



Appendix A: Plan and Profile Drawings

CHAMPLAIN HUDSON POWER EXPRESS PUTNAM STATION, CEMENTON, AND CONGERS HDD PLAN & PROFILE DRAWINGS

PROPERTY OWNER TABLE

LOCATION	LANDS NOW OR FORMERLY OF	BOOK, PAGE NO.	TAX MAP ID NO.
PUTNAM STATION LAYDOWN AREA	TOWN OF PUTNAM	3114, 323	5.-2-4.6
PUTNAM STATION HDD	DELAWARE & HUDSON RAILWAY CO.	639, 168	9.-1-10
	ROBERT G. ST. ARMOUR	719, 336	13.-3-21.1
CEMENTON HDD	GLENS FALLS LEHIGH CEMENT CO.	923, 221	213.00-2-3
TOMKINS COVE LAYDOWN AREA	SOUTHERN ENERGY LOVETT, LLC	NA	10.04-2-7
CONGERS HDD	ISABELLA ROSE REALTY LLC	NA	44.12-2-44
	PALISADES INTERSTATE PARK COMMISSION	739, 1165	44.08-1-8
		741, 554	45.09-1-2
		741, 561	45.05-1-2
		NA	45.05-1-1

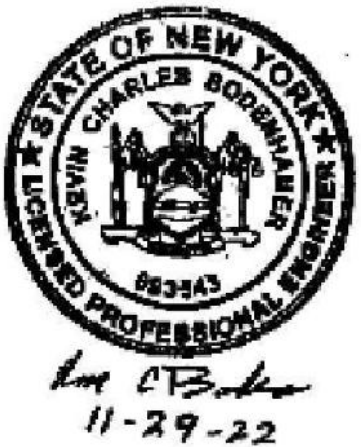
PREPARED FOR:
CALDWELL MARINE INTERNATIONAL
1333 CAMPUS PARKWAY
WALL, NEW JERSEY 07753

NOVEMBER 29, 2022

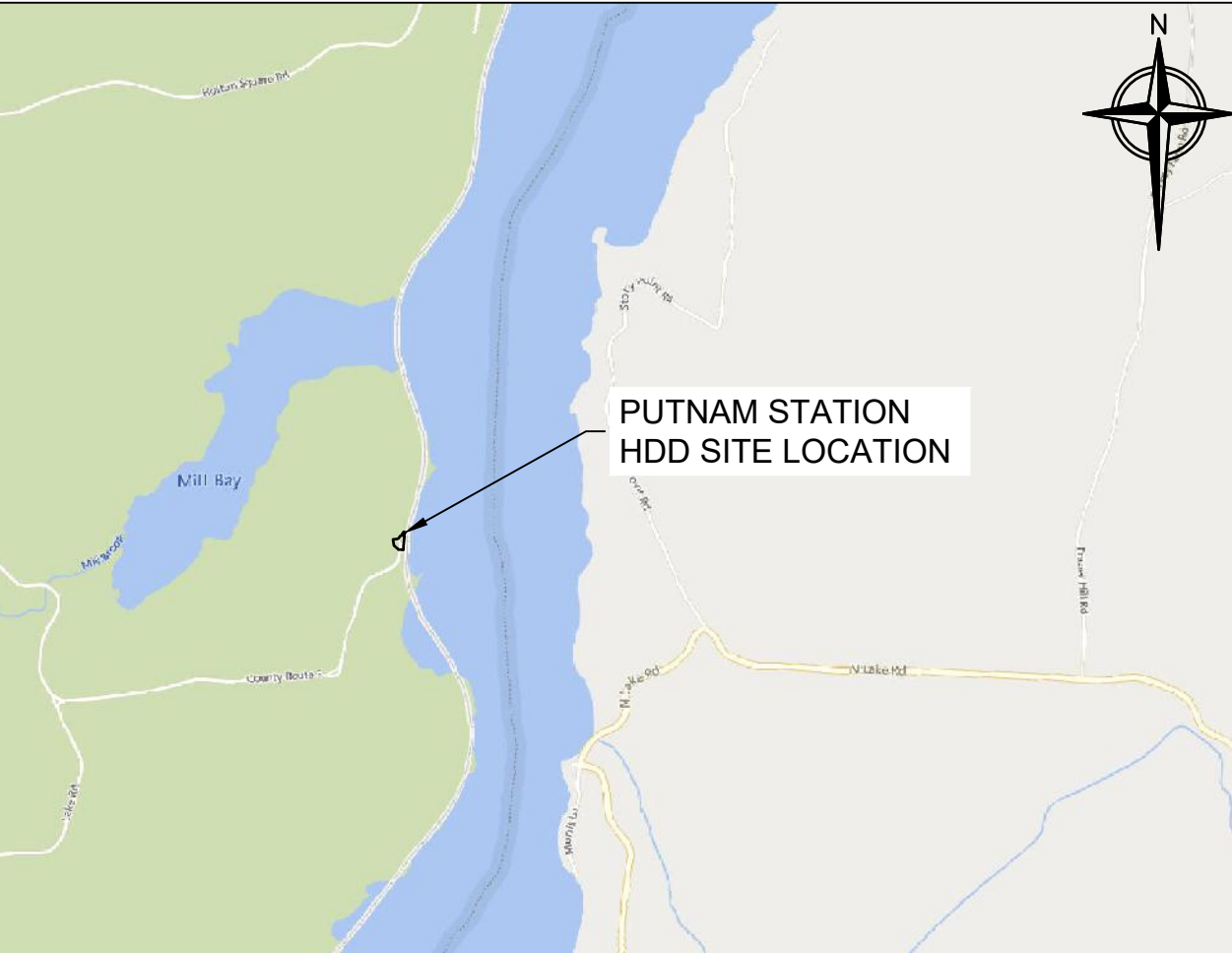
PREPARED BY:



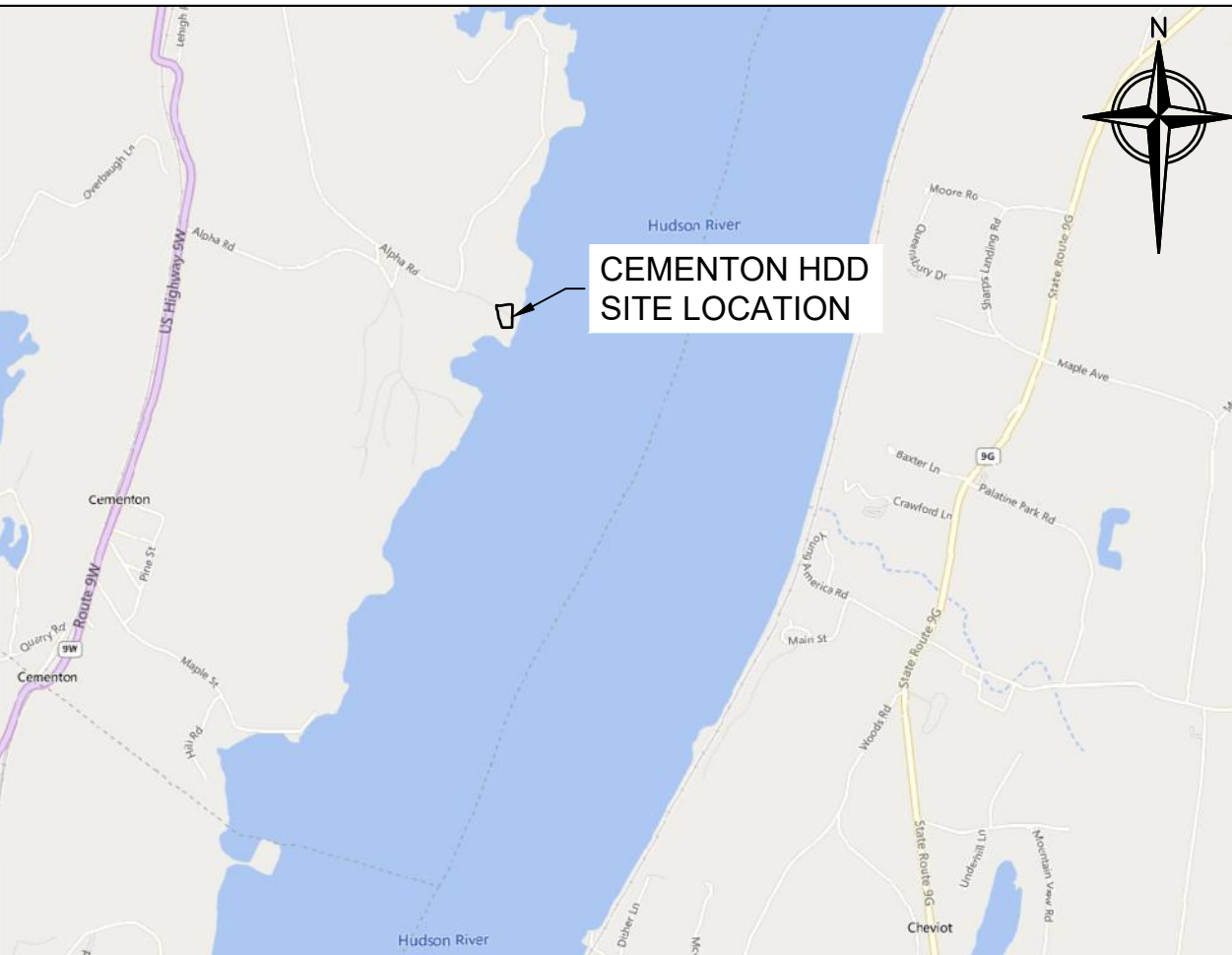
FIRM REGISTRATION NO.:
NY 0010187



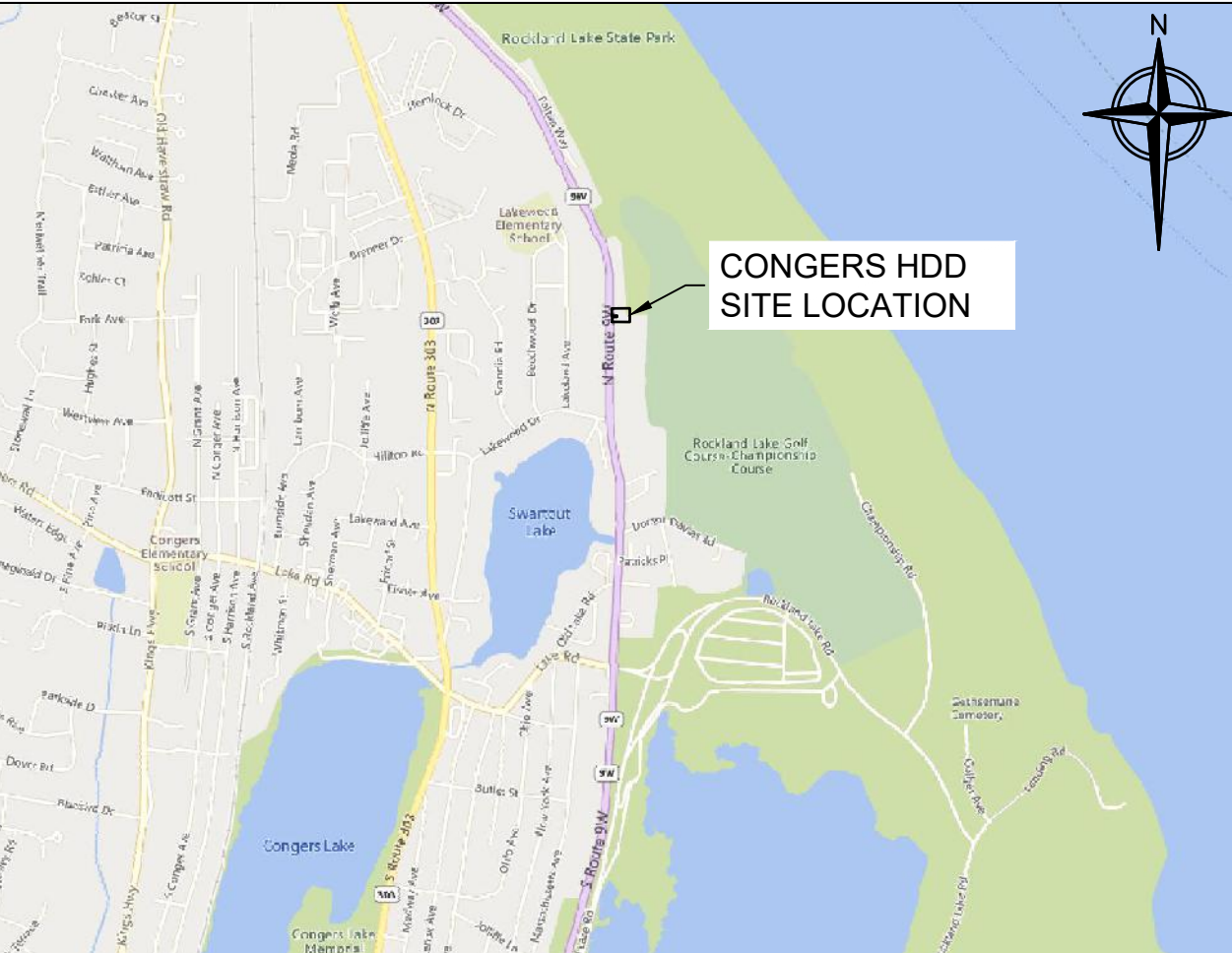
FOR PERMITTING ONLY



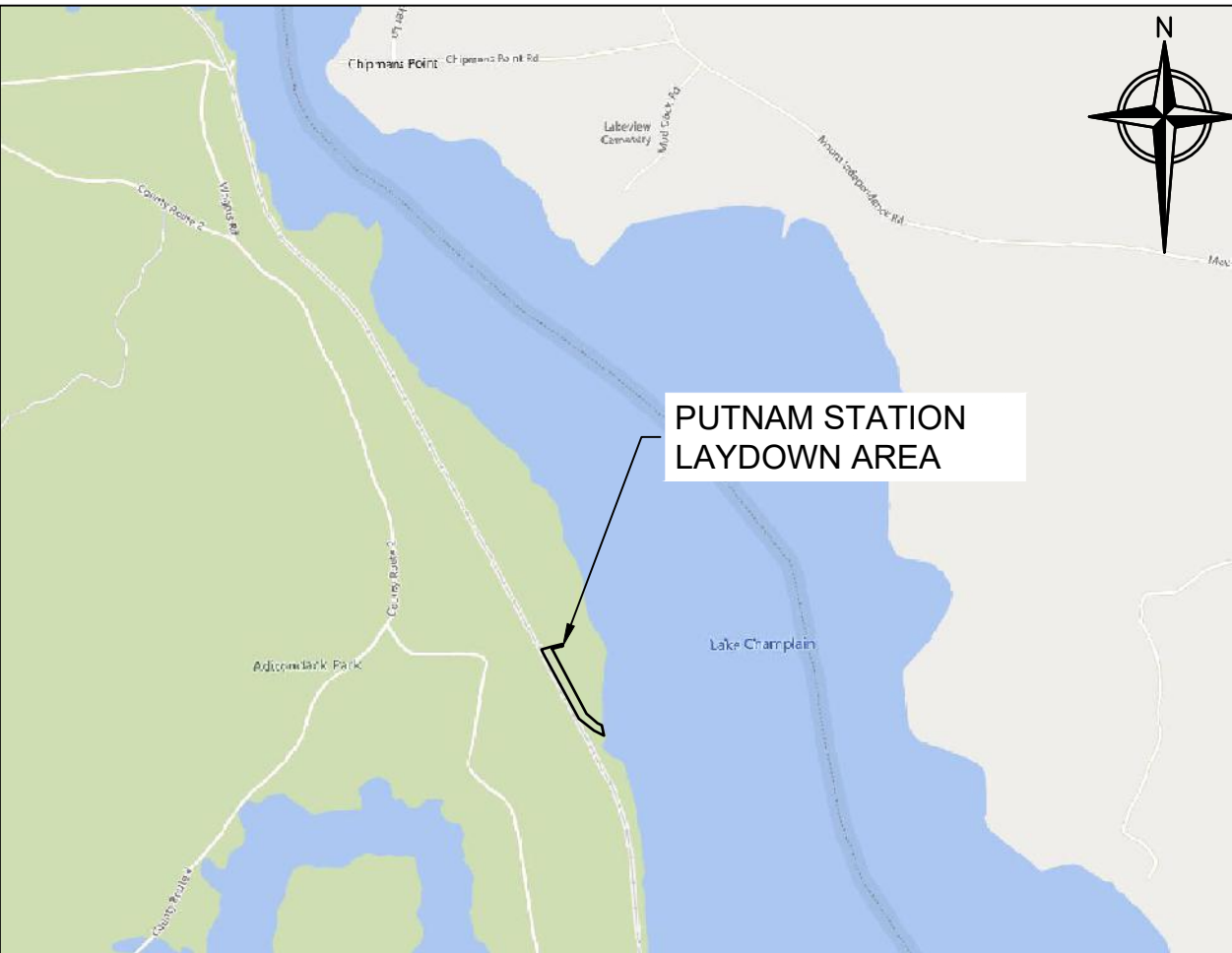
PUTNAM STATION, NEW YORK LOCATION MAP SCALE 1"=2000'



CEMENTON, NEW YORK LOCATION MAP SCALE 1"=2000'



CONGERS, NEW YORK LOCATION MAP SCALE 1"=2000'



PUTNAM LAYDOWN LOCATION MAP SCALE 1"=2000'



TOMKINS COVE LOCATION MAP SCALE 1"=2000'

DRAWING INDEX

SHEET NUMBER	DRAWING NUMBER	SHEET TITLE
1	-	COVER
2	N-1	NOTES & LEGEND
3	HDD-001	PUTNAM STATION LAYDOWN AREA PLAN
4	HDD-002	PUTNAM STATION HDD 1 PLAN AND PROFILE
5	HDD-003	PUTNAM STATION HDD 2 PLAN AND PROFILE
6	HDD-004	PUTNAM STATION HDD LAYOUT PLAN
7	HDD-005	PUTNAM STATION HDD EQUIPMENT LAYOUT PLAN
8	HDD-006	PUTNAM STATION RAILROAD CROSSING PLAN
9	HDD-007	TOMKINS COVE LAYDOWN AREA PLAN
10	HDD-008	CEMENTON HDD 1 PLAN AND PROFILE
11	HDD-009	CEMENTON HDD 2 PLAN AND PROFILE
12	HDD-010	CEMENTON HDD ACCESS ROAD PLAN
13	HDD-011	CEMENTON HDD LAYOUT PLAN
14	HDD-012	CEMENTON HDD EQUIPMENT LAYOUT PLAN
15	HDD-013	CONGERS HDD 1 PLAN AND PROFILE
16	HDD-014	CONGERS HDD 2 PLAN AND PROFILE
17	HDD-015	CONGERS HDD LAYOUT PLAN
18	HDD-016	CONGERS HDD EQUIPMENT LAYOUT PLAN
19	HDD-017	PUTNAM STATION & CEMENTON CONDUCTOR PIPE/GOAL POST/GRAVITY CELL INSTALLATION
20	HDD-018	CONGERS CONDUCTOR PIPE/GOAL POST/GRAVITY CELL INSTALLATION
21	HDD-019	DETAILS

NY 4904, D-212, (24x36)

GENERAL NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL NECESSARY CONSTRUCTION NOTIFICATIONS, PERMITS AND ACTIVITIES WITH THE CERTIFICATE HOLDERS PRIOR TO AND DURING CONSTRUCTION.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE NECESSARY ARRANGEMENTS IF TRAFFIC CONTROL PLANS AND/OR RAILROAD REPRESENTATION ARE REQUIRED.
3. CONTRACTOR TO LOCATE, MARK AND POTHOLE FOREIGN LINES AS NECESSARY PRIOR TO EXCAVATION (AND MONITOR DURING DRILLING).
4. CONTRACTOR TO DEVELOP A CROSSING PLAN WITH THE OWNER OF ANY FOREIGN PIPELINE CROSSED WITH DRILLING EQUIPMENT.
5. LOCATIONS OF EXISTING FACILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO LOCATE AND/OR CONFIRM THE LOCATIONS AND DEPTH OF ALL UTILITIES, PIPELINES OR OTHER OBSTACLES PRIOR TO EXCAVATION. CONTRACTOR TO INFORM ENGINEER OF ANY UTILITY FOUND THAT MAY AFFECT HDD DESIGN.
6. CONTRACTOR TO SUPPORT EXISTING UTILITIES, PIPELINES AND/OR OTHER FEATURES.
7. CONTRACTOR TO GRADE EXCAVATION AREA AND RESTORE TO ORIGINAL CONDITIONS.
8. CONTRACTOR TO CONTACT STATE ONE CALL SYSTEM AT LEAST 72 HOURS PRIOR TO DRILLING.

