

**APPENDIX C.13**

**CASE 10-T-0139**

**SITE PLANS AND CONSTRUCTION DRAWINGS  
ARCHITECTURAL DRAWINGS – AUXILIARY ENCLOSURES  
ASTORIA HVDC CONVERTER STATION - SEGMENT 22**

# ASTORIA HVDC CONVERTER STATION

## AUXILIARY ENCLOSURES ARCHITECTURE PACKAGE

### SCOPE OF WORK

THE ARCHITECTURAL SCOPE OF WORK FOR THE ASTORIA CONVERTER STATION INCLUDES THE ARCHITECTURAL DESIGN FOR THE AREAS BELOW:

1. STORAGE ENCLOSURE
2. RELAY ENCLOSURE
3. MVS ENCLOSURE
4. AC FILTER YARD FENCE
5. SITE FENCE AND GATES

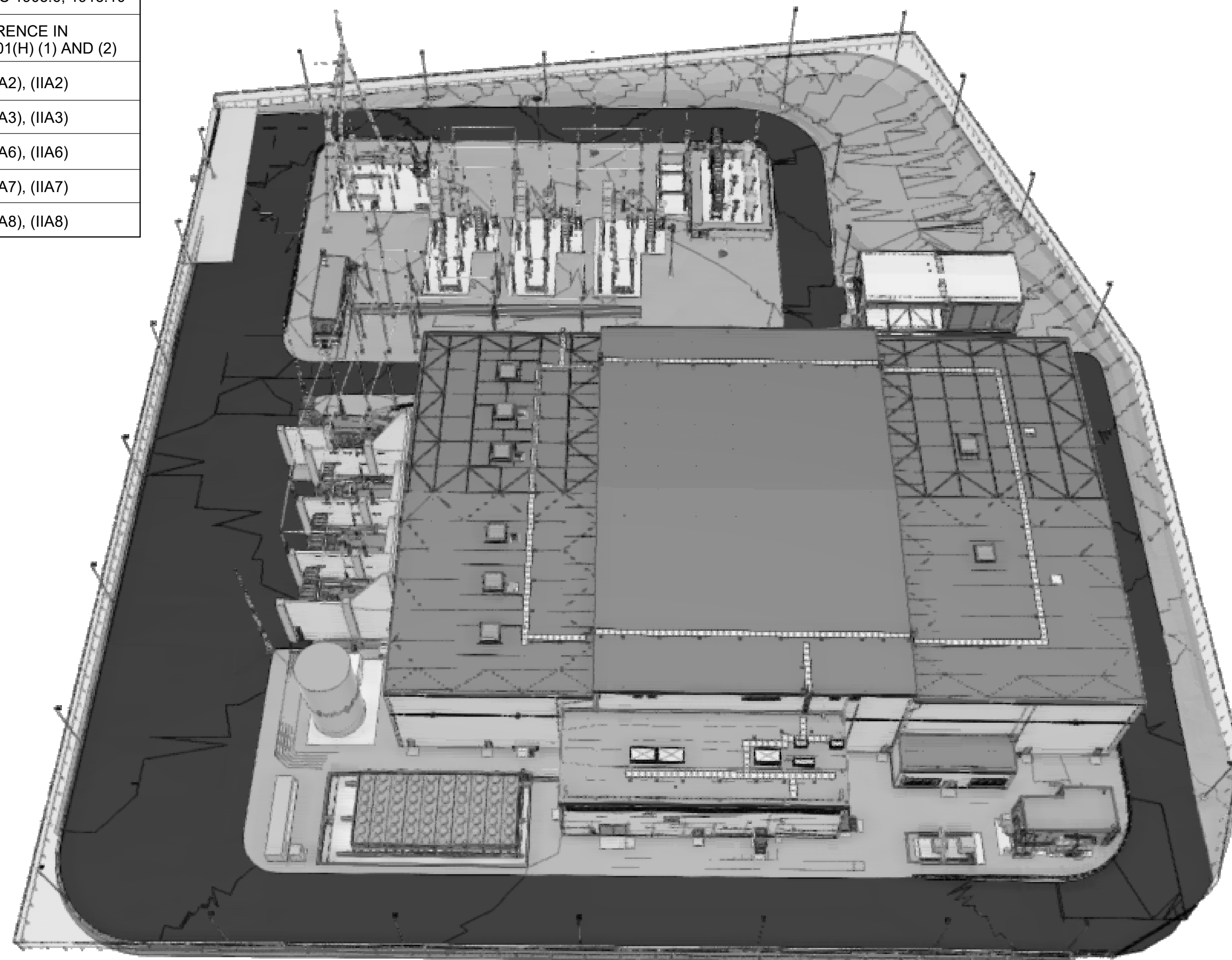
SPECIAL INSPECTIONS	CODE / SECTION
WALL PANELS, CURTAIN WALLS, AND VENEERS	BC 1704.10
ENERGY CODE COMPLIANCE INSPECTIONS	BC 110.3.1
FIRE-RESISTANCE RATED CONSTRUCTION	BC 110.3.5
FINAL	BC 1905.6; 1913.10
	TABLE REFERENCE IN 1RCNY 5000-01(H) (1) AND (2)
INSULATION PLACEMENT AND R-VALUES	(IA2), (IIA2)
FENESTRATION AND DOOR U-FACTOR AND PRODUCT RATINGS	(IA3), (IIA3)
AIR BARRIER - VISUAL INSPECTION	(IA6), (IIA6)
AIR BARRIER - TESTING	(IA7), (IIA7)
AIR BARRIER CONTINUITY PLAN TESTING/INSPECTION	(IA8), (IIA8)

### FLOOD ZONE DESIGN CERTIFICATION:

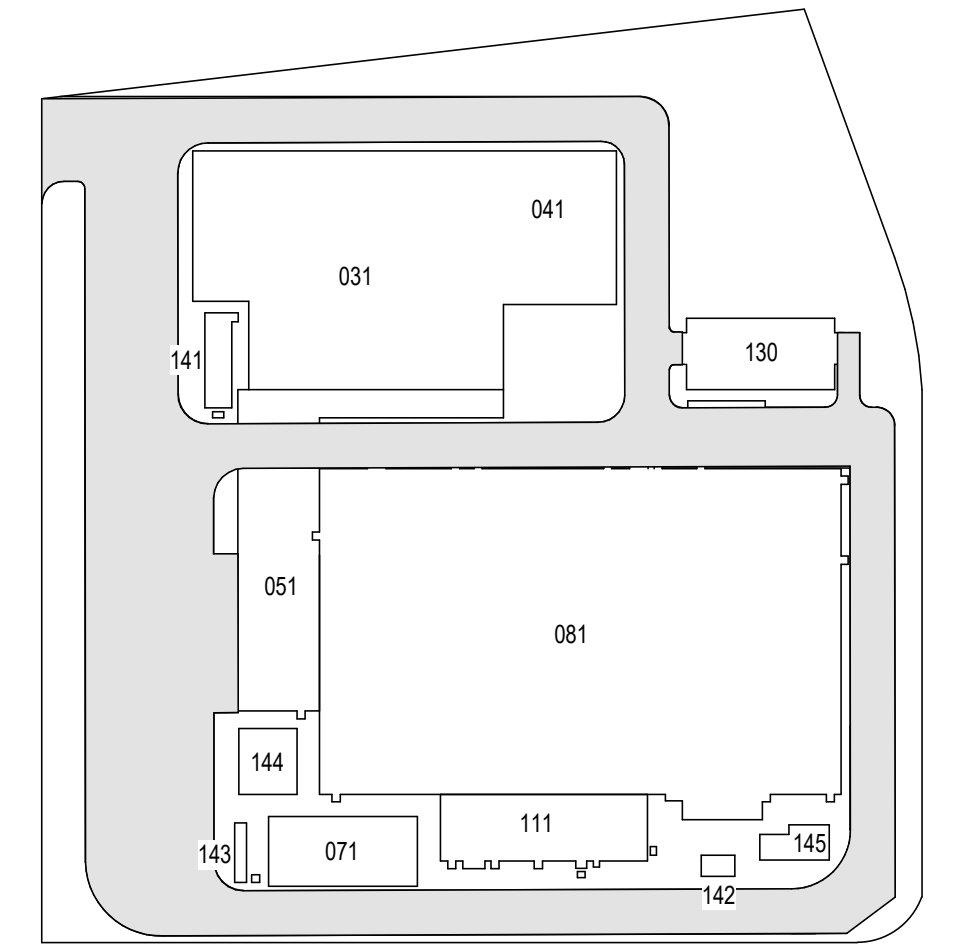
THE EXISTING PROPERTY IS IN THE SPECIAL FLOOD HAZARD AREA (SFHA), ZONE AE PER EFFECTIVE 2015 FLOOD INSURANCE RATE MAP(FIRM). THIS IS TO CONFIRM THAT THE PROPOSED INSTALLATION IS IN COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN APPENDIX Q OF THE NYC BUILDING CODE.

### NYC ENERGY CODE COMPLIANCE:

STATEMENT: TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CODE. PROPOSED WORK MEETS THE GUIDELINES AND INSTRUCTIONS OUTLINED IN THE 2020 NYC ECC CHAPTER 4.



ISSUED FOR PERMIT



KEY PLAN  
N.T.S.

**Engineering and Land Surveying, P.C.**  
370 7th Avenue  
SUITE 1604  
New York, NY 10001

**SOWINSKI SULLIVAN**  
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25 Mohawk Avenue  
Sparta, NJ 07871

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REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20<sup>th</sup> Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

COVER SHEET

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: T-001.00  
CADD FILE NO: Astoria HVDC Converter Station CHA-RE-141-ZZ-M3-A-001.rvt







**INTERIOR FINISHES**

**CHAPTER 8 - INTERIOR FINISHES**

**803.1.1 INTERIOR WALL AND CEILING FINISH MATERIALS.**

INTERIOR WALL AND CEILING FINISH MATERIALS SHALL BE TESTED AND CLASSIFIED IN ACCORDANCE WITH ASTM E 84 OR UL 723. SUCH INTERIOR FINISH MATERIALS SHALL BE GROUPED IN THE FOLLOWING CLASSES IN ACCORDANCE WITH THEIR FLAME SPREAD AND SMOKE-DEVELOPED INDEXES.

CLASS A = FLAME SPREAD INDEX 0-25; SMOKE DEVELOPED INDEX 0-450.

CLASS B = FLAME SPREAD INDEX 26-75; SMOKE DEVELOPED INDEX 0-450.

