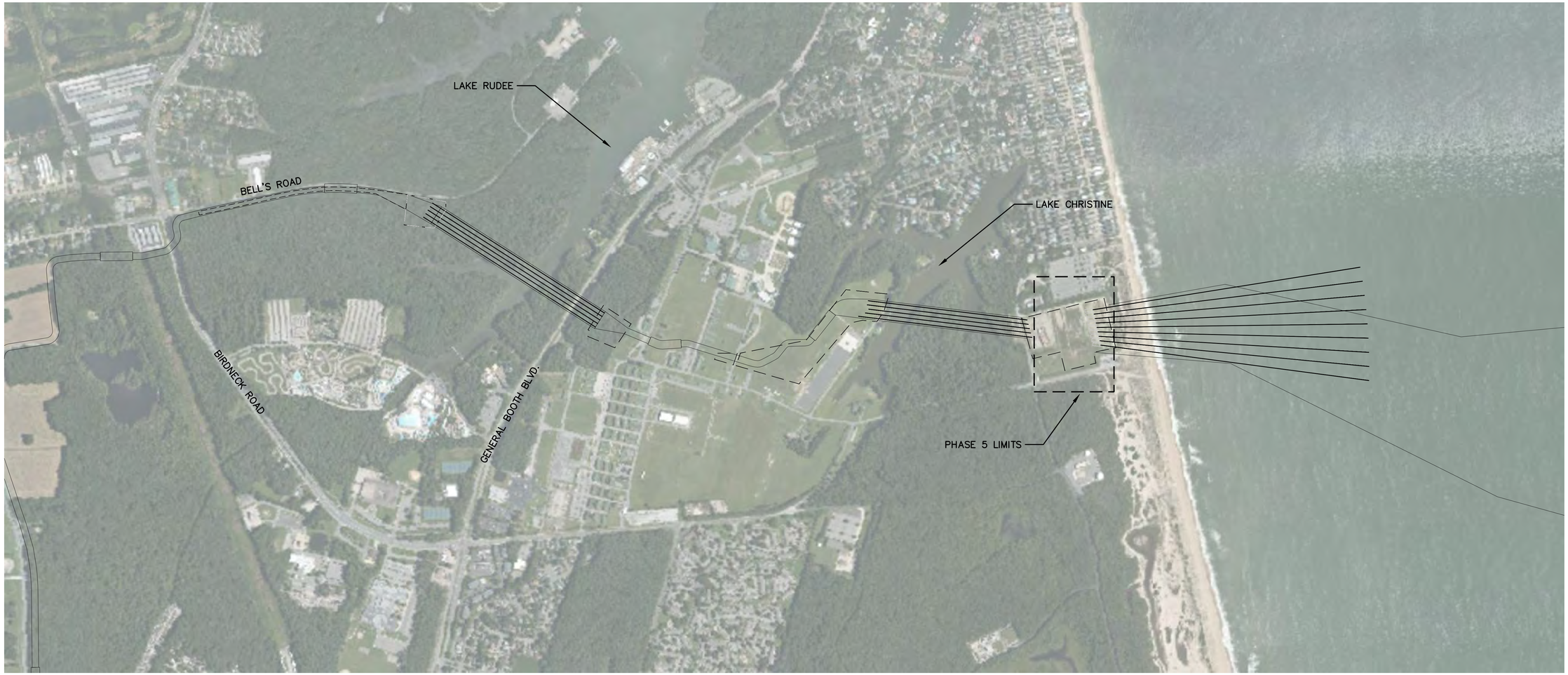
COASTAL VIRGINIA OFFSHORE WIND
230–kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE



PRELIMINARY – NOT FOR CONSTRUCTION

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	1 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-200.DWG
PLOTTED: 3/28/2022 3:07 PM
Drawing No. UG-EX-P5-200

UG-EX-P-200.DWG
PLOTTED: 3/28/2022 3:07 PM
GAINES, JACK

No.	Description	Date	By	Checked/Appr.
A	ISSUED FOR 60% REVIEW	03/25/2022	AH	PWD

Project Number B/M 0200157 H&A

Revisions

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

GAINES, JACK
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0200157\CAD

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 24168531420000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   - 7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   - 7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
     - 7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
     - 7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
    - 12.1. USACE PERMITS
    - 12.2. CITY OF ____
    - 12.3. COUNTY OF ____
    - 12.4. DEWATERING PERMITS
    - 12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

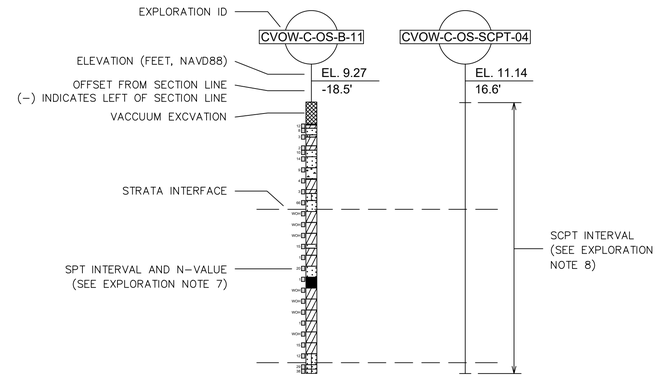
DIRECT PIPE NOTES:

1. PLACEHOLDER – TBD

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW		WELL GRADED SANDS, GRAVELLY SANDS
SP		POORLY GRADED SANDS, GRAVELLY SANDS
SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH		INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT		PEAT AND OTHER HIGHLY ORGANIC SOILS
BR		BEDROCK
NR		NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy®

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	2 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-201.DWG
PLOTTED: 3/28/2022 3:07 PM
Drawing No. UG-EX-P5-201

UG-EX-P-201.DWG
PLOTTED: 3/28/2022 3:07 PM
GAINES, JACK

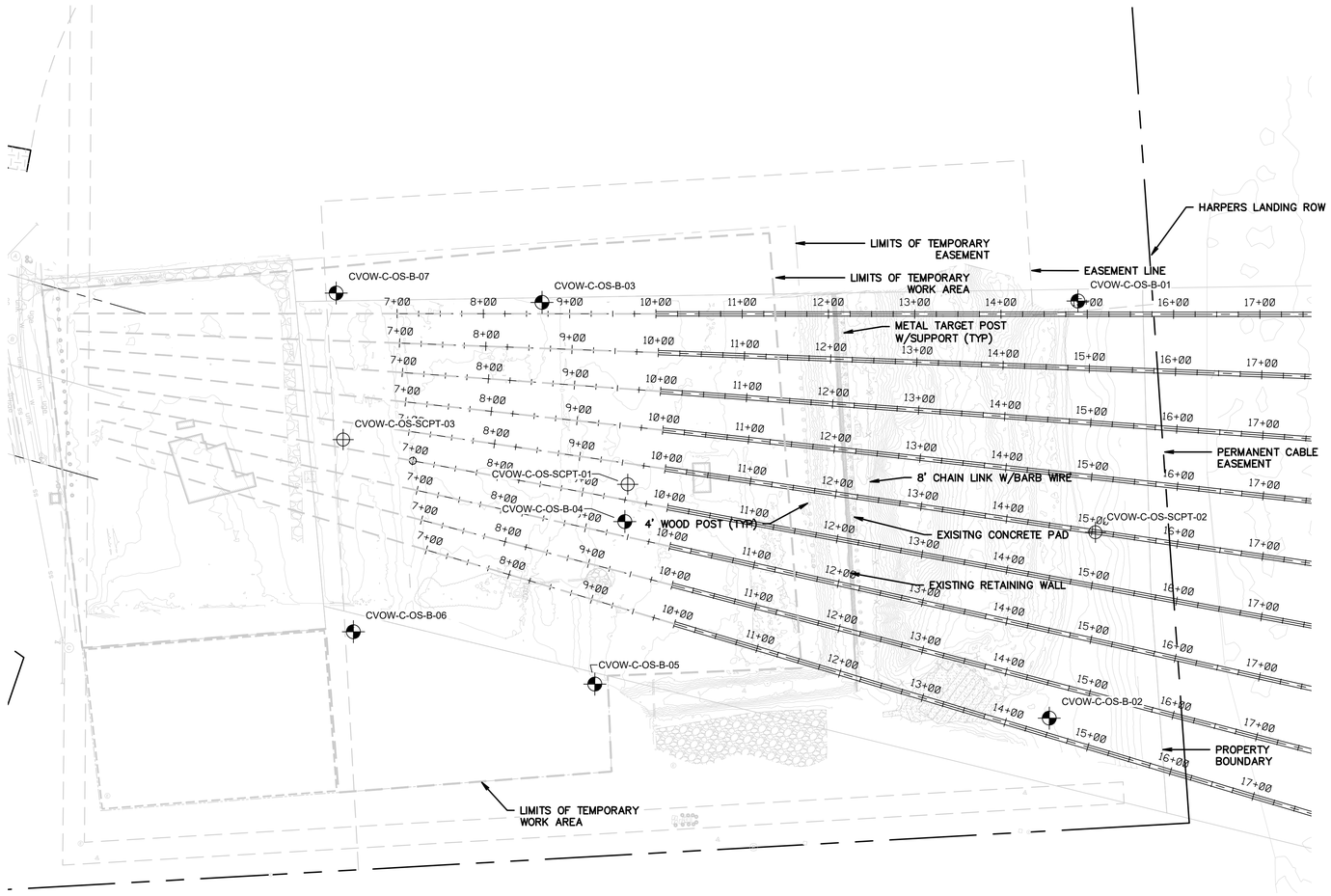
No	Date	By	Description	Project Number
				B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 H&A

Revisions

GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



0 80' 160'
HORIZONTAL SCALE IN FEET

LANDFALL "DIRECT PIPE 1 ENTRY TEMPORARY WORK AREA" PLAN VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
LANDFALL ENTRY WORK AREA

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	3 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
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Drawing No. UG-EX-P5-202

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:08 PM
GAINES, JACK

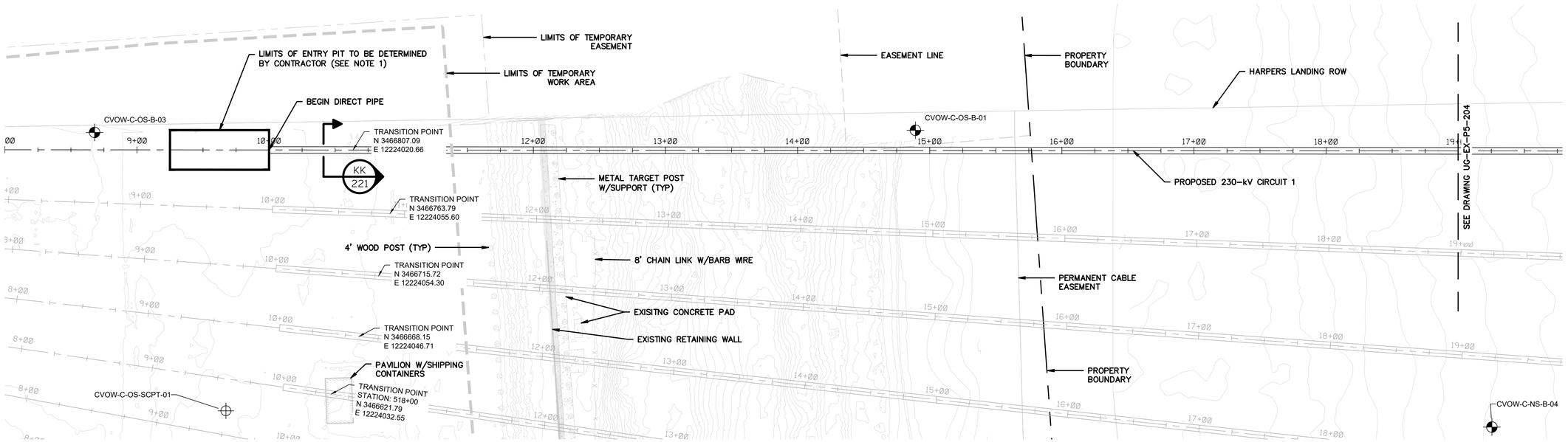
No.	Date	By	Description	Project Number	
		Checked/Appr.		B/M	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157	H&A

Revisions

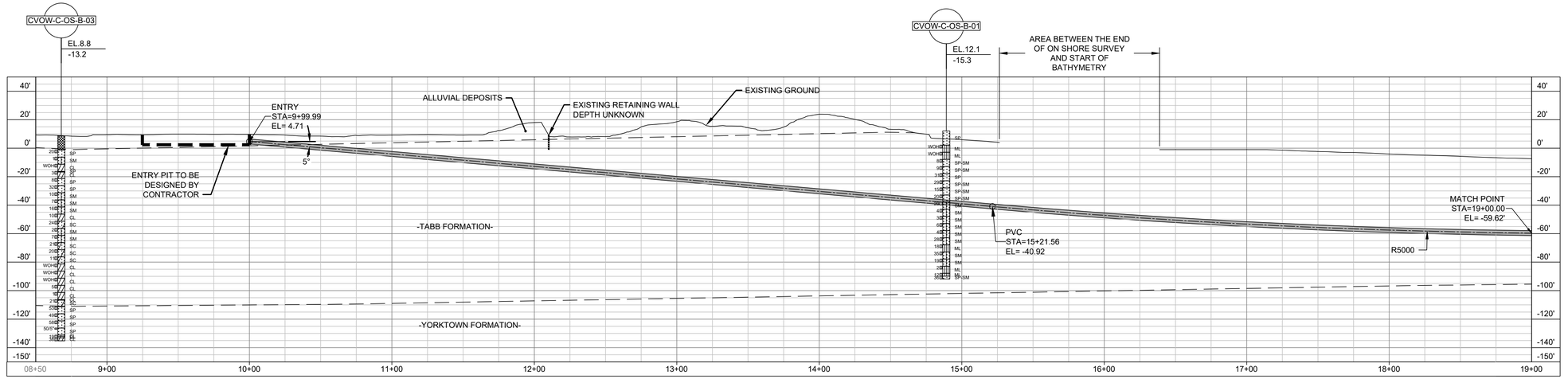
GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)		Pipe Stand Foundation Cells (Spread)		Foundation Cells for Other Typical Structures		Steel Detail & Assembly
							(Pier)	(Spread)	



LANDFALL "DIRECT PIPE 1 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 1 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 1 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	4 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:09 PM
Drawing No. UG-EX-P5-203

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:09 PM
GAINES, JACK

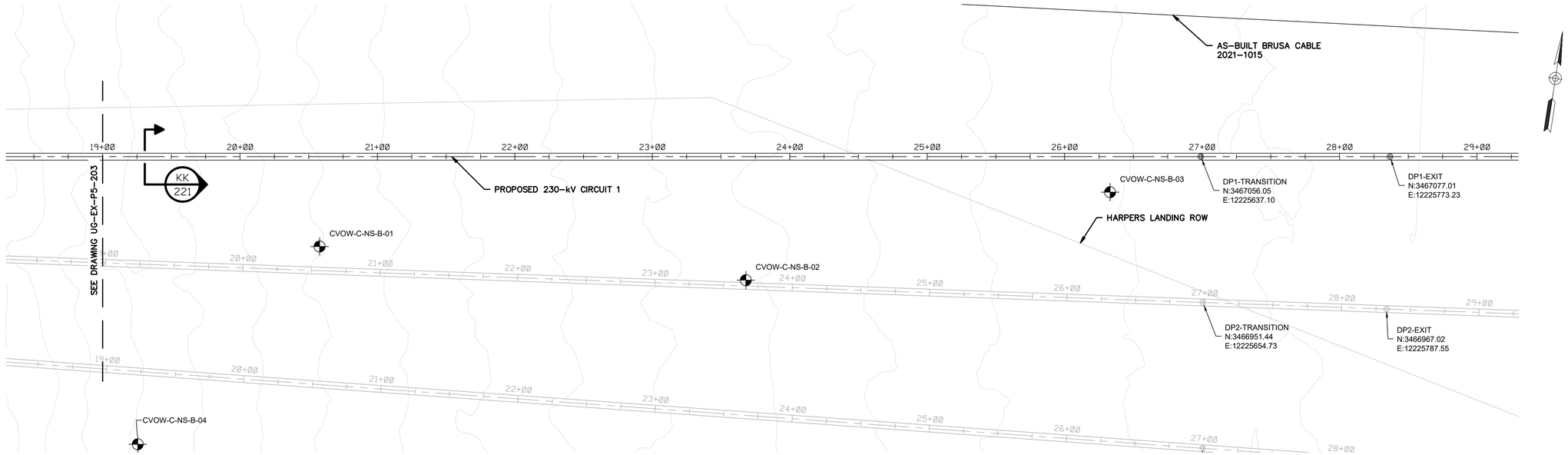
No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157	H&A
	Checked/Appr.			B/M	PWD

Revisions

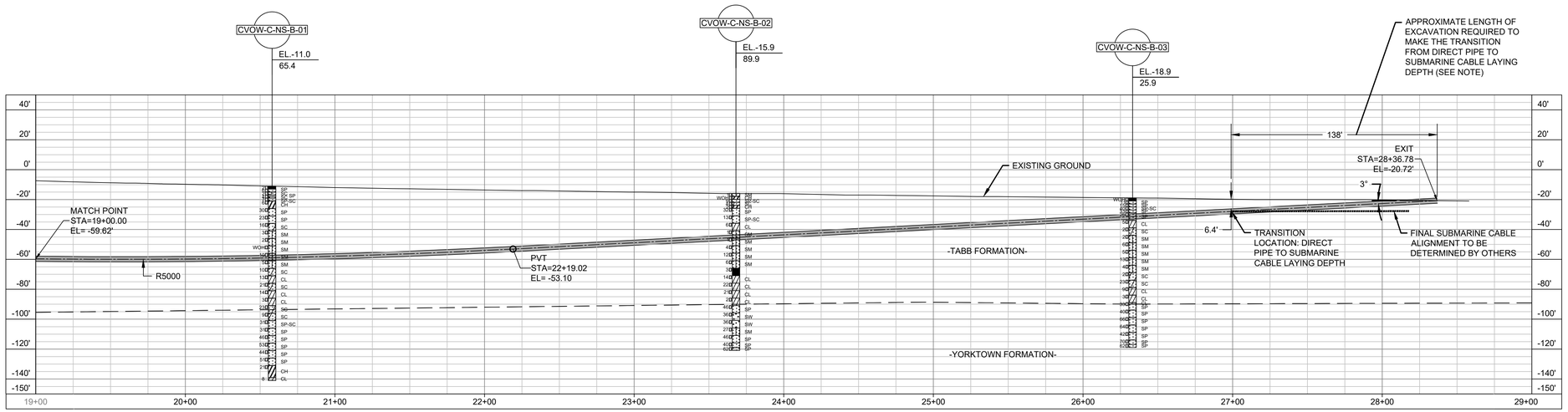
GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 1 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 1 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 1 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	5 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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PLOTTED: 3/28/2022 3:09 PM

Drawing No.
UG-EX-P5-204

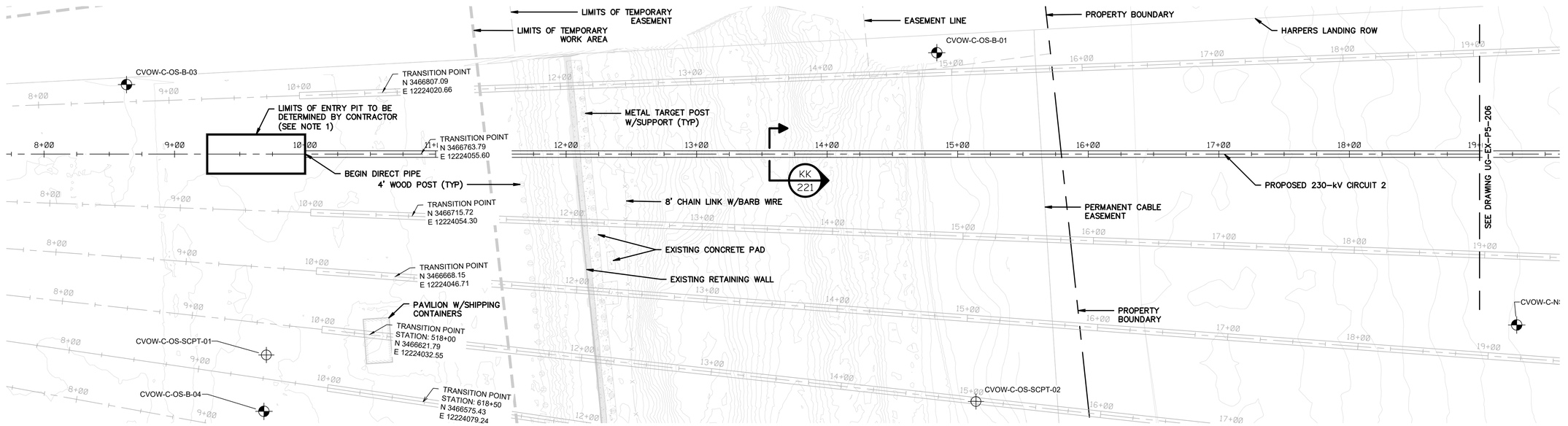
No.	Date	By	Description	Project Number B/M	Project Number 0200157	H&A
A	03/25/22	AH	ISSUED FOR 60% REVIEW			

Revisions

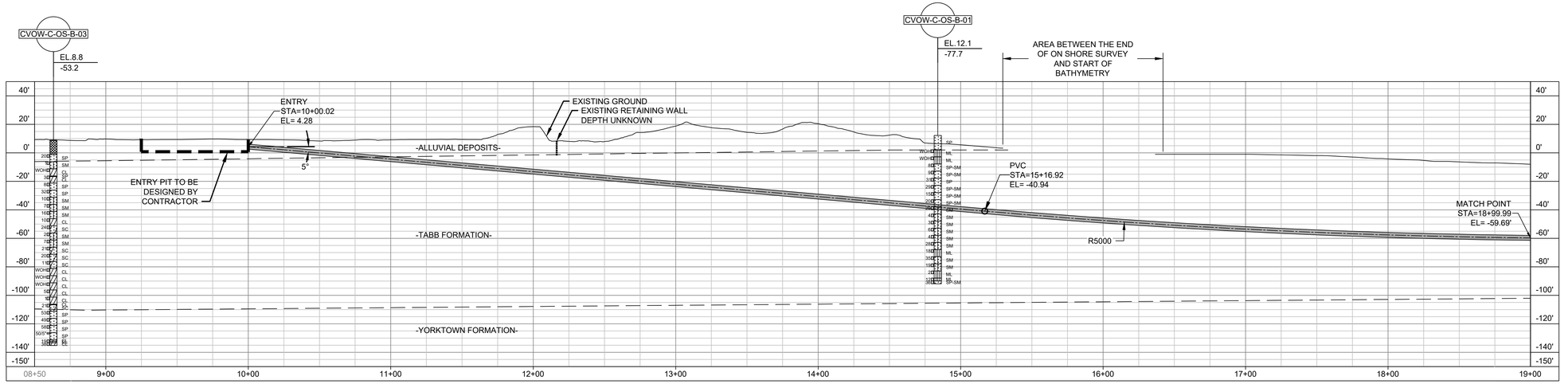
GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:09 PM
GAINES, JACK



LANDFALL "DIRECT PIPE 2 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 2 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 2 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	6 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:09 PM

Drawing No.
UG-EX-P5-205

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:09 PM
GAINES, JACK

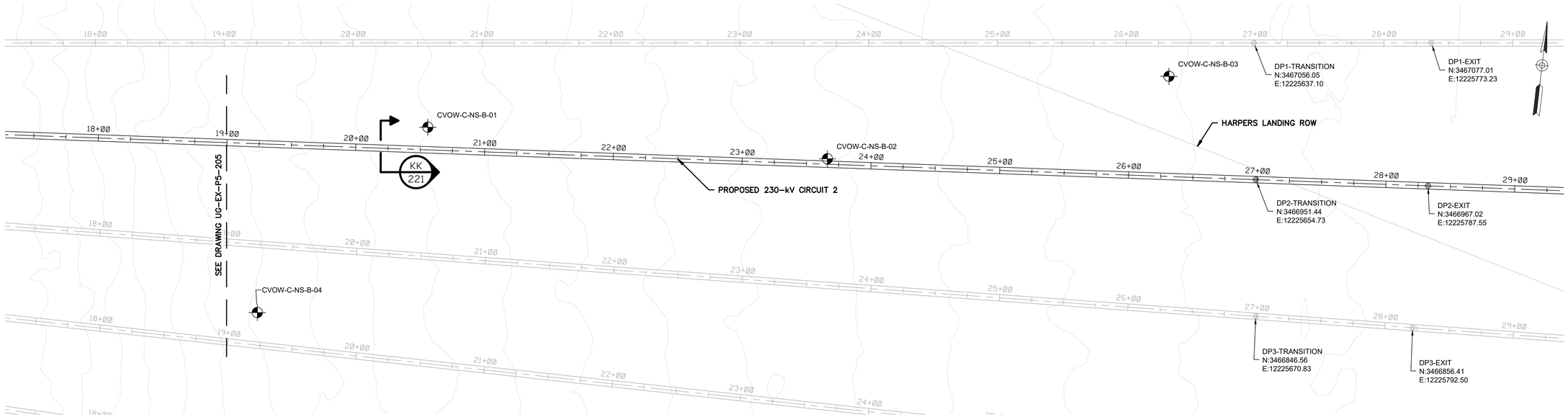
No	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
				0200157	

Revisions

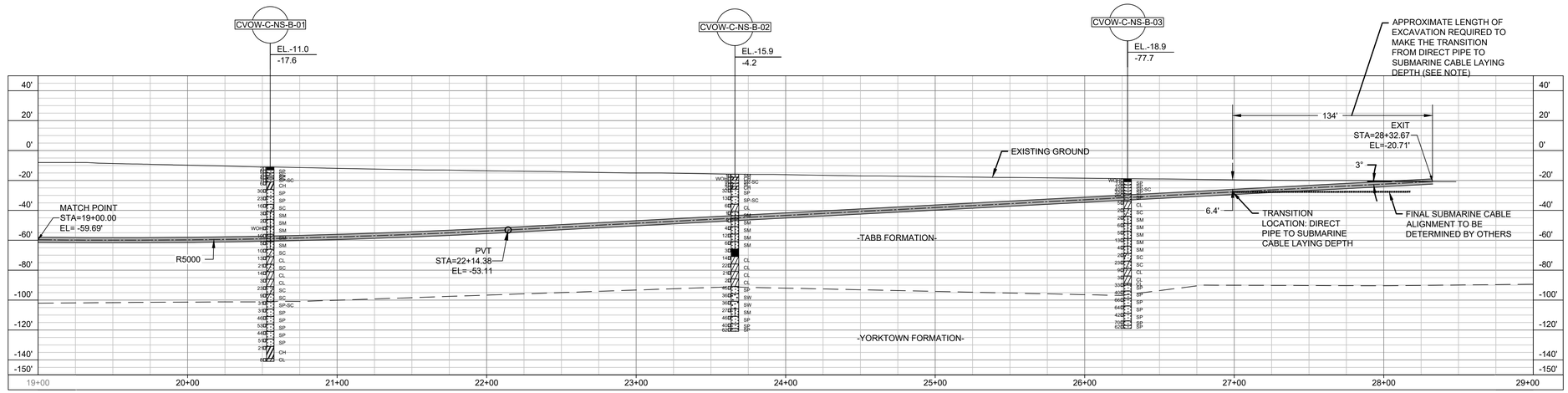
GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 2 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 2 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

va811.com Dig With CARE

BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 2 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	7 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
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Drawing No.
UG-EX-P5-206

UG-EX-P5-201-218.DWG
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GAINES, JACK

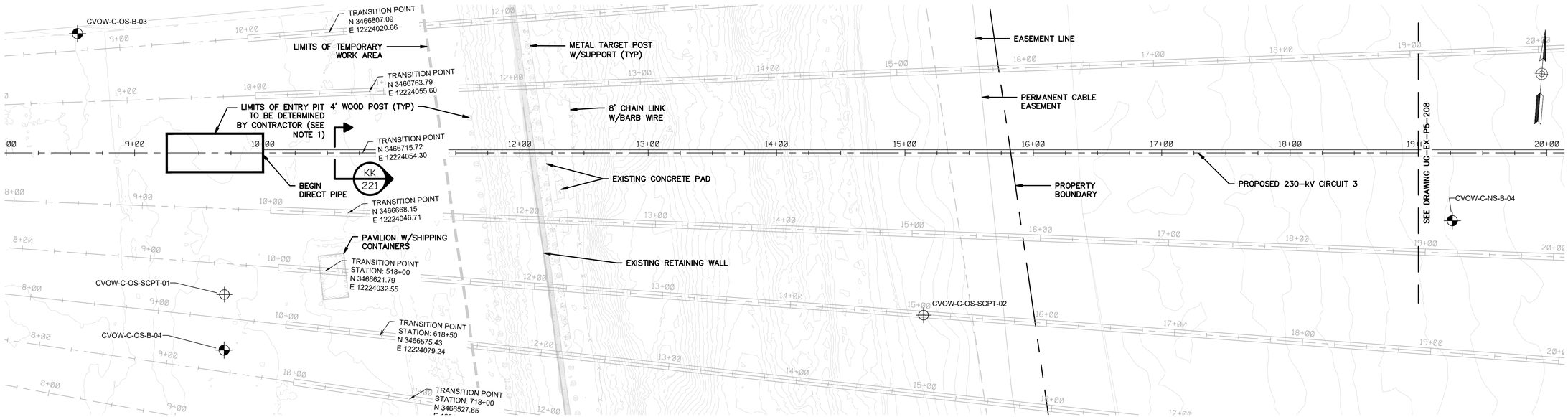
No.	Date	By	Description	Project Number B/M	Project Number 0200157	H&A
A	03/25/22	AH	ISSUED FOR 60% REVIEW			PWD

Revisions

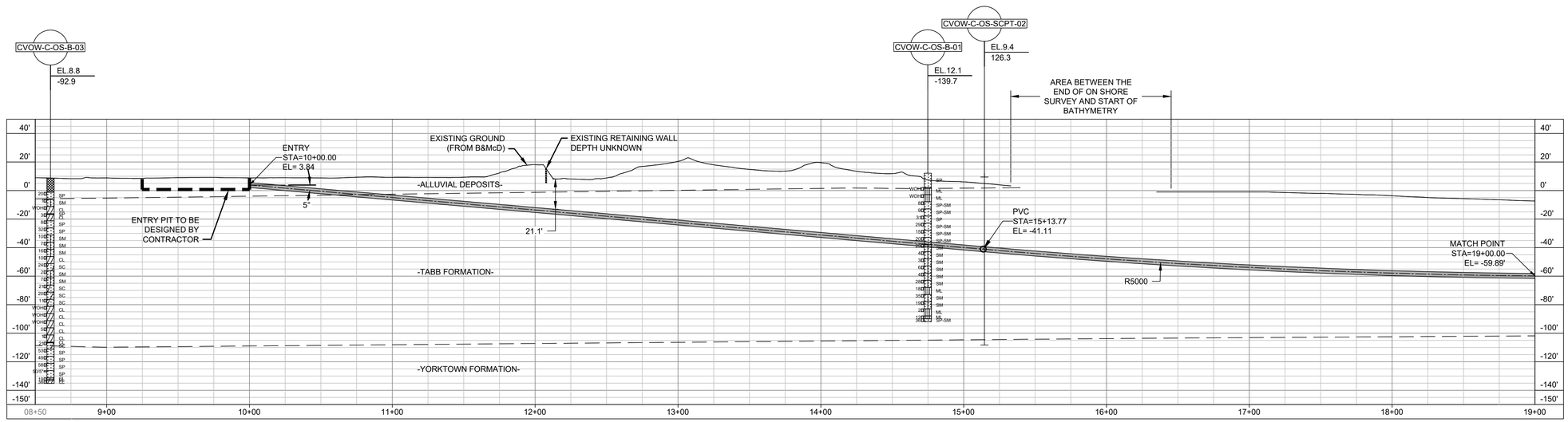
GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 3 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 3 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 3 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	8 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:10 PM

Drawing No.
UG-EX-P5-207

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:10 PM
GAINES, JACK

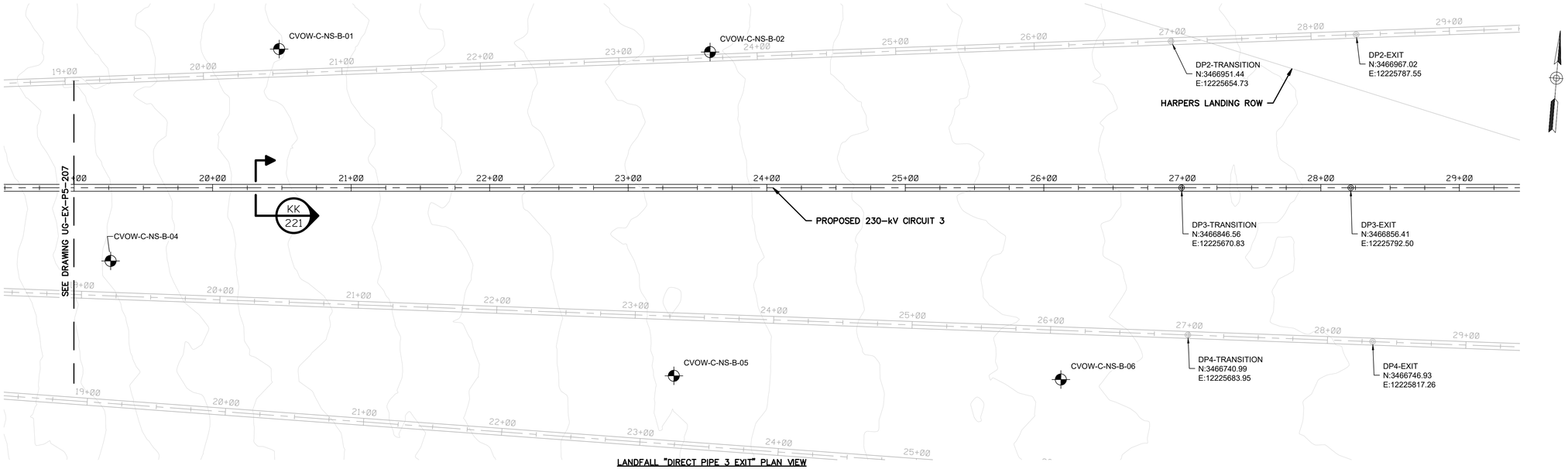
No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
					0200157
					B/M

Revisions

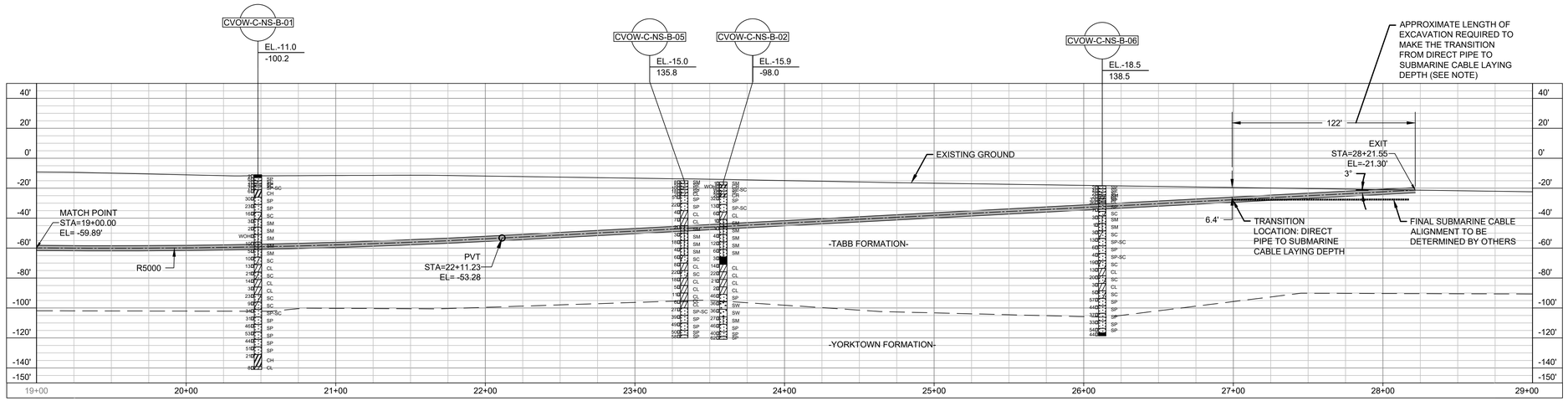
GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 3 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 3 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 3 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	9 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM

Drawing No. UG-EX-P5-208

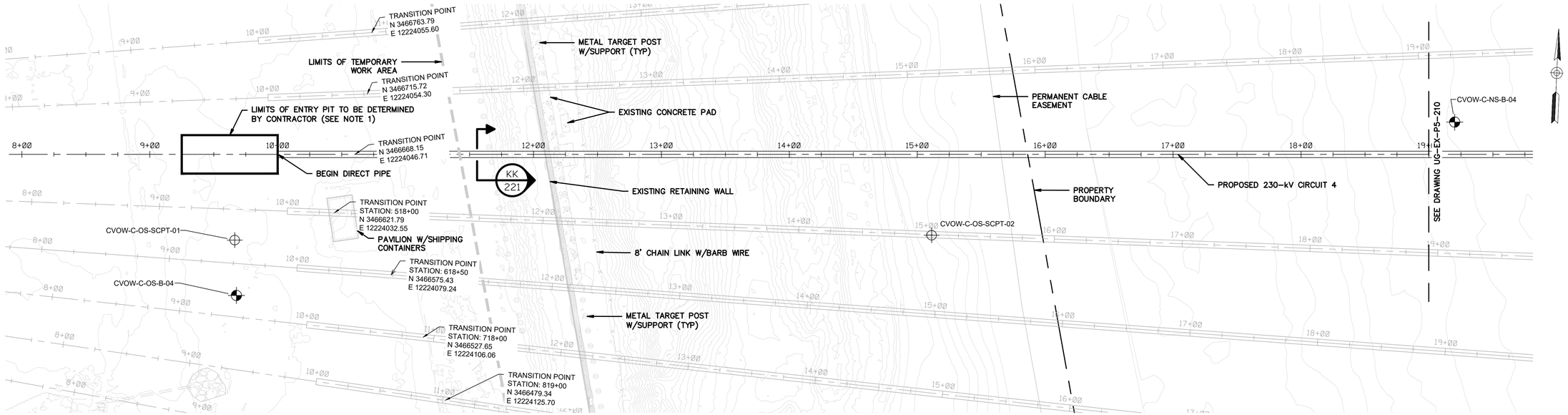
UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM
GAINES, JACK

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	0200157
					H&A
					PWD

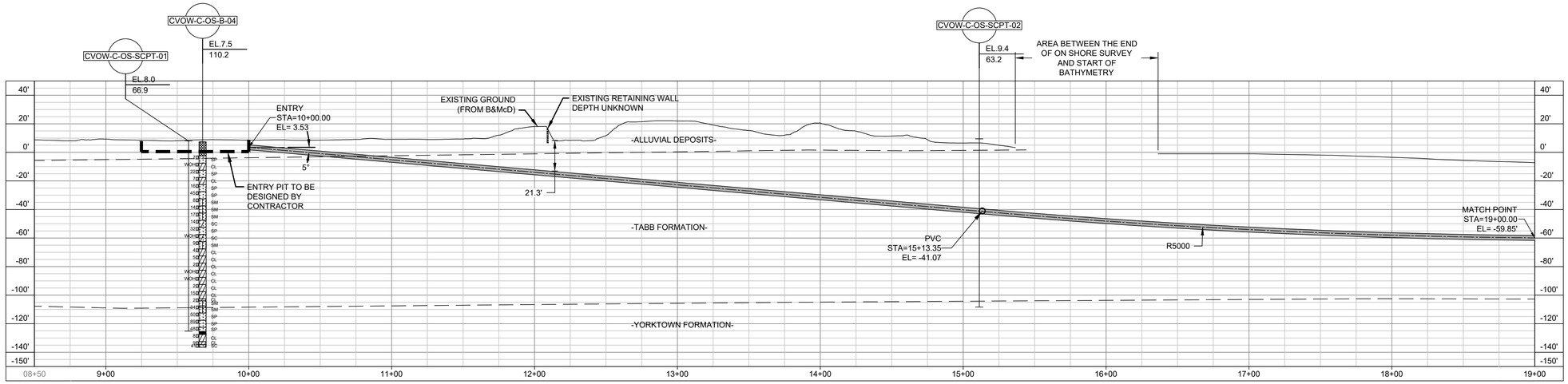
Revisions

GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 4 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 4 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET: 0 40' 80'

VERTICAL SCALE IN FEET: 0 40' 80'

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 4 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	10 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name: UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM

Drawing No. UG-EX-P5-209

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM
GAINES, JACK

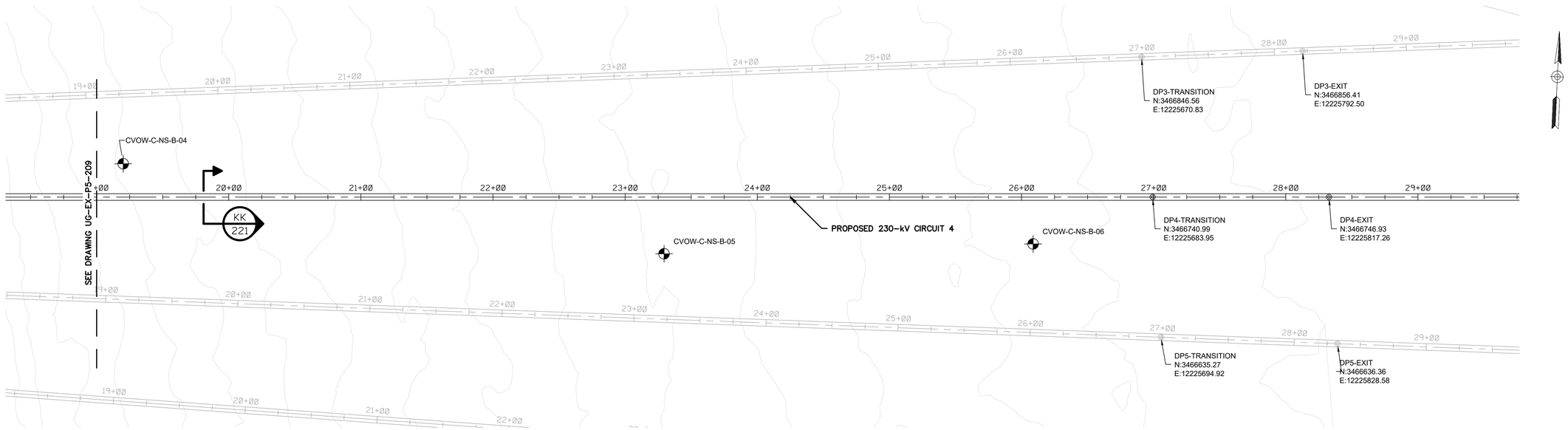
No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	0200157
					H&A
					PWD

Revisions

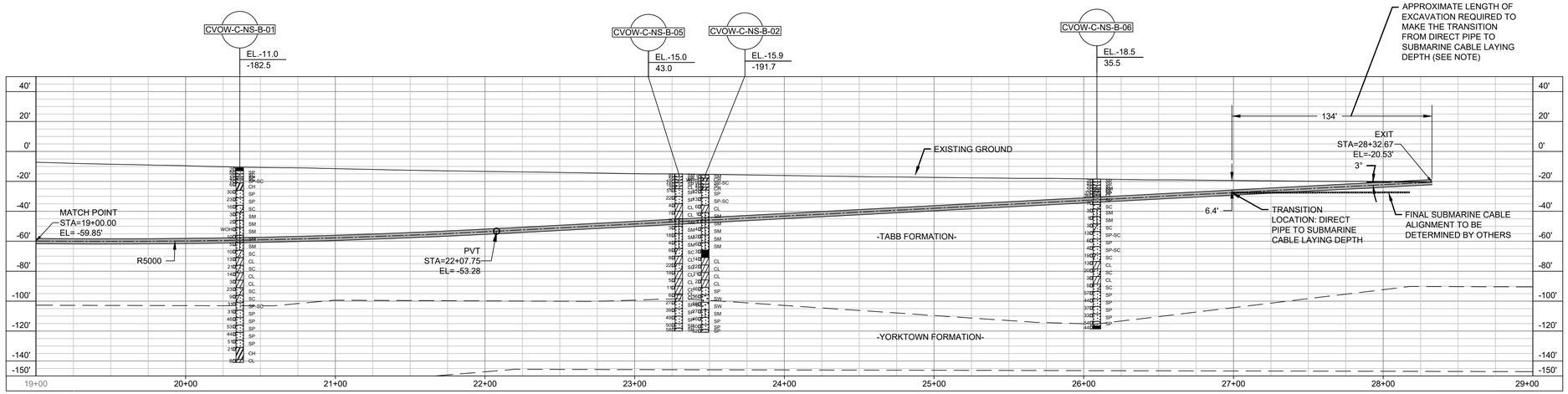
GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 4 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 4 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 4 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	11 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM

Drawing No. UG-EX-P5-210

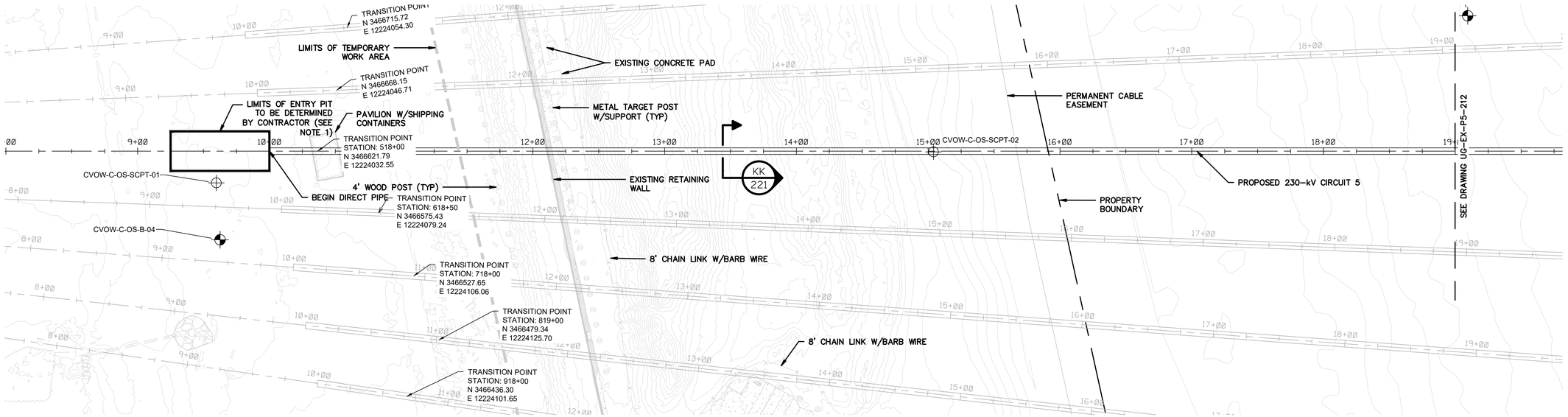
UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM
GAINES, JACK

No.	Date	By	Description	Project Number B/M	Project Number 0200157	H&A
A	03/25/22	AH	ISSUED FOR 60% REVIEW			PWD

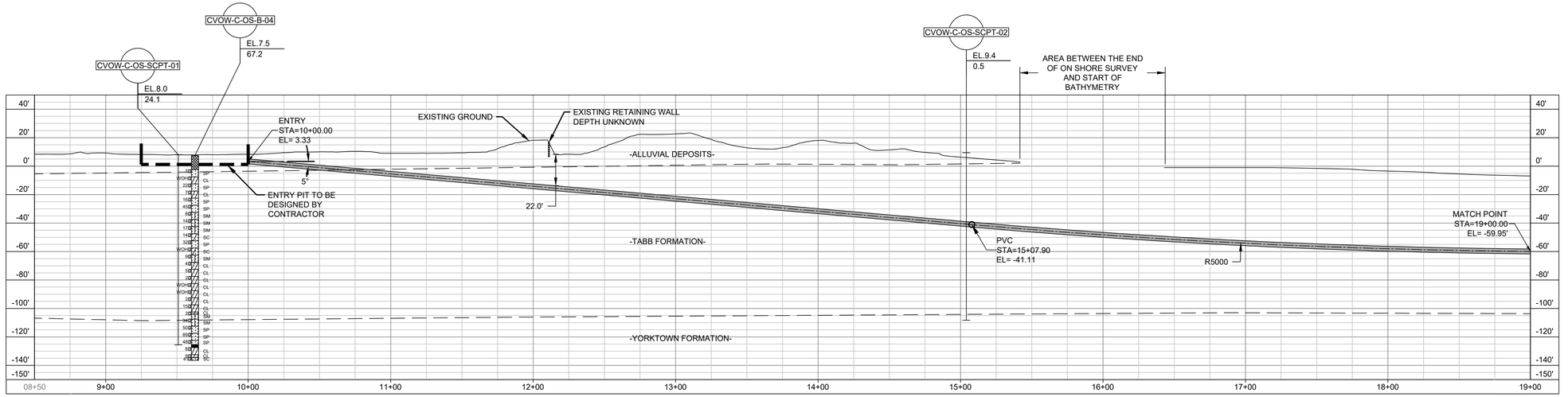
Revisions

GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 5 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 5 ENTRY" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 5 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	12 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:12 PM

Drawing No. UG-EX-P5-211

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:12 PM
GAINES, JACK

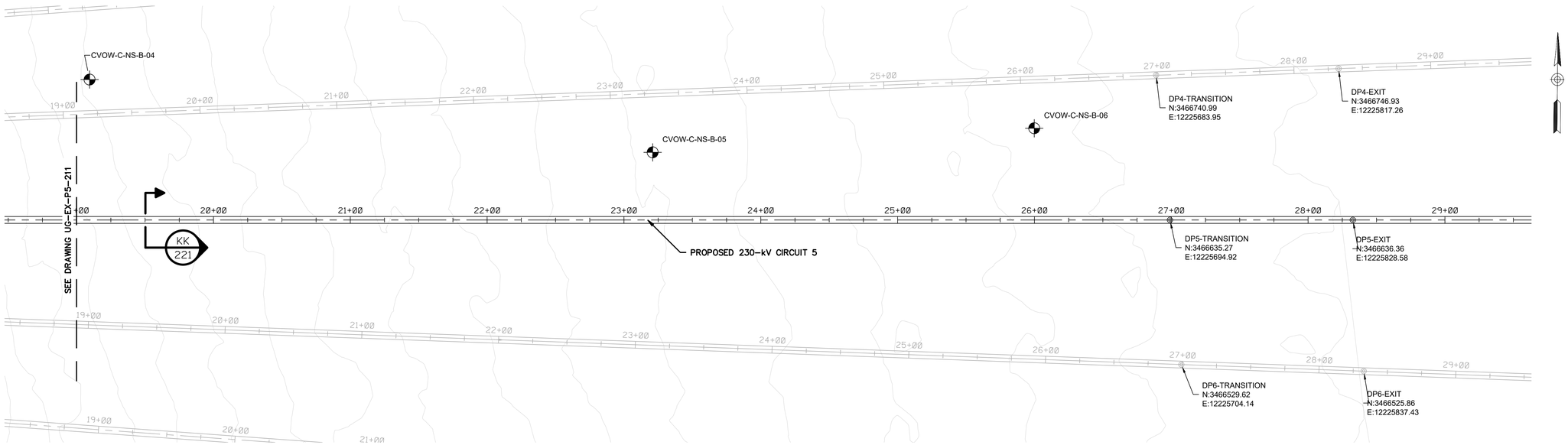
No	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157
				B/M H&A

Revisions

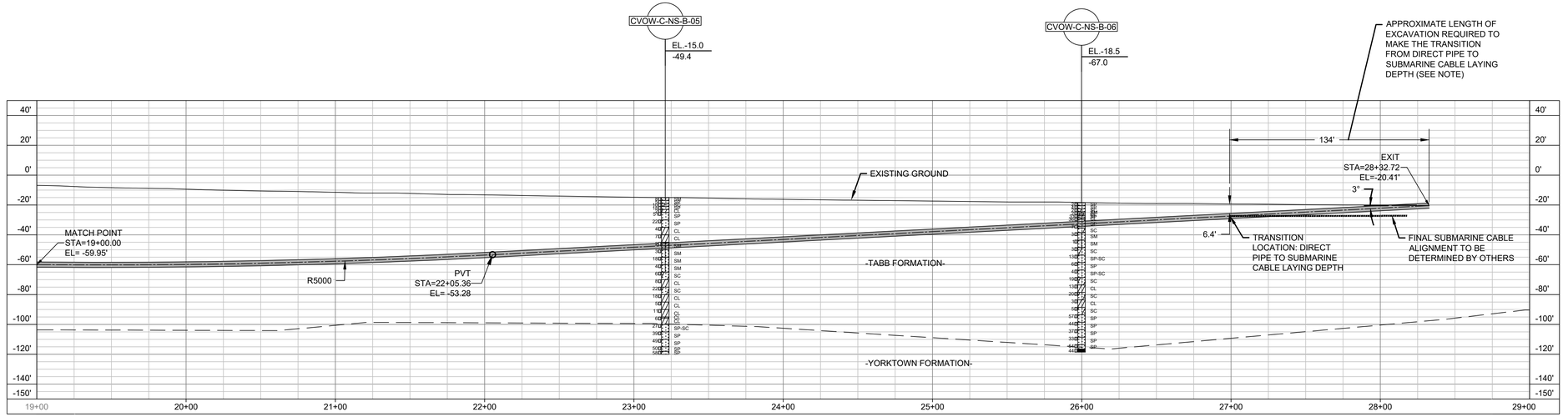
GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 5 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 5 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 5 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	13 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:12 PM

Drawing No.
UG-EX-P5-212

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:12 PM
GAINES, JACK

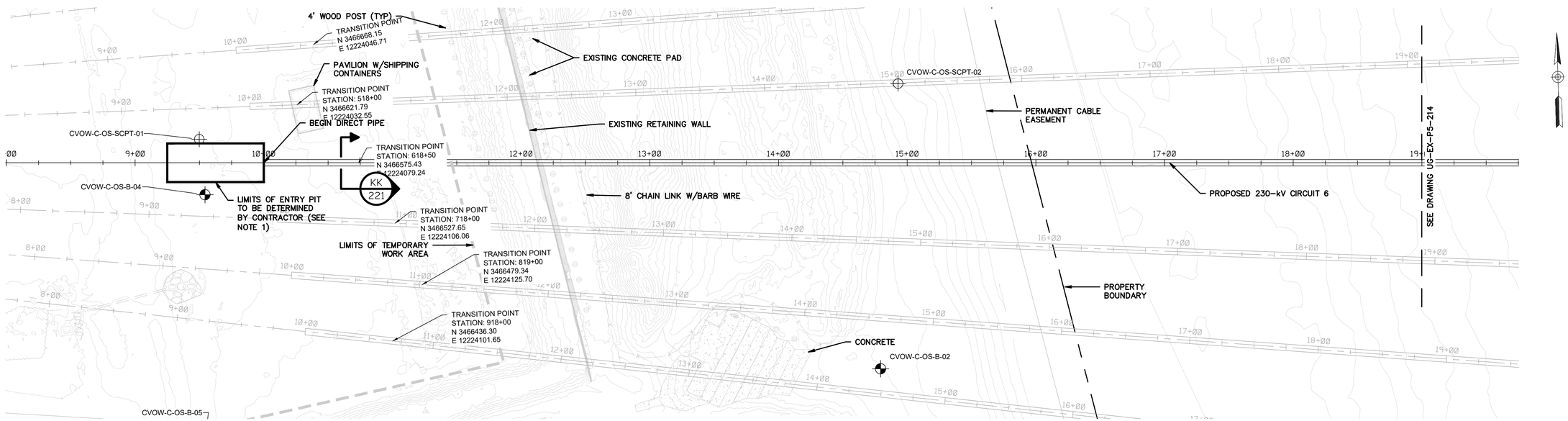
No.	Date	By	Description	Project Number B/M	Project Number 0200157	H&A
A	03/25/22	AH	ISSUED FOR 60% REVIEW			PWD

Revisions

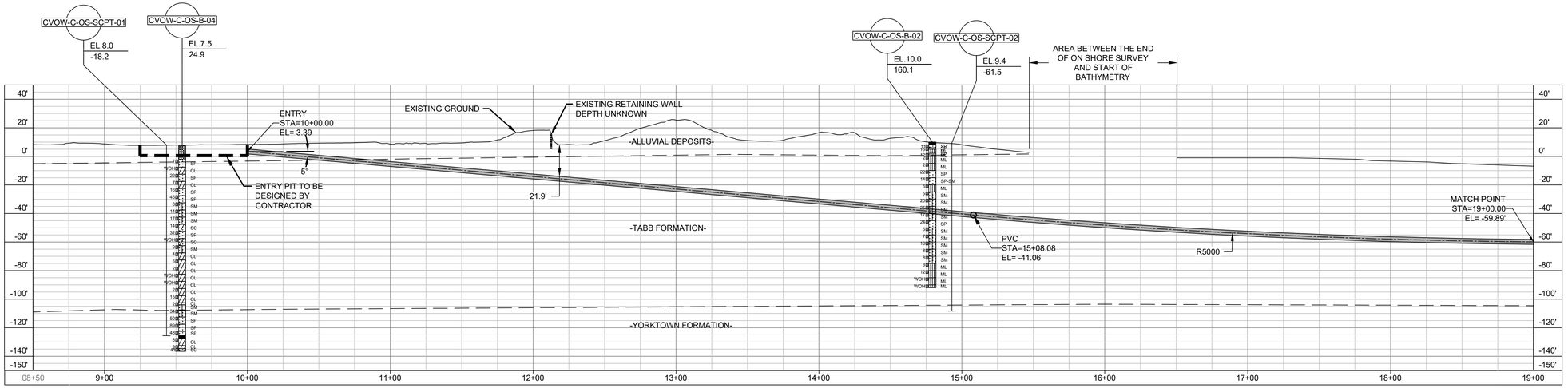
GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 6 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 6 ENTRY" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 6 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	14 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:13 PM

Drawing No.
UG-EX-P5-213

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:13 PM
GAINES, JACK

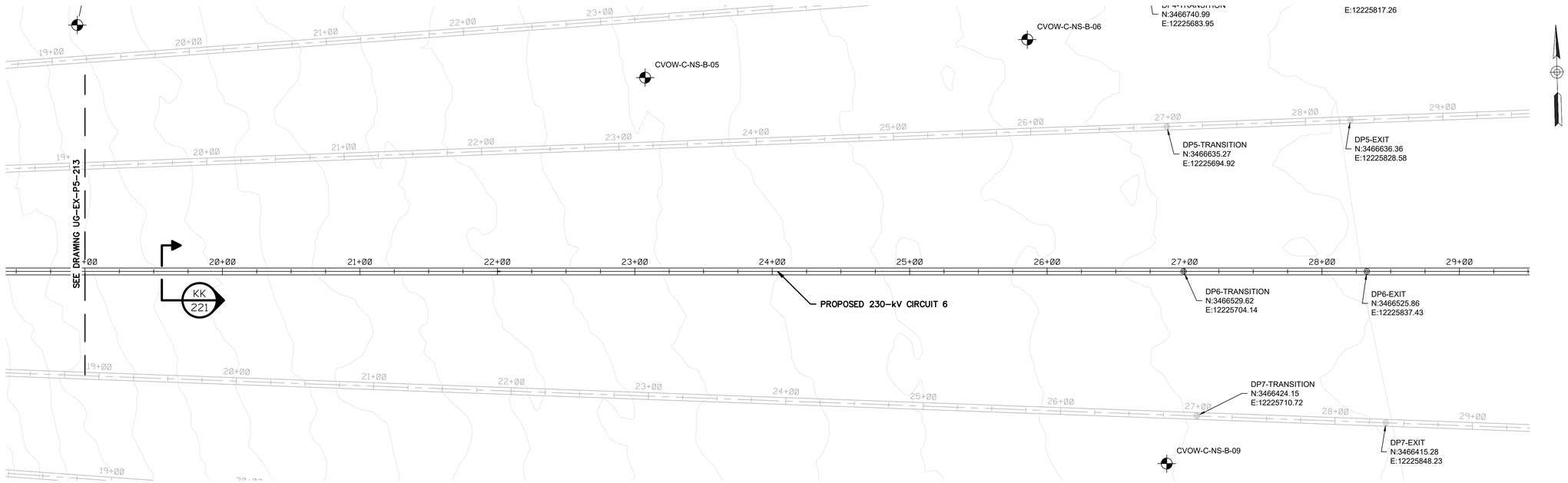
No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157
	PwD			H&A

Revisions

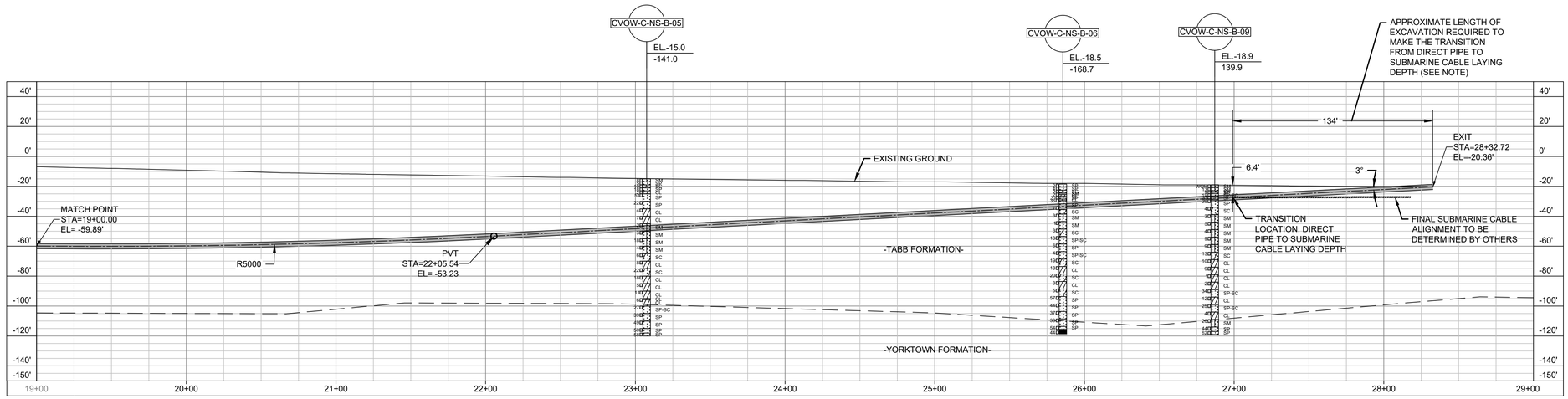
GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 6 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 6 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 6 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	15 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:13 PM

Drawing No. UG-EX-P5-214

No.	Date	By	Description	Project Number B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157 H&A

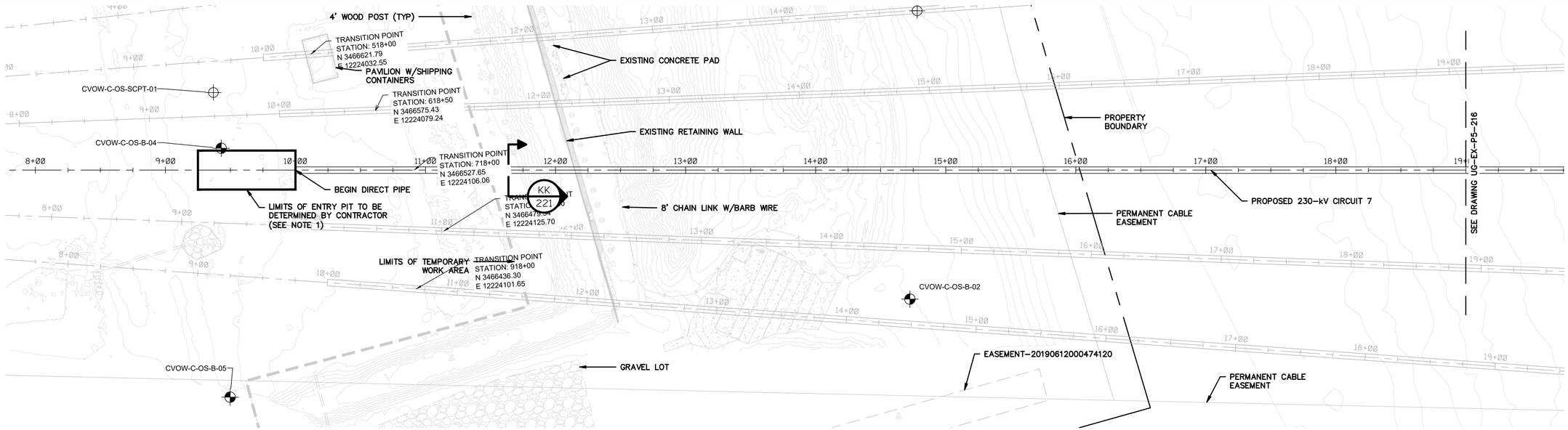
Revisions

GAINES, JACK

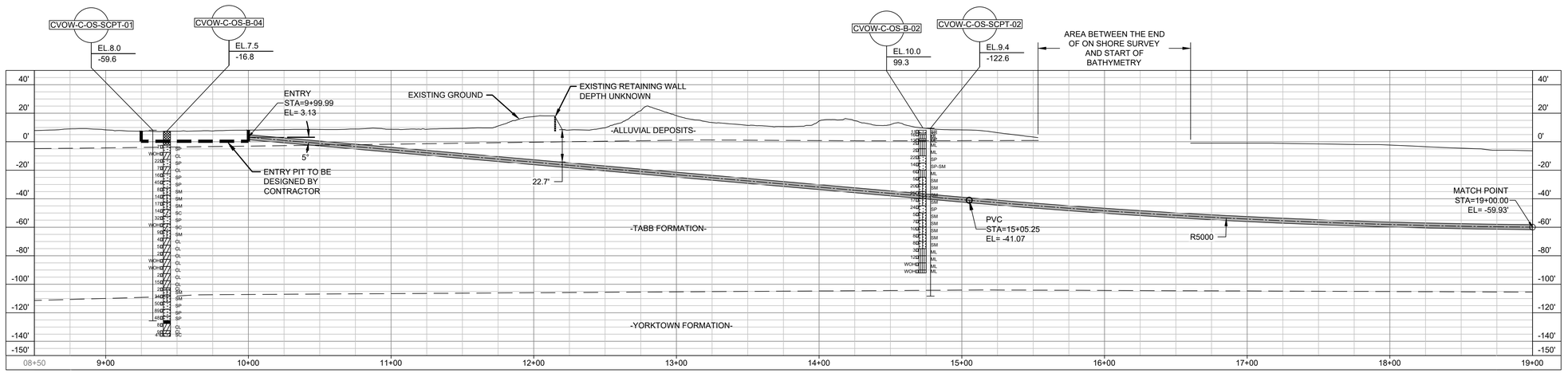
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:13 PM
GAINES, JACK



LANDFALL "DIRECT PIPE 7 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 7 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 7 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	16 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM

Drawing No.
UG-EX-P5-215

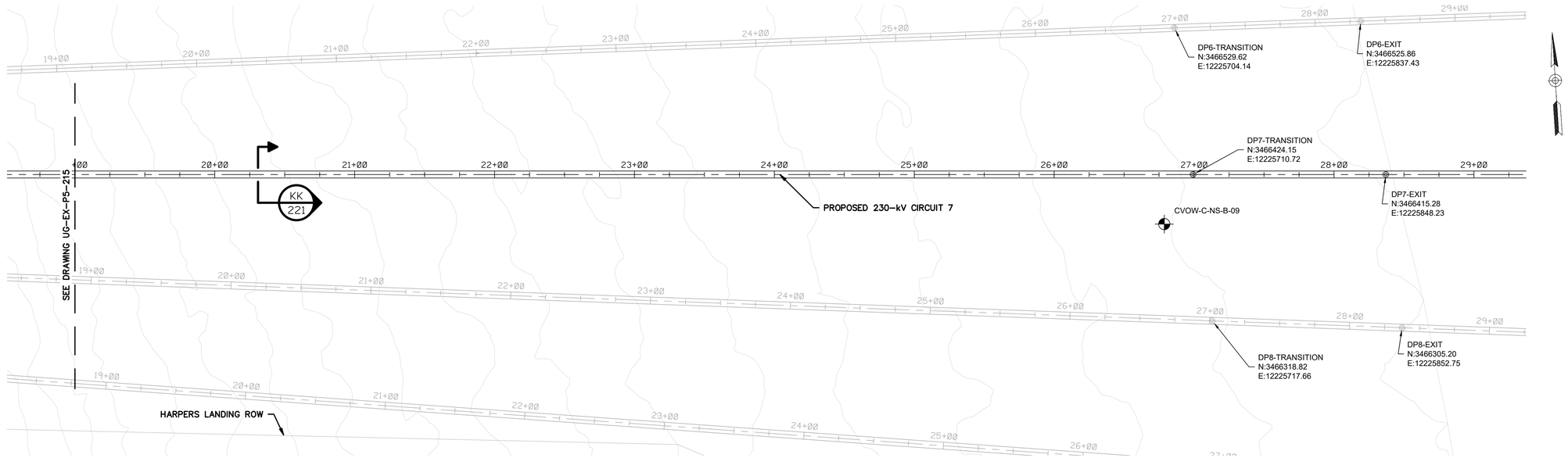
UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM
GAINES, JACK

No.	Date	By	Description	Project Number	
	Checked/Appr.			B/M	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
				0200157	

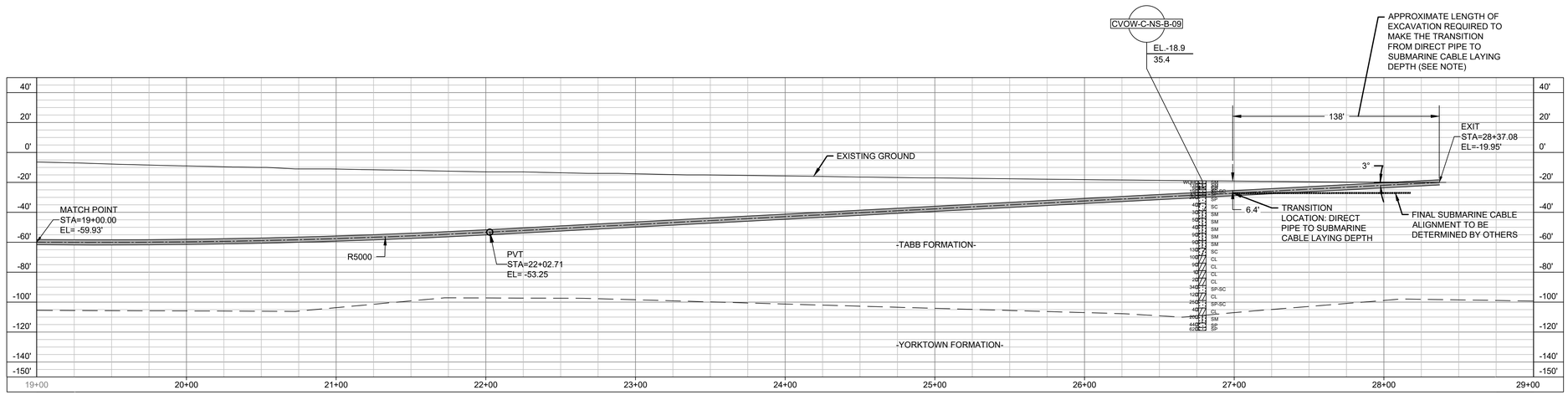
Revisions

GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 7 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 7 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 7 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	17 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM

Drawing No.
UG-EX-P5-216

No.	Date	By	Description	Project Number B/M	Project Number 0200157	H&A
A	03/25/22	AH	ISSUED FOR 60% REVIEW			PWD

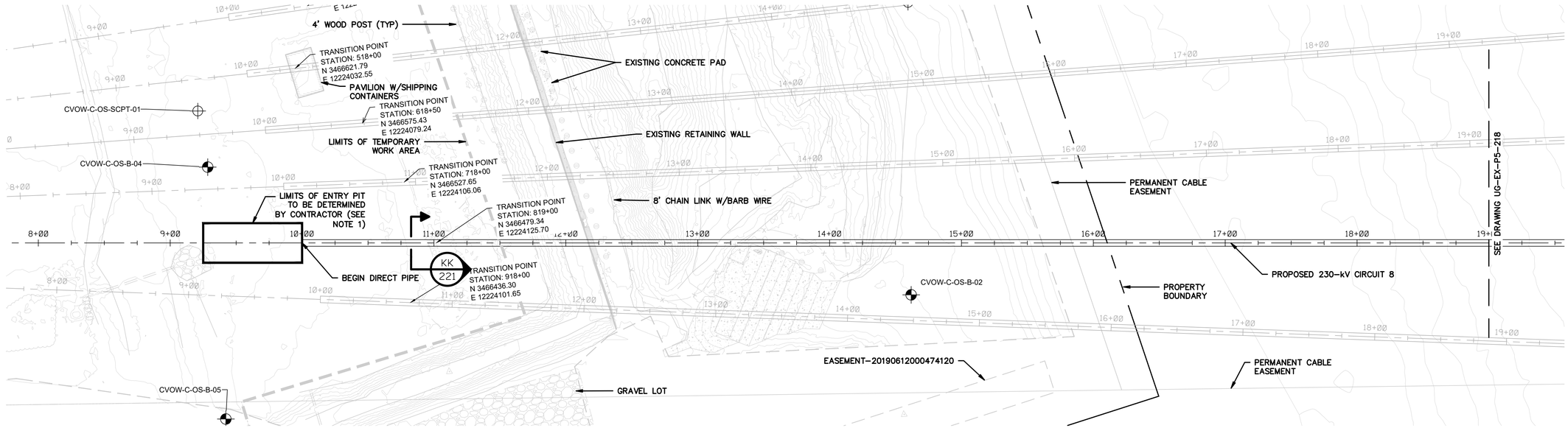
Revisions

GAINES, JACK

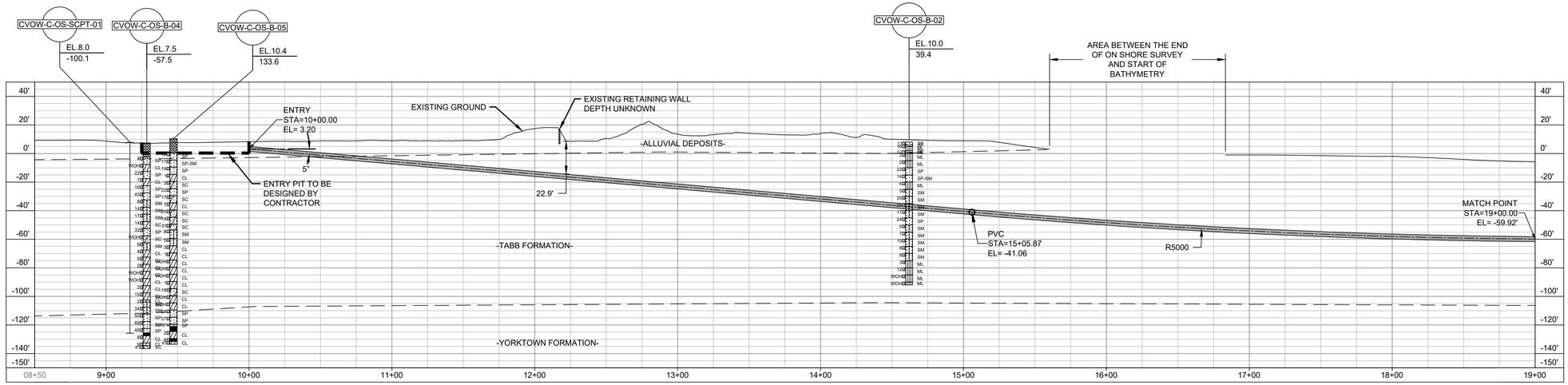
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM
GAINES, JACK



