[illegible]

WILEY | WILSON
BURNS
MCDONNELL
JOINT VENTURE

APPROVED

Jennife Blaess

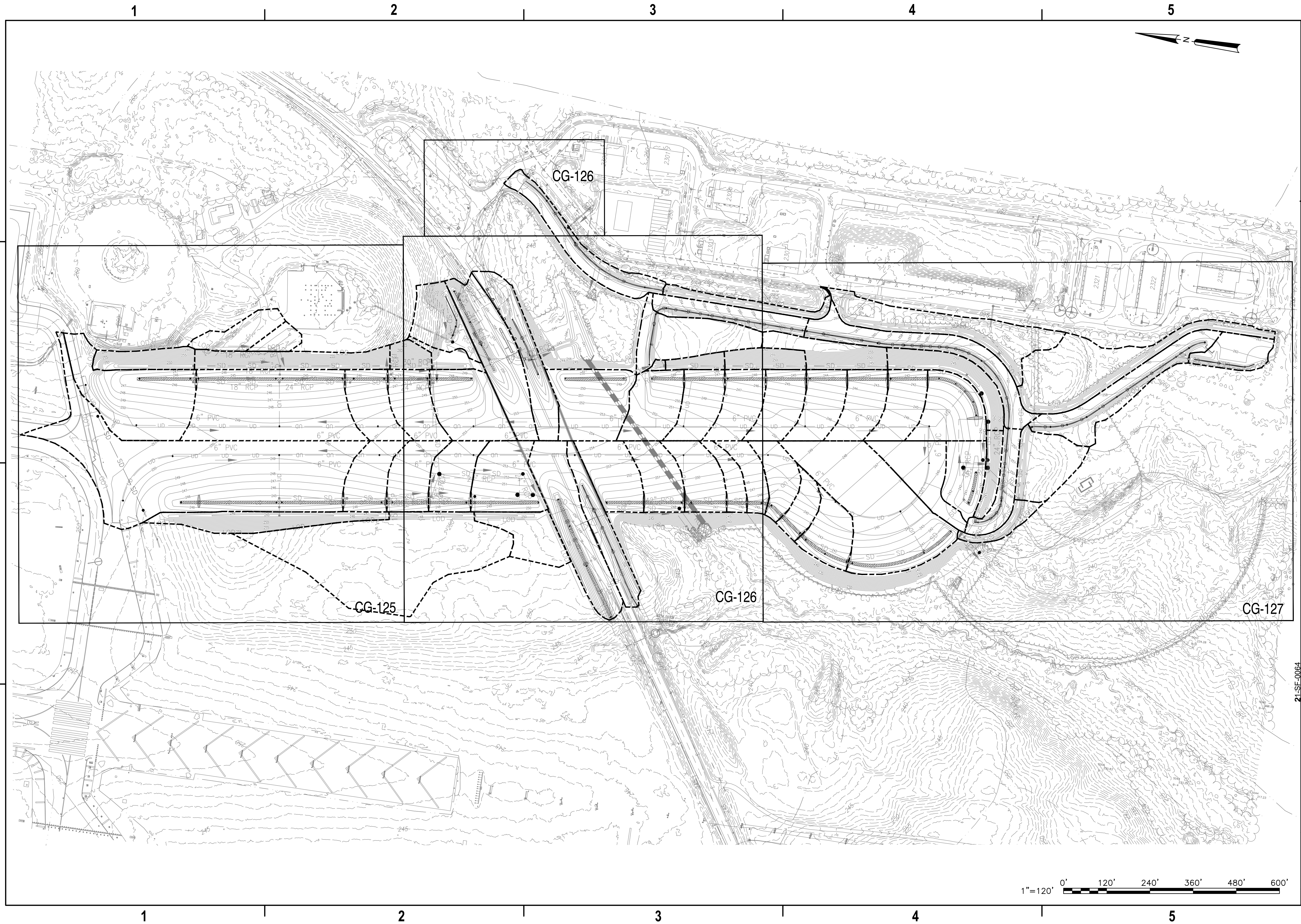
FOR COMMANDER NAVFAC

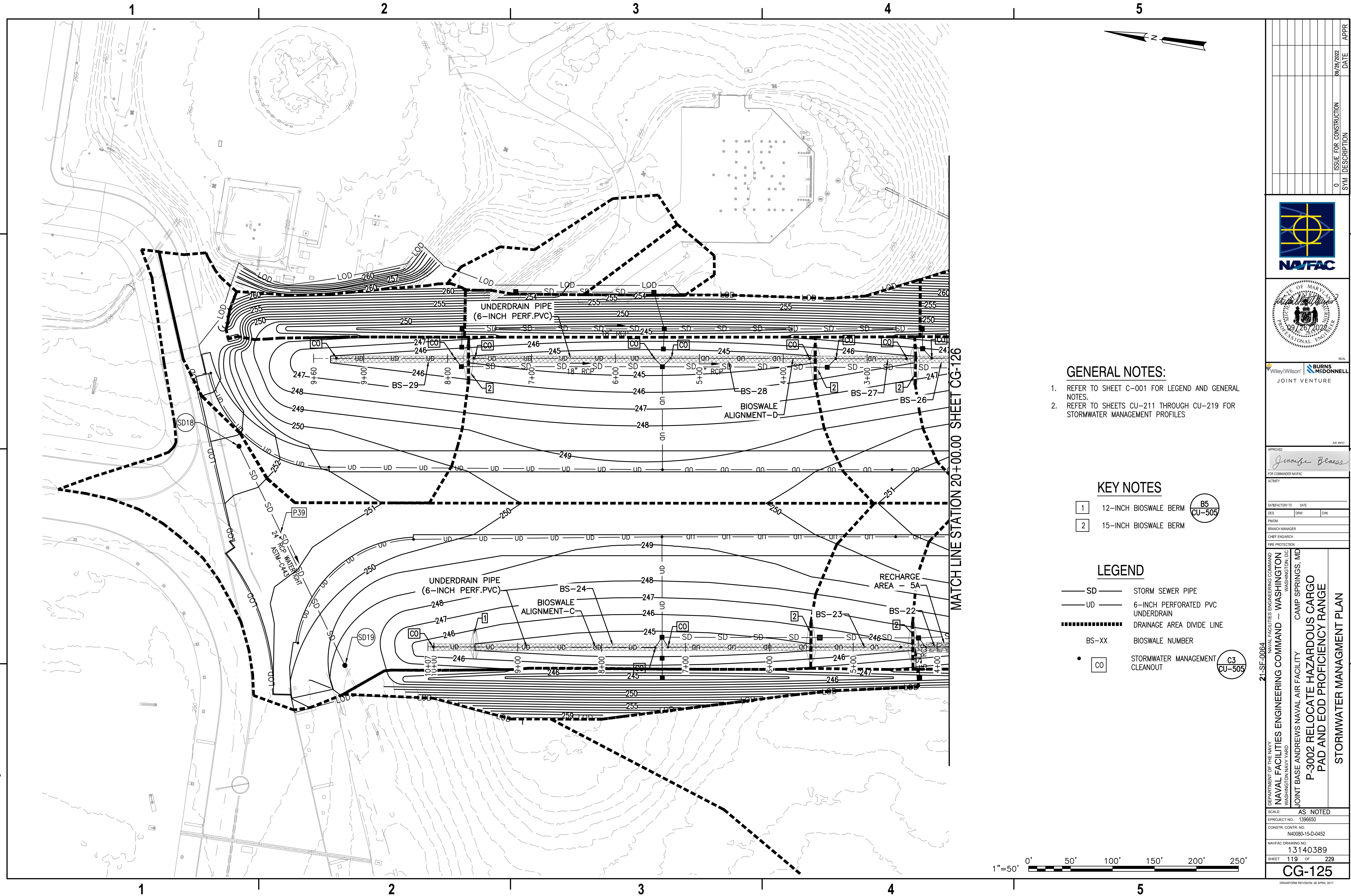
SATISFACTORY TO			DATE		
DES	DRW	CHK			
PM/DM					
BRANCH MANAGER					
CHIEF ENGINEER					
FIRE PROTECTION					

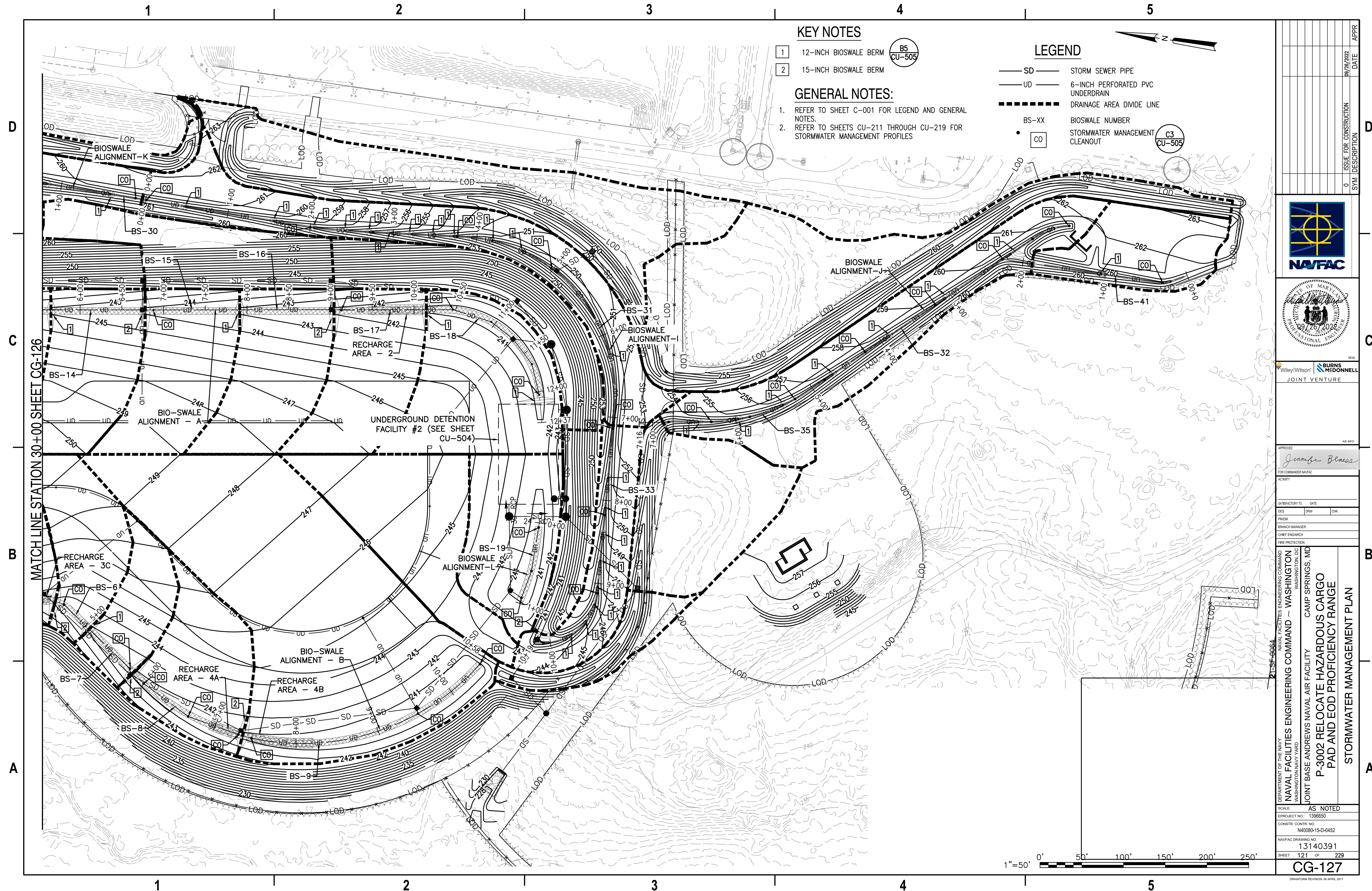
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON WASHINGTON NAVY YARD	JOINT BASE ANDREWS NAVAL AIR FACILITY P-3002 RELOCATE HAZARDOUS CARGO PAD AND EOD PROFICIENCY RANGE	CAMP SPRINGS, MD WASHINGTON, DC
GRADING AND DRAINAGE PLAN		

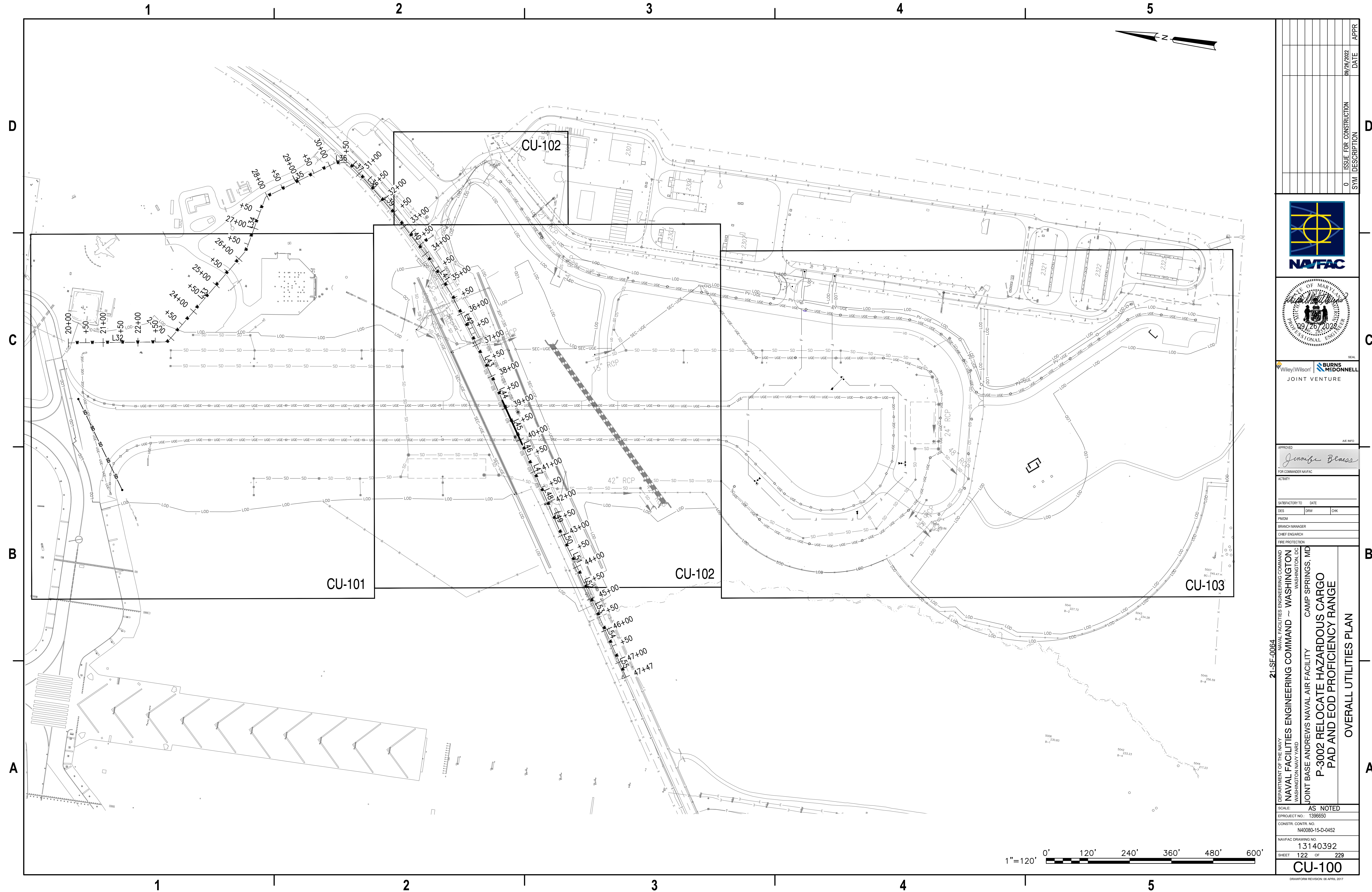
SCALE:	AS NOTED		
PROJECT NO.:	1396650		
CONSTR. CONTR. NO.	N40080-15-D-0452		
NAVFAC DRAWING NO.	13140387		
SHEET	117	OF	229
CG-123			
DRAWFORM REVISION: 06 APRIL 2017			

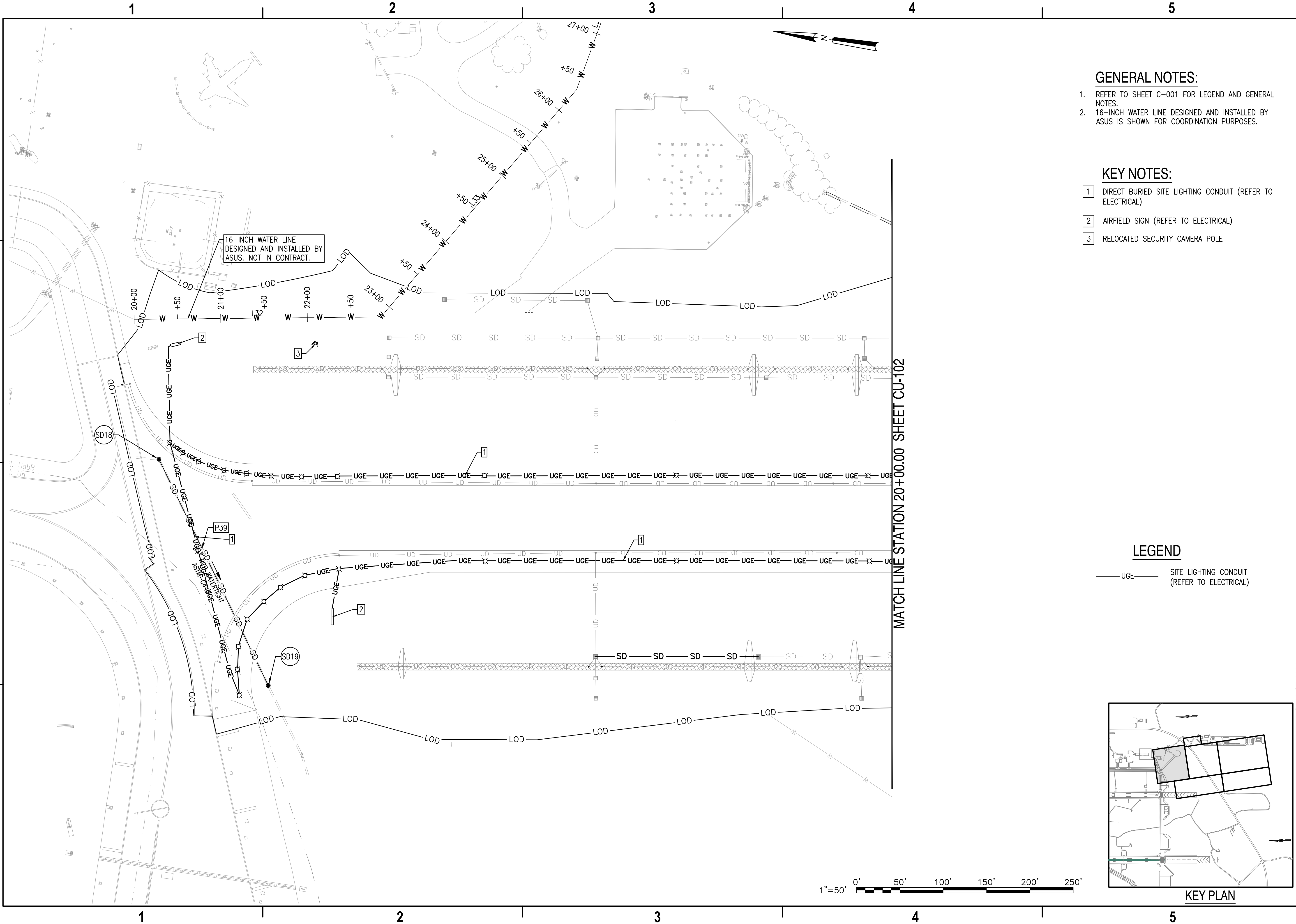
DRAWFORM REVISION: 06 APRIL 2017

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GENERAL NOTES:

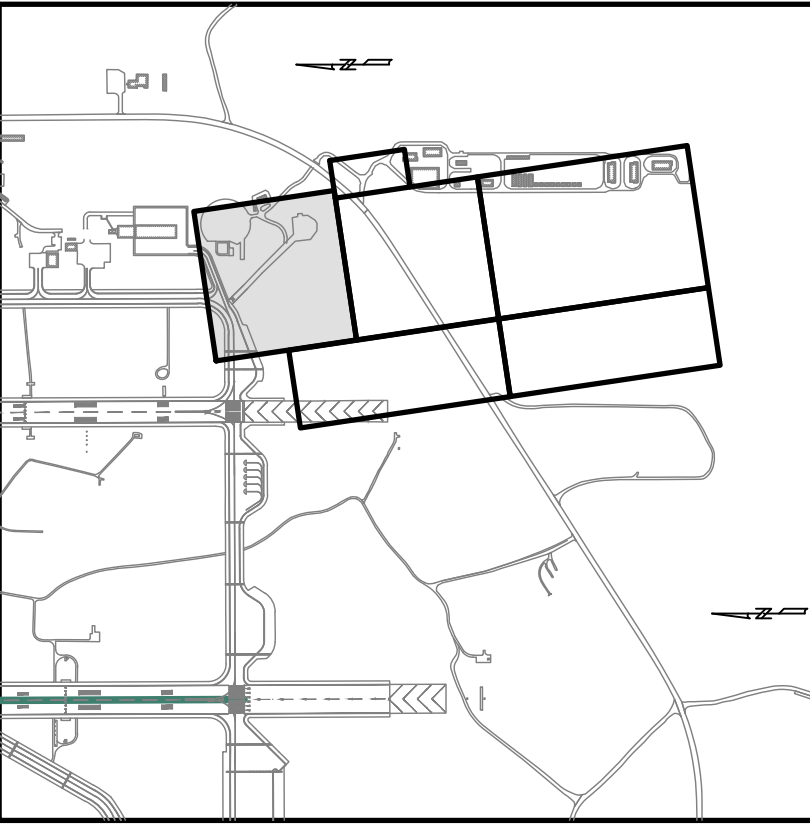
- 1. REFER TO SHEET C-001 FOR LEGEND AND GENERAL NOTES.
- 2. 16-INCH WATER LINE DESIGNED AND INSTALLED BY ASUS. IS SHOWN FOR COORDINATION PURPOSES.

KEY NOTES:

- 1 DIRECT BURIED SITE LIGHTING CONDUIT (REFER TO ELECTRICAL)
- 2 AIRFIELD SIGN (REFER TO ELECTRICAL)
- 3 RELOCATED SECURITY CAMERA POLE

LEGEND

UG SITE LIGHTING CONDUIT (REFER TO ELECTRICAL)



KEY PLAN

DATE: 09/26/2022
APPROVED: [Signature]
BY: [Signature]
FOR: [Signature]
ACTIVITY: [Signature]
SATISFACTORY TO: [Signature]
DES: [Signature]
PMTM: [Signature]
BRANCH MANAGER: [Signature]
CHIEF ENGINEER: [Signature]
FIRE PROTECTION: [Signature]

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WASHINGTON, DC
NAVAL BASE ANDREWS NAVAL AIR FACILITY
CAMP SPRINGS, MD
P-3002 RELOCATE HAZARDOUS CARGO
PAD AND EOD PROFICIENCY RANGE
UTILITIES PLAN

SCALE: AS NOTED
PROJECT NO.: 1398650
CONSTR. CONTR. NO.: N40080-15-D-0452
NAVFAC DRAWING NO.: 13140393
SHEET 123 OF 229
CU-101

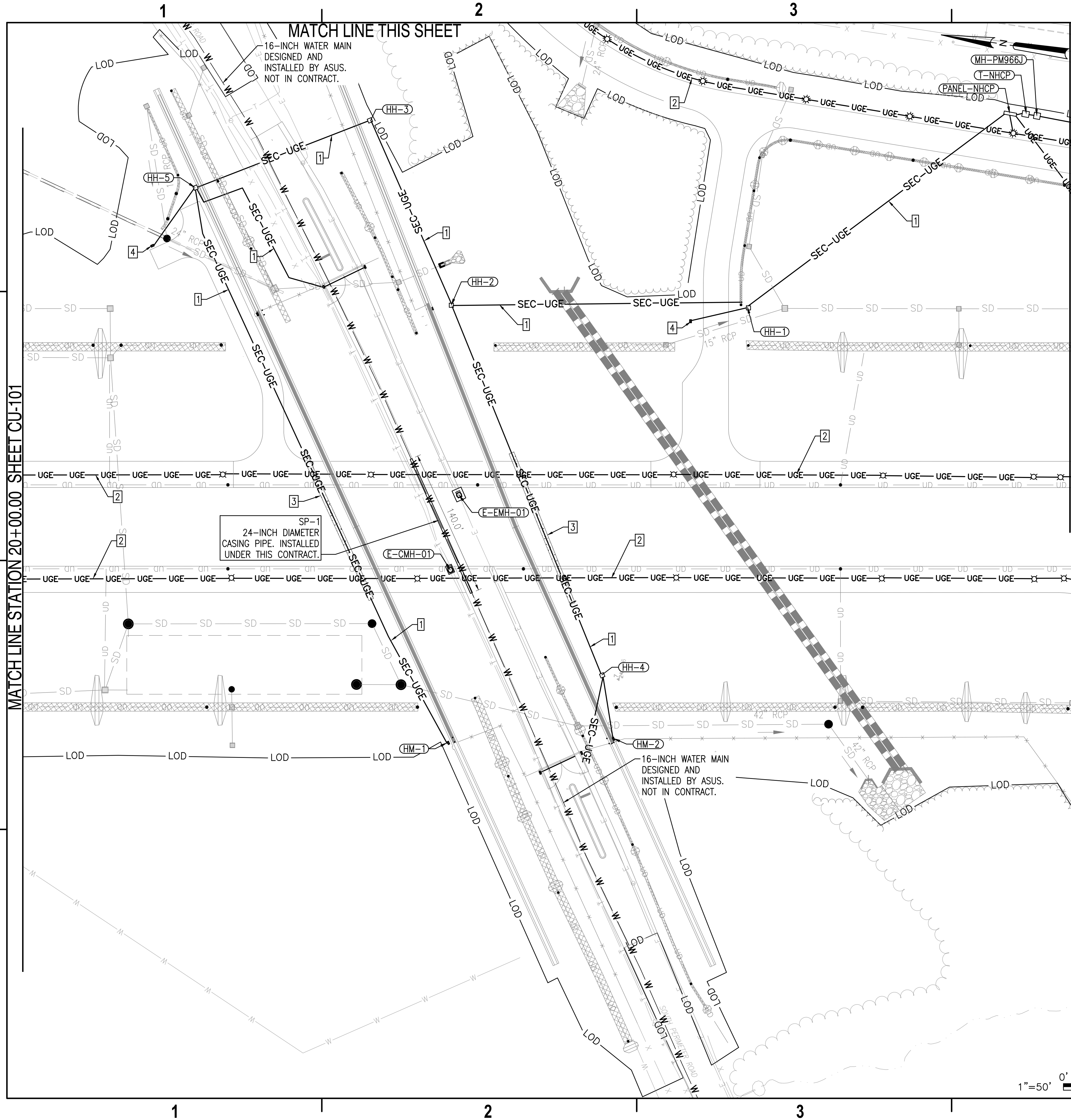
1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5



MATCH LINE STATION 30+00.00 SHEET CU-103

GENERAL NOTES:

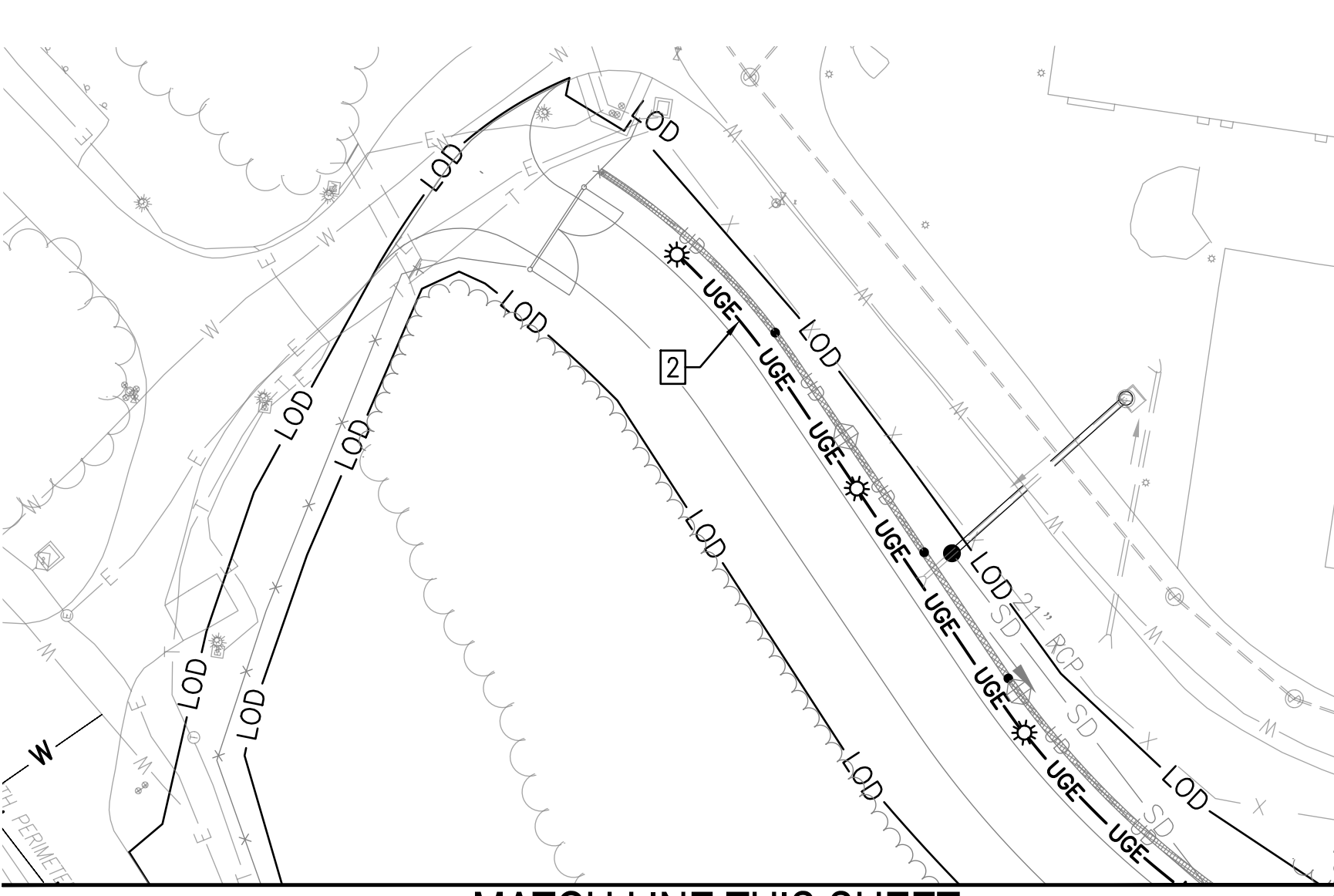
1. REFER TO SHEET C-001 FOR LEGEND AND GENERAL NOTES.
2. REFER TO SHEET CU-221 FOR WATER/STEEL CASING PIPE PROFILE.
3. REFER TO SHEET CU-230 TO CU-231 FOR ELECTRICAL AND COMMUNICATIONS PROFILES.