REFERENCE NOTES

1. AERIAL PHOTOGRAPHY ON PLAN AND PROFILE SHEETS HDD-002, HDD-003, HDD-008, HDD-009, HDD-013, & HDD-014 OBTAINED FROM MICROSOFT CORPORATION BING IMAGERY.
2. BASE PLAN REFERENCES A ROW, UTILITY & WETLAND SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC.
3. BASE PLAN HAS BEEN SUPPLEMENTED WITH INFORMATION PROVIDED BY CALDWELL MARINE, CLOUGH HARBOR ASSOCIATES AND NEW YORK GIS CLEARING HOUSE.
4. LAKE CHAMPLAIN BATHYMETRIC DATA PROVIDED BY OCEAN SURVEYS INC. IN OCTOBER 2022.

PROJECTION SYSTEM

1. NAD83 / NEW YORK EAST (U.S. SURVEY FEET).

INSTALLATION NOTES:

1. ACCESS: ALL EQUIPMENT MUST ACCESS THE LIMITS THE DISTURBANCE FROM PREVIOUSLY IMPROVED PUBLIC OR APPROVED PRIVATE ROADS.
2. WORK SPACE: LIMITS OF DISTURBANCE ARE DEPICTED HEREIN. LIMITED TREE CLEARING IS REQUIRED FOR PUTNAM STATION HDD OPERATIONS AND VEGETATION REMOVAL WILL BE LIMITED TO PRUNING OF LIMBS AND TRIMMING OF UNDERGROWTH AS NEEDED AROUND THE LIMITS OF THE CEMENTON AND CONGERS HDD OPERATIONS AREA. CLEARING BETWEEN THE ENTRY AND EXIT POINTS IS NOT ANTICIPATED. THE DEBRIS GENERATED FROM THE LIMITED PRUNING OF TREES AND THE TRIMMING OF UNDERGROWTH WILL BE COLLECTED IN A ROLL OFF DUMPSTER AND DISPOSED OF BY A LOCAL LICENSED WASTE DISPOSAL COMPANY.
3. WATER SOURCE: DRILL WATER SHALL BE OBTAINED FROM AN APPROVED SOURCE. THE CONTRACTOR WILL MAKE ARRANGEMENTS TO OBTAIN WATER FROM A LOCAL FIRE HYDRANT. WATER USAGE SHALL BE METERED AND OBTAINED THROUGH AN APPROVED BACK FLOW PREVENTER.
4. SPILL-PREVENTION: THE MOST RECENT VERSION OF THE SPILL PREVENTION PLAN (SPP) IS INCLUDED AS APPENDIX E OF THE CALDWELL MARINE HDD INSTALLATION MANUAL. THE CALDWELL MARINE HDD INSTALLATION MANUAL IS INCLUDED AS APPENDIX F OF THE ENVIRONMENTAL MANAGEMENT AND CONTROL PLAN (EM&CP). ALL REFUELING AND STORAGE IS ADDRESSED IN THE SPP. ALL PUMPS SHALL BE SET IN SECONDARY CONTAINMENT AND IN ACCORDANCE WITH THE SPP. EQUIPMENT AND PUMPS OPERATING WITHIN 100 FEET OF ANY WATER BODY OR WETLAND SHALL BE OPERATED AND REFUELED IN ACCORDANCE WITH THE SPP. EQUIPMENT REFUELING AND STORAGE OF HAZARDOUS MATERIALS, FUELS, ETC. SHALL BE CONDUCTED AT LEAST 100 FEET FROM WATER BODIES AND WETLAND WHERE PRACTICAL. EACH CONSTRUCTION CREW SHALL HAVE ON HAND SUFFICIENT TOOLS AND MATERIALS TO STOP LEAKS AND HAVE SUPPLIES OF ABSORBENT AND BARRIER MATERIALS TO ALLOW RAPID CONTAINMENT AND RECOVERY OF SPILLED MATERIALS.
5. EROSION AND SEDIMENT CONTROL: CONTRACTOR SHALL SUPPLY, INSTALL AND MAINTAIN SEDIMENT CONTROL STRUCTURES IN ACCORDANCE WITH CONTRACT DOCUMENTS. CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL STRUCTURES AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR OR AS NEEDED TO ENSURE SEDIMENT-LADEN RUNOFF FROM NEWLY DISTURBED AREAS IS PREVENTED FROM FLOWING OUTSIDE THE LIMITS OF DISTURBANCE.
6. MUD DISPOSAL: CONTRACTOR SHALL DISPOSE OF EXCESS DRILLING MUD AS DIRECTED BY THE COMPANY REPRESENTATIVE IN ACCORDANCE WITH PERMIT CONDITIONS. UNDER NO CIRCUMSTANCES SHALL DRILLING FLUID BE DISPOSED OF IN WATER BODIES OR WETLANDS. ANY DRILLING MUD WHICH INADVERTENTLY EXITS AT POINTS OTHER THAN THE ENTRY AND EXIT POINTS SHALL BE CONTAINED AND COLLECTED TO THE EXTENT PRACTICAL AND DISPOSED OF AS DIRECTED BY THE COMPANY REPRESENTATIVE IN ACCORDANCE WITH PERMIT CONDITIONS. DRILLING MUD WILL BE DISPOSED OF AT CLEAN EARTH NEW JERSEY, IN KEARNY, NJ OR AT AN ALTERNATE APPROVED FACILITY.
7. CLEANUP/STABILIZATION/RESTORATION: ALL DISTURBED AREAS SHALL BE RETURNED TO THE ORIGINAL CONDITIONS. DISTURBED AREAS SHALL BE SEEDED AND TEMPORARY EROSION/SEDIMENT CONTROL DEVICES SHALL BE REMOVED ONCE THE CONTRIBUTING DISTURBED AREAS ARE STABILIZED AND APPROVED BY THE QUALIFIED INSPECTOR. REFER TO THE SEED MIXTURES LISTED IN TABLE 4.4 OF APPENDIX G OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP IS INCLUDED AS APPENDIX I OF THE EM&CP.
8. CONTRACTOR SHALL USE A GYROSCOPIC DRILL HEAD ON THE PILOT DRILL TO ENSURE ACCURATE EXIT LOCATION WITHIN THE TEMPORARY MODULAR GRAVITY CELLS.

PROPOSED LEGEND

—— LOD ——— LOD ———


——— SF ———


- - - - -

— · · · — · · · —

—— - - - - ———

—————





LIMITS OF DISTURBANCE

SILT FENCE

LAYDOWN AREA

PERMITTED DEVIATION ZONE


TEMPORARY EASEMENT


HDD CONDUIT


HDD ENTRY/EXIT POINTS


GEOTECH BORE HOLE LOCATIONS


EXISTING LEGEND













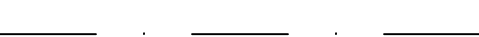





















EXISTING TREE LINE

RAILROAD TRACKS

OVERHEAD WIRES

UNDERGROUND UTILITY

DRAINAGE CULVERT

EXISTING FENCE

MAJOR CONTOUR

MINOR CONTOUR



WETLAND

100-FOOT WETLAND ADJACENT AREA

PARCEL BOUNDARIES

EXISTING NATURAL VEGETATION

EXISTING UTILITY POLE

			 <i>Kevin C. Bonaventura</i> 11-29-22	REFERENCE DRAWINGS		REVISIONS							DRAWING APPROVALS		 <div>NEW YORK STATE NO. 0010187</div>	NOTES & LEGEND				
				DWG. NO.	TITLE	NO.	DESCRIPTION	DATE	DRAWN	CHK	APPR.	DRAWN	DATE							
														MMO		11/1/2022				
														CHECKED		DATE				
														GJR		11/8/2022				
													ENGINEER	DATE						
														KCB	11/29/2022	SCALE	PROJECT NO.	DRAWING NO.	SHT.NO.	
																NTS	496182	N-1	2	

USER_DWGNAME
PAGE 1/1

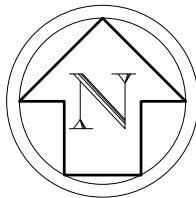
NY 0010187




PROPOSED WORK NOTES:

- 1. LAND DISTURBANCE IS NOT ANTICIPATED. TIMBER MATTING WITHIN GRASSED AREAS SHOULD BE USED WHEN SOFT OR POORLY DRAINED SOILS ARE PRESENT TO PREVENT EQUIPMENT RUTTING AND SEDIMENT TRACKING.
- 2. THE EXISTING ACCESS ROAD AND LAYDOWN AREA IS ANTICIPATED TO SUPPORT THE PIPE FUSING OPERATION IN IT'S CURRENT CONDITION. MINOR ACCESS SURFACE IMPROVEMENTS AND INSTALLATION OF ADDITIONAL EROSION CONTROLS WILL BE IMPLEMENTED AS NECESSARY TO PREVENT SEDIMENT-LADEN RUNOFF FROM FLOWING OUTSIDE OF THE LAYDOWN AREA.
- 3. TEMPORARY 'CONSTRUCTION TRAFFIC AHEAD' WARNING SIGNS WILL BE INSTALLED 100- FEET FROM THE EXISTING ACCESS VIA LAPOINTE LANE TO THE TOWN OF PUTNAMS PROPERTY ON BOTH LOWER ROAD APPROACHES. FINAL SIGN TEXT AND LOCATIONS TO BE APPROVED BY THE OWNER AND COORDINATED WITH THE TOWN OF PUTNAM.

