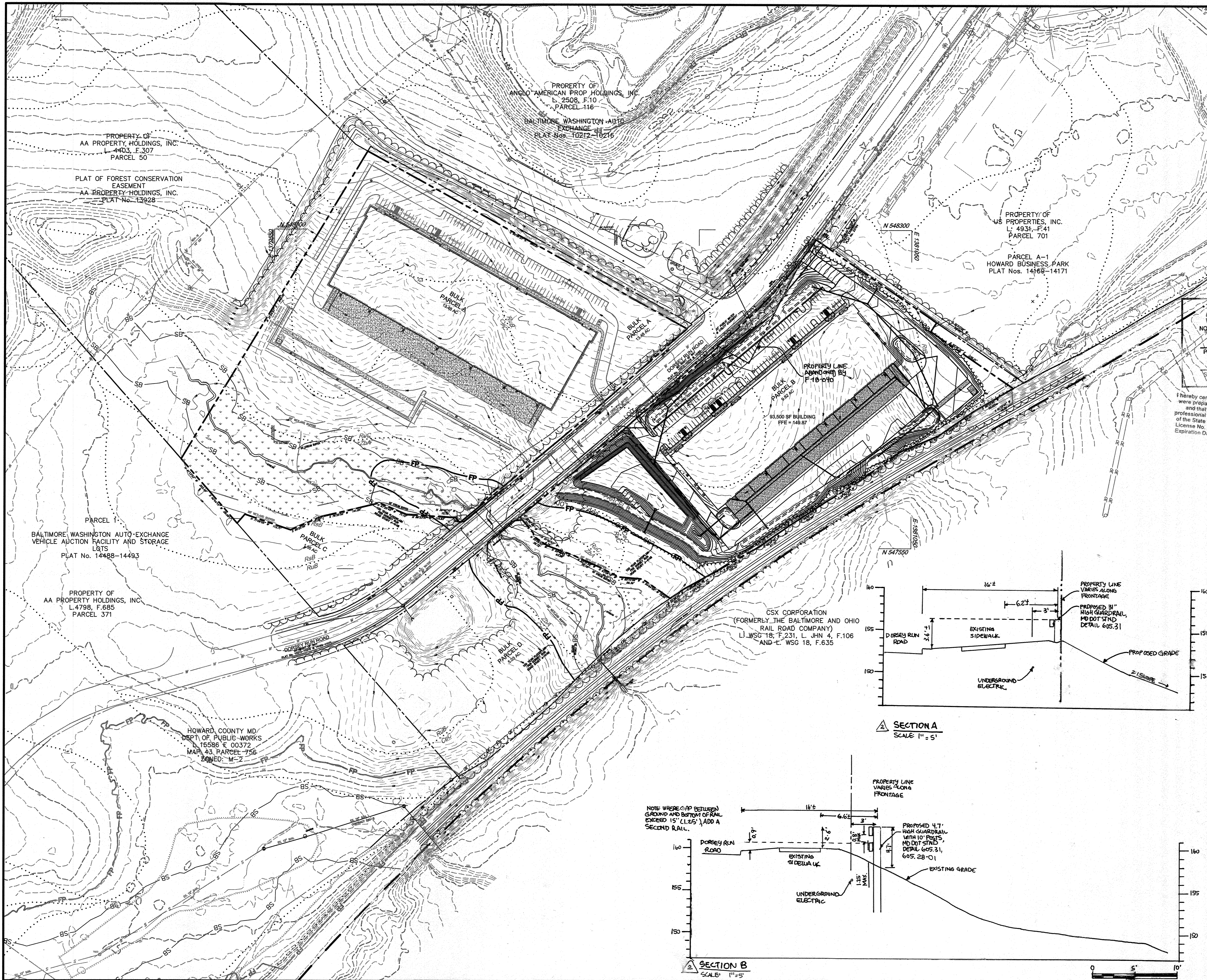
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
DRAWN BY: AGS/JSN/NTD
PROJECT NO: DCT1601
DATE: JANUARY 25, 2018
SCALE: 1" = 200'
DRAWING NO. 1 OF 36

AS-BUILT CERTIFICATION

I HEREBY CERTIFY BY MY SEAL THAT THE FACILITY SHOWN ON THIS PLANS WERE CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS MEETS THE APPROVED PLANS AND SPECIFICATIONS, EXCEPT AS NOTED IN RED ON THESE DRAWINGS.
James A. Reed
Professional Engineer
MD. P.E. No. 24774
11/21/20

ADDRESS CHART table with columns: PARCEL NUMBER, STREET ADDRESS. Shows parcel 51 at 7171 DORSEY RUN ROAD.
Subdivision Name: PARCEL B, Parcel: B, Plat No. or L.F.: 1696100350, Grid #: 11, Zoning: M-2, Tax Map No.: 43, Elect. Dist.: 1, Census Tract: 601203.



LEGEND

PROPERTY LINE AND RIGHT-OF-WAY	---
EXISTING BUILDING	[Hatched Box]
EXISTING 1' CONTOUR	154
EXISTING 5' CONTOUR	155
EXISTING TREE LINE	[Wavy Line]
EXISTING SOILS	RUB
EXISTING WETLANDS	[Dotted Area]
EXISTING WETLAND BUFFER	[Dashed Line]
EXISTING ZONING LINE	[Thick Dashed Line]
EXISTING WATER	[Blue Area]
EXISTING SEWER	[Line with 'S']
EXISTING COMMUNICATIONS	[Line with 'C']
EXISTING ELECTRICAL	[Line with 'E']
EXISTING GAS	[Line with 'G']
EXISTING STORM DRAIN	[Line with 'SD']
PROPOSED 1' CONTOUR	164
PROPOSED 5' CONTOUR	165
PROPOSED STORM DRAIN	[Line with 'SD']
PROP. CONCRETE SIDEWALK	[Hatched Box]

AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

James D. Rife 2174
 PRINTED NAME: JDR MD, P.E. NO.
 SIGNATURE: [Signature] 11/12/20 DATE

1/16/20 2 ADD GUARDRAIL SECTIONS ALC

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. 2174, Expiration Date: 11/12/20.

GRAPHIC SCALE 1"=50'

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
CHIEF, DEVELOPMENT ENGINEERING DIVISION	3-19-18 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	3-28-18 DATE
DIRECTOR	3-29-18 DATE

1/25/18	1	ADDITION OF ADJACENT PARCEL EXPANSION OF PARKING LOT, SWM REVISIONS	ALC
DATE	NO.	REVISION	BY
DEVELOPER: DCT INDUSTRIAL, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020			
OWNER: DCT MEARS LLC, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020			

PROJECT

TERRAPIN COMMERCE CENTER - BUILDING B

AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2 GRID NO. 11 1st ELECTION DISTRICT 7200 DORSEY RUN ROAD ELK RIDGE, MARYLAND 21075 HOWARD COUNTY, MARYLAND

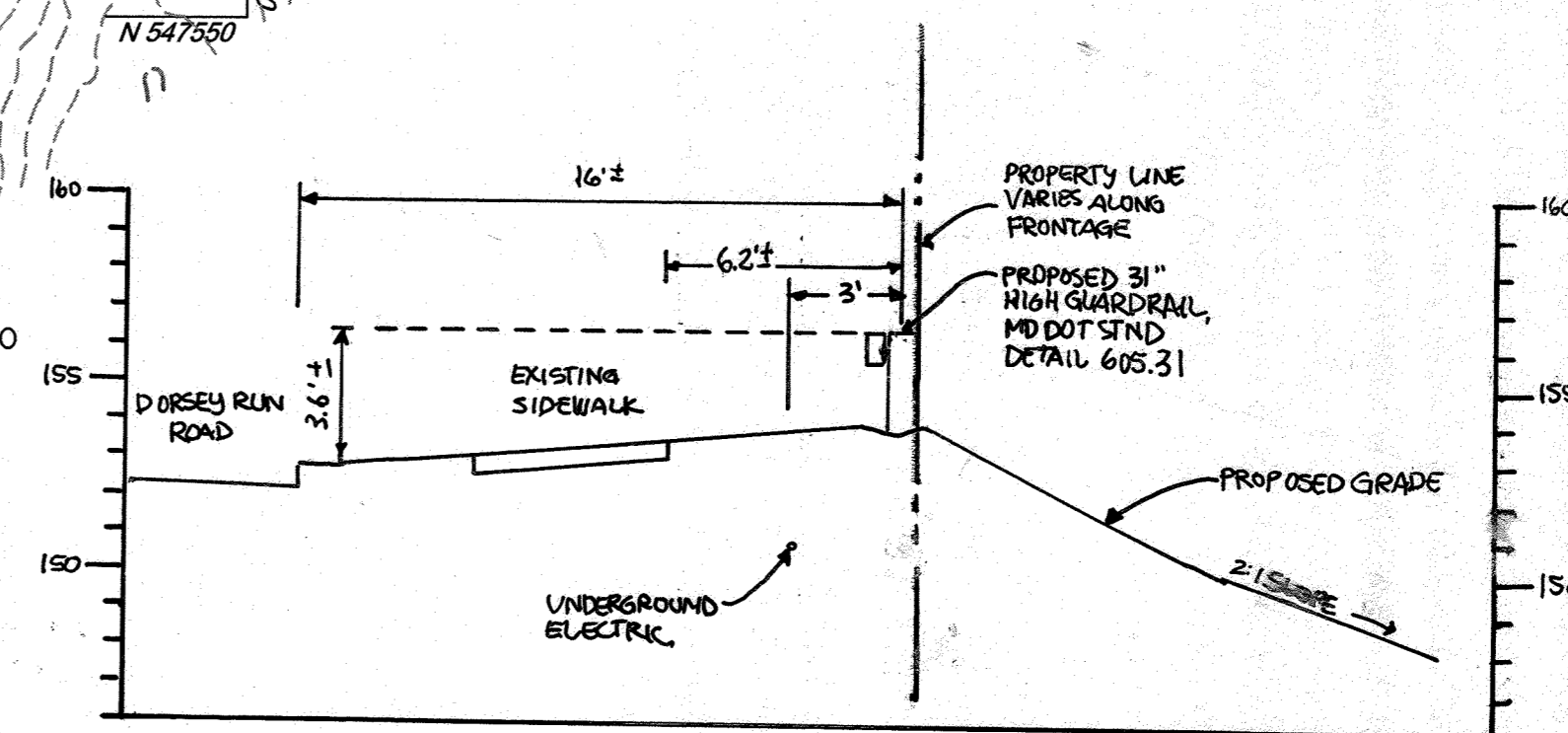
TITLE

OVERALL PLAN

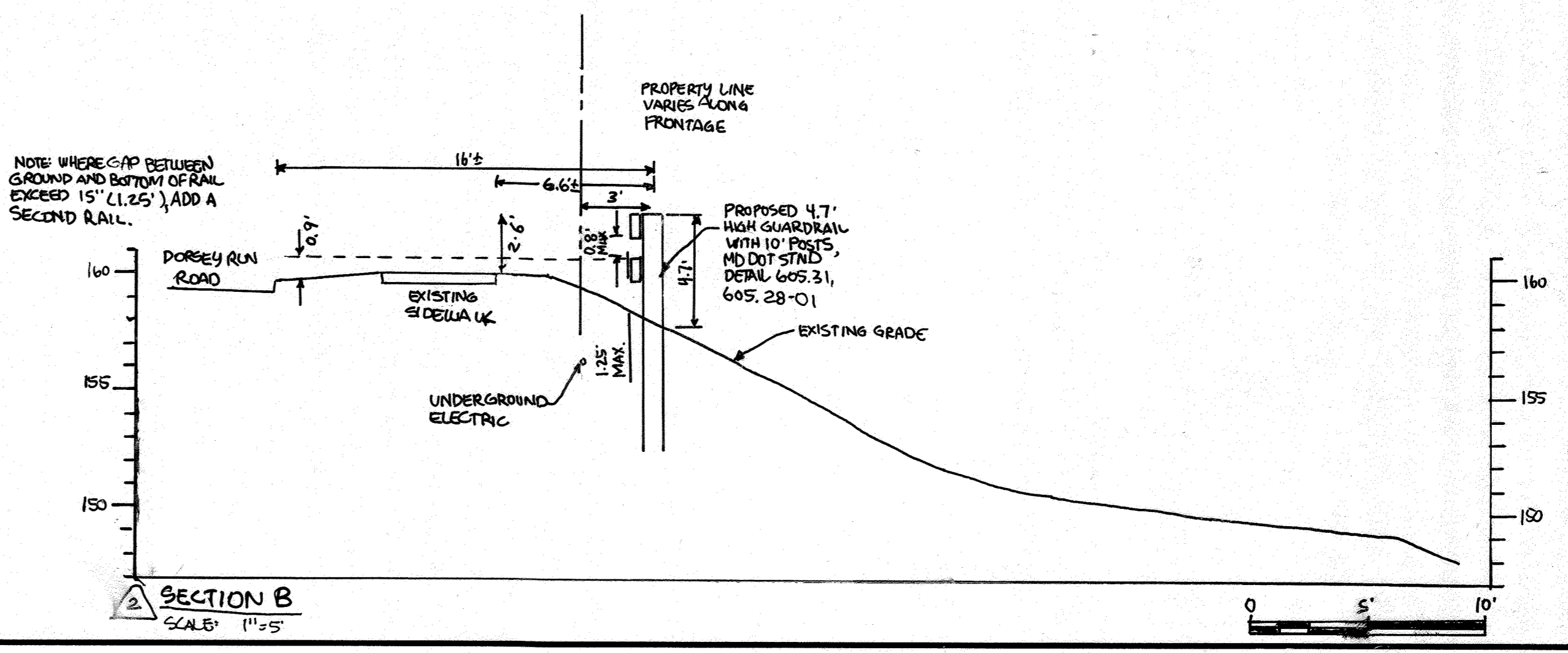
Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

	DESIGNED BY: PJS
	DRAWN BY: AGS/JSN/NTD
	PROJECT NO: DCT11601
	DATE: JANUARY 25, 2018
SCALE: 1" = 100'	
DRAWING NO. 2 OF 36	



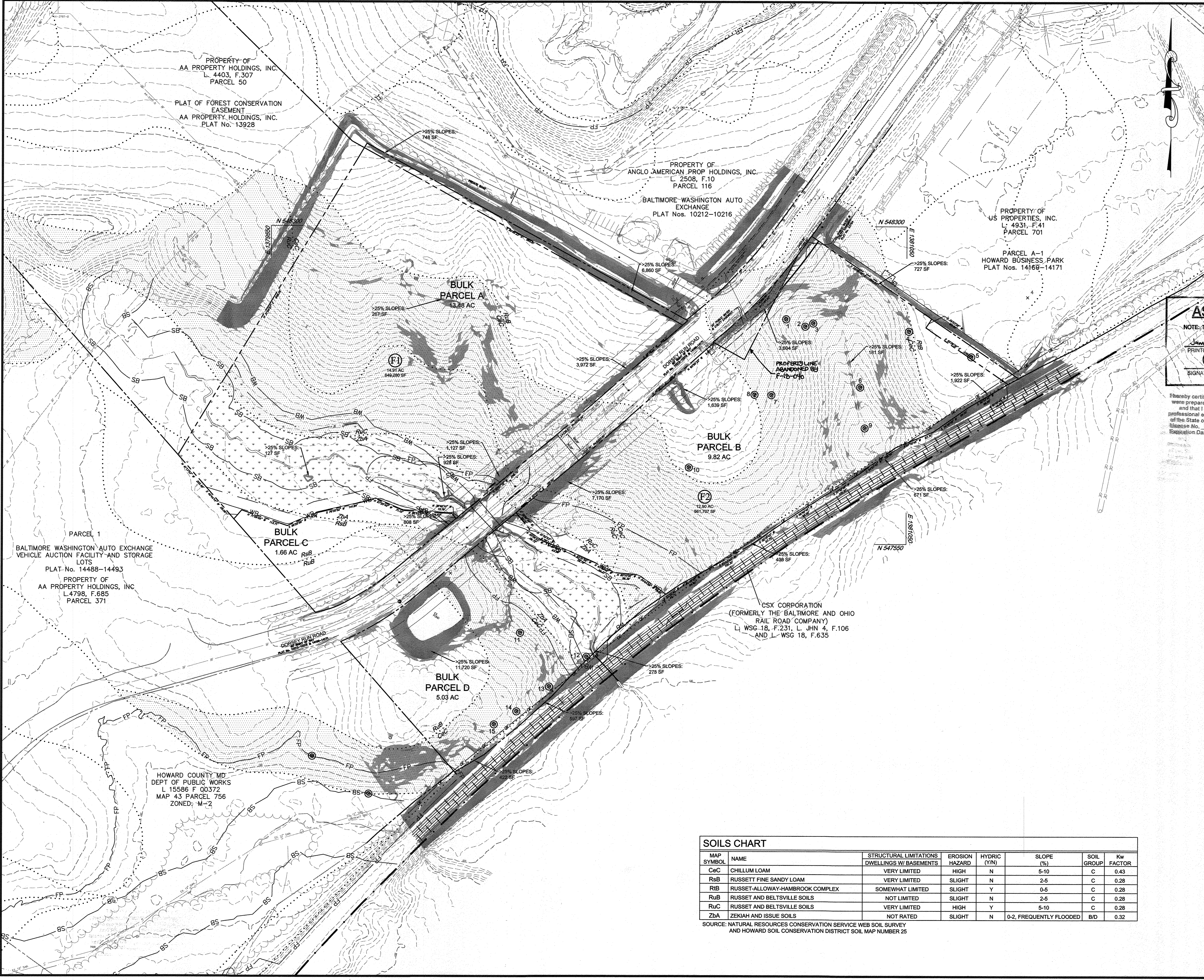
SECTION A
SCALE: 1" = 5'



SECTION B
SCALE: 1" = 5'



PENNONI ASSOCIATES INC. ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS



LEGEND

PROPERTY LINE AND RIGHT-OF-WAY: [Symbol]

EXISTING BUILDING: [Symbol]

EXISTING 1' CONTOUR: [Symbol]

EXISTING 5' CONTOUR: [Symbol]

EXISTING TREE LINE: [Symbol]

EXISTING SOILS: [Symbol]

EXISTING WATER: [Symbol]

EXISTING SEWER ELECTRICAL: [Symbol]

EXISTING UNDERGROUND ELECTRICAL: [Symbol]

EXISTING STORM DRAIN: [Symbol]

EXISTING STREAM: [Symbol]

EXISTING FLOODPLAIN: [Symbol]

EXISTING WETLANDS: [Symbol]

EXISTING WETLAND BUFFER: [Symbol]

15-25% SLOPES: [Symbol]

>25% SLOPES: [Symbol]

HIGHLY ERODIBLE SOILS: [Symbol]

AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

NAME: [Signature] 21774
 PRINTED NAME: [Signature] MD. P.E. NO.
 SIGNATURE: [Signature] DATE: 11/12/20

Professional Engineer Seal: [Seal]

Graphic Scale 1"=100'

Issue No. 21774
 Registration Date 11/12/20

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: [Signature] 3-19-18
 Chief, Division of Land Development: [Signature] 3-28-18
 Director: [Signature] 3-29-18

1/25/18	1	ADDITION OF ADJACENT PARCEL	ALC
DATE	NO.	REVISION	BY
DEVELOPER		DCT INDUSTRIAL 12011 GUILFORD ROAD SUITE 102 ANNAPOLIS JUNCTION, MD 20701 ATTN: FRED FERRARO PHONE: 410-645-5020	
OWNER		DCT MEARS LLC 12011 GUILFORD ROAD SUITE 102 ANNAPOLIS JUNCTION, MD 20701 ATTN: FRED FERRARO PHONE: 410-645-5020	

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
 GRID NO. 11 1st ELECTION DISTRICT
 7200 DORSEY RUN ROAD
 ELK RIDGE, MARYLAND 21075
 HOWARD COUNTY, MARYLAND

TITLE: EXISTING CONDITIONS PLAN

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

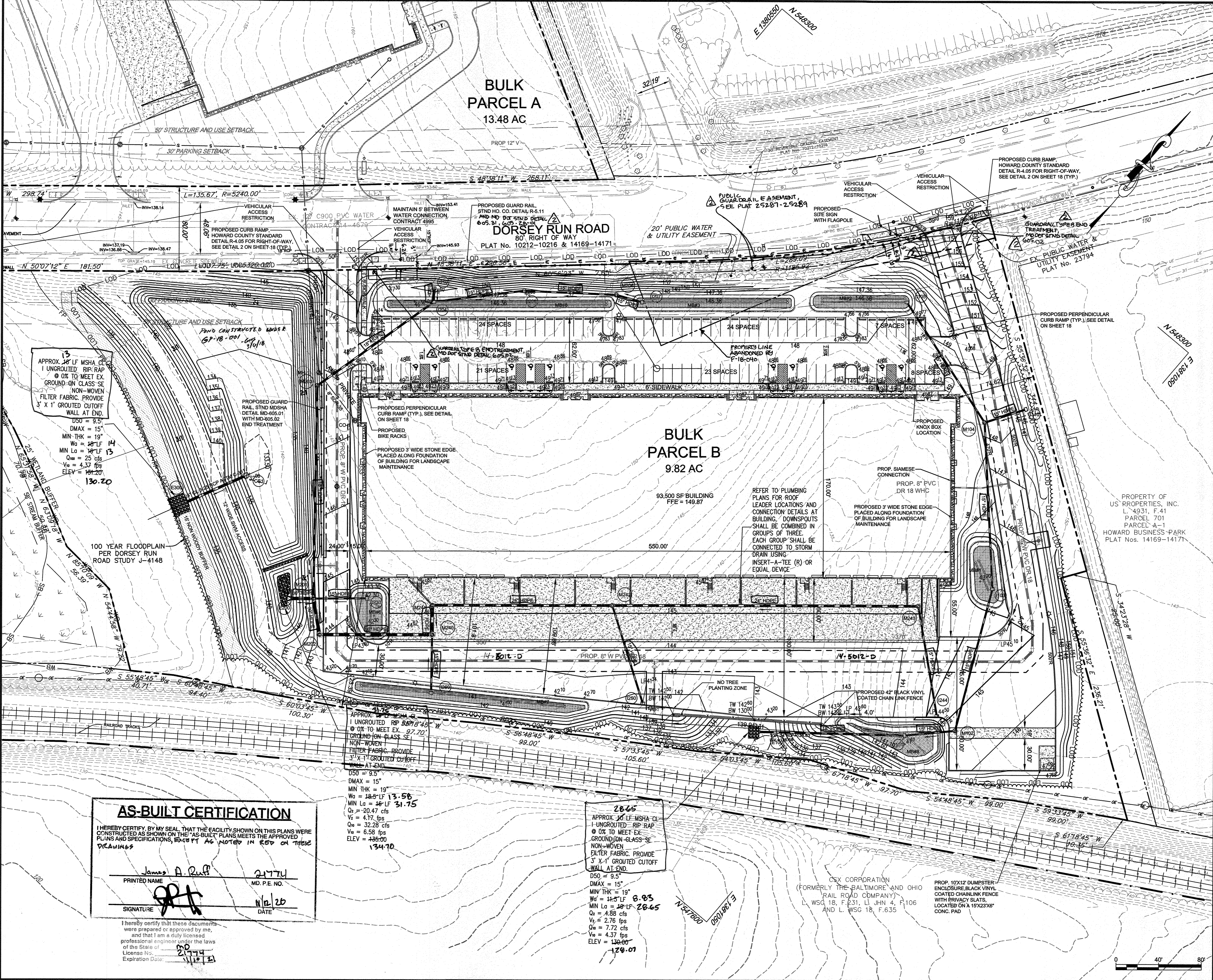
SEAL: [Seal]

DESIGNED BY: PJS
 DRAWN BY: AGS/JS/NTD
 PROJECT NO.: DCT11601
 DATE: JANUARY 25, 2018
 SCALE: 1" = 100'
 DRAWING NO. 3 OF 36

SOILS CHART

MAP SYMBOL	NAME	STRUCTURAL LIMITATIONS	EROSION HAZARD	HYDRIC (Y/N)	SLOPE (%)	SOIL GROUP	Kw FACTOR
CcC	CHILLUM LOAM	DWELLINGS W/ BASEMENTS	HIGH	N	5-10	C	0.43
RsB	RUSSETT FINE SANDY LOAM	VERY LIMITED	SLIGHT	N	2-5	C	0.28
RiB	RUSSET-ALLOWAY-HAMBROOK COMPLEX	SOMEWHAT LIMITED	SLIGHT	Y	0-5	C	0.28
RuB	RUSSET AND BELTSVILLE SOILS	NOT LIMITED	SLIGHT	N	2-5	C	0.28
RuC	RUSSET AND BELTSVILLE SOILS	VERY LIMITED	HIGH	Y	5-10	C	0.28
ZbA	ZEKIAH AND ISSUE SOILS	NOT RATED	SLIGHT	N	0-2, FREQUENTLY FLOODED	B/D	0.32

SOURCE: NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY AND HOWARD SOIL CONSERVATION DISTRICT SOIL MAP NUMBER 25



LEGEND

PROPERTY LINE AND RIGHT-OF-WAY	---
EXISTING 1' CONTOUR	---154---
EXISTING 5' CONTOUR	---155---
EXISTING TREE LINE	---RUB---
EXISTING SOILS	---
EXISTING WATER	---
EXISTING SEWER	---
EXISTING OVERHEAD ELECTRICAL	---
EXISTING UNDERGROUND ELECTRICAL	---
EXISTING STORM DRAIN	---
EXISTING STREAM	---
EXISTING FLOODPLAIN	---
EXISTING WETLANDS	---
EXISTING WETLAND BUFFER	WB
PROPOSED MICRO-BIORETENTION FACILITY	---
PROPOSED STORM DRAIN	---
PROPOSED WATER	---
PROPOSED SEWER	---
PROP. CONCRETE PAVING	---
PROPOSED TREE LINE	---
PROPOSED GUARD RAIL	---

PURPOSE STATEMENT OF REVISED SITE DEVELOPMENT PLAN
 THE PURPOSE OF THE REVISION IS TO ADD IN THE ADJACENT TRIANGULAR PARCEL, EXPANSION OF THE PARKING LOT AND SWM REVISIONS.

1/16/20	2	ADJUST LOCATION OF GUARDRAIL	ALC
APPROVED: DEPARTMENT OF PLANNING AND ZONING			
<i>Ch. Pender</i>		3-19-18	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	JP		
<i>S. Mansueti</i>		3-28-18	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	NH		
<i>Valeria Qui</i>		3-29-18	DATE
DIRECTOR			

1/25/18	1	ADDITION OF ADJACENT PARCEL, EXPANSION OF PARKING LOT, SWM REVISIONS	ALC
DEVELOPER			
DCT INDUSTRIAL 12011 GUILFORD ROAD SUITE 102 ANNAPOLIS JUNCTION, MD 20701 ATTN: FRED FERRARO PHONE: 410-645-5020			

OWNER			
DCT MEARS LLC 12011 GUILFORD ROAD SUITE 102 ANNAPOLIS JUNCTION, MD 20701 ATTN: FRED FERRARO PHONE: 410-645-5020			

PROJECT
 TERRAPIN COMMERCE CENTER
 - BUILDING B

AREA
 TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
 GRID NO. 11 1st ELECTION DISTRICT
 7200 DORSEY RUN ROAD
 ELKCRIDGE, MARYLAND 21075
 HOWARD COUNTY, MARYLAND

TITLE
 REVISED
 SITE DEVELOPMENT PLAN

Pennoni Associates Inc.
Pennoni Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
DRAWN BY: AGS/JSN/NTD
PROJECT NO: DCTH1601
DATE: JANUARY 25, 2018
SCALE: 1" = 40'
DRAWING NO. 4 OF 36

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITY SHOWN ON THIS PLANS WERE CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS MEETS THE APPROVED PLANS AND SPECIFICATIONS, EXCEPT AS NOTED IN RED ON THESE DRAWINGS.

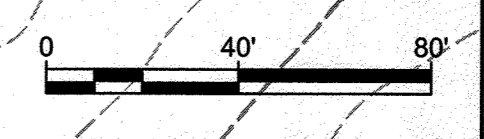
James A. Ruff
 PRINTED NAME
 21774
 MD. P.E. NO.
 SIGNATURE
 DATE: 1/12/20

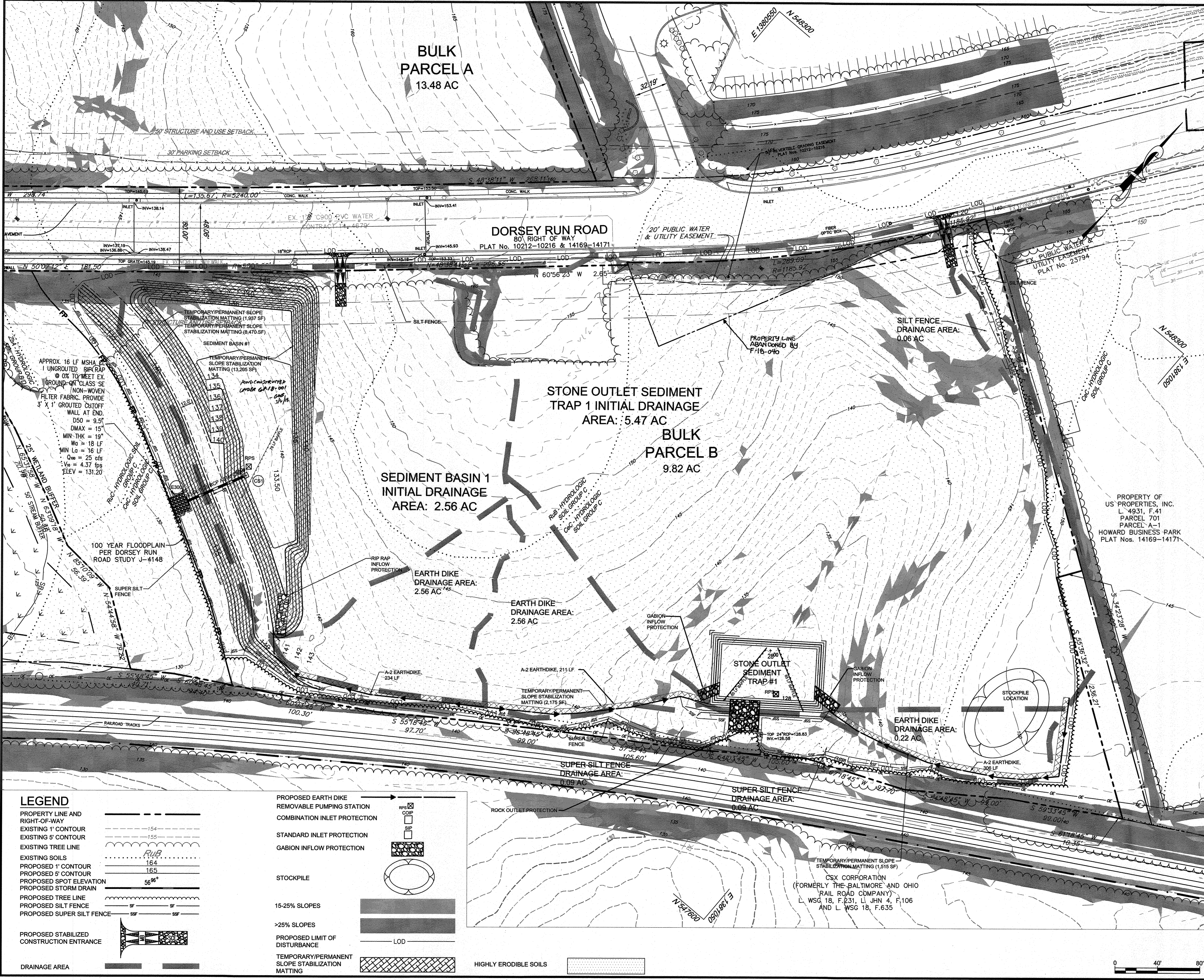
APPROX. 30' LF MSHA CL I UNGROUTED RIP-RAP @ 0% TO MEET EX. GROUND-ON CLASS SE NON-WOVEN FILTER FABRIC, PROVIDE 3' X 1' GROUTED CUTOFF WALL AT END.
 D50 = 9.5
 DMAX = 15"
 MIN THK = 19"
 W₀ = 18.5 LF 13.56
 MIN L₀ = 48 LF 31.75
 Q₂ = 20.47 cfs
 V₂ = 4.17 fps
 Q₀ = 32.28 cfs
 V₀ = 6.58 cfs
 ELEV = 435.00
 134.70

APPROX. 30' LF MSHA CL I UNGROUTED RIP-RAP @ 0% TO MEET EX. GROUND-ON CLASS SE NON-WOVEN FILTER FABRIC, PROVIDE 3' X 1' GROUTED CUTOFF WALL AT END.
 D50 = 9.5
 DMAX = 15"
 MIN THK = 19"
 W₀ = 14.5 LF 8.85
 MIN L₀ = 48 LF 28.65
 Q₂ = 4.88 cfs
 V₂ = 2.76 fps
 Q₀ = 7.72 cfs
 V₀ = 4.37 fps
 ELEV = 130.00
 120.07

REFER TO PLUMBING PLANS FOR ROOF LEADER LOCATIONS AND CONNECTION DETAILS AT BUILDING. DOWNSPOUTS SHALL BE COMBINED IN GROUPS OF THREE. EACH GROUP SHALL BE CONNECTED TO STORM DRAIN USING INSERT-A-TEE (R) OR EQUAL DEVICE.

PROPERTY OF US PROPERTIES, INC.
 L-4931, F-41
 PARCEL 701
 PARCEL A-1
 HOWARD BUSINESS-PARK
 PLAT Nos. 14169-14171





AS-BUILT CERTIFICATION
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.
 PRINTED NAME: *James A. P... 21774*
 SIGNATURE: *[Signature]* DATE: 1/12/20

ENGINEER'S CERTIFICATE
 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. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 2/24/18
 LICENSE NO. 21774
 EXPIRATION DATE: 11/1/21

DEVELOPER'S CERTIFICATE
 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 APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I SHALL ENGAGE A MARYLAND 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 CERTIFY RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.
 SIGNATURE OF DEVELOPER: *[Signature]* DATE: 2/19/18

THIS PLAN IS APPROVED FOR SMALL POND CONSTRUCTION AND SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SOIL CONSERVATION DISTRICT DATE: 3/6/18
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 3-19-18
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 3-28-18
 DIRECTOR DATE: 3-29-18

DATE	NO.	REVISION	BY
1/25/18	1	ADDITION OF ADJACENT PARCEL	ALC

DEVELOPER: DCT INDUSTRIAL
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

OWNER: DCT MEARS LLC
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
 GRID NO. 11 1st ELECTION DISTRICT
 7200 DORSEY RUN ROAD
 ELKRIDGE, MARYLAND 21075
 HOWARD COUNTY, MARYLAND

TITLE: GRADING AND SEDIMENT CONTROL PLAN - PHASE I

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
 DRAWN BY: AGS/JSN/NTD
 PROJECT NO.: DCT11601
 DATE: JANUARY 25, 2018
 SCALE: 1" = 40'
 DRAWING NO.: 5 OF 36

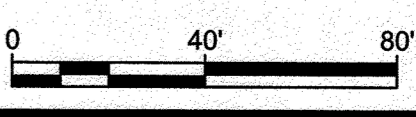
LEGEND

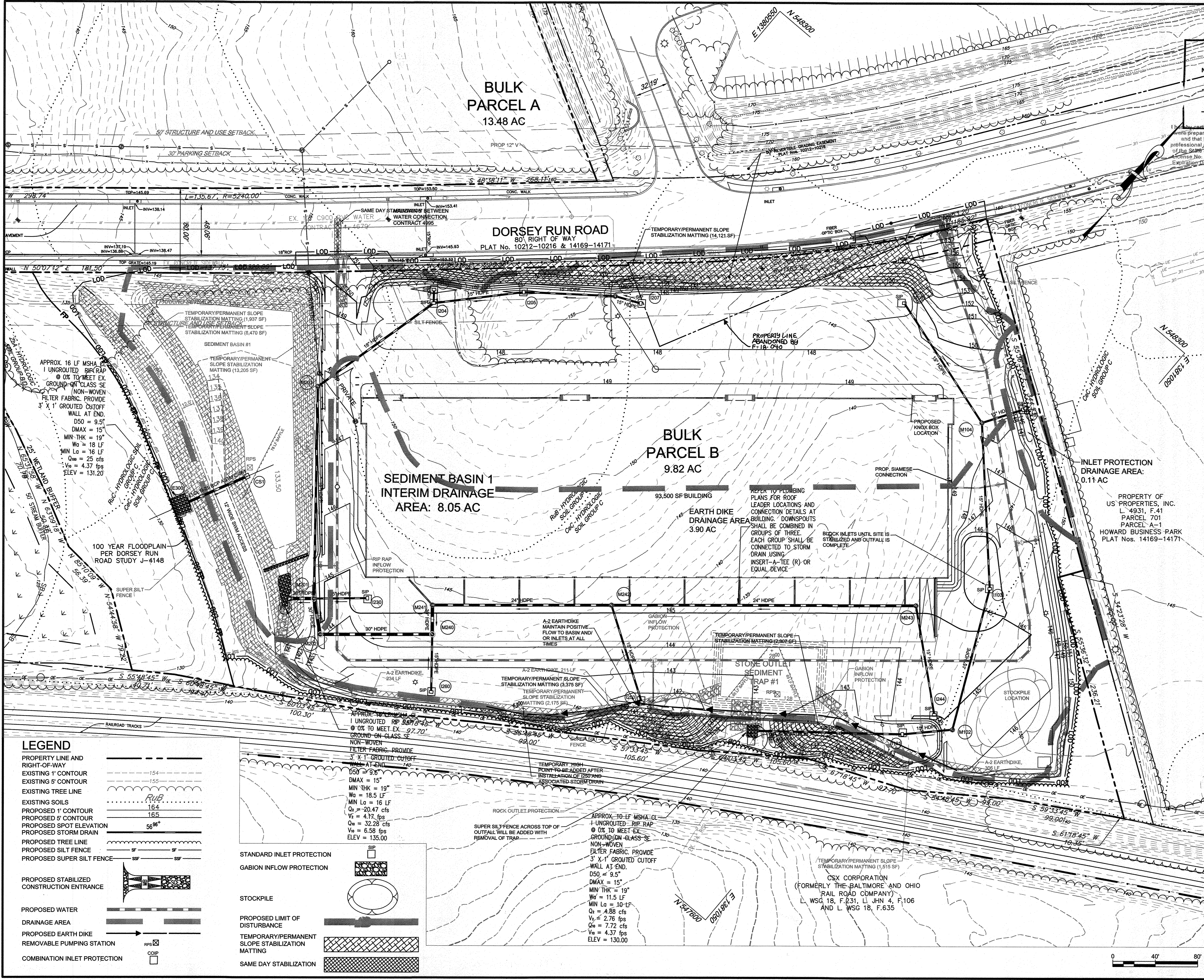
PROPERTY LINE AND RIGHT-OF-WAY	---
EXISTING 1' CONTOUR	---154---
EXISTING 5' CONTOUR	---155---
EXISTING TREE LINE	---RUB---
EXISTING SOILS	---
PROPOSED 1' CONTOUR	---164---
PROPOSED 5' CONTOUR	---165---
PROPOSED SPOT ELEVATION	56.96'
PROPOSED STORM DRAIN	---
PROPOSED TREE LINE	---
PROPOSED SILT FENCE	---
PROPOSED SUPER SILT FENCE	---
PROPOSED STABILIZED CONSTRUCTION ENTRANCE	---
DRAINAGE AREA	---

PROPOSED EARTH DIKE	---
REMOVABLE PUMPING STATION	---
COMBINATION INLET PROTECTION	---
STANDARD INLET PROTECTION	---
GABION INFLOW PROTECTION	---
STOCKPILE	---
15-25% SLOPES	---
>25% SLOPES	---
PROPOSED LIMIT OF DISTURBANCE	---
TEMPORARY/PERMANENT SLOPE STABILIZATION MATTING	---
HIGHLY ERODIBLE SOILS	---

PROPOSED EARTH DIKE	---
REMOVABLE PUMPING STATION	---
COMBINATION INLET PROTECTION	---
STANDARD INLET PROTECTION	---
GABION INFLOW PROTECTION	---
STOCKPILE	---
15-25% SLOPES	---
>25% SLOPES	---
PROPOSED LIMIT OF DISTURBANCE	---
TEMPORARY/PERMANENT SLOPE STABILIZATION MATTING	---
HIGHLY ERODIBLE SOILS	---

CSX CORPORATION
 (FORMERLY THE BALTIMORE AND OHIO RAIL ROAD COMPANY)
 L. WSG 18, F.231, L.J. UN 4, F.106
 AND L. WSG 18, F.635





AS-BUILT CERTIFICATION
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.
 PRINTED NAME: *James A. Rupp* 21774
 SIGNATURE: *[Signature]* MD. P.E. NO.
 DATE: 11/12/20

ENGINEER'S CERTIFICATE
 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. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 2/21/18

DEVELOPER'S CERTIFICATE
 I HAVE HEREBY CERTIFIED 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 APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I SHALL ENGAGE A MARYLAND 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 CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.
 SIGNATURE OF DEVELOPER: *[Signature]* DATE: 2/12/18

THIS PLAN IS APPROVED FOR SMALL POND CONSTRUCTION AND SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SOIL CONSERVATION DISTRICT DATE: 3/18/18

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* DATE: 3-19-18
 CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* DATE: 3-28-18
 DIRECTOR *[Signature]* DATE: 3-29-18

DATE	NO.	REVISION	BY
1/25/18	1	ADDITION OF ADJACENT PARCEL, EXPANSION OF PARKING LOT, SWM & GRADING REVISIONS	ALC

DEVELOPER: DCT INDUSTRIAL
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

OWNER: DCT MEARS LLC
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

TITLE: GRADING AND SEDIMENT CONTROL PLAN - PHASE II

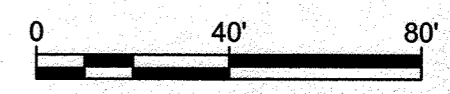
Pennoni Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

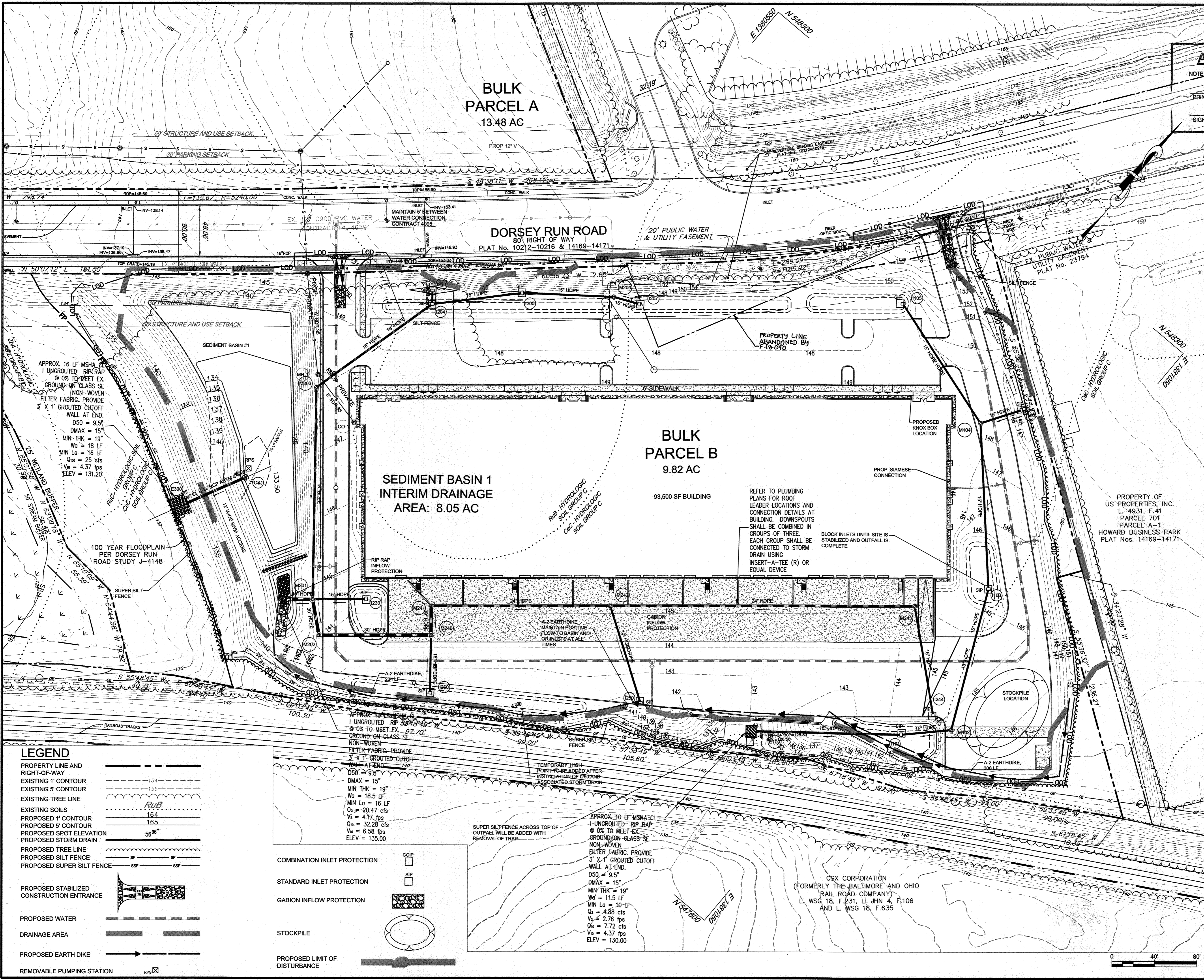
DESIGNED BY: PJS
DRAWN BY: AGS/JSN/NTD
PROJECT NO.: DCT11601
DATE: JANUARY 25, 2018
SCALE: 1" = 40'
DRAWING NO.: 6 OF 36

LEGEND

PROPERTY LINE AND RIGHT-OF-WAY	---
EXISTING 1' CONTOUR	-----
EXISTING 5' CONTOUR	-----
EXISTING TREE LINE	~~~~~
EXISTING SOILS
PROPOSED 1' CONTOUR	-----
PROPOSED 5' CONTOUR	-----
PROPOSED SPOT ELEVATION	56.96'
PROPOSED STORM DRAIN	---
PROPOSED TREE LINE	~~~~~
PROPOSED SILT FENCE	---
PROPOSED SUPER SILT FENCE	---
PROPOSED STABILIZED CONSTRUCTION ENTRANCE	---
PROPOSED WATER DRAINAGE AREA	---
PROPOSED EARTH DIKE	---
REMOVABLE PUMPING STATION	---
COMBINATION INLET PROTECTION	---

STANDARD INLET PROTECTION	---
GABION INFLOW PROTECTION	---
STOCKPILE	---
PROPOSED LIMIT OF DISTURBANCE	---
TEMPORARY/PERMANENT SLOPE STABILIZATION MATTING	---
SAME DAY STABILIZATION	---





AS-BUILT CERTIFICATION
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.
 PRINTED NAME: *[Signature]* 21774
 MD. P.E. NO. 11/21/18
 SIGNATURE: *[Signature]* DATE: 11/14/21
 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 MD. License No. 21774. Expiration Date: 11/14/21

ENGINEER'S CERTIFICATE
 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. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 2/13/18

DEVELOPER'S CERTIFICATE
 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 APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I SHALL ENGAGE A MARYLAND 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 CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.
 SIGNATURE OF DEVELOPER: *[Signature]* DATE: 2/13/18

THIS PLAN IS APPROVED FOR SMALL POND CONSTRUCTION AND SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SOIL CONSERVATION DISTRICT: *[Signature]* DATE: 3/16/18

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 3-19-18
 CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 3-28-18
 DIRECTOR: *[Signature]* DATE: 3-29-18

DATE	NO.	REVISION	BY
1/25/18	1	ADDITION OF ADJACENT PARCEL, EXPANSION OF PARKING LOT, SWM & GRADING REVISIONS	ALC

DEVELOPER: DCT INDUSTRIAL
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

OWNER: DCT MEARS LLC
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
 GRID NO. 11 1st ELECTION DISTRICT
 7200 DORSEY RUN ROAD
 ELKRIDGE, MARYLAND 21075
 HOWARD COUNTY, MARYLAND

TITLE: GRADING AND SEDIMENT CONTROL PLAN - PHASE III

SEAL: PENNONI ASSOCIATES INC. ENGINEERS • SURVEYORS • PLANNERS LANDSCAPE ARCHITECTS
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282
 DESIGNED BY: PJS
 DRAWN BY: AGS/JSN/NTD
 PROJECT NO.: DCT11601
 DATE: JANUARY 25, 2018
 SCALE: 1" = 40'
 DRAWING NO. 7 OF 36

LEGEND

- PROPERTY LINE AND RIGHT-OF-WAY
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- EXISTING TREE LINE
- EXISTING SOILS
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED STORM DRAIN
- PROPOSED TREE LINE
- PROPOSED SILT FENCE
- PROPOSED SUPER SILT FENCE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED WATER
- DRAINAGE AREA
- PROPOSED EARTH DIKE
- REMOVABLE PUMPING STATION

- COMBINATION INLET PROTECTION
- STANDARD INLET PROTECTION
- GABION INFLOW PROTECTION
- STOCKPILE
- PROPOSED LIMIT OF DISTURBANCE

APPROX. 10 LF MSHA CL-1 UNGROUTED RIP-RAP @ 0% TO MEET EX-GROUND/ON-CLASS SE NON-WOVEN FILTER FABRIC. PROVIDE 3' X 1' GROUDED CUTOFF WALL AT END.
 D50 = 9.5"
 DMAX = 15"
 MIN THK = 19"
 Wa = 11.5 LF
 MIN La = 10 LF
 Q1 = 4.88 cfs
 Q2 = 2.76 cfs
 Va = 7.72 cfs
 Vb = 4.37 fps
 ELEV = 130.00

APPROX. 16 LF MSHA CL-1 UNGROUTED RIP-RAP @ 0% TO MEET EX-GROUND/ON-CLASS SE NON-WOVEN FILTER FABRIC. PROVIDE 3' X 1' GROUDED CUTOFF WALL AT END.
 D50 = 9.5"
 DMAX = 15"
 MIN THK = 19"
 Wa = 18 LF
 MIN La = 16 LF
 Q1 = 20.47 cfs
 Q2 = 4.17 fps
 Q3 = 32.28 cfs
 Va = 6.58 fps
 ELEV = 135.00

APPROX. 10 LF MSHA CL-1 UNGROUTED RIP-RAP @ 0% TO MEET EX-GROUND/ON-CLASS SE NON-WOVEN FILTER FABRIC. PROVIDE 3' X 1' GROUDED CUTOFF WALL AT END.
 D50 = 9.5"
 DMAX = 15"
 MIN THK = 19"
 Wa = 11.5 LF
 MIN La = 10 LF
 Q1 = 4.88 cfs
 Q2 = 2.76 cfs
 Va = 7.72 cfs
 Vb = 4.37 fps
 ELEV = 130.00

APPROX. 10 LF MSHA CL-1 UNGROUTED RIP-RAP @ 0% TO MEET EX-GROUND/ON-CLASS SE NON-WOVEN FILTER FABRIC. PROVIDE 3' X 1' GROUDED CUTOFF WALL AT END.
 D50 = 9.5"
 DMAX = 15"
 MIN THK = 19"
 Wa = 11.5 LF
 MIN La = 10 LF
 Q1 = 4.88 cfs
 Q2 = 2.76 cfs
 Va = 7.72 cfs
 Vb = 4.37 fps
 ELEV = 130.00

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 LOOSENEE, 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 LOVERGRASS 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.

3. SOIL PREPARATION MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENEE TO A DEPTH OF 3 TO 5 INCHES.
4. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.

5. 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 FRAGILE. 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 2:1 OR FLATTER SLOPES WHERE:
 - a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

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 CONDSERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2 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. UNFORMALLY 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 #10 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-4-3 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 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 DISPERSION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION
 - a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
 - b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 - c. 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.
 - d. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

3. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
4. 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; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.
5. 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 BURNED OR HYDRATED LIME WHEN HYDROSEEDING.
6. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
7. 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, MOLTY, 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.
- c. 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.
- d. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
- e. 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.
- f. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
- g. 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.

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 TACK II, TERRA TACK AIR 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 HARDNESS 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 PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

Hardness Zone (From Figure B.3)	Seed Mixture (From Table B.1)	Fertilizer Rate (10-20-20)	Lime Rate
6B			

Hardness Zone (From Figure B.3): 6B

Seed Mixture (From Table B.1):

No.	Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)	Lime Rate
8	TALL FESCUE	100	MAR 1-MAY 15; AUG 15-OCT 15*	1 1/2"-2"	45 lbs/acre (10-20-20)	2 tons/acre (90 lbs/1000 sq ft)
9	PEARL MILLET	20	MAR 1-MAY 15; AUG 15-OCT 15*	1 1/2"-2"	45 lbs/acre (10-20-20)	2 tons/acre (90 lbs/1000 sq ft)

* FOR MAY 1 TO AUGUST 14, PLANT WITH NUSSER CROP OF PEARL MILLET BASED ON ONE OF THE PERMANENT SEED MIX APPLICATION RATE.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

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 3/4 INCH, PLUS OR MINUS 1/4 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

- 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 HARDNESS 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 SHOULDER, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDFIRE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - 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 0 TO 5 PERCENT. SEEDING RATE: 1.5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLEND.
 - 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.

- 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:

1. GENERAL USE
 - a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS 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 SHOULDER, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDFIRE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - 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 0 TO 5 PERCENT. SEEDING RATE: 1.5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLEND.
 - 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.

B-4-6 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

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:

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 SOLE 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, AND APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE SITED TO INTERCEPT THE DISCHARGE.
7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 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.