KEY NOTES:

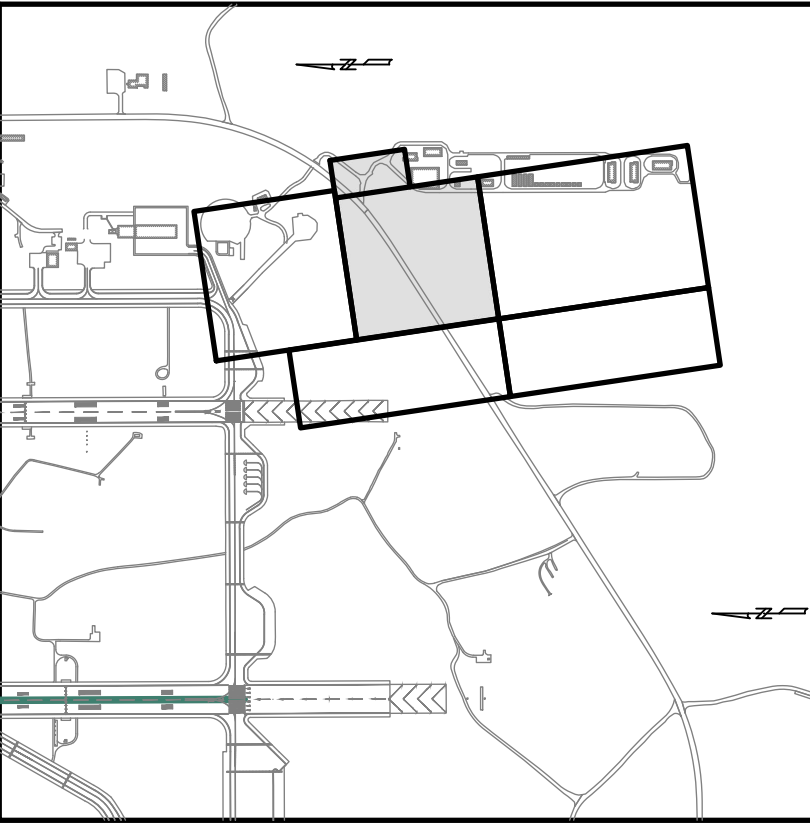
- 1 DIRECT BURIED CONDUIT (REFER TO ELECTRICAL)
- 2 DIRECT BURIED SITE LIGHTING CONDUIT (REFER TO ELECTRICAL)
- 3 CONCRETE ENCASE ELECTRICAL CONDUIT UNDER TAXIWAY PAVEMENT SECTION.
- 4 GATE CONTROL PANEL

LEGEND

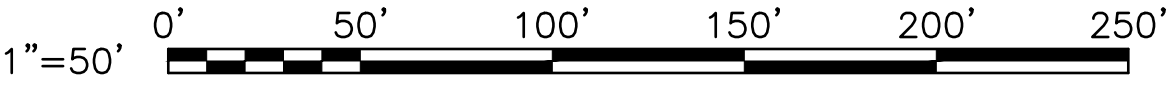
- SEC-UGE— LOW VOLTAGE ELECTRICAL CONDUIT (REFER TO ELECTRICAL)
- UGE— SITE LIGHTING CONDUIT (REFER TO ELECTRICAL)



MATCH LINE THIS SHEET



KEY PLAN



DATE		APPR
09/26/2022		
SYM	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	

JOINT VENTURE

APPROVED

Jennifer Bless

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES: [] DRAW: [] CHK: []

PM/DM

BRANCH MANAGER

CHIEF ENGINEER

FIRE PROTECTION

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON

WASHINGTON NAVY YARD

JOINT BASE ANDREWS NAVAL AIR FACILITY

CAMP SPRINGS, MD

P-3002 RELOCATE HAZARDOUS CARGO

PAD AND EOD PROFICIENCY RANGE

UTILITIES PLAN

SCALE: AS NOTED

EPROJECT NO.: 139650

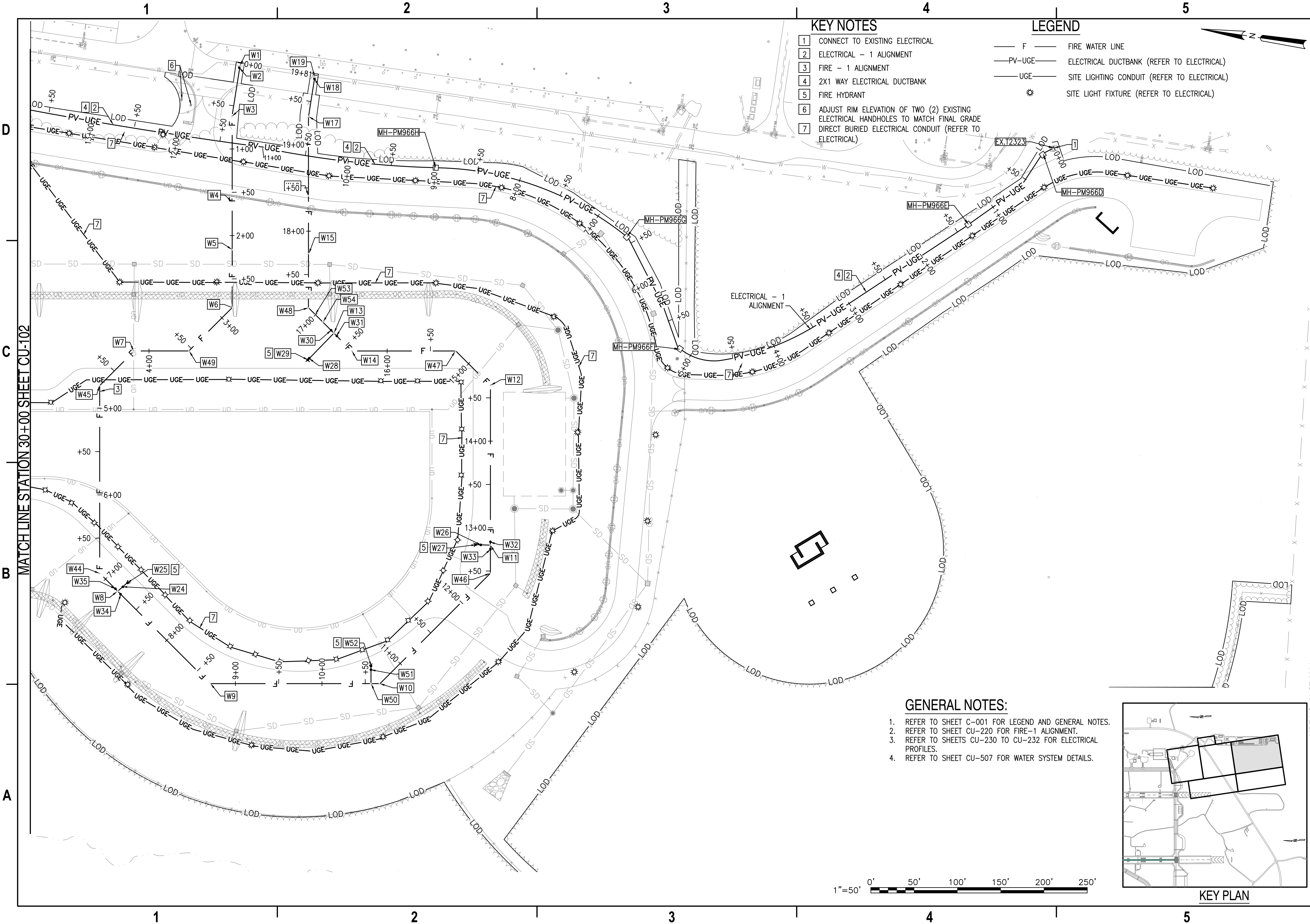
CONSTR. CONTR. NO. N40080-15-D-0452

NAVFAC DRAWING NO. 13140394

SHEET 124 OF 229

CU-102

DRAWING REVISION: 08 APRIL 2017



KEY NOTES

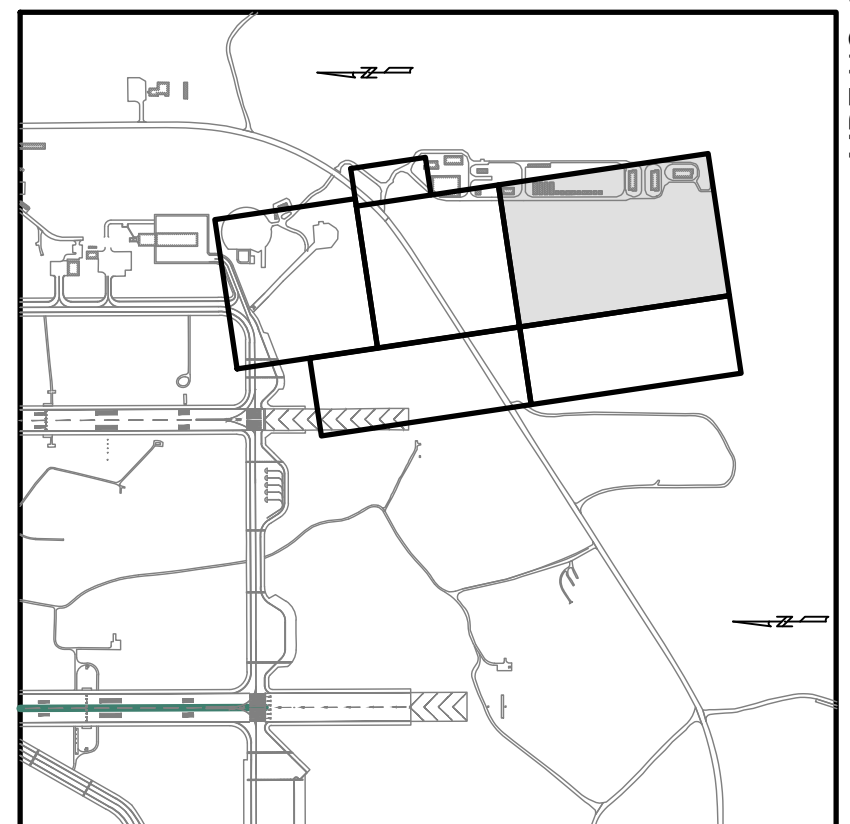
- 1 CONNECT TO EXISTING ELECTRICAL
- 2 ELECTRICAL - 1 ALIGNMENT
- 3 FIRE - 1 ALIGNMENT
- 4 2X1 WAY ELECTRICAL DUCTBANK
- 5 FIRE HYDRANT
- 6 ADJUST RIM ELEVATION OF TWO (2) EXISTING ELECTRICAL HANDHOLES TO MATCH FINAL GRADE
- 7 DIRECT BURIED ELECTRICAL CONDUIT (REFER TO ELECTRICAL)

LEGEND

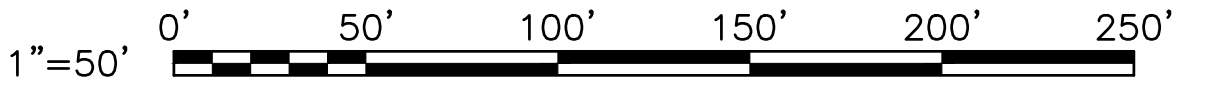
- F FIRE WATER LINE
- PV-UGE ELECTRICAL DUCTBANK (REFER TO ELECTRICAL)
- UGE SITE LIGHTING CONDUIT (REFER TO ELECTRICAL)
- ☼ SITE LIGHT FIXTURE (REFER TO ELECTRICAL)

GENERAL NOTES:

- 1. REFER TO SHEET C-001 FOR LEGEND AND GENERAL NOTES.
- 2. REFER TO SHEET CU-220 FOR FIRE-1 ALIGNMENT.
- 3. REFER TO SHEETS CU-230 TO CU-232 FOR ELECTRICAL PROFILES.
- 4. REFER TO SHEET CU-507 FOR WATER SYSTEM DETAILS.

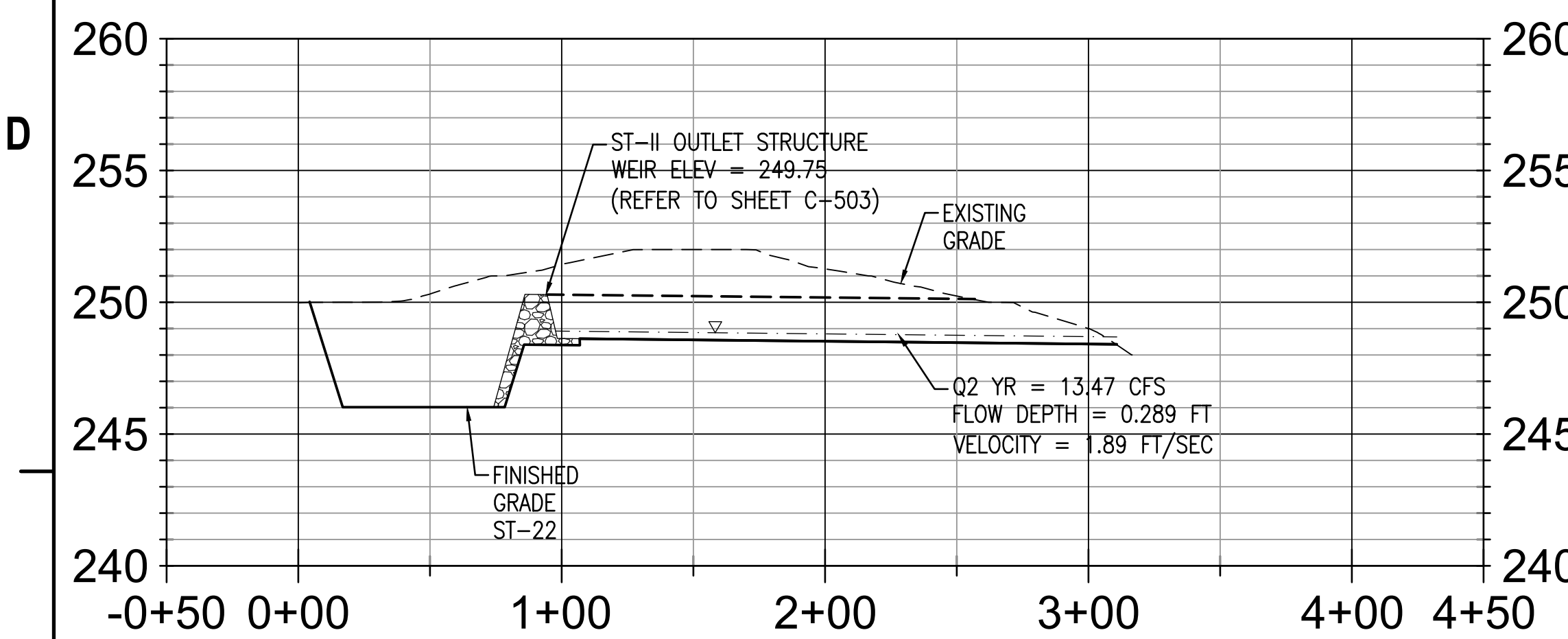


KEY PLAN



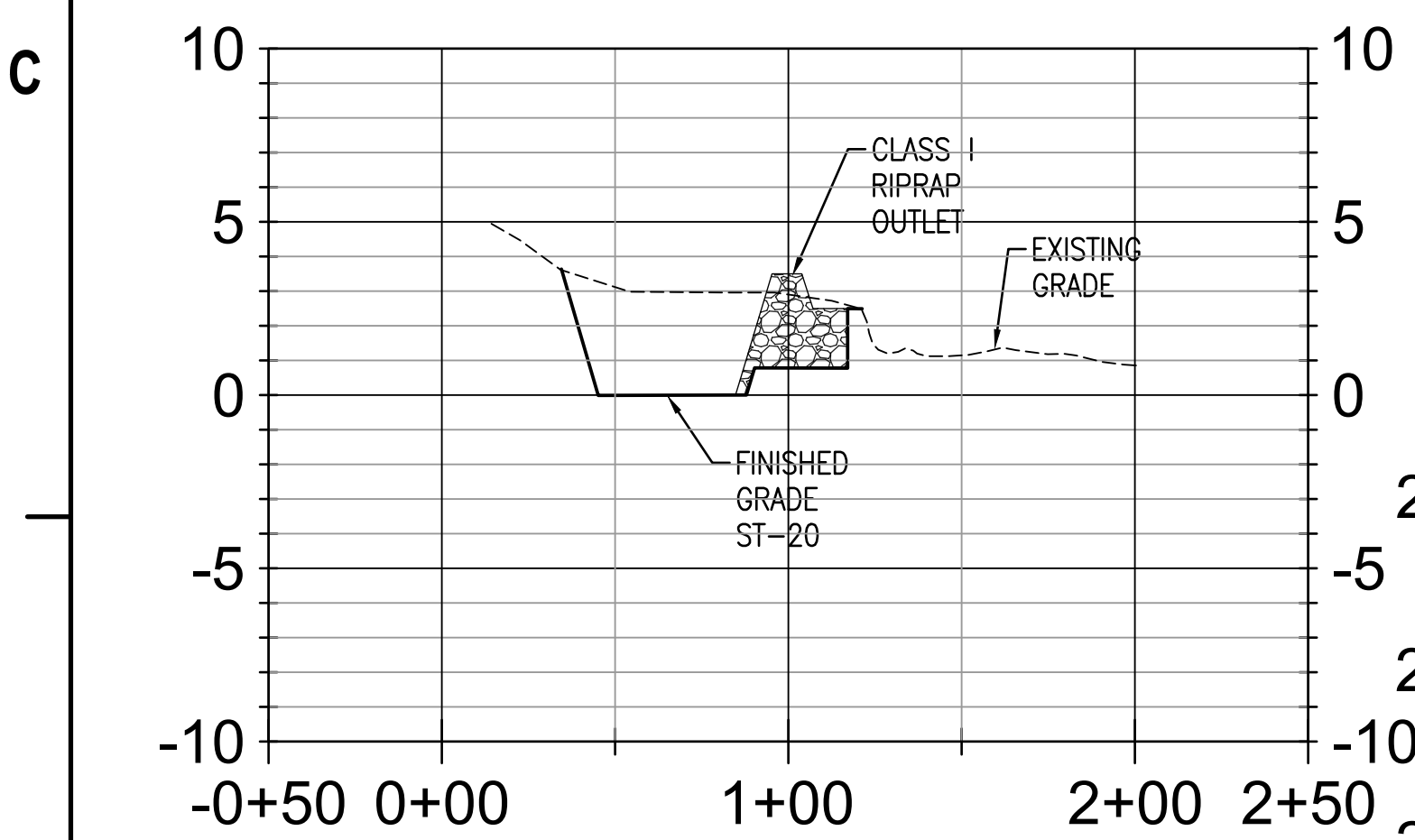
DATE		30/06/2022	APPR
SYM DESCRIPTION		0	ISSUE FOR CONSTRUCTION
WILEY WILSON BURNS & MCDONNELL JOINT VENTURE			
APPROVED <i>Jennifer Blaes</i> FOR COMMANDER NAVFAC			
ACTIVITY			
SATISFACTORY TO DATE			
DES	DRW	CHK	
PROJECT MANAGER			
CHIEF ENGINEER			
FIRE PROTECTION			
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON WASHINGTON NAVY YARD JOINT BASE ANDREWS NAVAL AIR FACILITY CAMP SPRINGS, MD P-3002 RELOCATE HAZARDOUS CARGO PAD AND EOD PROFICIENCY RANGE UTILITIES PLAN			
SCALE: AS NOTED PROJECT NO.: 1396650 CONSTR. CONTR. NO.: N40080-15-D-0452 NAVFAC DRAWING NO.: 13140395 SHEET 125 OF 229			
CU-103			
DRAWING REVISION: 06 APRIL 2017			

D



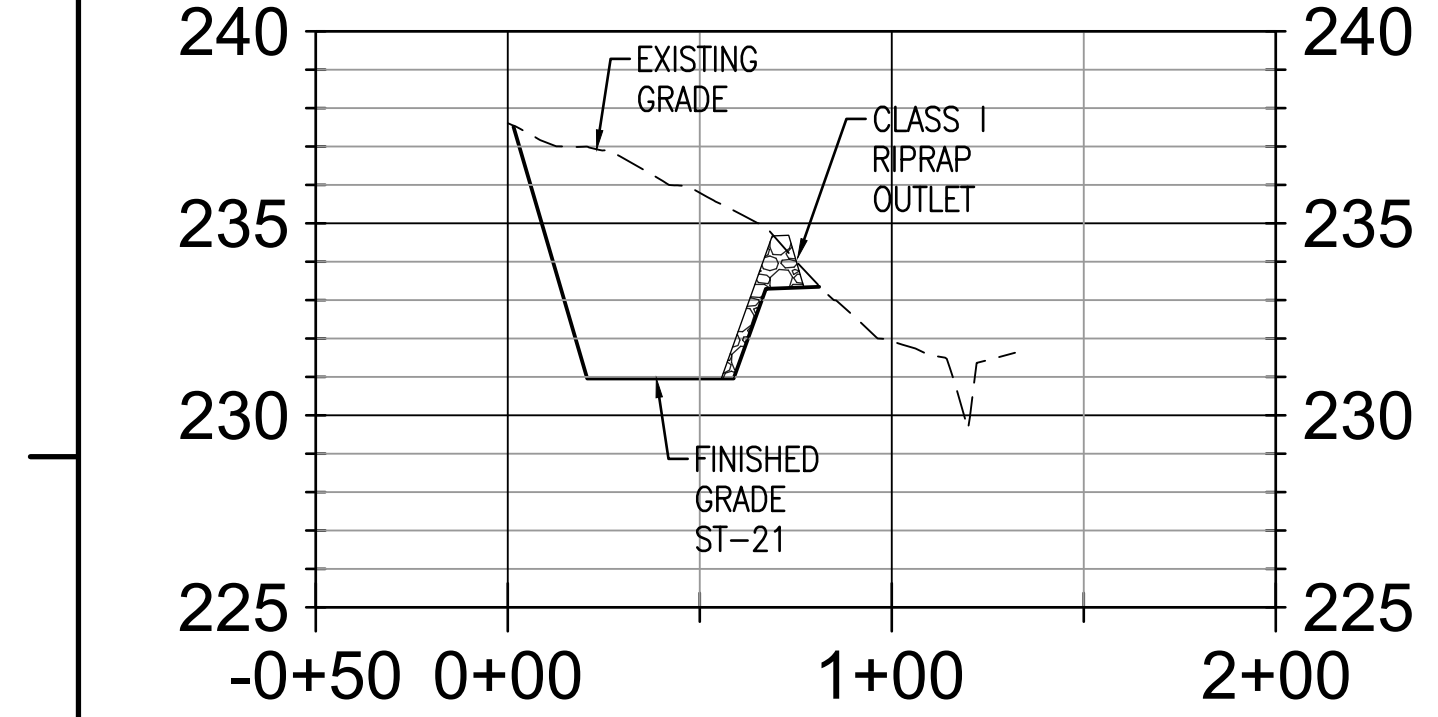
ST-22 SECTION PROFILE

C



ST-20 PROFILE

B

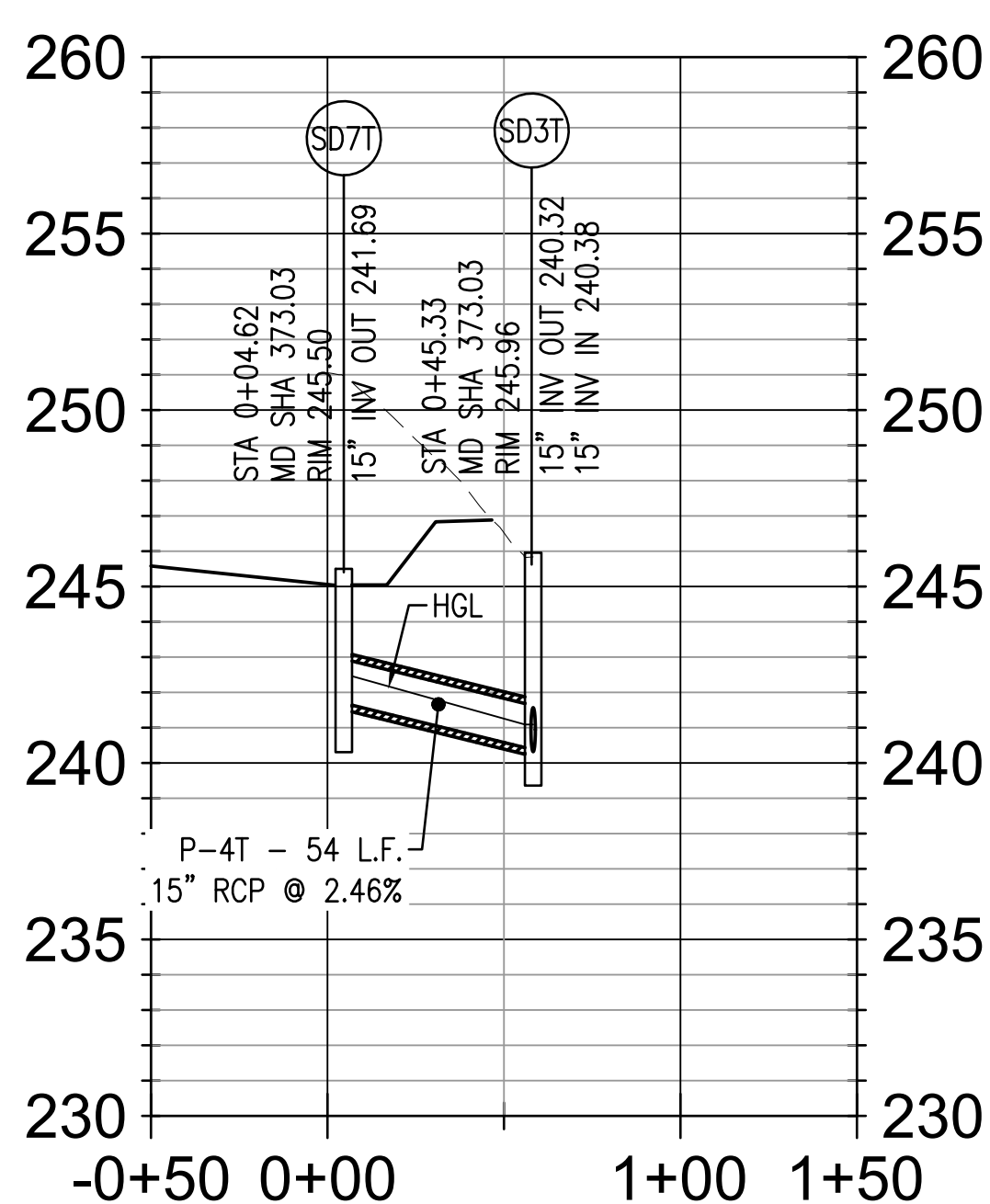


*ST-21 SECTION PROFILE

A

*SEDIMENT TRAP ST-21 INSTALLATION IS NOT INCLUDED IN THIS CONTRACT. ST-21 WILL BE INSTALLED BY THE STAGE 0 - TREE REMOVAL CONTRACTOR PRIOR TO THE AWARD OF THIS PROJECT. CONTRACTOR IS REQUIRED TO MAINTAIN ST-21 THROUGHOUT THIS PROJECT UNTIL BEING REMOVED PER EROSION AND SEDIMENT CONTROL PLANS.