CLASS C = FLAME SPREAD INDEX 76-200; SMOKE DEVELOPED INDEX 0-450.

EXCEPTION: MATERIALS TESTED IN ACCORDANCE WITH SECTION 803.1.2 NOT TO BE CLASSIFIED IN ACCORDANCE WITH SECTION 803.1.1.

**TABLE 803.11 INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY**

GROUP	SPRINKLERED			NONSPRINKLERED		
	INTERIOR EXIT STAIRWAYS, INTERIOR EXIT RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND EXIT ACCESS RAMPS	ROOM AND ENCLOSED SPACES	INTERIOR EXIT STAIRWAYS, INTERIOR EXIT RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND EXIT ACCESS RAMPS	ROOM AND ENCLOSED SPACES
F	B	C	C	A	A	B
S	B	C	C	A	B	C

**ALLOWABLE TRAVEL DISTANCES**

SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY, TABLE 1006.2.1

OCCUPANCY	MAXIMUM OCCUPANT LOAD OF SPACE	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (FEET)			
		WITHOUT SPRINKLER SYSTEM (FEET)		WITH SPRINKLER SYSTEM (FEET)	
		OL<30	OL>30		
F	49	75	75	100a	100a
S	29	100	75	100a	100a

FOR SI: 1 FOOT = 304.8 MM.  
 NP = NOT PERMITTED  
 a. BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2. SEE SECTION 903 FOR OCCUPANCIES WHERE AUTOMATIC SPRINKLER SYSTEMS ARE PERMITTED IN ACCORDANCE WITH SECTION 903.3.1.2.

**EXIT ACCESS TRAVEL DISTANCE, TABLE 1017.2**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM	WITH SPRINKLER SYSTEM
F-1	150	200b
S-2	200	250c

**EGRESS CAPACITY**

1005.3.1 STAIRWAYS  
 THE CAPACITY, IN INCHES, OF MEANS OF EGRESS STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH STAIRWAYS BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.3 INCH PER OCCUPANT.

1005.3.2 OTHER EGRESS COMPONENTS  
 THE CAPACITY, IN INCHES, OF MEANS OF EGRESS COMPONENTS OTHER THAN STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH COMPONENT BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.2 INCH PER OCCUPANT.

SINGLE LEAF DOOR TYPICAL UNLESS NOTED OTHERWISE	
EGRESS CAPACITY 3'-0" DOOR = 32" BETWEEN FACE OF DOOR AND THE STOP	32" / .2 = 160 PEOPLE
DOUBLE LEAF DOOR TYPICAL UNLESS NOTED OTHERWISE	
EGRESS CAPACITY 6'-0" DOOR = 68" BETWEEN FACE OF DOOR AND THE STOP	68" / .2 = 340 PEOPLE

CHAPTER 16: OCCUPANCY/RISK CLASSIFICATION  
 CLASSIFIED AS CATEGORY "II" (TABLE 1604.5 NYC BUILDING CODE 2022)

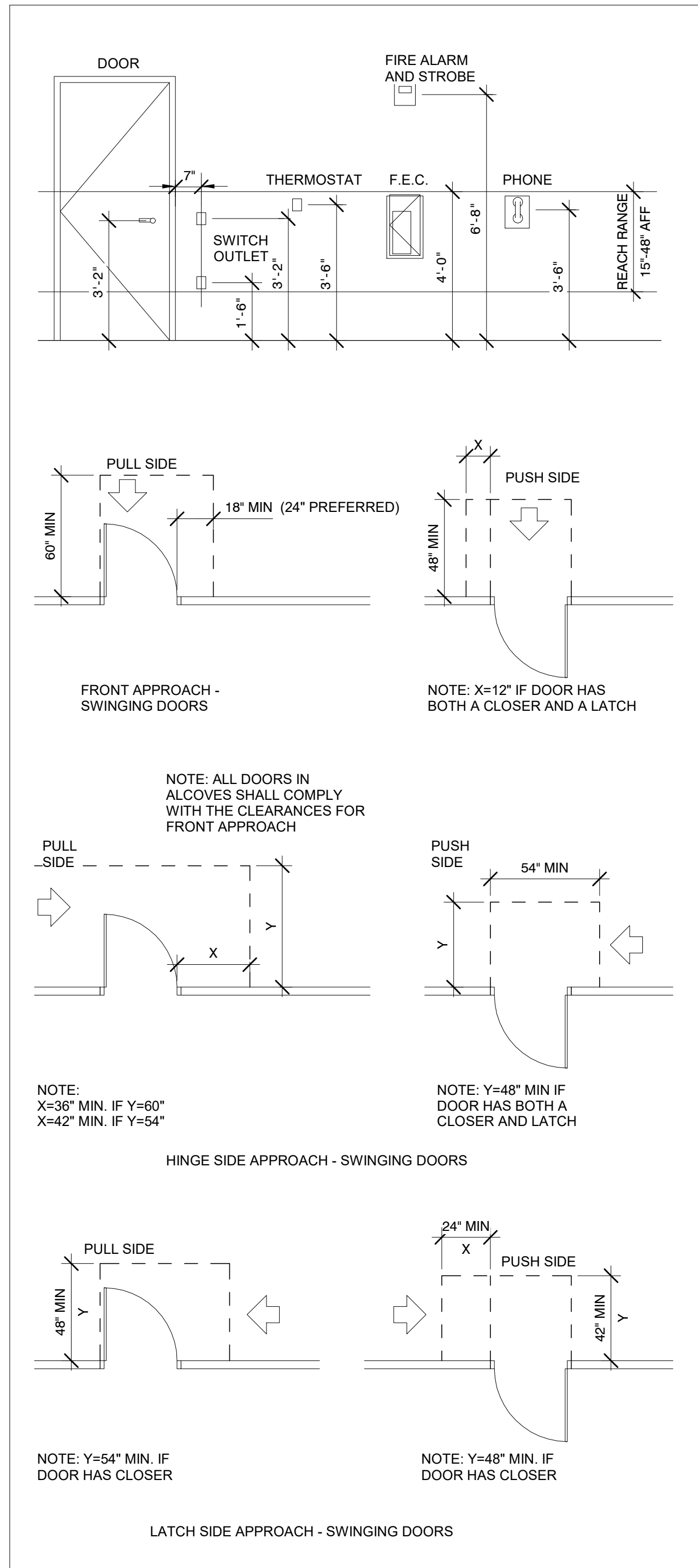
**STRUCTURAL DESIGN CHAPTER 16**

CHAPTER 16: OCCUPANCY/RISK CLASSIFICATION  
 CLASSIFIED AS CATEGORY "IV" (TABLE 1604.5 NYC BUILDING CODE 2022)