LANDFALL "DIRECT PIPE 8 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 8 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

va811.com Dig With CARE

BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 8 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	18 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM
Drawing No. UG-EX-P5-217

No.	Date	Checked/Appr.	By	Description	Project Number B/M
A	03/25/22	AH	PWD	ISSUED FOR 60% REVIEW	Project Number 0200157 H&A

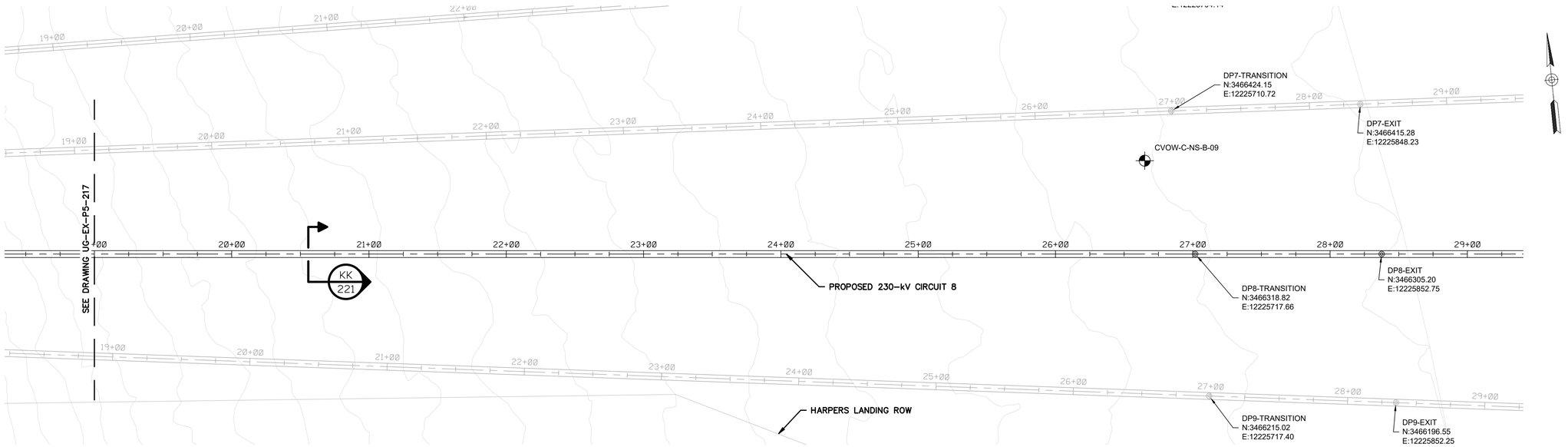
Revisions

GAINES, JACK

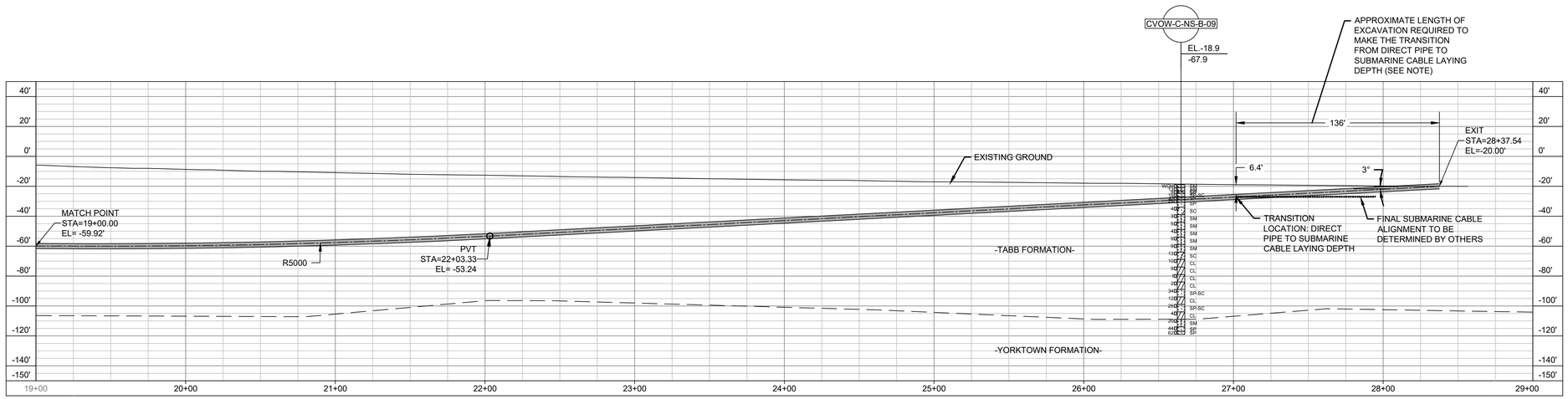
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM
GAINES, JACK



LANDFALL "DIRECT PIPE 8 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 8 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			0200157	

Revisions

GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

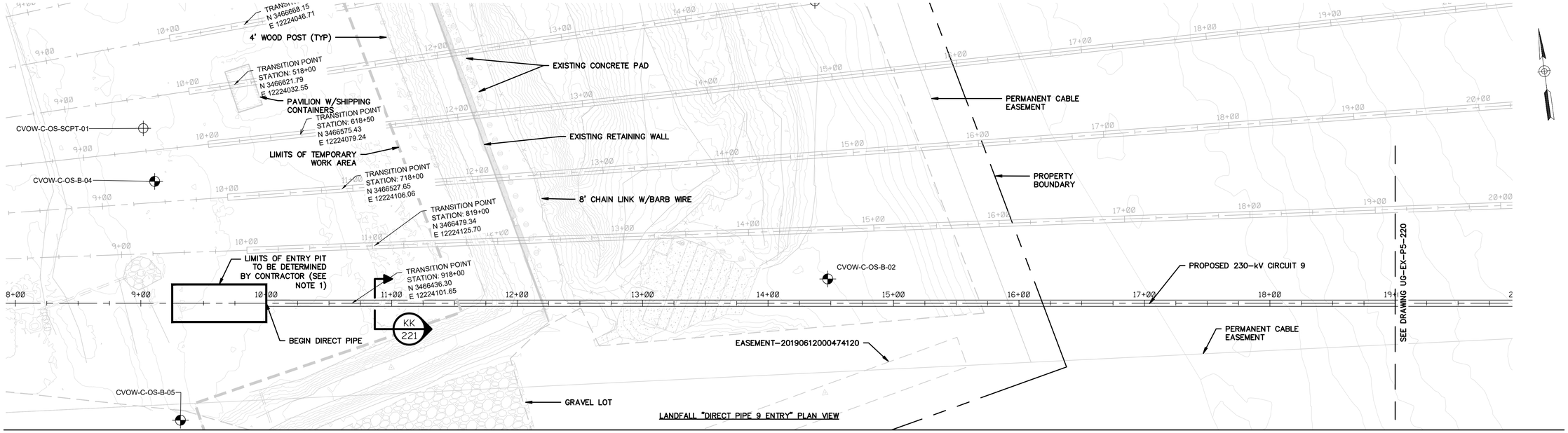
COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 8 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	19 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

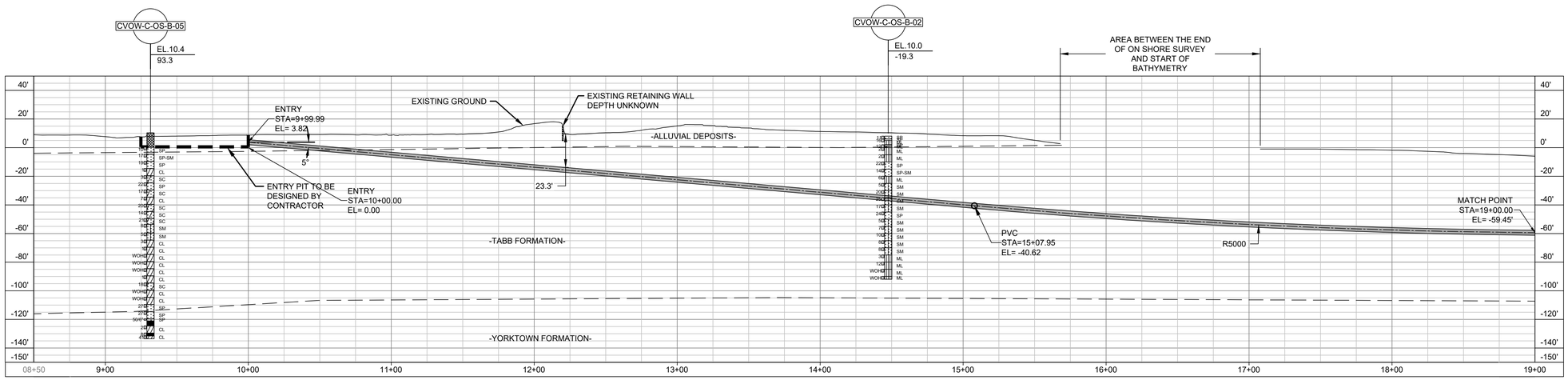
Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:15 PM

Drawing No.
UG-EX-P5-218

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:15 PM
GAINES, JACK



LANDFALL "DIRECT PIPE 9 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 9 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

va811.com Dig With Care

BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 9 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	20 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
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Drawing No. UG-EX-P5-219

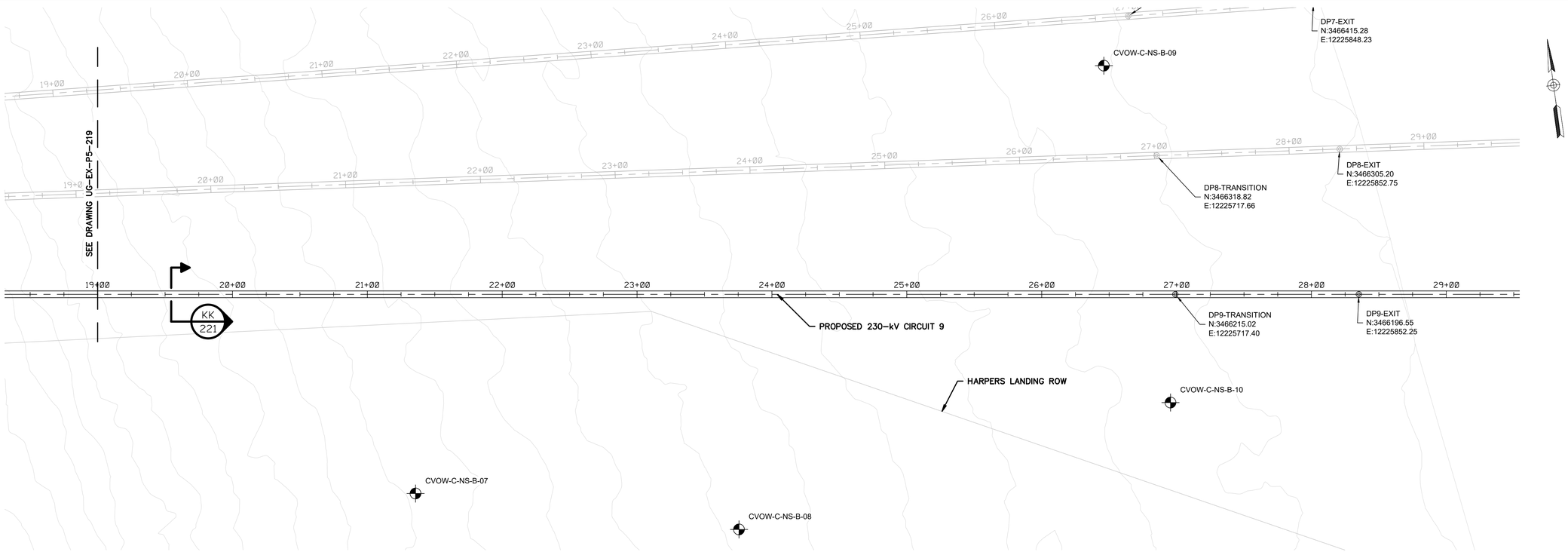
UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:15 PM
GAINES, JACK

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157	H&A

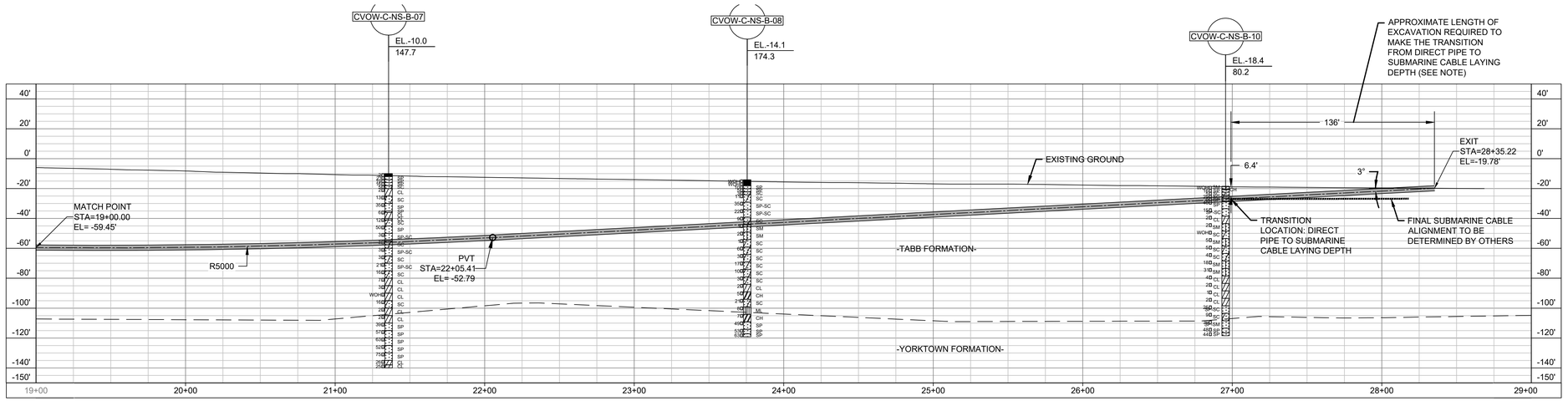
Revisions

GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE 9 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 9 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 9 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	21 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:16 PM

Drawing No. UG-EX-P5-220

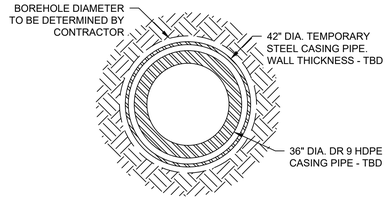
No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157
				B/M H&A

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

GAINES, JACK

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:16 PM
GAINES, JACK



KK

CONDUIT CONFIGURATION FOR LANDFALL DIRECT PIPE® INSTALLATIONS

NOT TO SCALE

NOTES:

1. **42" DIAMETER TEMPORARY STEEL CASING PIPE USED FOR THE DIRECT PIPE® INSTALLATION SHALL BE REMOVED PRIOR TO THE DIRECT PIPE (R) CONTRACTOR DEMOBILIZING.**

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
GENERAL NOTES

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	22 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 3:16 PM
Drawing No. UG-EX-P5-221

UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 3:16 PM
GAINES, JACK

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157
				B/M

Revisions

Project Number H&A
PWD

GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

COASTAL VIRGINIA OFFSHORE WIND
230–kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE

PRELIMINARY – NOT FOR CONSTRUCTION

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BURNS McDONNELL

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
Δ	03/25/2022	AH	ISSUED FOR 60% REVIEW	0200157
PwD				H&A

Revisions

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	1 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	
Cad File Name	UG-EX-P-200.DWG		Drawing No.	
PLOTTED:	3/28/2022 4:32 PM		UG-EX-P3-200	

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

POSTOLOWSKI, KEVIN
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0200157\CAD

UG-EX-P-200.DWG
PLOTTED: 3/28/2022 4:32 PM
POSTOLOWSKI, KEVIN

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 24168531420000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   - 7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   - 7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
     - 7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
     - 7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
    - 12.1. USACE PERMITS
    - 12.2. CITY OF ____
    - 12.3. COUNTY OF ____
    - 12.4. DEWATERING PERMITS
    - 12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

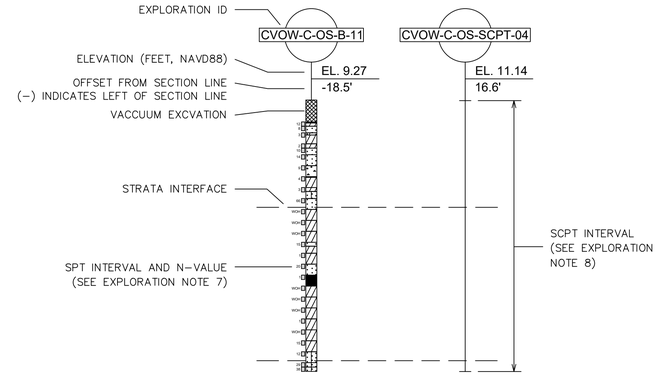
HORIZONTAL DIRECTIONAL DRILL NOTES:

1. CONTRACTOR SHALL EMPLOY APPROPRIATE MEASURES AND DRILLING PRACTICES TO ELIMINATE GROUND SURFACE SETTLEMENT, REDUCE SUBSURFACE DISTURBANCE AND ENSURE THE INTEGRITY OF THE CONDUIT BUNDLE AGAINST EXCESSIVE DEFLECTION, PULL LOADS, STRESSES AND BUCKLING DURING PULLBACK. EXAMPLES OF SUCH MEASURES MAY INCLUDE BUT NOT BE LIMITED TO:
   - A. MAINTAIN NEUTRAL BUOYANCY OF THE CONDUIT BUNDLE DURING PULLBACK.
   - B. USE OF TEMPORARY STEEL SURFACE CASINGS.
   - C. USE OF "MUD ENGINEER" TO MONITOR THE DRILL FLUID PROPERTIES.
2. UPON COMPLETION OF FINAL REAM, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO REMOVE THE EXISTING DRILL CUTTINGS FROM THE BOREHOLE AND MAINTAIN THE STABILITY OF THE BOREHOLE DURING PULLBACK. THE DRILL MUD SHALL BE MONITORED DURING PULLBACK AND EVERY EFFORT SHALL BE MADE TO REDUCE THE FRICTION AND DRAG FORCES SO AS TO LOWER THE PULLING LOAD ON THE PRODUCT BUNDLE.
3. CONTRACTOR SHALL EMPLOY APPROPRIATE CONTINGENCY MEASURES TO ADDRESS INADVERTENT DRILL FLUID RETURNS ON LAND OR UNDERWATER DURING THE DRILLING PROCESS. IN CASE OF INADVERTENT DRILL FLUID RETURNS, CONTINGENCY MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO DRILL FLUID IDENTIFICATION, CONTAINMENT, MITIGATION, EXTRACTION, STORAGE, TRANSPORTATION AND CLEAN-UP.

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW		WELL GRADED SANDS, GRAVELLY SANDS
SP		POORLY GRADED SANDS, GRAVELLY SANDS
SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH		INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT		PEAT AND OTHER HIGHLY ORGANIC SOILS
BR		BEDROCK
NR		NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	2 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name: UG-EX-P-201.DWG
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Drawing No.: UG-EX-P3-201

UG-EX-P-201.DWG
PLOTTED: 3/28/2022 4:33 PM
POSTOLOWSKI, KEVIN

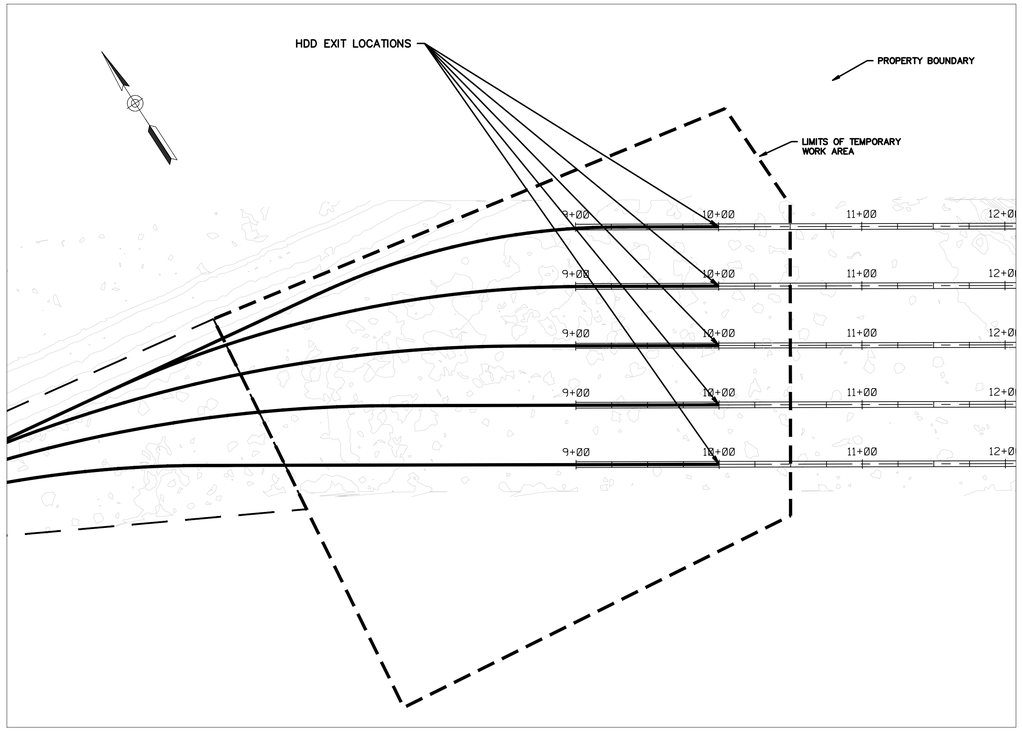
No	Date	Checked/Appr.	By	Description	Project Number B/M	Project Number 0200157	H&A
a	03/25/22		AH	ISSUED FOR 60% REVIEW			PwD

Revisions

POSTOLOWSKI, KEVIN

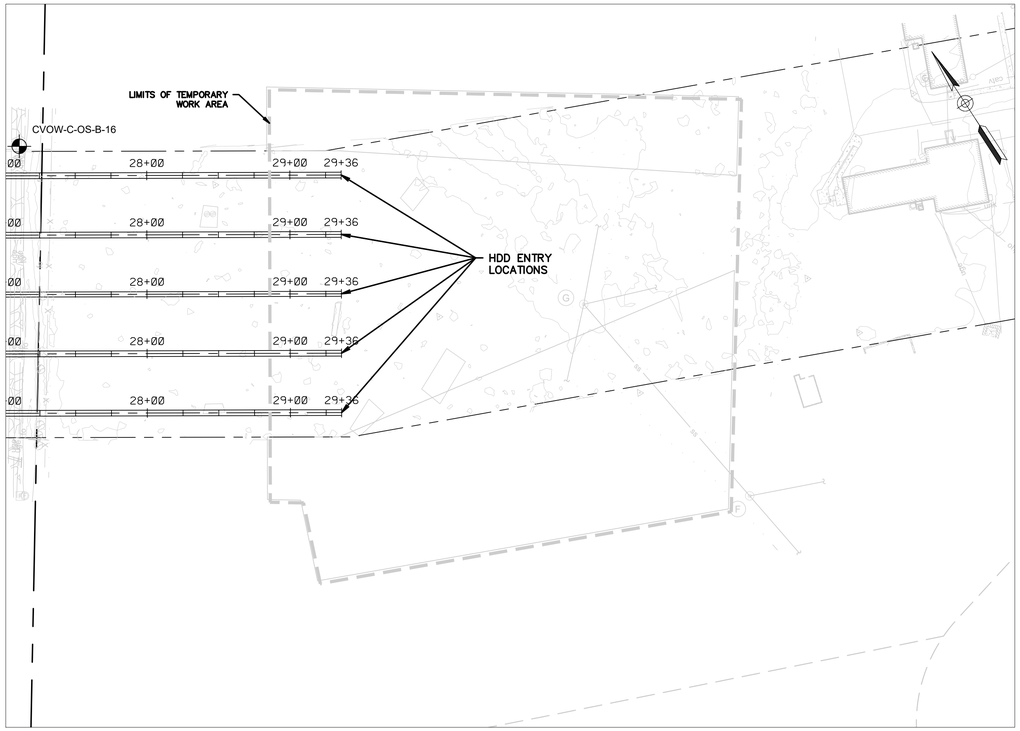
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)		Pipe Stand Foundation Cells (Spread)		Foundation Cells for Other Typical Structures		Steel Detail & Assembly
							(Pier)	(Spread)	



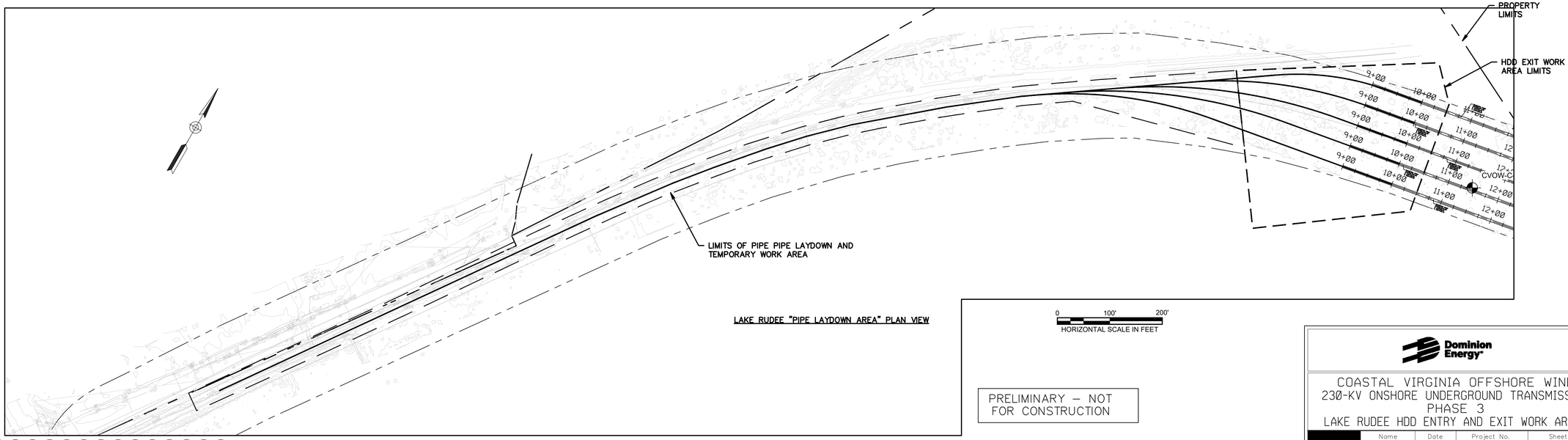
LAKE RUDEE "HDD EXIT TEMPORARY WORK AREA" PLAN VIEW

0 50' 100'
HORIZONTAL SCALE IN FEET



LAKE RUDEE "HDD ENTRY TEMPORARY WORK AREA" PLAN VIEW

0 50' 100'
HORIZONTAL SCALE IN FEET



LAKE RUDEE "PIPE LAYDOWN AREA" PLAN VIEW

0 100' 200'
HORIZONTAL SCALE IN FEET

PRELIMINARY – NOT FOR CONSTRUCTION

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
LAKE RUDEE HDD ENTRY AND EXIT WORK AREAS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	3 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:34 PM

Drawing No. UG-EX-P3-202

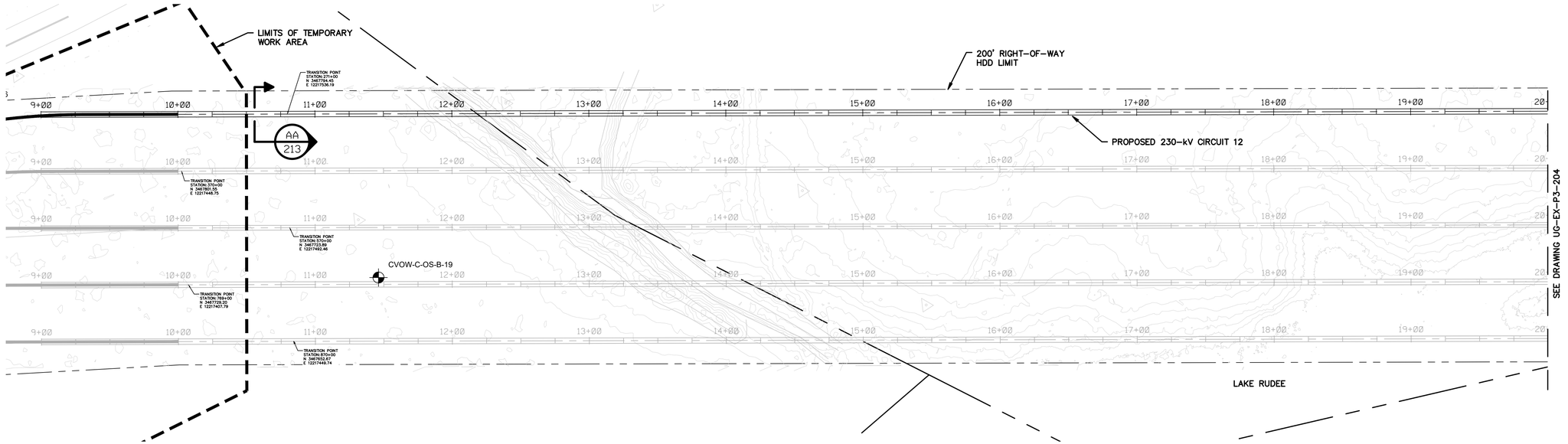
No.	Date	By	Checked/Appr.	Description	Project Number	B/M
A	03/25/22	AH		ISSUED FOR 60% REVIEW	Project Number 0200157	H&A
		PWD				

Revisions

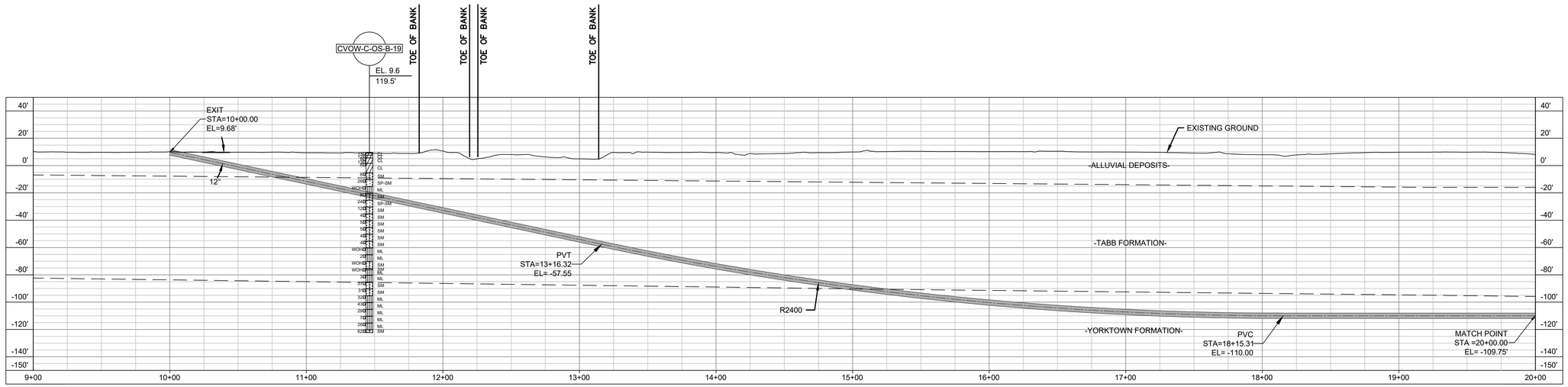
POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:34 PM
POSTOLOWSKI, KEVIN



LAKE RUDEE "HDD 1 EXIT" PLAN VIEW



LAKE RUDEE "HDD 1 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 1 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	4 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:35 PM

Drawing No. UG-EX-P3-203

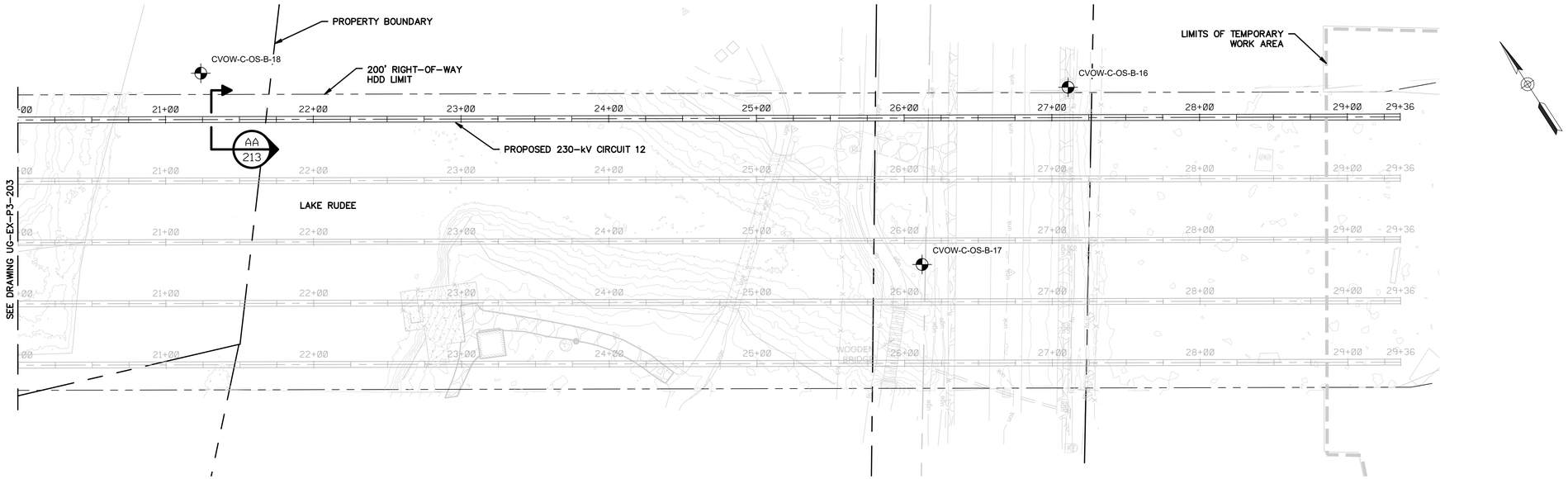
No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			B/M	0200157

Revisions

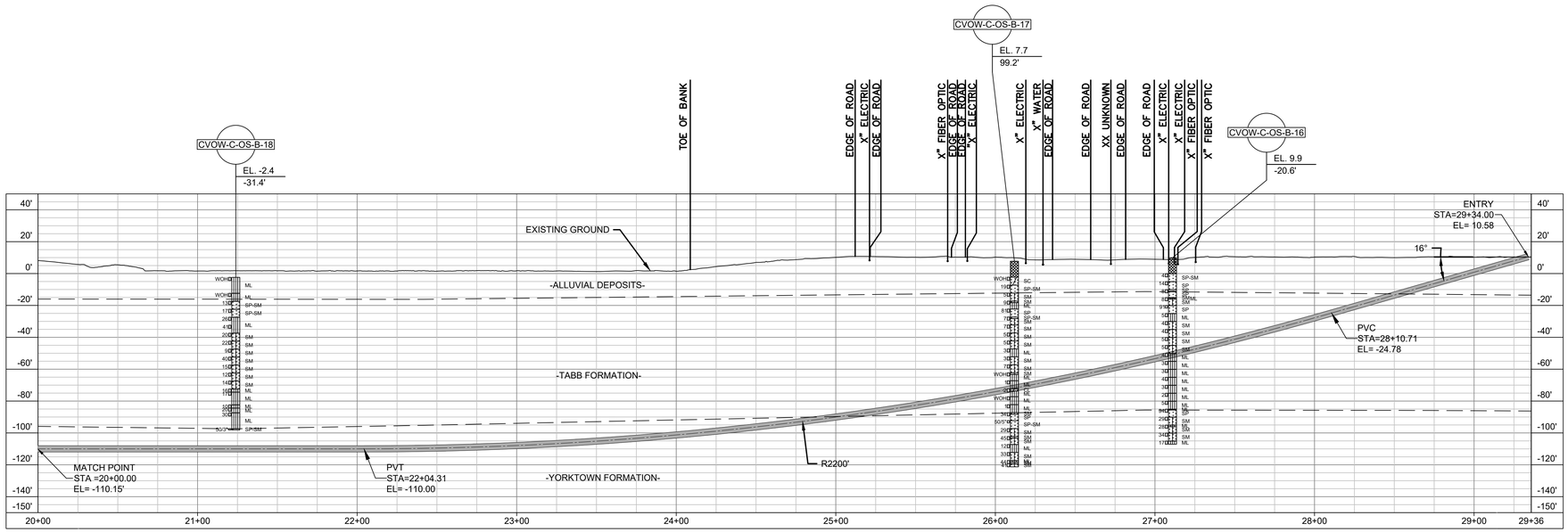
POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:35 PM
POSTOLOWSKI, KEVIN



LAKE RUDEE "HDD 1 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 1 ENTRANCE" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 1 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	5 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:36 PM

Drawing No.
UG-EX-P3-204

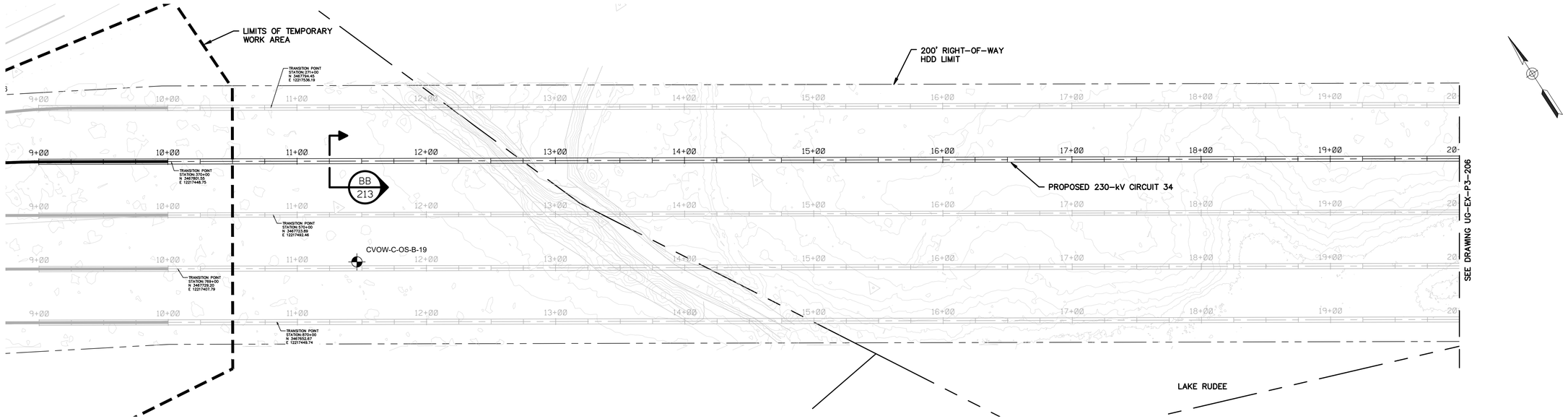
UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:36 PM
POSTOLOWSKI, KEVIN

No.	Date	By	Description	Project Number	
	Checked/Appr.			B/M	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
				0200157	

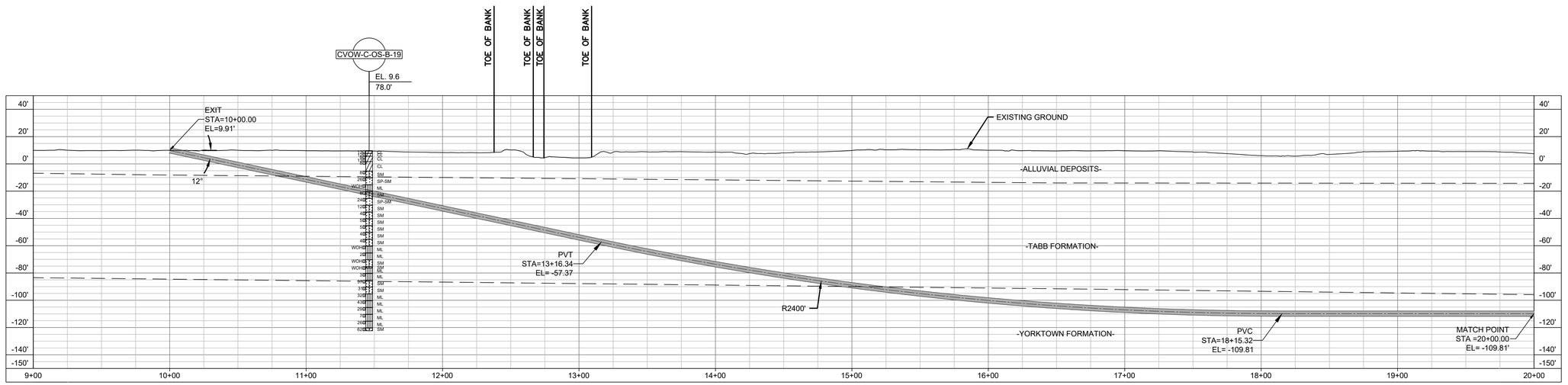
Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE RUDEE "HDD 2 EXIT" PLAN VIEW



LAKE RUDEE "HDD 2 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:
1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 2 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	6 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:37 PM
Drawing No. UG-EX-P3-205

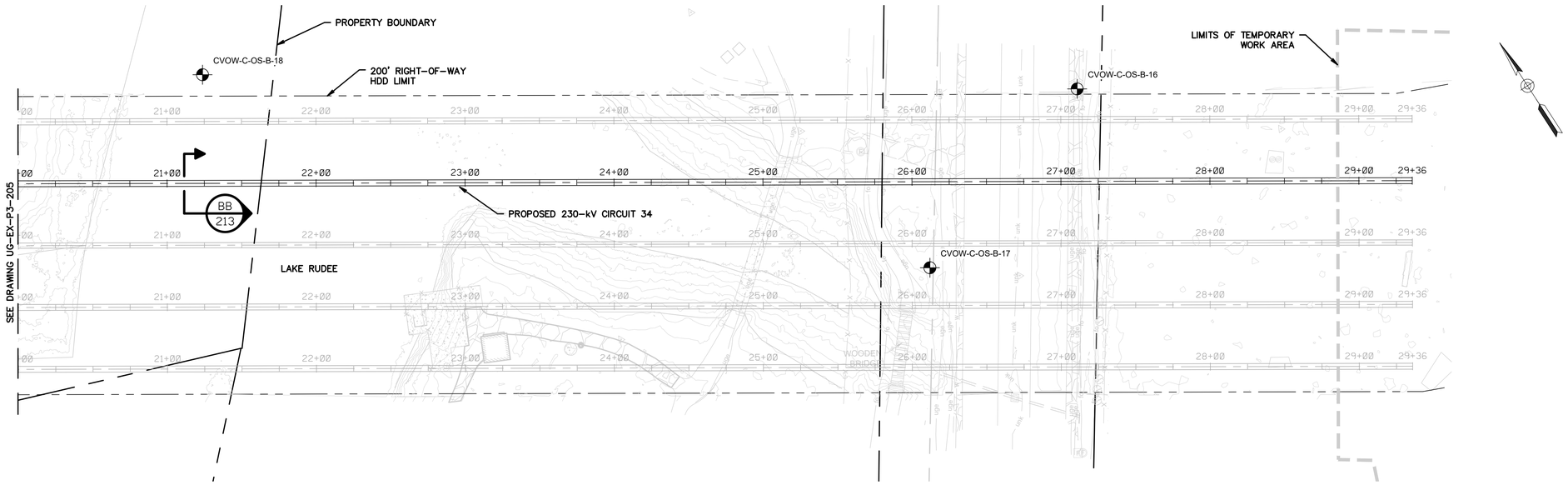
UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:37 PM
POSTOLOWSKI, KEVIN

No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
				B/M	0200157

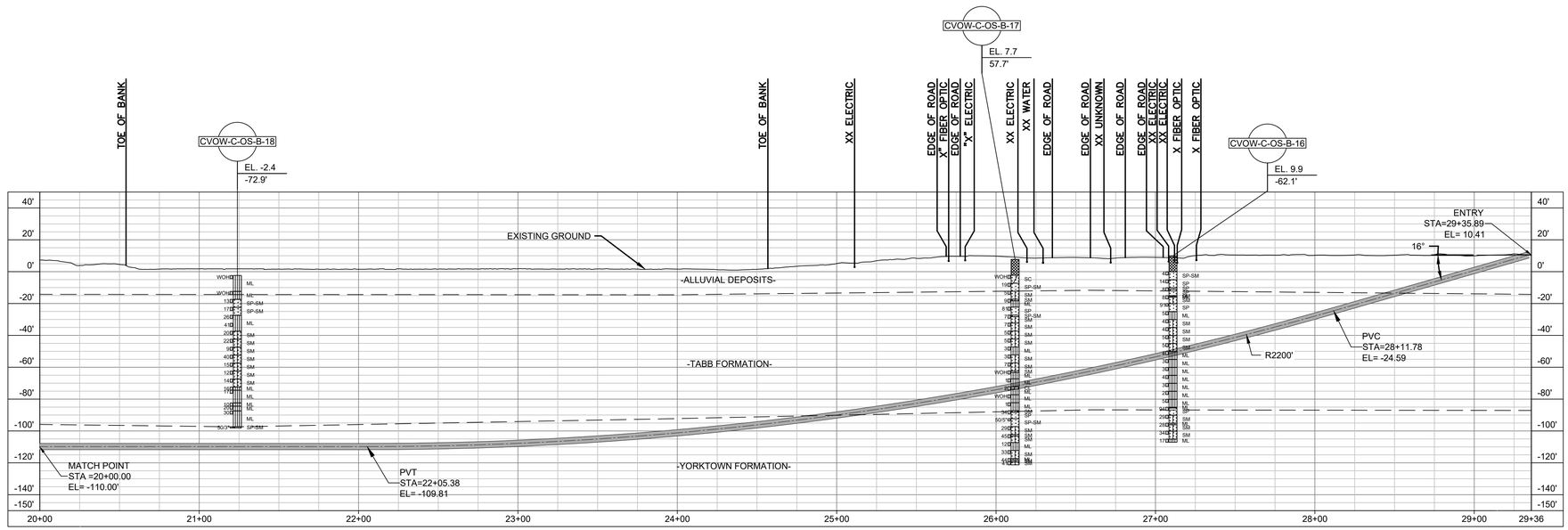
Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE RUDEE "HDD 5 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 5 ENTRANCE" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 2 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	7 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:38 PM

Drawing No.
UG-EX-P3-206

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:38 PM
POSTOLOWSKI, KEVIN

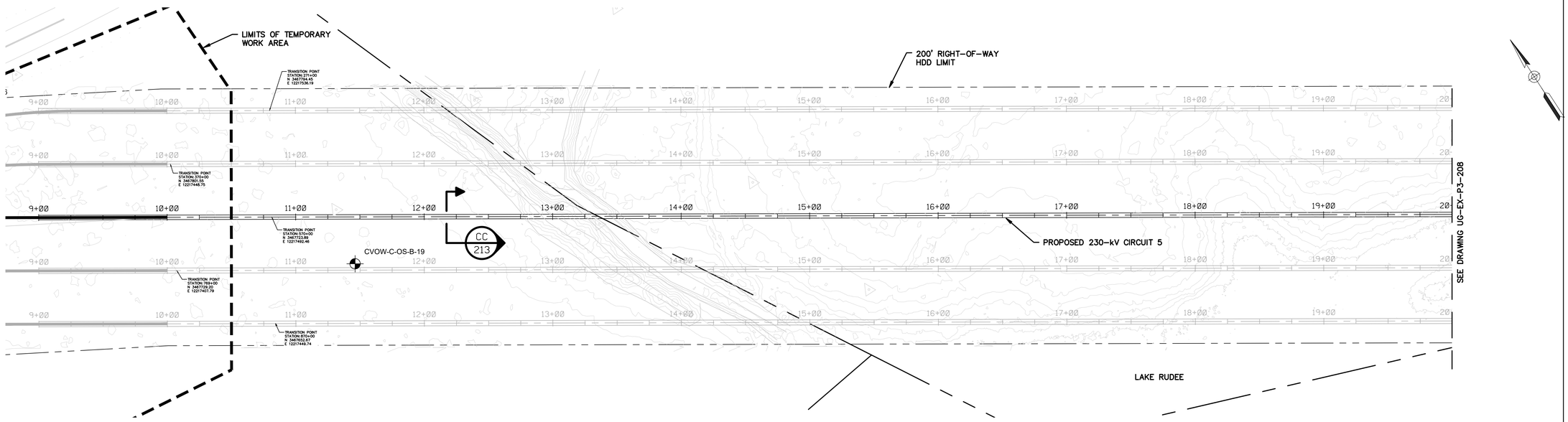
No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
					0200157
					B/M

Revisions

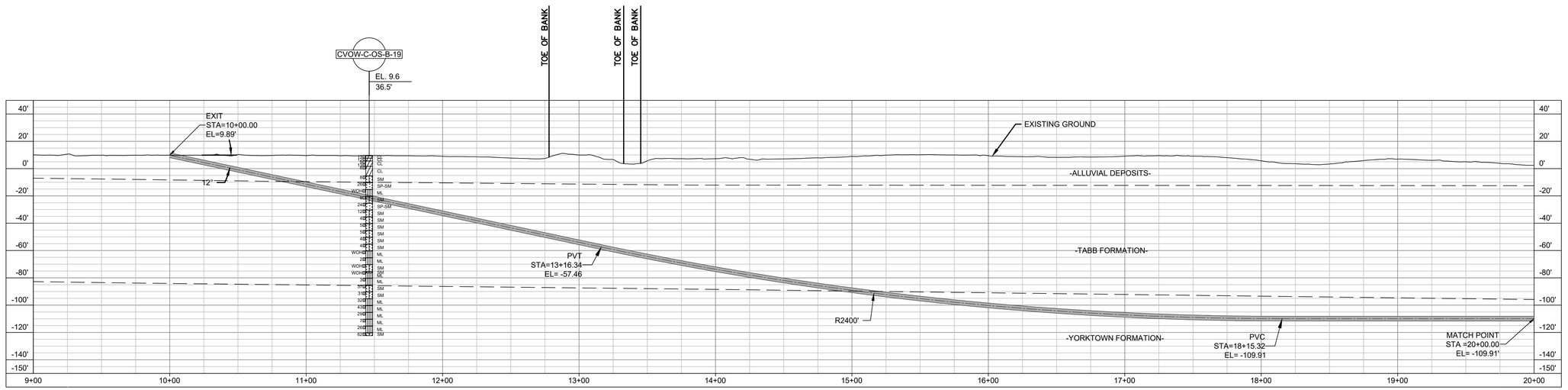
POSTOLOWSKI, KEVIN

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE RUDEE "HDD 3 EXIT" PLAN VIEW



LAKE RUDEE "HDD 3 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:
1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 3 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	8 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 5:20 PM
Drawing No. UG-EX-P3-207

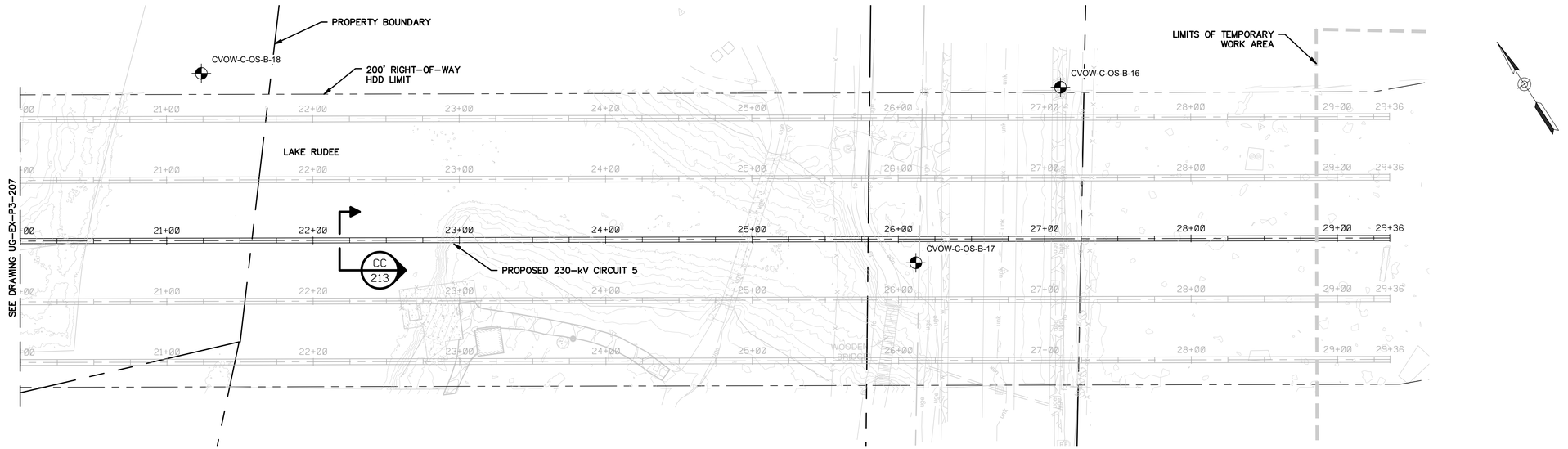
UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 5:20 PM
POSTOLOWSKI, KEVIN

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	0200157
	Checked/Appr.				H&A

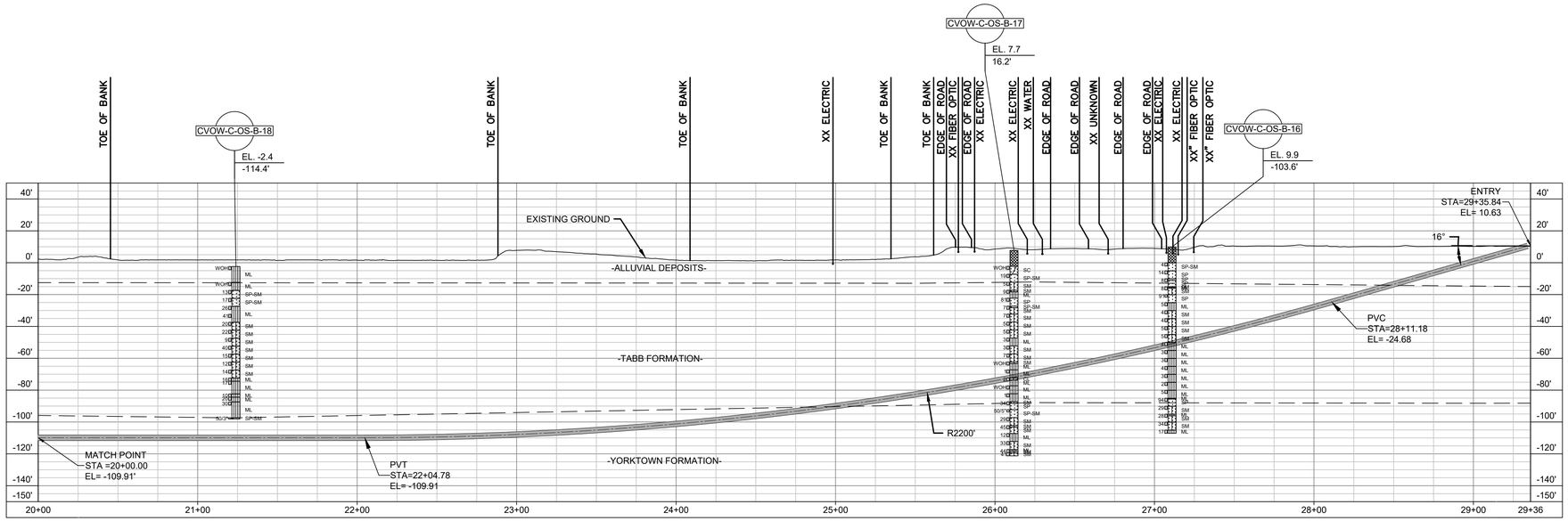
Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE RUDEE "HDD 3 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 3 ENTRANCE" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 3 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	9 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	

B/M No. | Revisions

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:40 PM

Drawing No. UG-EX-P3-208

No.	Description	By	Date	Checked/Appr.
A	ISSUED FOR 60% REVIEW	AH	03/25/22	PWD

Project Number B/M 0200157 H&A

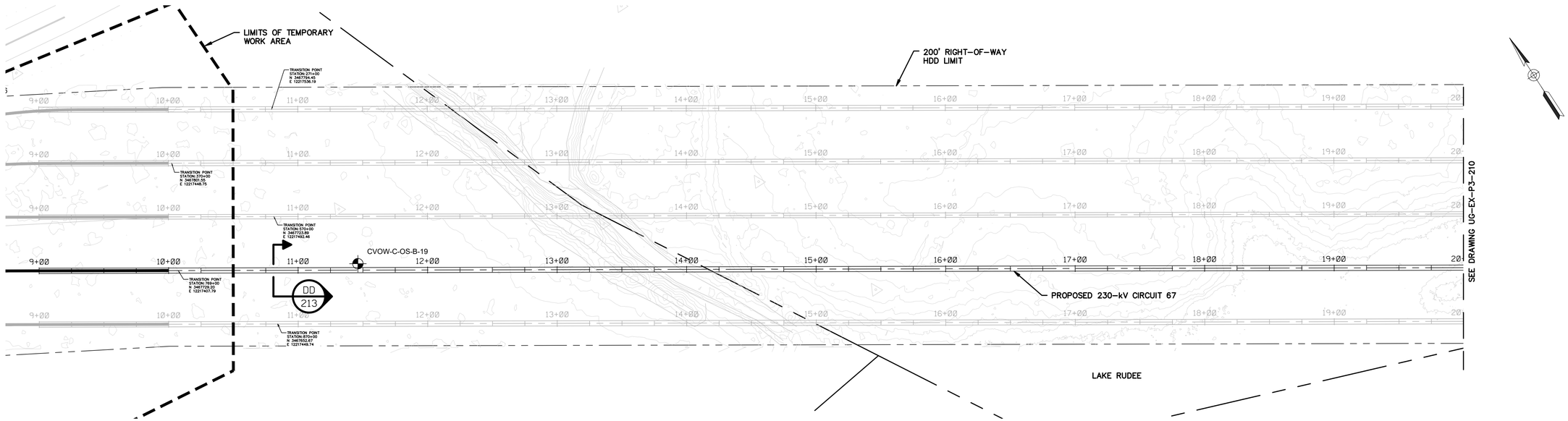
Revisions

POSTOLOWSKI, KEVIN

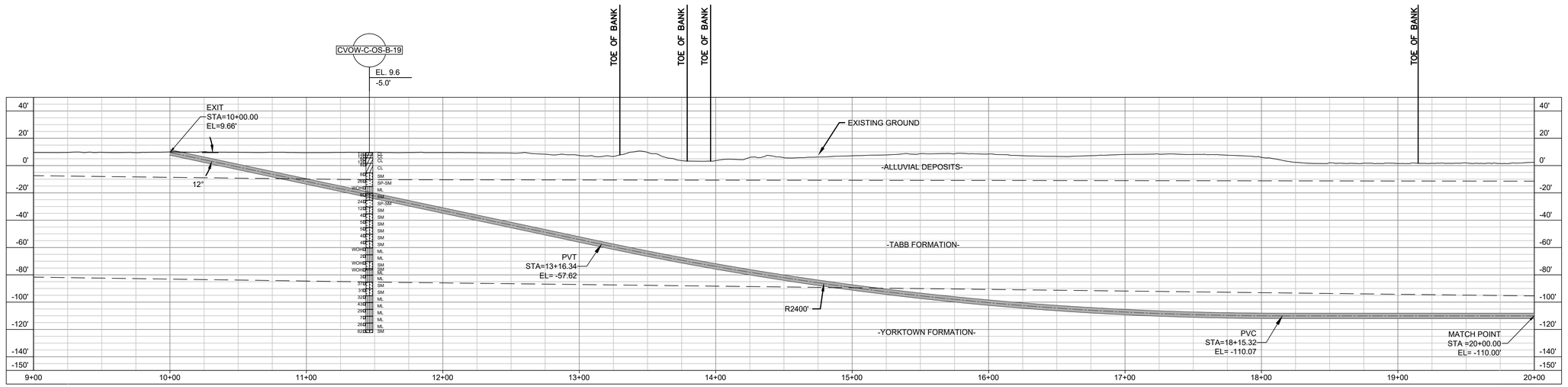
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:40 PM
POSTOLOWSKI, KEVIN



LAKE RUDEE "HDD 4 EXIT" PLAN VIEW



LAKE RUDEE "HDD 4 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 4 PLAN AND PROFILE (STA. 10+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	10 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:40 PM

Drawing No. UG-EX-P3-209

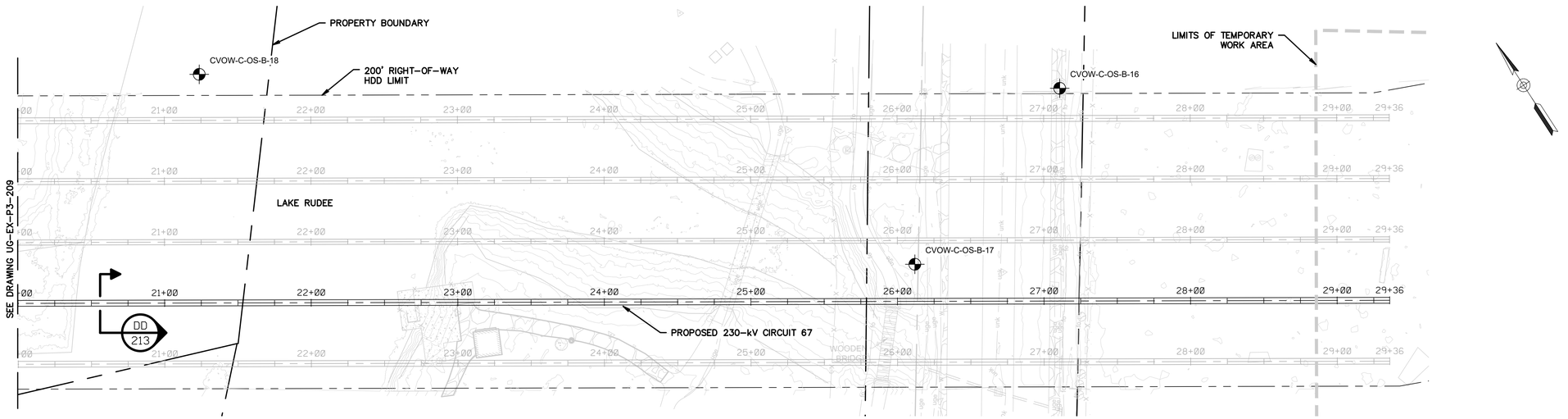
UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:40 PM
POSTOLOWSKI, KEVIN

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	0200157
	Checked/Appr.				H&A

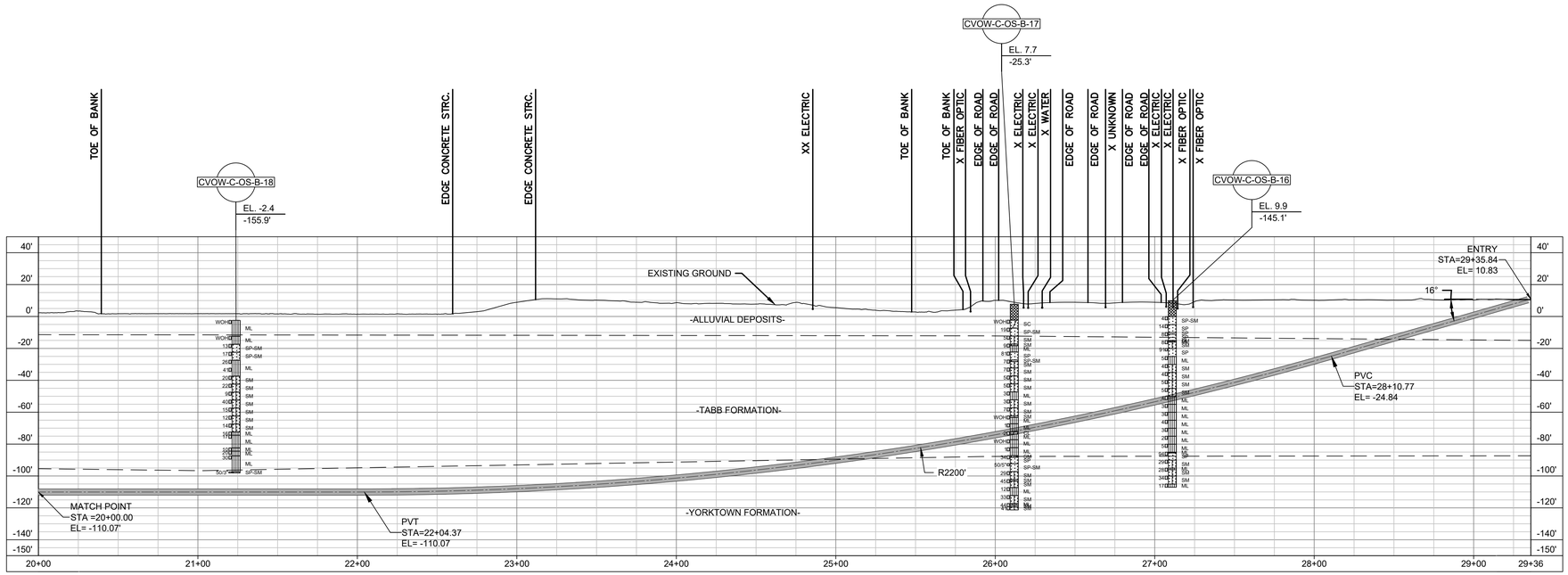
Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE RUDEE "HDD 4 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 4 ENTRANCE" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

No.	Date	By	Description	Project Number	
				B/M	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	0200157
	Checked/Appr.				H&A
		PWD			

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

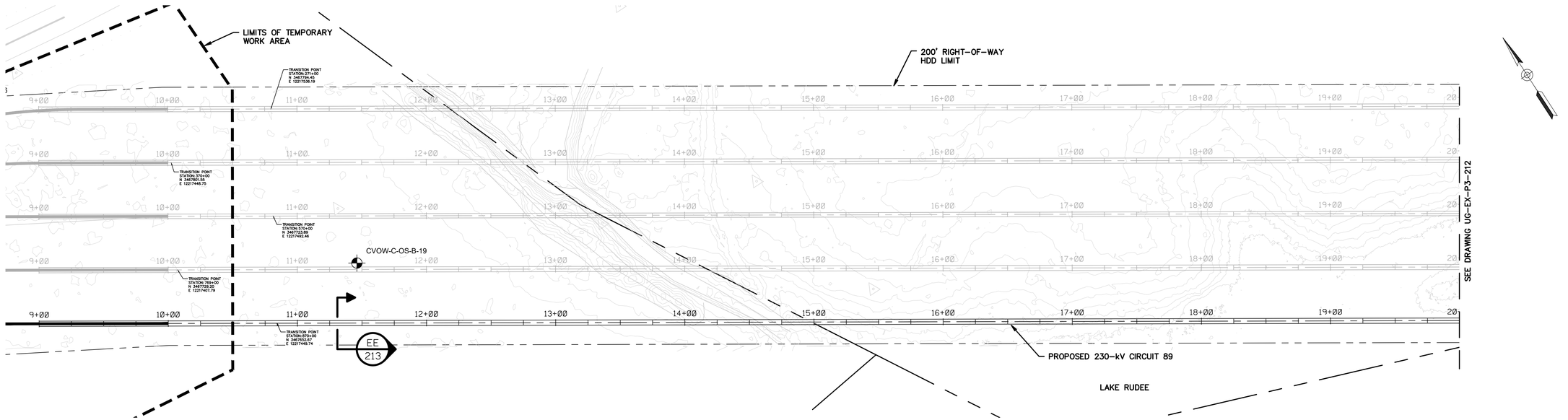
COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 4 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	11 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

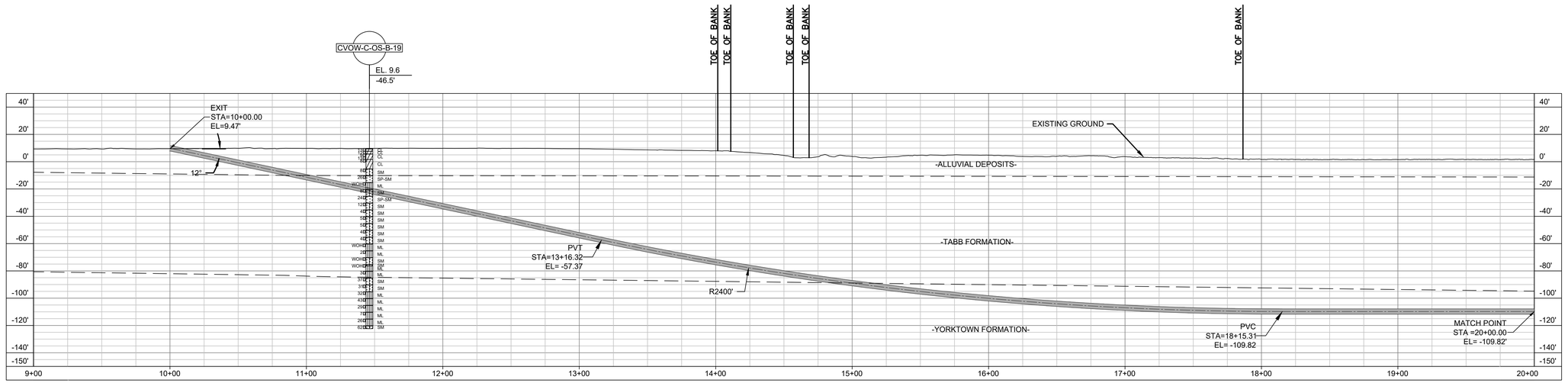
Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:41 PM

Drawing No.
UG-EX-P3-210

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:41 PM
POSTOLOWSKI, KEVIN



LAKE RUDEE "HDD 5 EXIT" PLAN VIEW



LAKE RUDEE "HDD 5 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 5 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	12 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name: UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:42 PM

Drawing No. UG-EX-P3-211

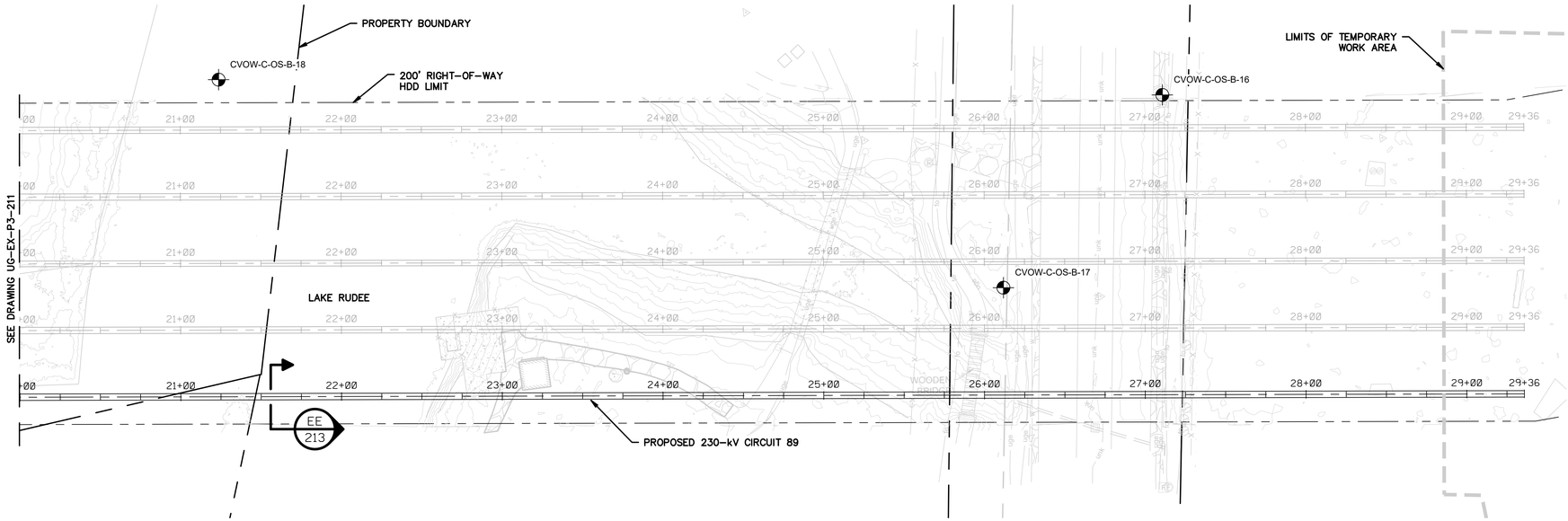
No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157 H&A
	Checked/Appr.			B/M PWD

Revisions

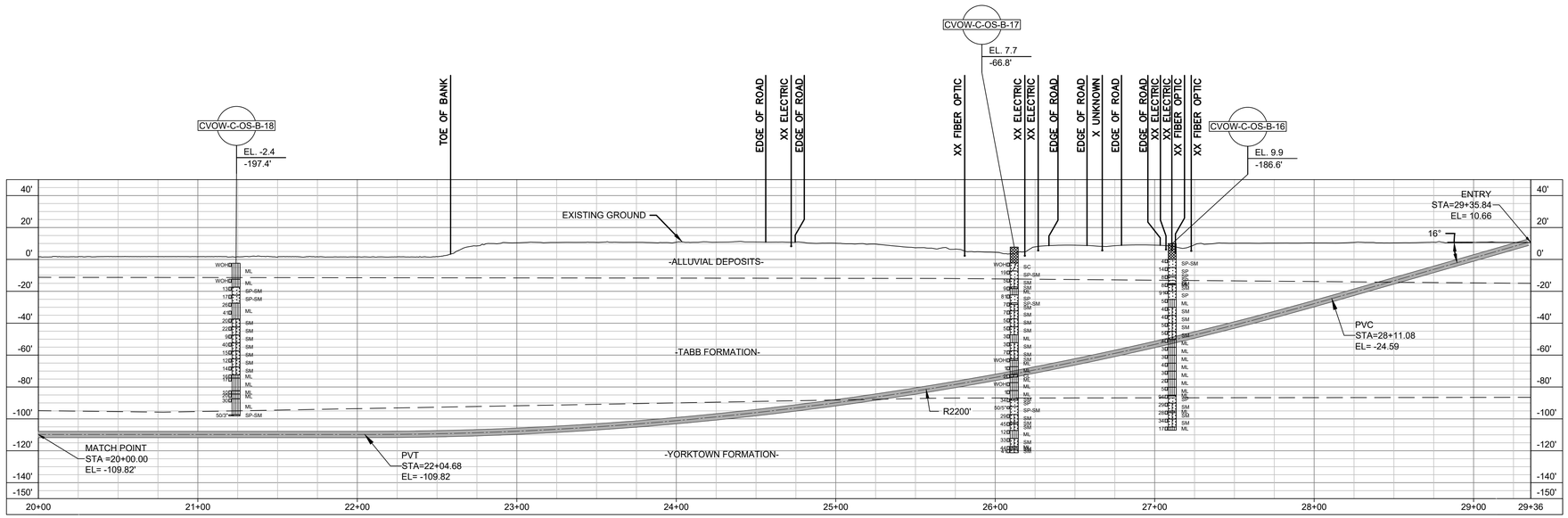
POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:42 PM
POSTOLOWSKI, KEVIN



LAKE RUDEE "HDD 5 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 5 ENTRANCE" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 5 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	13 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name: UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:43 PM

Drawing No.: UG-EX-P3-212

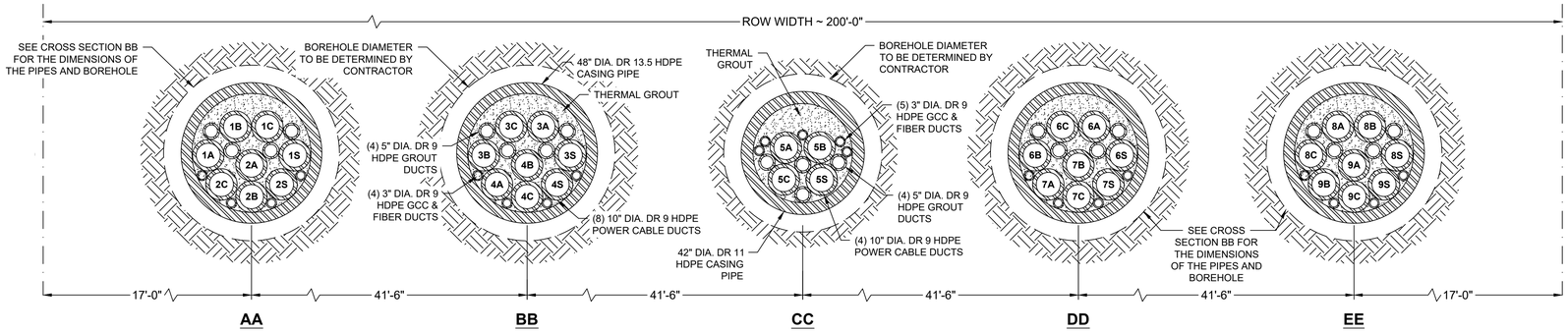
UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:43 PM
POSTOLOWSKI, KEVIN

No.	Date	By	Checked/Appr.	Description	Project Number	B/M
A	03/25/22	AH	PWD	ISSUED FOR 60% REVIEW	Project Number	H&A
						0200157

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



230-kV HDD INSTALLATION CROSS-SECTION

CONDUIT CONFIGURATION FOR ONSHORE HDD INSTALLATIONS
NOT TO SCALE

NOTES:

1. TEMPORARY STEEL SURFACE CASING PIPE IS NOT SHOWN AS A PART OF THE CROSS SECTIONS. CONTRACTOR SHALL DETERMINE THE SIZE AND LENGTH OF THE TEMPORARY STEEL SURFACE CASING PIPE BASED ON THEIR MEANS AND METHODS AND UNINSTALL THEM UPON COMPLETION OF THE PROJECT.