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 HARDNESS 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 PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

Hardness Zone (From Figure B.3)	Seed Mixture (From Table B.1)	Fertilizer Rate (10-20-20)	Lime Rate
6B			

Hardness Zone (From Figure B.3): 6B

Seed Mixture (From Table B.1):

No.	Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)	Lime Rate
8	TALL FESCUE	100	MAR 1-MAY 15; AUG 15-OCT 15*	1 1/2"-2"	45 lbs/acre (10-20-20)	2 tons/acre (90 lbs/1000 sq ft)
9	PEARL MILLET	20	MAR 1-MAY 15; AUG 15-OCT 15*	1 1/2"-2"	45 lbs/acre (10-20-20)	2 tons/acre (90 lbs/1000 sq ft)

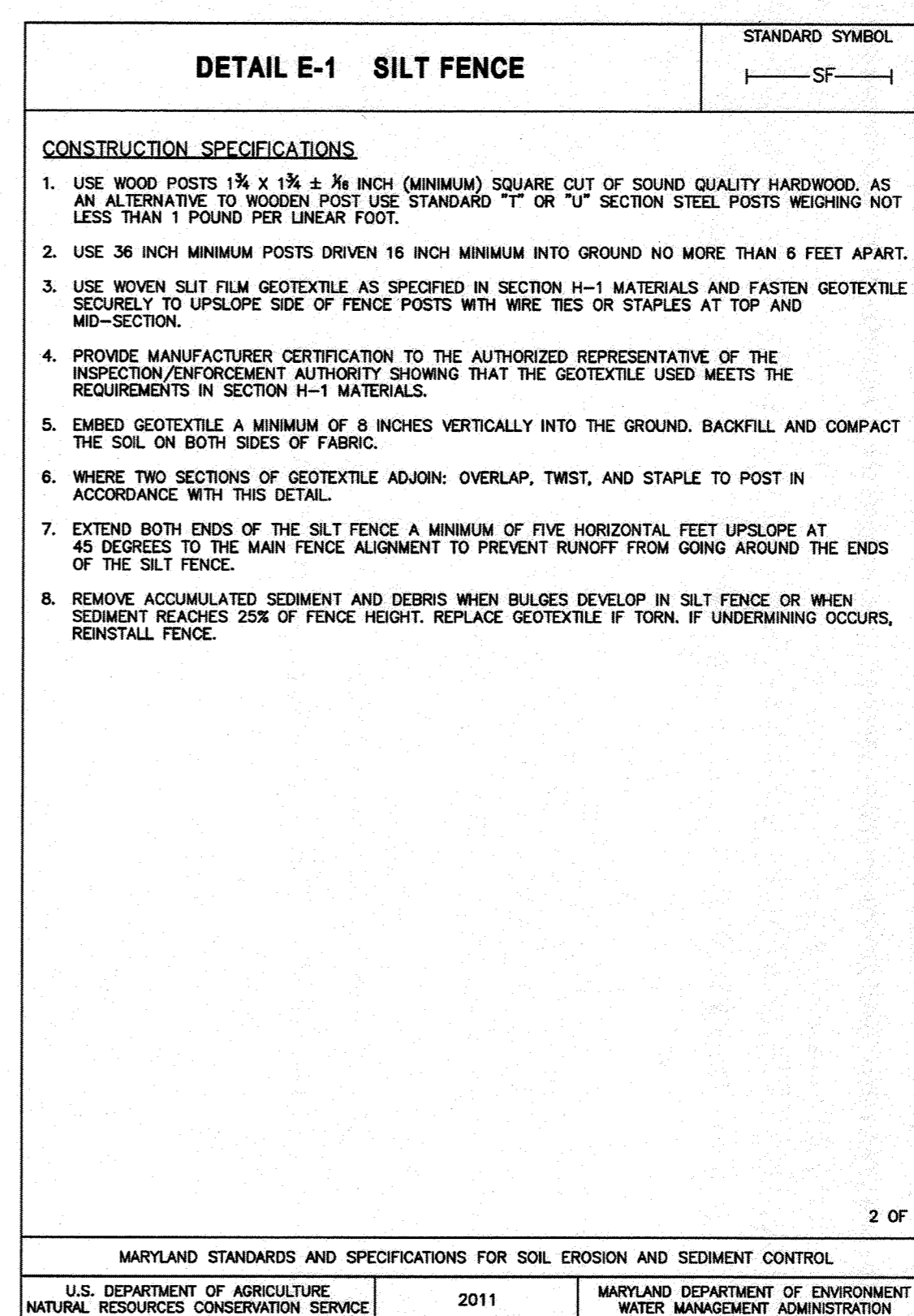
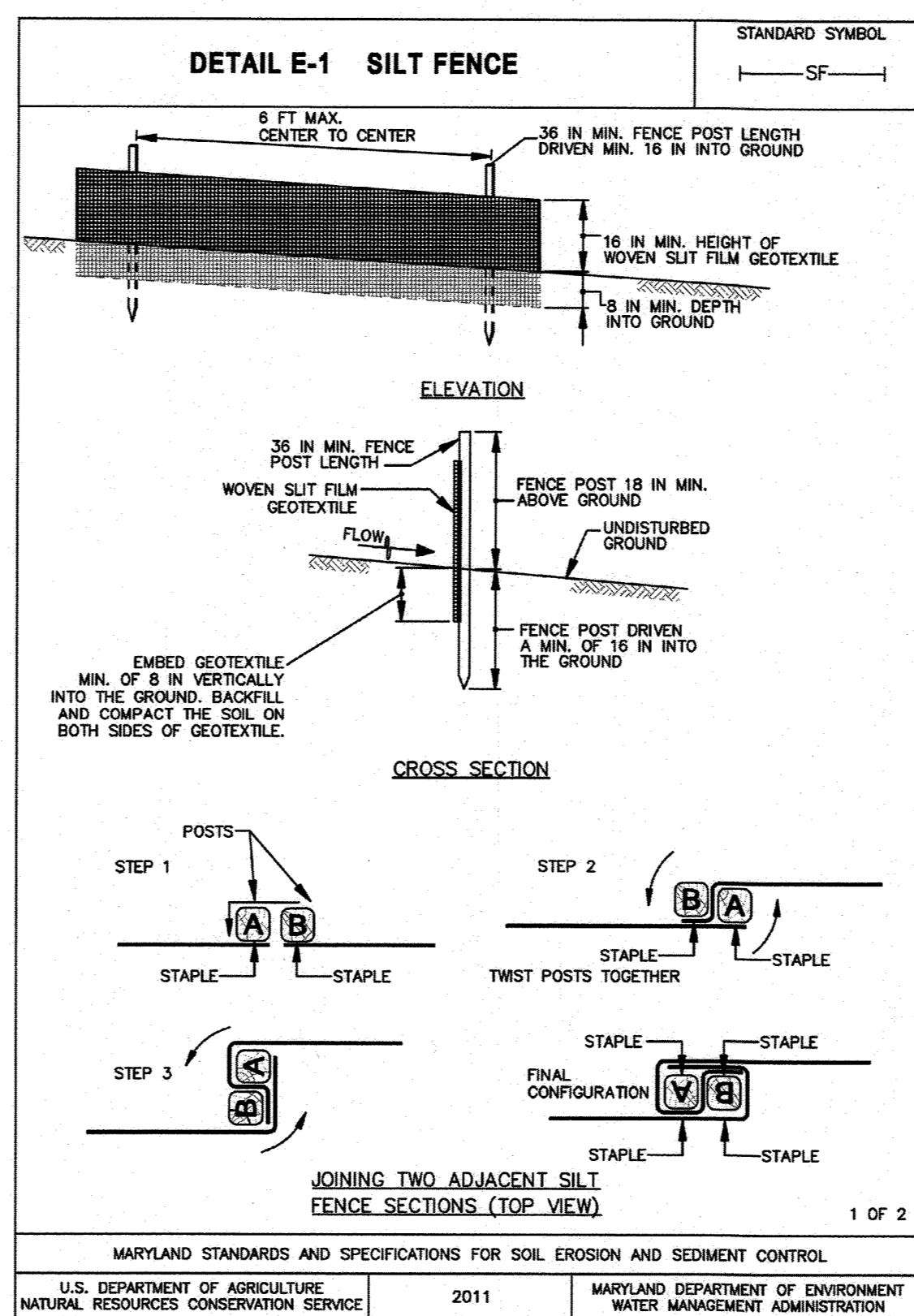
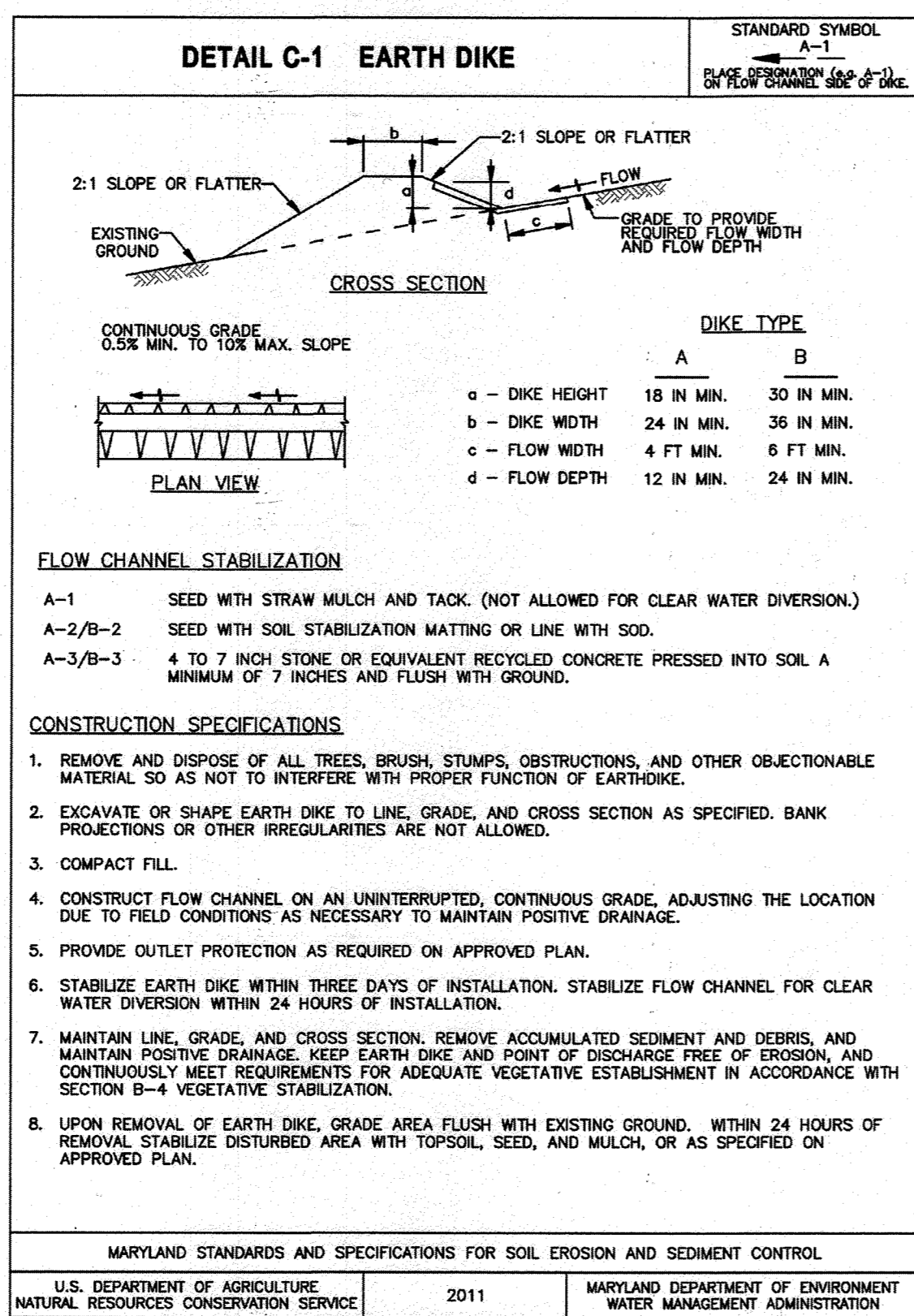
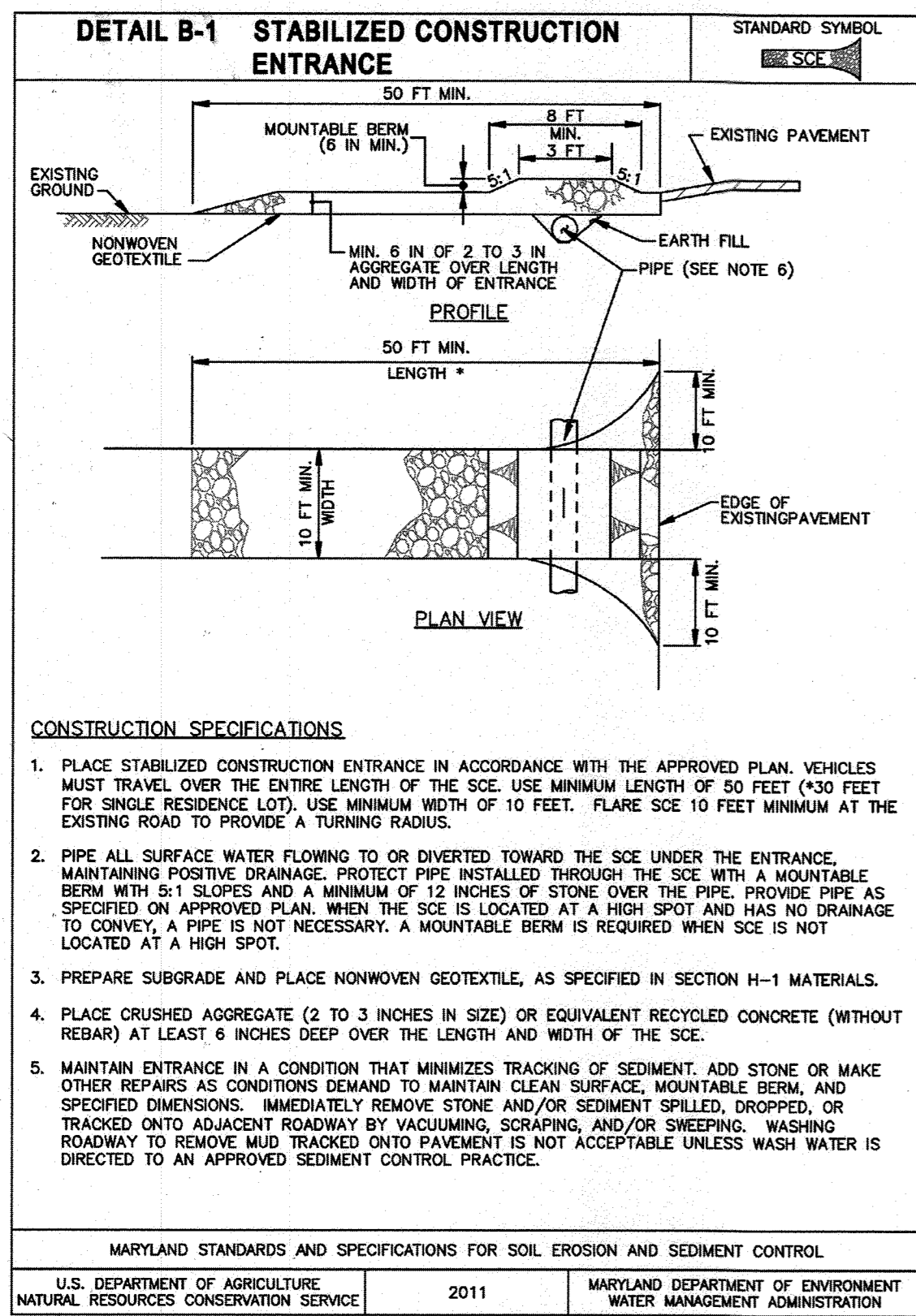
* FOR MAY 1 TO AUGUST 14, PLANT WITH NUSSER CROP OF PEARL MILLET BASED ON ONE OF THE PERMANENT SEED MIX APPLICATION RATE.

- 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 TRANSPORTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

ENGINEER'S CERTIFICATE

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. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

SIGNATURE OF ENGINEER: *Sharon L. Crut* DATE: *8/17/17*



AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

PRINTED NAME: James A. Rife
MD. P.E. NO.: 21724

SIGNATURE: [Signature]
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. 21724, Expiration Date: 11/12/21.

ENGINEER'S CERTIFICATE

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. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

SIGNATURE OF ENGINEER: [Signature]
DATE: 8/22/17

DEVELOPER'S CERTIFICATE

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 APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I SHALL ENGAGE A MARYLAND 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 CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

SIGNATURE OF DEVELOPER: [Signature]
DATE: 8/1/17

THIS PLAN IS APPROVED FOR SMALL POND CONSTRUCTION, AND SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT
DATE: 8/2/17

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature]
DATE: 9-8-17

CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature]
DATE: 9-21-17

DIRECTOR: [Signature]
DATE: 9-21-17

DEVELOPER: DCT INDUSTRIAL
12011 GULLFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

OWNER: DCT MEARS LLC
12011 GULLFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

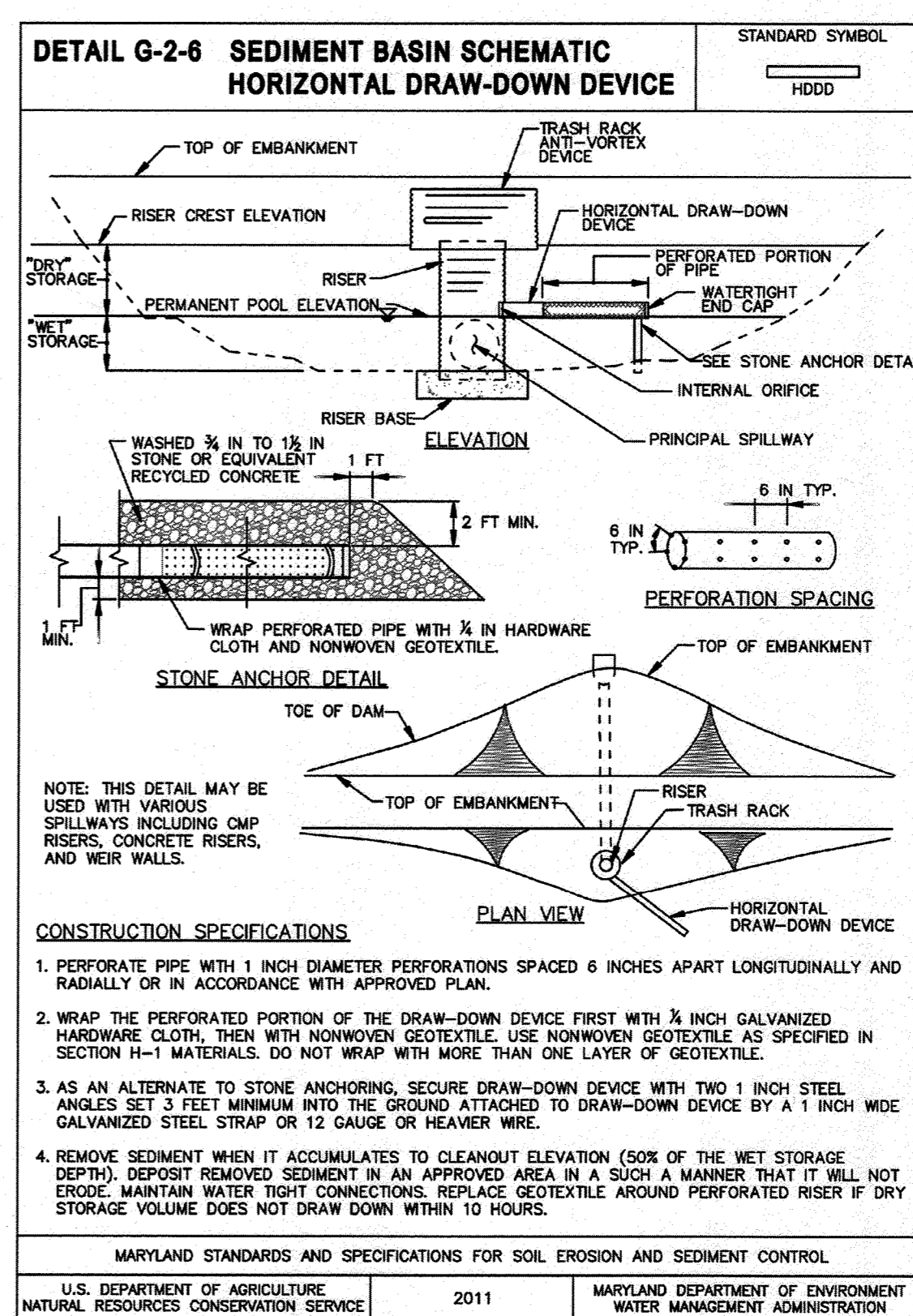
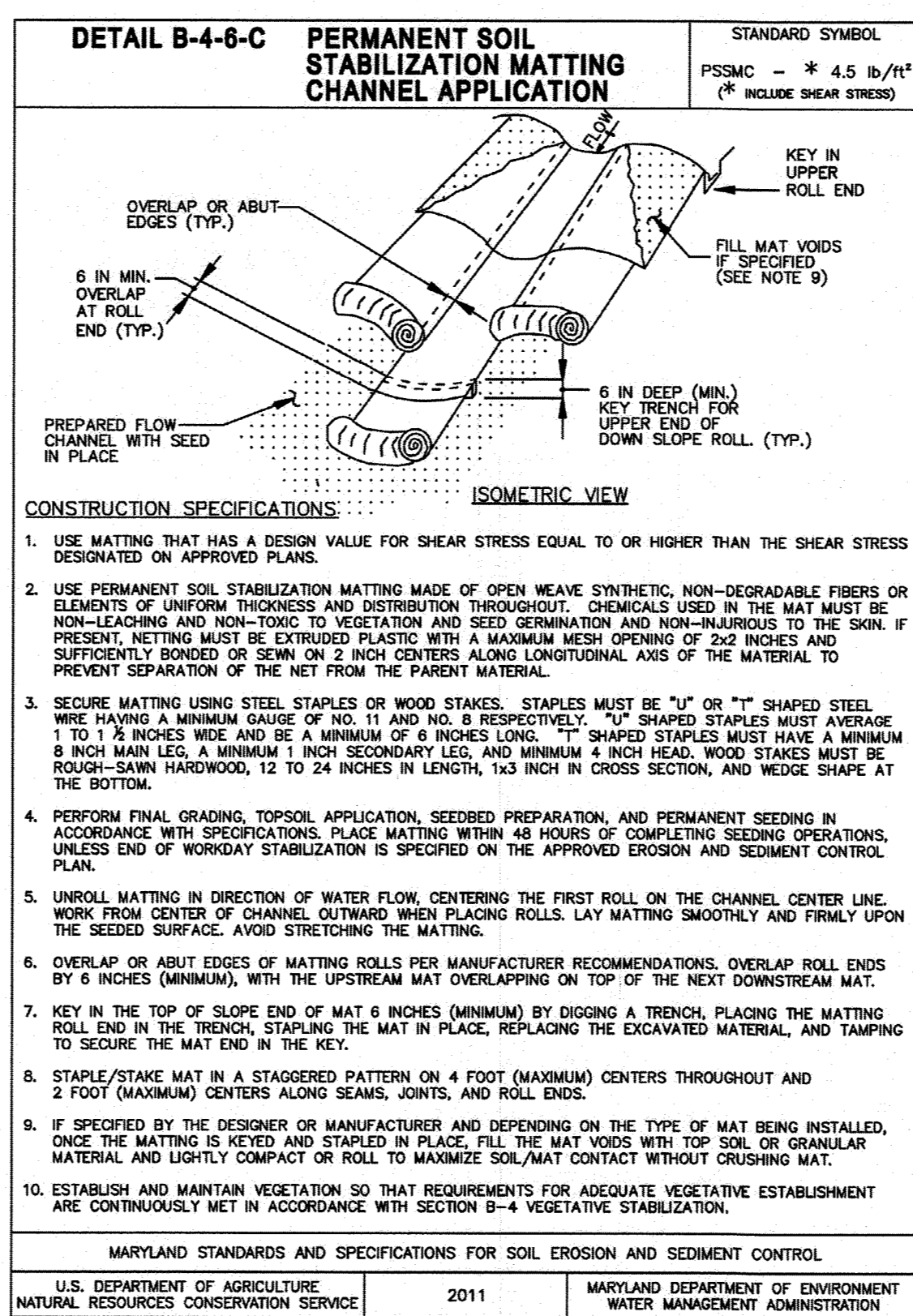
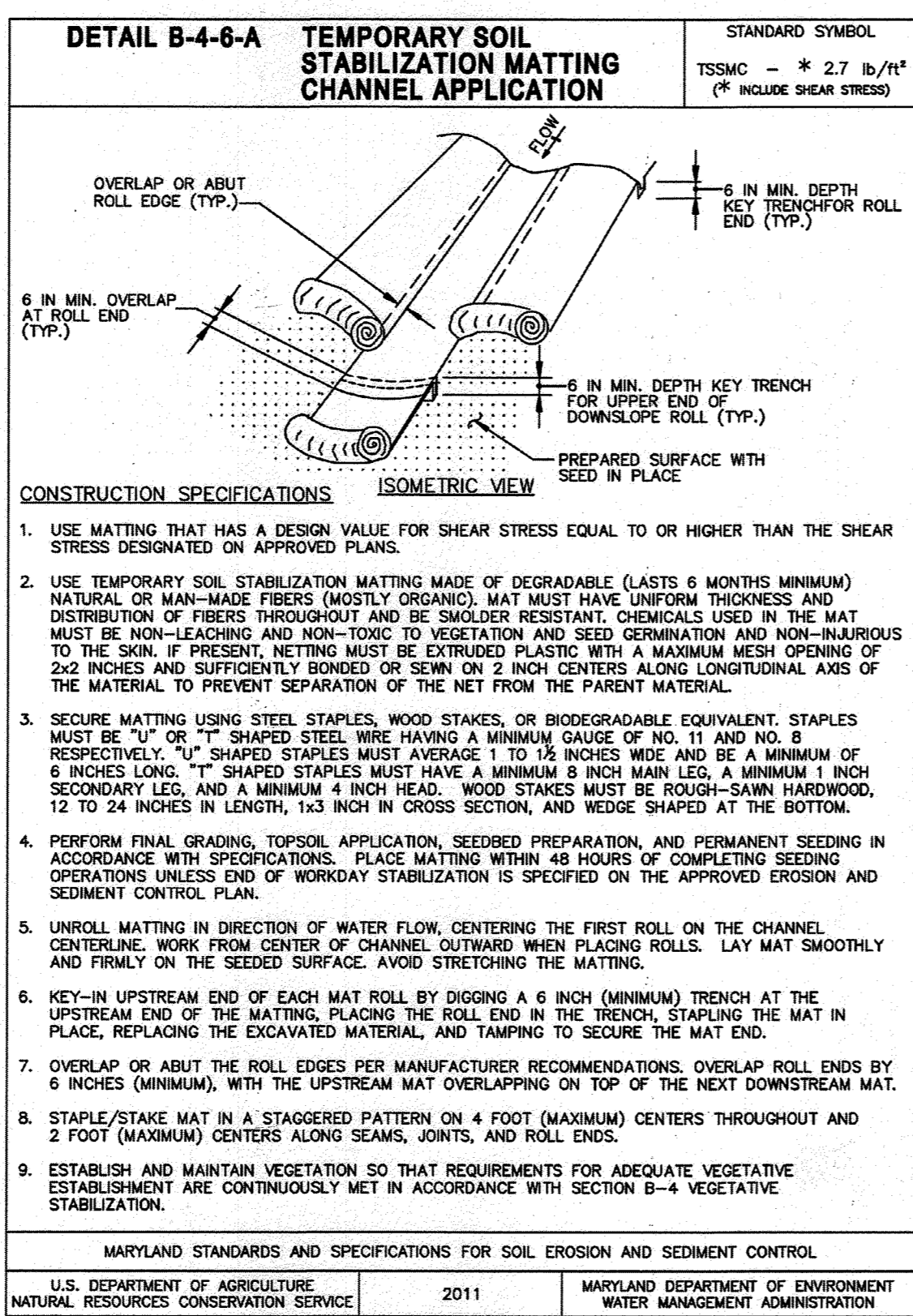
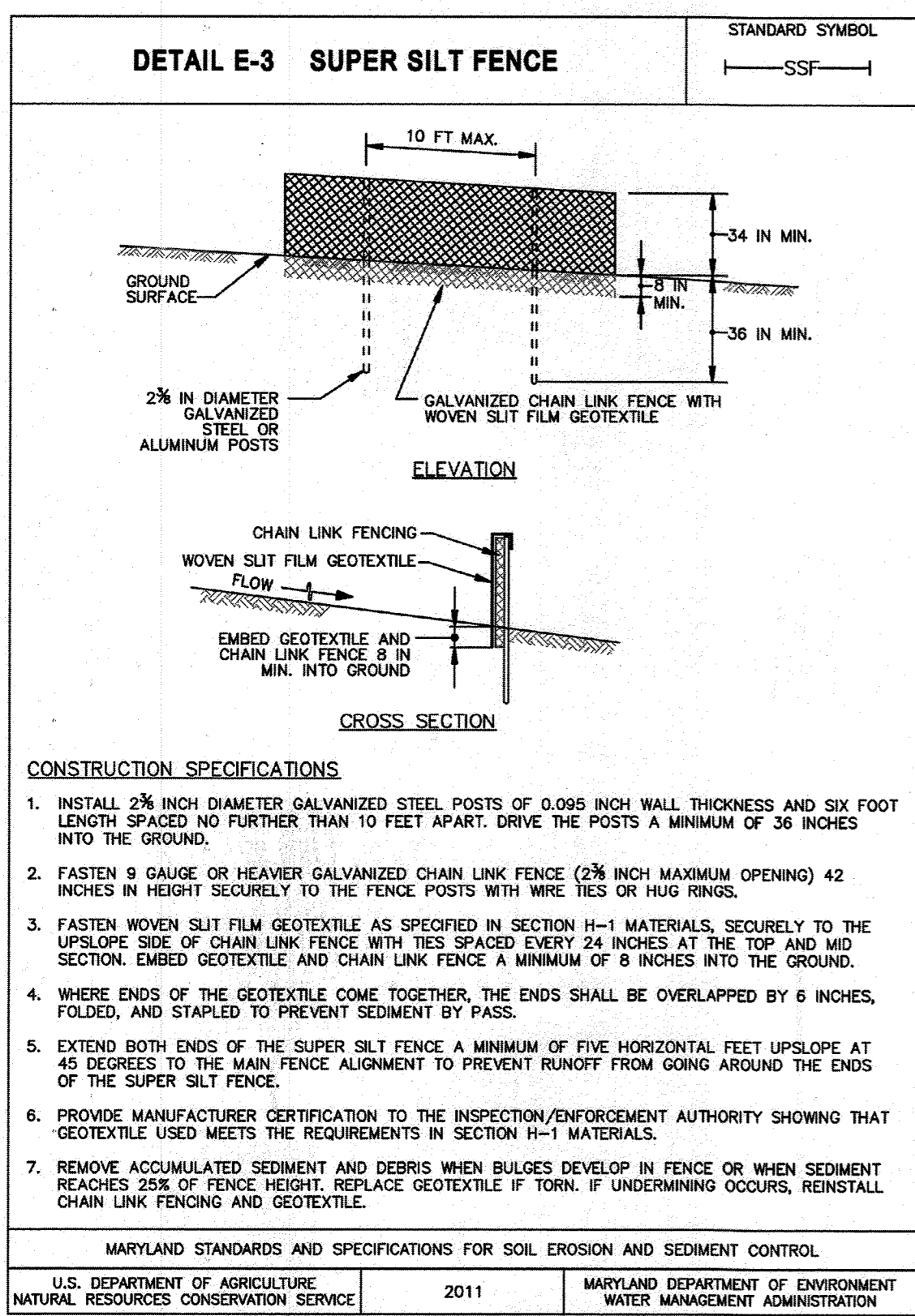
AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
GRID NO. 11 1st ELECTION DISTRICT
7200 DORSEY RUN ROAD
ELK RIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL DETAILS

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
DRAWN BY: AGS/JSN/NTD
PROJECT NO.: DCT1601
DATE: AUGUST 1, 2017
SCALE: AS SHOWN
DRAWING NO.: 10 OF 36



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

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

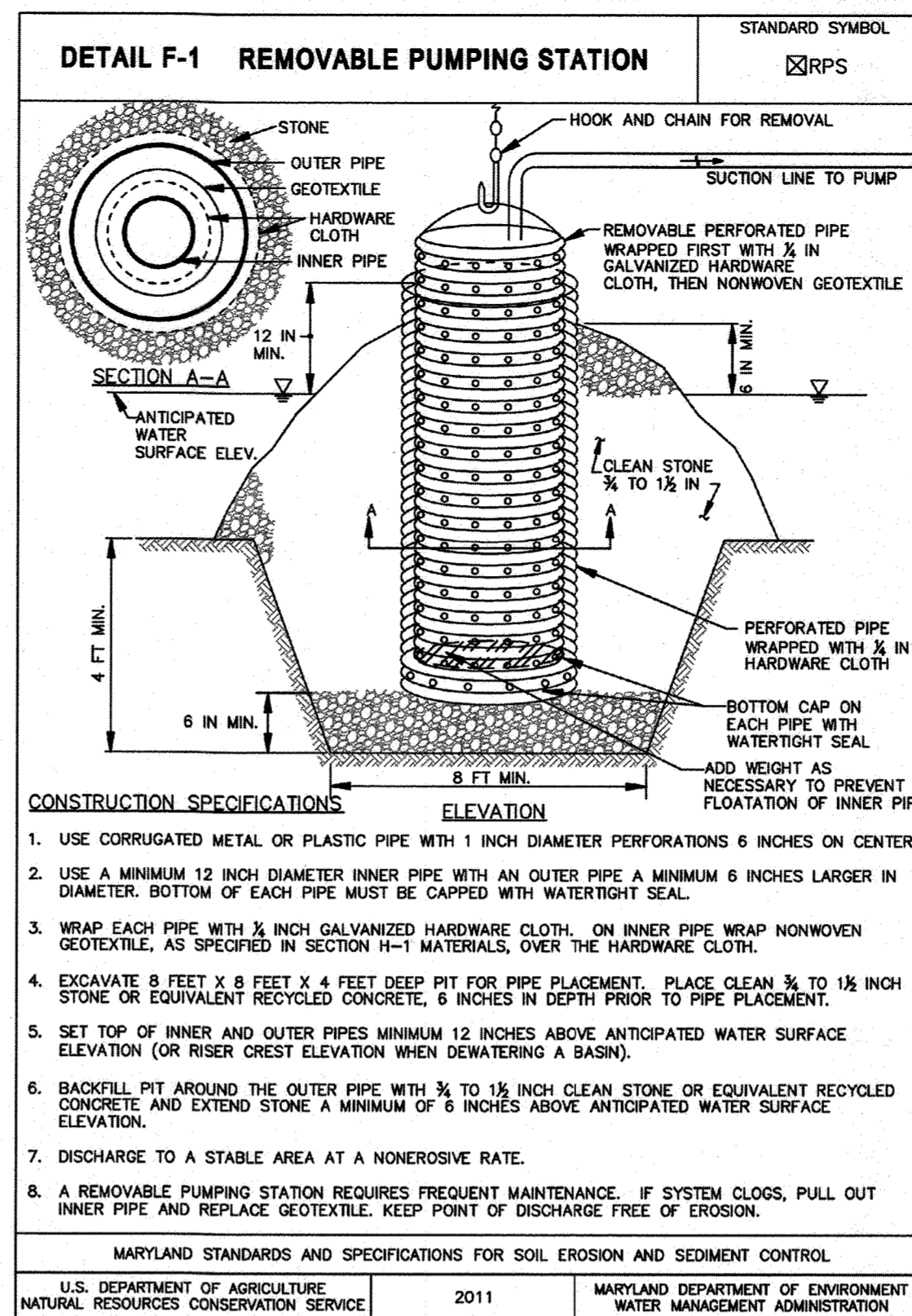
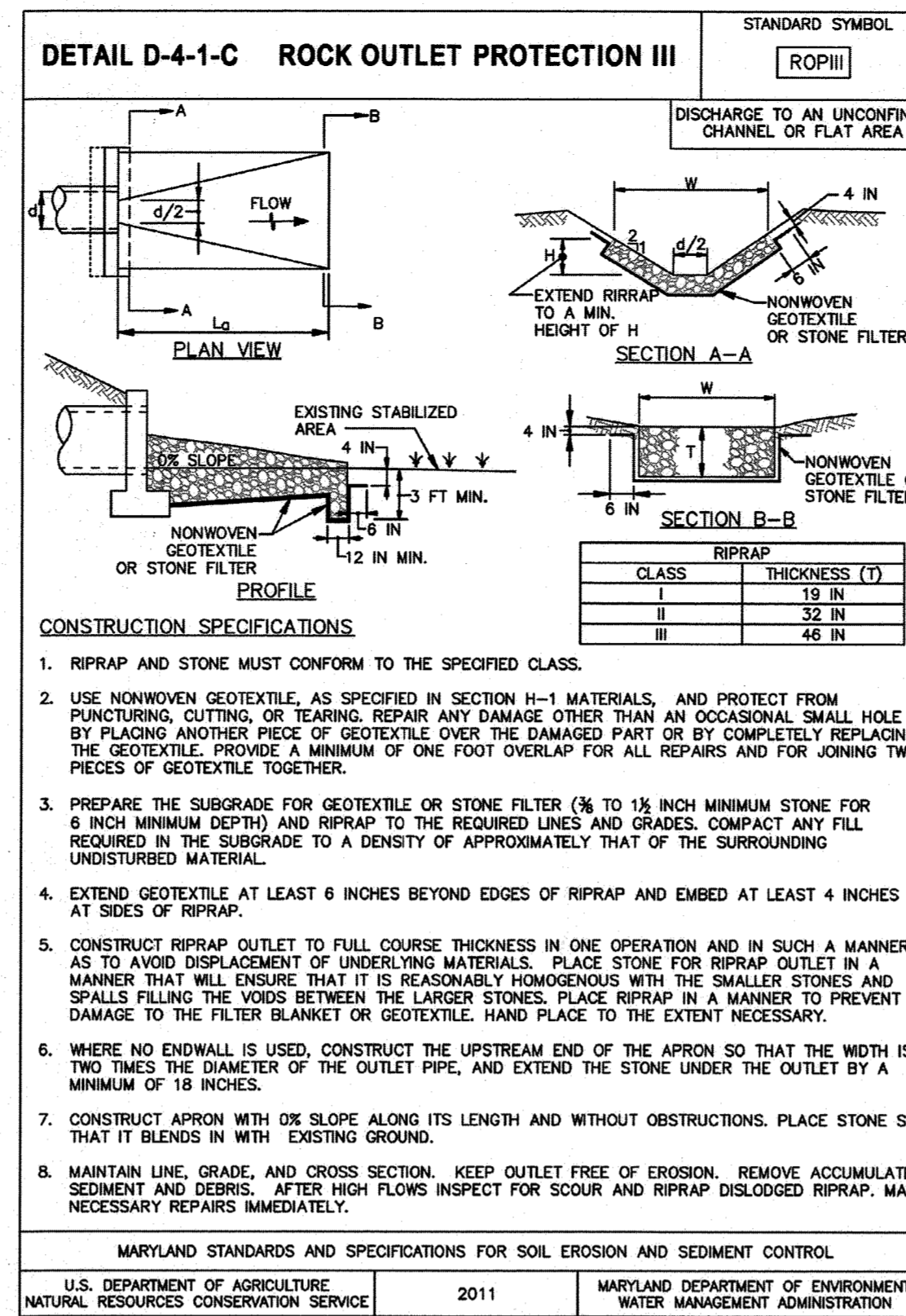
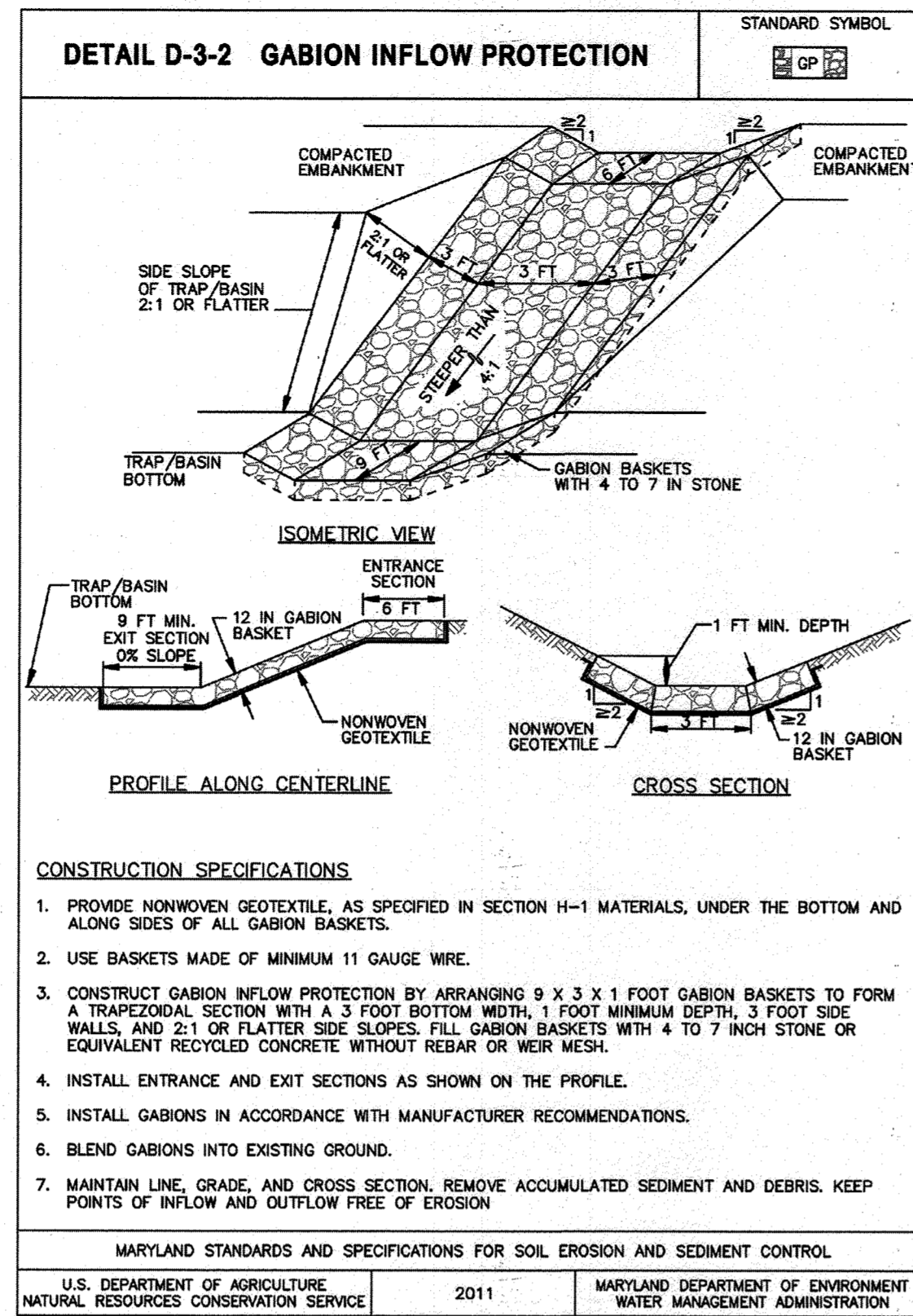
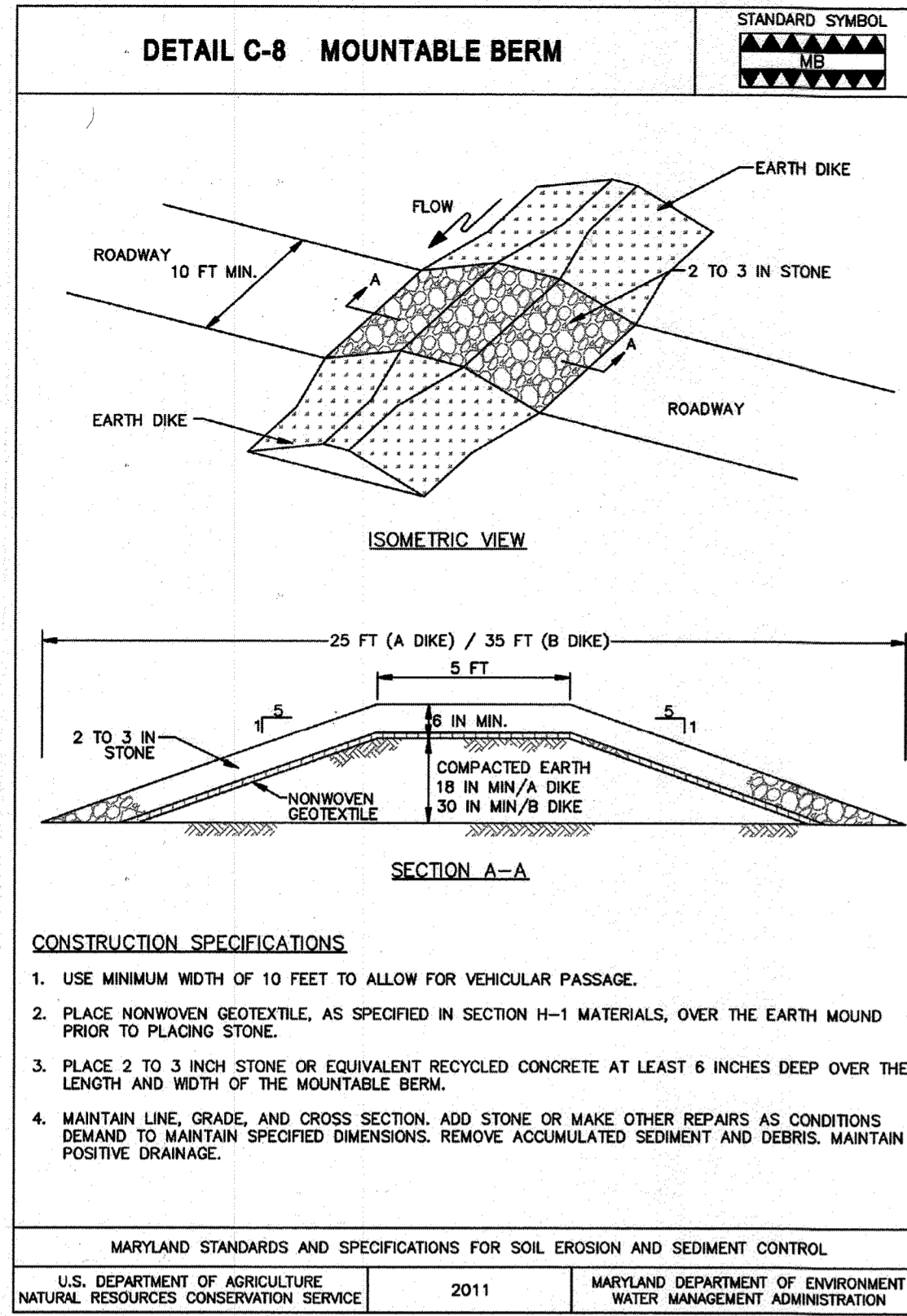
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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

SDP-17-037



AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

PRINTED NAME: James A. Ruff
 SIGNATURE: [Signature]
 DATE: 11/2/20

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. MD 21714

ENGINEER'S CERTIFICATE

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. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

SIGNATURE OF ENGINEER: [Signature]
 DATE: 8/21/17

DEVELOPER'S CERTIFICATE

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 APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I SHALL ENGAGE A MARYLAND 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 CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

SIGNATURE OF DEVELOPER: [Signature]
 DATE: 8/1/17

THIS PLAN IS APPROVED FOR SMALL POND CONSTRUCTION, AND SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT
 DATE: 8/21/17