1604.5.2. IMPORTANCE FACTOR  
 1613.3.5 - SEISMIC DESIGN CATEGORY

**BUILDING DEPARTMENT NOTES**

- ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE 2022.
- ALL REFERENCES TO THE BUILDING CODE AND BUILDING DEPARTMENT SHALL BE CONSTRUED TO MEAN THE RULES AND REGULATIONS OF THE BUILDING DEPARTMENT FOR THE CITY OF NEW YORK.
- THE CONTRACTOR SHALL TAKE ALL THE NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE PUBLIC AND SURROUNDING PROPERTY PER CHAPTER 33.
- THE SAFETY OF PERSONS EMPLOYED IN CONSTRUCTION OPERATIONS. THIS INCLUDES BUT IS NOT LIMITED TO THE PROVISIONS FOR SAFETY BARRICADES AT ALL OPENINGS, EXISTING, NEW, OR TEMPORARY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND INCURRING THE COST OF ALL REQUIRED PERMITS AND CERTIFICATES REQUIRED BY BUILDING DEPARTMENT AND CITY AGENCIES.
- ALL MATERIALS, ASSEMBLIES, FORMS AND METHODS OF CONSTRUCTION, AND SERVICE EQUIPMENT SHALL HAVE BEEN ACCEPTED FOR USE UNDER THE PRESCRIBED TEST METHODS BY THE NEW YORK CITY BUILDING CODE.
- PARTITIONS AND FURRING SHALL COMPLY WITH SECTION 2210 AND CHAPTER 25 OF THE NEW YORK CITY BUILDING CODE.
- INTERIOR FINISHES AND SUSPENDED CEILINGS SHALL COMPLY WITH CHAPTER 8 OF THE NEW YORK CITY BUILDING CODE.
- ALL PROPOSED WORK SHALL COMPLY WITH APPENDIX F FOR RODENT PROOFING. ALL OPENINGS INCLUDING BUT NOT LIMITED TO ANNULAR SPACES AROUND PIPES, ELECTRICAL CABLES, AND CONDUITS, SHALL BE PROTECTED BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, METAL PLATES, OR SCREENING DESIGNED TO PREVENT THE PASSAGE OF RODENTS. OPENINGS FOR DOORS, WINDOWS, AND VENTS SHALL BE AS PROVIDED FOR IN SECTIONS F102.3, F102.4, F102.5 RESPECTIVELY.
- FIRE TREATED WOOD SHALL COMPLY WITH SECTION 2303.2 OF THE NEW YORK CITY BUILDING CODE.
- MECHANICAL APPLIANCES, EQUIPMENT AND SYSTEMS SHALL BE CONSTRUCTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE NEW YORK CITY MECHANICAL CODE. ALL INTERIOR ROOMS TO MECHANICALLY VENTILATE PER THE NEW YORK CITY MECHANICAL CODE.
- LIGHTING AND POWER INSTALLATION SHALL CONFORM TO THE NEW YORK CITY ELECTRICAL CODE AND ANY PERTINENT REGULATIONS OF THE NEW YORK CITY DEPARTMENT OF WATER SUPPLY, ENVIRONMENTAL PROTECTION, GAS, AND ELECTRICAL SUPPLY.
- FIRE DIVISIONS SHALL BE CONTINUOUS THROUGH CONCEALED SPACES IN FLOOR AND ROOF CONSTRUCTION PER CHAPTER 7. OPENINGS IN AND PENETRATIONS THROUGH FIRE SEPARATIONS/DIVISIONS SHALL COMPLY WITH SECTION 712.
- OPENING PROTECTIVES INCLUDING FRAMES, CLOSURES, AND HARDWARE SHALL COMPLY WITH SECTION 715. ALL OPENINGS PROTECTIVES SHALL BE LABELED BY AN APPROVED TESTING AGENCY.
- CONDUIT IN FIRE RATED PARTITIONS IS NOT TO EXCEED 3/4" DIAMETER. OPENINGS IN WALLS, PARTITIONS, OR FLOORS FOR PIPE SLEEVES, ELECTRICAL DEVICES, ETC. SHALL BE PACKED, SEALED OR LINED AS REQUIRED IN ORDER TO MAINTAIN THE REQUIRED FIRE AND UL RATINGS.
- DUCTS, PIPES AND CONDUITS PASSING THROUGH RATED CONSTRUCTION SHALL HAVE SPACES NOT EXCEEDING 1/2" PACKED WITH MINERAL WOOL AND SHALL BE CLOSED OFF WITH CLOSE FITTING METAL ESCUTCHEONS OR PLATES. THE AGGREGATE AREA OF SUCH PENETRATIONS IS NOT TO EXCEED 25 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL OR FLOOR AREA UNLESS PROVIDED WITH AN OPENING PROTECTION DEVICE.
- PER SECTION 1205.3 AVERAGE ILLUMINATION OF AT LEAST 10 FOOT CANDLES MEASURED 30" ABOVE THE FLOOR SHALL BE MAINTAINED CONTINUOUSLY DURING OCCUPANCY IN ALL ROOMS AND SPACES. PER 1006.1 MEANS OF EGRESS ILLUMINATION LEVEL SHALL NOT BE LESS THAN 2 FOOT-CANDLES AT THE FLOOR LEVEL. EXIT LIGHTING SHALL BE FROM CIRCUITS THAT ARE SEPARATE FROM OTHER CIRCUITS TAKEN AHEAD OF THE MAIN SWITCH.
- EXIT DOORS SHALL BE READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES FROM THE DIRECTION OF EGRESS.
- ALL PROPOSED WORK SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF ICC A117.1 AND CHAPTER 11 OF THE NEW YORK CITY BUILDING CODE FOR ACCESSIBILITY.
- ALL PROPOSED WORK SHALL COMPLY WITH APPLICABLE PROVISIONS OF NEW YORK CITY ENERGY CONSERVATION CODE. SEE EN-100 FOR EXTERIOR ENVELOPE COMPLIANCE REQUIREMENTS AND EN-101 FOR MECHANICAL AND LIGHTING COMPLIANCE REQUIREMENTS.
- CONTRACTOR TO COMPLETE ALL SPECIAL AND PROGRESS INSPECTIONS AS WELL AS ENERGY CODE COMPLIANCE INSPECTIONS PER FORMS TR-1 AND TR-8 AND AS LISTED ON THE COVER SHEET. PROGRESS INSPECTION REFERENCE STANDARDS AND CITATIONS SHALL CONFORM TO THE REQUIREMENTS OF 2010 NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE. CHAPTER 5 AS REFLECTED IN THE ENERGY CODE COMPLIANCE CERTIFICATES ON EN-100.00 AND EN-101.00.
- IN ACCORDANCE WITH ARTICLE 116 OF TITLE 28 AND SECTION 109, CONSTRUCTION SHALL BE SCHEDULED TO ALLOW REQUIRED SPECIAL INSPECTIONS TO TAKE PLACE. ROOFS, CEILINGS, EXTERIOR WALLS, INTERIOR WALLS, FLOORS, FOUNDATIONS, BASEMENTS, AND ANY OTHER CONSTRUCTION SHALL NOT BE COVERED OR ENCLOSED UNTIL REQUIRED SPECIAL INSPECTIONS ARE COMPLETED OR THE SPECIAL INSPECTOR INDICATES THAT SUCH COVERING OR ENCLOSURE MAY PROCEED AT EACH STAGE OF CONSTRUCTION, AS APPLICABLE.
- IN ACCORDANCE WITH SECTIONS 109.9 AND ECC 104.2.3 WHERE AN INSPECTION OR TEST FAILS, THE CONSTRUCTION SHALL BE CORRECTED AND MUST BE MADE AVAILABLE FOR REINSPECTION AND/OR RETESTING BY THE SPECIAL INSPECTOR UNTIL IT COMPLIES.
- THE CONTRACTOR SHALL PROVIDE NOTIFICATION TO DOB 24-48 HOURS PRIOR TO COMMENCEMENT OF EARTHWORK AS PER BC 3304.3.1



NOTE: THE CONDITIONS ILLUSTRATED ON THIS SHEET CONSTITUTE LEGAL STANDARDS FOR HANDICAPPED ACCESSIBILITY. THEY ARE NOT INTENDED TO DEPICT ACTUAL ARCHITECTURAL CONDITIONS FOR CONSTRUCTION IN THE COURSE OF THIS WORK. SEE ENCLOSED ARCHITECTURAL DRAWINGS FOR ACTUAL EXTENT OF WORK. NOT ALL CONDITIONS SHOWN HERE NECESSARILY OCCUR IN THIS PROJECT.

CONTRACTOR TO INFORM ARCHITECT WHEN DUE TO FIELD CONDITIONS, ETC. ACTUAL CONSTRUCTION WILL NOT CONFORM TO THESE STANDARDS.

ISSUED FOR PERMIT

Engineering and Land Surveying, P.C. 370 7th Avenue SUITE 1604 New York, NY 10001

SOWINSKI SULLIVAN ARCHITECTURE + ENGINEERING 25 Mohawk Avenue Sparta, NJ 07871

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B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022
REV	DESCRIPTION	DRW BY	CHK BY	DATE

Kiewit 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677  
 Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT **CHPE** Champlain Hudson Power Express  
**Astoria HVDC Converter Station**  
 31-45 20th Avenue, Astoria, Queens NY 11105  
 Block #850 - Lot #310 - BIN #4624437

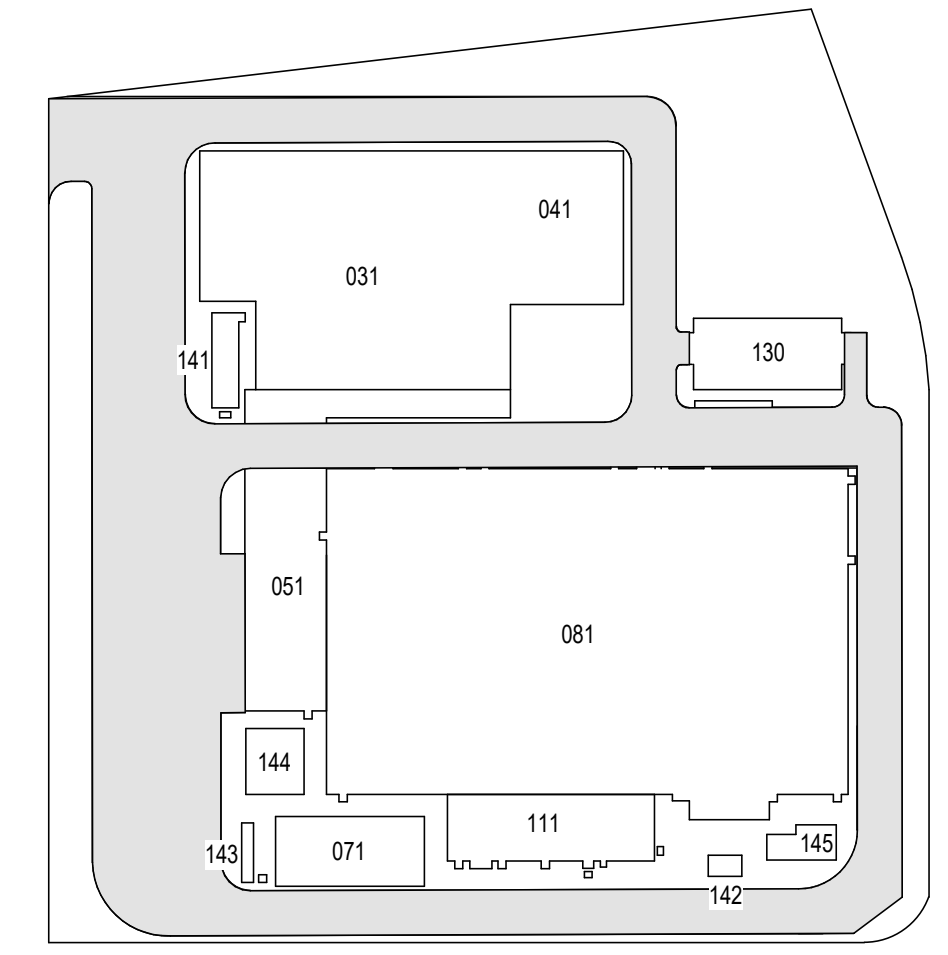
ADA STANDARDS, CODE DATA - MVS, RELAY AND STORAGE ENCLOSURES 2 OF 2

REGISTERED ARCHITECT SOWINSKI SULLIVAN ARCHITECTURE + ENGINEERING STATE OF NEW YORK 026048  
 DATE 12/12/2022  
 PROJECT NO 105121  
 DRAWING BY S. WARYAH  
 CHECKED BY J. STEPHENS  
 DRAWING NO **G-003.00**  
 CADD FILE NO Astoria HVDC - CHPE Astoria CHA-RE-141-ZZ-M3-A-001.rvt

BOROUGH: QUEENS  
 BLOCK: 850, LOT: 300  
 OWNER: ASTORIA  
 GENERATING COMPANY, L.P.

LEGEND

ISSUED FOR PERMIT



KEY PLAN  
 N.T.S.

