

- SAFETY NOTES:**
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1 AAA DR, SUITE 201 HAMILTON, NJ 08611

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PROJ. No. 15094-001

NEW YORK PROFESSIONAL ENGINEER
LICENCE NUMBER - 075635-1
EXP. 4/30/2025
EUGENE R. PORZIO
DATE: _____
SIGNATURE: Porzio



REV NO	DATE	REVISIONS			DWN	CHK RWVD APP
DRAWN: TI		CHARLES POLETTI SUBSTATION ASTORIA, NEW YORK ASTORIA ANNEX SUBSTATION				
CHECKED: GP						
REVIEWED:		345kV GAS/AIR INSULATED SUBSTATION OVERALL SITE PLAN				
APPROVED:		CIVIL-STRUCTURAL				
DATE:						
				SCALE: 1" = 60'-0"		
DWG. NO. CHPE-CS-CV-002				REV 0		
SHEET NO.						

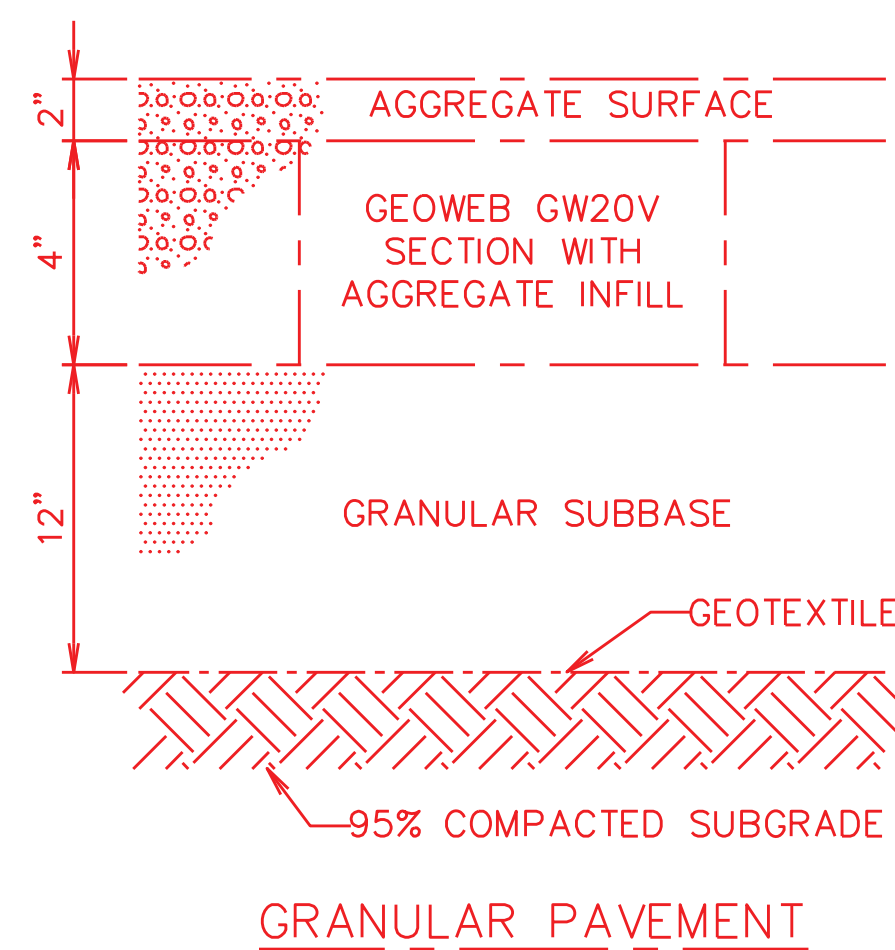
6" THICK LAYER OF STONE
(SEE NOTE 2)

SUBSTATION
YARD STONE DETAIL

95% COMPACTED SUBGRADE

NOTES:

1. DETAIL SHOWN IS FOR RESTORATION OF DISTURBED AREAS OF YARD STONE AND FOR THE EXPANDED FENCED-IN AREA. STONE TO EXTEND 5'-0" OUTSIDE OF THE EXPANDED FENCED-IN AREA.
2. STONE TO BE CLEAN NO. 467 PROCESSED AGGREGATE WITH A MINIMUM RESISTIVITY OF 3000 OHM-METERS.



SAFETY NOTES:

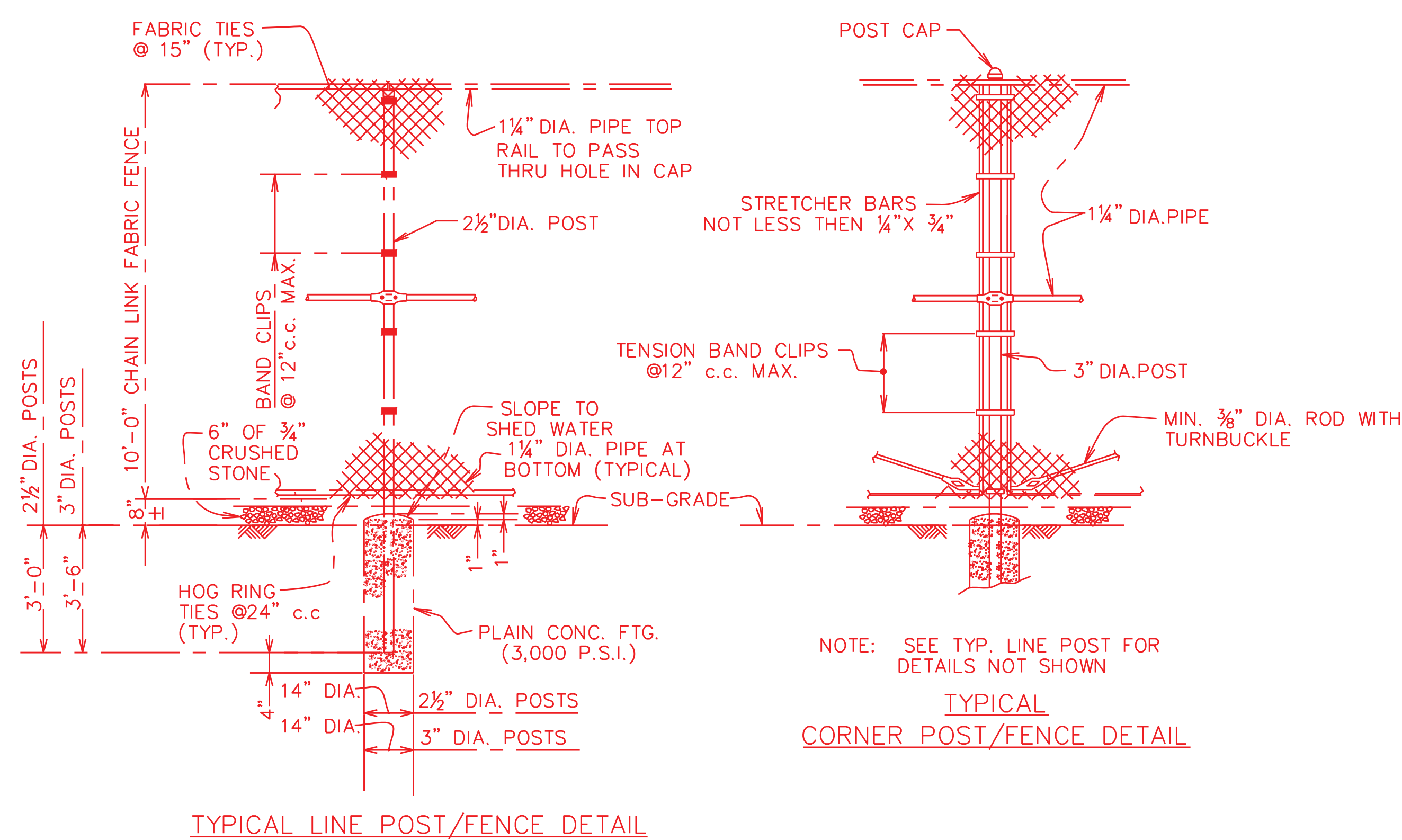
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REFERENCE DRAWINGS:

1. OVERALL SITE PLAN _____ CHPE-CS-CV-002
2. 345kV GAS/AIR INSULATED SUBSTATION
FOUNDATION PLAN AND SCHEDULE _____ 3096394-201-01

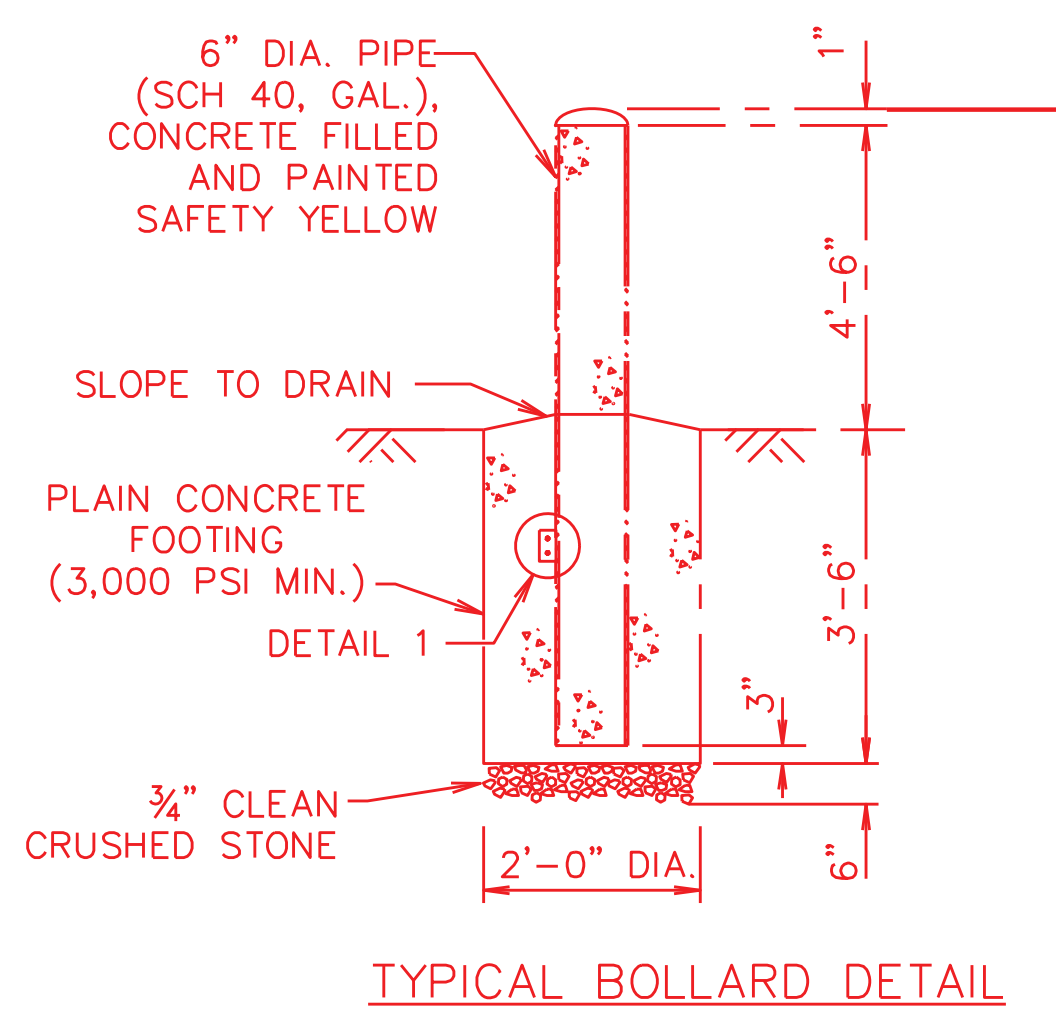
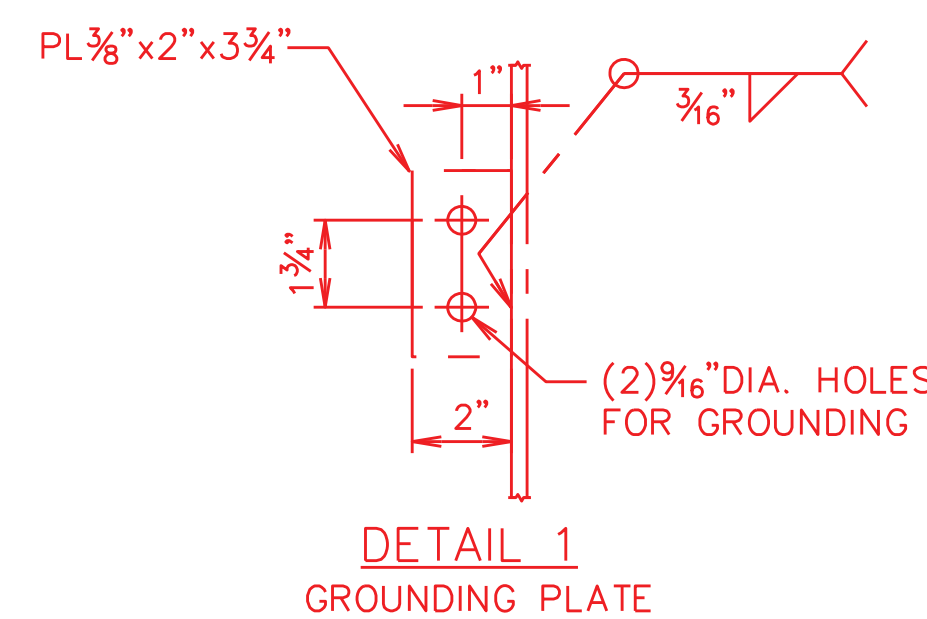
NOTES:

1. DETAIL SHOWN IS TO BE UTILIZED FOR REPAIR OF DISTURBED STATION ROAD AREAS.
2. AGGREGATE SURFACE AND INFILL TO BE CLEAN NO. 467 PROCESSED AGGREGATE.
3. GEOTEXTILE TO BE MIRAFI HP770 OR ENGINEER APPROVED EQUAL.
4. GEOWEB AND GEOTEXTILE TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.



NOTES:

1. OPENINGS 1" X 1" SQUARE #9 GAUGE ALUMINIZED OR GALVANIZED STEEL FABRIC.
2. ALL POSTS AND PIPES TO BE SCHEDULE 40 (ASTM-F283) AND BE SPACED 10'-0" O.C. MAXIMUM.



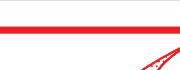
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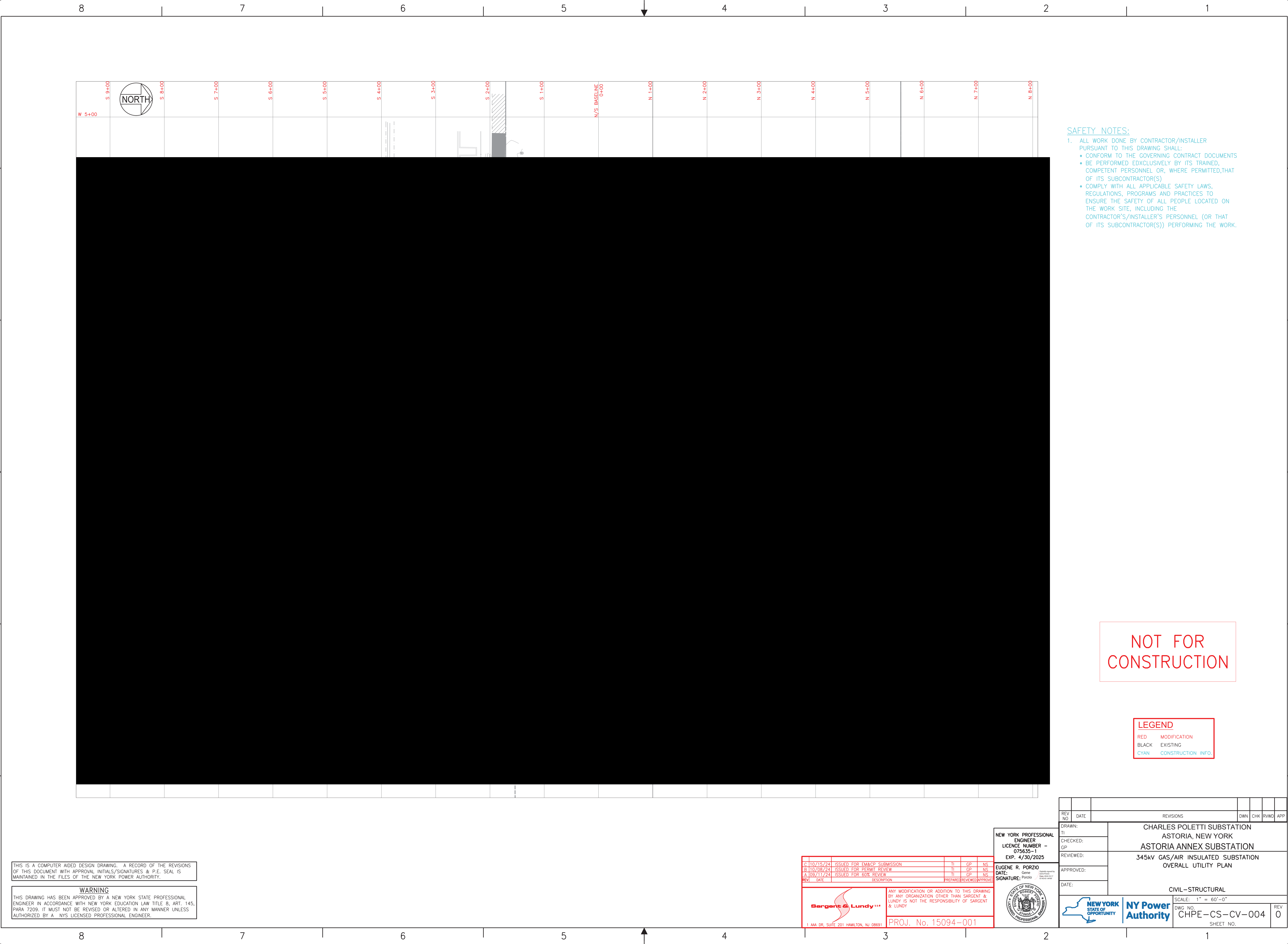
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PROJ. No. 15094-001

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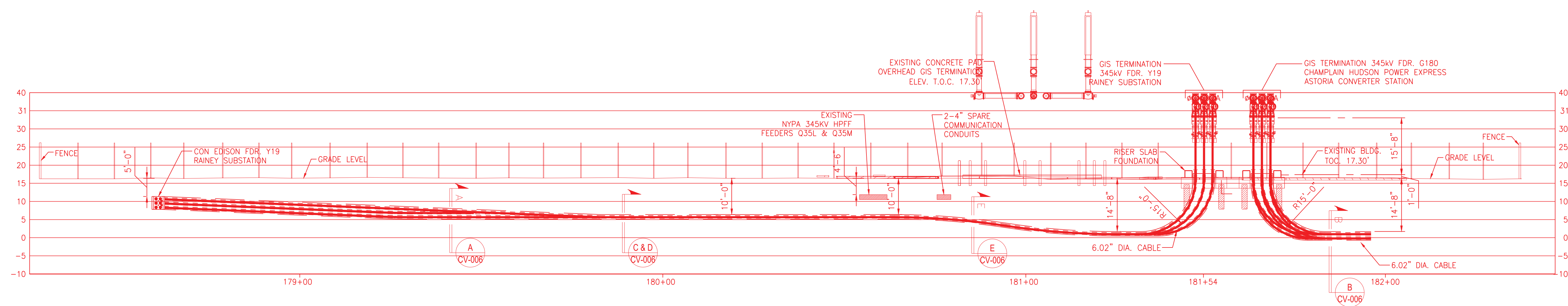
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EUGENE R. PORZIO
DATE: 10/15/24
SIGNATURE: Porzio



REV NO	DATE	REVISIONS	DWN	CHK	RWDR	APP
DRAWN:	TI	CHARLES POLETTI SUBSTATION ASTORIA, NEW YORK ASTORIA ANNEX SUBSTATION 345kV GAS/AIR INSULATED SUBSTATION OVERALL UTILITY PLAN				
CHECKED:	GP					
REVIEWED:						
APPROVED:		CIVIL-STRUCTURAL				
DATE:						
		 NY Power Authority		SCALE: 1" = 60'-0"		
		DWG. NO. CHPE-CS-CV-004		REV 0		
		SHEET NO.				



SAFETY NOTES:

REFERENCE DRAWINGS:

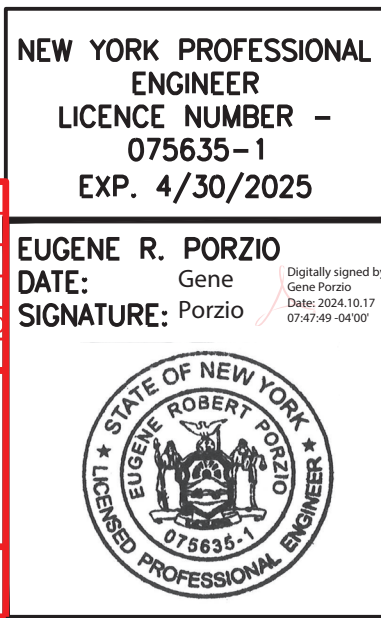
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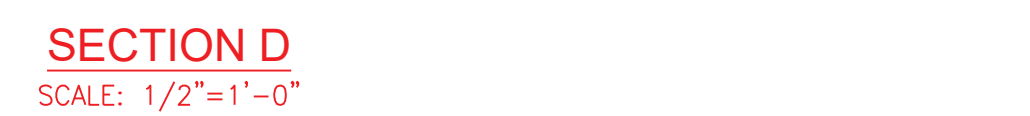
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CHECKED: GP								
REVIEWED: -		345kv GAS/AIR INSULATED SUBSTATION DUCT BANK PROFILES						
APPROVED:								
DATE:								
		CIVIL-STRUCTURAL						
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		DWG NO. CHPE-CS-CV-005						
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1. OVERALL UTILITY PLAN _____ CHPE-CS-CV-004

2. DUCT BANK PROFILES _____ CHPE-CS-CV-005




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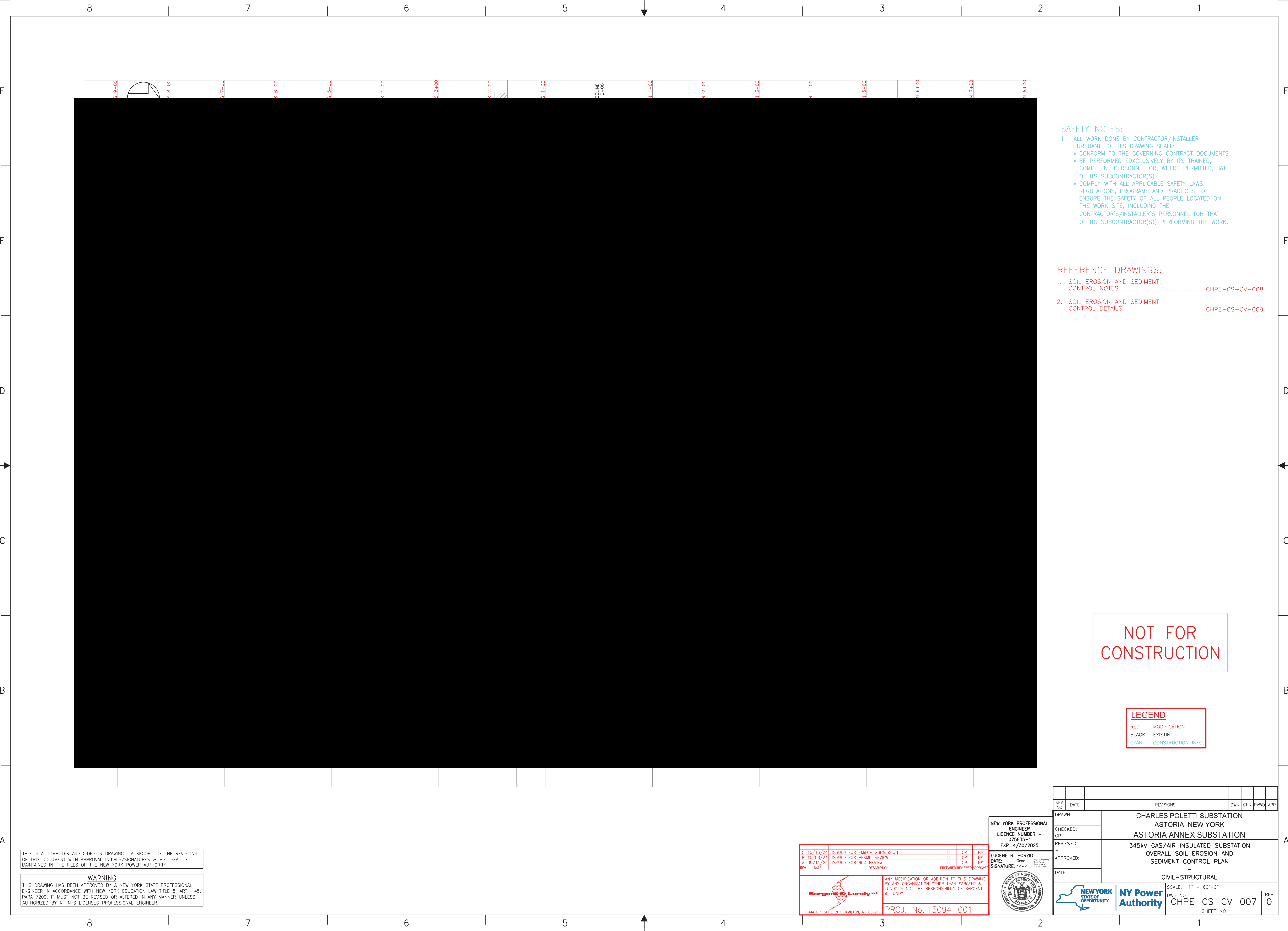
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REFERENCE DRAWINGS:

1. SOIL EROSION AND SEDIMENT CONTROL NOTES CHPE-CS-CV-008

2. SOIL EROSION AND SEDIMENT CONTROL DETAILS CHPE-CS-CV-009

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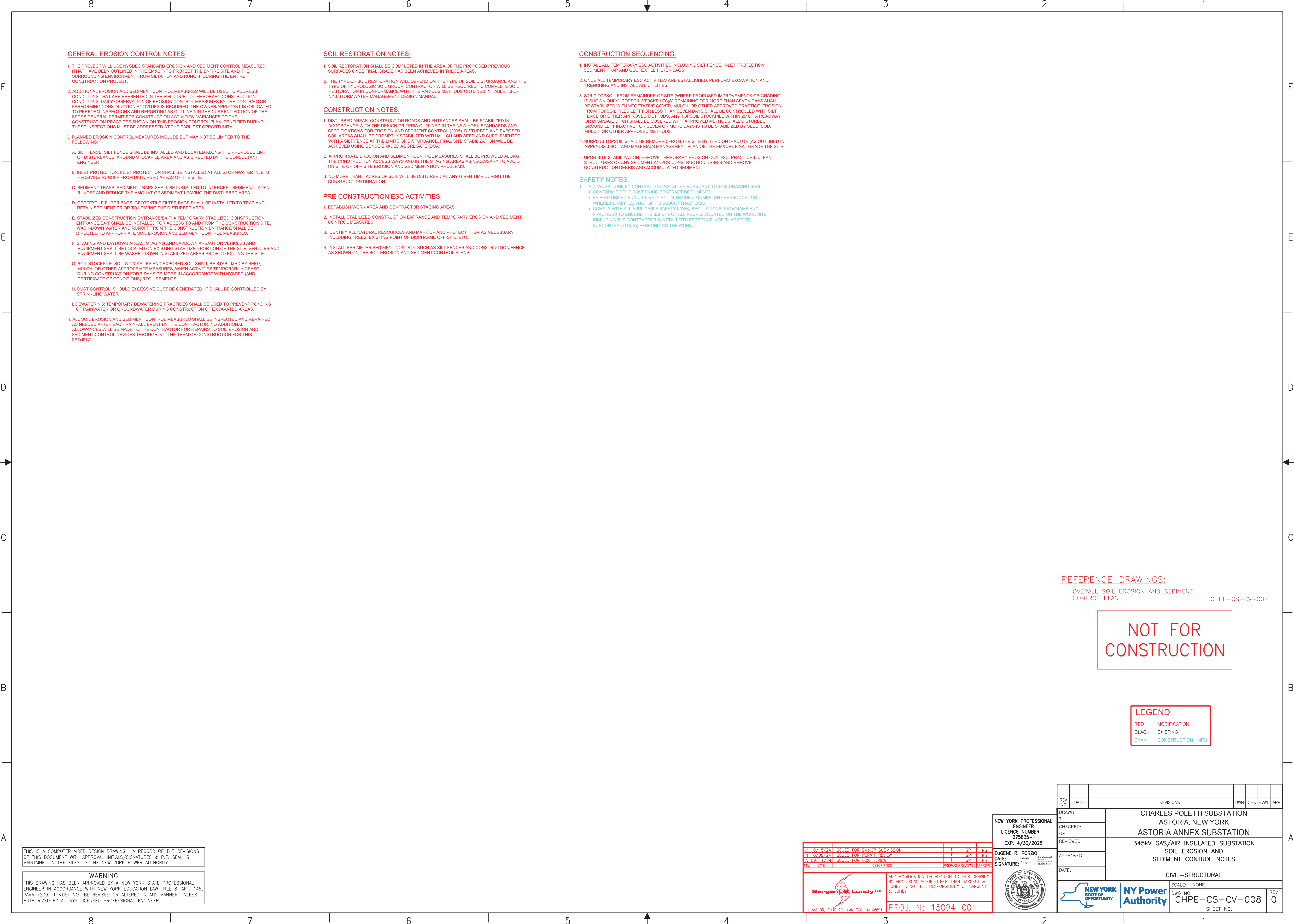
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DRAWN: TI		CHARLES POLETTI SUBSTATION ASTORIA, NEW YORK ASTORIA ANNEX SUBSTATION 345KV GAS/AIR INSULATED SUBSTATION OVERALL SOIL EROSION AND SEDIMENT CONTROL PLAN - CIVIL-STRUCTURAL				
CHECKED: GP						
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DATE: _____						
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DWG. NO. CHPE-CS-CV-007		SHEET NO.		REV 0		



GENERAL EROSION CONTROL NOTES

1. THE PROJECT WILL USE NYSDEC STANDARD EROSION AND SEDIMENT CONTROL MEASURES (THAT HAVE BEEN OUTLINED IN THE EM&CP) TO PROTECT THE ENTIRE SITE AND THE SURROUNDING ENVIRONMENT FROM SILTATION AND RUNOFF DURING THE ENTIRE CONSTRUCTION PROJECT.
2. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE USED TO ADDRESS CONDITIONS THAT ARE PRESENTED IN THE FIELD DUE TO TEMPORARY CONSTRUCTION CONDITIONS. DAILY OBSERVATION OF EROSION CONTROL MEASURES BY THE CONTRACTOR PERFORMING CONSTRUCTION ACTIVITIES IS REQUIRED. THE OWNER/APPLICANT IS OBLIGATED TO PERFORM INSPECTIONS AND REPORTING AS OUTLINED IN THE CURRENT EDITION OF THE SPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES. VARIANCES TO THE CONSTRUCTION PRACTICES SHOWN ON THIS EROSION CONTROL PLAN IDENTIFIED DURING THESE INSPECTIONS MUST BE ADDRESSED AT THE EARLIEST OPPORTUNITY.
3. PLANNED EROSION CONTROL MEASURES INCLUDE BUT MAY NOT BE LIMITED TO THE FOLLOWING:

A. SILT FENCE: SILT FENCE SHALL BE INSTALLED AND LOCATED ALONG THE PROPOSED LIMIT OF DISTURBANCE, AROUND STOCKPILE AREA AND AS DIRECTED BY THE CONSULTANT ENGINEER.

B. INLET PROTECTION: INLET PROTECTION SHALL BE INSTALLED AT ALL STORMWATER INLETS RECEIVING RUNOFF FROM DISTURBED AREAS OF THE SITE.

C. SEDIMENT TRAPS: SEDIMENT TRAPS SHALL BE INSTALLED TO INTERCEPT SEDIMENT-LADEN RUNOFF AND REDUCE THE AMOUNT OF SEDIMENT LEAVING THE DISTURBED AREA.

D. GEOTEXTILE FILTER BAGS: GEOTEXTILE FILTER BAGS SHALL BE INSTALLED TO TRAP AND RETAIN SEDIMENT PRIOR TO LEAVING THE DISTURBED AREA.

E. STABILIZED CONSTRUCTION ENTRANCE/EXIT: A TEMPORARY STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED FOR ACCESS TO AND FROM THE CONSTRUCTION SITE. WASH-DOWN WATER AND RUNOFF FROM THE CONSTRUCTION ENTRANCE SHALL BE DIRECTED TO APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.

F. STAGING AND LAYDOWN AREAS: STAGING AND LAYDOWN AREAS FOR VEHICLES AND EQUIPMENT SHALL BE LOCATED ON EXISTING STABILIZED PORTION OF THE SITE. VEHICLES AND EQUIPMENT SHALL BE WASHED DOWN IN STABILIZED AREAS PRIOR TO EXITING THE SITE.

G. SOIL STOCKPILE: SOIL STOCKPILES AND EXPOSED SOIL SHALL BE STABILIZED BY SEED, MULCH, OR OTHER APPROPRIATE MEASURES. WHEN ACTIVITIES TEMPORARILY CEASE DURING CONSTRUCTION FOR 7 DAYS OR MORE IN ACCORDANCE WITH NYSDEC (AND CERTIFICATE OF CONDITIONS) REQUIREMENTS.

H. DUST CONTROL: SHOULD EXCESSIVE DUST BE GENERATED, IT SHALL BE CONTROLLED BY SPRINKLING WATER.

I. DEWATERING: TEMPORARY DEWATERING PRACTICES SHALL BE USED TO PREVENT PONDING OF RAINWATER OR GROUNDWATER DURING CONSTRUCTION OF EXCAVATED AREAS.
4. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AND REPAIRED AS NEEDED AFTER EACH RAINFALL EVENT BY THE CONTRACTOR. NO ADDITIONAL ALLOWANCES WILL BE MADE TO THE CONTRACTOR FOR REPAIRS TO SOIL EROSION AND SEDIMENT CONTROL DEVICES THROUGHOUT THE TERM OF CONSTRUCTION FOR THIS PROJECT.

SOIL RESTORATION NOTES:

1. SOIL RESTORATION SHALL BE COMPLETED IN THE AREA OF THE PROPOSED PREVIOUS SURFACES ONCE FINAL GRADE HAS BEEN ACHIEVED IN THESE AREAS.
2. THE TYPE OF SOIL RESTORATION WILL DEPEND ON THE TYPE OF SOIL DISTURBANCE AND THE TYPE OF HYDROLOGIC SOIL GROUP. CONTRACTOR WILL BE REQUIRED TO COMPLETE SOIL RESTORATION IN CONFORMANCE WITH THE VARIOUS METHODS OUTLINED IN TABLE 5.3 OF NYS STORMWATER MANAGEMENT DESIGN MANUAL.

CONSTRUCTION NOTES:

1. DISTURBED AREAS, CONSTRUCTION ROADS AND ENTRANCES SHALL BE STABILIZED IN ACCORDANCE WITH THE DESIGN CRITERIA OUTLINED IN THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (2005). DISTURBED AND EXPOSED SOIL AREAS SHALL BE PROMPTLY STABILIZED WITH MULCH AND SEED AND SUPPLEMENTED WITH A SILT FENCE AT THE LIMITS OF DISTURBANCE. FINAL SITE STABILIZATION WILL BE ACHIEVED USING DENSE GRADED AGGREGATE (DGA).
2. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED ALONG THE CONSTRUCTION ACCESS WAYS AND IN THE STAGING AREAS AS NECESSARY TO AVOID ON-SITE OR OFF-SITE EROSION AND SEDIMENTATION PROBLEMS.
3. NO MORE THAN 5 ACRES OF SOIL WILL BE DISTURBED AT ANY GIVEN TIME DURING THE CONSTRUCTION DURATION.

PRE-CONSTRUCTION ESC ACTIVITIES:

1. ESTABLISH WORK AREA AND CONTRACTOR STAGING AREAS.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.
3. IDENTIFY ALL NATURAL RESOURCES AND MARK UP AND PROTECT THEM AS NECESSARY INCLUDING TREES, EXISTING POINT OF DISCHARGE OFF-SITE, ETC..
4. INSTALL PERIMETER SEDIMENT CONTROL, SUCH AS SILT FENCES AND CONSTRUCTION FENCE AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLANS.

CONSTRUCTION SEQUENCING:

1. INSTALL ALL TEMPORARY ESC ACTIVITIES INCLUDING SILT FENCE, INLET PROTECTION, SEDIMENT TRAP AND GEOTEXTILE FILTER BAGS.
2. ONCE ALL TEMPORARY ESC ACTIVITIES ARE ESTABLISHED, PERFORM EXCAVATION AND TRENCHING AND INSTALL ALL UTILITIES.
3. STRIP TOPSOIL FROM REMAINDER OF SITE (WHERE PROPOSED IMPROVEMENTS OR GRADING IS SHOWN ONLY). TOPSOIL STOCKPILES(S) REMAINING FOR MORE THAN SEVEN DAYS SHALL BE STABILIZED WITH VEGETATIVE COVER, MULCH, OR OTHER APPROVED PRACTICE. EROSION FROM TOPSOIL PILES LEFT FOR LESS THAN SEVEN DAYS SHALL BE CONTROLLED WITH SILT FENCE OR OTHER APPROVED METHODS. ANY TOPSOIL STOCKPILE WITHIN 25' OF A ROADWAY OR DRAINAGE DITCH SHALL BE COVERED WITH APPROVED METHODS. ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN OR MORE DAYS IS TO BE STABILIZED BY SEED, SOD, MULCH, OR OTHER APPROVED METHODS.
4. SURPLUS TOPSOIL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR (AS OUTLINED IN APPENDIX J SOIL AND MATERIALS MANAGEMENT PLAN OF THE EM&CP). FINAL GRADE THE SITE.
5. UPON SITE STABILIZATION, REMOVE TEMPORARY EROSION CONTROL PRACTICES. CLEAN STRUCTURES OF ANY SEDIMENT AND/OR CONSTRUCTION DEBRIS AND REMOVE CONSTRUCTION DEBRIS AND ACCUMULATED SEDIMENT.