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature]
 DATE: 9-8-17

CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature]
 DATE: 9-21-17

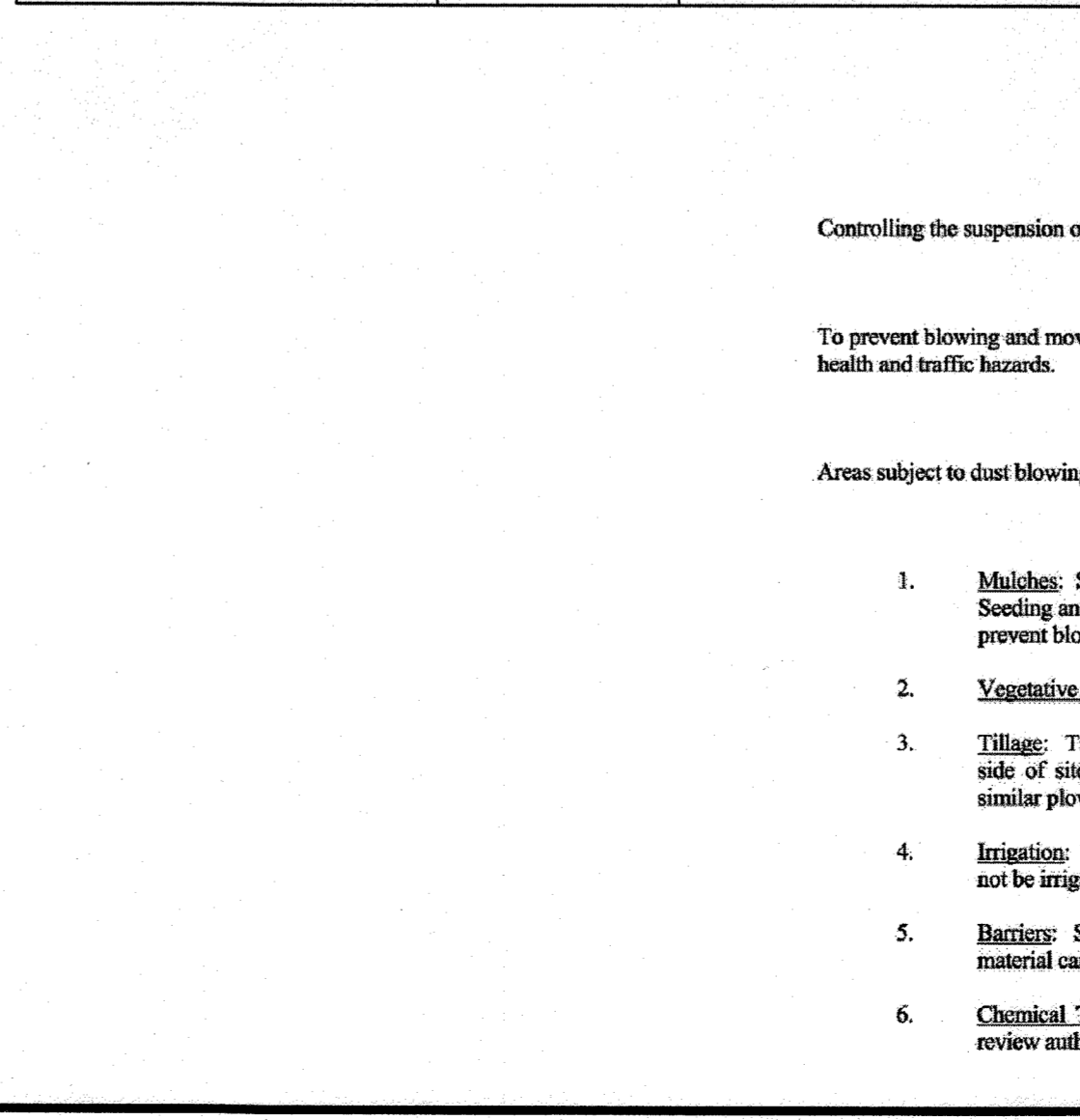
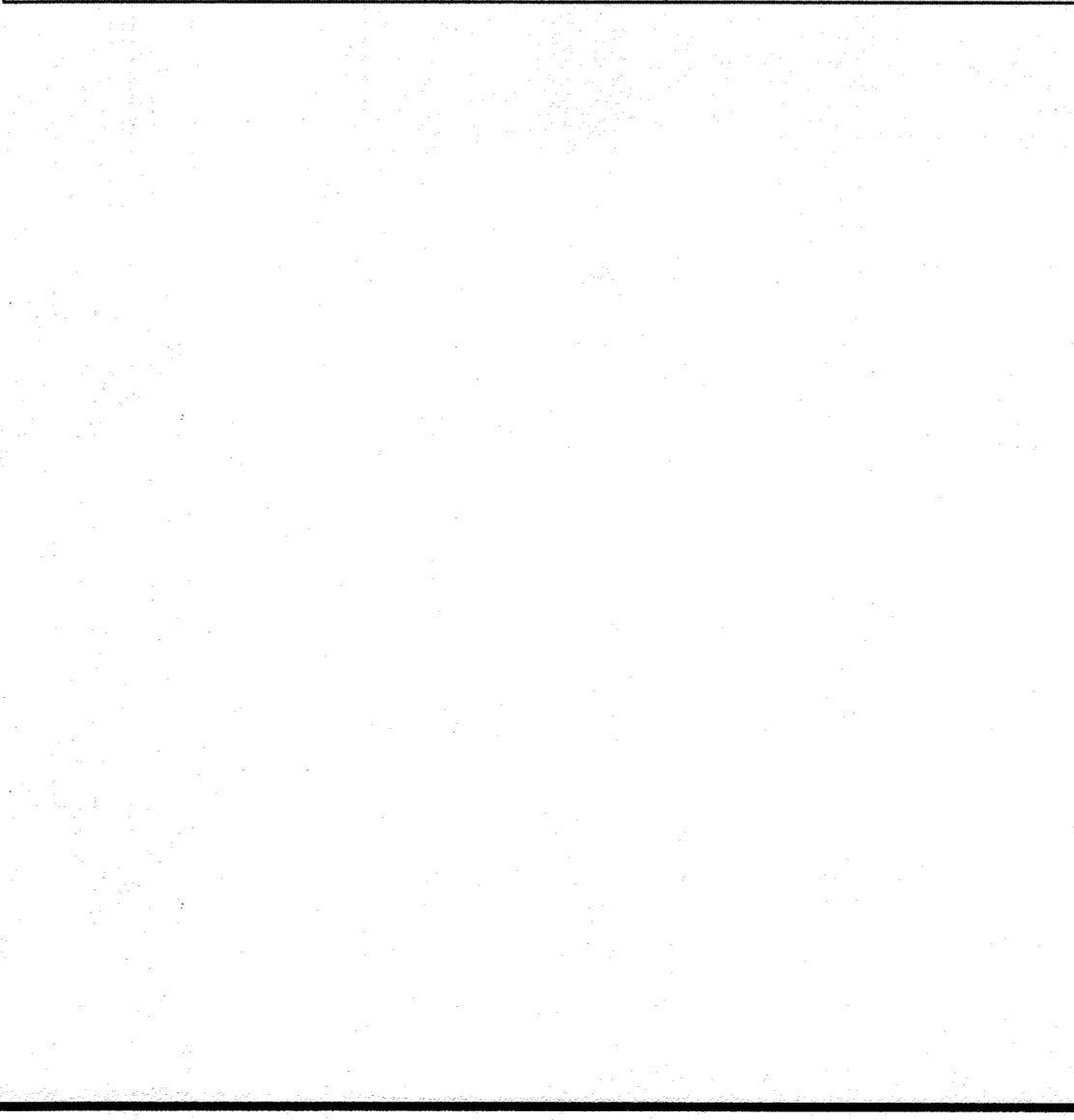
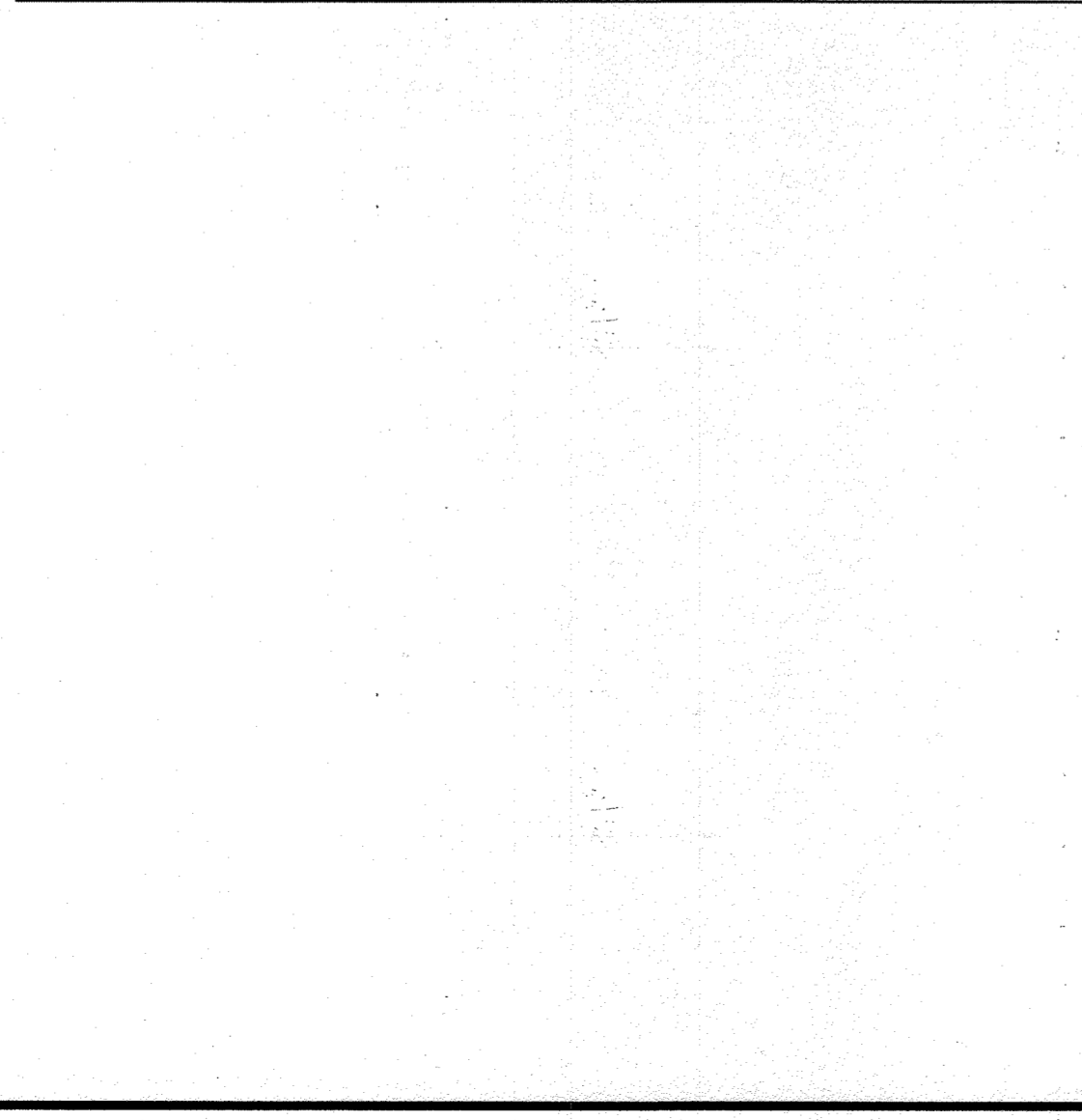
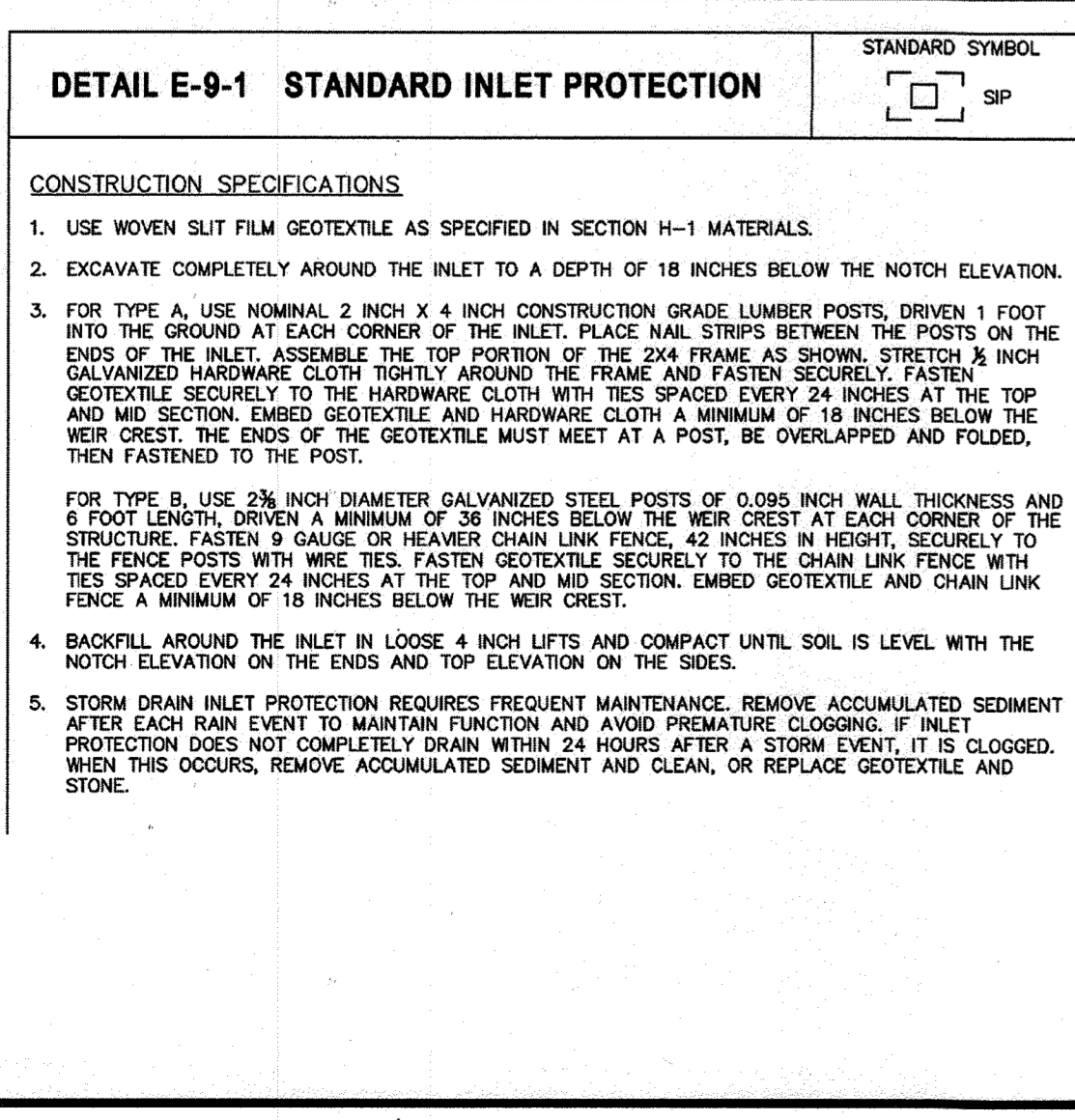
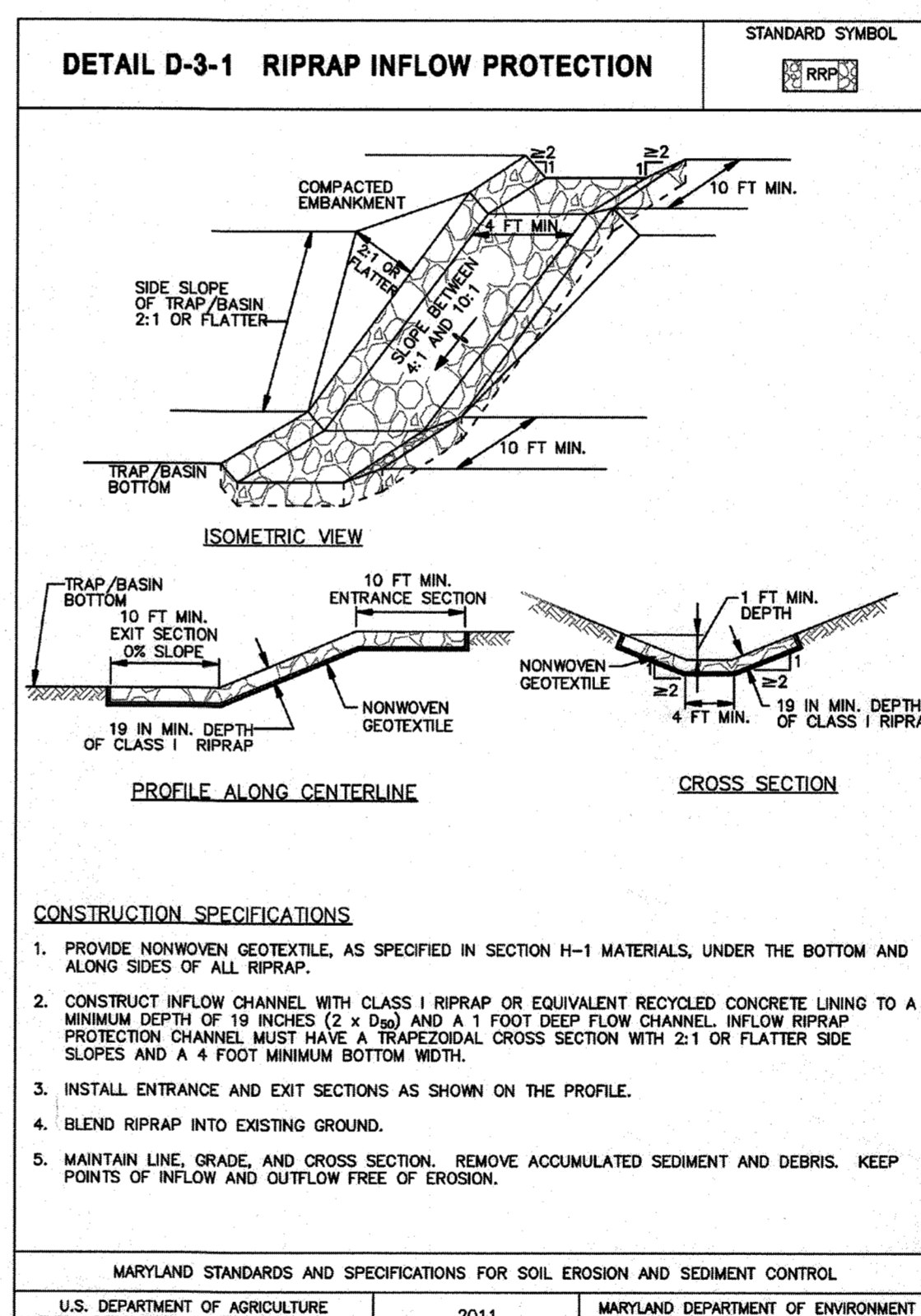
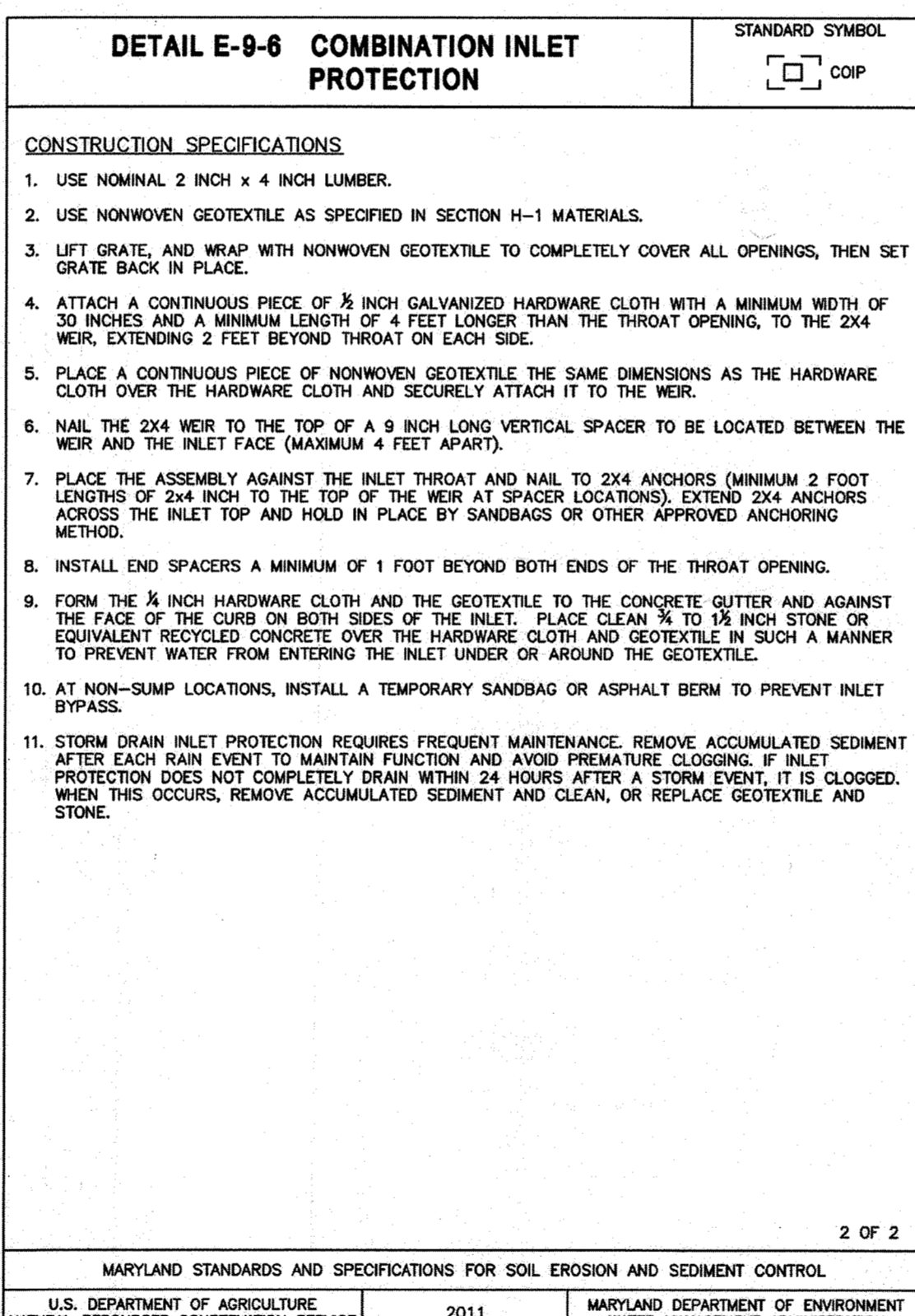
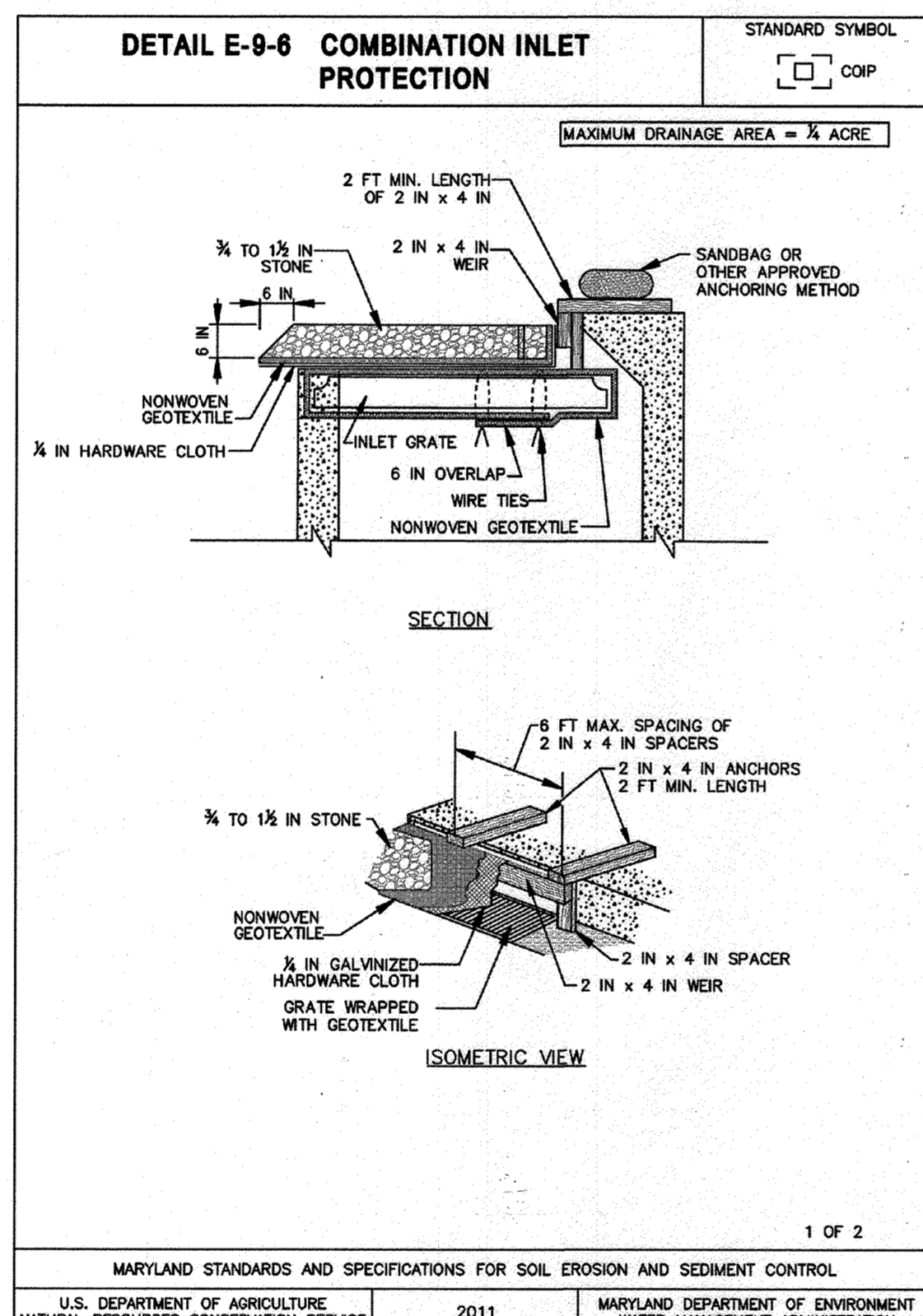
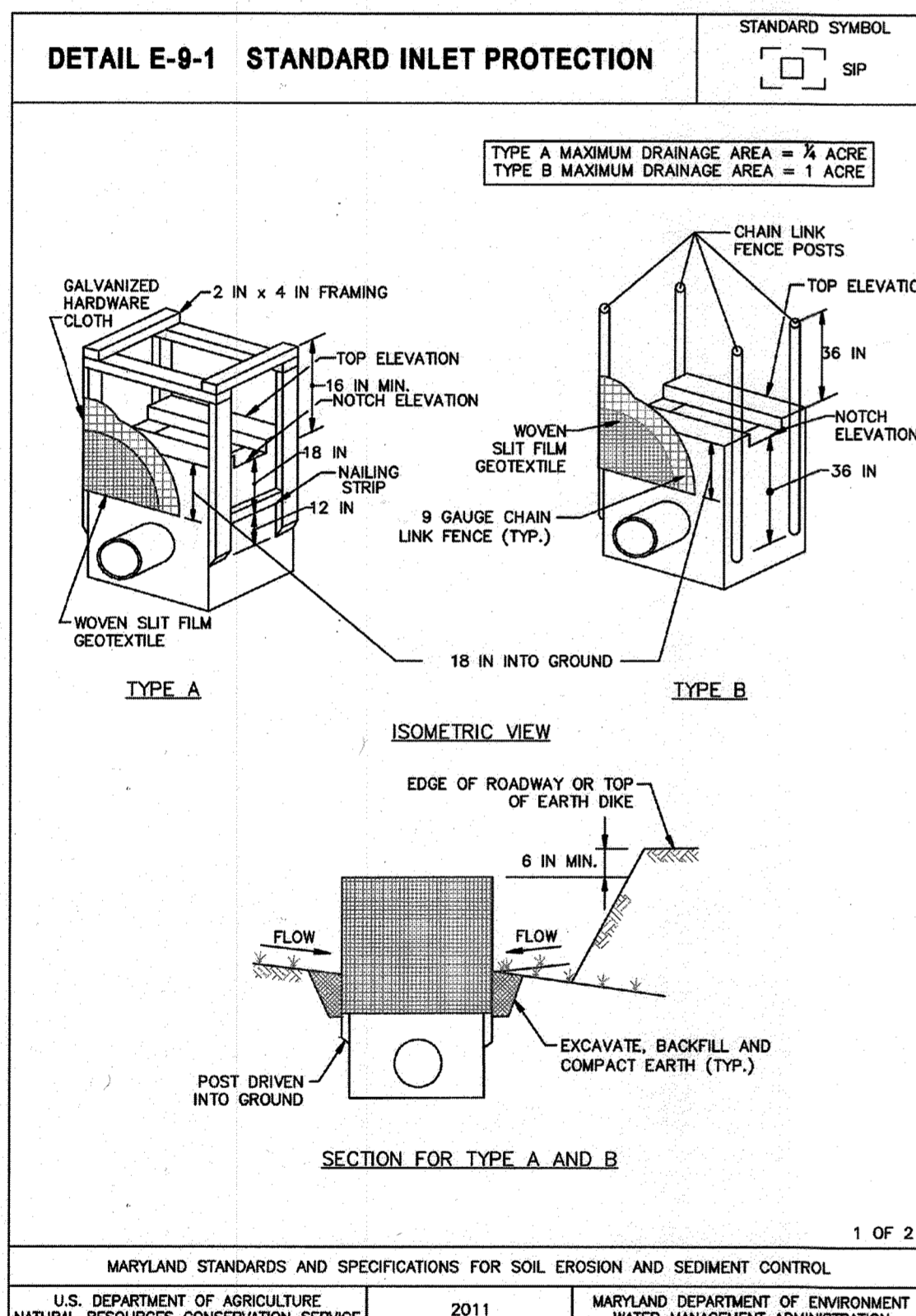
DIRECTOR: [Signature]
 DATE: 9-21-17

DATE	NO.	REVISION	BY

DEVELOPER: DCT INDUSTRIAL
 12011 GUILFORD ROAD SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

OWNER: DCT MEARS LLC
 12011 GUILFORD ROAD SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B



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.

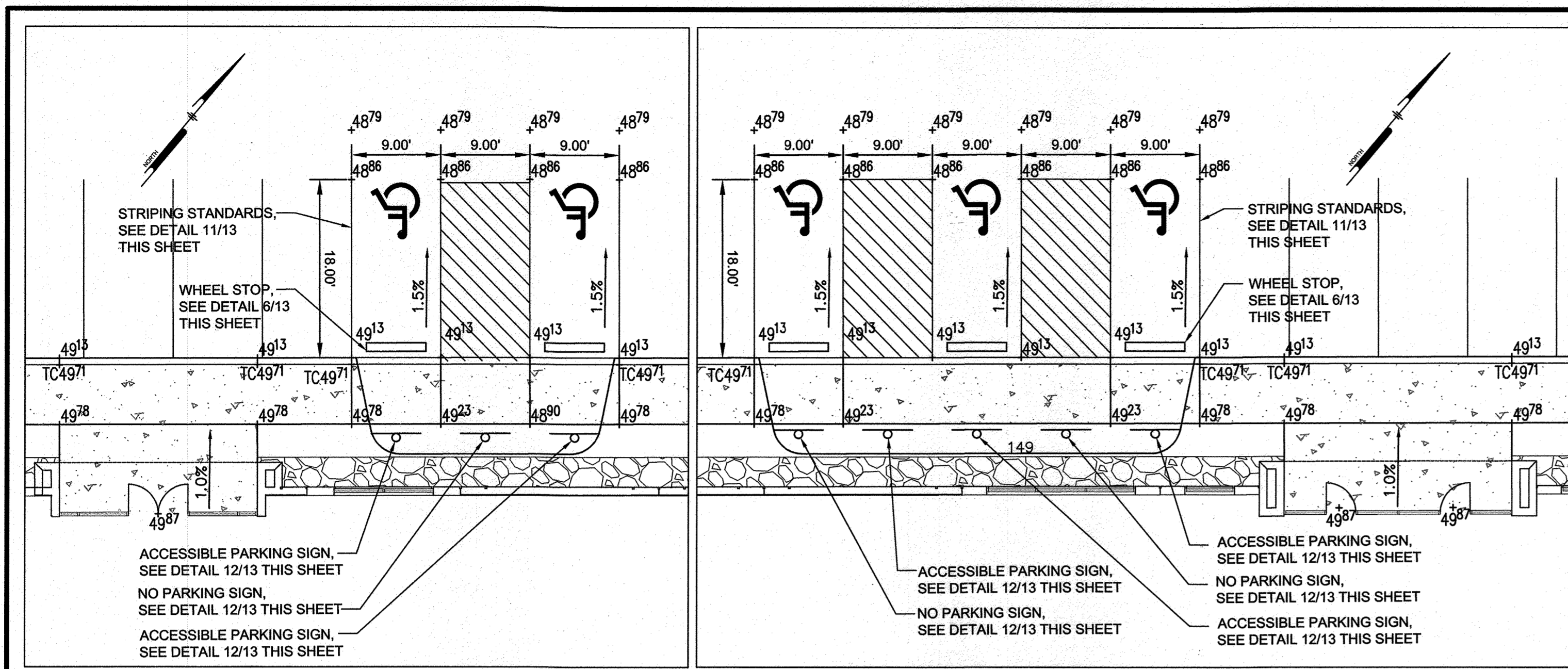
Specifications:

- 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.
- Vegetative Cover: See Section B-4-4 Temporary Stabilization.
- Tillage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.
- 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.
- Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.
- Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.

SEAL: [Professional Engineer Seal]

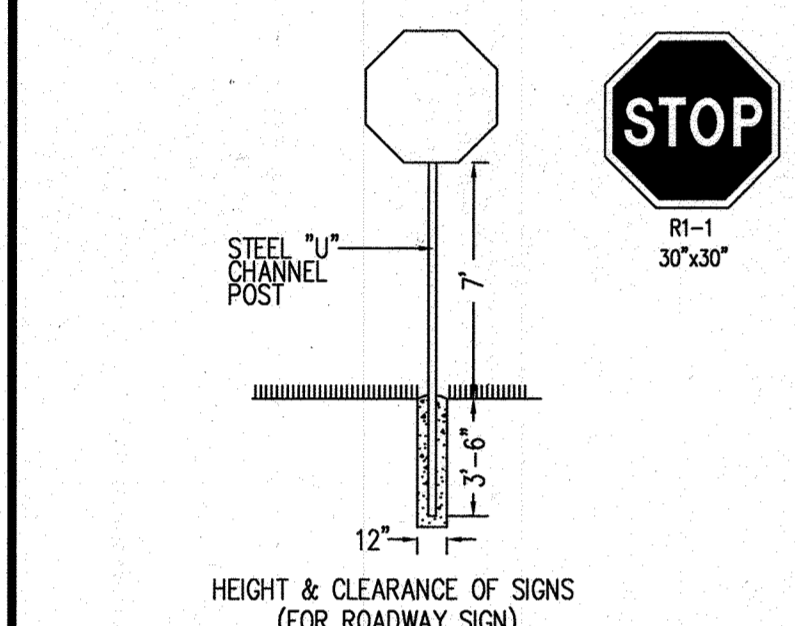
DESIGNED BY: PJS
 DRAWN BY: AGS/JSN/NTD
 PROJECT NO.: DCT11601
 DATE: AUGUST 1, 2017
 SCALE: AS SHOWN
 DRAWING NO.: 11 OF 36

SDP-17-037

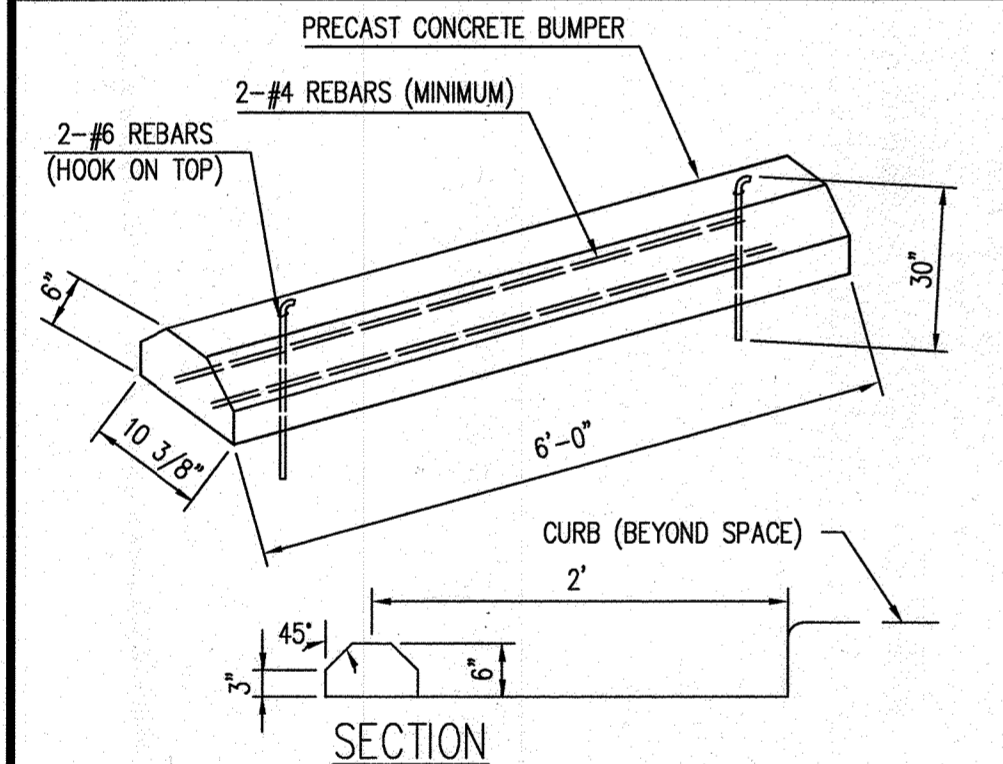


1 ACCESSIBLE PARKING
SCALE: 1"=10'

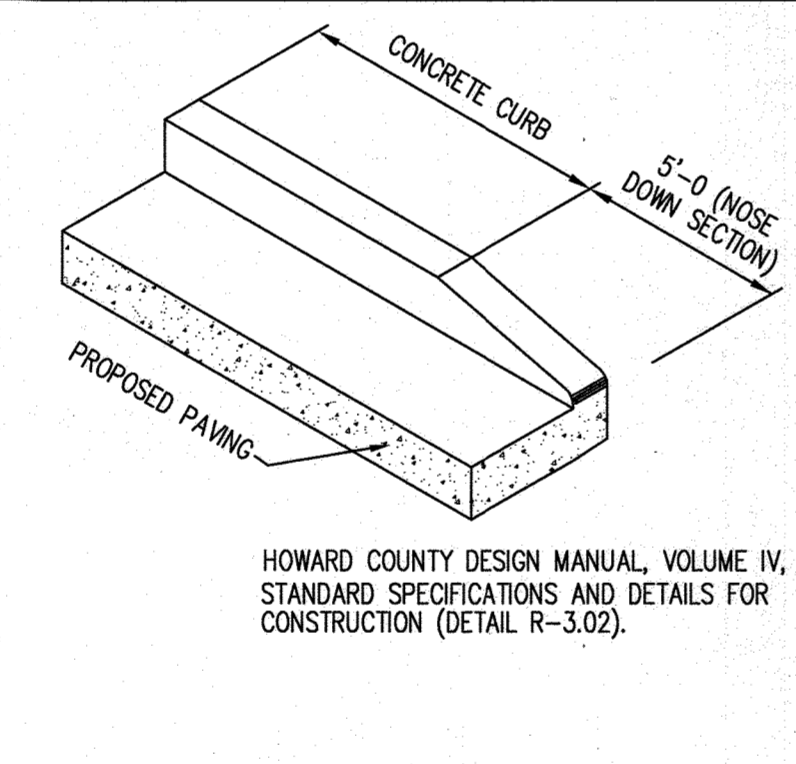
2 ACCESSIBLE PARKING
SCALE: 1"=10'



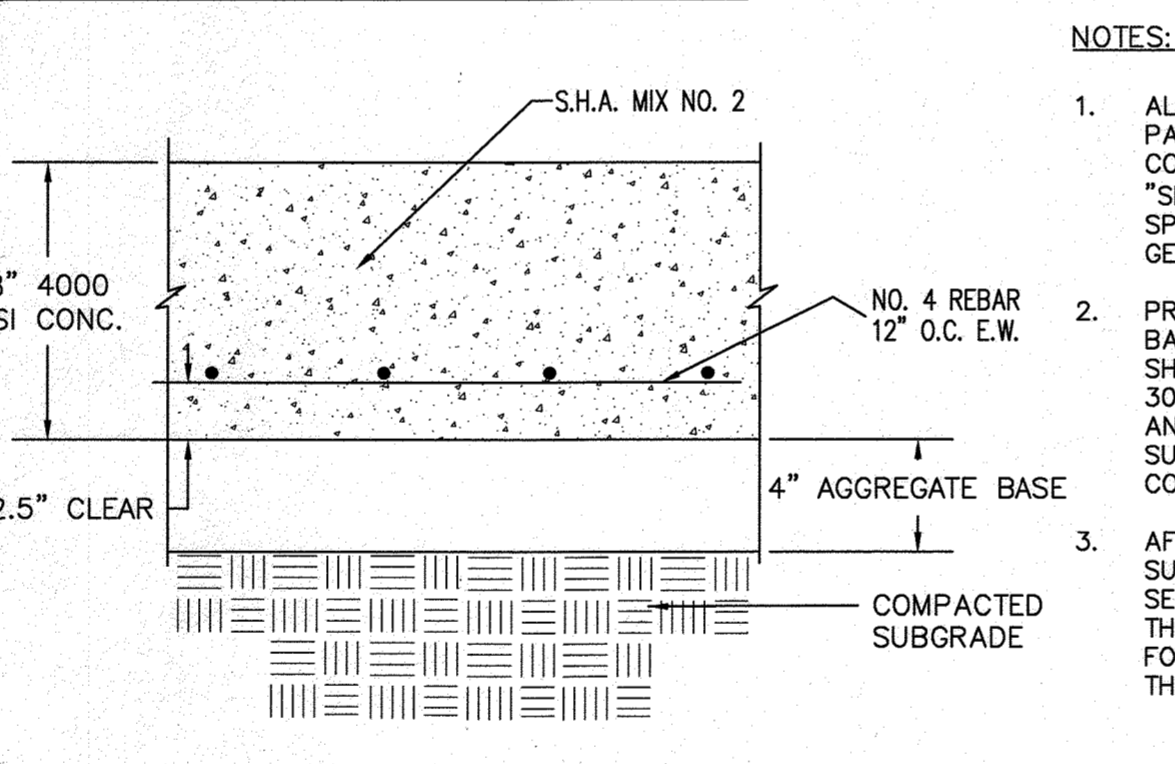
5 STOP SIGN
NOT TO SCALE



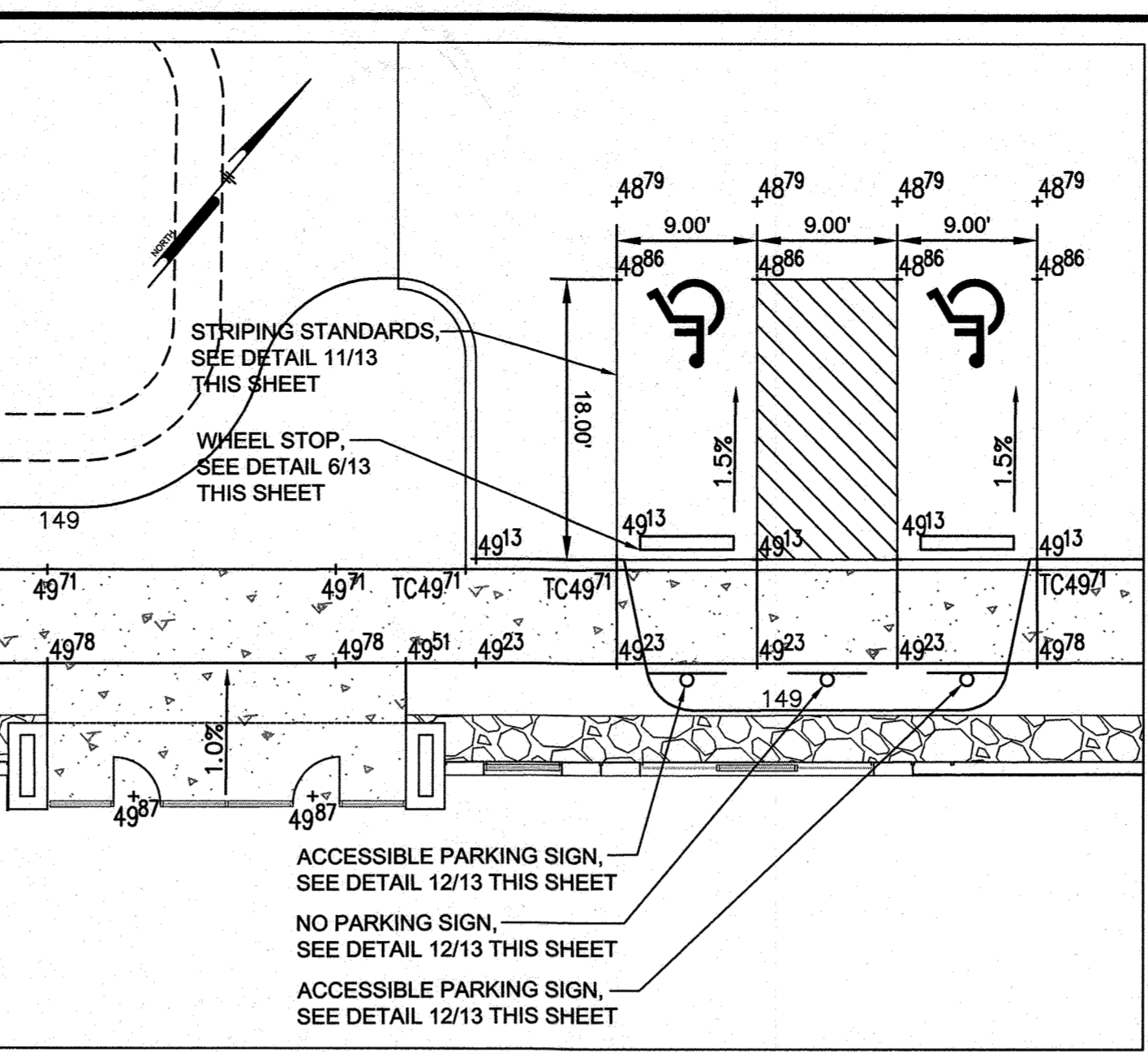
6 CONCRETE WHEEL STOP
NOT TO SCALE



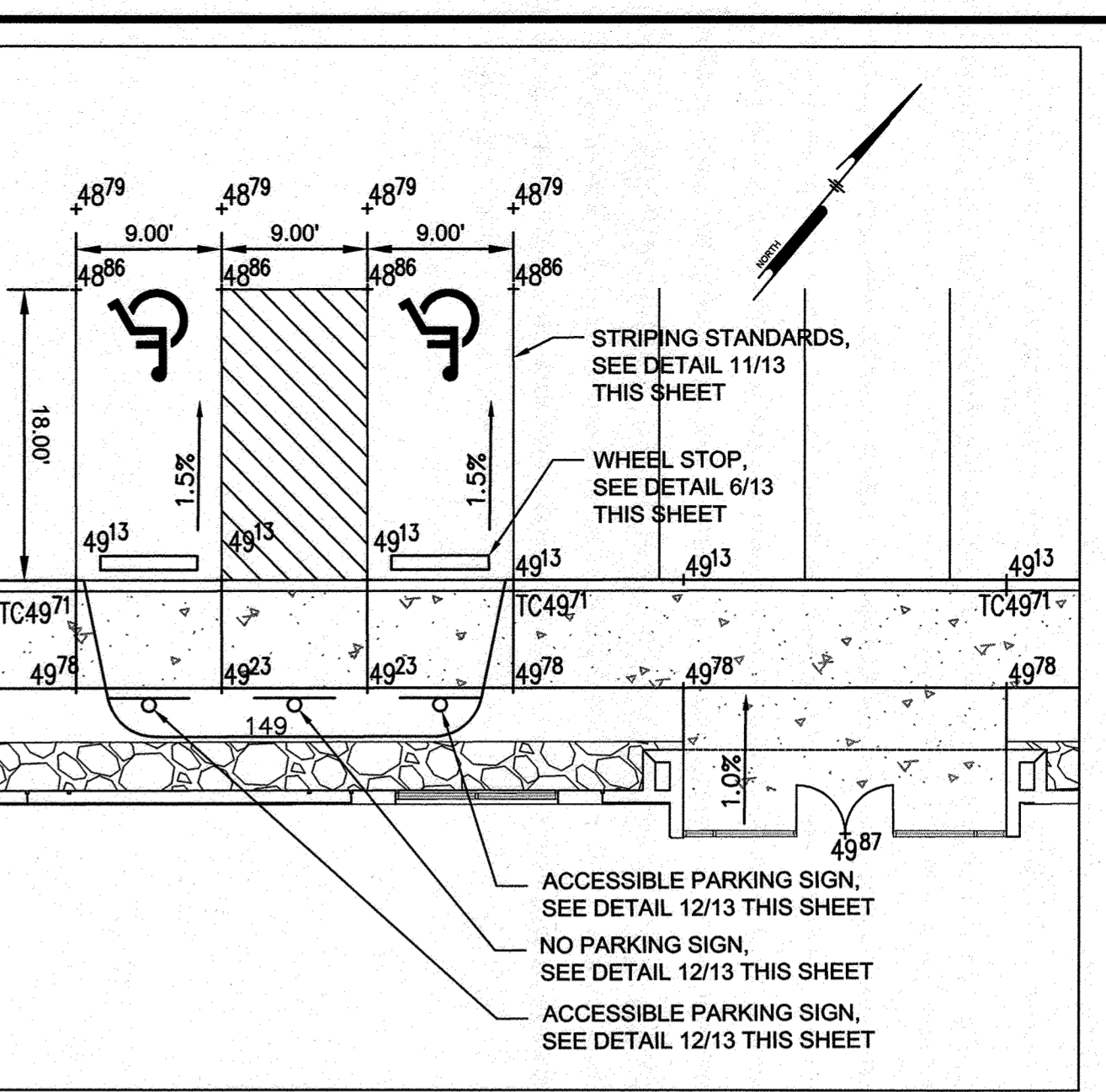
7 NOSE DOWN CURB
NOT TO SCALE
HC DPW STD. R-3.02



8 CONCRETE DUMPSTER PAD
NOT TO SCALE



3 ACCESSIBLE PARKING
SCALE: 1"=10'



4 ACCESSIBLE PARKING
SCALE: 1"=10'

ACCESSIBILITY NOTES:

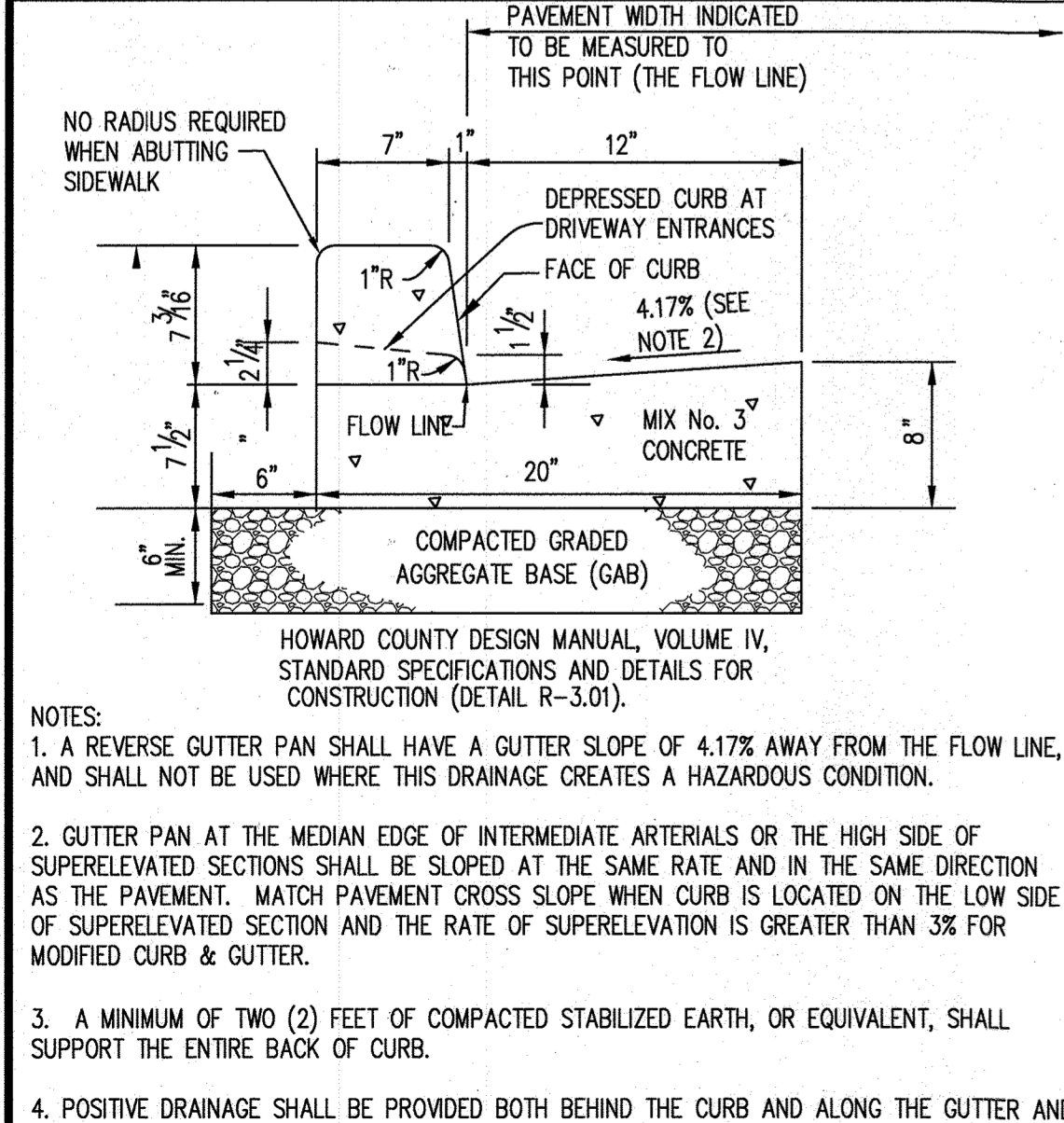
1. ACCESSIBLE ROUTE SHALL BE PROVIDED BETWEEN HANDICAPPED PARKING OR PUBLIC RIGHT OF WAYS TO THE MAIN BUILDING ENTRANCE IN ACCORDANCE WITH CURRENT ADA AND LOCAL STANDARDS. ALL HANDICAPPED RAMPS SHALL BE CONSTRUCTED ACCORDING TO CURRENT ADA AND LOCAL STANDARDS. EXCEPT AS SUPERSEDED IN CURRENT ADA AND LOCAL STANDARDS THE FOLLOWING SHALL APPLY:
 - A) MAXIMUM SIDEWALK CROSS SLOPES SHALL BE 2%.
 - B) A MINIMUM 5' x 5' LANDING AREA WITH A MAXIMUM SLOPE IN ANY DIRECTION OF 2% SHALL BE PROVIDED AT ALL CHANGES IN DIRECTION, TOPS AND BOTTOMS OF RAMPS, AND BUILDING EGRESS POINTS.
 - C) ALL HANDICAPPED PARKING SHALL BE SLOPED NO GREATER THAN 2% IN ANY DIRECTION, INCLUDING A 5' WIDE AREA BEHIND THE PARKING SPACES.
 - D) AN ACCESS ROUTE FROM THE PARKING SPACE(S) TO THE MAIN BUILDING ENTRANCE SHALL BE PROVIDED. ALL SLOPES ALONG THE DIRECTION OF TRAVEL SHALL NOT EXCEED 1:20 UNLESS THEY FALL UNDER CONDITION B) ABOVE. SLOPES IN EXCESS OF 1:20 EXCEPT FOR CURB RAMPS, REQUIRE A HANDRAIL MEETING ADA REQUIREMENTS.

AS-BUILT CERTIFICATION

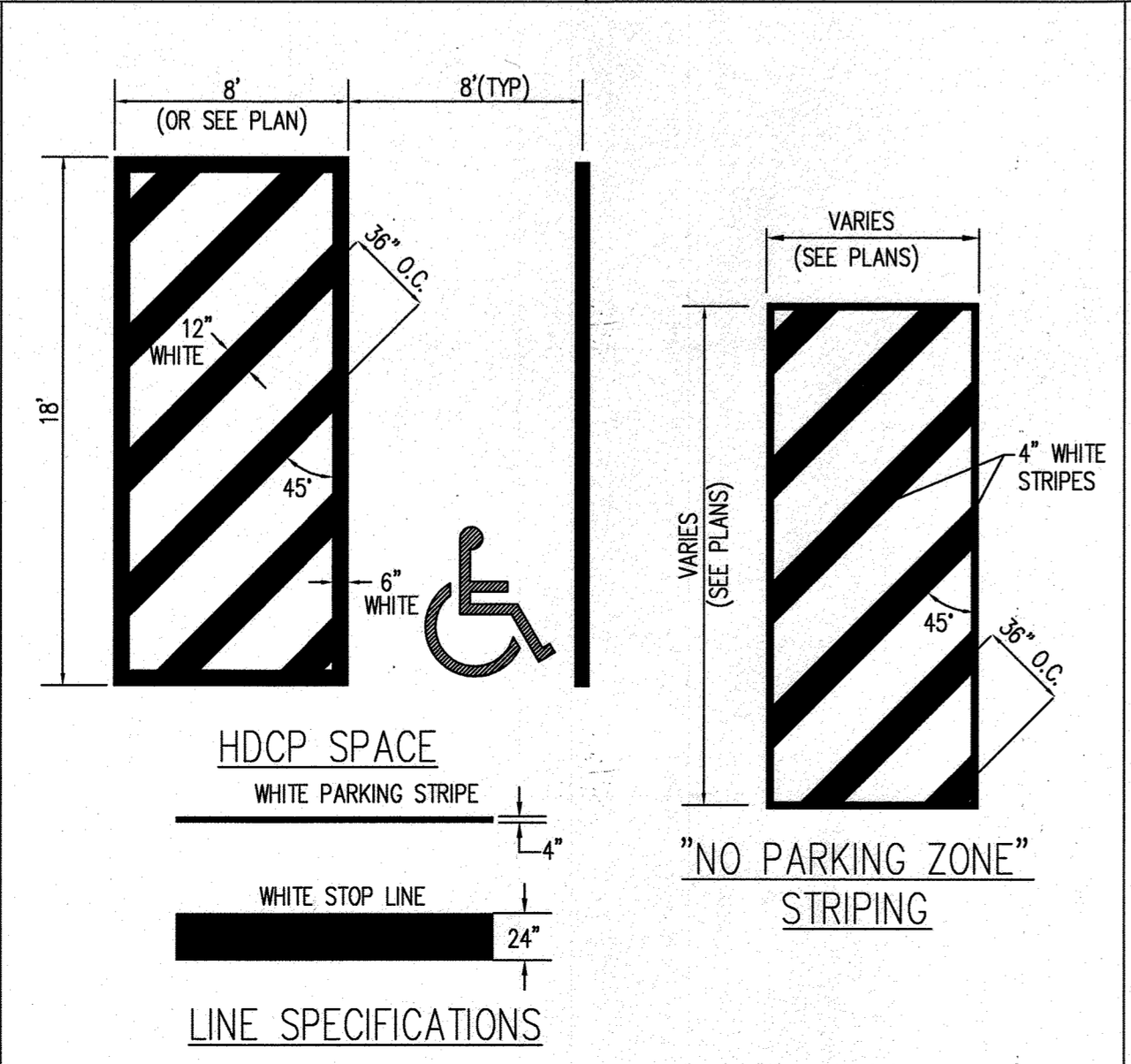
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

James A. Ruffe 21774
PRINTED NAME MD. P.E. NO.

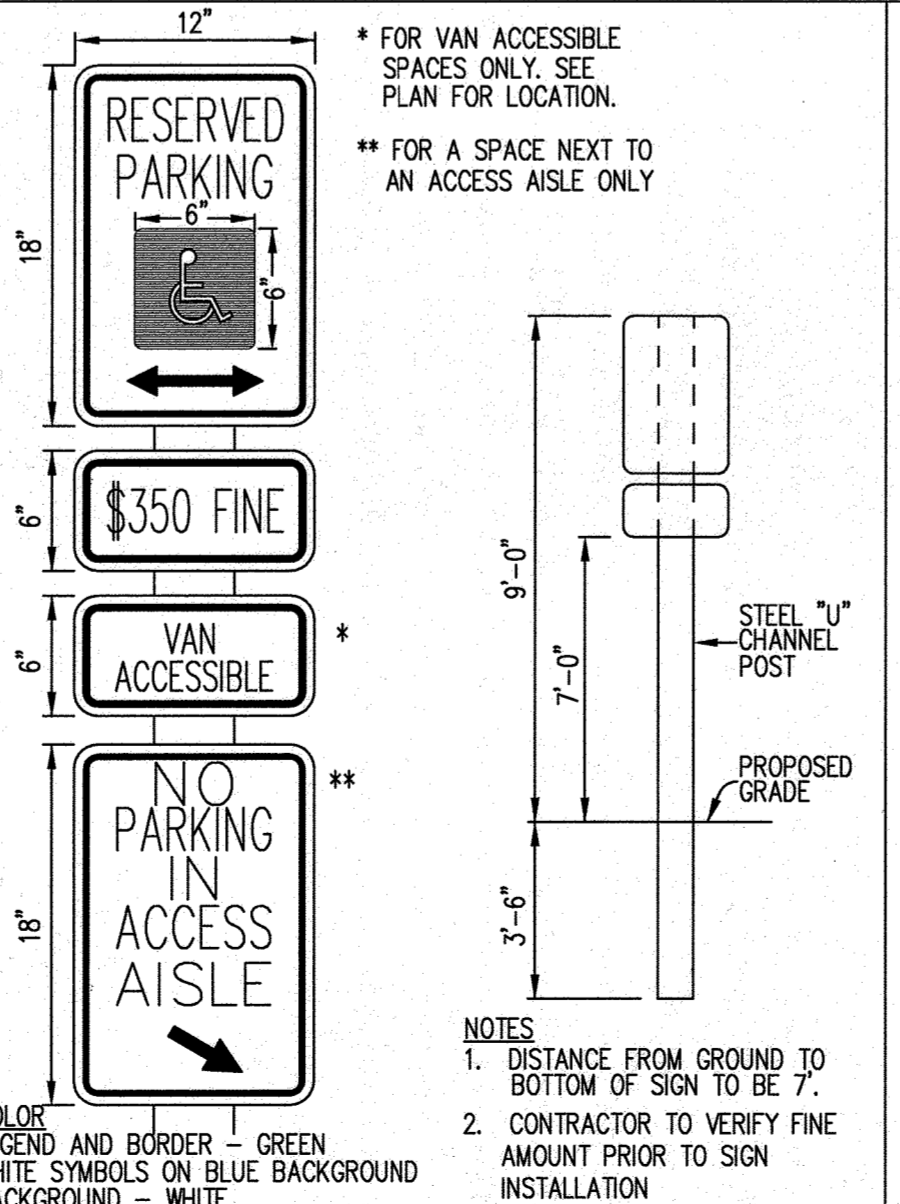
Signature DATE: 11/21/20



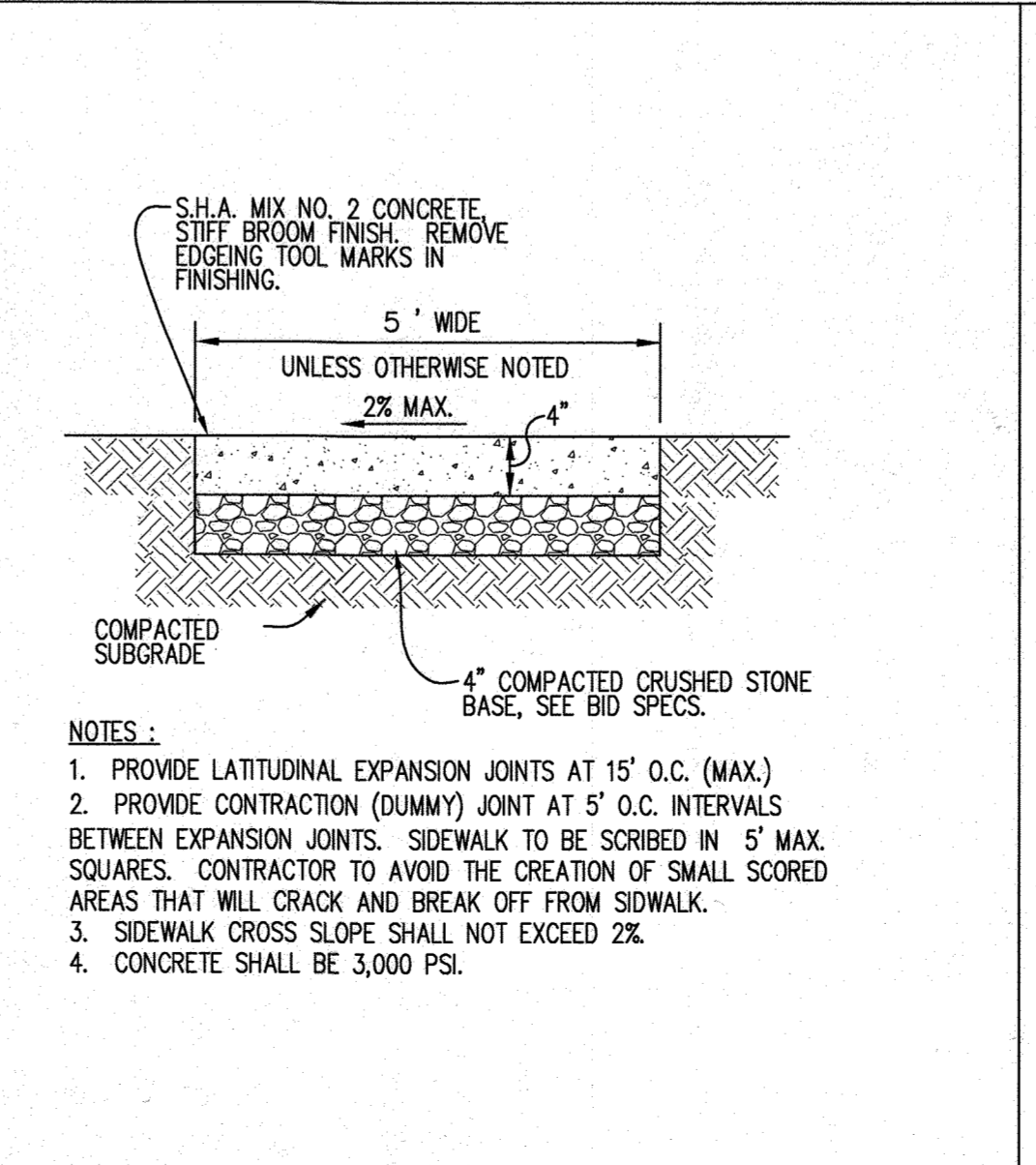
10 7" COMBINATION CURB AND GUTTER
NOT TO SCALE
HC DPW STD. R-3.01