REFERENCE NOTES:

- 1. AERIAL PHOTOGRAPHY OBTAINED FROM THE NEW YORK GIS CLEARINGHOUSE, STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, DATED SEPTEMBER 2017.
- 2. PARCEL DATA OBTAINED FROM NEW YORK GIS CLEARINGHOUSE, DIGITAL MAPS DATABASE, NYS STATEWIDE 2021 PARCEL LAYER, PUBLISHED OCTOBER 2022.
- 3. LIMITS OF LAYDOWN AREA PROVIDED BY CALDWELL MARINE INC. IN SEPTEMBER 2022.



				REFERENCE DRAWINGS		REVISIONS							DRAWING APPROVALS		 <div>SCALE PLAN: </div>	PUTNAM STATION LAYDOWN AREA PLAN						
				DWG. NO.	TITLE	NO.	DESCRIPTION	DATE	DRAWN	CHK	APPR.	DRAWN	DATE	SCALE						PROJECT NO.	DRAWING NO.	SHT.NO.
																CHECKED	DATE					
																GJR	11/7/2022					
														ENGINEER		DATE						
														KCB		11/29/2022						

NY 2022-11-29-22

PIPE STATIONING

PLAN

PROFILE

0+00 HDD ENTRY POINT
0+48 LIMITS OF DISTURBANCE
0+68 AT&T FIBER CABLE
0+87 E RAILROAD
0+95 E RAILROAD
1+04 LEDCOR FIBER CABLE

2+00

3+00

4+00

5+00

6+00

7+00

8+00

9+00 HDD EXIT POINT

WASHINGTON COUNTY, NEW YORK

Lands Now or Formerly of
ROBERT G. ST. ARMOUR
Book 719 Page 336
Tax Map ID No. 13-3-21.1

Lands Now or Formerly of
DELAWARE & HUDSON RAILWAY CO.
Book 639 Page 168
Tax Map ID No. 9-1-10

HDD ENTRY
LAT: N 43° 44' 05.43"
LONG: W 73° 22' 27.76"
N: 1787792.9375
E: 789612.0891

BORE_PD-1
LAT: N 43° 44' 05.59"
LONG: W 73° 22' 27.66"
N: 1787809.0000
E: 789619.0000

HDD EXIT
LAT: N 43° 44' 11.18"
LONG: W 73° 22' 18.41"
N: 1788384.5568
E: 790290.4397

12" HDPE CONDUIT (1)

12" HDPE CONDUIT (2)

LIMITS OF DISTURBANCE

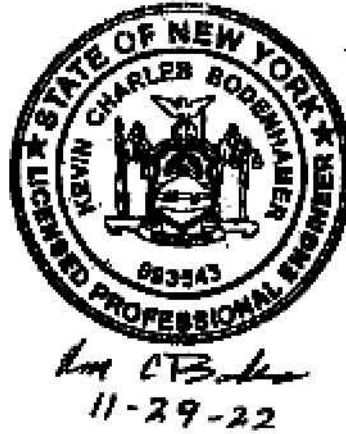
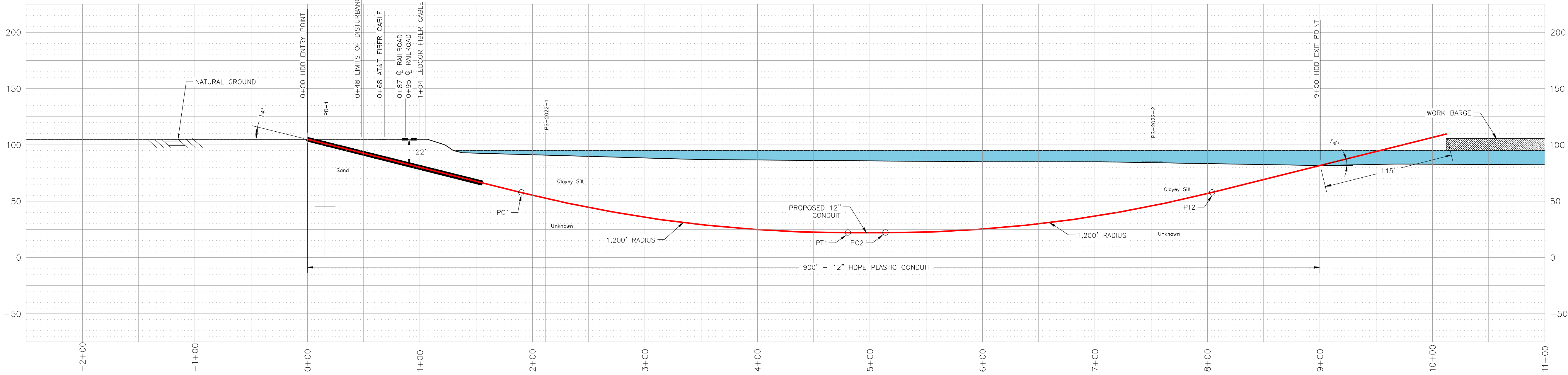
BORE_PS2022-1
LAT: N 43° 44' 06.06"
LONG: W 73° 22' 24.72"
N: 1787859.8540
E: 789834.1700

UTILITY POLE

COUNTY ROUTE 3

PERMITTED DEVIATION ZONE

WORK BARGE




HORIZONTAL DIRECTIONAL DRILL DATA		
DESCRIPTION	STA.	ELEV.
ENTRY ANGLE @ 14°	0+00	105.0'
POINT OF CURVATURE (PC1) (1,200 FT. RADIUS)	1+90	57.6'
POINT OF TANGENCY (PT1)	4+80	22.0'
POINT OF CURVATURE (PC2) (1,200 FT. RADIUS)	5+13	22.0'
POINT OF TANGENCY (PT2)	8+04	57.6'
EXIT ANGLE @ 14°	9+00	81.7'

HORIZONTAL DIRECTIONAL DRILL PARAMETERS		
1.) PIPE: 12.75" O.D. x 1.417" W.T. DESIGN FACTOR:	HDPE DR9 IPS 0.63	
2.) LENGTH OF CROSSING:	900' HORIZONTAL DISTANCE	
3.) TYPE OF PIPE JOINT: LENGTH OF PIPE:	BUTT FUSION 215' L.E.	
4.) ESTIMATED PULL FORCE: ALLOWABLE PULL FORCE:	9,096 LBS. 53,428 LBS.	
5.) CASING PIPE: 24" O.D. x 0.375" W.T.	STEEL X52	

REFERENCE DRAWINGS	
DWG. NO.	TITLE

REVISIONS						
NO.	DESCRIPTION	DATE	DRAWN	CHK	APPR	

DRAWING APPROVALS	
DRAWN	DATE
AWF	09/14/22
CHECKED	DATE
GJR	11/29/22
ENGINEER	DATE
KCB	11/29/22



NEW YORK STATE
NY 0010187

SCALE PLAN: 0"=50'

SCALE PROFILE H: 0"=50'

SCALE PROFILE V: 0"=50'