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REFERENCE DRAWINGS:

1. OVERALL SOIL EROSION AND SEDIMENT CONTROL PLAN - - - - - CHPE-CS-CV-007

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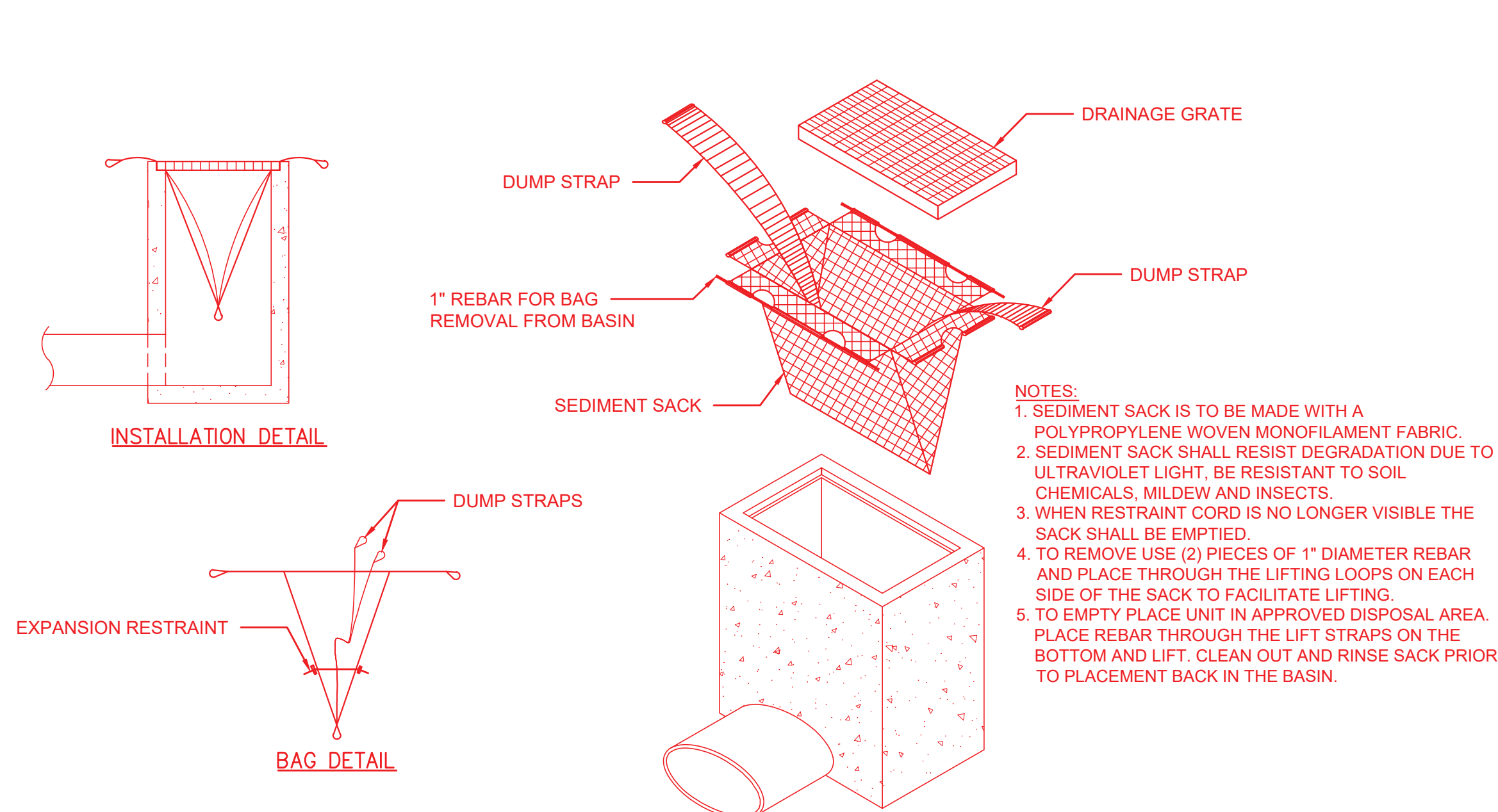
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CHARLES POLETTI SUBSTATION
ASTORIA, NEW YORK
ASTORIA ANNEX SUBSTATION
345kV GAS/AIR INSULATED SUBSTATION
SOIL EROSION AND
SEDIMENT CONTROL NOTES

CIVIL-STRUCTURAL

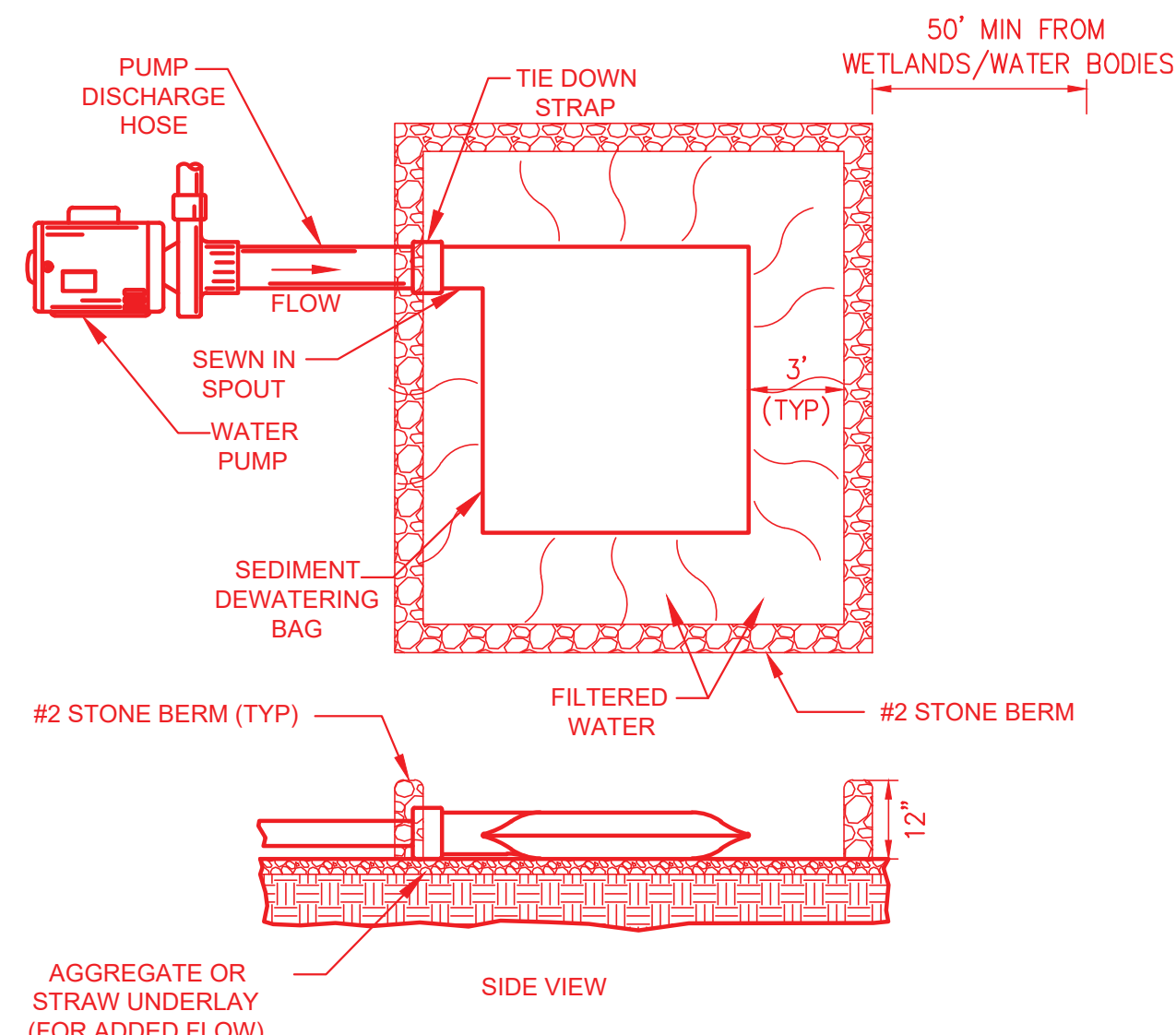
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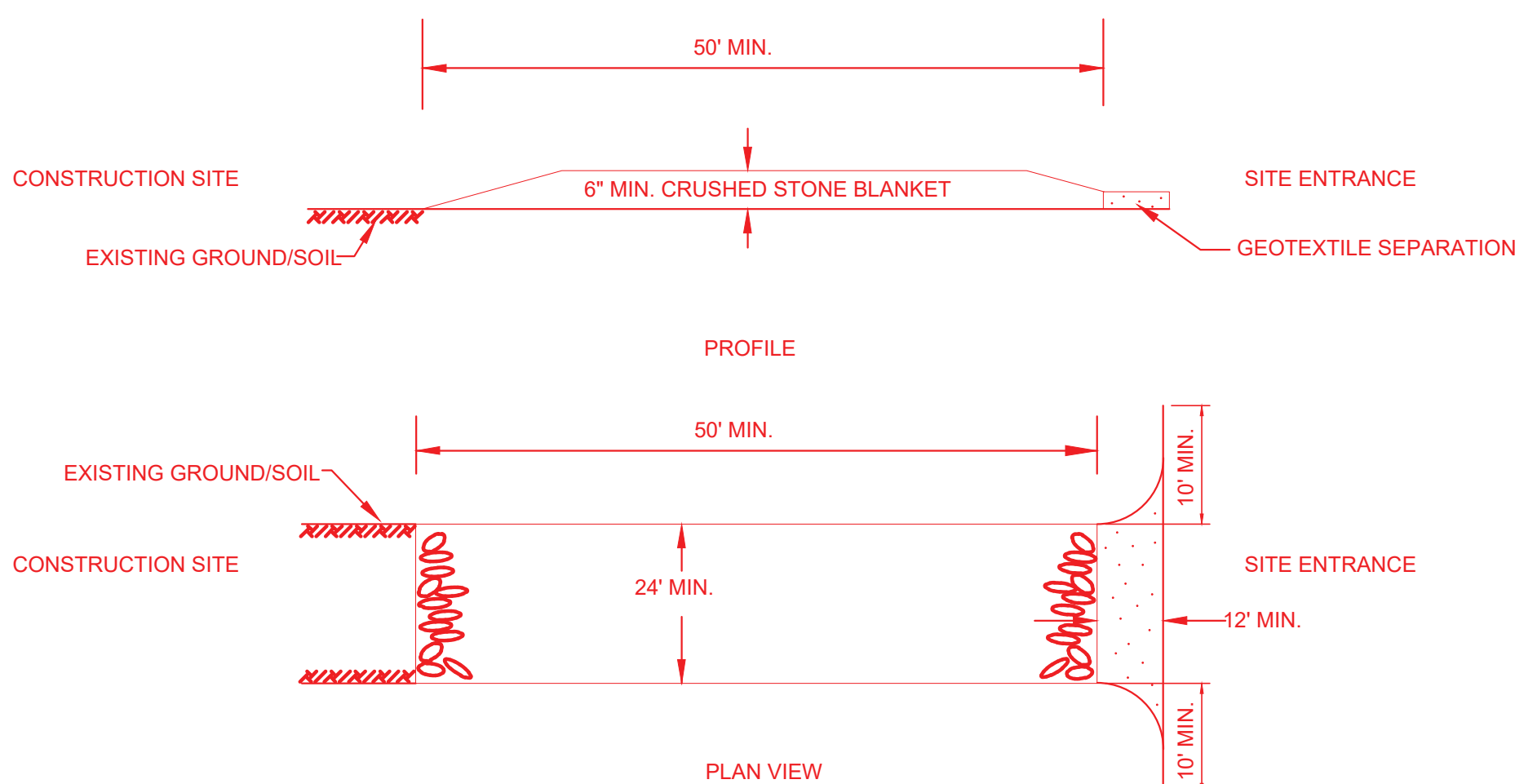
INLET PROTECTION DETAIL

SCALE: N.T.S.



SILT FENCE DETAIL

SCALE: N.T.S.

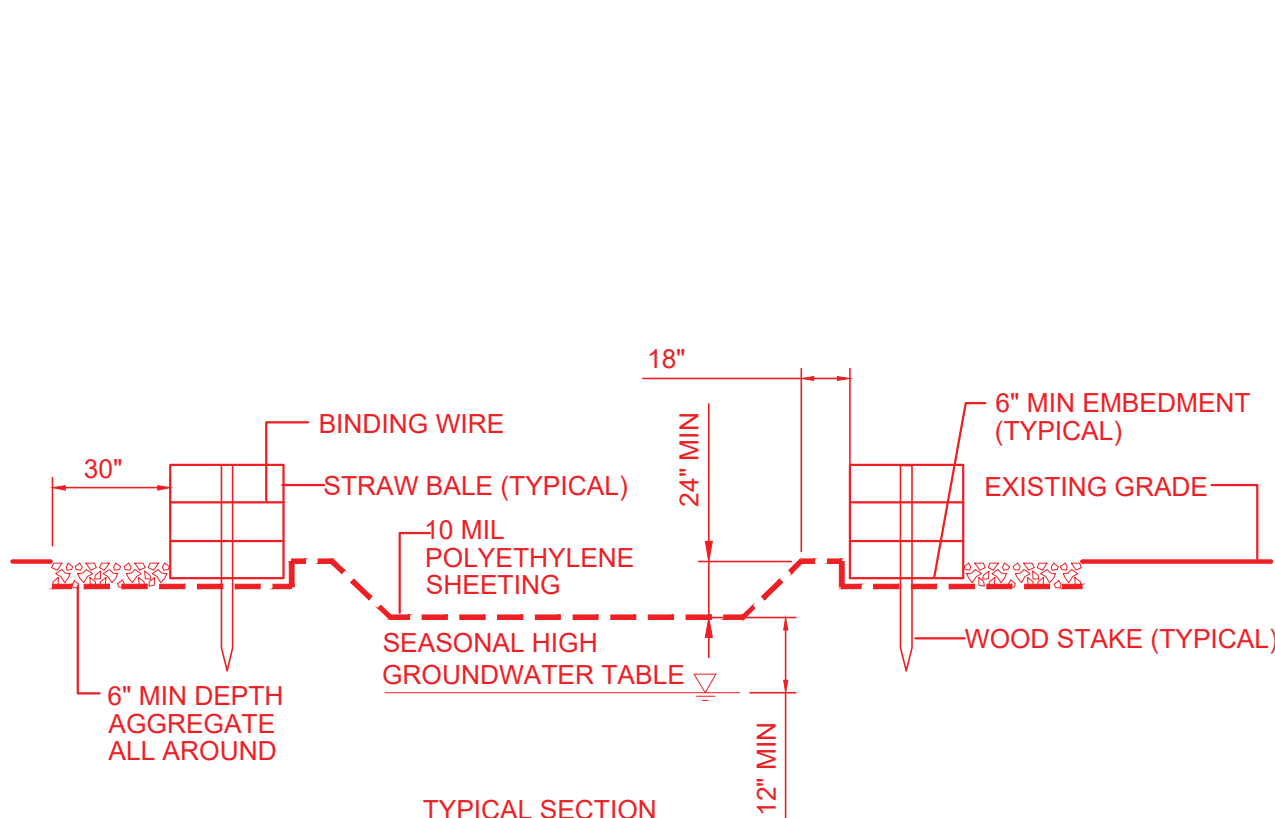


NOTES:

1. THE WHEEL-CLEANING BLANKET SHALL BE A MINIMUM 6" DEPTH OF 1" - 1 1/2" CRUSHED STONE, AT LEAST 24' X 50' (FOR STREETS) AND SHOULD BE PLACED ON COMPACTED SUB-GRADE.
2. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
4. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
5. WHEN WASHING IS REQUIRED WATER SHALL BE MADE AVAILABLE AND IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

SCALE: N.T.S.



NOTES:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BLUGS" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL

SCALE: N.T.S.

NOTES:

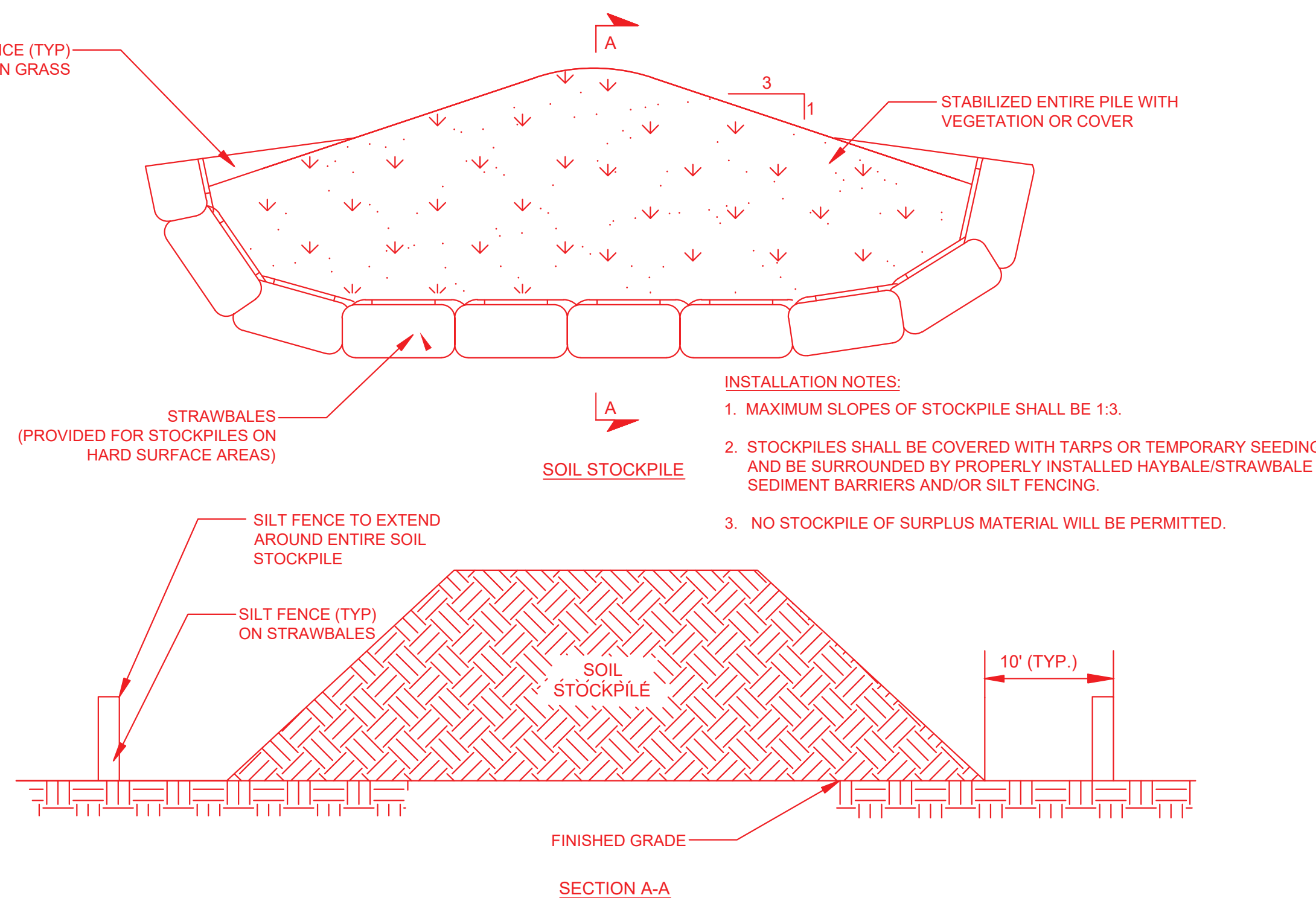
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SAFETY NOTES:

1. ALL WORK DONE BY CONTRACTOR/INSTALLER PURSUANT TO THIS DRAWING SHALL:
 - CONFORM TO THE GOVERNING CONTRACT DOCUMENTS
 - BE PERFORMED EXCLUSIVELY BY ITS TRAINED, COMPETENT PERSONNEL OR, WHERE PERMITTED, THAT OF ITS SUBCONTRACTOR(S)
 - COMPLY WITH ALL APPLICABLE SAFETY LAWS, REGULATIONS, PROGRAMS AND PRACTICES TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING THE CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S)) PERFORMING THE WORK.

REFERENCE DRAWINGS:

1. OVERALL SOIL EROSION AND SEDIMENT CONTROL PLAN - CHPE-CS-CV-007



TEMPORARY SOIL STOCKPILE DETAIL

SCALE: N.T.S.

NOTES:

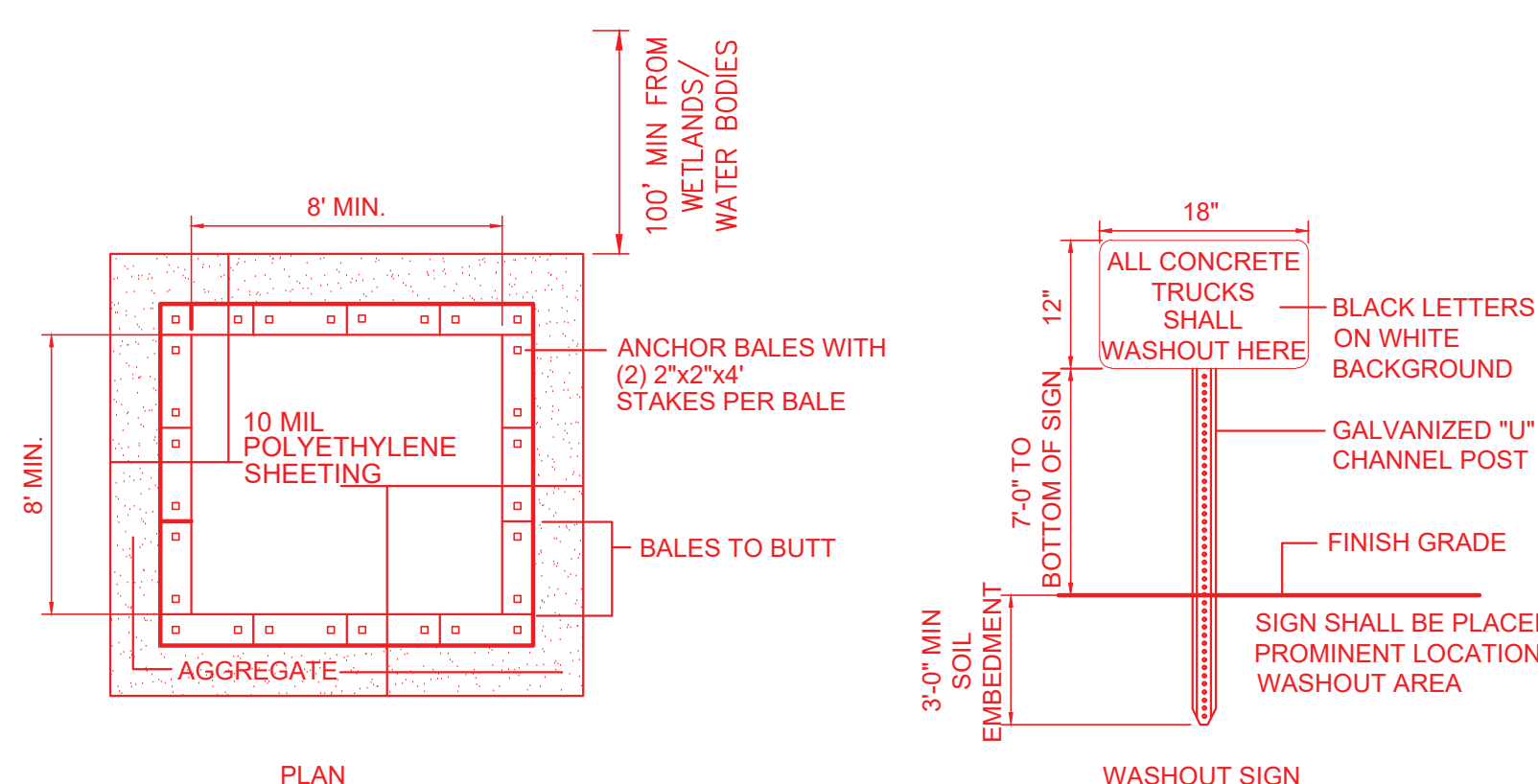
1. STOCKPILES ARE NOT TO BE LOCATED WITHIN 50' OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY.
2. THE BASE OF ALL STOCKPILES SHOULD BE PROTECTED BY A SEDIMENT FENCE.
3. STOCKPILES SHOULD BE VEGETATED - SEE VEGETATIVE STANDARDS FOR SOIL STABILIZATION

MAINTENANCE NOTES:

1. ALL CONCRETE WASHOUT FACILITIES SHALL BE INSPECTED DAILY. DAMAGED OR LEAKING FACILITIES SHALL BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY. EXCESS RAINWATER THAT HAS ACCUMULATED OVER HARDENED CONCRETE SHALL BE PUMPED TO A STABILIZED AREA SUCH AS A GRASS FILTER STRIP.
2. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 75% OF THE STORAGE CAPACITY OF THE STRUCTURE IS FILLED. ANY EXCESS WASH WATER SHALL BE PUMPED INTO A CONTAINMENT VESSEL AND PROPERLY DISPOSED OF OFF-SITE.
3. DISPOSE OF THE HARDENED MATERIAL OFF-SITE IN A CONSTRUCTION/DEMOLITION LANDFILL.
4. THE PLASTIC LINER SHALL BE REPLACED WITH EACH CLEANING OF THE WASHOUT FACILITY.
5. INSPECT THE PROJECT SITE FREQUENTLY TO ENSURE THAT NO CONCRETE DISCHARGES ARE TAKING PLACE IN NON-DESIGNATED AREAS.
6. LOCATION(S) TO BE DETERMINED IN THE FIELD BY THE OWNER'S REPRESENTATIVE.

SEDIMENT DEWATERING BAG DETAIL

SCALE: N.T.S.



CONCRETE WASHOUT AREA DETAIL

SCALE: N.T.S.

NOT FOR CONSTRUCTION

LEGEND


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C 10/15/24	ISSUED FOR EM&CP SUBMISSION	TI	GP	NS	
B 10/08/24	ISSUED FOR PERMIT REVIEW	TI	GP	NS	
A 09/11/24	ISSUED FOR 60% REVIEW	TI	GP	NS	
REV	DATE	DESCRIPTION	PREPARED	REVIEWED	APPROVED



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1 AAA DR, SUITE 201 HAMILTON, NJ 08691

PROJ. No. 15094-001

NEW YORK PROFESSIONAL ENGINEER
LICENCE NUMBER - 075635-1
EXP. 4/30/2025
EUGENE R. PORZIO
DATE: Gene Porzio
SIGNATURE: Porzio

REV NO	DATE	REVISIONS	DWN	CHK	RWD	APP
1						

DRAWN: TI

CHECKED: GP

REVIEWED: --

APPROVED: --

DATE: --

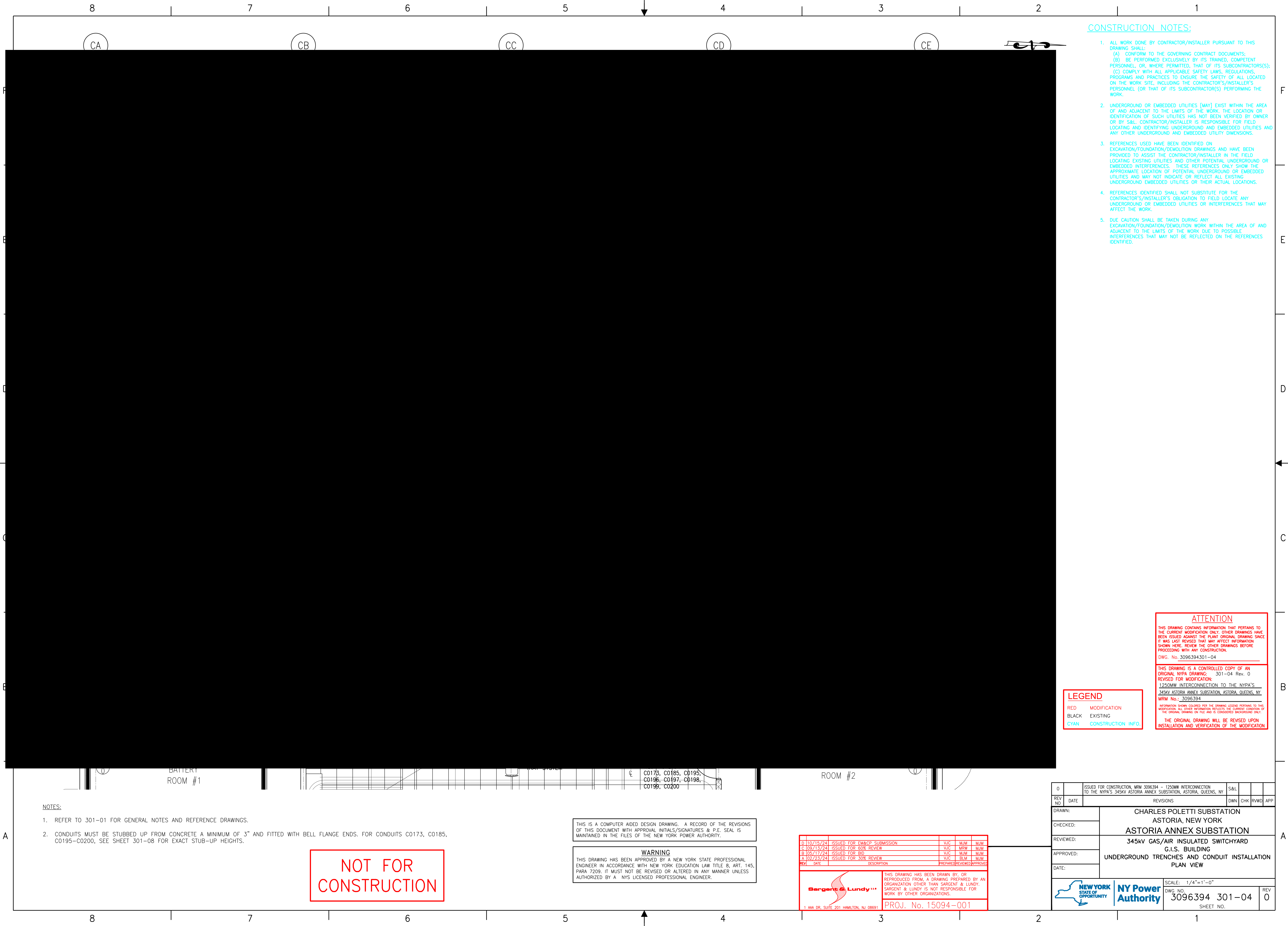
CHARLES POLETTI SUBSTATION
ASTORIA, NEW YORK
ASTORIA ANNEX SUBSTATION
345kV GAS/AIR INSULATED SUBSTATION
SOIL EROSION AND
SEDIMENT CONTROL DETAILS

CIVIL-STRUCTURAL

SCALE: NONE

DWG NO. CHPE-CS-CV-009
SHEET NO.

REV 0



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LEGEND

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DWG. No. 3096394301-04

THIS DRAWING IS A CONTROLLED COPY OF AN ORIGINAL NYPA DRAWING. 301-04 Rev. 0

REVISED FOR MODIFICATION:

1250MW INTERCONNECTION TO THE NYPA'S

345KV ASTORIA ANNEX SUBSTATION, ASTORIA, QUEENS, NY

MRM No. 3096394

INFORMATION SHOWN COLORED PER THE DRAWING LEGEND PERTAINS TO THIS MODIFICATION. ALL OTHER INFORMATION REFLECTS THE CURRENT CONDITION OF THE ORIGINAL DRAWING ON FILE AND IS CONSIDERED BACKGROUND ONLY.

THE ORIGINAL DRAWING WILL BE REVISED UPON INSTALLATION AND VERIFICATION OF THE MODIFICATION

NOTES:

- REFER TO 301-01 FOR GENERAL NOTES AND REFERENCE DRAWINGS.
- CONDUITS MUST BE STUBBED UP FROM CONCRETE A MINIMUM OF 3" AND FITTED WITH BELL FLANGE ENDS. FOR CONDUITS C0173, C0185, C0195-C0200, SEE SHEET 301-08 FOR EXACT STUB-UP HEIGHTS.


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D	10/15/24	ISSUED FOR EM&CP SUBMISSION	VJC	MJM	MJM
C	09/13/24	ISSUED FOR 60% REVIEW	VJC	MRW	MJM
B	05/17/24	ISSUED FOR BID	VJC	MJM	MJM
A	02/23/24	ISSUED FOR 30% REVIEW	VJC	BLM	MJM
REV	DATE	DESCRIPTION	PREPARED	REVIEWED	APPROVED

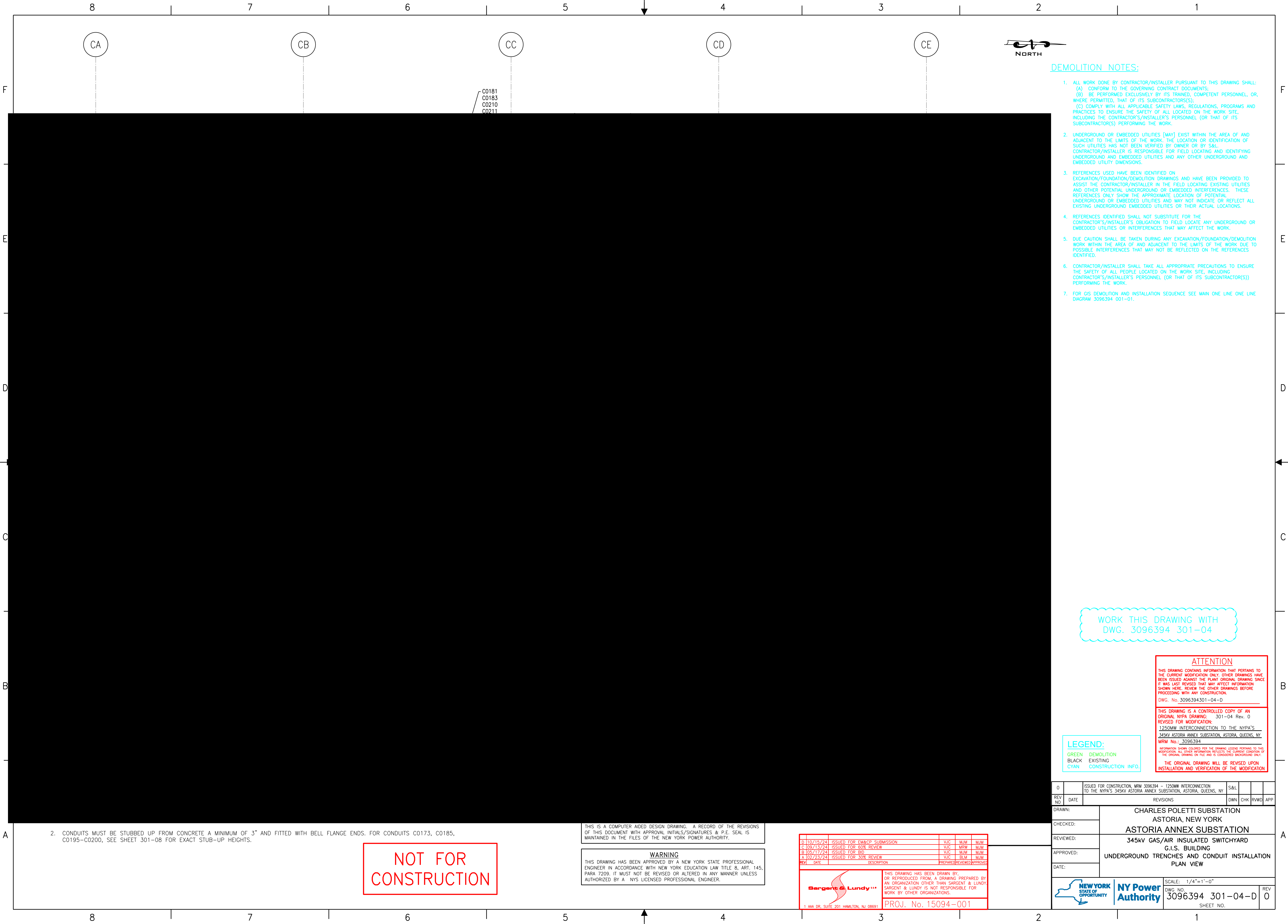


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PROJ. No. 15094-001

0	ISSUED FOR CONSTRUCTION, MRM 3096394 - 1250MW INTERCONNECTION TO THE NYPA'S 345KV ASTORIA ANNEX SUBSTATION, ASTORIA, QUEENS, NY	S&L			
REV AND DATE	REVISIONS	DWN	CHK	RWVD	APP
DRAWN:	CHARLES POLETTI SUBSTATION ASTORIA, NEW YORK ASTORIA ANNEX SUBSTATION 345kv GAS/AIR INSULATED SWITCHYARD G.I.S. BUILDING UNDERGROUND TRENCHES AND CONDUIT INSTALLATION PLAN VIEW				
CHECKED:					
REVIEWED:					
APPROVED:					
DATE:					
				SCALE: 1/4"=1'-0"	
		DWG. NO. 3096394 301-04		REV 0	
		SHEET NO.			



DEMOLITION NOTES:

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- FOR GIS DEMOLITION AND INSTALLATION SEQUENCE SEE MAIN ONE LINE ONE LINE DIAGRAM 3096394 001-01.

WORK THIS DRAWING WITH
DWG. 3096394 301-04

LEGEND:

GREEN DEMOLITION
BLACK EXISTING
CYAN CONSTRUCTION INFO.

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DWG. No. 3096394301-04-D

THIS DRAWING IS A CONTROLLED COPY OF AN ORIGINAL NYPA DRAWING: 301-04 Rev. 0
REVISED FOR MODIFICATION:
1250MW INTERCONNECTION TO THE NYPA'S
345KV ASTORIA ANNEX SUBSTATION, ASTORIA, QUEENS, NY
MRM No.: 3096394

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REV	DATE	REVISIONS	DWN	CHK	RWVD	APP
DRAWN:	CHARLES POLETTI SUBSTATION ASTORIA, NEW YORK					
CHECKED:	ASTORIA ANNEX SUBSTATION					
REVIEWED:	345kv GAS/AIR INSULATED SWITCHYARD					
APPROVED:	G.I.S. BUILDING					
DATE:	UNDERGROUND TRENCHES AND CONDUIT INSTALLATION PLAN VIEW					
NEW YORK STATE OF OPPORTUNITY		NY Power Authority		SCALE: 1/4"=1'-0"		
				DWG. NO.	3096394 301-04-D	REV
				SHEET NO.		0