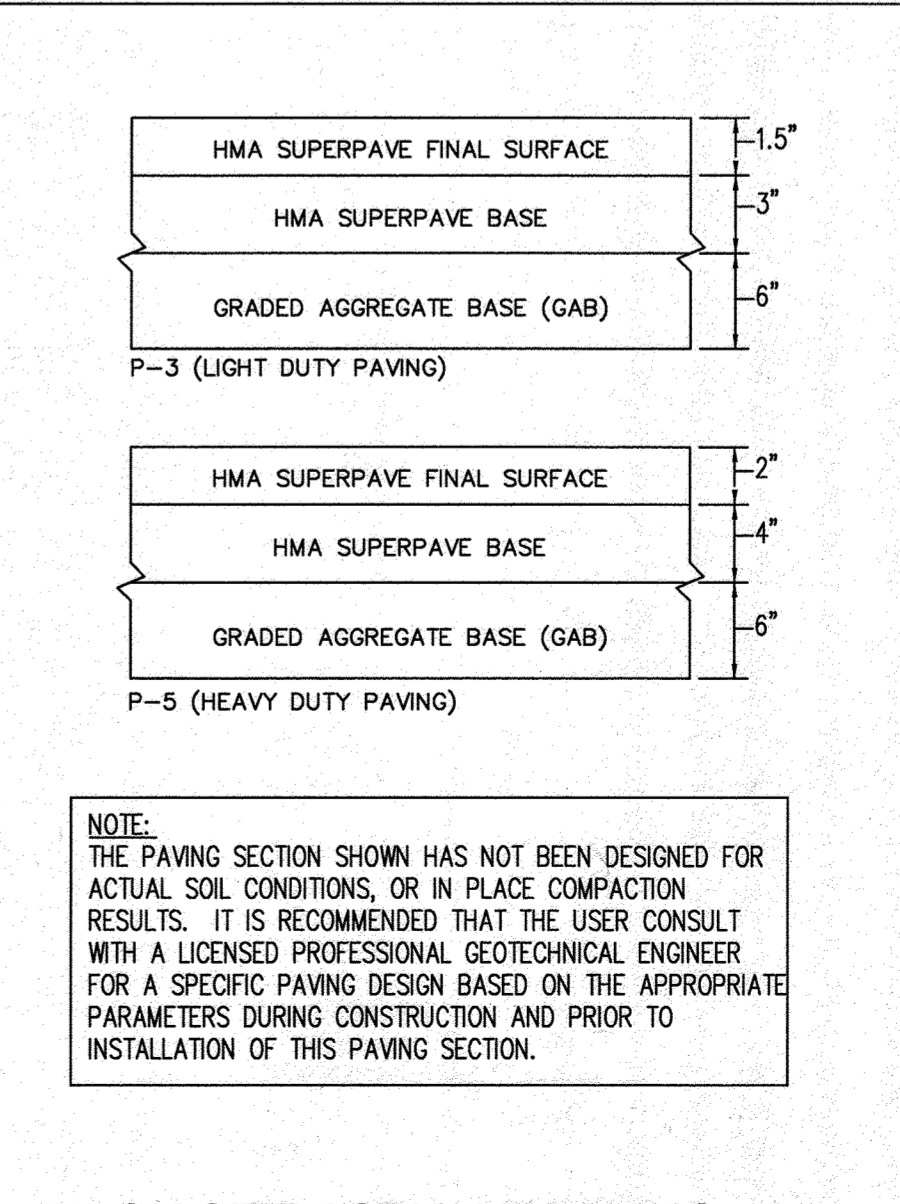
11 STRIPING STANDARDS
NOT TO SCALE



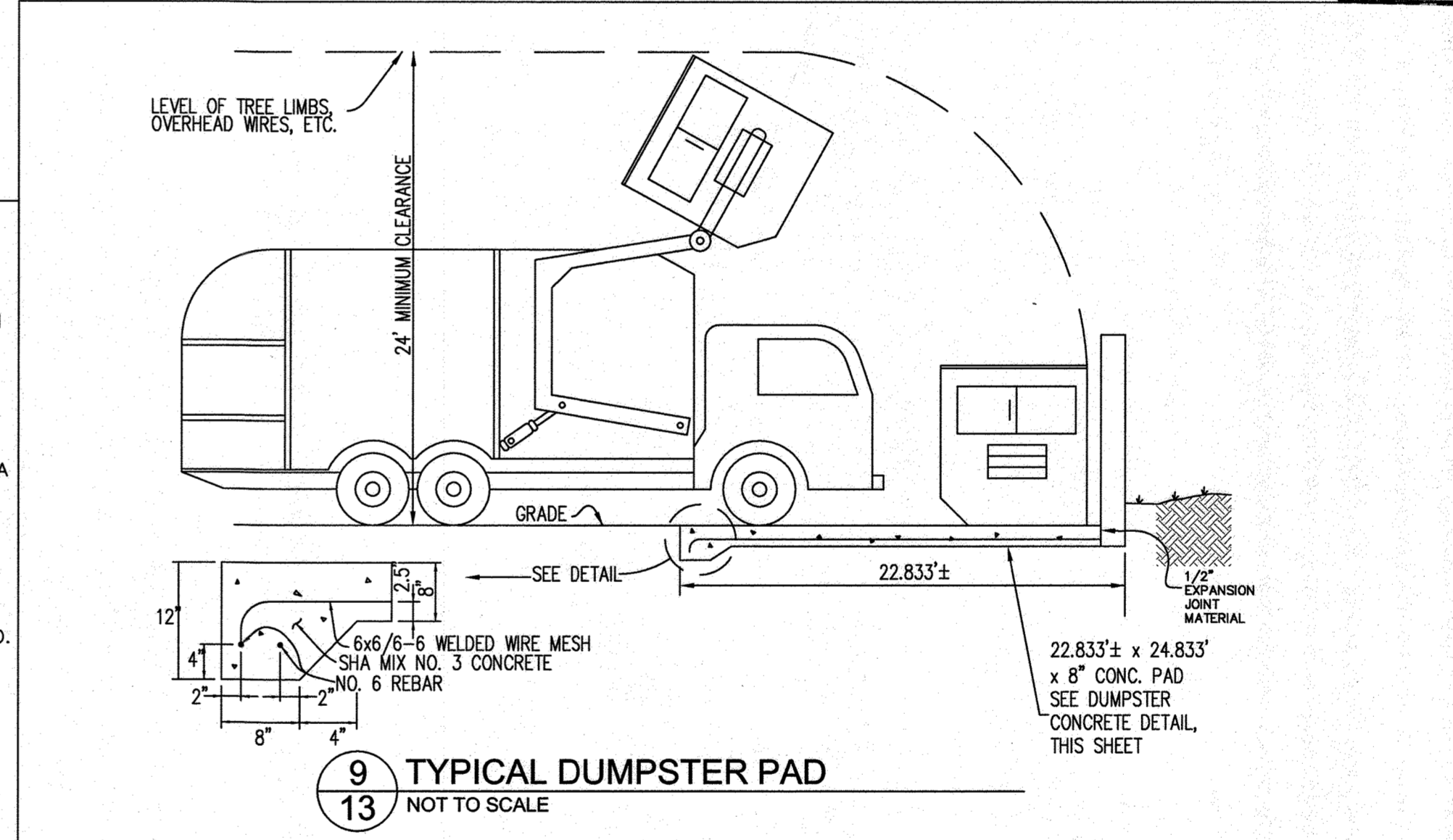
12 ACCESSIBLE PARKING SIGN
NOT TO SCALE



13 CONCRETE SIDEWALK
NOT TO SCALE



14 ON SITE ASPHALT PAVING
NOT TO SCALE



9 TYPICAL DUMPSTER PAD
NOT TO SCALE

- NOTES:**
1. ALL FINISHED DRIVEWAY AND PARKING SUBGRADE SHOULD BE CONSTRUCTED AND COMPLY WITH "SITE PREPARATION" SPECIFICATION OF THE GEOTECHNICAL REPORT.
 2. PRIOR TO PLACEMENT OF STONE BASE, THE ENTIRE SUBGRADE SHOULD BE PROFFROULD WITH A 30-TON LOADED DUMP TRUCK. ANY SOFT AND UNSTABLE SUBGRADE SHOULD BE CORRECTED.
 3. AFTER APPROVAL OF THE SUBGRADE, THE PAVEMENT SECTION SHOULD FOLLOW THE SPECIFICATIONS IN THE GEOTECHNICAL REPORT.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, DEVELOPMENT ENGINEERING DIVISION 9-8-17 DATE

Chief, DIVISION OF LAND DEVELOPMENT 9-21-17 DATE

DIRECTOR 9-21-17 DATE

DATE	NO.	REVISION	BY

DEVELOPER: DCT INDUSTRIAL, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020

OWNER: DCT MEARS LLC, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2 GRID NO. 11 1st ELECTION DISTRICT 7200 DORSEY RUN ROAD ELK RIDGE, MARYLAND 21075 HOWARD COUNTY, MARYLAND

TITLE: SITE DETAILS

Pennoni Associates Inc. Engineers - Surveyors - Planners Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS

DRAWN BY: AGS/JSN/NTD

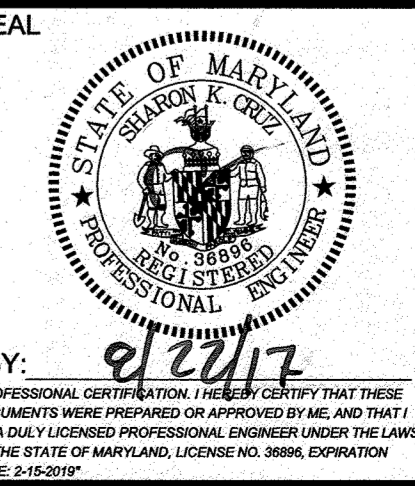
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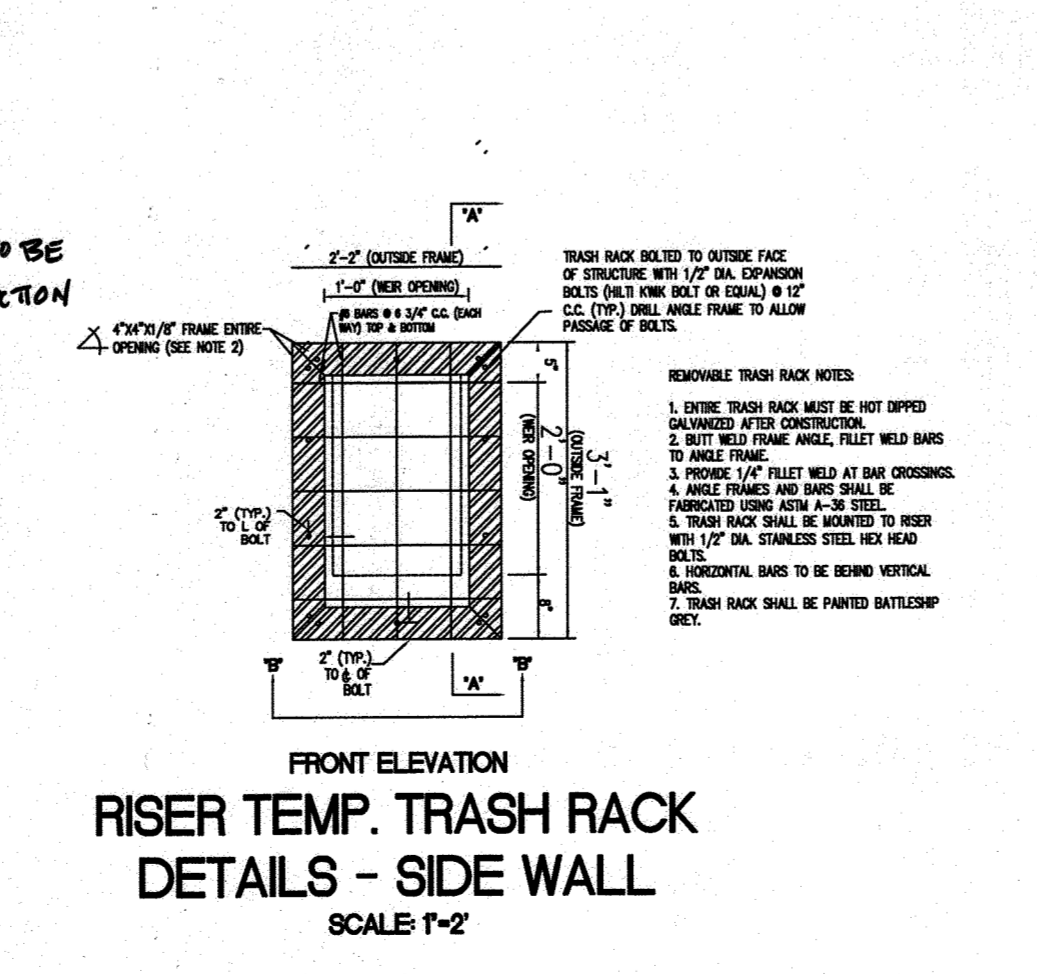
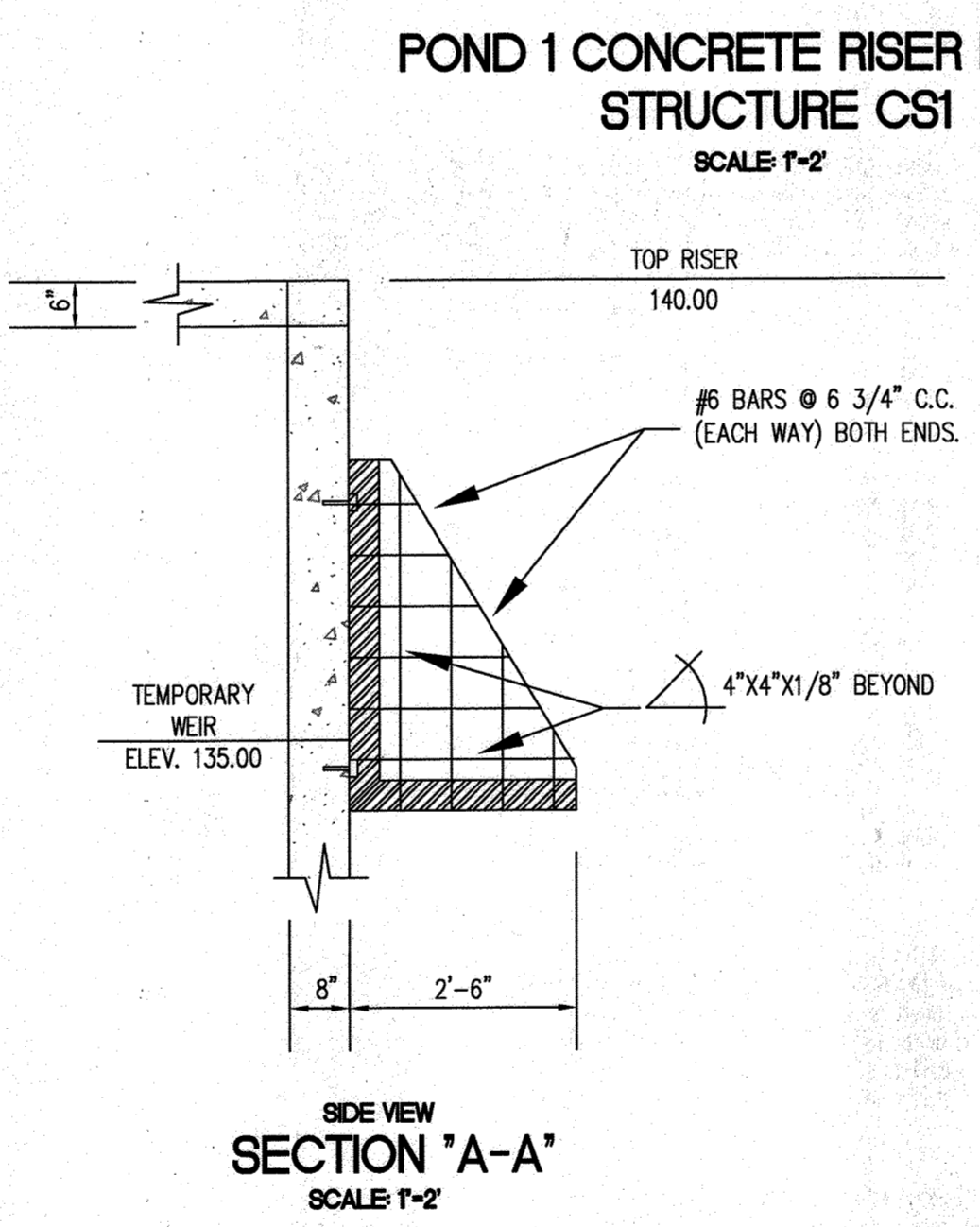
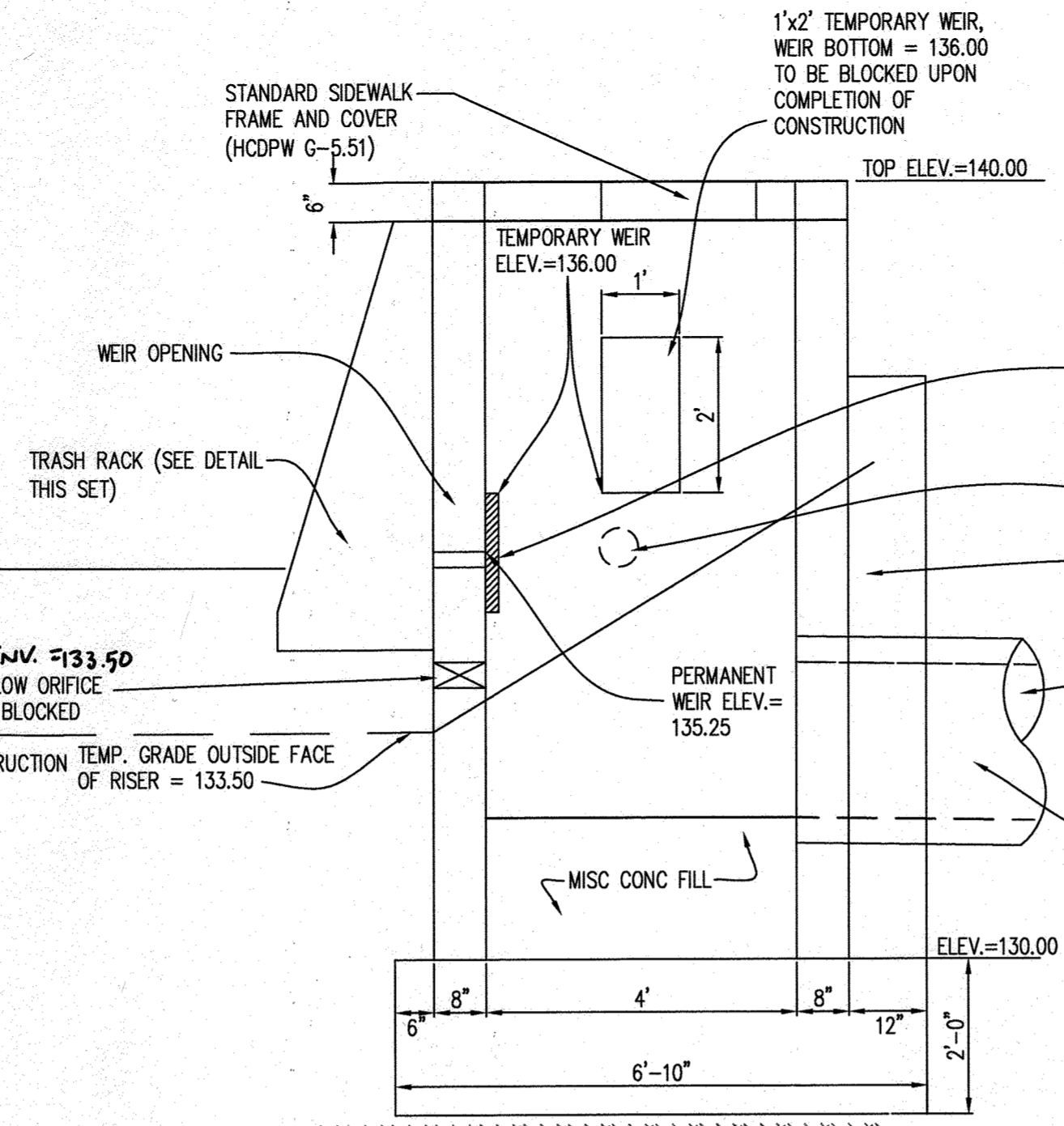
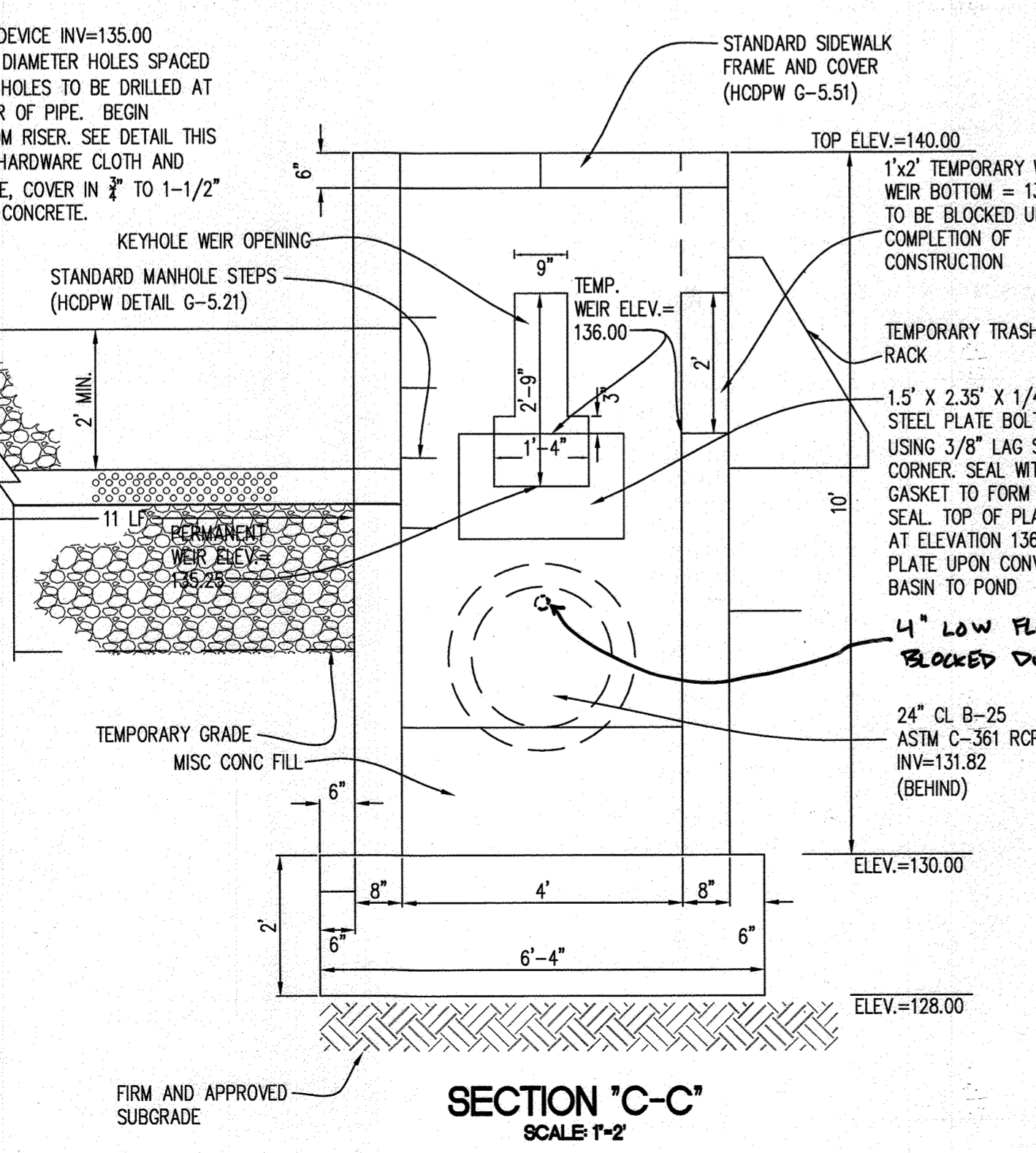
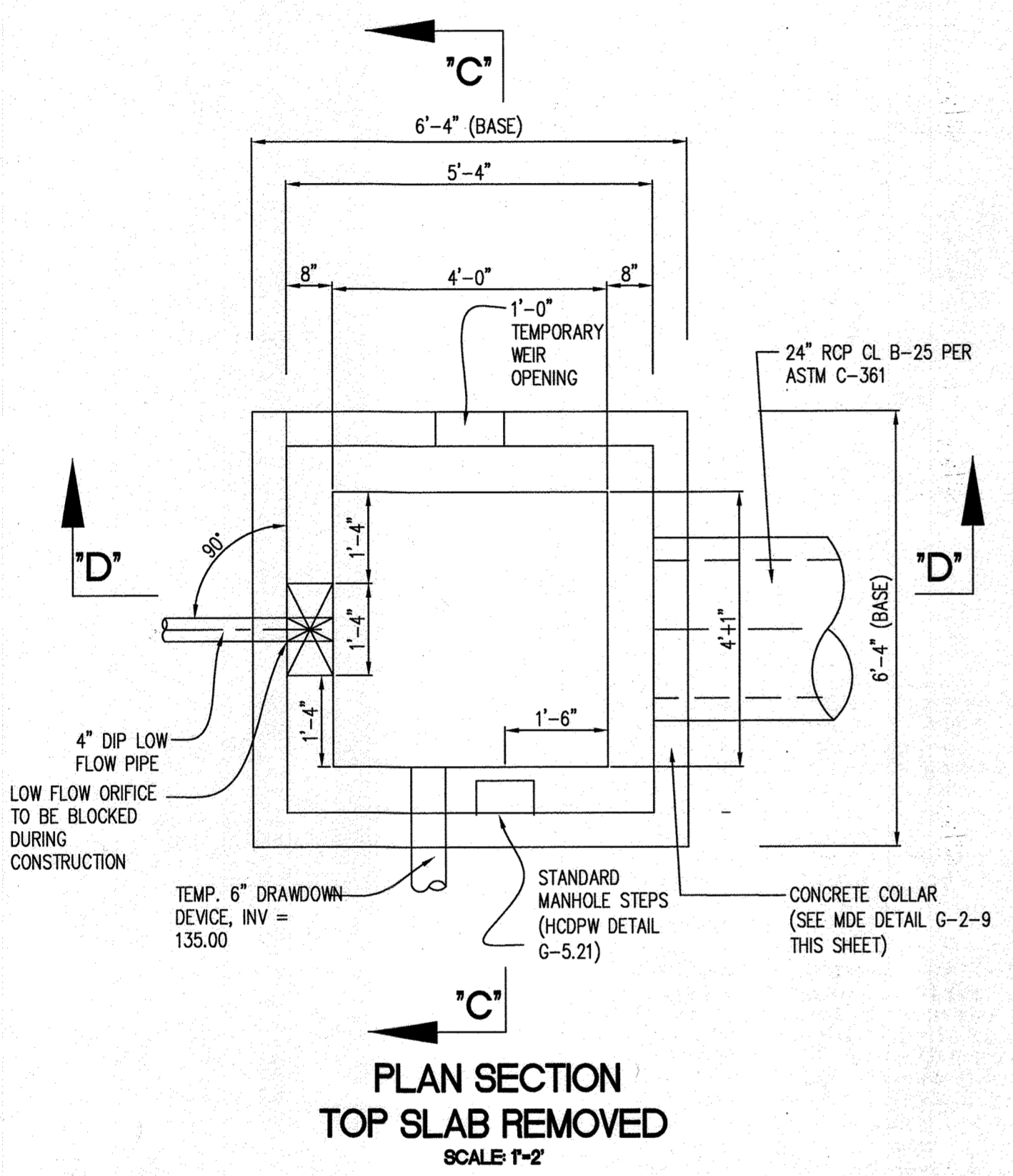
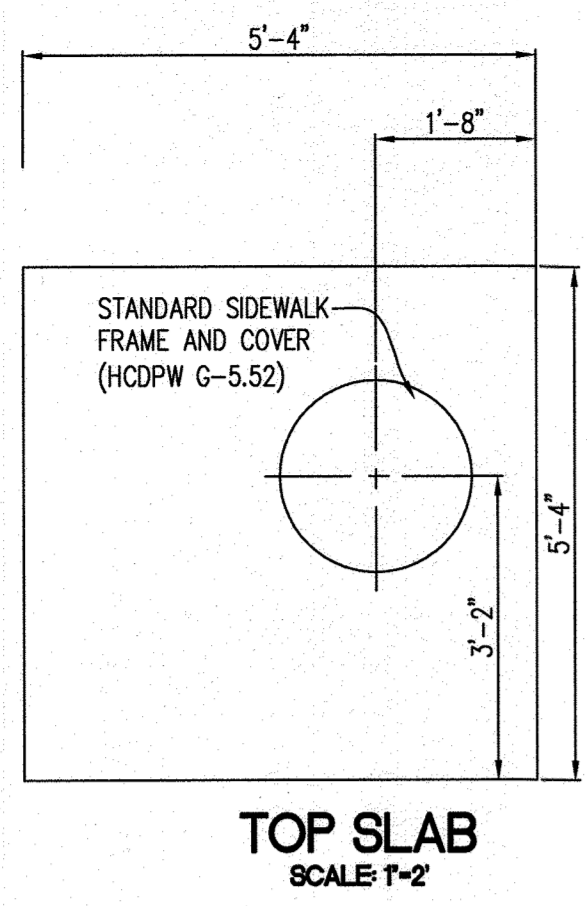
DATE: AUGUST 1, 2017

SCALE: AS SHOWN

DRAWING NO. 13 OF 36

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 MD License No. 21774 Expiration Date: 11/21/21

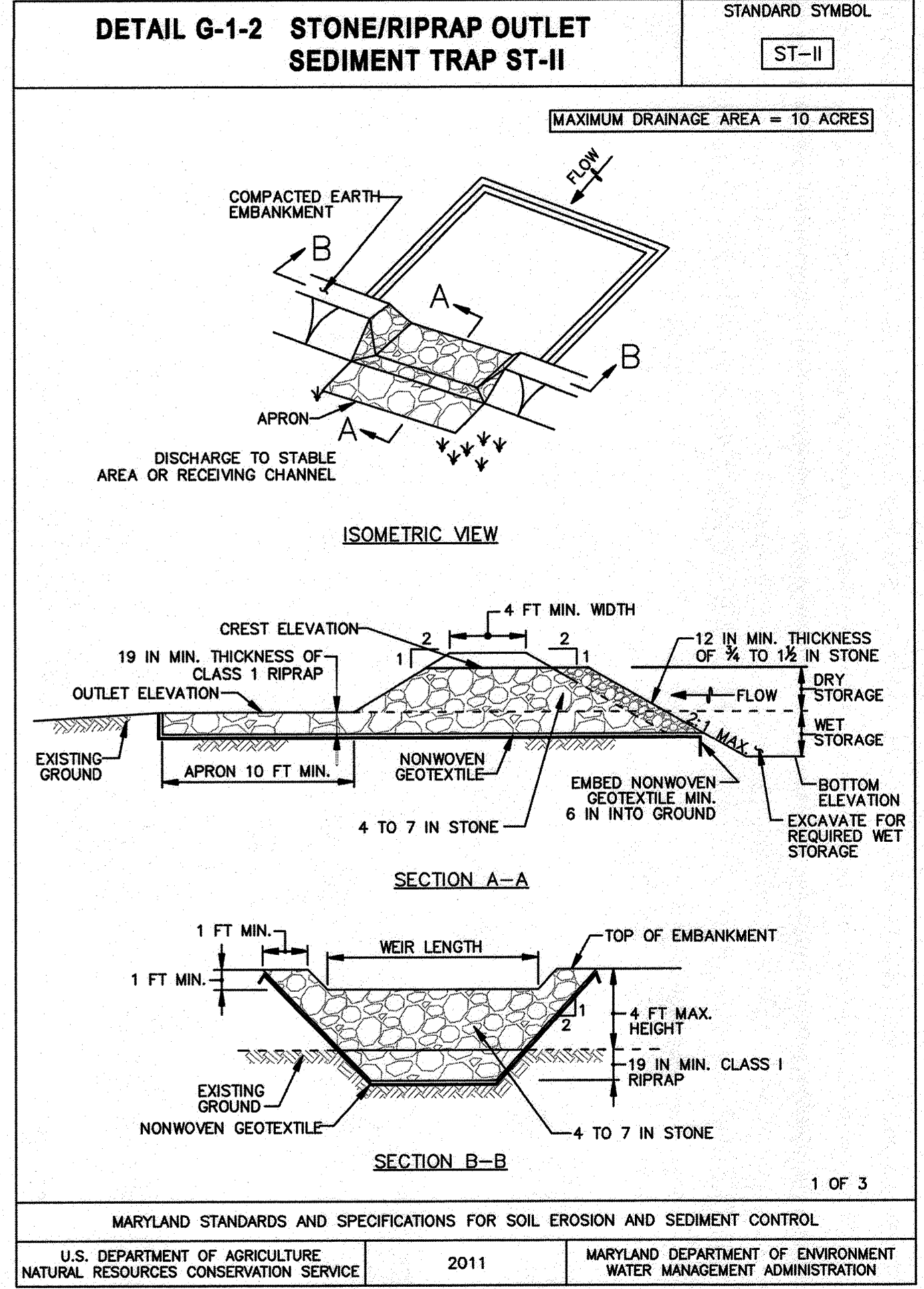




- 1.5' X 2.35' X 1/4" GALVANIZED STEEL PLATE BOLTED TO RISER USING 3/8" LAG SCREWS AT EACH CORNER. SEAL WITH NEOPRENE GASKET TO FORM WATERTIGHT SEAL. TOP OF PLATE SHALL BE AT ELEVATION 136.00. REMOVE PLATE UPON CONVERSION OF BASIN TO POND.
- TEMP. 6" DRAWDOWN DEVICE, BEHIND, INV = 135.00
- CONCRETE COLLAR IS TO BE POURED AROUND PIPE AT FACE OF RISER. EXTEND COLLAR TO BASE (SEE MDE DETAIL G-2-9 THIS SHEET). NOTE: FIRST PIPE JOINT SHALL BE WITHIN 4 FT OF RISER BUT NOT LESS THAN 2 FT.
- 24" CL B-25 ASTM C-361 RCP @ 1.02% RISER GENERAL NOTES:
 1. THIS DETAIL IS FOR A PRECAST RISER ONLY.
 2. SHOP DRAWINGS MUST BE APPROVED BY THE DESIGN ENGINEER PRIOR TO FABRICATION.
 3. RISER STRUCTURES MUST BE REINFORCED CONCRETE.
 4. ALL CONNECTIONS SHALL BE WATERTIGHT.
 5. USE SHA MIX NO. 3 FOR ALL POND MIX.
 6. USE MASTIC GROUT FOR ALL PIPE JOINTS FROM CONTROL STRUCTURE TO OUTFALL.

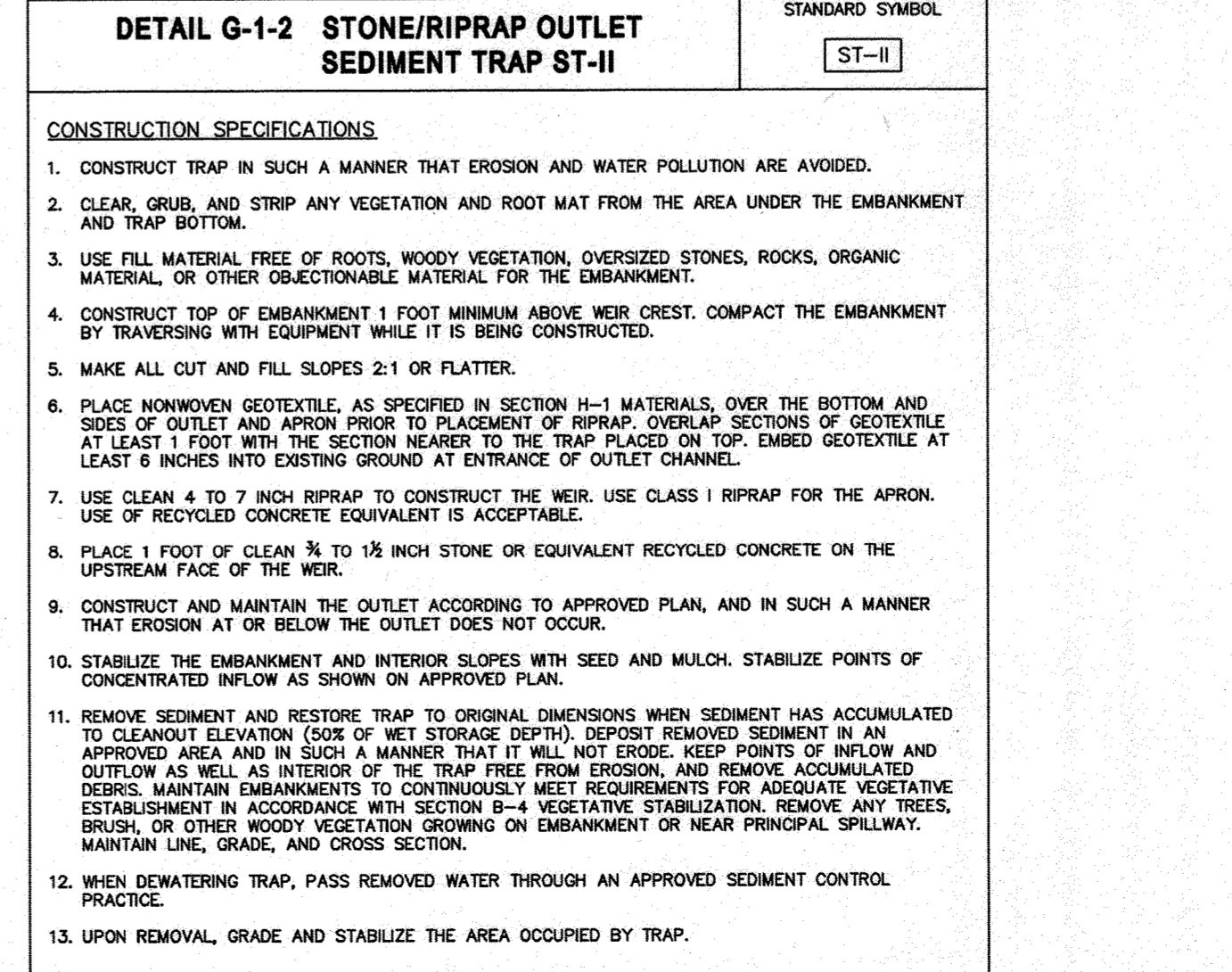
STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 1		
DRAINAGE AREA - INITIAL	5.47	ACRES
DRAINAGE AREA - INTERM	5.47	ACRES
DRAINAGE AREA - FINAL	0.00	ACRES
TOTAL STORAGE REQUIRED	19,692	CF
TOTAL STORAGE PROVIDED	22,832	CF
WET STORAGE REQUIRED	9,846	CF
WET STORAGE PROVIDED	10,168	CF
DRY STORAGE REQUIRED	9,846	CF
DRY STORAGE PROVIDED	12,664	CF
EXISTING GROUND ELEVATION AT OUTLET (WET STORAGE ELEVATION)	130.00	FT
TRAP BOTTOM DIMENSIONS	90 X 50	FT X FT
WEIR LENGTH	22	FT
WEIR CREST (DRY STORAGE) ELEVATION	132.00	FT
CLEANOUT ELEVATION	129.00	FT
TOP OF EMBANKMENT ELEVATION	133.00	FT
SIDE SLOPE	2:1	H:V RATIO
EMBANKMENT TOP WIDTH	4	FT
OUTLET PROTECTION - LENGTH	17	FT
OUTLET PROTECTION - DEPTH	19	IN
TOP OF BAFFLE	131.00	FT

SEDIMENT BASIN # 1		
NOTE: POND 1 IS TO BE USED AS A SEDIMENT BASIN		
EX. DRAINAGE AREA	=	2.56 AC
INTERM DRAINAGE AREA	=	8.05 AC
DEV. DRAINAGE AREA	=	5.98 AC
STORAGE REQUIRED (3,600 cu.ft./Ac.)	=	14,490 CF
REQUIRED VOLUME WET	=	14,490 CF
REQUIRED VOLUME DRY	=	14,490 CF
TOTAL VOLUME	=	28,980 CF
STORAGE PROVIDED	=	14,718 CF
PROVIDED VOLUME WET	=	103,413 CF
PROVIDED VOLUME DRY	=	118,131 CF
TOTAL VOLUME	=	221,544 CF
STORAGE DEPTH	=	6.5'
MINIMUM BOTTOM ELEVATION	=	133.50
BOTTOM DIMENSIONS	=	135' X 235'
RISER DIAMETER	=	4'4"
RISER CREST ELEVATION	=	136.00
REQUIRED WET STORAGE ELEVATION	=	135.00
REQUIRED DRY STORAGE ELEVATION	=	136.00
BARREL DIAMETER	=	24"
BARREL LENGTH	=	60 LF
BARREL INVERTS	=	
UPSTREAM	=	131.82
DOWNSTREAM	=	131.20
TRASH RACK DIAMETER	=	N/A
CLEAN OUT ELEVATION	=	134.25
PERMANENT POOL WSEL.	=	N/A
DESIGN TOP OF EMBANKMENT EL.	=	140.00
CONSTRUCTED TOP OF EMBANKMENT EL.	=	140.80
EMERGENCY SPILLWAY CREST EL.	=	N/A
EMERGENCY SPILLWAY WIDTH	=	N/A



SEDIMENT BAFFLES-TRAP 1	
SURFACE AREA OF BASIN AT WEIR CREST =	6,996 SF+
$W_e = (AREA/2)^{1/2}$	$W_e = (6,996/2)^{1/2} = 59$ FT
$L_e =$ REQUIRED BAFFLE LENGTH	$L_e = 2W_e = 2(59) = 118$ FT
PROVIDED BAFFLE LENGTH -	120 FT
PROVIDED BAFFLE LENGTH IS GREATER THAN REQUIRED BAFFLE LENGTH, THEREFORE BAFFLE DESIGN REQUIREMENTS ARE MET	

SEDIMENT BAFFLES-BASIN 1	
SURFACE AREA OF BASIN AT RISER CREST =	17,973 SF
$W_e = (AREA/2)^{1/2}$	$W_e = (17,973/2)^{1/2} = 95$ FT
$L_e =$ REQUIRED BAFFLE LENGTH	$L_e = 2W_e = 2(95) = 190$ FT
PROVIDED BAFFLE LENGTH -	215 FT
PROVIDED BAFFLE LENGTH IS GREATER THAN REQUIRED BAFFLE LENGTH, THEREFORE BAFFLE DESIGN REQUIREMENTS ARE MET	



AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

James A. Ruff
 Signature: *[Signature]*
 License No: 21714
 Date: 11/14/20

ENGINEER'S CERTIFICATE

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. 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 90 DAYS OF COMPLETION.

Signature of Engineer: *[Signature]*
 Date: 8/22/17

DEVELOPER'S CERTIFICATE

I HAVE HEREBY CERTIFIED 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 APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I SHALL ENGAGE A MARYLAND REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION, AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 90 DAYS OF COMPLETION. I CERTIFY RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

Signature of Developer: *[Signature]*
 Date: 8.22.17

THIS PLAN IS APPROVED FOR SMALL POND CONSTRUCTION, AND SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *[Signature]*
 Date: 8/28/17

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *[Signature]*
 Date: 9-8-17

Signature: *[Signature]*
 Date: 9-21-17

Signature: *[Signature]*
 Date: 9-21-17

DATE	NO.	REVISION	BY

DEVELOPER: DCT INDUSTRIAL
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

OWNER: DCT MEARS LLC
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

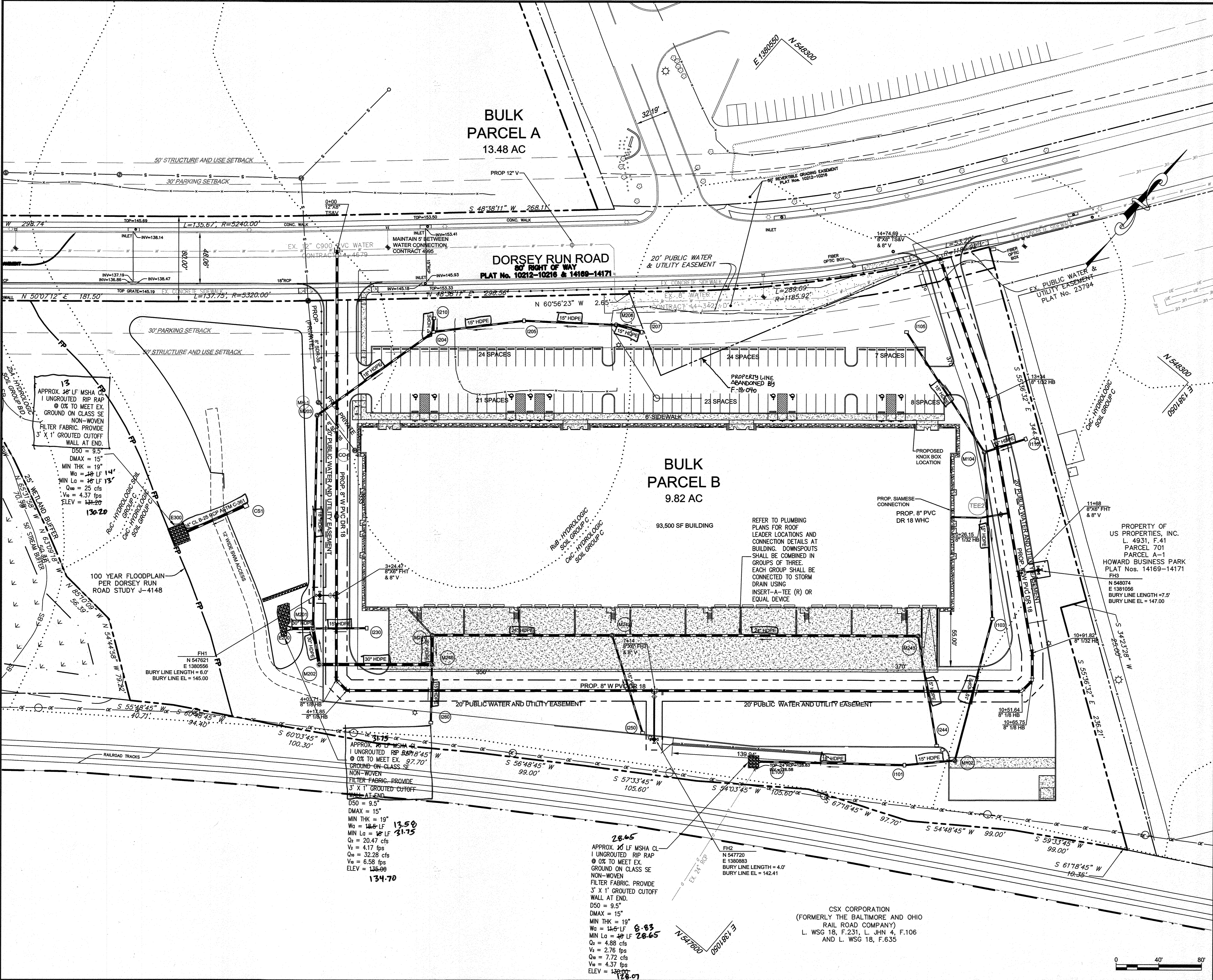
AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
 GRID NO. 11 1st ELECTION DISTRICT
 7200 DORSEY RUN ROAD
 ELKBRIDGE, MARYLAND 21075
 HOWARD COUNTY, MARYLAND

SEDIMENT CONTROL DETAILS

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
 DRAWN BY: AGS/JS/NNTD
 PROJECT NO: DCT11601
 DATE: AUGUST 1, 2017
 SCALE: AS SHOWN
 DRAWING NO. 9 OF 36



LEGEND

PROPERTY LINE AND RIGHT-OF-WAY	---
PROPOSED STORM DRAIN	---
PROPOSED WATER	---
PROPOSED FIRE HYDRANT	⊕
PROPOSED SEWER	---

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS 'AS-BUILT' PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

DATE: 1/25/18
 SIGNATURE OF ENGINEER: [Signature]
 PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 3-19-18
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature]
 DATE: 3-28-18
 CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature]
 DATE: 3-29-18
 DIRECTOR: [Signature]

1/25/18	1	ADDITION OF ADJACENT PARCEL, EXPANSION OF PARKING LOT	ALC
DATE	NO.	REVISION	BY
DEVELOPER: DCT INDUSTRIAL, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020			
OWNER: DCT MEARS LLC, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020			

PROJECT
TERRAPIN COMMERCE CENTER - BUILDING B

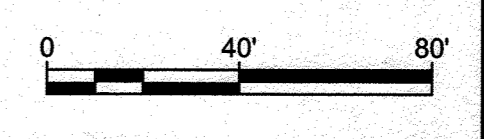
AREA
TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2 GRID NO. 11 1ST ELECTION DISTRICT 7200 DORSEY RUN ROAD ELK RIDGE, MARYLAND 21075 HOWARD COUNTY, MARYLAND

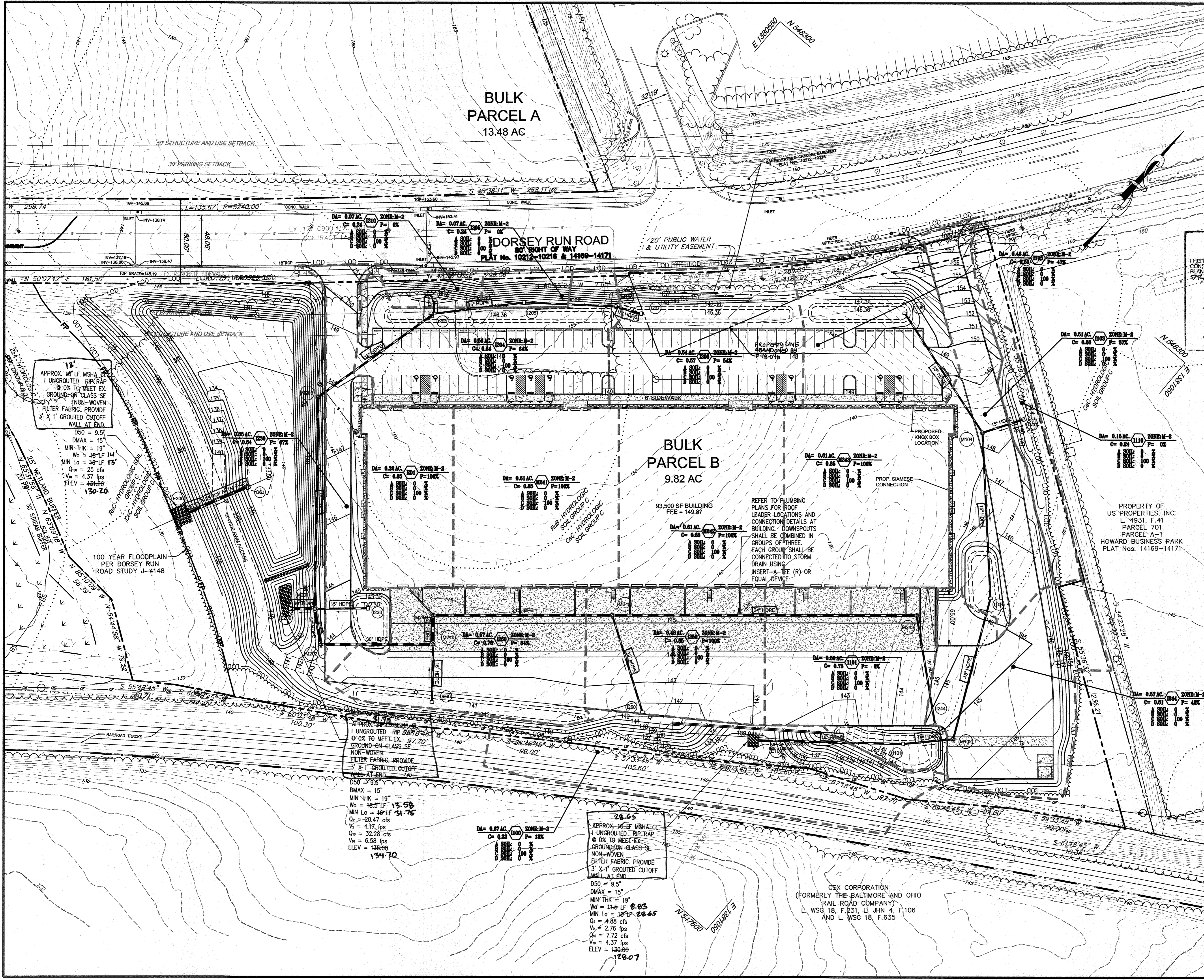
TITLE
UTILITY PLAN AS-BUILT

Pennoni Associates Inc.
Engineers - Surveyors - Planners
Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
DRAWN BY: AGS/JSN/NTD
PROJECT NO.: DCTH1601
DATE: JANUARY 25, 2018
SCALE: 1" = 40'
DRAWING NO.: 14 OF 36





LEGEND

PROPERTY LINE AND RIGHT-OF-WAY	---
EXISTING 1' CONTOUR	-154-
EXISTING 5' CONTOUR	-155-
EXISTING SOILS	RUB
PROPOSED 1' CONTOUR	164
PROPOSED 5' CONTOUR	165
PROPOSED SPOT ELEVATION	56.96'
PROPOSED STORM DRAIN	---
PROPOSED TREE LINE	---
DRAINAGE AREA	---

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITY SHOWN ON THIS PLANS WERE CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS MEETS THE APPROVED PLANS AND SPECIFICATIONS, EXCEPT AS NOTED IN RED ON THESE DRAWINGS.