PRELIMINARY – NOT FOR CONSTRUCTION

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157
	Checked/Appr.			B/M H&A

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
DETAILS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	14 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 4:44 PM

Drawing No. UG-EX-P3-213

UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 4:44 PM
POSTOLOWSKI, KEVIN

COASTAL VIRGINIA OFFSHORE WIND
230–kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE

PRELIMINARY – NOT FOR CONSTRUCTION

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	1 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-200.DWG
PLOTTED: 3/28/2022 6:53 PM
Drawing No. UG-EX-P4-200

UG-EX-P-200.DWG
PLOTTED: 3/28/2022 6:53 PM
POSTOLOWSKI, KEVIN

No.	Description	Date	By	Checked/Appr.
A	ISSUED FOR 60% REVIEW	03/25/2022	AH	PWD

Project Number 0200157 B/M H&A
Project Number
Revisions

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

POSTOLOWSKI, KEVIN
\\HALEYALDRICK.COM\SHARE\CF\PROJECTS\0200157\CAD

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 2416853142000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
   7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
   12.1. USACE PERMITS
   12.2. CITY OF ____
   12.3. COUNTY OF ____
   12.4. DEWATERING PERMITS
   12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

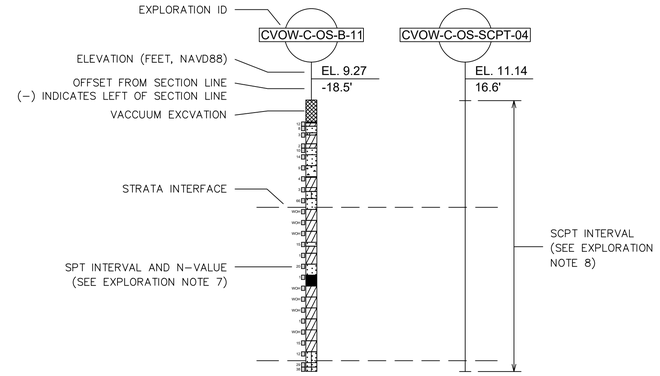
HORIZONTAL DIRECTIONAL DRILL NOTES:

1. CONTRACTOR SHALL EMPLOY APPROPRIATE MEASURES AND DRILLING PRACTICES TO ELIMINATE GROUND SURFACE SETTLEMENT, REDUCE SUBSURFACE DISTURBANCE AND ENSURE THE INTEGRITY OF THE CONDUIT BUNDLE AGAINST EXCESSIVE DEFLECTION, PULL LOADS, STRESSES AND BUCKLING DURING PULLBACK. EXAMPLES OF SUCH MEASURES MAY INCLUDE BUT NOT BE LIMITED TO:
   A. MAINTAIN NEUTRAL BUOYANCY OF THE CONDUIT BUNDLE DURING PULLBACK.
   B. USE OF TEMPORARY STEEL SURFACE CASINGS.
   C. USE OF "MUD ENGINEER" TO MONITOR THE DRILL FLUID PROPERTIES.
2. UPON COMPLETION OF FINAL REAM, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO REMOVE THE EXISTING DRILL CUTTINGS FROM THE BOREHOLE AND MAINTAIN THE STABILITY OF THE BOREHOLE DURING PULLBACK. THE DRILL MUD SHALL BE MONITORED DURING PULLBACK AND EVERY EFFORT SHALL BE MADE TO REDUCE THE FRICTION AND DRAG FORCES SO AS TO LOWER THE PULLING LOAD ON THE PRODUCT BUNDLE.
3. CONTRACTOR SHALL EMPLOY APPROPRIATE CONTINGENCY MEASURES TO ADDRESS INADVERTENT DRILL FLUID RETURNS ON LAND OR UNDERWATER DURING THE DRILLING PROCESS. IN CASE OF INADVERTENT DRILL FLUID RETURNS, CONTINGENCY MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO DRILL FLUID IDENTIFICATION, CONTAINMENT, MITIGATION, EXTRACTION, STORAGE, TRANSPORTATION AND CLEAN-UP.

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW		WELL GRADED SANDS, GRAVELLY SANDS
SP		POORLY GRADED SANDS, GRAVELLY SANDS
SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH		INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT		PEAT AND OTHER HIGHLY ORGANIC SOILS
BR		BEDROCK
NR		NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	2 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-201.DWG
PLOTTED: 3/28/2022 6:53 PM
Drawing No. UG-EX-P4-201

UG-EX-P-201.DWG
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POSTOLOWSKI, KEVIN

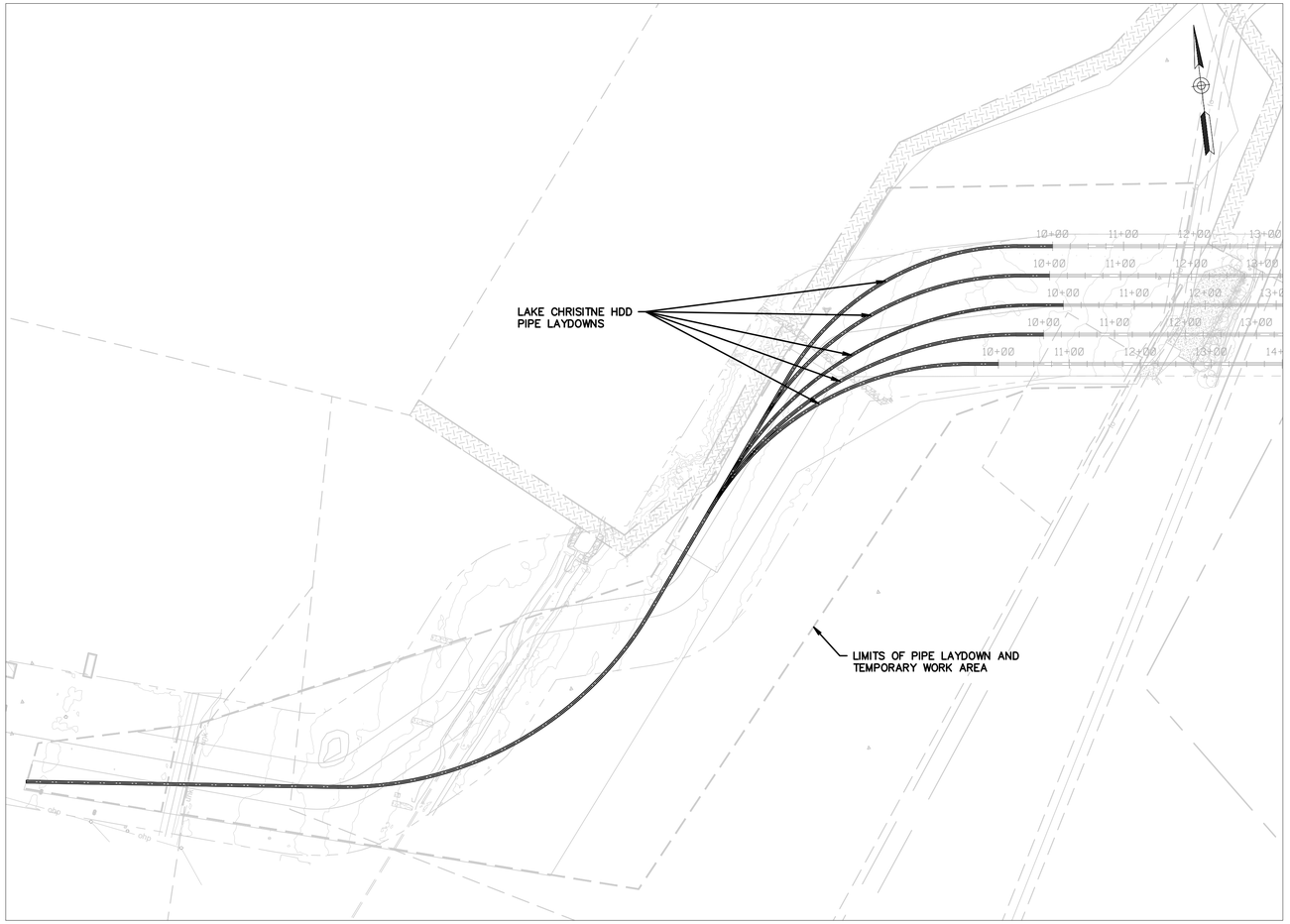
No	Date	By	Description	Project Number	
	Checked/Appr.			B/M	
1	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157	H&A
					PwD

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)		Pipe Stand Foundation Cells (Spread)		Foundation Cells for Other Typical Structures		Steel Detail & Assembly
							(Pier)	(Spread)	



LAKE CHRISTINE "PIPE LAYDOWN AND HDD ENTRY TEMPORARY WORK AREA" PLAN VIEW

0 100' 200'
HORIZONTAL SCALE IN FEET

LAKE CHRISTINE "HDD 1 EXIT WORK AREA" PLAN VIEW

0 100' 200'
HORIZONTAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES SEE DRAWINGS

PRELIMINARY – NOT FOR CONSTRUCTION

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
LAKE CHRISITNE PIPE LAYDOWN / WORK AREAS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	3 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:23 PM

Drawing No. UG-EX-P4-202

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157
	Checked/Appr.			B/M H&A

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

UG-EX-P4-202-212.DWG
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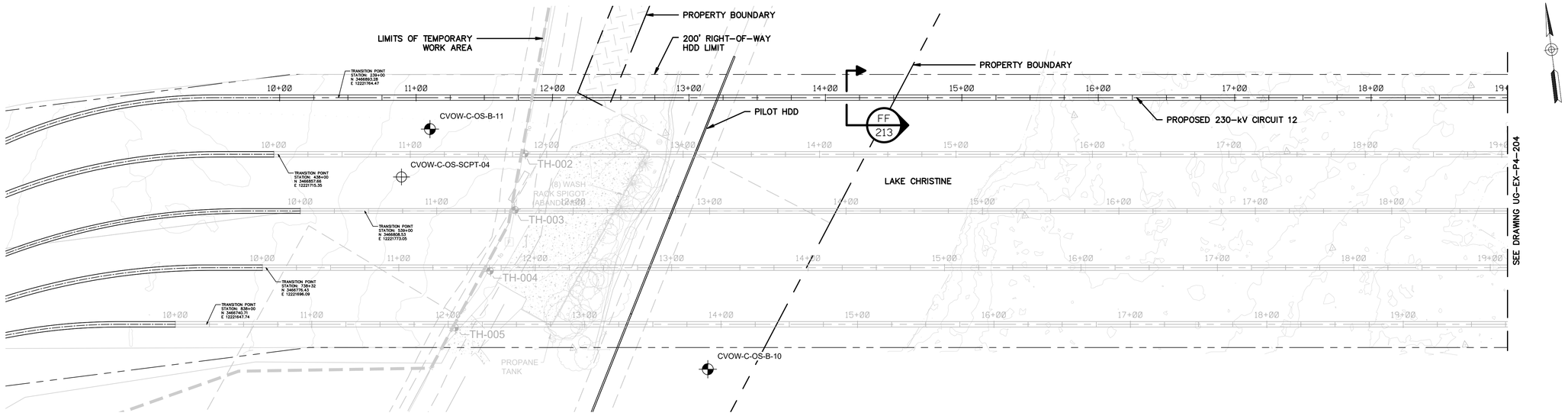
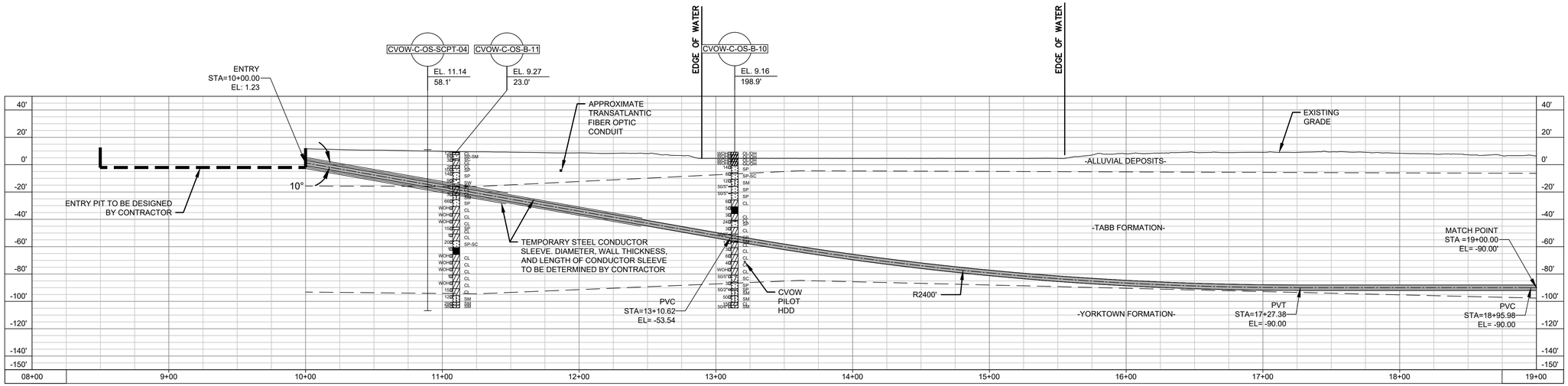
POSTOLOWSKI, KEVIN



LAKE CHRISTINE "HDD 1 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 1 ENTRY" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4

HDD 1 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	4 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:24 PM

Drawing No. UG-EX-P4-203

No.	Date	By	Description	Project Number
			ISSUED FOR 60% REVIEW	Project Number 0200157
	Checked/Appr.			B/M H&A
	03/25/22	AH		
		PWD		

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

UG-EX-P4-202-212.DWG
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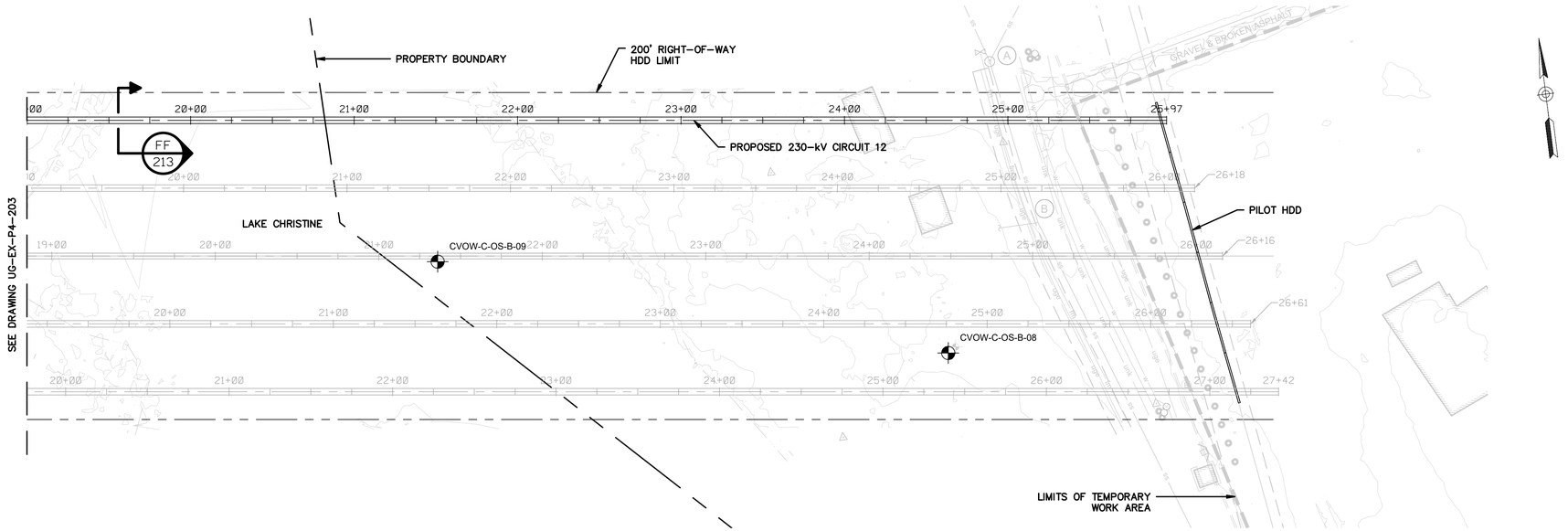
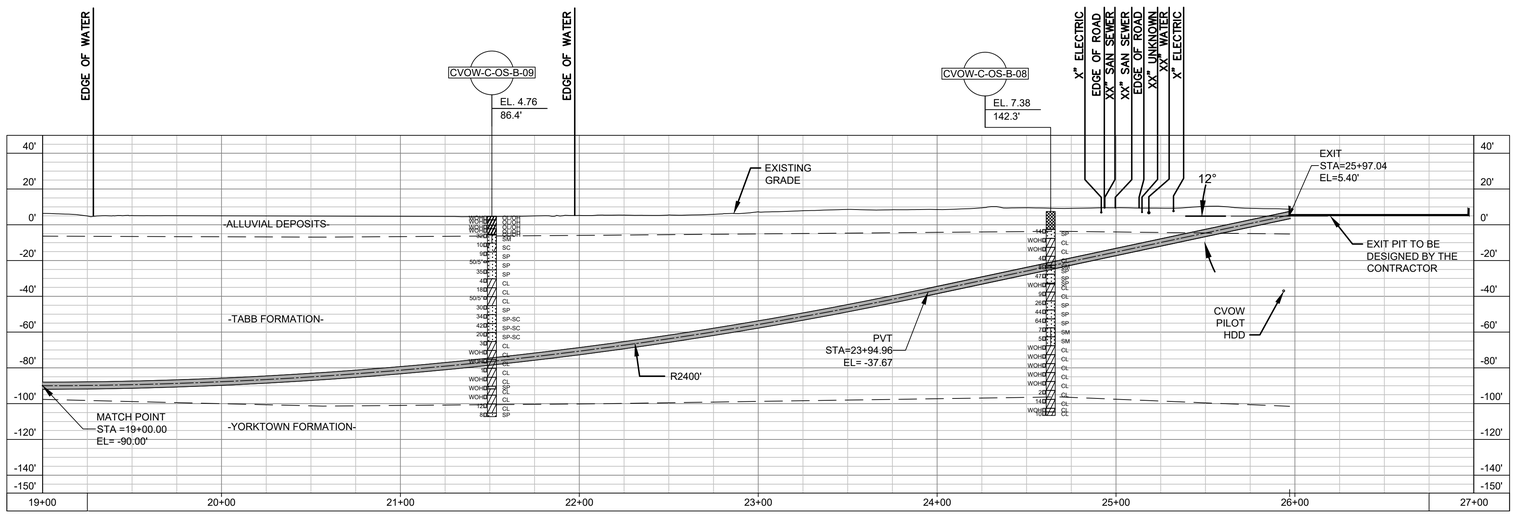
POSTOLOWSKI, KEVIN



LAKE CHRISTINE "HDD 1 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 1 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
HDD 1 PLAN AND PROFILE (STA. 19+00 TO 27+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	5 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:24 PM

Drawing No. UG-EX-P4-204

UG-EX-P4-202-212.DWG
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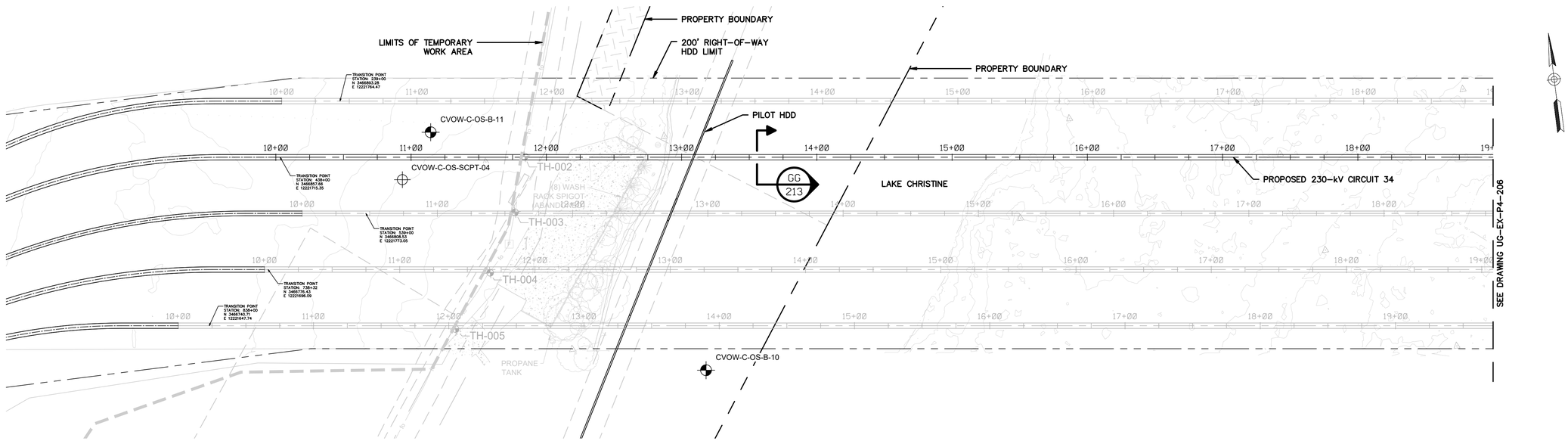
POSTOLOWSKI, KEVIN

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			0200157	

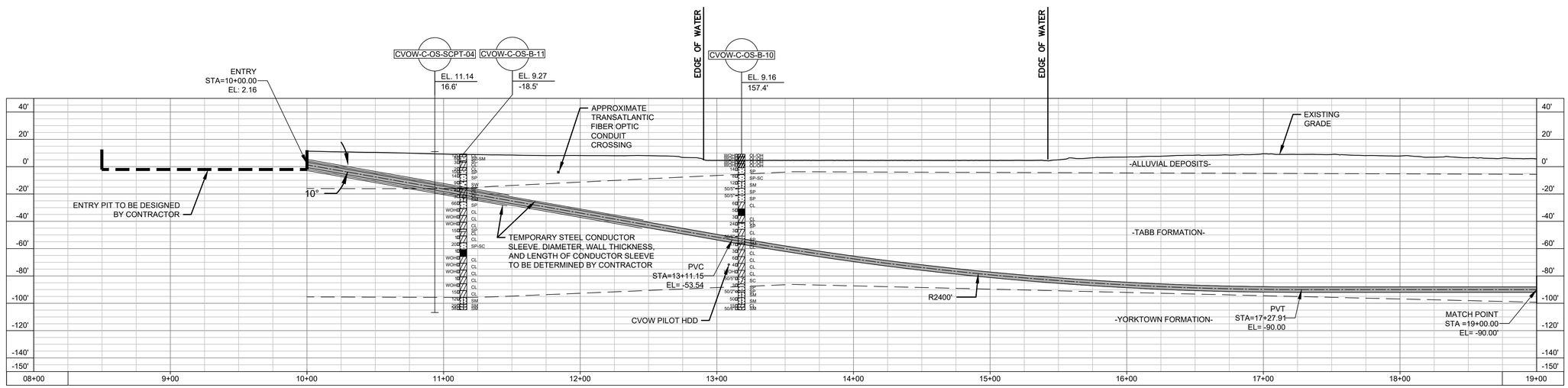
Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE CHRISTINE "HDD 2 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 2 ENTRY" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Revisions

No	Date	By	Description	Project Number
a	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157
	Checked/Appr.			B/M H&A

POSTOLOWSKI, KEVIN

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)		Pipe Stand Foundation Cells (Spread)		Foundation Cells for Other Typical Structures		Steel Detail & Assembly
							(Pier)	(Spread)	

Dominion Energy

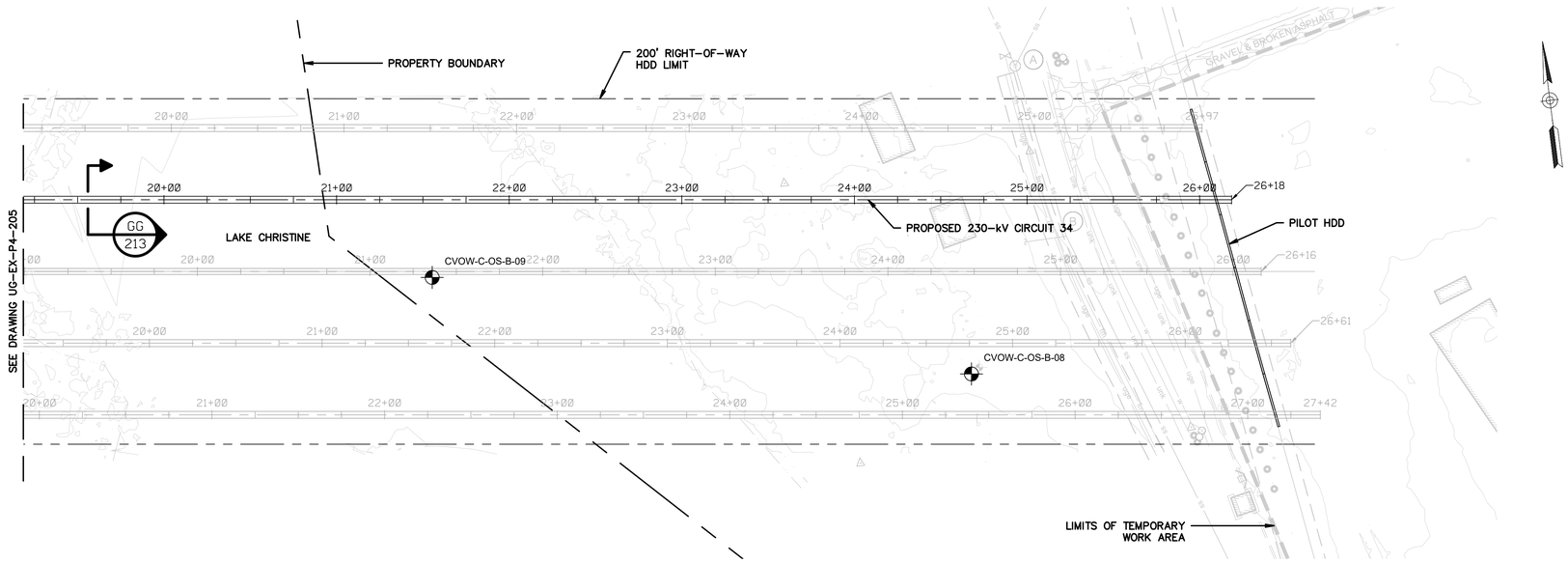
COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
HDD 2 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	6 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

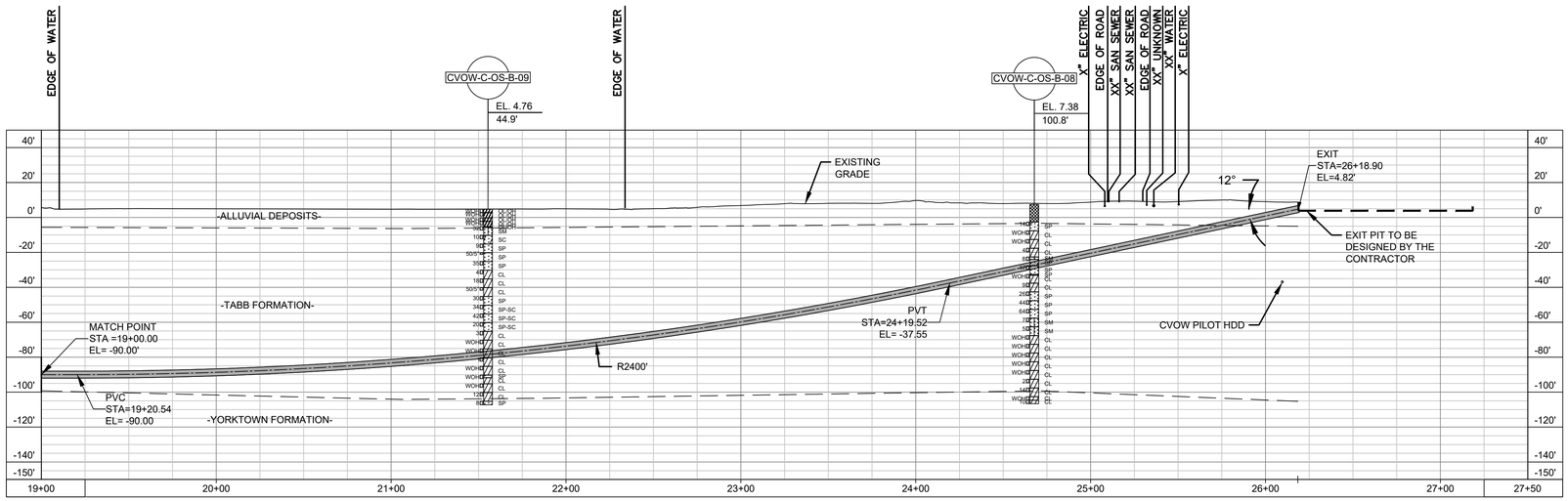
Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:25 PM

Drawing No. UG-EX-P4-205

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:25 PM
POSTOLOWSKI, KEVIN



LAKE CHRISTINE "HDD 2 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 2 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
HDD 2 PLAN AND PROFILE (STA. 19+00 TO 27+50)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	7 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:25 PM

Drawing No. UG-EX-P4-206

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:25 PM
POSTOLOWSKI, KEVIN

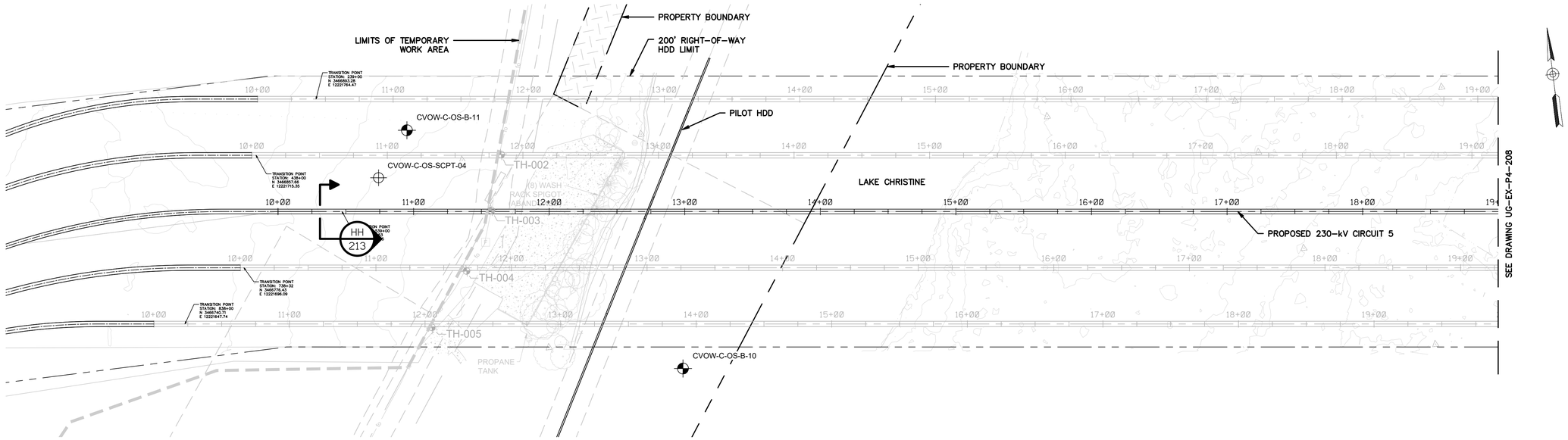
No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
					0200157

Revisions

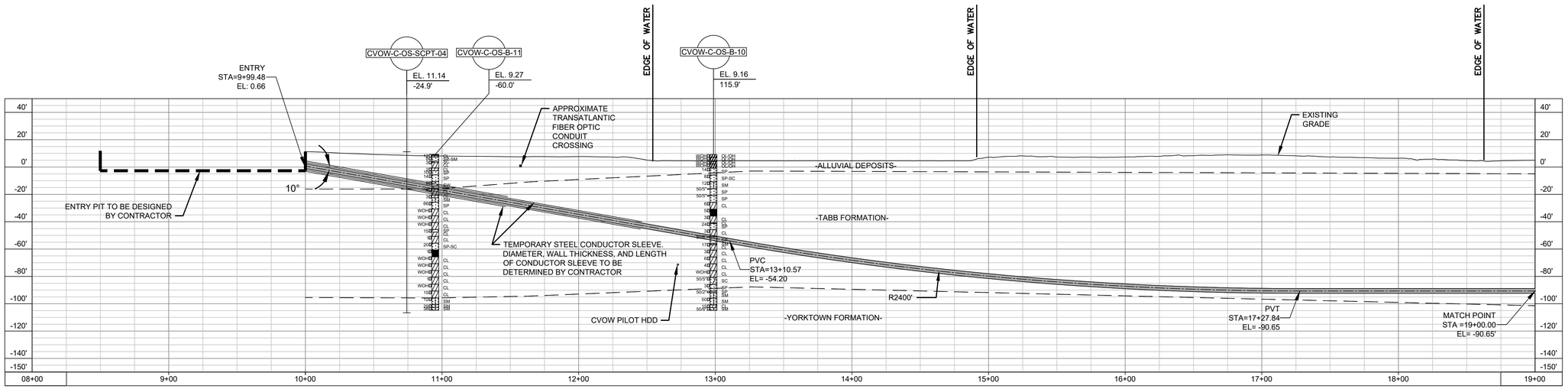
POSTOLOWSKI, KEVIN

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE CHRISTINE "HDD 3 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 3 ENTRY" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157 H&A
	Checked/Appr.			B/M

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

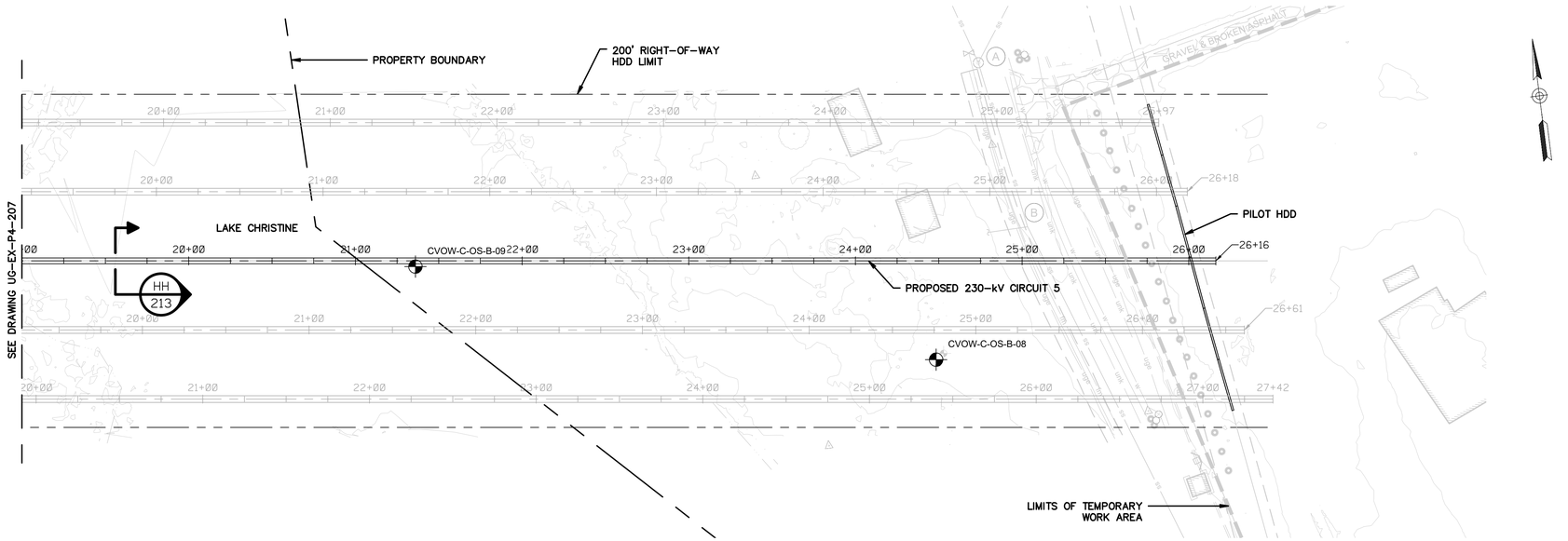
COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 3 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	8 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

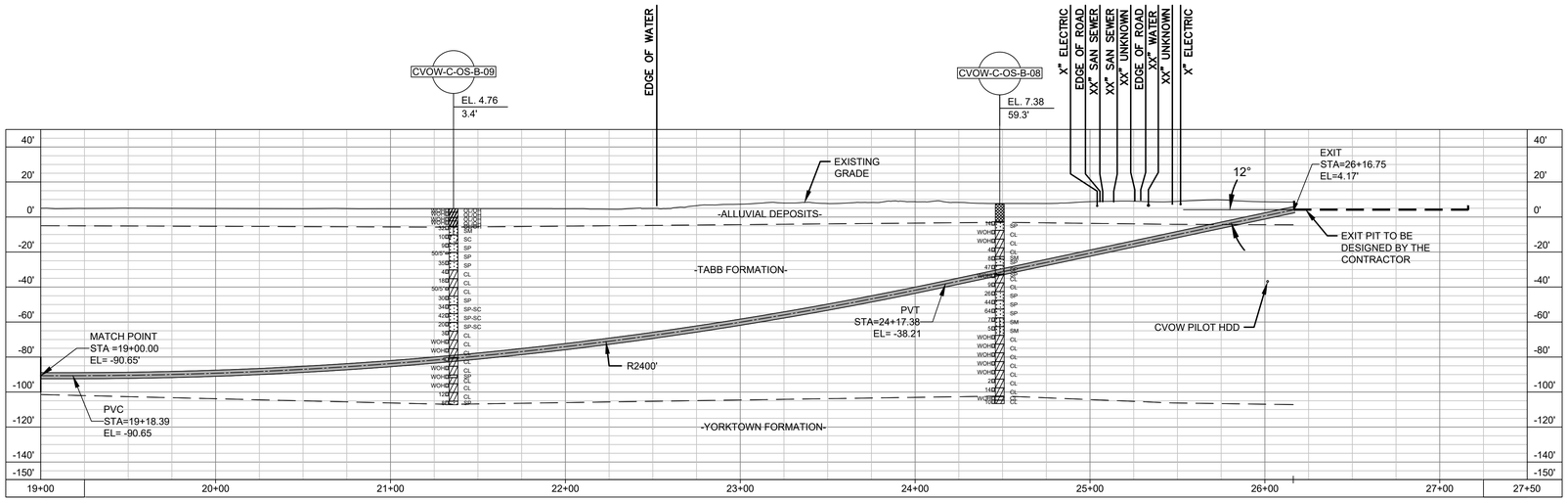
Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:26 PM

Drawing No. UG-EX-P4-207

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:26 PM
POSTOLOWSKI, KEVIN



LAKE CHRISTINE "HDD 3 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 3 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD3 PLAN AND PROFILE (STA. 19+00 TO 27+50)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	9 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:26 PM
Drawing No. UG-EX-P4-208

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:26 PM
POSTOLOWSKI, KEVIN

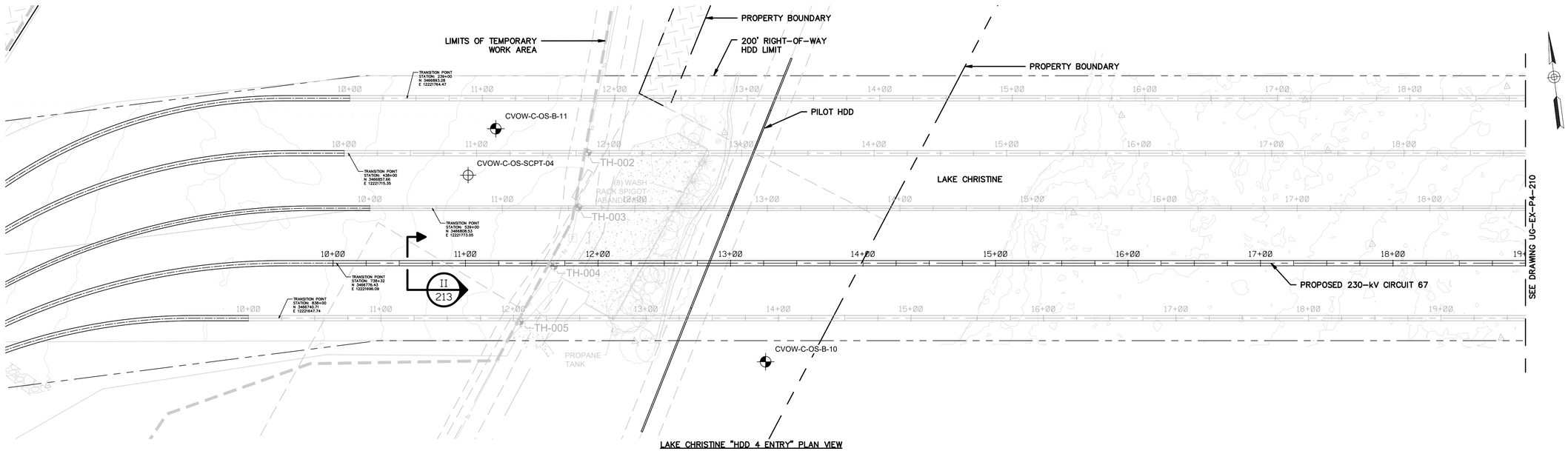
No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157	H&A
	Checked/Appr.			B/M	PWD

Revisions

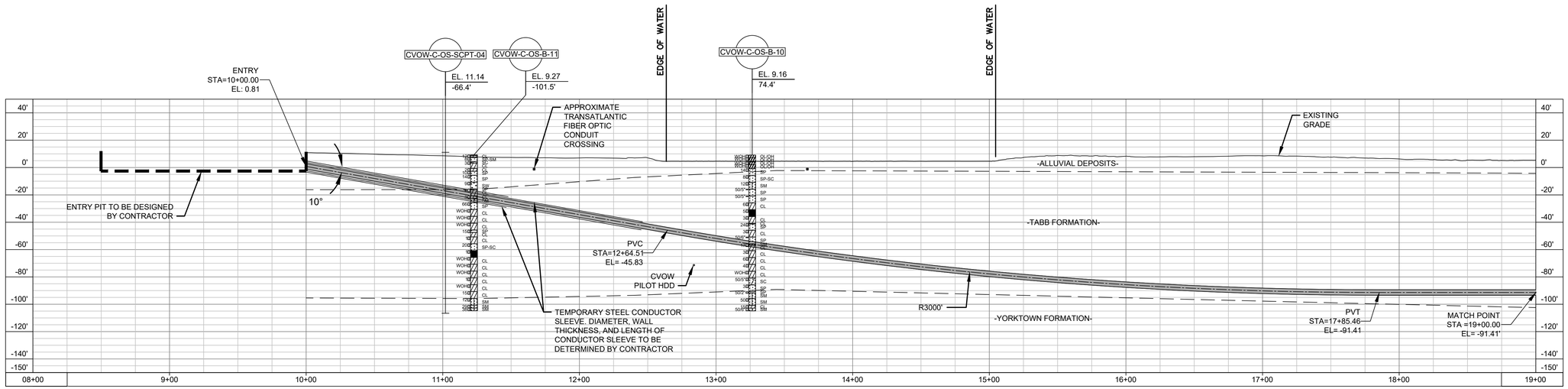
POSTOLOWSKI, KEVIN

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE CHRISTINE "HDD 4 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 4 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 4 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	10 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:26 PM

Drawing No. UG-EX-P4-209

No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			B/M	0200157

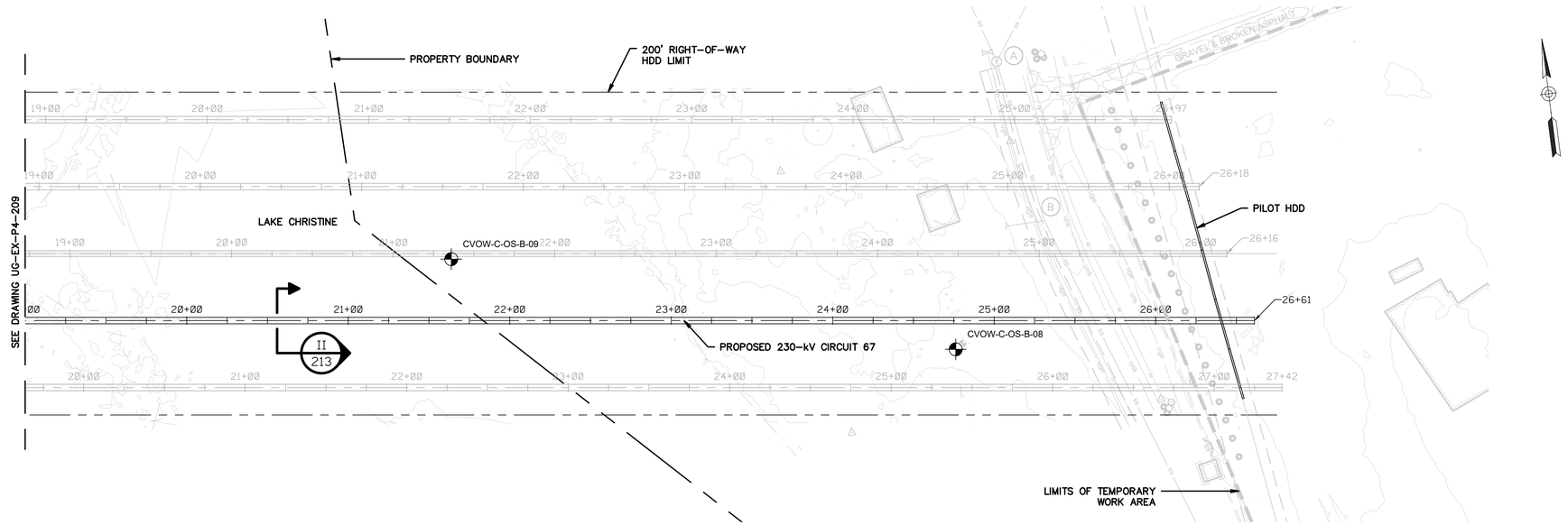
Revisions

POSTOLOWSKI, KEVIN

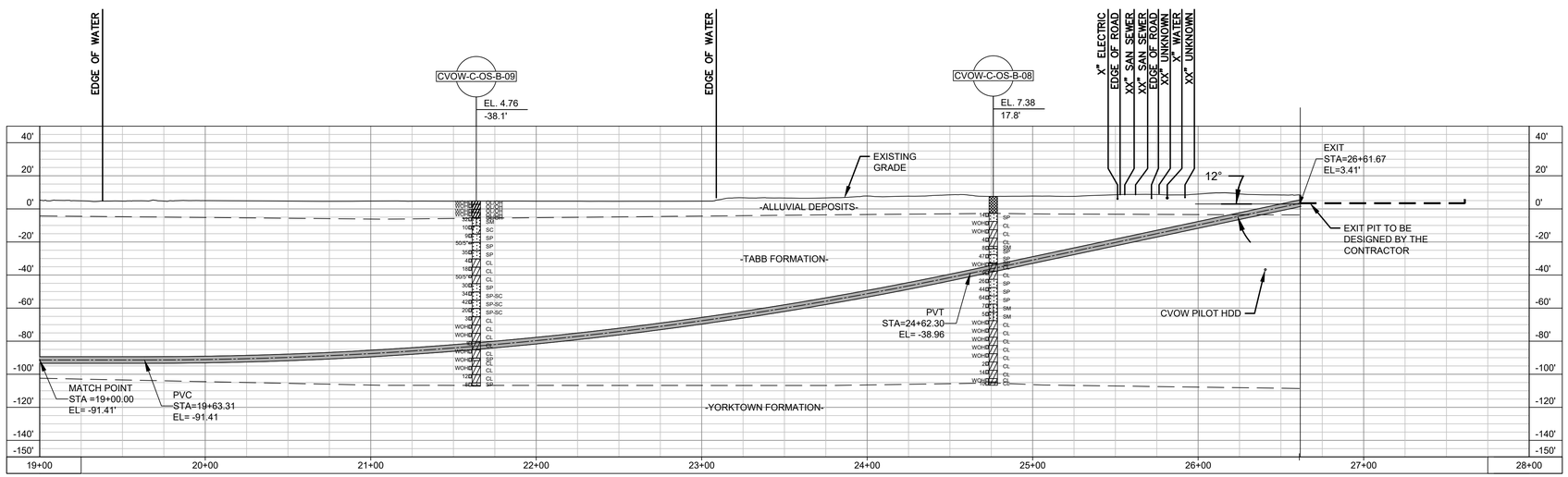
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:26 PM
POSTOLOWSKI, KEVIN



LAKE CHRISTINE "HDD 4 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 4 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:
1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 4 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	11 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:27 PM
Drawing No. UG-EX-P4-210

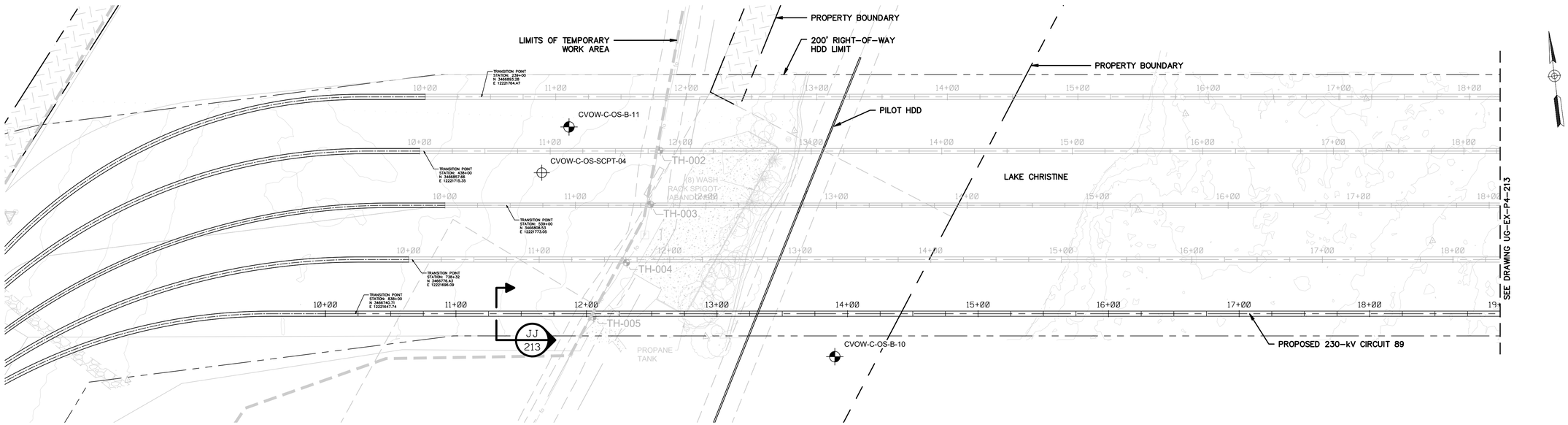
UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:27 PM
POSTOLOWSKI, KEVIN

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			0200157	

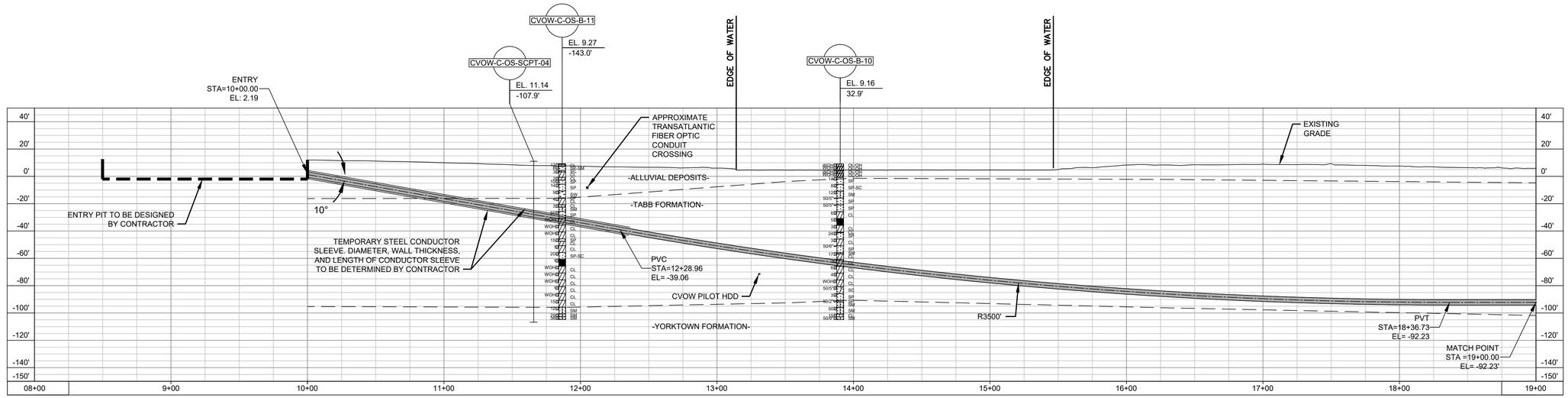
Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly



LAKE CHRISTINE "HDD 5 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 5 ENTRY" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Revisions

No.	Description	Date	By	Checked/Appr.
A	ISSUED FOR 60% REVIEW	03/25/22	AH	PWD
Project Number			B/M	H&A
0200157				

POSTOLOWSKI, KEVIN

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4

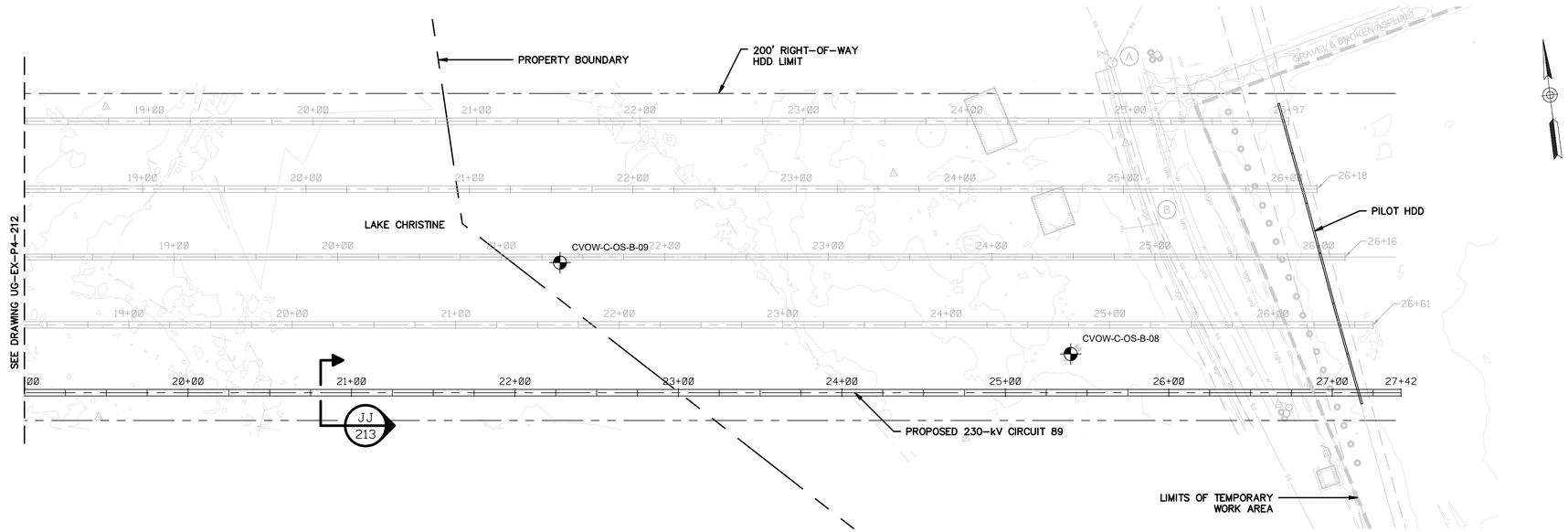
HDD 5 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	12 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

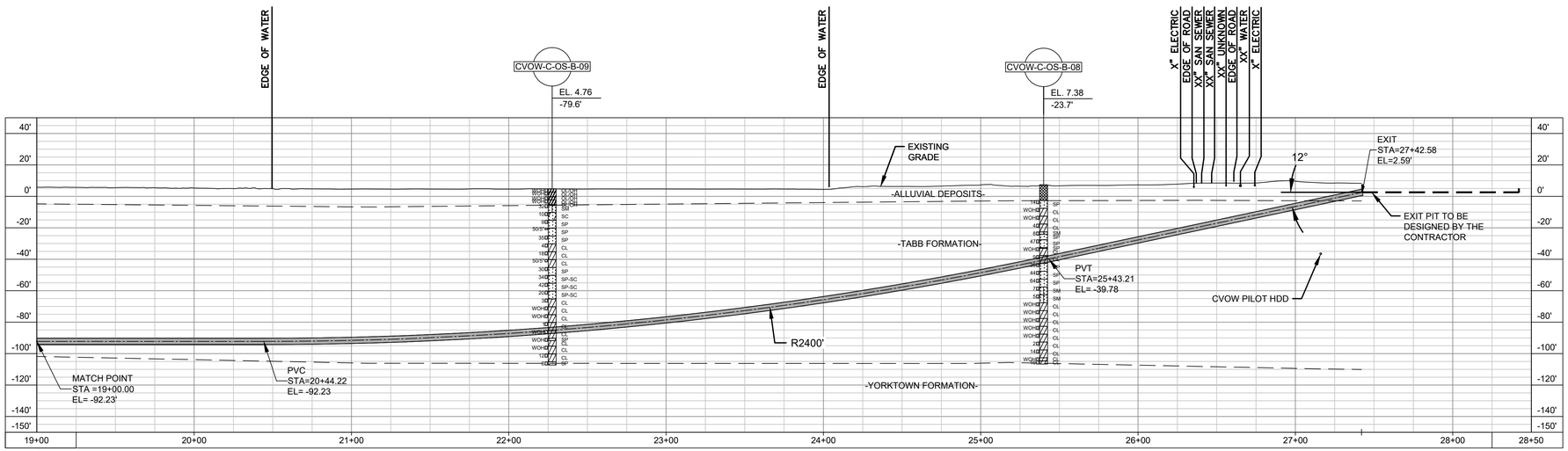
Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:27 PM

Drawing No.
UG-EX-P4-211

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:27 PM
POSTOLOWSKI, KEVIN



LAKE CHRISTINE "HDD 5 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 5 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 5 PLAN AND PROFILE (STA. 19+00 TO 28+50)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	13 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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PLOTTED: 3/28/2022 7:27 PM

Drawing No. UG-EX-P4-212

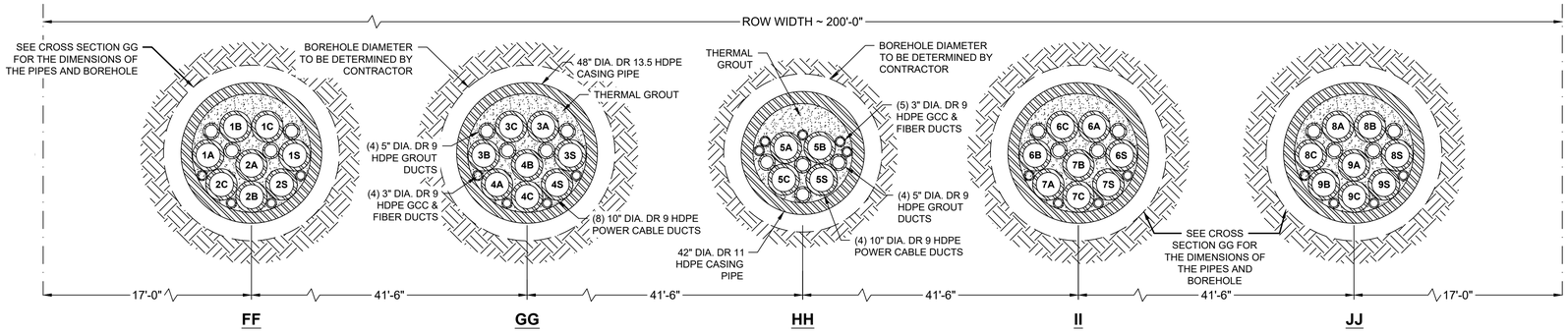
UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:27 PM
POSTOLOWSKI, KEVIN

No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.				B/M

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



230-kV HDD INSTALLATION
CROSS-SECTION

CONDUIT CONFIGURATION FOR ONSHORE HDD INSTALLATIONS
NOT TO SCALE

NOTES:

1. TEMPORARY STEEL SURFACE CASING PIPE IS NOT SHOWN AS A PART OF THE CROSS SECTIONS. CONTRACTOR SHALL DETERMINE THE SIZE AND LENGTH OF THE TEMPORARY STEEL SURFACE CASING PIPE BASED ON THEIR MEANS AND METHODS AND UNINSTALL THEM UPON COMPLETION OF THE PROJECT.

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

va811.com Dig With CARE

BURNS McDONNELL

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157
				B/M H&A

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD DETAILS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	14 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 7:27 PM

Drawing No. UG-EX-P4-213

UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 7:27 PM
POSTOLOWSKI, KEVIN

SHIP LOOSE ITEMS

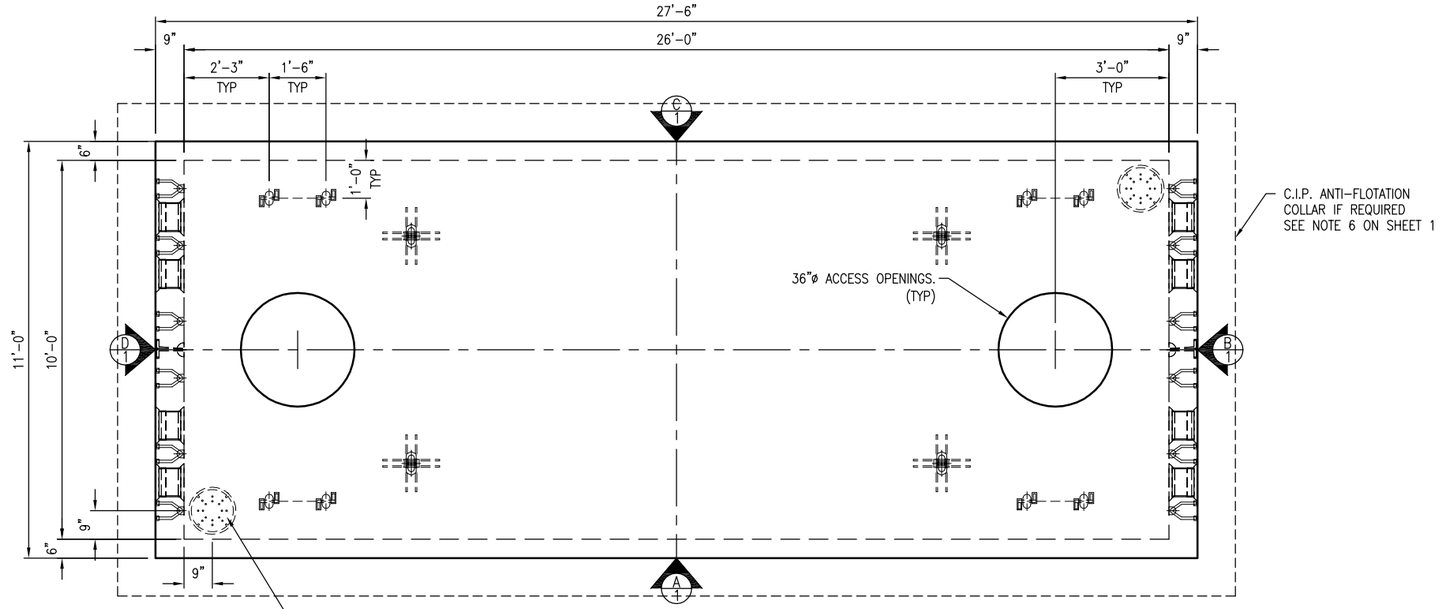
P/N	QTY	DESCRIPTION	AX #
	6 ROLLS	SEALANT - CS-102 CONSEAL	5439200
	EA.	½" - 13X12X2" HOOKED ANCHOR BOLT	5417004

STRUCTURE WEIGHTS

STRUCTURE WEIGHT		STRUCTURE TYPE
30.23 TONS	60,463 LBS	TOP SECTION
28.04 TONS	56,085 LBS	BASE SECTION

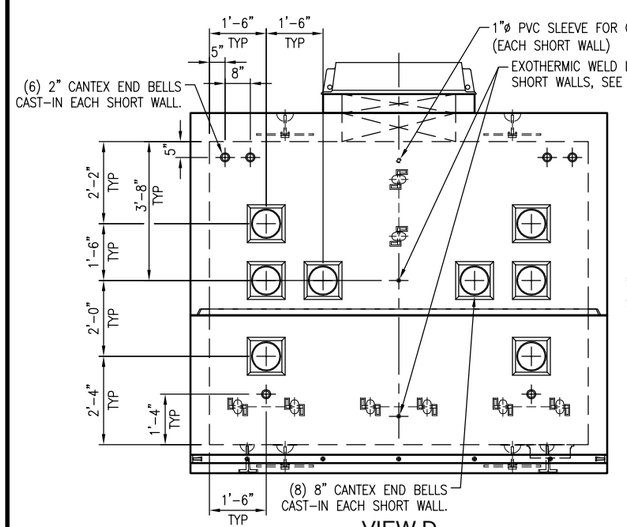
NOTES:
1. APPROXIMATELY 16 MILS. OF COOPERS CREEK SP WATERPROOFING TO BE APPLIED TO THE EXTERIOR OF BOTH THE TOP AND BASE SECTIONS. (EQUIVALENT TO SONNEDRIN HYDROCIDE 700)

COMMONWEALTH OF VIRGINIA
DUNCAN W. MACOMBER
No. 033548
3/27/19
PROFESSIONAL ENGINEER

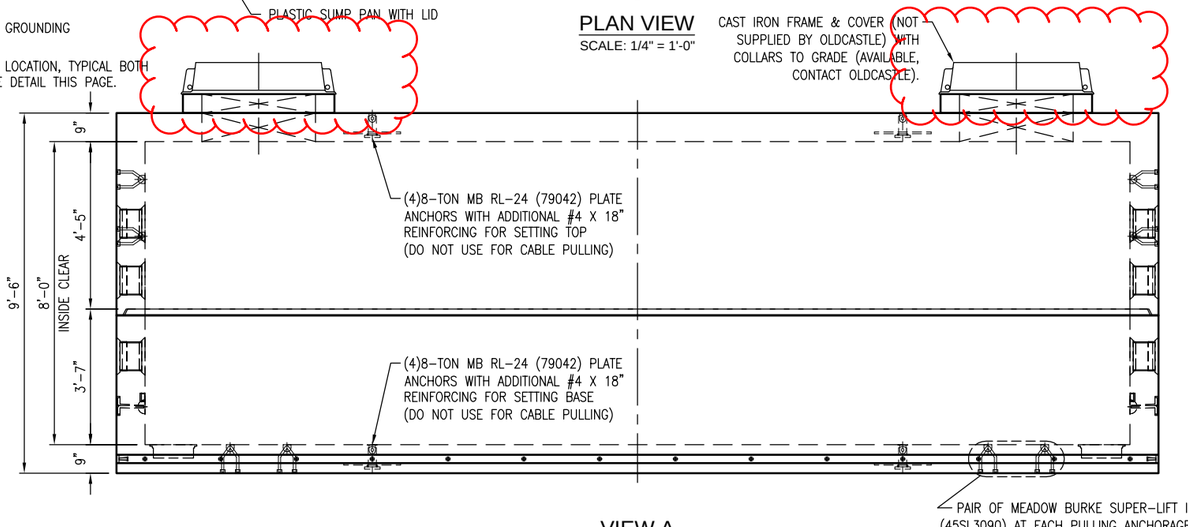


PLAN VIEW
SCALE: 1/4" = 1'-0"

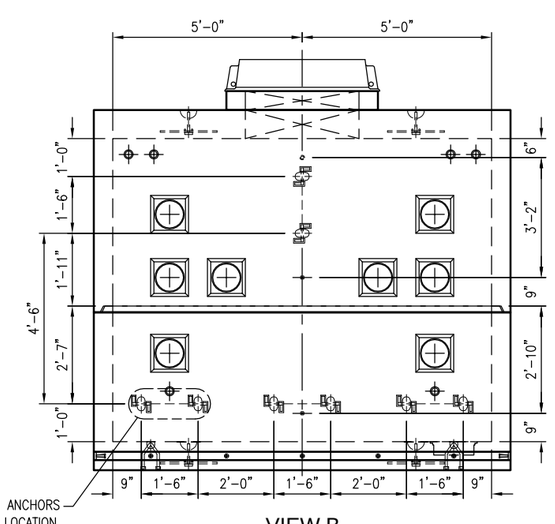
CAST IRON FRAME & COVER (NOT SUPPLIED BY OLDCASTLE) WITH COLLARS TO GRADE (AVAILABLE, CONTACT OLDCASTLE).



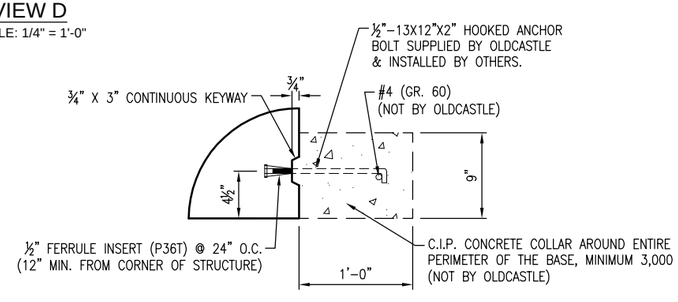
VIEW D
SCALE: 1/4" = 1'-0"



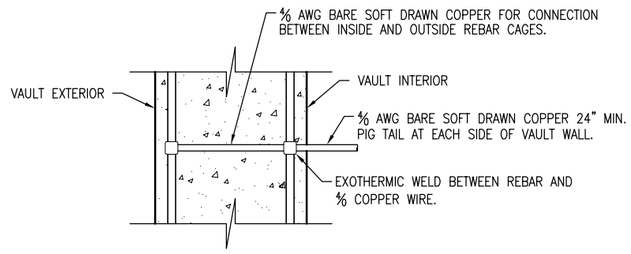
VIEW A
VIEW C IS TYPICAL
SCALE: 1/4" = 1'-0"



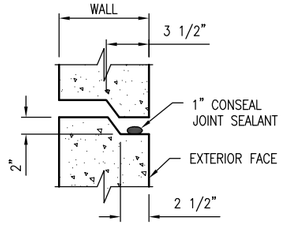
VIEW B
SCALE: 1/4" = 1'-0"



ANTI-FLOTATION COLLAR DETAIL
REQUIRED IF WATER TABLE IS ABOVE 3'-6" BELOW GRADE
*SEE NOTE 6 ON SHEET 1
SCALE: 3/4" = 1'-0"



EXOTHERMIC WELD DETAIL
SCALE: 1" = 1'-0"



WALL SHIPLAP JOINT DETAIL
N.T.S.