STORM DRAIN STRUCTURE SD7T TO SD5T PROFILE



TEMP. STORM STRUCTURE TABLE		
STRUCTURE ID	STRUCTURE DETAILS	NORTHING/EASTING
SD3T MD SHA 373.03	Rim = 245.96 P-4T INV IN = 240.38 P-2T INV OUT = 240.32	410562.41, 1351748.92
SD4T MD SHA 354.01	Rim = 240.48 P-2T INV IN = 238.55	410549.00, 1351689.74
SD7T MD SHA 373.03	Rim = 245.50 P-4T INV OUT = 241.69	410607.03, 1351778.71

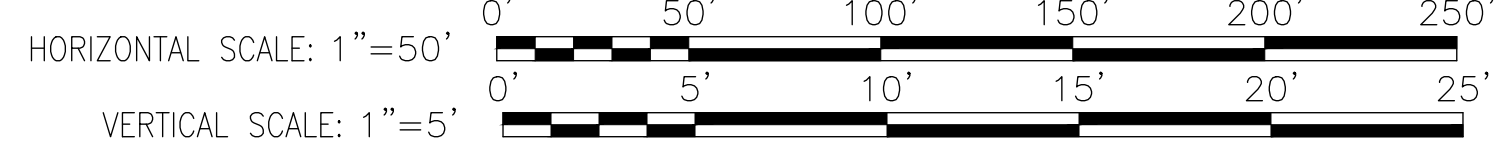
TEMP. STORM PIPE TABLE					
PIPE LABEL	DIA. (IN.)	LENGTH (FT.)	INV. IN	INV. OUT	SLOPE
P-2T	15	60.7	240.32	238.55	2.92%
P-4T	15	53.7	241.69	240.38	2.46%

STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 21		
DRAINAGE AREA - STAGE 0	3.28	ACRES
DRAINAGE AREA - STAGE 1	3.96	ACRES
DRAINAGE AREA - STAGE 1B	5.21	ACRES
DRAINAGE AREA - STAGE 2	1.1	ACRES
DRAINAGE AREA - STAGE 3	0	ACRES
TOTAL STROAGE REQUIRED	18,756	CF
TOTAL STROAGE PROVIDED	19,743	CF
WET STORAGE REQUIRED	7,128	CF
WET STORAGE PROVIDED	10,355	CF
DRY STORAGE REQUIRED	7,128	CF
DRY STORAGE PROVIDED	9,388	CF
EXISTING GROUND ELEVATION AT OUTLET (WET STORAGE ELEVATION)	233.50	FT
TRAP BOTTOM ELEVATION	231.0	FT
TRAP BOTTOM DIMENSIONS	39 X 76	FT x FT
WEIR LENGTH	25	FT
WEIR CREST (DRY STORAGE) ELEVATION	234.50	FT
CLEANOUT ELEVATION	232.45	FT
TOP OF EMBANKMENT	235.0	FT
SIDE SLOPE	3:1	H:V RATIO
EMBANKMENT TOP WIDTH	4.0	FT
OUTLET PROTECTION LENGTH	15	FT
OUTLET PROTECTION DEPTH	19	IN

BAFFLE BOARD CALCULATIONS, SED. TRAP NO. 21		
SURFACE AREA AT WET STORAGE ELEVATION	5,439	SF
EFFECTIVE WIDTH	52	FT
EFFECTIVE FLOW LENGTH REQUIRED (Le)	104	FT
EFFECTIVE FLOW LENGTH ACHIEVED WITH BAFFLE BOARD	133	FT
LENGTH OF BAFFLE BOARD - 1	95	FT

STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 22		
DRAINAGE AREA - STAGE 1A	8.25	ACRES
DRAINAGE AREA - STAGE 1B	9.86	ACRES
DRAINAGE AREA - STAGE 2	9.98	ACRES
DRAINAGE AREA - STAGE 3	0	ACRES
TOTAL STROAGE REQUIRED	35,928	CF
TOTAL STROAGE PROVIDED	41,241	CF
WET STORAGE REQUIRED	17,964	CF
WET STORAGE PROVIDED	22,439	CF
DRY STORAGE REQUIRED	17,964	CF
DRY STORAGE PROVIDED	18,802	CF
EXISTING GROUND ELEVATION AT OUTLET (WET STORAGE ELEVATION)	248.40	FT
TRAP BOTTOM ELEVATION	246.0	FT
TRAP BOTTOM DIMENSIONS	70 X 114	FT x FT
WEIR LENGTH	40	FT
WEIR CREST (DRY STORAGE) ELEVATION	249.75	FT
CLEANOUT ELEVATION	247.4	FT
TOP OF EMBANKMENT	250.0	FT
SIDE SLOPE	3:1	H:V RATIO
EMBANKMENT TOP WIDTH	4.0	FT
OUTLET PROTECTION LENGTH	20	FT
OUTLET PROTECTION DEPTH	19	IN

BAFFLE BOARD CALCULATIONS, SED. TRAP NO. 22		
SURFACE AREA AT WET STORAGE ELEVATION	11,001	SF
EFFECTIVE WIDTH	74.2	FT
EFFECTIVE FLOW LENGTH REQUIRED (Le)	148.4	FT
EFFECTIVE FLOW LENGTH ACHIEVED WITH BAFFLE BOARD	130	FT
LENGTH OF BAFFLE BOARD - 1	60	FT
LENGTH OF BAFFLE BOARD - 2	100	FT
TOP ELEVATION OF BAFFLE BOARD	248.6	MSL



APPR

DATE

09/26/2022

ISSUE FOR CONSTRUCTION

SYN DESCRIPTION

0

Wiley|Wilson

BURNS & MCDONNELL

JOINT VENTURE

APPROVED

Jennifer Bless

FOR COMMANDER NAVFAC

SATISFACTORY TO

DATE

DES

DRAW

CHK

PHOTO

BRANCH MANAGER

CHIEF ENGINEER

FIRE PROTECTION

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND - WASHINGTON DC

WASHINGTON DC

JOINT BASE ANDREWS NAVAL AIR FACILITY

CAMP SPRINGS, MD

P-3002 RELOCATE HAZARDOUS CARGO

PAD AND EOD PROFICIENCY RANGE

TEMPORARY SEDIMENT TRAP PROFILES

SCALE:

AS NOTED

EPROJECT NO.:

1396650

CONSTR. CONTR. NO.

N40080-15-D-0452

NAVFAC DRAWING NO.

13140398

SHEET

128

OF

229

CG-203

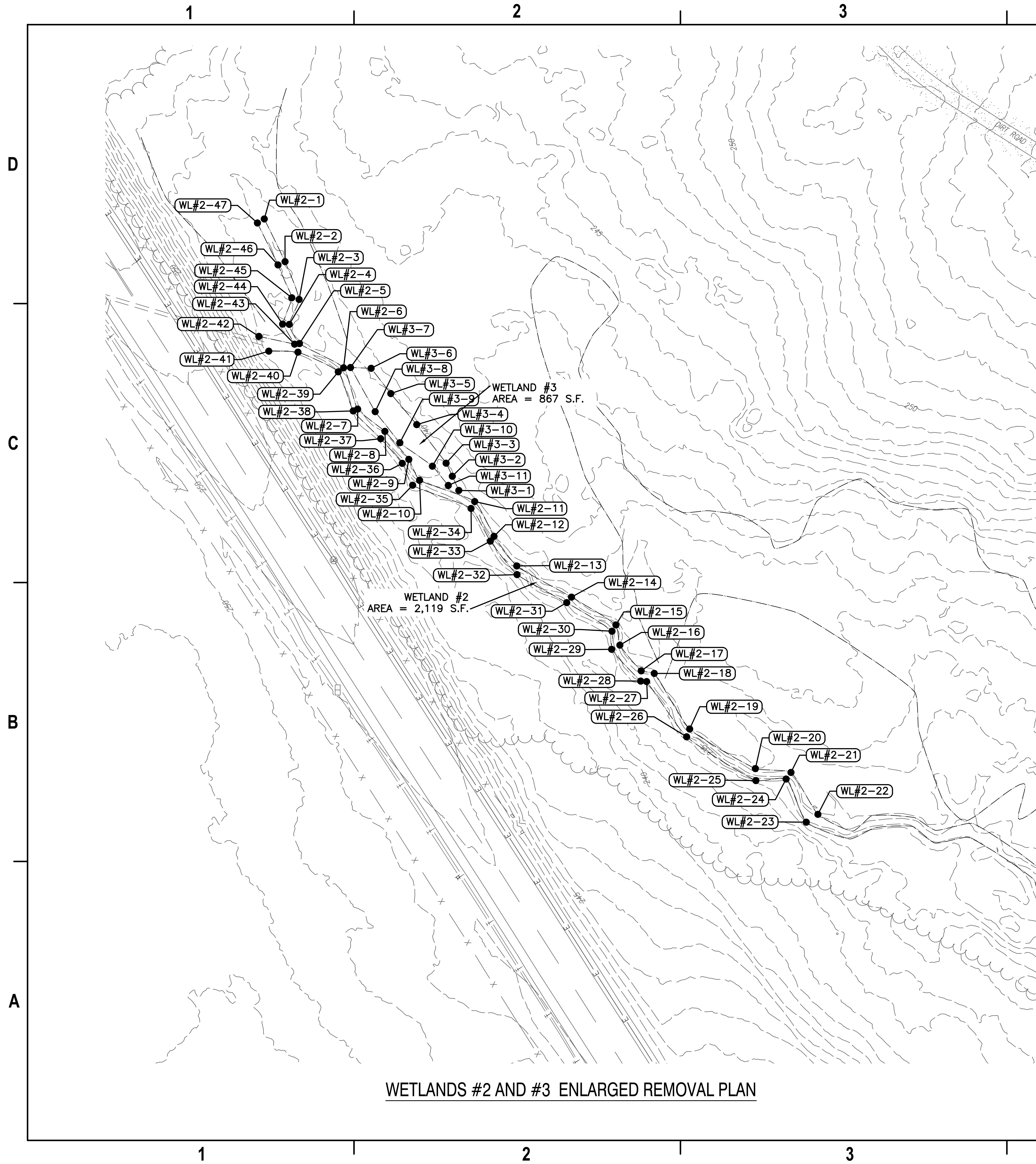
DRAWING REVISION: 06 APRIL 2017

D

C

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A



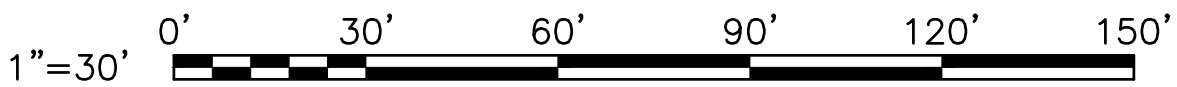
WETLANDS #2 AND #3 ENLARGED REMOVAL PLAN

EXISTING WETLAND POINTS				
POINT #	DESCRIPTION	NORTHING	EASTING	ELEVATION
55	WL#2-1	410856.45	1352420.47	240.48
56	WL#2-2	410845.00	1352396.93	240.15
57	WL#2-3	410837.27	1352376.10	240.18
58	WL#2-4	410842.68	1352362.34	239.42
59	WL#2-5	410837.06	1352351.77	239.23
60	WL#2-6	410812.72	1352338.42	239.33
61	WL#2-7	410804.99	1352315.67	238.46
62	WL#2-8	410789.96	1352303.39	238.38
63	WL#2-9	410776.76	1352287.95	238.49
64	WL#2-10	410770.82	1352276.46	237.94
65	WL#2-11	410740.45	1352264.71	238.09
66	WL#2-12	410729.78	1352245.53	237.59
67	WL#2-13	410717.24	1352229.22	236.42
68	WL#2-14	410687.06	1352212.03	236.32
69	WL#2-15	410662.56	1352196.68	235.61
70	WL#2-16	410660.38	1352185.56	235.94
71	WL#2-17	410648.62	1352171.38	235.32
72	WL#2-18	410641.44	1352169.97	235.37
73	WL#2-19	410621.90	1352139.33	235.07
74	WL#2-20	410585.65	1352117.51	235.68

EXISTING WETLAND POINTS				
POINT #	DESCRIPTION	NORTHING	EASTING	ELEVATION
75	WL#2-21	410566.04	1352115.39	234.81
76	WL#2-22	410551.19	1352092.30	234.43
77	WL#2-23	410557.61	1352087.99	234.96
78	WL#2-24	410568.71	1352111.76	234.50
79	WL#2-25	410585.38	1352110.92	235.45
80	WL#2-26	410623.57	1352135.02	235.65
81	WL#2-27	410645.62	1352165.48	235.64
82	WL#2-28	410648.88	1352165.73	236.21
83	WL#2-29	410664.92	1352183.27	236.54
84	WL#2-30	410664.70	1352193.23	235.55
85	WL#2-31	410689.69	1352209.00	236.15
86	WL#2-32	410717.07	1352224.44	233.93
87	WL#2-33	410731.82	1352242.89	237.51
88	WL#2-34	410742.47	1352260.91	237.75
89	WL#2-35	410774.65	1352273.70	238.67
90	WL#2-36	410780.38	1352285.75	238.15
91	WL#2-37	410792.25	1352299.35	238.42
92	WL#2-38	410807.43	1352314.65	238.62
93	WL#2-39	410815.65	1352336.19	239.08
94	WL#2-40	410837.88	1352347.04	239.52

LEGEND

EXISTING WETLAND AREA



EXISTING WETLAND POINTS				
POINT #	DESCRIPTION	NORTHING	EASTING	ELEVATION
95	WL#2-41	410853.98	1352347.60	239.64
96	WL#2-42	410859.44	1352355.75	239.68
97	WL#2-43	410839.74	1352351.44	239.25
98	WL#2-44	410846.35	1352362.51	239.56
99	WL#2-45	410841.27	1352377.01	239.74
100	WL#2-46	410848.88	1352395.14	240.30
101	WL#2-47	410860.24	1352418.24	240.66
102	WL#3-1	410749.20	1352270.83	238.06
103	WL#3-2	410752.76	1352278.66	238.52
104	WL#3-3	410756.21	1352285.84	238.52
105	WL#3-4	410772.39	1352307.11	239.01
106	WL#3-5	410786.69	1352324.21	239.51
107	WL#3-6	410797.53	1352338.15	240.10
108	WL#3-7	410808.91	1352338.59	239.88
109	WL#3-8	410795.31	1352314.26	239.46
110	WL#3-9	410781.71	1352297.12	239.32
111	WL#3-10	410763.76	1352284.19	238.89
112	WL#3-11	410755.00	1352273.59	238.47