James A. Reiff 21774
 PRINTED NAME MD. P.E. NO.
 DATE 11/12/20
 SIGNATURE

Professional Engineer Seal: James A. Reiff, License No. 21774, Exp. Date 11/12/21

Scale: 0 40' 80'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	3-19-18	DATE
S. Mahesh CS	3-28-18	DATE
Director	3-29-18	DATE

1/25/18	1	ADDITION OF ADJACENT PARCEL	ALC
DATE	NO.	REVISION	BY
DEVELOPER: DCT INDUSTRIAL, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701			
OWNER: DCT MEARS LLC, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701			
PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B			
AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2			
TITLE: STORM DRAIN DRAINAGE AREA MAP AS-BUILT			

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects

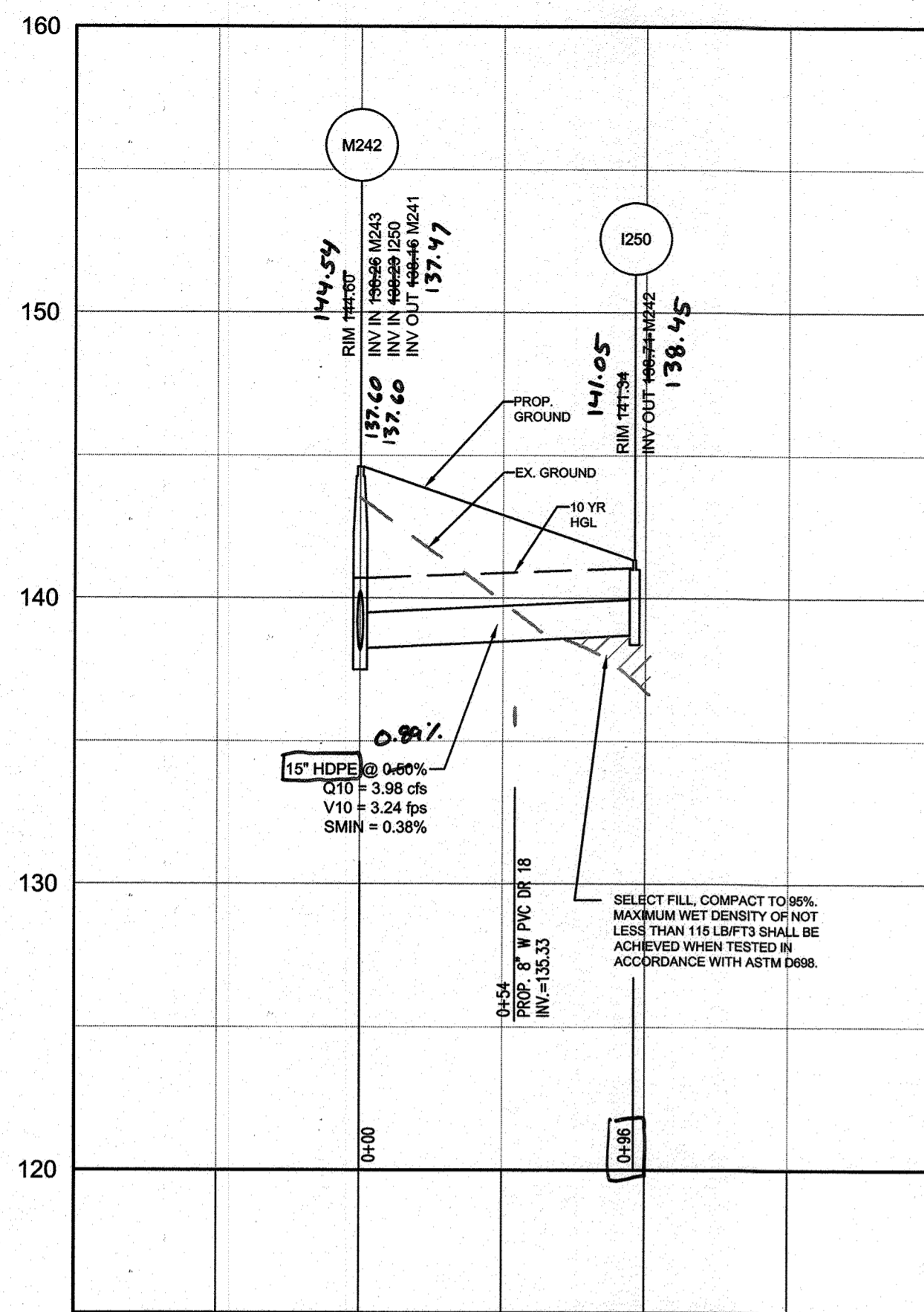
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
 DRAWN BY: AGS/JSN/NTD
 PROJECT NO: DCT11601
 DATE: JANUARY 25, 2018
 SCALE: 1" = 40'
 DRAWING NO. 15 OF 36

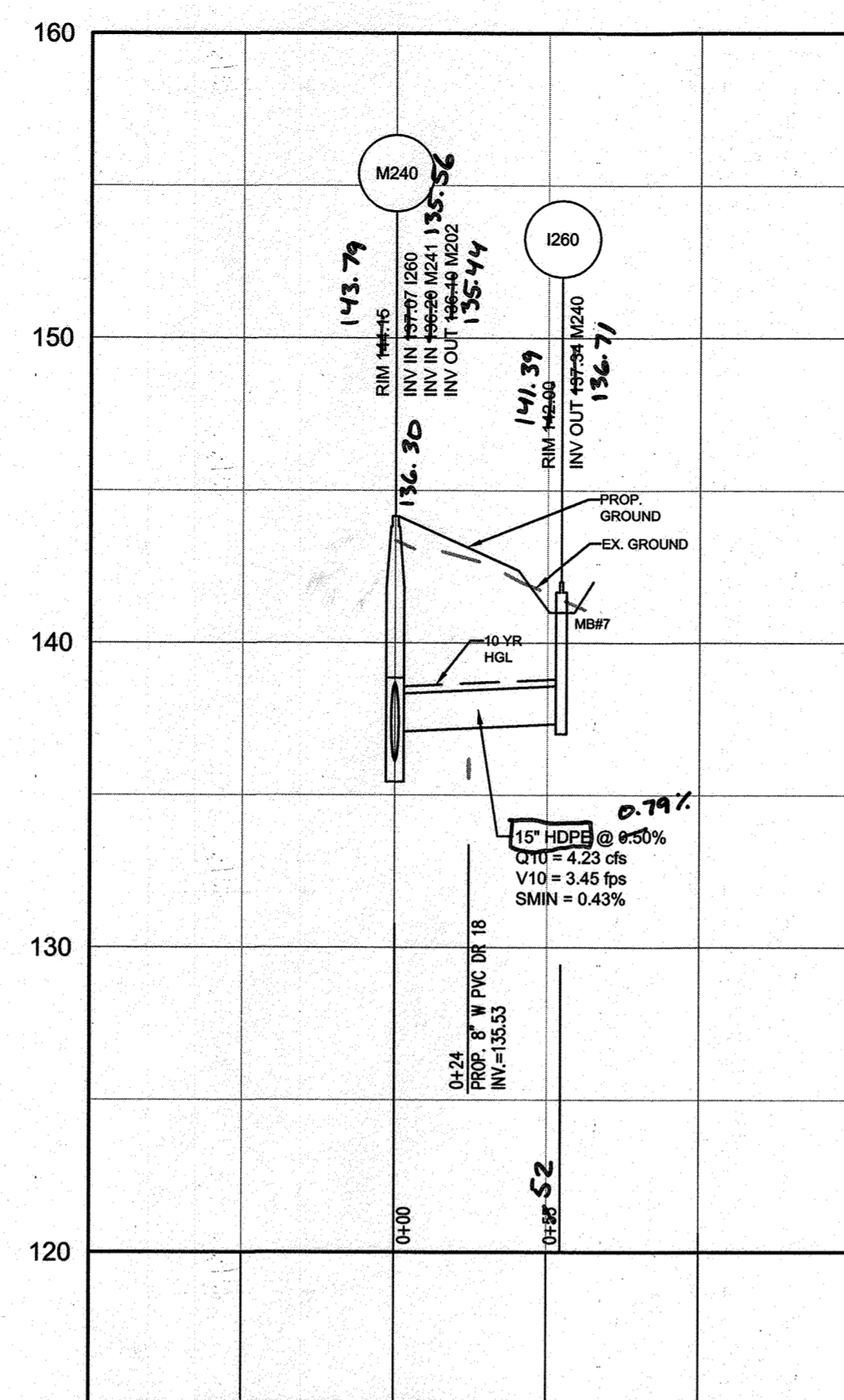
BY: [Signature]

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3888, EXPIRATION DATE: 5-15-2019

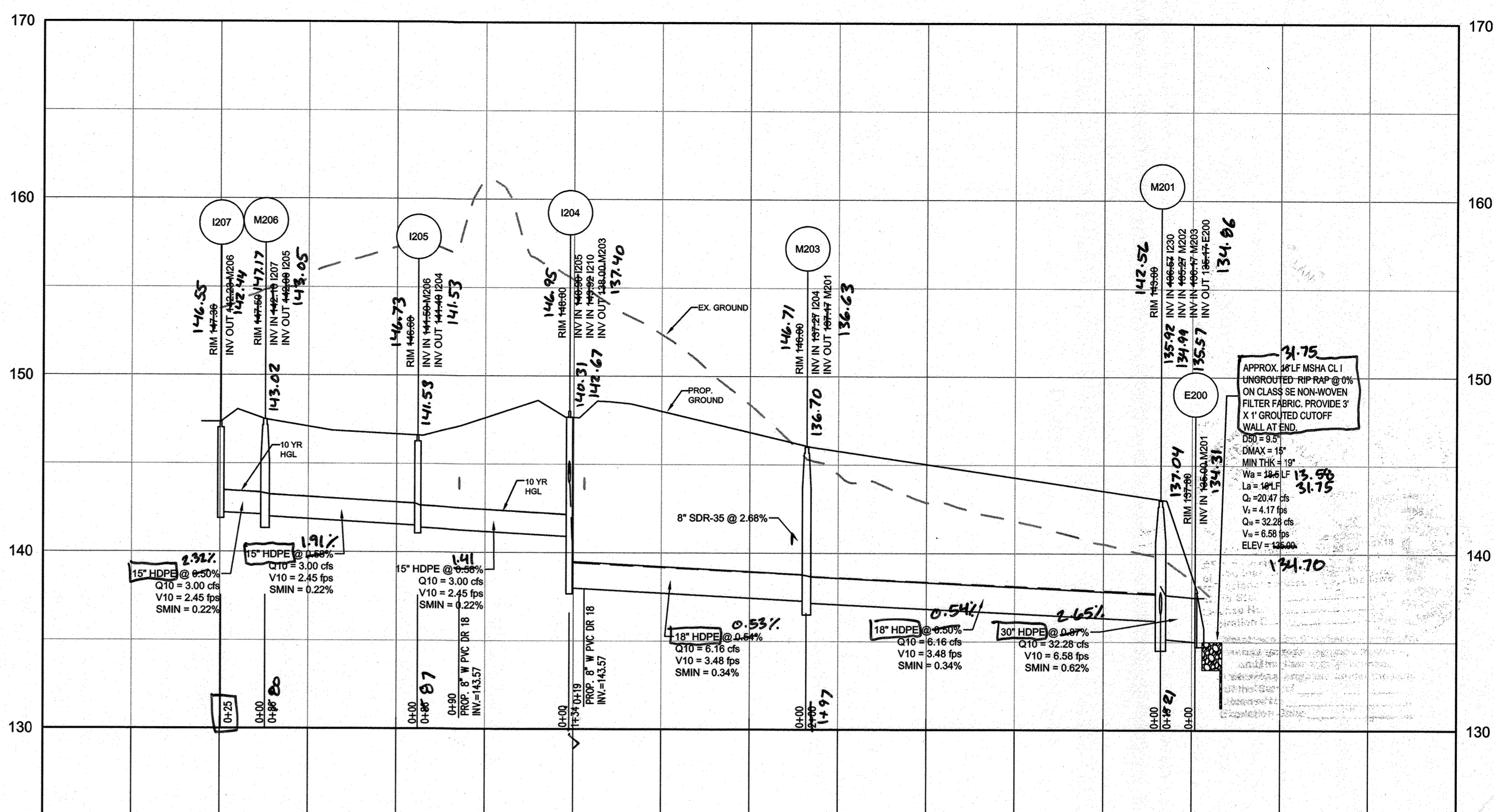
STATE OF MARYLAND PROFESSIONAL ENGINEERING SEAL: James A. Reiff, License No. 21774, Exp. Date 11/12/21



PRIVATE STORM DRAIN I250 TO M242 3+00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



PRIVATE STORM DRAIN I260 TO M240
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



PRIVATE STORM DRAIN I207 TO M201 8+00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.

[Signature]
SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE)
DATE: 3/17/18
PROFESSIONAL ENGINEER
STATE OF MARYLAND
EXPIRES: 3/31/21

AS BUILT

ID	RIM ELEVATION	INV IN (FROM)	INV OUT (TO)	TYPE	NORTHING	EASTING
CS1	140.00		131.82 (24" RCP CL IV) E300	48 L X 48 W INLET RECTANGULAR FRAME	547840.5120	1380448.5657
E100	131.72	130.00 (18" HDPE @ 1.41%) I101		18 IN HDPE FES	547769.0842	1380974.0302
E200	137.80	135.00 (30" HDPE @ 0.87%) M201		30 IN FES	547580.7244	1380556.4158
E300	133.95	131.20 (24" RCP CL IV @ 1.03%) CS1		CONC. ENDWALL, D-5.21	547586.3483	1380422.3713
I101	142.60	134.57 (15" HDPE @ 0.70%) M102	131.90 (18" HDPE) E100	YARD INLET, D-4.14	547853.5693	1381078.7085
I103	144.70	136.17 (15" HDPE @ 2.00%) M104		YARD INLET, D-4.14	548011.7715	1381053.0466
I105	147.36		142.00 (15" HDPE) M104	18" NYLOPLAST DRAIN BASIN	548165.5423	1380817.3570
I110	145.70		142.00 (15" HDPE) M104	YARD INLET, D-4.14	548160.9720	1380967.9170
I204	148.00	140.90 (15" HDPE @ 0.58%) I205 143.92 (15" HDPE @ 0.60%) I210	138.00 (18" HDPE) M203	YARD INLET, D-4.14	547878.9768	1380477.9834
I205	148.60	141.50 (15" HDPE @ 0.58%) M206	141.40 (15" HDPE) I204	18" NYLOPLAST DRAIN BASIN	547941.8181	1380536.1438
I207	147.36	142.23 (15" HDPE) M206		18" NYLOPLAST DRAIN BASIN	548004.7426	1380627.6065
I210	146.80	144.00 (15" HDPE) I204		18" NYLOPLAST DRAIN BASIN	547888.9686	1380469.9128
I230	143.50	136.83 (15" HDPE) M201		18" NYLOPLAST DRAIN BASIN	547626.0721	1380609.7696
I244	144.50	140.97 (15" HDPE) M243		WR INLET, D-4.35	547887.1162	1381090.0030
I250	141.34		138.71 (15" HDPE) M242	WR INLET, D-4.35	547717.7791	1380871.4066
I260	142.00		137.34 (15" HDPE) M240	18" NYLOPLAST DRAIN BASIN	547597.1457	1380713.1601
M102	145.30	135.04 (15" HDPE @ 0.70%) I103	134.90 (15" HDPE) I101	48" MH, G-5.12	547887.4320	1381112.0590
M104	148.30	139.30 (15" HDPE @ 2.00%) I105 141.00 (15" HDPE @ 2.46%) I110	139.30 (15" HDPE) I103	48" MH, G-5.12	548128.4870	1380946.3350
M201	143.00	136.57 (15" HDPE @ 0.52%) I230 135.27 (30" HDPE @ 0.58%) M202 135.17 (18" HDPE @ 0.50%) M203	135.17 (30" HDPE) E200	60" MH	547593.2180	1380571.3281
M202	140.70	135.57 (30" HDPE @ 0.50%) M240		60" MH	547571.2691	1380597.7141
M203	146.00	137.27 (18" HDPE @ 0.54%) I204		48" MH, G-5.12	547794.3699	1380604.7504
M206	147.50	142.10 (15" HDPE @ 0.50%) I207		48" MH, G-5.12	547748.4855	1380444.9521
M240	144.15	137.07 (15" HDPE @ 0.50%) I260 136.20 (30" HDPE @ 0.50%) M241		60" MH	547639.4670	1380678.6862
M241	144.60	136.84 (24" HDPE @ 0.78%) M242		60" 48" MH, G-5.48 13	547860.6672	1380860.9915
M242	144.60	138.26 (24" HDPE @ 0.50%) M243 138.23 (15" HDPE @ 0.50%) I250		48" MH, G-5.12	547769.3932	1380790.2742
M243	144.60	140.45 (15" HDPE @ 0.50%) I244		48" MH, G-5.12	547954.5183	1381010.0937

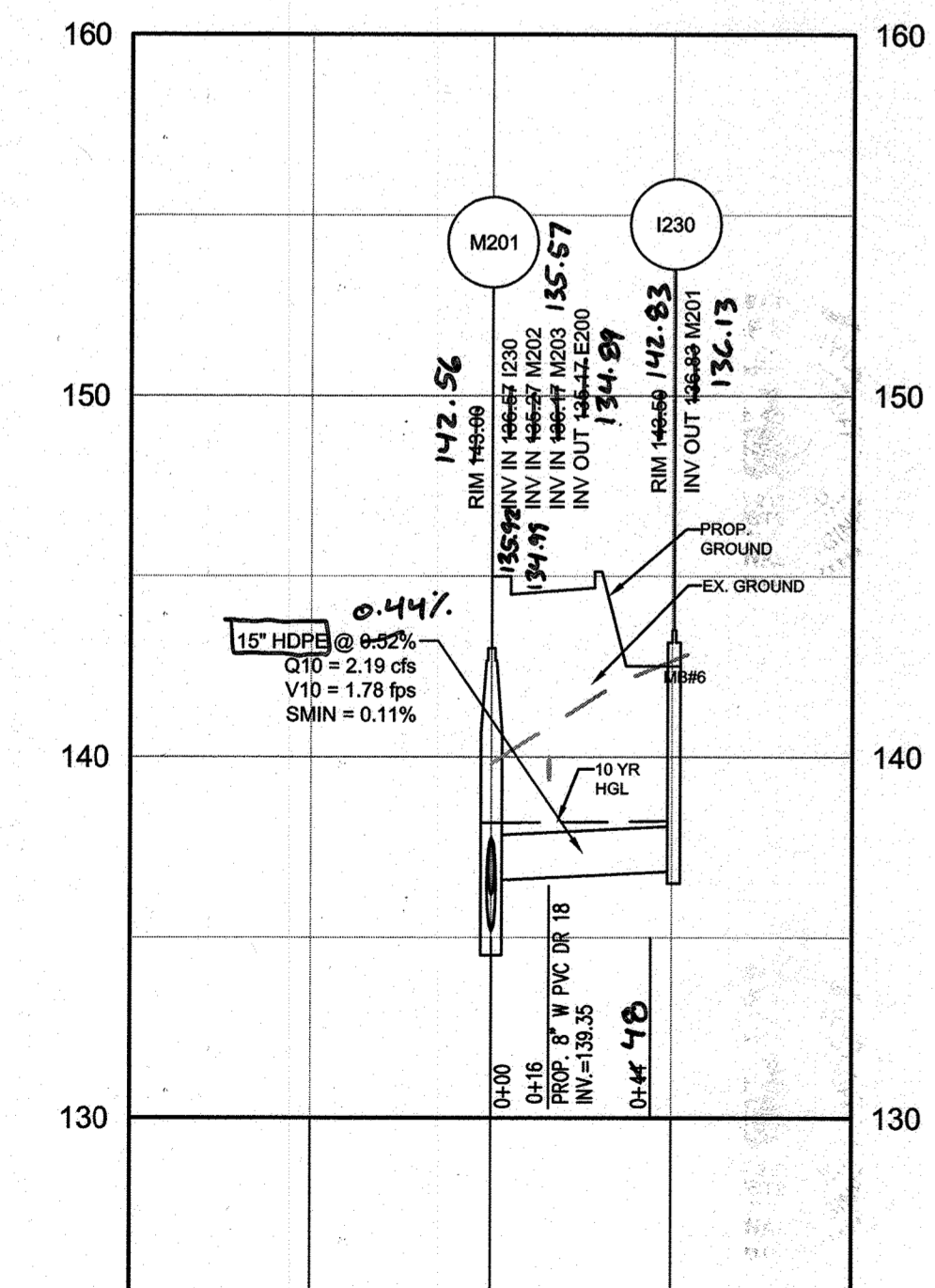
AS BUILT

ID	INV OUT	INV IN	DIAMETER (in)	MATERIAL	LENGTH (ft)	SLOPE
CS1 TO E300	131.82	131.20	24"	RCP CL IV	60'	1.03%
I101 TO E100	131.90	130.00	18"	HDPE	135'	1.41%
I103 TO M102	136.00	135.04	15"	HDPE	138'	0.70%
I105 TO M104	142.00	139.30	15"	HDPE	135'	2.00%
I110 TO M104	142.00	141.00	15"	HDPE	41'	2.46%
I204 TO M203	138.00	137.27	18"	HDPE	135'	0.54%
I205 TO I204	144.00	140.90	15"	HDPE	86'	0.58%
I210 TO I204	144.00	143.92	15"	HDPE	13'	0.60%
I230 TO M201	136.83	136.57	15"	HDPE	51'	0.52%
I244 TO M243	140.97	140.45	15"	HDPE	105'	0.50%
I260 TO M240	137.34	137.07	15"	HDPE	55'	0.50%
M102 TO I101	134.90	134.57	15"	HDPE	48'	0.70%
M104 TO I103	139.30	136.17	15"	HDPE	157'	2.00%
M201 TO E200	135.17	135.00	30"	HDPE	19'	0.87%
M201 TO M202	135.27	135.47	30"	HDPE	34'	0.58%
M201 TO M203	136.17	137.17	18"	HDPE	200'	0.50%
M206 TO I205	142.00	141.50	15"	HDPE	86'	0.58%
M206 TO I207	142.10	142.23	15"	HDPE	25'	0.50%
M240 TO M202	136.10	135.57	30"	HDPE	106'	0.50%
M241 TO M240	136.34	136.20	30"	HDPE	28'	0.50%
M242 TO M241	138.16	138.84	24"	HDPE	169'	0.78%
M243 TO M242	139.70	138.26	24"	HDPE	287'	0.50%

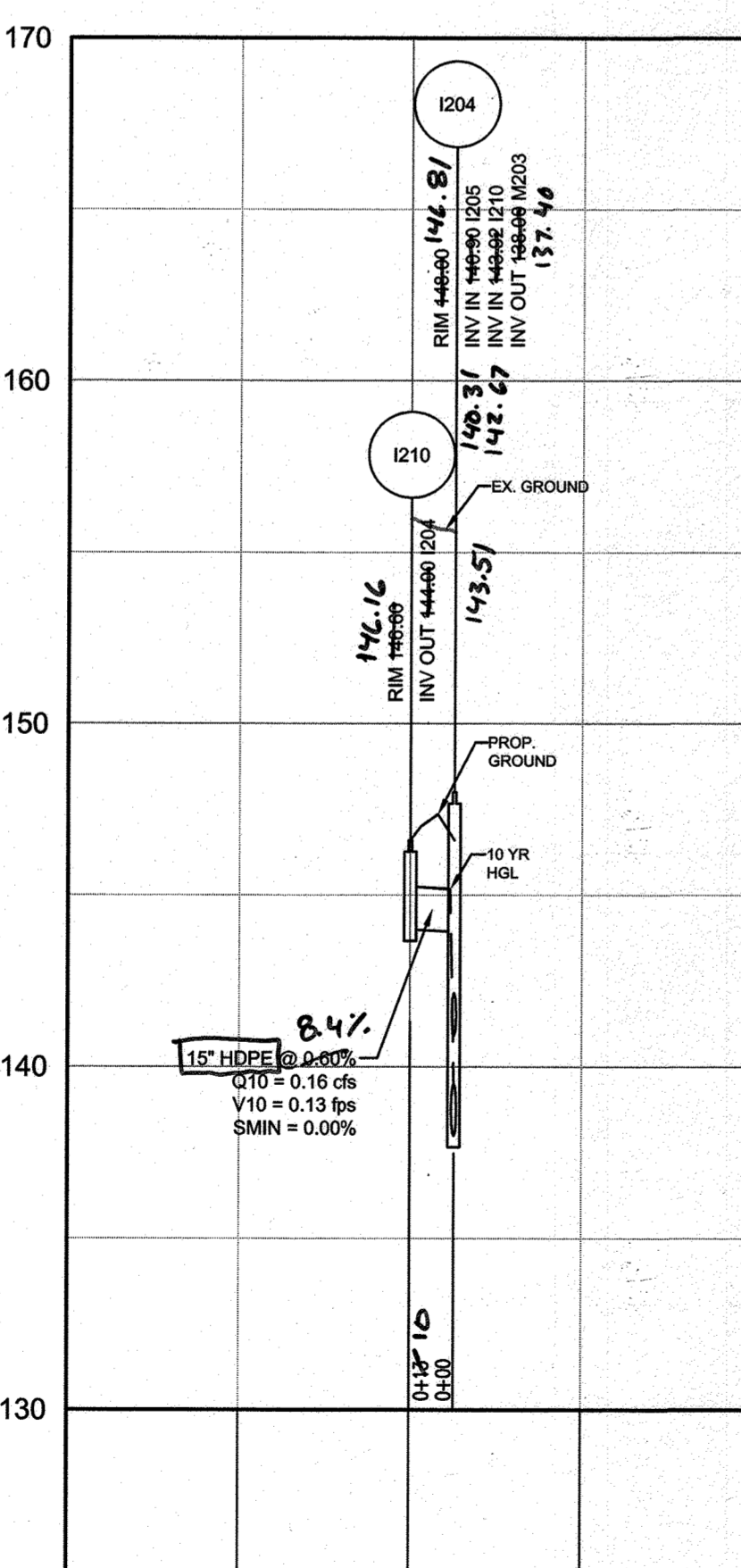
PIPE SCHEDULE

SIZE	TYPE	LINEAR FOOTAGE
4"	PVC	30
4"	PERFORATED PVC	762
15"	HDPE	1,029
18"	HDPE	465
24"	HDPE	476
30"	HDPE	190
24"	RCP CL IV	60

- NOTES:**
- ALL STRUCTURES ARE HOWARD COUNTY STANDARDS UNLESS NOTED OTHERWISE. CONTRACTOR MAY USE PRECAST STRUCTURE WHERE AVAILABLE TO MEET THE STANDARD STRUCTURE SPECIFIED.
 - STATIONS ARE GIVEN TO CENTER OF STRUCTURE AT FACE OF CURB FOR CURB INLETS AND TO CENTER OF STRUCTURE FOR ALL OTHER STRUCTURES.
 - ELEVATIONS ARE GIVEN TO TOP OF CURB FOR CURB INLETS, TOP OF GRATE FOR GRATE INLETS AND TOP OF LID FOR MANHOLES.
 - PIPE LENGTHS ARE GIVEN TO THE CENTER OF THE STRUCTURE. CONTRACTOR SHALL ADJUST LENGTH TO OBTAIN ACTUAL PIPE LENGTHS.
 - ALL CLEANOUTS LOCATED IN PAVEMENT AREAS SHALL BE TRAFFIC BEARING.
 - THE PIPE SCHEDULE IS GIVEN FOR REFERENCE. IN THE EVENT OF A DISCREPANCY BETWEEN THE PIPE SCHEDULE AND THE PLAN, THE INFORMATION ON THE PLAN SHALL TAKE PRIORITY.



PRIVATE STORM DRAIN I230 TO M202
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



PRIVATE STORM DRAIN I210 TO I204
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 3-19-18

[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 3-28-18

[Signature]
DIRECTOR
DATE: 3-29-18

DATE	NO.	REVISION	BY
1/25/18	1	ADDITION OF ADJACENT PARCEL AND STORM DRAIN REVISIONS TO I207 AND M206	ALC

DEVELOPER: DCT INDUSTRIAL
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

OWNER: DCT MEARS LLC
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

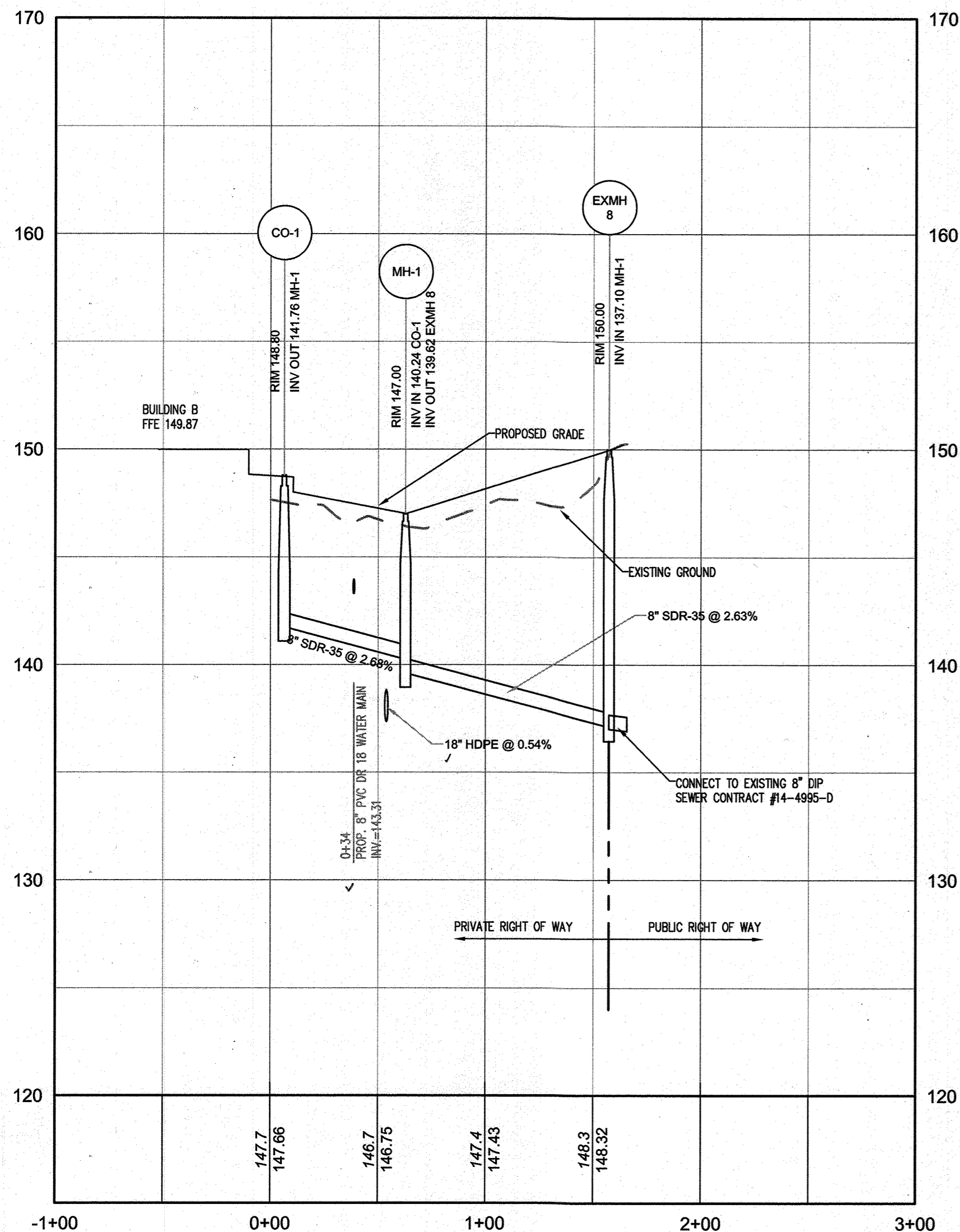
PROJECT: **TERRAPIN COMMERCE CENTER - BUILDING B**

AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
GRID NO. 11 1st ELECTION DISTRICT
7200 DORSEY RUN ROAD
ELK RIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE: **STORM DRAIN PROFILES AND SCHEDULES AS-BUILT**

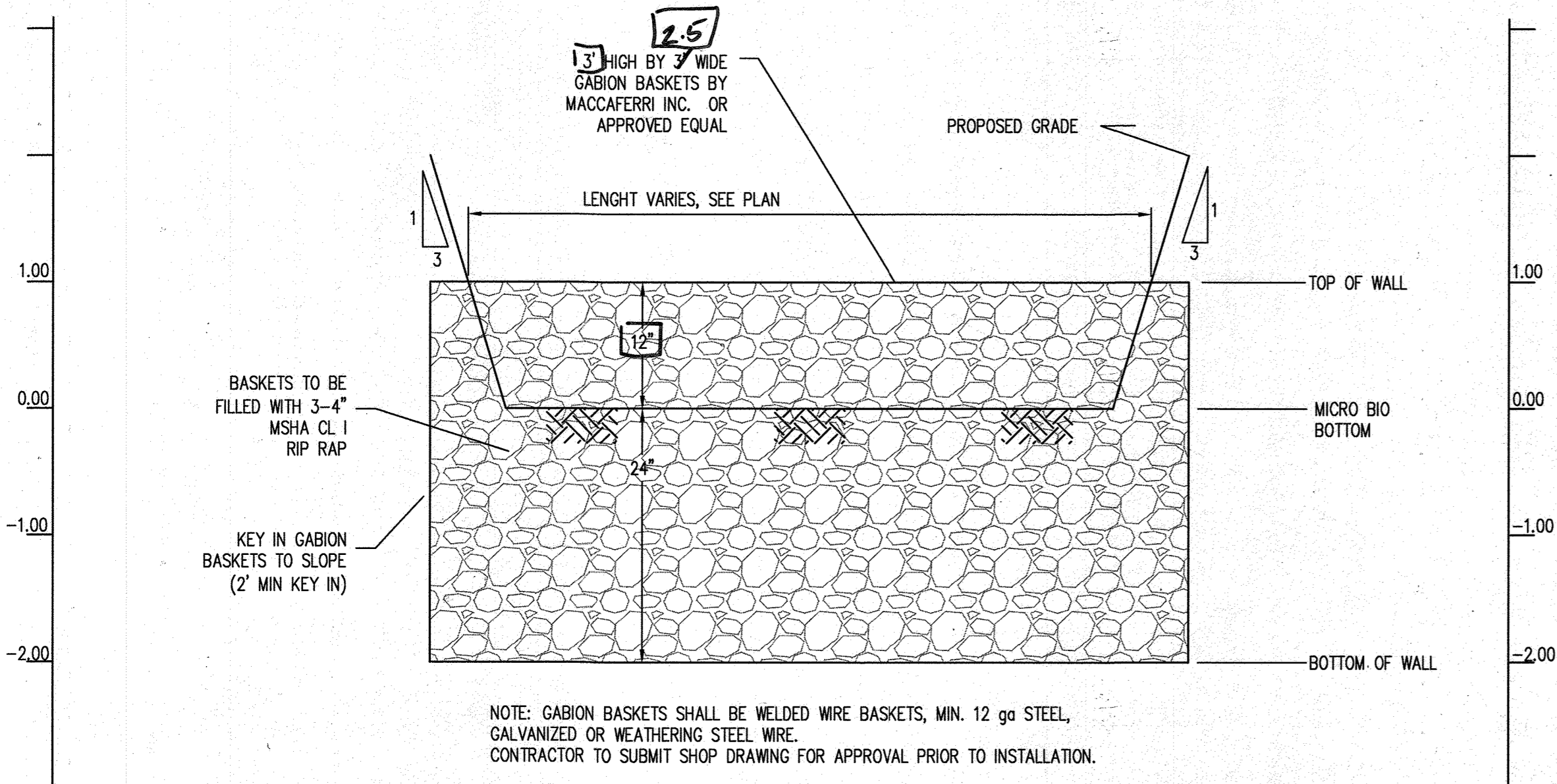
Pennoni Associates Inc.
Engineers - Surveyors - Planners
Landscape Architects
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
DRAWN BY: AGS/JSN/NTD
PROJECT NO: DCT11601
DATE: JANUARY 25, 2018
SCALE: AS SHOWN
DRAWING NO. 17 OF 36

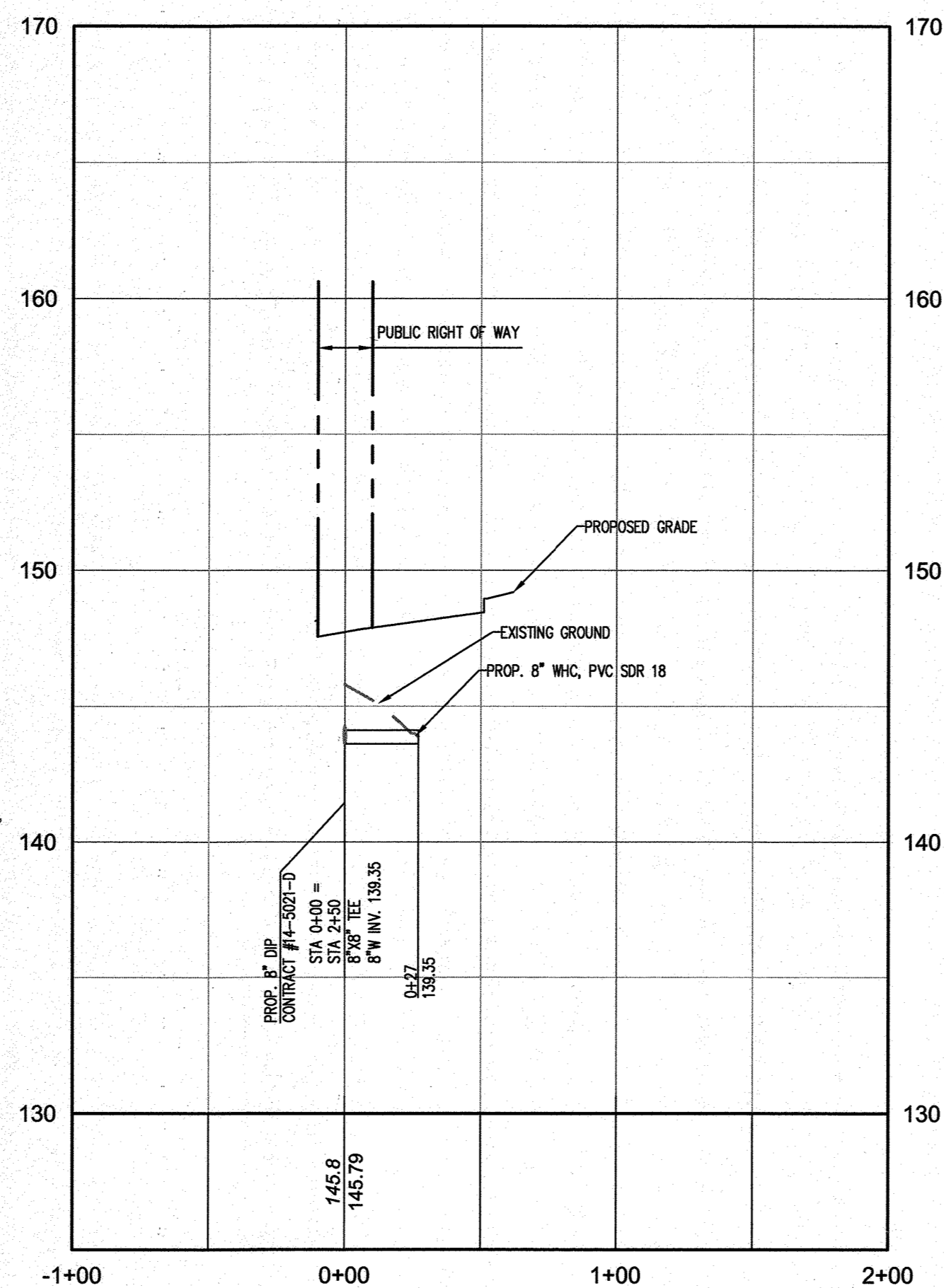


PRIVATE SEWER BLDG B 7+00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

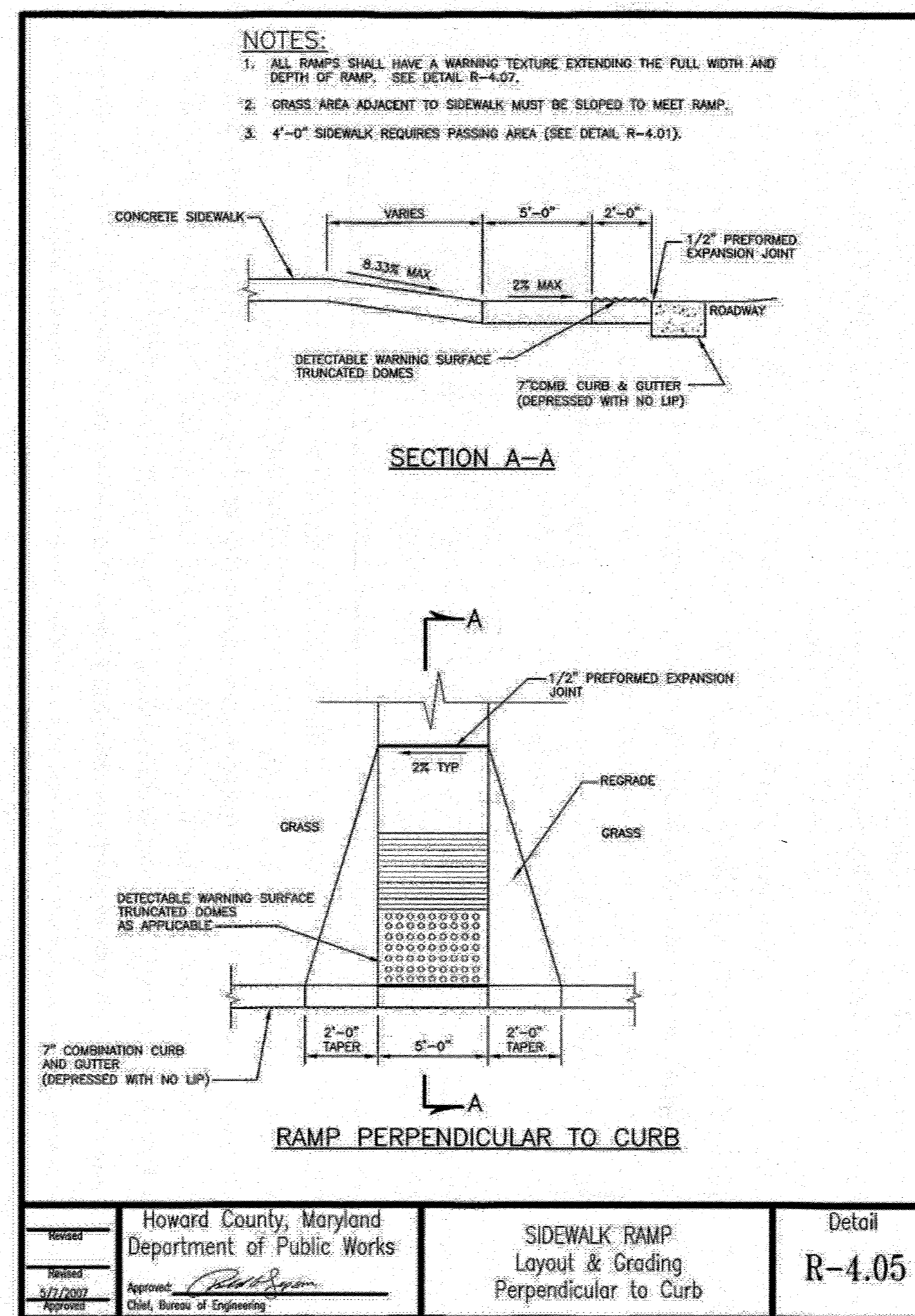
PRIVATE SEWER SCHEDULE					
ID	RIM ELEVATION	INV IN (FROM)	INV OUT (TO)	TYPE	EASTING
CO-1	148.80		141.76 (8" SDR-35) MH-1	CLEANOUT	547746.2139 1380493.3128
EXMH 8	150.00	137.10 (8" SDR-35 @ 2.63%) MH-1	48" MH		547825.2989 1380368.9859
MH-1	147.00	140.24 (8" SDR-35 @ 2.68%) CO-1	139.62 (8" SDR-35) EXMH 8	48" MH	547758.5764 1380437.9847



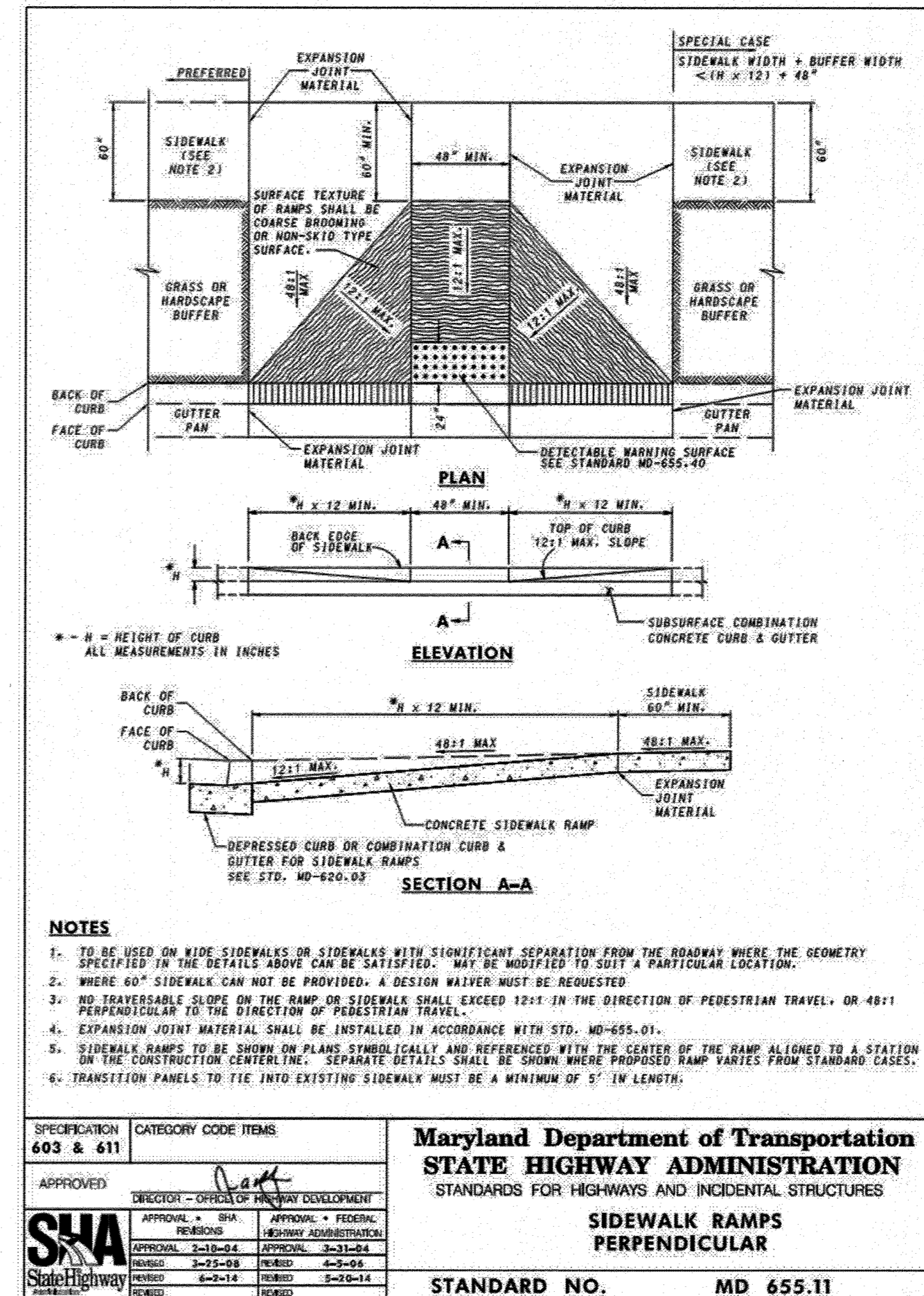
SWM POND GABION WALL DETAIL
SCALE: HOR: 1"=10'
VERT: 1"=1'



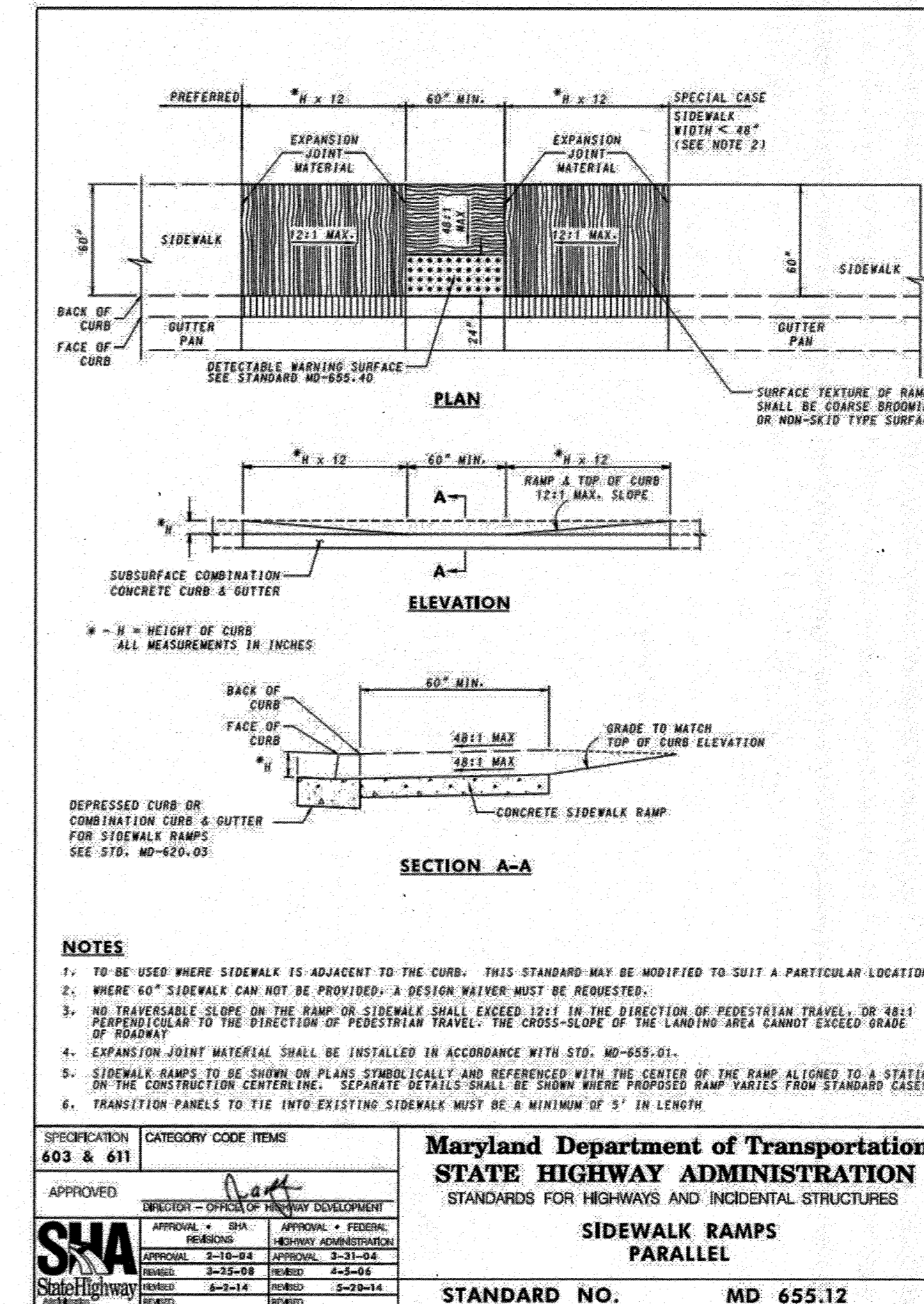
PRIVATE WATER LINE 3+00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



2 PERPENDICULAR SIDEWALK RAMPS
18 NOT TO SCALE



1 PERPENDICULAR SIDEWALK RAMPS
18 NOT TO SCALE



3 PARALLEL SIDEWALK RAMPS
18 NOT TO SCALE

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITY SHOWN ON THIS PLANS WERE CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS MEETS THE APPROVED PLANS AND SPECIFICATIONS, EXCEPT AS NOTED IN RSD ON THESE DRAWINGS.

JAMES A. RUFF 21774
PRINTED NAME MD. P.E. NO.
DATE 11.12.20

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 **21774 MD**.
Expiration Date: 11/12/21

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Paul Edmund 4-8-17
CHIEF, DEVELOPMENT ENGINEERING DIVISION JR DATE

Walter Wood 9-21-17
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Walter Wood 9-21-17
DIRECTOR DATE

DATE	NO.	REVISION	BY

DEVELOPER: DCT INDUSTRIAL
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-9020

OWNER: DCT MEARS LLC
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-9020

PROJECT: **TERRAPIN COMMERCE CENTER - BUILDING B**

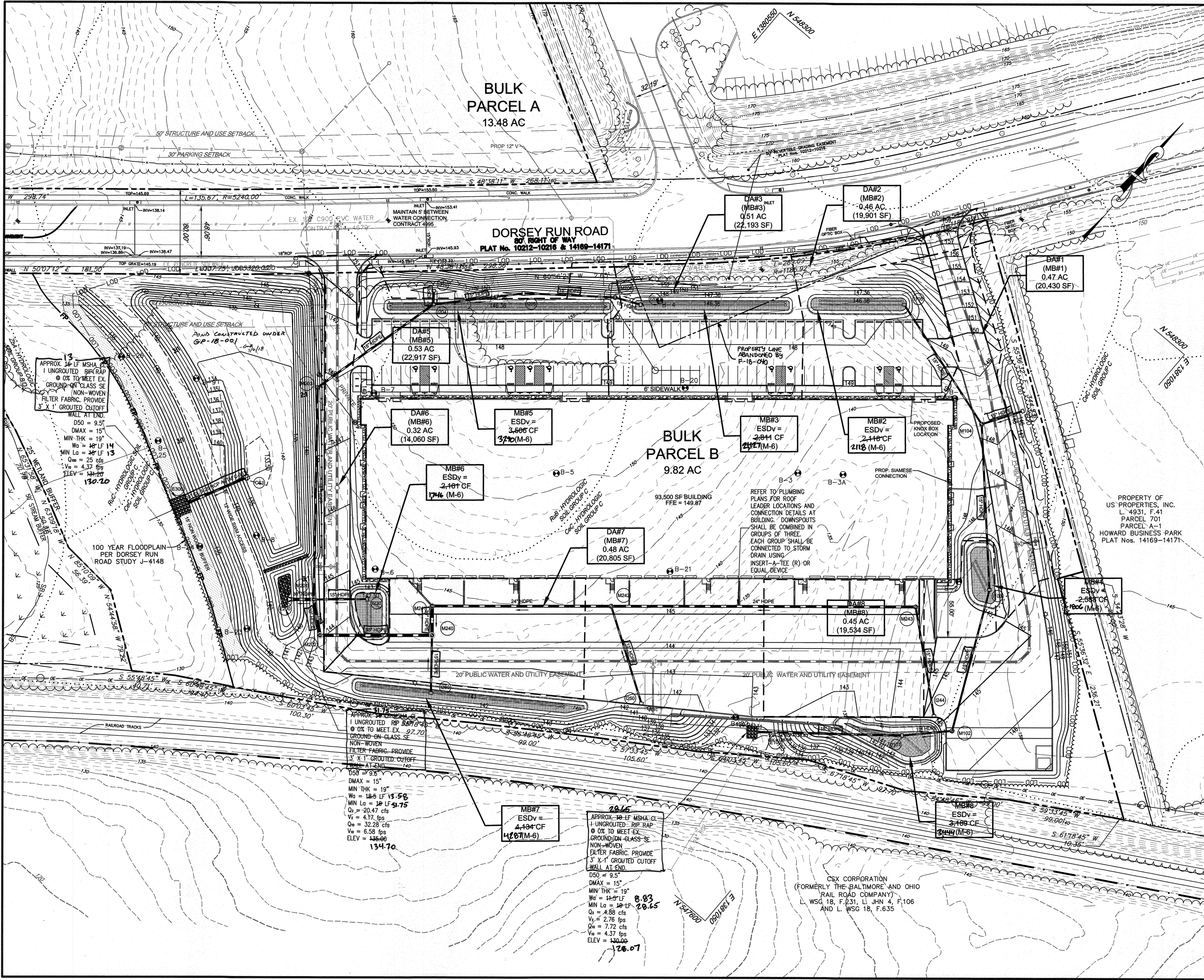
AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
GRID NO. 11 1st ELECTION DISTRICT
7200 DORSEY RUN ROAD
ELK RIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE: **PRIVATE UTILITY PROFILES AND SCHEDULES AS-BUILT**

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
DRAWN BY: AGSJSUN/NTD
PROJECT NO: DCT1801
DATE: AUGUST 1, 2017
SCALE: AS SHOWN
DRAWING NO. 18 OF 36



LEGEND

- PROPERTY LINE AND RIGHT-OF-WAY: ---
- EXISTING 1' CONTOUR: - - - - - 154
- EXISTING 5' CONTOUR: - - - - - 155
- EXISTING TREE LINE: ---
- EXISTING SOILS: --- Rub
- EXISTING WETLANDS: ---
- EXISTING WETLAND BUFFER: --- WB
- EXISTING WATER: ---
- EXISTING SEWER: ---
- EXISTING COMMUNICATIONS: ---
- EXISTING ELECTRICAL: ---
- EXISTING STORM DRAIN: ---
- PROPOSED 1' CONTOUR: - - - - - 164
- PROPOSED 5' CONTOUR: - - - - - 165
- PROPOSED MICRO-BIORETENTION FACILITY: [Symbol]
- PROPOSED STORM DRAIN: ---
- PROPOSED WATER: ---
- PROP. CONCRETE SIDEWALK: [Symbol]
- PROPOSED TREE LINE: ---
- SOIL BORING: [Symbol] B-14
- DRAINAGE AREA: ---

0 40' 80'

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER: [Signature] DATE: 2/17/24
 PROFESSIONAL ENGINEER, LICENSE NO. 21774

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] DATE: 3-19-18
 CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE: 3-28-18
 DIRECTOR: [Signature] DATE: 3-29-18

DATE	NO.	REVISION	BY
1/25/18	1	ADDITION OF ADJACENT PARCEL, EXPANSION OF PARKING LOT, SWM & GRADING REVISIONS	ALC

DEVELOPER: DCT INDUSTRIAL, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020

OWNER: DCT MEARS LLC, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020

PROJECT: **TERRAPIN COMMERCE CENTER - BUILDING B**

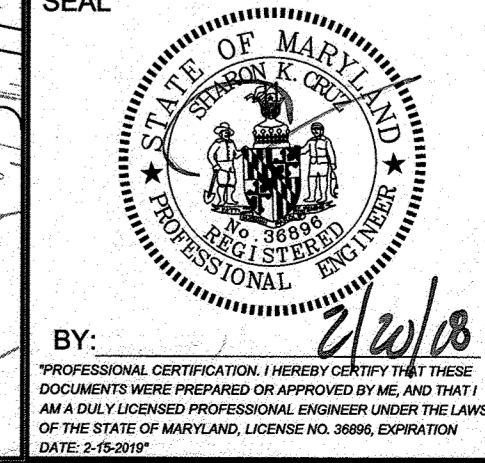
AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2, GRID NO. 11 1st ELECTION DISTRICT, 7200 DORSEY RUN ROAD, ELKCRIDGE, MARYLAND 21075, HOWARD COUNTY, MARYLAND

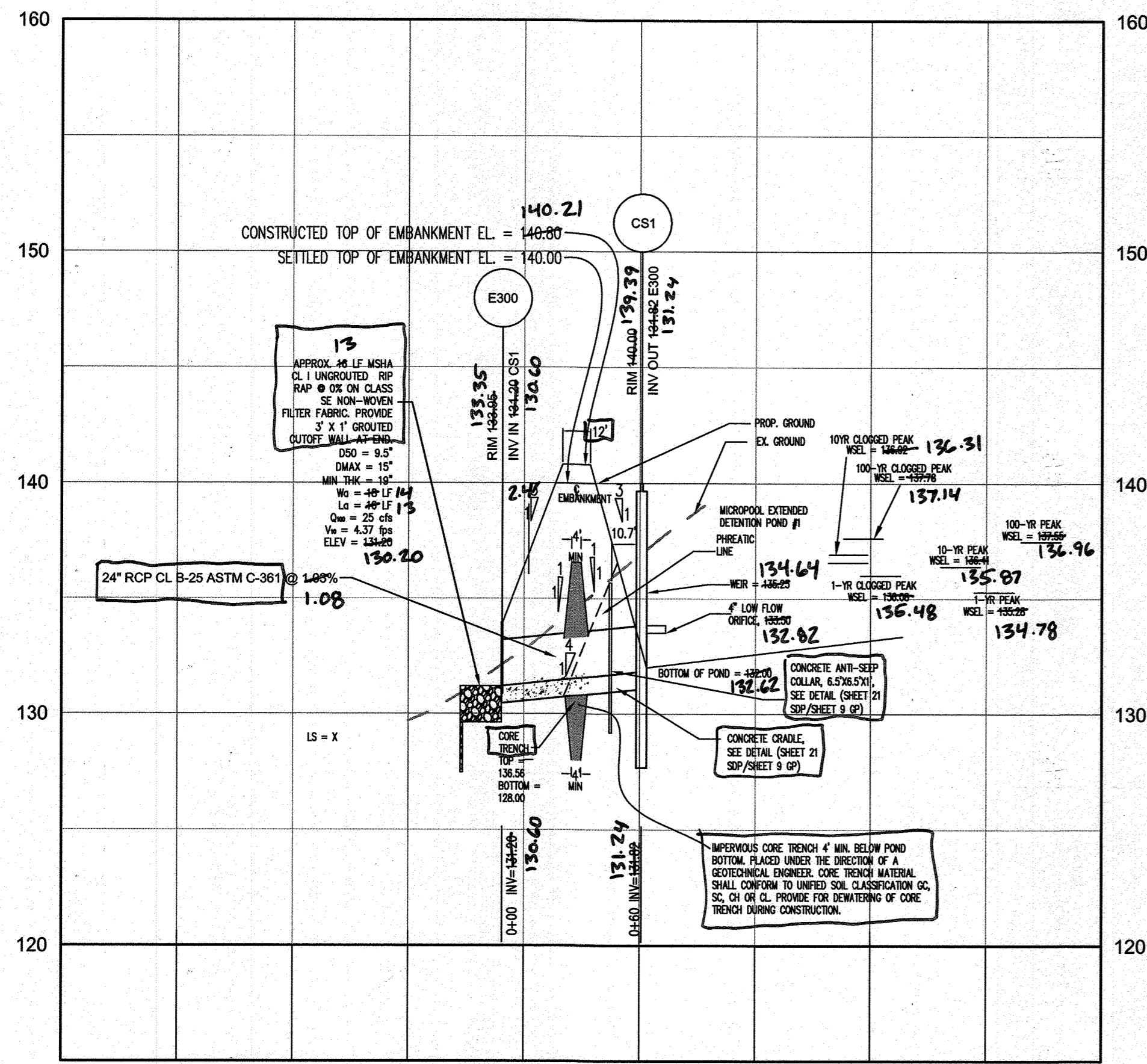
TITLE: **STORMWATER MANAGEMENT PLAN AS-BUILT**