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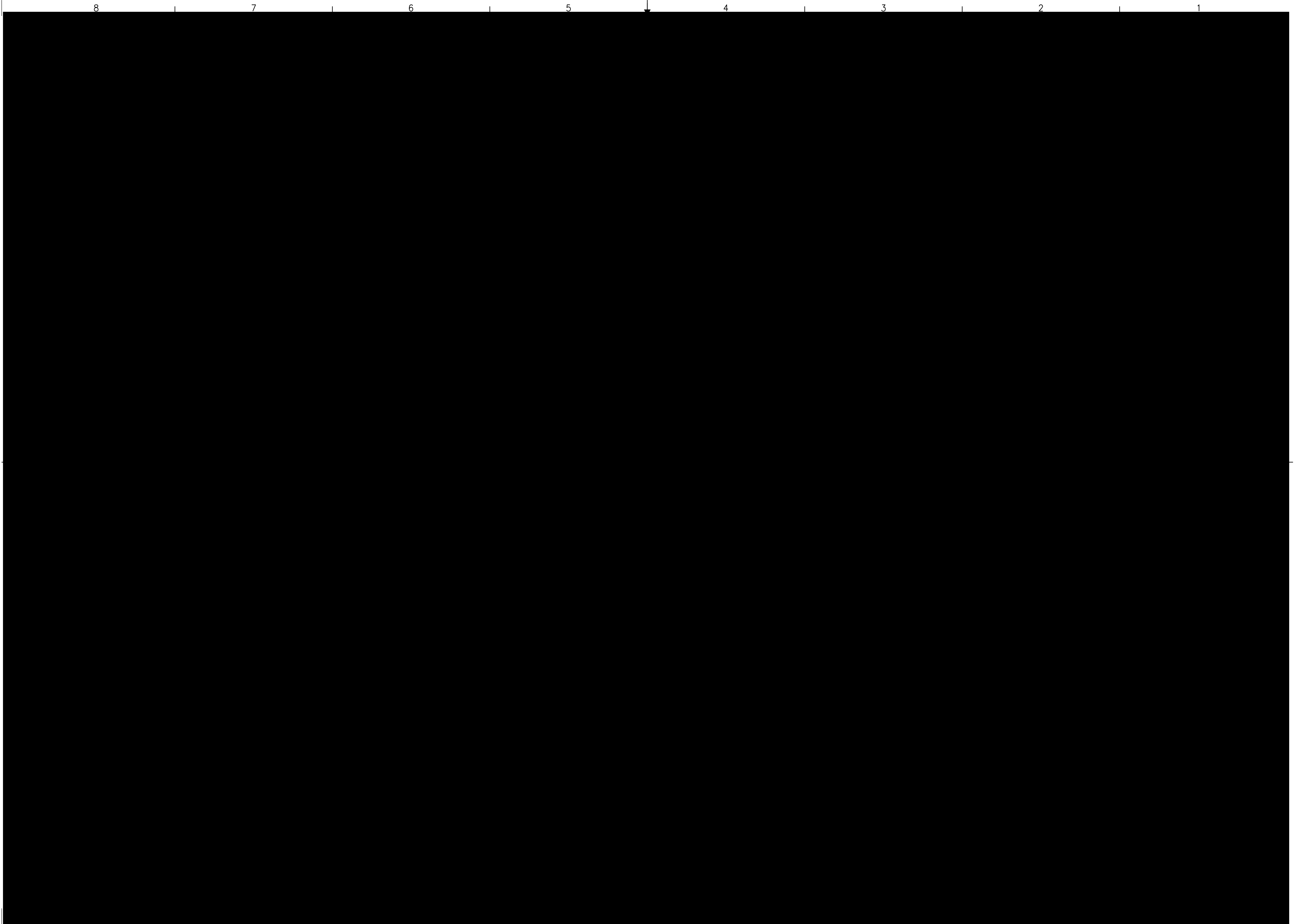
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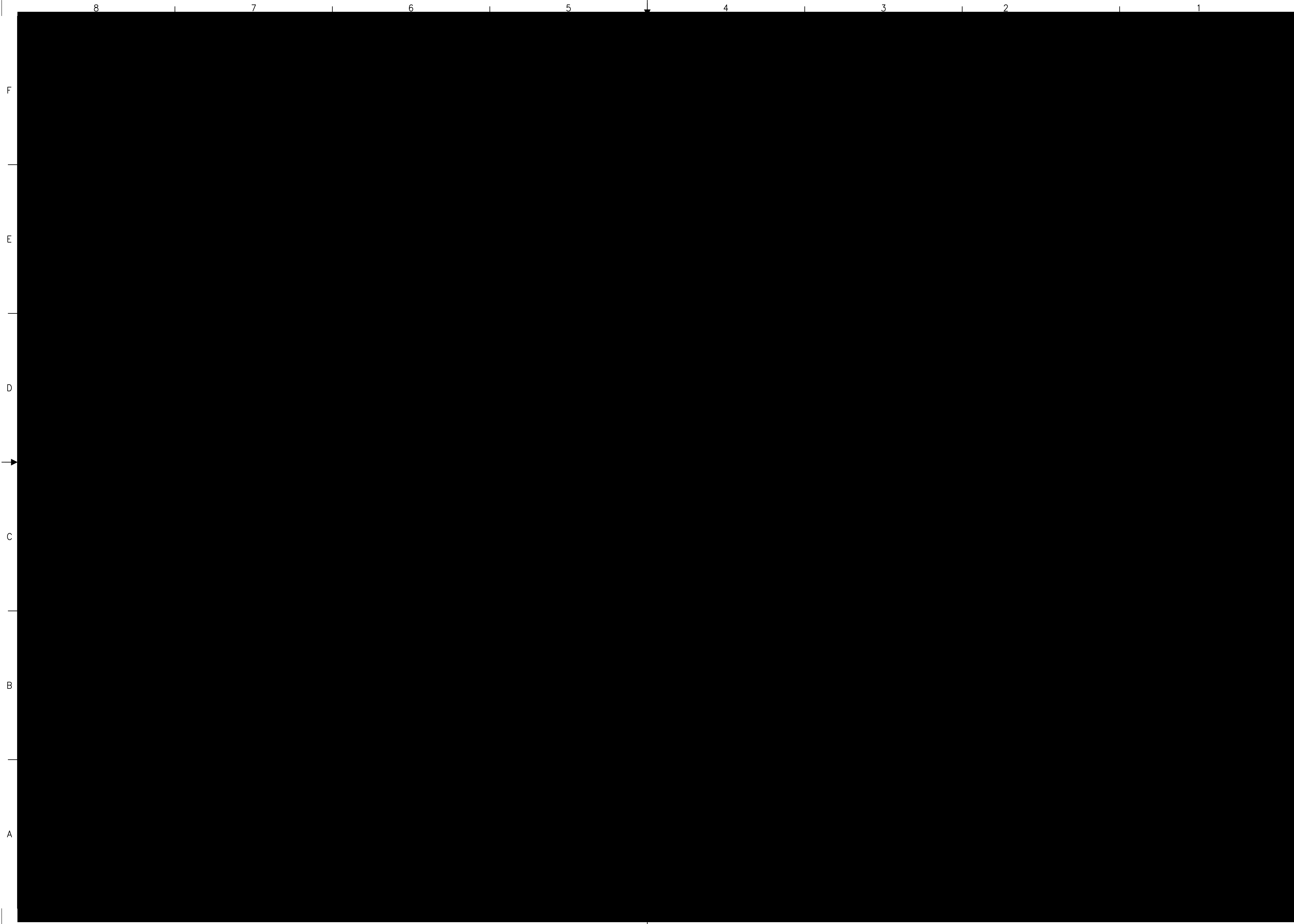
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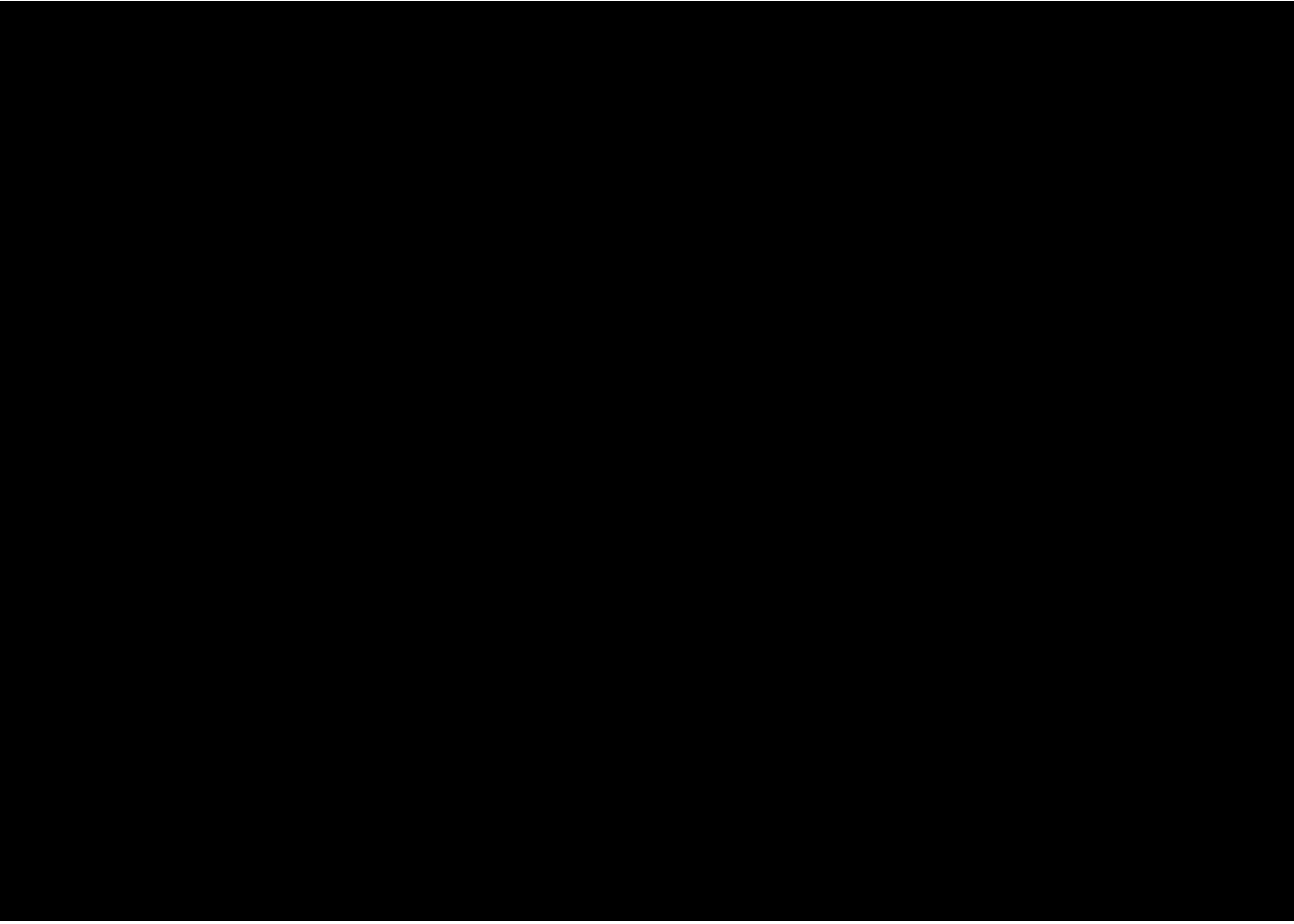
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C 109/113/24	ISSUED FOR 60% REVIEW	VJC	MRW	MJM	
B 05/17/24	ISSUED FOR BID	VJC	BLM	MJM	
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REV	DATE	DESCRIPTION	PREPARED	REVIEWED	APPROVED
Sargent & Lundy		THIS DRAWING HAS BEEN DRAWN BY, OR REPRODUCED FROM, A DRAWING PREPARED BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY. SARGENT & LUNDY IS NOT RESPONSIBLE FOR WORK BY OTHER ORGANIZATIONS.			
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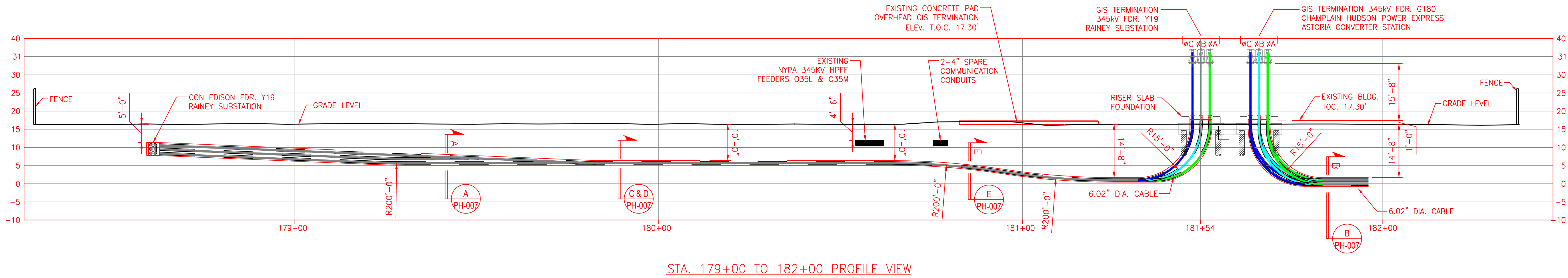






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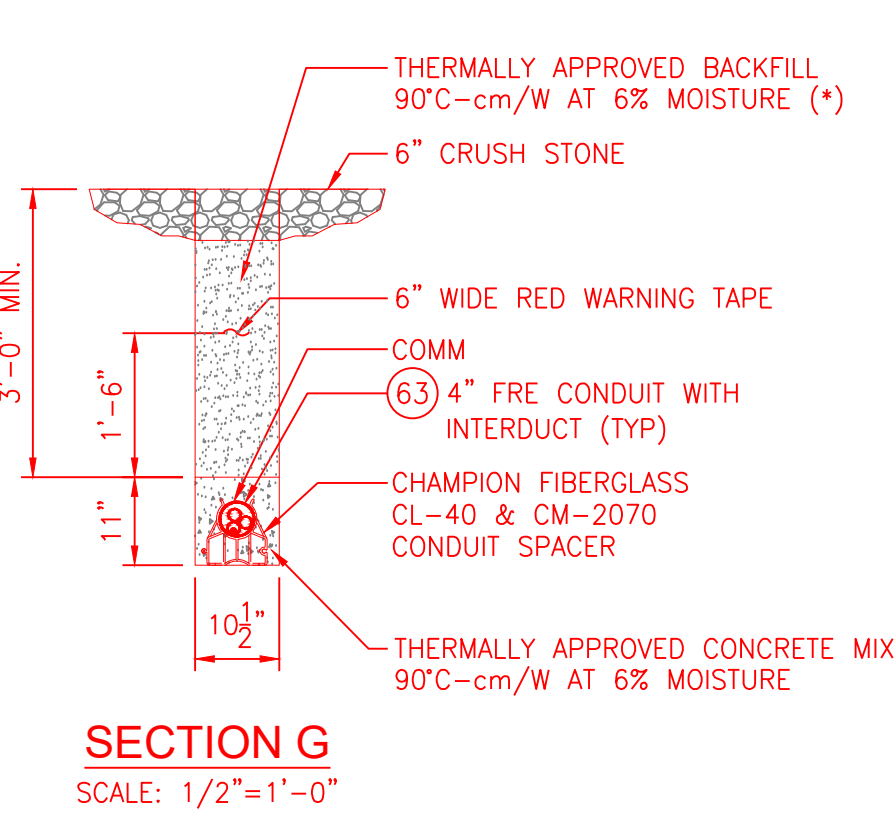
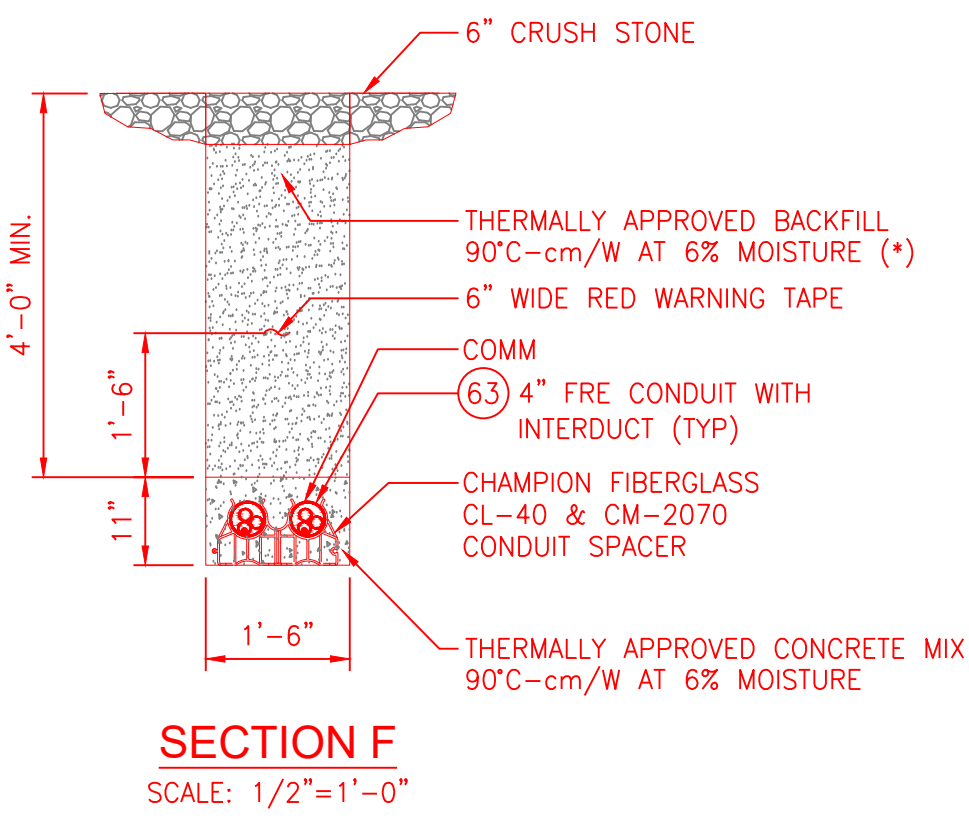
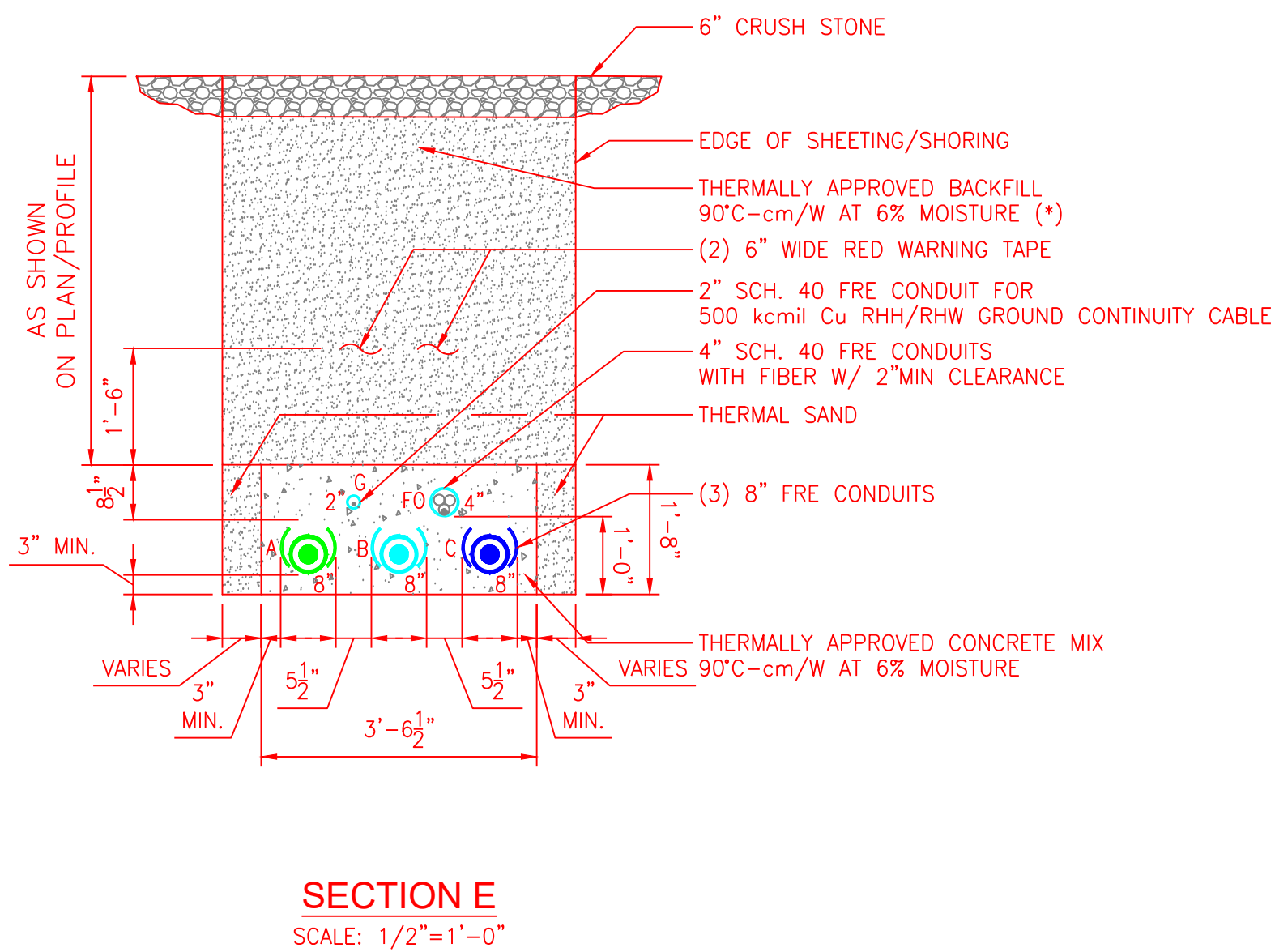
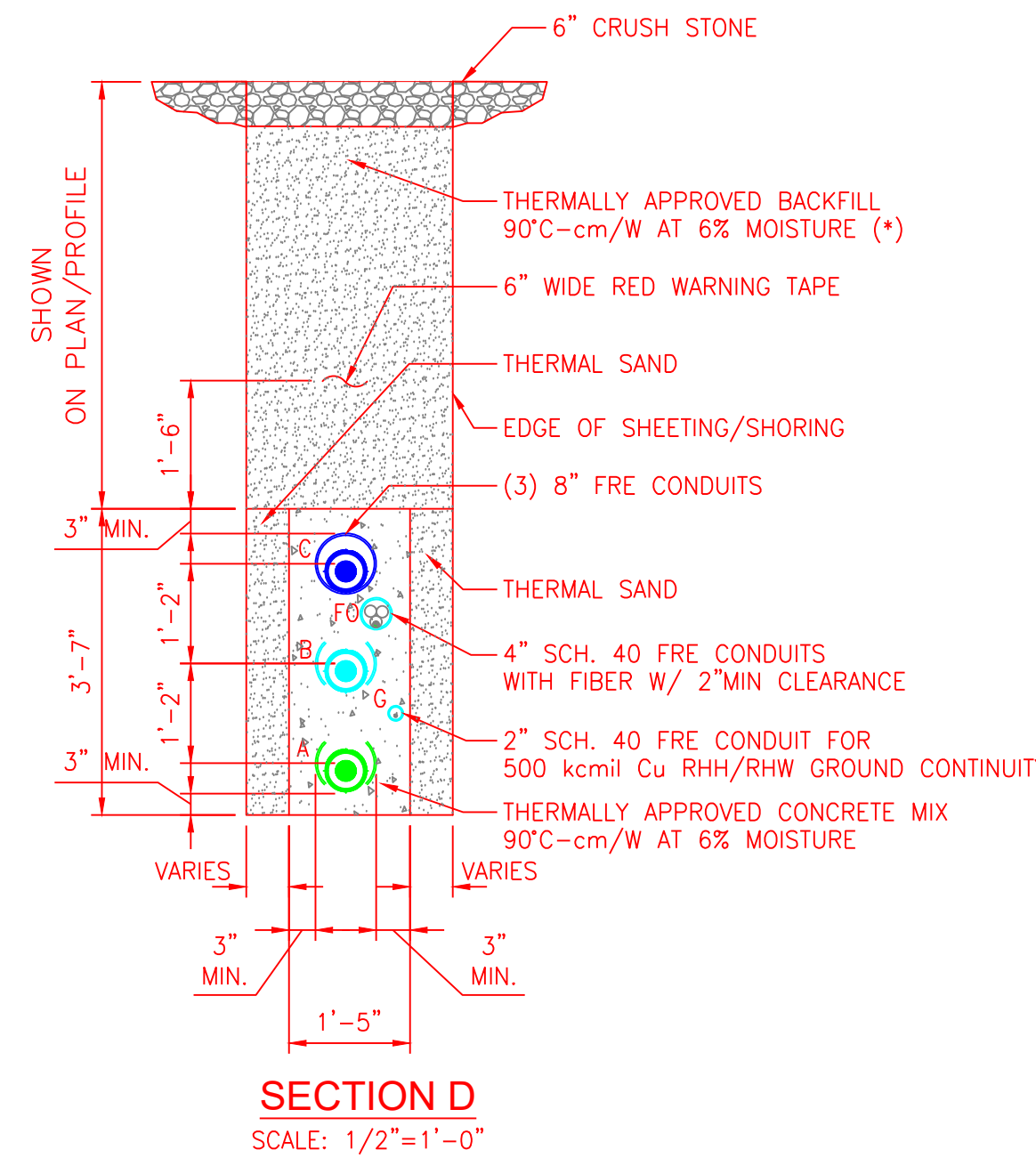
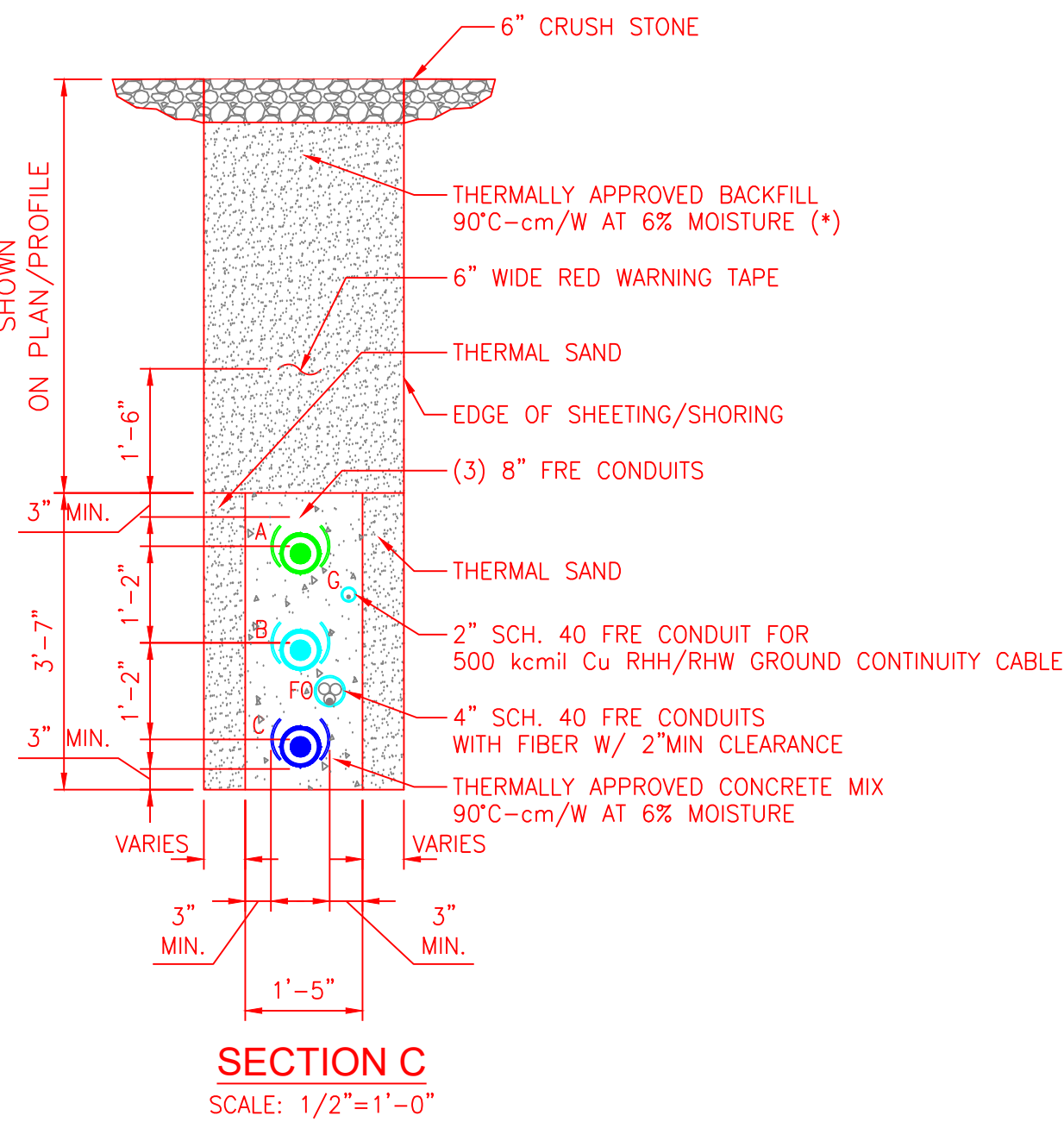
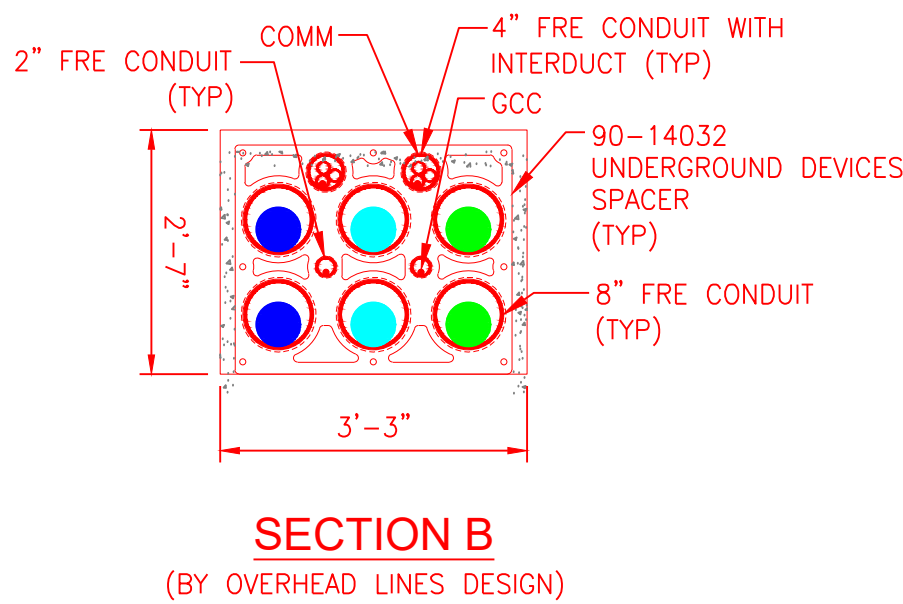
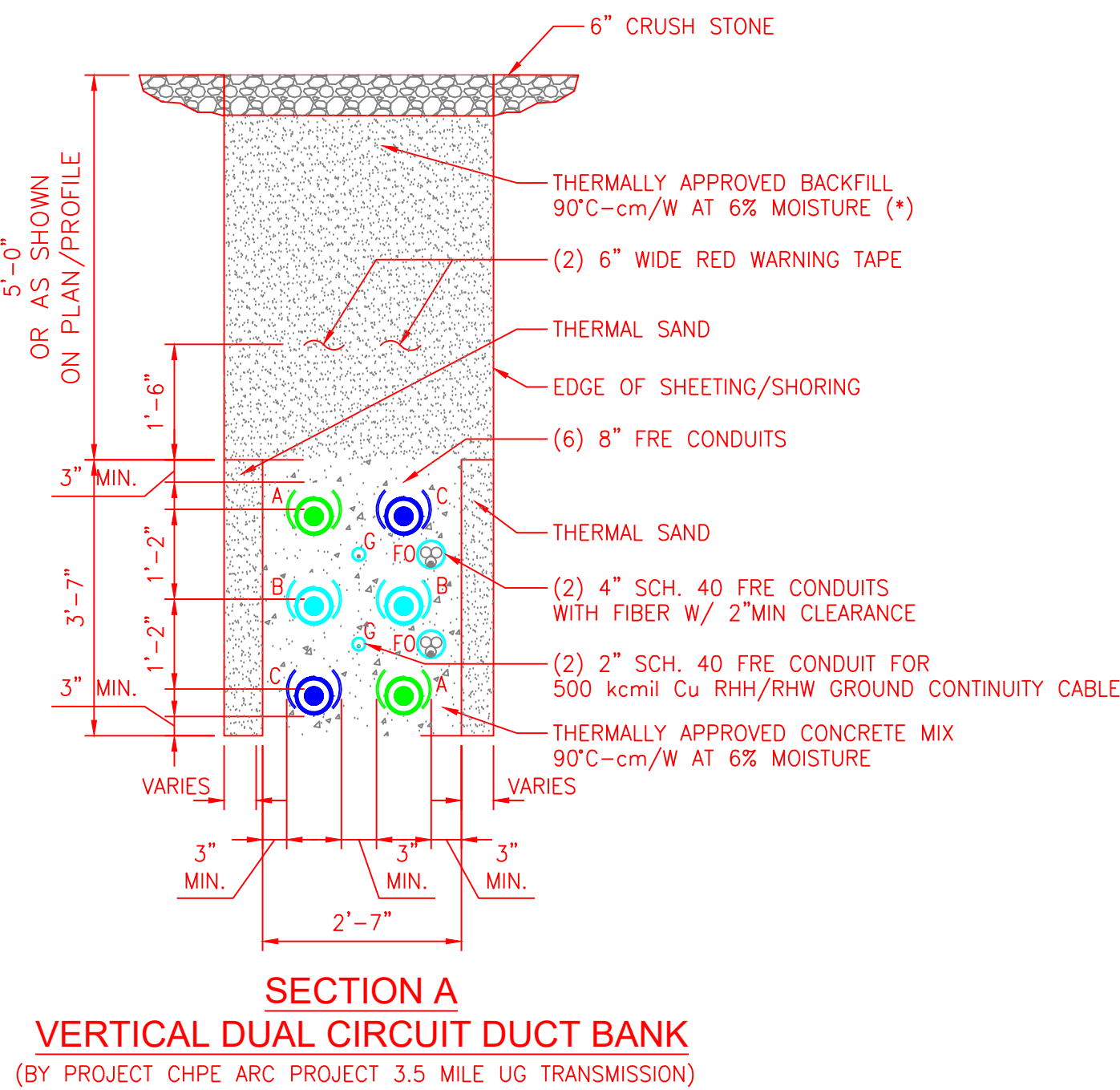


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NOTES:

- NORTH ORIENTATION IS REFERENCED TO GRID NORTH AND IS BASED ON THE NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE, NAD 83/2011.
- VERTICAL DATUM NAVD 88 (GEOID 18).
- EXISTING POLE LOCATION REVISED PER SITE POINT-CLOUD LASER SCAN.



LEGEND	
RED	MODIFICATION
BLACK	EXISTING
CYAN	CONSTRUCTION INFO.

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REVISION	DATE	DESCRIPTION	PREPARED	REVIEWED	APPROVED
1	02/23/24	ISSUED FOR 30% REVIEW	VJC	BLM	MJM

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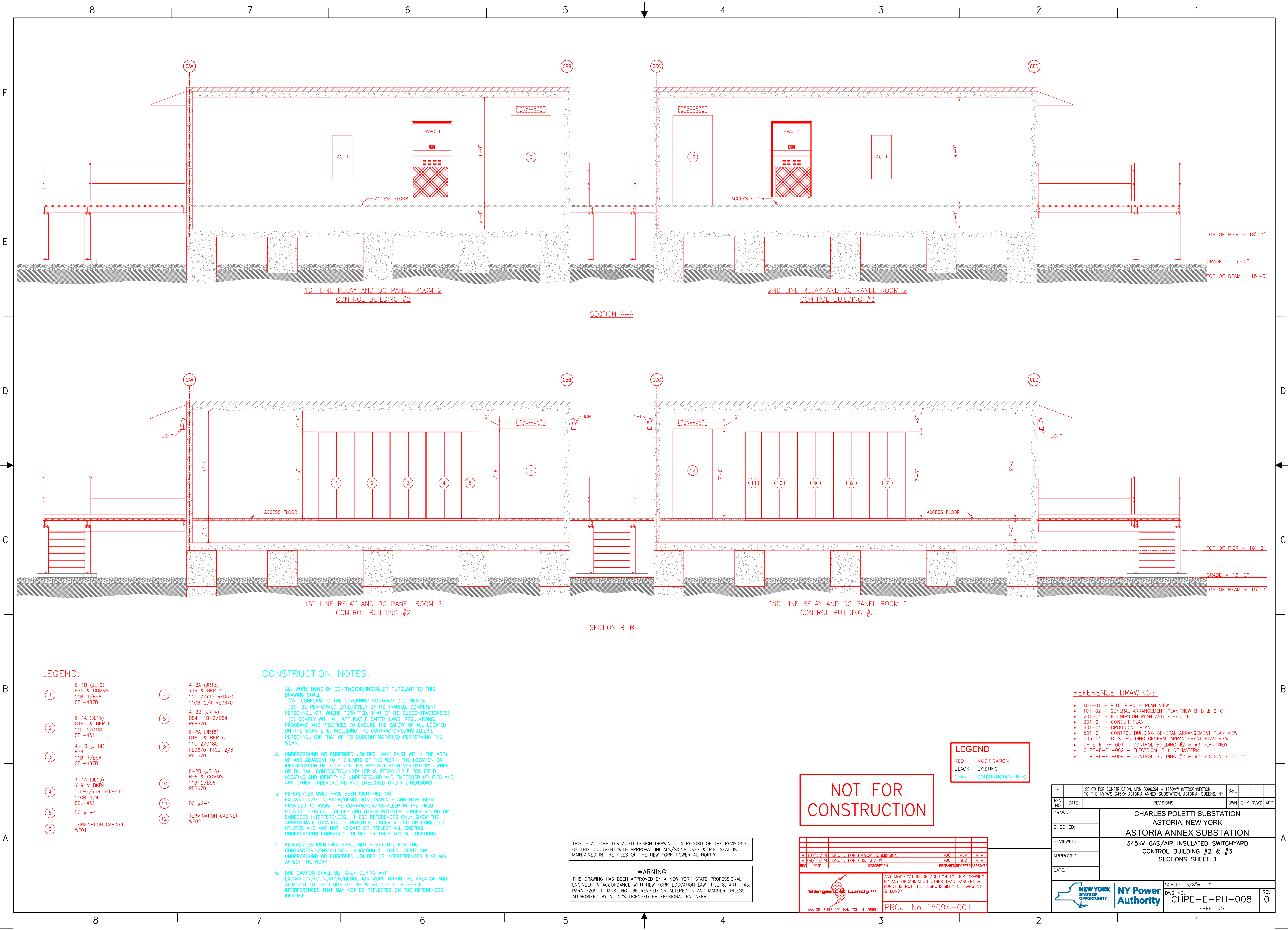
1 AAA DR, SUITE 201 HAMILTON, NJ 08691

PROJ. No. 15094-001

REFERENCE DRAWINGS:

- 101-01 - PLOT PLAN - PLAN VIEW
- 101-02 - GENERAL ARRANGEMENT PLAN VIEW B-B & C-C
- 201-01 - FOUNDATION PLAN AND SCHEDULE
- 301-01 - CONDUIT PLAN
- 401-01 - GROUNDING PLAN
- 501-01 - CONTROL BUILDING GENERAL ARRANGEMENT PLAN VIEW
- 505-01 - G.I.S. BUILDING GENERAL ARRANGEMENT PLAN VIEW
- CHPE-E-PH-001 - CONTROL BUILDING #2 & #3 PLAN VIEW
- CHPE-E-PH-002 - ELECTRICAL BILL OF MATERIAL
- CHPE-E-PH-008 - CONTROL BUILDING #2 & #3 SECTION SHEET 1
- CHPE-E-PH-009 - CONTROL BUILDING #2 & #3 SECTION SHEET 2

0	ISSUED FOR CONSTRUCTION, MRM 3086394 - 1250MW INTERCONNECTION TO THE NYPA'S 345KV ASTORIA ANNEX SUBSTATION, ASTORIA, QUEENS, NY	S&L			
REV NO	DATE	REVISIONS	DWN	CHK	RWD
DRAWN:					
CHECKED:					
REVIEWED:					
APPROVED:					
DATE:					
CHARLES POLETTI SUBSTATION ASTORIA, NEW YORK ASTORIA ANNEX SUBSTATION 345KV GIS/AIR INSULATED SWITCHYARD ELECTRICAL DUCT BANK PROFILE & SECTIONS					
NEW YORK STATE OF OPPORTUNITY NY Power Authority			SCALE: 1/16"=1'-0" DWG. NO. CHPE-E-PH-007 SHEET NO.		
			REV 0		



- LEGEND:**
- | | | | |
|---|---|----|--|
| 1 | 6-1B (JL16)
BS6 & COMMS
11B-1/BS6
SEL-487B | 7 | 4-2A (JR13)
Y19 & BKR 4
11L-2/Y19 RED670
11CB-2/4 REC670 |
| 2 | 6-1A (JL15)
G180 & BKR 6
11L-1/G180
SEL-451 | 8 | 4-2B (JR14)
BS4 11B-2/BS4
REB670 |
| 3 | 4-1B (JL14)
BS4
11B-1/BS4
SEL-487B | 9 | 6-2A (JR15)
G180 & BKR 6
11L-2/G180
RED670 11CB-2/6
REC670 |
| 4 | 4-1A (JL13)
Y19 & BKR4
11L-1/Y19 SEL-411L
11CB-1/4 | 10 | 6-2B (JR16)
BS6 & COMMS
11B-2/BS6
REB670 |
| 5 | DC #1-4
SEL-451 | 11 | DC #2-4 |
| 6 | TERMINATION CABINET
WE01 | 12 | TERMINATION CABINET
WE02 |

- CONSTRUCTION NOTES:**
- ALL WORK DONE BY CONTRACTOR/INSTALLER PURSUANT TO THIS DRAWING SHALL:
(A) CONFORM TO THE GOVERNING CONTRACT DOCUMENTS;
(B) BE PERFORMED EXCLUSIVELY BY ITS TRAINED, COMPETENT PERSONNEL, OR, WHERE PERMITTED, THAT OF ITS SUBCONTRACTOR(S);
(C) COMPLY WITH ALL APPLICABLE SAFETY LAWS, REGULATIONS, PROGRAMS AND PRACTICES TO ENSURE THE SAFETY OF ALL LOCATED ON THE WORK SITE, INCLUDING THE CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S) PERFORMING THE WORK.
 - UNDERGROUND OR EMBEDDED UTILITIES (MAY) EXIST WITHIN THE AREA OF AND ADJACENT TO THE LIMITS OF THE WORK. THE LOCATION OR IDENTIFICATION OF SUCH UTILITIES HAS NOT BEEN VERIFIED BY OWNER OR BY S&L. CONTRACTOR/INSTALLER IS RESPONSIBLE FOR FIELD LOCATING AND IDENTIFYING UNDERGROUND AND EMBEDDED UTILITIES AND ANY OTHER UNDERGROUND AND EMBEDDED UTILITY DIMENSIONS.
 - REFERENCES USED HAVE BEEN IDENTIFIED ON EXCAVATION/FOUNDATION/DEMOLITION DRAWINGS AND HAVE BEEN PROVIDED TO ASSIST THE CONTRACTOR/INSTALLER IN THE FIELD LOCATING EXISTING UTILITIES AND OTHER POTENTIAL UNDERGROUND OR EMBEDDED INTERFERENCES. THESE REFERENCES ONLY SHOW THE APPROXIMATE LOCATION OF POTENTIAL UNDERGROUND OR EMBEDDED UTILITIES AND MAY NOT INDICATE OR REFLECT ALL EXISTING UNDERGROUND EMBEDDED UTILITIES OR THEIR ACTUAL LOCATIONS.
 - REFERENCES IDENTIFIED SHALL NOT SUBSTITUTE FOR THE CONTRACTOR'S/INSTALLER'S OBLIGATION TO FIELD LOCATE ANY UNDERGROUND OR EMBEDDED UTILITIES OR INTERFERENCES THAT MAY AFFECT THE WORK.
 - DUE CAUTION SHALL BE TAKEN DURING ANY EXCAVATION/FOUNDATION/DEMOLITION WORK WITHIN THE AREA OF AND ADJACENT TO THE LIMITS OF THE WORK DUE TO POSSIBLE INTERFERENCES THAT MAY NOT BE REFLECTED ON THE REFERENCES IDENTIFIED.