PUTNAM STATION HDD 1 PLAN AND PROFILE			
SCALE	PROJECT NO.	DRAWING NO.	SHT. NO.
1"=50'	496182	HDD-002	4

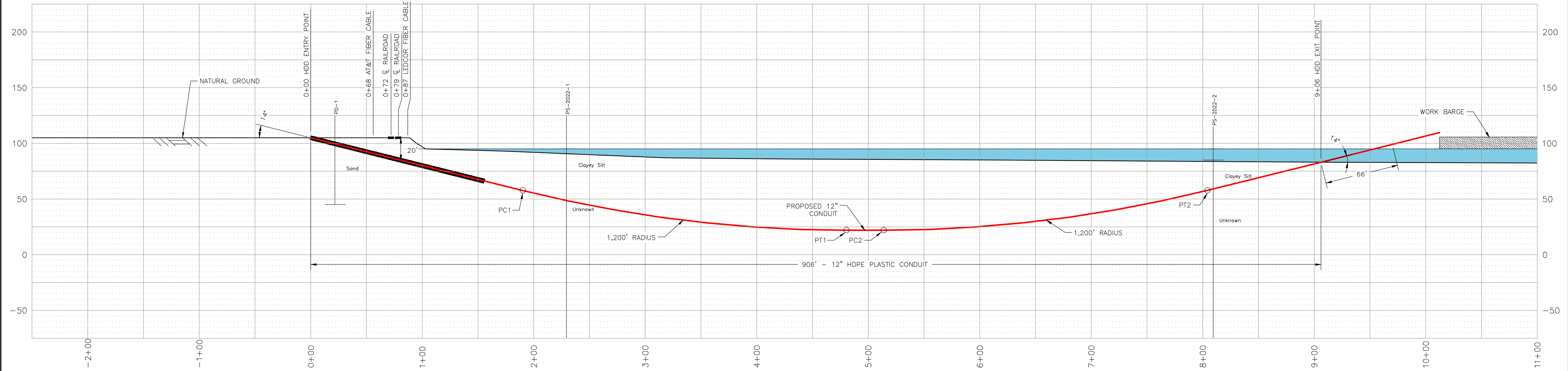
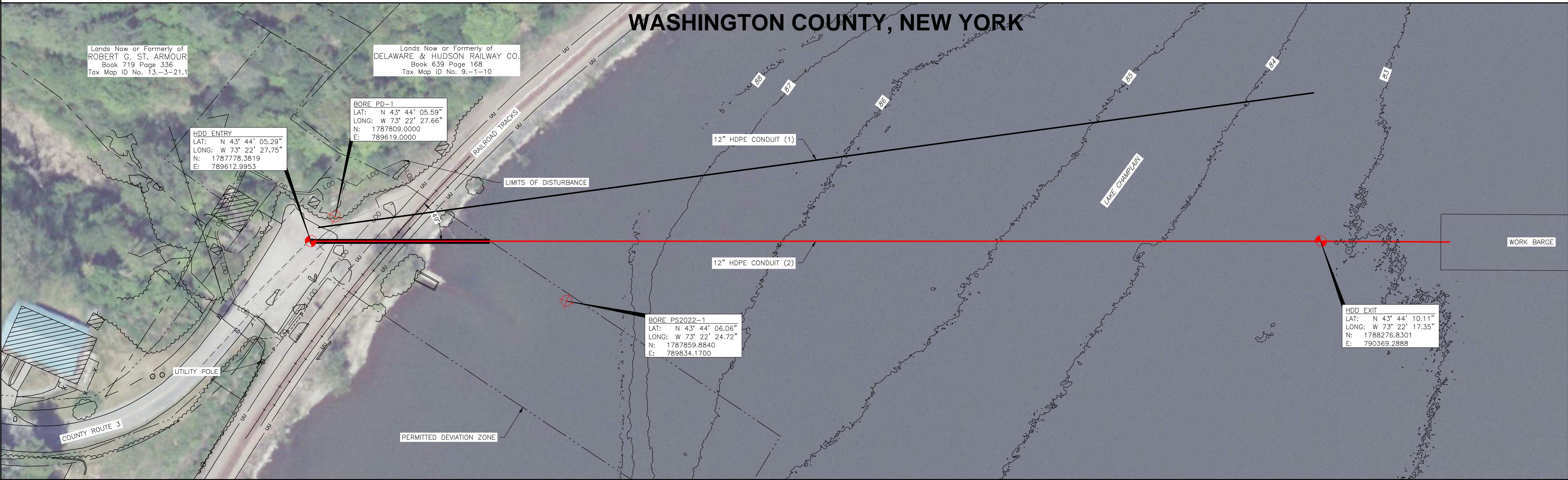
NY 2022-11-29-22

PIPE STATIONING

PLAN

PROFILE

0+00 HDD ENTRY POINT
0+68 AT&T FIBER CABLE
0+72 C RAILROAD
0+79 C RAILROAD
0+87 LEDCOR FIBER CABLE
1+00
3+00
4+00
5+00
6+00
7+00
8+00
9+06 HDD EXIT POINT



HORIZONTAL DIRECTIONAL DRILL DATA		
DESCRIPTION	STA.	ELEV.
ENTRY ANGLE @ 14°	0+00	105.0'
POINT OF CURVATURE (1,200 FT. RADIUS) (PC1)	1+90	57.6'
POINT OF TANGENCY (PT1)	4+80	22.0'
POINT OF CURVATURE (1,200 FT. RADIUS) (PC2)	5+13	22.0'
POINT OF TANGENCY (PT2)	8+04	57.6'
EXIT ANGLE @ 14°	9+06	83.1'

HORIZONTAL DIRECTIONAL DRILL PARAMETERS		
1.) PIPE: 12.75" O.D. x 1.417" W.T. DESIGN FACTOR:	HDPE DR9 IPS 0.63	
2.) LENGTH OF CROSSING:	906' HORIZONTAL DISTANCE	
3.) TYPE OF PIPE JOINT: LENGTH OF PIPE:	BUTT FUSION 921' L.E.	
4.) ESTIMATED PULL FORCE: ALLOWABLE PULL FORCE:	9,096 LBS. 53,428 LBS.	
5.) CASING PIPE: 24" O.D. x 0.375" W.T.	STEEL X52	

REFERENCE DRAWINGS

DWG. NO.	TITLE

REVISIONS

NO.	DESCRIPTION	DATE	DRAWN	CHK	APPR

DRAWING APPROVALS	
DRAWN	DATE
AWF	09/14/22
CHECKED	DATE
GJR	11/29/22
ENGINEER	DATE
KCB	11/29/22

TRC THE TRC GROUP INC. NY 0010187

SCALE PLAN:

SCALE PROFILE H:

SCALE PROFILE V:

**PUTNAM STATION HDD 2
PLAN AND PROFILE**

SCALE	PROJECT NO.	DRAWING NO.	SHT. NO.
1"=50'	496182	HDD-003	5

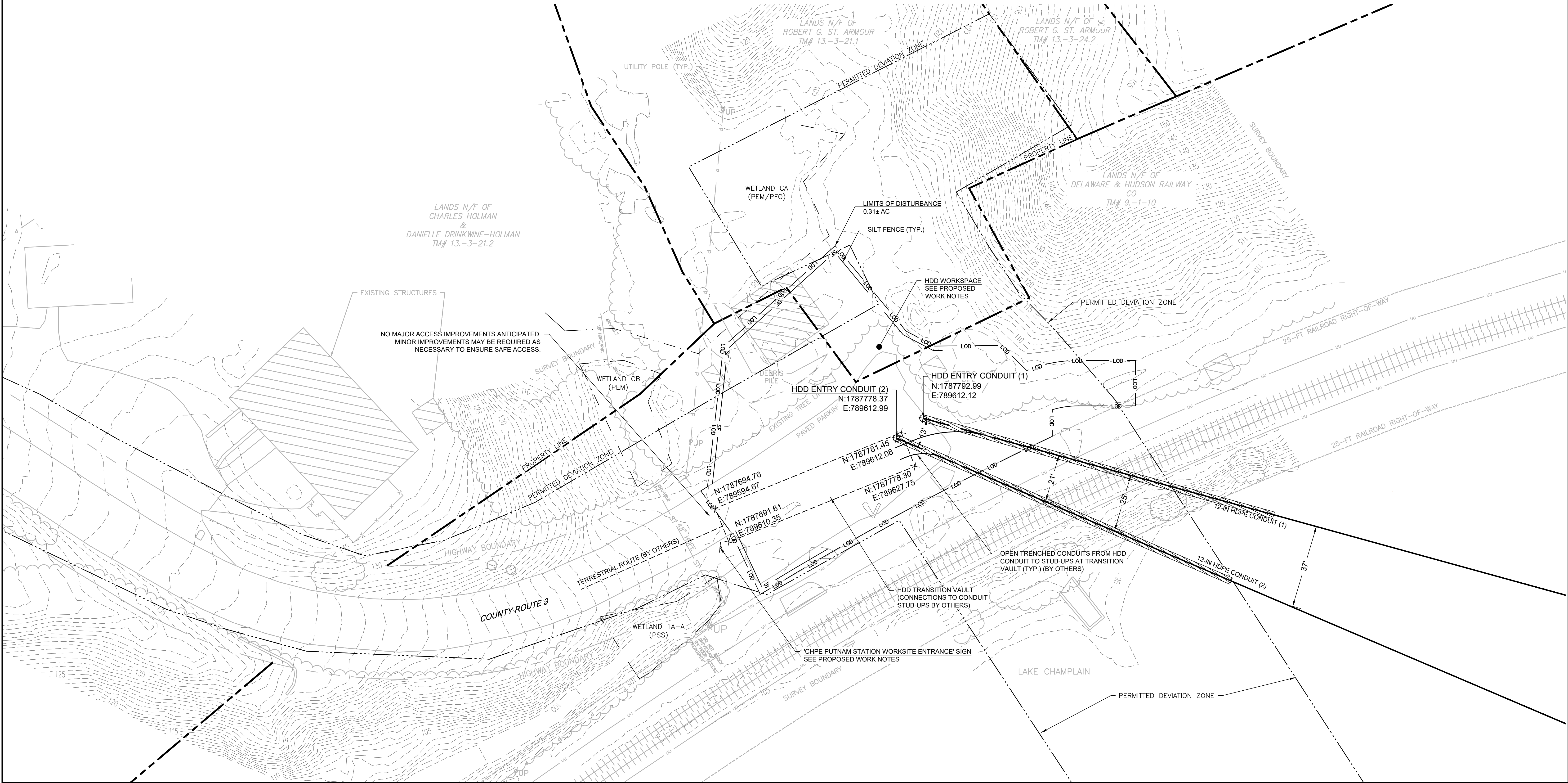
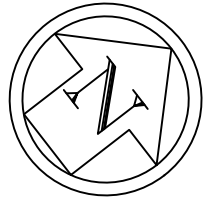
NY 0010187.dwg




PROPOSED WORK NOTES:

1. ALL HDD CONSTRUCTION OPERATIONS AND PARKING WILL BE CONTAINED WITHIN THE LIMITS OF DISTURBANCE. SIGNIFICANT LAND GRADING IS NOT ANTICIPATED. VEGETATION REMOVAL IS ANTICIPATED TO BE LIMITED TO THE REMOVAL OF THE TREES WITHIN THE IMMEDIATE VICINITY OF THE BUILDING REMAINS TO THE EAST OF THE PAVED PARKING AREA, PRUNING OF LIMBS AND TRIMMING OF UNDERGROWTH ALONG THE PERIMETER OF THE HDD WORKSPACE, NO HERBICIDE USE IS PERMITTED. ALL DISTURBED AREAS SHALL BE RESTORED AFTER CONSTRUCTION.
2. NO EXISTING ACCESS IMPROVEMENTS ARE ANTICIPATED. THE PAVED PARKING AREA SHALL BE RE-SURFACED AS NECESSARY TO SUPPORT HDD CONSTRUCTION OPERATIONS AND PREVENT SEDIMENT-LADEN RUNOFF TO FLOW OUTSIDE OF THE LIMITS OF DISTURBANCE.
3. TEMPORARY 'CONSTRUCTION TRAFFIC AHEAD' WARNING SIGN WILL BE INSTALLED IN THE SHOULDER OF COUNTY ROUTE 3 100- FEET FROM THE END OF THE DOUBLE YELLOW LINE. FINAL SIGN TEXT AND LOCATION TO BE APPROVED BY THE OWNER, DELAWARE AND HUDSON RAILWAY CO, AND COORDINATED WITH WASHINGTON COUNTY.