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects

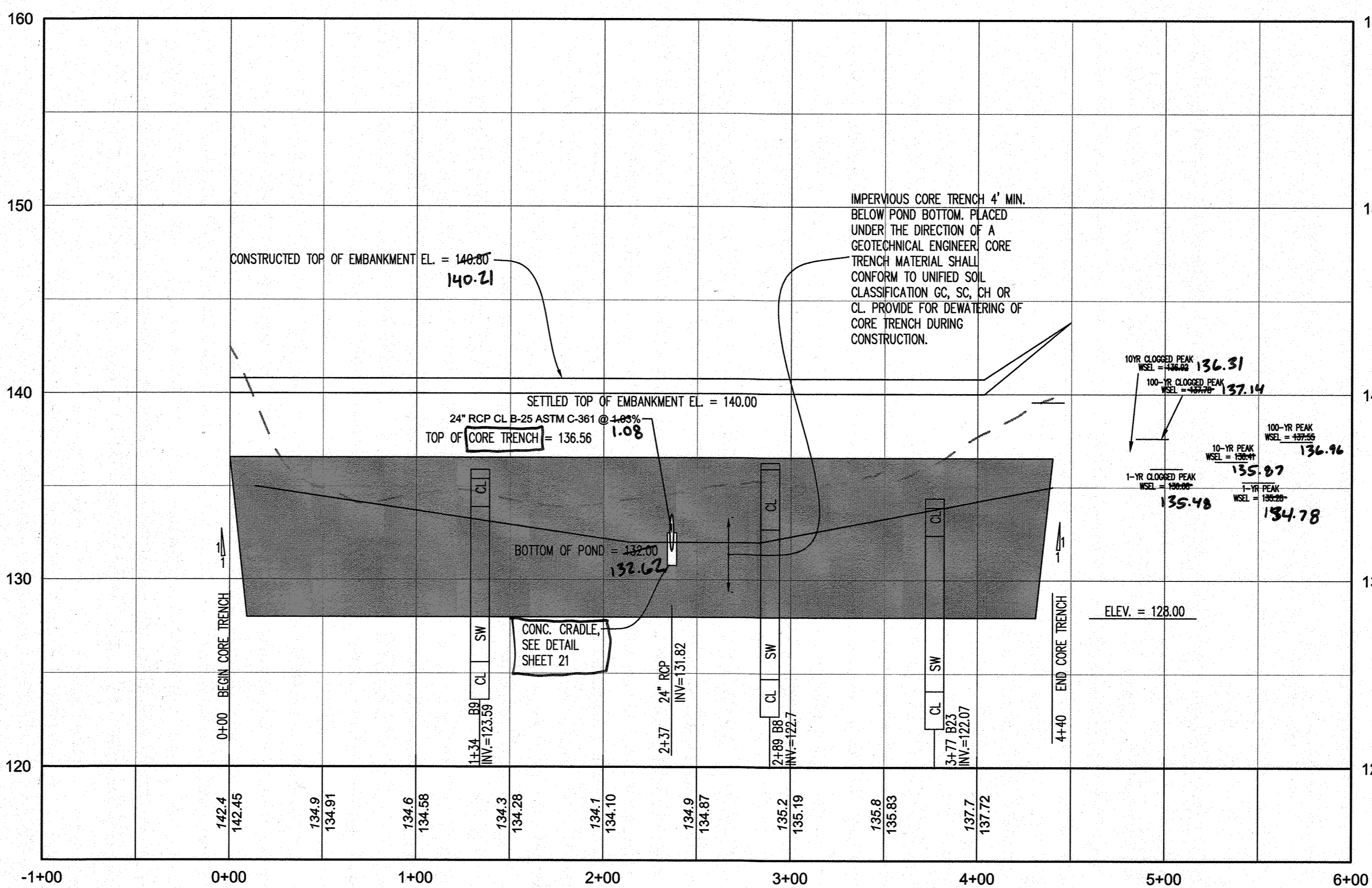
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
 DRAWN BY: AGS/JSN/NTD
 PROJECT NO: DCT1601
 DATE: JANUARY 25, 2018
 SCALE: 1" = 40'
 DRAWING NO. 19 OF 36

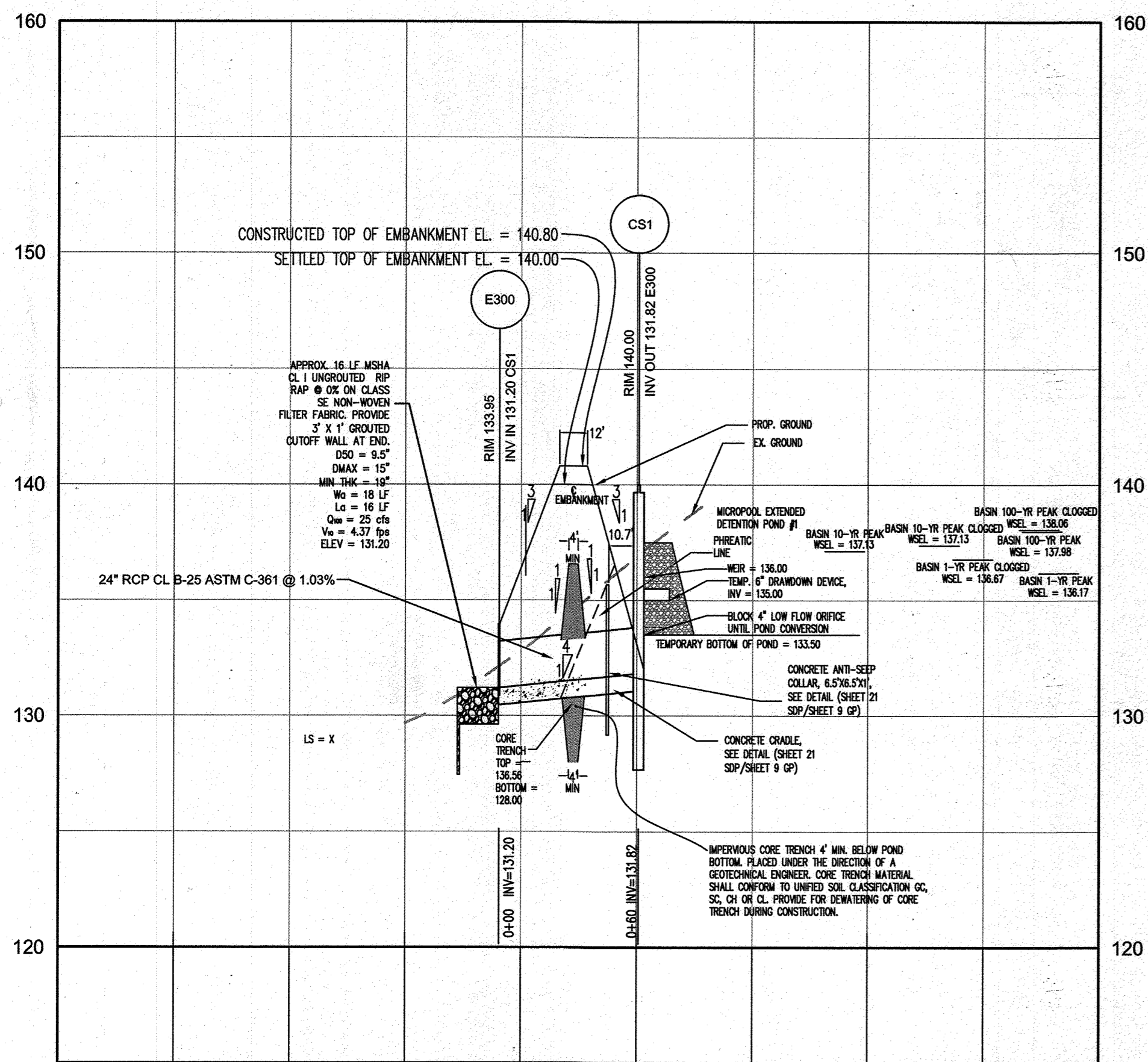




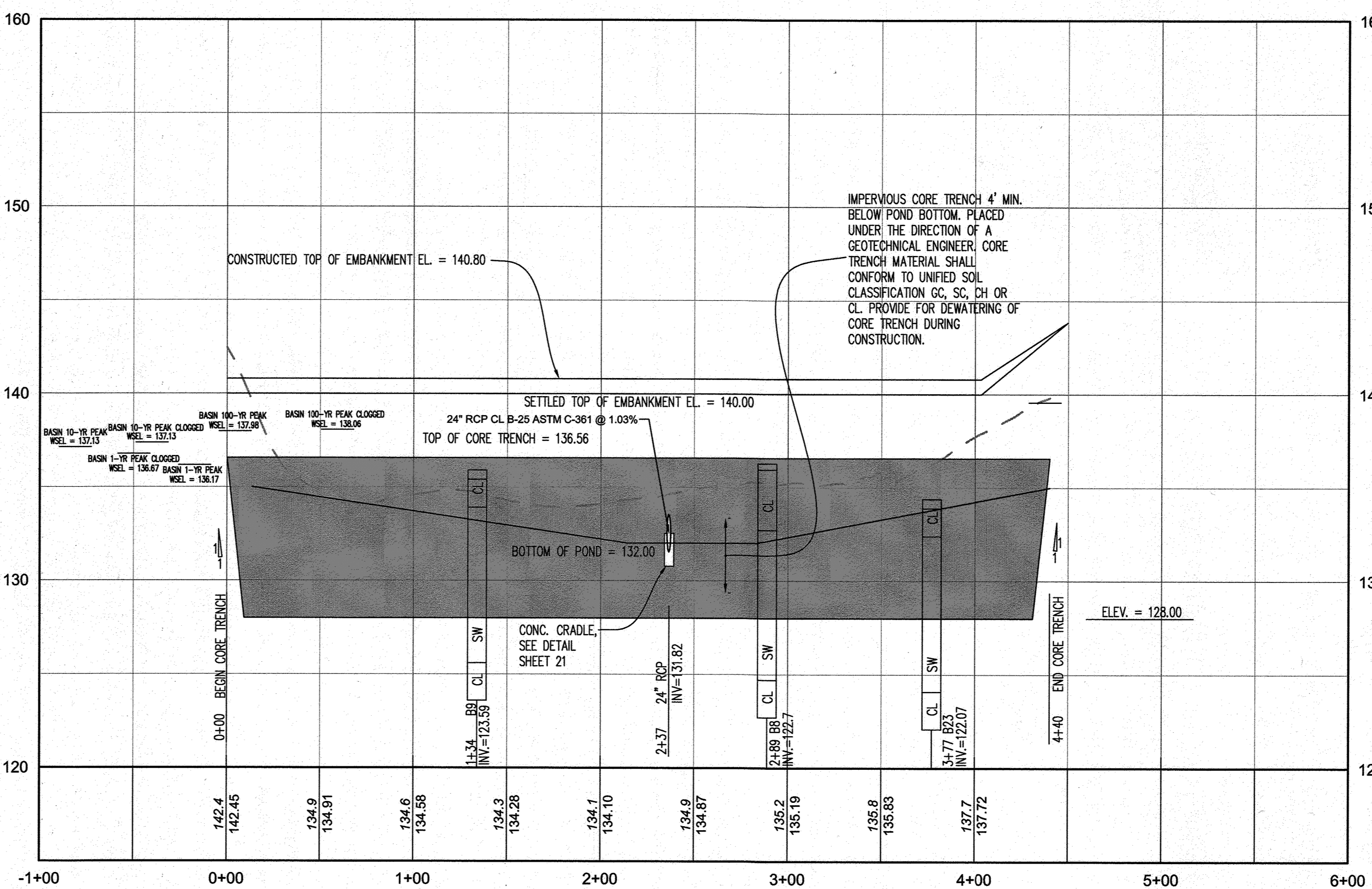
POND OUTFALL
CS1 TO E100 3+00
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



POND
DAM CENTERLINE 7+00
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



BASIN OUTFALL
CS1 TO E100 3+00
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



BASIN
DAM CENTERLINE 7+00
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

[Signature]
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE 2/17/17
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND AND LICENSE NO. 21774 EXPIRATION DATE 11/18/21

ENGINEER'S CERTIFICATE
 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. 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] 8/22/17
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE
DEVELOPER'S CERTIFICATE
 I HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR EROSION 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 APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I SHALL ENGAGE A MARYLAND 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 CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."
[Signature] 8/22/17
 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE

THIS PLAN IS APPROVED FOR SMALL POND CONSTRUCTION, AND SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 8/22/17
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 9-8-17
 CHIEF, DEVELOPMENT ENGINEERING DIVISION, DATE
[Signature] 9-21-17
 CHIEF, DIVISION OF LAND DEVELOPMENT, DATE
[Signature] 9-21-17
 DIRECTOR, DATE

DATE	NO.	REVISION	BY
------	-----	----------	----

DEVELOPER: DCT INDUSTRIAL, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020

OWNER: DCT MEARS LLC, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020

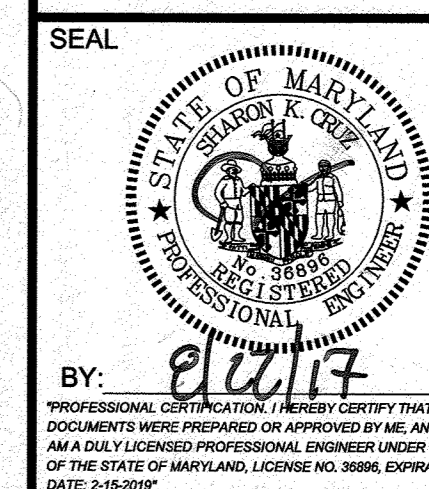
PROJECT: **TERRAPIN COMMERCE CENTER - BUILDING B**

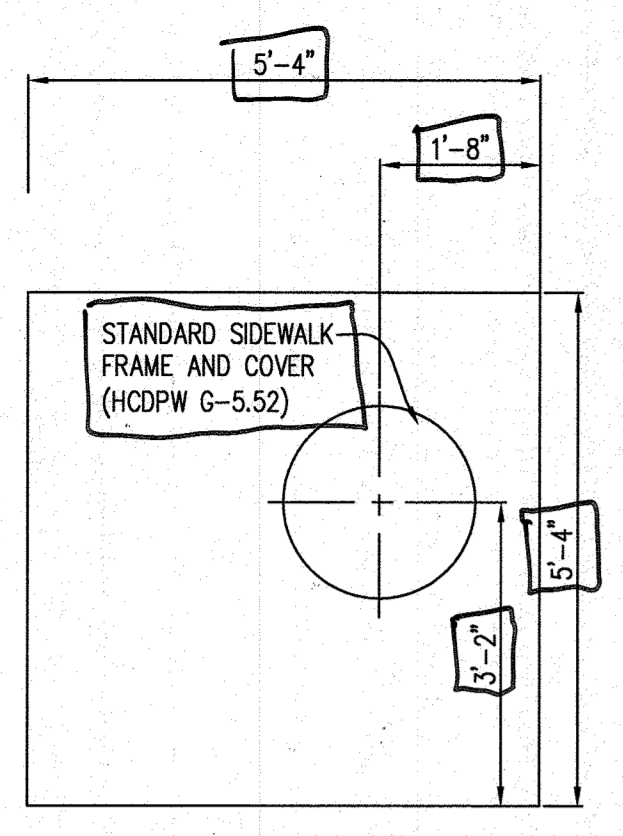
AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2, GRID NO. 11 1st ELECTION DISTRICT, 7200 DORSEY RUN ROAD, ELKRIDGE, MARYLAND 21075, HOWARD COUNTY, MARYLAND

TITLE: **STORMWATER MANAGEMENT POND/BASIN DETAILS AS-BUILT**

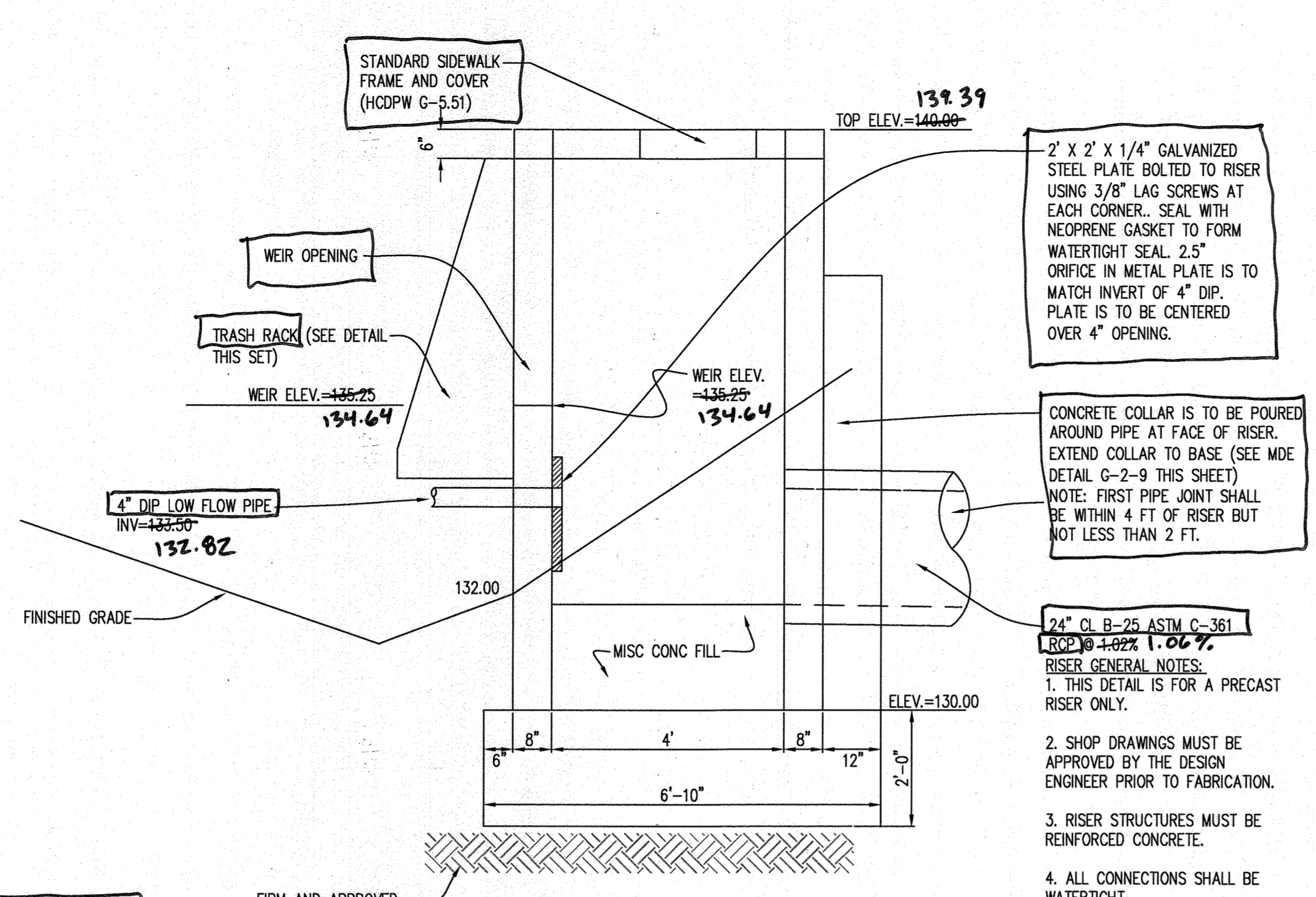
Pennonni Pennonni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
 DRAWN BY: AGS/JSN/NTD
 PROJECT NO: DCT11601
 DATE: AUGUST 1, 2017
 SCALE: AS SHOWN
 DRAWING NO. 20 OF 36

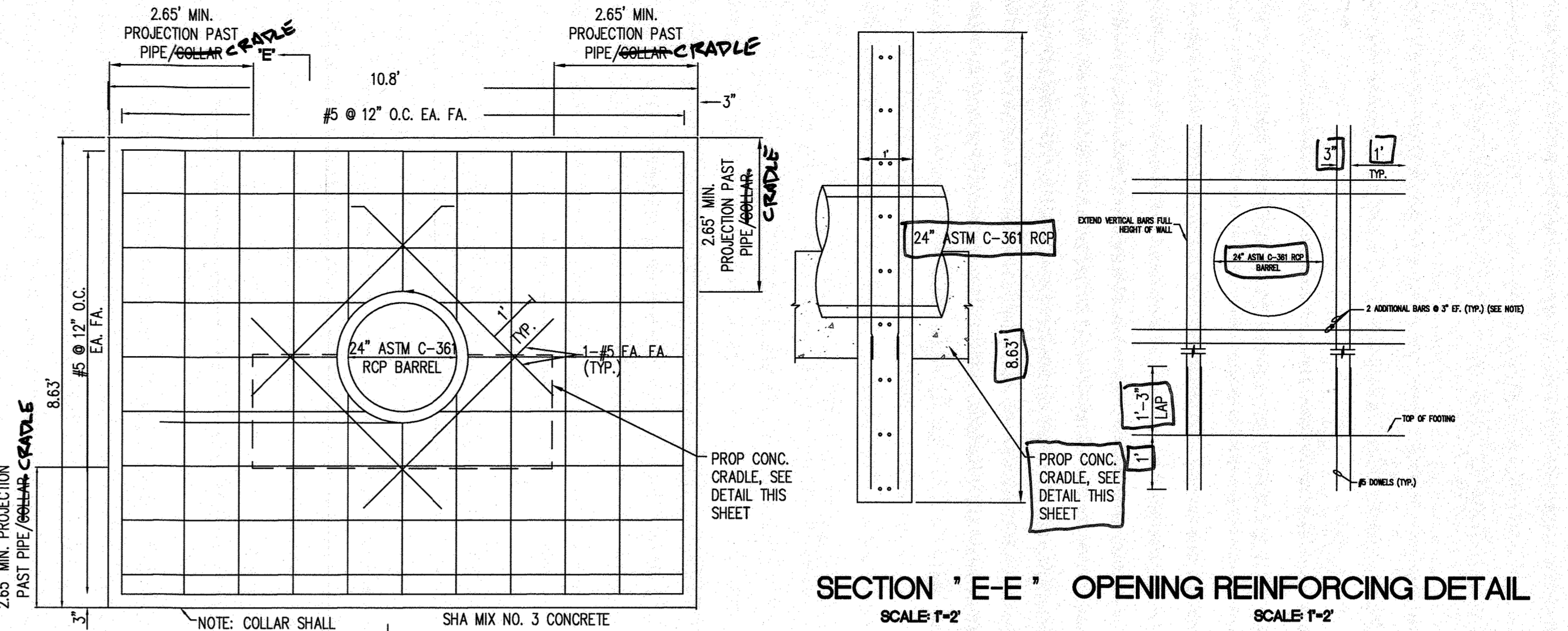




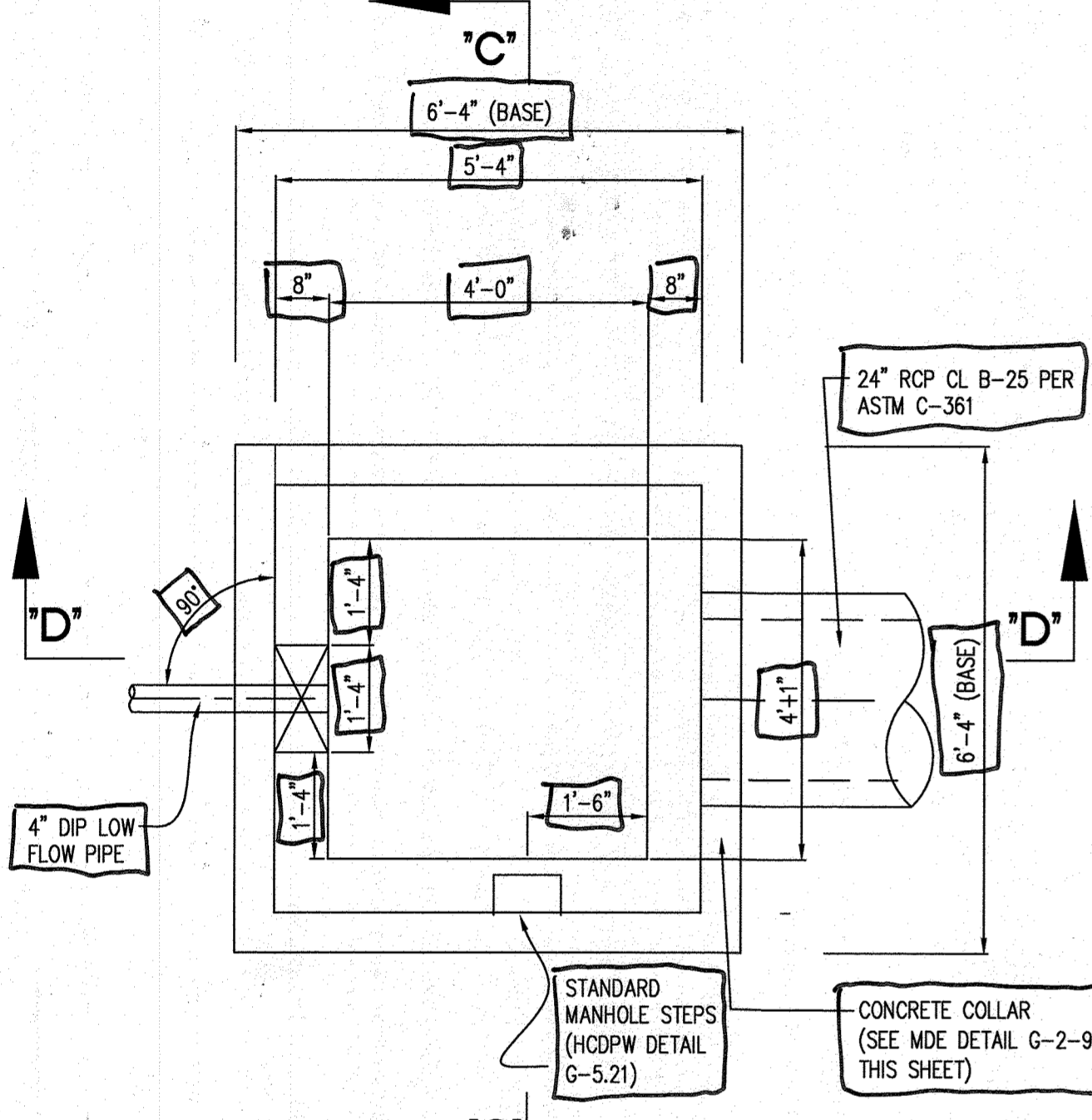
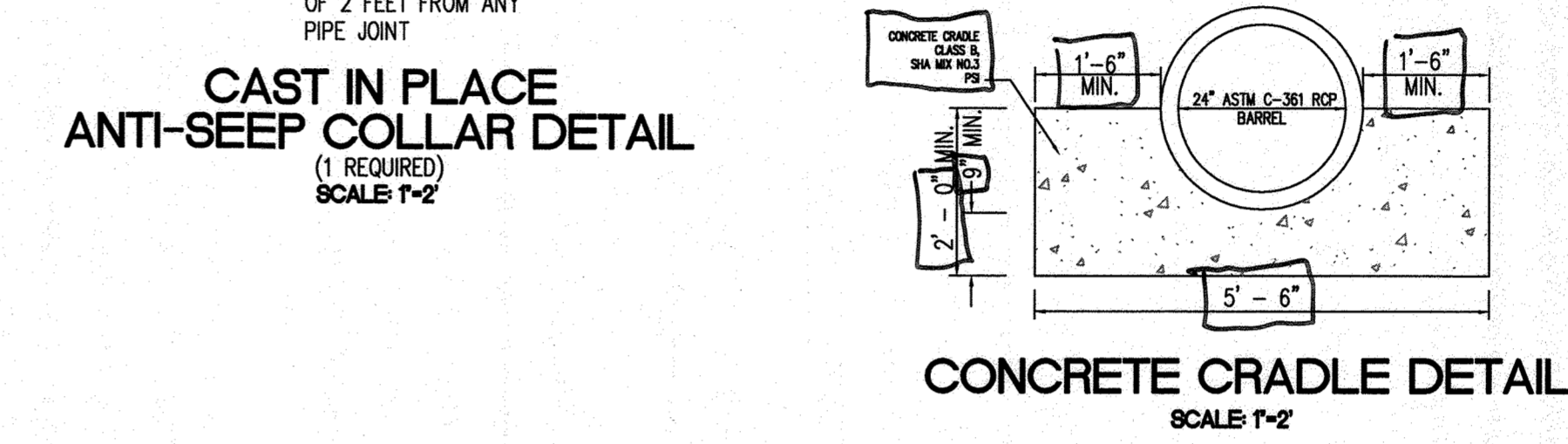
TOP SLAB
SCALE 1/2



SECTION 'D-D'
SCALE 1/2

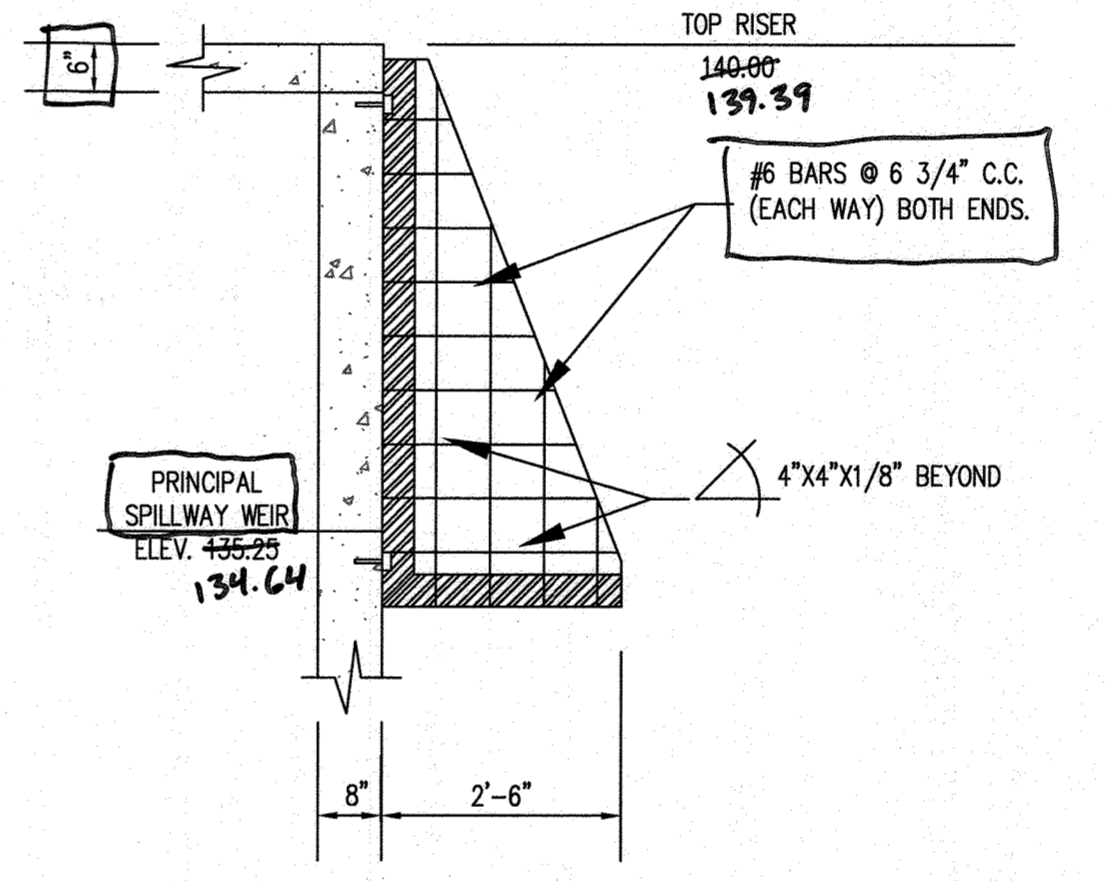


SECTION 'E-E' OPENING REINFORCING DETAIL
SCALE 1/2

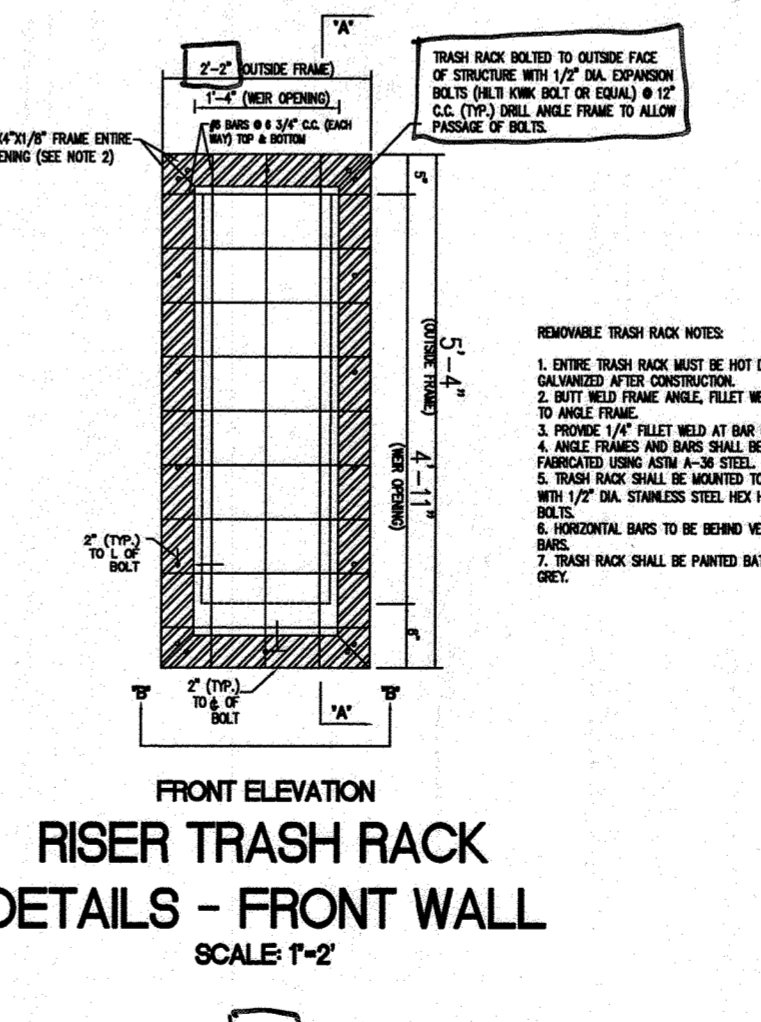
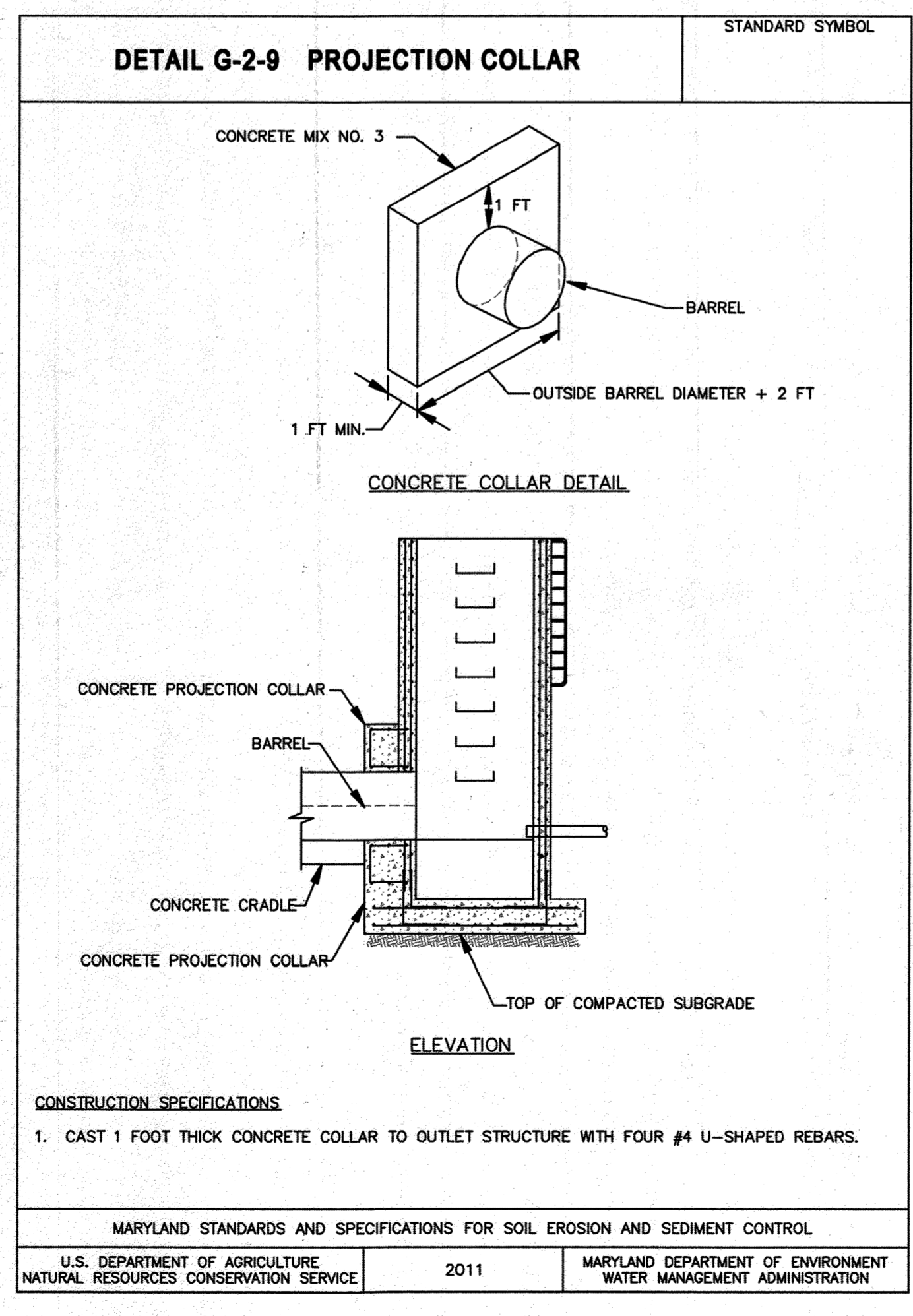


PLAN SECTION TOP SLAB REMOVED
SCALE 1/2

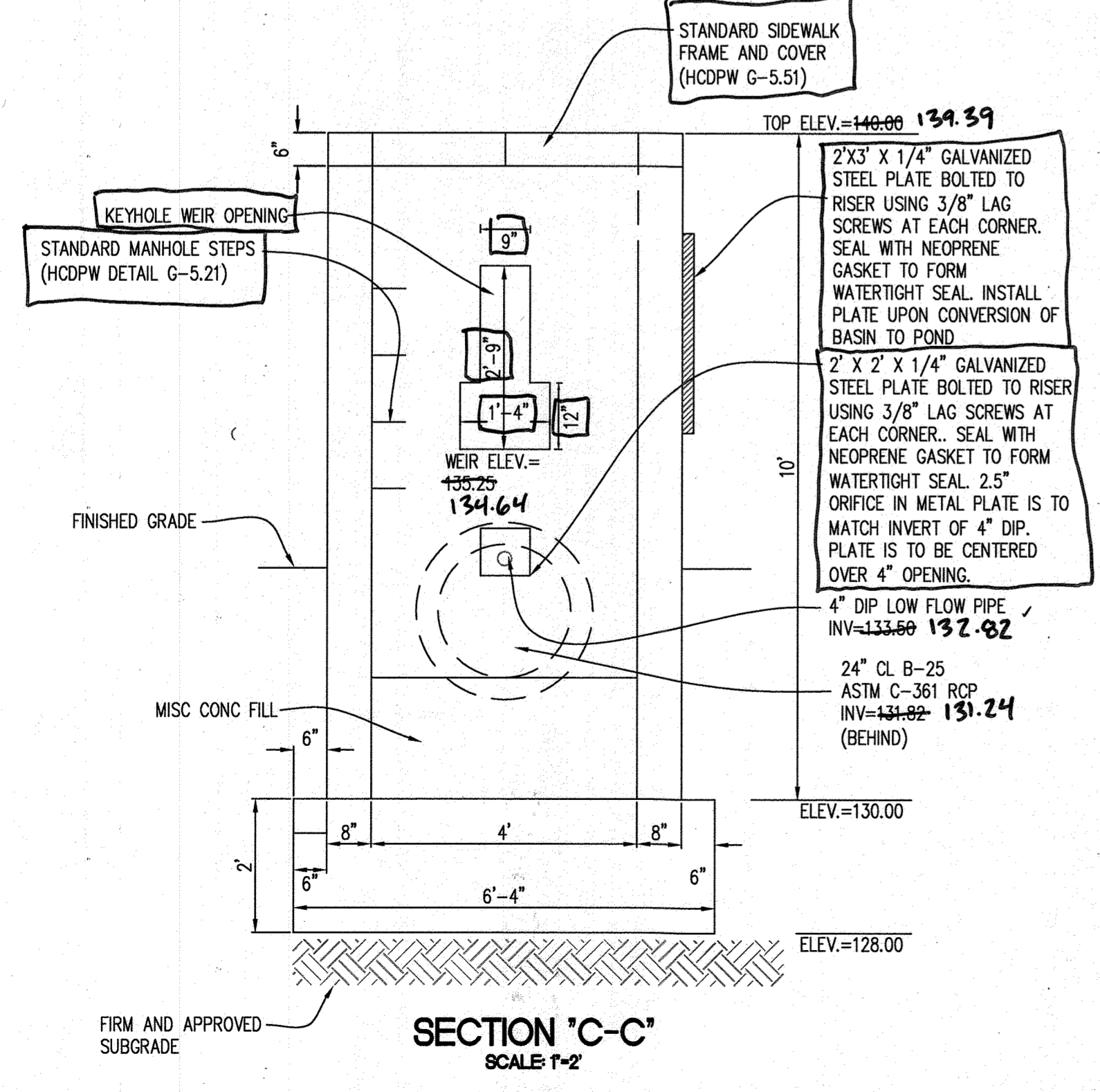
POND 1 CONCRETE RISER DETAIL STRUCTURE CS1
SCALE 1/2



SIDE VIEW SECTION 'A-A'
SCALE 1/2



FRONT ELEVATION RISER TRASH RACK DETAILS - FRONT WALL
SCALE 1/2



SECTION 'C-C'
SCALE 1/2

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS 'AS-BUILT' PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER: *[Signature]* DATE: 9-8-17
 PE # 21774

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. 21774, EXPIRATION DATE: 11-10-21.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION JR: *[Signature]* DATE: 9-21-17
 CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 9-21-17
 DIRECTOR: *[Signature]* DATE: 9-21-17

DATE	NO.	REVISION	BY

DEVELOPER: DCT INDUSTRIAL, 12011 GUILDFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-9020

OWNER: DCT MEARS LLC, 12011 GUILDFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-9020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

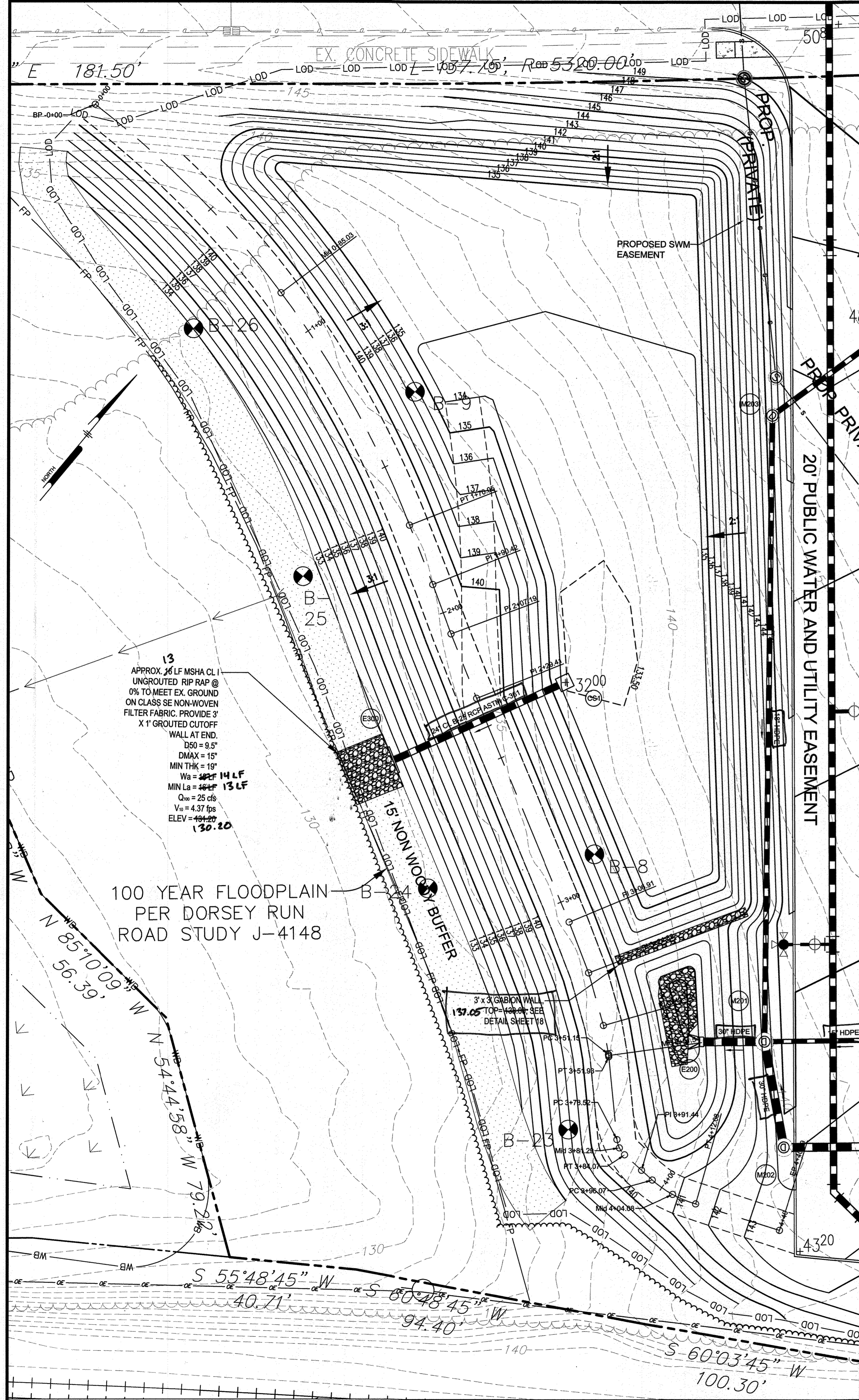
AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2, GRID NO. 11 1st ELECTION DISTRICT, 7200 DORSEY RUN ROAD, ELKBRIDGE, MARYLAND 21075, HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS AS-BUILT

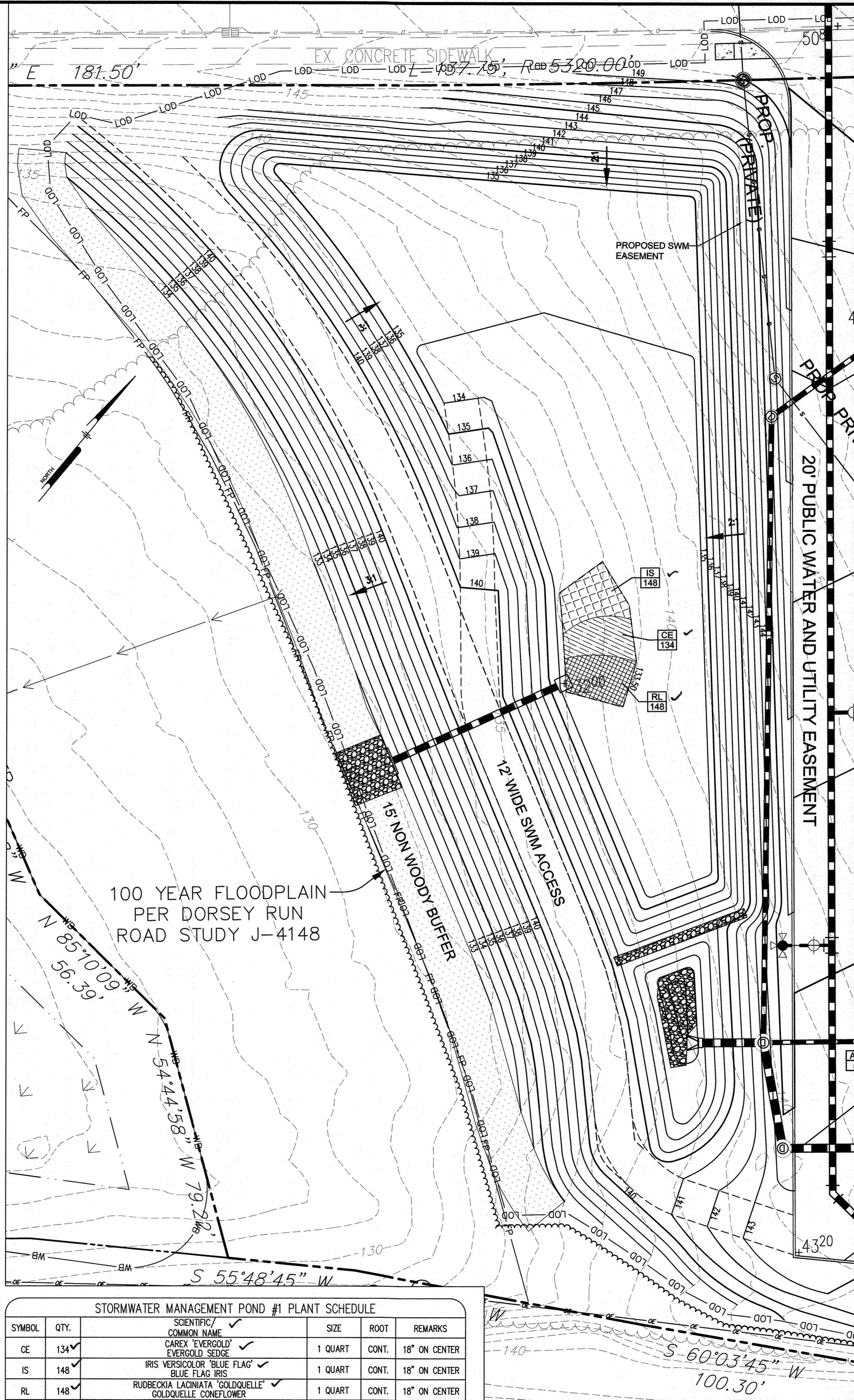
Pennoni Associates Inc. Engineers • Surveyors • Planners Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL: PROFESSIONAL ENGINEER, STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-21

DESIGNED BY: PJS
 DRAWN BY: AGS/JSN/NTD
 PROJECT NO: DCT11601
 DATE: AUGUST 1, 2017
 SCALE: AS SHOWN
 DRAWING NO: 21 OF 36

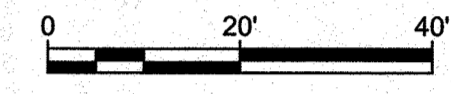


STORMWATER MANAGEMENT POND #1 DETAIL PLAN
SCALE: 1"=20'



STORMWATER MANAGEMENT POND #1 LANDSCAPE PLAN
SCALE: 1"=20'

STORMWATER MANAGEMENT POND #1 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
CE	134	CAREX EVERGOLD EVERGOLD SEDGE	1 QUART	CONT.	18" ON CENTER
IS	148	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 QUART	CONT.	18" ON CENTER
RL	148	RUDBECKIA LACINIATA 'GOLDQUELLE' GOLDQUELLE CONEFLOWER	1 QUART	CONT.	18" ON CENTER



AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER: [Signature] DATE: 8/1/17
 PE # 21774

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. 91774 EXPIRATION DATE: 11-12-21

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division JP: 8-8-17 DATE
 Chief, Division of Land Development MM: 8-21-17 DATE
 Director VJ: 8-21-17 DATE

DATE	NO.	REVISION	BY

DEVELOPER: DCT INDUSTRIAL
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

OWNER: DCT MEARS LLC
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

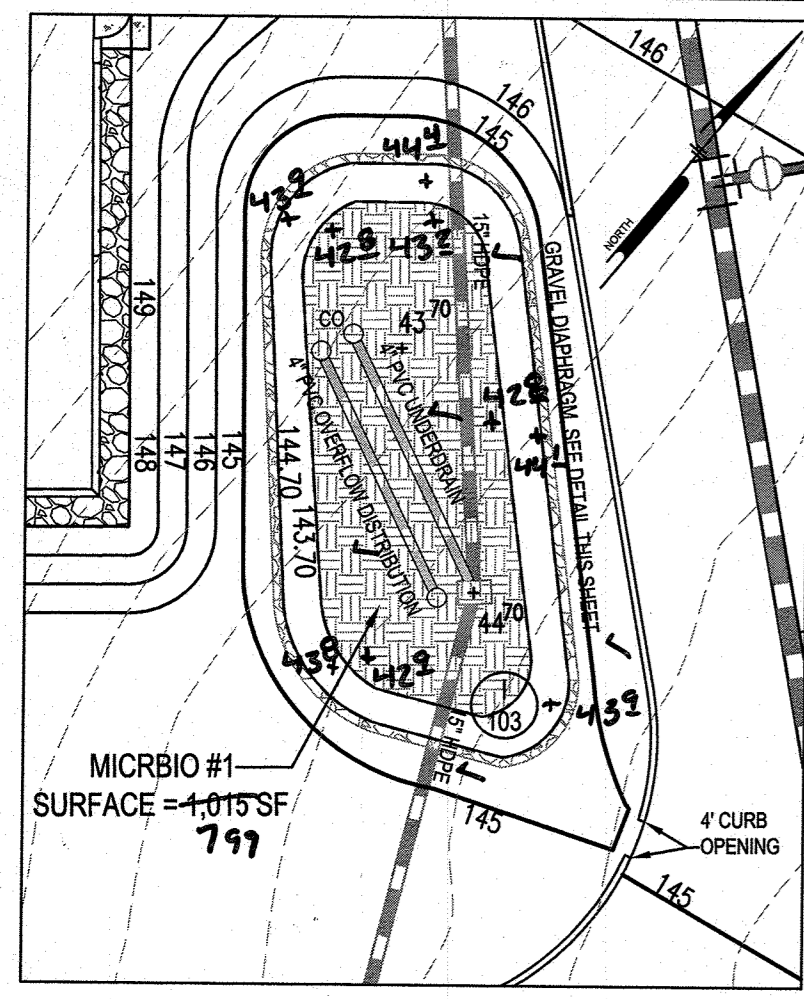
AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
 GRID NO. 11 1st ELECTION DISTRICT
 7200 DORSEY RUN ROAD
 ELKCRIDGE, MARYLAND 21075
 HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS
AS-BUILT

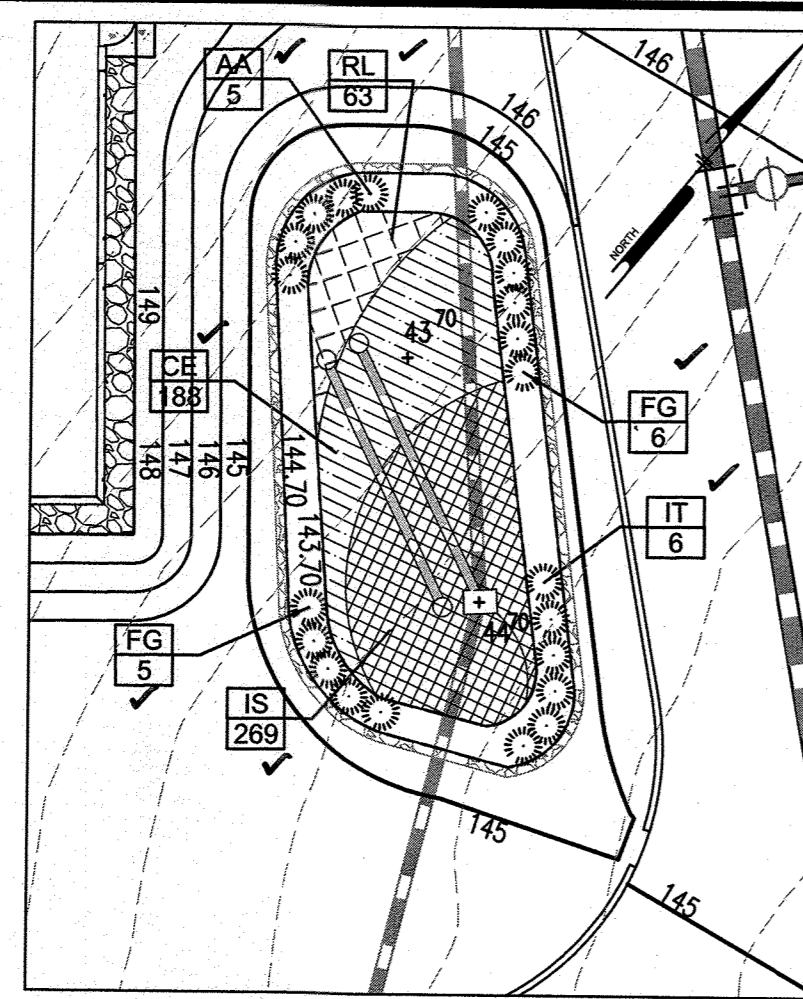
Pennoni Associates Inc.
 Engineers - Surveyors - Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL: [Professional Engineer Seal]