REVISION TABLE

REV	REV DATE	BY	DESCRIPTION

Oldcastle Infrastructure™
A CRH COMPANY
OPI-CHESAPEAKE-INFO@OLDCASTLE.COM
1401 TRIMBLE RD, EDGEWOOD, MD 21040 410-612-1213
5115 MASSAPONAX CHURCH RD, FREDERICKSBURG, VA 22407 540-898-5300

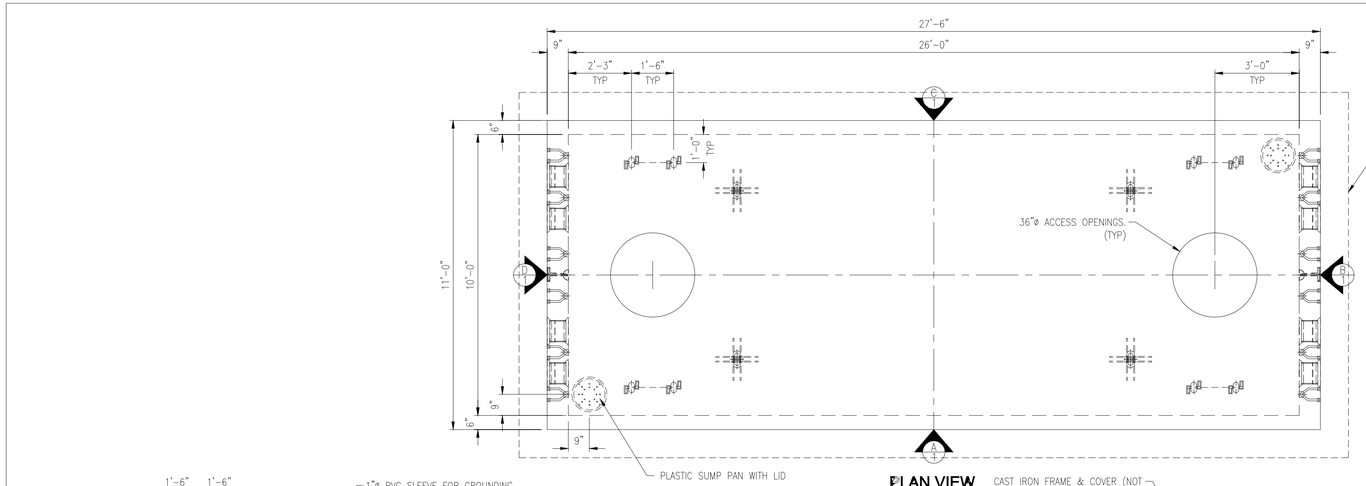
10'-0" x 26'-0" x 8'-0" TRANSMISSION VAULT

SUBMITTAL DRAWING
DOMINION ARLINGTION TRANSMISSION LINE
ARLINGTON, VA

CUSTOMER
DOMINION ENERGY

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
3/27/19	KB	AH	DWM	DWM	43733

DRAWING NUMBER	REVISION	SHEET
365-S043733-001	REV DATE	2 OF 3



PLAN VIEW
SCALE: 1/4" = 1'-0"

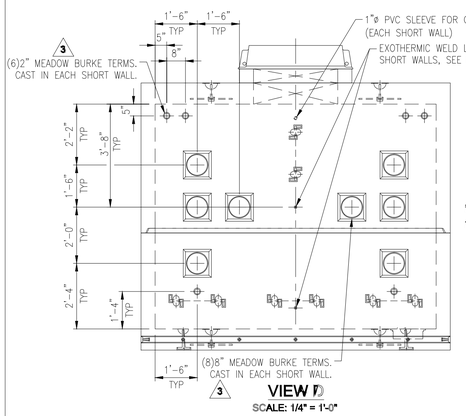
SHIP-LOOSE ITEMS

P/N	QTY	DESCRIPTION	AX #
	6 ROLLS	SEALANT - CS-102 CONSEAL	5439200
	EA.	½" - 13X12X2" HOOKED ANCHOR BOLT	5417004

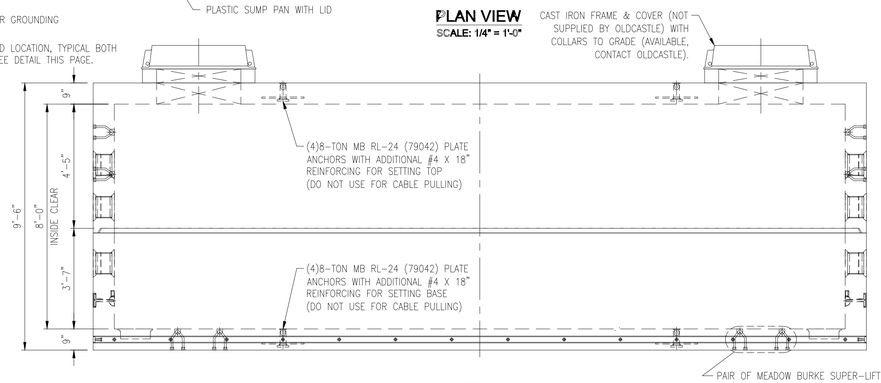
STRUCTURE WEIGHTS

STRUCTURE WEIGHT		STRUCTURE TYPE
30.23 TONS	60,463 LBS	TOP SECTION
28.04 TONS	56,085 LBS	BASE SECTION

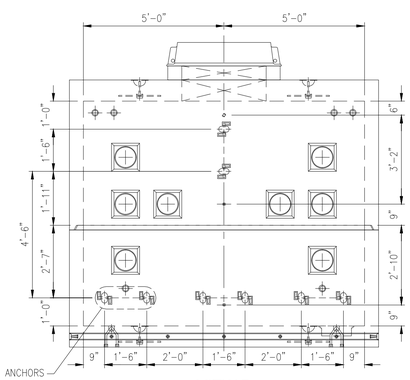
NOTES:
1. APPROXIMATELY 16 MILS. OF COOPERS CREEK SP WATERPROOFING TO BE APPLIED TO THE EXTERIOR OF BOTH THE TOP AND BASE SECTIONS. (EQUIVALENT TO SONNEDRIN HYDROCIDE 700)



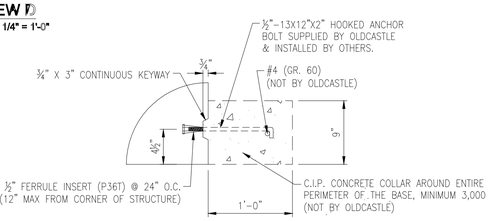
VIEW D
SCALE: 1/4" = 1'-0"



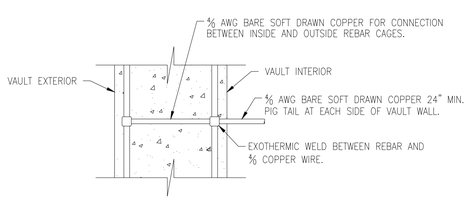
VIEW A
VIEW C IS TYPICAL
SCALE: 1/4" = 1'-0"



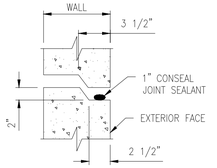
VIEW B
SCALE: 1/4" = 1'-0"



ANTI-FLOTATION COLLAR DETAIL
REQUIRED IF WATER TABLE IS ABOVE 3'-6" BELOW GRADE
*SEE NOTE 6 ON SHEET 1
SCALE: 3/4" = 1'-0"



EXOTHERMIC WELD DETAIL
SCALE: 1" = 1'-0"



WALL SHIPLAP JOINT DETAIL
N.T.S.

REVISION TABLE

REV	REV DATE	BY	DESCRIPTION
3	7/23/2019	DWM	CHANGED CANTEX END BELLS TO MEADOW BURKE TERMINATORS

NOTES:
1. MINIMUM DEPTH OF COVER, AS MEASURED AT ANY POINT OF THE BURIED SPLICE VAULTS, SHALL BE A MINIMUM OF 3'-0" AND A MAXIMUM OF 15'-0".
2. MINIMUM DESIGN LOAD RATING TO AASHTO HS-25.
3. CABLE RACKING SHALL BE PROVIDED BY CABLE INSTALLER.
4. REBAR WITHIN SPLICE CHAMBER WALLS SHALL NOT FORM A CLOSED LOOP AROUND ANY 8" CONDUIT OPENING.
5. ASSUMED WATER TABLE DEPTH 3'-0" BELOW GRADE.
6. SPLICE VAULT GROUND RING TO BE INSTALLED 6" ABOVE SPLICE VAULT FLOOR.
7. FOR BOTH SPLICE VAULT LIDS AND FRAMES, USE NEENAH FOUNDRY PART# Ø150T189

PRELIMINARY – NOT FOR CONSTRUCTION

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BURNS McDONNELL

Oldcastle Infrastructure™
A CRH COMPANY
CP-CHESAPEAKE-INFO@OLDCASTLE.COM
1401 TRIMBLE RD, EDGEWOOD, MD 21040 410-612-1213
5115 MASSAPONAX CHURCH RD, FREDERICKSBURG, VA 22407 540-898-6300

10'-0" x 26'-0" x 8'-0" TRANSMISSION VAULT

SUBMITTAL DRAWING
DOMINION ARLINGTION TRANSMISSION LINE
ARLINGTON, VA

CUSTOMER
DOMINION ENERGY

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
3/27/19	KB	AH	DWM	DWM	43733

DRAWING NUMBER	REVISION	SHEET
365-S044780-001	3 REV DATE 7/23/19	2 OF 3

Dominion Energy®

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
OVERALL PROJECT
SPLICE VAULT DETAILS

	Name	Date	Project No.	Sheet No.
Designed by:	ATH (BMCD)	04/15/22	82466C.1.7.1	Ø1 OF Ø3
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	
			A	

Cad File Name UG-EX-3.DWG
PLOTTED: 4/13/2022 1:59 PM

Drawing No.
UG-EX-301

UG-EX-3.DWG
PLOTTED: 4/13/2022 1:59 PM
DODD, PATRICK W

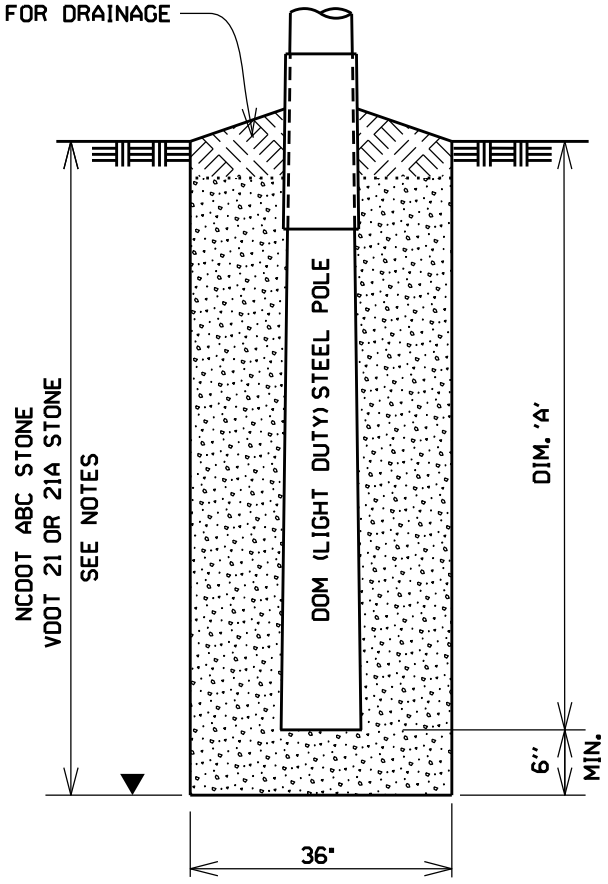
No.	Date	By	Description	Project Number
A	04/15/2022	ATH	ISSUED FOR 60% REVIEW	128578
	Checked/Appr.			B/M
		PWD		B/M

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

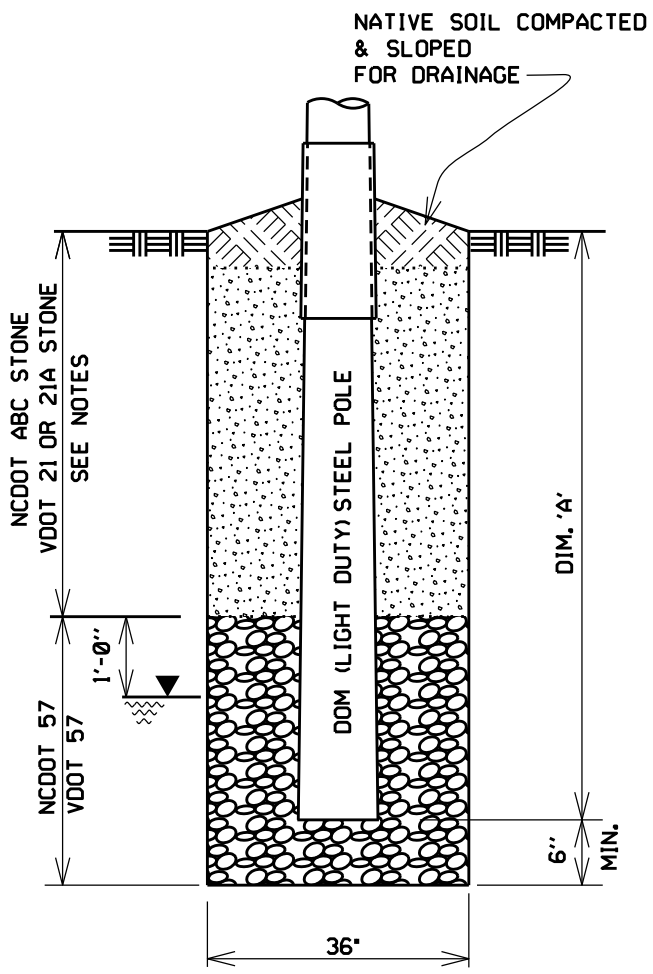
DODD, PATRICK W

\\BMCD\DFS\CLIENTS\TND\DOMINIONENR_UNDERGROUND\128578.CVDWG\DESIGN\UNDERGROUND\CADD\WORKING\P8



POLE INSTALLATION: DRY HOLE

MINOR WATER REMOVED AND THE EXCAVATION CAN BE MAINTAINED DRY DURING THE PLACEMENT OF BACKFILL



POLE INSTALLATION: WET HOLE

WATER LEVEL IN THE EXCAVATION CANNOT BE MAINTAINED AT THE BOTTOM OF THE HOLE DURING THE PLACEMENT OF BACKFILL

DIM. 'A' = 10% POLE HT + 2'

COMPACTION PROCEDURES FOR BOTTOM OF HOLE AND ANNULUS:

1. SPECIFIED BACKFILL MATERIAL SHALL BE PLACED IN 4 INCH LIFTS.
2. EACH LAYER IS TO BE COMPACTED AND INTERLOCKED WITH THE SIDES OF THE EXCAVATION USING MECHANICAL OR PNUEMATIC TAMPERS. A MINIMUM OF 3 PASSES SHALL BE MADE OVER EACH LAYER. ADDITIONAL PASSES ARE TO BE MADE IF DISPLACEMENT OF THE BACKFILL IS STILL EVIDENT ON THE THIRD PASS.
3. ROD EXTENSIONS SHALL BE ADDED TO THE TAMPER, AS REQUIRED, IN ORDER FOR THE OPERATOR TO MAINTAIN DOWNWARD PRESSURE ON THE UNIT AT ALL TIMES.

▼ - WATER LEVEL
NCDOT - NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
VDOT - VIRGINIA DEPARTMENT OF TRANSPORTATION

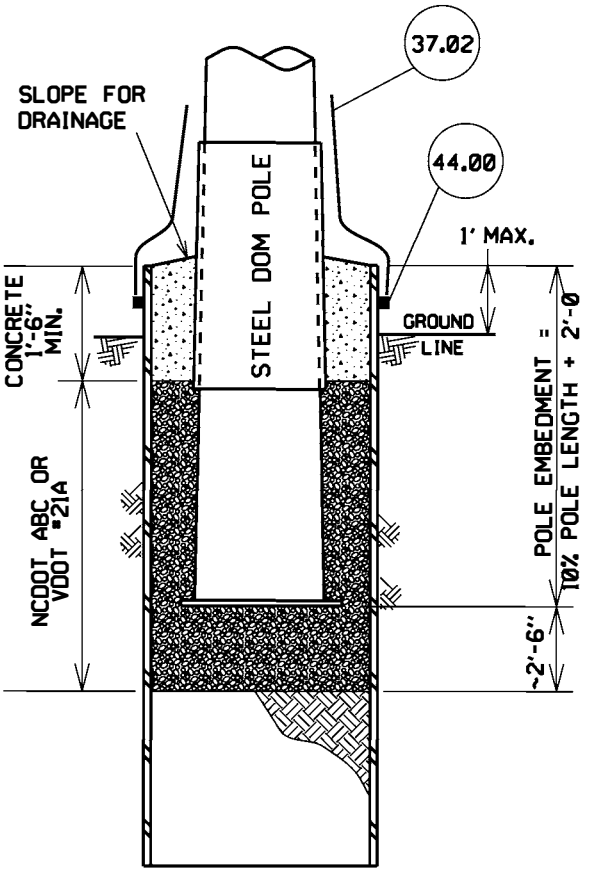
Transmission Construction

DOM STEEL POLE INSTALLATION DETAILS DIRECT EMBEDDED W/ ENGR BACKFILL

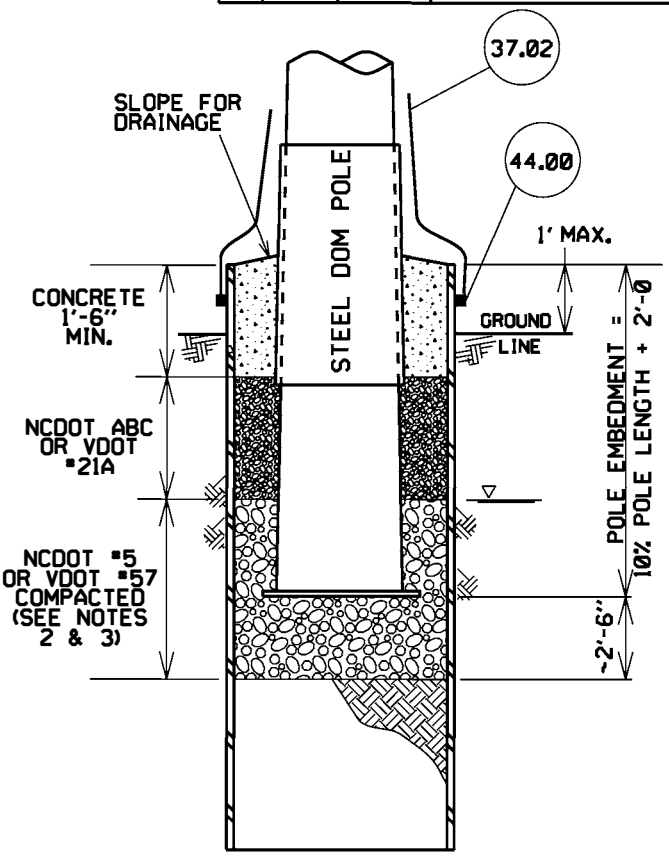
Dominion Energy
701 E. Cary Street
Richmond, VA 23219

	DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
ORIGINAL	JPA	KCH	DLC	05/20/14	90.035
REVISION					CAD NO. 90.035

B/M REQ'D FOR ONE INSTALLATION			
1	37.02	42177693	WIRE, TIN, CCS, #4, SOLID
2	44.00	57823000	CONN., TRF. GROUND
1	733.12	42330225	PIPE PILE, GALV STL 36" OD X 12"



POLE INSTALLATION: DRY HOLE
NO WATER INSIDE THE PILE
DURING THE PLACEMENT
OF BACKFILL



POLE INSTALLATION: WET HOLE
WATER INSIDE THE PILE
DURING THE PLACEMENT
OF BACKFILL

GENERAL NOTES:

1. CLEAN OUT PIPE PILE TO REQ'D DEPTH: 10% POLE LENGTH + 2'-0" + 2'-6" MIN.

2. ADD SPECIFIED COMPACTED STONE BACKFILL - MINIMUM OF 2'-6" BELOW THE BASE PLATE OF THE POLE. WHERE WATER IS PRESENT INSIDE THE PIPE PILE, NCDOT #5 OR VDOT #57 SHALL BE PLACED TO THE LEVEL OF THE WATER.

3. BACKFILL MATERIAL SHALL BE PLACED IN 4 INCH LIFTS. EACH LAYER SHALL BE COMPACTED USING MECHANICAL OR PNUEMATIC TAMPERS. A MINIMUM OF 3 PASSES SHALL BE MADE OVER EACH LAYER. ADDITIONAL PASSES ARE TO BE MADE IF DISPLACEMENT OF THE BACKFILL IS STILL EVIDENT ON THE THIRD PASS. ROD EXTENSIONS SHALL BE ADDED TO THE TAMPER, AS REQUIRED, IN ORDER FOR THE OPERATOR TO MAINTAIN DOWNWARD PRESSURE ON THE UNIT AT ALL TIMES.

4. PLACE CONCRETE BACKFILL AS SPECIFIED. CONCRETE TO BE A MINIMUM OF 3500 PSI AT 28 DAYS.

5. EXISTING GROUND LEADS TO BE ATTACHED TO POLE AS DETAILED IN DWG 60.201.

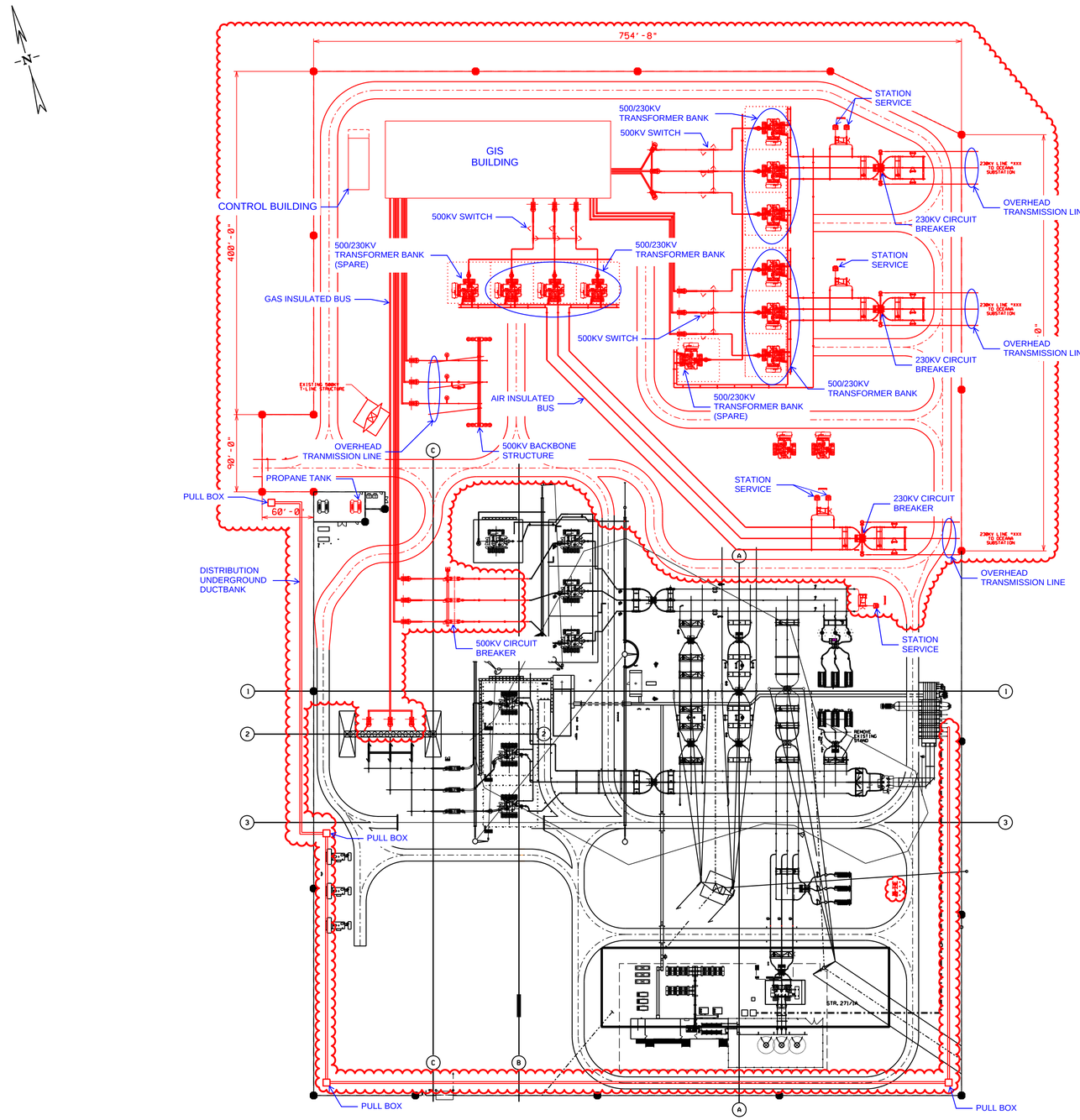
Transmission Construction

DOM POLE INSTALLATION DETAILS / PIPE PILE

Dominion
701 E. Cary Street
Richmond, VA 23219

	DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
ORIGINAL	SLS		CNH	5/1/20	
REVISION					CAD NO.

$DGNSPEC$
TESBORD1



CONCEPTUAL ONLY
NOT FOR CONSTRUCTION

No.	Date	Checked/Appr.	By	Description	Project Number	B/M
25	-	-	CBB(BMC)	EXPANDED 500/230KV YARD AND ADDED 3 NEW FENTRESS LINE		
				PRELIMINARY	CVDW	-
24	01-14-18	LWF(BMC)	BYO	REPLACE LINE 271 CCVT M.U. BOX	94-6040	16482
23	01-08-18	LWF(BMC)	BYO	I/S GEN. MONITOR, KIOSK LIGHTS AND FENCE MODIFICATIONS	94-8058	15989
22	09-30-17	JWC(BMC)	TWV	NEW OIL CONTAINMENT LINER & OUTFALLS	99-2397	11042
21	07-02-17	AAM(BMC)	TWV	R/P TX*3 500-230 KV	94-4766	13404
20	02-23-16	BMC	JDH	INSTALL SECURITY KIOSK	94-4654V10	12799
19	1-31-15	DMJ	DMB	INSTALL 230KV CAP BANK	99-2588	11193
18	05-29-15	BMC	TWV	INSTALL STATCOM	99-2397	11042
17	01-04-15	BMC	JDH	SECURITY FENCE	94-4654	10808
16	03-30-14	BMC	TWV	R/P LINE 588 WAVE TRAP	99-2398	2414
15	03-30-14	BMC	TWV	R/P 230 KV SW'S & BREAKERS	94-4050	7237

Revisions

References	Library	Cell Name	B/M Assembly

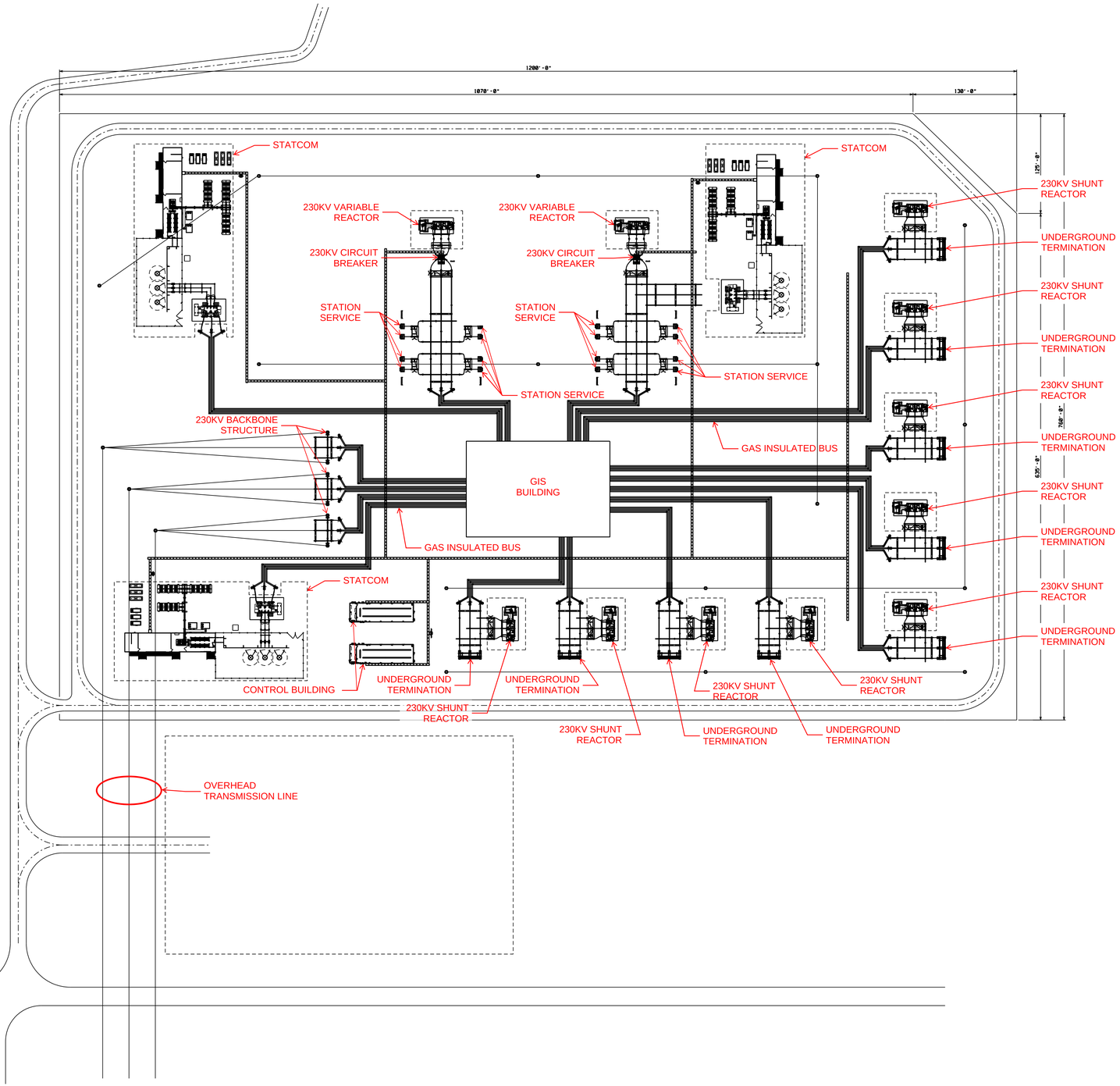
USER: jpwerner

Dominion Energy

GENERAL ARRANGEMENT PLAN
FENTRESS SUBSTATION
CHESAPEAKE, VIRGINIA

	Name	Date	Project No.	Sheet No.
Designed by:				1 OF 1
Approvals			Scale	
Approvals			1"=70'-0"	
		B/M No.	Revisions	
			23 24 14 15 16 17 18 19 20 21 22	
Cad File Name	1244094e.dgn		Drawing No.	
PLOTTED:	10/1/2021		1244-094	

BORDER2



CONCEPTUAL ONLY
NOT FOR CONSTRUCTION

Dominion Energy

GENERAL ARRANGEMENT PLAN
HARPERS SWITCHING STATION

	Name	Date	Project No.	Sheet No.
Designed by:				1 OF 1
Approvals			Scale	
Approvals			1"=60'-0"	
		B/M No.	Revisions	

Cad File Name XXXX001a.dgn
PLOTTED: 9/30/2021
Drawing No. XXXX-GA

$FILENAME$
PLOTTED: 9/30/2021
USER: dsmiller

No.	Date	By	Description	Project Number B/M
		Checked/Appr.		

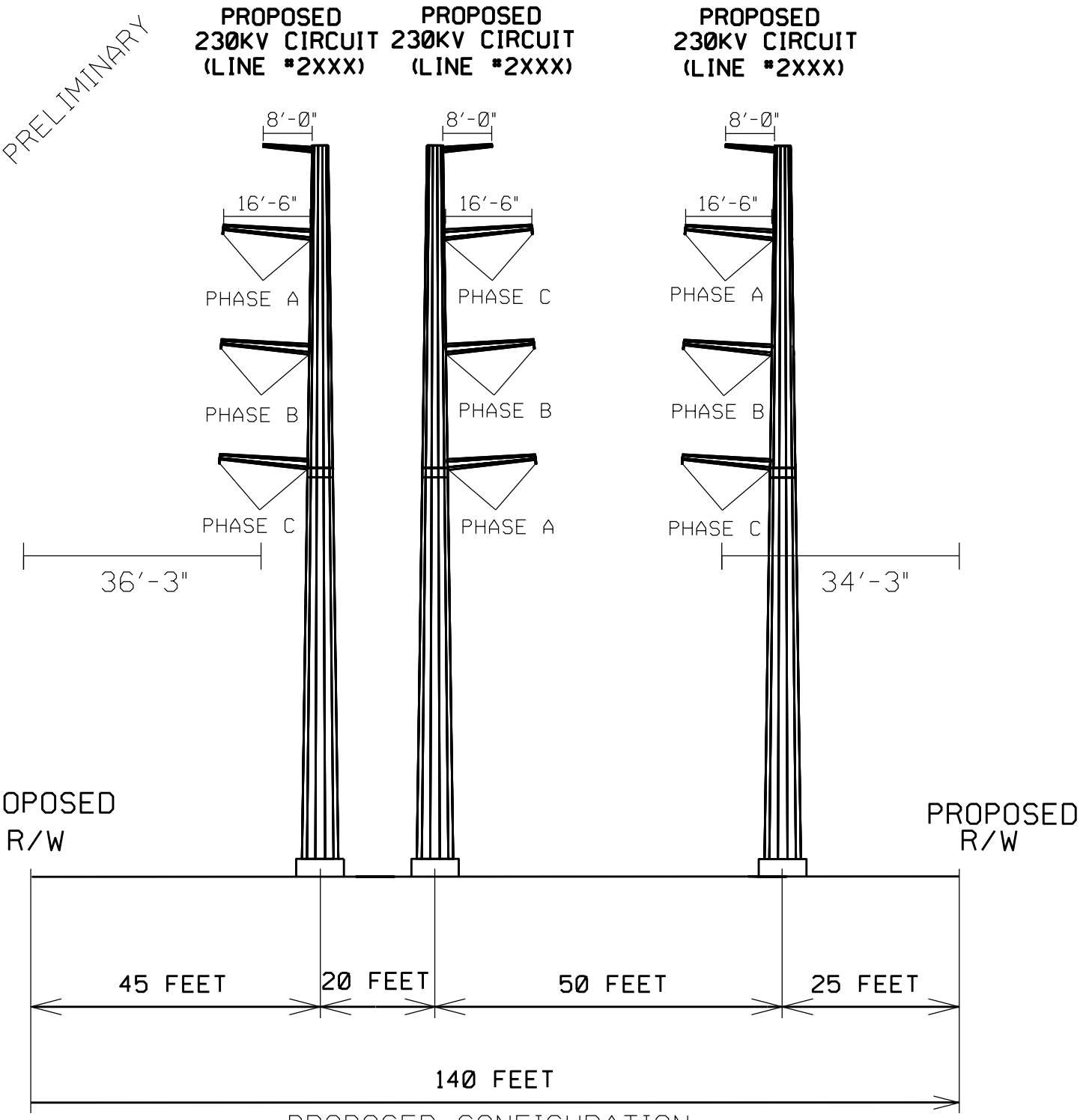
Revisions

USER: dsmiller

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

TYPICAL CONFIGURATION FOR GREENFIELD AREAS

PRELIMINARY



PROPOSED CONFIGURATION

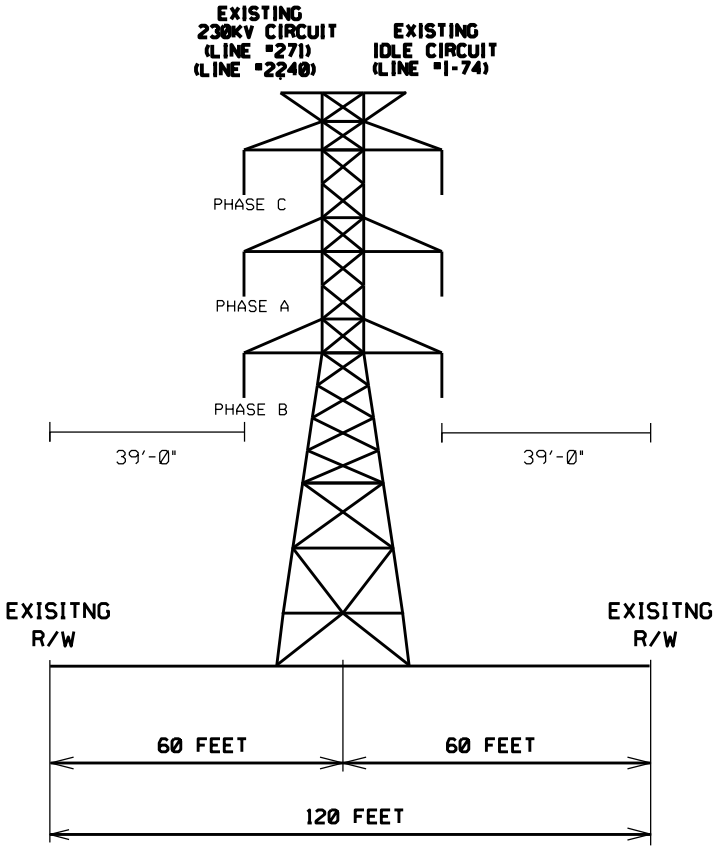
TYPICAL CORRIDOR LOOKING TOWARD HARPERS

NOTE: Information contained on drawing is to be considered preliminary in nature and subject to change based on final design.

$DGNSPEC$

TYPICAL CONFIGURATION

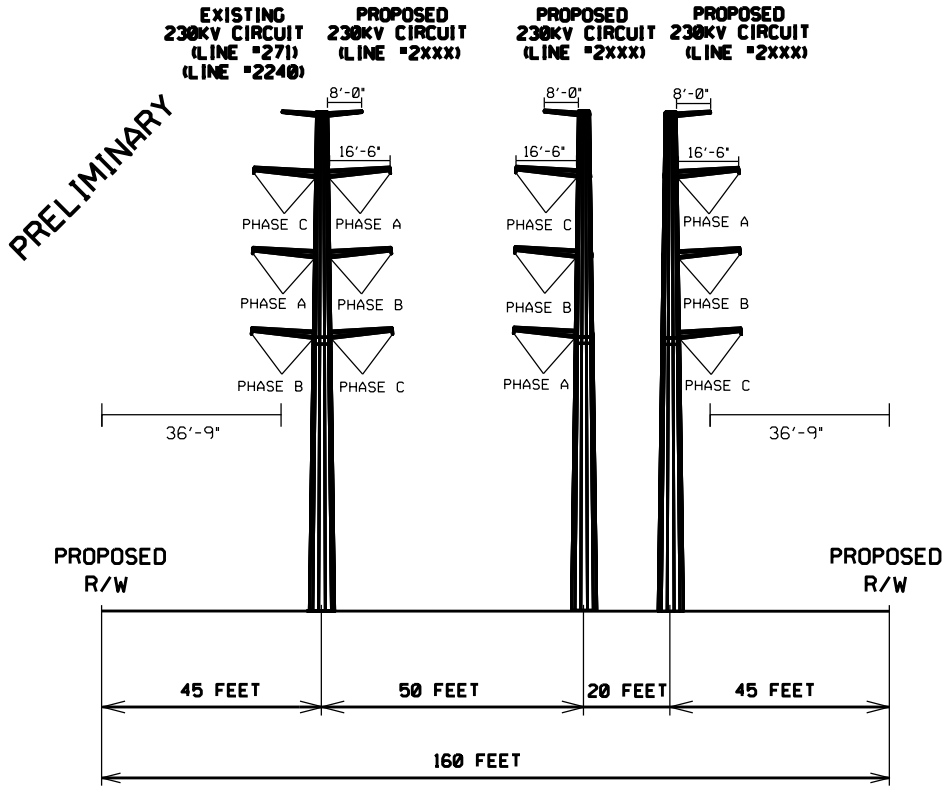
REBUILD SEGMENTS (LINE #271 & LINE #2240)



EXISTING CONFIGURATION
TYPICAL CORRIDOR LOOKING TOWARD HARPERS

TYPICAL CONFIGURATION

REBUILD SEGMENTS (LINE #271 & LINE #2240)

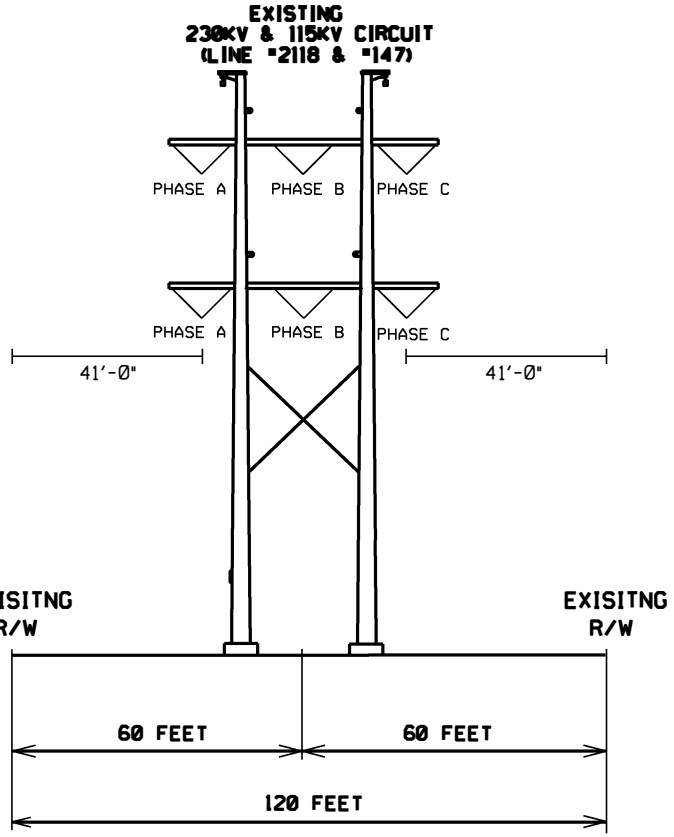


PROPOSED CONFIGURATION
TYPICAL CORRIDOR LOOKING TOWARD HARPERS

NOTE: Information contained on drawing is to be considered preliminary in nature and subject to change based on final design.

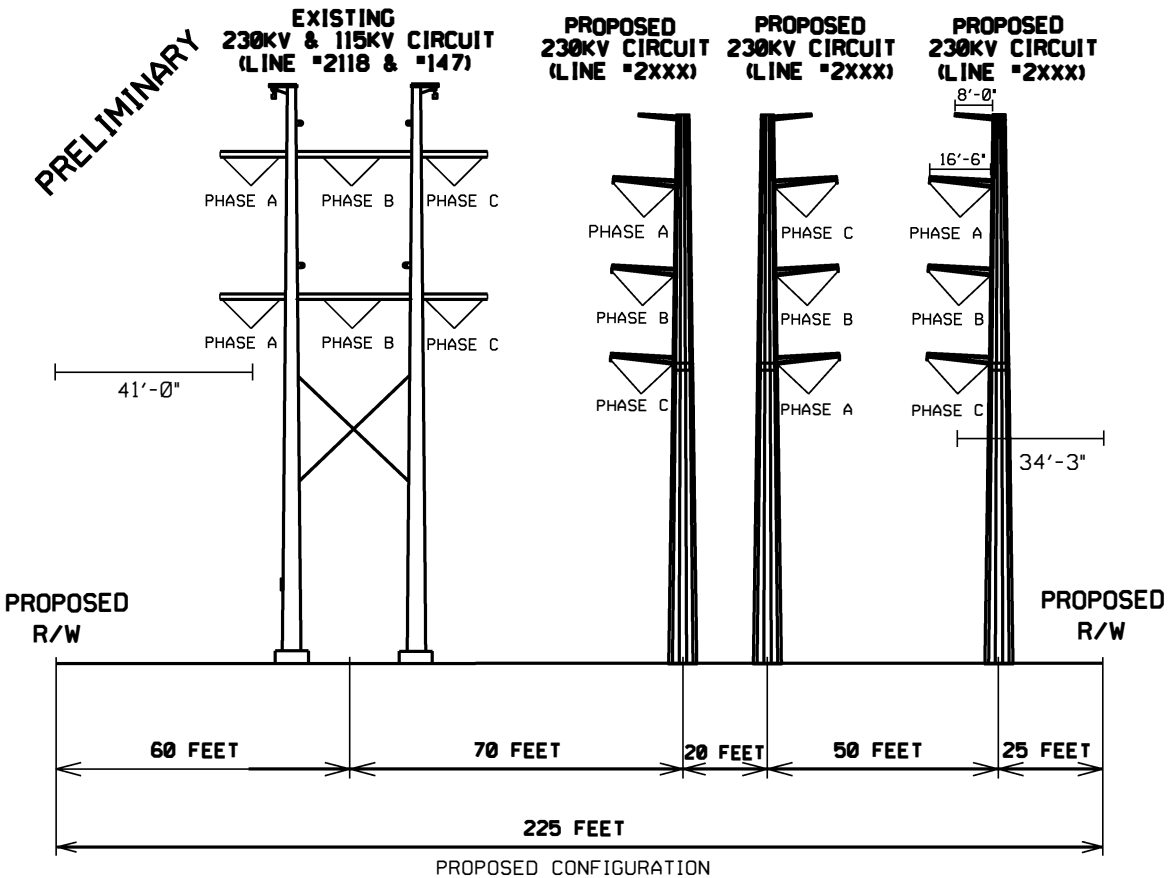
ATTACHMENT II.A.5.c

TYPICAL CONFIGURATION
ROUTE SEGMENTS ADJACENT TO LINE #2118/#147



EXISTING CONFIGURATION
TYPICAL CORRIDOR LOOKING TOWARD HARPERS

TYPICAL CONFIGURATION
ROUTE SEGMENTS ADJACENT TO LINE #2118/#147



PROPOSED CONFIGURATION
TYPICAL CORRIDOR LOOKING TOWARD HARPERS

NOTE: Information contained on drawing is to be considered preliminary in nature and subject to change based on final design.

COASTAL VIRGINIA OFFSHORE WIND
230–kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE

ISSUED FOR BID
NOT FOR CONSTRUCTION

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	1 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG–EX–P–200.DWG
PLOTTED: 6/27/2022 2:25 PM

Drawing No.
UG–EX–P3–200

UG–EX–P–200.DWG
PLOTTED: 6/27/2022 2:25 PM
GARDNER, ZACHARY

No.	Description	By	Date	Checked/Appr.
Project Number	B/M			
0200157	H&A	A.	03/25/2022	AH CL.
				ISSUED FOR 60% REVIEW
0200157	H&A	B	07/15/2022	AH CL.
				ISSUED FOR BID
				JGK/P.ZG

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

GARDNER, ZACHARY
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0200157\CAD

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 24168531420000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   - 7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   - 7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
     - 7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
     - 7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
    - 12.1. USACE PERMITS
    - 12.2. CITY OF ____
    - 12.3. COUNTY OF ____
    - 12.4. DEWATERING PERMITS
    - 12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

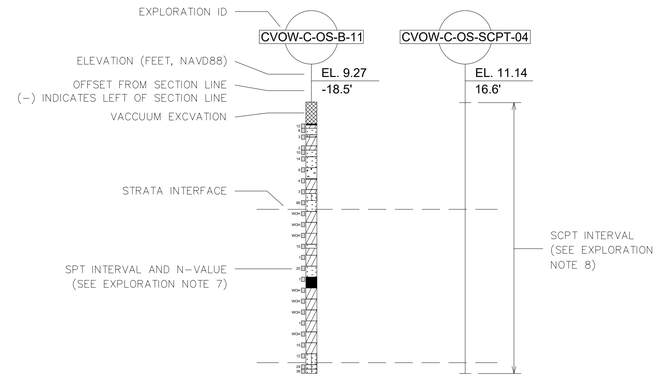
HORIZONTAL DIRECTIONAL DRILL NOTES:

1. CONTRACTOR SHALL EMPLOY APPROPRIATE MEASURES AND DRILLING PRACTICES TO ELIMINATE GROUND SURFACE SETTLEMENT, REDUCE SUBSURFACE DISTURBANCE AND ENSURE THE INTEGRITY OF THE CONDUIT BUNDLE AGAINST EXCESSIVE DEFLECTION, PULL LOADS, STRESSES AND BUCKLING DURING PULLBACK. EXAMPLES OF SUCH MEASURES MAY INCLUDE BUT NOT BE LIMITED TO:
   - A. MAINTAIN NEUTRAL BUOYANCY OF THE CONDUIT BUNDLE DURING PULLBACK.
   - B. USE OF TEMPORARY STEEL SURFACE CASINGS.
   - C. USE OF 'MUD ENGINEER' TO MONITOR THE DRILL FLUID PROPERTIES.
2. UPON COMPLETION OF FINAL REAM, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO REMOVE THE EXISTING DRILL CUTTINGS FROM THE BOREHOLE AND MAINTAIN THE STABILITY OF THE BOREHOLE DURING PULLBACK. THE DRILL MUD SHALL BE MONITORED DURING PULLBACK AND EVERY EFFORT SHALL BE MADE TO REDUCE THE FRICTION AND DRAG FORCES SO AS TO LOWER THE PULLING LOAD ON THE PRODUCT BUNDLE.
3. CONTRACTOR SHALL EMPLOY APPROPRIATE CONTINGENCY MEASURES TO ADDRESS INADVERTENT DRILL FLUID RETURNS ON LAND OR UNDERWATER DURING THE DRILLING PROCESS. IN CASE OF INADVERTENT DRILL FLUID RETURNS, CONTINGENCY MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO DRILL FLUID IDENTIFICATION, CONTAINMENT, MITIGATION, EXTRACTION, STORAGE, TRANSPORTATION AND CLEAN-UP.

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW		WELL GRADED SANDS, GRAVELLY SANDS
SP		POORLY GRADED SANDS, GRAVELLY SANDS
SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH		INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT		PEAT AND OTHER HIGHLY ORGANIC SOILS
BR		BEDROCK
NR		NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

ISSUED FOR BID
NOT FOR CONSTRUCTION

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	2 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:29 PM

Drawing No.
UG-EX-P3-201

UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:29 PM
GARDNER, ZACHARY

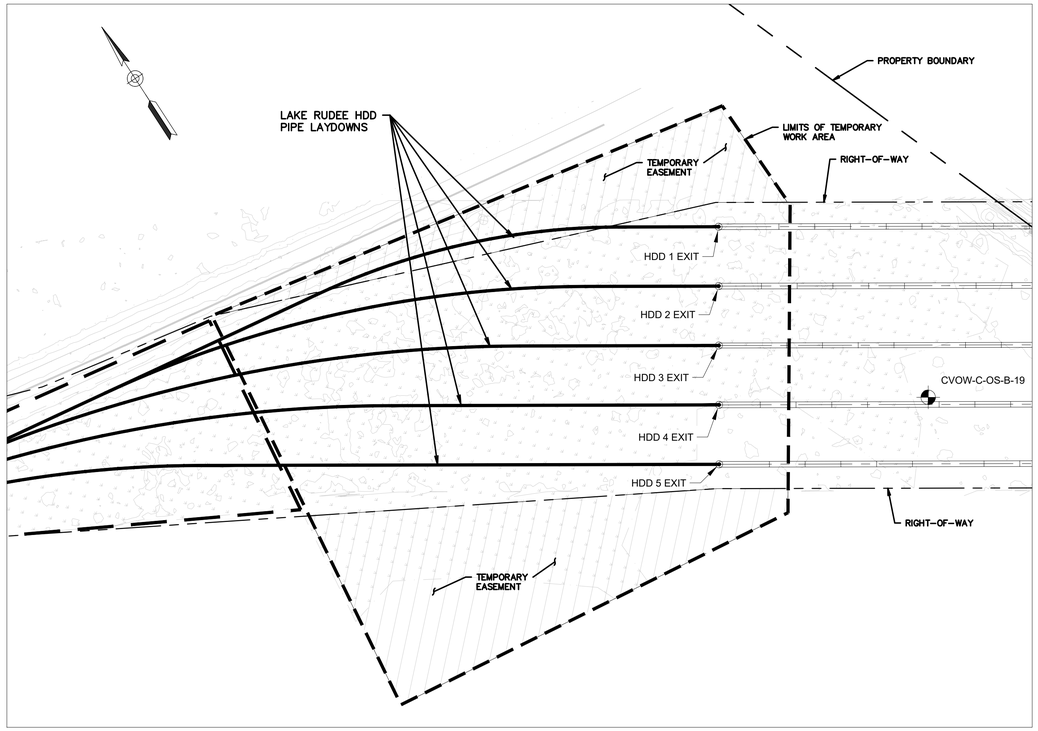
No.	Description	Date	By	Checked/Appr.
Project Number	0200157		B/M	
A	ISSUED FOR 60% REVIEW	03/25/22	AH	CL
B	ISSUED FOR BID	07/15/22	AH	CL

Revisions

GARDNER, ZACHARY

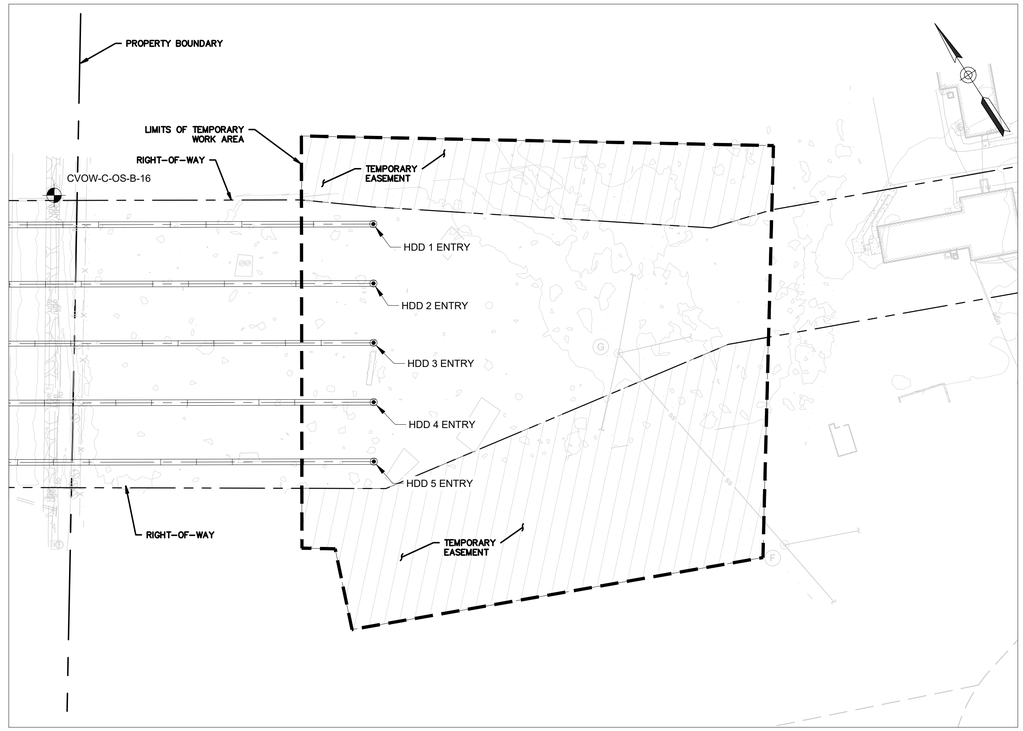
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)		Pipe Stand Foundation Cells (Spread)		Foundation Cells for Other Typical Structures		Steel Detail & Assembly
							(Pier)	(Spread)	



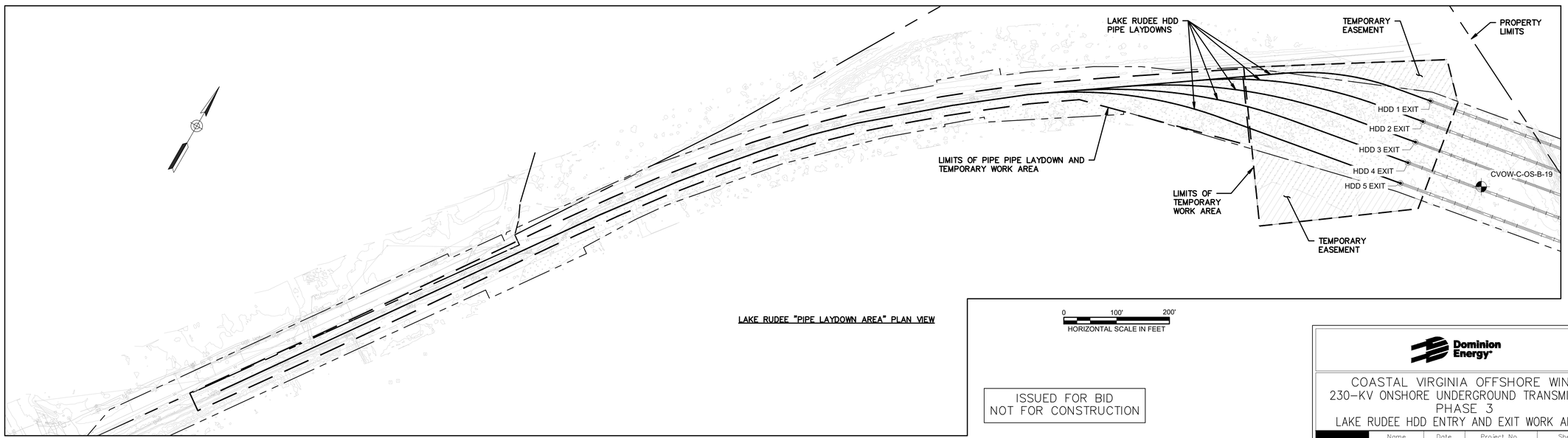
LAKE RUDEE "HDD EXIT TEMPORARY WORK AREA" PLAN VIEW

0 50' 100'
HORIZONTAL SCALE IN FEET



LAKE RUDEE "HDD ENTRY TEMPORARY WORK AREA" PLAN VIEW

0 50' 100'
HORIZONTAL SCALE IN FEET



LAKE RUDEE "PIPE LAYDOWN AREA" PLAN VIEW

0 100' 200'
HORIZONTAL SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
LAKE RUDEE HDD ENTRY AND EXIT WORK AREAS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	3 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:06 PM

Drawing No. UG-EX-P3-202

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:06 PM
GARDNER, ZACHARY

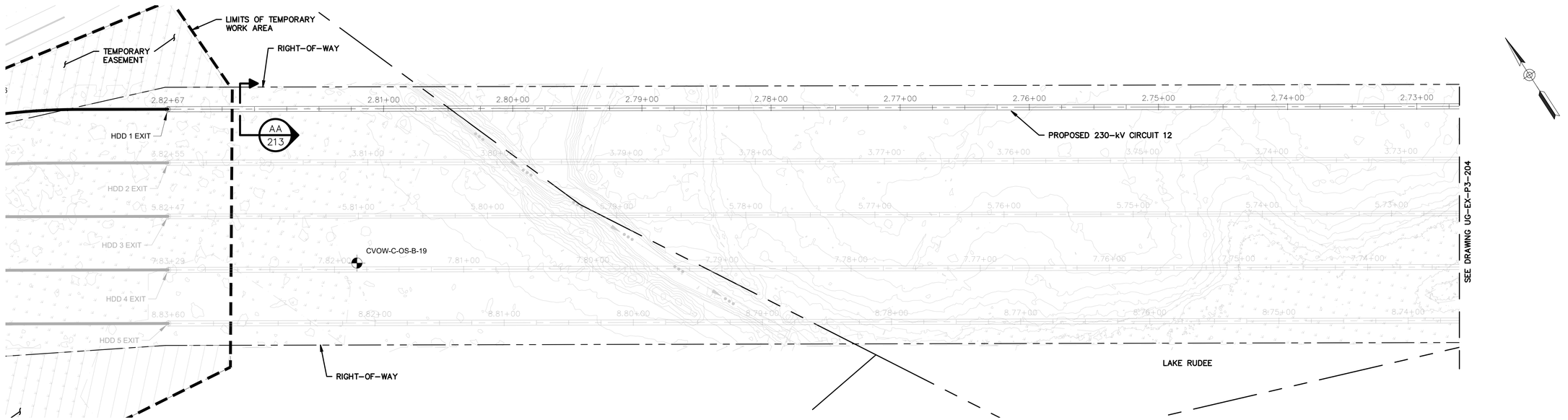
No.	Date	By	Description	Project Number	B/M
A	03/25/22	KP/JGZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	CL	ISSUED FOR BID	0200157	H&A

Revisions

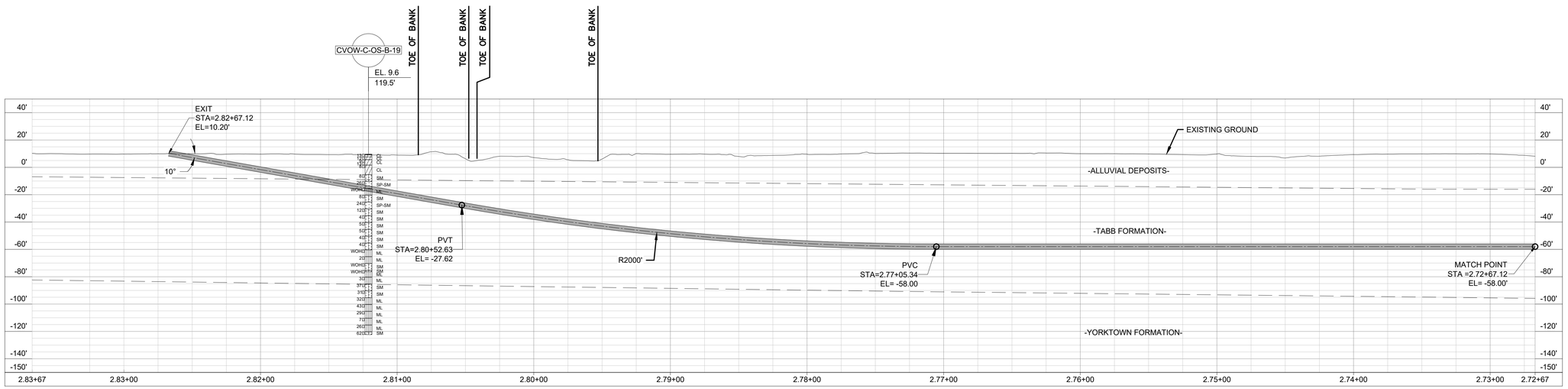
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly



LAKE RUDEE "HDD 1 EXIT" PLAN VIEW



LAKE RUDEE "HDD 1 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-518 THROUGH UG-EX-P3-521.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET 0 40' 80'

VERTICAL SCALE IN FEET 0 40' 80'

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 1 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	4 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:07 PM

Drawing No. UG-EX-P3-203

No.	Date	By	Checked/Appr.	Description	Project Number
A	03/25/22	KP JG ZC	AH CL	ISSUED FOR 60% REVIEW	0200157 H&A B/M
B	07/15/22	JG KP ZC	AH CL	ISSUED FOR BID	0200157 H&A

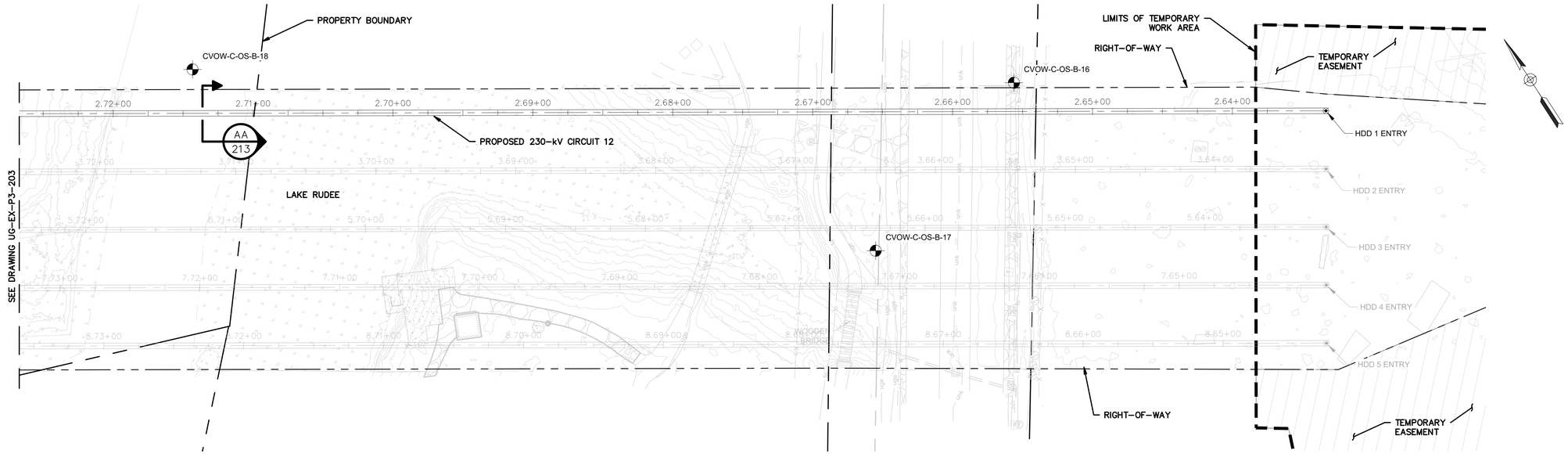
Revisions

GARDNER, ZACHARY

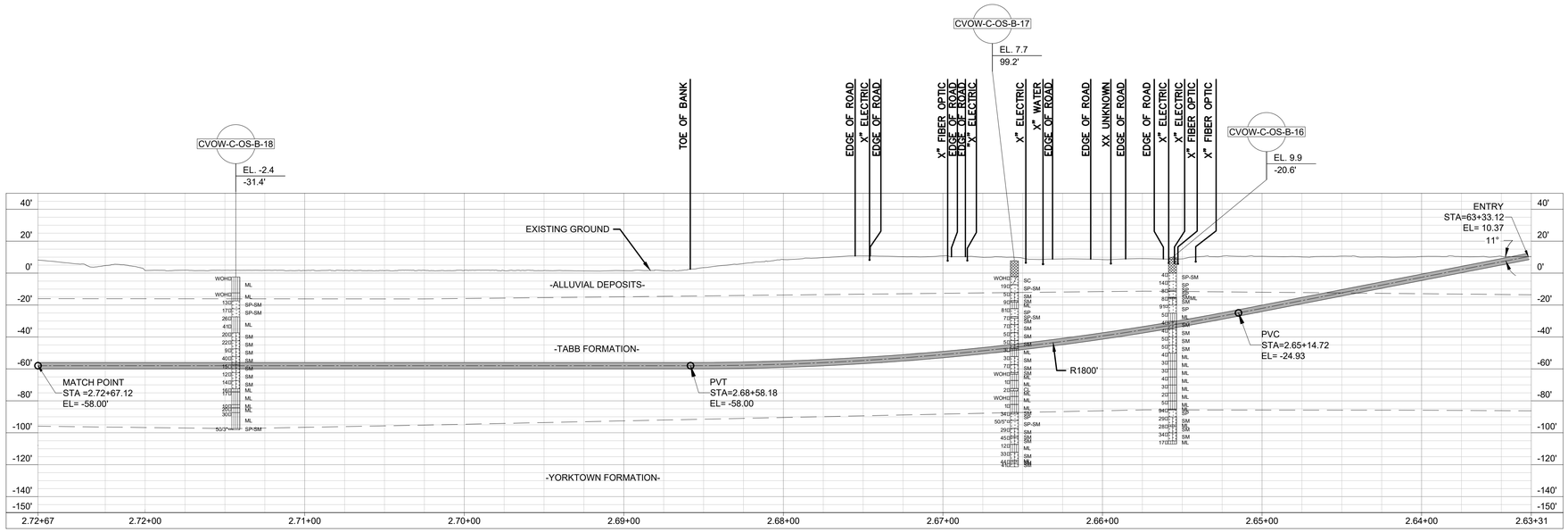
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:07 PM
GARDNER, ZACHARY



LAKE RUDEE "HDD 1 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 1 ENTRANCE" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-518 THROUGH UG-EX-P3-521.

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 1 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	5 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:07 PM

Drawing No.
UG-EX-P3-204

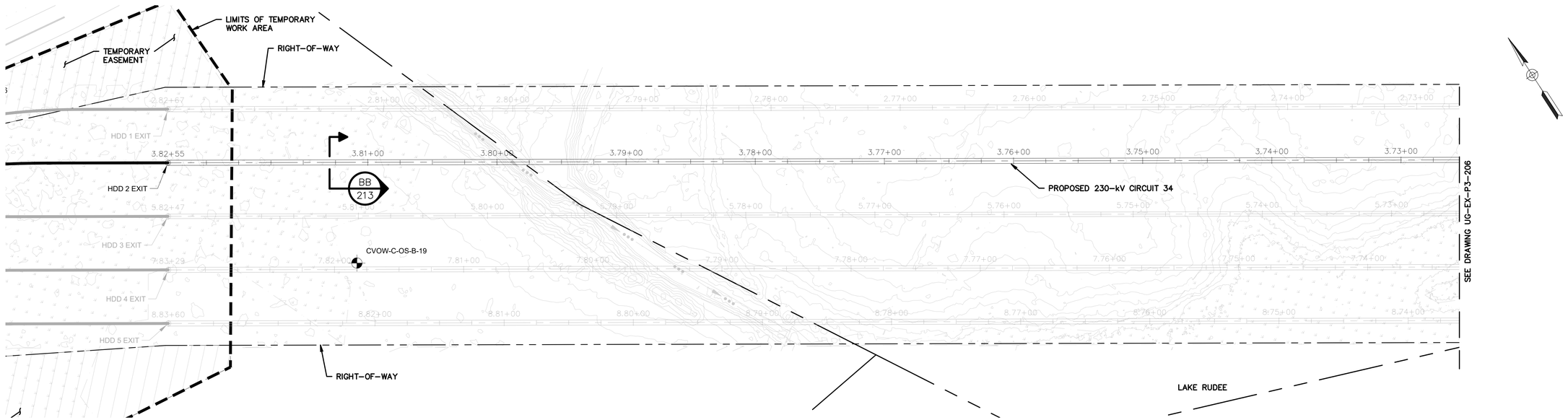
UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:07 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 B/M
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A
		KP JG ZG		H&A
		JG KP ZG		

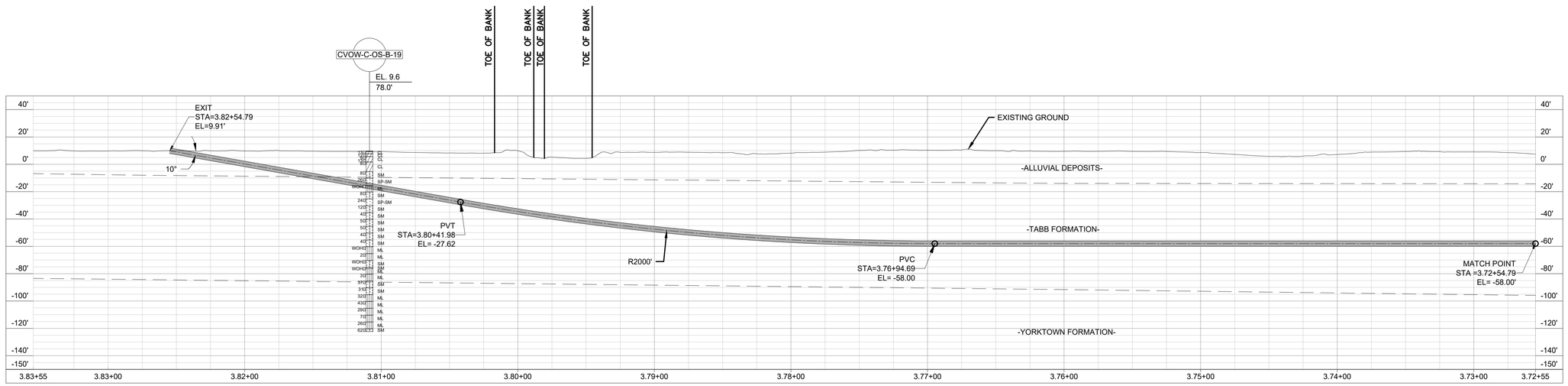
Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE RUDEE "HDD 2 EXIT" PLAN VIEW



LAKE RUDEE "HDD 2 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-534 THROUGH UG-EX-P3-537.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 2 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	6 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:08 PM

Drawing No. UG-EX-P3-205

No.	Date	By	Description	Project Number
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A

Checked/Appr. KP JG ZC

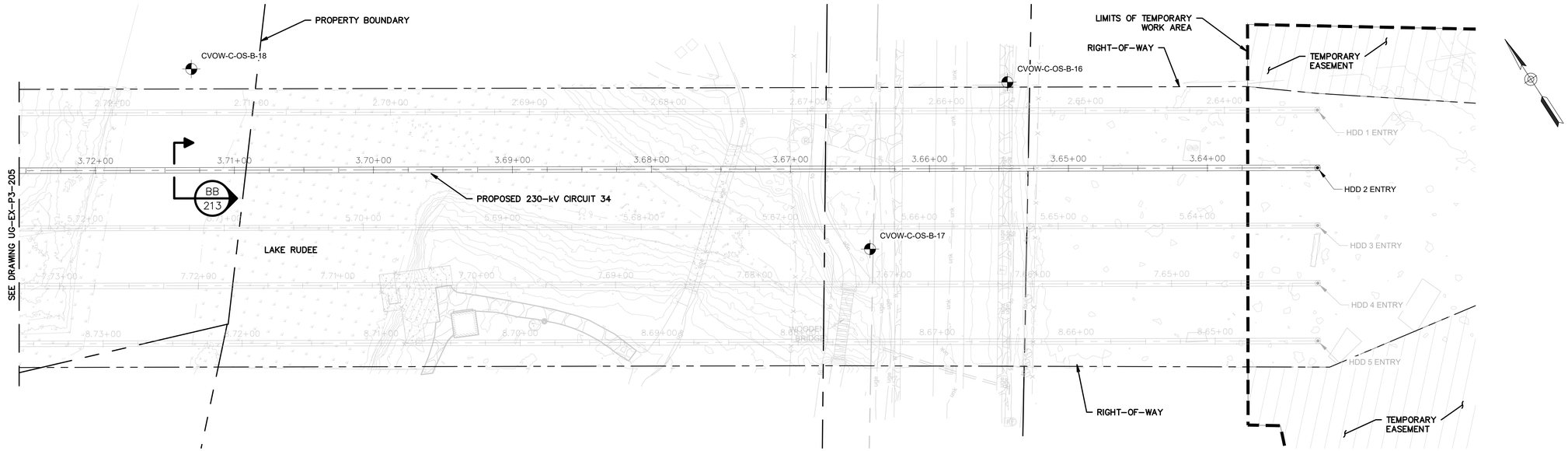
Revisions

GARDNER, ZACHARY

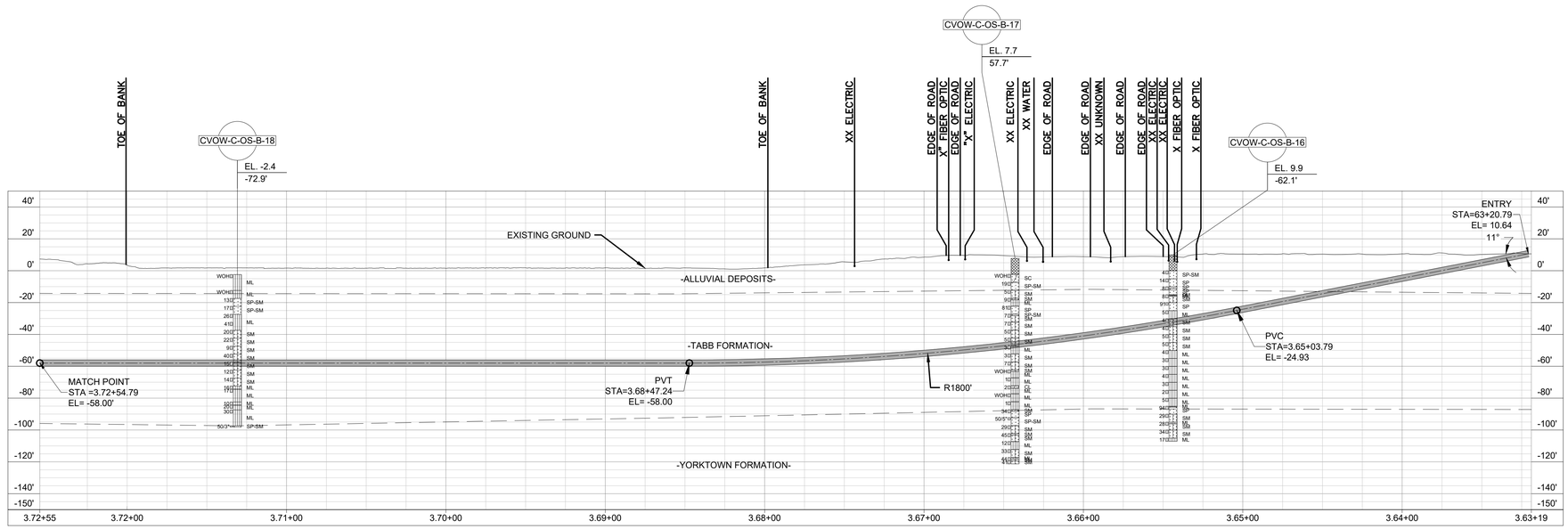
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:08 PM
GARDNER, ZACHARY



LAKE RUDEE "HDD 5 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 5 ENTRANCE" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-534 THROUGH UG-EX-P3-537.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET: 0, 40', 80'
VERTICAL SCALE IN FEET: 0, 40', 80'

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 2 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	7 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name: UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:08 PM
Drawing No.: UG-EX-P3-206

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:08 PM
GARDNER, ZACHARY

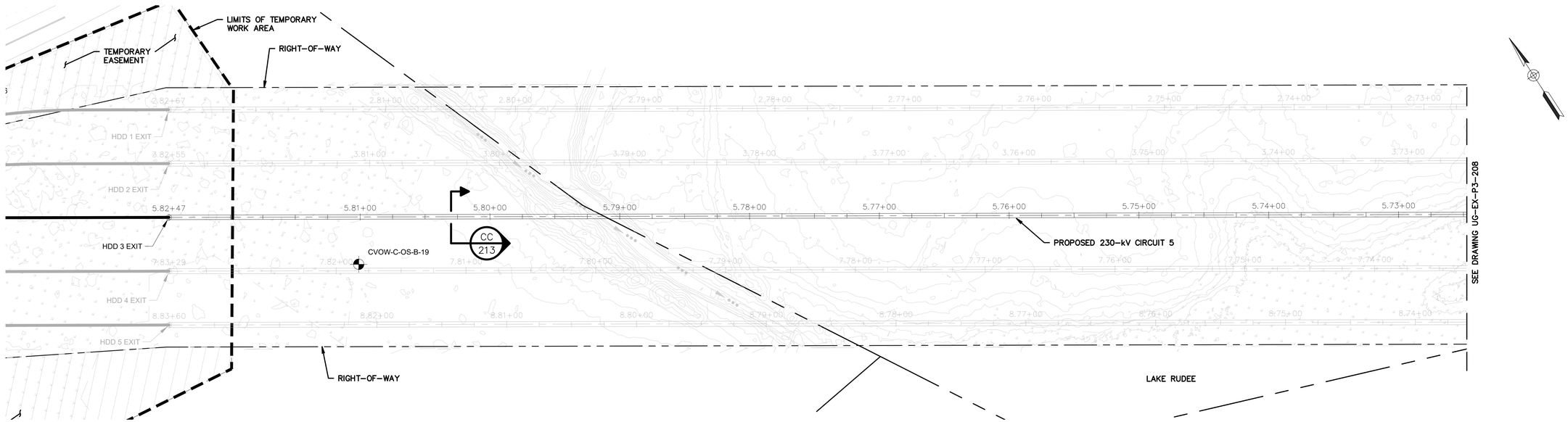
No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 B/M
B	07/15/22	AH	ISSUED FOR BID	0200157 H&A

Revisions

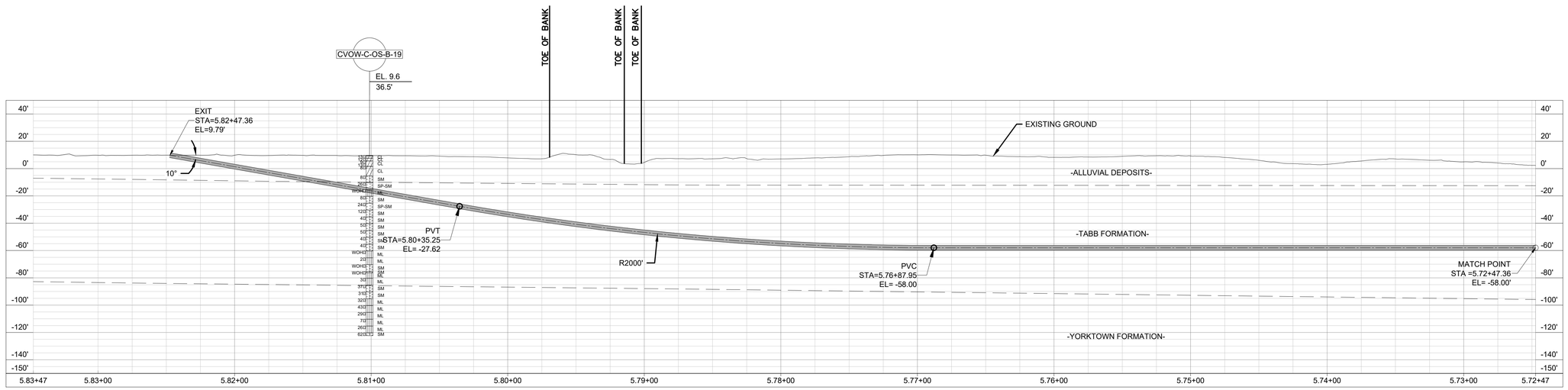
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE RUDEE "HDD 3 EXIT" PLAN VIEW



LAKE RUDEE "HDD 3 EXIT" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET 0 40' 80'

VERTICAL SCALE IN FEET 0 40' 80'

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-539 THROUGH UG-EX-P3-542.