REFERENCE NOTES:

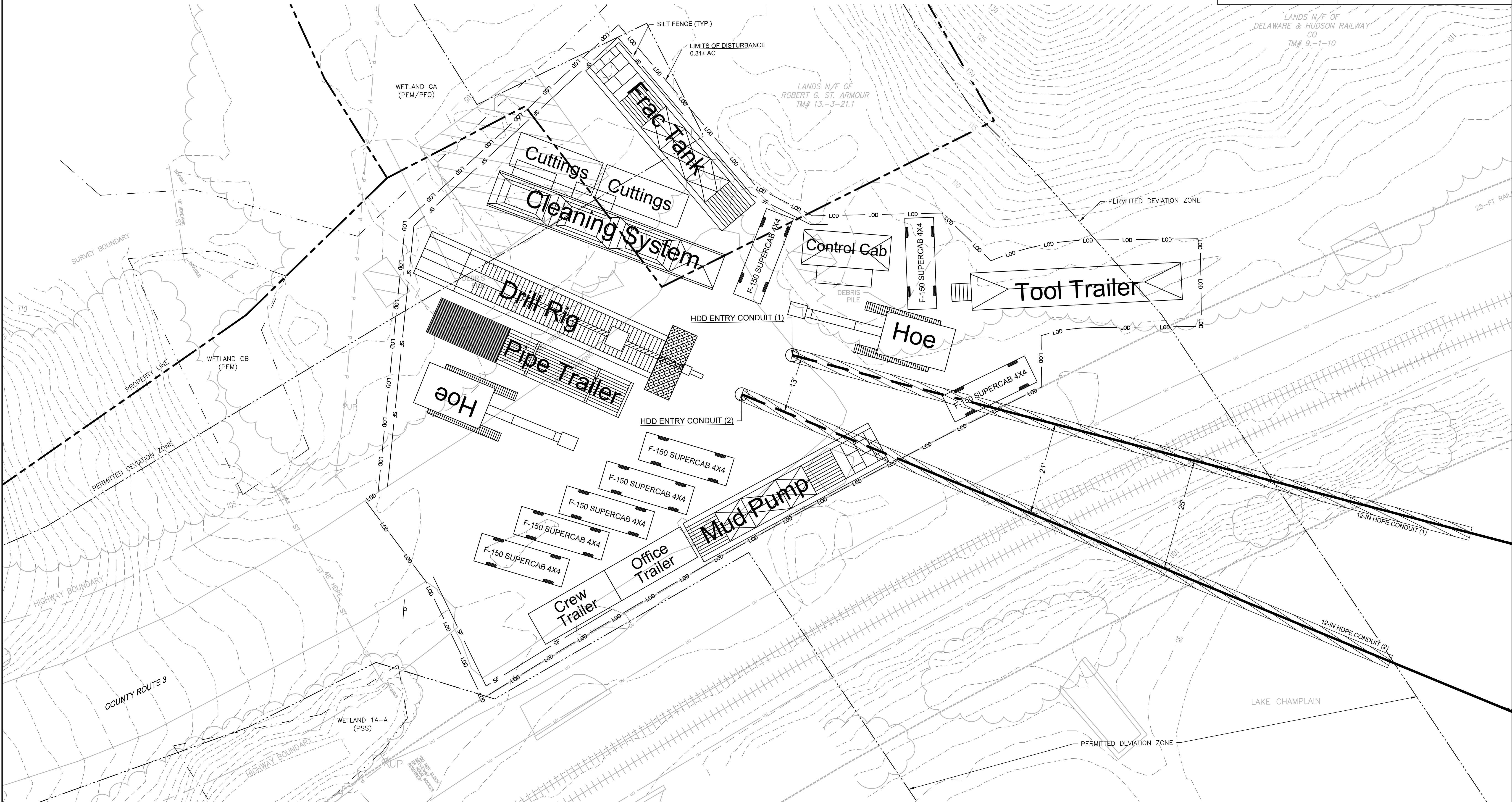
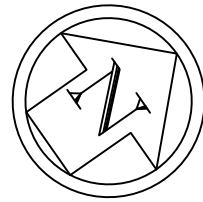
1. BASE PLAN REFERENCES A ROW, UTILITY & WETLAND SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC.
2. BASE PLAN HAS BEEN SUPPLEMENTED WITH INFORMATION PROVIDED BY CALDWELL MARINE, CLOUGH HARBOR ASSOCIATES AND NEW YORK GIS CLEARING HOUSE.






							REFERENCE DRAWINGS		REVISIONS							DRAWING APPROVALS		 <div>TRC</div> <div>NEW YORK REGISTRATION NO. NY 0010187</div> <div>SCALE PLAN: </div>	PUTNAM STATION HDD LAYOUT PLAN			
			DWG. NO.	TITLE	NO.		DESCRIPTION	DATE	DRAWN	CHK	APPR.	DRAWN	DATE	SCALE	PROJECT NO.	DRAWING NO.	SHT.NO.					

NY 0010187 (24x36)

- REFERENCE NOTES:
1. BASE PLAN REFERENCES A ROW, UTILITY & WETLAND SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC.
 2. BASE PLAN HAS BEEN SUPPLEMENTED WITH INFORMATION PROVIDED BY CALDWELL MARINE, CLOUGH HARBOR ASSOCIATES AND NEW YORK GIS CLEARING HOUSE.
 3. HDD EQUIPMENT LAYOUT PROVIDED BY CALDWELL MARINE IN NOVEMBER 2022.



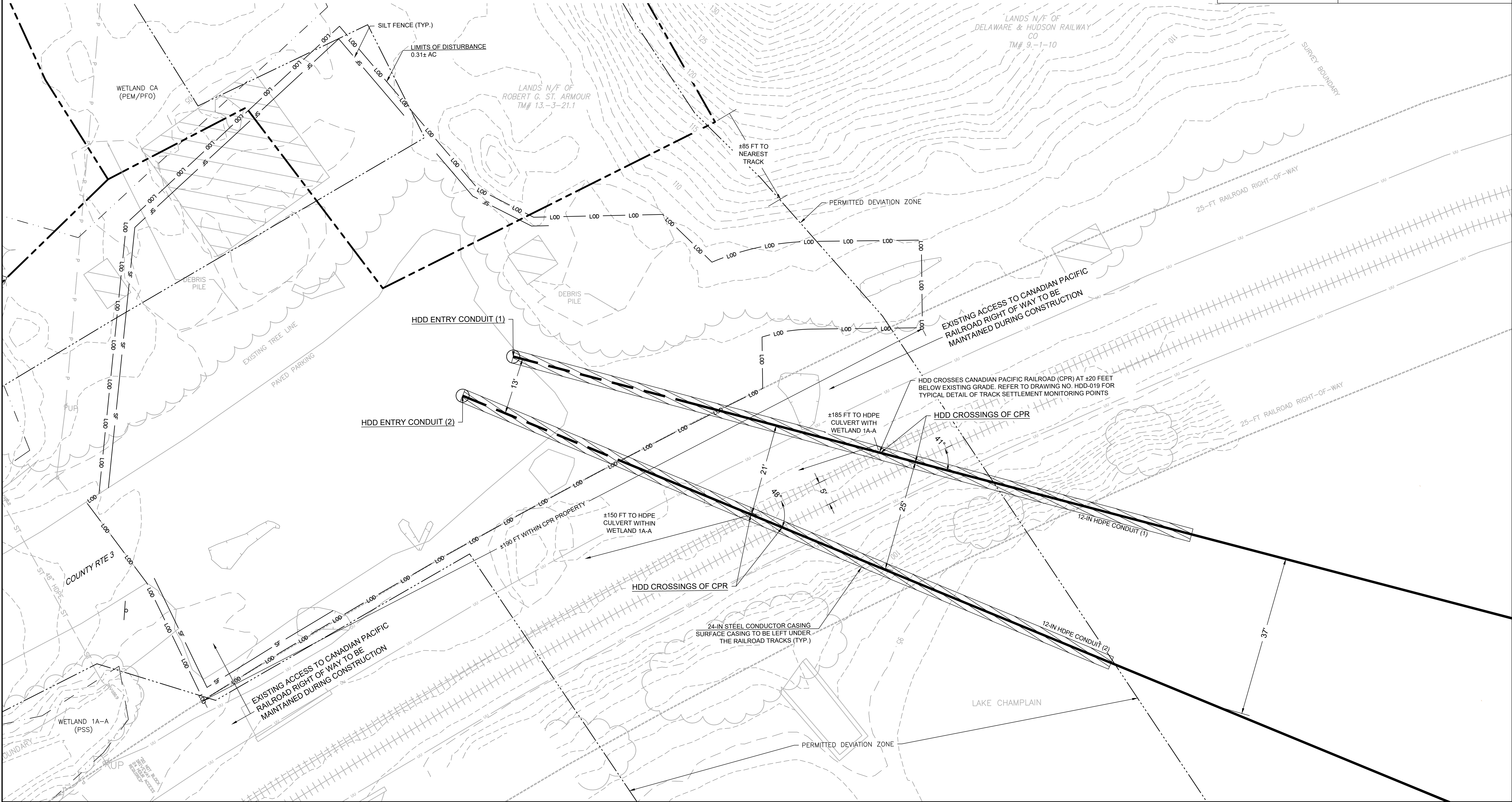
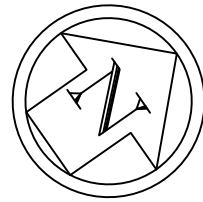
			 <i>Eng. C. B. ...</i> 11-29-22	REFERENCE DRAWINGS		REVISIONS							DRAWING APPROVALS		 <small>NEW YORK REGISTRATION NO. NY 0010187</small> SCALE PLAN: 	PUTNAM STATION HDD EQUIPMENT LAYOUT PLAN					
				DWG. NO.	TITLE	NO.	DESCRIPTION	DATE	DRAWN	CHK	APPR	DRAWN	DATE								





USER_DWGNAME

NY 0010187 (24x36)

- REFERENCE NOTES:
1. BASE PLAN REFERENCES A ROW, UTILITY & WETLAND SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC.
 2. BASE PLAN HAS BEEN SUPPLEMENTED WITH INFORMATION PROVIDED BY CALDWELL MARINE, CLOUGH HARBOR ASSOCIATES AND NEW YORK GIS CLEARING HOUSE.