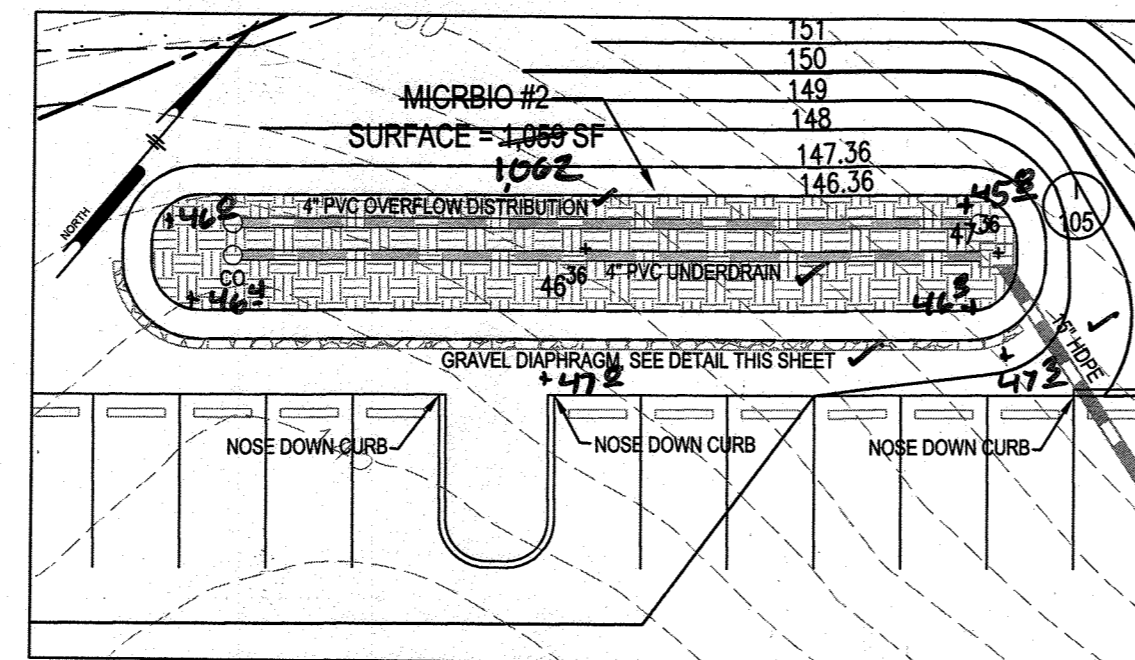
DESIGNED BY: PJS
 DRAWN BY: AGS/JSN/NTD
 PROJECT NO.: DCT11601
 DATE: AUGUST 1, 2017
 SCALE: AS SHOWN
 DRAWING NO. 22 OF 36



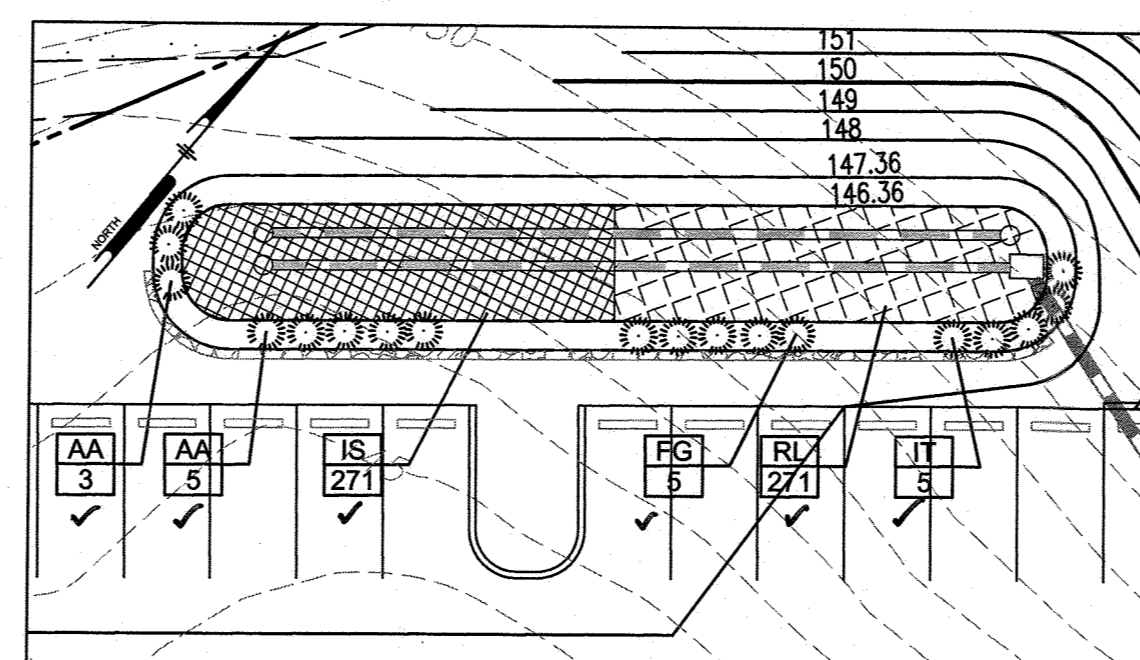
**MICRO-BIORETENTION #1
DETAIL PLAN**
SCALE: 1"=20'



**MICRO-BIORETENTION #1
LANDSCAPE PLAN**
SCALE: 1"=20'



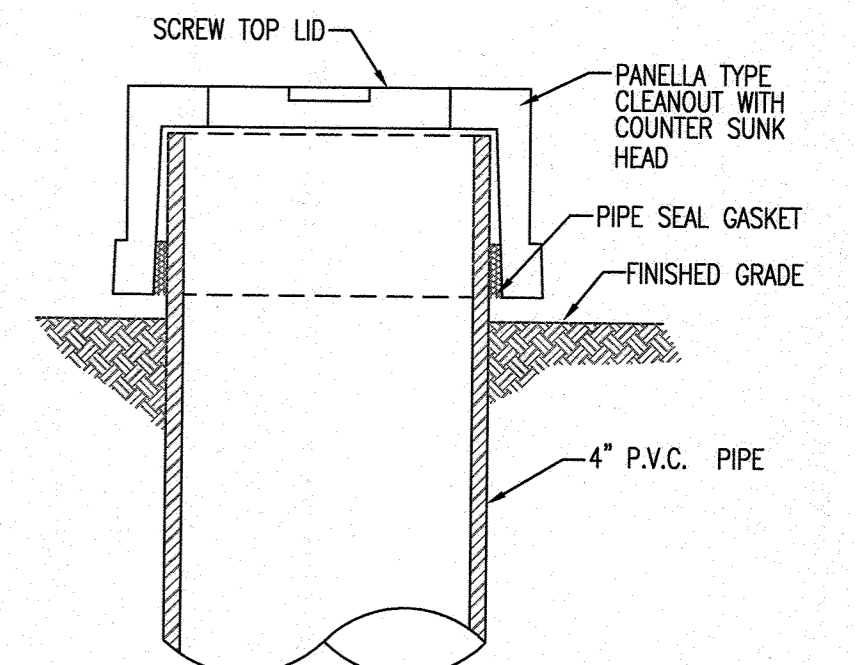
MICRO-BIORETENTION #2 DETAIL PLAN
SCALE: 1"=20'



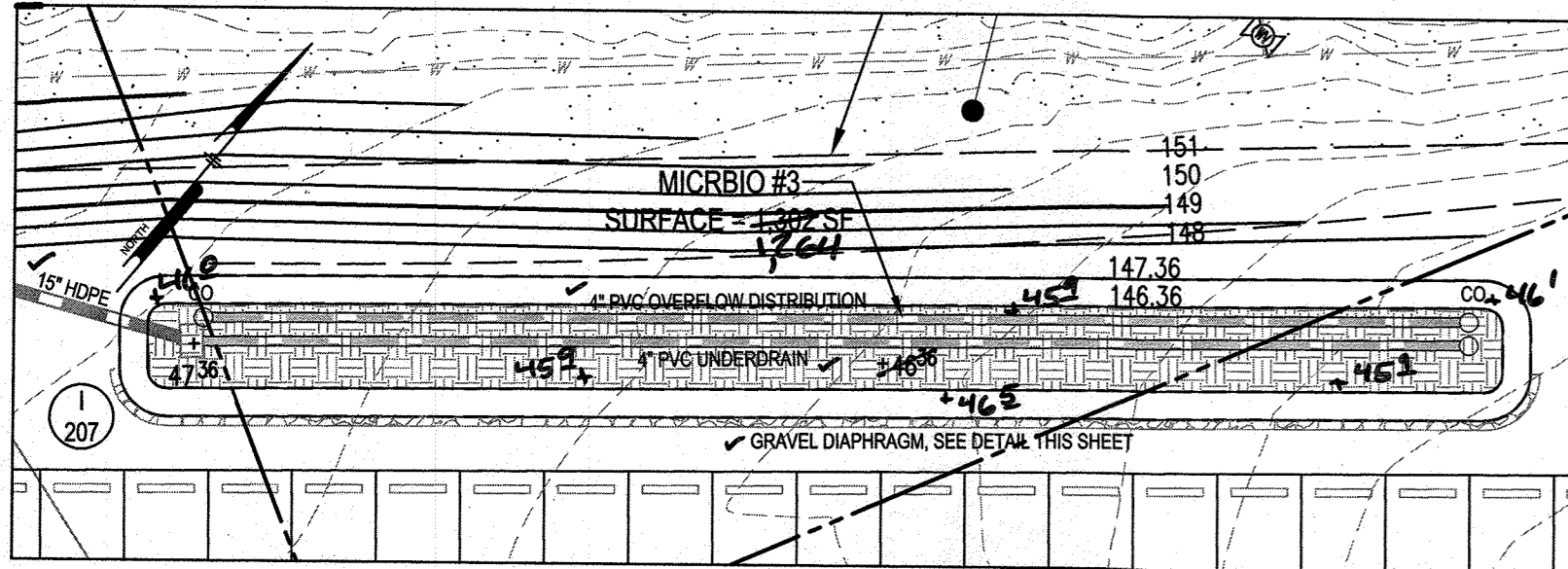
MICRO-BIORETENTION #2 LANDSCAPE PLAN
SCALE: 1"=20'

MICRO-BIORETENTION #1 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AA	5	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' RED CHOKEBERRY	3 GAL.	CONT.	AS SHOWN
FG	11	FOTHERGILLA GARDENII 'MT. AIRY' MT. AIRY DWARF FOTHERGILLA	3 GAL.	CONT.	AS SHOWN
IT	6	ITEA VIRGINICA 'HENRY'S GARNET' HENRY'S GARNET VIRGINIA SWEETSPIRE	18-24" HT.	CONT.	AS SHOWN
CE	188	CAREX 'EVERGOLD' EVERGOLD SEDGE	1 QUART.	CONT.	18" ON CENTER
IS	269	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 QUART.	CONT.	18" ON CENTER
RL	63	RUDEBECKIA LACINIATA 'GOLDOUELLE' GOLDOUELLE CONEFLOWER	1 QUART.	CONT.	18" ON CENTER

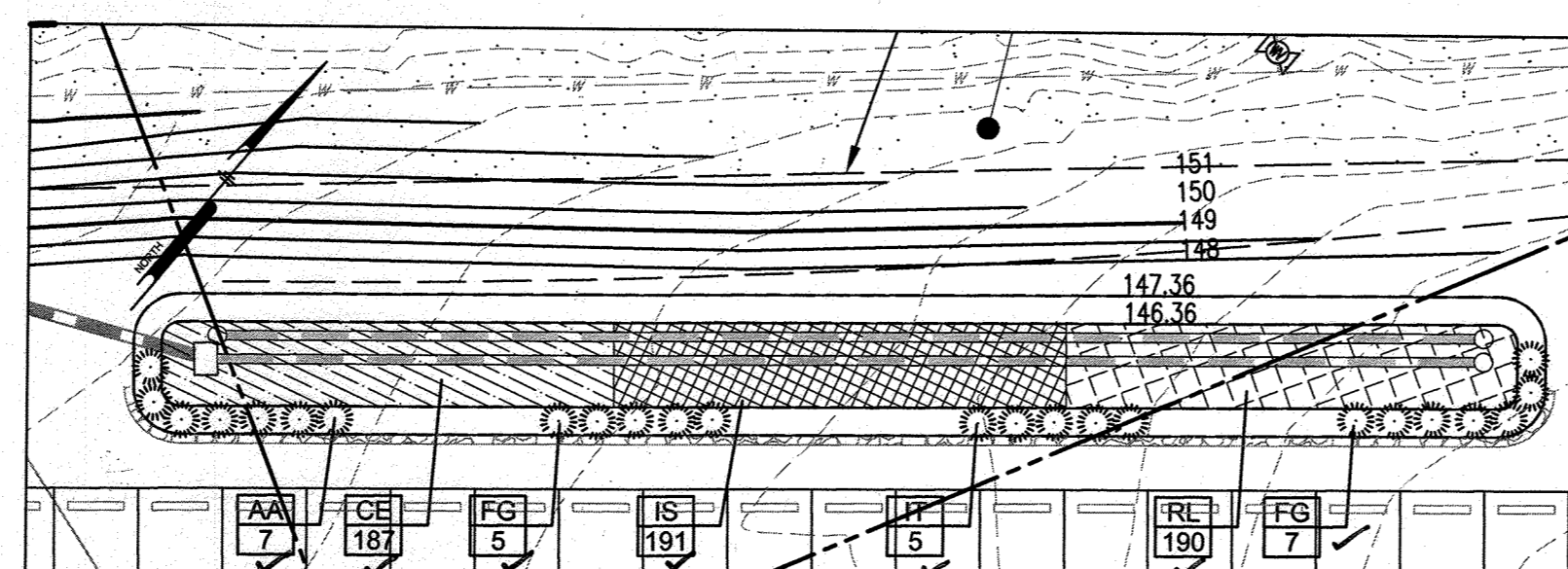
MICRO-BIORETENTION #2 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AA	8	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' RED CHOKEBERRY	3 GAL.	CONT.	AS SHOWN
FG	5	FOTHERGILLA GARDENII 'MT. AIRY' MT. AIRY DWARF FOTHERGILLA	3 GAL.	CONT.	AS SHOWN
IT	5	ITEA VIRGINICA 'HENRY'S GARNET' HENRY'S GARNET VIRGINIA SWEETSPIRE	18-24" HT.	CONT.	AS SHOWN
IS	271	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 QUART.	CONT.	18" ON CENTER
RL	271	RUDEBECKIA LACINIATA 'GOLDOUELLE' GOLDOUELLE CONEFLOWER	1 QUART.	CONT.	18" ON CENTER



**1
23 CLEAN-OUT OBSERVATION WELL CAP**
NOT TO SCALE

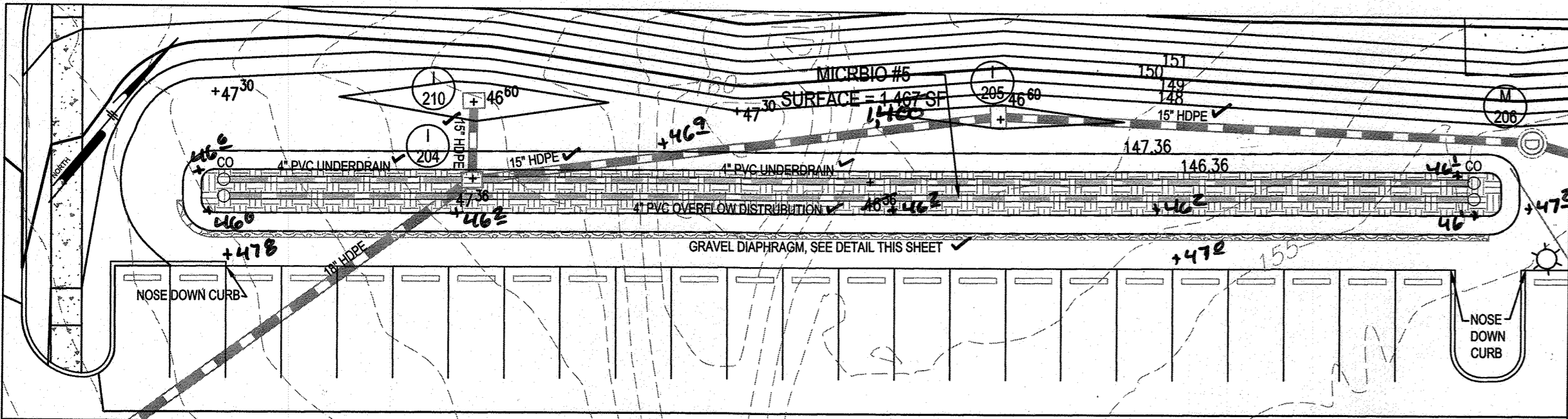


MICRO-BIORETENTION #3 DETAIL PLAN
SCALE: 1"=20'

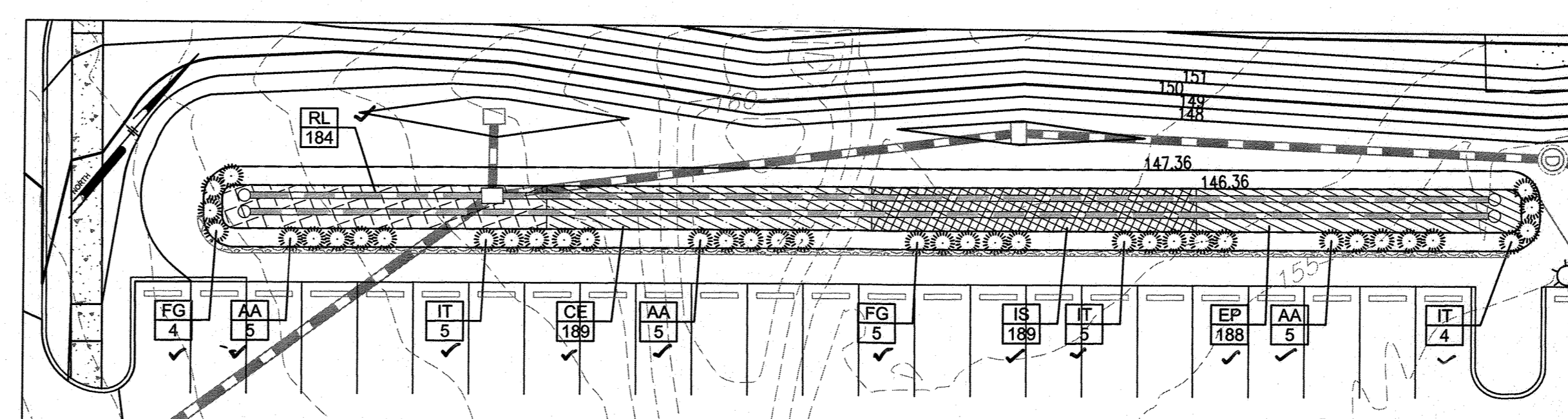


MICRO-BIORETENTION #3 LANDSCAPE PLAN
SCALE: 1"=20'

MICRO-BIORETENTION #3 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AA	7	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' RED CHOKEBERRY	3 GAL.	CONT.	AS SHOWN
FG	12	FOTHERGILLA GARDENII 'MT. AIRY' MT. AIRY DWARF FOTHERGILLA	3 GAL.	CONT.	AS SHOWN
IT	5	ITEA VIRGINICA 'HENRY'S GARNET' HENRY'S GARNET VIRGINIA SWEETSPIRE	18-24" HT.	CONT.	AS SHOWN
CE	187	CAREX 'EVERGOLD' EVERGOLD SEDGE	1 QUART.	CONT.	18" ON CENTER
IS	191	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 QUART.	CONT.	18" ON CENTER
RL	190	RUDEBECKIA LACINIATA 'GOLDOUELLE' GOLDOUELLE CONEFLOWER	1 QUART.	CONT.	18" ON CENTER

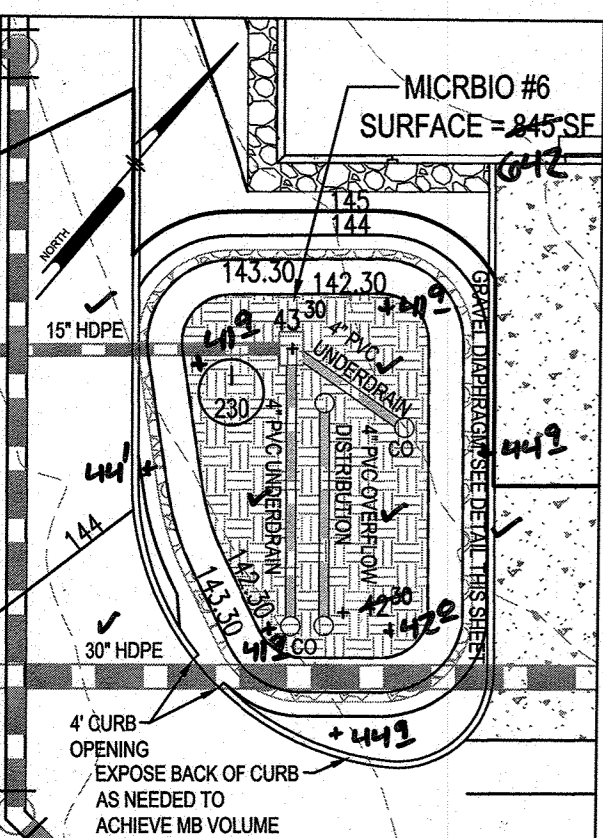


MICRO-BIORETENTION #5 DETAIL PLAN
SCALE: 1"=20'

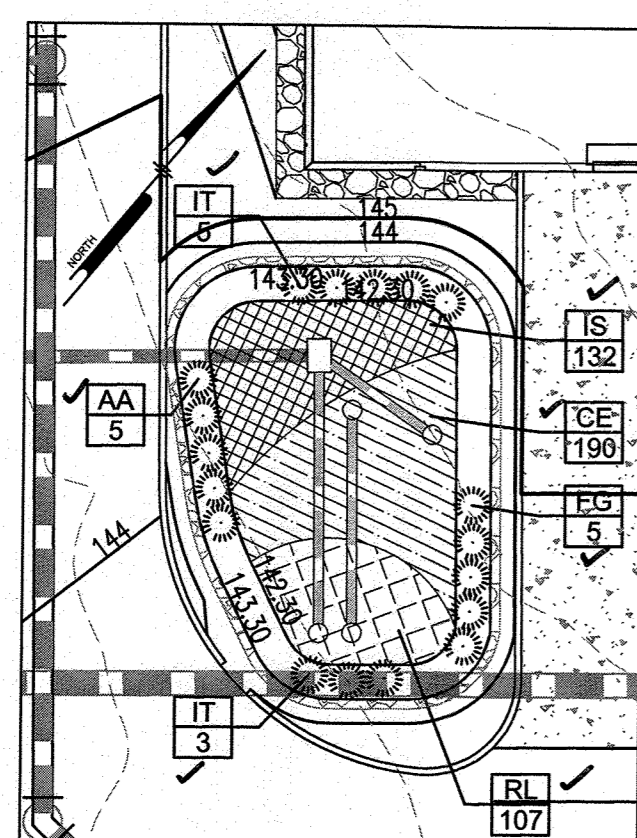


MICRO-BIORETENTION #5 LANDSCAPE PLAN
SCALE: 1"=20'

MICRO-BIORETENTION #5 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AA	15	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' RED CHOKEBERRY	3 GAL.	CONT.	AS SHOWN
FG	9	FOTHERGILLA GARDENII 'MT. AIRY' MT. AIRY DWARF FOTHERGILLA	3 GAL.	CONT.	AS SHOWN
IT	14	ITEA VIRGINICA 'HENRY'S GARNET' HENRY'S GARNET VIRGINIA SWEETSPIRE	18-24" HT.	CONT.	AS SHOWN
CE	189	CAREX 'EVERGOLD' EVERGOLD SEDGE	1 QUART.	CONT.	18" ON CENTER
EP	188	EUPATORIUM PURPUREUM ICE PYE WEED	1 QUART.	CONT.	18" ON CENTER
IS	189	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 QUART.	CONT.	18" ON CENTER
RL	184	RUDEBECKIA LACINIATA 'GOLDOUELLE' GOLDOUELLE CONEFLOWER	1 QUART.	CONT.	18" ON CENTER

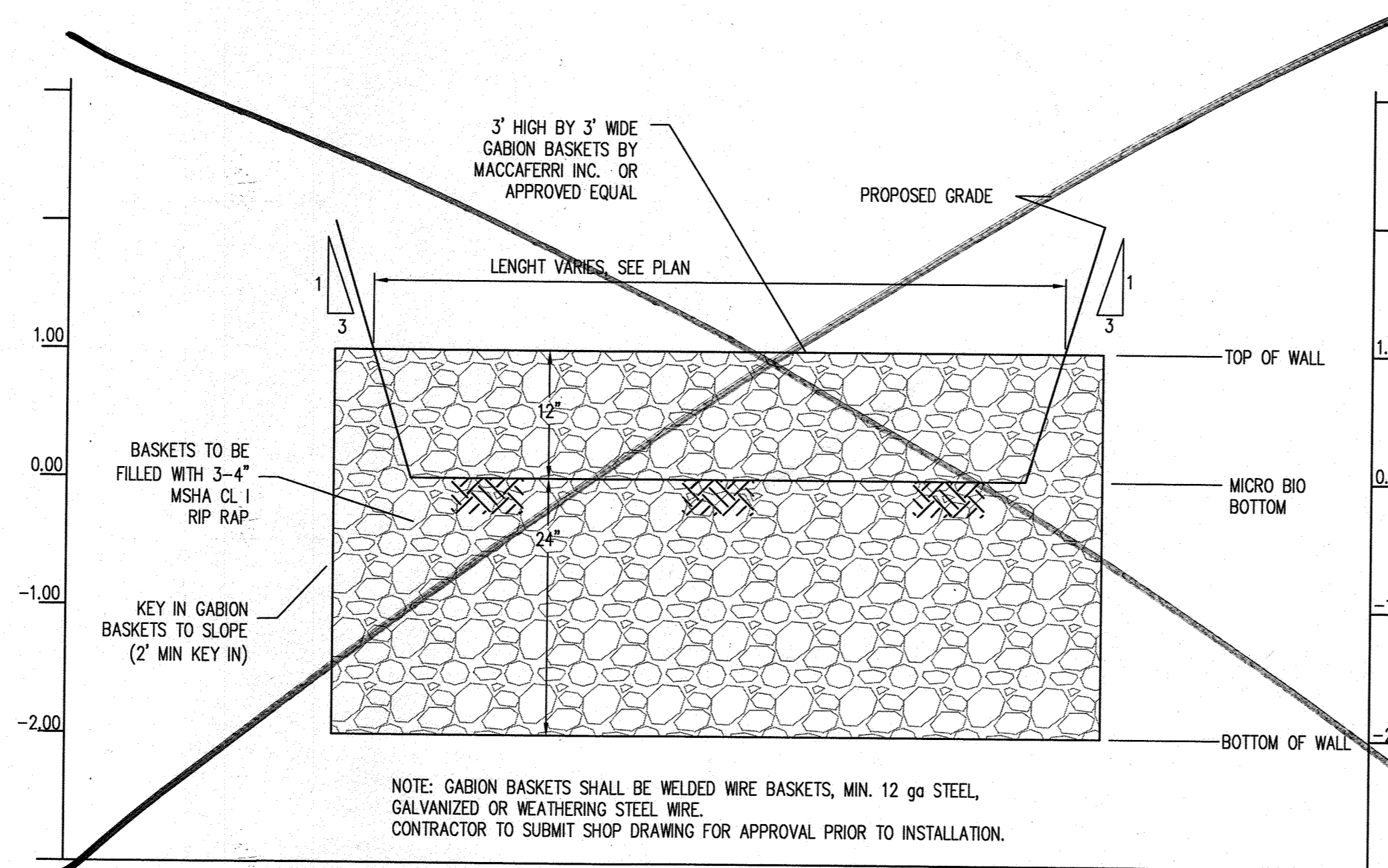


**MICRO-BIORETENTION #6
DETAIL PLAN**
SCALE: 1"=20'

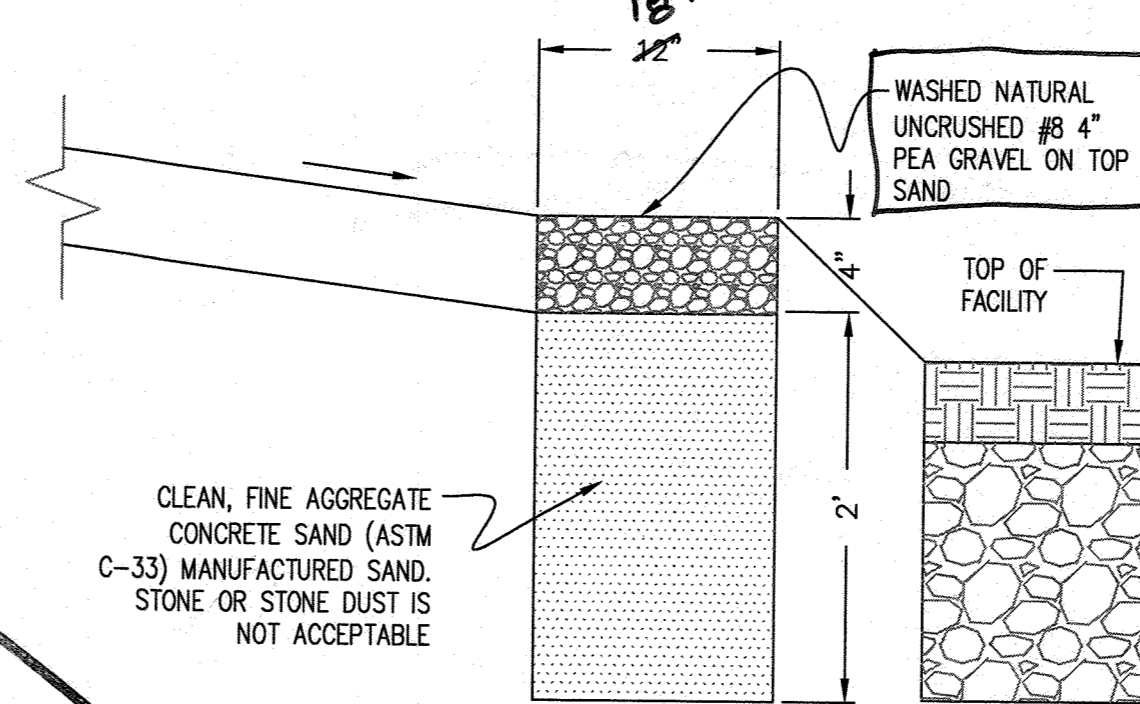


**MICRO-BIORETENTION #6
LANDSCAPE PLAN**
SCALE: 1"=20'

MICRO-BIORETENTION #6 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AA	5	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' RED CHOKEBERRY	3 GAL.	CONT.	AS SHOWN
FG	5	FOTHERGILLA GARDENII 'MT. AIRY' MT. AIRY DWARF FOTHERGILLA	3 GAL.	CONT.	AS SHOWN
IT	8	ITEA VIRGINICA 'HENRY'S GARNET' HENRY'S GARNET VIRGINIA SWEETSPIRE	18-24" HT.	CONT.	AS SHOWN
CE	190	CAREX 'EVERGOLD' EVERGOLD SEDGE	1 QUART.	CONT.	18" ON CENTER
IS	132	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 QUART.	CONT.	18" ON CENTER
RL	107	RUDEBECKIA LACINIATA 'GOLDOUELLE' GOLDOUELLE CONEFLOWER	1 QUART.	CONT.	18" ON CENTER



MICROBIO GABION WALL DETAIL
SCALE: HOR: 1"=10'
VERT: 1"=1'



**2
23 GRAVEL DIAPHRAGM TYPICAL SECTION**
NOT TO SCALE

AS-BUILT CERTIFICATION
I HEREBY CERTIFY BY MY SEAL THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER: [Signature]
DATE: 2/17/18
PE # 21774
EXPIRATION DATE: 11-10-21

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division: [Signature] DATE: 3-19-18
Chief, Division of Land Development: [Signature] DATE: 3-28-18
Director: [Signature] DATE: 3-29-18

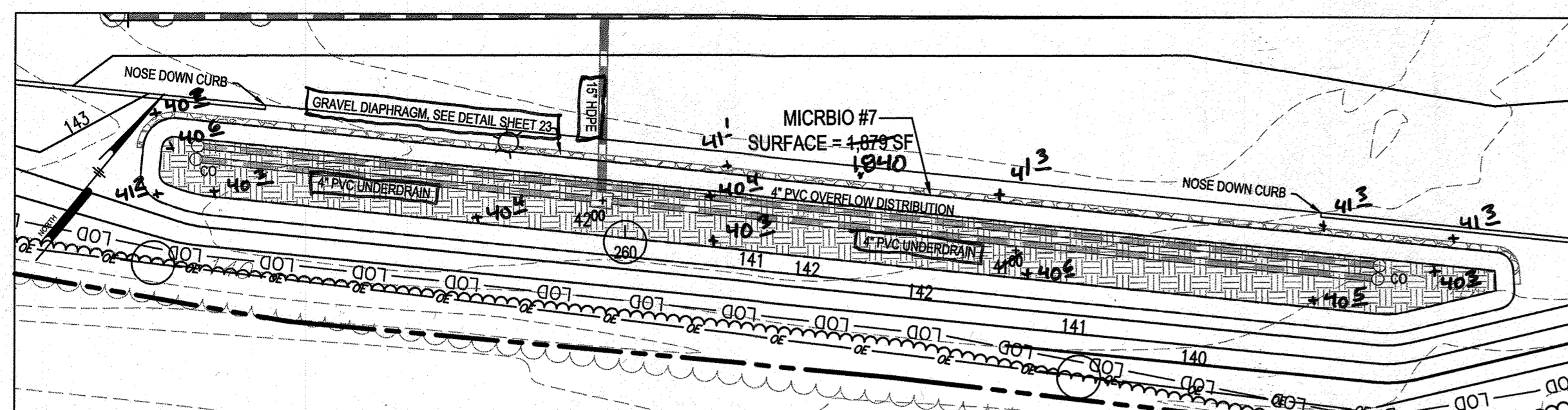
DEVELOPER: DCT INDUSTRIAL
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

OWNER: DCT MEARS LLC
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

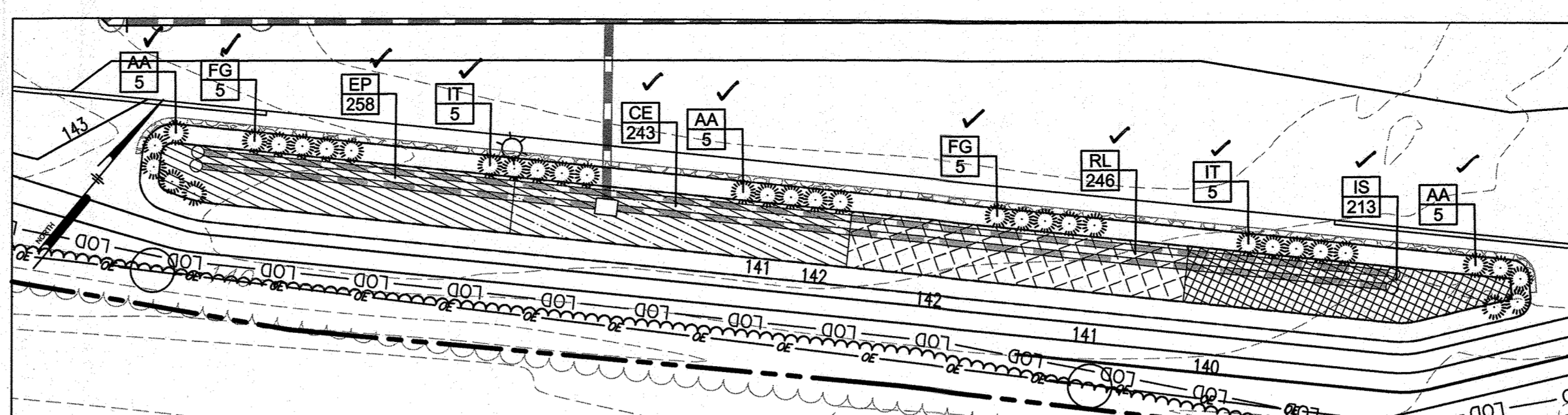
PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B
AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
GRID NO. 11 1st ELECTION DISTRICT
7200 DORSEY RUN ROAD
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS
AS-BUILT
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
DRAWN BY: AGSJS/NNTD
PROJECT NO: DCT1601
DATE: JANUARY 25, 2018
SCALE: AS SHOWN
DRAWING NO. 23 OF 36

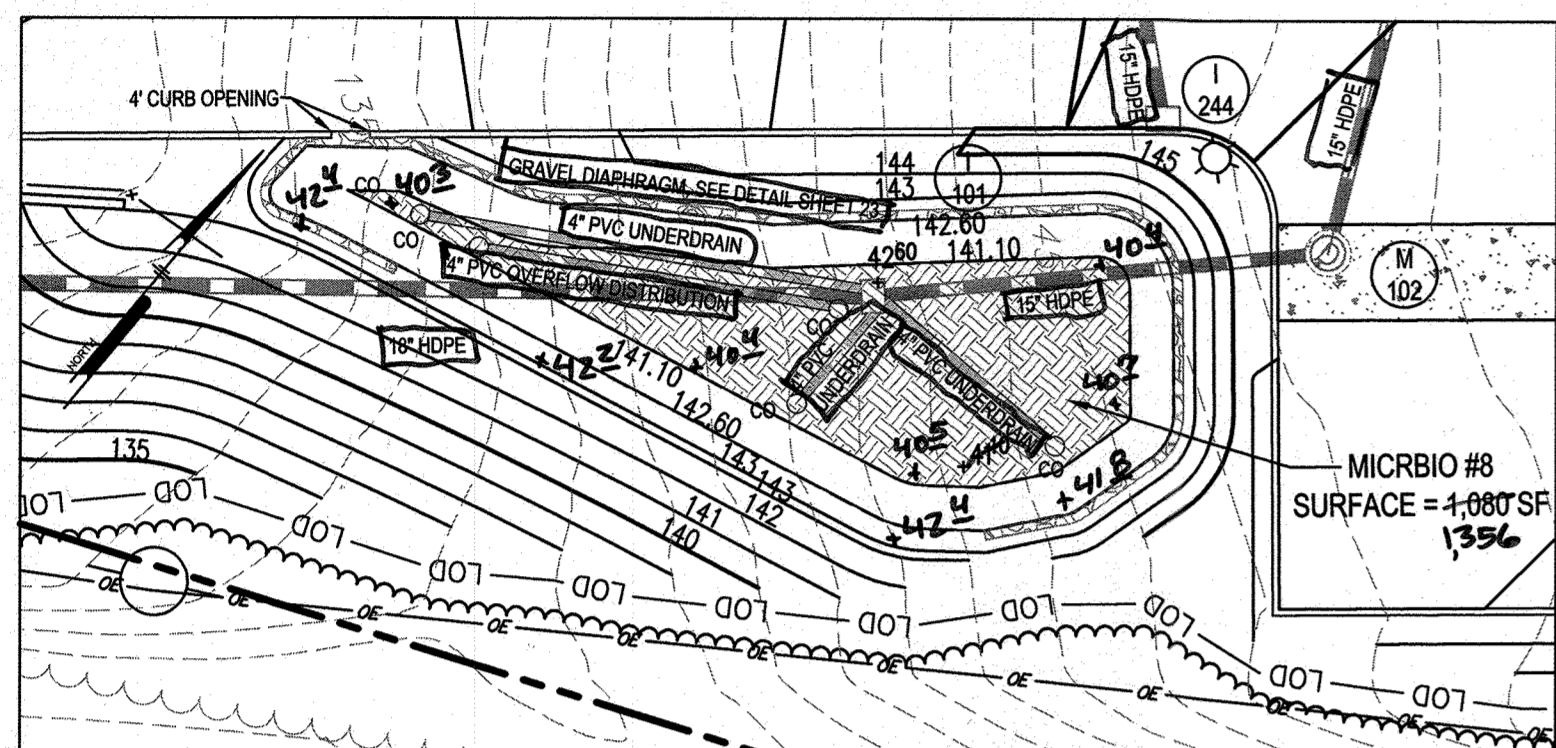


MICRO-BIORETENTION #7 DETAIL PLAN
SCALE: 1"=20'

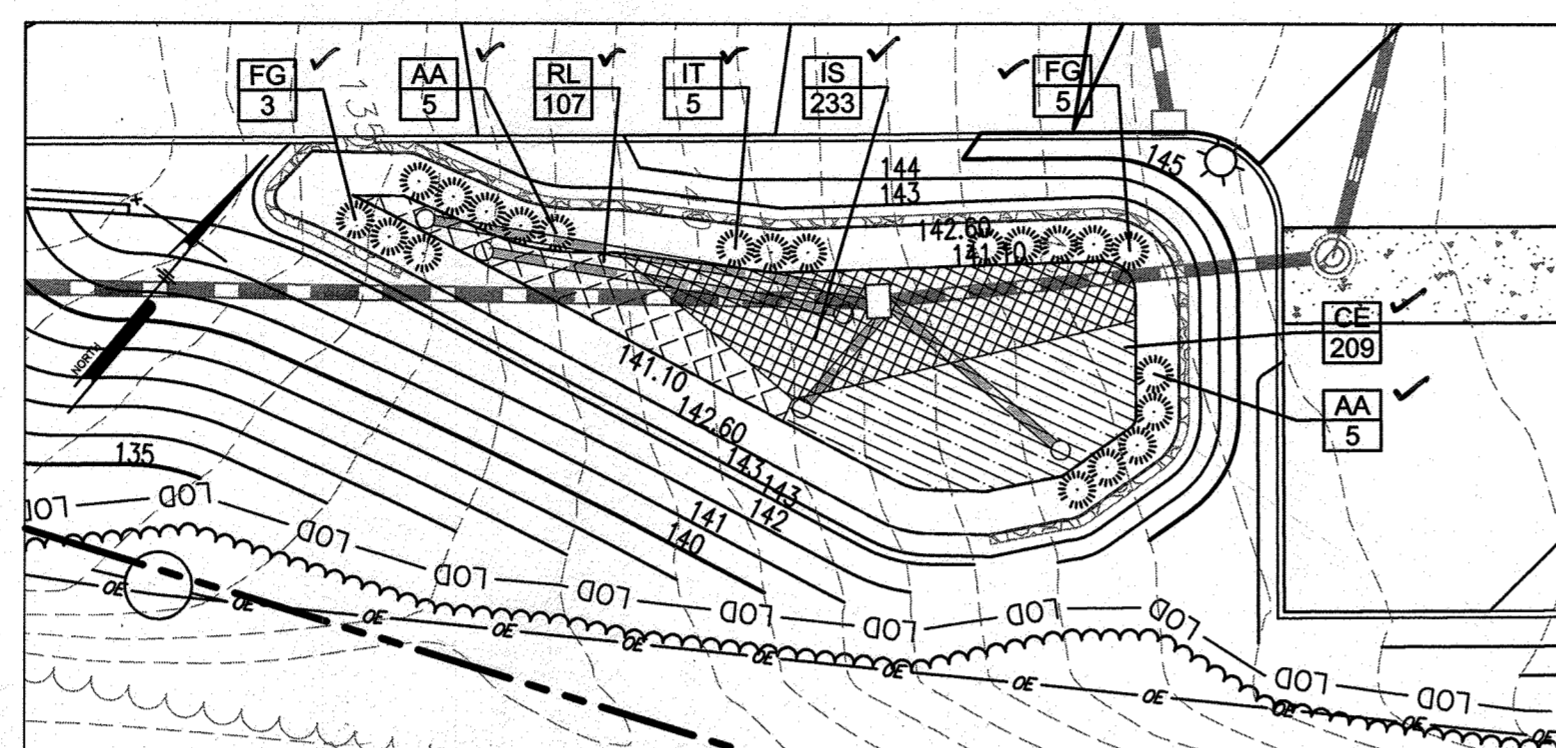


MICRO-BIORETENTION #7 LANDSCAPE PLAN
SCALE: 1"=20'

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AA	15	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' RED CHOCHEBERRY	3 GAL.	CONT.	AS SHOWN
FG	10	FOTHERGILLA GARDENII 'MT. AIRY' MT. AIRY DWARF FOTHERGILLA	3 GAL.	CONT.	AS SHOWN
IT	10	ITEA VIRGINICA 'HENRY'S GARNET' HENRY'S GARNET VIRGINIA SWEETSPIRE	18-24" HT.	CONT.	AS SHOWN
CE	243	CAREX 'EVERGOLD' EVERGOLD SEDGE	1 QUART	CONT.	18" ON CENTER
EP	258	EUPATORIUM PURPUREUM JOE PYE WEED	1 QUART	CONT.	18" ON CENTER
IS	213	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 QUART	CONT.	18" ON CENTER
RL	246	RUDBECKIA LACINIATA 'GOLDQUELLE' GOLDQUELLE CONEFLOWER	1 QUART	CONT.	18" ON CENTER



MICRO-BIORETENTION #8 DETAIL PLAN
SCALE: 1"=20'



MICRO-BIORETENTION #8 LANDSCAPE PLAN
SCALE: 1"=20'

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AA	10	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' RED CHOCHEBERRY	3 GAL.	CONT.	AS SHOWN
FG	8	FOTHERGILLA GARDENII 'MT. AIRY' MT. AIRY DWARF FOTHERGILLA	3 GAL.	CONT.	AS SHOWN
IT	5	ITEA VIRGINICA 'HENRY'S GARNET' HENRY'S GARNET VIRGINIA SWEETSPIRE	18-24" HT.	CONT.	AS SHOWN
CE	209	CAREX 'EVERGOLD' EVERGOLD SEDGE	1 QUART	CONT.	18" ON CENTER
IS	233	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 QUART	CONT.	18" ON CENTER
RL	107	RUDBECKIA LACINIATA 'GOLDQUELLE' GOLDQUELLE CONEFLOWER	1 QUART	CONT.	18" ON CENTER

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER PONDS (P-1 THROUGH P-5)

ROUTINE MAINTENANCE:

- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
- TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHALL BE MOWED AS NEEDED.
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS THE RIPRAP OR GABION OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

NON-ROUTINE MAINTENANCE:

- STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
- SEDIMENT SHALL BE REMOVED FROM THE POND, AND FOREBAY, NO LATER THAN WHEN THE CAPACITY OF THE POND, OR FOREBAY, IS HALF FULL OF SEDIMENT, OR, WHEN DEMAILED NECESSARY FOR AESTHETIC REASONS, UPON APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.

MICROBIORETENTION SPECIFICATIONS

- THE UNDERDRAIN PIPE MUST BE 4-INCH DIAMETER SCHEDULE 40 OR STRONGER PERFORATED PVC PIPE AT 0.00% SLOPE. THREE INCHES OF GRAVEL MUST BE PLACED UNDER THE PIPE, WITH A MINIMUM OF 6 INCHES OF GRAVEL OVER THE PIPE. PERFORATIONS MUST BE 3/8 INCH IN DIAMETER AND MUST BE LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE. PERFORATED PIPE MUST NOT BE WRAPPED AROUND THE UNDERDRAIN PIPE.
- 4" INCH CLEAN-OUTS SHOULD BE USED. CLEANOUTS FOR EACH PIPE SHOULD EXTEND 6 INCHES ABOVE THE TOP OF THE PLANTING MEDIA AND HAVE A REMOVABLE CAP.
- THE GRAVEL LAYER SURROUNDING THE UNDERDRAIN PIPES MUST MEET MSHA SIZE #7 (TABLE 901A), AND MUST PROVIDE A MINIMUM OF 6 INCHES COVER OVER THE PIPE, AND MINIMUM 3 INCHES UNDER THE PIPE. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED ANYWHERE WITHIN THE FILTER MEDIA (STONE OR SAND).
- A MINIMUM 6-INCH FINE AGGREGATE SAND LAYER SHALL BE PROVIDED BELOW THE SOIL FILTER/PLANTING MEDIA. THE SAND MUST BE ASTM C33 FINE AGGREGATE CONCRETE SAND, MANUFACTURED SAND OR STONE DUST IS NOT ACCEPTABLE.
- THE PLANTING MEDIA MIX SHALL MEET SHA BIORETENTION SOIL MIX STANDARDS. THE SOIL SHALL MEET THE FOLLOWING MINIMUM CRITERIA: A HOMOGENEOUS MIXTURE COMPOSED OF 5 PARTS COARSE SAND, 3 PARTS BASE SOIL, AND 2 PARTS FINE BARK. THE SOIL SHALL BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES. THE PLANTING MATERIAL SHALL BE FLOODED AFTER PLACEMENT. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.
- THE SURFACE MULCH LAYER WILL CONSIST OF STANDARD FINE SHREDDED AGED HARDWOOD MULCH. THE MULCH SHOULD BE UNIFORMLY TO A DEPTH OF 2 TO 3 INCHES. YEARLY REPLISHING MAY BE NECESSARY. PINE BARK IS NOT ACCEPTABLE.

5.8. STORMWATER MANAGEMENT PONDS

WE UNDERSTAND THAT THE PONDS ARE DESIGNED AS DRY PONDS. THE PONDS WILL REQUIRE DESIGN AND CONSTRUCTION IN ACCORDANCE WITH NRCS - MD CODE NO. 378 POND STANDARDS/SPECIFICATIONS.

5.8.1 SUBGRADE PREPARATION

SUBGRADE AREAS OF FILL EMBANKMENTS SHOULD BE CLEARED OF TREES, LOGS, STUMPS, ROOTS, BRUSH, BOULDERS, SOIL, AND RUBBISH PRIOR TO FILL PLACEMENT. THE FOUNDATION AREA SHOULD BE THOROUGHLY SCARIFIED BEFORE PLACEMENT OF FILL TO ALLOW FOR BONDING OF THE FILL TO THE FOUNDATION.

5.8.2 EMBANKMENT

FOR PORTIONS OF THE EMBANKMENT TO BE CONSTRUCTED IN FILL CONDITIONS, NEAR SURFACE SOILS OF STRATA A AND B CAN BE REUSED FOR EMBANKMENT CONSTRUCTION, PROVIDED ALL ORGANICS AND DEBRIS LARGER THAN 3 INCHES IN ITS GREATEST DIMENSION BE REMOVED PRIOR TO REUSE. IF NECESSARY, IMPORTED FILL SHOULD CONSIST OF WELL-GRADED MATERIAL WITH A MAXIMUM PARTICLE SIZE LESS THAN 3 INCHES, NOT MORE THAN 20 PERCENT PASSING THE NO. 200 SIEVE AND HAVE A PLASTICITY INDEX (PI) NOT GREATER THAN 8 PERCENT.

NEW FILLS CONSISTING OF ON-SITE SOIL (STRATA A AND B) OR IMPORTED GRANULAR SOIL SHOULD BE PLACED IN LAYERS NOT EXCEEDING 10 IN. LOOSE MEASURE. THIS CRITERION MIGHT BE ADJUSTED BY THE GEOTECHNICAL ENGINEER IN THE FIELD DEPENDING ON THE CONDITIONS PRESENT AT THE TIME OF CONSTRUCTION, ON THE COMPACTION EQUIPMENT USED, AND ON THE FILL MATERIAL SELECTED. FILL PLACED WITHIN THE EMBANKMENT SHOULD BE COMPACTED TO AT LEAST 98 PERCENT OF THE LABORATORY DETERMINED MAXIMUM DRY DENSITY, ASTM D 698, WHEN SMALL HAND OPERATED COMPACTION EQUIPMENT IS USED AND TO AT LEAST 95 PERCENT OF THE LABORATORY DETERMINED DRY DENSITY, ASTM D 1557, WHEN SELF-PROPELLED, HEAVY DUTY COMPACTION EQUIPMENT IS USED.

SPECIFICATIONS SHOULD INDICATE THAT THE PERCENTAGE OF MAXIMUM DRY DENSITY ATTAINED IN THE FIELD IS NOT THE ONLY CRITERIA TO BE USED FOR ASSESSING FILL COMPACTION. OBSERVATION OF THE BEHAVIOR OF THE FILL UNDER THE LOADS OF CONSTRUCTION EQUIPMENT SHOULD BE USED. IF THE TEST RESULTS INDICATE THAT THE PERCENTAGE OF COMPACTION IS BEING ACHIEVED, BUT THE SOIL MASS IS MOVING UNDER THE EQUIPMENT, PLACEMENT OF ADDITIONAL FILL SHOULD NOT BE CONTINUED UNTIL THE MOVEMENT IS STABILIZED. OTHERWISE, SETTLEMENT OF THE FILL MAY OCCUR.

5.8.3 CUTOFF TRENCH AND IMPERVIOUS CORE

CUTOFF TRENCHES AND IMPERVIOUS CORES SHOULD BE CONSTRUCTED IN ACCORDANCE WITH NRCS - MD CODE NO. 378 POND STANDARDS/SPECIFICATIONS. TO PREVENT HORIZONTAL SEEPAGE THROUGH NEWLY COMPACTED FILL OR STRATA A AND B SOILS THAT MAY BE EXPOSED ALONG THE SIDE SLOPES, WE RECOMMEND THAT A COMPACTED CLAY CUTOFF TRENCH AND IMPERVIOUS CORE BE UTILIZED. WE RECOMMEND THAT THE CUTOFF TRENCH BE PROVIDED A MINIMUM OF 4 FEET BELOW THE ENTIRE LENGTH OF THE DAM AND SHOULD BE LOCATED AT OR UPSTREAM FROM THE CENTERLINE OF THE DAM. THE CUTOFF SHOULD HAVE A BOTTOM WIDTH ADEQUATE TO ACCOMMODATE THE EQUIPMENT USED FOR EXCAVATION, BACKFILL, AND COMPACTION OPERATIONS, WITH THE MINIMUM WIDTH BEING 4 FEET AND SIDE SLOPES NO STEEPER THAN ONE HORIZONTAL TO ONE VERTICAL. THE IMPERVIOUS CORE SHOULD BE CONSTRUCTED WITHIN THE EMBANKMENT AT OR UPSTREAM FROM THE CENTERLINE OF THE DAM AND EXTEND UP THE ABUTMENTS TO THE 10-YEAR WATER SURFACE ELEVATION. THE IMPERVIOUS CORE SHOULD EXTEND VERTICALLY FROM THE CUTOFF TRENCH UP TO THE 10-YEAR WATER SURFACE ELEVATION THROUGHOUT THE EMBANKMENT.

THE MATERIALS SHOULD CONSIST OF CLAY COMPACTED TO AT LEAST 98 PERCENT OF THE LABORATORY DETERMINED MAXIMUM DRY DENSITY, ASTM D 698, WHEN SMALL HAND OPERATED COMPACTION EQUIPMENT IS USED AND TO AT LEAST 95 PERCENT OF THE LABORATORY DETERMINED DRY DENSITY, ASTM D 1557, WHEN SELF-PROPELLED, HEAVY DUTY COMPACTION EQUIPMENT IS USED. THE ON-SITE CLAY MATERIAL (STRATUM A) APPEARS BE SUITABLE FOR USE AS A CUTOFF TRENCH AND IMPERVIOUS CORE PROVIDED THAT THE MATERIAL IS WITHIN THE REQUIRED MOISTURE CONTENT RANGE TO ACHIEVE THE SPECIFIED COMPACTION AND HAS A MINIMUM PLASTICITY INDEX OF 6. HOWEVER, CONDITIONING OF THE ON-SITE SOILS MAY BE PROBABLY TIME CONSUMING OR COSTLY, WARRANTING IMPORTING OF OFF-SITE CLAY.