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 3 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	8 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:09 PM

Drawing No. UG-EX-P3-207

No.	Date	By	Description	Project Number
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A

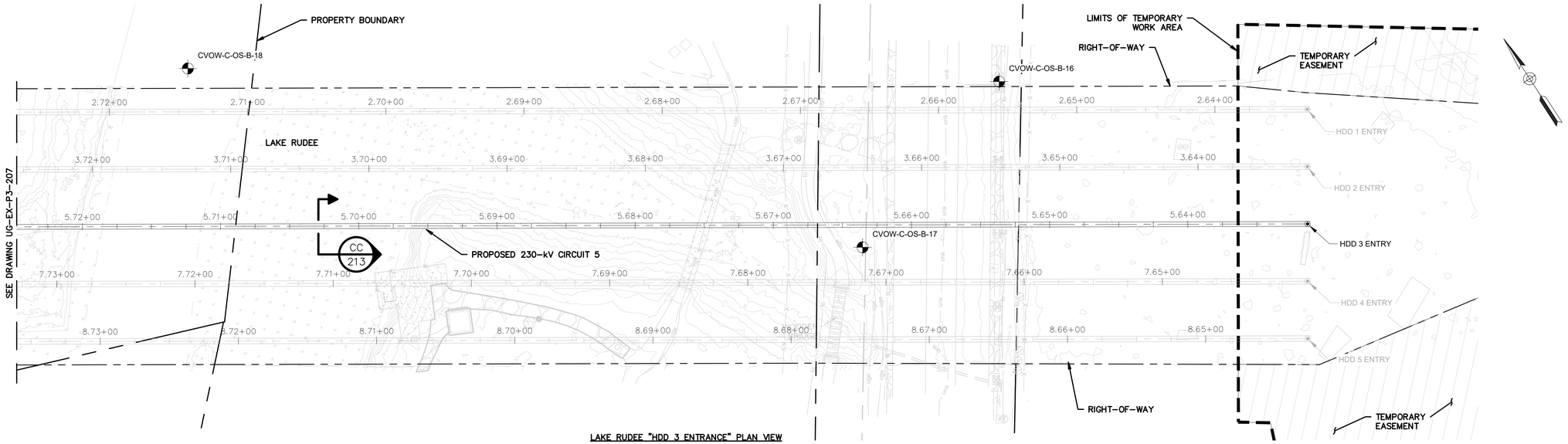
Revisions

GARDNER, ZACHARY

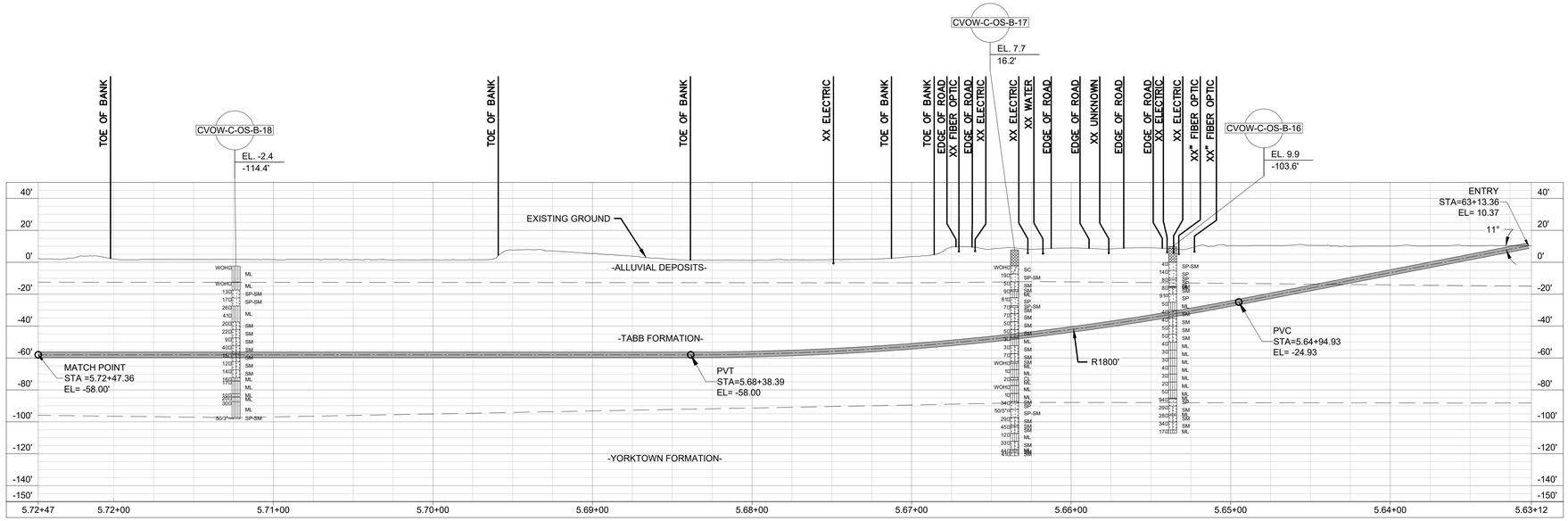
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:09 PM
GARDNER, ZACHARY



LAKE RUDEE "HDD 3 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 3 ENTRANCE" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-539 THROUGH UG-EX-P3-542.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 3 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	9 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:09 PM

Drawing No.
UG-EX-P3-208

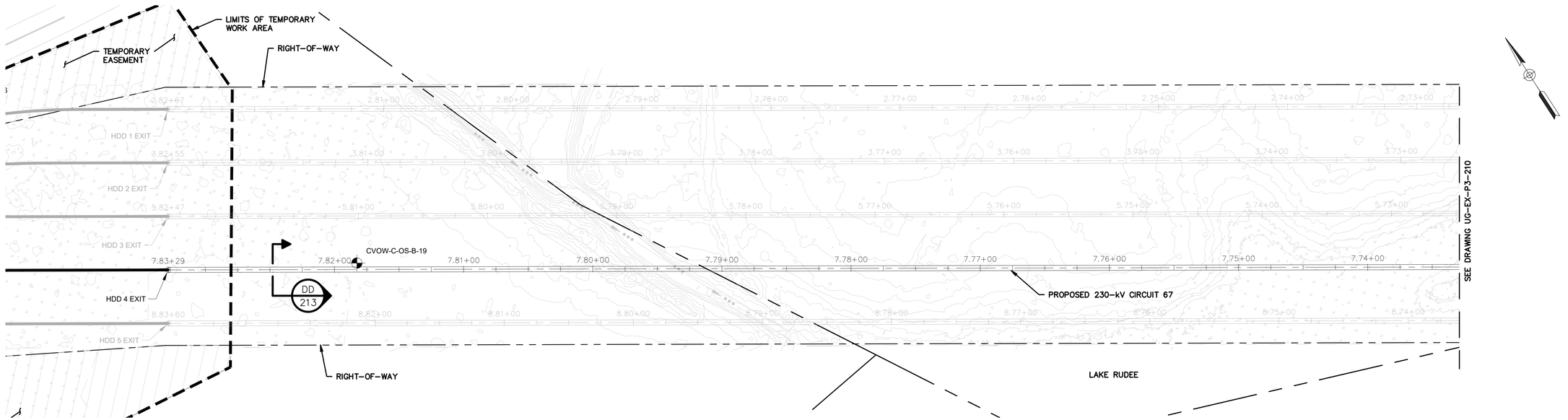
UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:09 PM
GARDNER, ZACHARY

No.	Date	By	Checked/Appr.	Description	Project Number	B/M
A	03/25/22	KP-JG-ZG	AH CL.	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JG-KP-ZG	AH CL.	ISSUED FOR BID	0200157	H&A

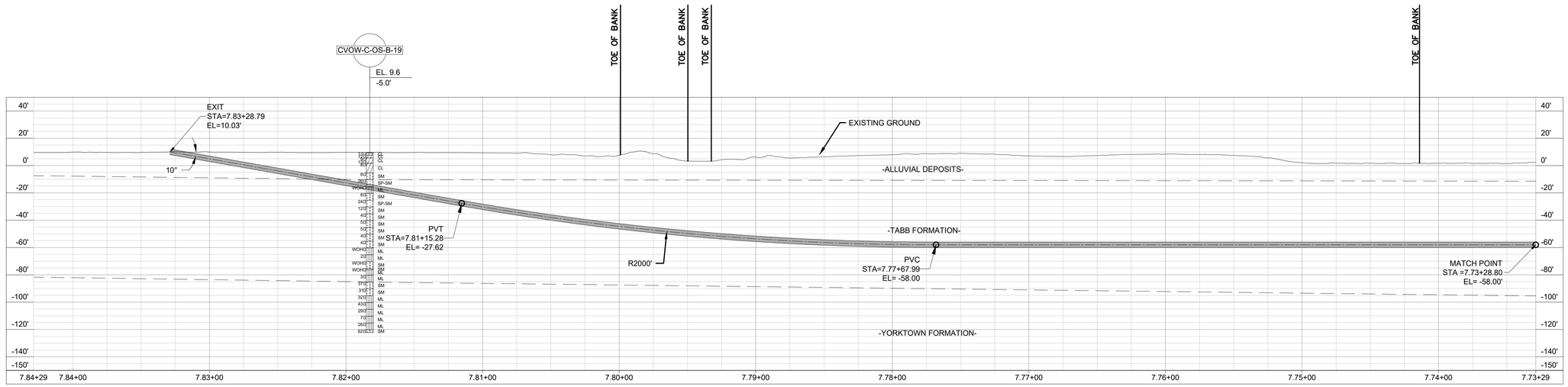
Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE RUDEE "HDD 4 EXIT" PLAN VIEW



LAKE RUDEE "HDD 4 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-555 THROUGH UG-EX-P3-558.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET 0 40' 80'

VERTICAL SCALE IN FEET 0 40' 80'

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 4 PLAN AND PROFILE (STA. 10+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	10 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:10 PM

Drawing No. UG-EX-P3-209

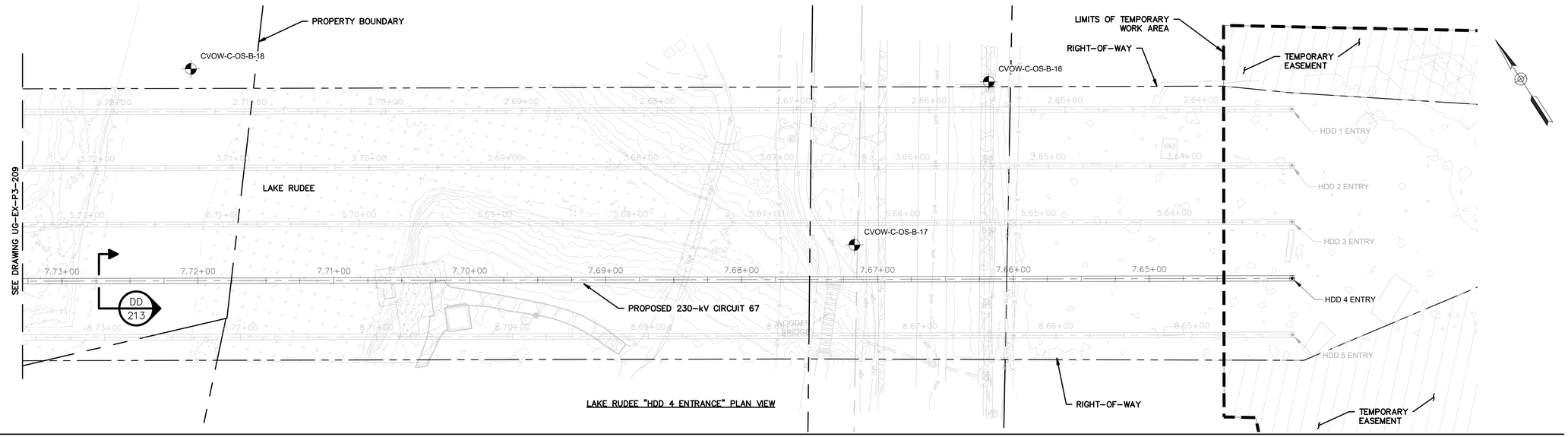
UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:10 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A

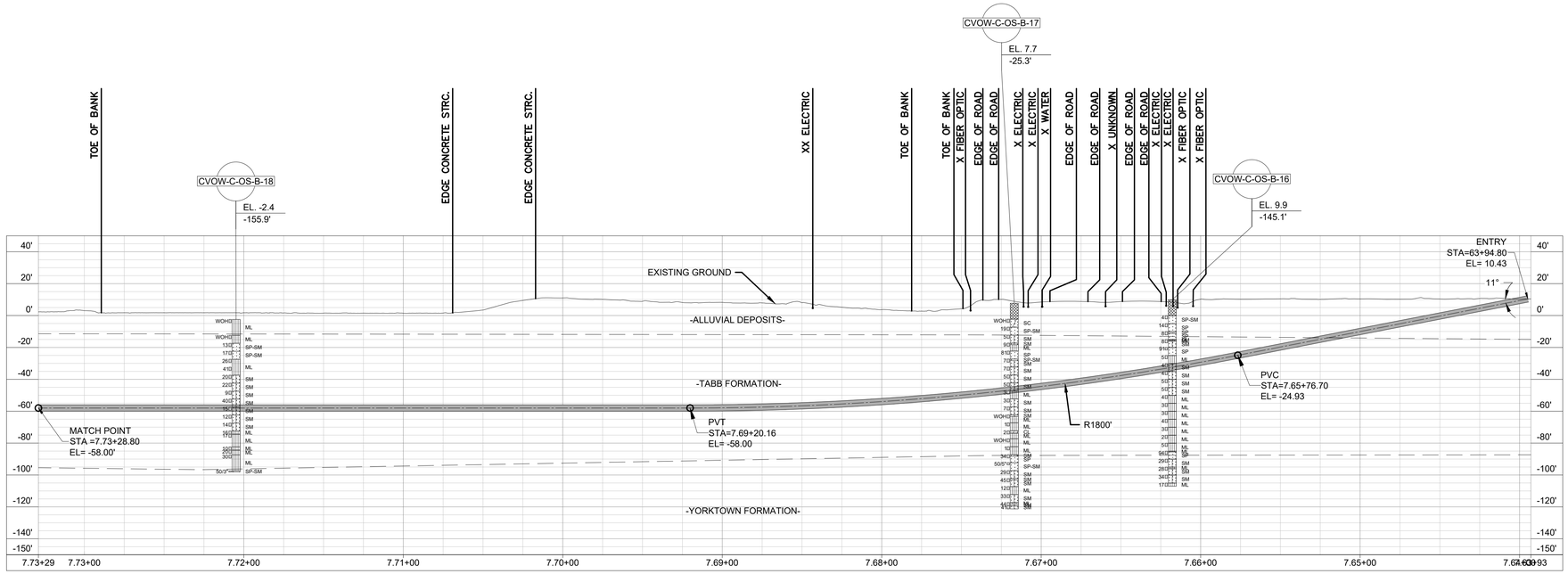
Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE RUDEE "HDD 4 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 4 ENTRANCE" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-555 THROUGH UG-EX-P3-558.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 4 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	11 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:11 PM

Drawing No.
UG-EX-P3-210

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:11 PM
GARDNER, ZACHARY

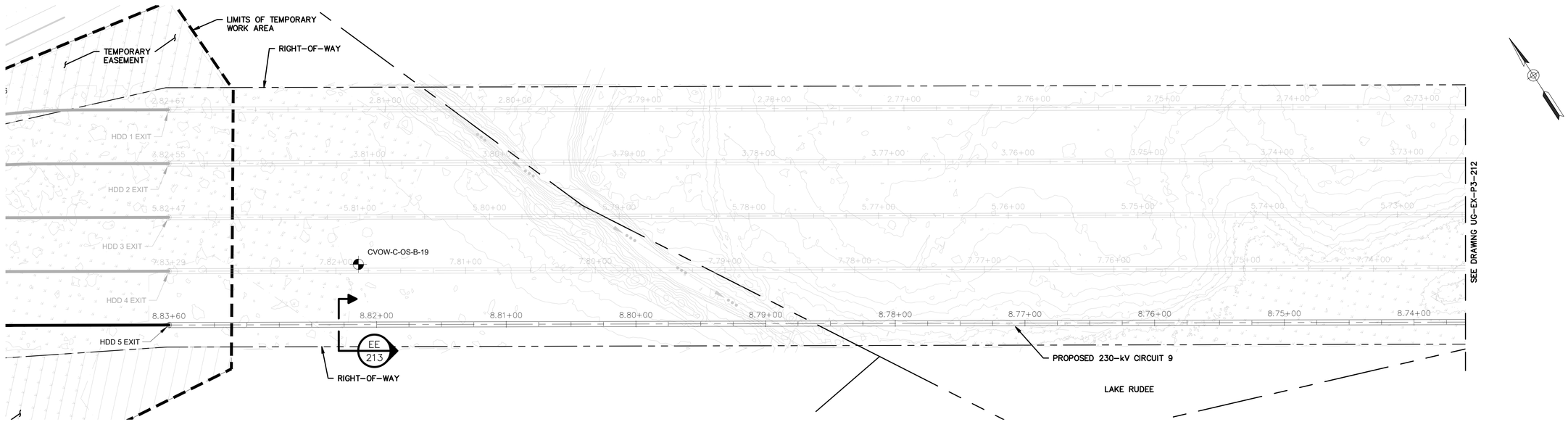
No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	KP,JG,ZG	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	JG,KP,ZG	ISSUED FOR BID	0200157 H&A
	AH	CL		

Revisions

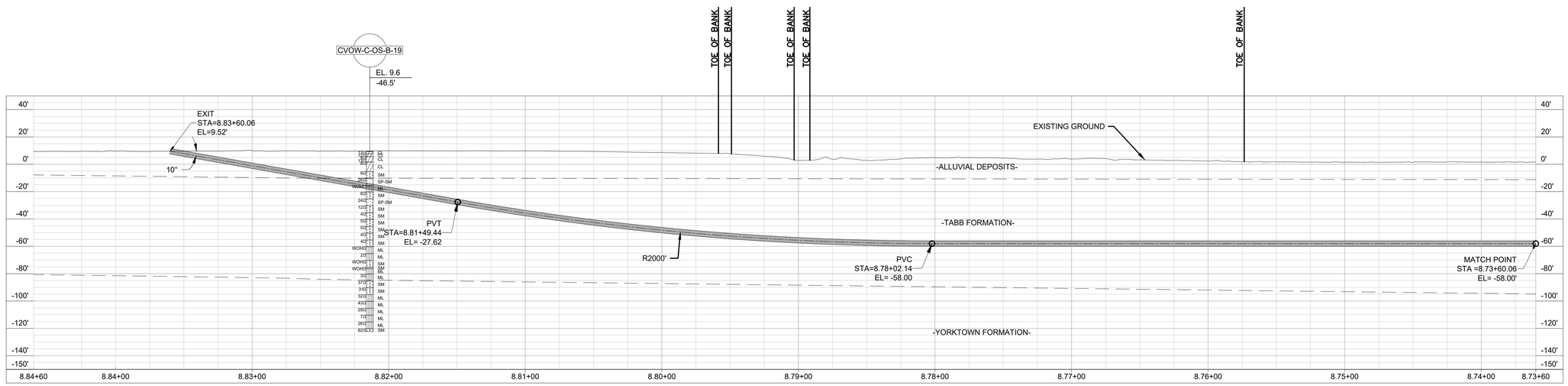
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE RUDEE "HDD 5 EXIT" PLAN VIEW



LAKE RUDEE "HDD 5 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 5 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	12 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:11 PM

Drawing No. UG-EX-P3-211

No.	Date	By	Description	Project Number
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 B/M H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A

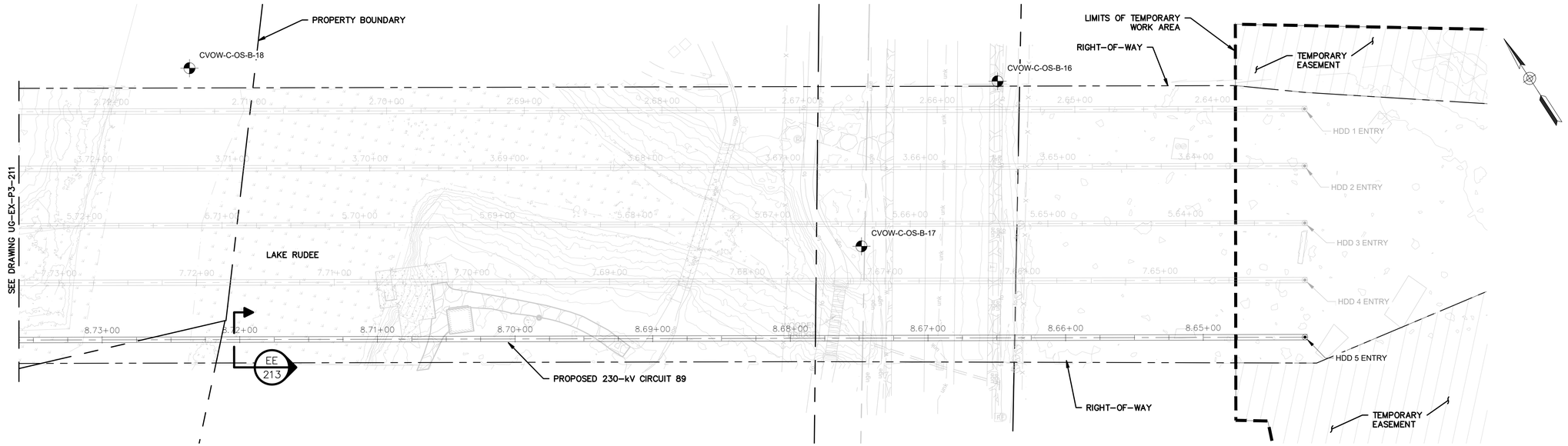
Revisions

GARDNER, ZACHARY

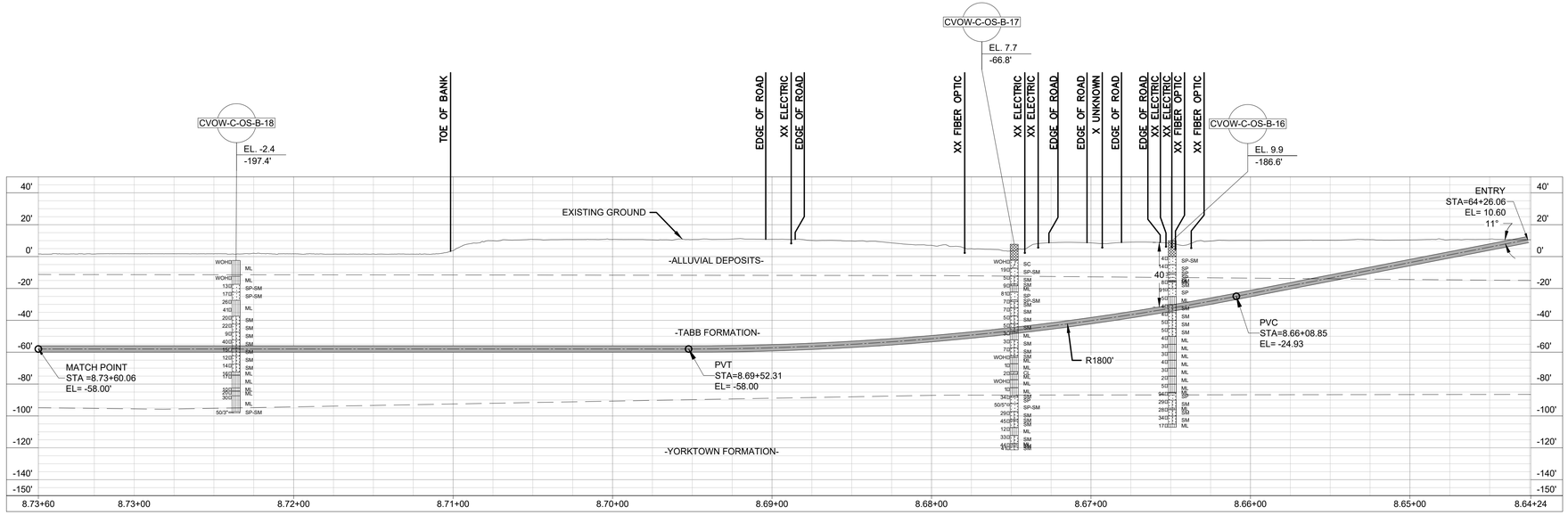
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:11 PM
GARDNER, ZACHARY



LAKE RUDEE "HDD 5 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 5 ENTRANCE" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 5 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	13 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:12 PM

Drawing No. UG-EX-P3-212

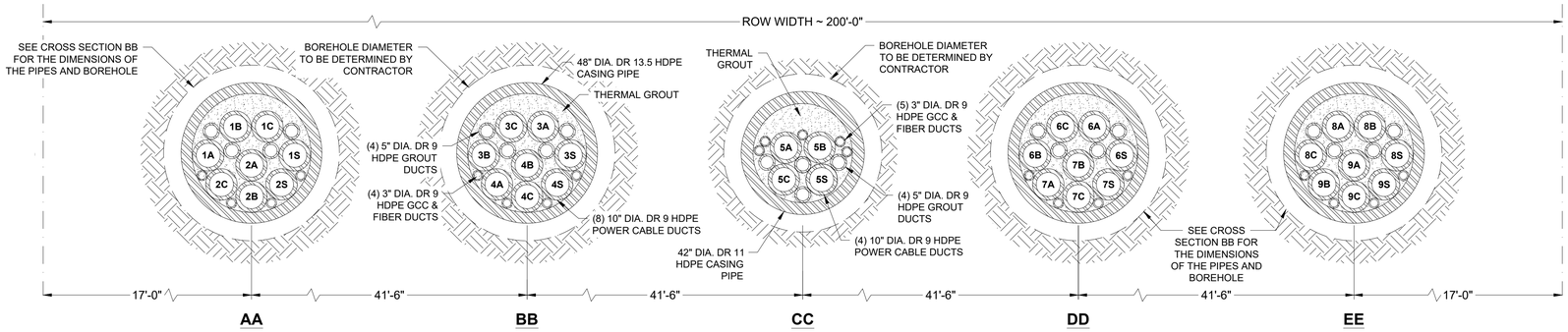
UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:12 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
A	03/25/22	KP/JG/ZG	ISSUED FOR 60% REVIEW	0200157 B/M
B	07/15/22	JG/KP/ZG	ISSUED FOR BID	0200157 H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



230-kV HDD INSTALLATION CROSS-SECTION

CONDUIT CONFIGURATION FOR ONSHORE HDD INSTALLATIONS
NOT TO SCALE

NOTES:

1. **TEMPORARY STEEL SURFACE CASING PIPE IS NOT SHOWN AS A PART OF THE CROSS SECTIONS. CONTRACTOR SHALL DETERMINE THE SIZE AND LENGTH OF THE TEMPORARY STEEL SURFACE CASING PIPE BASED ON THEIR MEANS AND METHODS AND UNINSTALL THEM UPON COMPLETION OF THE PROJECT.**

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COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD SECTIONS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	14 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-213.DWG
PLOTTED: 6/27/2022 2:26 PM

Drawing No. UG–EX–P3–213

No.	Date	By	Description	Project Number	B/M
A	03/25/22	JGKP-ZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JGKP-ZG	ISSUED FOR BID	0200157	H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG–EX–P3–213.DWG
PLOTTED: 6/27/2022 2:26 PM
GARDNER, ZACHARY

COASTAL VIRGINIA OFFSHORE WIND
230–kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE

ISSUED FOR BID
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COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	1 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG–EX–P–200.DWG
PLOTTED: 6/27/2022 2:20 PM

Drawing No.
UG–EX–P4–200

UG–EX–P–200.DWG
PLOTTED: 6/27/2022 2:20 PM
GARDNER, ZACHARY

No.	Description	By	Date	Checked/Appr.
Project Number	B/M			
0200157	H&A	AH	03/25/2022	CL
ISSUED FOR 60% REVIEW		JGKP-ZG		
0200157	H&A	AH	07/15/2022	CL
ISSUED FOR BID		JGKP-ZG		

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

GARDNER, ZACHARY
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0200157\CAD

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 2416853142000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   - 7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   - 7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
     - 7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
     - 7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
    - 12.1. USACE PERMITS
    - 12.2. CITY OF ____
    - 12.3. COUNTY OF ____
    - 12.4. DEWATERING PERMITS
    - 12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

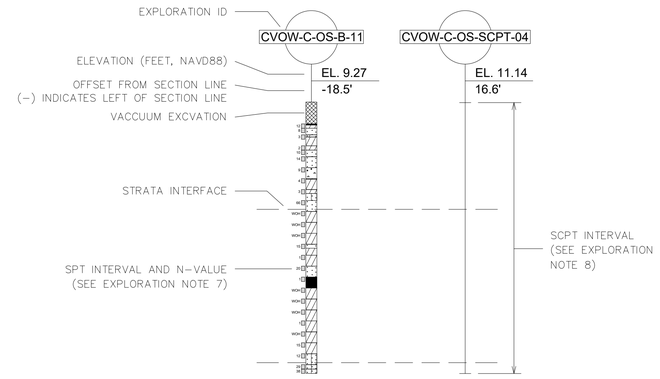
HORIZONTAL DIRECTIONAL DRILL NOTES:

1. CONTRACTOR SHALL EMPLOY APPROPRIATE MEASURES AND DRILLING PRACTICES TO ELIMINATE GROUND SURFACE SETTLEMENT, REDUCE SUBSURFACE DISTURBANCE AND ENSURE THE INTEGRITY OF THE CONDUIT BUNDLE AGAINST EXCESSIVE DEFLECTION, PULL LOADS, STRESSES AND BUCKLING DURING PULLBACK. EXAMPLES OF SUCH MEASURES MAY INCLUDE BUT NOT BE LIMITED TO:
   - A. MAINTAIN NEUTRAL BUOYANCY OF THE CONDUIT BUNDLE DURING PULLBACK.
   - B. USE OF TEMPORARY STEEL SURFACE CASINGS.
   - C. USE OF 'MUD ENGINEER' TO MONITOR THE DRILL FLUID PROPERTIES.
2. UPON COMPLETION OF FINAL REAM, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO REMOVE THE EXISTING DRILL CUTTINGS FROM THE BOREHOLE AND MAINTAIN THE STABILITY OF THE BOREHOLE DURING PULLBACK. THE DRILL MUD SHALL BE MONITORED DURING PULLBACK AND EVERY EFFORT SHALL BE MADE TO REDUCE THE FRICTION AND DRAG FORCES SO AS TO LOWER THE PULLING LOAD ON THE PRODUCT BUNDLE.
3. CONTRACTOR SHALL EMPLOY APPROPRIATE CONTINGENCY MEASURES TO ADDRESS INADVERTENT DRILL FLUID RETURNS ON LAND OR UNDERWATER DURING THE DRILLING PROCESS. IN CASE OF INADVERTENT DRILL FLUID RETURNS, CONTINGENCY MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO DRILL FLUID IDENTIFICATION, CONTAINMENT, MITIGATION, EXTRACTION, STORAGE, TRANSPORTATION AND CLEAN-UP.

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW		WELL GRADED SANDS, GRAVELLY SANDS
SP		POORLY GRADED SANDS, GRAVELLY SANDS
SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH		INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT		PEAT AND OTHER HIGHLY ORGANIC SOILS
BR		BEDROCK
NR		NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

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NOT FOR CONSTRUCTION

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	2 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:21 PM

Drawing No.
UG-EX-P4-201

UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:21 PM
GARDNER, ZACHARY

No.	Description	Date	By	Checked/Appr.
A	ISSUED FOR 60% REVIEW	03/25/22	AH	CL
B	ISSUED FOR BID	07/15/22	AH	CL

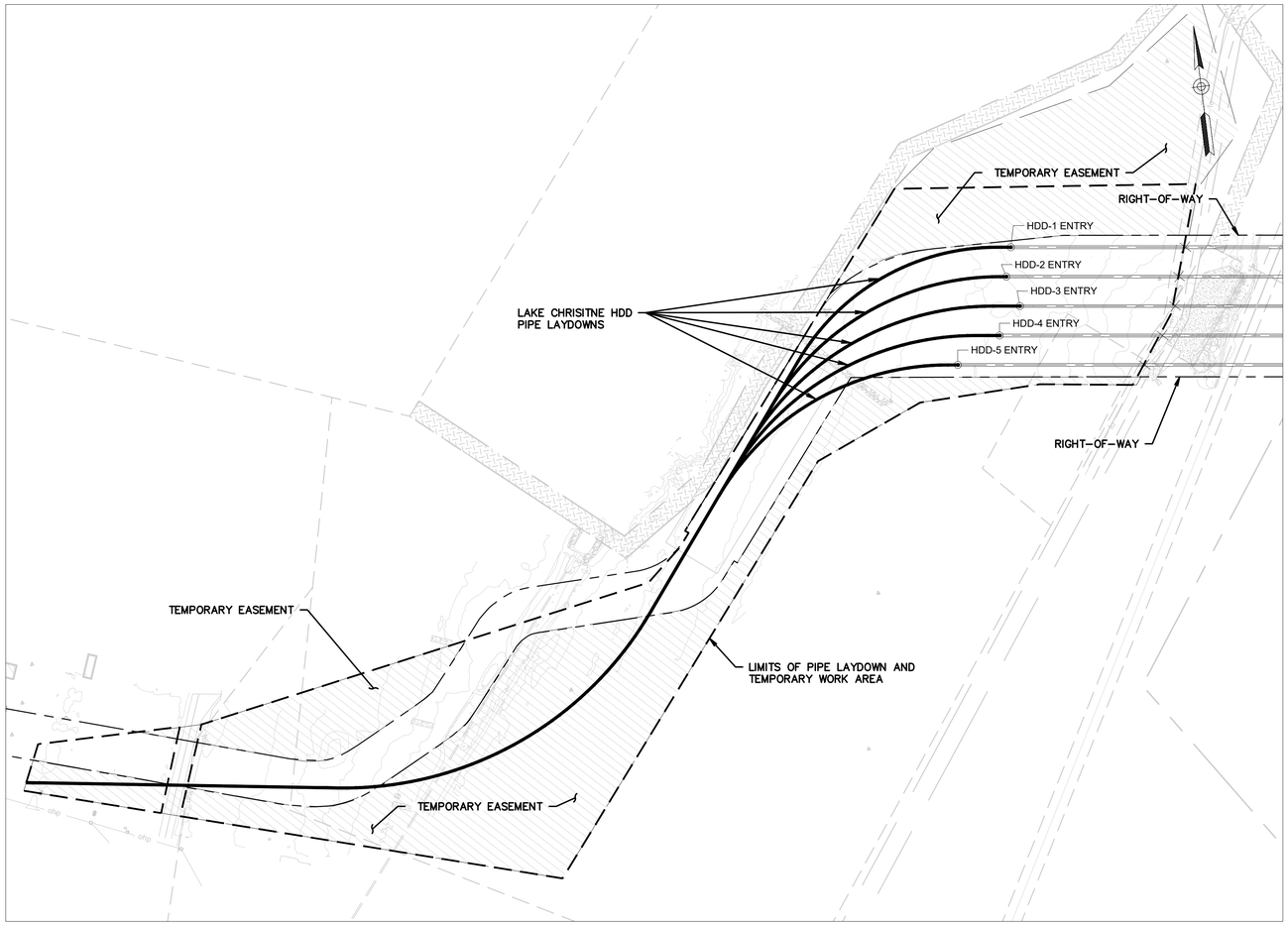
Project Number 0200157 | B/M 0200157 | H&A | JS,KP,ZG | H&A | JS,KP,ZG

Revisions

GARDNER, ZACHARY

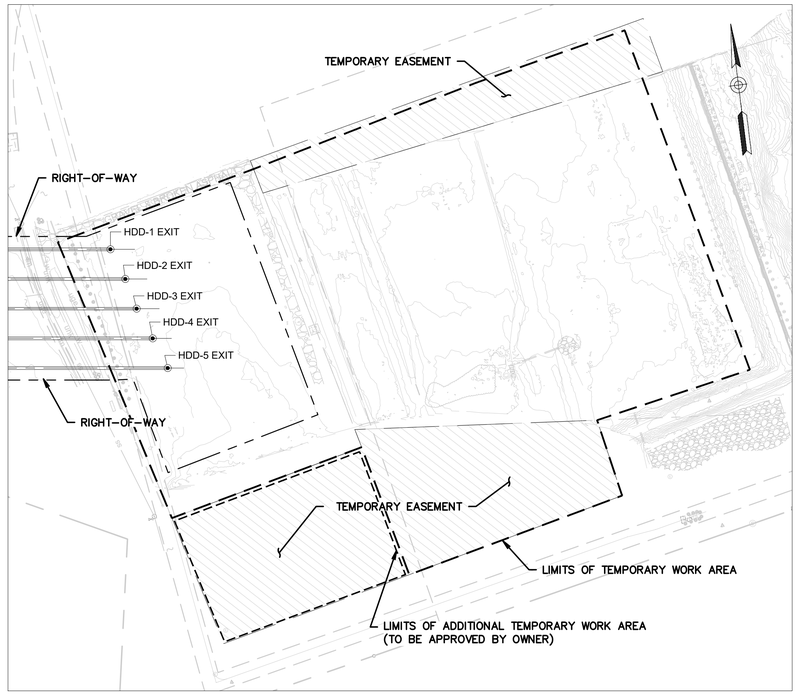
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE CHRISTINE "PIPE LAYDOWN AND HDD ENTRY TEMPORARY WORK AREA" PLAN VIEW

0 100' 200'
HORIZONTAL SCALE IN FEET



LAKE CHRISTINE "HDD 1 EXIT WORK AREA" PLAN VIEW

0 100' 200'
HORIZONTAL SCALE IN FEET

No.	Date Checked/Appr.	By	Description	Project Number
A	03/25/22 CL.	AH	ISSUED FOR 60% REVIEW	0200157 H&A B/M
B	07/15/22 CL.	AH	ISSUED FOR BID	0200157 H&A JG,KP,ZG

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

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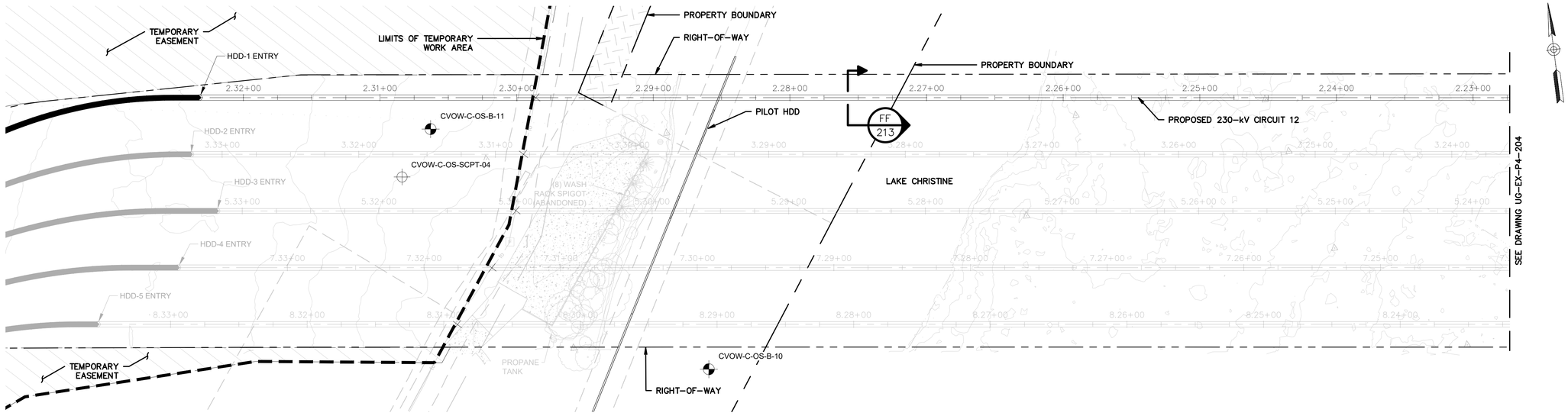
COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
LAKE CHRISITNE PIPE LAYDOWN / WORK AREAS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	3 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	--		NOTED	
		B/M No.	Revisions	

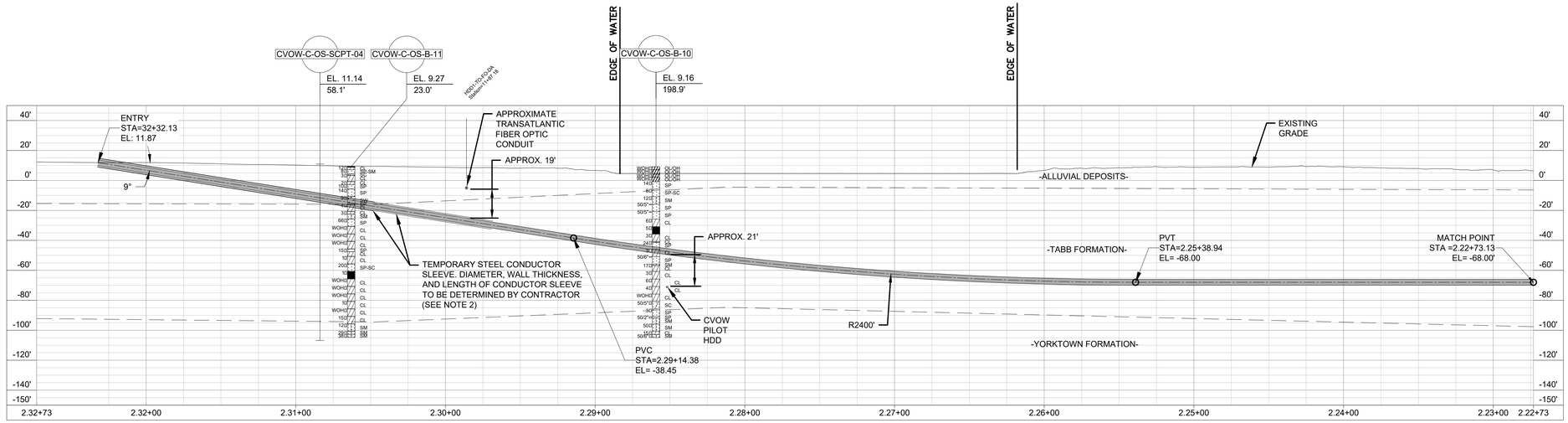
Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:21 PM

Drawing No.
UG-EX-P4-202

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:21 PM
GARDNER, ZACHARY



LAKE CHRISTINE "HDD 1 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 1 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-506 THROUGH UG-EX-P4-509.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FLOWABLE FILL IN THE ANNULAR SPACE BETWEEN THE TEMPORARY STEEL SURFACE CASING PIPE AND THE HDPE CASING PIPE. THE FLOWABLE FILL SHALL BE OF SIMILAR STRENGTH AND THERMAL PROPERTIES AS THE NATIVE SUBSURFACE CONDITIONS AROUND THE TEMPORARY STEEL SURFACE CASING PIPE.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 1 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	4 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:22 PM

Drawing No.
UG-EX-P4-203

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:22 PM
GARDNER, ZACHARY

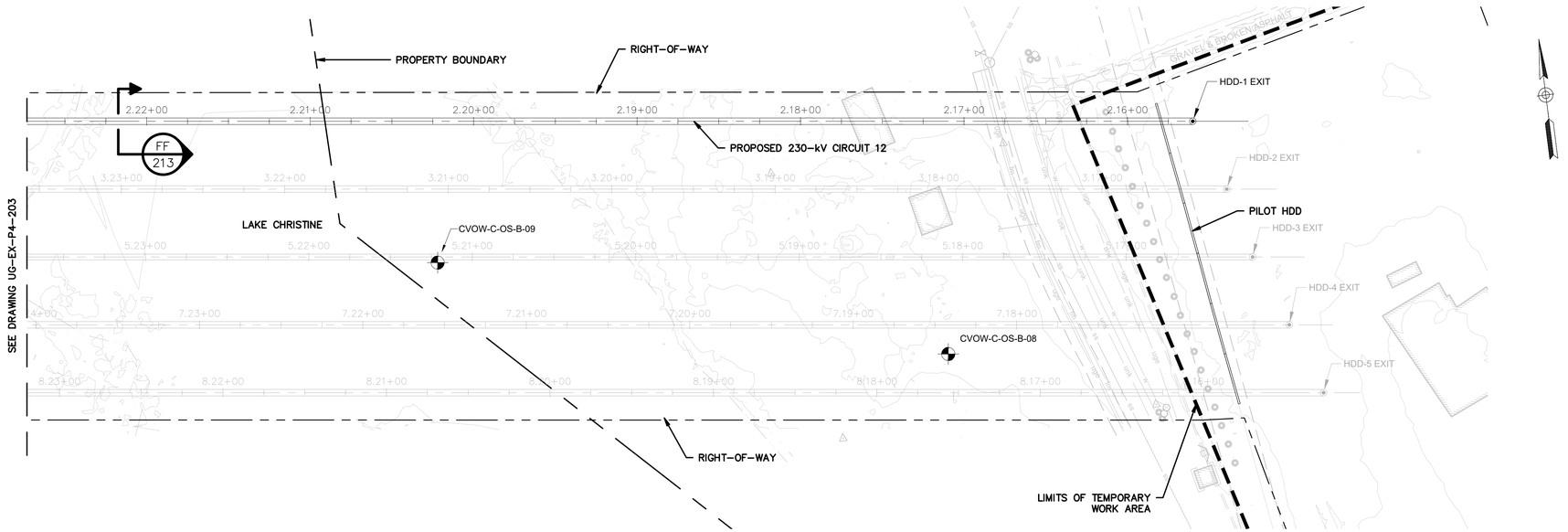
No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	JG,KP,ZG	ISSUED FOR 60% REVIEW	0200157
	AH	CL		H&A
B	07/15/22	JG,KP,ZG	ISSUED FOR BID	0200157
	AH	CL		H&A

Revisions

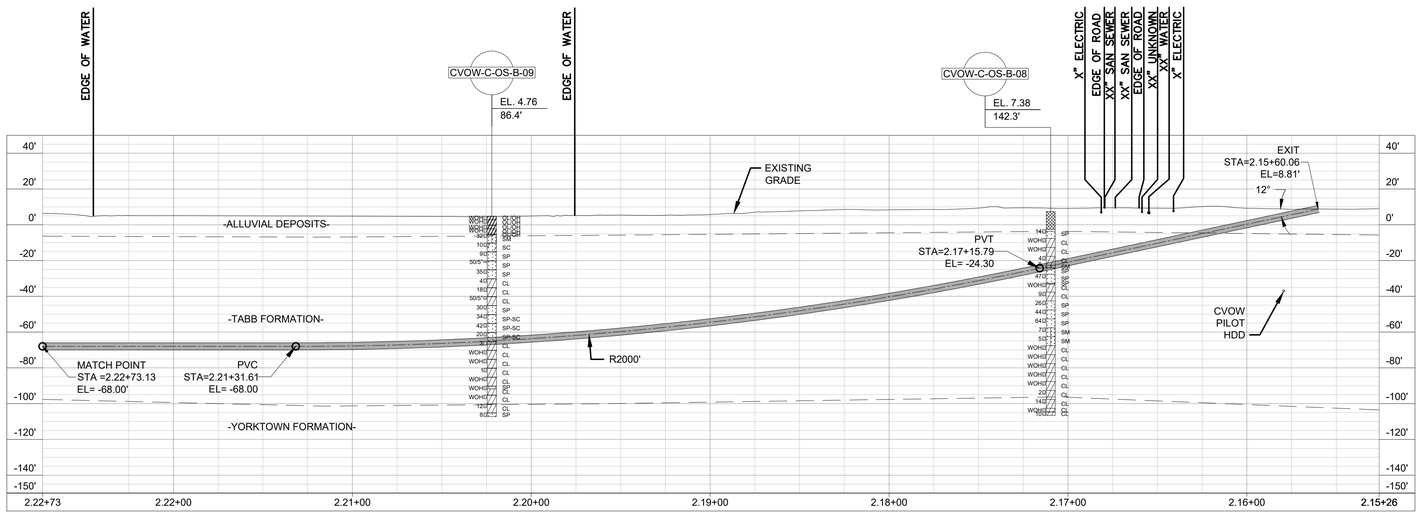
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)		Pipe Stand Foundation Cells (Spread)		Foundation Cells for Other Typical Structures		Steel Detail & Assembly
							(Pier)	(Spread)	



LAKE CHRISTINE "HDD 1 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 1 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-506 THROUGH UG-EX-P4-509.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 1 PLAN AND PROFILE (STA. 19+00 TO 27+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	5 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:22 PM

Drawing No.
UG-EX-P4-204

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:22 PM
GARDNER, ZACHARY

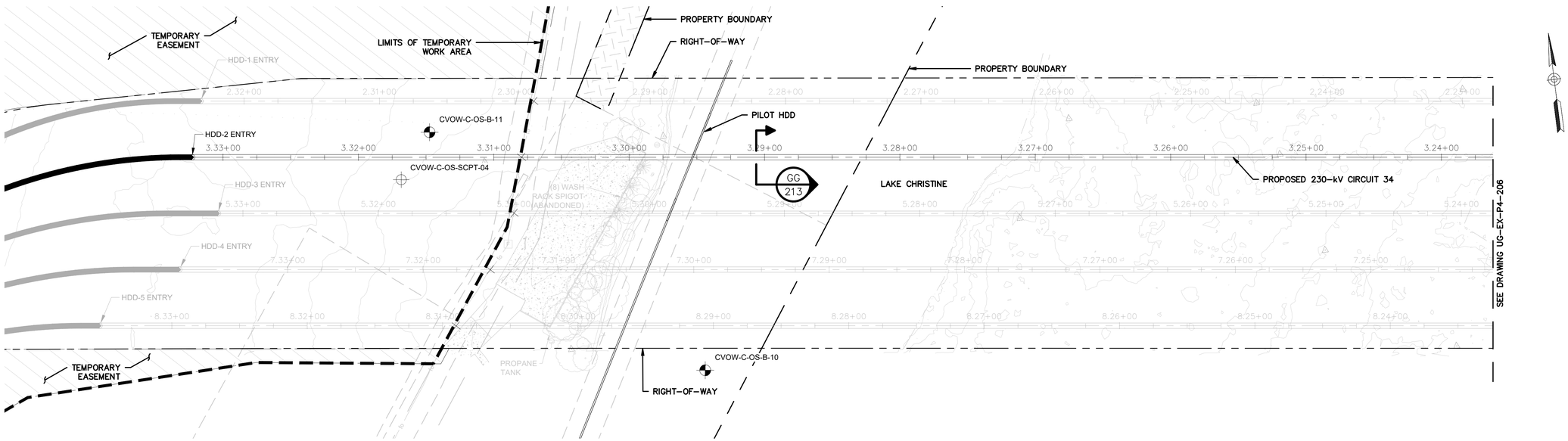
No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157	H&A

Revisions

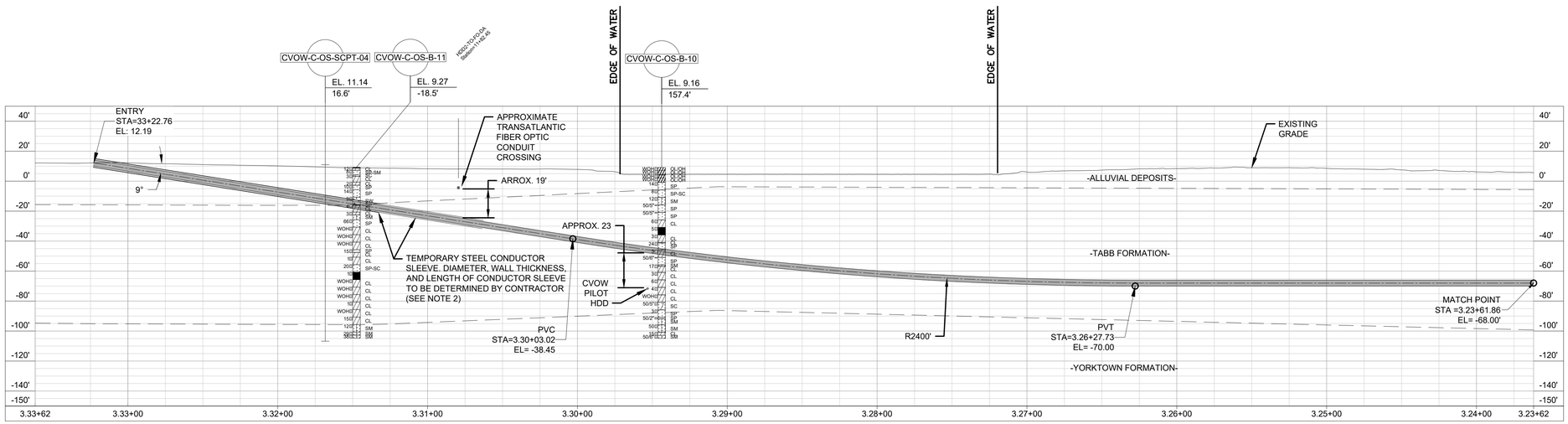
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE CHRISTINE "HDD 2 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 2 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-510 THROUGH UG-EX-P4-513.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FLOWABLE FILL IN THE ANNULAR SPACE BETWEEN THE TEMPORARY STEEL SURFACE CASING PIPE AND THE HDPE CASING PIPE. THE FLOWABLE FILL SHALL BE OF SIMILAR STRENGTH AND THERMAL PROPERTIES AS THE NATIVE SUBSURFACE CONDITIONS AROUND THE TEMPORARY STEEL SURFACE CASING PIPE.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 2 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	6 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:22 PM

Drawing No.
UG-EX-P4-205

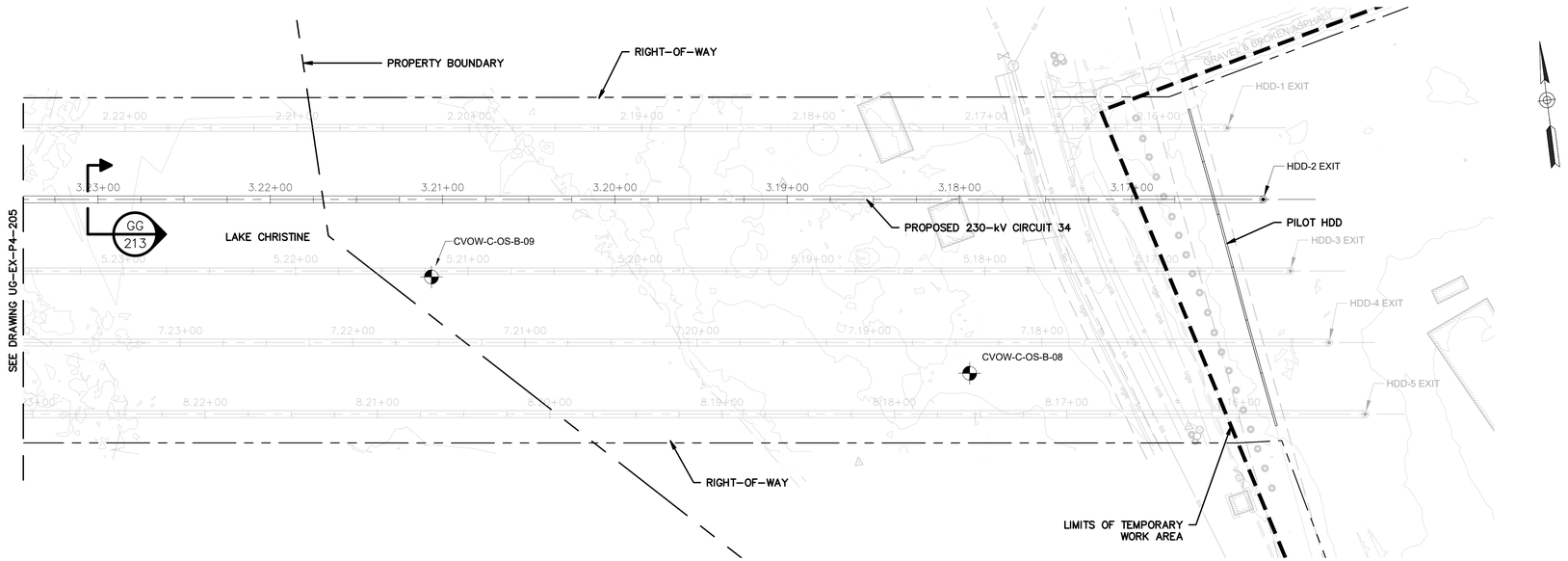
UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:22 PM
GARDNER, ZACHARY

No	Date	By	Description	Project Number	B/M
		Checked/Appr.			
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157	H&A
		JG,KP,ZG			
		JG,KP,ZG			

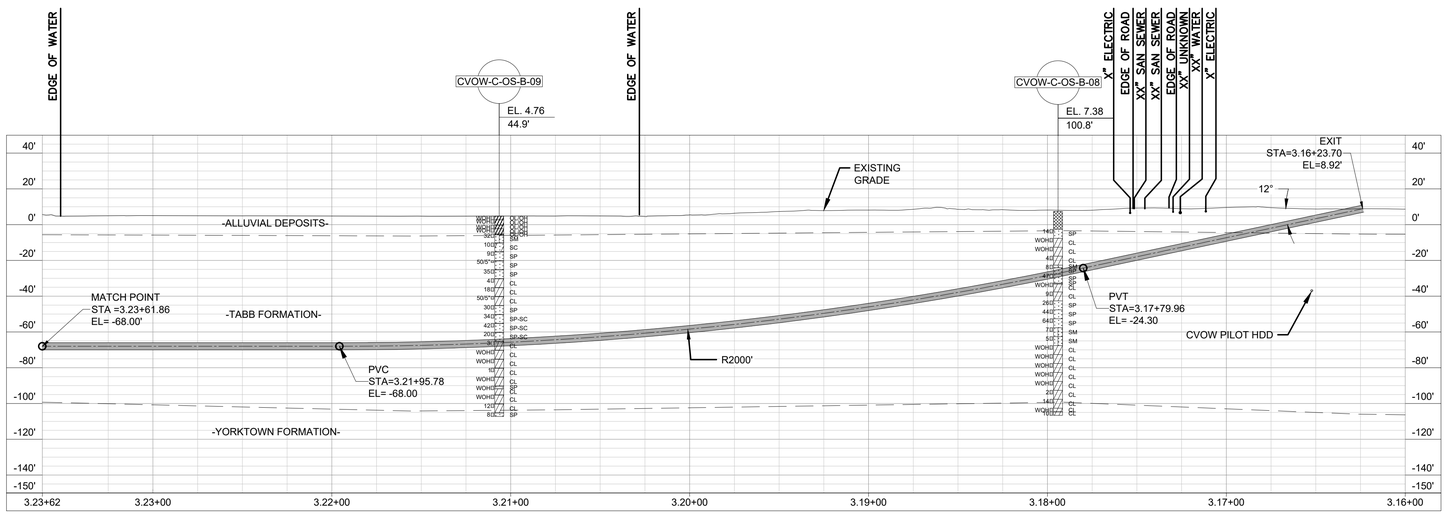
Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly



LAKE CHRISTINE "HDD 2 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 2 EXIT" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-510 THROUGH UG-EX-P4-513.

No.	Date	By	Description	Project Number
A	03/25/22	AH CL.	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH CL. JGKP-2C	ISSUED FOR BID	0200157 H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

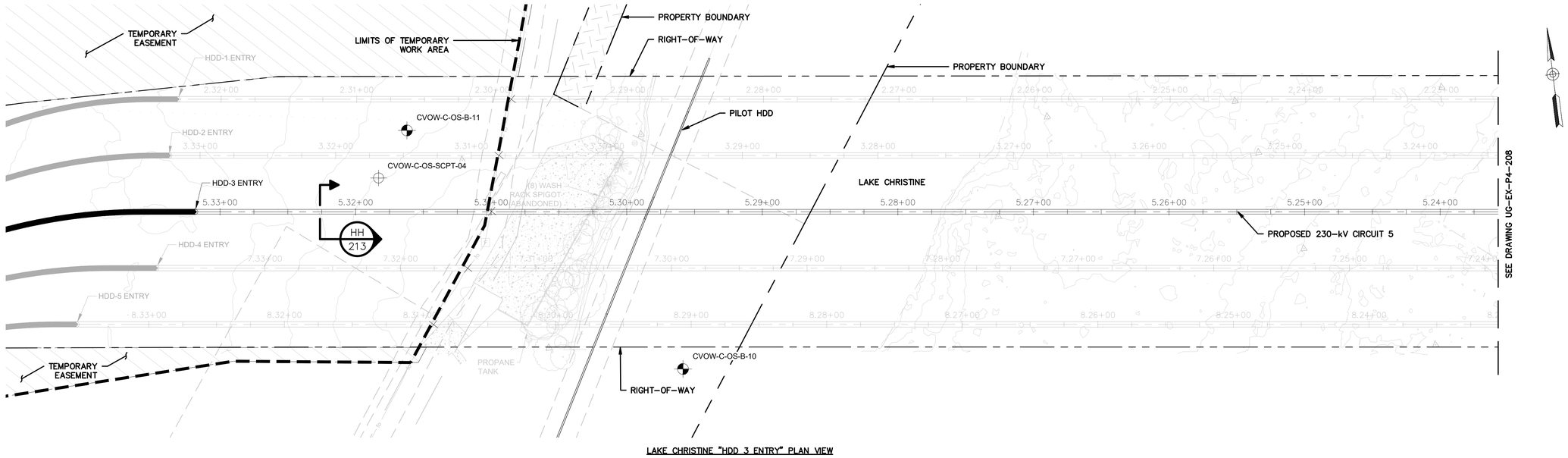
COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
HDD 2 PLAN AND PROFILE (STA. 19+00 TO 27+50)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	7 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

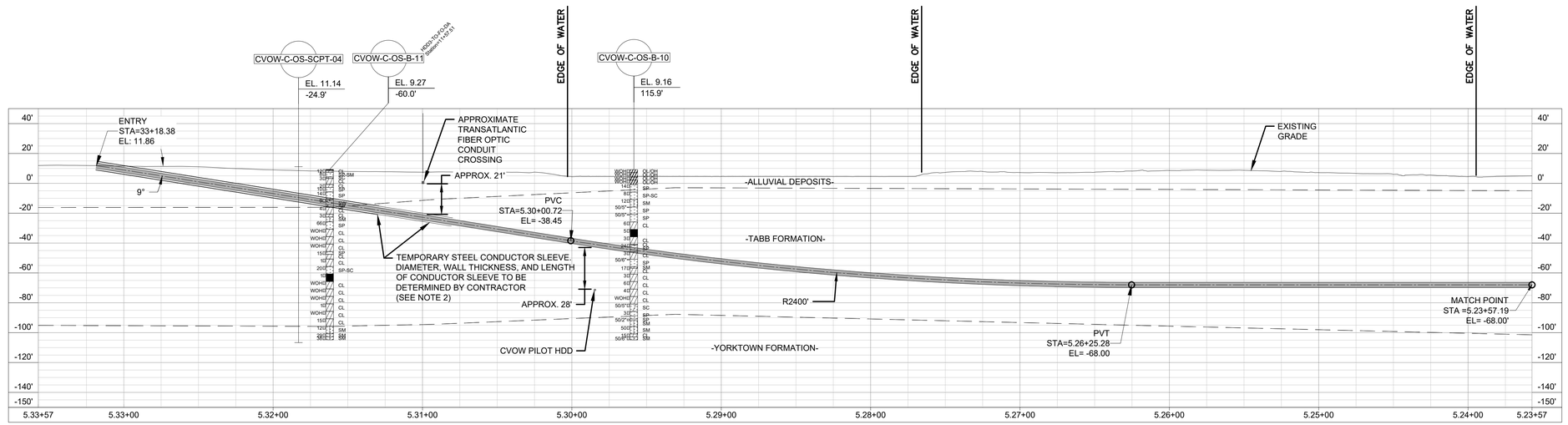
Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM

Drawing No. UG-EX-P4-206

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM
GARDNER, ZACHARY



LAKE CHRISTINE "HDD 3 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 3 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-519 THROUGH UG-EX-P4-522.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FLOWABLE FILL IN THE ANNULAR SPACE BETWEEN THE TEMPORARY STEEL SURFACE CASING PIPE AND THE HDPE CASING PIPE. THE FLOWABLE FILL SHALL BE OF SIMILAR STRENGTH AND THERMAL PROPERTIES AS THE NATIVE SUBSURFACE CONDITIONS AROUND THE TEMPORARY STEEL SURFACE CASING PIPE.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
HDD 3 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	8 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM

Drawing No. UG-EX-P4-207

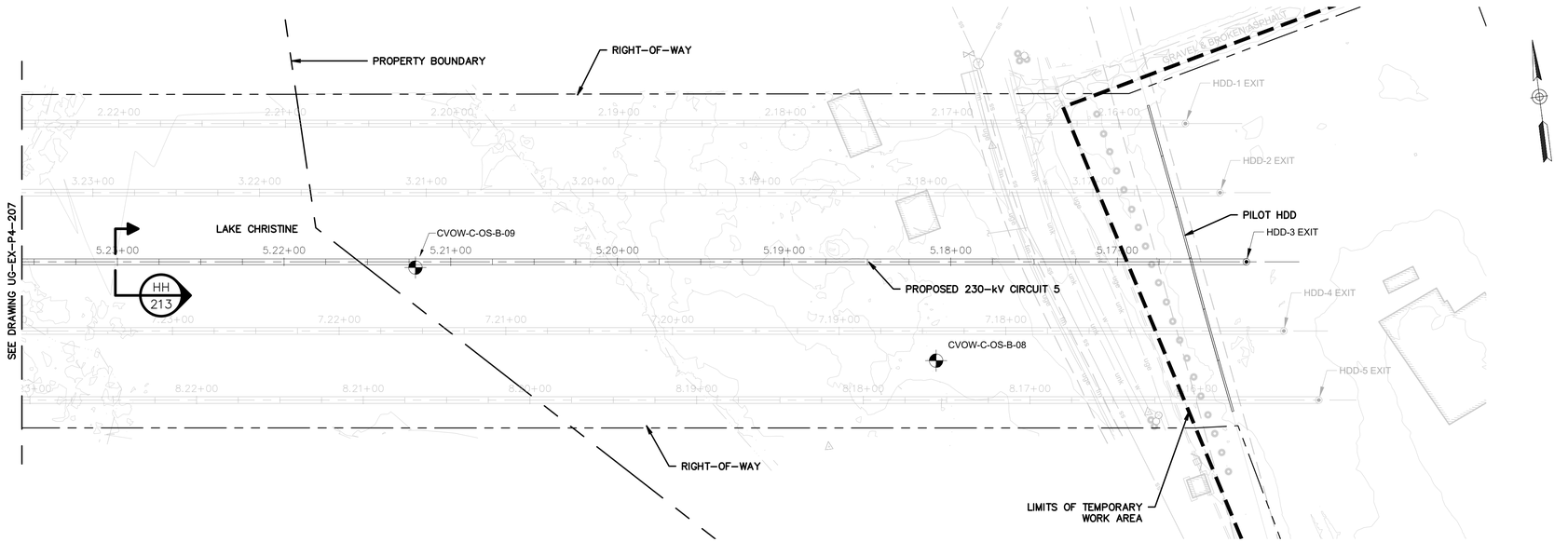
No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	JG/KP-ZC	ISSUED FOR 60% REVIEW	0200157
	AH	CL		H&A
B	07/15/22	JG/KP-ZC	ISSUED FOR BID	0200157
	AH	CL		H&A

Revisions

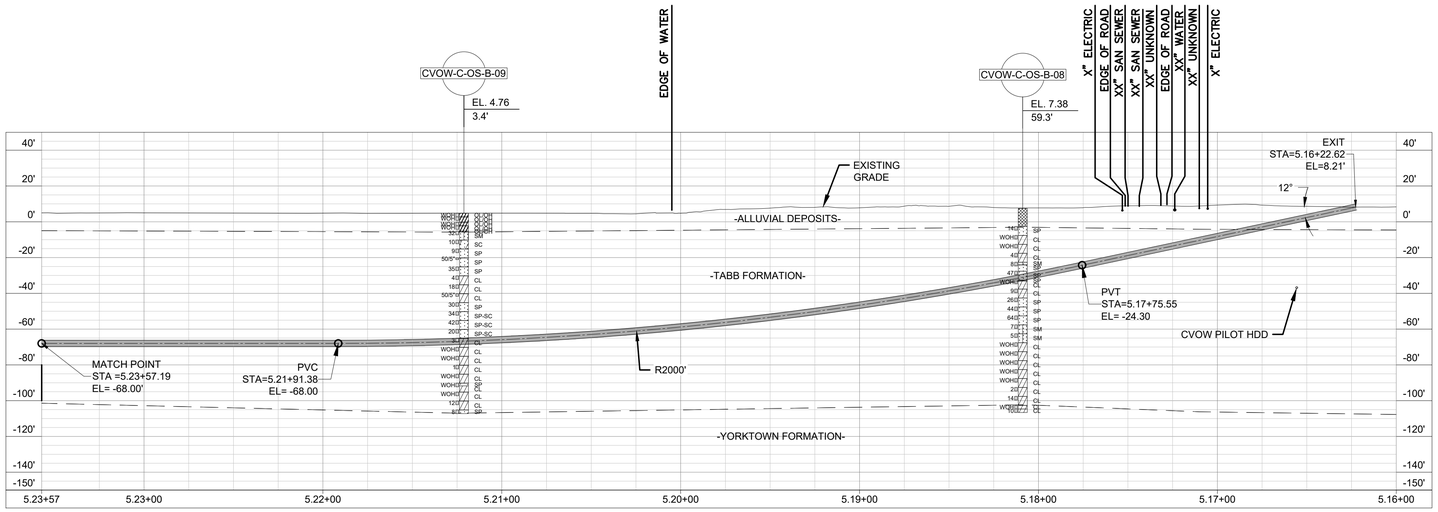
GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM
GARDNER, ZACHARY



LAKE CHRISTINE "HDD 3 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 3 EXIT" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-519 THROUGH UG-EX-P4-522.