					REFERENCE DRAWINGS		REVISIONS							DRAWING APPROVALS		 <small>FIRM REGISTRATION NO. NY 0010187</small>	<div>PUTNAM STATION HDD RAILROAD CROSSING PLAN</div> <div><table><tr><td>SCALE</td><td>PROJECT NO.</td><td>DRAWING NO.</td><td>SHT.NO.</td></tr><tr><td>1"=10'</td><td>496182</td><td>HDD-006</td><td>8</td></tr></table></div>				SCALE	PROJECT NO.	DRAWING NO.	SHT.NO.	1"=10'	496182	HDD-006	8
SCALE	PROJECT NO.	DRAWING NO.			SHT.NO.																							
1"=10'	496182	HDD-006	8																									
			DWG. NO.	TITLE	NO.	DESCRIPTION	DATE	DRAWN	CHK	APPR.	DRAWN	DATE																
												MMO	11/1/2022															
												CHECKED	DATE															
												GJR	11/7/2022															
												ENGINEER	DATE															
												KCB	11/29/2022															



USER: D:\GNAME

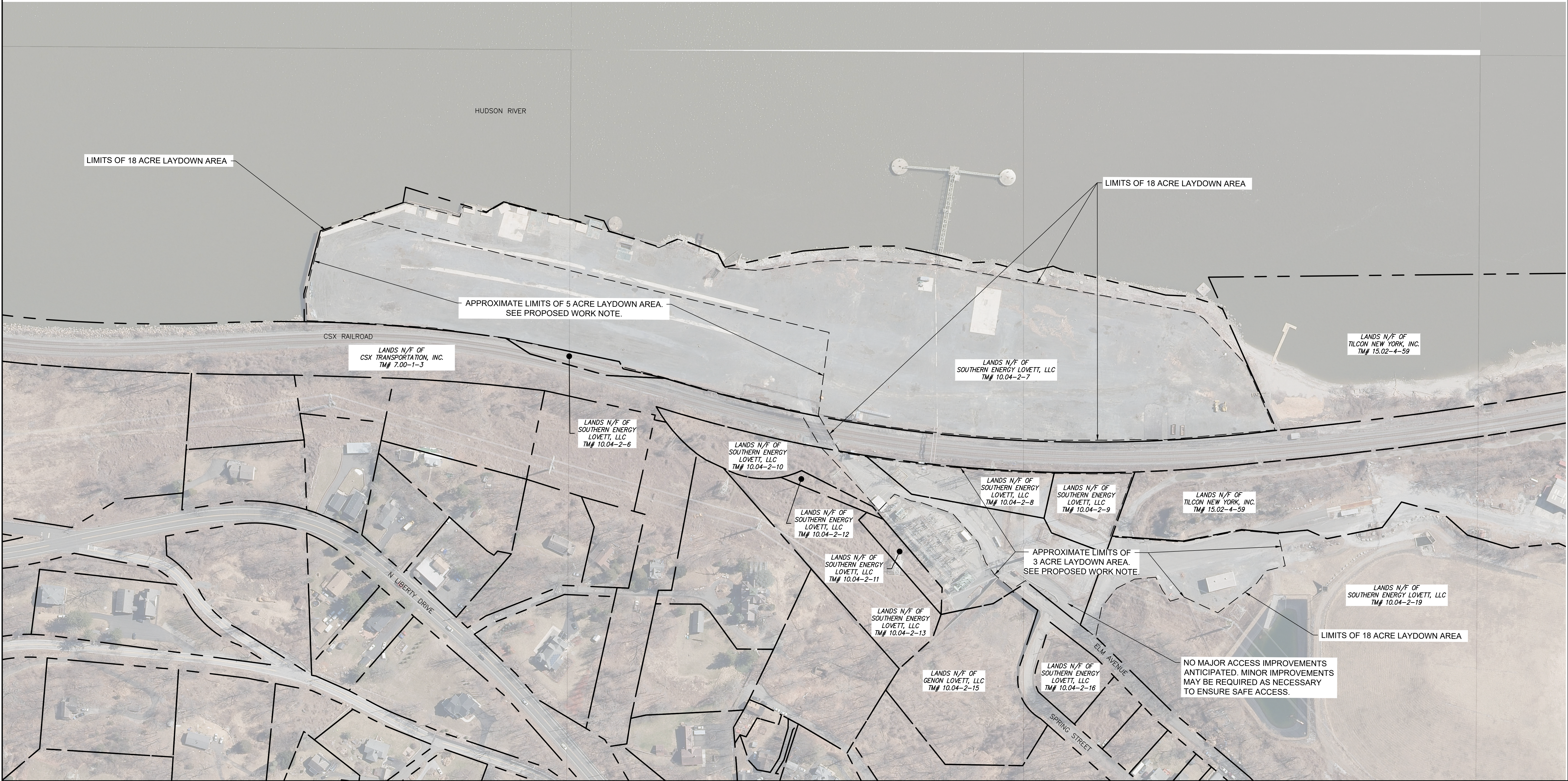
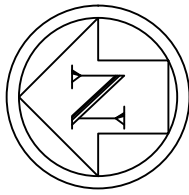
NY 0010187




PROPOSED WORK NOTE:

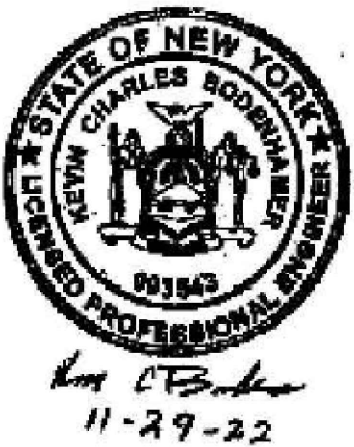
1. LAND DISTURBANCE IS NOT ANTICIPATED. 8 ACRES OF THE LARGER 18 ACRE LAYDOWN AREA WILL BE USED TO SUPPORT CEMENTON, STONY POINT AND CONGERS HDD CONSTRUCTION. THE REMAINING 10 ACRES WILL BE USED FOR ASPECTS OF THE CHPE PROJECT NOT RELATED TO HDD CONSTRUCTION.

REFERENCE NOTES:

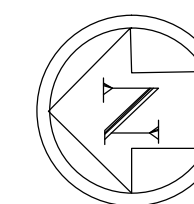
1. AERIAL PHOTOGRAPHY OBTAINED FROM THE NEW YORK GIS CLEARINGHOUSE, STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, DATED SEPTEMBER 2017.
2. PARCEL DATA OBTAINED FROM NEW YORK GIS CLEARINGHOUSE, DIGITAL MAPS DATABASE, NYS STATEWIDE 2021 PARCEL LAYER, PUBLISHED OCTOBER 2022.
3. LIMITS OF LAYDOWN AREA PROVIDED BY TRANSMISSION DEVELOPERS INC. IN SEPTEMBER 2022.



				REFERENCE DRAWINGS		REVISIONS							DRAWING APPROVALS		 <div>FILE REGISTRATION NO. NY 0010187</div> <div>SCALE PLAN: </div>	TOMKINS COVE LAYDOWN AREA PLAN			
					DWG. NO.	TITLE	NO.	DESCRIPTION	DATE	DRAWN	CHK	APPR.	DRAWN	DATE					
																MMO	11/1/2022		
																CHECKED	DATE		
																GJR	11/7/2022		
																ENGINEER	DATE		
														KCB	11/29/2022				
															SCALE	PROJECT NO.	DRAWING NO.	SHT.NO.	
															1"=100'	496182	HDD-007	9	