FILL LAYERS SHOULD BE PROPERLY ROUGHENED OR SCARIFIED USING A SHEEPSFOOT ROLLER OR SIMILAR EQUIPMENT PRIOR TO THE PLACEMENT OF THE NEXT LIFT OF FILL. ALTHOUGH IT IS DESIRABLE TO SEAL FILL OPERATIONS ON A DAILY BASIS USING A STEEL DRUM OR RUBBER TIRE ROLLER, THESE SURFACES SHOULD BE SCARIFIED THE FOLLOWING DAY PRIOR TO FILL ACTIVITIES TO MINIMIZE THE CREATION OF PLANES OF SEEPAGE WITHIN THE EMBANKMENT STRUCTURE.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER: [Signature]
DATE: 2/17/14
PROFESSIONAL ENGINEER: [Signature]
EXPIRATION DATE: 11-10-21

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] DATE: 9-8-17
CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE: 9-21-17
DIRECTOR: [Signature] DATE: 9-21-17

DEVELOPER: DCT INDUSTRIAL, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020

OWNER: DCT MEARS LLC, 12011 GUILFORD ROAD, SUITE 102, ANNAPOLIS JUNCTION, MD 20701, ATTN: FRED FERRARO, PHONE: 410-645-5020

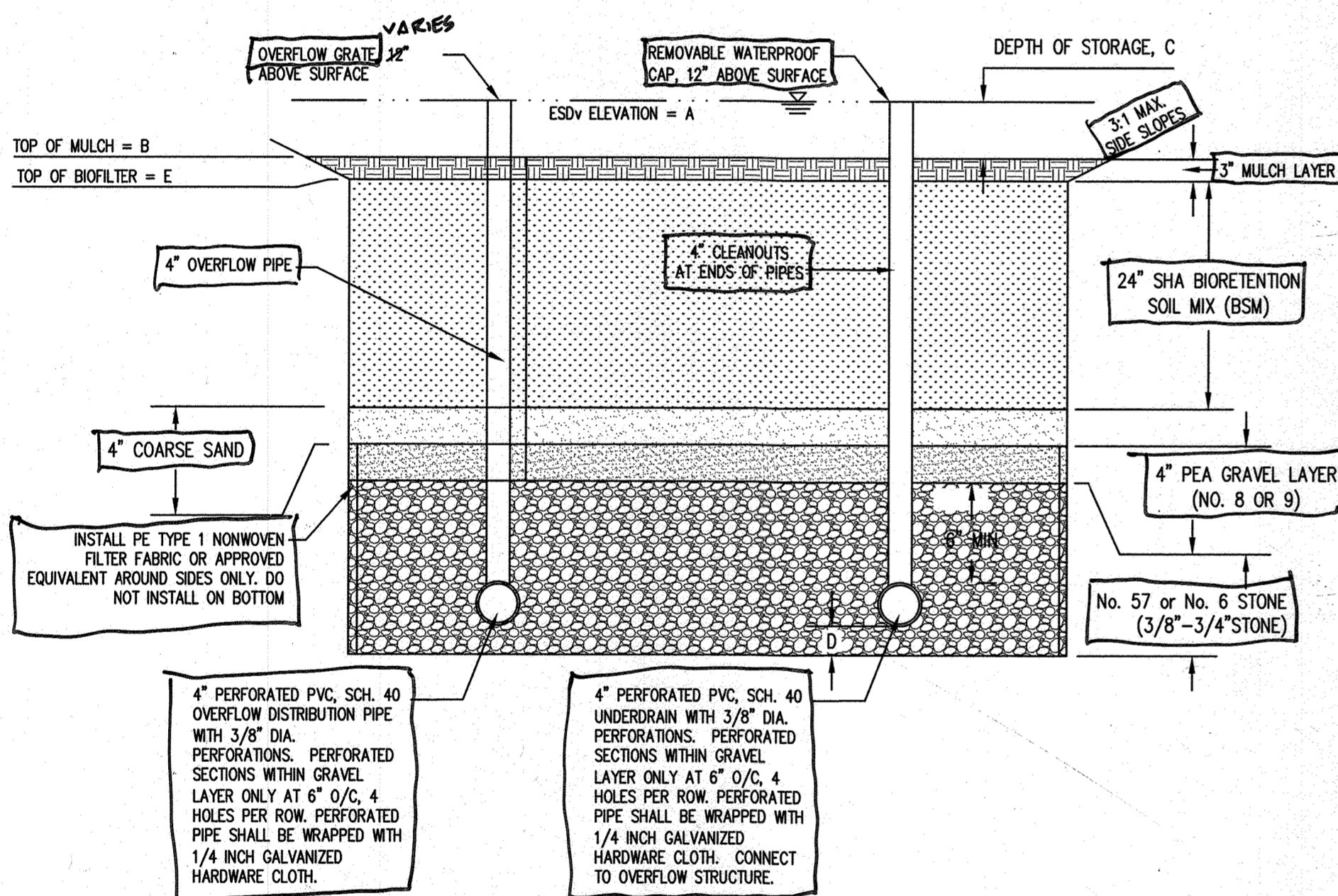
PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2 GRID NO. 11 1st ELECTION DISTRICT, 7200 DORSEY RUN ROAD, ELK RIDGE, MARYLAND 21075, HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS AS-BUILT

Pennoni Associates Inc. Engineers - Surveyors - Planners Landscape Architects
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
DRAWN BY: AGS/JSN/NTD
PROJECT NO.: DCT11601
DATE: AUGUST 1, 2017
SCALE: AS SHOWN
DRAWING NO.: 24 OF 36



MICROBIORETENTION TYPICAL SECTION
NOT TO SCALE

ESDv REQUIRED	ESDv REQUIRED TO MEET C _{pv}	ESDv REQUIRED TO MEET W _{qv}	ESDv PROVIDED
36,958 cf	36,958 cf	18,479 cf	20,727 cf

AS BUILT = 19,119 CF

TREATMENT	ESDv REQUIRED TO MEET C _{pv}	ESDv REQUIRED TO MEET W _{qv}	ESDv PROVIDED
MICRO-BIORETENTION 1	2,588 cf	959 cf	2,588 cf
MICRO-BIORETENTION 2	2,118 cf	784 cf	2,118 cf
MICRO-BIORETENTION 3	2,811 cf	1,041 cf	2,811 cf
MICRO-BIORETENTION 5	3,506 cf	1,299 cf	3,506 cf
MICRO-BIORETENTION 6	2,265 cf	839 cf	2,265 cf
MICRO-BIORETENTION 7	3,944 cf	1,647 cf	4,134 cf
MICRO-BIORETENTION 8	3,476 cf	1,546 cf	3,305 cf
TOTAL			20,727 cf

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

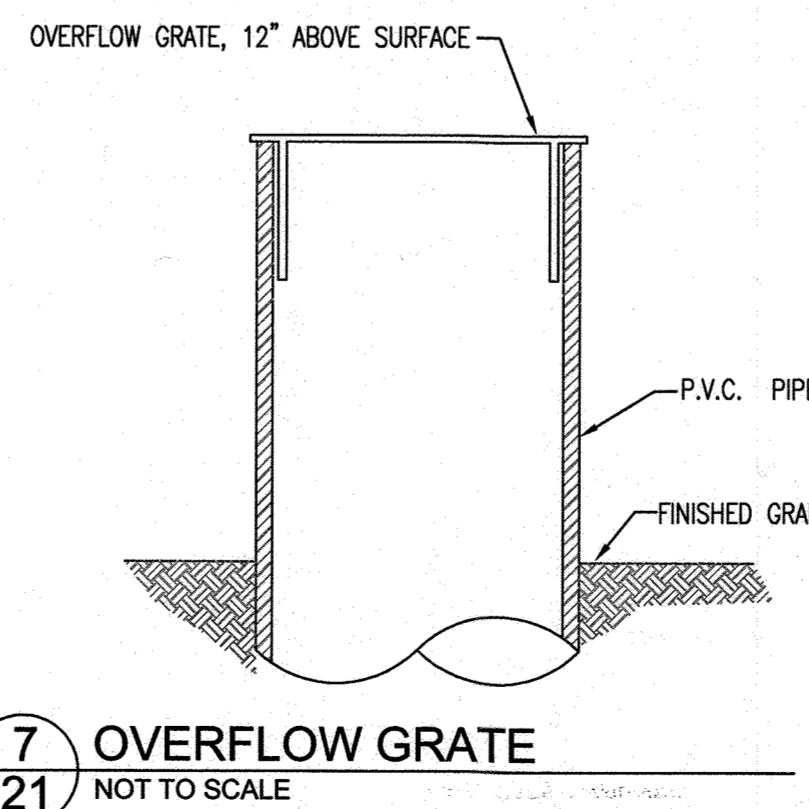
- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL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

MICRO-BIORETENTION SEQUENCE OF CONSTRUCTION

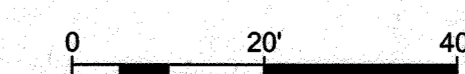
- DO NOT BEGIN BIORETENTION INSTALLATION UNTIL SITE UPSTREAM OF MICRO-BIORETENTION IS STABILIZED AND FINE GRADING HAS BEEN COMPLETED.
- EXCAVATE MICRO-BIORETENTION. CONSTRUCTION SHALL BE PERFORMED WITH LIGHTWEIGHT, WIDE-TRACKED EQUIPMENT TO MINIMIZE DISTURBANCE AND COMPACTION. EXCAVATED MATERIALS SHALL BE PLACED IN A CONTAINED AREA (1 DAY)
- PLACE STONE AND UNDERDRAINS. (1 DAY)
- PLACE SAND LAYER IN LIFTS OF THREE INCHES. (0.5 DAY)
- PLACE PLANTING SOIL AND OBSERVATION WELLS. (1 DAY)
- PLACE MULCH. (0.5 DAY)
- INSTALL PLANT MATERIAL. (1 DAY)
- STABILIZE MICRO-BIORETENTION AREA. (0.5 DAY)

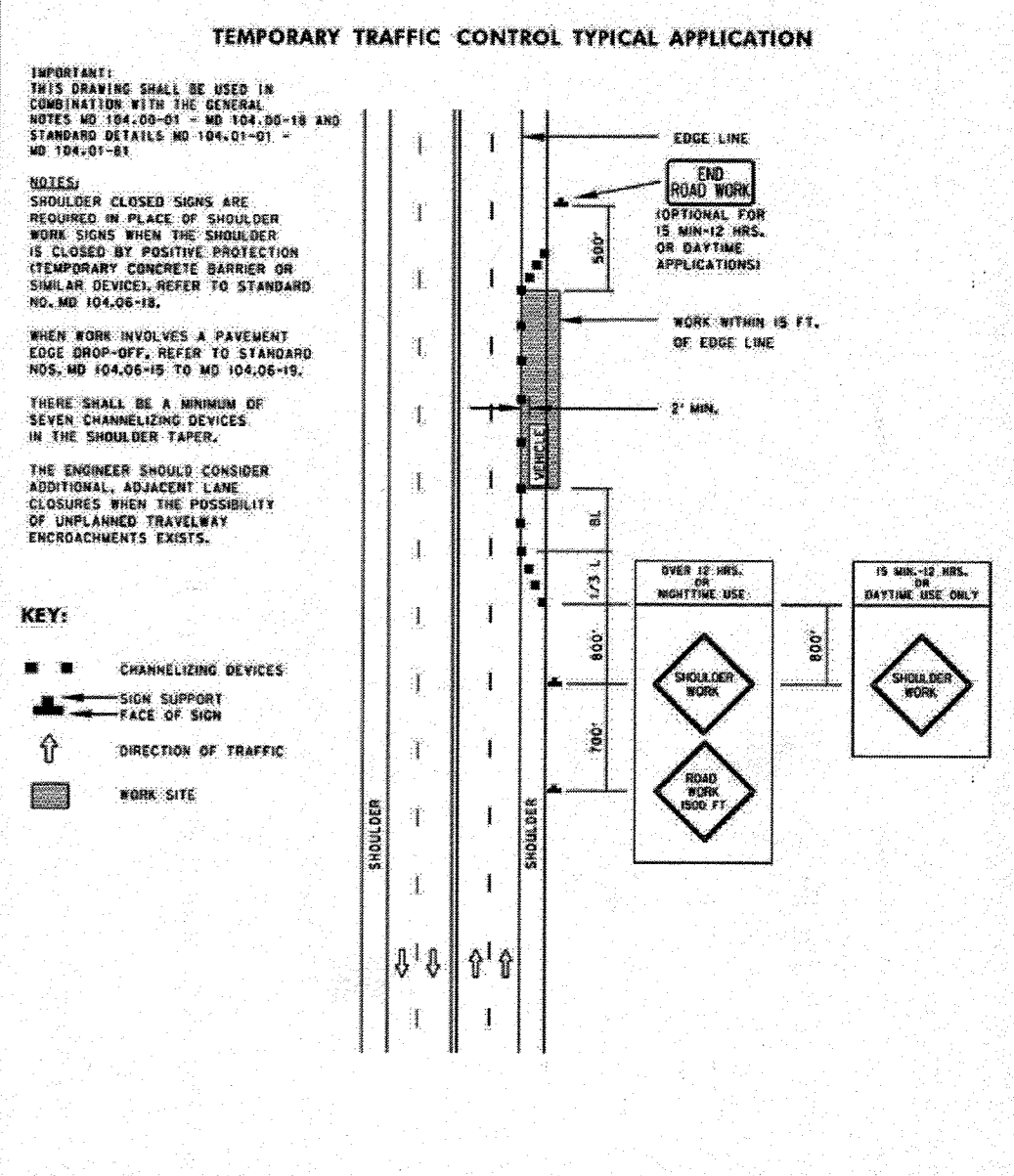
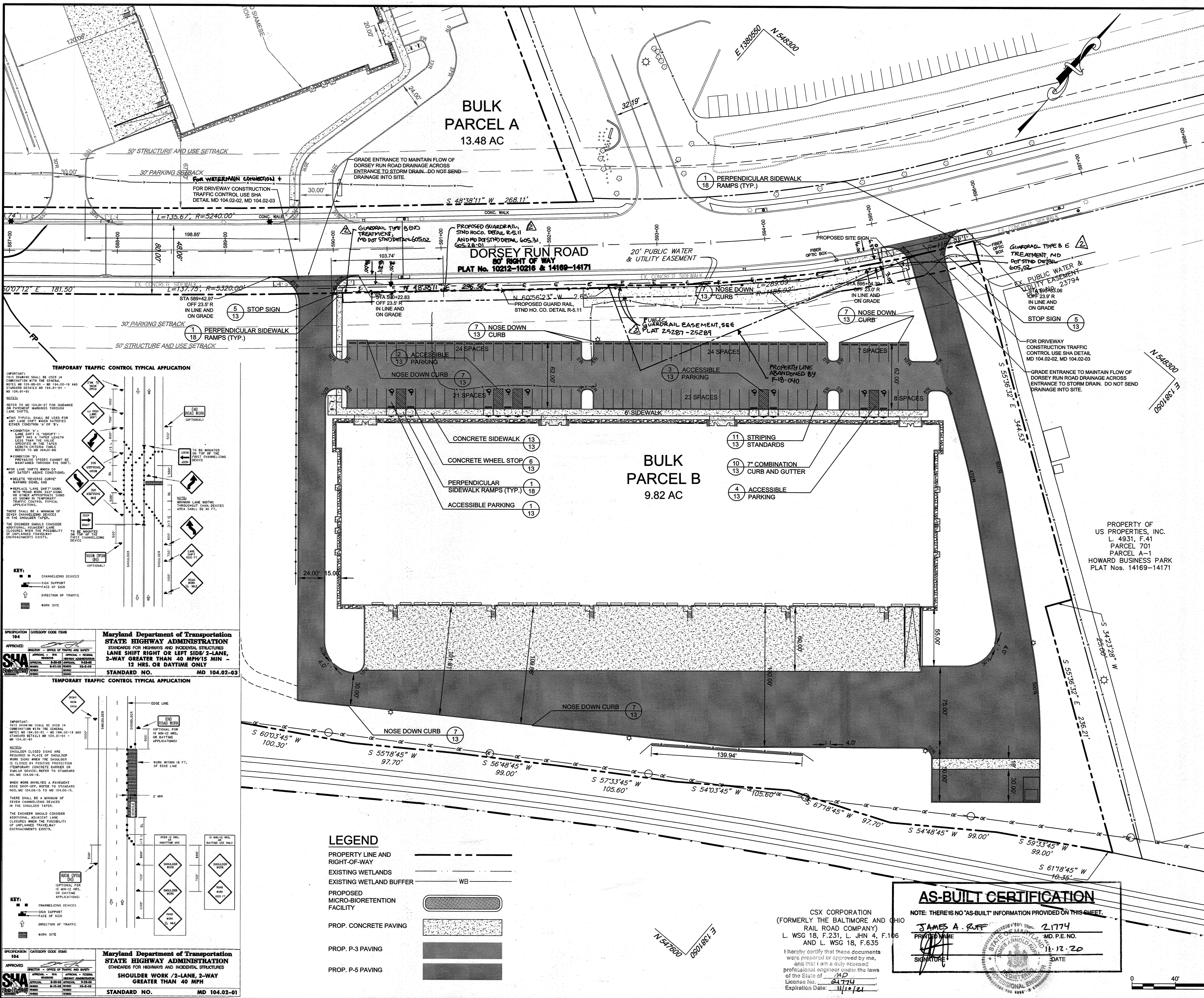
SAND SPECIFICATIONS

- SAND MUST MEET GRADATION REQUIREMENTS FOR ASTM C-33 FINE AGGREGATE CONCRETE SAND. AASHTO M-6 GRADATION IS ALSO ACCEPTABLE.
- SAND MUST BE SILICA BASED. NO LIMESTONE BASED PRODUCTS MAY BE USED. IF THE MATERIAL IS WHITE OR GRAY IN COLOR, IT IS PROBABLY NOT ACCEPTABLE.
- SAND MUST BE CLEAN. NATURAL, UNWASHED SAND DEPOSITS MAY NOT BE USED. LIKEWISE, SAND THAT HAS BECOME CONTAMINATED BY IMPROPER STORAGE OR INSTALLATION PRACTICES WILL BE REJECTED.
- MANUFACTURED SAND OR STONE DUST IS NOT ACCEPTABLE UNDER ANY CIRCUMSTANCE.



	1	2	3	5	6	7	8
A	447.70 143.80	447.36 146.91	447.36 146.55	447.36 146.95	443.60 142.83	442.00 141.39	442.66 142.13
B	143.95	146.61	146.61	146.61	142.55	141.25	141.35
C	12"	12" 13"	12" 9"	12" 11"	14.5" 13"	12" 13"	18" 12"
D	27"	24"	24"	29"	36"	31"	52"
E	443.70 142.80	446.36 145.80	446.36 145.88	446.36 146.04	442.36 141.67	441.00 140.76	444.16 141.15
SURFACE AREA AT E' (SF)	4,815 799	4,859 1,062	4,700 1,264	4,474 1,400	845 642	1,879 1,340	4,686 1,356





TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION

IMPORTANT: THIS DRAWING SHALL BE USED IN COMBIATION WITH THE GENERAL NOTES AND SPECIFICATIONS AND STANDARD DETAILS NO. 104.01-01 TO 104.01-04.

KEY:

- CHANNELIZING DEVICES
- SIDE SUPPORT
- FACE OF SIGN
- DIRECTION OF TRAFFIC
- WORK SITE

GUARDRAIL NOTES:

- POSTS SHALL BE 8' LONG.
- GUARDRAIL SHALL BE 3" HIGH FROM SIDEWALK TO TOP OF RAIL.
- CONTRACTOR TO MAINTAIN 3" BETWEEN ELECTRIC LINE AND GUARDRAIL. CONTRACTOR TO CONFIRM LOCATION OF ELECTRIC LINE BEFORE INSTALLING GUARDRAIL.
- CONTRACTOR SHALL LOCATE VIA TEST PITS ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF GUARDRAIL.
- GUARDRAIL TYPE B END TREATMENT USE MD DOT STND DETAIL 605.02.

DATE	NO.	REVISION	BY
1/16/20	2	ADJUST LOCATION OF GUARDRAIL	PLC

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Paul Robinson 3-19-18
CHIEF, DEVELOPMENT ENGINEERING DIVISION, DATE

William J. Fuchs 3-28-18
CHIEF, DIVISION OF LAND DEVELOPMENT, DATE

William J. Fuchs 3-29-18
DIRECTOR, DATE

DEVELOPER: DCT INDUSTRIAL
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

OWNER: DCT MEARS LLC
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

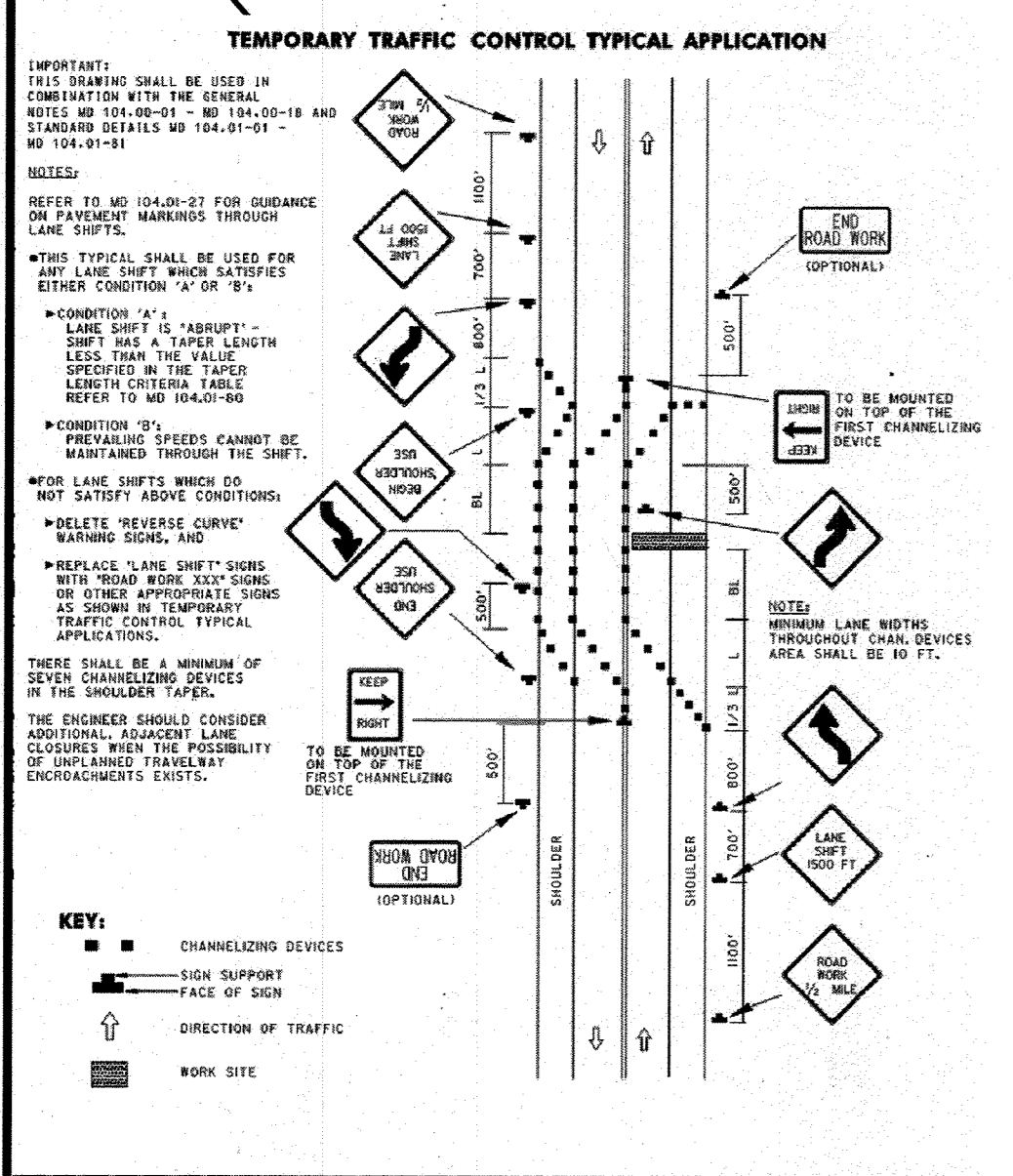
AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
GRID NO. 11 1st ELECTION DISTRICT
7200 DORSEY RUN ROAD
ELK RIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE: PAVING, STRIPING, AND SIGNAGE PLAN

Pennoni Associates Inc.
Engineers - Surveyors - Planners
Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
DRAWN BY: AGS/JSN/NTD
PROJECT NO.: DCT11601
DATE: JANUARY 25, 2018
SCALE: 1" = 40'
DRAWING NO. 25 OF 36

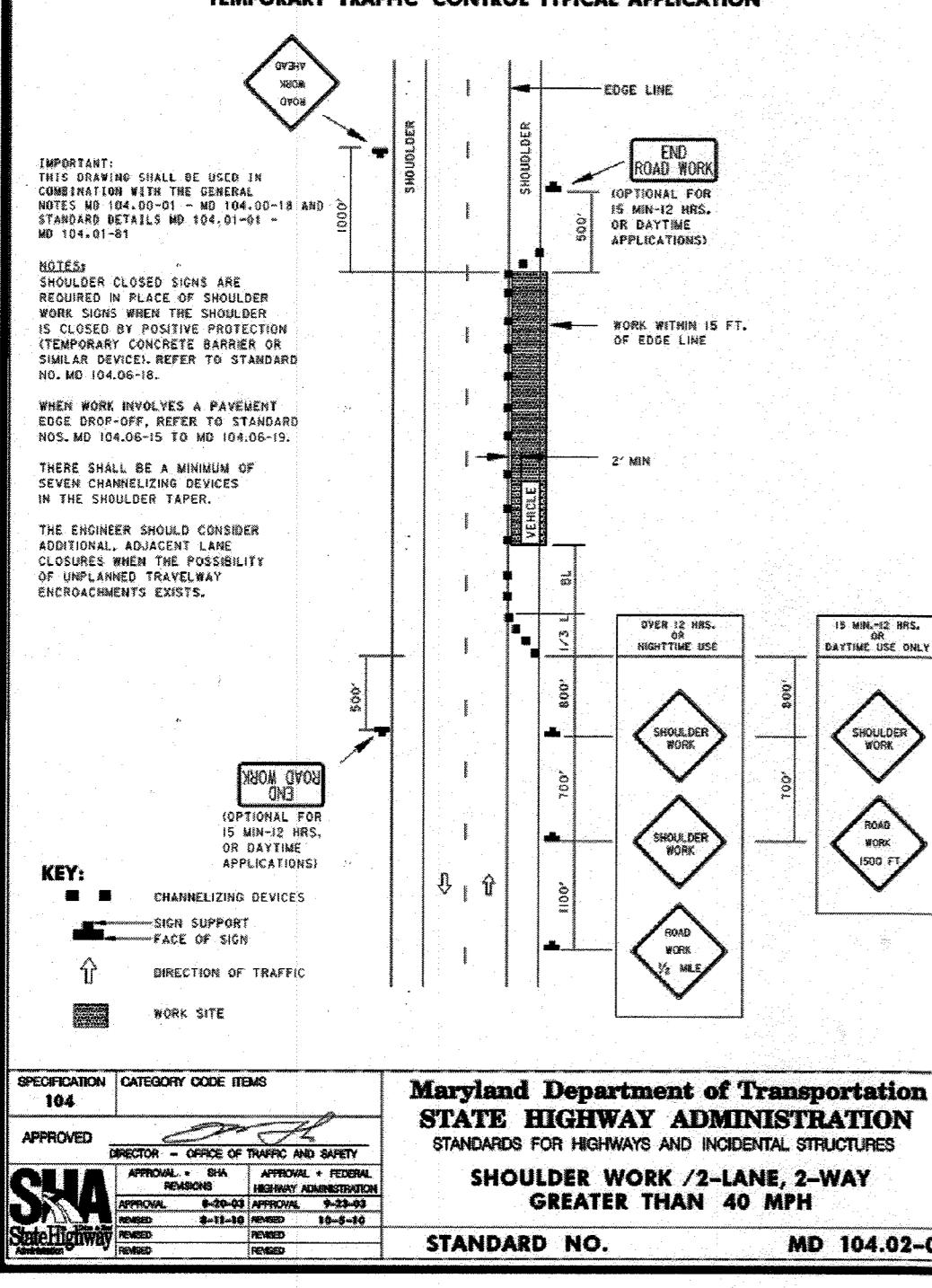


TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION

IMPORTANT: THIS DRAWING SHALL BE USED IN COMBIATION WITH THE GENERAL NOTES AND SPECIFICATIONS AND STANDARD DETAILS NO. 104.01-01 TO 104.01-04.

KEY:

- CHANNELIZING DEVICES
- SIDE SUPPORT
- FACE OF SIGN
- DIRECTION OF TRAFFIC
- WORK SITE

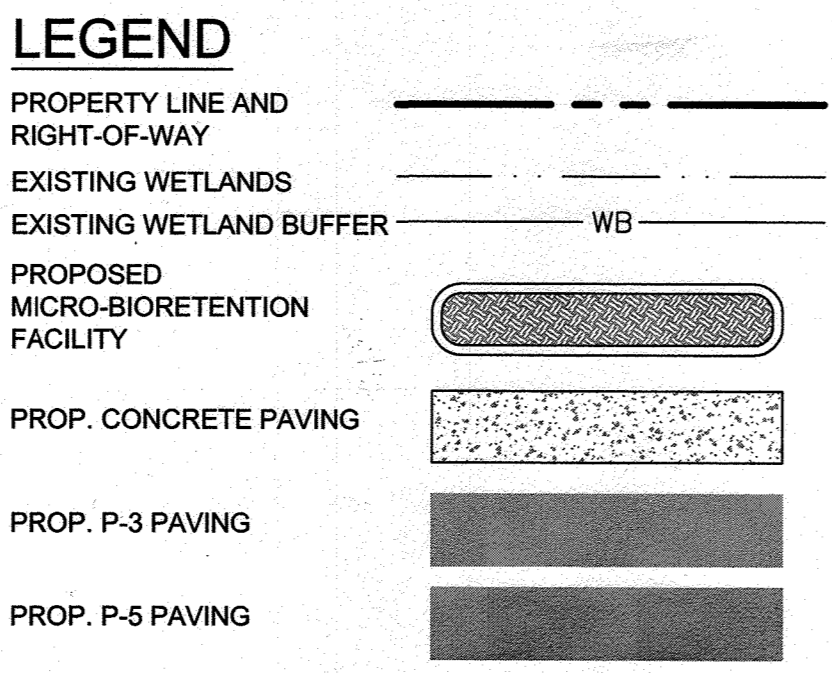


TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION

IMPORTANT: THIS DRAWING SHALL BE USED IN COMBIATION WITH THE GENERAL NOTES AND SPECIFICATIONS AND STANDARD DETAILS NO. 104.01-01 TO 104.01-04.

KEY:

- CHANNELIZING DEVICES
- SIDE SUPPORT
- FACE OF SIGN
- DIRECTION OF TRAFFIC
- WORK SITE



BULK PARCEL B
9.82 AC

BULK PARCEL A
13.48 AC

DORSEY RUN ROAD
80' RIGHT OF WAY
PLAT No. 10212-10216 & 14169-14171

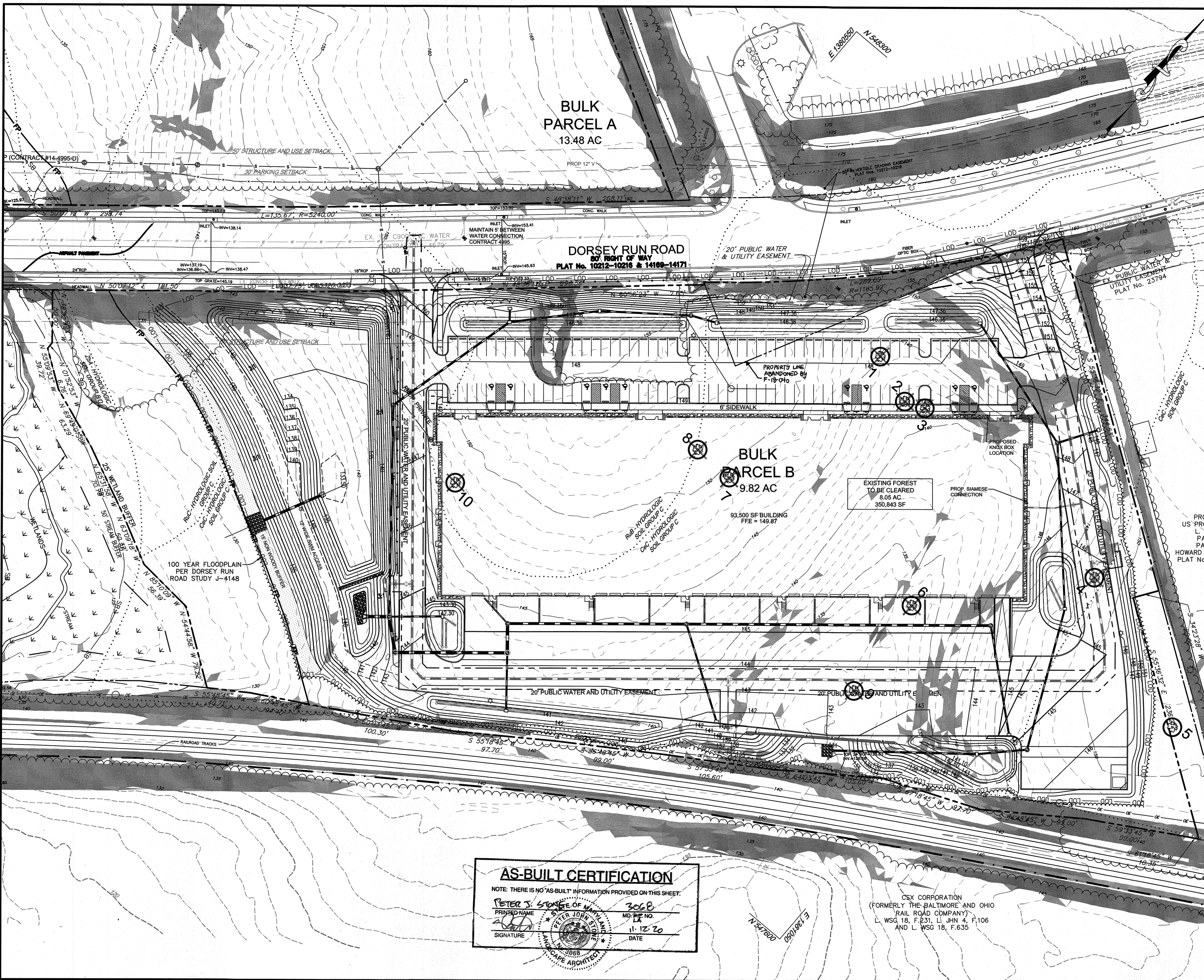
AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

JAMES A. RUFF 2.1774
PRINTED NAME MD. P.E. NO.
11-12-20
SIGNATURE DATE

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. 21774
Expiration Date: 11/12/21

PROPERTY OF
US PROPERTIES, INC.
L. 4931, F.41
PARCEL 701
PARCEL A-1
HOWARD BUSINESS PARK
PLAT Nos. 14169-14171



LEGEND

- PROPERTY LINE AND RIGHT-OF-WAY
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- EXISTING TREE LINE
- EXISTING SOILS
- EXISTING WETLANDS
- EXISTING WETLAND BUFFER
- EXISTING STORM DRAIN
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- PROPOSED MICRO-BIRETENTION FACILITY
- PROPOSED TREE LINE
- PROPOSED STORM DRAIN
- PROPOSED TREE PROTECTION FENCE
- PROP. FOREST CONSERVATION EASEMENT
- PROPOSED FOREST CONSERVATION SIGN
- EXISTING SPECIMEN TREE
- EXISTING SPECIMEN TREE TO BE REMOVED
- 15-25% SLOPES
- >25% SLOPES
- PROPOSED WATER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 3-19-19

[Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3-28-19

[Signature]
 DIRECTOR
 DATE: 3-29-19

DATE	NO.	REVISION	BY
1/25/18	1	ADDITION OF ADJACENT PARCEL, EXPANSION OF PARKING LOT, GRADING REVISIONS	ALC

DEVELOPER	DCT INDUSTRIAL 12011 GUILFORD ROAD SUITE 102 ANNAPOLIS JUNCTION, MD 20701 ATTN: FRED FERRARO PHONE: 410-645-5020
OWNER	DCT MEARS LLC 12011 GUILFORD ROAD SUITE 102 ANNAPOLIS JUNCTION, MD 20701 ATTN: FRED FERRARO PHONE: 410-645-5020

PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
GRID NO. 11 1st ELECTION DISTRICT
7200 DORSEY RUN ROAD
ELK RIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE: FOREST CONSERVATION PLAN

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS

DRAWN BY: AGS/JSN/NTD

PROJECT NO: DCT11601

DATE: JANUARY 25, 2018

SCALE: 1" = 40'

DRAWING NO. 26 OF 36

AS-BUILT CERTIFICATION

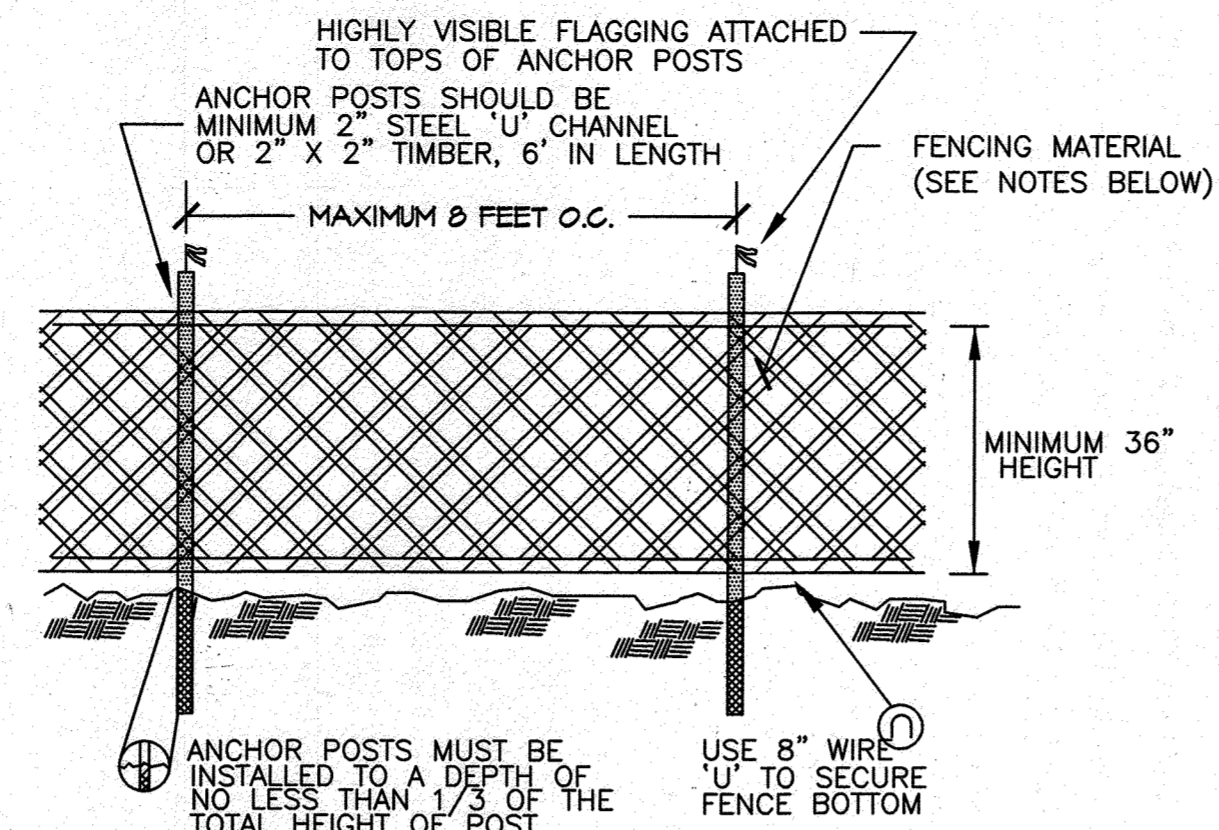
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

PETER S. STONE OF W. 3068
 PRINTED NAME MD. REG. NO.
 [Signature] 11-12-20
 SIGNATURE DATE

CSX CORPORATION
 (FORMERLY THE BALTIMORE AND OHIO RAIL ROAD COMPANY)
 L. WSG 18, F. 231, L. JHN 4, F. 106
 AND L. WSG 18, F. 635

FOREST CONSERVATION PLAN GENERAL NOTES:

- BOUNDARY INFORMATION PROVIDED BY PENNONI ASSOCIATES, DATED FEBRUARY 5, 2016. TOPOGRAPHIC INFORMATION PROVIDED BY RESOURCE MAPPING GROUP, DATED FEBRUARY 2016.
- NO CRITICAL HABITATS OF RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.
- NO TREES, SHRUBS, OR PLANTS IDENTIFIED AS RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.
- THERE ARE NO KNOWN CEMETERIES OR BURIAL PLOTS LOCATED ON THE SITE.
- THERE ARE NO STRUCTURES PRESENT ON THE SITE.
- THE SOILS ON SITE ARE CHILLUM LOAM (5-10% SLOPES) - CcC, RUSSET FINE SANDY LOAM (2-5% SLOPES) - RuB, RUSSET AND BELTSVILLE SOILS (2-5% SLOPES) - RuB, RUSSET AND BELTSVILLE SOILS (2-10% SLOPES) - RuC, AND ZEPHRAH AND ISSUE SOILS (0-2% SLOPES) - ZmA ACCORDING TO THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.
- A FOREST STAND DELINEATION FOR THIS PROPERTY WAS COMPLETED BY PENNONI ASSOCIATES, INC. AND APPROVED ON SEPTEMBER 2, 2016 (SEE FILE # ECP-16-056).
- THE HOWARD COUNTY FOREST CONSERVATION MANUAL SUPERCEDES ANY DISCREPANCIES BETWEEN THE MANUAL AND THESE PLANS.
- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION.
- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE PURCHASE OF CREDITS FOR 4.55 ACRES OF FOREST IN AN OFFSITE BANK. THE BANK IS KNOWN AS SDP-16-028, AFS FARM AND/OR F-13-070 QUARTZ HILL III.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND 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.



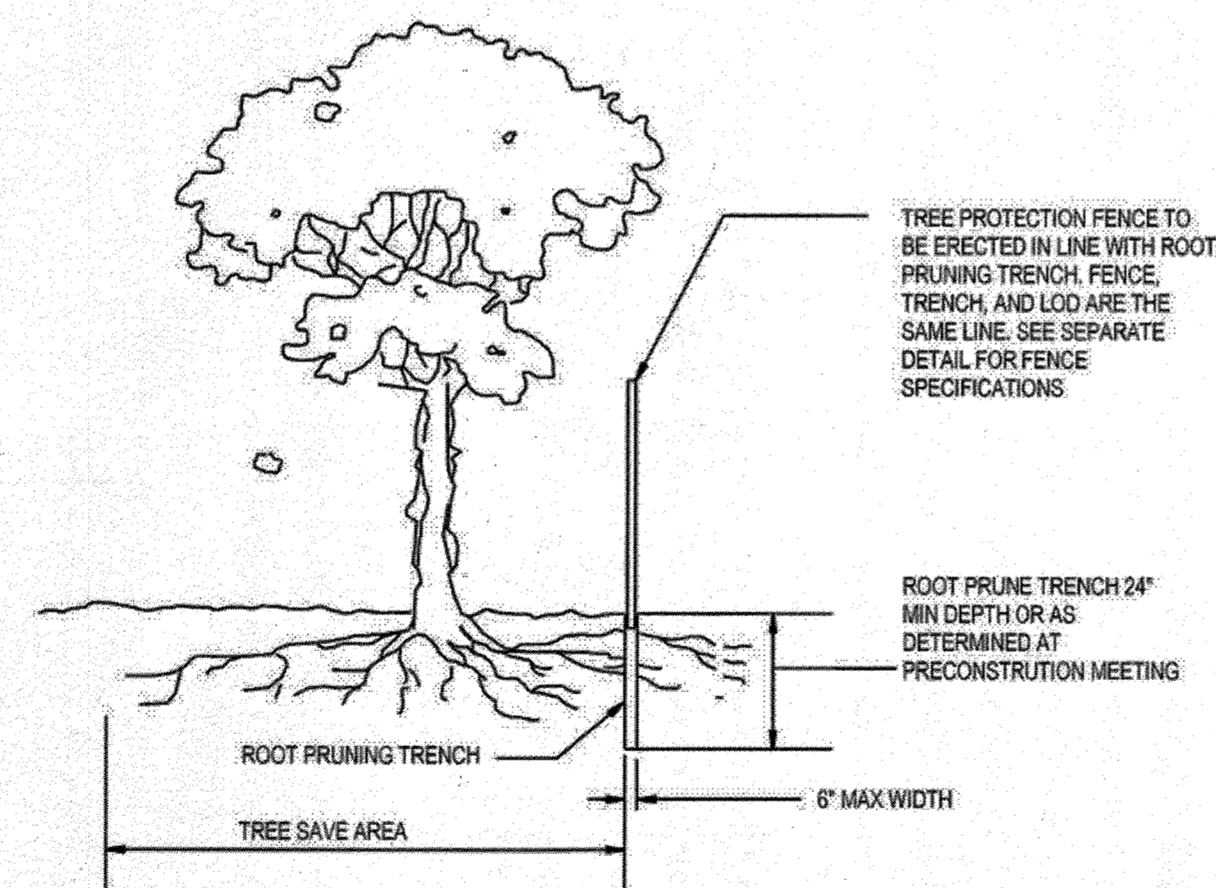
- NOTES:**
- BLAZE ORANGE MESH OR SUPER SILT FENCE FOR TREE PROTECTION DEVICE, ONLY.
 - BOUNDARIES OF PROTECTION AREA WILL BE ESTABLISHED PRIOR TO GRADING AND SEDIMENT CONTROL.
 - AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVER LARGE ROOTS WHEN INSTALLING POSTS.
 - FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION FENCING
NOT TO SCALE

Howard County Forest Conservation Worksheet

Project Name: **TERRAPIN COMMERCE CENTER**
County File #: **SDP-17-037**
Date: **February 16, 2017**

	Acres
A. Total Tract Area	A = 9.73
B. Existing Floodplain Area	B = 0.91
C. Net Tract Area Net Tract Area = (A-B-C)	C = 8.82
Land Use Category: <u>Industrial Development Area</u>	
D. Afforestation Threshold (Net Tract Area X 15%)	D = 1.32
E. Conservation Threshold (Net Tract Area X 15%)	E = 1.32
Existing Forest Cover	
F. Existing Forest Cover within the Net Tract Area	F = 8.92
G. Area of Forest Above Conservation Threshold	G = 7.60
If the Existing Forest Cover (F) is greater than Conservation Threshold (G), then G = Existing Forest Cover (F) - Conservation Threshold (E); Otherwise G = 0	
Break Even Point	
H. Break Even (Amount of forest that must be retained so that no mitigation is required)	H = 2.84
(1) If the area of forest above the Conservation Threshold (G) is greater than zero, then H = (0.2 X the area of forest above Conservation Threshold (G)) + the Conservation Threshold (E)	
(2) If the area of forest above the Conservation Threshold (G) is equal to zero, then H = Existing Forest Cover (F)	
I. Forest Clearing Permitted Without Mitigation	I = 6.08
I = Existing Forest Cover (F) - Break Even Point (H)	
Proposed Forest Clearing	
J. Total Area of Forest to be Cleared	J = 8.92
K. Total Area of Forest to be Retained	K = 0.00
K = Existing Forest Cover (F) - forest to be cleared (J)	
Planting Requirements	
If the Total Area of Forest to be Cleared (K) is at or above the Break Even Point (H), no planting is required and no further calculations are necessary (L=0, M=0, N=0, P=0);	
If not, calculate the planting requirement below:	
L. Reforestation for Clearing Above the Conservation Threshold	L = 1.90
(1) If the total area of forest to be retained (K) is greater than the Conservation Threshold (E), then L = the area of forest to be cleared (J) X 0.25; or	
(2) If the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then L = area of forest above Conservation Threshold (G) X 0.25	
M. Reforestation for Clearing Below the Conservation Threshold	M = 2.65
(1) If Existing Forest Cover (F) is greater than Conservation Threshold (E) and the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then M = 2.0 X (the Conservation Threshold (E) - the forest to be retained (K))	
(2) If Existing Forest (F) is less than or equal to the Conservation Threshold (E), then M = 2.0 X Forest to be cleared (J)	
N. Credit for Retention Above the Conservation Threshold	N = 0.00
If the area of forest to be retained (K) is greater than the Conservation Threshold (E), then N = K - E	
P. Total Reforestation Required P = L + M - N	P = 4.55
Q. Total Afforestation Required	Q = 0.00
(1) If Existing Forest Cover (F) is less than the Afforestation Threshold (D) then Q = the Afforestation Threshold (D) - the Existing Forest Cover (F)	
R. Total Planting Requirement R = P + Q	R = 4.55



- NOTES:**
- RETENTION AREAS WILL BE SET AS PART OF THE REVIEW PROCESS AND PRECONSTRUCTION MEETING.
 - BOUNDARIES OF RETENTION AREAS MUST BE STAKED AT THE PRECONSTRUCTION MEETING AND FLAGGED PRIOR TO TRENCHING.
 - EXACT LOCATION OF TRENCH SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE FOREST CONSERVATION (FC) INSPECTOR.
 - TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH EXCAVATED SOIL OR OTHER ORGANIC SOIL AS SPECIFIED PER PLAN OR BY THE FC INSPECTOR.
 - ROOTS SHALL BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.
 - ALL PRUNING MUST BE EXECUTED WITH LOD SHOWN ON PLANS OR AS AUTHORIZED IN WRITING BY THE FC INSPECTOR.

ROOT PRUNING DETAIL

NTS

KEY	SPECIES	SIZE	CONDITION	REMAIN/REMOVE
1	TULIP POPLAR (Liriodendron tulipifera)	31"	GOOD	REMOVE
2	TULIP POPLAR (Liriodendron tulipifera)	35"	GOOD	REMOVE
3	TULIP POPLAR (Liriodendron tulipifera)	35"	GOOD	REMOVE
4	NORTHERN RED OAK (Quercus rubra)	36"	GOOD	REMOVE
5	LOBLOLLY PINE (Pinus taeda)	33"	GOOD	REMAIN
6	TULIP POPLAR (Liriodendron tulipifera)	46"	GOOD	REMOVE
7	LOBLOLLY PINE (Pinus taeda)	31"	GOOD	REMOVE
8	LOBLOLLY PINE (Pinus taeda)	35"	GOOD	REMOVE
9	TULIP POPLAR (Liriodendron tulipifera)	32"	GOOD	REMOVE
10	NORTHERN RED OAK (Quercus rubra)	36"	DEAD	REMOVE

AS-BUILT CERTIFICATION
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

PETER J. STONE 3068
PRINTED NAME MD.PE. NO.
11-12-20
SIGNATURE DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

9-8-17 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION JP

9-21-17 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

9-21-17 DATE
DIRECTOR

DATE	NO.	REVISION	BY

DEVELOPER: DCT INDUSTRIAL
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

OWNER: DCT MEARS LLC
12011 GUILFORD ROAD
SUITE 102
ANNAPOLIS JUNCTION, MD 20701
ATTN: FRED FERRARO
PHONE: 410-645-5020

PROJECT: **TERRAPIN COMMERCE CENTER - BUILDING B**

AREA: TAX MAP 43, PARCEL 51 LOT PAR B PLAT 23793 ZONED M-2
GRID NO. 11 1st ELECTION DISTRICT
7200 DORSEY RUN ROAD
ELK RIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE: **FOREST CONSERVATION NOTES AND TABULATIONS**

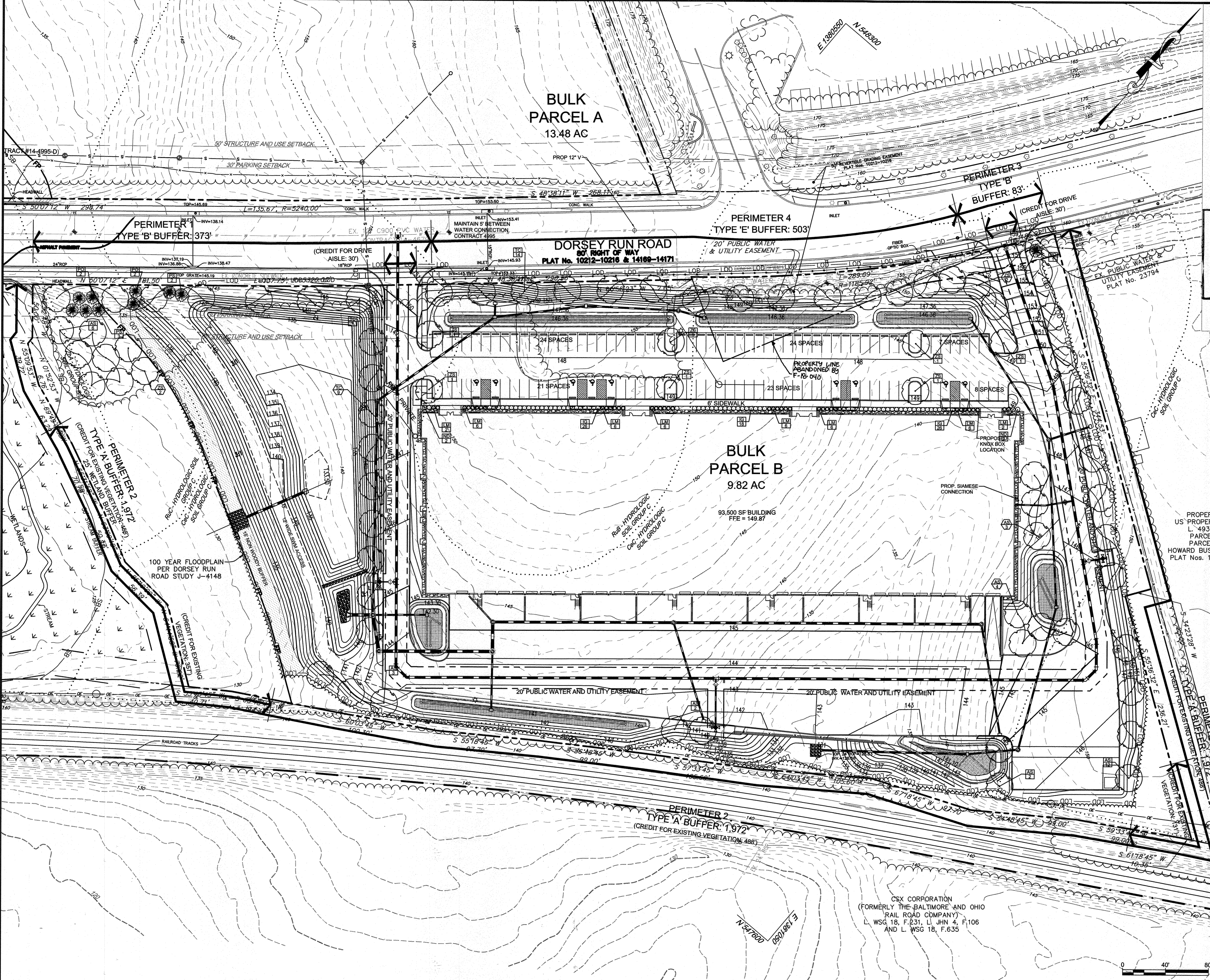
Pennonni Associates Inc.
Engineers - Surveyors - Planners
Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

3-22-17

DESIGNED BY: PJS
DRAWN BY: AGS/JSN/NTD
PROJECT NO: DCT11601
DATE: AUGUST 1, 2017
SCALE: AS SHOWN
DRAWING NO: 27 OF 36

PETER J. STONE #3068



LEGEND

- PROPOSED TREE LINE
- PROPOSED SHADE TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUBS
- REQUIRED LANDSCAPING PER THE HOWARD COUNTY LANDSCAPE MANUAL
- SHADE TREES ADDED PER ALTERNATIVE COMPLIANCE REQUEST (WP-17-087)

AS-BUILT CERTIFICATION
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.
 PETER J. STONE 3068
 PRINTER NAME MD. P.E. NO.
 SIGNATURE DATE 11.12.20
 STATE OF MARYLAND
 LANDSCAPE ARCHITECT

APPROVED : DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	J.P.	3-18-18	DATE
Chief, Division of Land Development	M.R.	3-28-18	DATE
Director	M.F.	3-27-18	DATE

DATE	NO.	REVISION	BY
1/25/18	1	ADDITION OF ADJACENT PARCEL, EXPANSION OF PARKING LOT	ALC

DEVELOPER: DCT INDUSTRIAL
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

OWNER: DCT MEARS LLC
 12011 GUILFORD ROAD
 SUITE 102
 ANNAPOLIS JUNCTION, MD 20701
 ATTN: FRED FERRARO
 PHONE: 410-645-5020

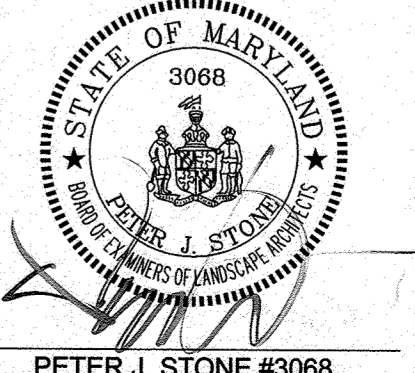
PROJECT: TERRAPIN COMMERCE CENTER - BUILDING B

AREA: TAX MAP 43, PARCEL 51 LOT PAR B, PLAT 23793 ZONED M-2
 GRID NO. 11 1st ELECTION DISTRICT
 7200 DORSEY RUN ROAD
 ELK RIDGE, MARYLAND 21075
 HOWARD COUNTY, MARYLAND

TITLE: LANDSCAPE PLAN

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS
 DRAWN BY: AGS/JSN/NTD
 PROJECT NO: DCT1601
 DATE: JANUARY 25, 2018
 SCALE: 1" = 40'
 DRAWING NO. 28 OF 36



CSX CORPORATION
 (FORMERLY THE BALTIMORE AND OHIO
 RAIL ROAD COMPANY)
 L. WSG 18, F.231, LI JHN 4, F.106
 AND L. WSG 18, F.635