Engineering and  
 Land Surveying, P.C. 370 7th Avenue  
 SUITE 1604  
 New York, NY 10001

**SOWINSKI  
 SULLIVAN**  
 ARCHITECTURE + ENGINEERING 25 Mohawk Avenue  
 Sparta, NJ 07871

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**Kiewit** 470 Chestnut Ridge Rd # 2,  
 Woodcliff Lake, NJ 07677

**Hitachi Energy** 901 Main Campus Drive  
 Raleigh, North Carolina 27606

PROJECT

**CHPE**  
 Champlain Hudson  
 Power Express

**Astoria HVDC  
 Converter Station**  
 31-45 20th Avenue, Astoria, Queens NY 11105  
 Block #850 - Lot #310 - BIN #4624437

OVERALL SITE PLAN

REGISTERED ARCHITECT  
 SOWINSKI SULLIVAN  
 STATE OF NEW YORK

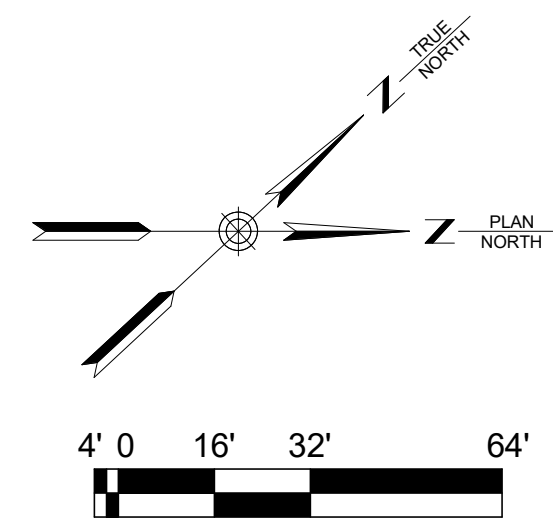
DATE 12/12/2022  
 PROJECT NO 105121  
 DRAWING BY S. WARYAH  
 CHECKED BY J. STEPHENS  
 DRAWING NO  
**A-001.00**  
 CADD FILE NO  
 Astoria HVDC CHPE  
 Astoria CHA-RE-141-ZZ-M3-A-001.rvt

Lands Now of Formerly of  
 CONSOLIDATED EDISON  
 COMPANY OF NEW YORK, INC.  
 Block 850 Lot 1

Lands Now of Formerly of  
 CONSOLIDATED EDISON  
 COMPANY OF NEW YORK,  
 INC.  
 Block 850 Lot 1

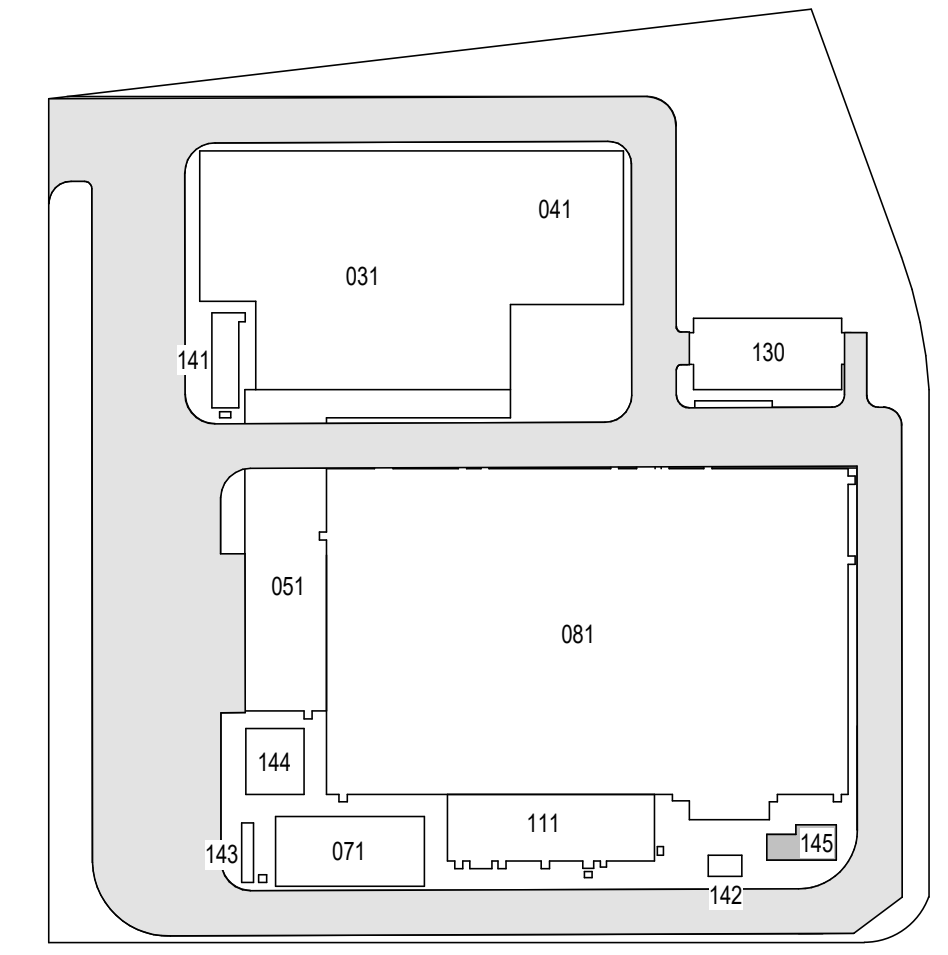
Lands Now of Formerly of  
 CONSOLIDATED EDISON  
 COMPANY OF NEW YORK,  
 INC.  
 Block 850 Lot 1

1 OVERALL SITE PLAN  
 A-001.00 1/32" = 1'-0"



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ISSUED FOR PERMIT



KEY PLAN  
N.T.S.

**Engineering and Land Surveying, P.C.**  
370 7th Avenue  
SUITE 1604  
New York, NY 10001

**SOWINSKI SULLIVAN**  
ARCHITECTURE + ENGINEERING  
25 Mohawk Avenue  
Sparta, NJ 07871

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**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

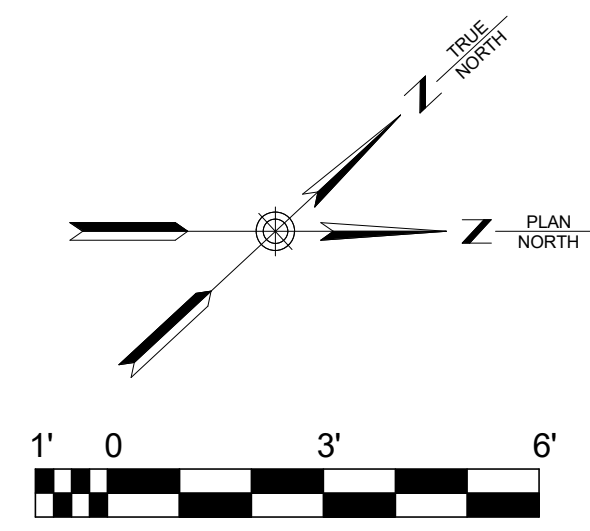
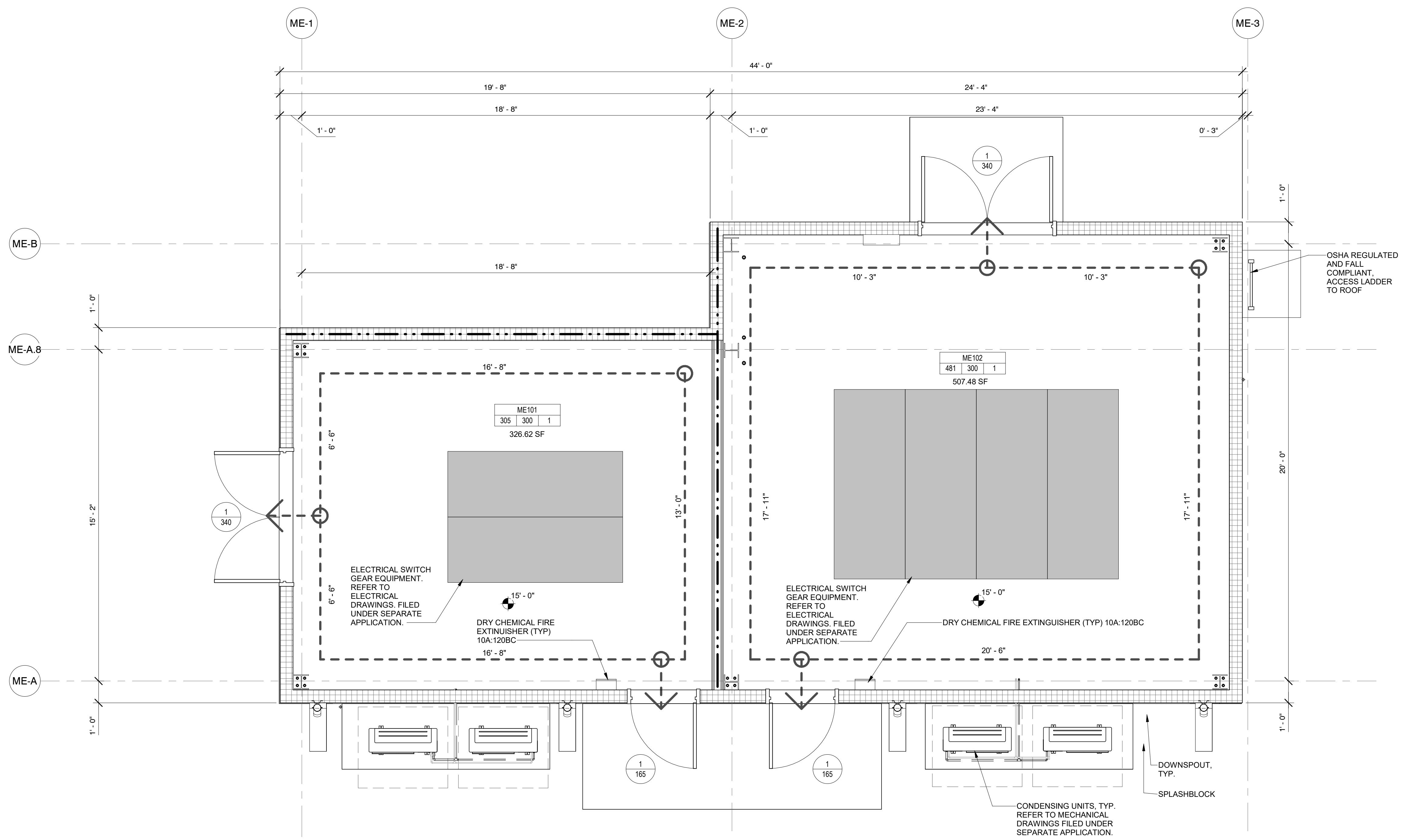
**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**MVS ENCLOSURE EGRESS PLAN**

REGISTERED ARCHITECT  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO:  
**A-002.00**  
CADD FILE NO:  
Astoria HVDC CHPE  
Astoria/CHA/RE-141-ZZ-M3-A-001.rvt