APPR
DATE
30/06/2022

ISSUE FOR CONSTRUCTION
DATE
01/07/2022

SYNOPSIS
DESCRIPTION

Wiley|Wilsort

BURNS
MCDONNELL

JOINT VENTURE

APPROVED
Jennifer Blaess
FOR COMMANDER NAVFAC

SATISFACTORY TO DATE

DESIGN
DESIGNER
CHK

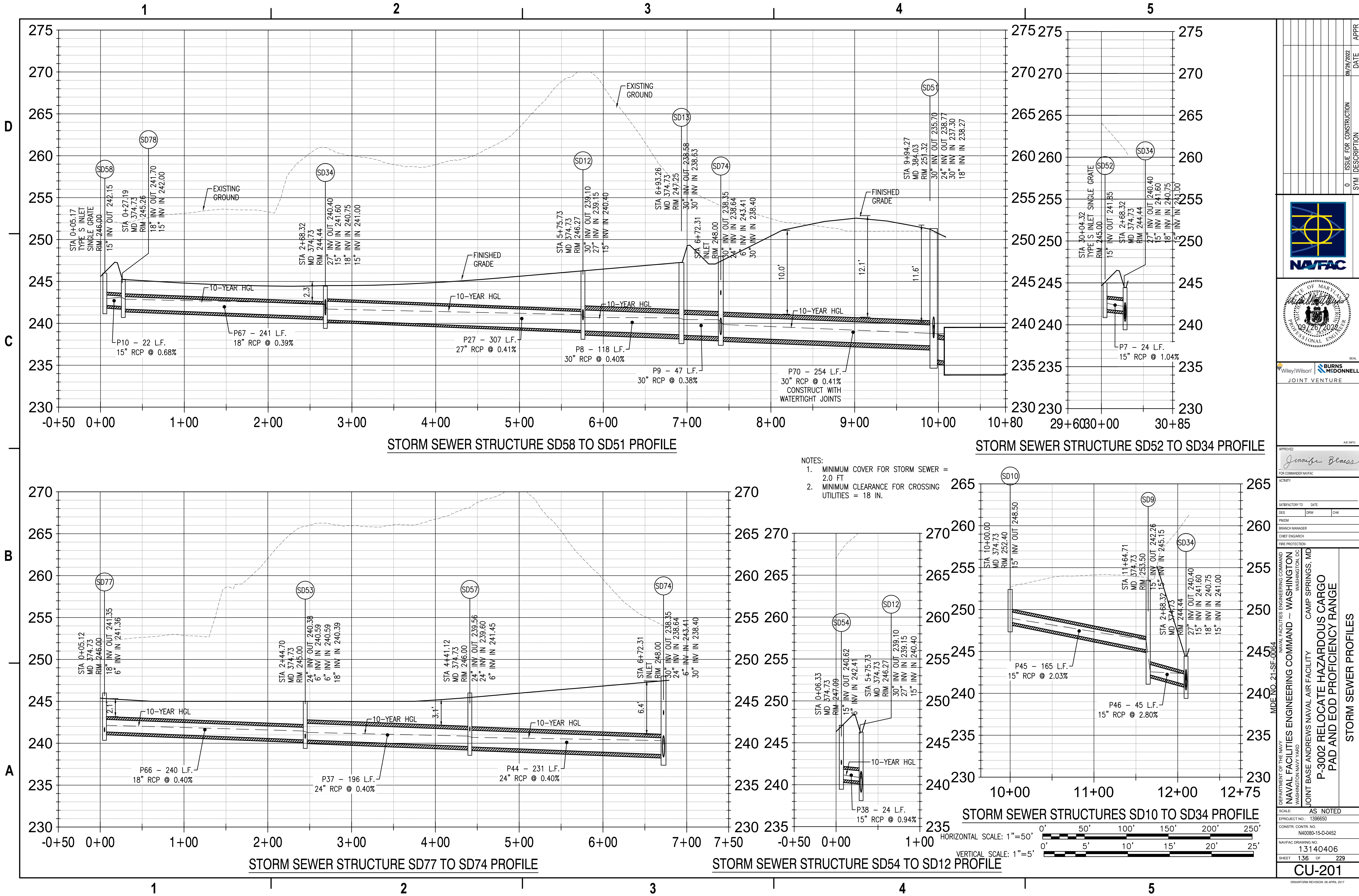
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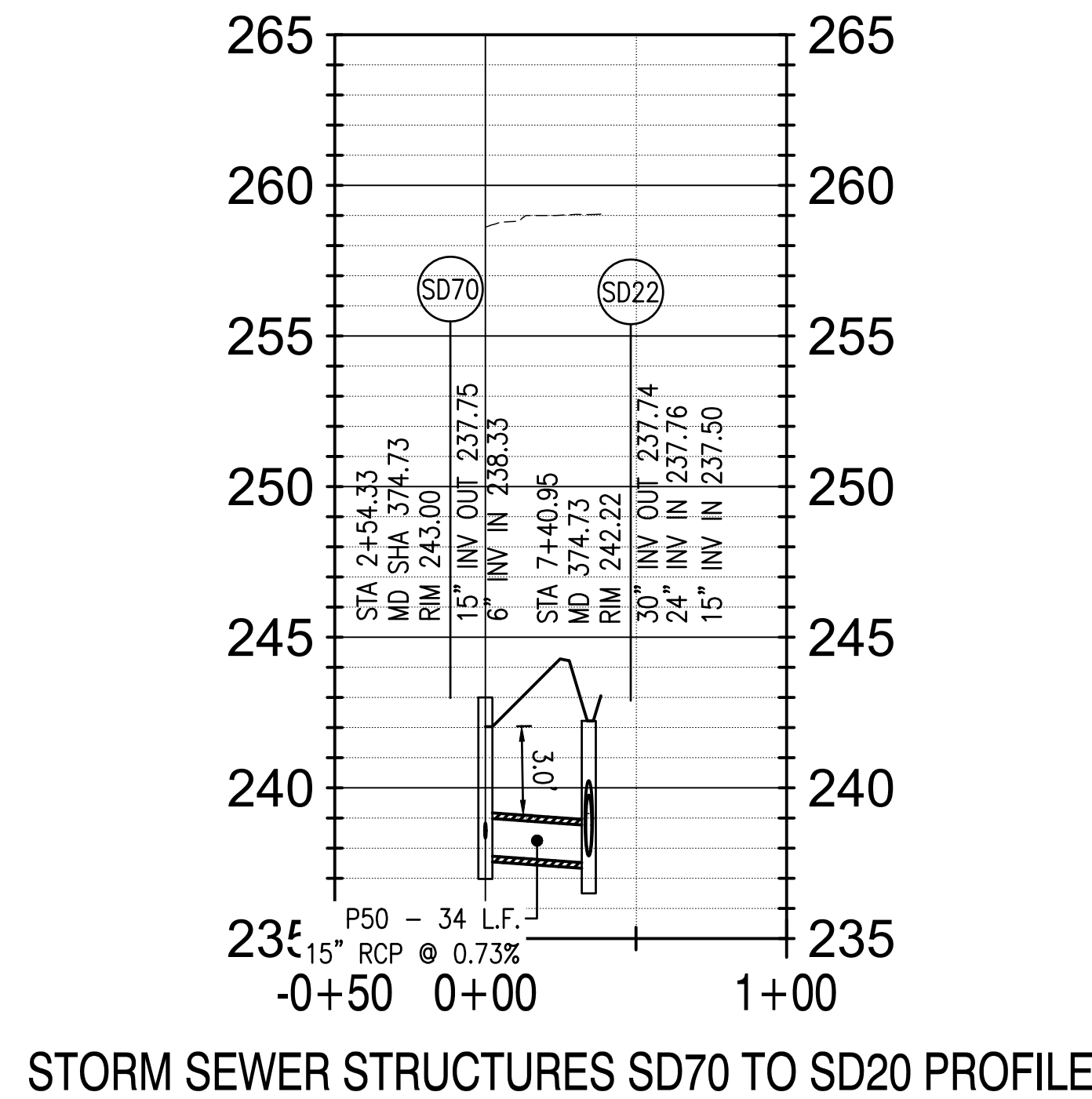
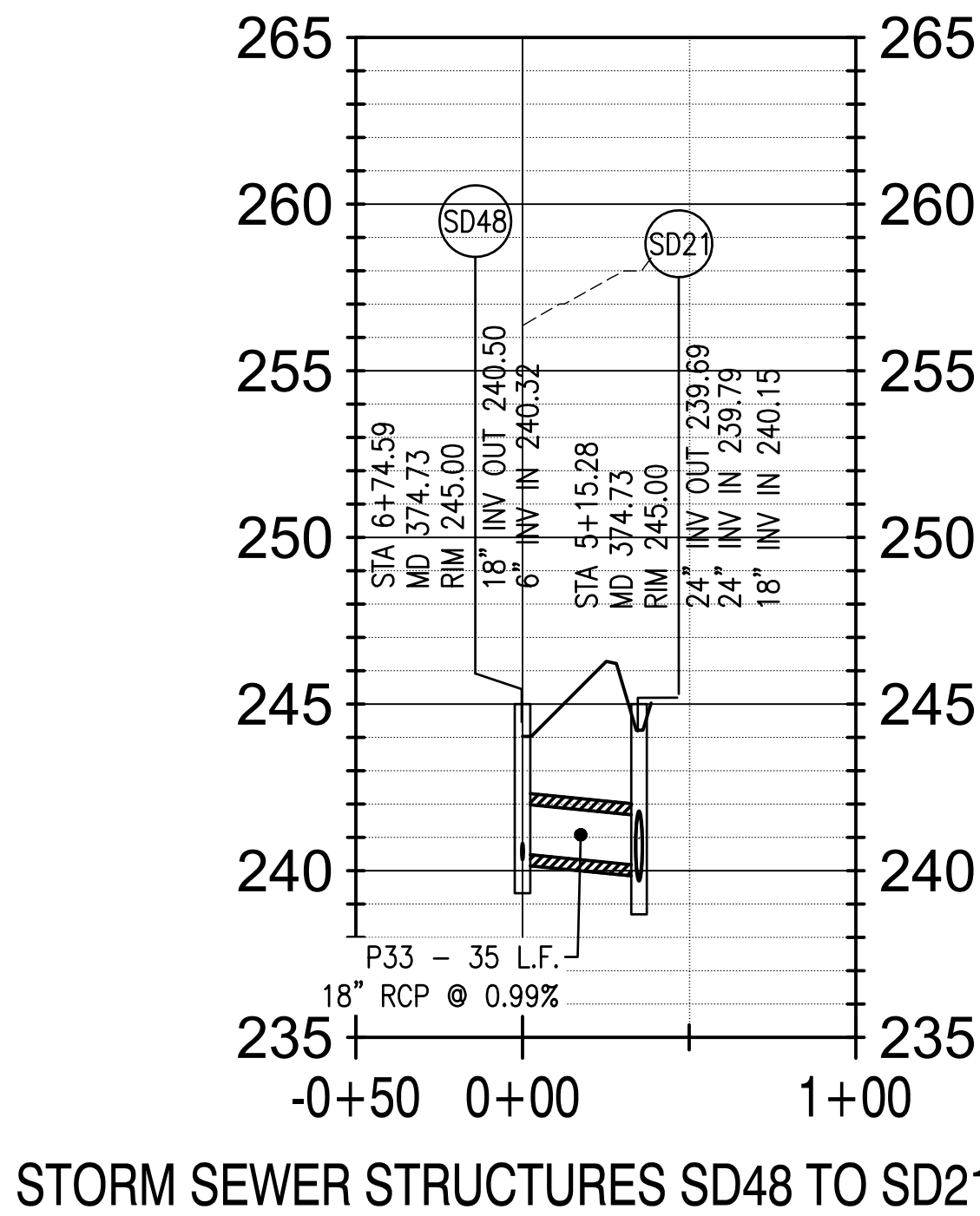
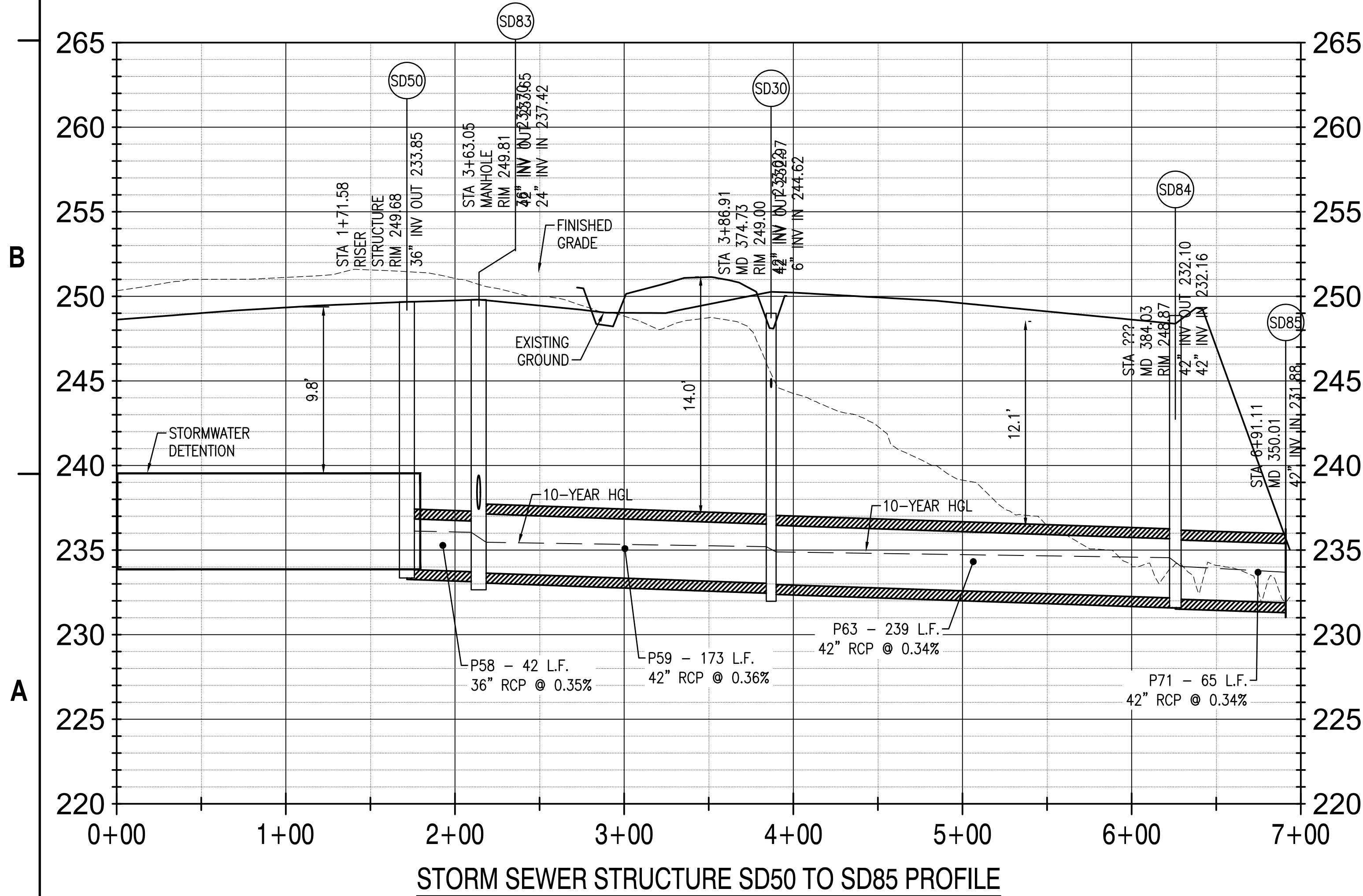
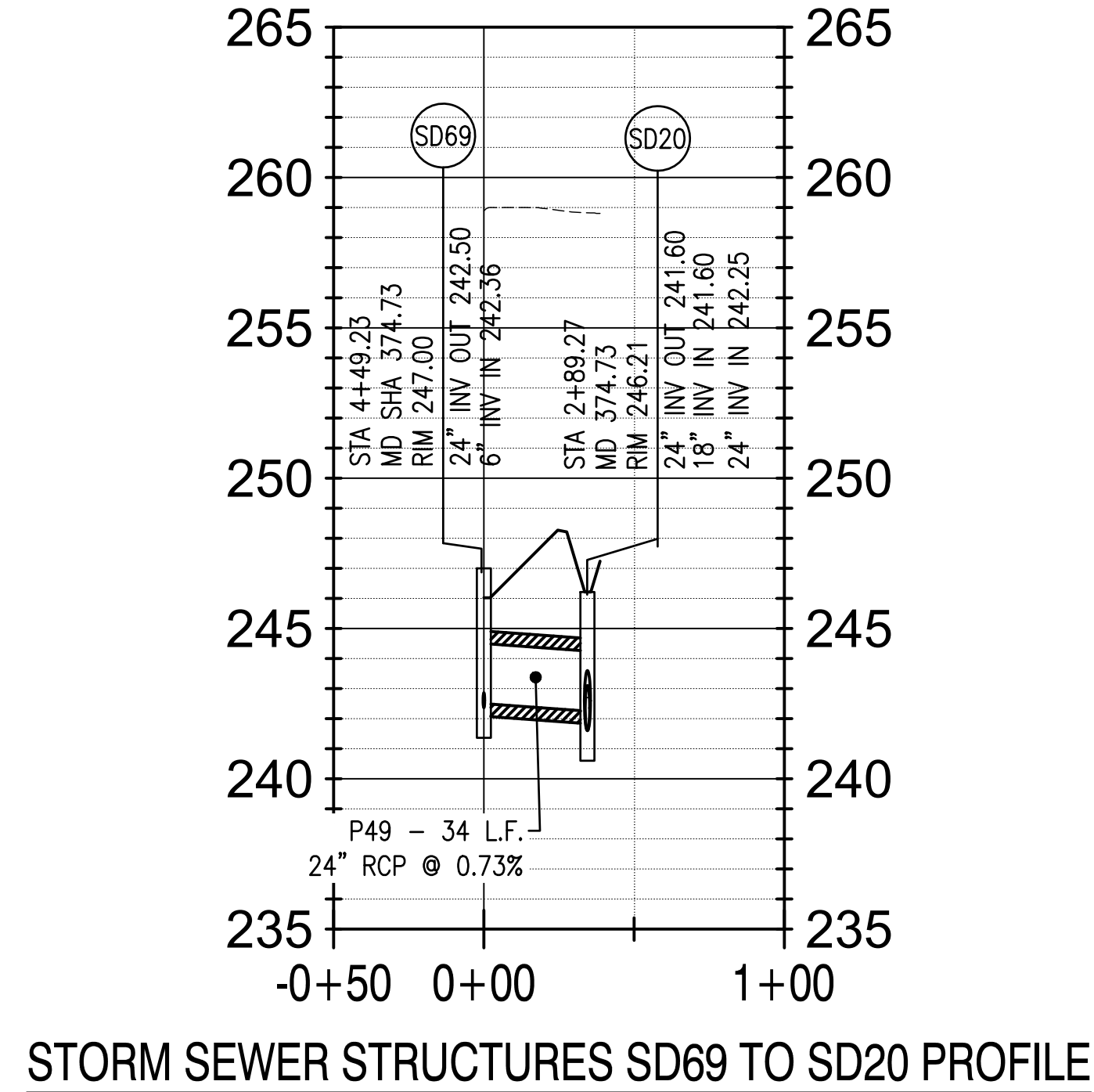
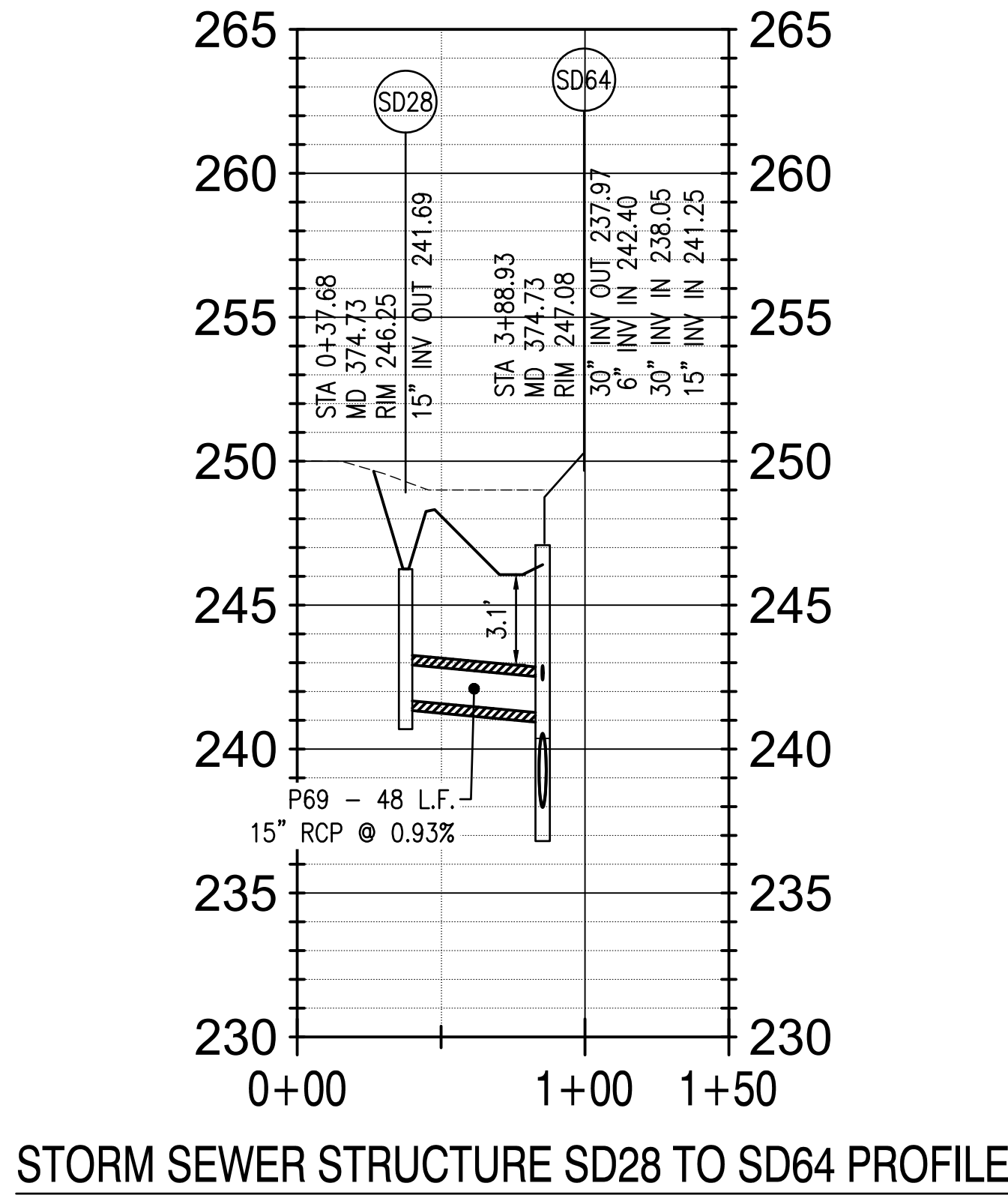
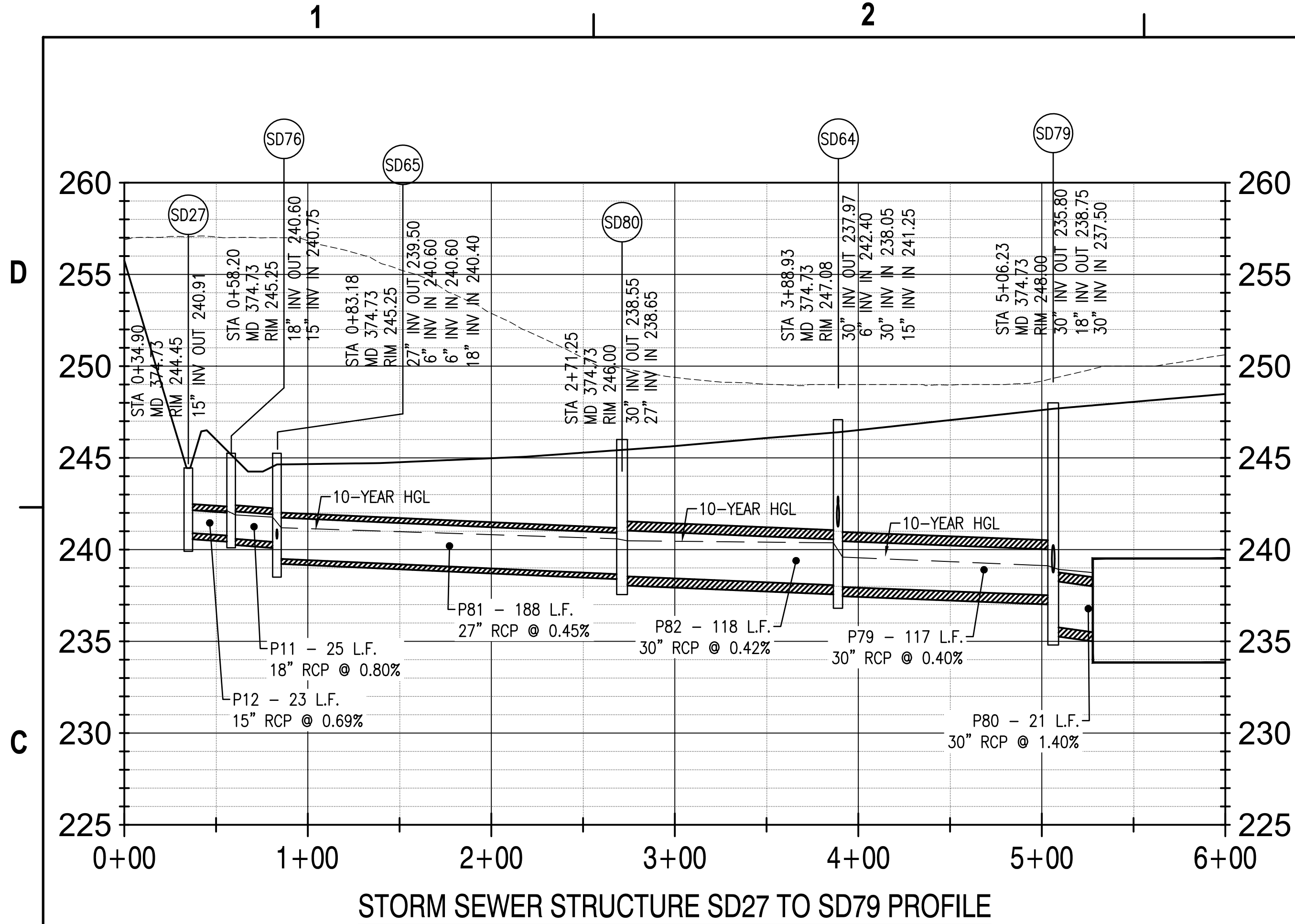
CHIEF ENGINEER

FIRE PROTECTION

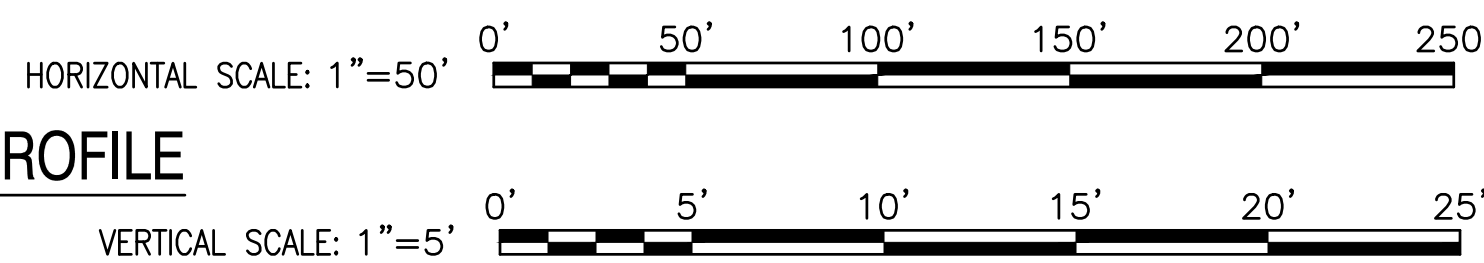
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WASHINGTON, DC
NAVAL BASE ANDREWS NAVAL AIR FACILITY
CAMP SPRINGS, MD
P-3002 RELOCATE HAZARDOUS CARGO
PAD AND EOD PROFICIENCY RANGE
ENLARGED WETLAND REMOVAL PLAN

SCALE: AS NOTED
PROJECT NO.: 1396650
CONSTR. CONTR. NO.: N40080-15-D-0452
NAVFAC DRAWING NO.: 13140400
SHEET 130 OF 229
CG-402
DRAWING REVISION: 06 APRIL 2017





- NOTES:
1. MINIMUM COVER FOR STORM SEWER = 2.0 FT
 2. MINIMUM CLEARANCE FOR CROSSING UTILITIES = 18 IN.