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	JGKP-ZG	ISSUED FOR 60% REVIEW	0200157
	AH	CL		H&A
B	07/15/22	JGKP-ZG	ISSUED FOR BID	0200157
	AH	CL		H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

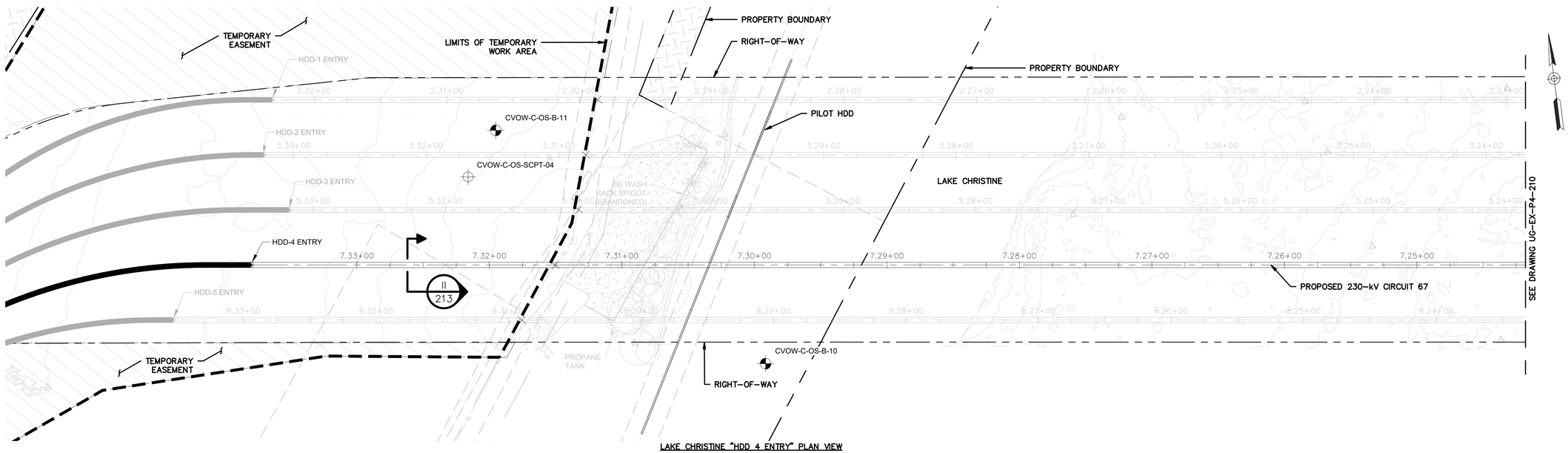
COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD3 PLAN AND PROFILE (STA. 19+00 TO 27+50)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	9 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

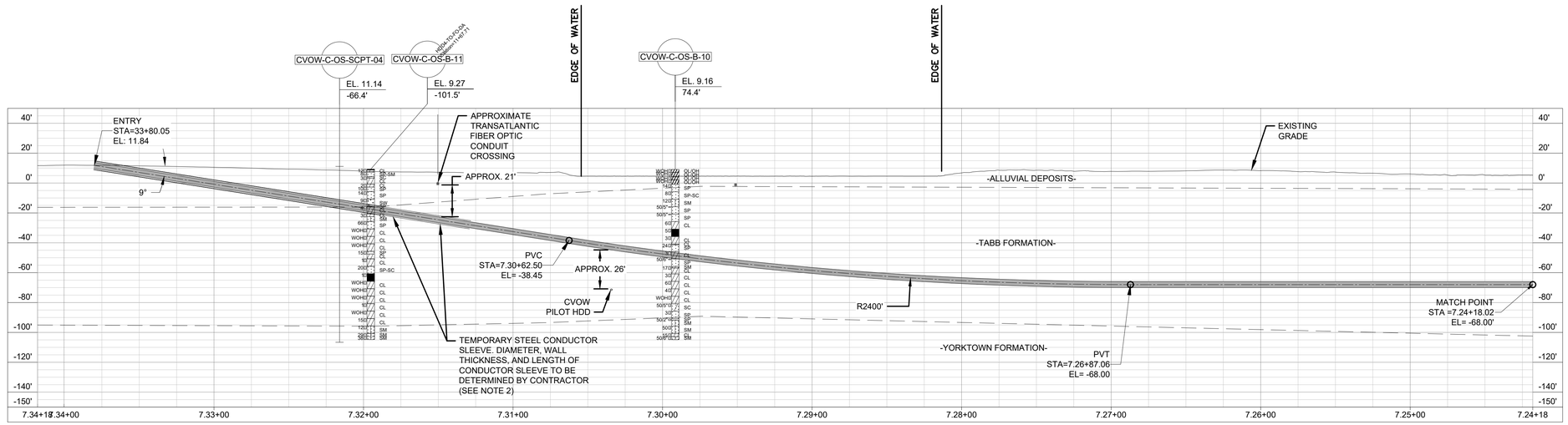
Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM

Drawing No.
UG-EX-P4-208

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM
GARDNER, ZACHARY



LAKE CHRISTINE "HDD 4 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 4 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-523 THROUGH UG-EX-P4-526.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FLOWABLE FILL IN THE ANNULAR SPACE BETWEEN THE TEMPORARY STEEL SURFACE CASING PIPE AND THE HDPE CASING PIPE. THE FLOWABLE FILL SHALL BE OF SIMILAR STRENGTH AND THERMAL PROPERTIES AS THE NATIVE SUBSURFACE CONDITIONS AROUND THE TEMPORARY STEEL SURFACE CASING PIPE.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 4 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	10 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM

Drawing No.
UG-EX-P4-209

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM
GARDNER, ZACHARY

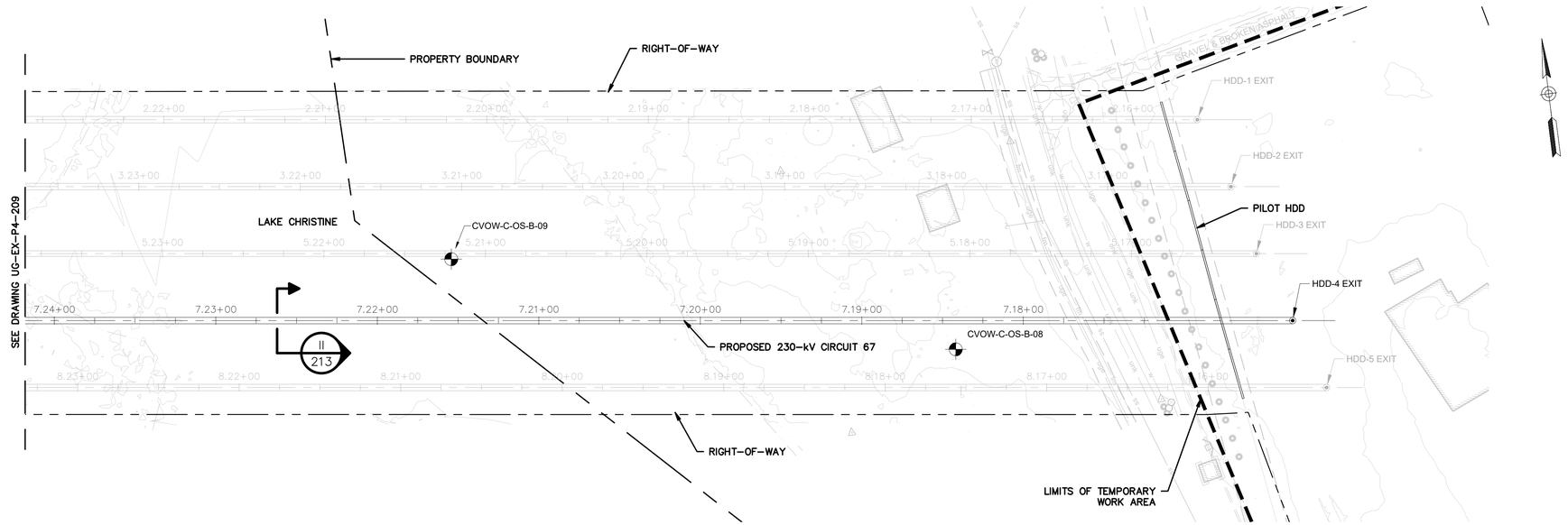
No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A
		JG-KP-ZC		
		JG-KP-ZC		

Revisions

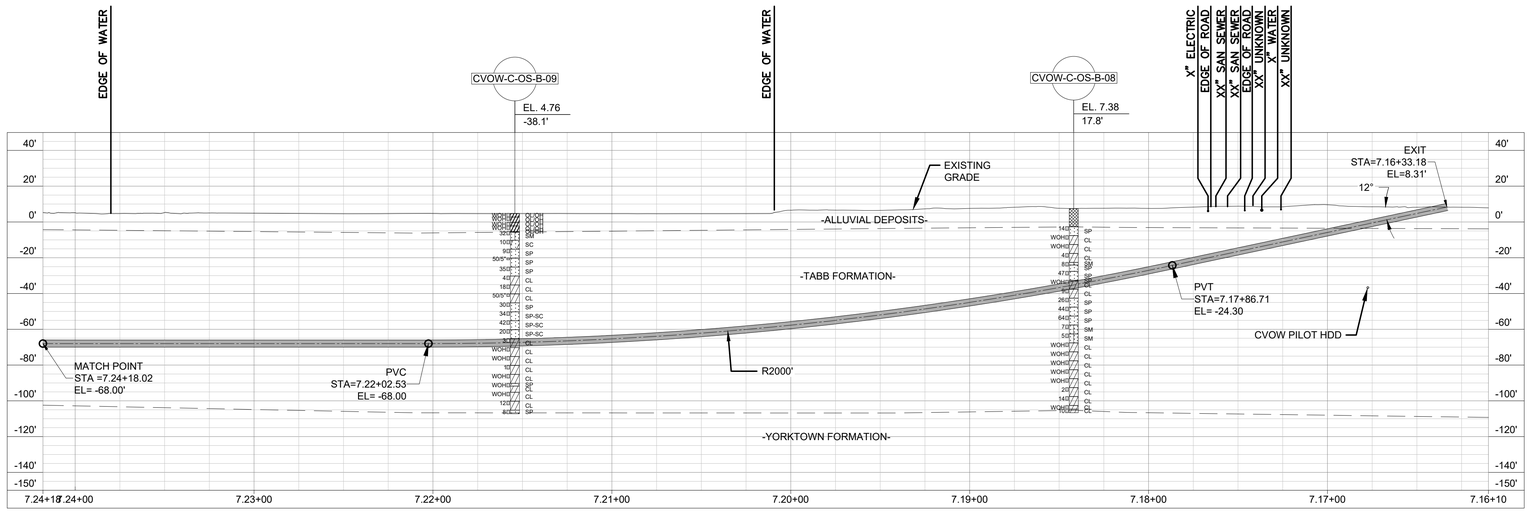
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LAKE CHRISTINE "HDD 4 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 4 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-523 THROUGH UG-EX-P4-526.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

No.	Date	By	Description	Project Number
	Checked/Appr.			
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A
		JC/KP-ZC		

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

Dominion Energy

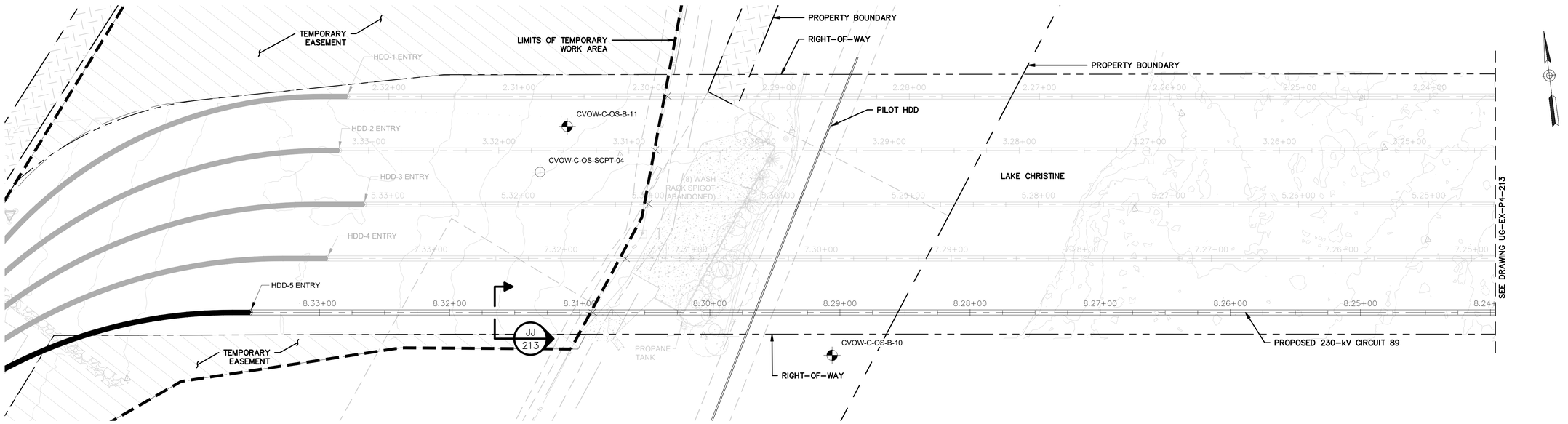
COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 4 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	11 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

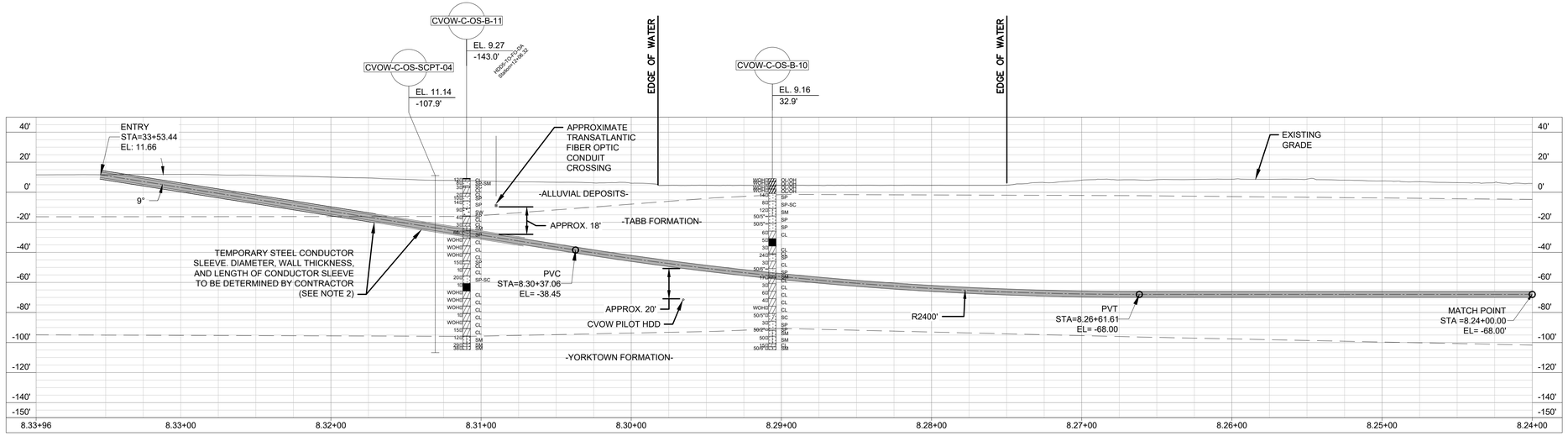
Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM

Drawing No.
UG-EX-P4-210

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM
GARDNER, ZACHARY



LAKE CHRISTINE "HDD 5 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 5 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-532 THROUGH UG-EX-P4-535.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FLOWABLE FILL IN THE ANNULAR SPACE BETWEEN THE TEMPORARY STEEL SURFACE CASING PIPE AND THE HDPE CASING PIPE. THE FLOWABLE FILL SHALL BE OF SIMILAR STRENGTH AND THERMAL PROPERTIES AS THE NATIVE SUBSURFACE CONDITIONS AROUND THE TEMPORARY STEEL SURFACE CASING PIPE.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 5 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	12 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM

Drawing No.
UG-EX-P4-211

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM
GARDNER, ZACHARY

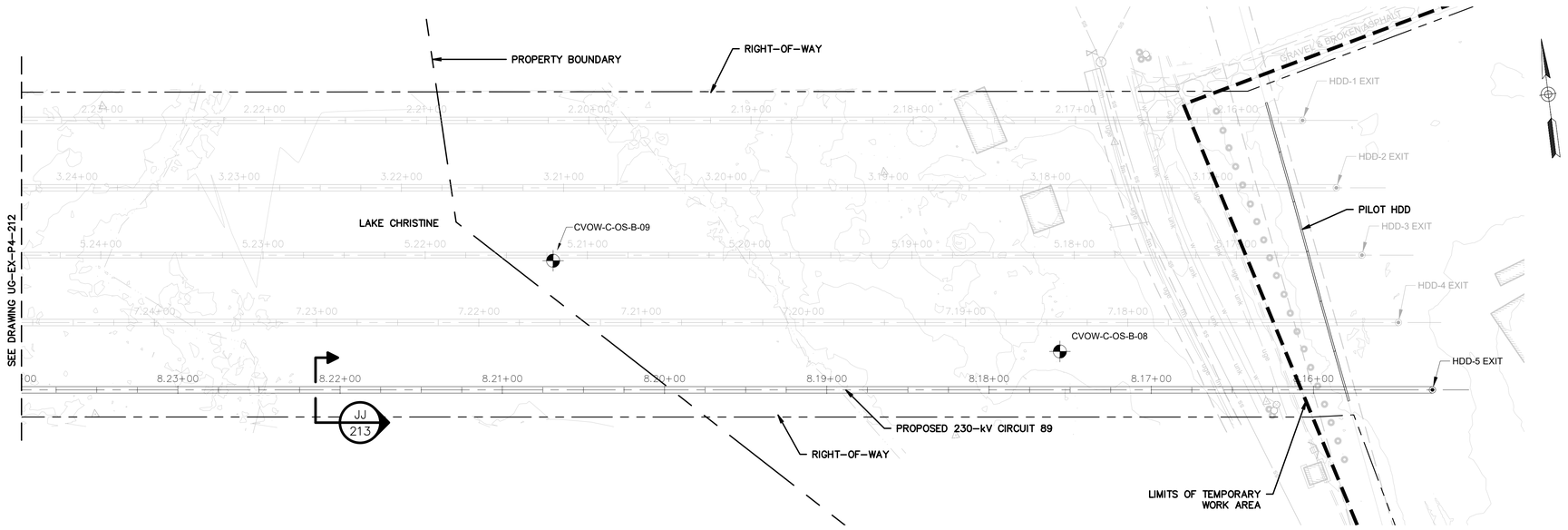
No.	Date	By	Description	Project Number	B/M
A	03/25/22	JG,KP,ZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JG,KP,ZG	ISSUED FOR BID	0200157	H&A

Checked/Appr.
Revisions

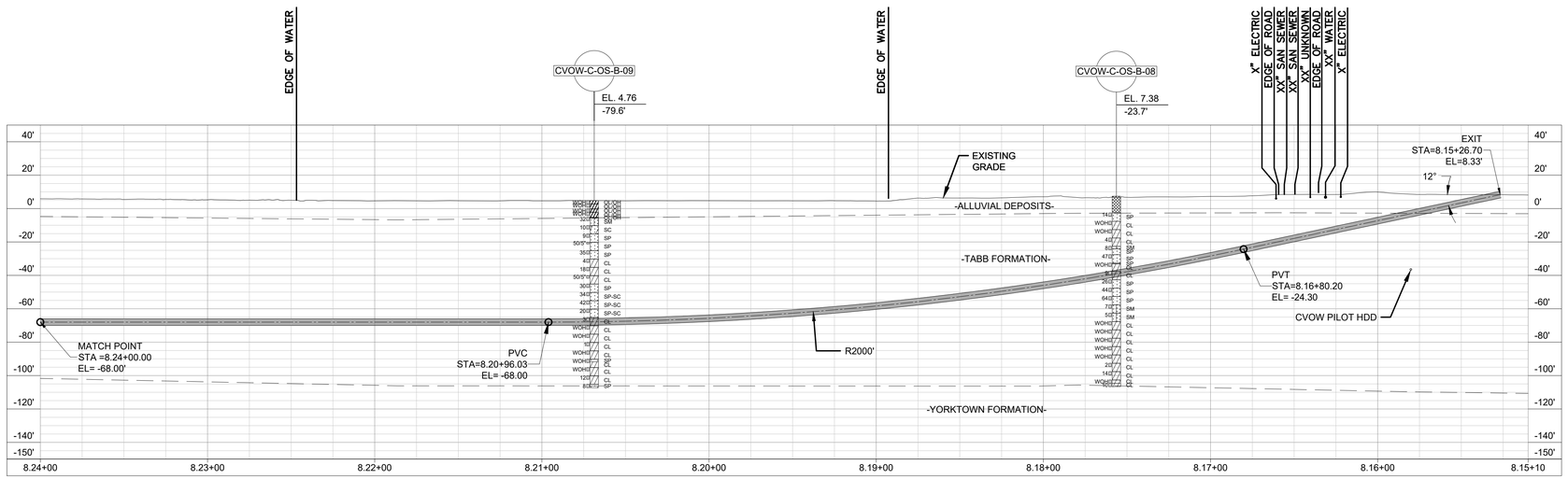
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly



LAKE CHRISTINE "HDD 5 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 5 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-532 THROUGH UG-EX-P4-535.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 5 PLAN AND PROFILE (STA. 19+00 TO 28+50)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	13 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM

Drawing No. UG-EX-P4-212

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM
GARDNER, ZACHARY

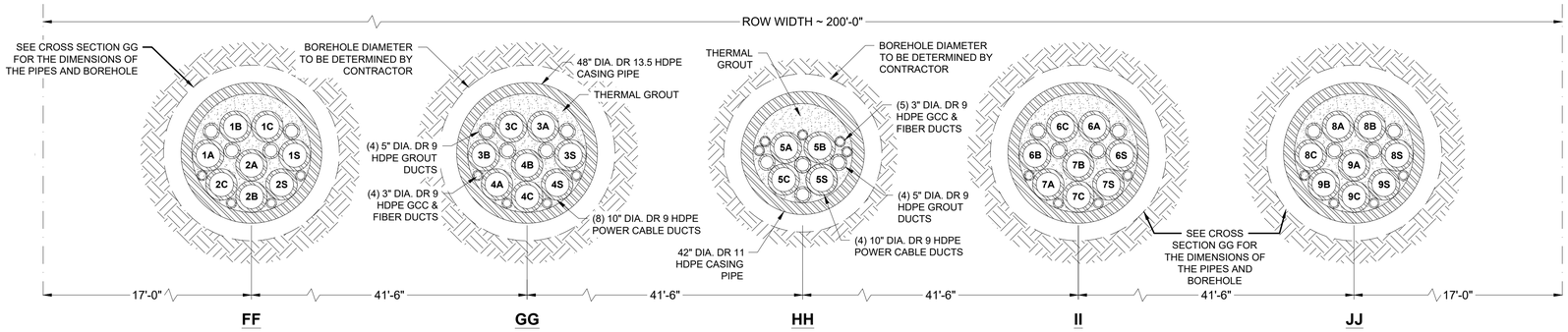
No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	JG,KP,ZG	ISSUED FOR 60% REVIEW	0200157
	AH	CL		H&A
B	07/15/22	JG,KP,ZG	ISSUED FOR BID	0200157
	AH	CL		H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



230-kV HDD INSTALLATION CROSS-SECTION

CONDUIT CONFIGURATION FOR ONSHORE HDD INSTALLATIONS
NOT TO SCALE

NOTES:

1. TEMPORARY STEEL SURFACE CASING PIPE IS NOT SHOWN AS A PART OF THE CROSS SECTIONS. CONTRACTOR SHALL DETERMINE THE SIZE AND LENGTH OF THE TEMPORARY STEEL SURFACE CASING PIPE BASED ON THEIR MEANS AND METHODS AND UNINSTALL THEM UPON COMPLETION OF THE PROJECT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD SECTIONS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	14 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-213.DWG
PLOTTED: 6/27/2022 2:24 PM
Drawing No. UG–EX–P4–213

No.	Date	By	Description	Project Number
A	03/25/22	JGKP-ZG	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	JGKP-ZG	ISSUED FOR BID	0200157 H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG–EX–P4–213.DWG
PLOTTED: 6/27/2022 2:24 PM
GARDNER, ZACHARY

COASTAL VIRGINIA OFFSHORE WIND
230–kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE

ISSUED FOR BID
NOT FOR CONSTRUCTION

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COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	1 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG–EX–P–200.DWG
PLOTTED: 6/27/2022 2:28 PM

Drawing No.
UG–EX–P5–200

UG–EX–P–200.DWG
PLOTTED: 6/27/2022 2:28 PM
GARDNER, ZACHARY

No.	Description	By	A. 03/25/2022 JGK/P.ZG	B 07/15/2022 JGK/P.ZG
			AH CL.	AH CL.
	Project Number	B/M	0200157 H&A	0200157 H&A
	Checked/Appr.		ISSUED FOR 60% REVIEW	ISSUED FOR BID

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

GARDNER, ZACHARY
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0200157\CAD

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 2416853142000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   - 7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   - 7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
     - 7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
     - 7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
    - 12.1. USACE PERMITS
    - 12.2. CITY OF ____
    - 12.3. COUNTY OF ____
    - 12.4. DEWATERING PERMITS
    - 12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

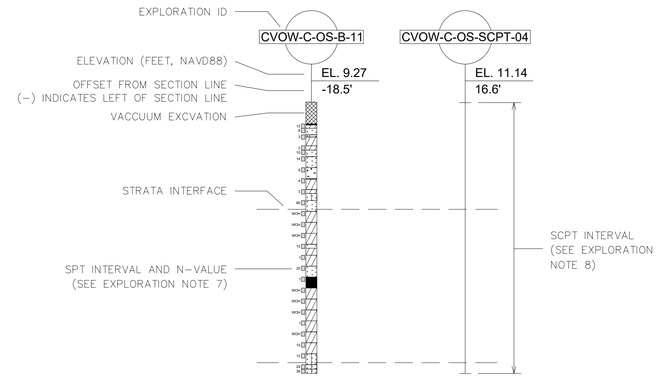
DIRECT PIPE NOTES:

1. PLACEHOLDER – TBD

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW		WELL GRADED SANDS, GRAVELLY SANDS
SP		POORLY GRADED SANDS, GRAVELLY SANDS
SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH		INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT		PEAT AND OTHER HIGHLY ORGANIC SOILS
BR		BEDROCK
NR		NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	2 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
			B/M No.	Revisions

Cad File Name UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:28 PM
Drawing No. UG-EX-P5-201

UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:28 PM
GARDNER, ZACHARY

No.	Description	Date	By	Checked/Appr.
A	ISSUED FOR 60% REVIEW	03/25/22	AH	CL
B	ISSUED FOR BID	07/15/22	AH	CL

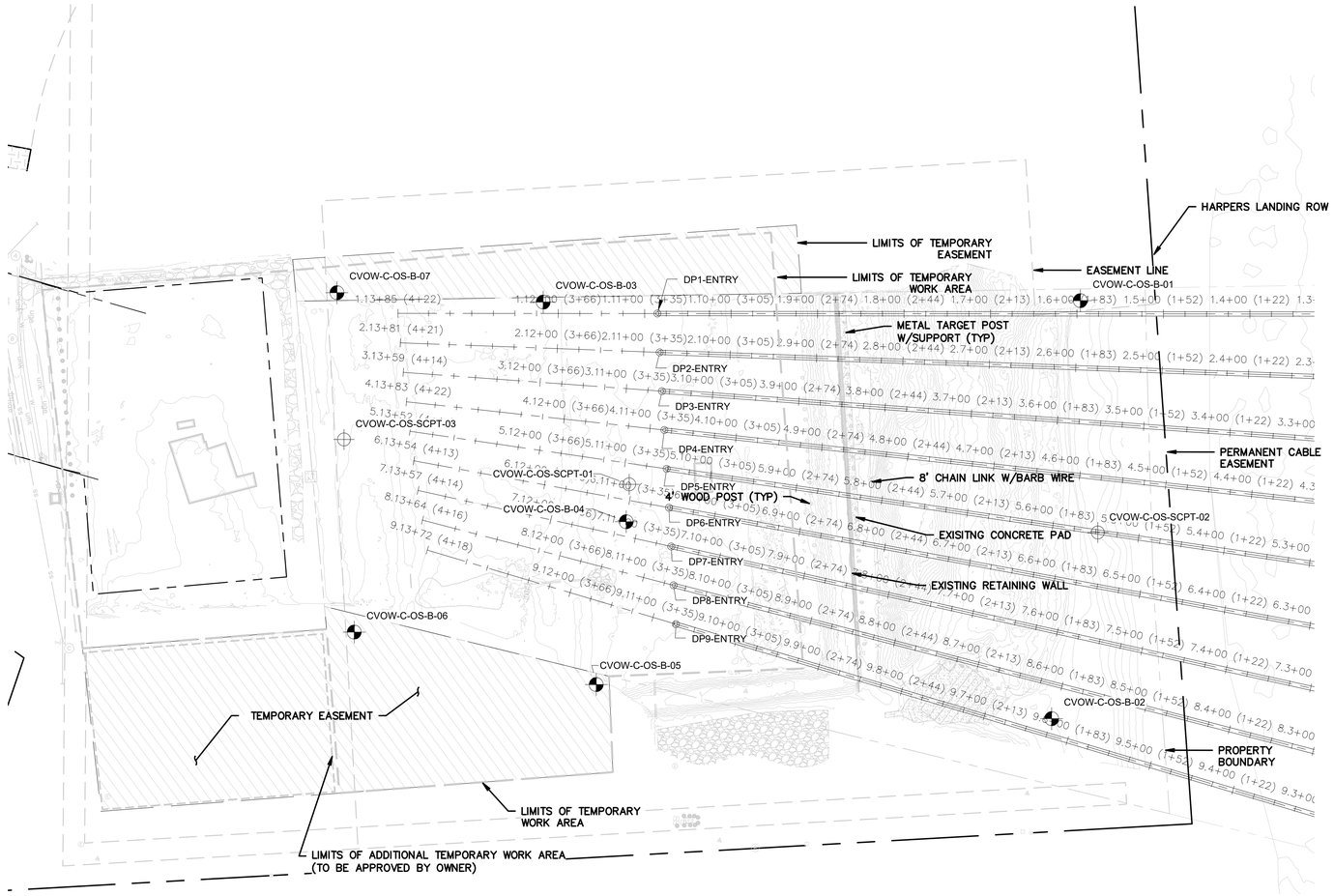
Project Number 0200157 0200157 B/M H&A H&A JS,KP,ZG JS,KP,ZG

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE® 1 ENTRY TEMPORARY WORK AREA" PLAN VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN THE OWNER-PROVIDED EASEMENT.

No	Date	By	Checked/Appr.	Description	Project Number
A	03/25/22	AH	CL.	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH	CL.	ISSUED FOR BID	0200157 H&A
					B/M

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

Dominion Energy

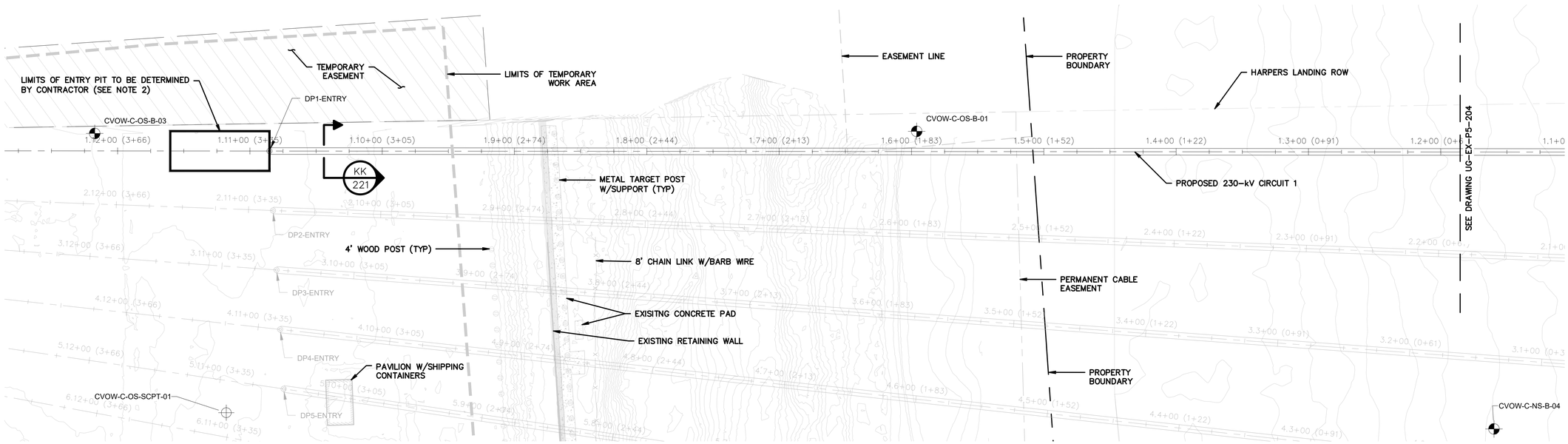
COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
LANDFALL ENTRY WORK AREA

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	3 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

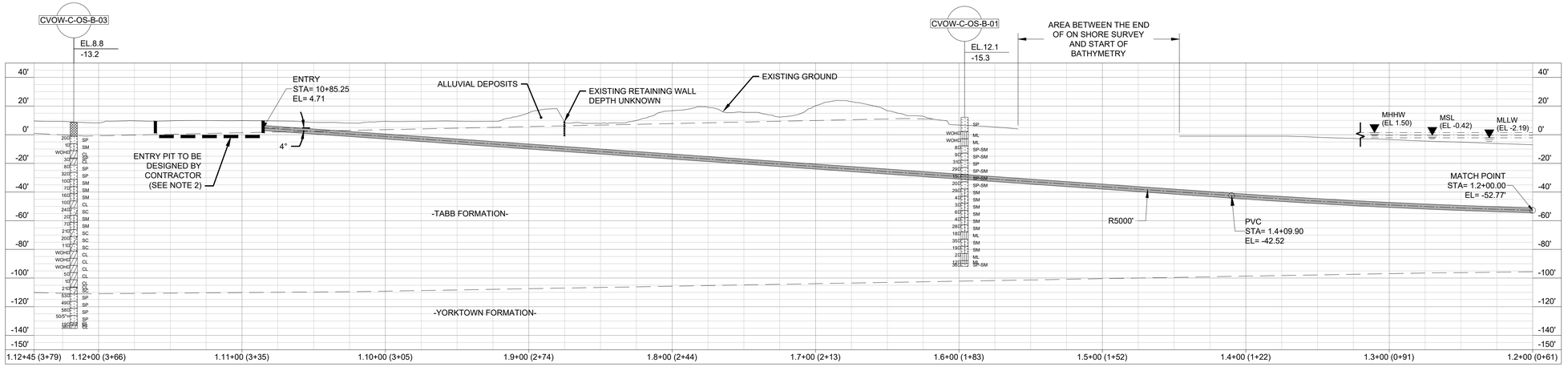
Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM

Drawing No.
UG-EX-P5-202

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM
GARDNER, ZACHARY



LANDFALL "DIRECT PIPE® 1 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 1 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-001 AND UG-EX-P5-002.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN THE OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	AH	ISSUED FOR BID	0200157	H&A
		CL			
		JGKP-ZG			

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

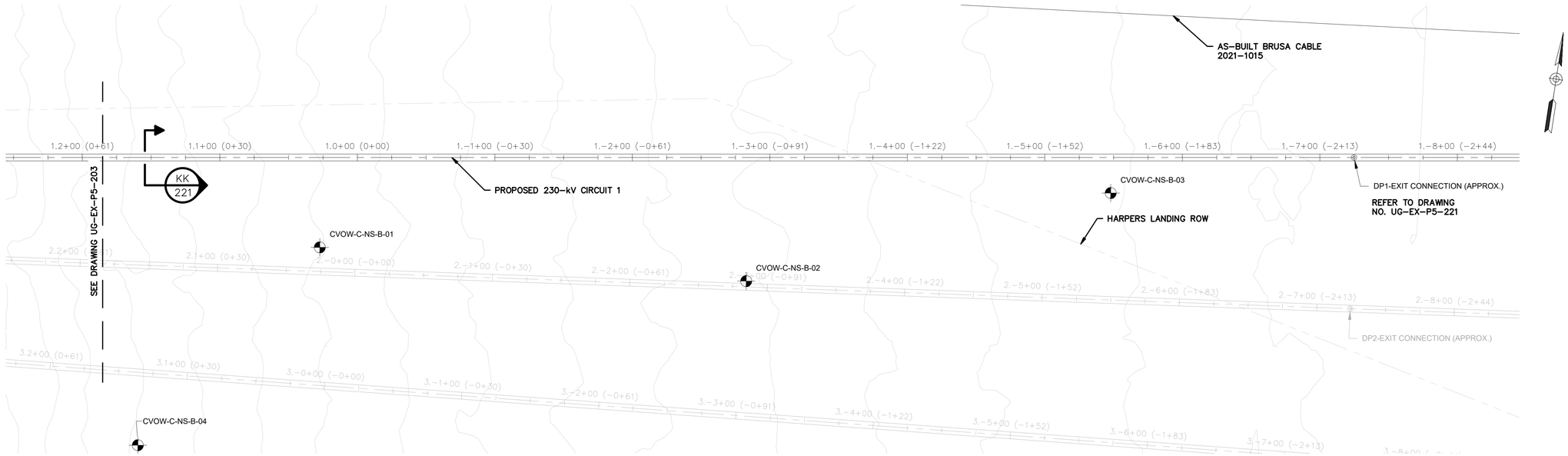
COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 1 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	4 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

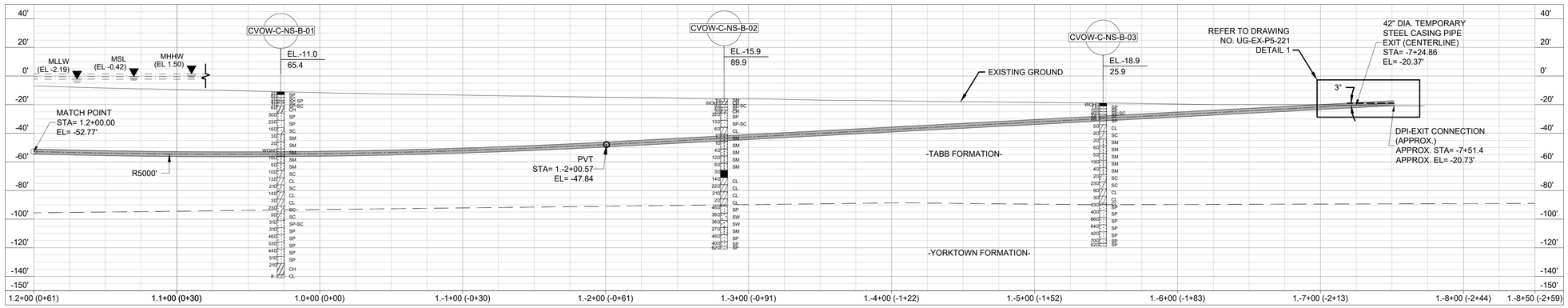
Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM

Drawing No.
UG-EX-P5-203

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM
GARDNER, ZACHARY



LANDFALL "DIRECT PIPE® 1 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 1 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-001 AND UG-EX-P5-002.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

va811.com Dig With ONE

BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 1 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	5 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM

Drawing No. UG-EX-P5-204

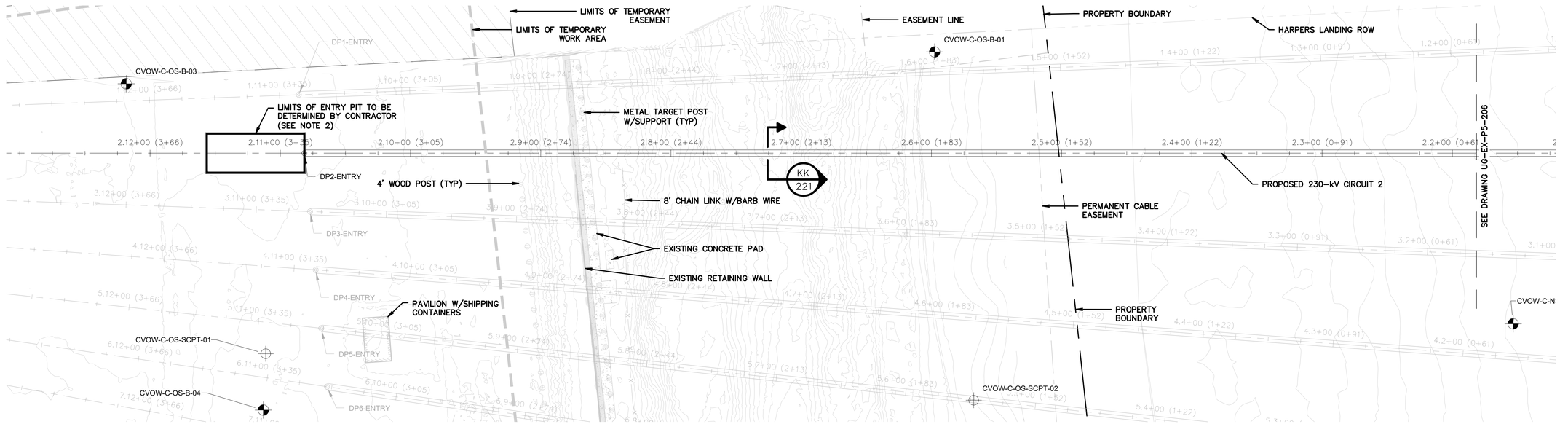
UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	JG/KP-ZC	ISSUED FOR 60% REVIEW	0200157
	AH	CL		H&A
B	07/15/22	JG/KP-ZC	ISSUED FOR BID	0200157
	AH	CL		H&A

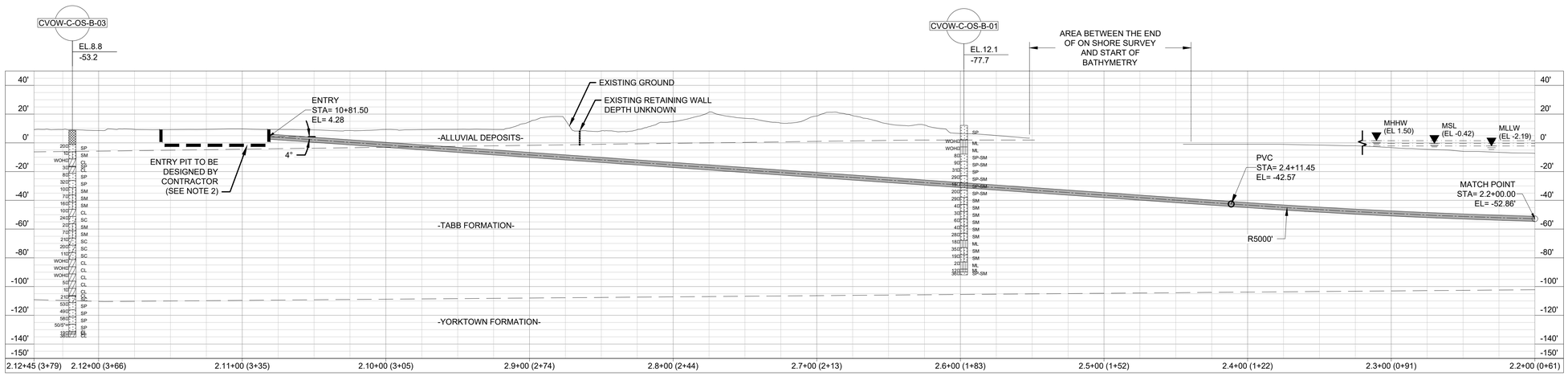
Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE® 2 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 2 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-003 AND UG-EX-P5-004.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 2 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	6 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:30 PM

Drawing No. UG-EX-P5-205

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:30 PM
GARDNER, ZACHARY

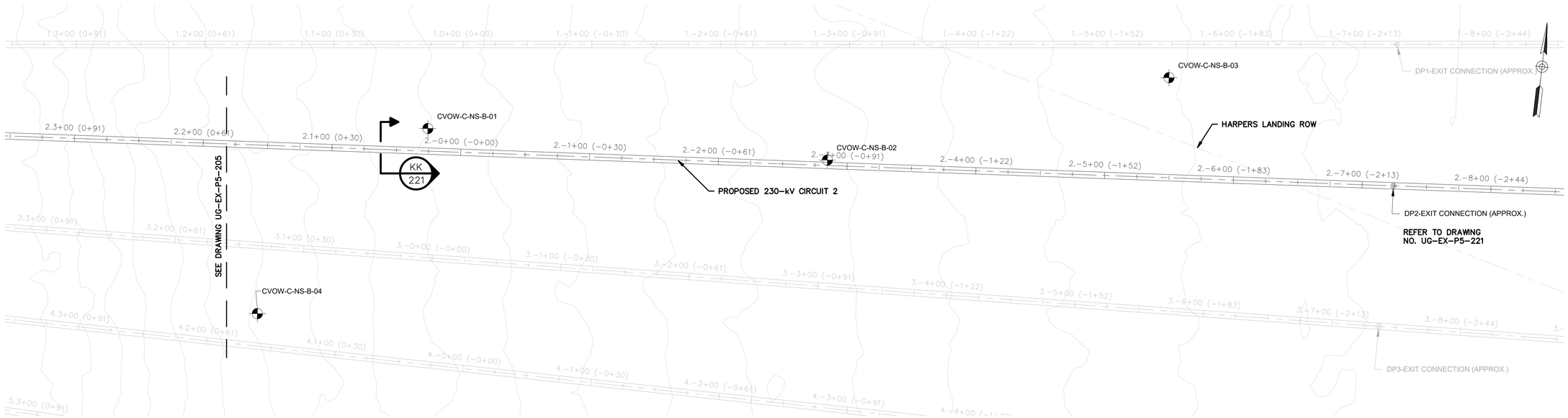
No.	Date	By	Description	Project Number	B/M
A	03/25/22	JG/KP-ZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JG/KP-ZG	ISSUED FOR BID	0200157	H&A

Revisions

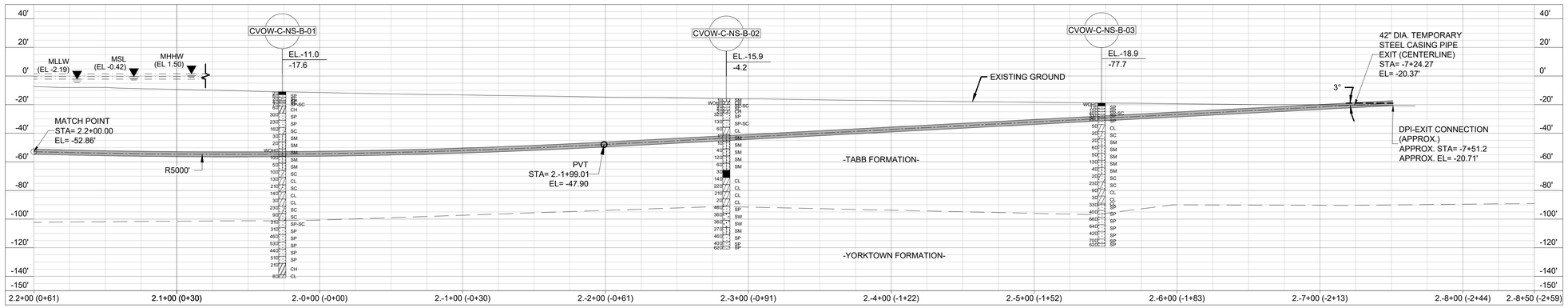
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE® 2 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 2 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-003 AND UG-EX-P5-004.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 2 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	7 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:30 PM

Drawing No. UG-EX-P5-206

No.	Date	By	Description	Project Number
A	03/25/22	JGKP-ZG	ISSUED FOR 60% REVIEW	0200157 H&A B/M
B	07/15/22	JGKP-ZG	ISSUED FOR BID	0200157 H&A

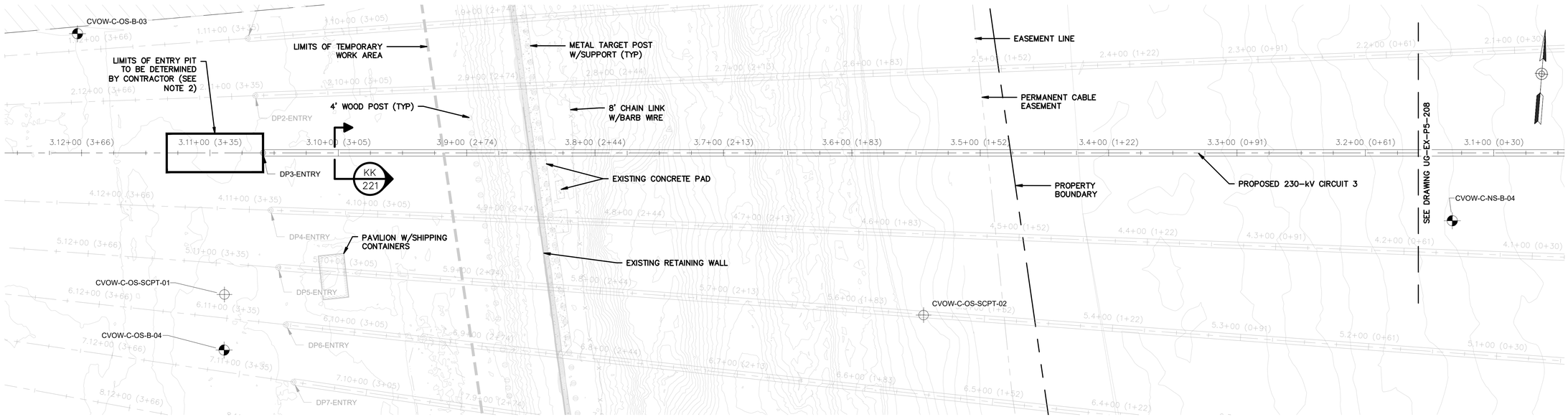
Revisions

GARDNER, ZACHARY

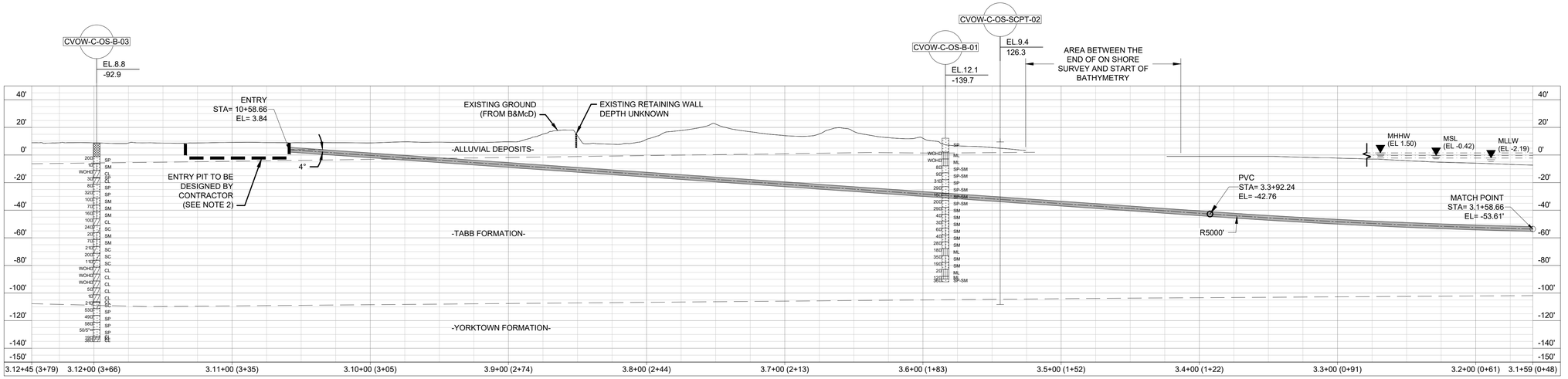
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:30 PM
GARDNER, ZACHARY



LANDFALL "DIRECT PIPE® 3 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 3 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-005 AND UG-EX-P5-006.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET: 0, 40', 80'
VERTICAL SCALE IN FEET: 0, 40', 80'

HALEY ALDRICH
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BURNS McDONNELL

No.	Date	By	Description	Project Number
A	03/25/22	CL.	ISSUED FOR 60% REVIEW	0200157
AH				B/M
B	07/15/22	CL.	ISSUED FOR BID	0200157
AH				H&A
JG-KP-ZC				

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

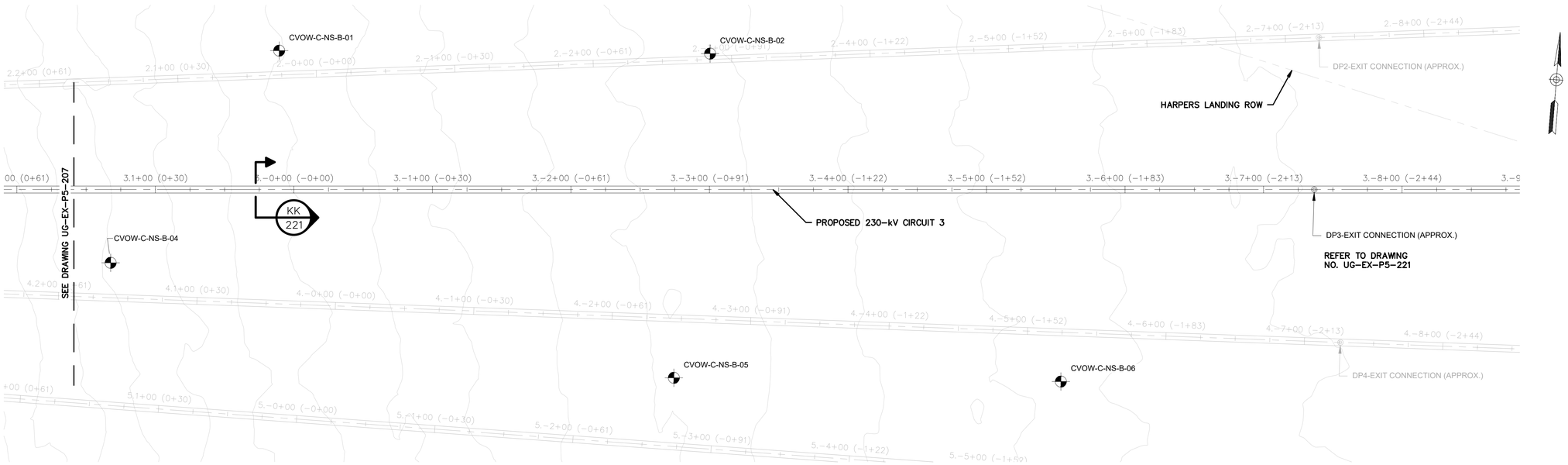
COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 3 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	8 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

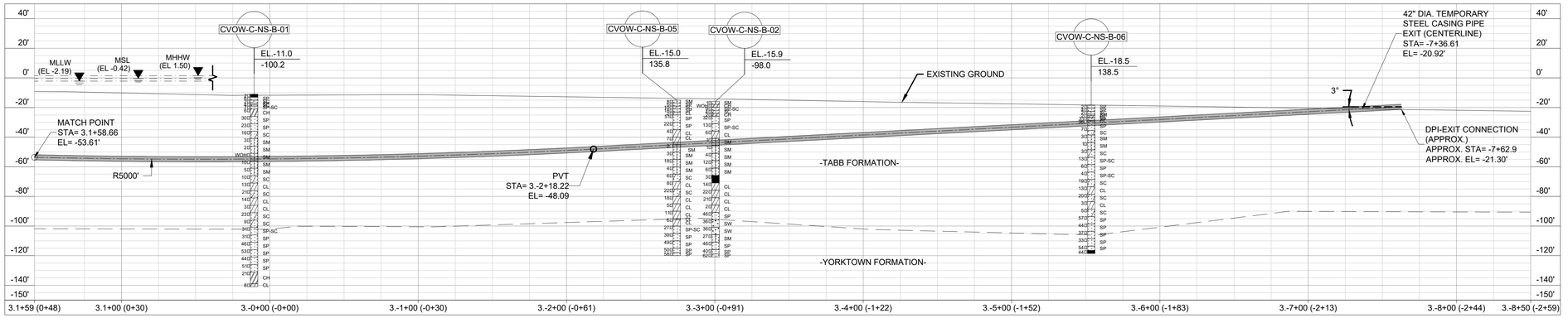
Cad File Name: UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:31 PM

Drawing No.
UG-EX-P5-207

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:31 PM
GARDNER, ZACHARY



LANDFALL "DIRECT PIPE® 3 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 3 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-005 AND UG-EX-P5-006.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET 0 40' 80'

VERTICAL SCALE IN FEET 0 40' 80'

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 3 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	9 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

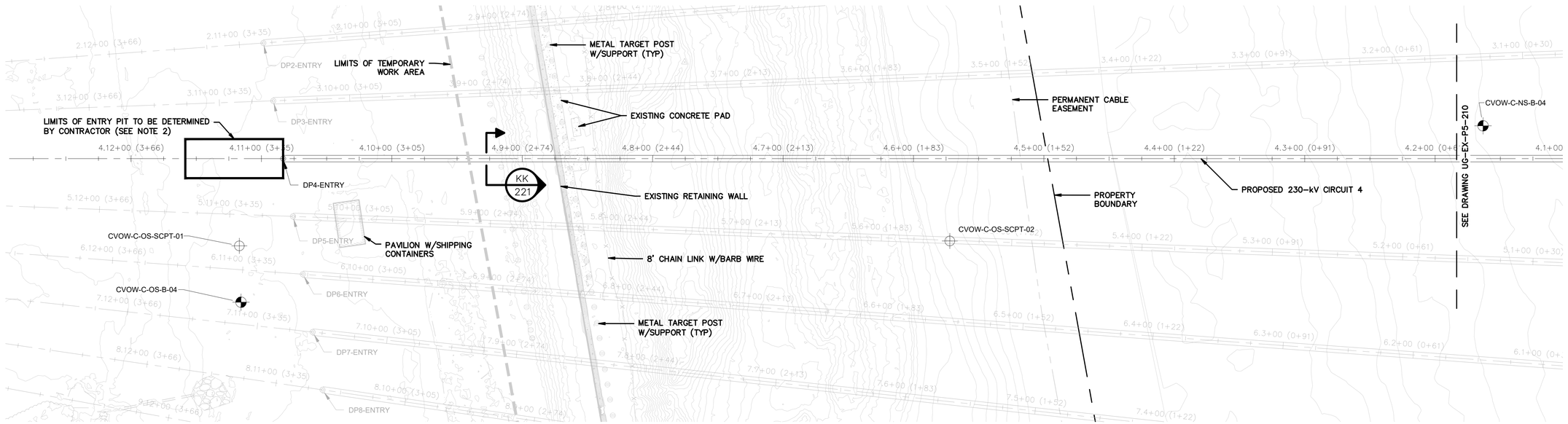
Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:31 PM
Drawing No. UG-EX-P5-208

No.	Date	By	Description	Project Number
	Checked/Appr.		Revisions	B/M
A	03/25/22	JGKP-ZG	ISSUED FOR 60% REVIEW	0200157
	AH	CL		H&A
B	07/15/22	JGKP-ZG	ISSUED FOR BID	0200157
	AH	CL		H&A

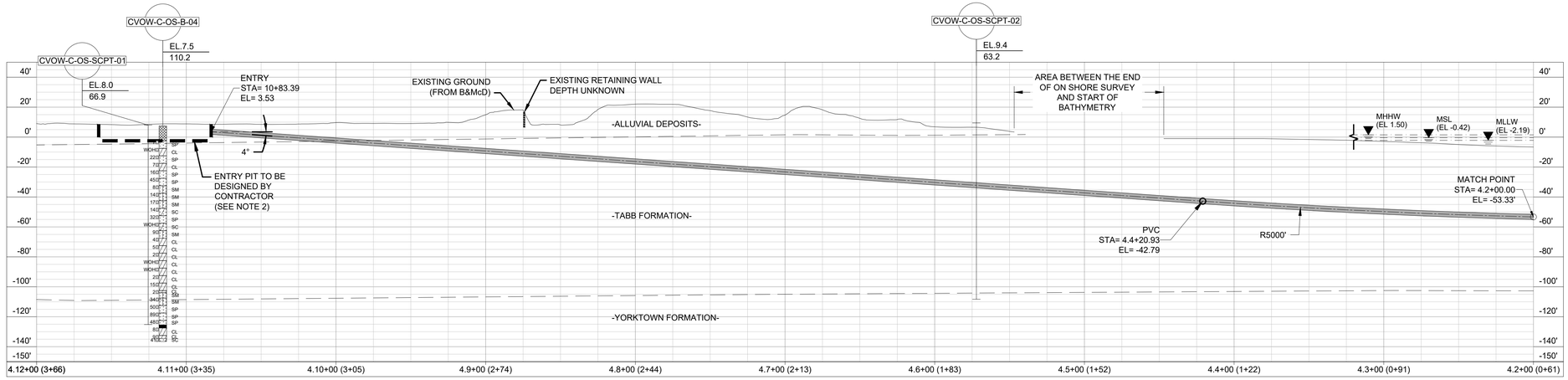
GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:31 PM
GARDNER, ZACHARY



LANDFALL "DIRECT PIPE® 4 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 4 ENTRY" PROFILE VIEW

NOTES:

1.
2. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-007 AND UG-EX-P5-008.
3. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 4 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	10 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM

Drawing No. UG-EX-P5-209

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM
GARDNER, ZACHARY

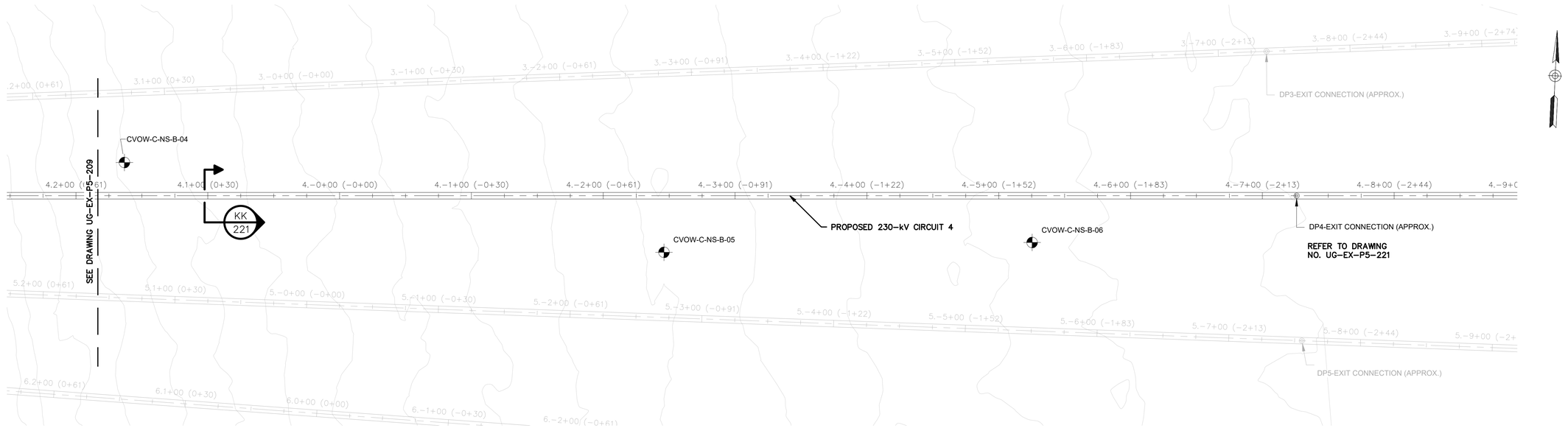
No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH CL.	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	AH CL.	ISSUED FOR BID	0200157	H&A

Revisions

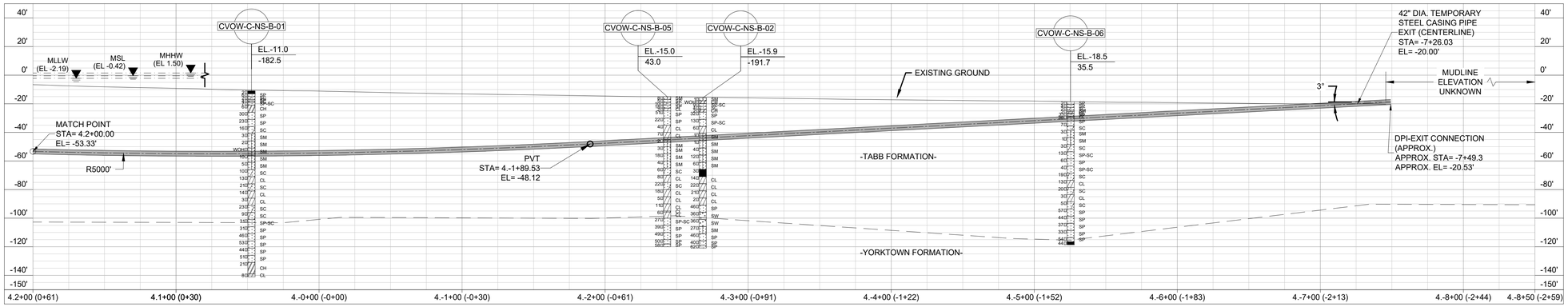
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE® 4 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 4 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-007 AND UG-EX-P5-008.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 4 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	11 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM

Drawing No. UG-EX-P5-210

No.	Date	By	Description	Project Number	B/M
A	03/25/22	JGKP-ZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JGKP-ZG	ISSUED FOR BID	0200157	H&A

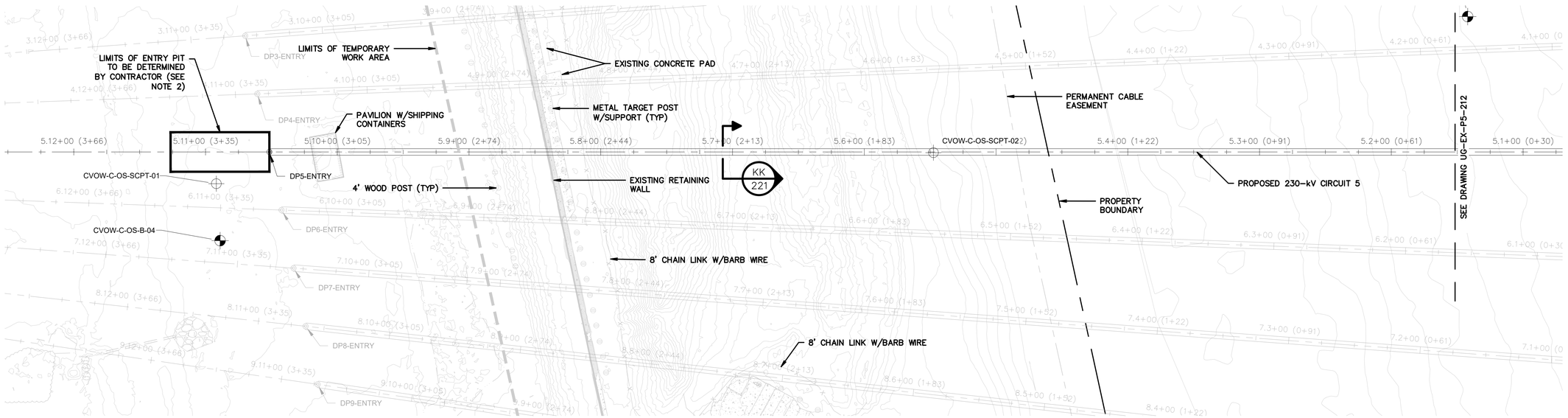
Revisions

GARDNER, ZACHARY

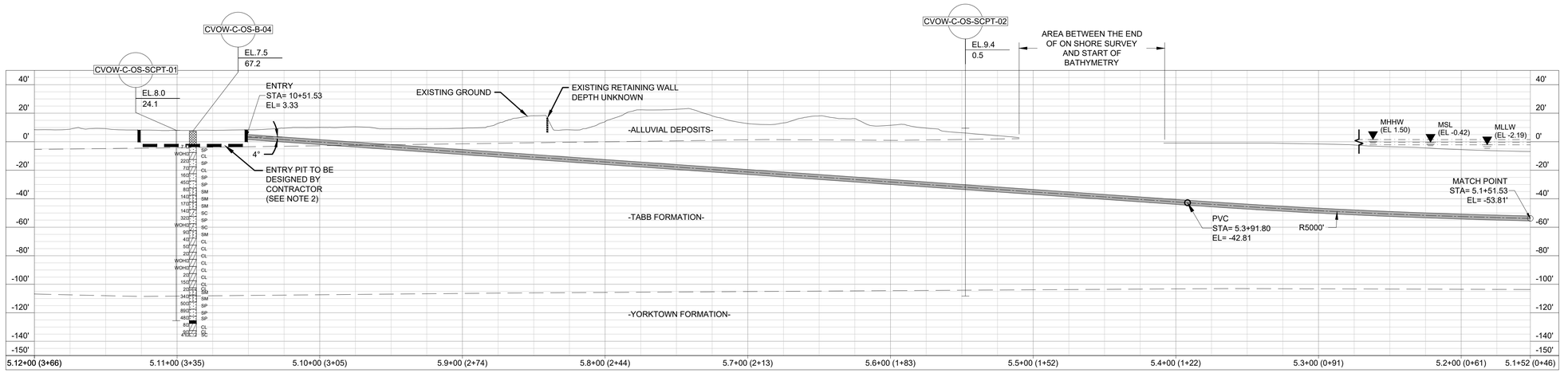
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM
GARDNER, ZACHARY



LANDFALL "DIRECT PIPE® 5 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 5 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-009 AND UG-EX-P5-010.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 5 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	12 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM

Drawing No. UG-EX-P5-211

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM
GARDNER, ZACHARY

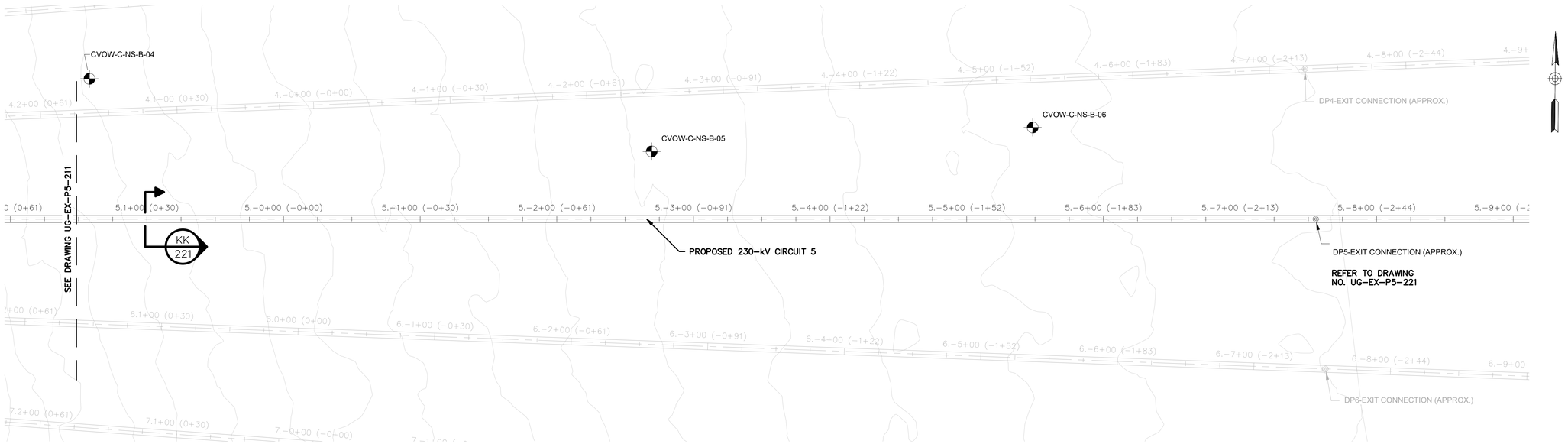
No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH CL.	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	AH CL.	ISSUED FOR BID	0200157	H&A

Revisions

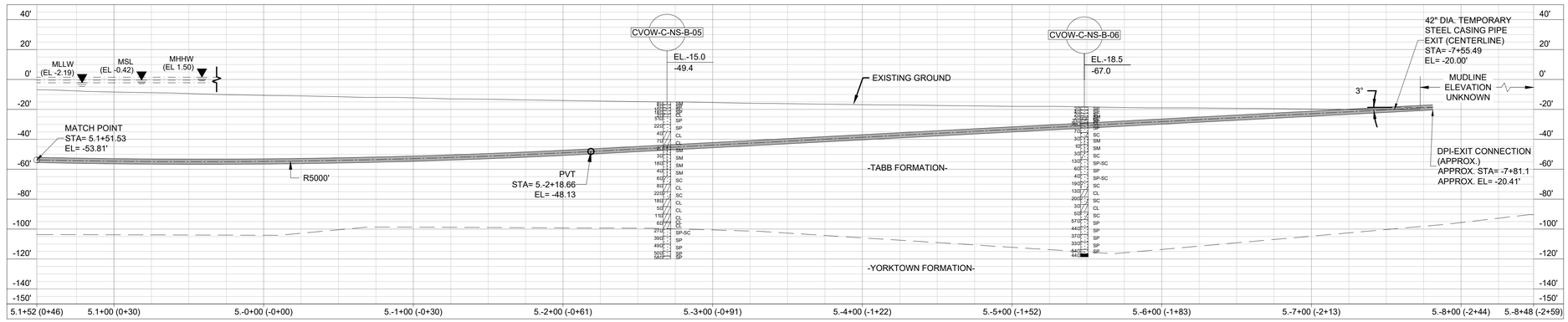
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE® 5 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 5 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-009 AND UG-EX-P5-010.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 5 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	13 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:33 PM
Drawing No. UG-EX-P5-212