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WARNING
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**NOT FOR
CONSTRUCTION**

REV	DATE	DESCRIPTION	PREPARED	REVIEWED	APPROVED
B	10/15/24	ISSUED FOR EM&CP SUBMISSION	VJC	MJM	MJM
A	09/13/24	ISSUED FOR 60% REVIEW	VJC	BLM	MJM

1 AAA DR, SUITE 201 HAMILTON, NJ 08691

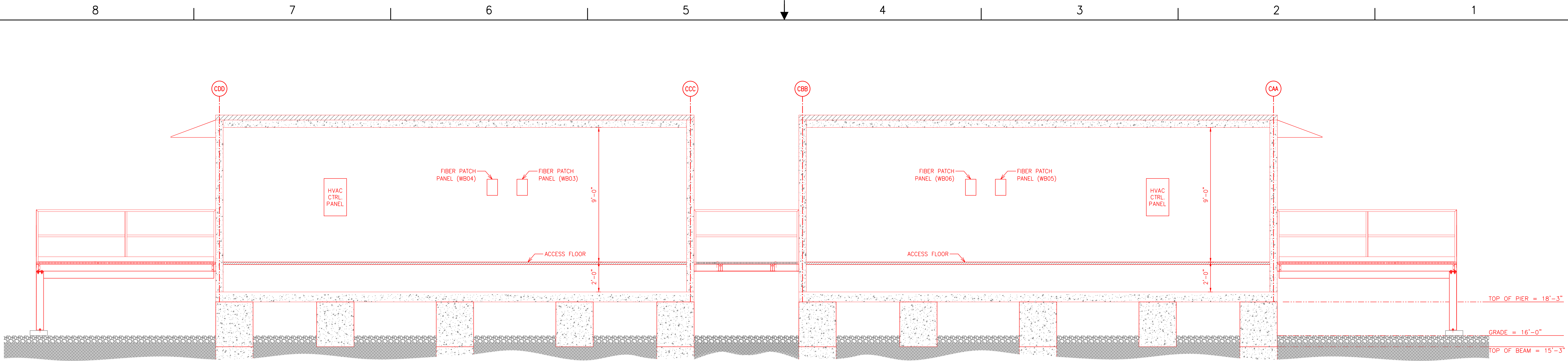
ANY MODIFICATION OR ADDITION TO THIS DRAWING BY ANY ORGANIZATION OTHER THAN SARGENT & LUNDY IS NOT THE RESPONSIBILITY OF SARGENT & LUNDY

PROJ. No. 15094-001

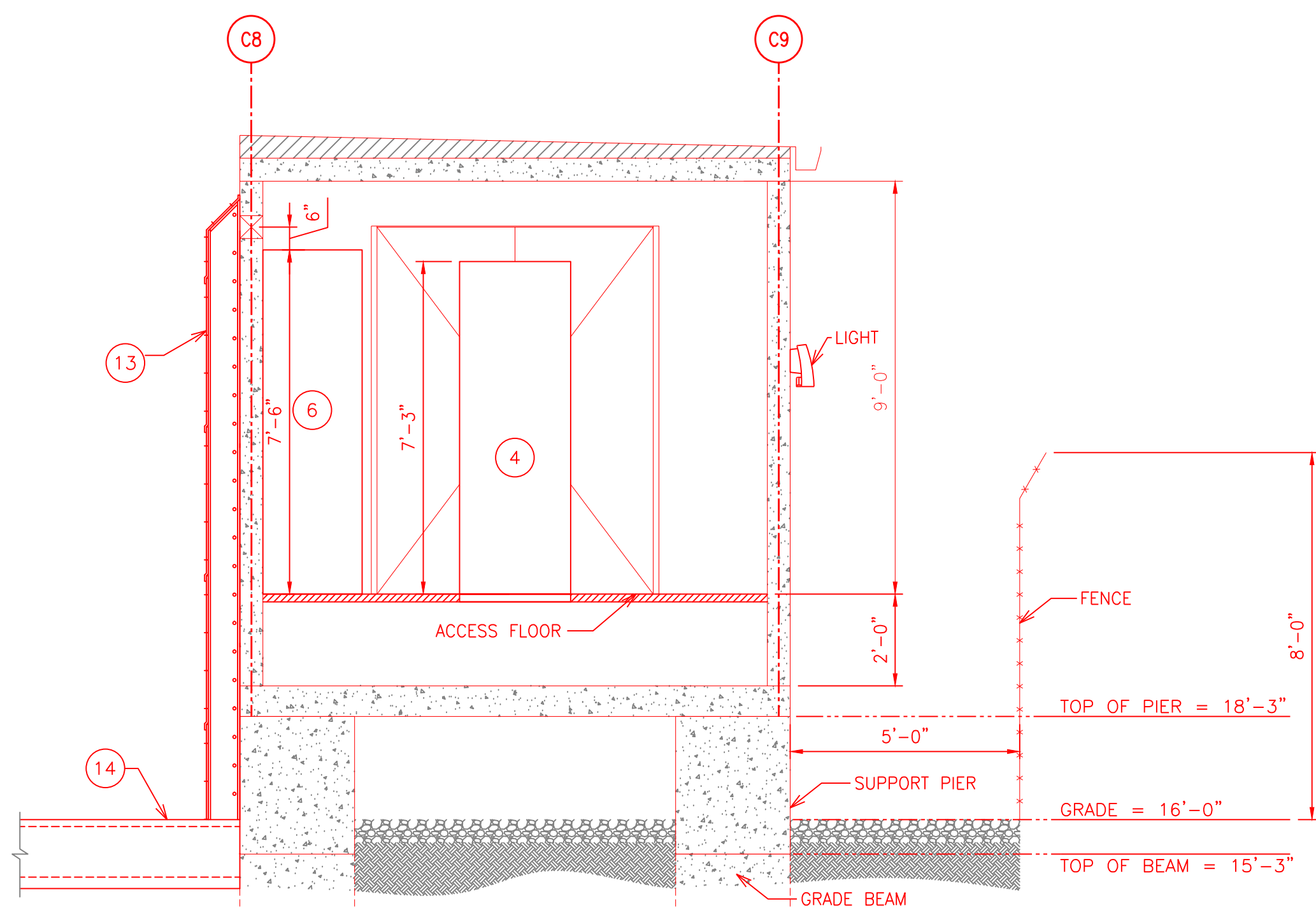
- LEGEND**
- | | |
|-------|--------------------|
| RED | MODIFICATION |
| BLACK | EXISTING |
| CYAN | CONSTRUCTION INFO. |

- REFERENCE DRAWINGS:**
- 101-01 - PLOT PLAN - PLAN VIEW
 - 101-02 - GENERAL ARRANGEMENT PLAN VIEW B-B & C-C
 - 201-01 - FOUNDATION PLAN AND SCHEDULE
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 - 401-01 - GROUNDING PLAN
 - 501-01 - CONTROL BUILDING GENERAL ARRANGEMENT PLAN VIEW
 - 505-01 - G.I.S. BUILDING GENERAL ARRANGEMENT PLAN VIEW
 - CHPE-E-PH-001 - CONTROL BUILDING #2 & #3 PLAN VIEW
 - CHPE-E-PH-002 - ELECTRICAL BILL OF MATERIAL
 - CHPE-E-PH-009 - CONTROL BUILDING #2 & #3 SECTION SHEET 2

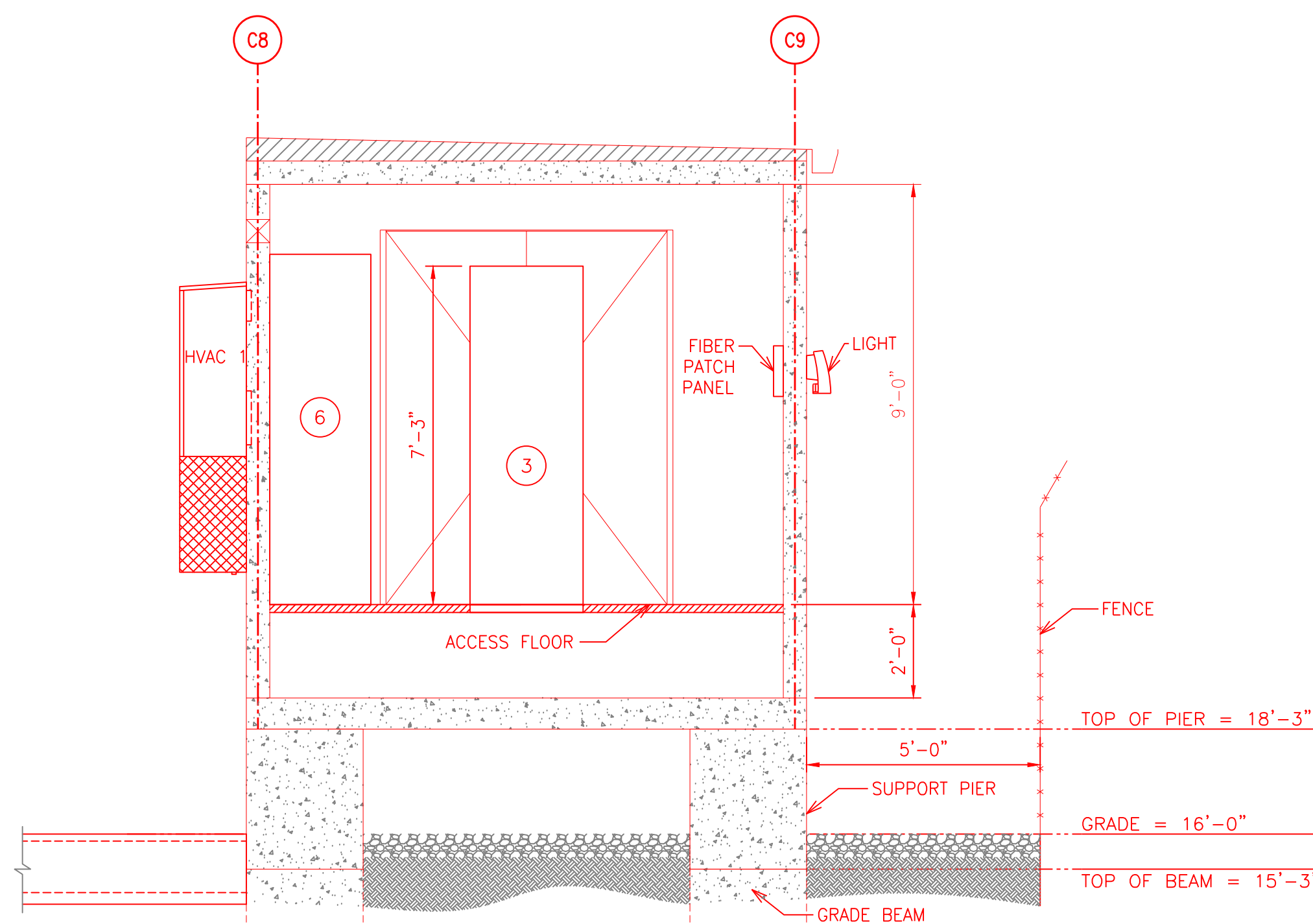
0	ISSUED FOR CONSTRUCTION, MRM 3086394 - 1250MM INTERCONNECTION TO THE NYPA'S 345KV ASTORIA ANNEX SUBSTATION, ASTORIA, QUEENS, NY	S&L			
REV	DATE	REVISIONS	DWN	CHK	RWLD
DRAWN:					
CHECKED:					
REVIEWED:					
APPROVED:					
DATE:					
CHARLES POLETTI SUBSTATION ASTORIA, NEW YORK ASTORIA ANNEX SUBSTATION 345kv GAS/AIR INSULATED SWITCHYARD CONTROL BUILDING #2 & #3 SECTIONS SHEET 1					
				SCALE: 3/8"=1'-0"	
DWG. NO. CHPE-E-PH-008		SHEET NO.		REV 0	



SECTION C-C



SECTION D-D



SECTION E-E

LEGEND:

- | | |
|--|--|
| ① 6-1B (JL16)
BS6 & COMMS
SEL-487B | ⑦ 4-2A (JR13)
Y19 & BKR 4
11L-2/Y19 RED670
11CB-2/4 REC670 |
| ② 6-1A (JL15)
G180 & BKR 6
11L-1/G180
SEL-451 | ⑧ 4-2B (JR14)
BS4 11B-2/BS4
REB670 |
| ③ 4-1B (JL14)
BS4
11B-1/BS4
SEL-487B | ⑨ 6-2A (JR15)
G180 & BKR 6
11L-2/G180
RED670 11CB-2/6
REC670 |
| ④ 4-1A (JL13)
Y19 & BKR4
11L-1/Y19 SEL-411L
11CB-1/4
SEL-451 | ⑩ 6-2B (JR16)
BS6 & COMMS
11B-2/BS6
REB670 |
| ⑤ DC #1-4 | ⑪ DC #2-4 |
| ⑥ TERMINATION CABINET
WE01 | ⑫ TERMINATION CABINET
WE02 |
| | ⑬ CABLE RISER |
| | ⑭ 30" CABLE TRENCH |

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NOT FOR
CONSTRUCTION


LEGEND

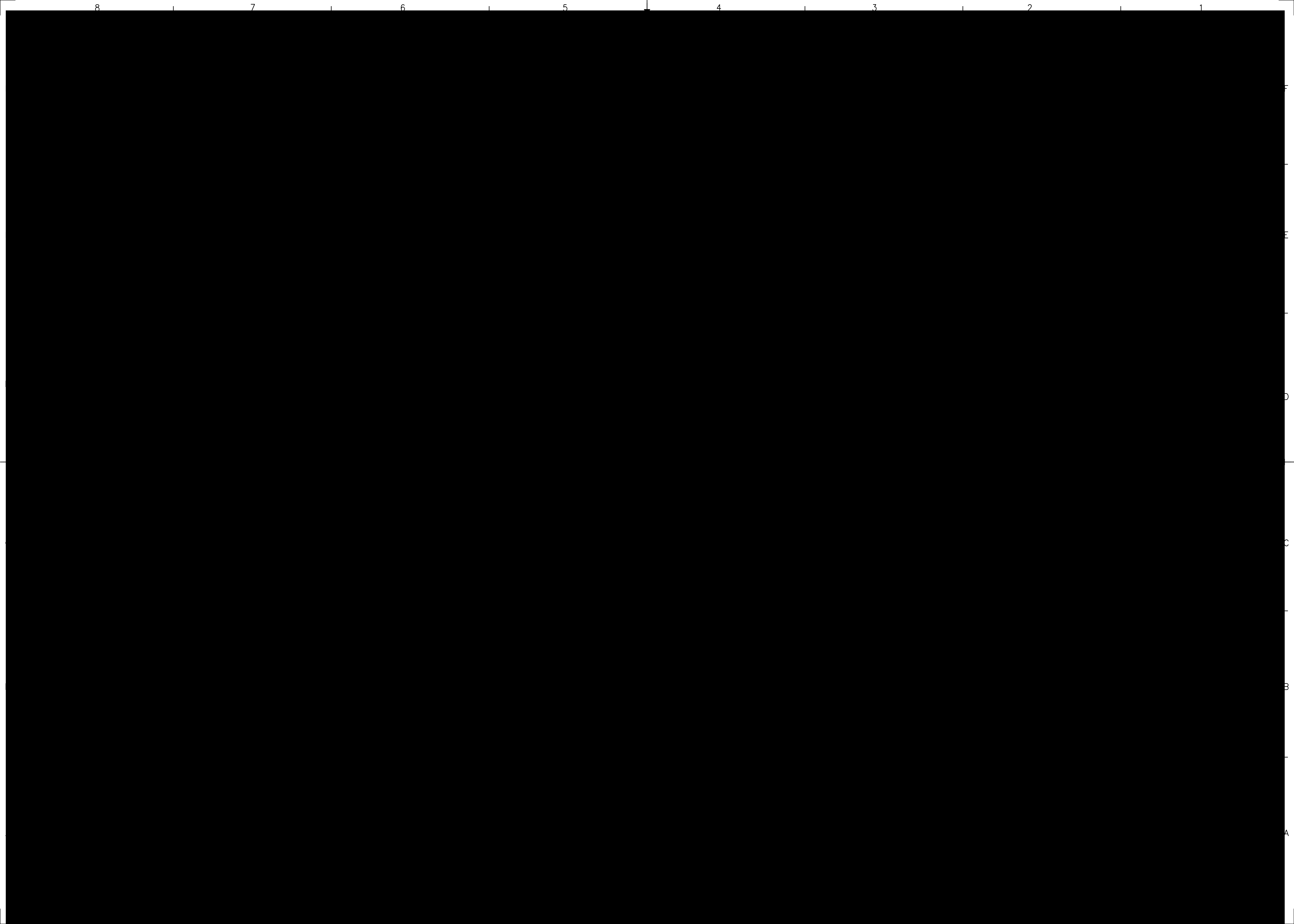
- | | |
|-------|--------------------|
| RED | MODIFICATION |
| BLACK | EXISTING |
| CYAN | CONSTRUCTION INFO. |

REFERENCE DRAWINGS:

- 101-01 - PLOT PLAN - PLAN VIEW
- 101-02 - GENERAL ARRANGEMENT PLAN VIEW B-B & C-C
- 110-01 - FENCE PLAN
- 201-01 - FOUNDATION PLAN AND SCHEDULE
- 301-01 - CONDUIT PLAN
- 401-01 - GROUNDING PLAN
- 501-01 - CONTROL BUILDING GENERAL ARRANGEMENT PLAN VIEW
- 505-01 - G.I.S. BUILDING GENERAL ARRANGEMENT PLAN VIEW
- CHPE-E-PH-001 - CONTROL BUILDING #2 & #3 PLAN VIEW
- CHPE-E-PH-002 - ELECTRICAL BILL OF MATERIAL
- CHPE-E-PH-008 - CONTROL BUILDING #2 & #3 SECTION SHEET 1

0		ISSUED FOR CONSTRUCTION, MRM 3086394 - 1250MW INTERCONNECTION TO THE NYPA'S 345KV ASTORIA ANNEX SUBSTATION, ASTORIA, QUEENS, NY				S&L			
REV	DATE	REVISIONS				DWN	CHK	RWD	APP
DRAWN:		CHARLES POLETTI SUBSTATION ASTORIA, NEW YORK ASTORIA ANNEX SUBSTATION 345KV GAS/AIR INSULATED SWITCHYARD CONTROL BUILDING #2 & #3 SECTIONS SHEET 2							
CHECKED:									
REVIEWED:									
APPROVED:									
DATE:									
		NY Power Authority		SCALE: 3/8"=1'-0"				REV 0	
				DWG. NO. CHPE-E-PH-009					
				SHEET NO.					

B 10/15/24	ISSUED FOR EM&CP SUBMISSION	VJC	MJM	MJM	
A 09/13/24	ISSUED FOR 60% REVIEW	VJC	BLM	MJM	
REV	DATE	DESCRIPTION	PREPARED	REVIEWED	APPROVED
		ANY MODIFICATION OR ADDITION TO THIS DRAWING BY ANY ORGANIZATION OTHER THAN SARGENT & LUNDY IS NOT THE RESPONSIBILITY OF SARGENT & LUNDY			
1 AAA DR, SUITE 201 HAMILTON, NJ 08611		PROJ. No. 15094-001			



NYPA GIS SUBSTATION PILE TABLE		
PILE No.	LENGTH	
	ESTIMATED	ACTUAL
NYPA-GIS-01	40'-0"	95'-9"
NYPA-GIS-02	40'-0"	95'-9"
NYPA-GIS-03	40'-0"	96'-6"
NYPA-GIS-04	40'-0"	95'-9"
NYPA-GIS-05	40'-0"	95'-9"
NYPA-GIS-06	40'-0"	95'-9"
NYPA-GIS-07	40'-0"	95'-9"
NYPA-GIS-08	40'-0"	96'-6"
NYPA-GIS-09	40'-0"	95'-9"
NYPA-GIS-10	40'-0"	95'-9"
NYPA-GIS-11	40'-0"	95'-9"
NYPA-GIS-12	40'-0"	95'-9"
NYPA-GIS-13	40'-0"	96'-6"
NYPA-GIS-14	40'-0"	95'-9"
NYPA-GIS-15	40'-0"	95'-9"
NYPA-GIS-16	40'-0"	96'-6"
NYPA-GIS-17	40'-0"	95'-9"
NYPA-GIS-18	40'-0"	95'-9"
NYPA-GIS-19	40'-0"	95'-9"
NYPA-GIS-20	40'-0"	95'-9"
NYPA-GIS-21	40'-0"	95'-9"
NYPA-GIS-22	40'-0"	95'-9"
NYPA-GIS-23	40'-0"	95'-3"
NYPA-GIS-24	40'-0"	95'-3"
NYPA-GIS-25	40'-0"	95'-3"
NYPA-GIS-26	40'-0"	95'-3"
NYPA-GIS-27	40'-0"	95'-3"
NYPA-GIS-28	40'-0"	95'-3"
NYPA-GIS-29	40'-0"	95'-3"
NYPA-GIS-30	40'-0"	95'-9"
NYPA-GIS-31	40'-0"	95'-9"
NYPA-GIS-32	40'-0"	95'-9"
NYPA-GIS-33	40'-0"	95'-9"
NYPA-GIS-34	40'-0"	95'-9"
NYPA-GIS-35	40'-0"	95'-9"
NYPA-GIS-36	40'-0"	95'-3"
NYPA-GIS-37	40'-0"	95'-3"
NYPA-GIS-38	40'-0"	95'-3"
NYPA-GIS-39	40'-0"	95'-3"
NYPA-GIS-40	40'-0"	95'-3"
NYPA-GIS-41	40'-0"	95'-3"
NYPA-GIS-42	40'-0"	95'-3"
NYPA-GIS-43	40'-0"	95'-9"
NYPA-GIS-44	40'-0"	95'-9"
NYPA-GIS-45	40'-0"	95'-9"
NYPA-GIS-46	40'-0"	95'-9"
NYPA-GIS-47	40'-0"	95'-9"
NYPA-GIS-48	40'-0"	95'-9"
NYPA-GIS-49	40'-0"	95'-3"
NYPA-GIS-50	40'-0"	95'-3"

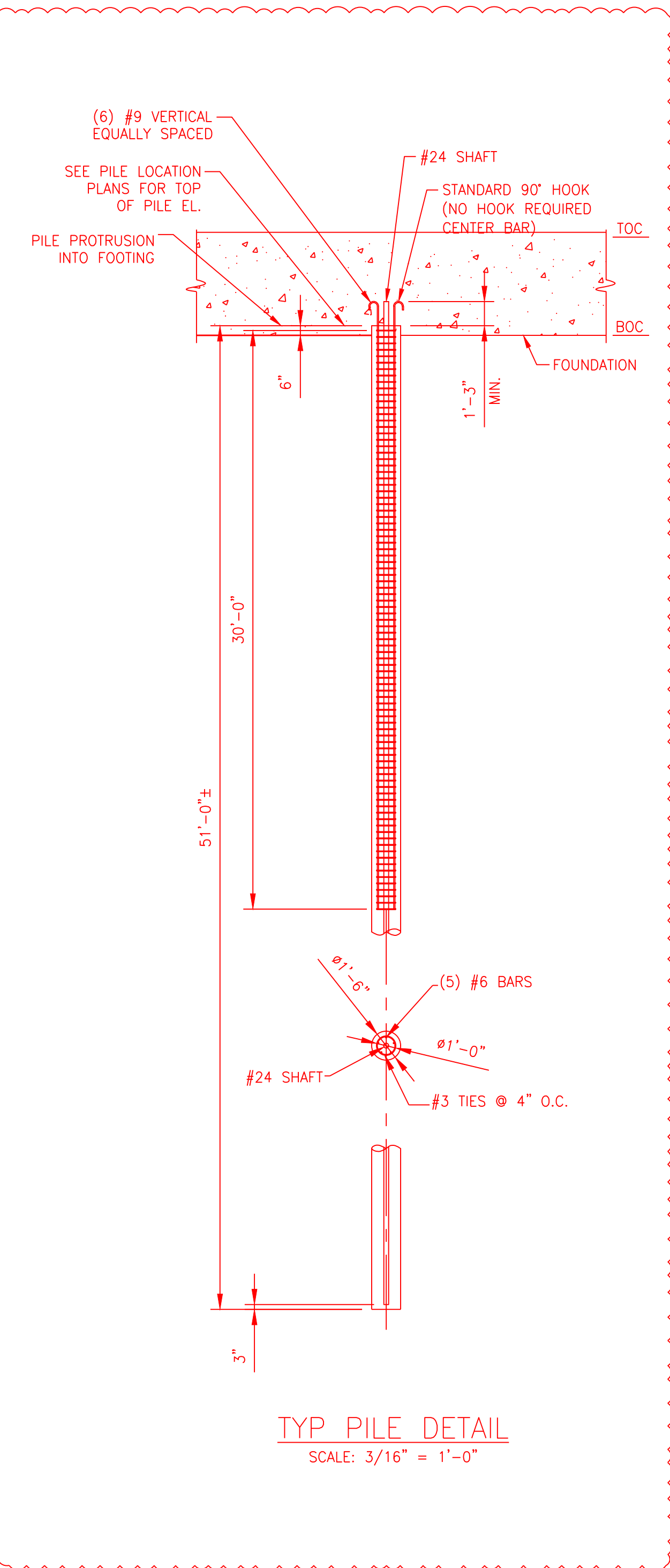
NYPA GIS SUBSTATION PILE TABLE		
NYPA-GIS-51	40'-0"	95'-3"
NYPA-GIS-52	40'-0"	95'-3"
NYPA-GIS-53	40'-0"	95'-3"
NYPA-GIS-54	40'-0"	95'-3"
NYPA-GIS-55	40'-0"	95'-3"
NYPA-GIS-56	40'-0"	95'-9"
NYPA-GIS-57	40'-0"	95'-9"
NYPA-GIS-58	40'-0"	95'-9"
NYPA-GIS-59	40'-0"	95'-9"
NYPA-GIS-60	40'-0"	95'-9"
NYPA-GIS-61	40'-0"	95'-9"
NYPA-GIS-62	40'-0"	95'-0"
NYPA-GIS-63	40'-0"	94'-3"
NYPA-GIS-64	40'-0"	94'-3"
NYPA-GIS-65	40'-0"	94'-3"
NYPA-GIS-66	40'-0"	94'-3"
NYPA-GIS-67	40'-0"	95'-0"
NYPA-GIS-68	40'-0"	94'-3"
NYPA-GIS-69	40'-0"	94'-3"
NYPA-GIS-70	40'-0"	94'-3"
NYPA-GIS-71	40'-0"	94'-3"
NYPA-GIS-72	40'-0"	95'-0"
NYPA-GIS-73	40'-0"	94'-3"
NYPA-GIS-74	40'-0"	94'-3"
NYPA-GIS-75	40'-0"	95'-0"
NYPA-GIS-76	40'-0"	95'-9"
NYPA-GIS-77	40'-0"	95'-9"
NYPA-GIS-78	40'-0"	96'-6"
NYPA-GIS-79	40'-0"	96'-6"
NYPA-GIS-80	40'-0"	96'-6"
NYPA-GIS-81	40'-0"	96'-6"
NYPA-GIS-82	40'-0"	96'-6"
NYPA-GIS-83	40'-0"	96'-6"
NYPA-GIS-84	40'-0"	96'-6"
NYPA-GIS-85	40'-0"	96'-6"
NYPA-GIS-86	40'-0"	96'-6"
NYPA-GIS-87	40'-0"	96'-6"
NYPA-GIS-88	40'-0"	96'-6"
NYPA-GIS-89	40'-0"	96'-6"
NYPA-GIS-90	40'-0"	96'-6"
NYPA-GIS-91	40'-0"	96'-6"
NYPA-GIS-92	40'-0"	96'-6"
NYPA-GIS-93	40'-0"	96'-6"
NYPA-GIS-94	40'-0"	94'-6"
NYPA-GIS-95	40'-0"	94'-6"
NYPA-GIS-96	40'-0"	94'-6"
NYPA-GIS-97	40'-0"	94'-6"
NYPA-GIS-98	40'-0"	94'-6"
NYPA-GIS-99	40'-0"	94'-6"
NYPA-GIS-100	40'-0"	94'-6"
NYPA-GIS-101	40'-0"	94'-6"
NYPA-GIS-102	40'-0"	94'-6"
NYPA-GIS-103	40'-0"	94'-6"

NYPA GIS SUBSTATION PILE TABLE		
NYPA-GIS-104	40'-0"	94'-6"
NYPA-GIS-105	40'-0"	94'-6"
NYPA-GIS-106	40'-0"	94'-6"
NYPA-GIS-107	40'-0"	94'-6"
NYPA-GIS-108	40'-0"	95'-9"
NYPA-GIS-109	40'-0"	95'-9"
NYPA-GIS-110	40'-0"	95'-9"
NYPA-GIS-111	40'-0"	95'-9"
NYPA-GIS-112	40'-0"	95'-9"
NYPA-GIS-113	40'-0"	95'-9"
NYPA-GIS-114	40'-0"	95'-9"
NYPA-GIS-115	40'-0"	95'-9"
NYPA-GIS-116	40'-0"	93'-9"
NYPA-GIS-117	40'-0"	93'-9"
NYPA-GIS-118	40'-0"	93'-9"
NYPA-GIS-119	40'-0"	93'-9"
NYPA-GIS-120	40'-0"	93'-9"
NYPA-GIS-121	40'-0"	93'-9"
NYPA-GIS-122	40'-0"	93'-9"
NYPA-GIS-123	40'-0"	93'-9"
NYPA-GIS-124	40'-0"	93'-9"
NYPA-GIS-125	40'-0"	93'-9"
NYPA-GIS-126	40'-0"	93'-9"
NYPA-GIS-127	40'-0"	93'-9"
NYPA-GIS-128	40'-0"	95'-3"
NYPA-GIS-129	40'-0"	95'-3"
NYPA-GIS-130	40'-0"	95'-3"
NYPA-GIS-131	40'-0"	95'-3"
NYPA-GIS-132	40'-0"	95'-3"
NYPA-GIS-133	40'-0"	95'-3"
NYPA-GIS-134	40'-0"	95'-3"
NYPA-GIS-135	40'-0"	95'-3"
NYPA-GIS-136	50'-0"	13'-6 1/2" *
NYPA-GIS-137	50'-0"	13'-6 1/2" *
NYPA-GIS-138	50'-0"	13'-6 1/2" *
NYPA-GIS-139	50'-0"	13'-6 1/2" *
NYPA-GIS-140	50'-0"	13'-6 1/2" *
NYPA-GIS-141	50'-0"	13'-6 1/2" *
NYPA-GIS-142	50'-0"	13'-6 1/2" *
NYPA-GIS-143	50'-0"	13'-6 1/2" *
NYPA-GIS-144	65'-0"	12'-3" *
NYPA-GIS-145	65'-0"	12'-3" *
NYPA-GIS-146	65'-0"	12'-3" *
NYPA-GIS-147	65'-0"	12'-3" *
NYPA-GIS-148	65'-0"	12'-3" *
NYPA-GIS-149	65'-0"	12'-3" *
NYPA-GIS-150	65'-0"	12'-3" *
NYPA-GIS-151	65'-0"	12'-3" *
NYPA-GIS-152	65'-0"	12'-3" *
NYPA-GIS-153	65'-0"	12'-3" *
NYPA-GIS-154	65'-0"	12'-3" *
NYPA-GIS-155	65'-0"	12'-3" *

* NAVD83 DATUM

- GENERAL NOTES:
- COORDINATES AND ELEVATIONS ARE BASED ON "QUEENS BOROUGH DATUM" SEE DRAWING 0620-C031-001. FLOOR SLAB AT ELEVATION 100'-0" IS EL. 20.50 IN QUEENS BOROUGH DATUM.
 - FOR STRUCTURAL DESIGN NOTES SEE DRAWING 0620-S001-001 AND -002.
 - FOR TYPICAL PILE DETAILS SEE DRAWING 0620-F001-004. ALL PILES TO BE 18" Ø AUGERCAST UNO.
 - PILE LENGTHS TO BE 40'-0" MIN OR TO BEDROCK REFUSAL, WHICHEVER IS LESS. GEOTECHNICAL ENGINEER TO APPROVE REQUIRED LENGTH DURING INSTALLATION TO ACHIEVE DESIGN CAPACITY.

- LEGEND:
- (TE-B) PILE ARRANGEMENT TYPE
- REFERENCE DWGS:
- PILING SPECIFICATION: SP-C086.1
- REFERENCE SPECS:



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TURBINE ENCLOSURE PILE SCHEDULE				
PILE CAP TYPE	QTY CAP TYPES	PILES PER CAP TYPE	SUBTOTAL	SIZE & REINF
(TE-A)	NOT USED	NOT USED	NOT USED	NOT USED
(TE-B)	18	2	36	2 PILE CAP, SEE DRAWING 0620-F001-005
(TE-C)	8	4	32	4 PILE CAP, SEE DRAWING 0620-F001-005
INDIVIDUAL PILES	NO CAP		67	0
TOTAL NUMBER OF PILES			135	0

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REV NO	DATE	REVISIONS	DWN	CHK	RWD	APP
4	3/17/10	REMOVED TABLE	DC	MK	GG	VS
3	3/17/10	REVISE PILING QTY, REVISE PILING PLAN, REVISE TABLE	DC	MK	GG	VS
2	3/3/10	RESPONSE TO CON ED REVIEW COMMENTS	MWB	BT	GG	MD
1	2/5/10	ADDED PILES	MWB	BT	GG	VS

SNC • LAVALIN
Constructors
Inc.

DRAWN: MWBB
CHECKED: BT
REVIEWED: BT
APPROVED: GG
DATE: 11/17/09

**CHARLES POLETTI SUBSTATION
ASTORIA, NEW YORK**

**NYPA GIS SUBSTATION
PILE DETAILS**

SCALE: NTS
DWG NO. F031
SHEET NO. 2 of 7
REV 4

**New York Power
Authority**

- REFERENCE DRAWINGS:
- 3096394-201-01 - FOUNDATION PLAN AND SCHEDULE
 - CHPE-E-PH-001 - CONTROL BUILDING #2 AND #3 PLAN VIEW
 - CHPE-E-PH-008 - CONTROL BUILDING #2 AND #3 SECTIONS - SHEET 1
 - CHPE-E-PH-009 - CONTROL BUILDING #2 AND #3 SECTIONS - SHEET 2
 - C031 SHEET 1 OF 2 - GRADING PLAN
 - F031 SHEET 1 OF 7 - PILE PLAN
 - CHPE-CS-C-001 - CONTROL BUILDING FOUNDATION - PLAN, ELEVATION AND SECTIONS
 - CHPE-CS-C-002 - GIS RISER FDN - PLAN AND DETAILS

- LEGEND
- RED MODIFICATION
 - BLACK EXISTING
 - CYAN CONSTRUCTION INFO

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WARNING

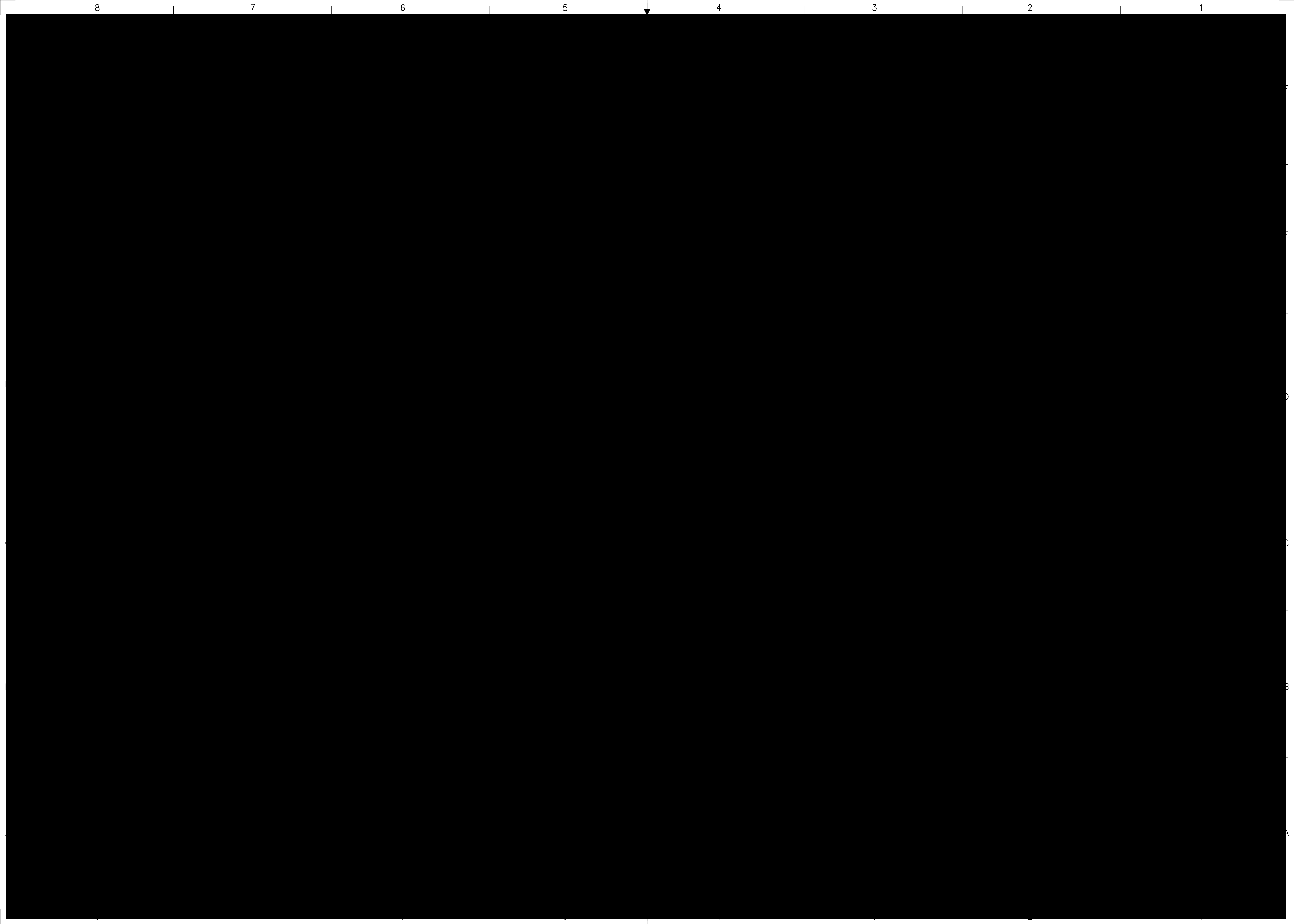
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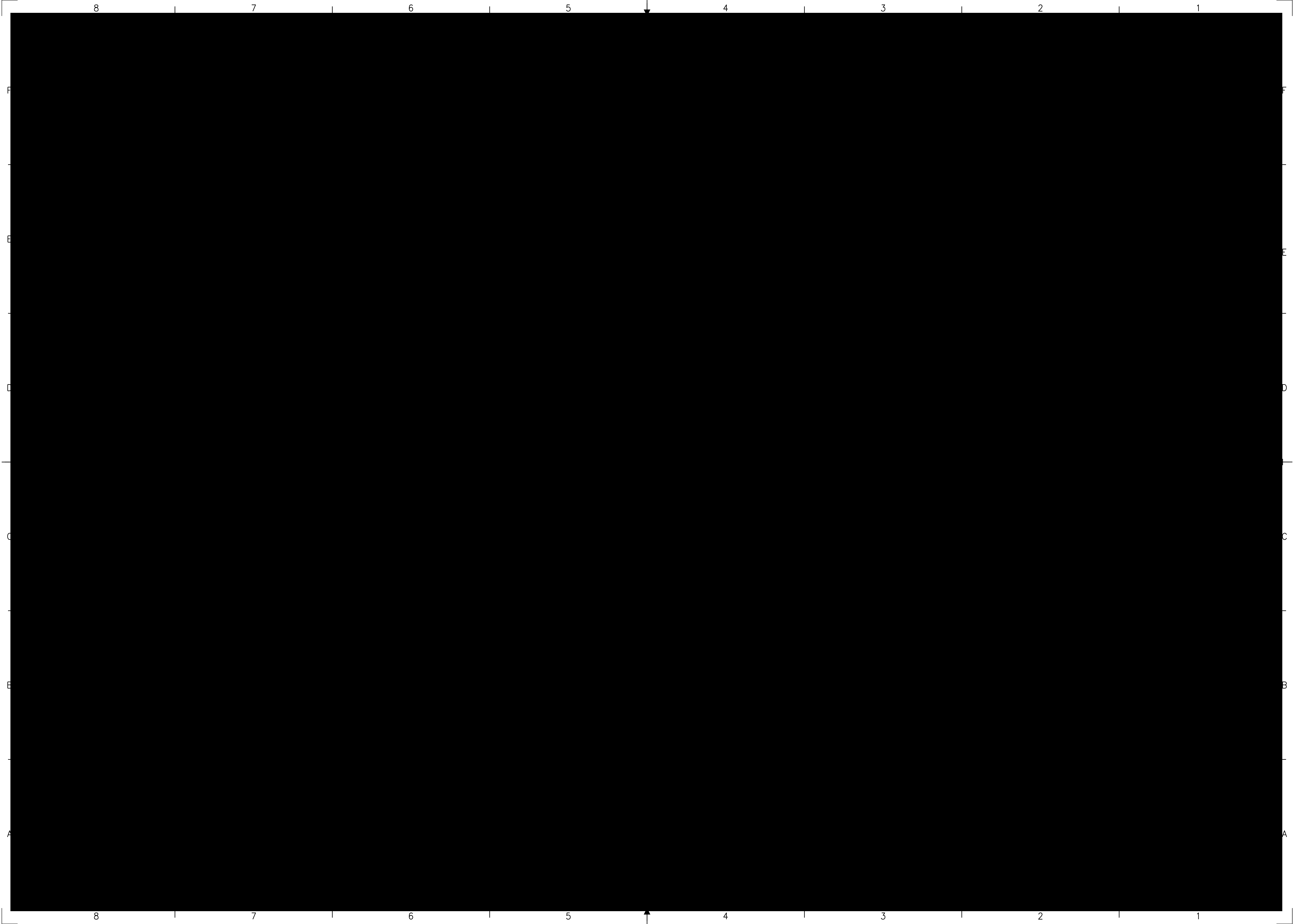
THIS DRAWING IS A CONTROLLED COPY OF AN ORIGINAL NYPA DRAWING. AA-FP031_SHT_02 Rev. 0 REVISED FOR MODIFICATION.
1250MW INTERCONNECTION TO THE NYPA'S 345KV ASTORIA ANNEX SUBSTATION, ASTORIA, QUEENS, NY.
MRM No.: 3096394
INFORMATION SHOWN COLORED PER THE DRAWING LEGEND PERTAINS TO THIS MODIFICATION. ALL OTHER INFORMATION REFLECTS THE CURRENT CONDITION OF THE ORIGINAL DRAWING ON FILE AND IS CONSIDERED BACKGROUND ONLY.
THE ORIGINAL DRAWING WILL BE REVISED UPON INSTALLATION AND VERIFICATION OF THE MODIFICATION.