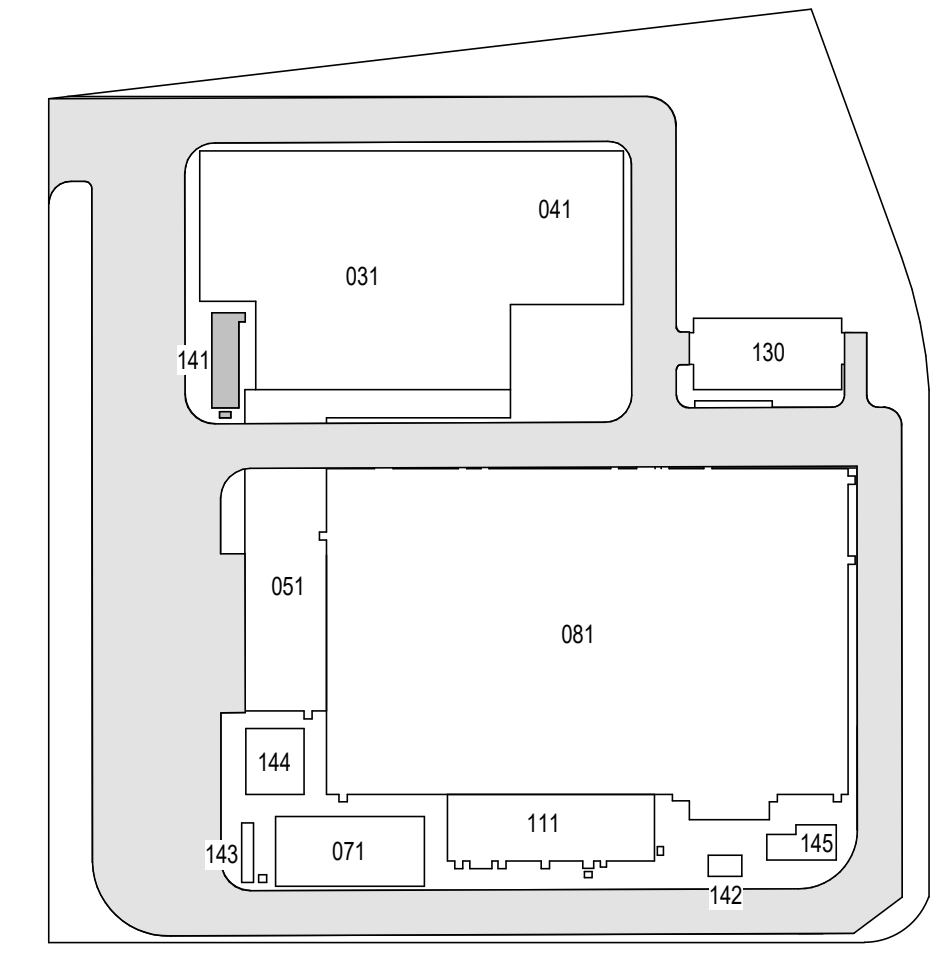
1 MVS ENCLOSURE EGRESS PLAN  
A-002.00 3/8" = 1'-0"

EGRESS PLAN LEGEND

EGRESS TRAVEL ROUTE	DOOR EGRESS COMPONENT	ROOM TAG	WALL RATINGS
	ACTUAL OCCUPANTS	AREA	2 HR WALL
	MAX. OCCUPANT LOAD ALLOWED	OCCUPANT LOAD FACTOR	
		ACTUAL OCCUPANT	

12/21/2022 5:31:12 PM

ISSUED FOR PERMIT



KEY PLAN  
N.T.S.

**Engineering and Land Surveying, P.C.**  
370 7th Avenue  
SUITE 1604  
New York, NY 10001

**SOWINSKI SULLIVAN**  
ARCHITECTURE + ENGINEERING  
25 Mohawk Avenue  
Sparta, NJ 07871

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**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

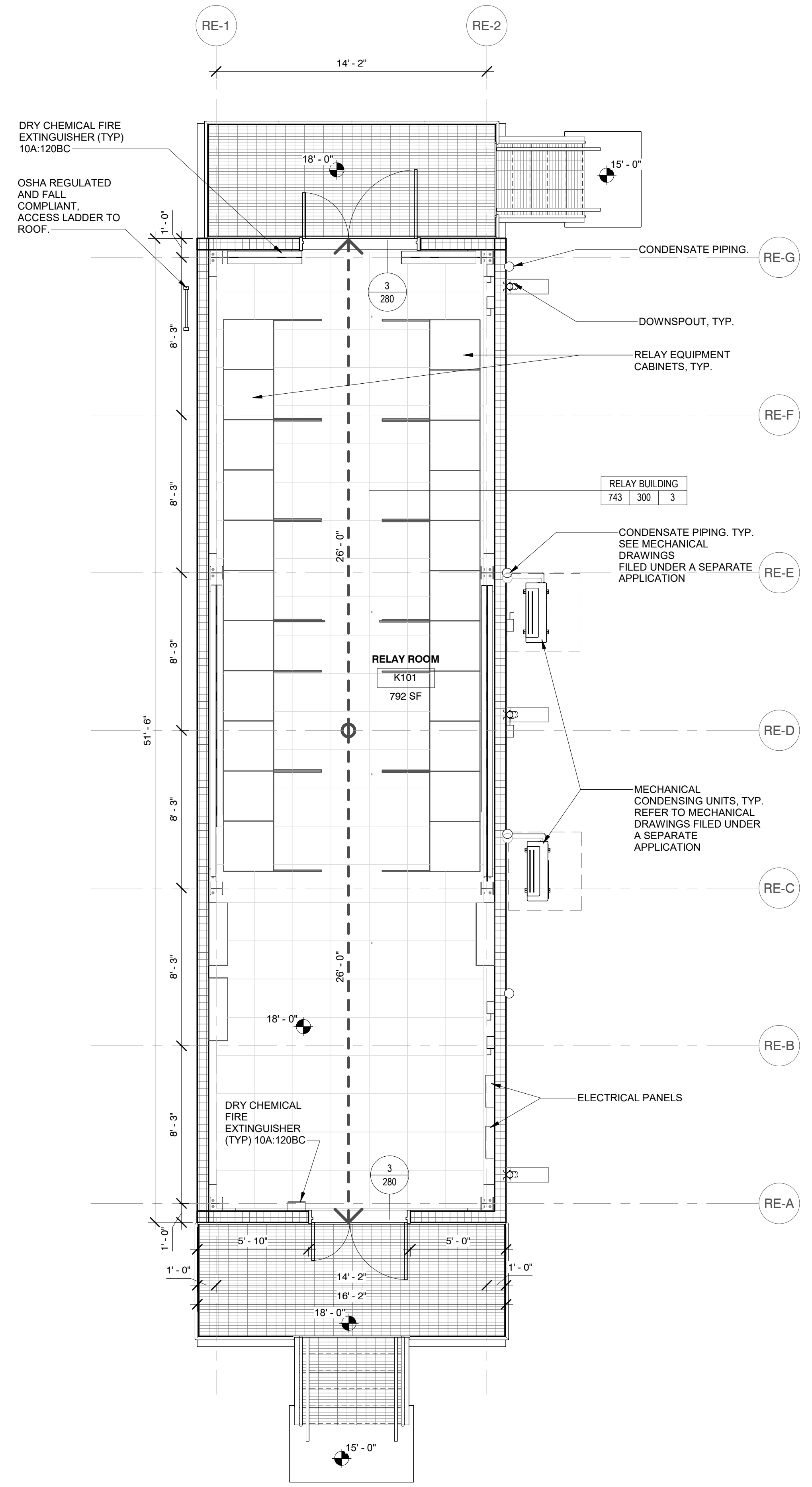
PROJECT

**CHPE**  
Champlain Hudson  
Power Express

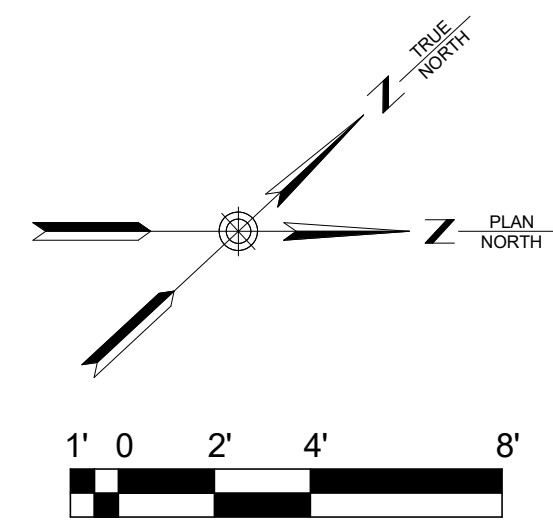
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**RELAY ENCLOSURE  
EGRESS PLAN**

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO:  
**A-003.00**  
CADD FILE NO:  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt



1 RELAY ENCLOSURE EGRESS PLAN  
A-003.00 1/4" = 1'-0"



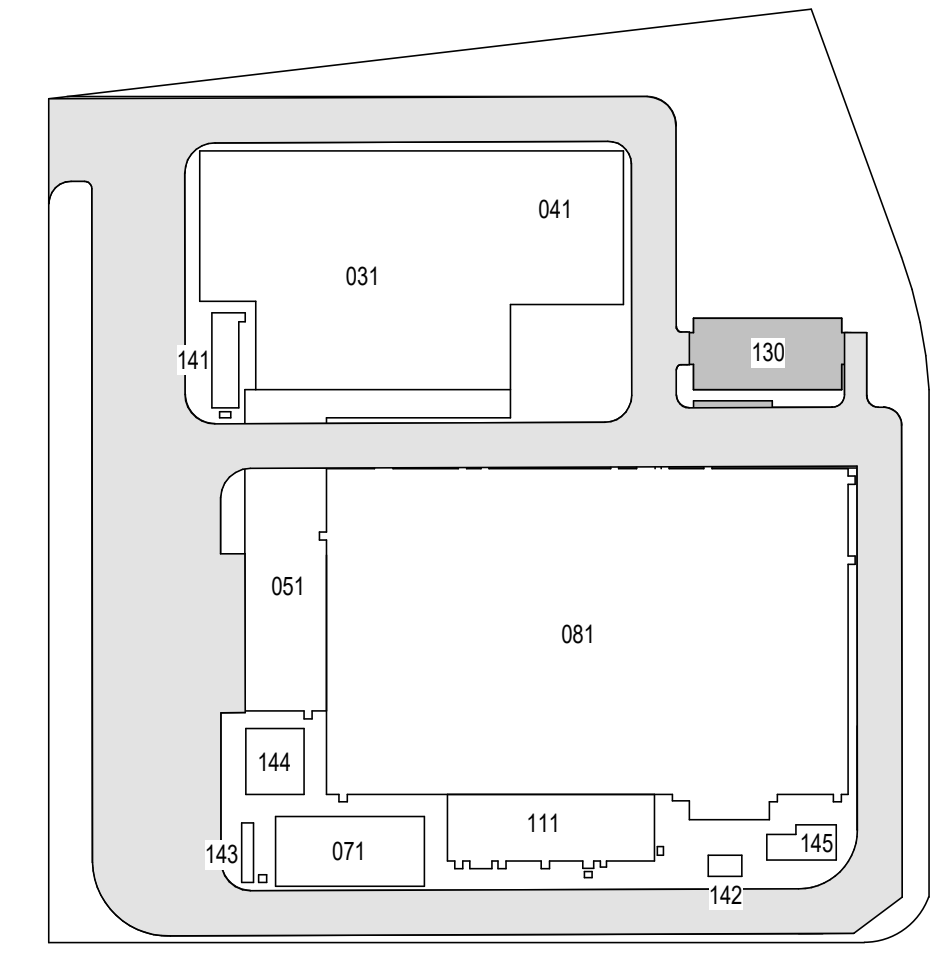
**EGRESS PLAN LEGEND**

EGRESS TRAVEL ROUTE	DOOR EGRESS COMPONENT	ROOM TAG
	ACTUAL OCCUPANTS	AREA
	MAX. OCCUPANT LOAD ALLOWED	OCCUPANT LOAD FACTOR
		ACTUAL OCCUPANT

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ISSUED FOR PERMIT



KEY PLAN  
N.T.S.