APPROVED	DATE	APPR
	09/26/2022	
ISSUE FOR CONSTRUCTION	SYM DESCRIPTION	
0		

JOINT VENTURE

WileyWilson Burns & McDonnell

APPROVED

Jennifer Bless

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES

BRANCH MANAGER

CHIEF ENGINEER

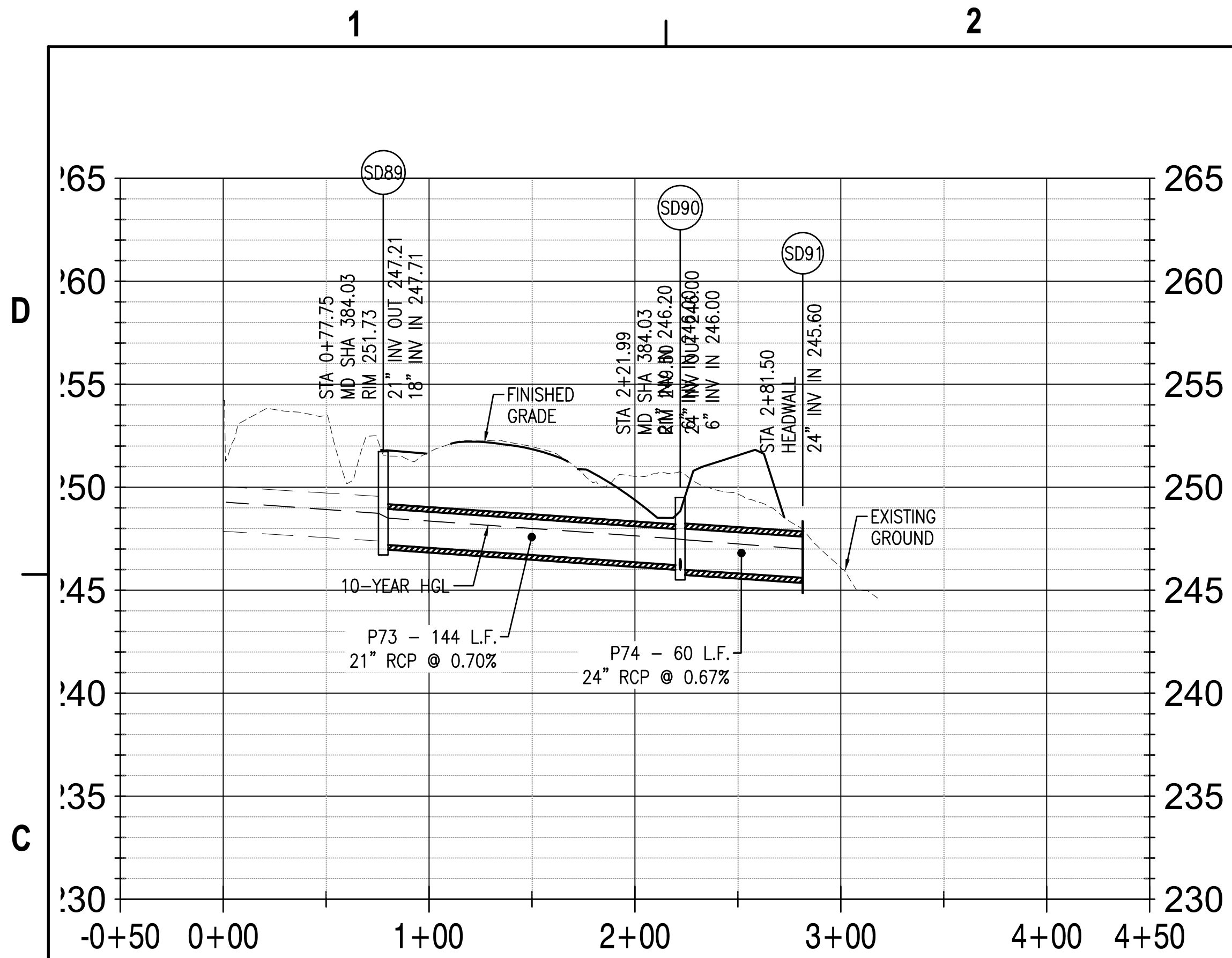
FIRE PROTECTION

NAVFAC DRAWING NO. 13140407

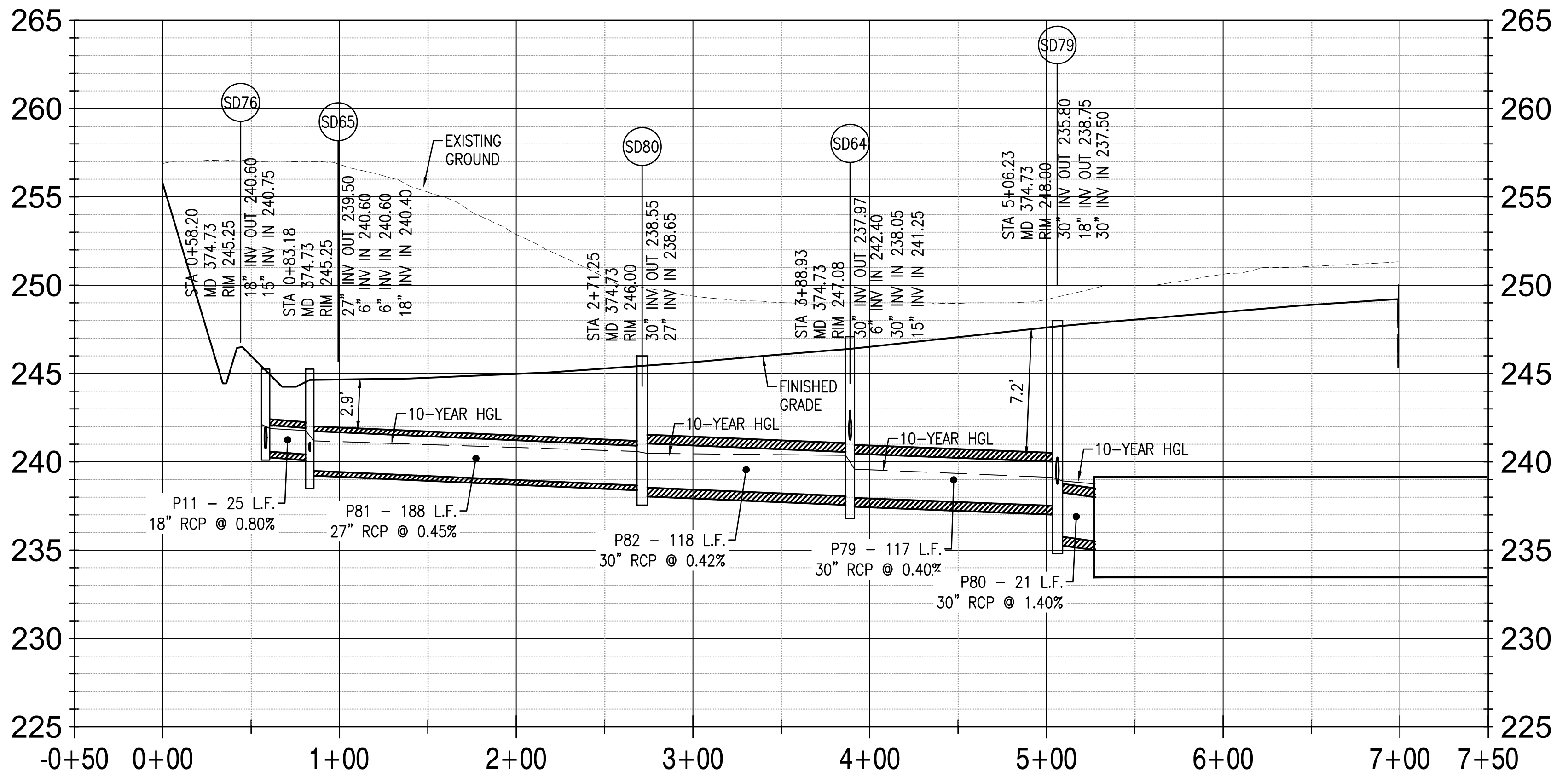
SHEET 137 OF 229

CU-202

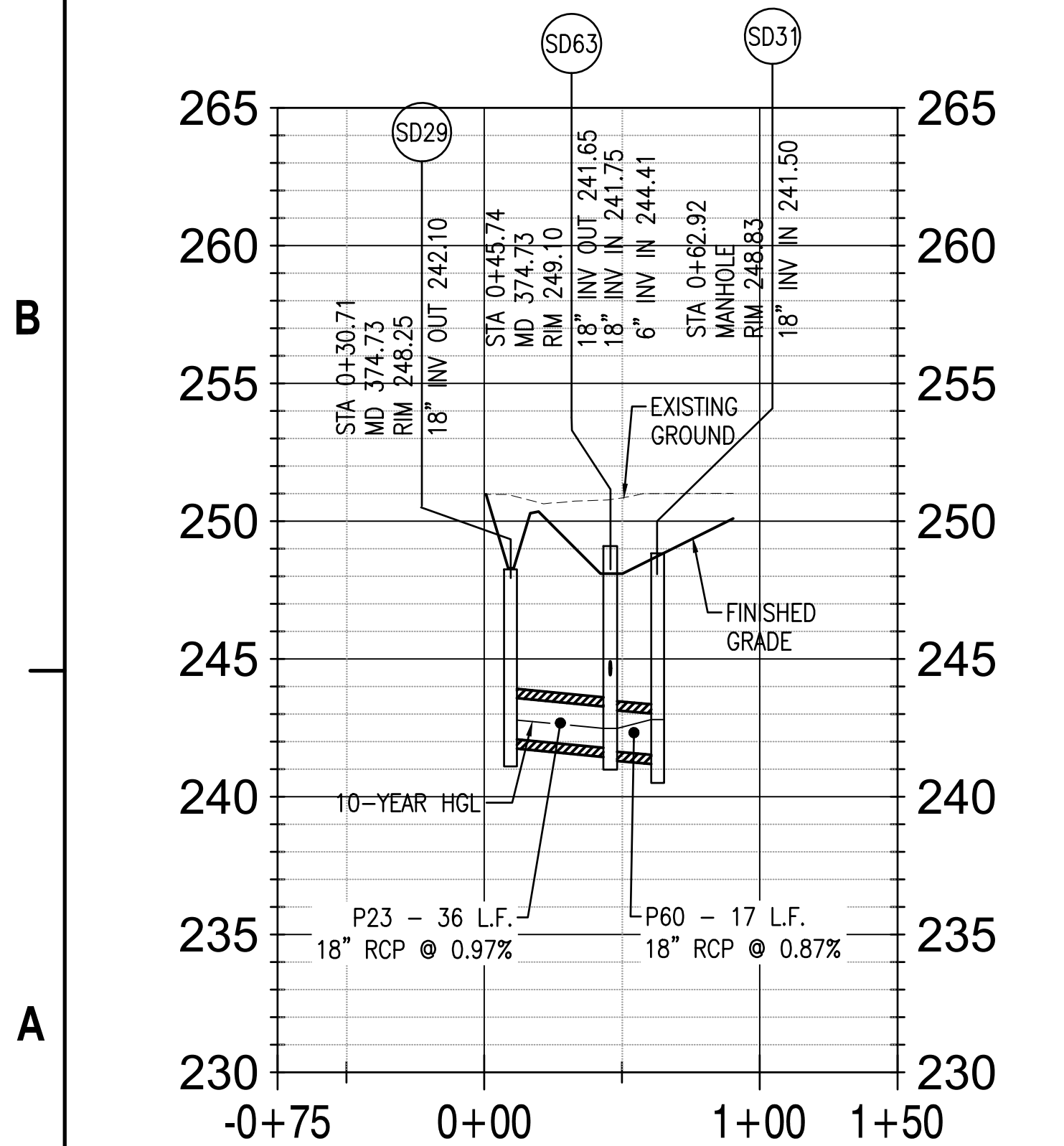
DRAWING REVISION: 06 APRIL 2017



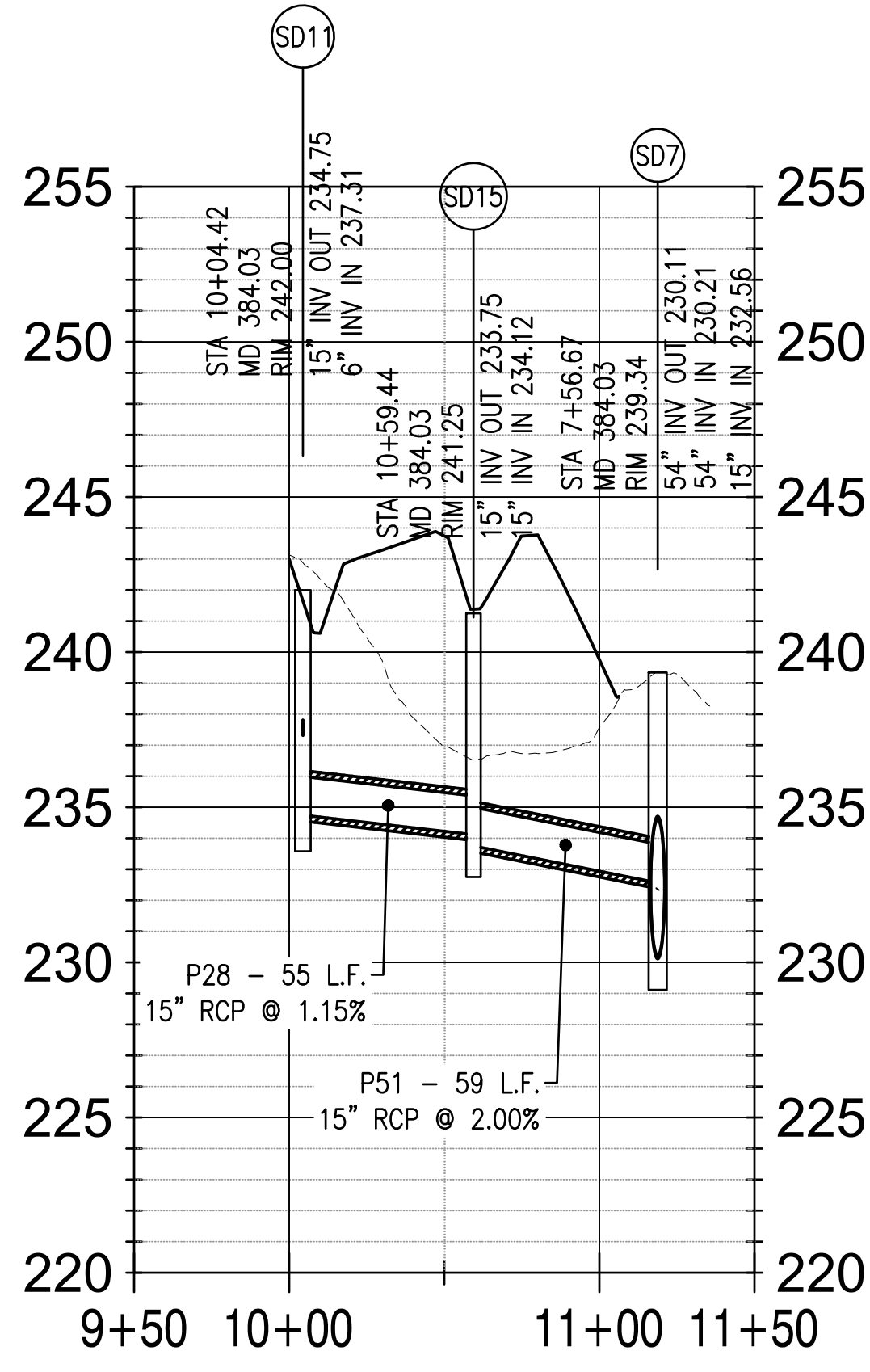
STORM SEWER STRUCTURES EX.339 TO SD91 PROFILE



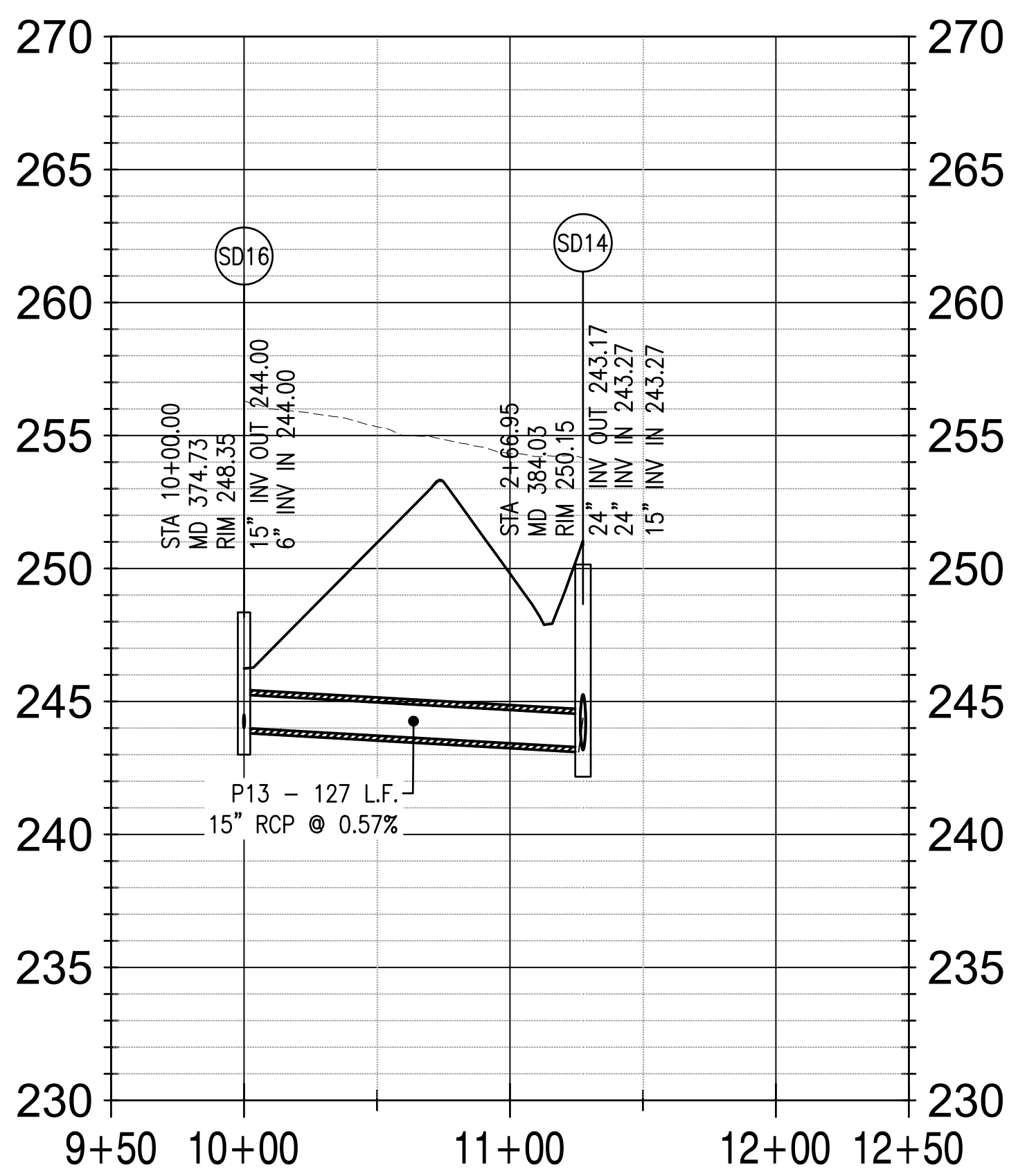
STORM SEWER STRUCTURE SD27 TO SD79 PROFILE



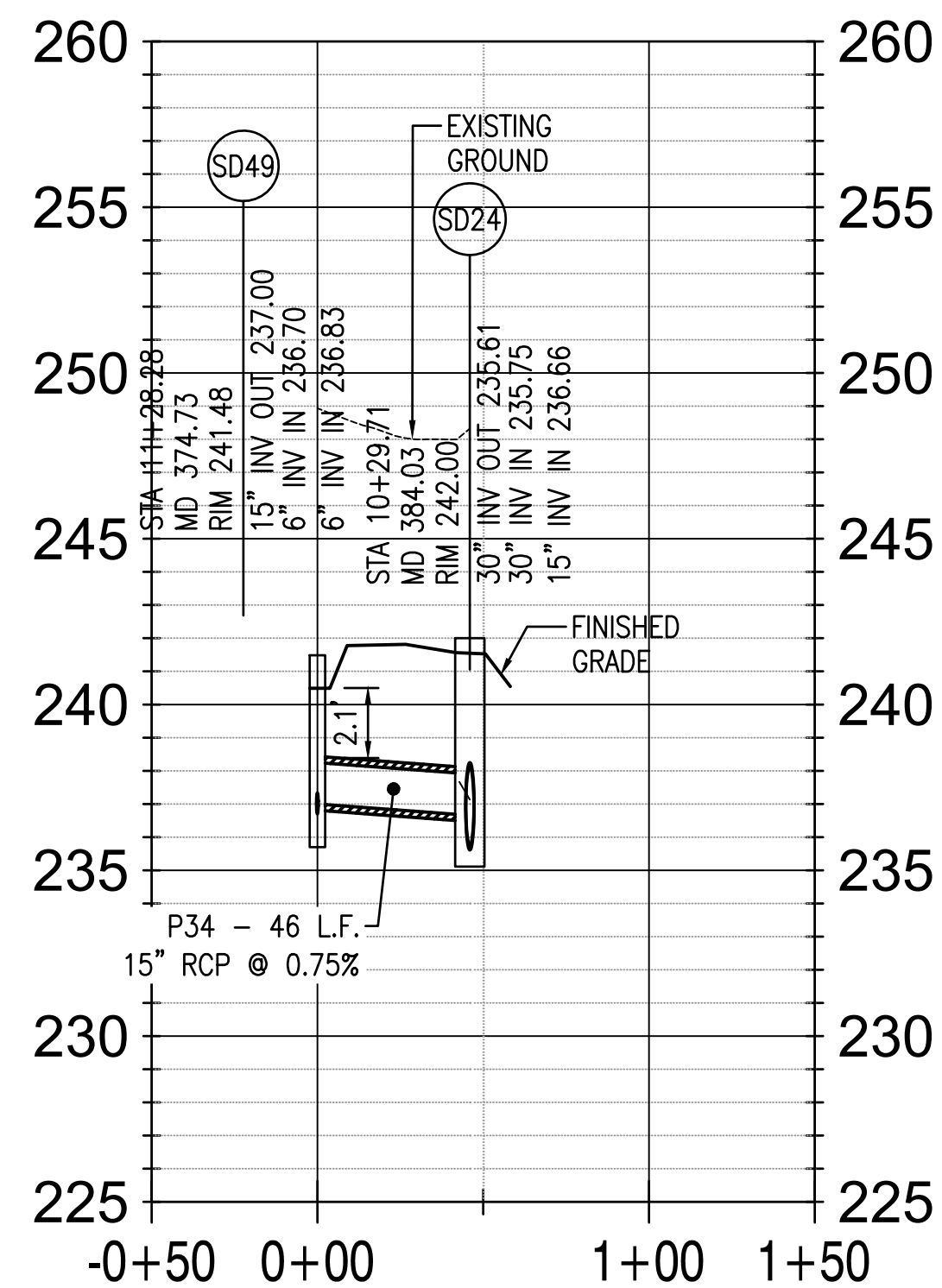
STORM SEWER STRUCTURE SD29 TO SD31 PROFILE



STORM SEWER SD11 TO SD7 PROFILE

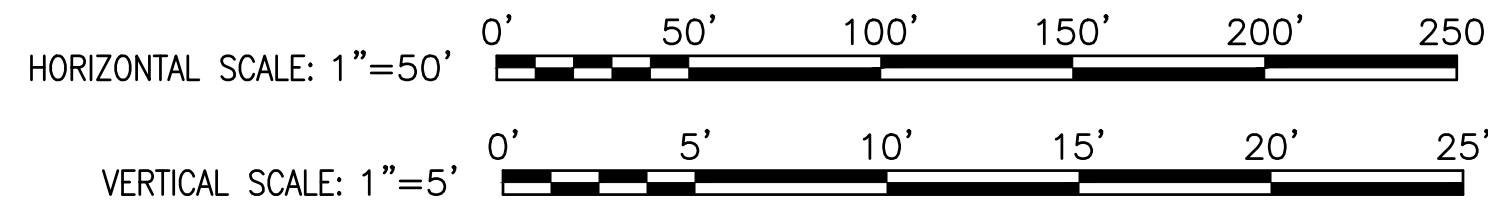


STORM SEWER STRUCTURES SD14 TO SD16 PROFILE



STORM SEWER STRUCTURES SD49 TO SD24 PROFILE

- NOTES:
1. MINIMUM COVER FOR STORM SEWER = 2.0 FT
 2. MINIMUM CLEARANCE FOR CROSSING UTILITIES = 18 IN.



APPROVED	DATE	APPR
ISSUE FOR CONSTRUCTION	09/26/2022	DATE
SYM DESCRIPTION		

JOINT VENTURE

Wiley|Wilson | BURNS & MCDONNELL

APPROVED

Jennifer Bless

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DESIGN

BRANCH MANAGER

CHIEF ENGINEER

FIRE PROTECTION

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND

WASHINGTON DC

JOINT BASE ANDREWS NAVAL AIR FACILITY

CAMP SPRINGS, MD

P-3002 RELOCATE HAZARDOUS CARGO

PAD AND EOD PROFICIENCY RANGE

STORM SEWER PROFILES

SCALE: AS NOTED

PROJECT NO.: 1396650

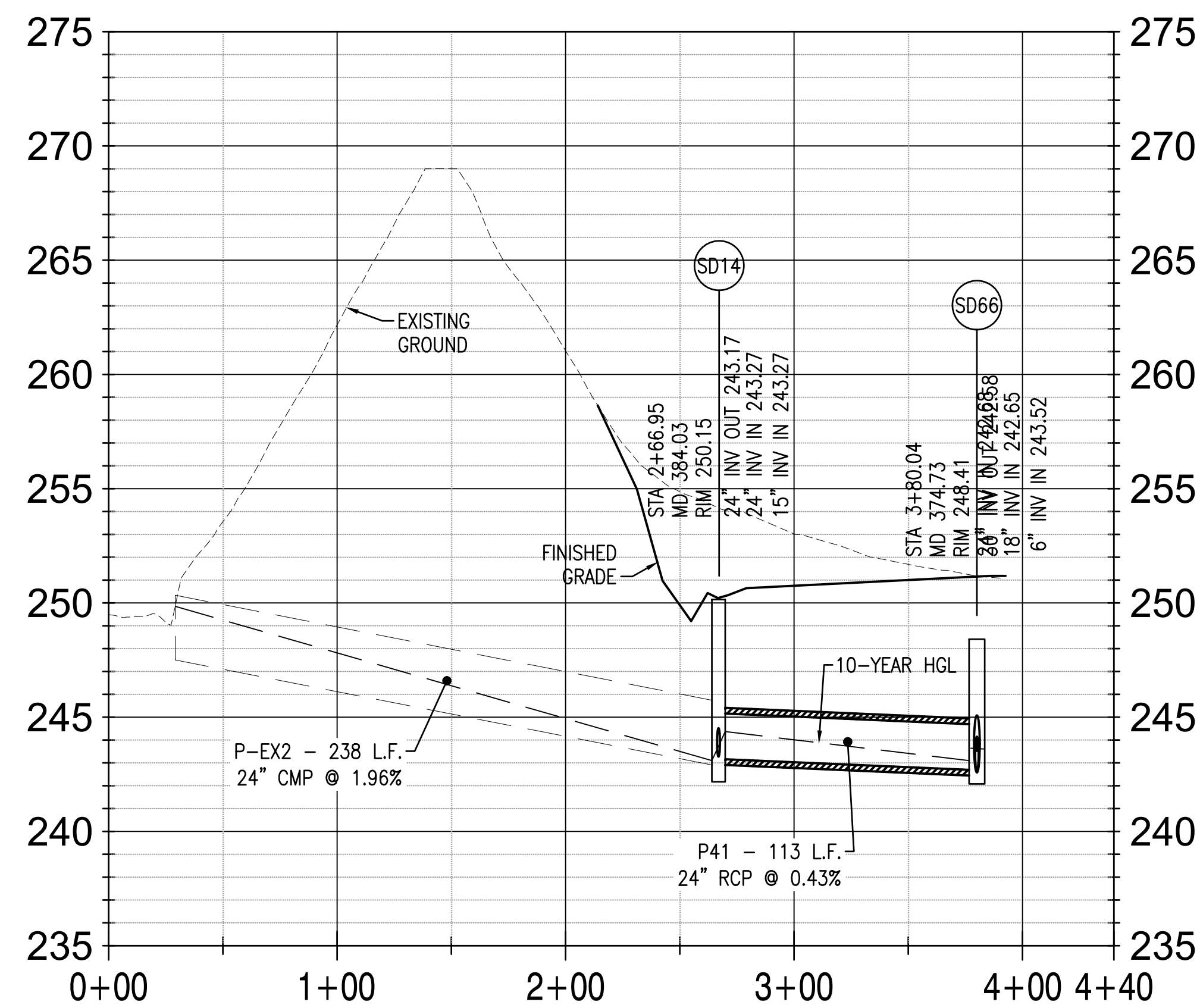
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NAVFAC DRAWING NO. 13140408

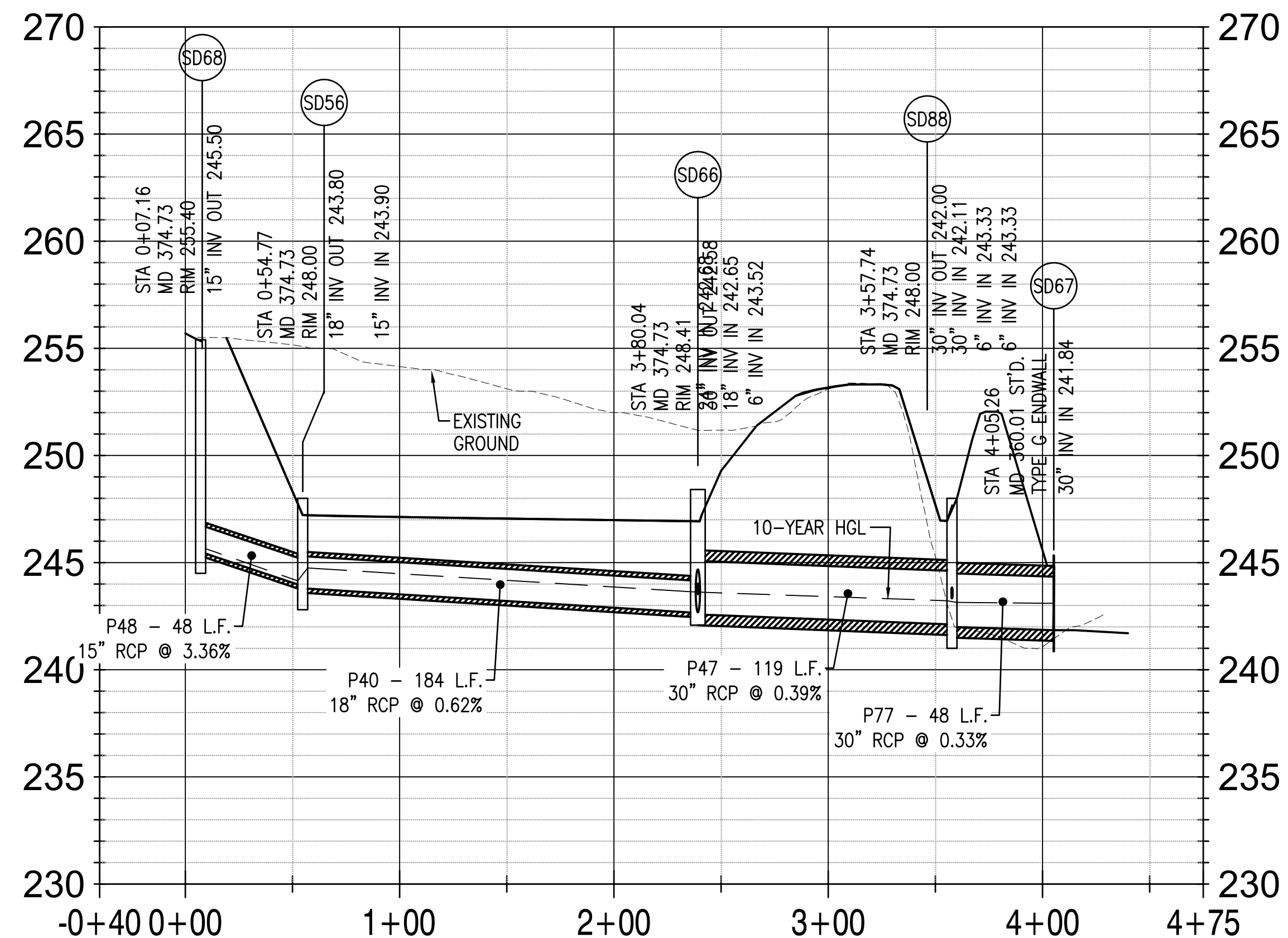
SHEET 138 OF 229

CU-203

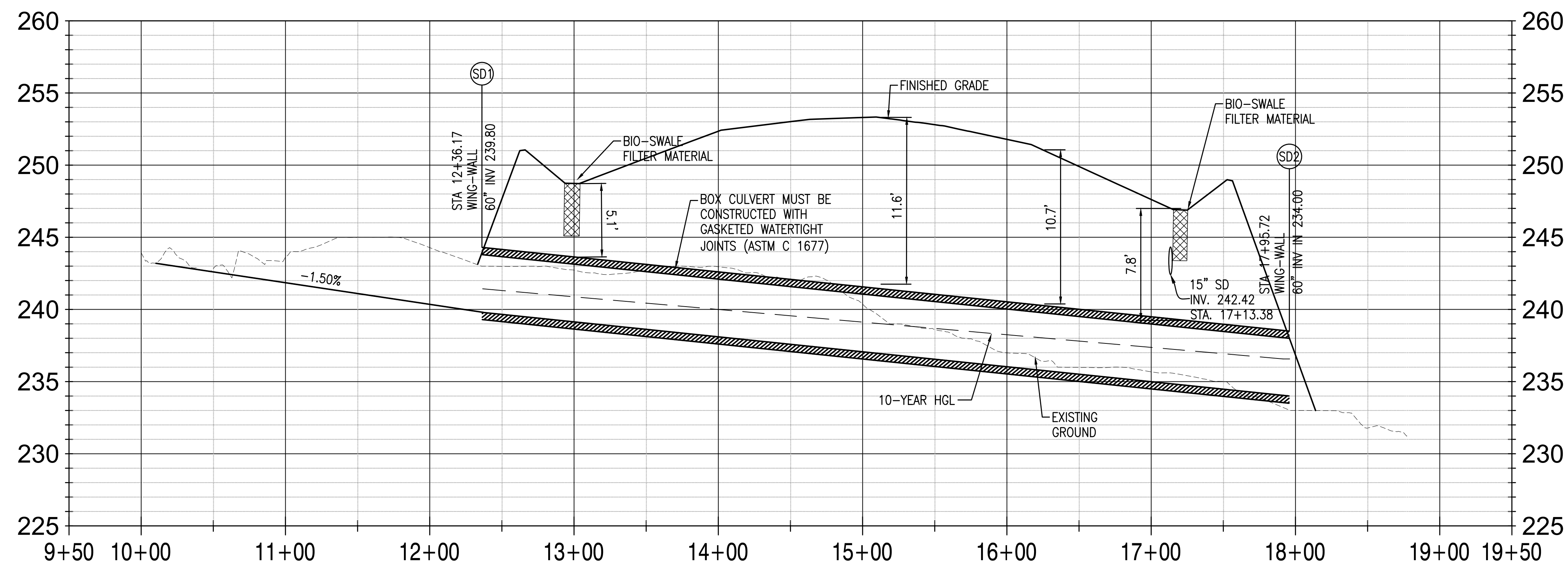
DRAWING REVISION: 06 APRIL 2017



STORM SEWER STRUCTURES P-EX2 TO SD66 PROFILE



STORM SEWER STRUCTURE SD68 TO SD67 PROFILE



STORM SEWER STRUCTURES SD1 TO SD2 PROFILE

STORM STRUCTURE TABLE		
STRUCTURE ID	STRUCTURE DETAILS	NORTHING/EASTING
SD1 WING-WALL	P1 Rim = 244.80 INV OUT = 239.80	N=410747.72, E=1352439.04
SD2 WING-WALL	P1 Rim = 239.00 INV IN = 234.00	N=410358.91, E=1352036.63