NEW YORK PROFESSIONAL
ENGINEER
LICENSE NUMBER -
075635-1
EXP. 4/30/2025
EUGENE R. PORZIO
DATE:
SIGNATURE:

0	ISSUED FOR CONSTRUCTION, MRM 3096394				
REV NO	DATE	REVISIONS	DWN	CHK	RWD APP
DRAWN:					
CHECKED:					
REVIEWED:					
APPROVED:					
DATE:					
CHARLES POLETTI SUBSTATION ASTORIA, NEW YORK ASTORIA ANNEX SUBSTATION NYPA GIS SUBSTATION PILE DETAILS					
SCALE: 1/8"=1'-0"					
DWG NO.	3096394	AA-FP031_SHT_002	REV	O	
SHEET NO.					







8 7 6 5 4 3 2 1

DEMOLITION NOTES:

FOUNDATION TABLE

F

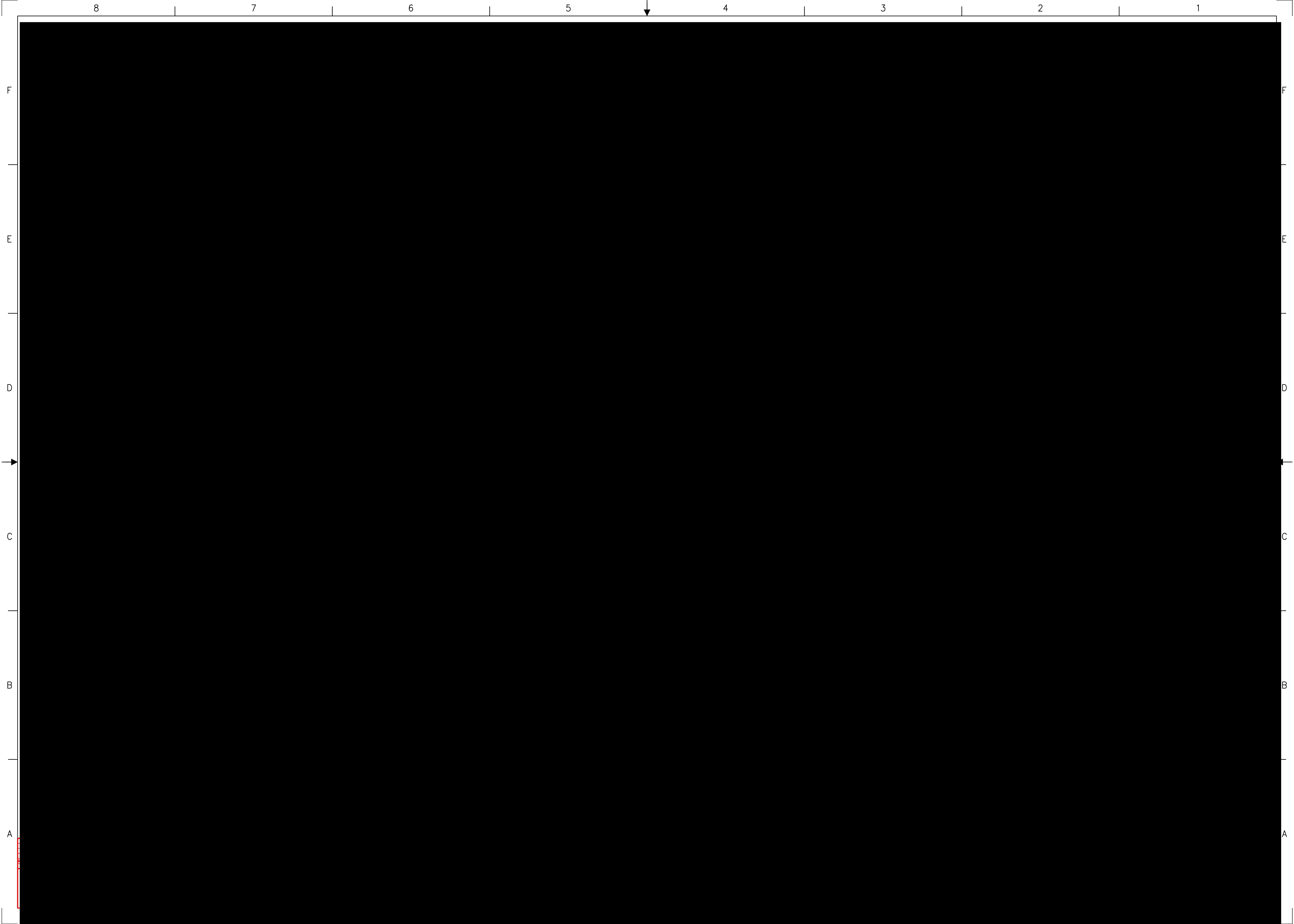
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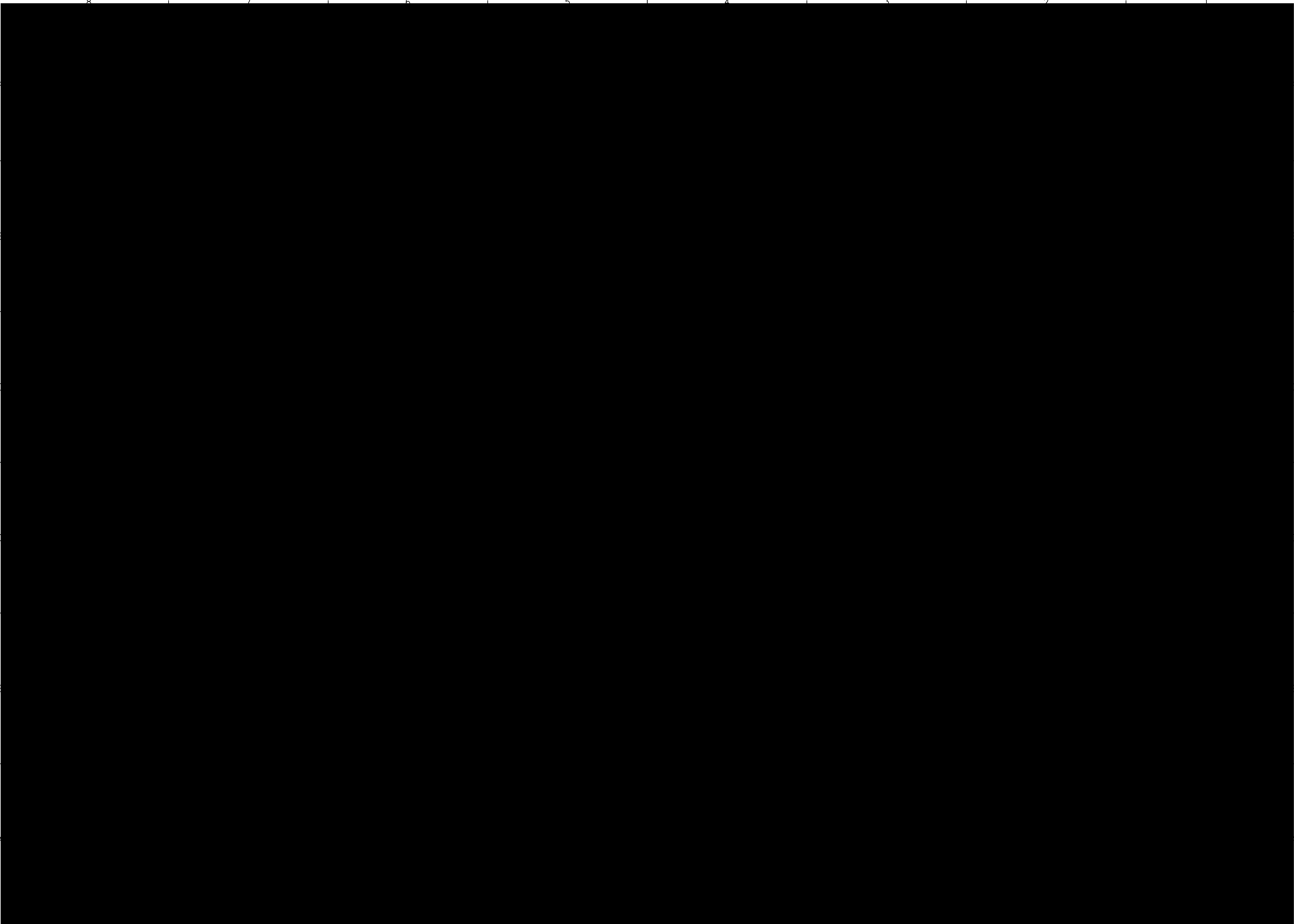
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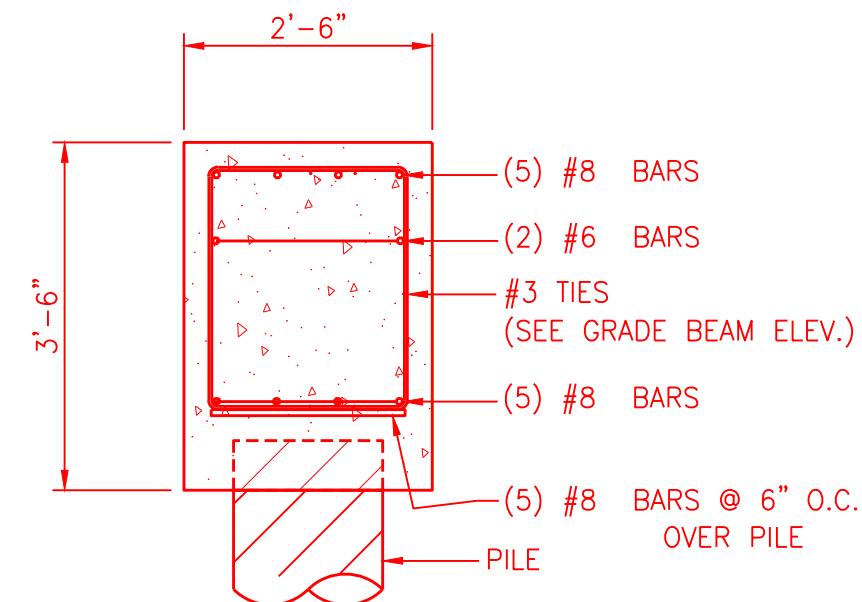
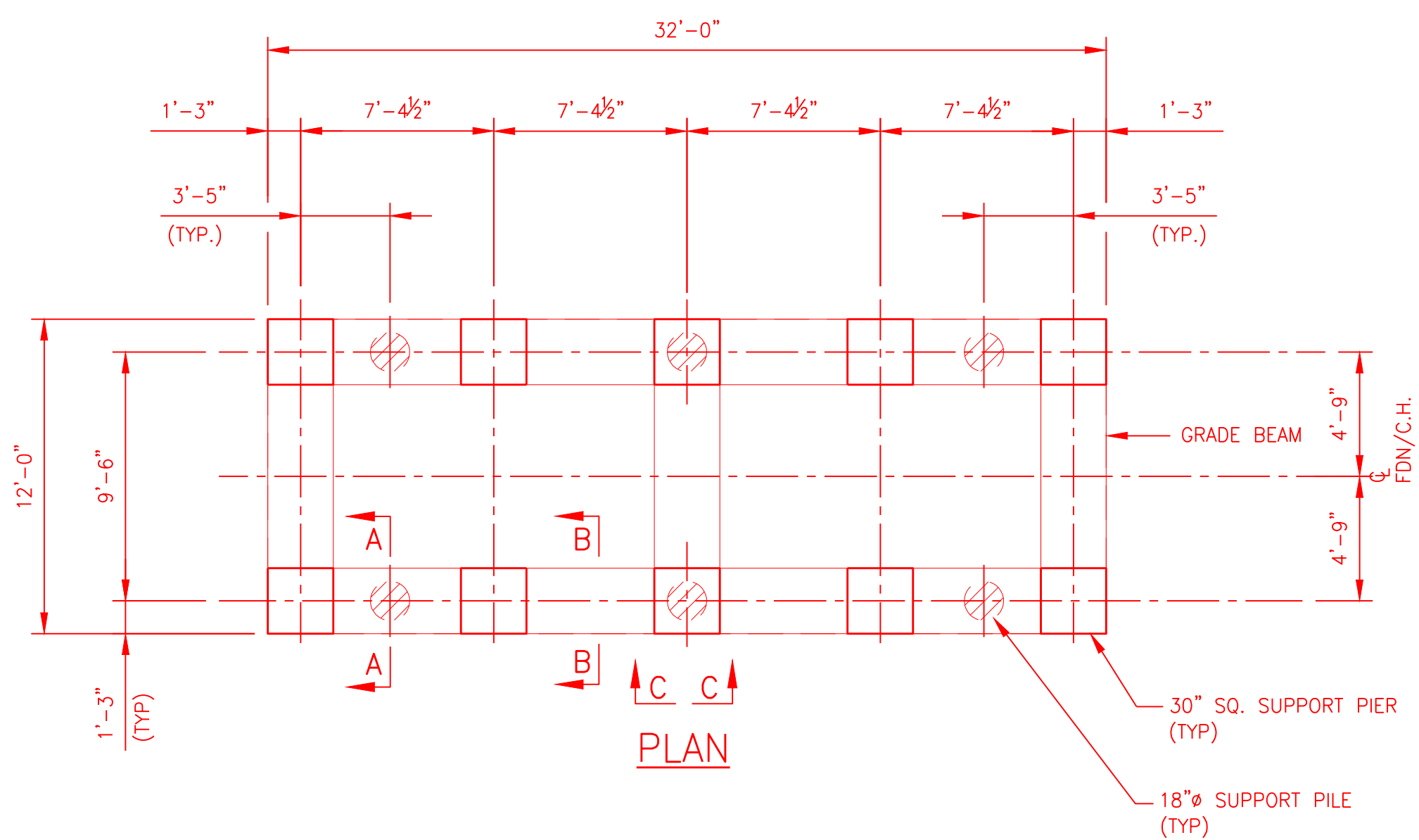
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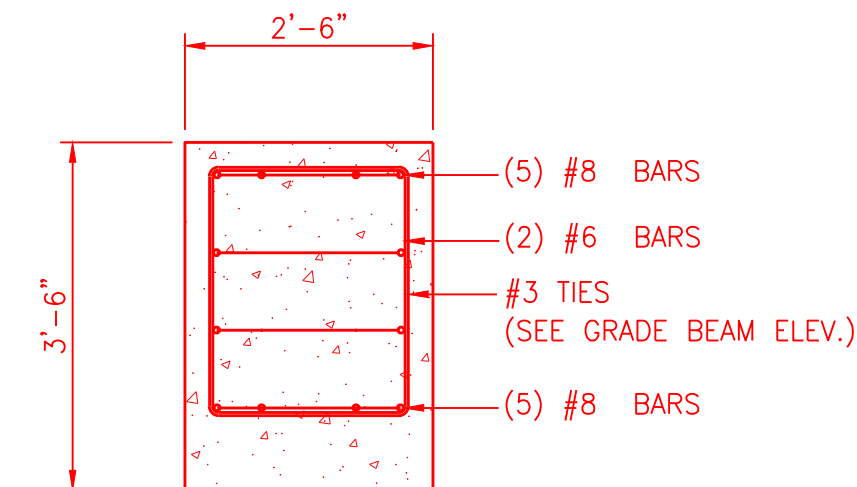
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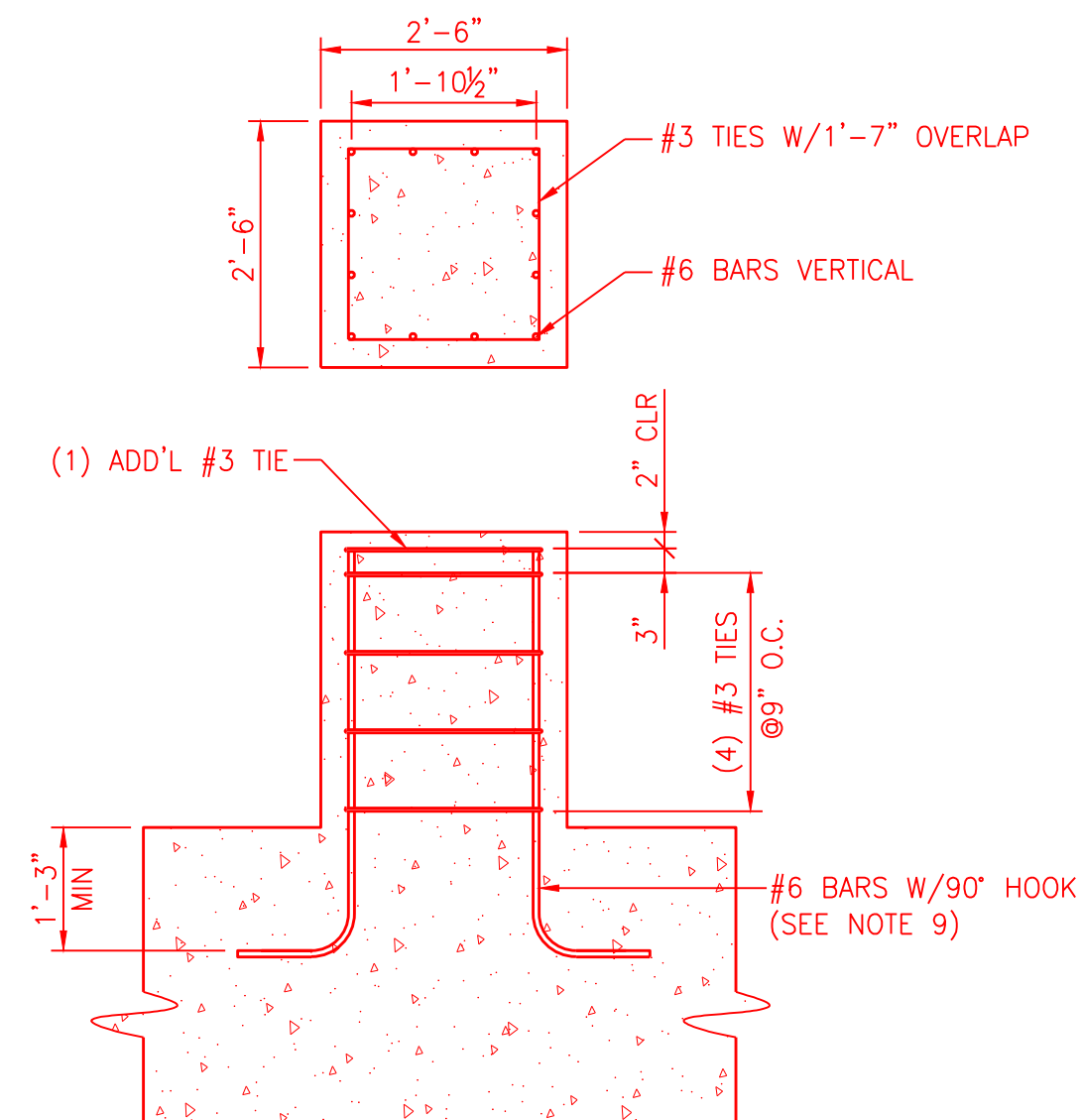




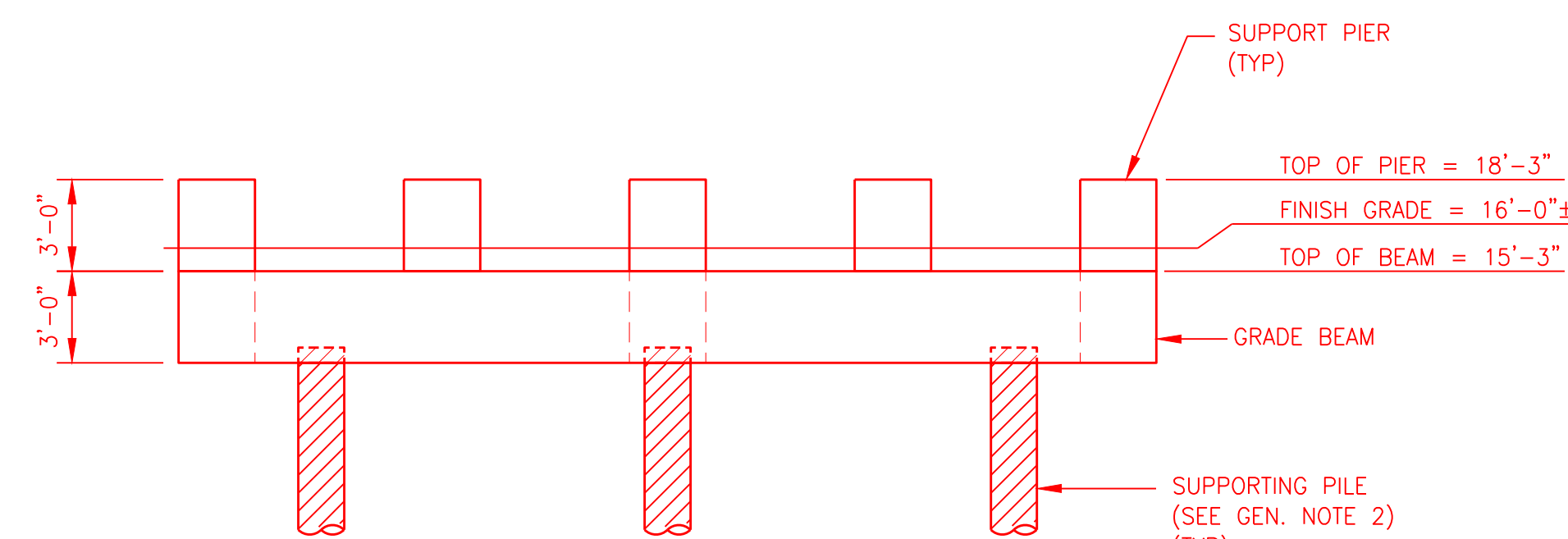
SECTION A-A
TYP. REINF. DETAIL
AT PILES
SCALE: 1/2" = 1'-0"



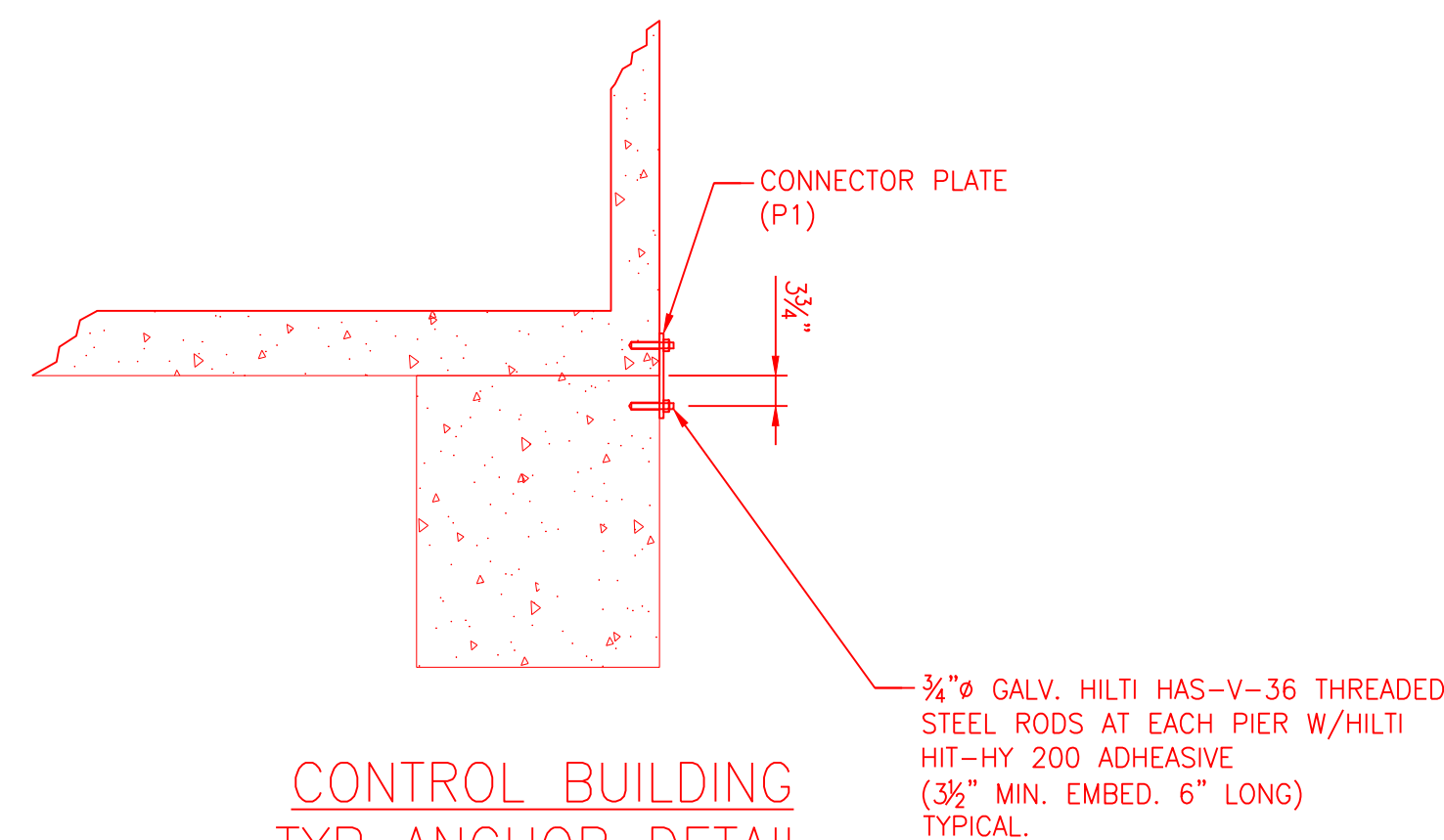
SECTION B-B
TYP. GRADE BEAM DETAIL
SCALE: 1/2" = 1'-0"



SECTION C-C
TYP. PIER DETAIL
SCALE: 1/2" = 1'-0"



CONTROL BUILDING FOUNDATION
(2 REQUIRED)
SCALE: 3/16" = 1'-0"



CONTROL BUILDING
TYP ANCHOR DETAIL
SCALE: 1/2" = 1'-0"

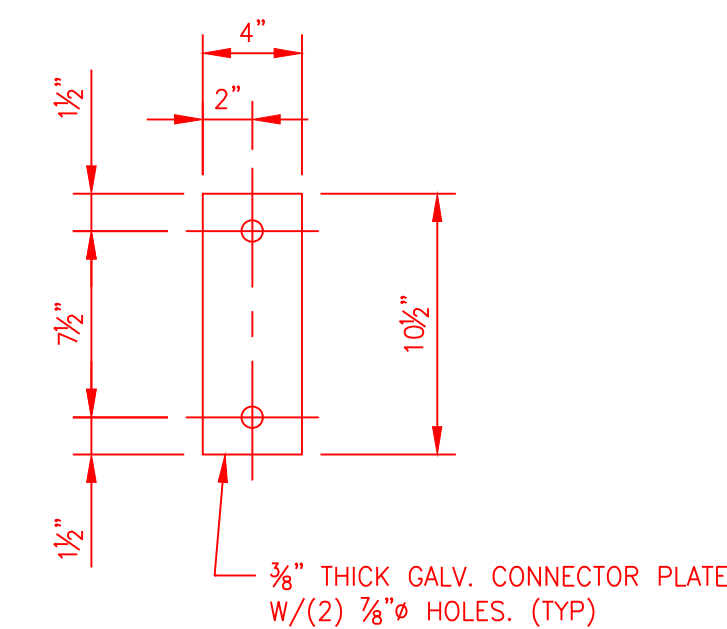
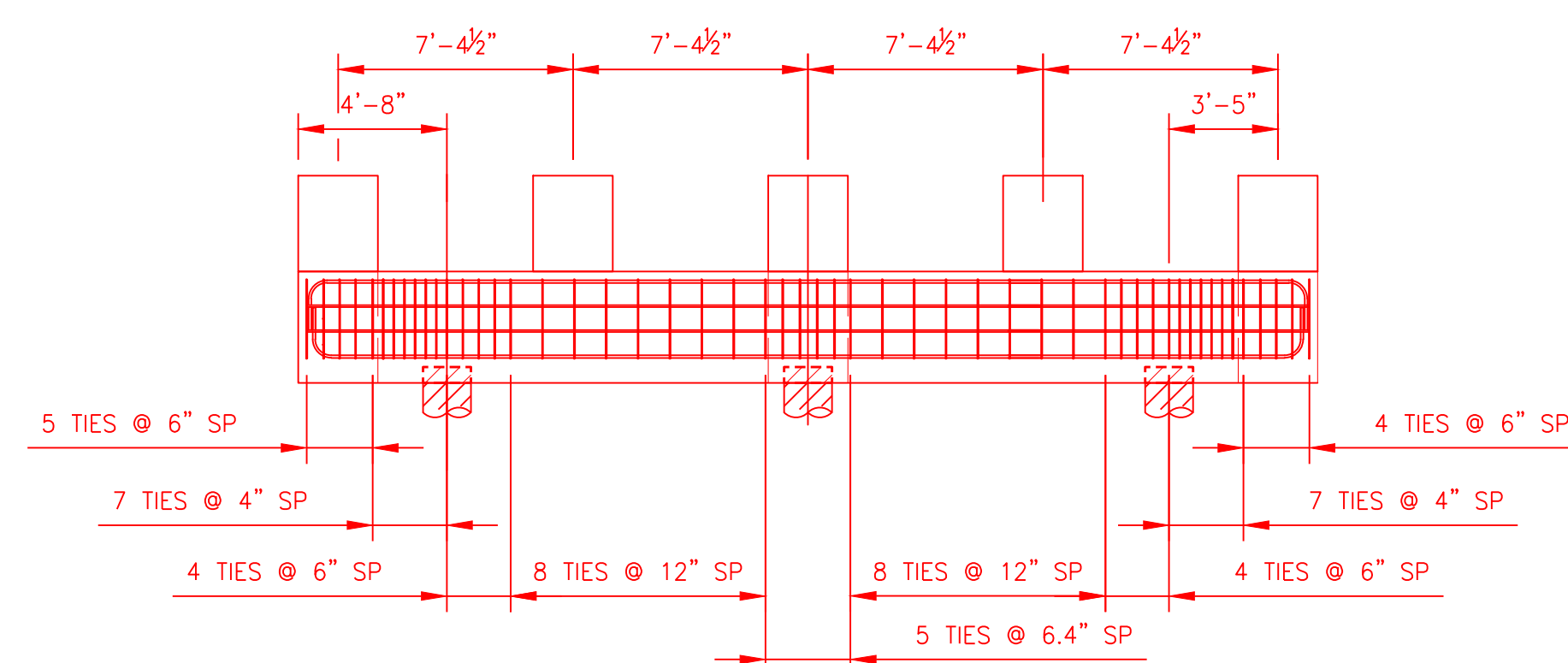



PLATE P1 DETAIL
SCALE: 1½" = 1'-0"



CONTROL BUILDING FOUNDATION
REINFORCING DETAILS
SCALE: 3/16" = 1'-0"

A					T	GP	NS
R	10/15/24	ISSUED FOR E&PG SUBMISSION			T	GP	NS
A	10/17/24	ISSUED FOR GOG REVIEW			T	GP	NS
REV	DATE	DESCRIPTION	PREPARED/REVIEWED/APPROVED				
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1 AAA DR, SUITE 201 HAMILTON, NJ 08691 PROJ. No. 15094-001

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SAFETY NOTES:

1. ALL WORK DONE BY CONTRACTOR/INSTALLER PURSUANT TO THIS DRAWING SHALL:
 - (A) CONFORM TO THE GOVERNING CONTRACT DOCUMENTS;
 - (B) BE PERFORMED EXCLUSIVELY BY ITS TRAINED, COMPETENT PERSONNEL, OR, WHERE PERMITTED, THAT OF ITS SUBCONTRACTOR(S);
2. ALL WORK SHALL COMPLY WITH ALL APPLICABLE SAFETY LAWS, REGULATIONS, PROGRAMS AND PRACTICES TO ENSURE THE SAFETY OF ALL LOCATED ON THE WORK SITE, INCLUDING THE CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S)) PERFORMING THE WORK.
3. UNDERGROUND OR EMBEDDED UTILITIES [MAY] EXIST WITHIN THE AREA OF AND ADJACENT TO THE LIMITS OF THE WORK, THE LOCATION OR IDENTIFICATION OF SUCH UTILITIES HAS NOT BEEN VERIFIED BY OWNER OR BY S&L. CONTRACTOR/INSTALLER IS RESPONSIBLE FOR FIELD LOCATING AND IDENTIFYING UNDERGROUND AND EMBEDDED UTILITIES AND ANY OTHER UNDERGROUND AND EMBEDDED UTILITY DIMENSIONS.
4. REFERENCES USED HAVE BEEN IDENTIFIED ON EXCAVATION/FOUNDATION/DEMOLITION DRAWINGS AND HAVE BEEN PROVIDED TO ASSIST THE CONTRACTOR/INSTALLER IN THE FIELD LOCATING EXISTING UTILITIES AND OTHER POTENTIAL UNDERGROUND OR EMBEDDED INTERFERENCES. THESE REFERENCES ONLY SHOW THE APPROXIMATE LOCATION OF POTENTIAL UNDERGROUND OR EMBEDDED UTILITIES AND MAY NOT INDICATE OR REFLECT ALL EXISTING UNDERGROUND EMBEDDED UTILITIES OR THEIR ACTUAL LOCATIONS.
5. REFERENCES IDENTIFIED SHALL NOT SUBSTITUTE FOR THE CONTRACTOR'S/INSTALLER'S OBLIGATION TO FIELD LOCATE ANY UNDERGROUND OR EMBEDDED UTILITIES OR INTERFERENCES THAT MAY AFFECT THE WORK.
6. DUE CAUTION SHALL BE TAKEN DURING ANY EXCAVATION/FOUNDATION/DEMOLITION WORK WITHIN THE AREA OF AND ADJACENT TO THE LIMITS OF THE WORK DUE TO POSSIBLE INTERFERENCES THAT MAY NOT BE REFLECTED ON THE REFERENCES IDENTIFIED.

GENERAL NOTES:

1. VERTICAL DATUM SHOWN IS NAVD 88 (GEOID 18).
2. FOR CONNECTION DETAIL OF PILE TO GRADE BEAM SEE
DWG. 3096394 AA-FP031_SHT_02.

CONCRETE NOTES:

1. ALL CONCRETE WORK, DETAILS AND CONSTRUCTION SHALL CONFORM TO ACI 301 AND ACI 310.
2. CONCRETE SHALL HAVE 4500 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS WITH A MAXIMUM AGGREGATE SIZE OF 3/4 INCH AND BE AIR ENTRAINED 5% +/- 1%, UNLESS NOTED OTHERWISE.
3. ALL REINFORCING SHALL BE DEFORMED BARS OF NEW BILLET STEEL OF DOMESTIC MANUFACTURE, CONFORMING TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
4. CONCRETE FORMS SHALL BE EXTERIOR GRADE PLYWOOD OR METAL PRODUCING SMOOTH FINISH WHERE APPEARANCE IS ESSENTIAL.
5. ALL EXPOSED OUTSIDE CORNERS SHALL BE CHAMFERED AT 3/4 INCH, (U.N.O.).
6. CONCRETE COVER TO REINFORCING UNLESS NOTED OTHERWISE SHALL BE:
TOP AND FORMED SURFACES: 2 INCHES
CONCRETE CAST AGAINST EARTH: 3 INCHES
7. FOUNDATIONS TO BE MONOLITHIC UNLESS CONSTRUCTION JOINTS ARE SPECIFIED.
8. TOP OF CONCRETE ELEVATION TOLERANCE TO BE +1/4 INCH FROM VALUE SHOWN.
9. FOR PIER VERTICAL REINFORCEMENT TURN HOOKS INWARD, WHERE REQUIRED, TO MAINTAIN 2" SURFACE CLEARANCE TO OUTSIDE GRADE BERM SURFACES.

EXCAVATION NOTES:



1. BACKFILLING AGAINST NEW FOUNDATION WALLS SHALL BE DONE CAREFULLY USING PORTABLE COMPACTION EQUIPMENT.
2. SITE PREPARATION: EXCAVATE TO THE BOTTOM OF FOUNDATION AND COMPACT THE BOTTOM SURFACE TO ACHIEVE A MINIMUM DRY DENSITY OF 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D968). THIS DENSITY SHOULD BE DEVELOPED TO A MAXIMUM DEPTH OF 12 INCHES BELOW THE FOUNDATION, OVER-EXCAVATE AND RE-COMPACT AS NECESSARY.
3. EXCAVATIONS FOR FOUNDATIONS SHALL BE KEPT FREE OF WATER & BOTTOMS OF EXCAVATIONS SHALL BE KEPT FREE OF DEBRIS, WASTE, & DELETERIOUS MATERIAL. ALL FOUNDATIONS SHALL BE INSPECTED AND FOUNDATION CONCRETE PLACED IN THE SAME DAY THAT EXCAVATIONS ARE DONE.
4. CONTRACTOR TO CALL NEW YORK ONE-CALL SYSTEM PRIOR TO ANY EXCAVATIONS.