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SUITE 1604  
New York, NY 10001

**SOWINSKI SULLIVAN**  
ARCHITECTURE + ENGINEERING  
25 Mohawk Avenue  
Sparta, NJ 07871

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REV	DESCRIPTION	DRW BY	CHK BY	DATE
A	INTERIM SUBMITTAL	JP	JS	DEC 12, 2022
B	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

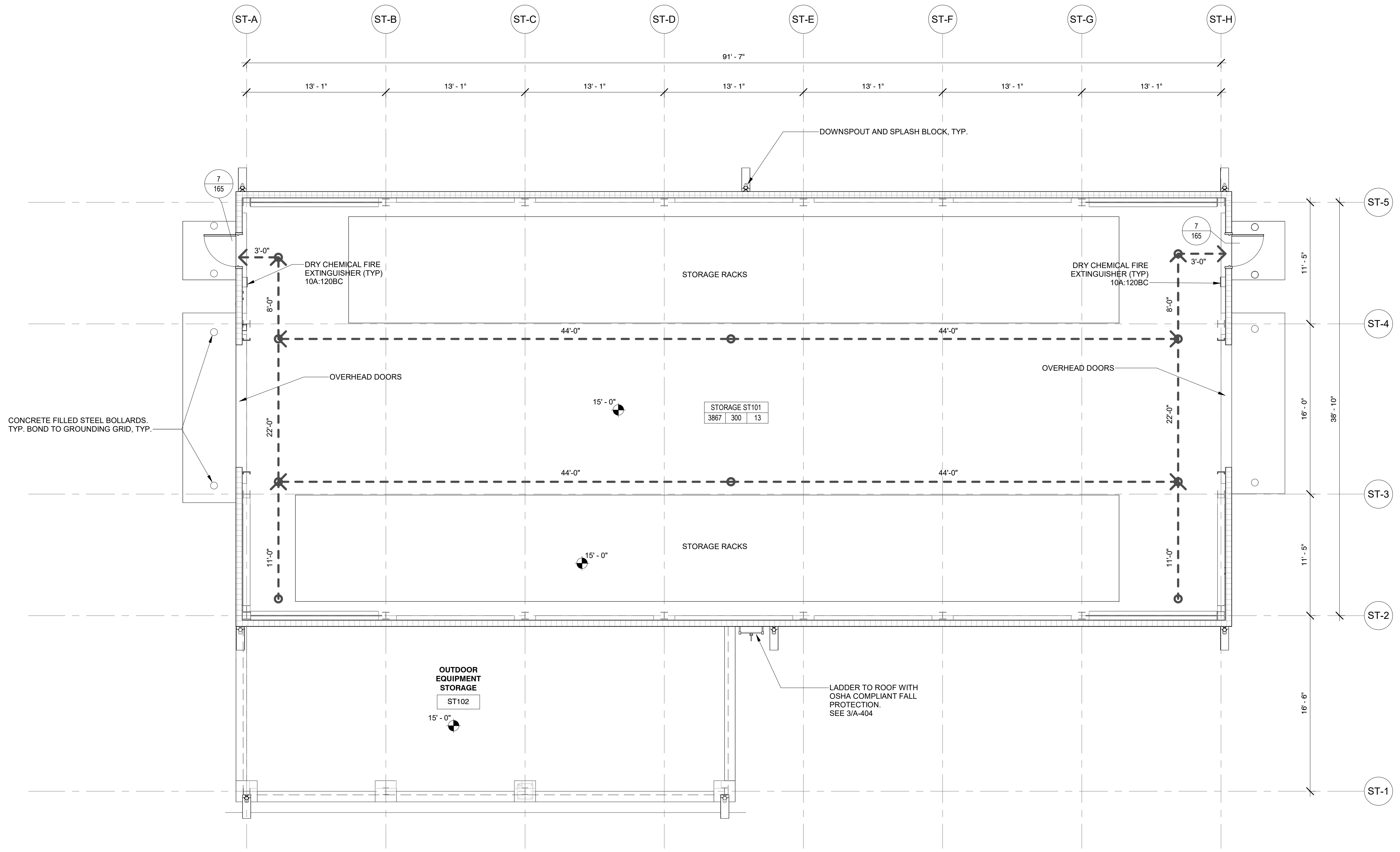
**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

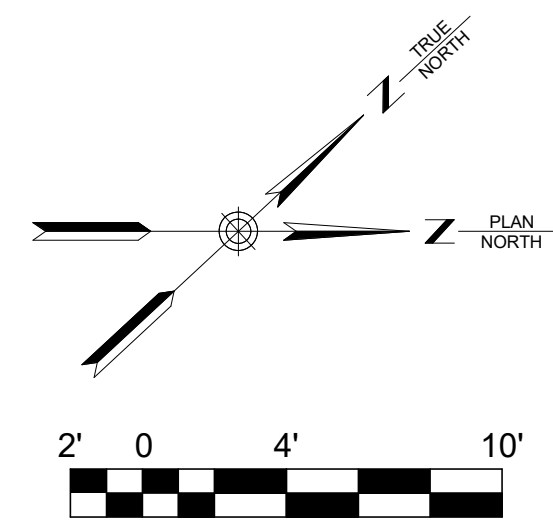
**STORAGE ENCLOSURE  
EGRESS PLAN**

REGISTERED ARCHITECT  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-004.00**  
CADD FILE NO:  
Astoria/CHA-RE-130-ZZ-M3-A-001.rvt