STORM PIPE TABLE					
PIPE LABEL	DIA. (IN.)	LENGTH (FT.)	INV. IN	INV. OUT	SLOPE
P1	60	559.6	239.80	234.00	1.04%

NOTES:

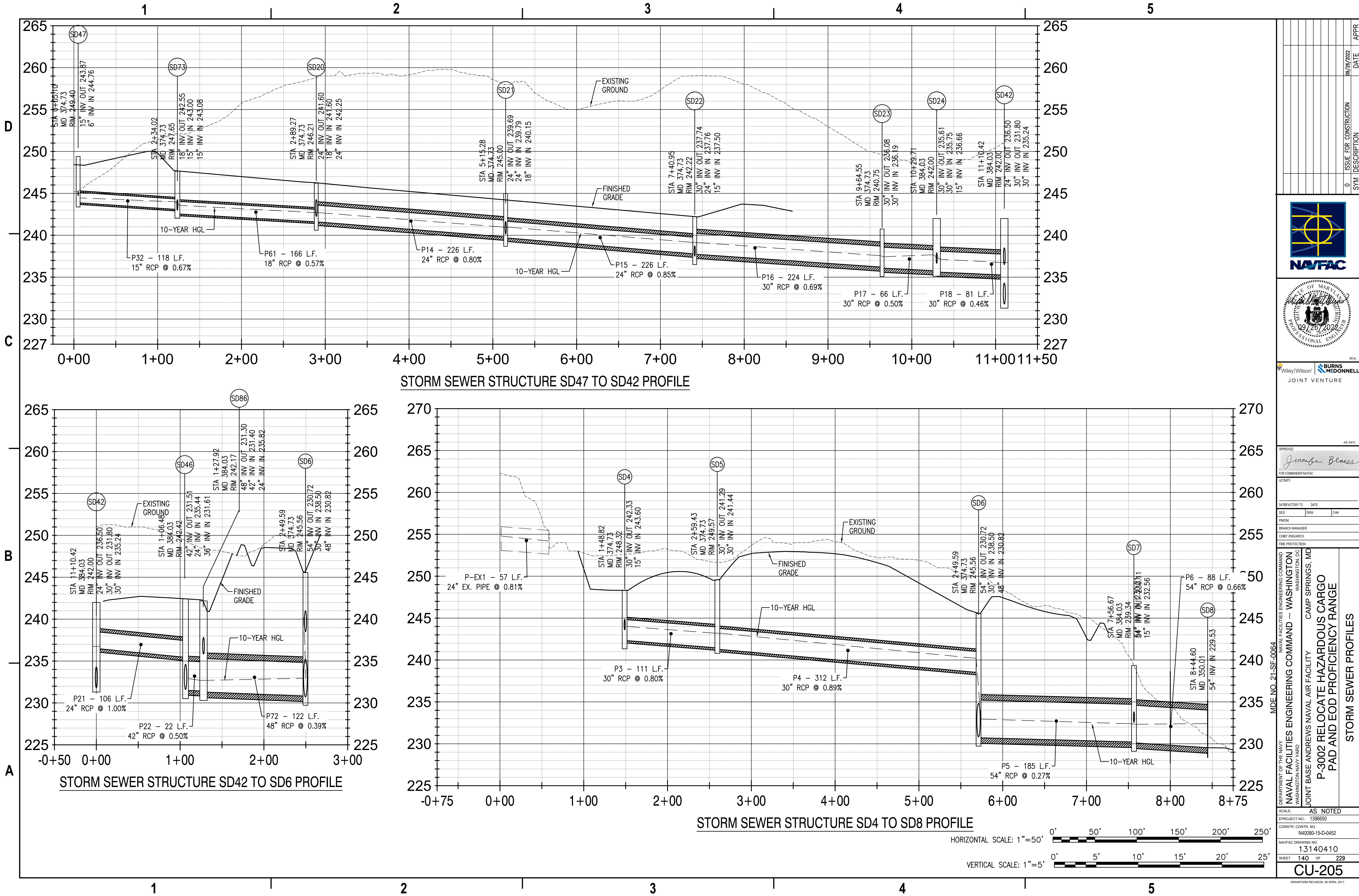
1. MINIMUM COVER FOR STORM SEWER = 2.0 FT
2. MINIMUM CLEARANCE FOR CROSSING UTILITIES = 18 IN.

HORIZONTAL SCALE: 1"=50'





VERTICAL SCALE: 1"=5'





APPR	DATE	30/06/2022
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JOINT VENTURE

APPROVED: *Jennifer Bless*
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ACTIVITY

SATISFACTORY TO: DATE

DES: [] REV: [] CHK: []

PHOTO

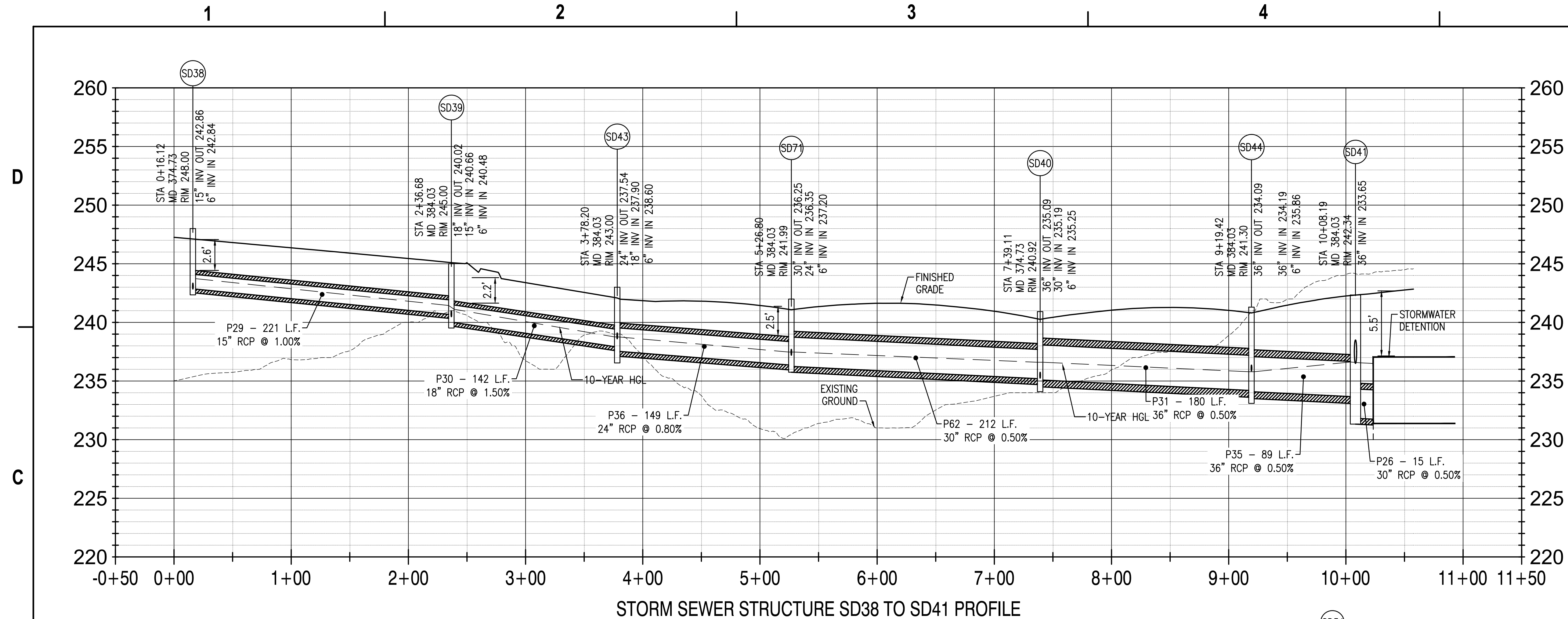
BRANCH MANAGER

CHIEF ENGINEER

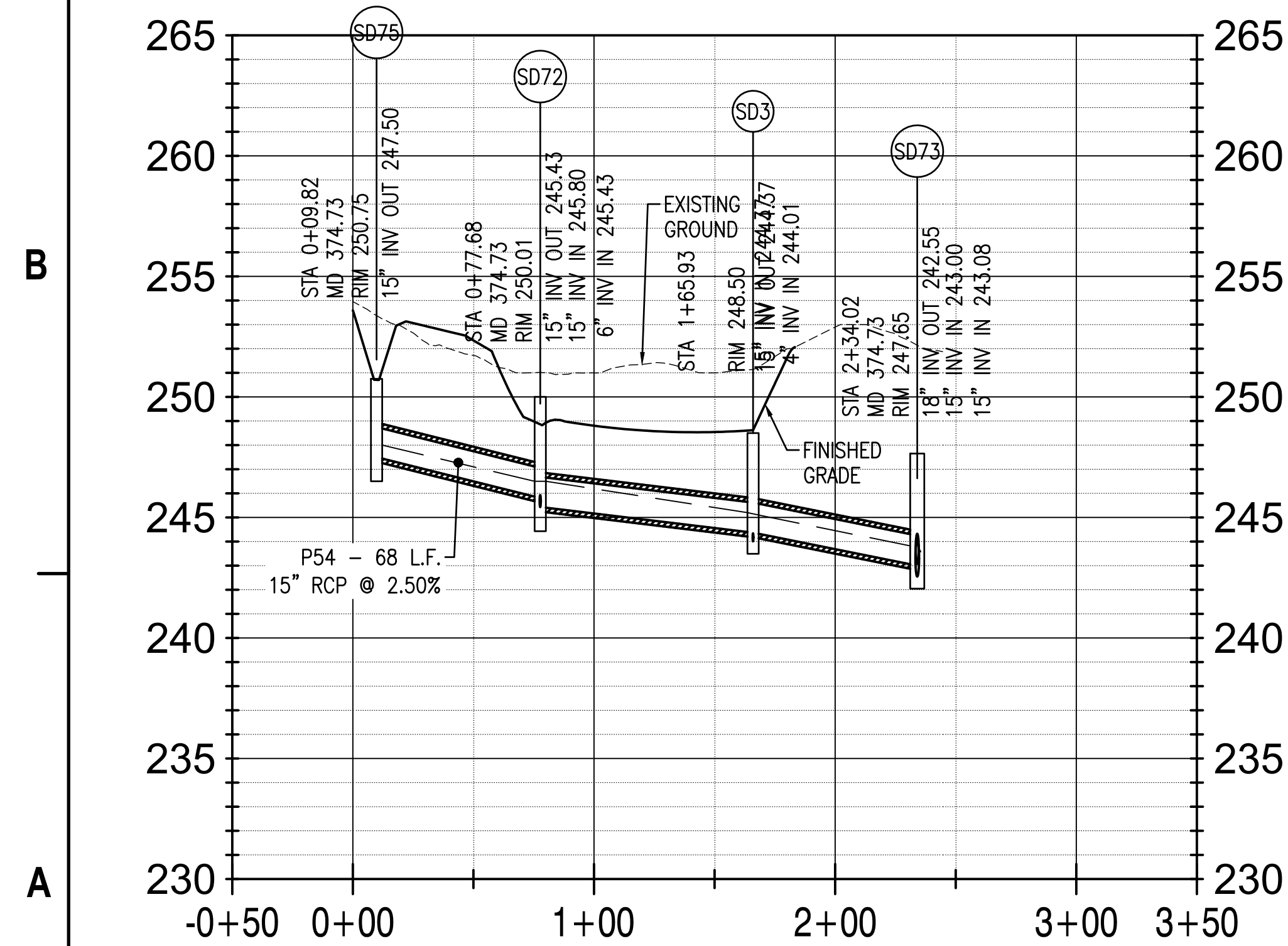
FIRE PROTECTION

DEPARTMENT OF THE NAVY
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NAVAL FACILITIES ENGINEERING COMMAND - WASHINGTON
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CAMP SPRINGS, MD
P-3002 RELOCATE HAZARDOUS CARGO
PAD AND EOD PROFICIENCY RANGE
STORM SEWER PROFILES

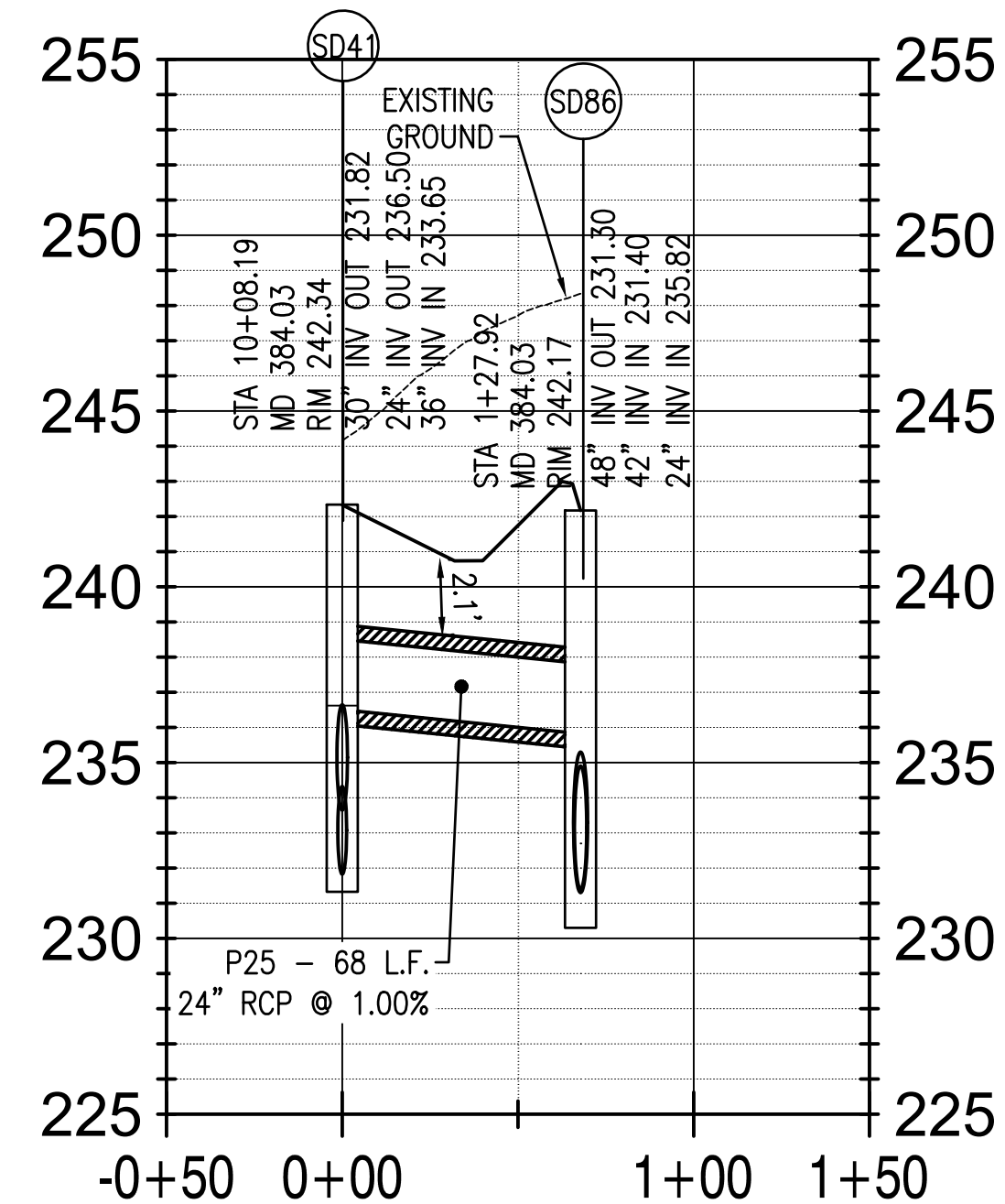
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CONSTR. CONTR. NO.: N40080-15-D-0452
NAVFAC DRAWING NO.: 13140410
SHEET 140 OF 229



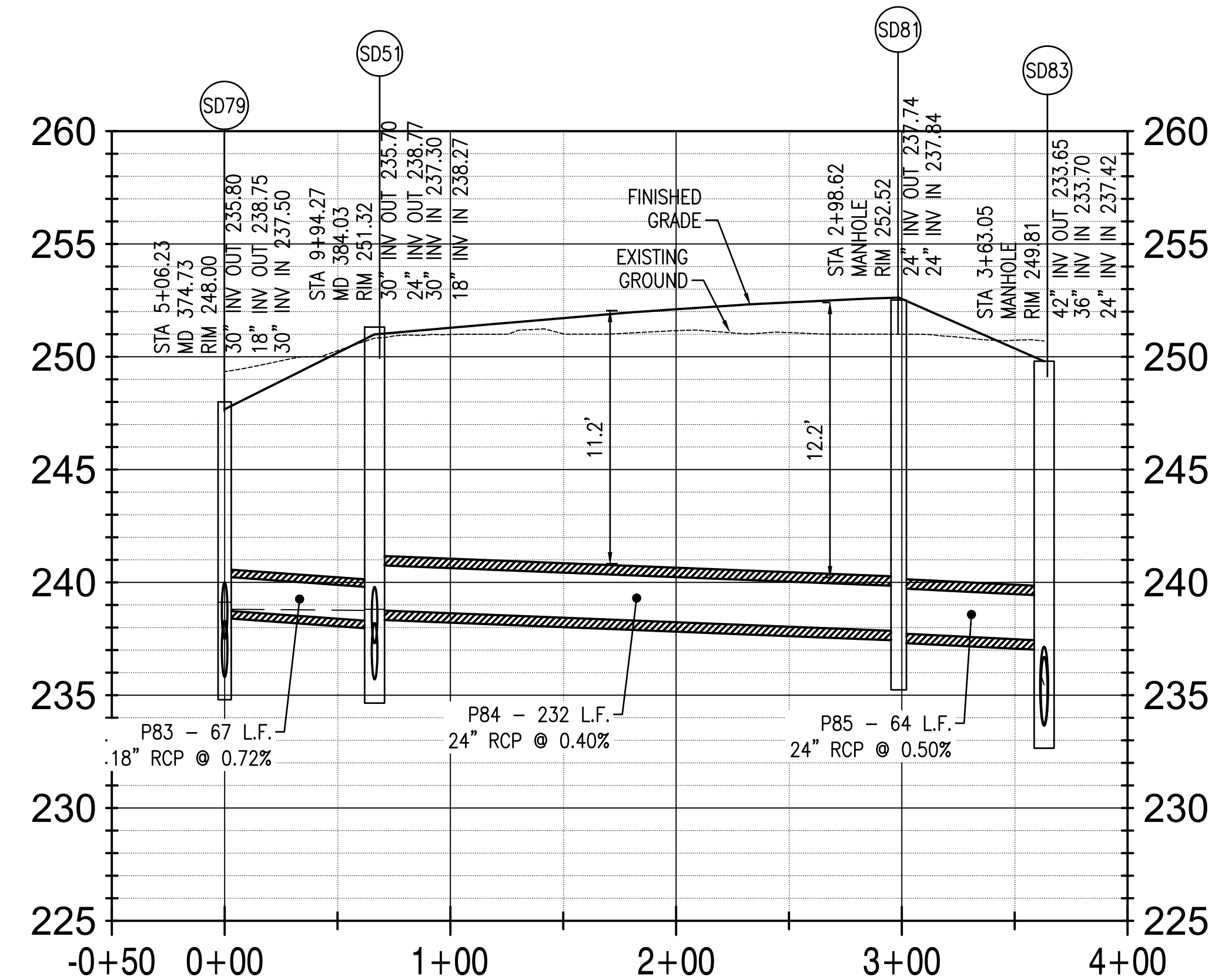
STORM SEWER STRUCTURE SD38 TO SD41 PROFILE



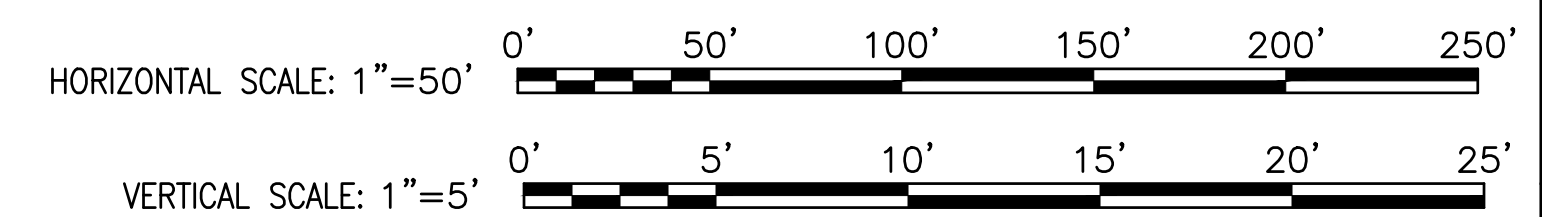
STORM SEWER STRUCTURE SD75 TO SD73 PROFILE

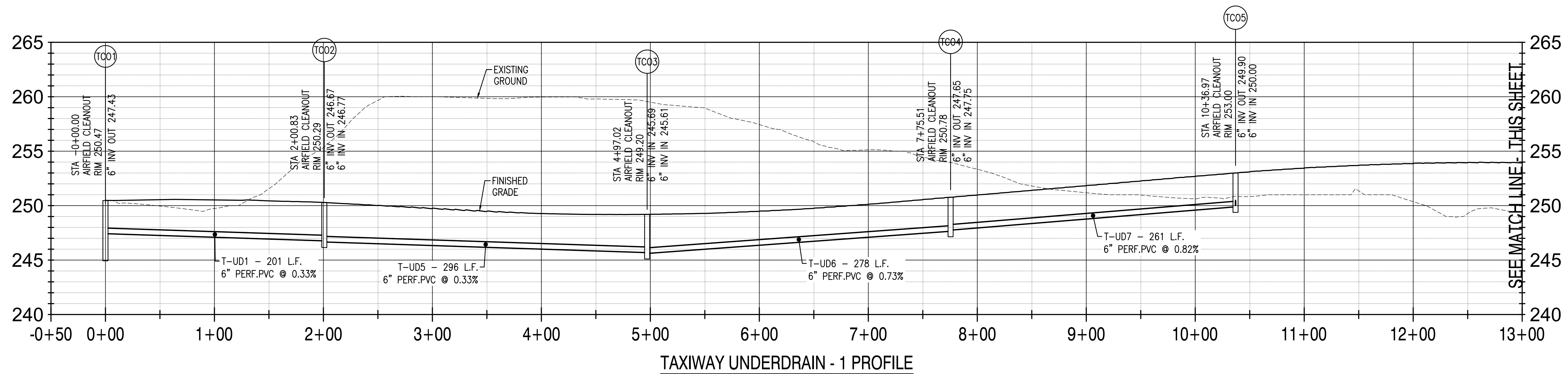


STORM SEWER STRUCTURES SD41 TO SD86 PROFILE

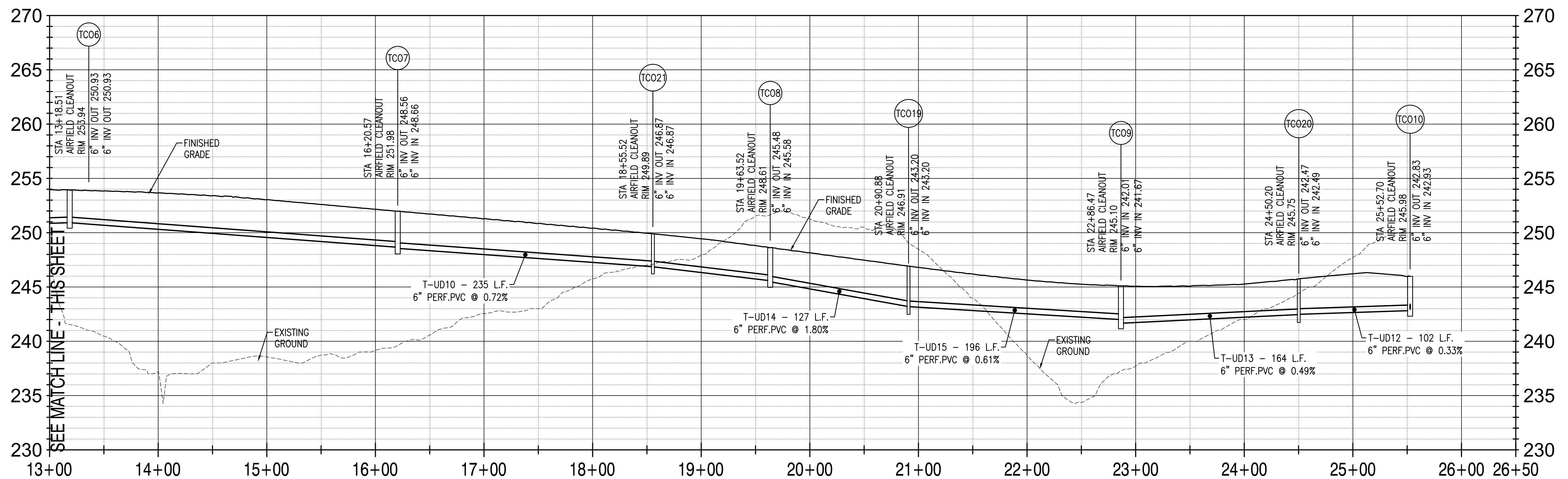


STORM SEWER STRUCTURES SD79 TO SD83 PROFILE

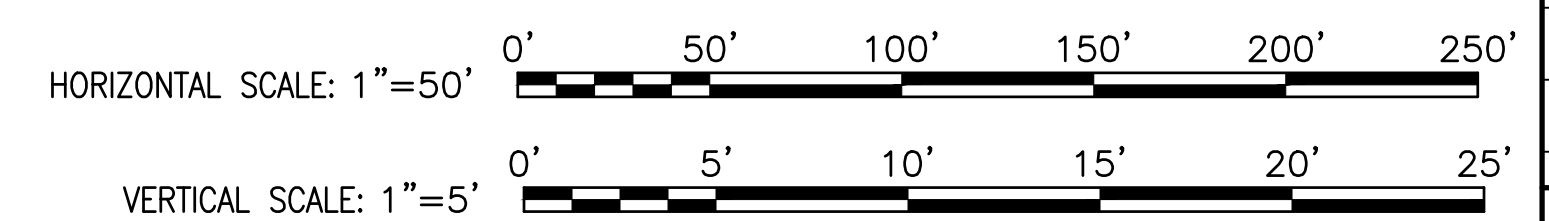
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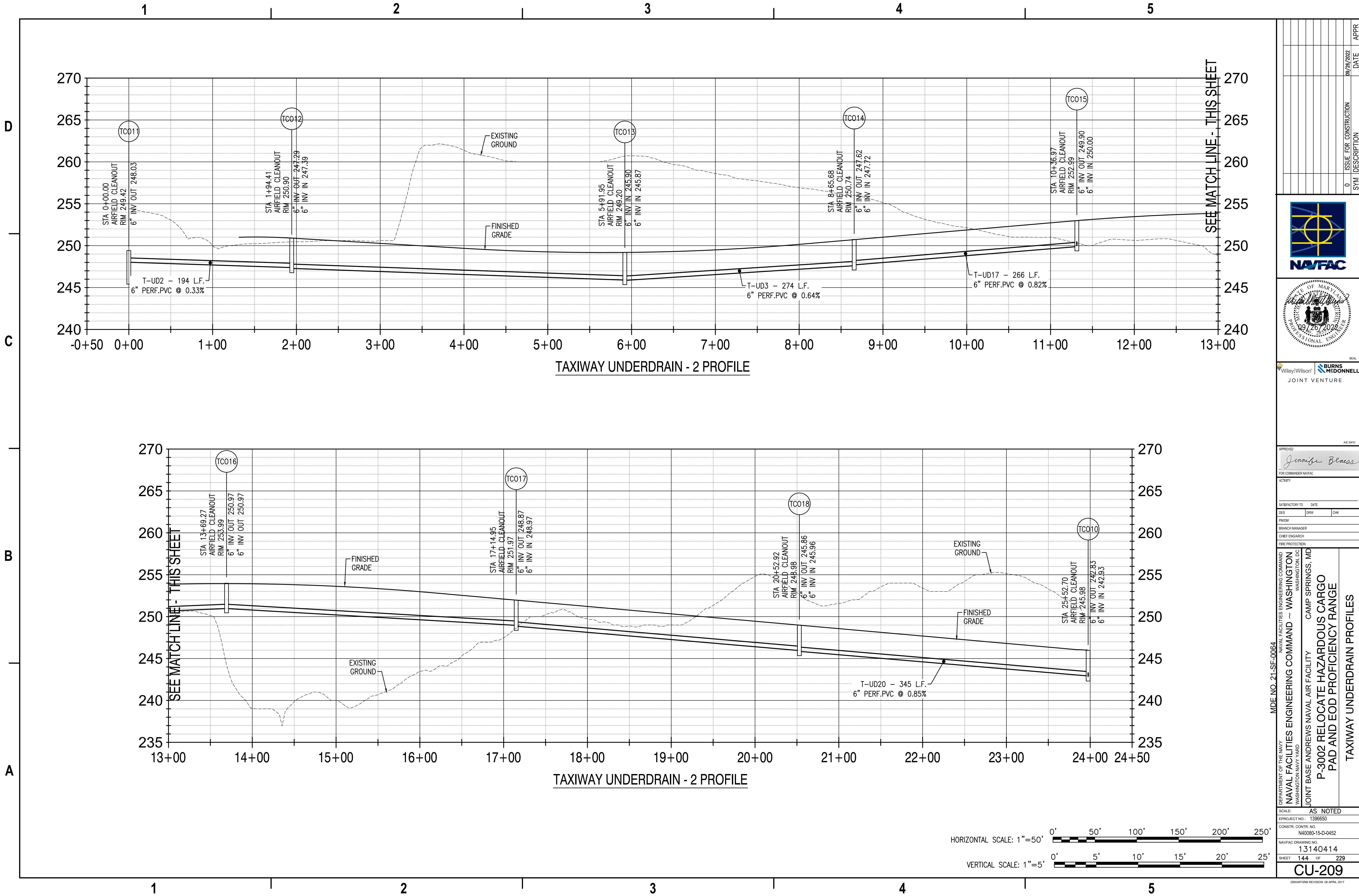