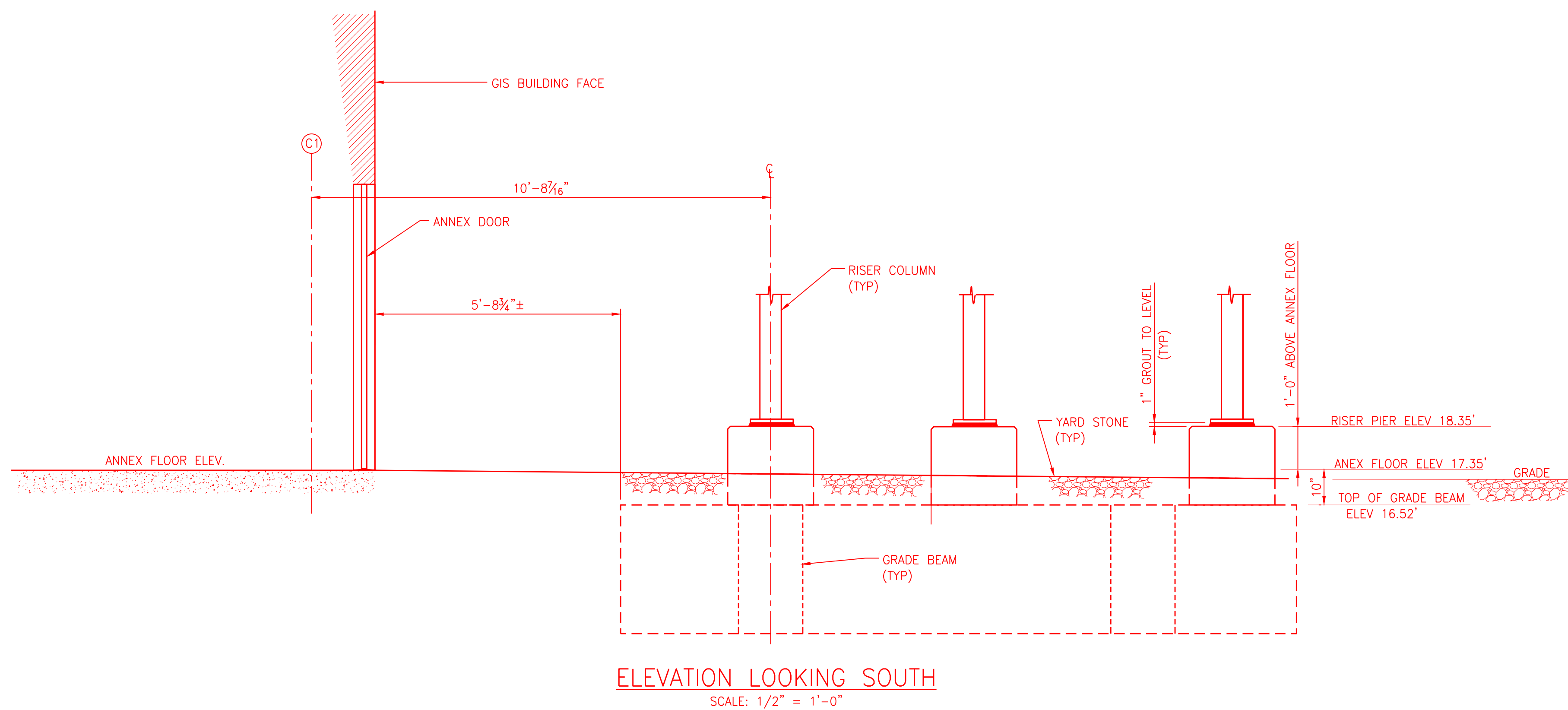
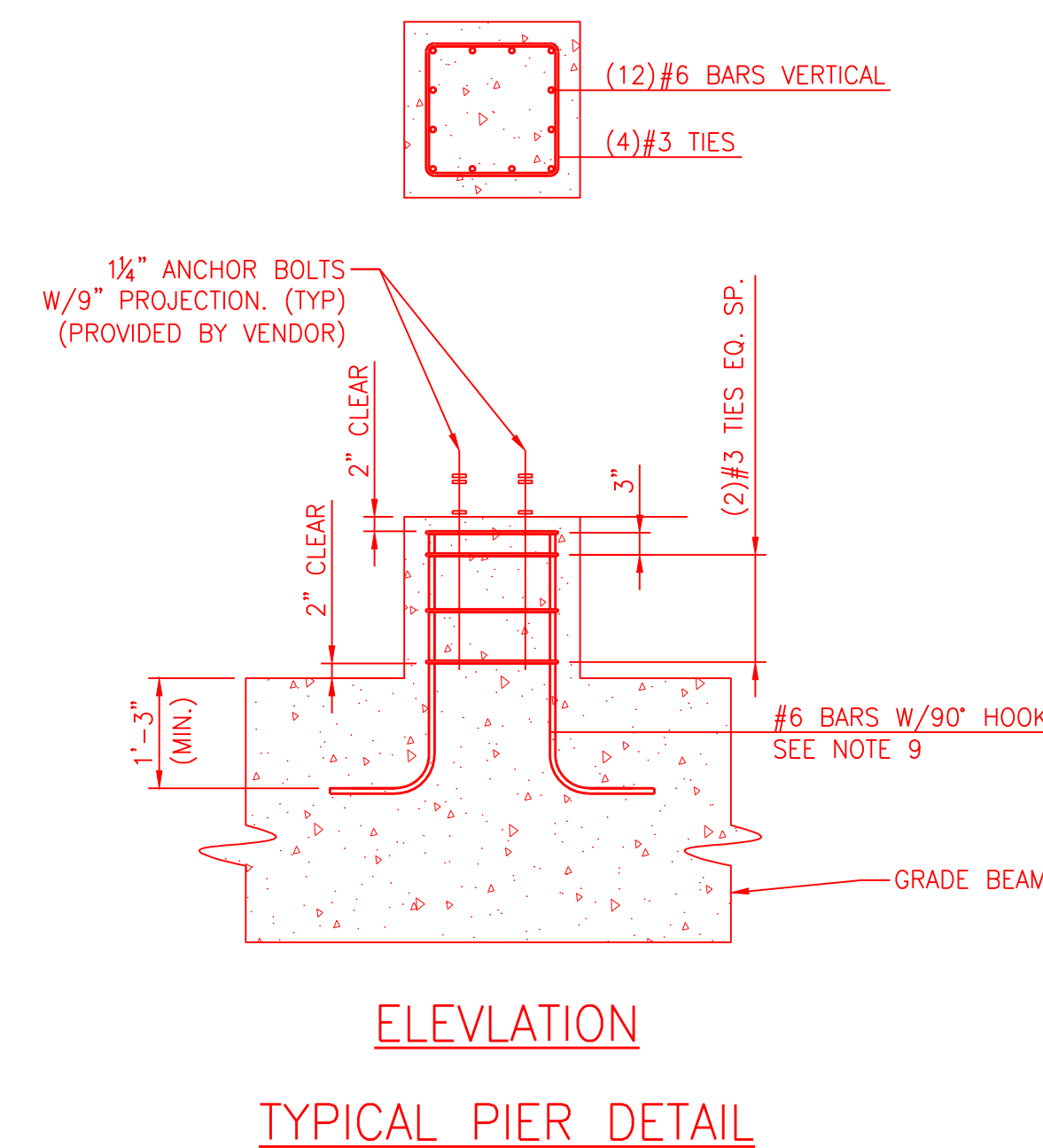
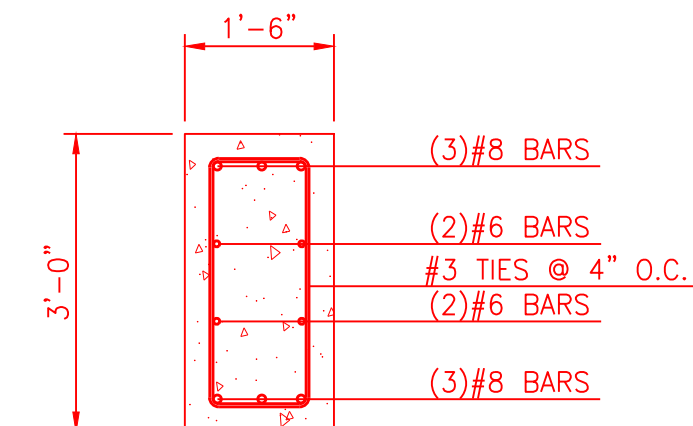
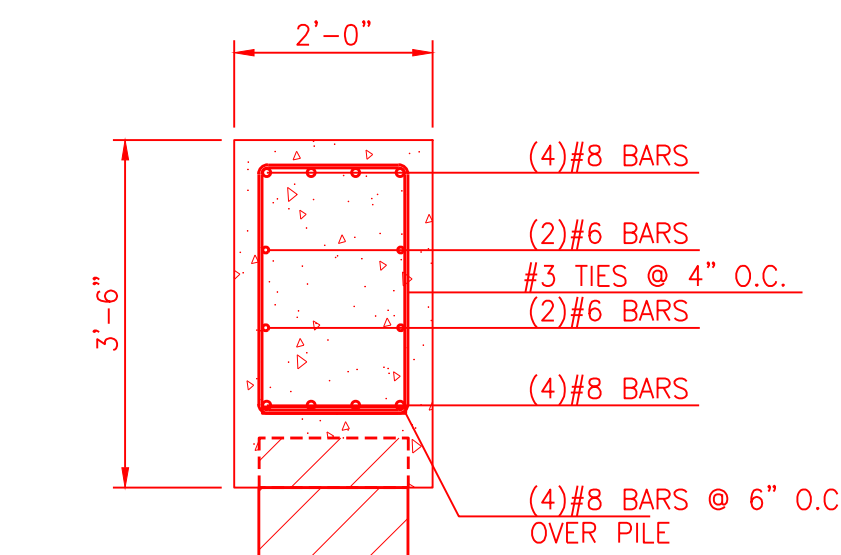
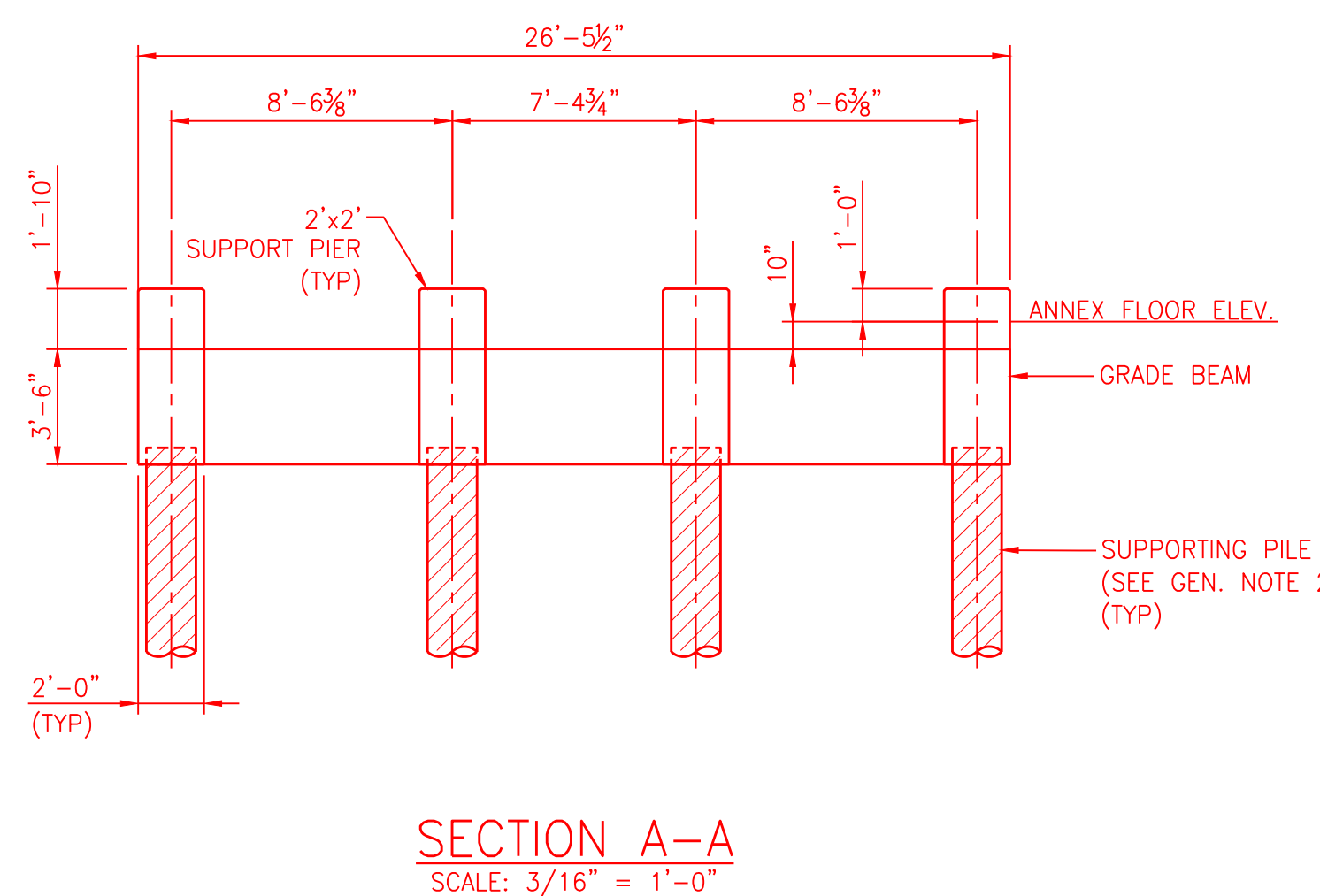
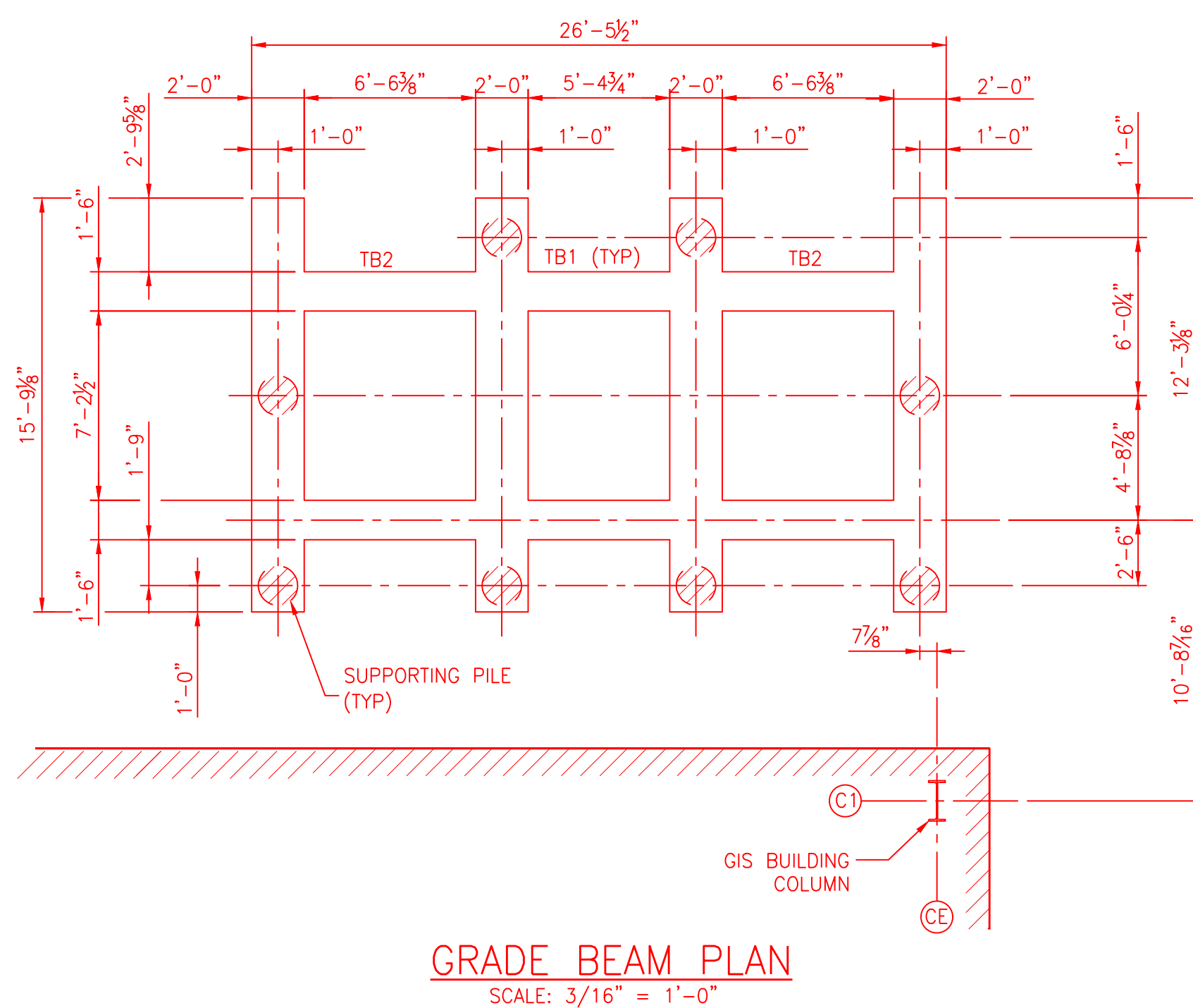
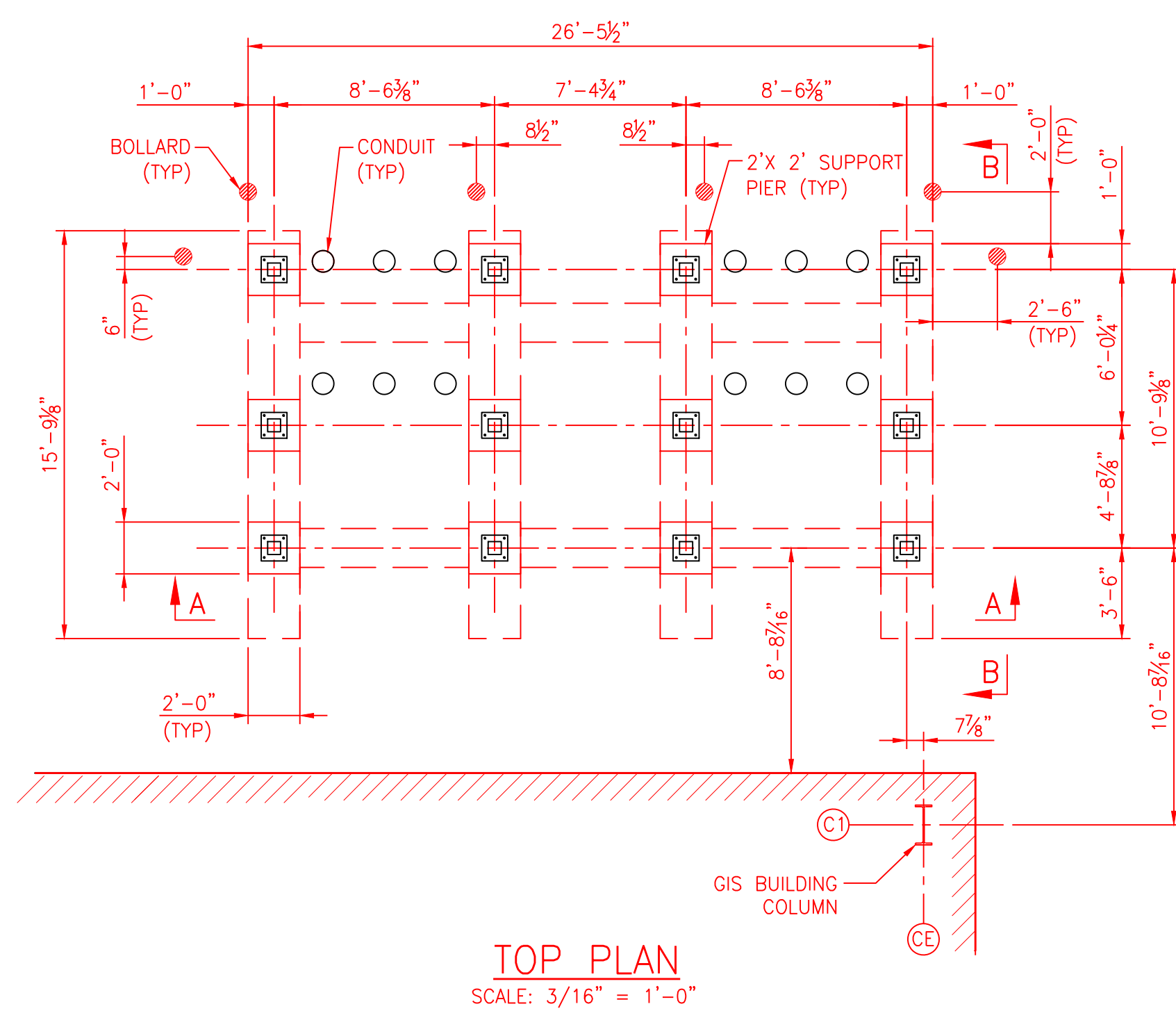
REFERENCE DRAWINGS:

- 3096394-201-01 - FOUNDATION PLAN AND SCHEDULE
- CHPE-E-PH-001 - CONTROL BUILDING #2 AND #3 PLAN VIEW
- CHPE-E-PH-008 - CONTROL BUILDING #2 AND #3 SECTIONS - SHEET 1
- CHPE-E-PH-009 - CONTROL BUILDING #2 AND #3 SECTIONS - SHEET 2
- CO31 SHEET 1 OF 2 - GRADING PLAN
- FO31 SHEET 1 OF 7 - PILE PLAN

LEGEND

RED MODIFICATION
BLACK EXISTING
CYAN CONSTRUCTION INFO.

0	ISSUED FOR CONSTRUCTION, MRM 30965394 - 1250MW INTERCONNECTION TO THE NYPA'S 345KV ASTORIA ANNEX SUBSTATION, ASTORIA, QUEENS, NY							
REV NO	DATE	REVISIONS				DWN	CHK	RWD
DRAWN:		<p align="center">CHARLES POLETTI SUBSTATION ASTORIA, NEW YORK ASTORIA ANNEX SUBSTATION</p> <p align="center">CONTROL BUILDING FOUNDATION PLAN, ELEVATION AND SECTIONS</p>						
CHECKED:								
REVIEWED:								
APPROVED:								
DATE:								
				SCALE: AS NOTED DWG NO. CHPE-CS-C-001 SHEET NO.			REV 0	

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LEGEND

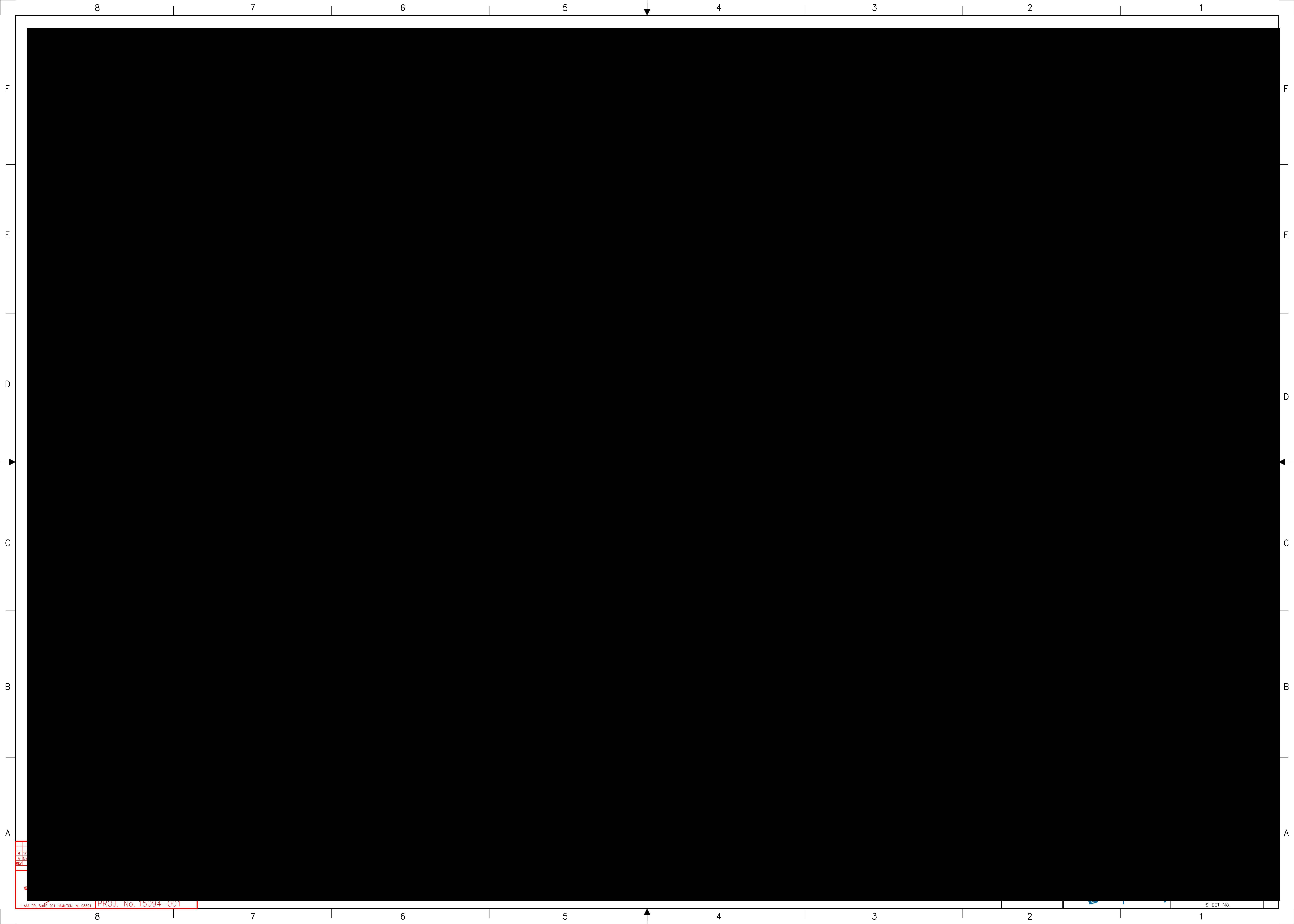
RED	MODIFICATION
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CYAN	CONSTRUCTION INFO.

NOT FOR
CONSTRUCTION

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0	ISSUED FOR CONSTRUCTION, MRM 3096394 - 1250MW INTERCONNECTION TO THE NYPA'S 345KV ASTORIA ANNEX SUBSTATION, ASTORIA, QUEENS, NY								
REV NO	DATE	REVISIONS				DWN	CHK	RWD	AP
DRAWN:		<p align="center">CHARLES POLETTI SUBSTATION ASTORIA, NEW YORK ASTORIA ANNEX SUBSTATION</p> <p align="center">GIS RISER FOUNDATION PLANS, ELEVATION AND SECTIONS</p>							
CHECKED:									
REVIEWED:									
APPROVED:									
DATE:									
						SCALE: AS NOTED DWG NO. CHPE-CS-C-002 SHEET NO.		REV 0	



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F F

E E

D D

C C

B B

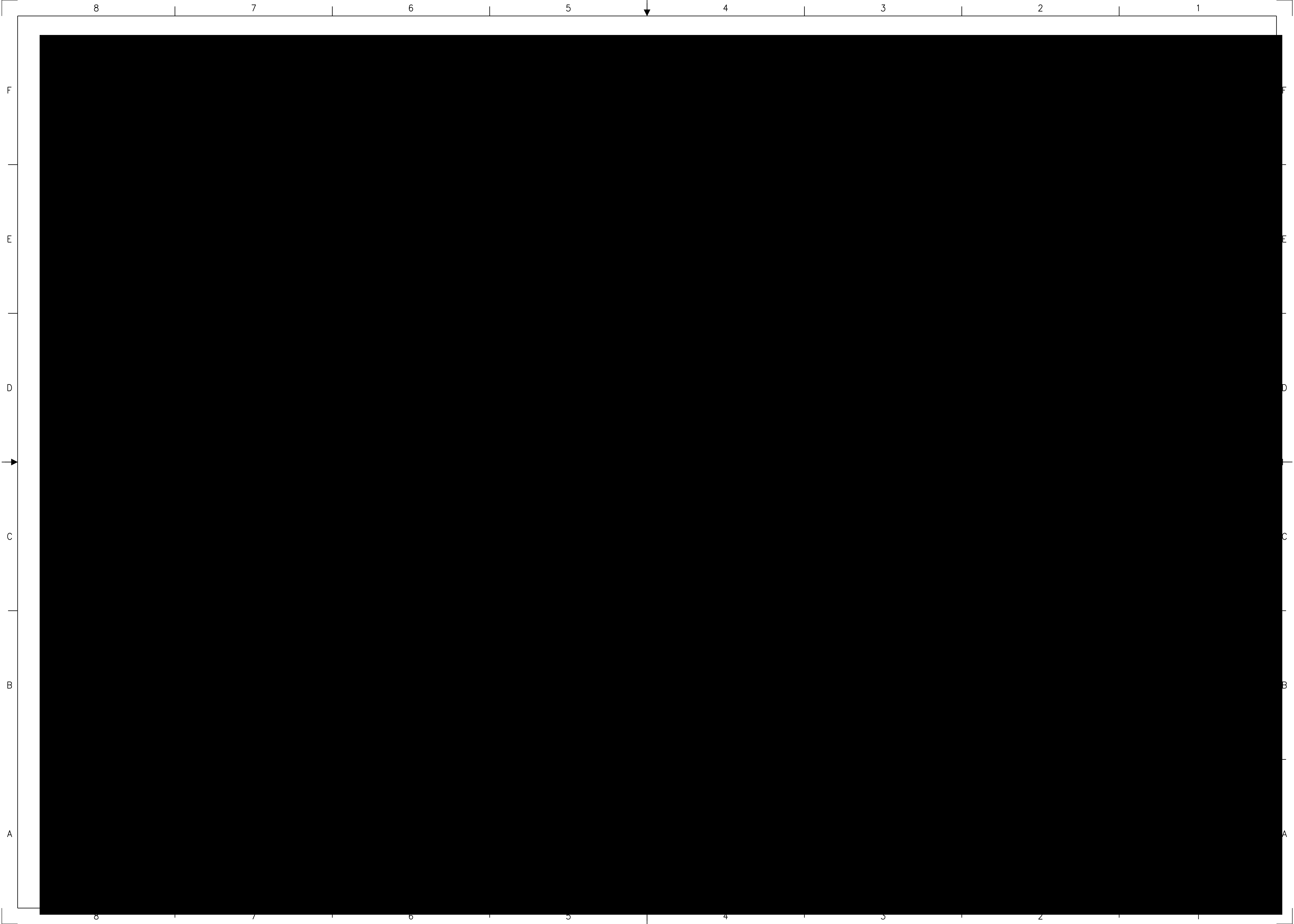
A A

12.11.15
A.105
REV

1 AAA DR. SUITE 201 HAMILTON, NJ 08691

PROJ. No. 15094-001

SHEET NO.









345kV TRANSMISSION LINE POLE DATA SHEET															
STR NUMBER	STR COORD. X	STR COORD. Y	LATITUDE (DEG)	LONGITUDE (DEG)	ELEVATION (FT)	STA (FT)	AHEAD SPAN (FT)	LINE ANGLE (DEG)	STRUCTURE TYPE/CONFIGURATION	STANDARD STRUCTURE FRAMING DRAWING	POLE LENGTH (FT)	STR AGL (FT)	FOUNDATION TYPE (HOLD)	ESTIMATED FOUNDATION DIAMETER (FT)	COMMENT
Converter Sub. Gantry	1011564.69	225974.05	40.78688048	-73.90136232	9.76	0.00	82.79	0.00	GANTRY DE STRUCTURE	N/A	85.0	60.0	DRILLED PIER OR MICROPILE	TBD	
P1	1011508.71	225913.05	40.78671323	-73.90156472	10.00	82.79	447.76	27.01	DEADEND	CHPE-FRAMING-001	140.0	141.0	DRILLED PIER OR MICROPILE	TBD	
P2	1011089.17	225756.60	40.78628510	-73.90308036	8.94	530.56	493.38	-32.66	RUNNING ANGLE	CHPE-FRAMING-001	145.0	146.0	DRILLED PIER OR MICROPILE	TBD	
P3	1010793.00	225362.00	40.78520292	-73.90415143	13.89	1023.94	353.44	-84.11	DEADEND	CHPE-FRAMING-001	145.0	146.0	DRILLED PIER OR MICROPILE	TBD	
P4A	1011052.41	225121.95	40.78454327	-73.90321564	14.04	1377.38	0.00	0.00	OH/UG RISER	CHPE-FRAMING-001	155.0	156.0	DRILLED PIER OR MICROPILE	TBD	
P4B	1011015.72	225155.90	40.78463656	-73.90334799	14.24	1327.39	0.00	0.00	OH/UG RISER	CHPE-FRAMING-001	119.0	120.0	DRILLED PIER OR MICROPILE	TBD	
P4C	1010978.95	225189.93	40.78473006	-73.90348063	14.59	1277.29	0.00	0.00	OH/UG RISER	CHPE-FRAMING-001	97.0	98.0	DRILLED PIER OR MICROPILE	TBD	



345KV HVAC TRANSMISSION LINE OF ASTORIA ANNEX SUBSTATION MODIFICATION BILL-OF-MATERIAL (BOM)





Bill of Material of New Items for Structure Converter Gantry

Stock Number	Description	Quantity	Unit of Measure	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
8003269H3	Download Cushion (PLP)	16.00	Each	0.00	0.00	0.00	0.00	0.00
947604006	Yoke Plate (HUBBELL)	3.00	Each	0.00	0.00	0.00	0.00	0.00
974153001	Anchor Shackle, 50k (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
ANSH30L-BNC	Anchor Shackle, 30k (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
APCKH631/646	OPGW Connector Kit (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
AS50WBNKSN	Anchor Shackle, 50k (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
BWAL50H/50H60	Bonding Wire 60" (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
CB-44-3AL	External Coil Bracket (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
CGTS-0112HT	Cushion-Grip Twin Spacer (PLP)	3.00	Each	0.00	0.00	0.00	0.00	0.00
DEDA3309SSAC	Compression Deadend w/Terminal (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
LK120CVN	Chain Link (HUBBELL)	3.00	Each	0.00	0.00	0.00	0.00	0.00
ODEC640/649G09	Bolted Dead End for OPGW (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
ODELP10	Dead End Link Plate 12" (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
OG03	Opti-Guard Splice Enclosure (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
OGFK01	Opti-Guard Fiber Routing Kit (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
OGST01-72	Opti-Guard Splice Tray (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
S050103S201B	Insulator, ANSI 52-11 117.8" (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
SYC50SN	Socket Y-Clevis (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
YPR50190508	Yoke Plate (HUBBELL)	3.00	Each	0.00	0.00	0.00	0.00	0.00





Bill of Material of New Items for Structure P1

Stock Number	Description	Quantity	Unit of Measure	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
7 No. 8	7-Wire Strand Copper Wire (Copperweld)	200.00	(ft)	0.00	0.00	0.00	0.00	0.00
271724-3001	Clamp Assembly (HUBBELL)	5.00	Each	0.00	0.00	0.00	0.00	0.00
611380	Copper-Bonded Ground Rod, 0.5" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
5050203	Spirial Vibration Damper (PLP)	4.00	Each	0.00	0.00	0.00	0.00	0.00
947604006	Yoke Plate (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
974153001	Anchor Shackle, 50k (HUBBELL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
AP8141	Armor Rods (HUBBELL)	10.00	Each	0.00	0.00	0.00	0.00	0.00
AS50WBNKSN	Anchor Shackle, 50k (HUBBELL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
BWAL50H/50H60	Bonding Wire 60" (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
CC58	Compression Coupler, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
CC207	Transformer Tank Grounding Connectors (nVent)	1.00	Each	0.00	0.00	0.00	0.00	0.00
CGTS-0112HT	Cushion-Grip Twin Spacer (PLP)	9.00	Each	0.00	0.00	0.00	0.00	0.00
HDC58	Ground Rod Clamps, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
HPS-P250109S107	Post property: P250109S107	5.00	Each	0.00	0.00	0.00	0.00	0.00
LK120CVN	Chain Link (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
OB-513021-1001	Strain property: OB-513021-1001	6.00	Each	0.00	0.00	0.00	0.00	0.00
ODEC640/649G09	Bolted Dead End for OPGW (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
ODELP10	Dead End Link Plate 12" (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
P250101S002A	Insulator, Post w/Ring 112.7" (HUBBELL)	5.00	Each	0.00	0.00	0.00	0.00	0.00
S050103S201B	Insulator, ANSI 52-11 117.8" (HUBBELL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
SEDA3309SSAC	Compression Deadend w/Terminal (HUBBELL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
SYC50SN	Socket Y-Clevis (HUBBELL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
VSD-4050	Stockbridge Vibration Damper (PLP)	12.00	Each	0.00	0.00	0.00	0.00	0.00
YPR50190508	Yoke Plate (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00





Bill of Material of New Items for Structure P2

Stock Number	Description	Quantity	Unit of Measure	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
7 No. 8	7-Wire Strand Copper Wire (Copperweld)	200.00	(ft)	0.00	0.00	0.00	0.00	0.00
611380	Copper-Bonded Ground Rod, 0.5" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
AP8141	Armor Rods (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
AS50BNK	Anchor Shackle (HUBBELL)	3.00	Each	0.00	0.00	0.00	0.00	0.00
BWAL50H/50H60	Bonding Wire 60" (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
CC58	Compression Coupler, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
CC207	Transformer Tank Grounding Connectors (nVent)	1.00	Each	0.00	0.00	0.00	0.00	0.00
CGTS-0112HT	Cushion-Grip Twin Spacer (PLP)	9.00	Each	0.00	0.00	0.00	0.00	0.00
HCSA1118	Helical Cushion Suspension Clamp (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
HDC58	Ground Rod Clamps, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
HOS645/659	HIBUS OPGW Suspension Clamp Assembly (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
S050103S201B	Insulator, ANSI 52-11 117.8" (HUBBELL)	3.00	Each	0.00	0.00	0.00	0.00	0.00
SCE-55-625	Clevis Eye (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
SUMEYP	Yoke Plate (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
SYC50SN	Socket Y-Clevis (HUBBELL)	3.00	Each	0.00	0.00	0.00	0.00	0.00
YCC	Y-Clevis Clevis (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
YPD50185491	Yoke Plate (HUBBELL)	3.00	Each	0.00	0.00	0.00	0.00	0.00





Bill of Material of New Items for Structure P3

Stock Number	Description	Quantity	Unit of Measure	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
7 No. 8	7-Wire Strand Copper Wire (Copperweld)	200.00	(ft)	0.00	0.00	0.00	0.00	0.00
271724-3001	Clamp Assembly (HUBBELL)	3.00	Each	0.00	0.00	0.00	0.00	0.00
611380	Copper-Bonded Ground Rod, 0.5" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
5050203	Spirial Vibration Damper (PLP)	4.00	Each	0.00	0.00	0.00	0.00	0.00
947604006	Yoke Plate (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
974153001	Anchor Shackle, 50k (HUBBELL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
AP8141	Armor Rods (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
AS50WBNKSN	Anchor Shackle, 50k (HUBBELL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
BWAL50H/50H60	Bonding Wire 60" (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
CC58	Compression Coupler, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
CC207	Transformer Tank Grounding Connectors (nVent)	1.00	Each	0.00	0.00	0.00	0.00	0.00
CGTS-0112HT	Cushion-Grip Twin Spacer (PLP)	9.00	Each	0.00	0.00	0.00	0.00	0.00
HDC58	Ground Rod Clamps, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
LK120CVN	Chain Link (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
ODEC640/649G09	Bolted Dead End for OPGW (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
ODELP10	Dead End Link Plate 12" (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
P250101S002A	Insulator, Post w/Ring 112.7" (HUBBELL)	3.00	Each	0.00	0.00	0.00	0.00	0.00
S050103S201B	Insulator, ANSI 52-11 117.8" (HUBBELL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
SEDA3309SSAC	Compression Deadend w/Terminal (HUBBELL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
SYC50SN	Socket Y-Clevis (HUBBELL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
YPR50190508	Yoke Plate (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00





Bill of Material of New Items for Structure P4C

Stock Number	Description	Quantity	Unit of Measure	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
7 No. 8	7-Wire Strand Copper Wire (Copperweld)	200.00	(ft)	0.00	0.00	0.00	0.00	0.00
271724-3001	Clamp Assembly (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
611380	Copper-Bonded Ground Rod, 0.5" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
947604006	Yoke Plate (HUBBELL)	1.00	Each	0.00	0.00	0.00	0.00	0.00
974153001	Anchor Shackle, 50k (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
AP8141	Armor Rods (HUBBELL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
AS50WBNKSN	Anchor Shackle, 50k (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
CC58	Compression Coupler, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
CC207	Transformer Tank Grounding Connectors (nVent)	1.00	Each	0.00	0.00	0.00	0.00	0.00
HDC58	Ground Rod Clamps, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
LK120CVN	Chain Link (HUBBELL)	1.00	Each	0.00	0.00	0.00	0.00	0.00
P250101S002A	Insulator, Post w/Ring 112.7" (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
S050103S201B	Insulator, ANSI 52-11 117.8" (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
SEDA3309SSAC	Compression Deadend w/Terminal (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
SYC50SN	Socket Y-Clevis (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
YPR50190508	Yoke Plate (HUBBELL)	1.00	Each	0.00	0.00	0.00	0.00	0.00





Bill of Material of New Items for Structure P4B

Stock Number	Description	Quantity	Unit of Measure	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
7 No. 8	7-Wire Strand Copper Wire (Copperweld)	200.00	(ft)	0.00	0.00	0.00	0.00	0.00
271724-3001	Clamp Assembly (HUBBELL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
611380	Copper-Bonded Ground Rod, 0.5" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
947604006	Yoke Plate (HUBBELL)	1.00	Each	0.00	0.00	0.00	0.00	0.00
974153001	Anchor Shackle, 50k (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
AP8141	Armor Rods (HUBBELL)	8.00	Each	0.00	0.00	0.00	0.00	0.00
AS50WBNKSN	Anchor Shackle, 50k (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
CC58	Compression Coupler, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
CC207	Transformer Tank Grounding Connectors (nVent)	1.00	Each	0.00	0.00	0.00	0.00	0.00
HDC58	Ground Rod Clamps, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
LK120CVN	Chain Link (HUBBELL)	1.00	Each	0.00	0.00	0.00	0.00	0.00
P250101S002A	Insulator, Post w/Ring 112.7" (HUBBELL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
S050103S201B	Insulator, ANSI 52-11 117.8" (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
SEDA3309SSAC	Compression Deadend w/Terminal (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
SYC50SN	Socket Y-Clevis (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
YPR50190508	Yoke Plate (HUBBELL)	1.00	Each	0.00	0.00	0.00	0.00	0.00





Bill of Material of New Items for Structure P4A

Stock Number	Description	Quantity	Unit of Measure	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
7 No. 8	7-Wire Strand Copper Wire (Copperweld)	200.00	(ft)	0.00	0.00	0.00	0.00	0.00
271724-3001	Clamp Assembly (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
611380	Copper-Bonded Ground Rod, 0.5" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
8003269H3	Downlead Cushion (PLP)	30.00	Each	0.00	0.00	0.00	0.00	0.00
947604006	Yoke Plate (HUBBELL)	1.00	Each	0.00	0.00	0.00	0.00	0.00
974153001	Anchor Shackle, 50k (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
AP8141	Armor Rods (HUBBELL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
APCKH631/646	OPGW Connector Kit (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
AS50WBNKSN	Anchor Shackle, 50k (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
CB-44-3AL	External Coil Bracket (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
CC58	Compression Coupler, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
CC207	Transformer Tank Grounding Connectors (nVent)	1.00	Each	0.00	0.00	0.00	0.00	0.00
HDC58	Ground Rod Clamps, 5/8" (nVent)	10.00	Each	0.00	0.00	0.00	0.00	0.00
LK120CVN	Chain Link (HUBBELL)	1.00	Each	0.00	0.00	0.00	0.00	0.00
ODEC640/649G09	Bolted Dead End for OPGW (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
ODELP10	Dead End Link Plate 12" (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
OG03	Opti-Guard Splice Enclosure (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
OGFK01	Opti-Guard Fiber Routing Kit (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
OGST01-72	Opti-Guard Splice Tray (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
P250101S002A	Insulator, Post w/Ring 112.7" (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
S050103S201B	Insulator, ANSI 52-11 117.8" (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
SEDA3309SSAC	Compression Deadend w/Terminal (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
SYC50SN	Socket Y-Clevis (HUBBELL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
YPR50190508	Yoke Plate (HUBBELL)	1.00	Each	0.00	0.00	0.00	0.00	0.00