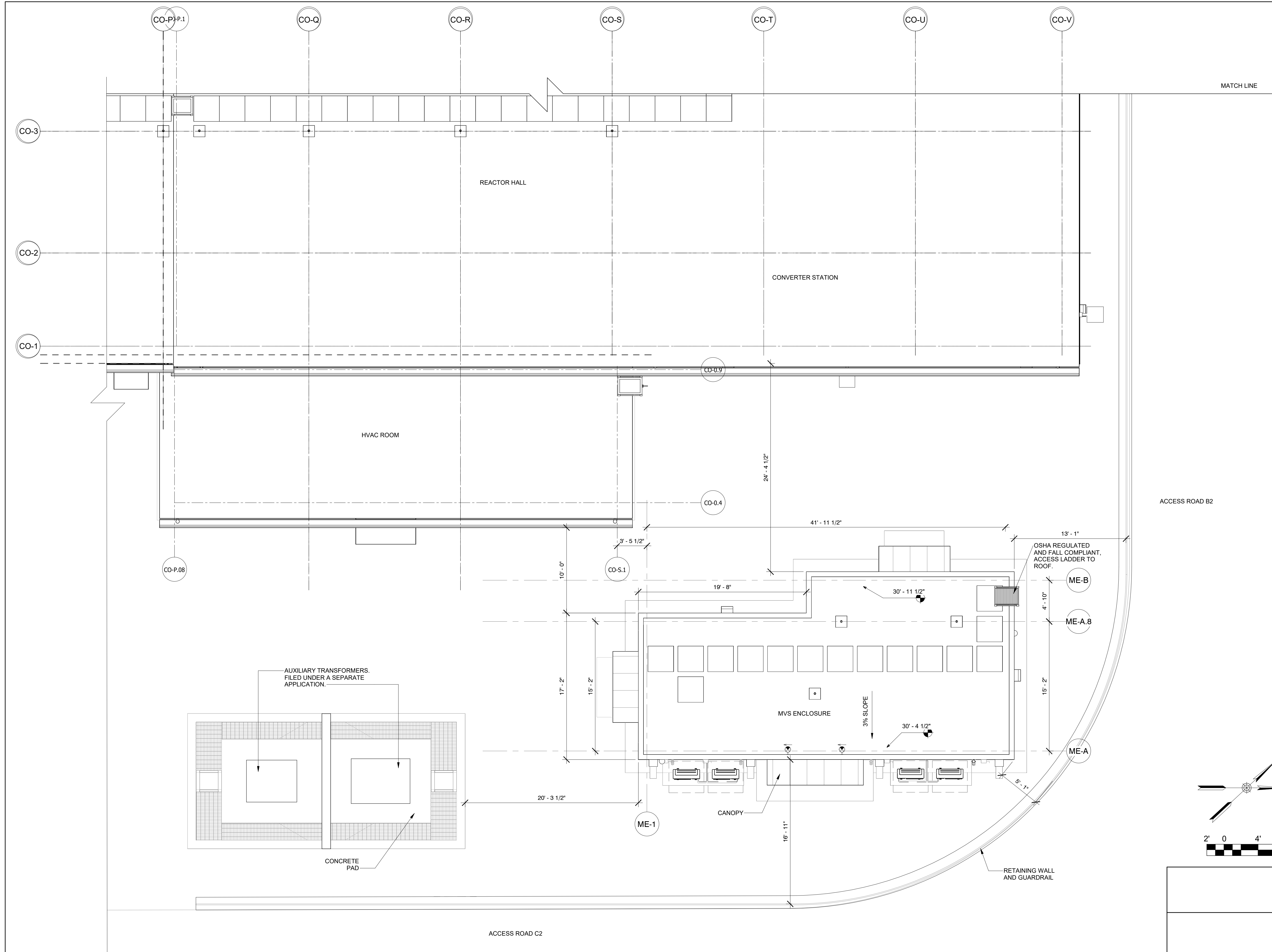


1 STORAGE ENCLOSURE- EGRESS PLAN  
A-004.00 3/16" = 1'-0"

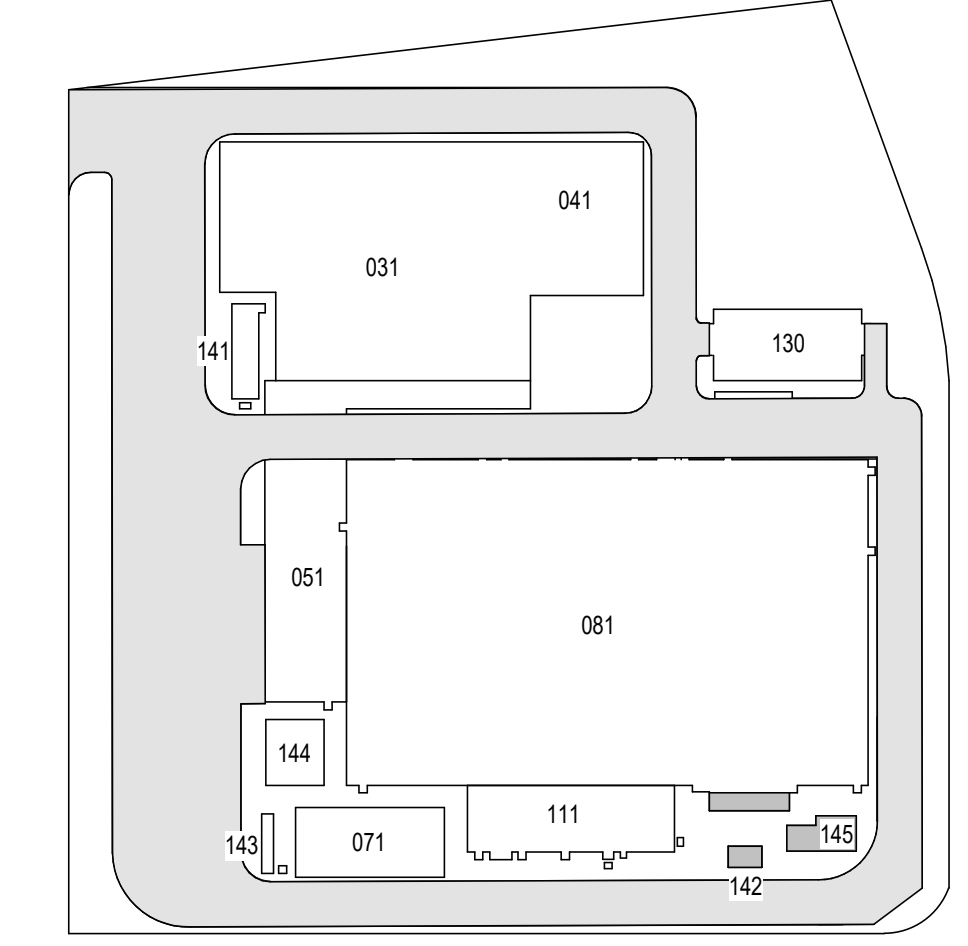


12/21/2022 5:46:05 PM

EGRESS PLAN LEGEND			
EGRESS TRAVEL ROUTE	DOOR EGRESS COMPONENT	STAIR EGRESS COMPONENT	ROOM TAG
	ACTUAL OCCUPANTS	EGRESS WIDTH	AREA
	MAX. OCCUPANT LOAD ALLOWED	MAX OCCUPANT LOAD ALLOWED	OCCUPANT LOAD FACTOR
		ACTUAL OCCUPANT	ACTUAL OCCUPANT



ISSUED FOR PERMIT



KEY PLAN  
N.T.S.

**Engineering and Land Surveying, P.C.**  
370 7th Avenue  
SUITE 1604  
New York, NY 10001

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25 Mohawk Avenue  
Sparta, NJ 07871

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REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**MVS ENCLOSURE SITE PLAN**

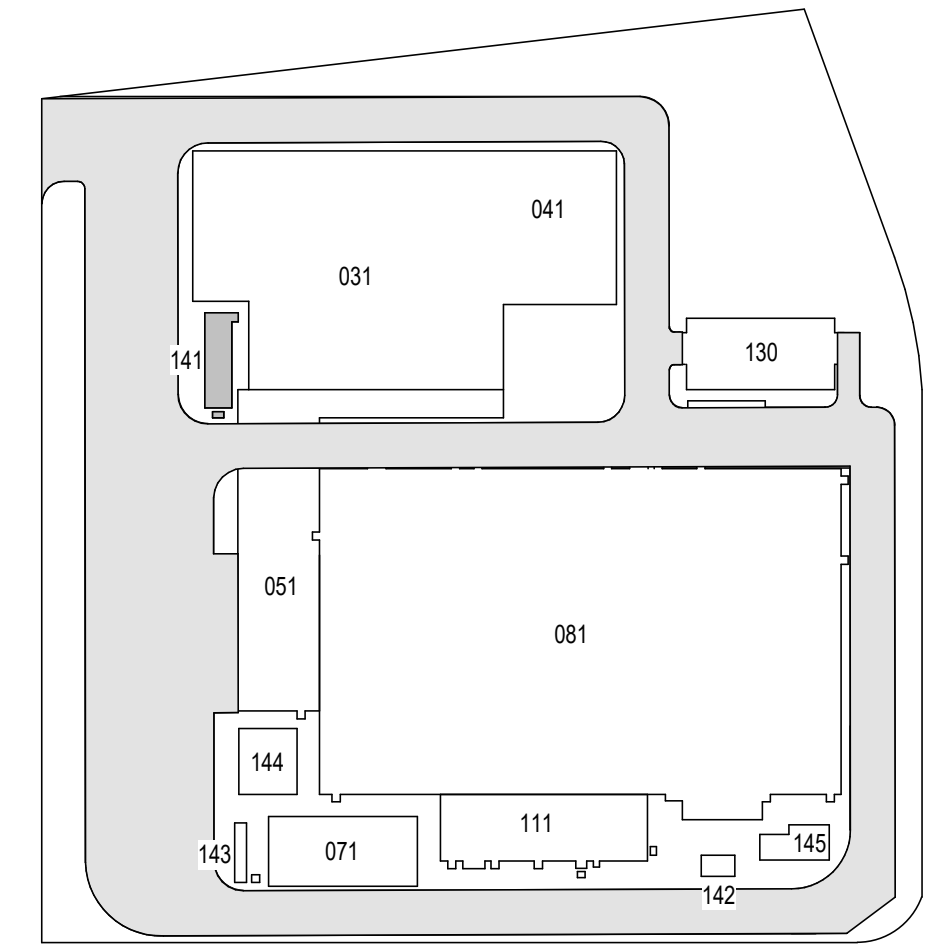
REGISTERED ARCHITECT  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-010.00**  
CADD FILE NO:  
Astoria HVDC CHPE  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt

12/21/2022 5:51:05 PM

1 MVS ENCLOSURE SITE PLAN  
A-010.00 3/16" = 1'-0"

ISSUED FOR PERMIT



KEY PLAN N.T.S.

Engineering and Land Surveying, P.C. 370 7th Avenue SUITE 1604 New York, NY 10001

SOWINSKI SULLIVAN ARCHITECTURE+ENGINEERING 25 Mohawk Avenue Sparta, NJ 07871

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A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

Kiewit 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677

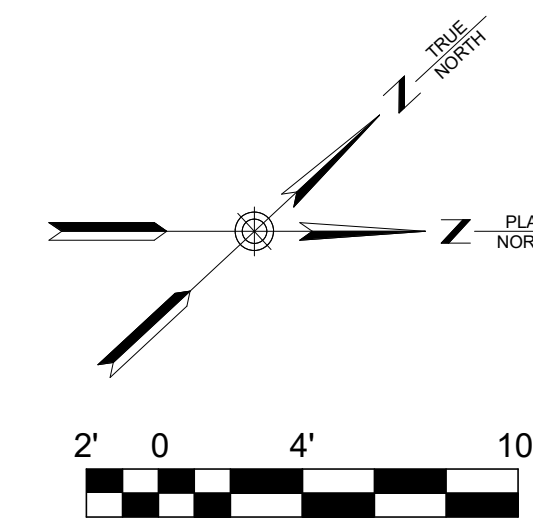
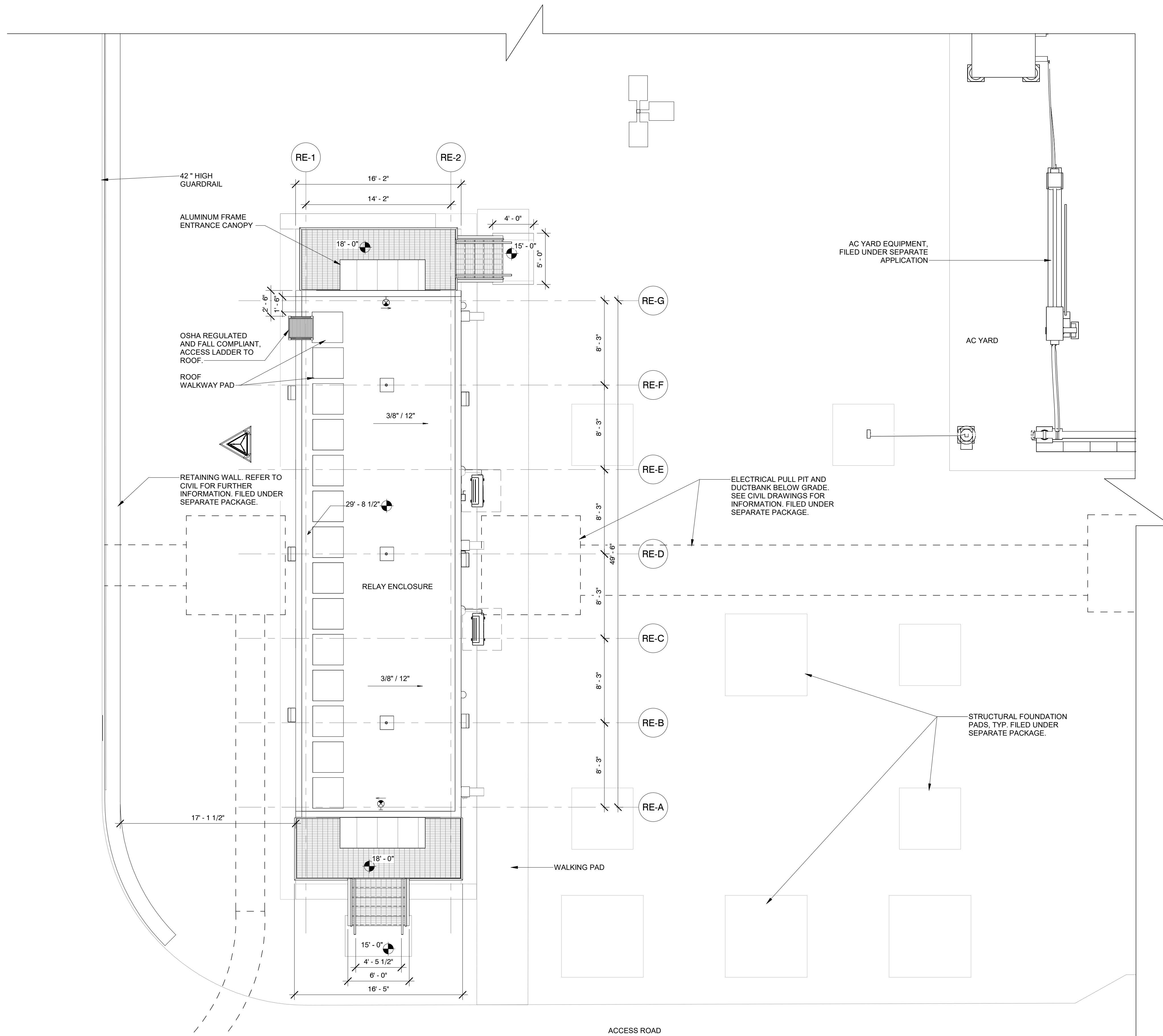
Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT CHPE Champlain Hudson Power Express Astoria HVDC Converter Station 31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