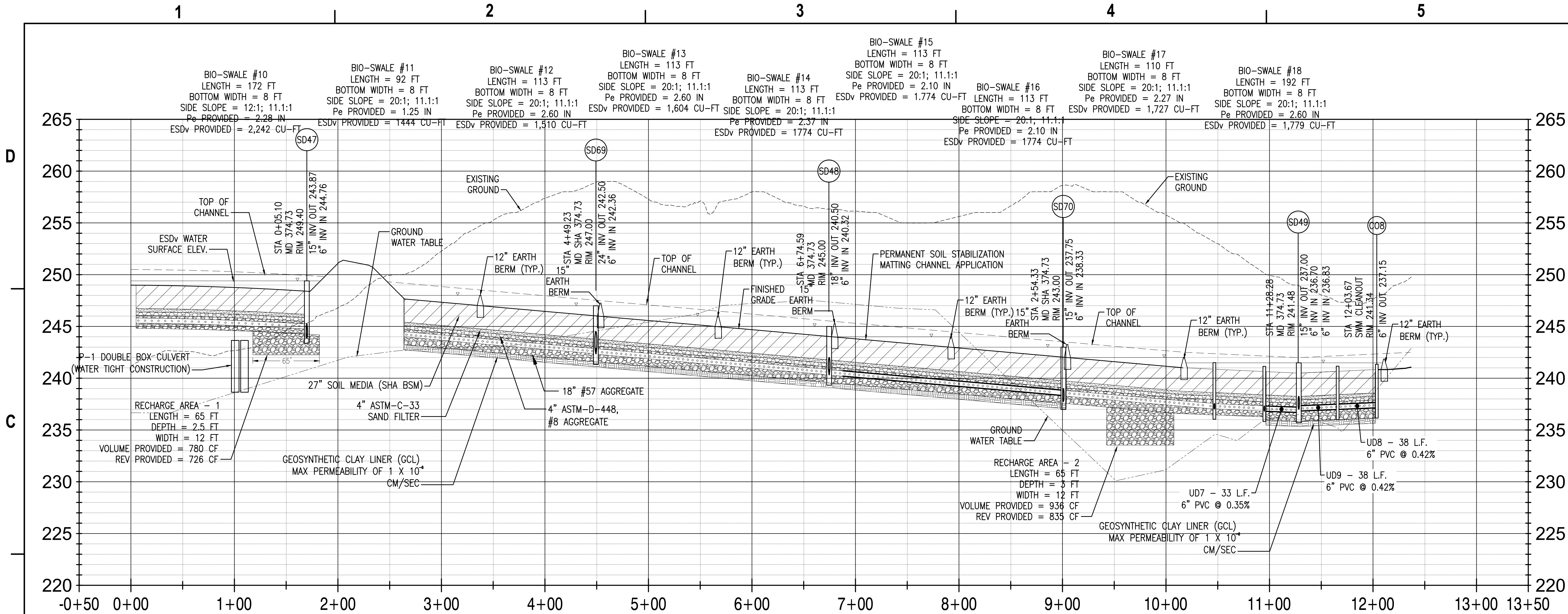
TAXIWAY UNDERDRAIN - 1 PROFILE



TAXIWAY UNDERDRAIN - 1 PROFILE

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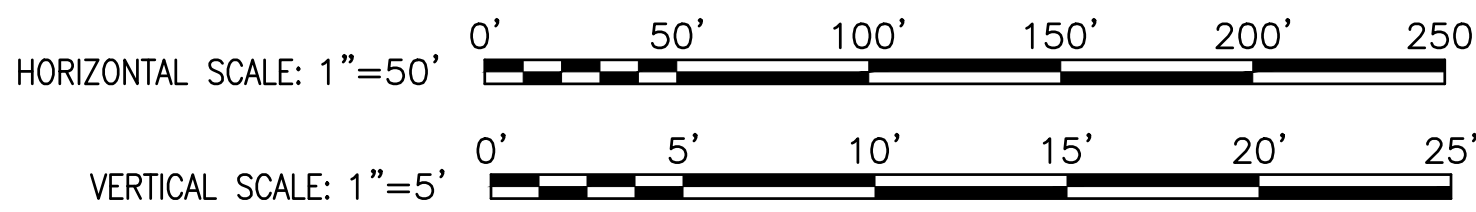




BIOSWALE - A PROFILE

GENERAL NOTES:

- 1. REFER TO SHEETS CU-505 AND CU-506 FOR SWM NOTES AND DETAILS.
- 2. REFER TO SHEETS CG-124 THROUGH CG-127 FOR SWM PLANS



APPROVED		DATE	APPR
0		09/26/2022	
ISSUE FOR CONSTRUCTION		DATE	APPR
0		09/26/2022	
SYM DESCRIPTION		DATE	APPR
0		09/26/2022	

JOINT VENTURE

APPROVED

Jennifer Bless

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES ☐ DRY ☐ CHK ☐

PM/DM

BRANCH MANAGER

CHIEF ENGINEER

FIRE PROTECTION

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND

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CAMP SPRINGS, MD

P-3002 RELOCATE HAZARDOUS CARGO

PAD AND EOD PROFICIENCY RANGE

STORMWATER MANAGEMENT PROFILES

SCALE: AS NOTED

PROJECT NO.: 1396550

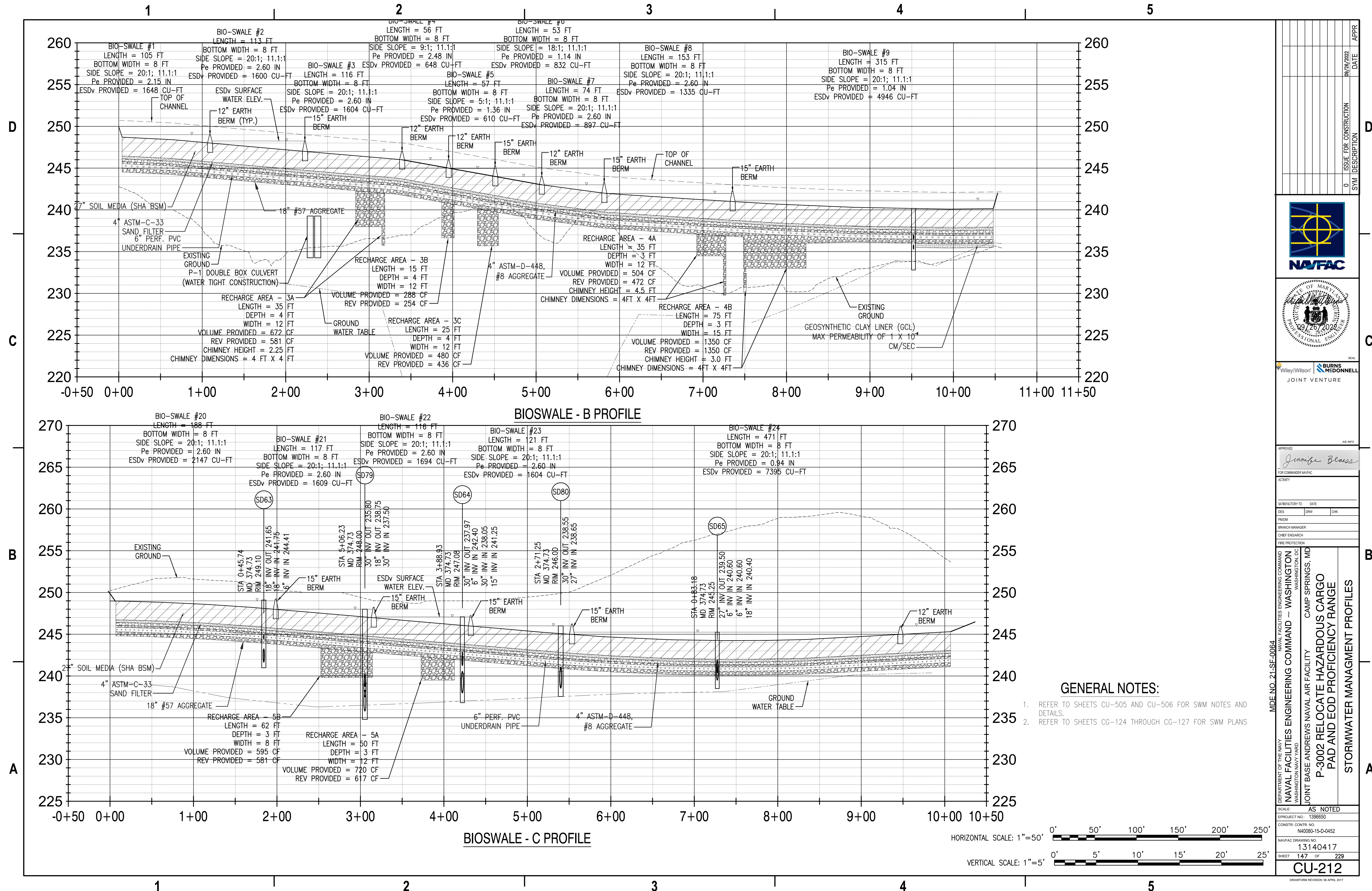
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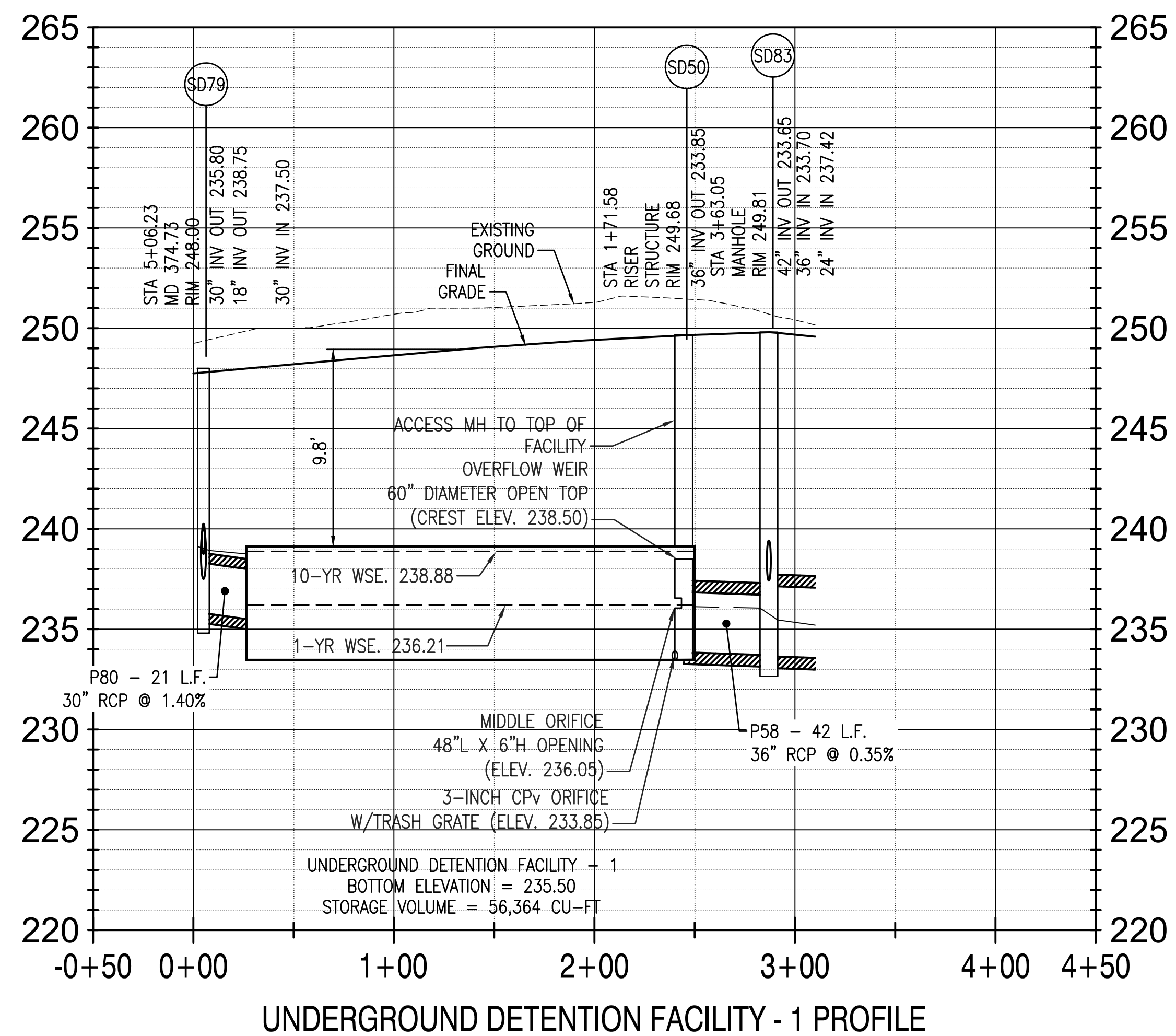
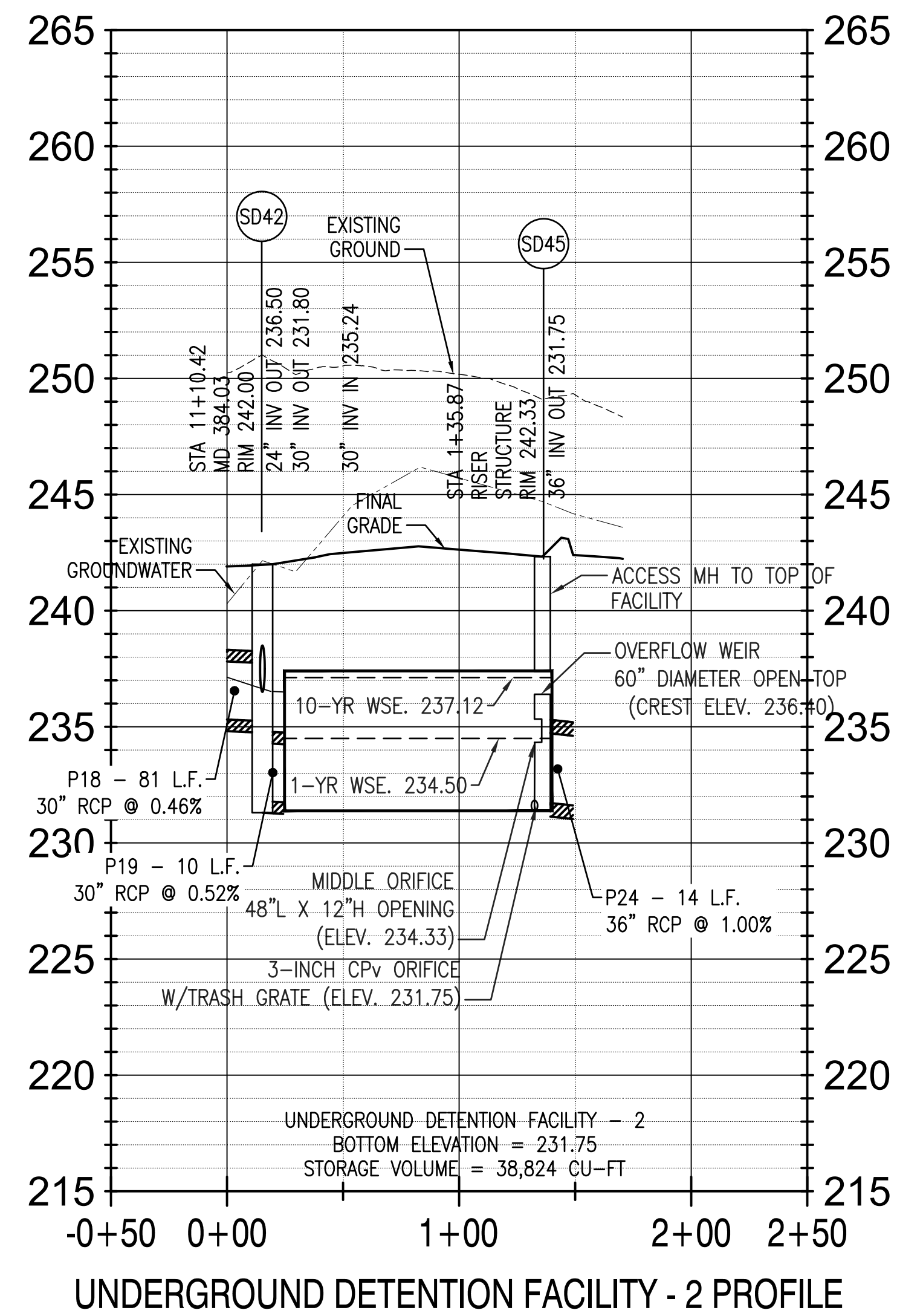
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SHEET 146 OF 229

CU-211

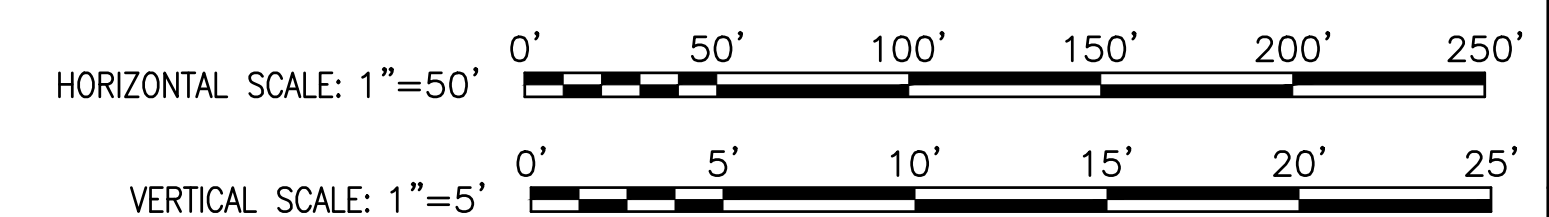
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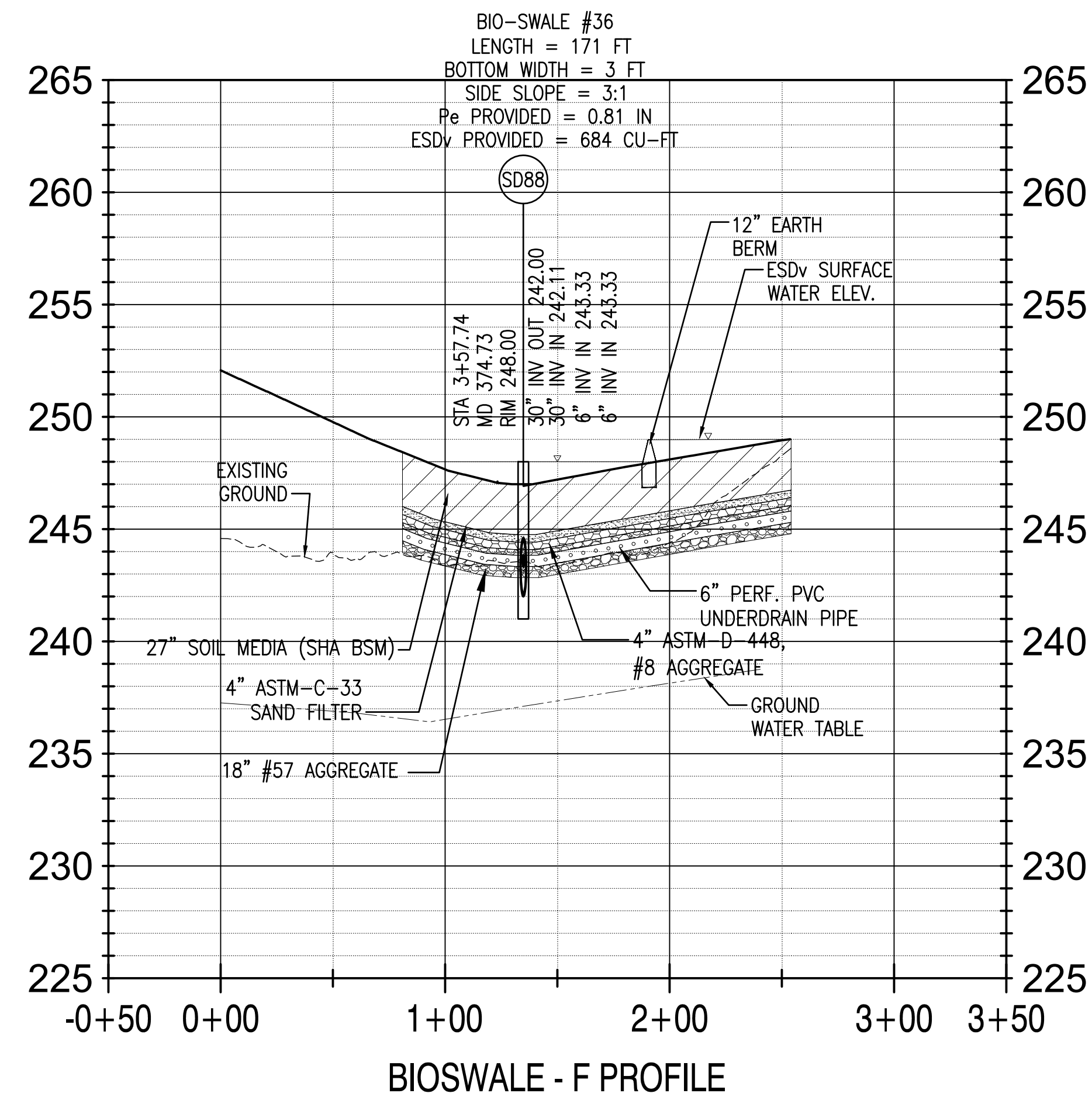
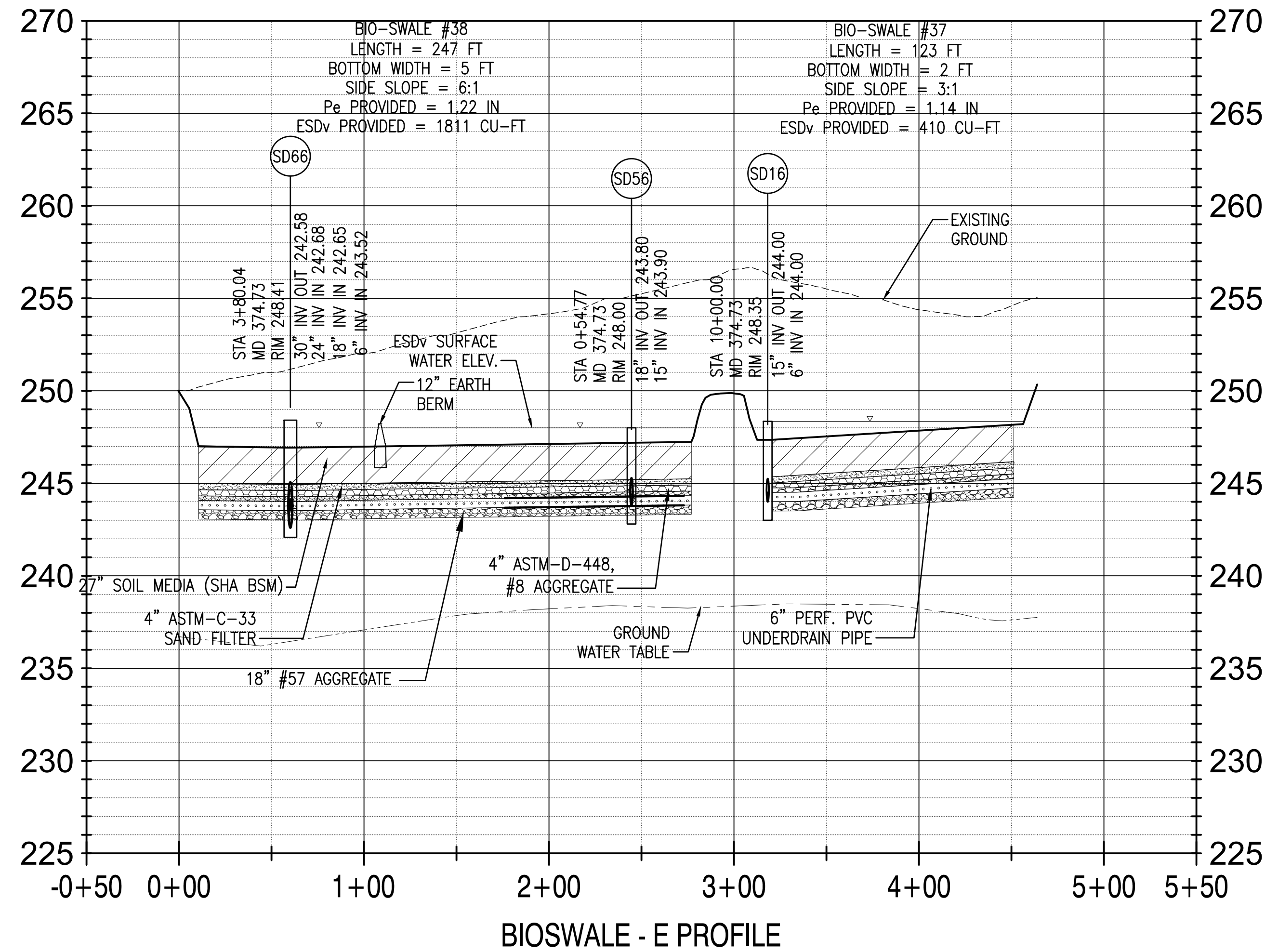