Bill of Material of New Items

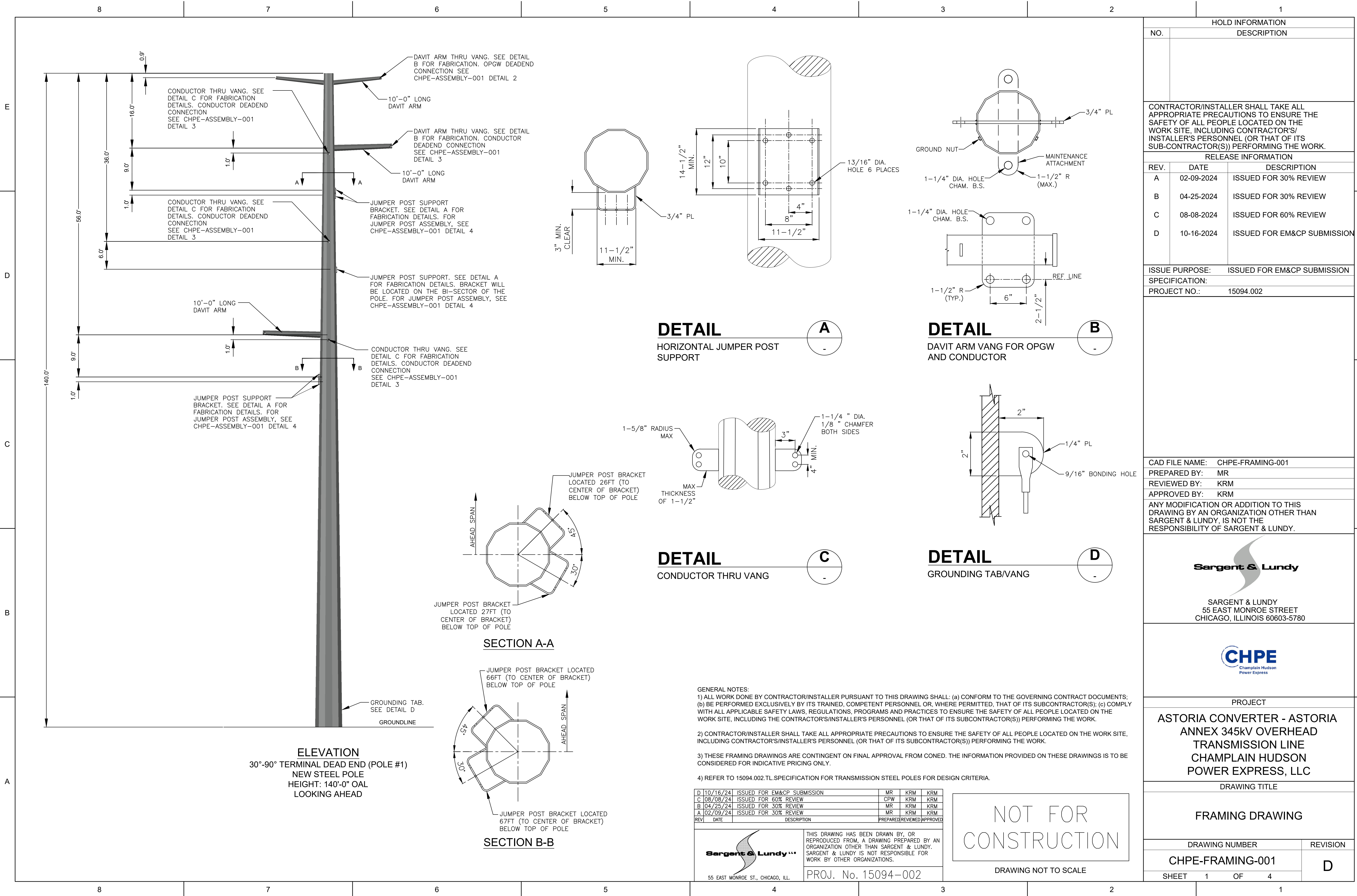
Stock Number	Description	Quantity	Unit of Measure	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
7 No. 8	7-Wire Strand Copper Wire (Copperweld)	1200.00	(ft)	0.00	0.00	0.00	0.00	0.00
271724-3001	Clamp Assembly (HUBBELL)	20.00	Each	0.00	0.00	0.00	0.00	0.00
611380	Copper-Bonded Ground Rod, 0.5" (nVent)	60.00	Each	0.00	0.00	0.00	0.00	0.00
5050203	Spirial Vibration Damper (PLP)	8.00	Each	0.00	0.00	0.00	0.00	0.00
8003269H3	Downlead Cushion (PLP)	46.00	Each	0.00	0.00	0.00	0.00	0.00
947604006	Yoke Plate (HUBBELL)	18.00	Each	0.00	0.00	0.00	0.00	0.00
974153001	Anchor Shackle, 50k (HUBBELL)	36.00	Each	0.00	0.00	0.00	0.00	0.00
AC-34/52/646	AlumaCore OPGW (AFL)	5000.00	(ft)	0.00	0.00	0.00	0.00	0.00
ANSH30L-BNC	Anchor Shackle, 30k (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
AP8141	Armor Rods (HUBBELL)	46.00	Each	0.00	0.00	0.00	0.00	0.00
APCKH631/646	OPGW Connector Kit (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
AS50BNK	Anchor Shackle (HUBBELL)	3.00	Each	0.00	0.00	0.00	0.00	0.00
AS50WBNKSN	Anchor Shackle, 50k (HUBBELL)	36.00	Each	0.00	0.00	0.00	0.00	0.00
BWAL50H/50H60	Bonding Wire 60" (AFL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
CB-44-3AL	External Coil Bracket (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
CC58	Compression Coupler, 5/8" (nVent)	60.00	Each	0.00	0.00	0.00	0.00	0.00
CC207	Transformer Tank Grounding Connectors (nVent)	6.00	Each	0.00	0.00	0.00	0.00	0.00
CGTS-0112HT	Cushion-Grip Twin Spacer (PLP)	30.00	Each	0.00	0.00	0.00	0.00	0.00
DEDA3309SSAC	Compression Deadend w/Terminal (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
Drake ACSS	Drake 795 kcmil 26/7 ACSS Conductor	10000.00	(ft)	0.00	0.00	0.00	0.00	0.00
HCSA1118	Helical Cushion Suspension Clamp (HUBBELL)	6.00	Each	0.00	0.00	0.00	0.00	0.00
HDC58	Ground Rod Clamps, 5/8" (nVent)	60.00	Each	0.00	0.00	0.00	0.00	0.00
HOS645/659	HIBUS OPGW Suspension Clamp Assembly (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
LK120CVN	Chain Link (HUBBELL)	18.00	Each	0.00	0.00	0.00	0.00	0.00
OB-513021-1001	Strain property: OB-513021-1001	6.00	Each	0.00	0.00	0.00	0.00	0.00
ODEC640/649G09	Bolted Dead End for OPGW (AFL)	12.00	Each	0.00	0.00	0.00	0.00	0.00
ODELP10	Dead End Link Plate 12" (AFL)	14.00	Each	0.00	0.00	0.00	0.00	0.00
OG03	Opti-Guard Splice Enclosure (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
OGFK01	Opti-Guard Fiber Routing Kit (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00





OGST01-72	Opti-Guard Splice Tray (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
P250101S002A	Insulator, Post w/Ring 112.7" (HUBBELL)	20.00	Each	0.00	0.00	0.00	0.00	0.00
S050103S201B	Insulator, ANSI 52-11 117.8" (HUBBELL)	39.00	Each	0.00	0.00	0.00	0.00	0.00
SCE-55-625	Clevis Eye (AFL)	4.00	Each	0.00	0.00	0.00	0.00	0.00
SEDA3309SSAC	Compression Deadend w/Terminal (HUBBELL)	30.00	Each	0.00	0.00	0.00	0.00	0.00
SUMEYP	Yoke Plate (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
SYC50SN	Socket Y-Clevis (HUBBELL)	39.00	Each	0.00	0.00	0.00	0.00	0.00
VSD-4050	Stockbridge Vibration Damper (PLP)	12.00	Each	0.00	0.00	0.00	0.00	0.00
YCC	Y-Clevis Clevis (AFL)	2.00	Each	0.00	0.00	0.00	0.00	0.00
YPD50185491	Yoke Plate (HUBBELL)	3.00	Each	0.00	0.00	0.00	0.00	0.00
YPR50190508	Yoke Plate (HUBBELL)	18.00	Each	0.00	0.00	0.00	0.00	0.00





DETAIL

HORIZONTAL JUMPER POST SUPPORT

DETAIL

DAVIT ARM VANG FOR OPGW AND CONDUCTOR

DETAIL

CONDUCTOR THRU VANG

DETAIL

GROUNDING TAB/VANG

SECTION A-A

SECTION B-B

- GENERAL NOTES:
- 1) ALL WORK DONE BY CONTRACTOR/INSTALLER PURSUANT TO THIS DRAWING SHALL: (a) CONFORM TO THE GOVERNING CONTRACT DOCUMENTS; (b) BE PERFORMED EXCLUSIVELY BY ITS TRAINED, COMPETENT PERSONNEL OR, WHERE PERMITTED, THAT OF ITS SUBCONTRACTOR(S); (c) COMPLY WITH ALL APPLICABLE SAFETY LAWS, REGULATIONS, PROGRAMS AND PRACTICES TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING THE CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S)) PERFORMING THE WORK.
 - 2) CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S)) PERFORMING THE WORK.
 - 3) THESE FRAMING DRAWINGS ARE CONTINGENT ON FINAL APPROVAL FROM CONED. THE INFORMATION PROVIDED ON THESE DRAWINGS IS TO BE CONSIDERED FOR INDICATIVE PRICING ONLY.
 - 4) REFER TO 15094.002.TL SPECIFICATION FOR TRANSMISSION STEEL POLES FOR DESIGN CRITERIA.

10/16/24

ISSUED FOR EM&CP SUBMISSION

MR

KRM

KRM

08/08/24

ISSUED FOR 60% REVIEW

CPW

KRM

KRM

04/25/24

ISSUED FOR 30% REVIEW

MR

KRM

KRM

02/09/24

ISSUED FOR 30% REVIEW

MR

KRM

KRM

REV

DATE

DESCRIPTION

PREPARED

REVIEWED

APPROVED



55 EAST MONROE ST., CHICAGO, ILL.

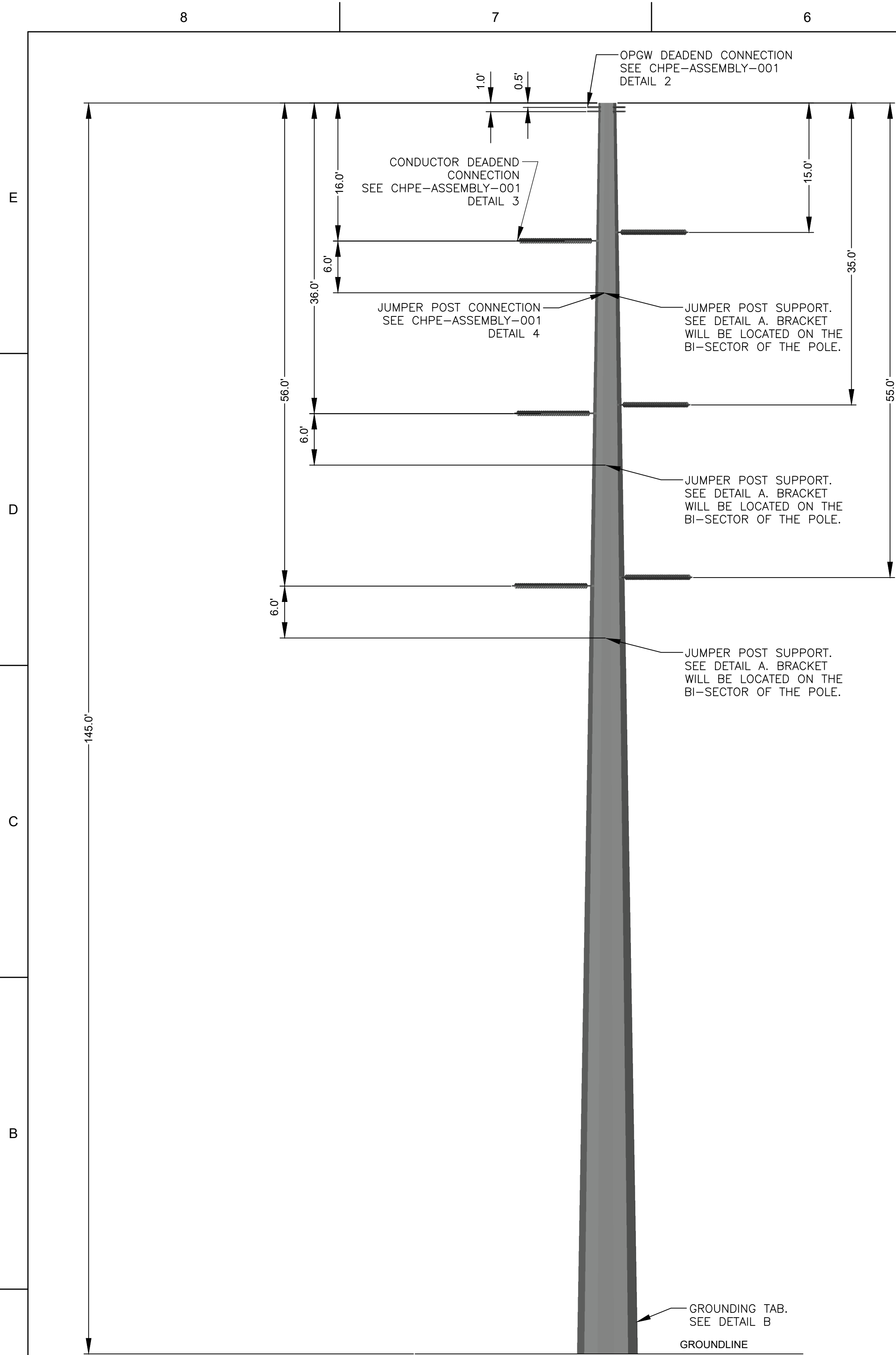
THIS DRAWING HAS BEEN DRAWN BY, OR REPRODUCED FROM, A DRAWING PREPARED BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY. SARGENT & LUNDY IS NOT RESPONSIBLE FOR WORK BY OTHER ORGANIZATIONS.

PROJ. No. 15094-002

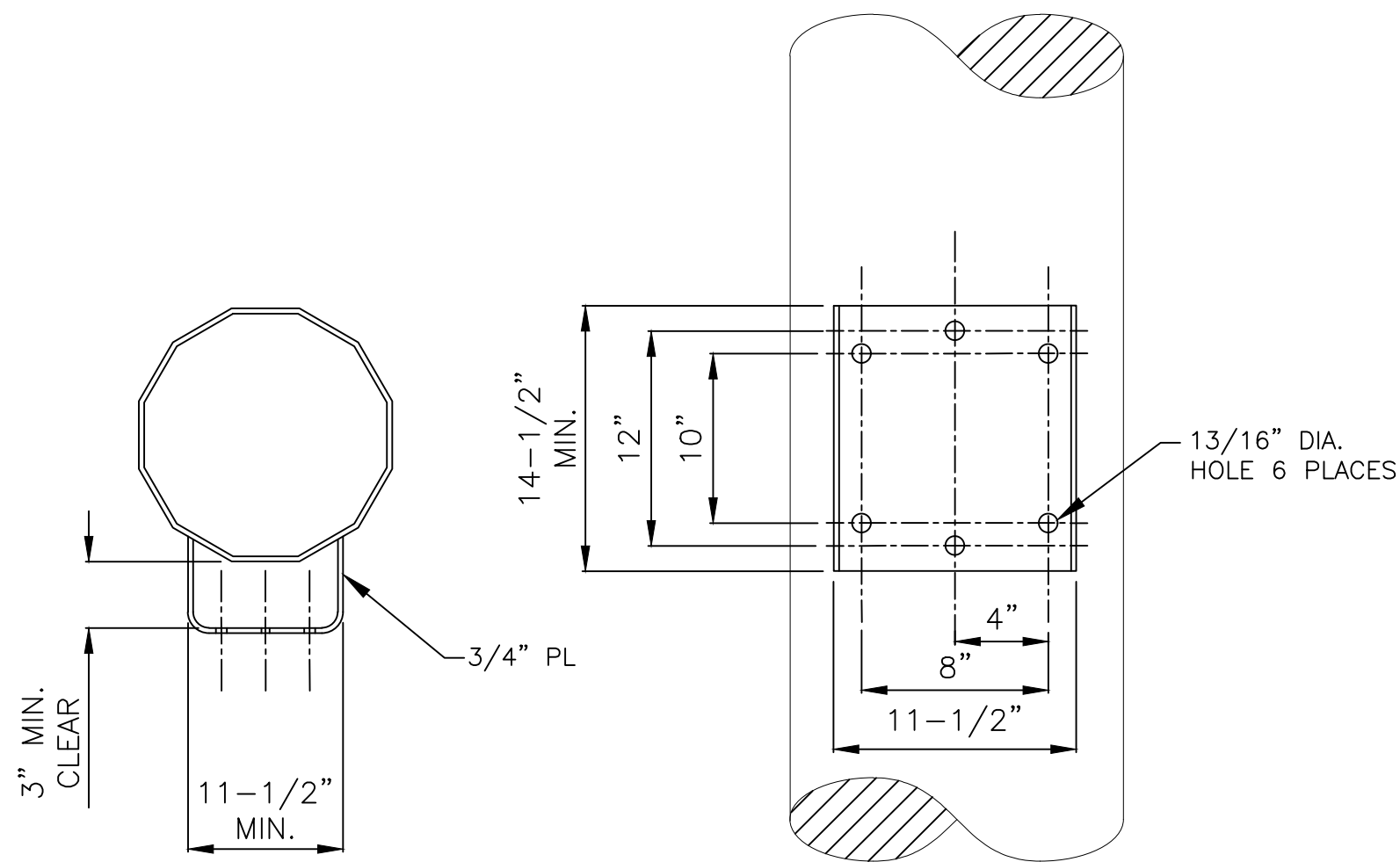
NOT FOR CONSTRUCTION

DRAWING NOT TO SCALE

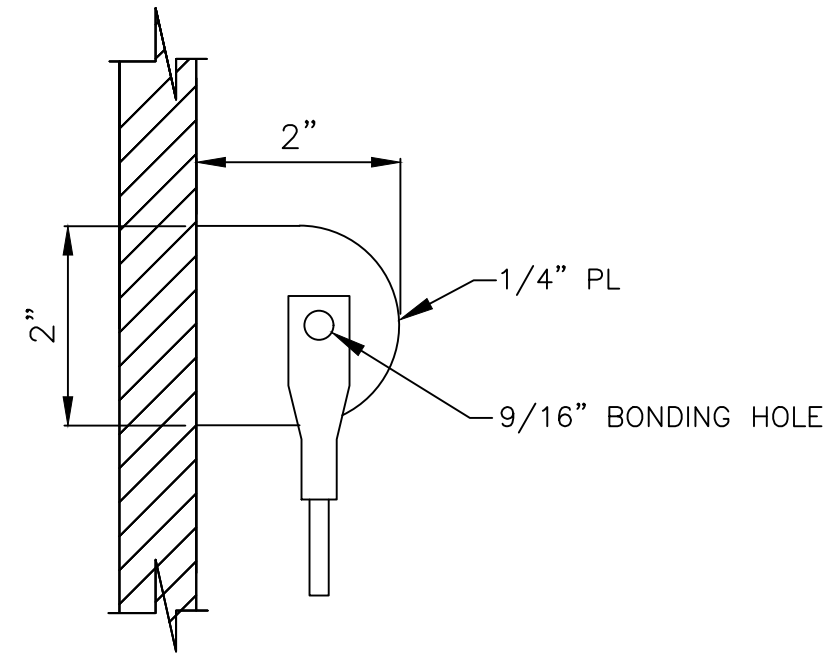
HOLD INFORMATION		
NO.	DESCRIPTION	
CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK.		
RELEASE INFORMATION		
REV.	DATE	DESCRIPTION
A	02-09-2024	ISSUED FOR 30% REVIEW
B	04-25-2024	ISSUED FOR 30% REVIEW
C	08-08-2024	ISSUED FOR 60% REVIEW
D	10-16-2024	ISSUED FOR EM&CP SUBMISSION
ISSUE PURPOSE:		ISSUED FOR EM&CP SUBMISSION
SPECIFICATION:		
PROJECT NO.:		15094.002
CAD FILE NAME: CHPE-FRAMING-001		
PREPARED BY:		MR
REVIEWED BY:		KRM
APPROVED BY:		KRM
ANY MODIFICATION OR ADDITION TO THIS DRAWING BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY, IS NOT THE RESPONSIBILITY OF SARGENT & LUNDY.		
<div><p>SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780</p></div>		
<div><p>CHPE Champlain Hudson Power Express</p></div>		
PROJECT		
ASTORIA CONVERTER - ASTORIA ANNEX 345KV OVERHEAD TRANSMISSION LINE CHAMPLAIN HUDSON POWER EXPRESS, LLC		
DRAWING TITLE		
FRAMING DRAWING		
DRAWING NUMBER		REVISION
CHPE-FRAMING-001		D
SHEET	1 OF 4	



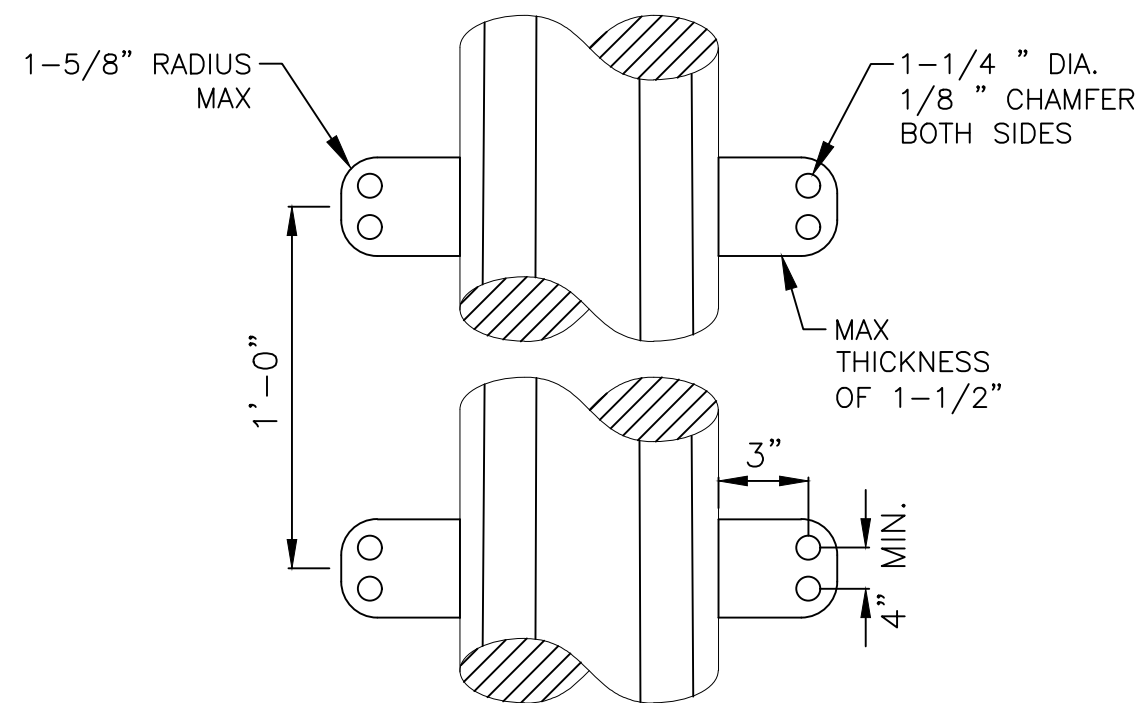
ELEVATION
30°-90° TERMINAL DEAD END (POLE #3)
NEW STEEL POLE
HEIGHT: 145'-0" OAL



DETAIL
HORIZONTAL JUMPER POST
SUPPORT



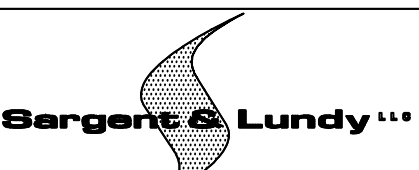
DETAIL
GROUNDING TAB/VANG



DETAIL
CONDUCTOR & OPGW
THRU VANG

- GENERAL NOTES:
- 1) ALL WORK DONE BY CONTRACTOR/INSTALLER PURSUANT TO THIS DRAWING SHALL: (a) CONFORM TO THE GOVERNING CONTRACT DOCUMENTS; (b) BE PERFORMED EXCLUSIVELY BY ITS TRAINED, COMPETENT PERSONNEL OR, WHERE PERMITTED, THAT OF ITS SUBCONTRACTOR(S); (c) COMPLY WITH ALL APPLICABLE SAFETY LAWS, REGULATIONS, PROGRAMS AND PRACTICES TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING THE CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S)) PERFORMING THE WORK.
 - 2) CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S)) PERFORMING THE WORK.
 - 3) THESE FRAMING DRAWINGS ARE CONTINGENT ON FINAL APPROVAL FROM CONED. THE INFORMATION PROVIDED ON THESE DRAWINGS IS TO BE CONSIDERED FOR INDICATIVE PRICING ONLY.
 - 4) REFER TO 15094.002.TL SPECIFICATION FOR TRANSMISSION STEEL POLES FOR DESIGN CRITERIA.

D	10/16/24	ISSUED FOR EM&CP SUBMISSION	MR	KRM	KRM
C	08/08/24	ISSUED FOR 60% REVIEW	CPW	KRM	KRM
B	04/25/24	ISSUED FOR 30% REVIEW	MR	KRM	KRM
A	02/09/24	ISSUED FOR 30% REVIEW	MR	KRM	KRM
REV	DATE	DESCRIPTION	PREPARED	REVIEWED	APPROVED



55 EAST MONROE ST., CHICAGO, ILL.



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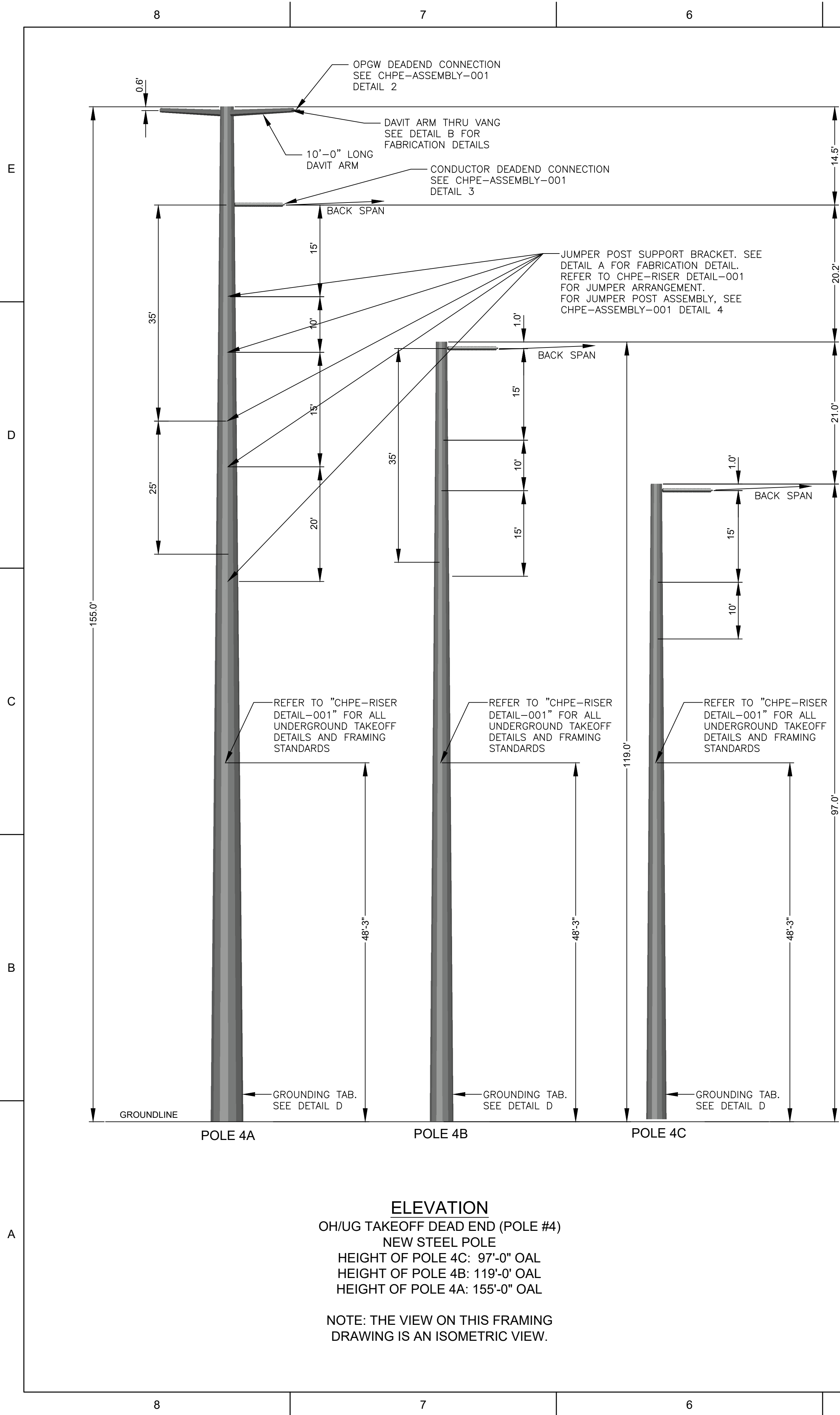
PROJ. No. 15094-002

NOT FOR
CONSTRUCTION

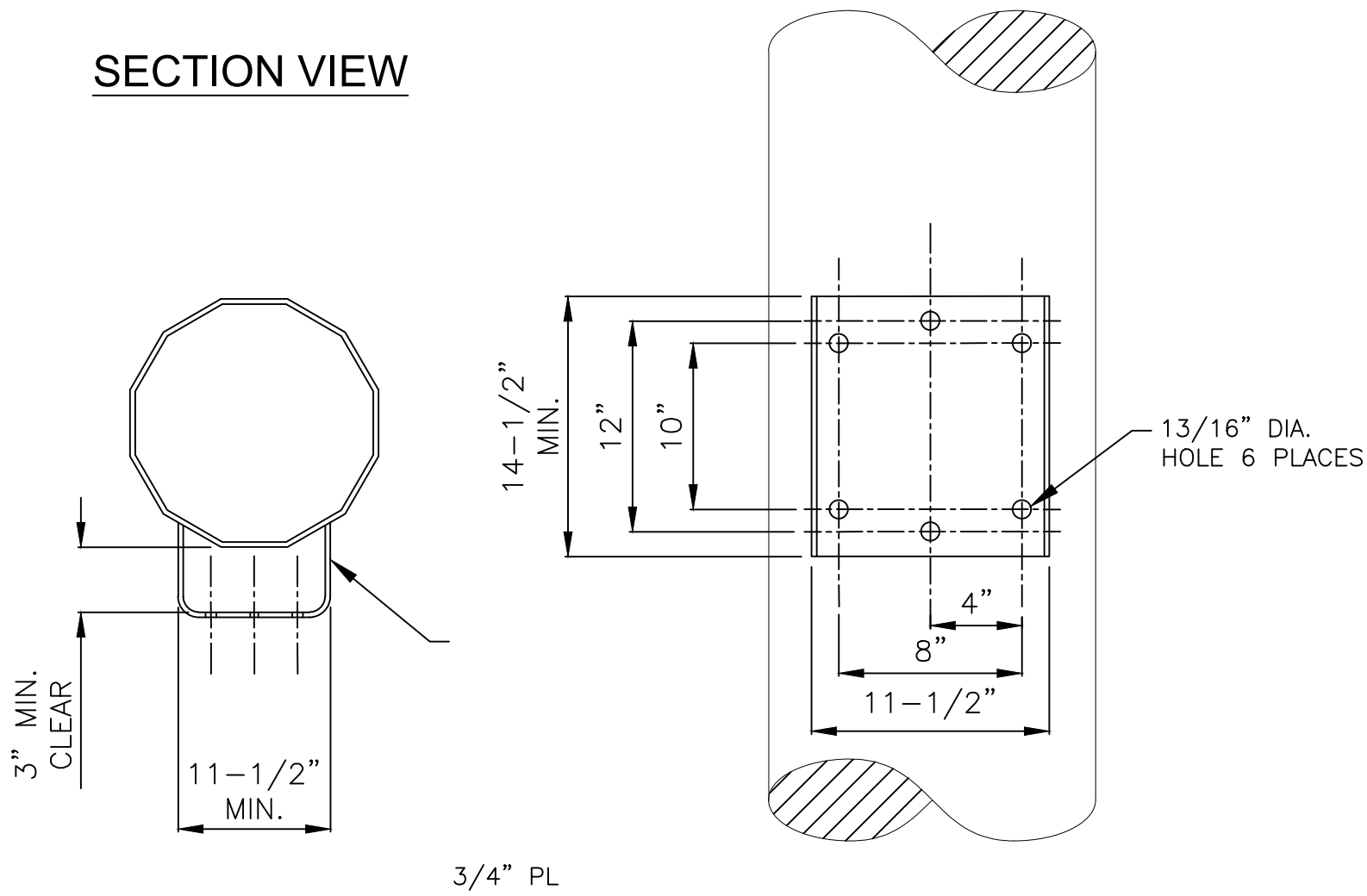
DRAWING NOT TO SCALE

1

HOLD INFORMATION		
NO.	DESCRIPTION	
CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK.		
RELEASE INFORMATION		
REV.	DATE	DESCRIPTION
A	02-09-2024	ISSUED FOR 30% REVIEW
B	04-25-2024	ISSUED FOR 30% REVIEW
C	08-08-2024	ISSUED FOR 60% REVIEW
D	10-16-2024	ISSUED FOR EM&CP SUBMISSION
ISSUE PURPOSE:		ISSUED FOR EM&CP SUBMISSION
SPECIFICATION:		
PROJECT NO.:		15094.002
CAD FILE NAME: CHPE-FRAMING-001		
PREPARED BY: MR		
REVIEWED BY: KRM		
APPROVED BY: KRM		
ANY MODIFICATION OR ADDITION TO THIS DRAWING BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY, IS NOT THE RESPONSIBILITY OF SARGENT & LUNDY.		
<div><p>SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780</p></div>		
<div></div>		
PROJECT		
ASTORIA CONVERTER - ASTORIA ANNEX 345kV OVERHEAD TRANSMISSION LINE CHAMPLAIN HUDSON POWER EXPRESS, LLC		
DRAWING TITLE		
FRAMING DRAWING		
DRAWING NUMBER		REVISION
CHPE-FRAMING-001		D
SHEET	3 OF 4	

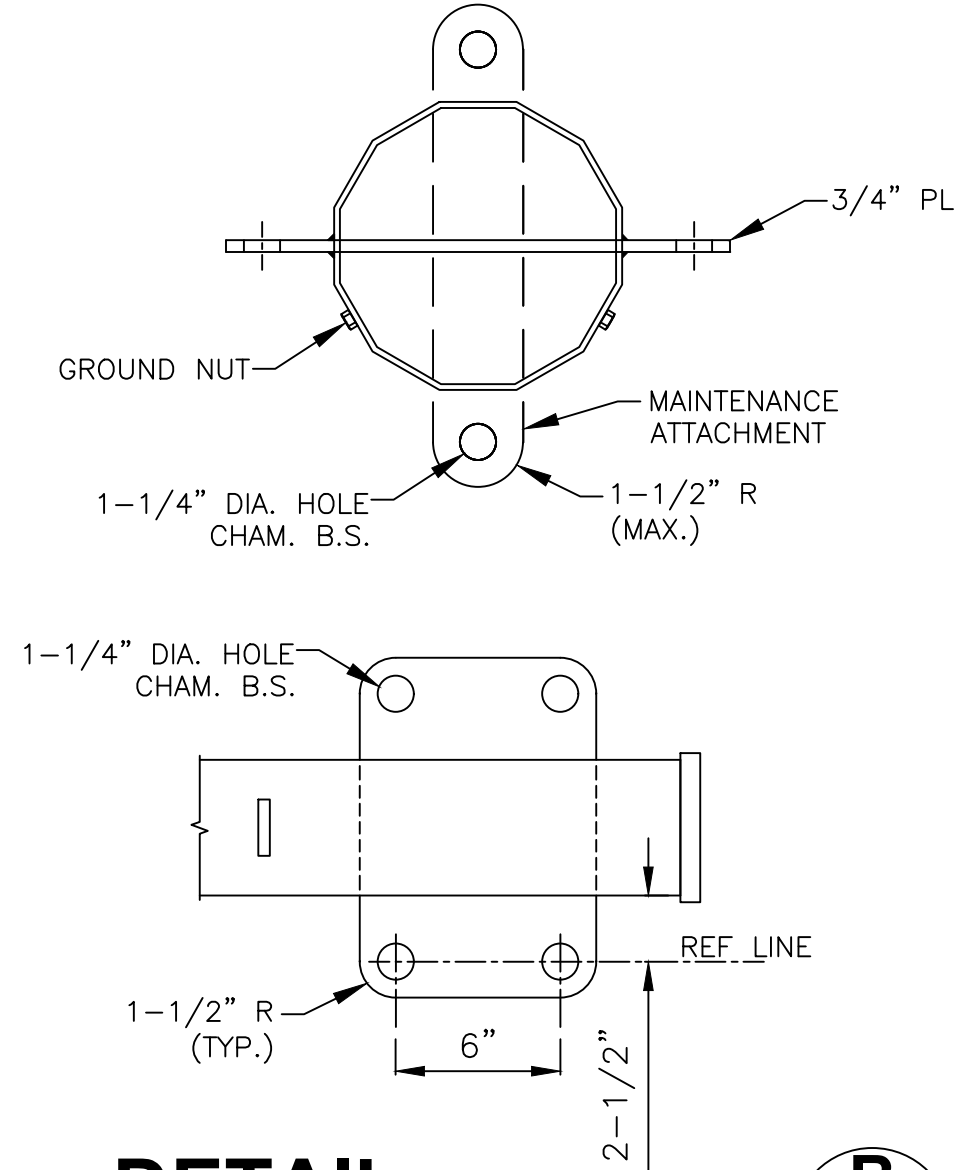
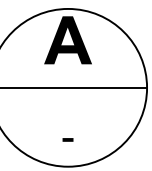


SECTION VIEW



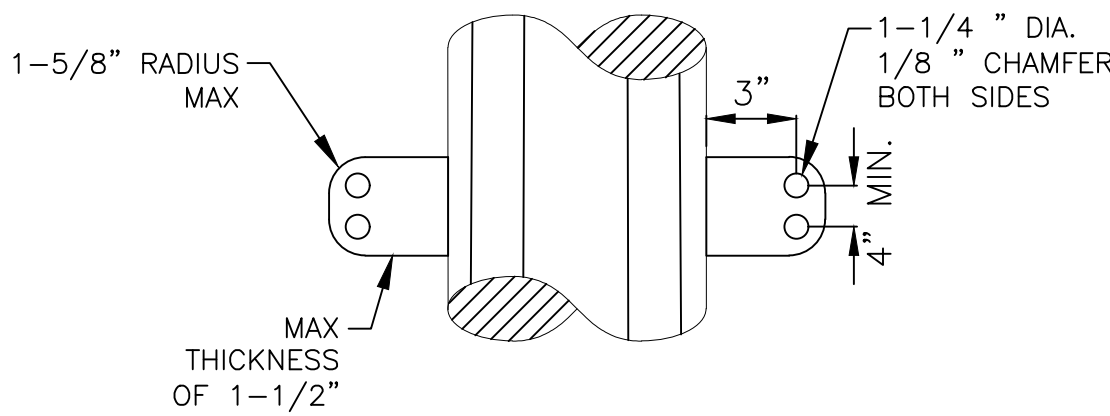
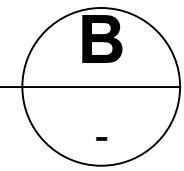
DETAIL

HORIZONTAL JUMPER POST
SUPPORT



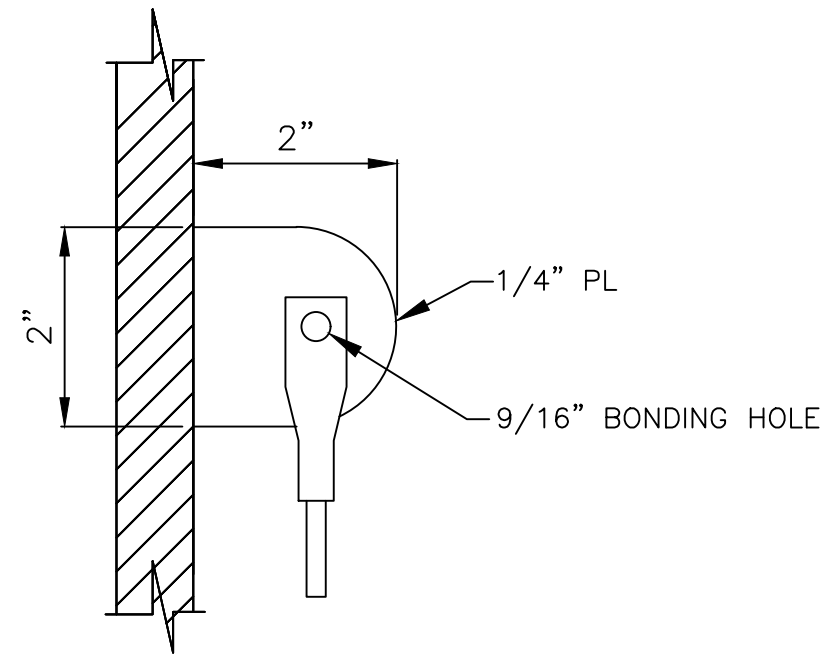
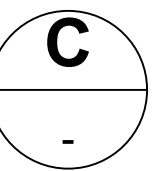
DETAIL

DAVIT ARM VANG FOR OPGW
AND CONDUCTOR



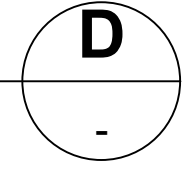
DETAIL

CONDUCTOR THRU VANG




DETAIL

GROUNDING TAB/VANG





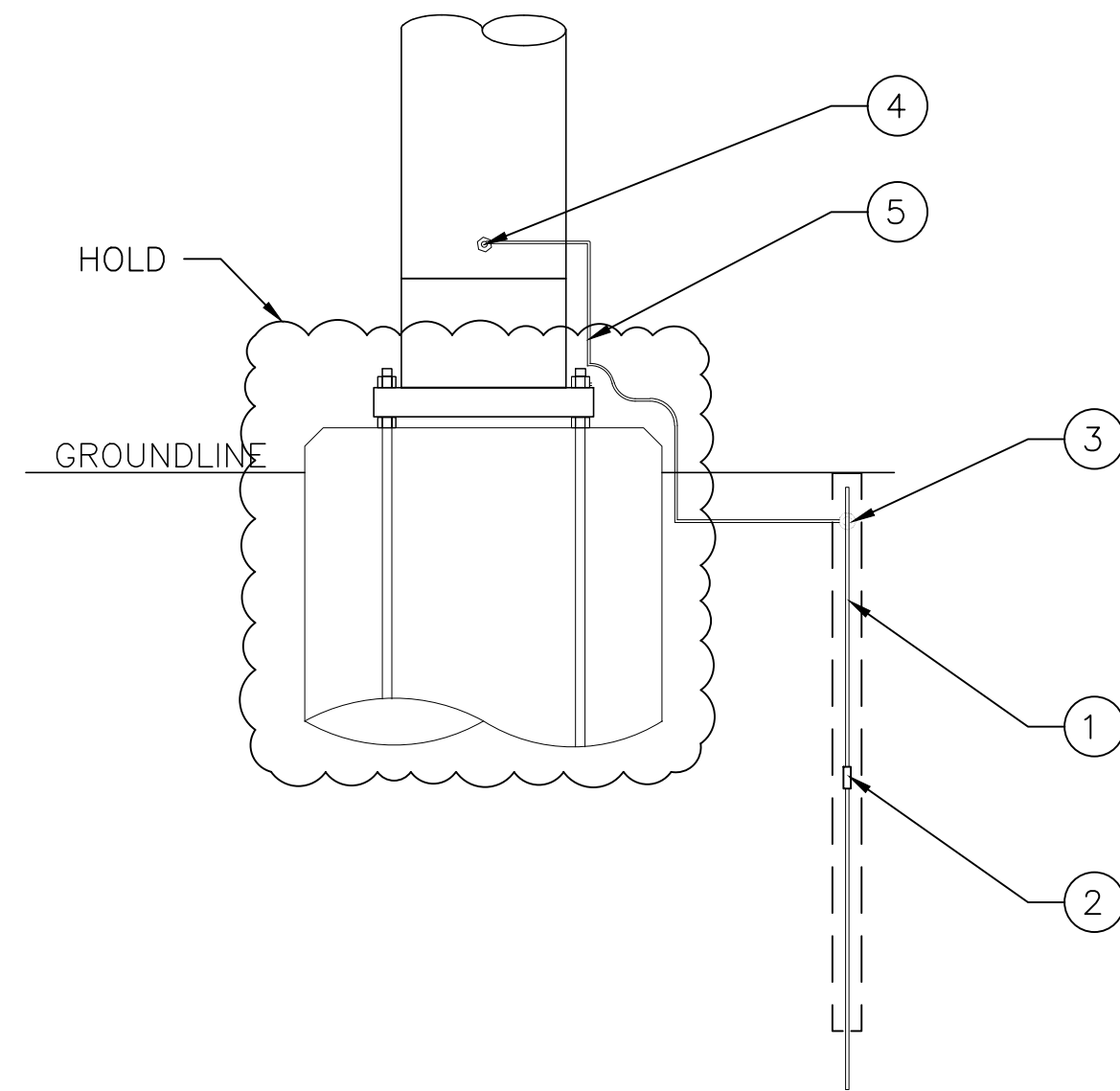
- GENERAL NOTES:
- 1) ALL WORK DONE BY CONTRACTOR/INSTALLER PURSUANT TO THIS DRAWING SHALL: (a) CONFORM TO THE GOVERNING CONTRACT DOCUMENTS; (b) BE PERFORMED EXCLUSIVELY BY ITS TRAINED, COMPETENT PERSONNEL OR, WHERE PERMITTED, THAT OF ITS SUBCONTRACTOR(S); (c) COMPLY WITH ALL APPLICABLE SAFETY LAWS, REGULATIONS, PROGRAMS AND PRACTICES TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING THE CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S)) PERFORMING THE WORK.
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 - 4) REFER TO 15094.002.TL SPECIFICATION FOR TRANSMISSION STEEL POLES FOR DESIGN CRITERIA.
 - 5) POLE 4A SHALL HAVE WELDED CLIPS OR PRE-DRILLED HOLES TO ACCOMMODATE OPGW DEADLEAD CUSHIONS TO SPLICE BOX LOCATED 5'-0" O/C.
 - 6) TWO SPLICE BOXES WILL BE LOCATED 15'-0" ABOVE THE GROUNDLINE. PREDRILLED HOLES SHALL BE INCLUDED TO ACCOMMODATE THE SPLICE BOX AND EXTERNAL COIL BRACKET.