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 B/M H&A
B	07/15/22	AH	ISSUED FOR BID	0200157 H&A
		JG/KP-ZC		

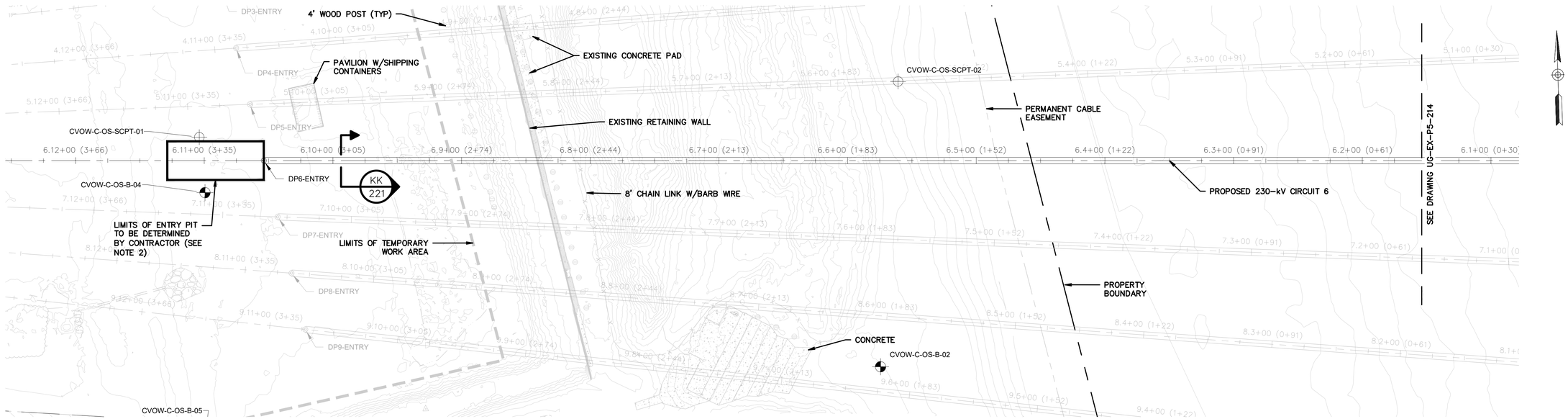
Revisions

GARDNER, ZACHARY

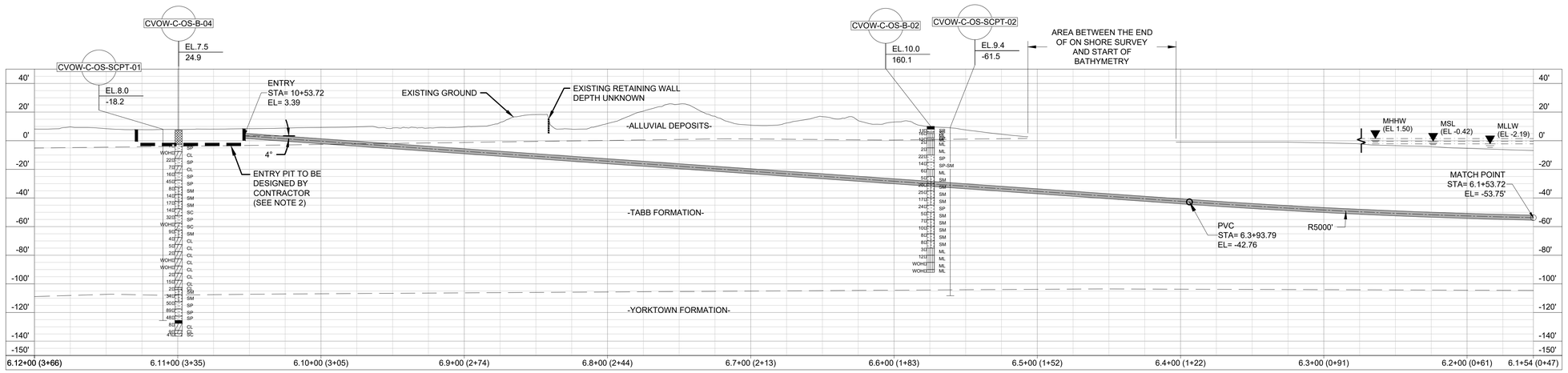
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:33 PM
GARDNER, ZACHARY



LANDFALL "DIRECT PIPE® 6 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 6 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-011 AND UG-EX-P5-012.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 6 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	14 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:33 PM

Drawing No. UG-EX-P5-213

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:33 PM
GARDNER, ZACHARY

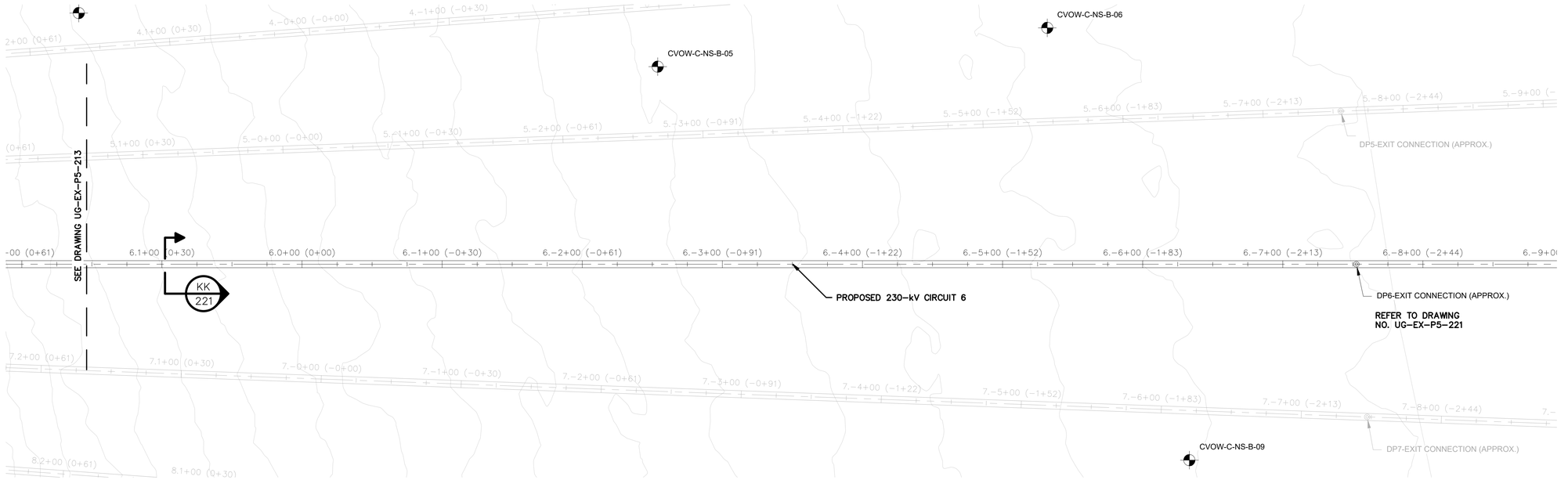
No.	Date	By	Description	Project Number	
A	03/25/22	JG,KP,ZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JG,KP,ZG	ISSUED FOR BID	0200157	H&A

Revisions

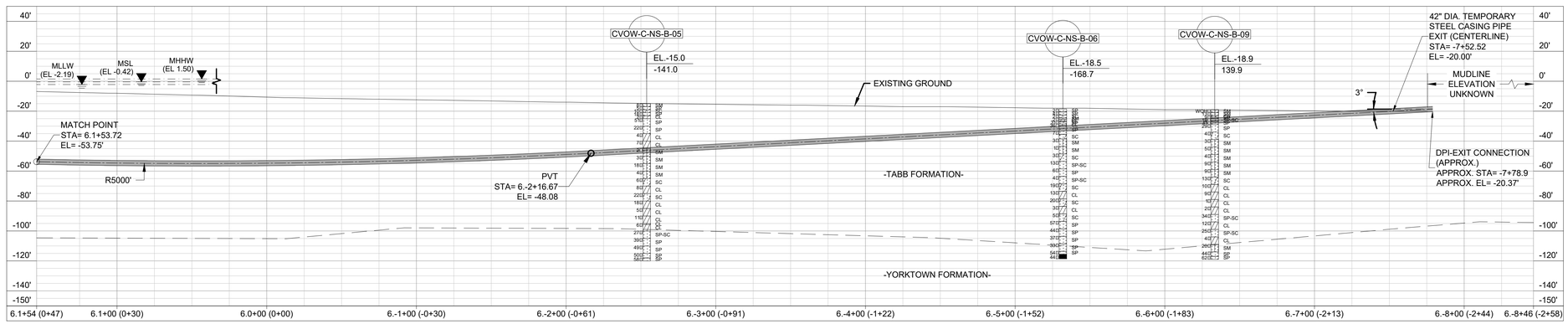
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE® 6 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 6 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-011 AND UG-EX-P5-012.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

No.	Date	By	Description	Project Number
				B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH	ISSUED FOR BID	0200157 H&A
		CL		
		JGKP-ZC		

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 6 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	15 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
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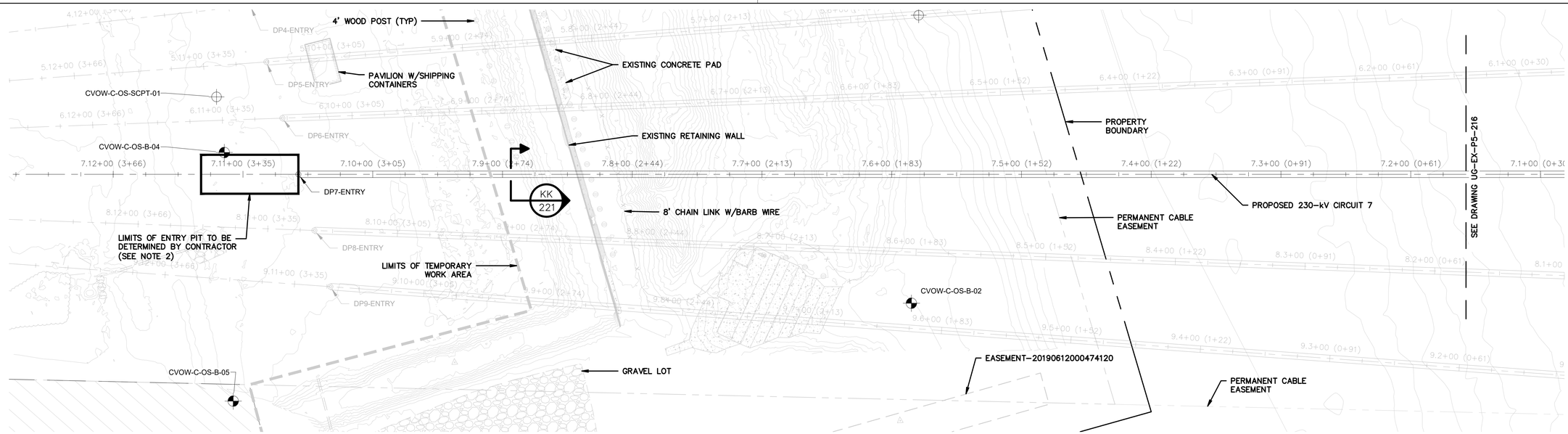
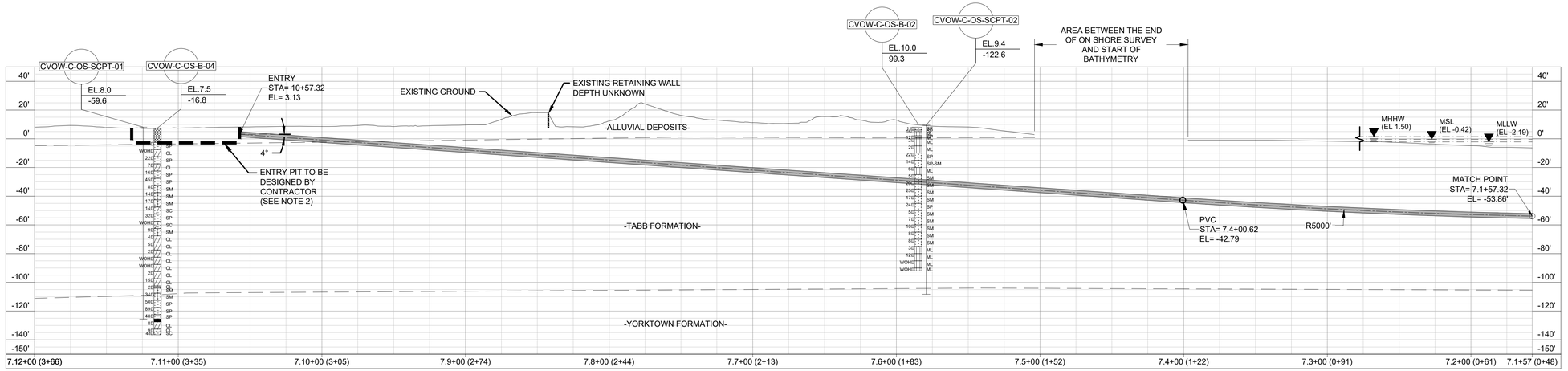
Drawing No.
UG-EX-P5-214

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:34 PM
GARDNER, ZACHARY



LANDFALL "DIRECT PIPE® 7 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 7 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-013 AND UG-EX-P5-014.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 7 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	16 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:34 PM

Drawing No. UG-EX-P5-215

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:34 PM
GARDNER, ZACHARY

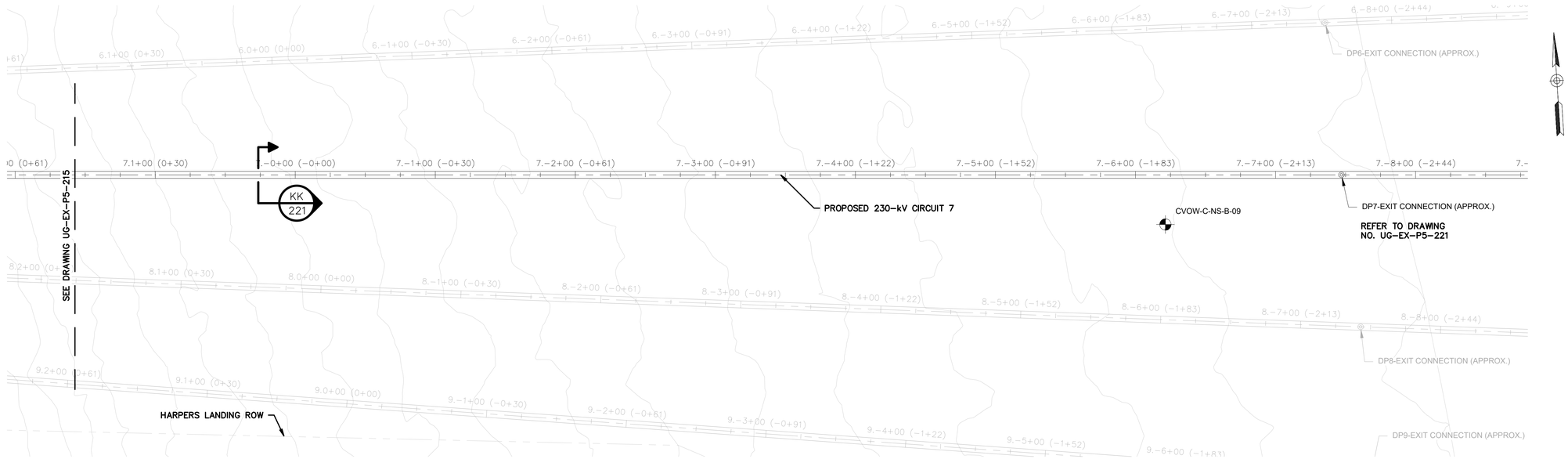
No.	Date	By	Description	Project Number
A	03/25/22	AH CL.	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH CL.	ISSUED FOR BID	0200157 H&A
		JG-KP-ZC		

Revisions

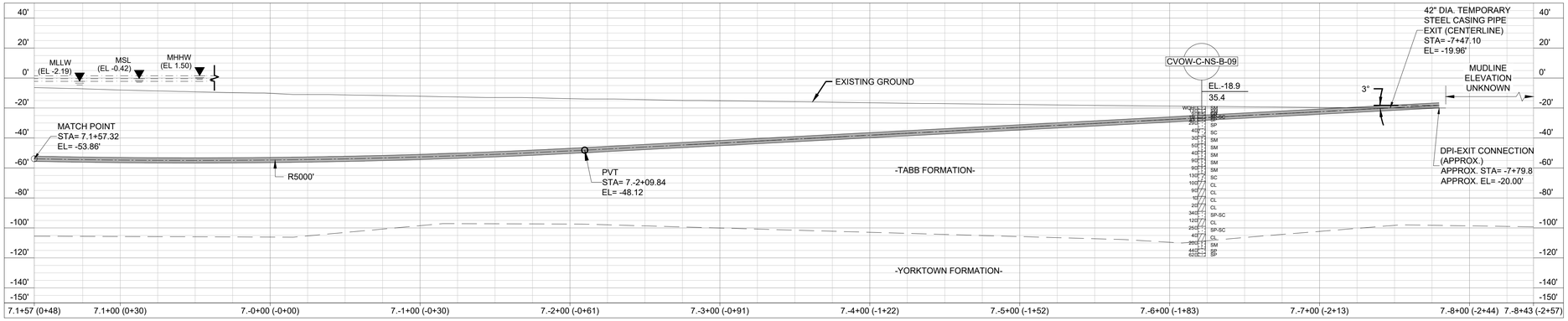
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE® 7 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 7 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-013 AND UG-EX-P5-014.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 7 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	17 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:34 PM

Drawing No. UG-EX-P5-216

No.	Description	Date	By	Project Number
B	ISSUED FOR BID	07/15/22	JGKP-ZC	0200157
			AH	
			CL	B/M
A	ISSUED FOR 60% REVIEW	03/25/22	JGKP-ZC	0200157
			AH	H&A
			CL	

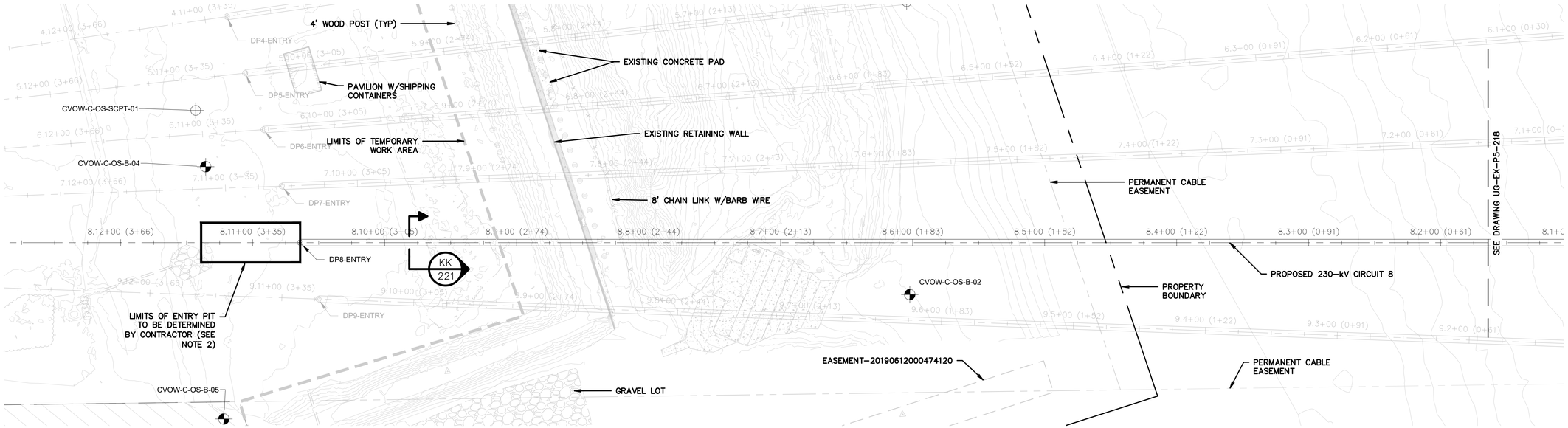
Revisions

GARDNER, ZACHARY

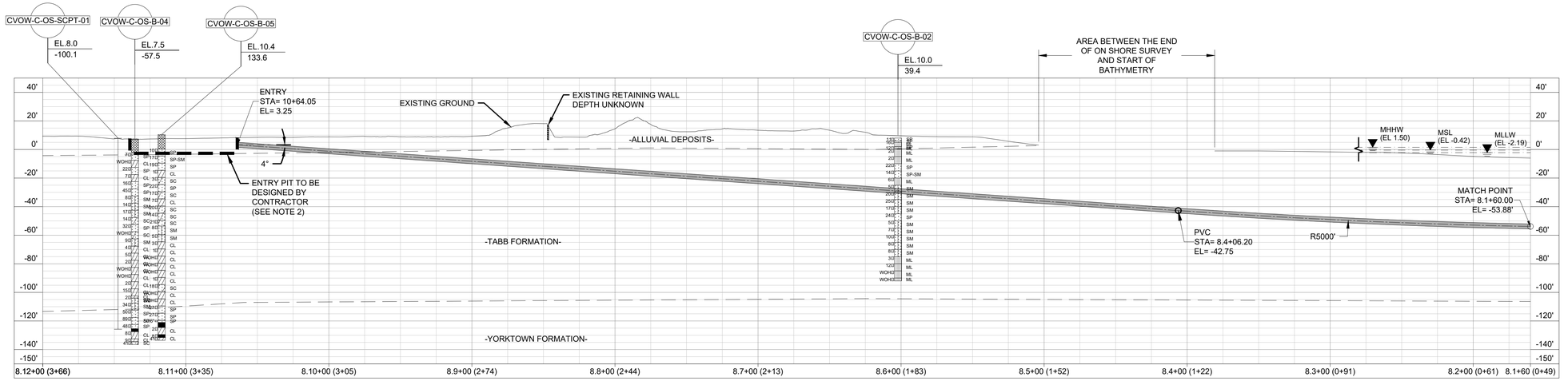
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:34 PM
GARDNER, ZACHARY



LANDFALL "DIRECT PIPE® 8 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 8 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-015 AND UG-EX-P5-016.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET: 0 40' 80'

VERTICAL SCALE IN FEET: 0 40' 80'

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 8 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	18 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name: UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:35 PM

Drawing No.
UG-EX-P5-217

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157	H&A

Revisions

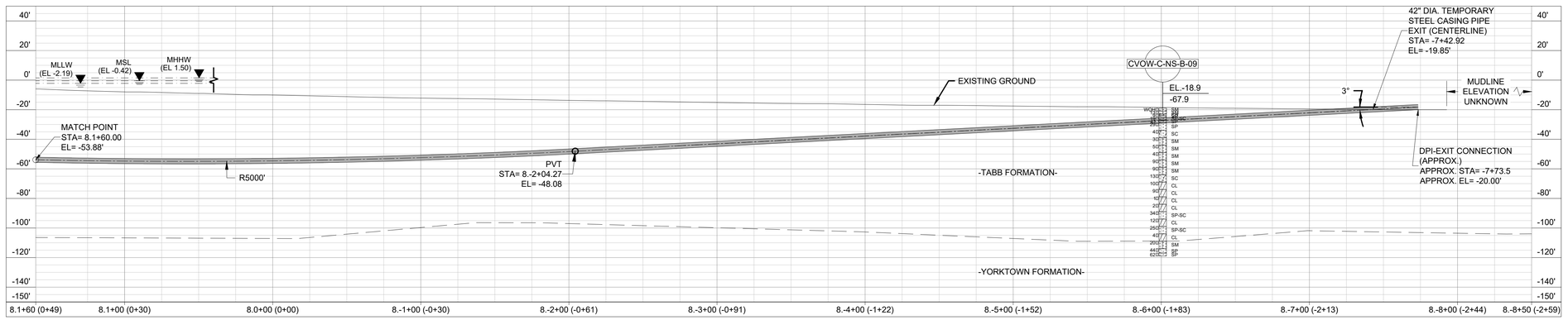
GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:35 PM
GARDNER, ZACHARY

LANDFALL "DIRECT PIPE® 8 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 8 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-015 AND UG-EX-P5-016.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 8 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	19 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:35 PM
Drawing No. UG-EX-P5-218

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH CL.	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	AH CL.	ISSUED FOR BID	0200157	H&A
		JG/KP-ZC			

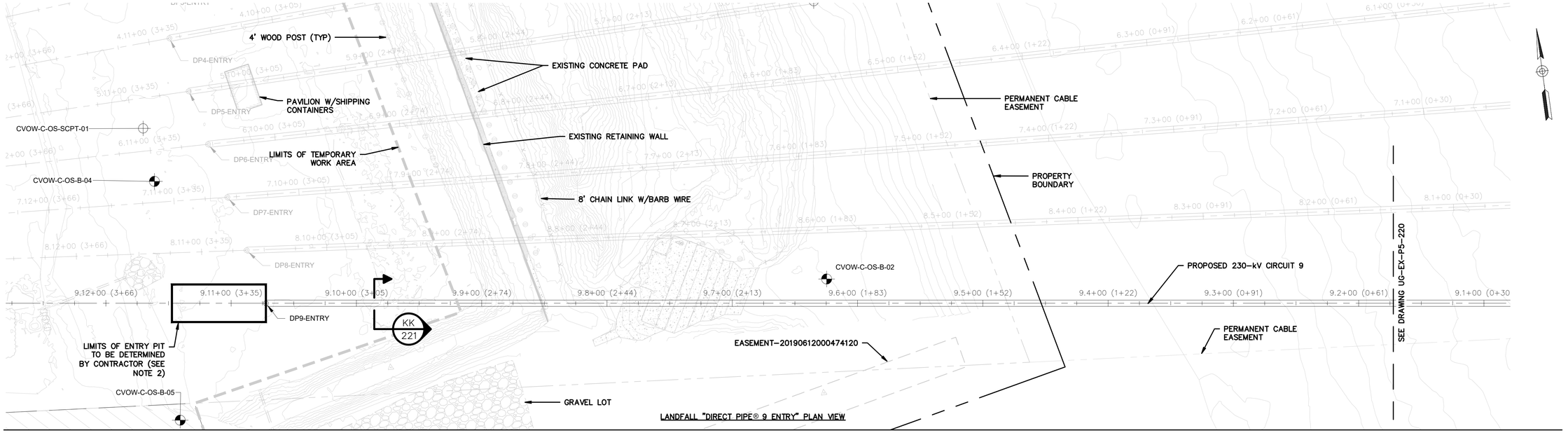
Revisions

GARDNER, ZACHARY

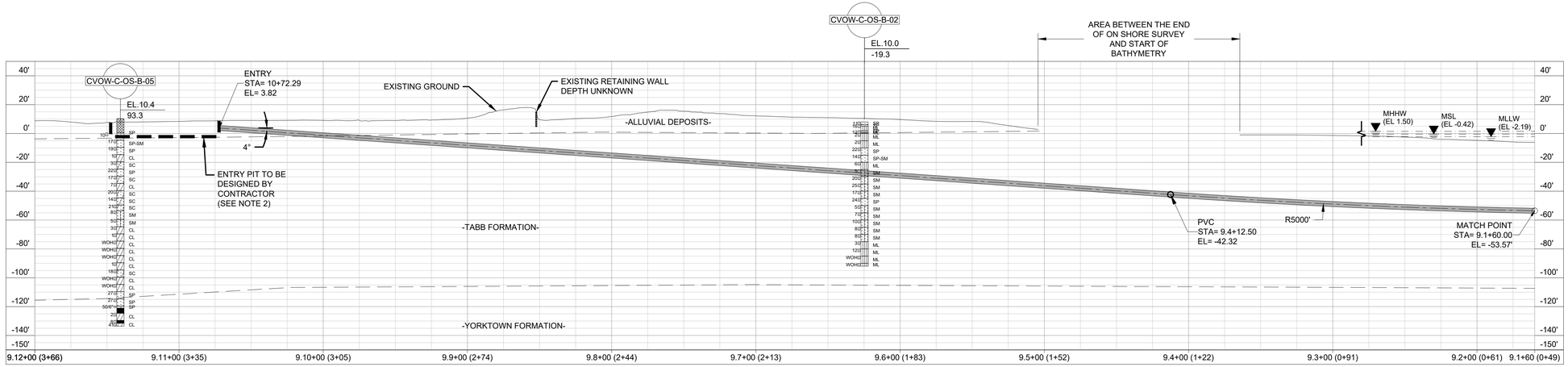
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:35 PM
GARDNER, ZACHARY



LANDFALL "DIRECT PIPE® 9 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 9 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-017 AND UG-EX-P5-018.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 9 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	20 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:36 PM
Drawing No. UG-EX-P5-219

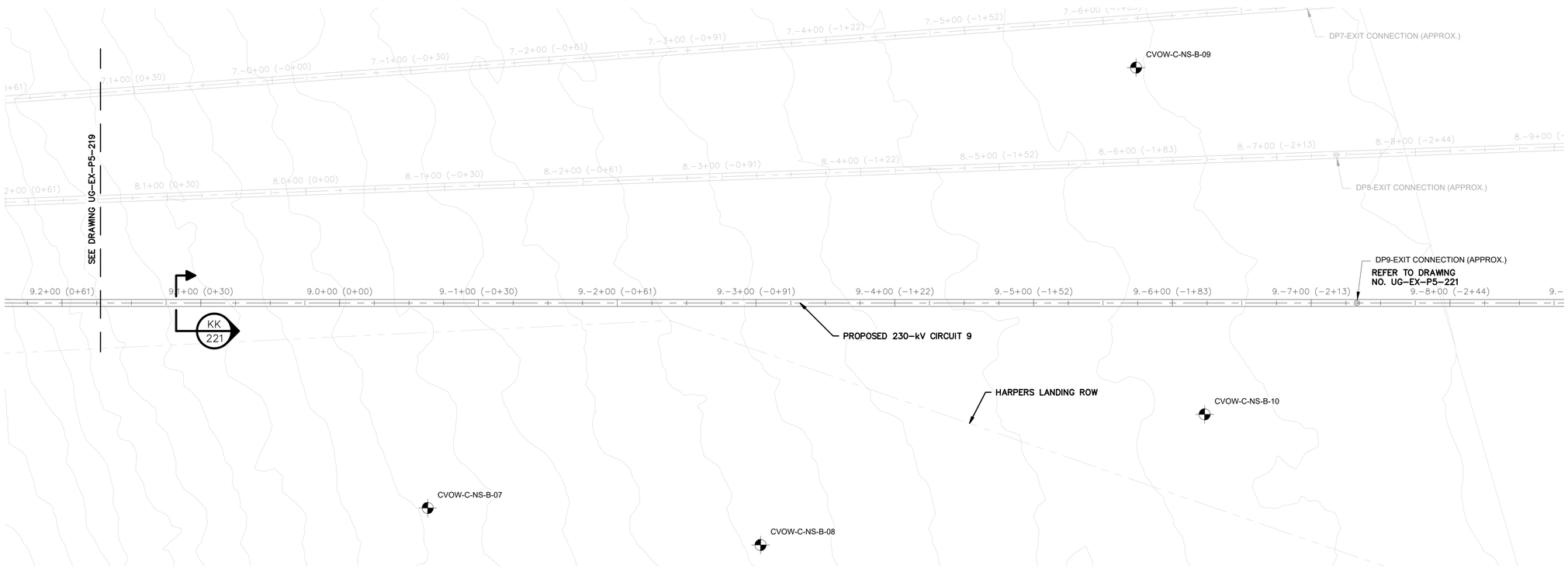
UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:36 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	CL	ISSUED FOR BID	0200157	H&A
		JGKP-ZC			

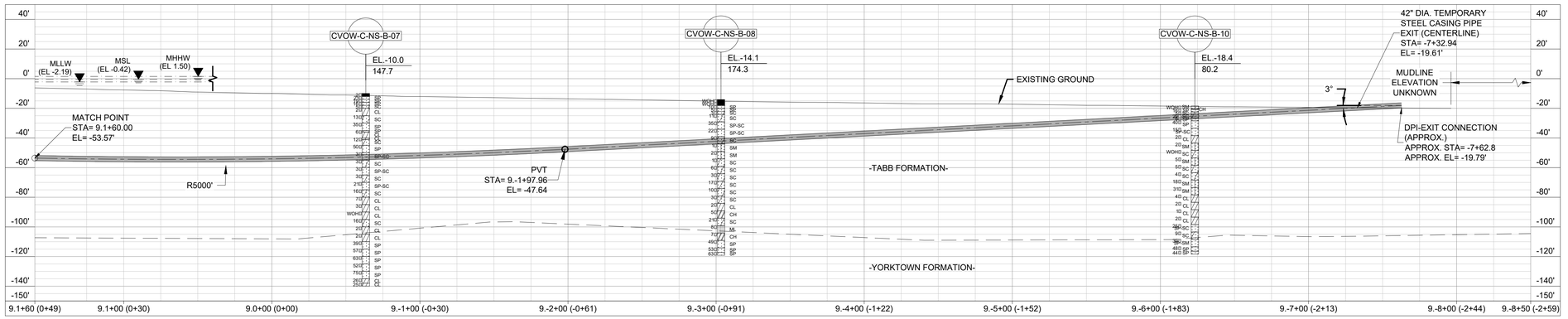
Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly



LANDFALL "DIRECT PIPE® 9 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 9 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-017 AND UG-EX-P5-018.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 B/M
B	07/15/22	AH	ISSUED FOR BID	0200157

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

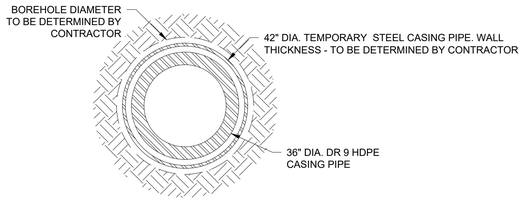
COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 9 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	21 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:36 PM

Drawing No. UG-EX-P5-220

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:36 PM
GARDNER, ZACHARY

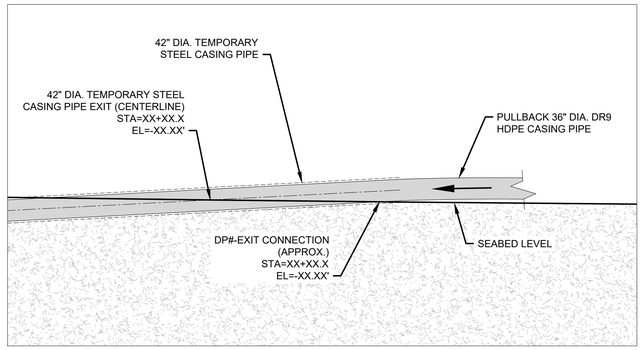


KK

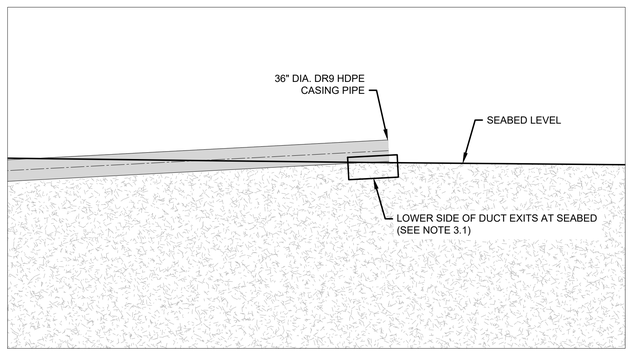
CONDUIT CONFIGURATION FOR LANDFALL DIRECT PIPE® INSTALLATIONS
NOT TO SCALE

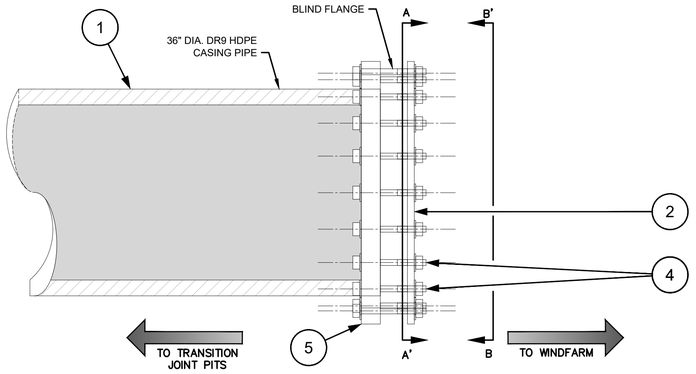
DETAIL 1 – CONSTRUCTION SEQUENCE:

1. PULLBACK 36" DIA. DR9 HDPE CASING PIPE
2. ONCE 36" HDPE IS INSTALLED, LEAVE HDPE TAIL LONG AN REMOVE 42" STEEL CASING.



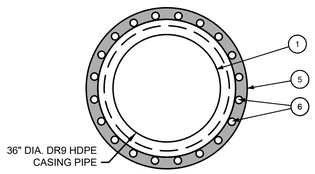
3. CONTRACTOR TO CUT 36" CASING IN THE FIELD TO MEET THE FOLLOWING CRITERIA:
   3.1 LOWER SIDE OF DUCT EXITS AT SEABED LEVEL WITHIN +0.5M AND –0.1M.
4. INSTALL BLIND FLANGE (SEE BLIND FLANGE DETAIL, THIS SHEET).



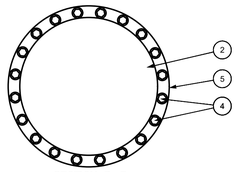


BLIND FLANGE DETAIL (SIDE VIEW)
NOT TO SCALE

TYPICAL SEALING FLANGE
(NOT TO SCALE)



SECTION A–A



SECTION B–B

KEY
1. HDPE DUCT
2. HDPE BLIND FLANGE
3. SEALING RUBBER OR SIMILAR
4. SCREWS
5. STEEL MOBILE FLANGE (BACKING RING) NECESSARY FOR LANDING BELLMOUTH AND SEALING FLANGE INSTALLATION
6. HOLES

NOTE:

1. THE FLANGE SCHEMATICS PROVIDED ON THIS SHEET ARE FOR PLANNING PURPOSES ONLY AND ARE BASED ON INFORMATION PROVIDED BY PRYSMIAN ON 16 MAY 2022. PRYSMIAN WILL DESIGN AND DETAIL THE REQUIRED FLANGE AND BELLMOUTH COMPONENTS AT A LATER DATE. CONTRACTOR SHALL PROCURE THE FLANGE AND BELLMOUTH COMPONENTS AS DESIGNED BY PRYSMIAN. CONTRACTOR SHALL SUBMIT THE FABRICATOR'S SHOP DRAWINGS FOR THE FLANGE AND BELLMOUTH COMPONENTS TO PRYSMIAN FOR THEIR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

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Dominion Energy®

COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE® SECTION AND DETAILS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	22 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	

		B/M No.	Revisions

Cad File Name UG-EX-P5-221.DWG
PLOTTED: 6/27/2022 2:36 PM

Drawing No.
UG–EX–P5–221

UG-EX-P5-221.DWG
PLOTTED: 6/27/2022 2:36 PM
GARDNER, ZACHARY

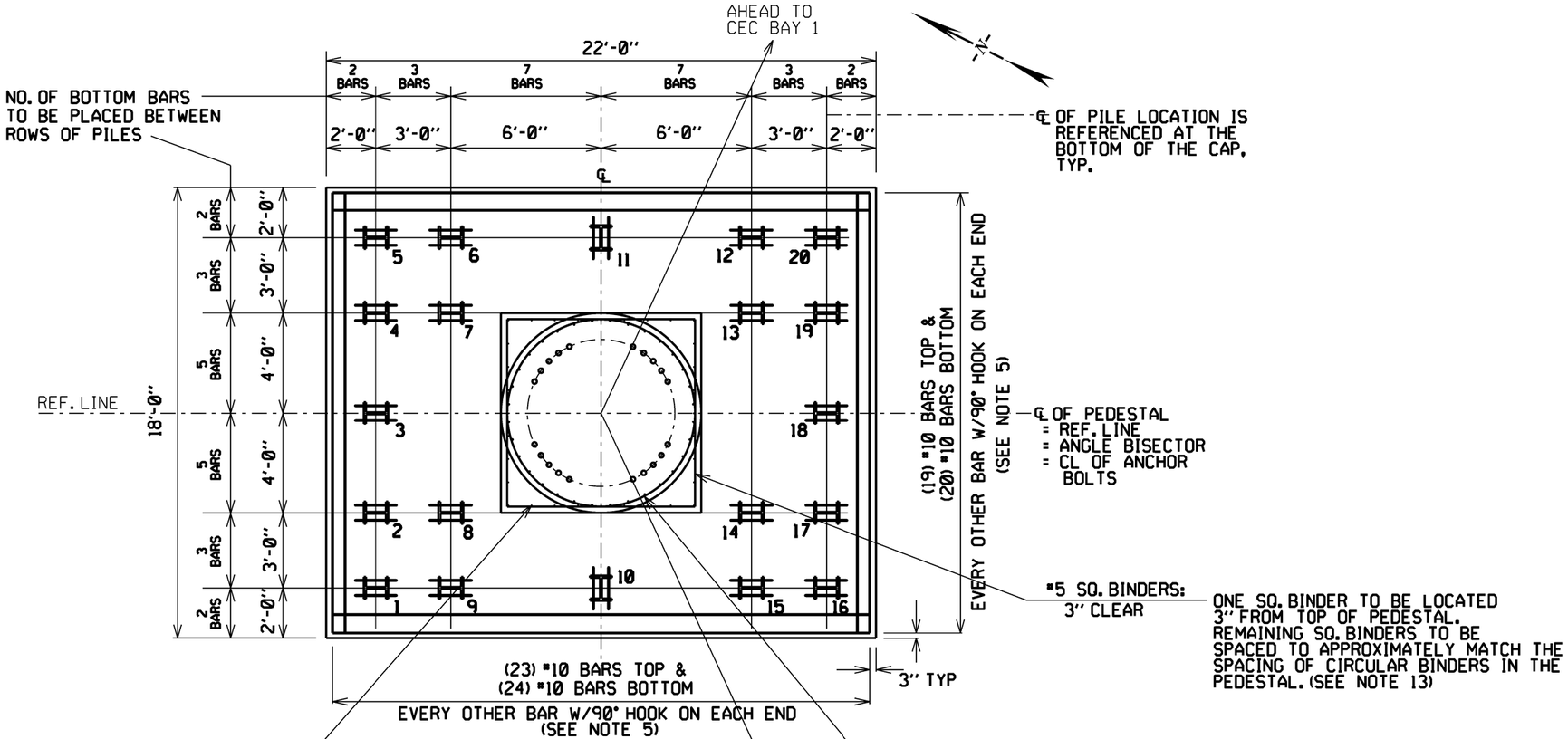
No.	Date	Checked/Appr.	By	Description	Project Number	B/M
A	03/25/22	AH	CL	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	AH	CL	ISSUED FOR BID	0200157	H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly



GENERAL NOTES:

1. FOUNDATION TO BE BUILT IN ACCORDANCE WITH COMPANY SPECIFICATIONS TE VEP-2960 SPECIFICATIONS FOR FOUNDATION CONSTRUCTION.

2. FOLLOWING THE INSTALLATION OF THE PILES AND THE EXCAVATION OF THE CAP, THE SOIL AROUND THE PILES SHALL BE COMPACTED WITH BACKFILL ADDED AS REQUIRED.

3. STEEL PILES TO BE HP12x53 AND CONFORM TO ASTM A36.

4. REINFORCING STEEL TO BE ASTM A-615, GRADE 60. TO BE IN ACCORDANCE WITH LATEST EDITION OF ACI 318. FOR HOOK DETAILS, SEE DWG. 1-262-1-133.

5. NO CUTTING AND SPLICING OF BARS WILL BE PERMITTED. TWO (2) BARS SHALL BE PLACED BETWEEN THE PILES AND SIDE OF CAP, TWO (2) LOCATIONS. REMAINING BARS SHALL BE EQUALLY SPACED WITH ADJUSTMENTS MADE TO MISS PILES, PEDESTAL VERTICAL REBARS AND ANCHOR BOLTS. CENTER-TO-CENTER BAR SPACING SHALL NOT EXCEED 1'-6".

6. ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE A MINIMUM OF 3500 PSI AT 28 DAYS.

7. CLEAR DISTANCE FROM FACE OF CONCRETE TO REINFORCING STEEL SHALL BE 0'-3" UNLESS OTHERWISE NOTED. HIJACKER PIER BOLSTERS BY PIERESEARCH ARE TO BE USED AT THE BOTTOM OF EXCAVATION TO MAINTAIN SPECIFIED CLEAR DISTANCE TO THE BOTTOM REINFORCEMENT. MAXIMUM SPACING BETWEEN PIER BOLSTERS SHALL NOT EXCEED 5'-0".

8. ALL CORNERS OF CONCRETE THAT ARE EXPOSED ABOVE GROUND LEVEL TO HAVE 3/4" CHAMFER.

9. REFER TO DWG. 1-262-1-132 FOR TYPICAL GROUNDING DETAILS.

10. ANCHOR BOLTS SHALL BE SET, SECURED, AND STRICTLY MAINTAINED ACCORDING TO LINE AND GRADE. FOR ANCHOR BOLT ORIENTATION SEE MANUFACTURER DRAWINGS WHICH ARE PART OF THIS SPECIFICATION.

11. FOUNDATION PEDESTAL SHALL BE FORMED AND FINISHED.

12. FOLLOWING FORM REMOVAL AROUND THE CAP, ALL VOIDS AROUND CAP SHALL BE BACKFILLED WITH SUITABLE MATERIAL IN 0'-9" MAXIMUM LAYERS WITH EACH LAYER COMPACTED TO A DENSITY EQUAL TO OR GREATER THAN THE SURROUNDING UNDISTURBED SOIL.

13. SQUARE PEDESTAL REINFORCING STEEL IS IN ADDITION TO CIRCULAR PEDESTAL REINFORCING STEEL. SQUARE PEDESTAL IS NOT REQUIRED, AND IS ONLY INCLUDED AS AN ALTERNATIVE TO CASTING A CIRCULAR PEDESTAL. SEE DRAWING 1-262-1-141 FOR ADDITIONAL DETAILS.

TABLE I	
PILE NO.	TOTAL LENGTH REQUIRED
1 THRU 20	80'-0"

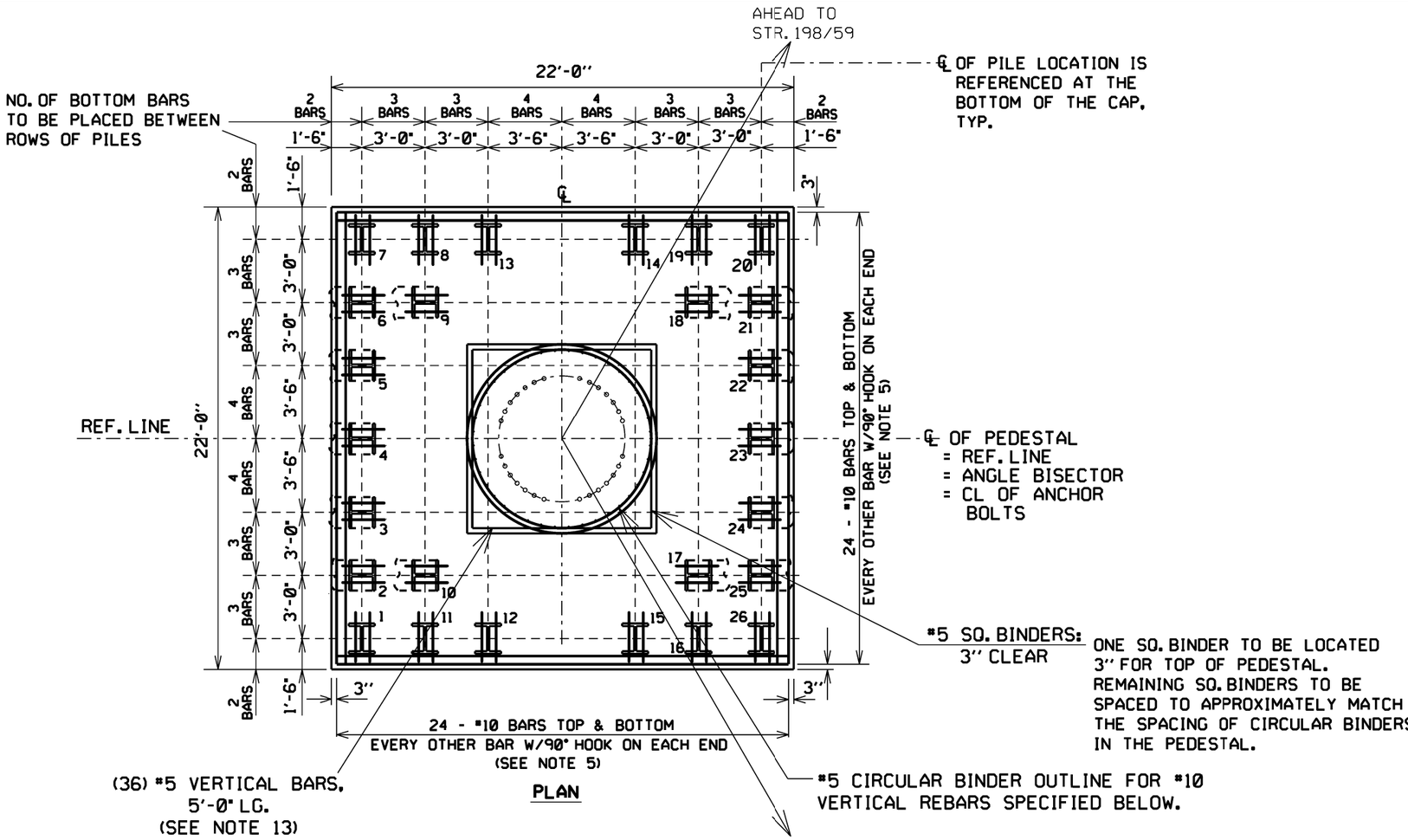
• PILES MAY BE SPLICED (SEE DWG 1-262-1-131)

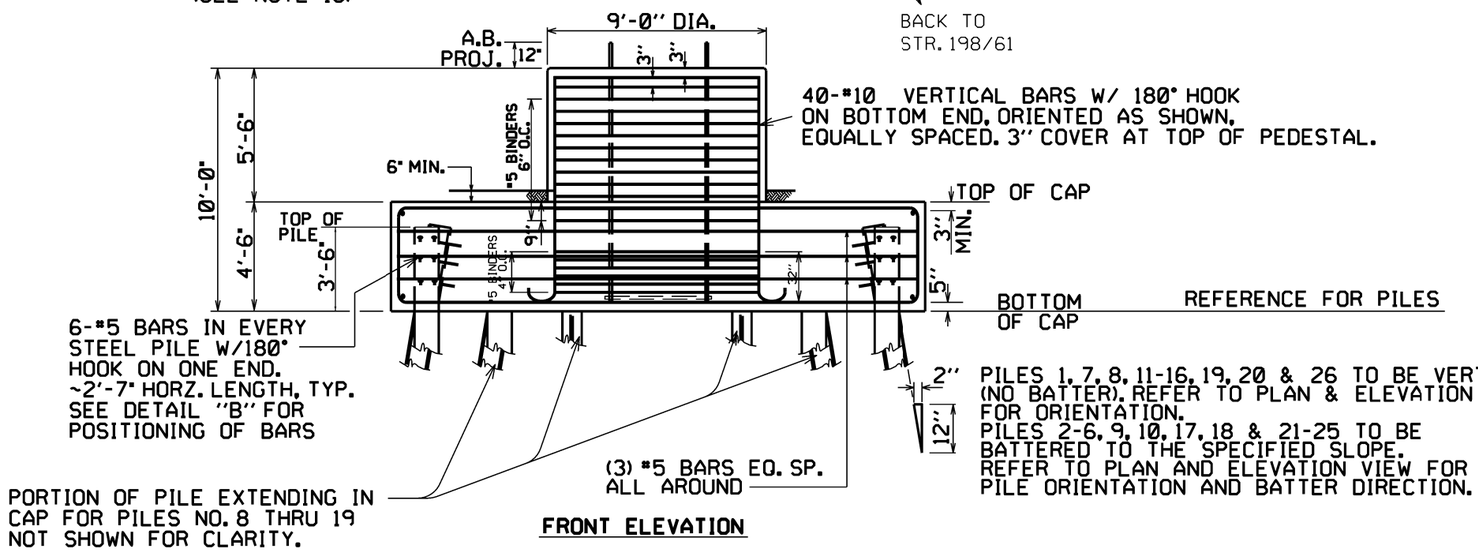
Transmission Construction

H-PILE FOUNDATION
DC POLE STR. 74/601 & 46/178

Dominion Energy
10900 Nuckols Road
Suite 400
Glen Allen, VA 23060

	ORIGINAL	REVISION	DRAWING NO.
DRAWN	CNH		1-74-1-296 PAGE 1 OF 2
CHECKED			
APPROVED			
DATE	5/16/14		CAD NO.





GENERAL NOTES:

1. FOUNDATION TO BE BUILT IN ACCORDANCE WITH COMPANY SPECIFICATIONS TE VEP-2960 SPECIFICATIONS FOR FOUNDATION CONSTRUCTION.

2. FOLLOWING THE INSTALLATION OF THE PILES AND THE EXCAVATION OF THE CAP, THE SOIL AROUND THE PILES SHALL BE COMPACTED WITH BACKFILL ADDED AS REQUIRED.

3. STEEL PILES TO BE HP12x53 AND CONFORM TO ASTM A36. POINTED PILE TIPS ARE TO BE UTILIZED.

4. REINFORCING STEEL TO BE ASTM A-615, GRADE 60. TO BE IN ACCORDANCE WITH LATEST EDITION OF ACI 318. FOR HOOK DETAILS, SEE DWG. 1-198-1-061.

5. NO CUTTING AND SPLICING OF BARS WILL BE PERMITTED. TWO BARS SHALL BE PLACED BETWEEN THE PILES AND SIDE OF CAP, (TWO LOCATIONS). REMAINING BARS SHALL BE EQUALLY SPACED WITH ADJUSTMENTS MADE TO MISS PILES, PEDESTAL VERTICAL REBARS AND ANCHOR BOLTS. CENTER TO CENTER BAR SPACING SHALL NOT EXCEED 1'-6".

6. ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE A MINIMUM OF 3500 PSI AT 28 DAYS.

7. CLEAR DISTANCE FROM FACE OF CONCRETE TO REINFORCING STEEL SHALL BE 3 INCHES UNLESS OTHERWISE NOTED. HIJACKER PIER BOLSTERS BY PIERESEARCH ARE TO BE USED AT THE BOTTOM OF EXCAVATION TO MAINTAIN SPECIFIED CLEAR DISTANCE TO THE BOTTOM REINFORCEMENT. MAXIMUM SPACING BETWEEN PIER BOLSTERS SHALL NOT EXCEED 5'-0".

8. ALL CORNERS OF CONCRETE THAT ARE EXPOSED ABOVE GROUND LEVEL TO HAVE 3/4" CHAMFER.

9. REFER TO DWG. 71.224R FOR TYPICAL GROUNDING DETAILS.

10. ANCHOR BOLTS SHALL BE SET, SECURED, AND STRICTLY MAINTAINED ACCORDING TO LINE AND GRADE. FOR ANCHOR BOLT ORIENTATION SEE MANUFACTURER DRAWINGS WHICH ARE PART OF THIS SPECIFICATION.

11. FOUNDATION PEDESTAL SHALL BE FORMED AND FINISHED.

12. FOLLOWING FORM REMOVAL AROUND THE CAP, ALL VOIDS AROUND CAP SHALL BE BACKFILLED WITH SUITABLE MATERIAL IN 9" MAXIMUM LAYERS WITH EACH LAYER COMPACTED TO A DENSITY EQUAL TO OR GREATER THAN THE SURROUNDING UNDISTURBED SOIL.

13. SQUARE PEDESTAL REINFORCING STEEL IS IN ADDITION TO CIRCULAR PEDESTAL REINFORCING STEEL. SQUARE PEDESTAL IS NOT REQUIRED, AND IS ONLY INCLUDED AS AN ALTERNATIVE TO CASTING A CIRCULAR PEDESTAL. SEE DRAWING 1-198-1-062 FOR ADDITIONAL DETAILS.

TABLE I	
PILE NO.	TOTAL LENGTH REQUIRED
1 THRU 26	50'-0"

• PILES MAY BE SPLICED (SEE DWG 1-198-1-059)

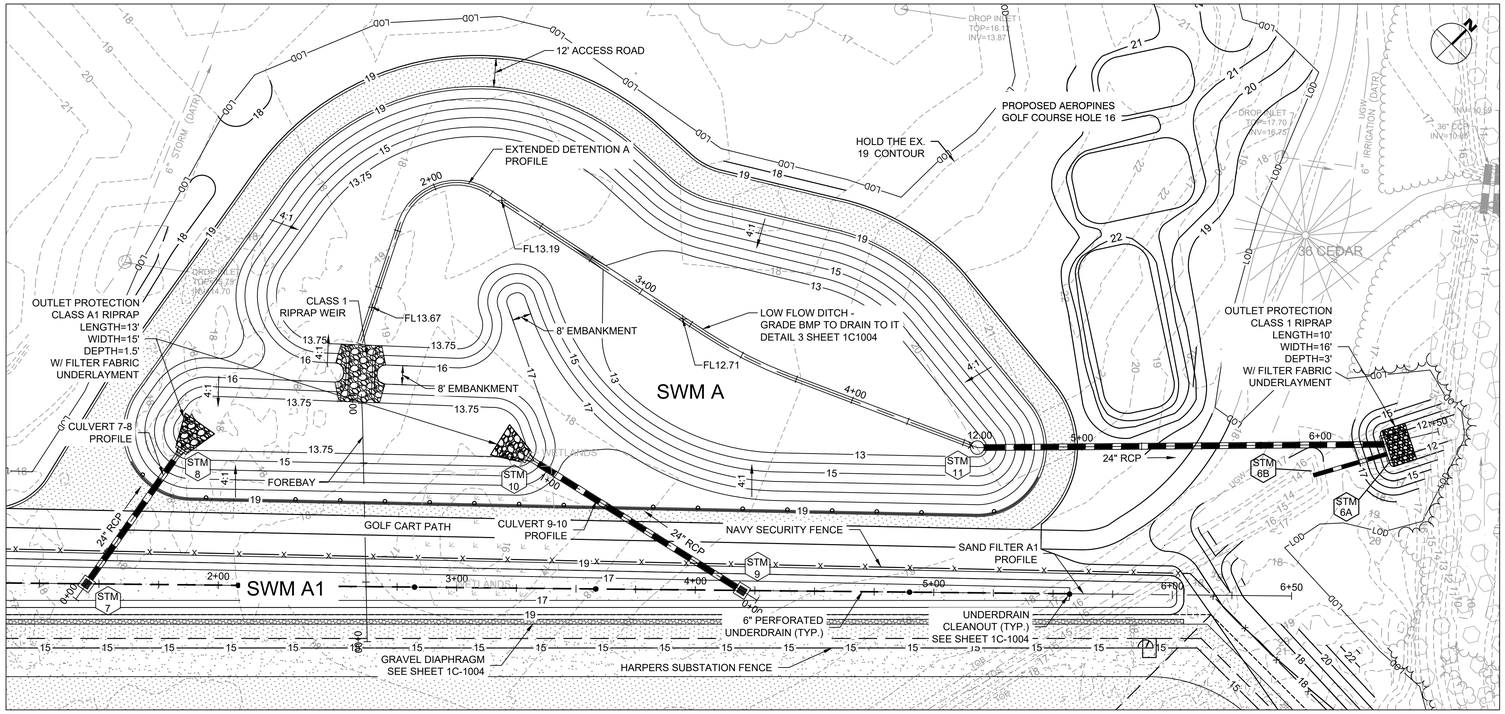
Transmission Construction

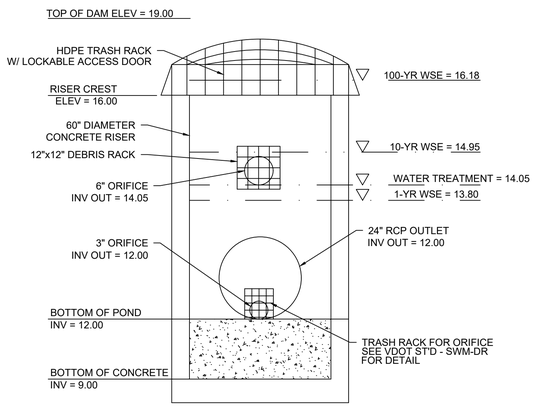
H-PILE FOUNDATION
DC POLE STR. 198/60 & 153/77

Dominion Energy®
Dominion Energy
10900 Nuckols Road
Suite 400
Glen Allen, VA 23060

	ORIGINAL	REVISION	DRAWING NO.
DRAWN	CNH		1-198-1-058 PAGE 1 OF 2
CHECKED			
APPROVED	RBS		
DATE	6/13/14		CAD NO.

SWM A - EXTENDED DETENTION (LEVEL 1) PLAN VIEW





1 / C612 STM 11 OUTLET STRUCTURE, VDOT ST'D - SWM 1
N.T.S. Source: Dewberry

GENERAL NOTES

1. REFER TO GEOTECHNICAL ENGINEERING REPORT PREPARED BY SCHNABEL ENGINEERING, DATED APRIL 7, 2022, FOR ADDITIONAL INFORMATION.

0' 30' 60'

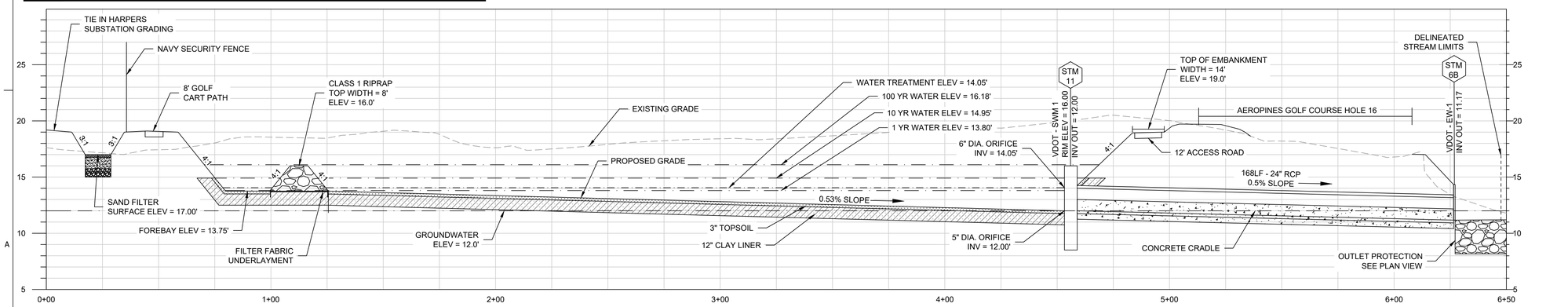
SWM A - SUMMARY

EXTENDED DETENTION LEVEL 1										OUTLET STRUCTURE - STM 11							
DRAINAGE AREA	TOP OF DAM	DESIGN 10-YR WSE	DESIGN 100-YR WSE	FREEBOARD (100-YR)	TREATMENT REQUIRED	TREATMENT PROVIDED	DRAWDOWN TIME	GROUNDWATER ELEVATION	PRE-TREATMENT METHOD	STRUCTURE TYPE	TOP OF STR	ORIFICE INV	ORIFICE SIZE	ORIFICE INV	ORIFICE SIZE	UPPER INV	LOWER INV
(AC)	(FT)	(FT)	(FT)	(FT)	(CF)	(CF)	(HR)	(FT)			(FT)	(FT)	(IN)	(FT)	(IN)	(FT)	(FT)
5.20	19.00	14.95	16.18	2.82	16,325	20,627	24.60	12.00	FOREBAY	SWM 1	16.00	12.00	3.0	14.05	6.0	12.00	11.17

SWM A DISCHARGES:
1- YEAR = 0.31 CFS
10- YEAR = 1.17 CFS
100- YEAR = 5.72 CFS

SWM A WATER SURFACE ELEVATIONS:
1- YEAR = 13.80 FT
10- YEAR = 14.95 FT
100- YEAR = 16.18 FT

SWM A - EXTENDED DETENTION (LEVEL 1) PROFILE VIEW



1"=25' HORIZONTAL SCALE
1"=5' VERTICAL SCALE

REVISIONS		
REV	DATE	DESCRIPTION

Dewberry
Dewberry Engineers Inc.
4805 Lake Brook Drive, Suite 200
Glen Allen, VA 23060; (p) 804.290.7957

PRELIMINARY

DEWBERRY PROJECT NO.: 50142476

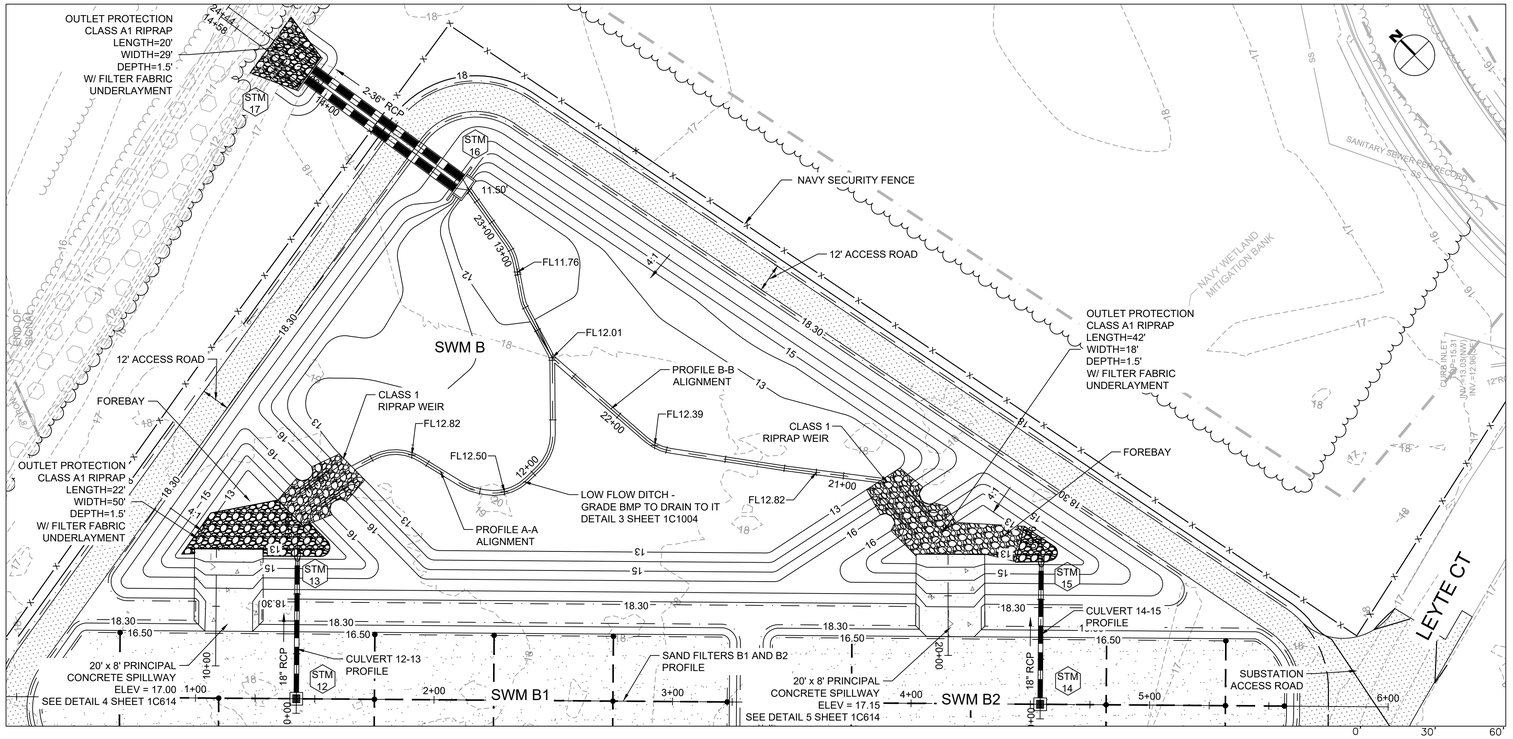
Dominion Energy

SWM A EXTENDED DETENTION PLAN

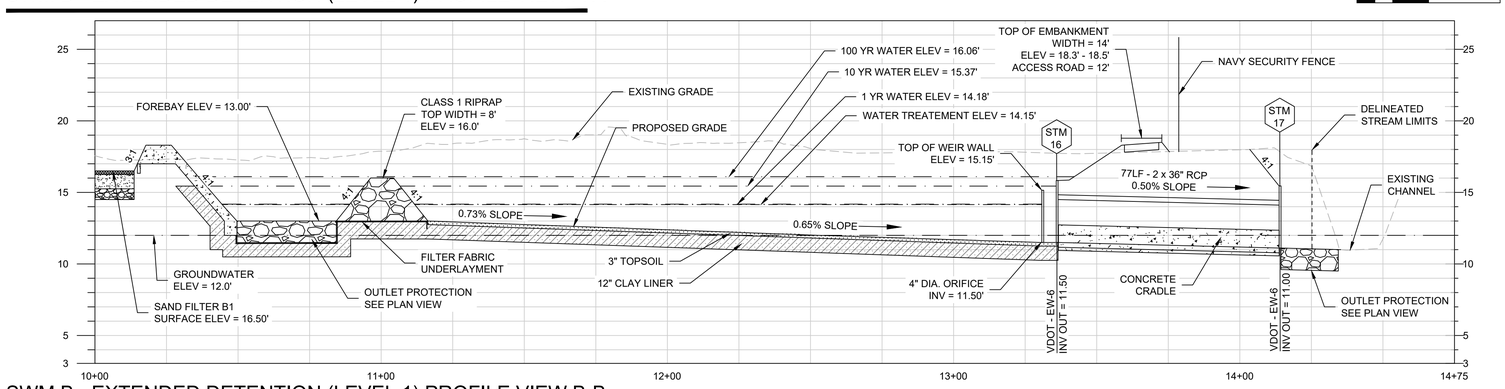
HARPERS SUBSTATION
CITY OF VIRGINIA BEACH VIRGINIA

OPERATIONAL REGION		B/M No.		SCALE	AS NOTED
PROJECT GITAF1123C	NAME	DATE	SHEET:	166523C-1C-612	
DESIGNER	KAS/SPC	3/30/23			
PROJECT ENGINEER	KAS/SPC	3/30/23	DRAWING:	166523C-1C-612.dwg	
APPROVED BY	DRM	3/30/23			

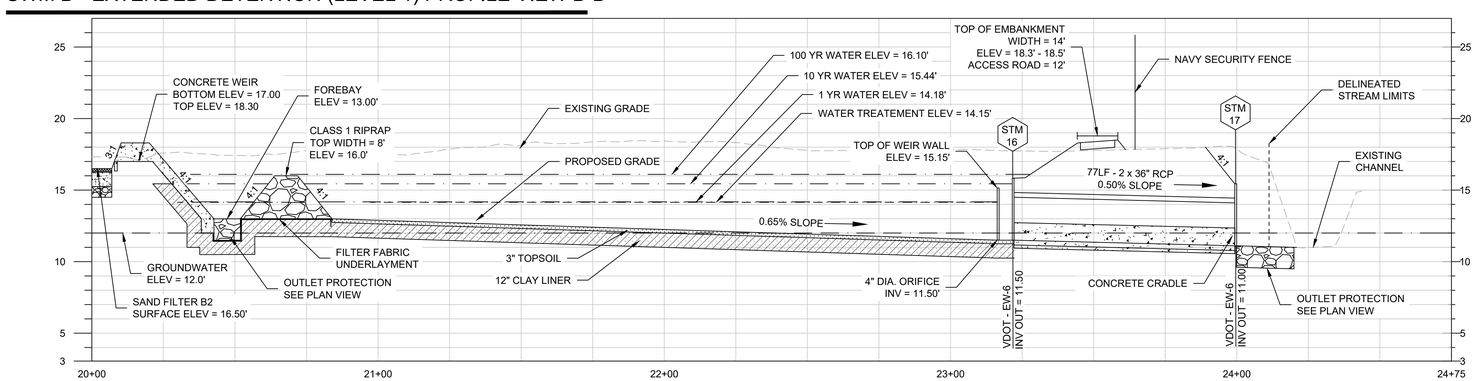
SWM B - EXTENDED DETENTION (LEVEL 1) PLAN VIEW



SWM B - EXTENDED DETENTION (LEVEL 1) PROFILE VIEW A-A



SWM B - EXTENDED DETENTION (LEVEL 1) PROFILE VIEW B-B



SWM B - SUMMARY

EXTENDED DETENTION LEVEL 1									
DRAINAGE AREA	TOP OF DAM	DESIGN 10-YR WSE	DESIGN 100-YR WSE	FREEBOARD (100-YR)	TREATMENT REQUIRED	TREATMENT PROVIDED	DRAWDOWN TIME	GROUNDWATER ELEVATION	PRE-TREATMENT METHOD
(AC)	(FT)	(FT)	(FT)	(FT)	(CF)	(CF)	(HR)	(FT)	
11.59	18.30	15.37	16.06	2.24	39,035	42,505	24.0	12.00	FOREBAY

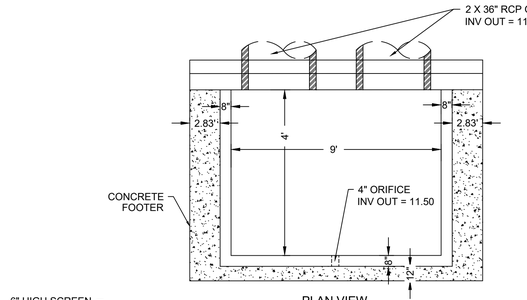
OUTLET STRUCTURE - STM 16					
STRUCTURE TYPE	TOP OF STR	ORIFICE INV	ORIFICE SIZE	UPPER INV	LOWER INV
	(FT)	(FT)	(IN)	(FT)	(FT)
MODIFIED EW-6	15.15	11.50	4.0	11.50	11.11

SWM A DISCHARGES:
- 1- YEAR = 0.69 CFS
- 10- YEAR = 17.85 CFS
- 100- YEAR = 85.47 CFS

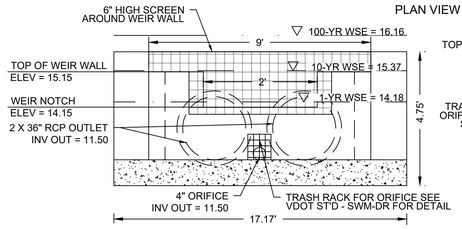
SWM A WATER SURFACE ELEVATIONS:
- 1- YEAR = 14.18 FT
- 10- YEAR = 15.37 FT
- 100- YEAR = 16.06 FT

GENERAL NOTES

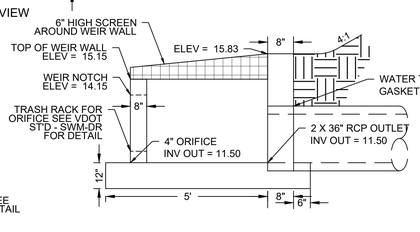
1. REFER TO GEOTECHNICAL ENGINEERING REPORT PREPARED BY SCHNABEL ENGINEERING, DATED APRIL 7, 2022, FOR ADDITIONAL INFORMATION.