GENERAL NOTES:

1. REFER TO SHEETS CU-504 FOR UNDERGROUND STORMWATER DETENTION NOTES AND DETAILS.
2. REFER TO SHEETS CG-124 THROUGH CG-127 FOR SWM PLANS

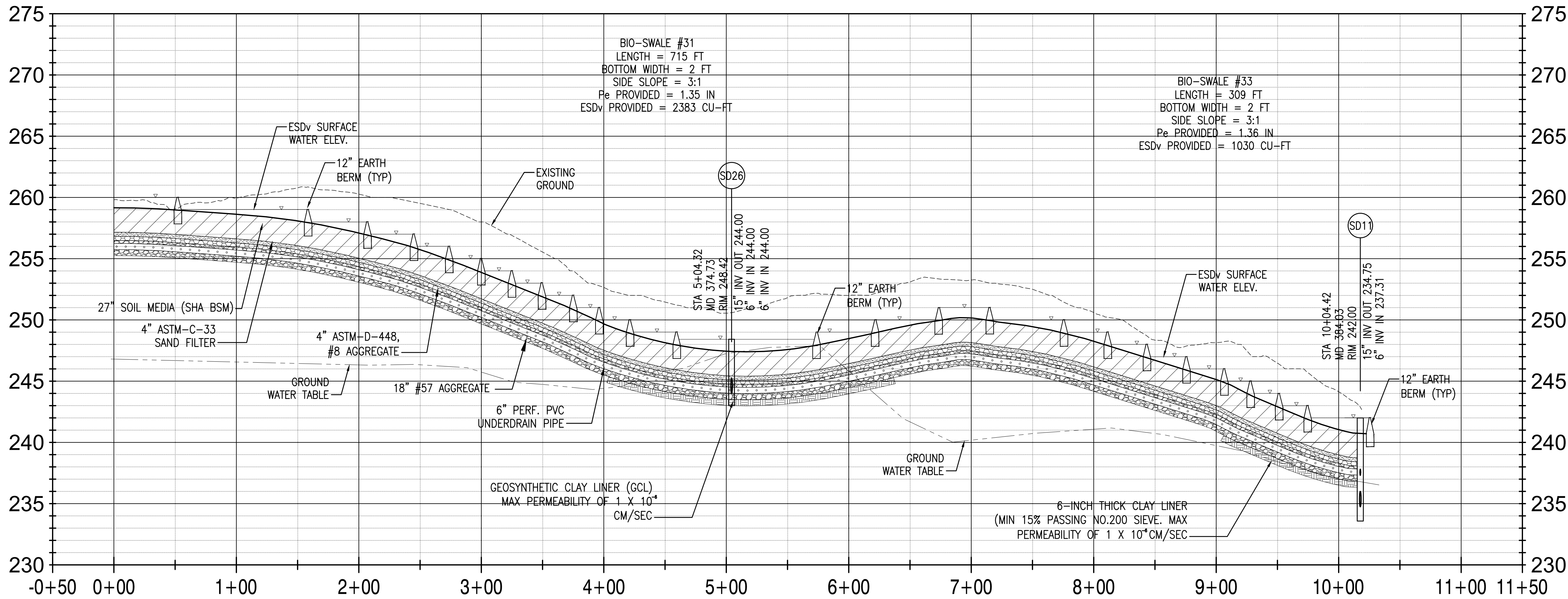
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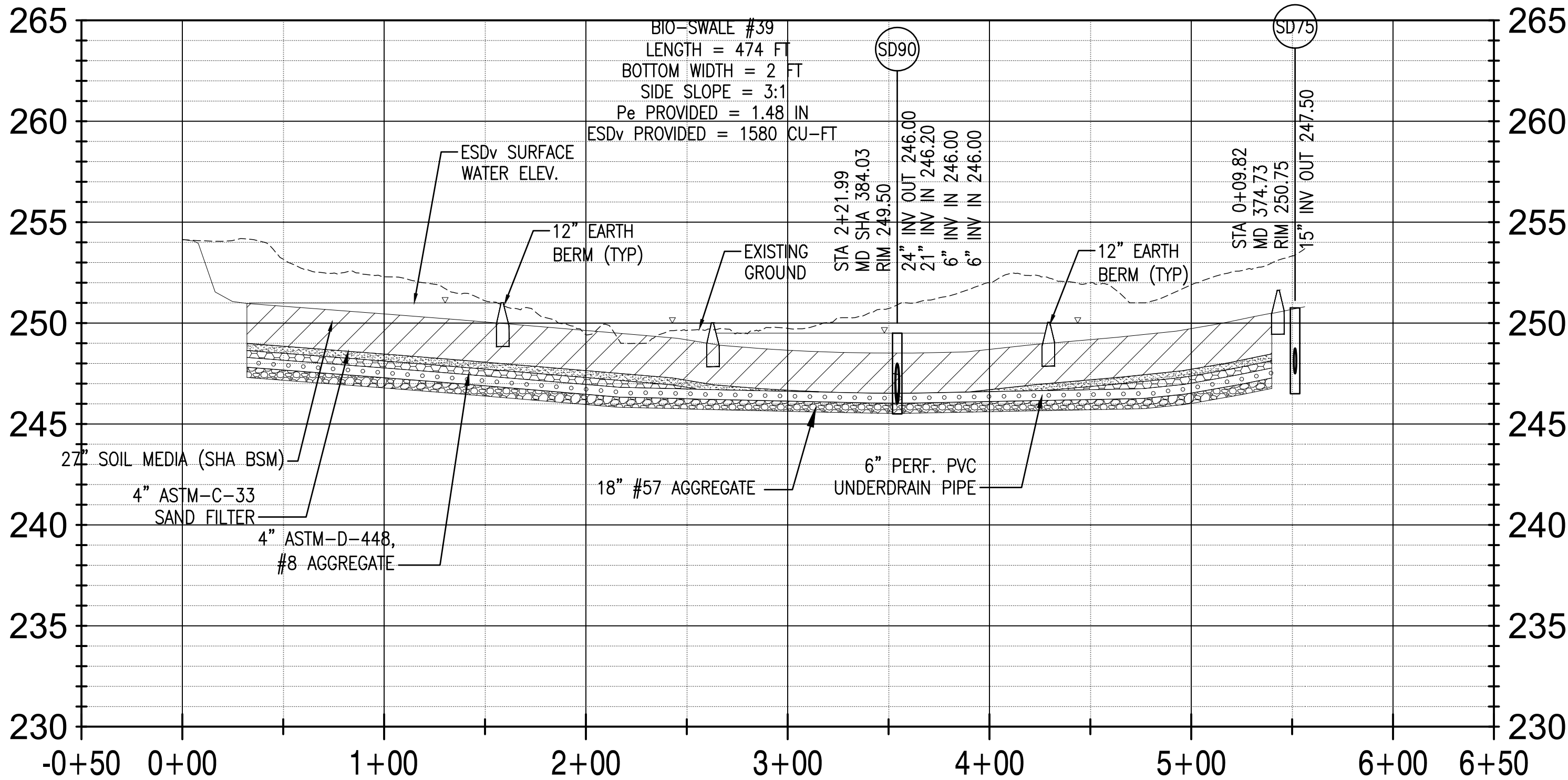
GENERAL NOTES:

1. REFER TO SHEETS CU-505 AND CU-506 FOR SWM NOTES AND DETAILS.
2. REFER TO SHEETS CG-124 THROUGH CG-127 FOR SWM PLANS

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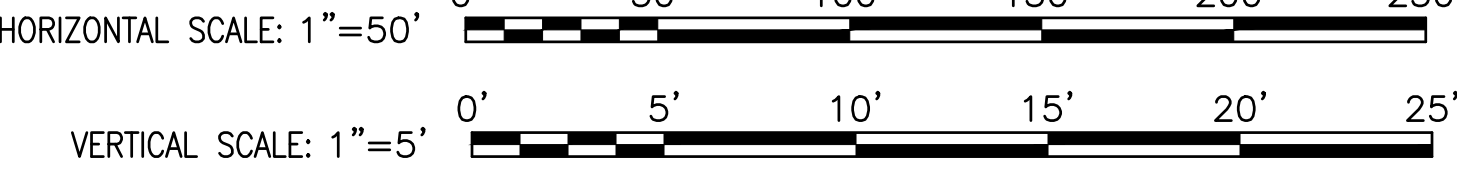
BIOSWALE - I PROFILE



BIOSWALE - M PROFILE

GENERAL NOTES:

- 1. REFER TO SHEETS CU-505 AND CU-506 FOR SWM NOTES AND DETAILS.
- 2. REFER TO SHEETS CG-124 THROUGH CG-127 FOR SWM PLANS



APPR	DATE	09/26/2022
SYM	DESCRIPTION	0

JOINT VENTURE

APPROVED

Jennifer Bless

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES ☐ PREP ☐ CHK ☐

PHOTO

BRANCH MANAGER

CHIEF ENGINEER

FIRE PROTECTION

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON

WASHINGTON NAVY YARD

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CAMP SPRINGS, MD

P-3002 RELOCATE HAZARDOUS CARGO

PAD AND EOD PROFICIENCY RANGE

STORMWATER MANAGEMENT PROFILES

SCALE: AS NOTED

PROJECT NO.: 139650

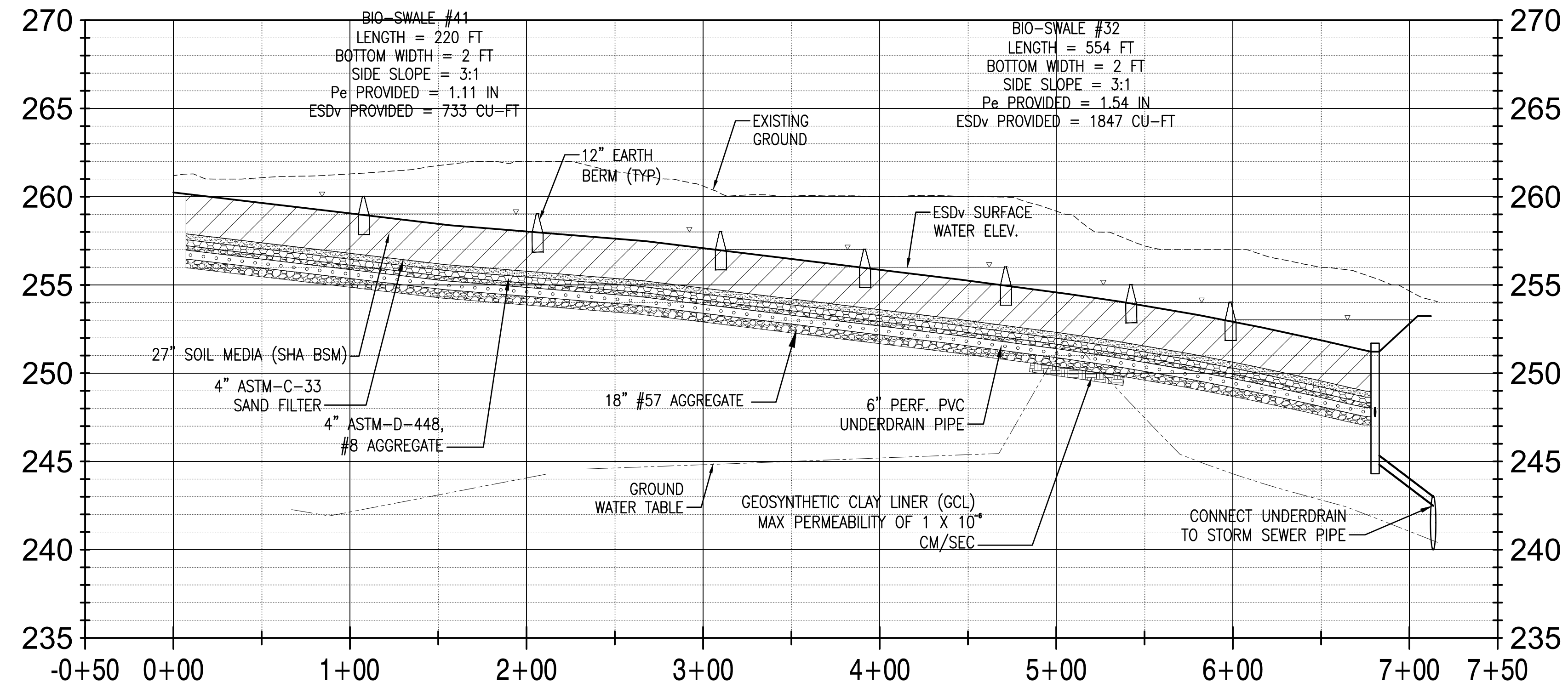
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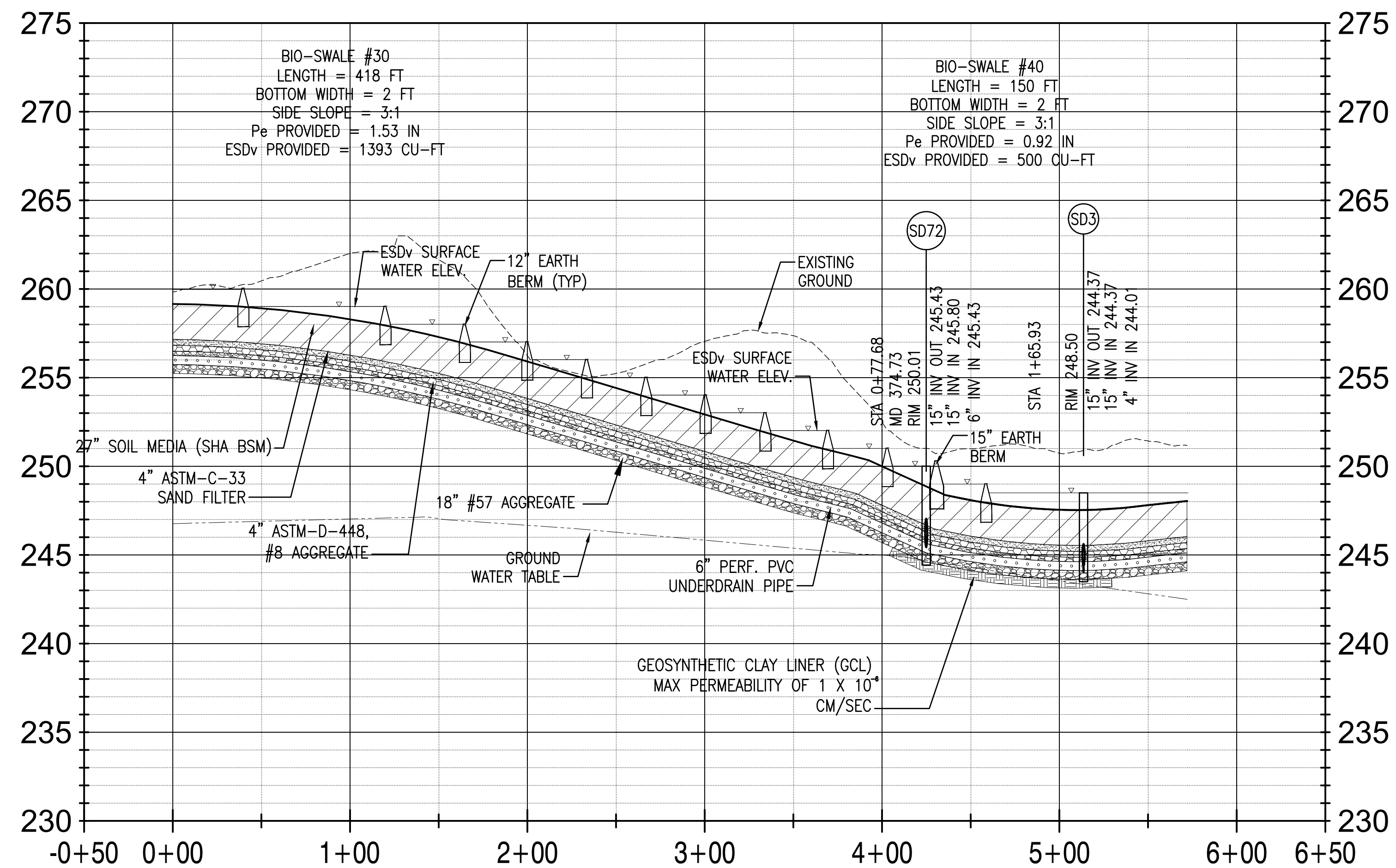
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CU-217

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BIOSWALE - J PROFILE



BIOSWALE - K PROFILE

GENERAL NOTES:

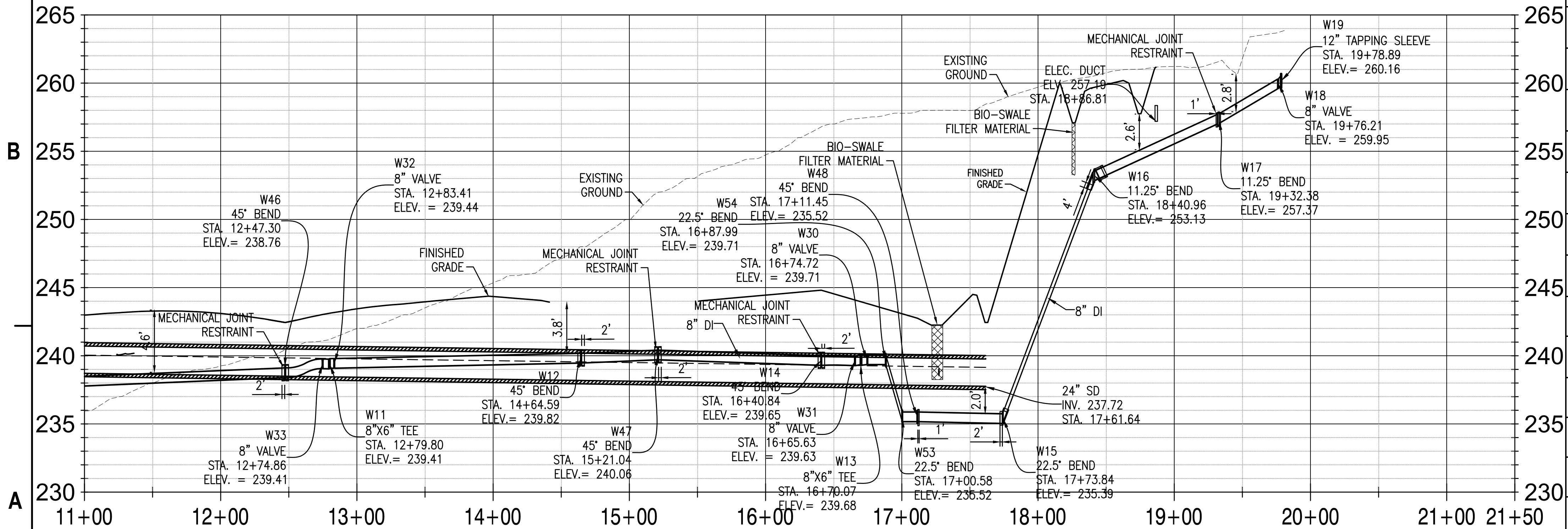
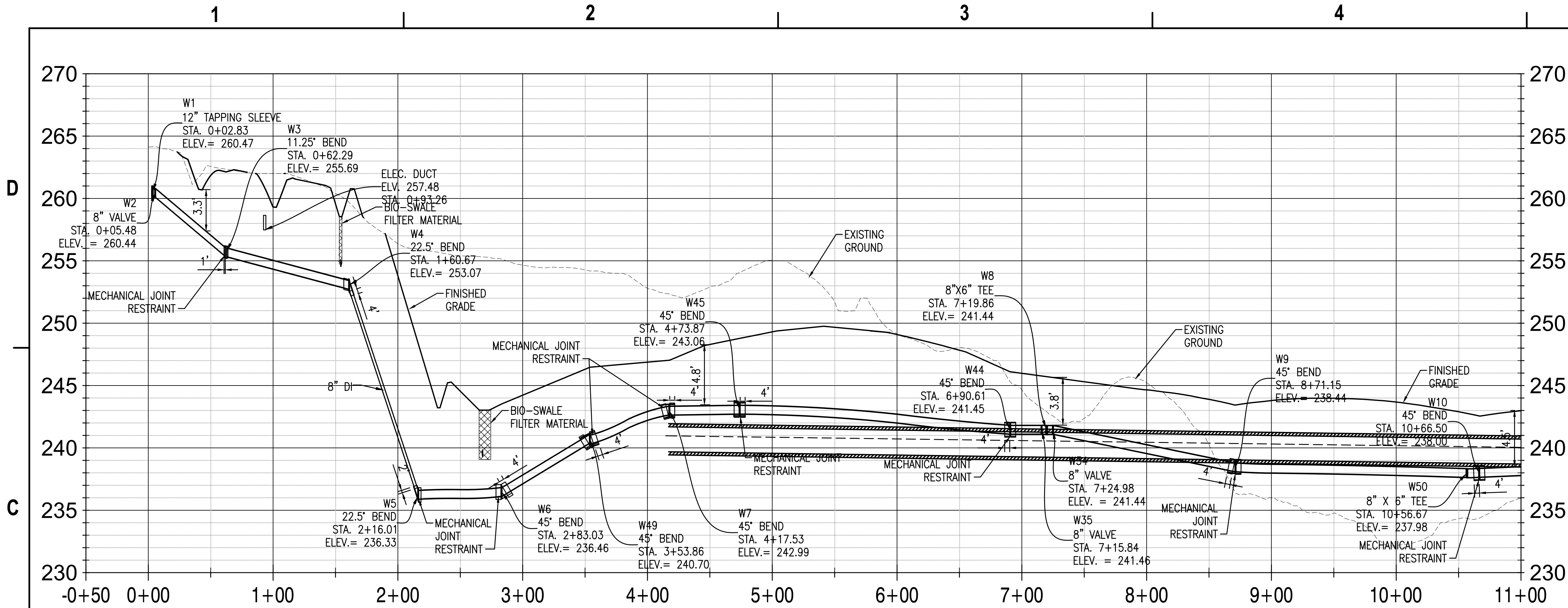
1. REFER TO SHEETS CU-505 AND CU-506 FOR SWM NOTES AND DETAILS.
2. REFER TO SHEETS CG-124 THROUGH CG-127 FOR SWM PLANS

HORIZONTAL SCALE: 1"=50'



VERTICAL SCALE: 1"=5'

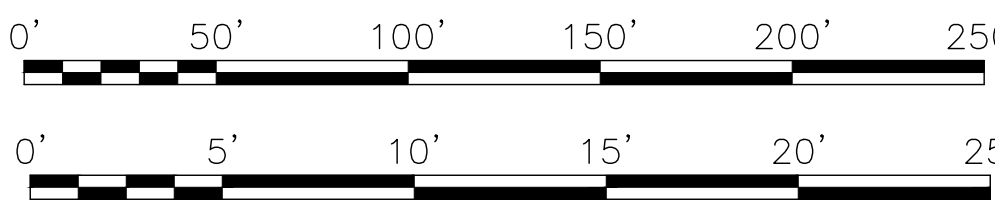
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- NOTES:
1. MINIMUM COVER FOR WATER MAIN = 2.5 FT
 2. MINIMUM CLEARANCE FOR CROSSING UTILITIES = 18 IN.
 3. ENCASE DUCTILE IRON WATER LINE PIPE IN POLYETHYLENE PER ASUS/TERRAPIN SPECIFICATIONS.

HORIZONTAL SCALE: 1"=50'

VERTICAL SCALE: 1"=5'



FITTING TABLE	
FITTING NAMES	COORDINATES
W1 12" TAPPING SLEEVE	N = 410063.36 E = 1352756.39
W3 11.25" BEND	N = 410063.95 E = 1352696.94
W4 22.5" BEND	N = 410049.16 E = 1352599.65
W5 22.5" BEND	N = 410040.97 E = 1352544.92
W6 45" BEND	N = 410030.95 E = 1352478.66
W7 45" BEND	N = 410135.88 E = 1352412.25
W9 45" BEND	N = 409991.59 E = 1352045.33
W10 45" BEND	N = 409798.39 E = 1352074.25
W11 8"x6" TEE	N = 409695.43 E = 1352251.16
W12 45" BEND	N = 409722.69 E = 1352433.86
W13 8"x6" TEE	N = 409910.41 E = 1352466.66
W14 45" BEND	N = 409886.84 E = 1352449.33
W15 22.5" BEND	N = 409952.82 E = 1352553.01
W16 11.25" BEND	N = 409962.78 E = 1352619.39
W17 11.25" BEND	N = 409976.21 E = 1352709.80
W19 12" TAPPING SLEEVE	N = 409975.89 E = 1352756.30
W44 45" BEND	N = 410136.92 E = 1352152.23
W45 45" BEND	N = 410168.92 E = 1352366.69
W46 45" BEND	N = 409690.64 E = 1352219.09
W47 45" BEND	N = 409768.38 E = 1352467.00
W48 45" BEND	N = 409943.60 E = 1352491.39
W49 45" BEND	N = 410072.84 E = 1352421.61
W50 8" X 6" TEE	N = 409808.10 E = 1352072.69

APPURTENANCE TABLE	
NAME & DESCRIPTION	COORDINATES
W35 8" VALVE	N = 410116.48 E = 1352137.44
W34 8" VALVE	N = 410109.21 E = 1352131.89
W33 8" VALVE	N = 409694.70 E = 1352246.28
W32 8" VALVE	N = 409695.96 E = 1352254.73
W31 8" VALVE	N = 409906.86 E = 1352464.00
W30 8" VALVE	N = 409914.13 E = 1352469.46
W24 6" VALVE	N = 410108.27 E = 1352140.97
W25 F.H.	N = 410103.83 E = 1352146.05
W26 6" VALVE	N = 409706.34 E = 1352249.99
W27 F.H.	N = 409712.07 E = 1352249.28
W28 F.H.	N = 409934.25 E = 1352433.67
W29 F.H.	N = 409935.62 E = 1352431.77
W18 8" VALVE	N = 409975.83 E = 1352753.62
W51 6" VALVE	N = 409810.43 E = 1352088.48
W52 F.H.	N = 409811.05 E = 1352092.99

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JOINT VENTURE

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DRAW
CHK

BRANCH MANAGER
CHIEF ENGINEER
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WASHINGTON DC
NAVAL FACILITIES ENGINEERING COMMAND - WASHINGTON DC
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JOINT BASE ANDREWS NAVAL AIR FACILITY
CAMP SPRINGS, MD
P-3002 RELOCATE HAZARDOUS CARGO
PAD AND EOD PROFICIENCY RANGE
WATER PROFILES

SCALE: AS NOTED
EPROJECT NO.: 1396650
CONSTR. CONTR. NO. N40080-15-D-0452
NAVFAC DRAWING NO. 13140425
SHEET 155 OF 229
CU-220
DRAWING REVISION: 06 APRIL 2017