D	10/16/24	ISSUED FOR EM&CP SUBMISSION	MR	KRM	KRM
C	08/08/24	ISSUED FOR 60% REVIEW	CPW	KRM	KRM
B	04/25/24	ISSUED FOR 30% REVIEW	MR	KRM	KRM
A	02/09/24	ISSUED FOR 30% REVIEW	MR	KRM	KRM
REV	DATE	DESCRIPTION	PREPARED	REVIEWED	APPROVED
 55 EAST MONROE ST., CHICAGO, ILL.			THIS DRAWING HAS BEEN DRAWN BY, OR REPRODUCED FROM, A DRAWING PREPARED BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY. SARGENT & LUNDY IS NOT RESPONSIBLE FOR WORK BY OTHER ORGANIZATIONS.		
			PROJ. No. 15094-002		

NOT FOR
CONSTRUCTION


DRAWING NOT TO SCALE

		1	
HOLD INFORMATION			
NO.		DESCRIPTION	
CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK.			
RELEASE INFORMATION			
REV.	DATE	DESCRIPTION	
A	02-09-2024	ISSUED FOR 30% REVIEW	
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D	10-16-2024	ISSUED FOR EM&CP SUBMISSION	
ISSUE PURPOSE:		ISSUED FOR EM&CP SUBMISSION	
SPECIFICATION:			
PROJECT NO.:		15094.002	
CAD FILE NAME: CHPE-FRAMING-001			
PREPARED BY: MR			
REVIEWED BY: KRM			
APPROVED BY: KRM			
ANY MODIFICATION OR ADDITION TO THIS DRAWING BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY, IS NOT THE RESPONSIBILITY OF SARGENT & LUNDY.			
<div><p>SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780</p></div>			
<div><p>CHPE Champlain Hudson Power Express</p></div>			
PROJECT			
ASTORIA CONVERTER - ASTORIA ANNEX 345kV OVERHEAD TRANSMISSION LINE CHAMPLAIN HUDSON POWER EXPRESS, LLC			
DRAWING TITLE			
FRAMING DRAWING			
DRAWING NUMBER		REVISION	
CHPE-FRAMING-001		D	
SHEET	4	OF	4



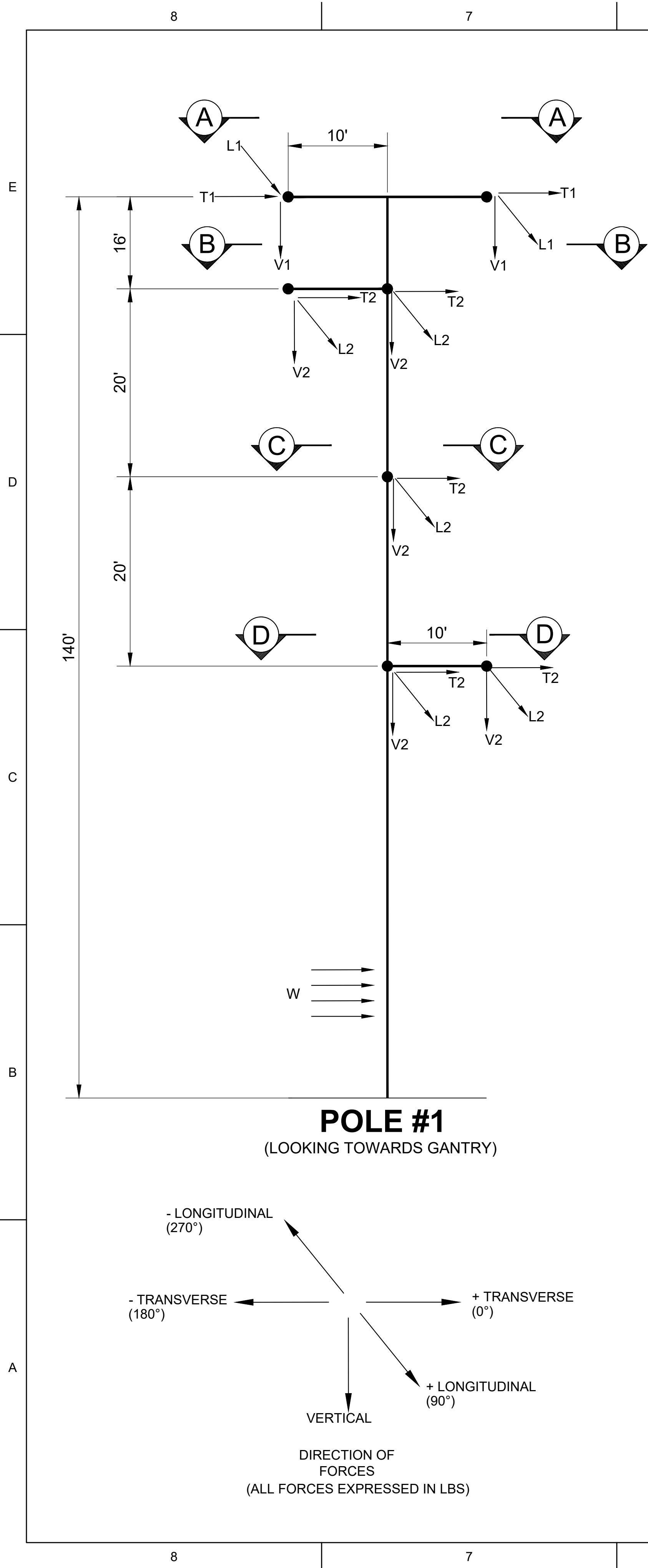
- NOTES:**
1. GROUNDING TO BE VERIFIED BY ENGINEER AND SHALL SAFEGUARD EMPLOYEES AND THE PUBLIC FROM INJURY THAT MAY BE CAUSED BY ELECTRICAL POTENTIAL. IN ADDITION TO THIS SPECIFICATION, GROUNDING METHODS ARE REQUIRED TO MEET NESC, FEDERAL, STATE, AND LOCAL REQUIREMENTS.
 2. DRIVEN ROD DEPTH SHALL NOT BE LESS THAN 8 FEET. THE UPPER END SHALL BE FLUSH OR BELOW GROUND LEVEL.
 3. SPACING BETWEEN MULTIPLE RODS SHALL NOT BE LESS THAN 6 FEET.
 4. DIRECT EMBEDDED POLES (NATIVE EARTH OR CONCRETE) CAN BE CONSIDERED AN ELECTRODE PROVIDED NOT LESS THAN 5 FEET OF UNCOATED EMBEDDED LENGTH IS EXPOSED DIRECTLY TO THE EARTH OR CONCRETE.
 5. ELECTRODE SHALL, AS FAR AS PRACTICAL, PENETRATE PERMANENT MOISTURE LEVEL AND BELOW THE FROST LINE.
 6. THE GROUND RESISTANCE OF (GROUND ROD & UNCOATED EMBEDDED POLE) SHOULD NOT EXCEED 10 OHMS. ONE ADDITIONAL ELECTRODE SHALL BE ADDED WHERE HIGHER RESISTANCE IS ENCOUNTERED.
 7. 1/2" HEAVY STAINLESS STEEL HEX NUTS SHALL BE WELDED TO LIGHT DUTY POLES 9" BELOW SHIELDWIRE ATTACHMENT AND A GROUND TAB SHALL BE WELDED 18" ABOVE THE GROUNDLINE.

GROUNDING LIST OF MATERIAL				
DRAWING ITEM	DESCRIPTION	QTY	MANUF	PART
1	ROD, GROUND, 5/8" X 8FT	4	ERICO	611380
2	COUPLING, GROUND ROD, EXT., THREADLESS	4	ERICO	CC58
3	CONNECTOR, GROUND ROD	1	ERICO	HDC58
4	CONNECTOR, GROUND LUG	2	ERICO	CC207
5	WIRE, 7-#8 COPPERWELD	10FT	COPPERWELD	GROUNDWIRE

B	10/16/24	ISSUED FOR EM&CP SUBMISSION						
A	08/08/24	ISSUED FOR 60% REVIEW			MR	KRM	KRM	
					MR	KRM	KRM	
REV	DATE	DESCRIPTION	PREPARED REVIEWED APPROVED					
 Sargent & Lundy "•"			THIS DRAWING HAS BEEN DRAWN BY, OR REPRODUCED FROM A DRAWING PREPARED BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY. SARGENT & LUNDY IS NOT RESPONSIBLE FOR WORK BY OTHER ORGANIZATIONS.					
			PROJ. No. 15094-002					
55 EAST MONROE ST., CHICAGO, ILL.								

NOT FOR
CONSTRUCTION

DRAWING NOT TO SCALE



LOADING TABLE																
LOADING CONDITIONS					OVERLOAD FACTORS			OPGW			CONDUCTOR			W	K	DEFLECTION (%AGH)
LOAD CASE	DESCRIPTION	TEMP (°F)	ICE (IN)	WIND (MPH)	VERTICAL	TRANSVERSE (WIND)	LONGITUDINAL (TENSION)	T1	L1	V1	T2	L2	V2	SEE NOTE 4		
CASE 1	NESC 250B - HEAVY	0	0.5	40.0	1.50	2.50	1.65	5,500	0	3,400	16,500	0	12,300	7.0	0.30	8
CASE 2	NESC EXTREME WIND 250C	60	0.0	100.0	1.00	1.00	1.00	2,300	0	1,000	7,900	0	4,700	27.0	-	8
CASE 3	NESC ICE/WIND 250D	15	0.75	50.0	1.00	1.00	1.00	2,900	0	3,300	8,100	0	10,800	7.0	-	8
CASE 4	EXTREME ICE	32	1.5	0.0	1.00	1.00	1.00	4,000	0	8,000	10,800	0	21,800	0.0	-	8
CASE 5	TEMPERATURE UPLIFT	-20	0.0	0.0	1.00	1.00	1.00	1,600	0	1,000	5,800	0	4,700	0.0	-	8
CASE 6	STRINGING	32	0.0	28.0	2.00	2.00	2.00	2,800	0	2,000	10,800	0	9,400	4.0	-	8
CASE 7	MAINTENANCE	32	0.0	28.0	2.00	2.00	2.00	2,700	0	3,000	10,700	0	12,900	3.0	-	8
CASE 8	BROKEN 1P & 1S	0	0.0	28.0	1.00	1.00	1.00	800	2,500	700	2,800	9,800	2,800	2.0	-	8
CASE 9	UNBALANCE ICE	32	0.5	39.5	1.00	1.00	2.00	1,600	1,400	2,300	5,500	2,000	8,200	4.0	-	8
CASE 10	NESC 250B - HEAVY DEADEND	0	0.5	40.0	1.50	2.50	1.65	2,800	9,800	1,900	8,400	29,200	6,800	7.0	-	8
CASE 11	NESC EXTREME WIND 250C DEADEND	60	0.0	100.0	1.00	1.00	1.00	1,200	3,400	700	4,400	10,700	2,800	27.0	-	8
CASE 12	NESC ICE/WIND 250D DEADEND	15	0.75	50.0	1.00	1.00	1.00	1,500	4,700	1,800	4,200	13,300	5,800	7.0	-	8
CASE 13	EXTREME ICE DEADEND	32	1.5	0.0	1.00	1.00	1.00	2,100	7,400	4,200	5,400	20,000	11,300	0.0	-	8
CASE 14	DEFLECTION	60	0.0	0.0	1.00	1.00	1.00	900	0	1,000	3,800	0	4,700	0.0	-	1
ALL LOADS IN LBS, INCLUDING OVERLOAD FACTORS																
"W" REPRESENTS WIND PRESSURE (PSF) TO BE APPLIED TO STRUCTURE																

NOTES:

- ALL INDICATED LOADS ARE ULTIMATE LOADS AND INCLUDE ALL OVERLOAD FACTORS AS INDICATED IN THE LOAD TABLE. STRUCTURES SHALL BE DESIGNED WITH A MATERIAL STRENGTH FACTOR OF 1.0.
- V, T, & L ARE IN LBS AND ARE THE LOADS IN THE DIRECTION OF THE STRUCTURE'S VERTICAL, TRANSVERSE, AND LONGITUDINAL AXIS RESPECTIVELY.
- TEMPERATURE, DESIGN ICE THICKNESS, AND WIND SPEED ARE INDICATED UNDER LOAD CASES. THESE VALUES WERE USED TO CALCULATE VERTICAL, TRANSVERSE, AND LONGITUDINAL LOADS APPLIED TO THE STRUCTURE.
- WIND ("W") IS IN PSF AND SHALL BE CONSIDERED ACTING ON THE STRUCTURE FROM ANY DIRECTION. "WIND ON POLE ONLY" LOAD UTILIZING THE 250C 300 YR CASE SHALL ALSO BE EVALUATED.
- STRUCTURE DEAD LOAD SHALL BE MULTIPLIED BY VERTICAL OVERLOAD FACTOR FOR A GIVEN CASE WITH THE EXCEPTION OF THE MAINTENANCE LOAD CASE. MAINTENANCE LOAD CASE SHALL USE A 1.5 VERTICAL OVERLOAD FACTOR FOR STRUCTURE WEIGHT.
- STRUCTURES SHALL BE DESIGNED FOR A MAXIMUM BASE ROTATION OF 1.5 DEGREES.
- STRUCTURE SHALL BE DESIGNED TO WITHSTAND TRANSVERSE LOADS FOR EACH LOAD CASE IN BOTH THE POSITIVE (+) AND NEGATIVE (-) TRANSVERSE AXIS.
- ICE DENSITY FOR WIRE AND STRUCTURE LOADINGS SHALL BE 57 LB/FT³.
- STRUCTURES SHALL BE DESIGNED IN ACCORDANCE TO THE STEEL POLE SPECIFICATION "15094.002.TL.DESIGN_TUBULAR STEEL POLE SPEC".
- ARMS SHALL BE DESIGNED WITH UPWARD BATTER TO ENSURE ARMS DO NOT SAG UNDER LOADING.
- CONDUCTOR DAVIT ARMS ONLY ATTACH ONE SIDE OF THE CONDUCTOR (BACK SPAN INTO THE SUBSTATION). THE POSITION OF THE CONDUCTOR IN THE AHEAD SPAN WILL BE ATTACHED TO A THRU VANG ON THE POLE.
- STRUCTURE SHALL BE DESIGNED TO WITHSTAND TWO BROKEN WIRE POSITIONS IN ANY COMBINATION GIVEN IN LOAD CASE 8.
- STRUCTURE SHALL BE DESIGNED TO WITHSTAND FULL ONE SIDE BROKEN WIRE POSITIONS FOR BOTH OPGW AND CONDUCTOR FOR LOAD CASES 10 THROUGH 13.
- ANCHOR BOLT CAGE SHALL HAVE V-NOTCH ON BI-SECTOR.
- POLE SHALL HAVE 2" BEAD WELD ON POLE SHAFT 1'-0" ABOVE GROUND LINE ON BI-SECTOR.
- BASE PLATES FOR POLE #1, POLE #3 & POLE #4A SHALL BE DESIGNED TO BE THE SAME DIAMETER AND BASE PLATES FOR POLE #2 AND POLE #4B & #4C SHALL BE DESIGNED TO HAVE THE SAME DIAMETER. THIS WILL ALLOW FOR THE FOUNDATION TO HAVE SIMILAR BOLT PATTERNS TO AID IN THE DESIGN OF STEEL PIER EOR WILL BE DESIGNING FOR MICROPILE FOUNDATION.
- ALL POLES WILL BE SUPPORTED BY A MICROPILE OR DRILLED DISPLACEMENT FOUNDATION WITH A FABRICATED STEEL ADAPTER PLATE. ALL ANCHOR BOLTS SHALL BE DESIGNED TO ATTACH TO THE ADAPTER PLATE FOUNDATION.

SECTION A-A

OPGW

1/2 LINE ANGLE (LA)

SECTION B-B

CONDUCTOR

1/2 LINE ANGLE (LA)

SECTION C-C

CONDUCTOR

1/2 LINE ANGLE (LA)

SECTION D-D

CONDUCTOR

1/2 LINE ANGLE (LA)

WIRE DATA:

OPGW: (2) AC-34-52-646, 0.646" DIA 48 FIBER, 0.417 LBS/FT WEIGHT
345KV CONDUCTOR: TWIN BUNDLED 795KCMIL ACSS "DRAKE"
1.108" DIA, 1.039LBS/FT WEIGHT
MAXIMUM WIND SPAN: 300 FT
MAXIMUM WEIGHT SPAN: 1,750 FT
RULING SPAN: 470 FT
CONDUCTOR DESIGN TENSION: 6,000 LBS (NESC 250B)
OPGW DESIGN TENSION: 4,000 LBS (NESC 250B)
LINE ANGLE: -28°

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PROJ. No. 15094-002

Sargent & Lundy

55 EAST MONROE ST., CHICAGO, ILL.

NOT FOR CONSTRUCTION

DRAWING NOT TO SCALE

NO.

DESCRIPTION

CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/ INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK.

REV.

DATE

DESCRIPTION

A

07-18-2024

ISSUED FOR BID

B

08-08-2024

ISSUED FOR 60% REVIEW

C

10-16-2024

ISSUED FOR EM&CP SUBMISSION

ISSUE PURPOSE:

ISSUED FOR EM&CP SUBMISSION

SPECIFICATION:

PROJECT NO.:

15094.002

CAD FILE NAME:

CHPE-LOAD TREES-001

PREPARED BY:

MR

REVIEWED BY:

KRM

APPROVED BY:

KRM

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Sargent & Lundy

SARGENT & LUNDY
55 EAST MONROE STREET
CHICAGO, ILLINOIS 60603-5780

CHPE

Champlain Hudson
Power Express

PROJECT

ASTORIA CONVERTER - ASTORIA
ANNEX 345KV OVERHEAD
TRANSMISSION LINE
CHAMPLAIN HUDSON
POWER EXPRESS, LLC

DRAWING TITLE

LOAD TREE DRAWING

DRAWING NUMBER

CHPE-LOAD TREES-001

REVISION

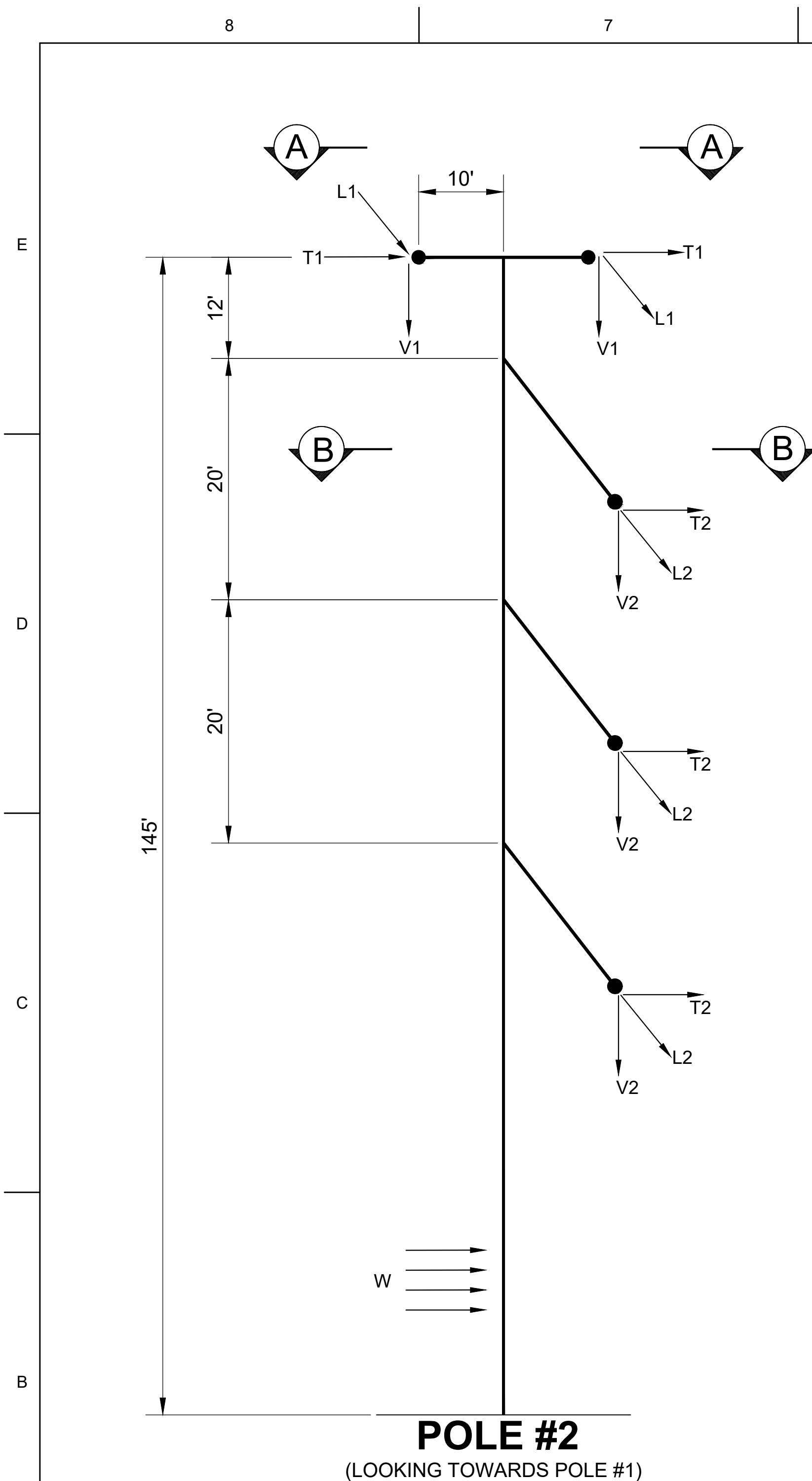
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SHEET

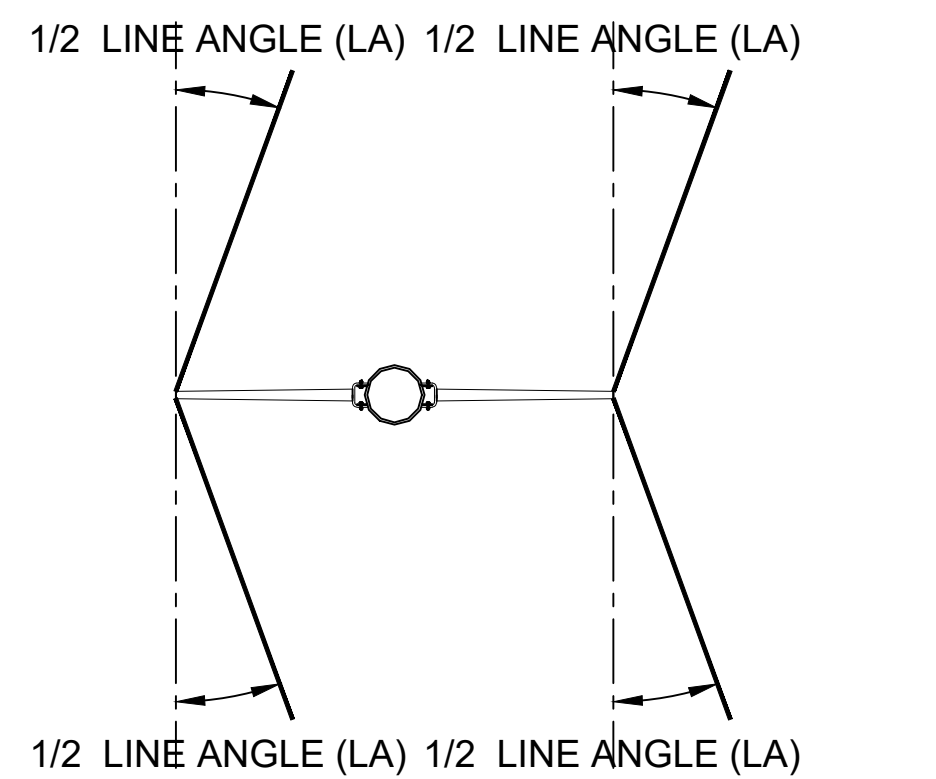
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OF

4

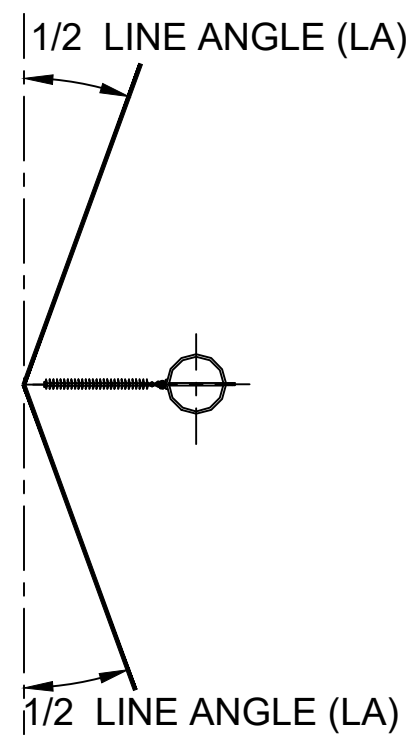


6			5			4		3			2					
LOADING TABLE																
LOADING CONDITIONS					OVERLOAD FACTORS			OPGW			CONDUCTOR			W	K	DEFLECTION (%AGH)
LOAD CASE	DESCRIPTION	TEMP (°F)	ICE (IN)	WIND (MPH)	VERTICAL	TRANSVERSE (WIND)	LONGITUDINAL (TENSION)	T1	L1	V1	T2	L2	V2	SEE NOTE 4		
CASE 1	NESC 250B - HEAVY	0	0.5	40.0	1.50	2.50	1.65	6,600	0	1,200	19,400	0	4,400	7.0	0.30	8
CASE 2	NESC EXTREME WIND 250C	60	0.0	100.0	1.00	1.00	1.00	2,800	0	500	9,600	0	2,000	28.0	-	8
CASE 3	NESC ICE/WIND 250D	15	0.75	50.0	1.00	1.00	1.00	3,500	0	1,200	9,800	0	3,700	7.0	-	8
CASE 4	EXTREME ICE	32	1.5	0.0	1.00	1.00	1.00	4,700	0	2,500	12,500	0	6,900	0.0	-	8
CASE 5	TEMPERATURE UPLIFT	-20	0.0	0.0	1.00	1.00	1.00	1,800	0	500	6,700	0	2,000	0.0	-	8
CASE 6	STRINGING	32	0.0	28.0	2.00	2.00	2.00	3,200	0	900	12,600	0	3,900	4.0	-	8
CASE 7	MAINTENANCE	32	0.0	28.0	2.00	2.00	2.00	3,200	0	1,900	12,500	0	7,400	3.0	-	8
CASE 8	BROKEN 1P & 1S	0	0.0	28.0	1.00	1.00	1.00	900	2,500	400	3,200	9,700	1,400	2.0	-	8
CASE 9	UNBALANCE ICE	32	0.5	39.5	1.00	1.00	2.00	2,000	1,300	900	6,500	2,000	3,000	4.0	-	8
CASE 10	DEFLECTION	60	0.0	0.0	1.00	1.00	1.00	2,500	0	700	10,900	0	2,900	4.0	-	1
ALL LOADS IN LBS, INCLUDING OVERLOAD FACTORS																
"W" REPRESENTS WIND PRESSURE (PSF) TO BE APPLIED TO STRUCTURE																



SECTION A-A

OPGW

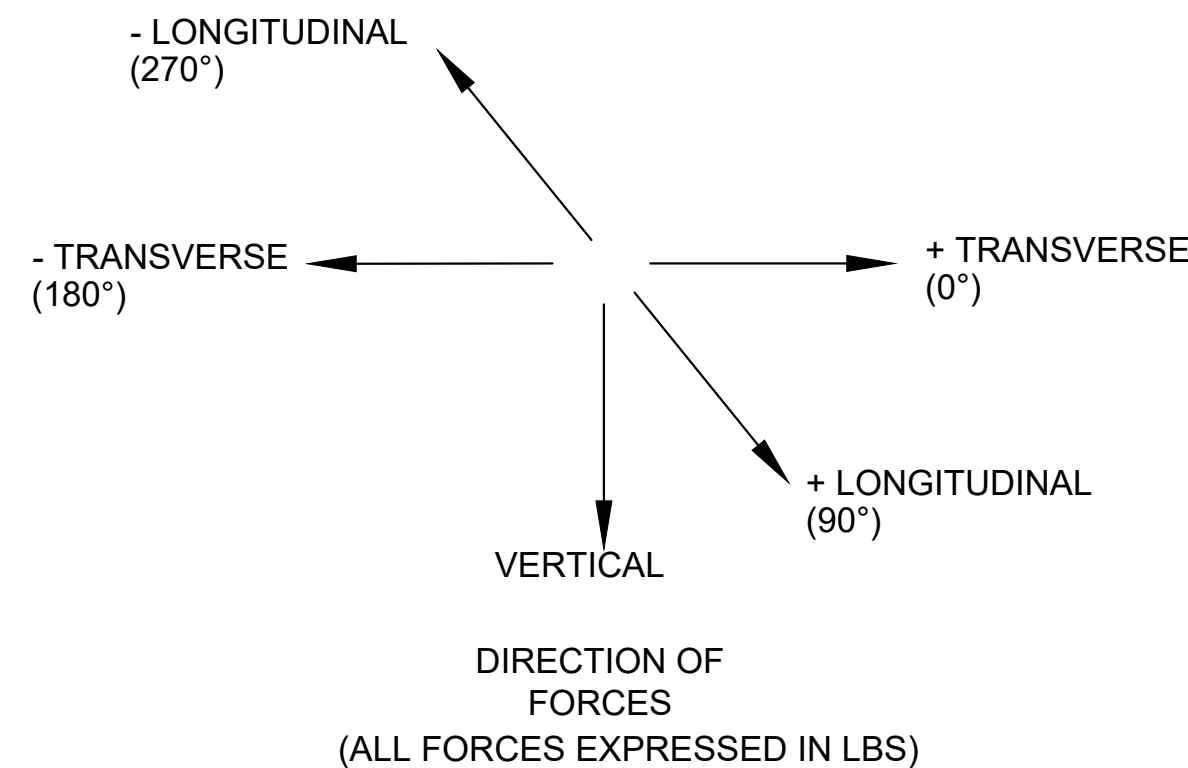


SECTION B-B

CONDUCTOR

- NOTES:

1. ALL INDICATED LOADS ARE ULTIMATE LOADS AND INCLUDE ALL OVERLOAD FACTORS AS INDICATED IN THE LOAD TABLE. STRUCTURES SHALL BE DESIGNED WITH A MATERIAL STRENGTH FACTOR OF 1.0.
2. V, T, & L ARE IN LBS AND ARE THE LOADS IN THE DIRECTION OF THE STRUCTURE'S VERTICAL, TRANSVERSE, AND LONGITUDINAL AXIS RESPECTIVELY.
3. TEMPERATURE, DESIGN ICE THICKNESS, AND WIND SPEED ARE INDICATED UNDER LOAD CASES. THESE VALUES WERE USED TO CALCULATE VERTICAL, TRANSVERSE, AND LONGITUDINAL LOADS APPLIED TO THE STRUCTURE.
4. WIND ("W") IS IN PSF AND SHALL BE CONSIDERED ACTING ON THE STRUCTURE FROM ANY DIRECTION. "WIND ON POLE ONLY" LOAD UTILIZING THE 250C 300 YR CASE SHALL ALSO BE EVALUATED.
5. STRUCTURE DEAD LOAD SHALL BE MULTIPLIED BY VERTICAL OVERLOAD FACTOR FOR A GIVEN CASE WITH THE EXCEPTION OF THE MAINTENANCE LOAD CASE. MAINTENANCE LOAD CASE SHALL USE A 1.5 VERTICAL OVERLOAD FACTOR FOR STRUCTURE WEIGHT.
6. STRUCTURES SHALL BE DESIGNED FOR A MAXIMUM BASE ROTATION OF 1.5 DEGREES.
7. STRUCTURE SHALL BE DESIGNED TO WITHSTAND TRANSVERSE LOADS FOR EACH LOAD CASE IN BOTH THE POSITIVE (+) AND NEGATIVE (-) TRANSVERSE AXIS.
8. ICE DENSITY FOR WIRE AND STRUCTURE LOADINGS SHALL BE 57 LB/FT³.
9. STRUCTURES SHALL BE DESIGNED IN ACCORDANCE TO THE STEEL POLE SPECIFICATION "15094.002.TL.DESIGN_TUBULAR STEEL POLE SPEC".
10. ARMS SHALL BE DESIGNED WITH UPWARD BATTER TO ENSURE ARMS DO NOT SAG UNDER LOADING.
11. STRUCTURE SHALL BE DESIGNED TO WITHSTAND TWO BROKEN WIRE POSITIONS IN ANY COMBINATION GIVEN IN LOAD CASE 8.
12. ANCHOR BOLT CAGE SHALL HAVE V-NOTCH ON BI-SECTOR.
13. POLE SHALL HAVE 2" BEAD WELD ON POLE SHAFT 1'-0" ABOVE GROUND LINE ON BI-SECTOR.
14. BASE PLATES FOR POLE #1, POLE #3 & POLE #4A SHALL BE DESIGNED TO BE THE SAME DIAMETER AND BASE PLATES FOR POLE #2 AND POLE #4B & #4C SHALL BE DESIGNED TO HAVE THE SAME DIAMETER. THIS WILL ALLOW FOR THE FOUNDATION TO HAVE SIMILAR BOLT PATTERNS TO AID IN THE DESIGN OF STEEL PIER EOR WILL BE DESIGNING FOR MICROPILE FOUNDATION.
15. ALL POLES WILL BE SUPPORTED BY A MICROPILE OR DRILLED DISPLACEMENT FOUNDATION WITH A FABRICATED STEEL ADAPTER PLATE. ALL ANCHOR BOLTS SHALL BE DESIGNED TO ATTACH TO THE ADAPTER PLATE FOUNDATION.



WIRE DATA:

OPGW: (2) AC-34-52-646, 0.646" DIA 48 FIBER, 0.417 LBS/FT WEIGHT
345KV CONDUCTOR: TWIN BUNDLED 795KCMIL ACSS "DRAKE"
1.108" DIA, 1.039LBS/FT WEIGHT
MAXIMUM WIND SPAN: 500 FT
MAXIMUM WEIGHT SPAN: 500 FT
RULING SPAN: 470 FT
CONDUCTOR DESIGN TENSION: 6,000 LBS (NESC 250B)
OPGW DESIGN TENSION: 4,000 LBS (NESC 250B)
LINE ANGLE: -33°

C	10/16/24	ISSUED FOR EM&CP SUBMISSION	MR	KRM	KRM
B	08/08/24	ISSUED FOR 60% REVIEW	CPW	KRM	KRM
A	07/18/24	ISSUED FOR BID	CPW	KRM	KRM
REV	DATE	DESCRIPTION	PREPARED	REVIEWED	APPROVED





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PROJ. No. 15094-002

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HOLD INFORMATION			
NO.	DESCRIPTION		
CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/ INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK.			
RELEASE INFORMATION			
REV.	DATE	DESCRIPTION	
A	07-18-2024	ISSUED FOR BID	
B	08-08-2024	ISSUED FOR 60% REVIEW	
C	10-16-2024	ISSUED FOR EM&CP SUBMISSION	
ISSUE PURPOSE:		ISSUED FOR EM&CP SUBMISSION	
SPECIFICATION:			
PROJECT NO.:		15094.002	
CAD FILE NAME: CHPE-LOAD TREES-002			
PREPARED BY: MR			
REVIEWED BY: KRM			
APPROVED BY: KRM			
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PROJECT			
ASTORIA CONVERTER - ASTORIA ANNEX 345kV OVERHEAD TRANSMISSION LINE CHAMPLAIN HUDSON POWER EXPRESS, LLC			
DRAWING TITLE			
LOAD TREE DRAWING			
DRAWING NUMBER			REVISION
CHPE-LOAD TREES-002			C
SHEET	2	OF	4