PLAN VIEW



FRONT VIEW



SIDE VIEW

NOTE:

1. ALL CONCRETE SHALL BE CLASS A4
2. DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60
3. THE MINIMUM COVER OF MAIN REINFORCING BARS SHALL BE 2" FROM THE FACE OF THE CONCRETE
4. ANY REINFORCING BARS IN CONFLICT WITH PIPE OPENING ARE TO BE CUT A MINIMUM OF 2" FROM OPENING
5. INCLUDE 6" HIGH SCREEN AROUND WEIR WALL TO TRAP FLOATABLE TRASH
6. INSTALL MINIMUM OF 4" AGGREGATE AND GEOTEXTILE FABRIC UNDER CONCRETE FOOTER OF WEIR WALL
7. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF STRUCTURE FOR REVIEW AND APPROVAL

1 / C614 STM 16 OUTLET STRUCTURE, MODIFIED EW-6 WEIR WALL
N.T.S. Source: Dewberry

1"=25' HORIZONTAL SCALE

1"=5' VERTICAL SCALE

REVISIONS		
REV	DATE	DESCRIPTION

Dewberry
Dewberry Engineers Inc.
4805 Lake Brook Drive, Suite 200
Glen Allen, VA 23060; (p) 804.290.7957

PRELIMINARY

DEWBERRY PROJECT NO.: 50142476

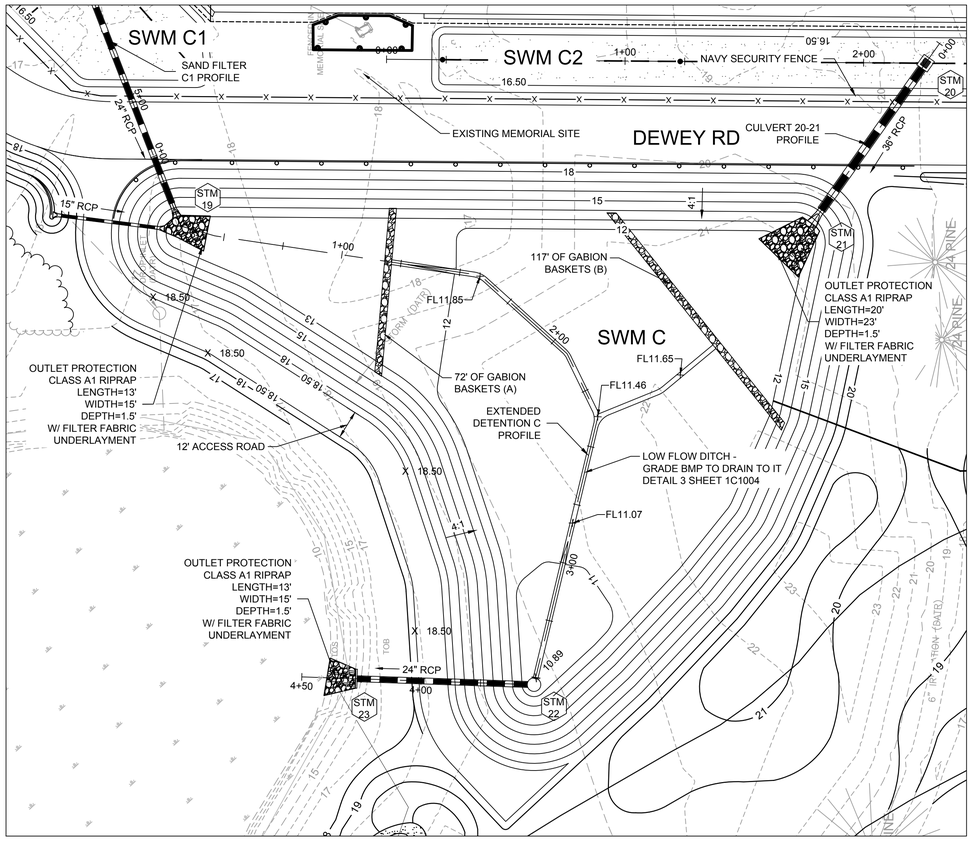
Dominion Energy

SWM B EXTENDED DETENTION PLAN

HARPERS SUBSTATION
CITY OF VIRGINIA BEACH VIRGINIA

OPERATIONAL REGION		B/M No.		SCALE	AS NOTED
PROJECT GITAF1123C	NAME	DATE	SHEET:	166523C-1C-614	
DESIGNER	KAS/SPC	3/30/23			
PROJECT ENGINEER	KAS/SPC	3/30/23	DRAWING:	166523C-1C-614.dwg	
APPROVED BY	DRM	3/30/23			

SWM C EXTENDED DETENTION (LEVEL 1) PLAN VIEW



0' 30' 60'

GENERAL NOTES

1. REFER TO GEOTECHNICAL ENGINEERING REPORT PREPARED BY SCHNABEL ENGINEERING, DATED APRIL 7, 2022, FOR ADDITIONAL INFORMATION.
2. STM 23 SHALL BE A EW-1 FOR A 33-36" CIRCULAR PIPE

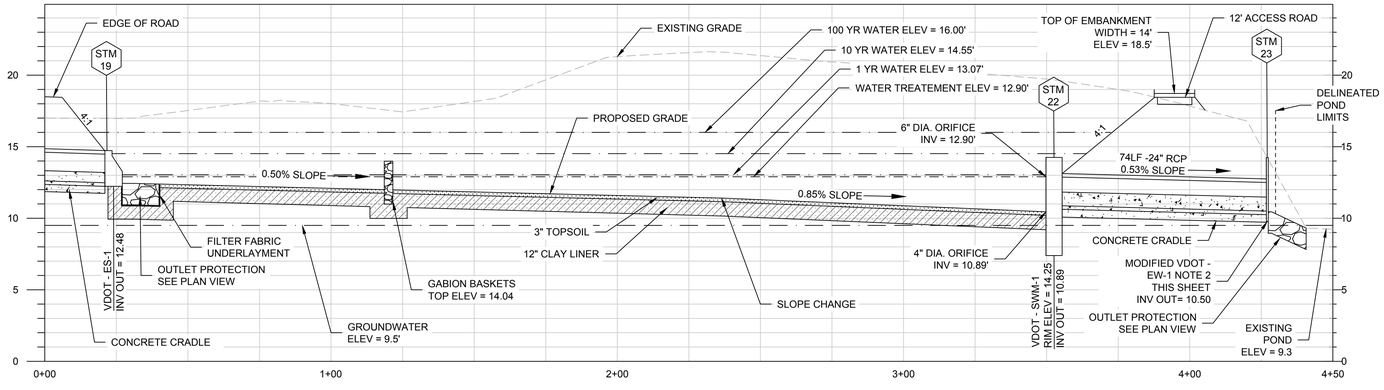
SWM C - SUMMARY

EXTENDED DETENTION LEVEL 1										OUTLET STRUCTURE - STM 22							
DRAINAGE AREA	TOP OF DAM	DESIGN 10-YR WSE	DESIGN 100-YR WSE	FREEBOARD (100-YR)	TREATMENT REQUIRED	TREATMENT PROVIDED	DRAWDOWN TIME	GROUNDWATER ELEVATION	PRE-TREATMENT METHOD	STRUCTURE TYPE	TOP OF STR	ORIFICE INV	ORIFICE SIZE	ORIFICE INV	ORIFICE SIZE	UPPER INV	LOWER INV
(AC)	(FT)	(FT)	(FT)	(FT)	(CF)	(CF)	(HR)	(FT)			(FT)	(FT)	(IN)	(FT)	(IN)	(FT)	(FT)
10.11	18.50	14.55	16.00	2.50	30,971	31,793	24.40	9.50	GABION BASKETS	SWM 1	14.25	10.89	4.0	12.90	6.0	10.89	10.50

SWM C DISCHARGES:
1- YEAR = 0.68 CFS
10- YEAR = 10.16 CFS
100- YEAR = 32.37 CFS

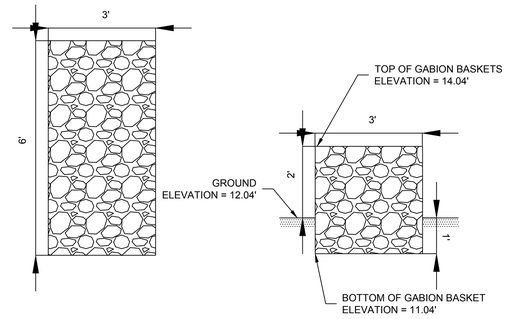
SWM C WATER SURFACE ELEVATIONS:
1- YEAR = 13.07 FT
10- YEAR = 14.55 FT
100- YEAR = 16.00 FT

SWM C EXTENDED DETENTION (LEVEL 1) PROFILE VIEW



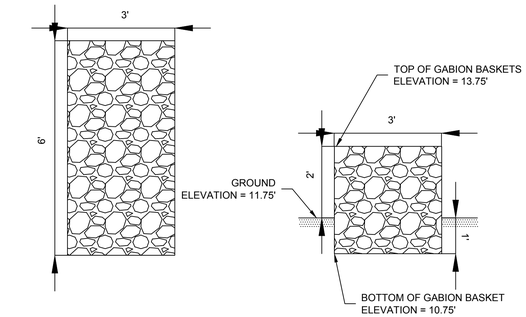
1"=25'
HORIZONTAL SCALE

1"=5'
VERTICAL SCALE

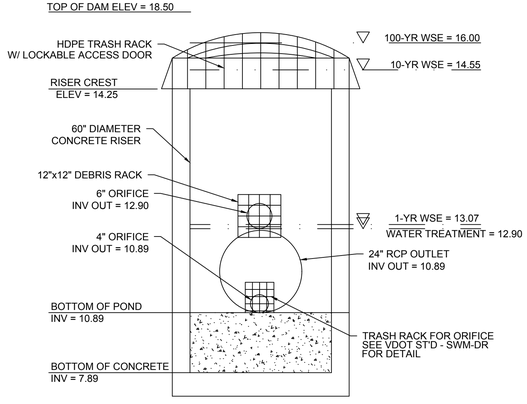


1 C616 GABION BASKET (A)
N.T.S. Source: Dewberry

NOTES:
1. GABION BASKET WILL FOLLOW VDOT ROAD AND BRIDGE SPECS - SECTION 610 - GABION WIRE MESH WILL BE ATLEAST 12 GAGE AND A MAX LINEAR OPENING OF 4.5 INCHES. BASKETS WILL BE FILLED WITH CLASS A1 STONE GABION BASKET DIMENSIONS IS 3FT WIDE X 6FT LONG X 3FT HIGH



2 C616 GABION BASKET (B)
N.T.S. Source: Dewberry



4 C616 STM 22 OUTLET STRUCTURE, VDOT ST'D - SWM 1
N.T.S. Source: Dewberry

REVISIONS		
REV	DATE	DESCRIPTION

Dewberry
Dewberry Engineers Inc.
4805 Lake Brook Drive, Suite 200
Glen Allen, VA 23060; (p) 804.290.7957

PRELIMINARY

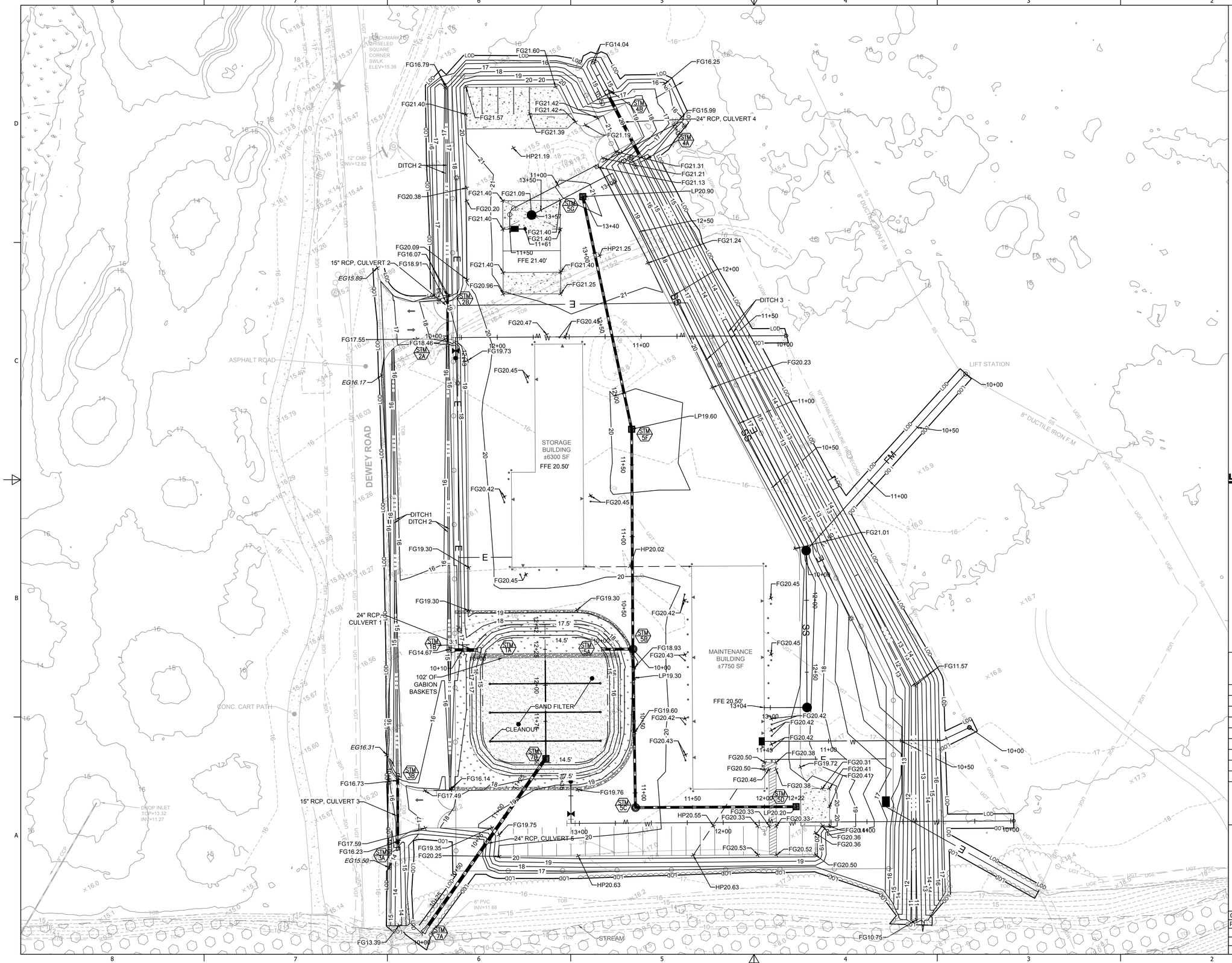
DEWBERRY PROJECT NO.: 50142476

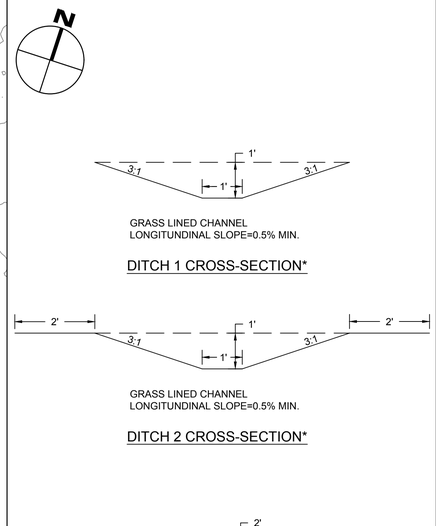
Dominion Energy

SWM C EXTENDED DETENTION PLAN

HARPERS SUBSTATION
CITY OF VIRGINIA BEACH VIRGINIA

OPERATIONAL REGION		B/M No.		SCALE	AS NOTED
PROJECT	GITAF1123C	NAME	DATE	SHEET:	166523C-1C-616
DESIGNER		KAS/SPC	3/30/23		
PROJECT ENGINEER		KAS/SPC	3/30/23	DRAWING:	166523C-1C-616.dwg
APPROVED BY		DRM	3/30/23		





*NOTE: CROSS SECTIONS NOT DRAWN TO SCALE.

LEGEND

618	EXISTING CONTOUR
620	EXISTING INDEX CONTOUR
+16.51	EXISTING SPOT ELEVATION
618	PROPOSED CONTOUR
620	PROPOSED INDEX CONTOUR
5%	SLOPE DIRECTION

0' 15' 30' 60'
SCALE: 1" = 30'

REVISIONS			Dewberry
			Dewberry Engineers Inc. 4805 Lake Brook Drive, Suite 200 Glen Allen, VA 23060, (p) 804.290.7957
			PRELIMINARY
REV	DATE	DESCRIPTION	DEWBERRY PROJECT NO.: 50142476

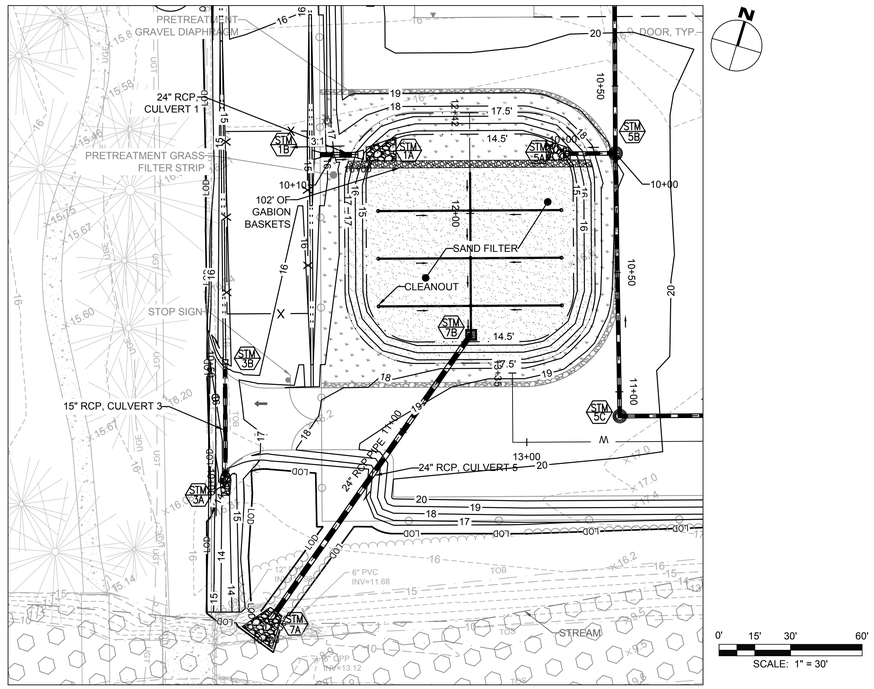
Dominion Energy

GRADING AND DRAINAGE PLAN

MWR PERMANENT MAINTENANCE YARD
CITY OF VIRGINIA BEACH VIRGINIA

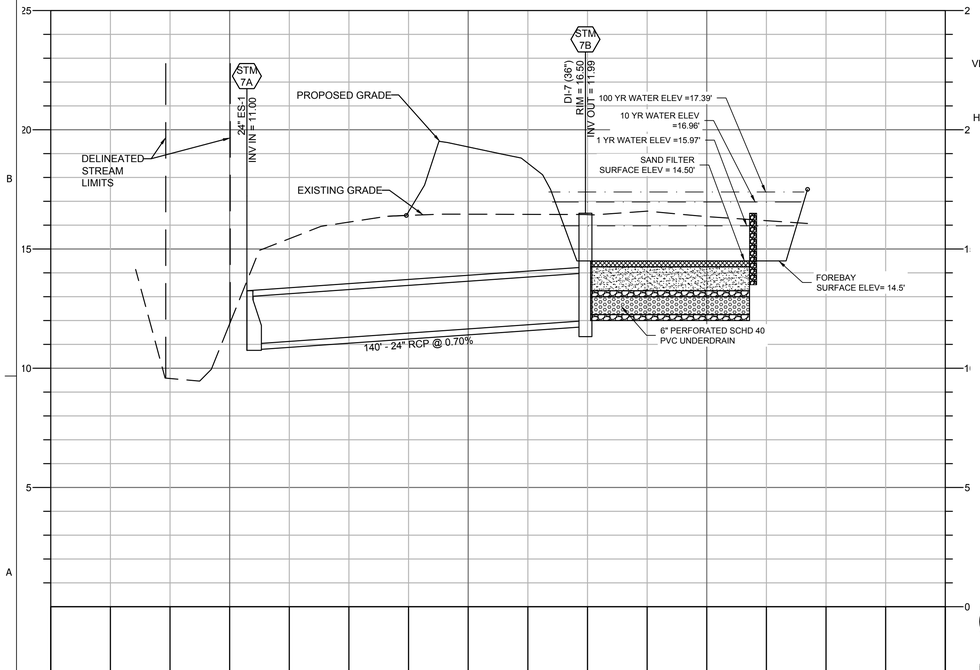
OPERATIONAL REGION			B/M No.	SCALE	AS NOTED
PROJECT	50142476	NAME	DATE	SHEET:	166523C-4C-401
DESIGNER		GMJ			
PROJECT ENGINEER		HCG		DRAWING:	166523C-4C-401.dwg
APPROVED BY		DRM	XX.XX.XX		

SWM A1 - PLAN VIEW



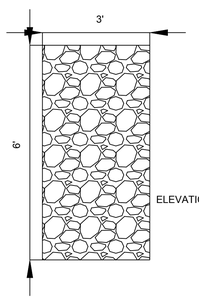
0' 15' 30' 60'
SCALE: 1" = 30'

SWM A1 - PROFILE VIEW

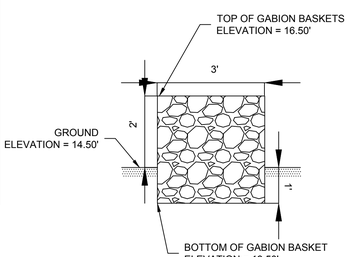


VERTICAL SCALE:
0' 1.5' 3' 6'
SCALE: 1" = 3'

HORIZONTAL SCALE:
0' 15' 30' 60'
SCALE: 1" = 30'



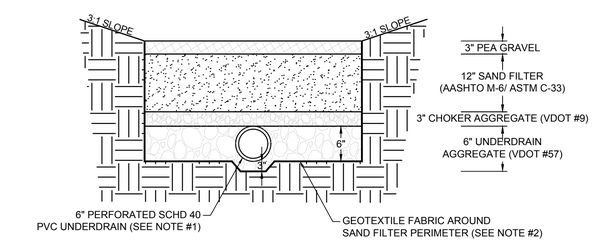
PLAN VIEW



SIDE VIEW

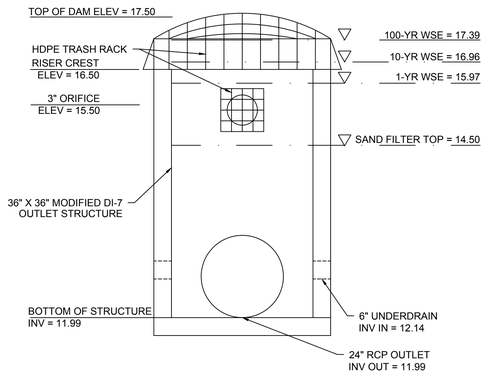
4 C612 GABION BASKET
N.T.S. Source: Dewberry

NOTES:
1. GABION BASKET WILL FOLLOW VDOT ROAD AND BRIDGE SPECS - SECTION 610 - GABION WIRE MESH WILL BE ATLEAST 12 GAGE AND A MAX LINEAR OPENING OF 4.5 INCHES. BASKETS WILL BE FILLED WITH CLASS A1 STONE GABION BASKET DIMENSIONS IS 3FT WIDE X 6FT LONG X 3FT HIGH



NOTE:
1. UNDERDRAIN PIPES MUST COMPLY WITH AASHTO M252 AND ASTM F405. UNDERDRAIN PIPES SHALL MEET ASTM F758
2. GEOTEXTILE FABRIC SHALL MEET 2016 VDOT ROAD AND BRIDGE SPECIFICATIONS FOR GEOSYNTHETICS AND LOW PERMEABILITY LINERS, SECTION 245

1 C612 SAND FILTER - FILTER SECTION
N.T.S. Source: Dewberry



2 C612 STM 7B OUTLET STRUCTURE, MODIFIED DI-7 (36" x 36")
N.T.S. Source: Dewberry

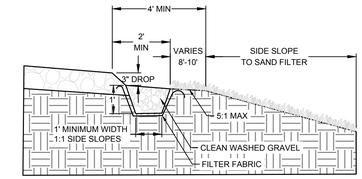
SWM A1 - SUMMARY

SAND FILTER LEVEL 1									
DRAINAGE AREA	LENGTH	WIDTH	TOP OF PEA GRAVEL	TOP OF WATER QUALITY	SURFACE AREA	TOP OF DAM	FREEBOARD	GROUNDWATER ELEVATION	PRE-TREATMENT METHOD
(AC)	(FT)	(FT)	(FT)	(FT)	(SF)	(FT)	(FT)	(FT)	
3.98	105	105	14.50	15.50	7,176	17.50	0.11		GRAVEL DIAPHRAGM & FOREBAY

OUTLET STRUCTURE - STM 7B						UNDERDRAIN			
STRUCTURE TYPE	TOP OF STR	UPPER INV	LOWER INV	ORIFICE INV	ORIFICE SIZE	UPPER INV.	LOWER INV.	6" PIPE QUANTITY	#OF CLEANOUTS
	(FT)	(FT)	(FT)	(FT)	(IN)	(FT)	(FT)	(LF)	
DI-7	16.50	11.99	11.00	15.50	3.00	12.50	12.14	303.31	10

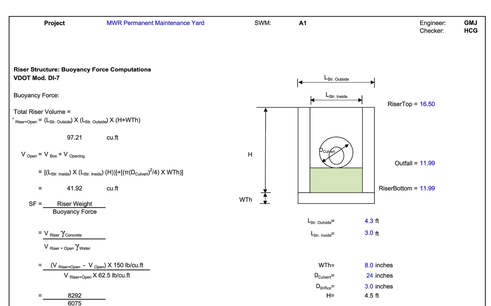
SWM A1 DISCHARGES:
1- YEAR = 11.08 CFS
10- YEAR = 22.11 CFS
100- YEAR = 37.83 CFS

SWM A1 WATER SURFACE ELEVATIONS:
1- YEAR = 15.97 FT
10- YEAR = 16.96 FT
100- YEAR = 17.39 FT



3 C612 GRAVEL DIAPHRAGM
N.T.S. Source: Dewberry

AS-BUILT NOTES:
1. THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS OF ALL STORMWATER MANAGEMENT FACILITIES LOCATED ON THE SHEET. THE AS-BUILT DRAWINGS SHALL SHOW THE ACTUAL FINISHED GROUND CONTOURS, OUTLET STRUCTURE DIMENSIONS, AND ELEVATIONS, ETC. AS THEY EXIST AT THE COMPLETION OF THE PROJECT. THESE DRAWINGS SHALL BE SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF VIRGINIA.



REVISIONS		
REV	DATE	DESCRIPTION

Dewberry
Dewberry Engineers Inc.
4805 Lake Brook Drive, Suite 200
Glen Allen, VA 23060; (p) 804.290.7957

PRELIMINARY

DEWBERRY PROJECT NO.: 50142476

Dominion Energy

SWM A1 SAND FILTER PLAN

MWR PERMANENT MAINTENANCE YARD
CITY OF VIRGINIA BEACH VIRGINIA

OPERATIONAL REGION		B/M No.		SCALE AS NOTED
PROJECT 50142476	NAME	DATE	SHEET:	166523C-4C-612
DESIGNER	GMJ			
PROJECT ENGINEER	HCG		DRAWING:	166523C-4C-612.dwg
APPROVED BY	DRM	XX.XX.XX		

SITE LEGEND

- PROPOSED EQUIPMENT ACCESS
- PROPOSED FENCE LINE
- PROPOSED EDGE OF STONE PAD
- PROPOSED TREELINE

PACELS WAY
60' R/W

CLEARWATER LANE
50' R/W

41' BUILDING SETBACK

EXISTING WETLANDS
DO NOT DISTURB

STORMWATER
MANAGEMENT BMP

LEVEL 1 SECURITY
FENCE (BY OTHERS)

TREE SAVE AREA
DO NOT DISTURB.
NO ACCESS OR STORAGE.

PROPOSED AT-GRADE
CROSSING

ASSESSMENT & TRAINING SOL CONSL
PIN: 0613003000001
SITE ADDRESS:
1024 CENTERVILLE TPKE S

OWNER: RAMSGATE, CORPORATION INC
PIN: 0610000001460
SITE ADDRESS: CENTERVILLE TPKE S

OWNER: VIRGINIA ELECTRIC AND POWER CO.
PIN: 0610000000952
SITE ADDRESS: 1021 FENTRESS LOOP

RIGHT-OF-WAY (TYP.)

PROPOSED 14' WIDE
EQUIPMENT ACCESS
ROAD, SEE DETAIL
SHEET C504

NEW
STRUCTURE
#2252/1A

NEW
STRUCTURE
#2128/2

30'X15' AREA
FOR TELECOM
INFRASTRUCTURE
(BY OTHERS)

OWNER: CITY OF CHESAPEAKE
PIN: 0610000000950
SITE ADDRESS:
1102 CENTERVILLE TPKE S

UNDERGROUND
DISTRIBUTION FACILITIES BY
DOMINION DISTRIBUTION

MANHOLE VAULT BY
DOMINION DISTRIBUTION

41' BUILDING
SETBACK

PROPOSED STORM
STRUCTURE

NEW
STRUCTURE
#588/254

NEW
STRUCTURE
#2253/1

NEW
STRUCTURE
#2252/1

NEW
STRUCTURE
#2128/1

EXISTING TREELINE (TYP.)

PROPOSED ACCESS
ROAD

PROPOSED STORM
PIPE

NEW
STRUCTURE
#2252/2

NEW
STRUCTURE
#2253/2

NEW
STRUCTURE
#2254/2

PROPOSED TREELINE (TYP.)

FOREBAY

N/F
VIRGINIA ELECTRIC AND
POWER CO.
FENTRESS SUBSTATION
D.B. 1752, PG. 460
D.B. 1522, PG. 84
T.M.# 0610000000952

PROPERTY LINE (TYP.)

STORMWATER
MANAGEMENT
BMP

UNDERGROUND
DISTRIBUTION FACILITIES BY
DOMINION DISTRIBUTION

MANHOLE VAULT BY
DOMINION DISTRIBUTION

14' PROPOSED
ACCESS
ROAD

OWNER: CITY OF CHESAPEAKE
PIN: 0610000000950
SITE ADDRESS:
1102 CENTERVILLE TPKE S

FENTRESS LOOP
VARIABLE WIDTH R/W
M.B. 125, PG. 41
M.B. 130, PG. 1

41' BUILDING
SETBACK

RIGHT-OF-WAY (TYP.)

LIMITS OF DISTURBANCE (TYP.)

FOREBAY

STORMWATER MANAGEMENT BMP

NEW
STRUCTURE
#2240/3

EXISTING
WETLANDS DO
NOT DISTURB

NEW
STRUCTURE
#2252/3

EXISTING WETLANDS
DO NOT DISTURB

PROPOSED STORM
PIPE

PROPOSED STORM
STRUCTURE

NEW
STRUCTURE
#2254/3

NEW
STRUCTURE
#2253/3

PROPOSED STORM
STRUCTURE

41' BUILDING
SETBACK

THANELUS CT.
50' R/W

HELEN AVE.
50' R/W

BECCA ANNE CT.
50' R/W

NORTH

GRAPHIC SCALE IN FEET
0 50 100 200

REVISIONS		
REV	DATE	DESCRIPTION

Kimley»Horn

2035 MAYWILL STREET, SUITE 200
RICHMOND, VA 23230
PHONE: 804-673-3882
WWW.KIMLEY-HORN.COM

NOT FOR CONSTRUCTION

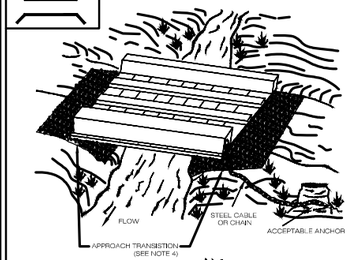
Dominion Energy

SITE IMPROVEMENTS EXHIBIT

FENTRESS SUBSTATION EXPANSION

CITY OF CHESAPEAKE — VIRGINIA

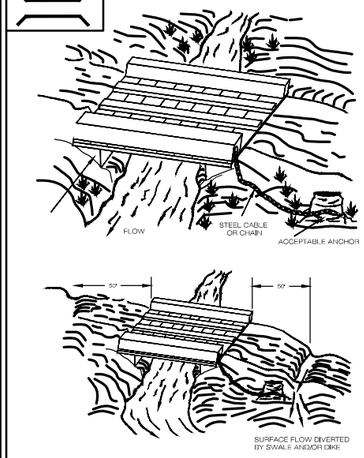
OPERATIONAL REGION		B/M No.		SCALE	1" = 100'
PROJECT	NAME	DATE	SHEET:	EX-1	
DESIGNER	KHA	4/18/2023			
PROJECT ENGINEER	KHA	4/18/2023	DRAWING:		
APPROVED BY	KHA	4/18/2023			



NOTES:

1. SEDIMENT FENCE SHALL BE INSTALLED IF EROSION AT STREAM CROSSING IS OBSERVED IN THE FIELD.
2. STREAM CROSSING (CRANE OR TIMBER MAT) BOARDS SHALL BE FASTENED TOGETHER SNUGGLY WITH MINIMAL GAPS BETWEEN BOARDS. IF GAPS CANNOT BE MINIMIZED A SOLID BOTTOM SHALL BE PROVIDED.
3. DIVERSION WITH STABILIZED CHECK DAM OUTLET SHALL BE INSTALLED ONLY IF FIELD CONDITIONS WARRANT DUE TO EROSION DOWN ROADWAY.
4. TRANSITION APPROACH TO TOP ELEVATION OF STREAM CROSSING MATTING. APPROACH TO STREAM CROSSING SHALL BE 15' LONG X 12' WIDE X 1' DEEP CONSTRUCTED OF COMPACTED FILL. STONE OR OTHER APPROVED MATERIAL AS DIRECTED BY DOMINION. UNDERLAIN WITH NON-WOVEN GEOTEXTILE FABRIC. OTHERWISE, ACCESS IN DELINEATED WETLANDS SHALL BE CONSTRUCTED OF TIMBER MATS.
5. AFTER COMPLETION OF CONSTRUCTION, STREAM CROSSING AND APPURTENANCES SHALL BE REMOVED AND THE AREA, INCLUDING ANY DISTURBED WETLANDS, SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS. NO FILL MATERIAL SHALL BE LEFT IN THE FLOODPLAIN.

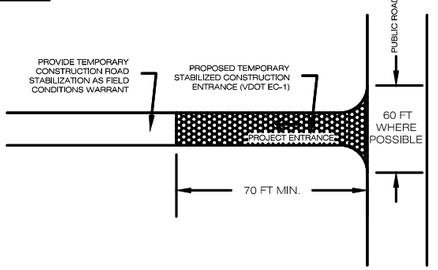
DETAIL: TEMPORARY VEHICULAR STREAM CROSSING
WITH GRAVEL APPROACH (VESCH STD & SPEC 3.24)
NTS



NOTES:

1. SEDIMENT FENCE SHALL BE INSTALLED IF EROSION AT STREAM CROSSING IS OBSERVED IN THE FIELD.
2. STREAM CROSSING (CRANE OR TIMBER MAT) BOARDS SHALL BE FASTENED TOGETHER SNUGGLY WITH MINIMAL GAPS BETWEEN BOARDS. IF GAPS CANNOT BE MINIMIZED A SOLID BOTTOM SHALL BE PROVIDED.
3. DIVERSION WITH STABILIZED CHECK DAM OUTLET SHALL BE INSTALLED ONLY IF FIELD CONDITIONS WARRANT DUE TO EROSION DOWN ROADWAY.
4. APPROACH TO STREAM CROSSING SHALL BE GRAVEL EXCEPT WHERE APPROACH IS IN AN AREA OF DELINEATED WETLANDS. APPROACH IN DELINEATED WETLANDS SHALL BE CONSTRUCTED OF TIMBER MATS.
5. TRANSITION APPROACH TO TOP ELEVATION OF STREAM CROSSING MATTING

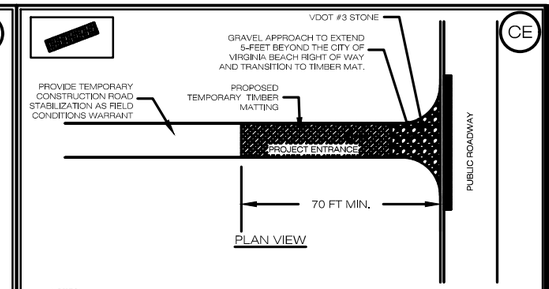
DETAIL: TEMPORARY VEHICULAR STREAM CROSSING
(VESCH STD & SPEC 3.24)
NTS



NOTES:

1. PROVIDE TEMPORARY GRAVEL STABILIZATION IN ACCORDANCE WITH STANDARD DETAIL SHOWN ON THIS SHEET.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO A PUBLIC RIGHT OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY SHALL BE REMOVED IMMEDIATELY.
3. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
4. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER HEAVY USE AND EACH RAIN.
5. FOR CURB AND GUTTER STREETS, TEMPORARY BOARDS OR PLATES SHALL BE USED TO PROTECT CURB, BUT REMOVED WHEN NOT IN USE OR END OF EACH WORKDAY TO PREVENT FLOW IMPEDIMENT AT GUTTER.
6. ANY DAMAGE TO CURB AND GUTTER, SIDEWALKS, OR ANY OTHER SITE FEATURES SHALL BE REPAIRED UPON COMPLETION OF PROJECT.

DETAIL: TEMPORARY CONSTRUCTION ENTRANCE
WITH GRAVEL STABILIZATION (VESCH STD & SPEC 3.02)
NTS



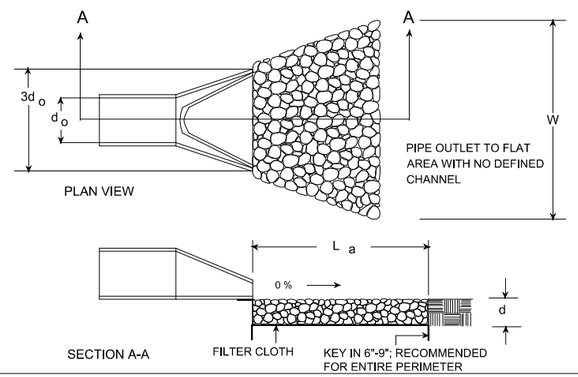
PLAN VIEW

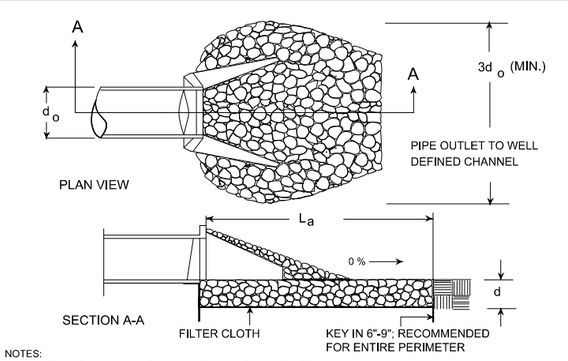
NOTES:

1. FOR THE SELECT TIMBER MAT ENTRANCES PROPOSED WITHIN THE CITY OF VIRGINIA BEACH, CONTRACTOR TO USE A GRAVEL APPROACH FROM THE ENTRANCE OF THE ROAD TO A MINIMUM LENGTH OF 5-FEET BEYOND THE VIRGINIA BEACH RIGHT OF WAY. TIMBER MATS ARE NOT ALLOWED TO EXTEND INTO THE CITY OF VIRGINIA BEACH RIGHT OF WAY. SEE ESC SHEETS FOR DETAILS.
2. ENSURE COMPLIANCE WITH MINIMUM STANDARD 17 (VIRGINIA E&S REGULATIONS) STILL APPLY. IF FIELD CONDITIONS WARRANT, REPLACEMENT OF MATS WITH GRAVEL STABILIZATION MAY BE NECESSARY.
3. REMOVE TEMPORARY TIMBER MATS AND GRAVEL UPON COMPLETION AND REPAIR TO PRE CONSTRUCTION CONDITIONS.
4. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO A PUBLIC RIGHT OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY SHALL BE REMOVED IMMEDIATELY, AT THE END OF EACH DAY THE ROAD WILL BE CLEANED BY SWEEPING AND SHOVELING.
5. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
6. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER HEAVY USE AND EACH RAIN.
7. ANY DAMAGE TO CURB AND GUTTER, SIDEWALKS OR ANY OTHER SITE FEATURES SHALL BE REPAIRED UPON COMPLETION OF PROJECT.

DETAIL: CITY OF VIRGINIA BEACH - TEMPORARY
CONSTRUCTION ENTRANCE WITH TIMBER MAT AND GRAVEL APPROACH

PIPE OUTLET CONDITIONS





NOTES:

1. APRON LINING MAY BE RIPRAP, GROUTED RIPRAP, GABION BASKET, OR CONCRETE.
2. La IS THE LENGTH OF THE RIPRAP APRON AS CALCULATED USING PLATES 3.18-3 AND 3.18-4.
3. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6 INCHES.

Source: Va. DSWC
Plate 3.18-1
* SEE CULVERT DESIGN TABLE FOR RIPRAP OUTFALL SIZING, SHEET CC403

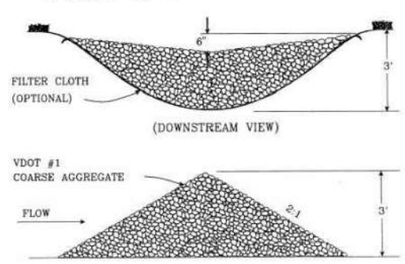
DETAIL: CULVERT OUTLET PROTECTION
(VESCH STD & SPEC 3.18-1)

OP

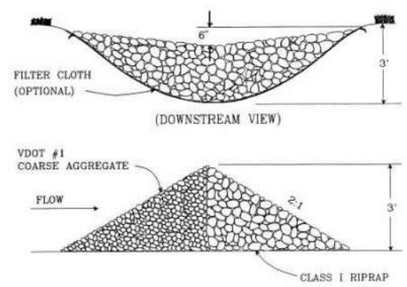
ROCK CHECK DAM

CD

2 ACRES OR LESS OF DRAINAGE AREA:



2-10 ACRES OF DRAINAGE AREA:



ONLY COARSE AGGREGATE NEEDS TO BE USED. CLASS I RIPRAP MAY BE USED BUT IS UNNECESSARY. NO FILTER CLOTH UNDERLAYMENT SHALL BE USED.

DETAIL: CHECK DAMS
NOT TO SCALE
(VESCH STD & SPEC 3.20)

PERMANENT SEEDING (UPLAND AREAS):

TYPE OF SLOPE	SEED	TOTAL LBS PER ACRE
GENERAL SLOPE (3:1 OR LESS)	KENTUCKY 31 FESCUE RED TOP GRASS SEASONAL NURSE CROP*	128 LBS 02 LBS 20 LBS
LOW MAINTENANCE SLOPE (STEEPER THAN 3:1)	KENTUCKY 31 TALL FESCUE COMMON BERMUDAGRASS** RED TOP GRASS SEASONAL NURSE CROP* SERICEA LESPEDEZA**	93-108 LBS 00-15 LBS 02 LBS 20 LBS 20 LBS

* USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW

FEBRUARY, MARCH THROUGH APRIL.....ANNUAL RYE
MAY 1ST THROUGH AUGUST.....FOXTAIL MILLET
SEPTEMBER, OCTOBER THROUGH NOVEMBER 15TH....ANNUAL RYE
NOVEMBER 16TH THROUGH JANUARY.....WINTER RYE

** MAY THROUGH OCTOBER, USE HULLED SEED. ALL OTHER SEEDING PERIODS, USE UNHULLED SEED. WEEPING LOVEGRASS MAY BE ADDED TO ANY SLOPE OR LOW-MAINTENANCE MIX DURING WARMER SEEDING PERIODS; ADD 10-20 LBS./ACRE IN MIXES.

PERMANENT SEEDING (WETLAND AREAS):

SEED MIX	LBS PER ACRE
CAREX VULPINOIDEA (FOX SEDGE) ELYMUS VIRGINICUS (VIRGINIA WILD RYE) CAREX GYNANDRA (NODDING SEDGE) SPARGANIUM AMERICANUM (EASTERN BUR REED) CAREX LURIDA (LURID (SHALLOW) SEDGE) CAREX SCOPARIA (BLUNT BROOM SEDGE) BIDENS CERNUA (NODDING BUR MARIGOLD) CAREX BAILEYI (BAILEYS SEDGE) CAREX FOLLICULATE (NORTHERN LONG SEDGE) CAREX INTUMESCENS (BLADDER (STAR) SEDGE) CAREX SQUARROSA (SQUARROSE SEDGE) CAREX COMOSA (COMOS (BRISTLY) SEDGE) CAREX LUPULINA (HOP SEDGE) ONOCLEA SENSIBILIS (SENSITIVE FERN) RUMEX VERTICILLATUS (SWAMP DOCK) SCIRPUS EXPANSUS (WOOD BULRUSH) SCIRPUS POLYPHYLLUS (MANY LEAVED BULRUSH) SCIRPUS CYPERINUS (WOOL GRASS)	15 LBS(1/3-1/2 LBS PER 1,000 SQUARE FEET) *ERNST CONSERVATION SEEDS "SPECIALIZED WETLAND MIX FOR SHADED OBL-FACW AREAS" (ERNMX-137) OR EQUIVALENT AS APPROVED BY THE ENGINEER OR THE CONSTRUCTION COORDINATOR

PERMANENT SEEDING (STREAM BANKS):

SEED MIX	LBS PER ACRE
ANDROPOGON GERARDII (A. FURCATUS) (BIG BLUESTEM (TURKEY FOOT BLUESTEM)) ASCLEPIAS SYRIACA (COMMON MILKWEED) BAPTISIA AUSTRALIS (BLUE FALSE INDIGO) CAREX VULPINOIDEA (FOX SEDGE) CHAMAECRISTA FASCICULATA (CASSIA F.) (PARTRIDGE PEA) CORNUS AMOMUM (SILKY DOGWOOD) DESMODIUM CANADENSE (SHOWY TICK TREFOIL) ELYMUS RIPARIUS (RIVERBANK WILD RYE) ELYMUS VIRGINICUS (VIRGINIA WILD RYE) EUPATORIUM FISTULOSUM (JOE PYE WEED) EUPATORIUM MACULATUM (SPOTTED JOE PYE WEED) EUPATORIUM PERFOLIATUM (BONESET) EUTHAMIA GRAMINIFOLIA (SOLIDAGO G.) (GRASS LEAVED GOLDENROD) HELIOPSIS HELIANTHOIDES (OX EYE SUNFLOWER) JUNCUS EFFUSUS (SOFT RUSH) MONARDA FISTULOSA (WILD BERGAMOT) PANICUM CLANDESTINUM (DICHANTHELIUM C.) (DEER TONGUE) PANICUM VIRGATUM (SWITCHGRASS) PENSTEMON DIGITALIS (TALL WHITE BEARD TONGUE) RHUS TYPHINA (R. HIRTA) (STAGHORN SUMAC) RUDBECKIA HIRTA (BLACK EYED SUSAN) SCHIZACHYRIUM SCOPARIUM (ANDROPOGON SCOPARIUS) (LITTLE BLUESTEM) SORGHASTRUM NUTANS (INDIANGRASS) VERBENA HASTATA (BLUE VERVAIN) VERNONIA GIGANTEA (V. ALTISSIMA) (GIANT IRONWEED) VIBURNUM DENTATUM (ARROW WOOD)	15 LBS(1.5-1/2 LBS PER 1,000 SQUARE FEET) *ERNST CONSERVATION SEEDS "RIPARIAN BUFFER MIX" (ERNMX-178) OR EQUIVALENT AS APPROVED BY THE ENGINEER OR THE CONSTRUCTION COORDINATOR

TEMPORARY SEEDING:

PLANTING DATES	SPECIES	RATE (LBS/ACRE)
SEPT. 1 - FEB 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) AND CEREAL (WINTER) RYE (SECALE CEREALE)	50-100
FEB. 16 - APR. 30	ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM)	60-100
MAY 1 - AUG 31	GERMAN MILLET (SETARIA ITALICA)	50

TS PS

DETAIL: PLANTING AND SEEDING (VESCH STD & SPEC 3.32)

COMMONWEALTH OF VIRGINIA
ADAM VALENTI
Lic. No. 57505
04/19/2023
PROFESSIONAL ENGINEER

Stantec
Stantec Consulting Services, Inc.
5238 Valley Pointe Parkway, Suite 3
Roanoke, VA 24019-3066
Tel: 540-563-1645
www.stantec.com

Client/Project
ERIC CLAY (RLD: 15467)
DOMINION ENERGY VIRGINIA
10900 NUCKOLS RD., 4TH FLOOR
GLEN ALLEN, VA 23060

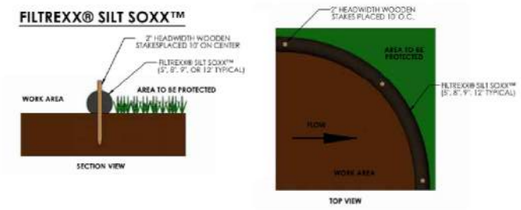
COASTAL VIRGINIA OFFSHORE WIND (CVOW)

Sheet Title
ESC DETAILS

Revision	
–	--
–	--
–	--
Project Number:	203401785
Drawn by:	MC/SM/AD/RH
Designed by:	MH/AD/AV
Checked by:	AV/AD/AH
Approved by:	AV
Date:	04/19/2023

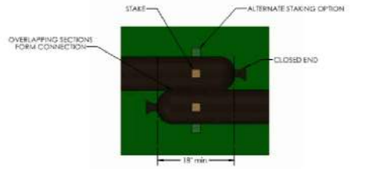
Sheet Number:
CC401

FILTREXX® SILT SOXX™

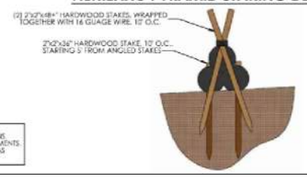


DETAIL: SILT SOXX
NTS

COMPOST SOCK CONNECTION/ATTACHMENT DETAIL



FILTREXX® PYRAMID STAKING DETAIL



NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. SILT SOXX™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

Table 1.3. Maximum Slope Lengths for Filtrexx® Perimeter Control Based on a 1 in (25 mm)/24 hr Rainfall Event.

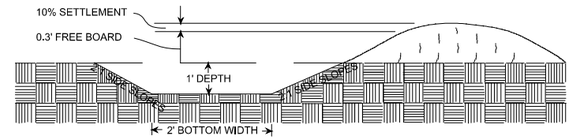
Slope Percent	Maximum Slope Length Above Sediment Control in Feet (meters)*					
	5 in (125 mm) Sediment control	8 in (200 mm) Sediment control	12 in (300 mm) Sediment control	18 in (450 mm) Sediment control	24 in (600mm) Sediment control	32 in (800mm) Sediment control
	4 in (100 mm)**	6.5 in (160 mm)**	9.5 in (240 mm) **	14.5 in (360 mm) **	19 in (480 mm) **	26 in (650 mm) **
2 (or less)	360 (110)	600 (180)	750 (225)	1000 (300)	1300 (400)	1650 (500)
5	240 (73)	400 (120)	500 (150)	550 (165)	650 (200)	750 (225)
10	120 (37)	200 (60)	250 (75)	300 (90)	400 (120)	500 (150)
15	85 (26)	140 (40)	170 (50)	200 (60)	325 (100)	450 (140)
20	60 (18)	100 (30)	125 (38)	140 (42)	260 (80)	400 (120)
25	48 (15)	80 (24)	100 (30)	110 (33)	200 (60)	275 (85)
30	36 (11)	60 (18)	75 (23)	90 (27)	130 (40)	200 (60)
35	36 (11)	60 (18)	75 (23)	80 (24)	115 (35)	150 (45)
40	36 (11)	60 (18)	75 (23)	80 (24)	100 (30)	125 (38)
45	24 (7)	40 (12)	50 (15)	60 (18)	80 (24)	100 (30)
50	24 (7)	40 (12)	50 (15)	55 (17)	65 (20)	75 (23)

* Based on a failure point of 36 in (0.9 m) super silt fence (wire reinforced) at 1000 ft (303 m) of slope, watershed width equivalent to receiving length of sediment control device, 1 in/ 24 hr (25 mm/24 hr) rain event.
** Effective height of Sediment control after installation and with constant head from runoff as determined by Ohio State University.

NOTES:
1. PER DISCUSSIONS WITH DOMINION ENERGY STAFF, COMPOST FILTER SOCKS ARE DESIRED FOR USE IN LIEU OF OTHER PERIMETER CONTROLS IN WORK AREAS WHERE THE SLOPE IS 7% OR LESS STEEP. THESE INSTALLATIONS SHALL REMAIN IN ACCORDANCE WITH THE ANNUAL STANDARDS AND SPECIFICATIONS AS WELL AS THE MANUFACTURER'S SPECIFICATIONS.
2. WHEN WORKING WITHIN WETLANDS, 12" COMPOST FILTER SOCK WILL BE USED TO WRAP THE WORK AREAS.
3. THE MANUFACTURER'S RECOMMENDED SIZING TABLE SHOWN ABOVE DELINEATES SLOPE BREAKS AT 5% AND 10% FOR COMPOST FILTER SOCK SIZING. FOR PURPOSES OF THESE PLANS, INTERPOLATED VALUES WERE UTILIZED TO IDENTIFY THE REQUESTED 7% MAXIMUM. SEE INTERPOLATED VALUES BELOW

SLOPE PERCENT	8 IN (200 MM) SEDIMENT CONTROL	12 IN (200 MM) SEDIMENT CONTROL	18 IN (450 MM) SEDIMENT CONTROL	24 IN (600 MM) SEDIMENT CONTROL	32 IN (800 MM) SEDIMENT CONTROL
7%	320 FEET	400 FEET	450 FEET	550 FEET	650 FEET

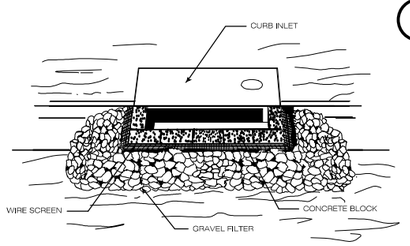
DV

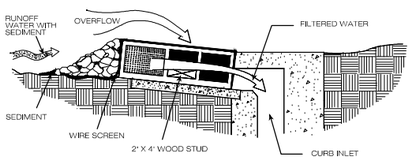


TYPICAL TRAPEZOIDAL DIVERSION

DETAIL: DIVERSIONS
NOT TO SCALE
(VESCH STD & SPEC 3.12)

IP





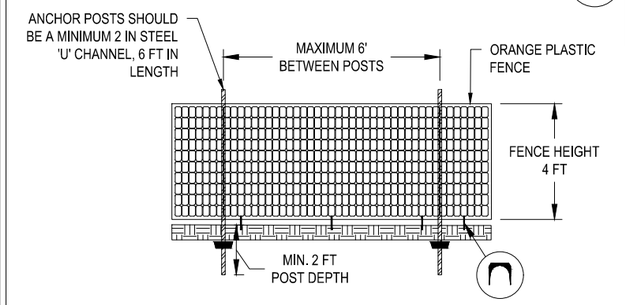
SPECIAL APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE

DETAIL: CURB INLET SEDIMENT FILTER
(VESCH STD & SPEC 3.07) NTS

SAF



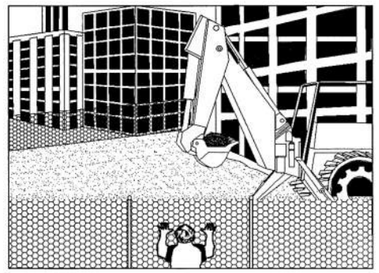
NOTE:
1. TREE PROTECTION FENCING MUST BE MAINTAINED THROUGHOUT CONSTRUCTION
2. USE 8 IN WIRE U STAPLES TO SECURE FENCE BOTTOM
3. PLASTIC ORANGE SAFETY FENCE SHALL BE INSTALLED ALONG ENTIRE LIMITS OF DISTURBANCE.
4. USE PLASTIC ORANGE SAFETY FENCE BACKED BY14-GAUGE WELDED WIRE FENCE AROUND TREES TO BE PRESERVED AT THE OUTER LIMITS OF DISTURBANCE BOUNDARY.

ADAPTED FROM: WOODLAND CONSERVATION MANUAL, PRINCE GEORGE COUNTY, MARYLAND
SOURCE: FAIRFAX COUNTY PUBLIC FACILITIES MANUAL PLATE NUMBER 6-12

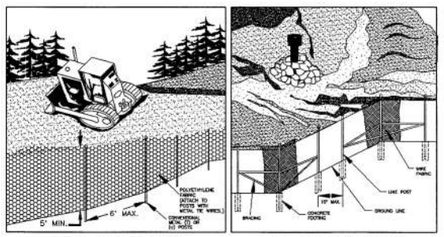
DETAIL: TREE PROTECTION AND SAFETY FENCE
NOT TO SCALE (VESCH STD & SPEC 3.01)

NOTE: SAFETY FENCE MAY BE REMOVED OR ADJUSTED AS THE PROJECT PROGRESSES AND AREAS ARE COMPLETED

SAF



PERSPECTIVE VIEW



PERSPECTIVE VIEW PLASTIC FENCE

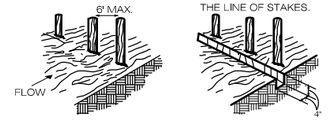
PERSPECTIVE VIEW METAL FENCE

DETAIL: SAFETY FENCE
VESCH STD & SPEC 3.01

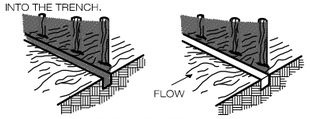
SF

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)

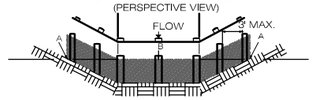
1. SET THE STAKES.
2. EXCAVATE A 4" x 4" TRENCH UPSLOPE ALONG THE LINE OF STAKES.



3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



SHEET FLOW INSTALLATION (PERSPECTIVE VIEW)



POINTS A SHOULD BE HIGHER THAN POINT B.
DRAINAGEWAY INSTALLATION (FRONT ELEVATION)

DETAIL: SILT FENCE
(VESCH STD & SPEC 3.05) NTS

PROJECT AREA LAND COVER ANALYSIS

	IMPERVIOUS				TURF				WOODS				WETLANDS				OPEN WATER				CULTIVATED CROP				SHURB/SCRUB				DISTURBED FOREST				DRAINAGE AREA (ACRES)	COMPOSITE CN
Hydrologic Soil Group	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D		
CN	98	98	98	98	39	61	74	80	30	55	70	77	30	55	70	77	98	98	98	98	65	75	82	86	30	48	65	73	32	58	72	79		
Pre-Development	0.00	0.00	0.00	4.26	0.12	0.00	0.00	18.58	5.45	0.00	0.00	6.79	0.42	0.00	0.00	16.86	0.11	0.00	0.00	0.00	0.00	0.00	0.00	18.52	0.00	0.00	0.00	4.51	0.00	0.00	0.00	0.27	75.89	77
Post-Development	0.00	0.00	0.00	4.26	0.12	0.00	0.00	18.58	5.45	0.00	0.00	6.79	0.42	0.00	0.00	16.86	0.11	0.00	0.00	0.00	0.00	0.00	0.00	18.52	0.00	0.00	0.00	4.51	0.00	0.00	0.00	0.27	75.89	77

NOTE: THE ABOVE LAND COVER ANALYSIS HAS BEEN PROVIDED FOR THE ENTIRETY OF THE PROJECT SWM WAIVER AREA (EXCLUDES TEMPORARY AND PERMANENT TREE CLEARING). A SEPARATE ANALYSIS FOR THESE TREE CLEARING AREAS HAS BEEN PROVIDED UNDER THE CVOW SWM PLANS (UNDER SEPARATE COVER).

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ADAM VALENTI
Lic. No. 57505
04/19/2023
PROFESSIONAL ENGINEER

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COASTAL VIRGINIA OFFSHORE WIND (CVOW)

Sheet Title
ESC DETAILS

Revision	
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Project Number:	203401785
Drawn by:	MC/SM/AD/RH
Designed by:	MH/AD/AV
Checked by:	AV/AD/AH
Approved by:	AV
Date:	04/19/2023

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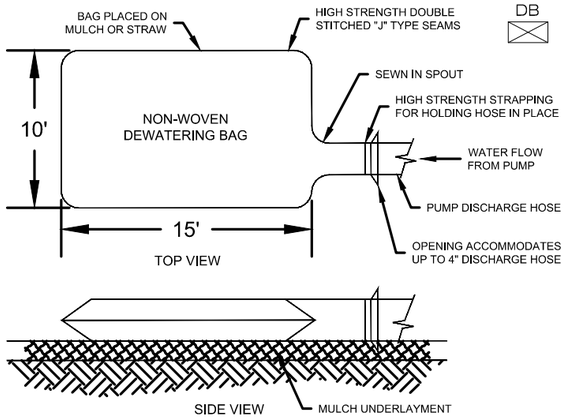
CC402



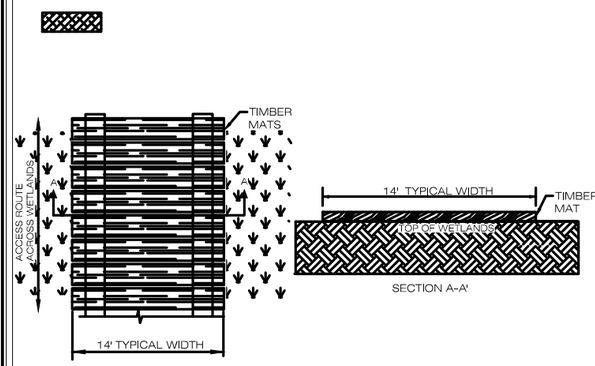
THE DEWATERING BAG SHALL BE MADE OF NON-WEVEN GEOTEXTILE WITH A MIN. SURFACE AREA OF 225 SQUARE FEET PER SIDE. ALL STRUCTURAL SEAMS SHALL BE SEWN WITH A DOUBLE STITCH USING A DOUBLE NEEDLE MACHINE WITH HIGH STRENGTH THREAD. THE SEAM STRENGTH SHALL WITHSTAND 100 lb/in USING ATTM D-4884 TEST METHOD. THE DEWATERING BAG SHALL HAVE A NOZZLE LARGE ENOUGH TO ACCOMMODATE A FOUR INCH DISCHARGE HOSE. THE NOZZLE SHALL BE SEALED TIGHTLY AROUND THE DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE TO PREVENT UNTREATED WATER FROM ESCAPING. THE GEOTEXTILE FABRIC SHALL BE A NON-WOVEN FABRIC WITH THE FOLLOWING PROPERTIES:

GEOTEXTILE FABRIC FOR DEWATERING BAG			
PROPERTIES	TEST METHOD	UNITS	DEWATERING BAG 12OZ.
WEIGHT	ASTM D-3776	OZ/YD	12
GRAB TENSILE	ASTM D-4632	LBS.	300
PUNCTURE	ASTM D-4833	LBS.	175
FLOW RATE	ASTM D-4491	GAL/MIN/FT2	70
PERMITIVITY	ASTM D-4491	1.3 SEC-1	1.0
MULLEN BURST	ASTM D-3786	LBS.IN2	580
UV RESISTANT	ASTM D-4355	%	70
AOS % RETAINED	ASTM D-4751	0.40-0.80mm	100

NOTE:
ALL PROPERTIES ARE MINIMUM AVERAGE ROLL VALUE EXCEPT THE WEIGHT OF THE FABRIC WHICH IS GIVEN FOR INFORMATION ONLY.

CONSTRUCTION: THE DEWATERING BAG SHALL BE INSTALLED OVER A 3 INCH GRAVEL BASE TO PROMOTE INFILTRATION AND DEWATERING OF THE BAG.

DETAIL : DEWATERING BAG
(2019 DOMINION ANNUAL STANDARDS AND SPECIFICATIONS APPENDIX B PAGE B) NTS



1. TEMPORARY TIMBER MATTING SHALL BE USED WHERE CONSTRUCTION EQUIPMENT CROSSES ANY JURISDICTIONAL NON-TIDAL WETLAND AREAS.

2. CONTRACTOR SHALL INSTALL TIMBER MATTING TO PROTECT THE WETLAND AREAS FROM CONSTRUCTION EQUIPMENT. THE MATTING SHALL BE INSTALLED TO BE STABLE WHEN TRAVERSED BY CONSTRUCTION EQUIPMENT.

3. THE WETLAND CROSSING SHALL BE CONSTRUCTED IN SUCH A WAY TO PREVENT THE WHEELS FROM PASSING THROUGH THE WETLANDS, AND MINIMIZE DEBRIS FROM VEHICLES FALLING INTO THE WETLANDS.

4. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AFTER HEAVY USE AND RAINFALL EVENTS.

5. REMOVE TEMPORARY TIMBER MATS UPON COMPLETION AND RESTORE TO PRE-CONSTRUCTION CONDITIONS.

DETAIL : TIMBER MAT TEMPORARY WETLAND CROSSING (TYP.)
(2019 DOMINION ANNUAL STANDARDS AND SPECIFICATIONS APPENDIX B PAGE 21)

DETAIL: SOIL STABILIZATION BLANKET
(2019 DOMINION ANNUAL STANDARDS AND SPECIFICATIONS APPENDIX B PAGE 20)

VDOT ROAD AND BRIDGE STANDARD NOTES:

1. REFER TO VDOT ROAD AND BRIDGE STANDARD 113.02 FOR PROTECTIVE COVERING INSTALLATION CRITERIA.

USACE-NLW
RCVD 6/30/2023

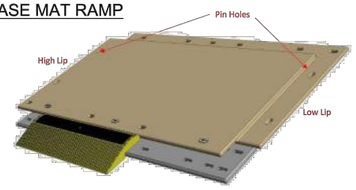
DURA-BASE General Specifications



	DURA-BASE Mat	DURA-BASE Turning Mat™	DURA-BASE Half Mat™
Overall Dimensions	8' x 14' x 4"	7' x 14' x 4"	8' x 7' 6" x 4"
	2.44 m x 4.27 m x 10.2 cm	2.13 m x 4.27 m x 10.2 cm	2.44 m x 2.29 m x 10.2 cm
Surface Dimensions	7' x 13'	58 sqft	7' x 6' 6"
	2.13 m x 3.96 m	5.38 sqm	2.13 m x 1.98 m
Weight / Mat	1000 lbs (454 kg)*	750 lbs (340 kg)*	550 lbs (249 kg)*
Material	Custom HDPE	Custom HDPE	Custom HDPE
Coefficient of Friction	0.6**	0.6**	0.6**

*All measurements and weights are nominal. **For wet neoprene rubber on mat surface.

DURA-BASE MAT RAMP



Ramps will be light weight diamond plate steel for pedestrian traffic, and they will utilize the pin holes to secure them in place.

ADA REQUIREMENTS:

Section §405 of the ADA curb ramp requirements for 2021 covers the following ADA curb ramp design standards:

- Clear Width: A ramp run must be at least 36 inches wide between the ramp's handrails.
- Rise: A maximum of 30 inches per run, with no limit on the number of runs.
- Running Slope: 1:12 maximum slope, or one foot in elevation change for every 12 feet.
- Cross Slope: The ADA permits a maximum ratio of 1:48.
- Alterations: Are permitted on running slopes with limited space, such as:
  - 1:10 maximum with 6 inches maximum rise
  - 1:8 maximum with 3 inches maximum rise
  - A slope of no greater than 1:12

DETAIL : DURA-BASE MAT RAMP
NTS

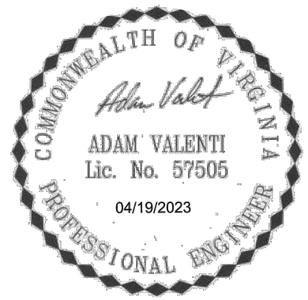
TEMPORARY CULVERT INSTALLATION NOTES:

1. COMPUTED DISCHARGES PROVIDED HEREIN ARE BASED ON WATERSHED/HYDROLOGIC PARAMETERS DERIVED FROM VGIN/USGS DATA AND ARE APPROXIMATE IN NATURE.
2. PIPE SIZING BASED ON 10-YEAR DESIGN FLOWS USING THE RATIONAL METHOD.
3. PIPES ARE TO BE CONSTRUCTED TO THE LENGTHS DEPICTED IN THE TABLE. SHOULD FIELD CONDITIONS REQUIRE A LENGTH ADJUSTMENT, THE PIPE SHALL BE INSTALLED WITH THE SAME HYDRAULIC CAPACITY, ALL CHANGES SHALL BE COORDINATED THROUGH THE DOMINION ENERGY CONSTRUCTION COORDINATOR.
4. MINIMUM COVER REQUIRED TO PROTECT CMP DURING CONSTRUCTION IS 18 INCHES FOR DIAMETERS < 36" IN ACCORDANCE WITH VDOT ROAD & BRIDGE STD, PC-1.
5. ABSOLUTE MINIMUM COVER REQUIRED TO PROTECT RCP DURING CONSTRUCTION IS 9", 1' TO 2' OF COVER IS IDEAL IF FIELD CONDITIONS WARRANT.
6. INVERT AND RIM ELEVATIONS PROVIDED HEREIN ARE RELATIVE, AS DERIVED FROM THE AVAILABLE FIELD SURVEY. THE PROPOSED CULVERTS SHALL BE INSTALLED ALONG THE BED OF THE EXISTING DITCHES/CHANNELS. THE PRECISE LOCATIONS OF THE INVERTS SHALL BE DETERMINED IN THE FIELD.
7. THE LOCATION OF THE PIPES ARE BASED ON DISCUSSIONS IN THE FIELD, OR THE LOCATION OF THE ACCESS ROAD ON THE PLANS IF NO SPECIFIC ADJUSTMENTS WERE DISCUSSED. IF FIELD CONDITIONS WARRANT CHANGES TO THE LOCATION, ENSURE COMPLIANCE WITH THE VDOT PERMIT AND COORDINATE WITH ENGINEER TO CONFIRM DESIGN CONDITIONS.
8. ALL BACKFILL MATERIALS MUST COMPLY WITH VDOT PB-1 SPECIFICATIONS.
9. PIPE LENGTHS SHOWN ABOVE ARE BASED ON 2 FT OF COVER AND 2:1 SLOPES TIED OFF TO EXISTING CONTOURS. IF THE PROPOSED ROADWAY FILL IS GREATER THAN EXPECTED, THE LENGTHS MAY NEED TO BE INCREASED.
10. WHEN TEMPORARY PIPE/ENTRANCE IS TO BE CONVERTED TO PERMANENT PIPE/ENTRANCE FOLLOWING CONSTRUCTION, THE FINAL PIPE MAY BE REDUCED 30 FT (MIN.) OR OTHERWISE DIRECTED BY DOMINION ENERGY CONSTRUCTION COORDINATOR.
11. SUBSTITUTION OF HDPE PIPE INSTEAD OF RCP IS ACCEPTABLE AS LONG AS 2 FT OF COVER IS PROVIDED.
12. BASED ON SOME COMPUTED OUTLET VELOCITIES, OUTLET PROTECTION IS NECESSARY AS DEPICTED.

CULVERT DESIGN TABLE

ID	CE	DRAINAGE AREA (AC)	DISCHARGE 10-YR (CFS)	PIPE DIAMETER (IN.)	# OF PIPES	PIPE MATERIAL	PROPOSED LENGTH (FT)	SLOPE (%)	ALLOWABLE HW DEPTH (FT)	HW DEPTH (FT)	HW/ DIAMETER	OUTLET VELOCITY (FPS)	RIPRAP PAD				COMMENTS
													APRON LENGTH (FT)	APRON WIDTH (FT)	APRON THICKNESS (IN.)	SIZE OF STONE	
1	3	17.88	46.69	36	1	HDPE	30	0.60	4.00	3.51	1.17	8.78	15.00	9.00	20	A1	PROPOSED TEMPORARY 36" HDPE CULVERT
2	6	62.86	50.89	36	1	HDPE	50	0.10	2.00	4.16	1.39	8.67	15.00	9.00	20	A1	PROPOSED TEMPORARY 18" HDPE CULVERT
3	7	1.08	3.34	18	1	HDPE	30	0.10	2.00	1.10	0.73	4.16	6.00	4.50	20	A1	PROPOSED TEMPORARY 18" HDPE CULVERT
4	8	13.05	9.32	24	1	HDPE	40	0.18	3.00	1.64	0.82	5.32	12.00	6.00	20	A1	PROPOSED TEMPORARY 24" HDPE CULVERT
5	9	6.45	15.52	24	1	HDPE	30	0.50	2.50	2.20	1.10	6.50	12.00	6.00	20	A1	PROPOSED TEMPORARY 24" HDPE CULVERT
6	10	2.98	8.78	18	1	HDPE	30	0.59	1.70	1.83	1.22	5.85	6.00	4.50	20	A1	PROPOSED TEMPORARY 18" HDPE CULVERT
7	16	2.09	7.83	18	1	HDPE	50	0.50	2.00	1.69	1.13	5.73	6.00	4.50	20	A1	PROPOSED TEMPORARY 18" HDPE CULVERT
8*	18	0.85	3.10	12	2	HDPE	30	0.38	2.00	1.24	1.24	4.88	4.00	3.00	20	A1	PROPOSED TEMPORARY 12" HDPE CULVERT
9	24	1.87	5.95	18	1	HDPE	30	0.32	6.00	1.42	0.95	5.09	6.00	4.50	20	A1	PROPOSED TEMPORARY 18" HDPE CULVERT
10	38	0.19	0.78	12	1	HDPE	30	0.58	3.30	0.53	0.53	3.78	4.00	3.00	20	A1	PROPOSED TEMPORARY 12" HDPE CULVERT
11	39	1.00	3.35	18	1	HDPE	30	0.16	3.00	1.04	0.69	4.16	6.00	4.50	20	A1	PROPOSED TEMPORARY 18" HDPE CULVERT

*Two culverts present at CE 18A/18B. Information in table related to furthest downstream culvert. Use sizing details for both culverts.



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COASTAL VIRGINIA OFFSHORE WIND (CVOW)

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ESC DETAILS

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