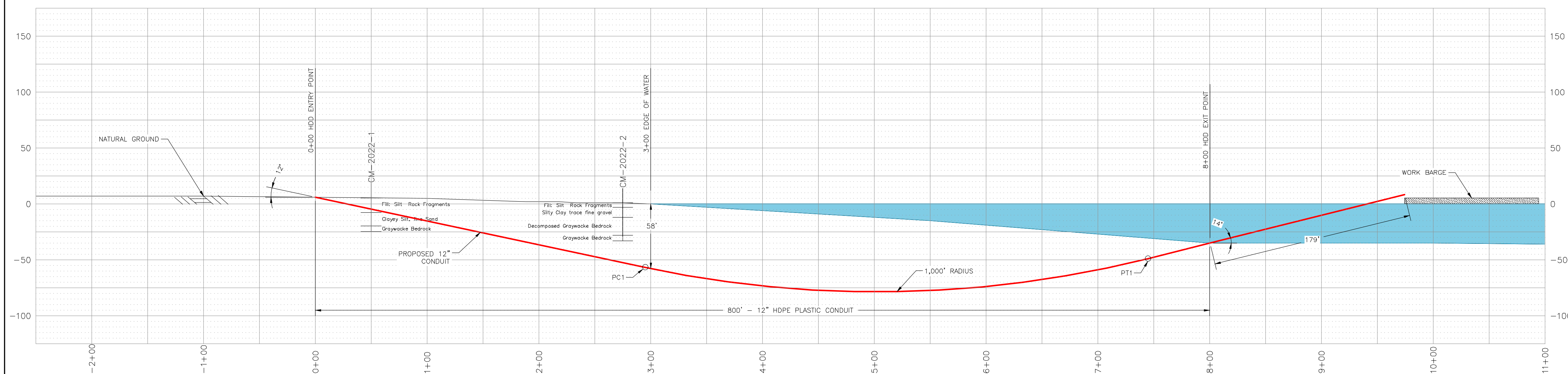
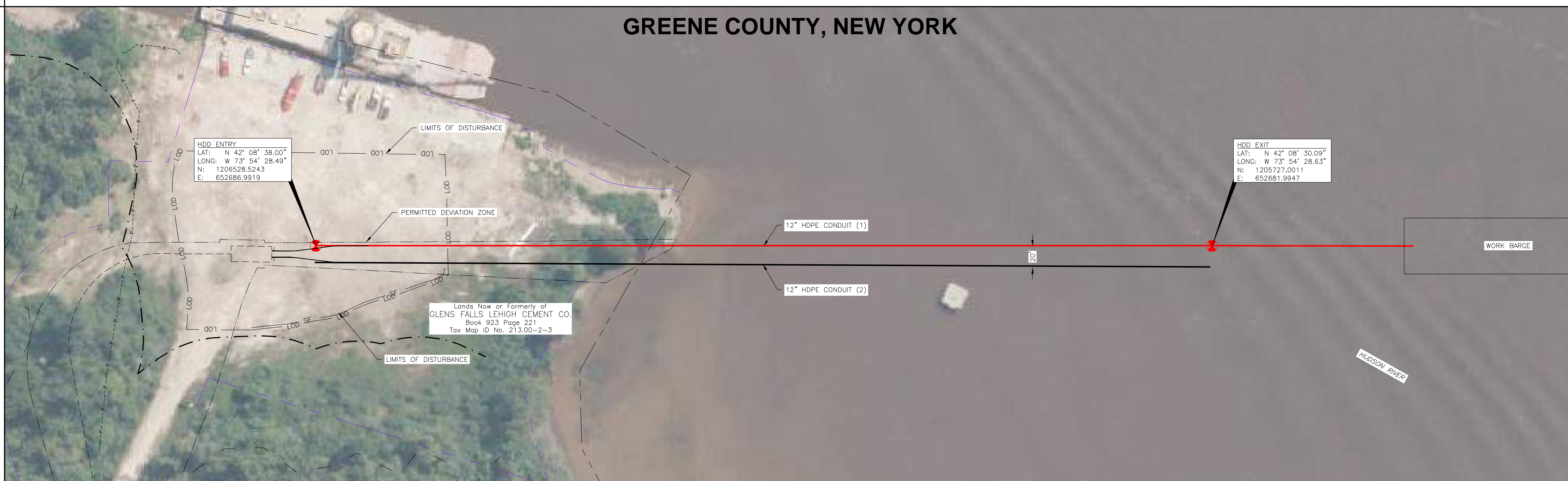
USER_DWGNAME



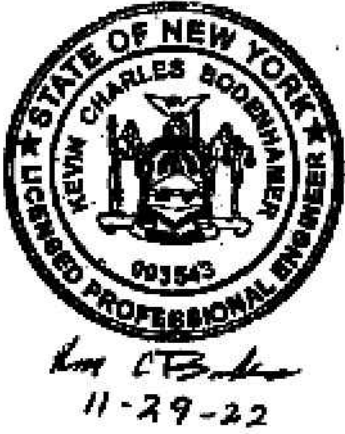
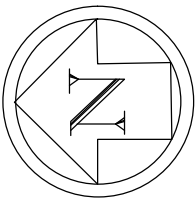
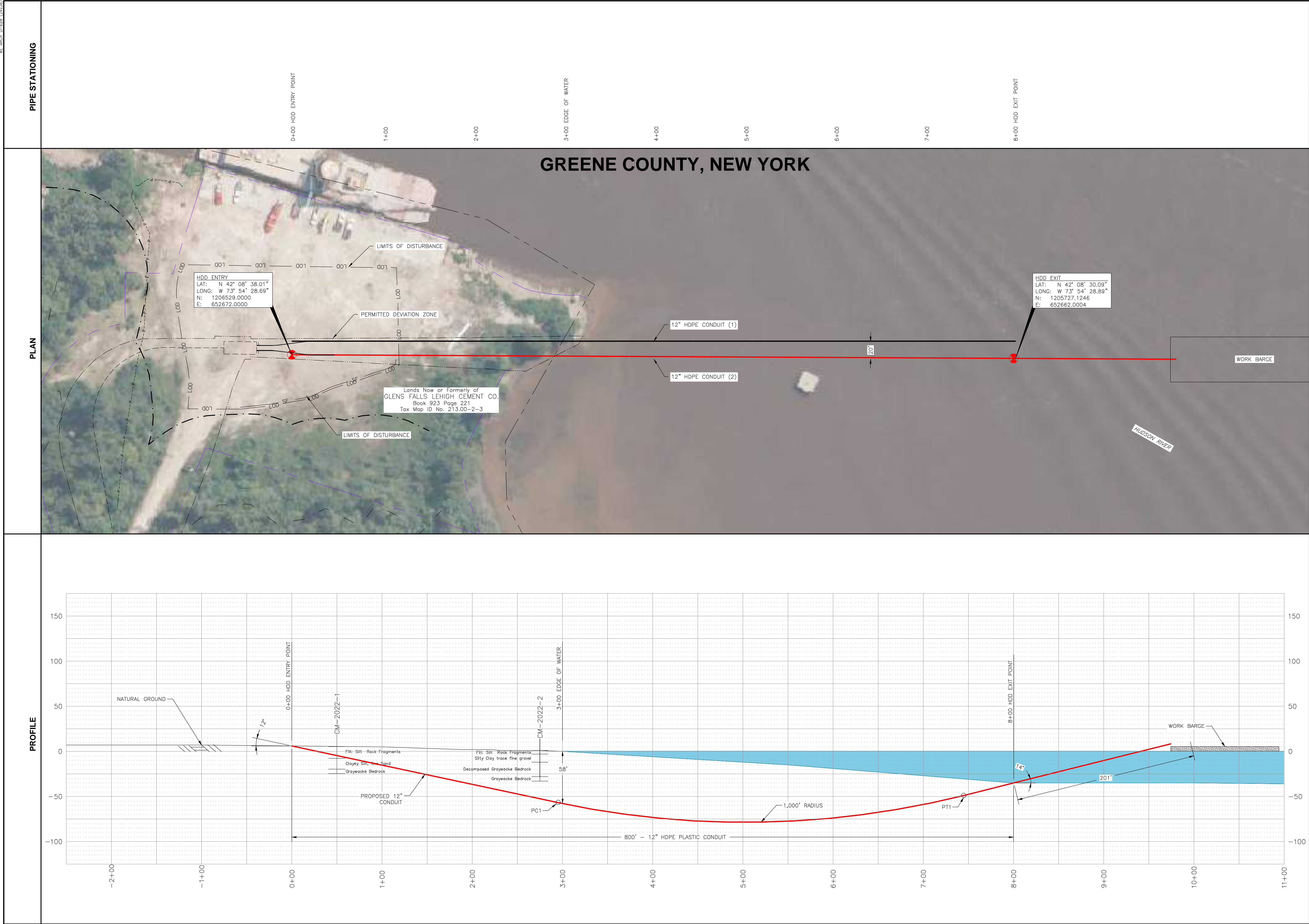
GREENE COUNTY, NEW YORK




PLAN

PROFILE

[illegible]

NY 496182 11-29-22



HORIZONTAL DIRECTIONAL DRILL DATA			HORIZONTAL DIRECTIONAL DRILL PARAMETERS			REFERENCE DRAWINGS			REVISIONS							DRAWING APPROVALS		<div><div>NEW REGISTRATION NO. NY 0010187</div></div>		CEMENTON HDD 2 PLAN AND PROFILE			
DESCRIPTION	STA.	ELEV.	1.) PIPE: 12.75" O.D. x 1.417" W.T. DESIGN FACTOR:	HDPE DR9 IPS 0.63		DWG. NO.	TITLE	NO.	DESCRIPTION	DATE	DRAWN	CHK	APPR	DRAWN	DATE								
ENTRY ANGLE @ 12°	0+00	6.0'	2.) LENGTH OF CROSSING:	800' HORIZONTAL DISTANCE											AWF	09/14/22	SCALE PLAN:  SCALE PROFILE H:  SCALE PROFILE V: 	SCALE	PROJECT NO.	DRAWING NO.	SHT. NO.		
POINT OF CURVATURE (PC1) (1,000 FT. RADIUS)	2+95	-56.8'	3.) TYPE OF PIPE JOINT: LENGTH OF PIPE:	BUTT FUSION 812 L.F.											CHECKED	DATE		1"=50'	496182	HDD-009	11		
POINT OF TANGENCY (PT1)	7+45	-48.8'	4.) ESTIMATED PULL FORCE: ALLOWABLE PULL FORCE:	7,971 LBS. 53,428 LBS.											GJR	11/29/22							
EXIT ANGLE @ 14°	8+00	-35.0'													ENGINEER	DATE							
															KCB	11/29/22							