RELAY ENCLOSURE SITE PLAN

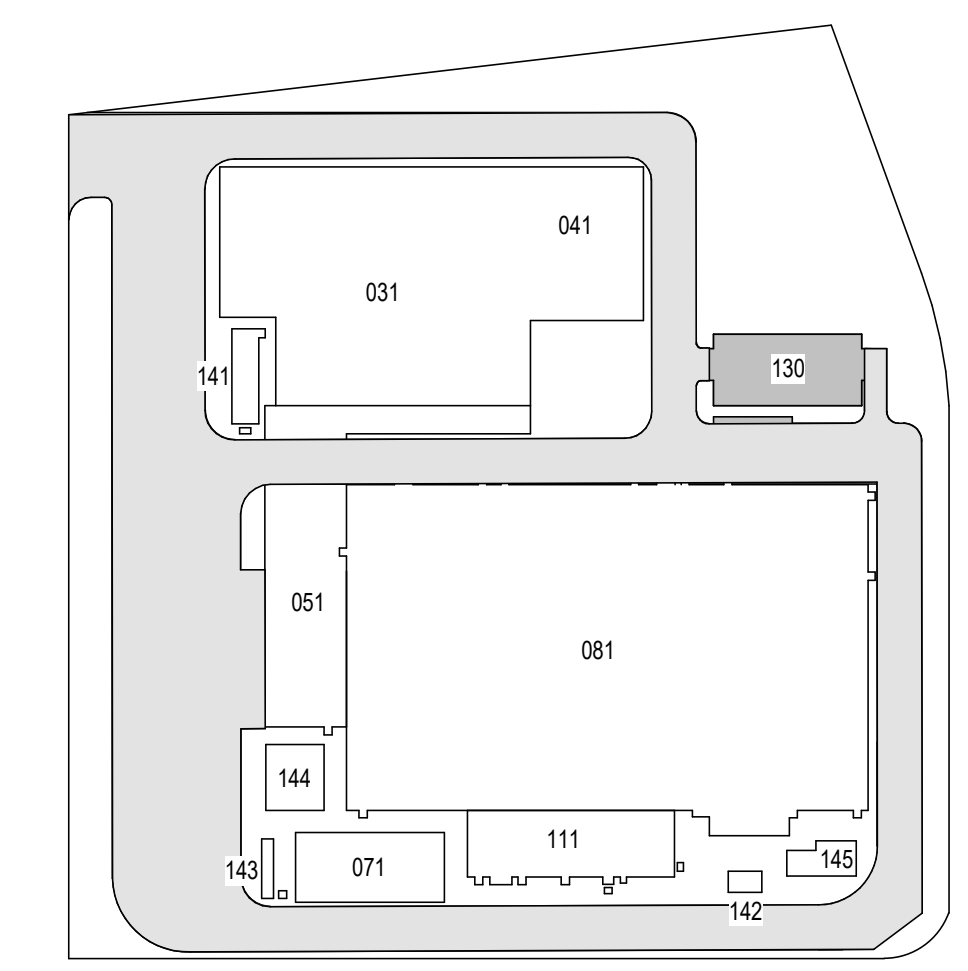


DATE	12/12/2022
PROJECT NO.	105121
DRAWING BY	S. WARYAH
CHECKED BY	J. STEPHENS
DRAWING NO.	A-011.00
CADD FILE NO.	Astoria HVDC CHPE Astoria CHA-RE-141-ZZ-M3-A-001.rvt



1 RELAY ENCLOSURE SITE PLAN 3/16" = 1'-0"

ISSUED FOR PERMIT



KEY PLAN  
N.T.S. PLAN NORTH

Engineering and Land Surveying, P.C.  
370 7th Avenue  
SUITE 1604  
New York, NY 10001

SOWINSKI SULLIVAN  
ARCHITECTURE + ENGINEERING  
25 Mohawk Avenue  
Sparta, NJ 07871

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**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

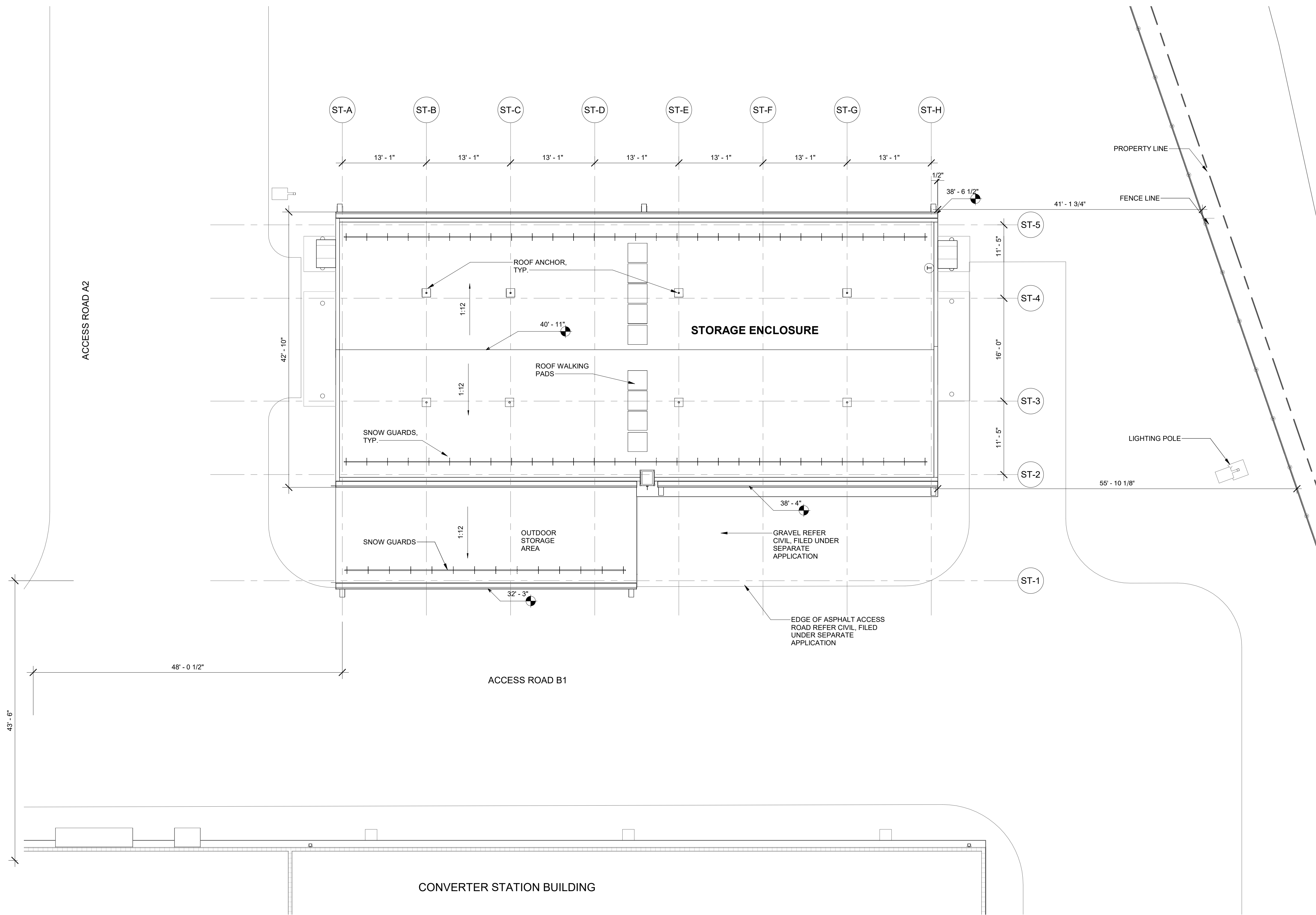
**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

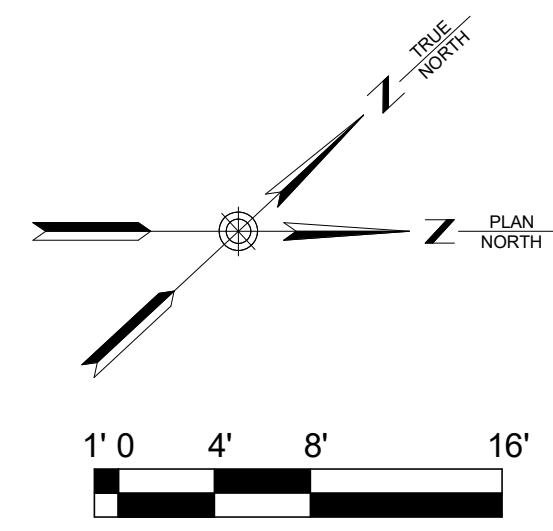
**STORAGE ENCLOSURE  
SITE PLAN**

REGISTERED ARCHITECT  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO:  
**A-012.00**  
CADD FILE NO:  
Astoria HVDC CHPE  
Astoria CHA-RE-130-ZZ-M3-A-001.rvt

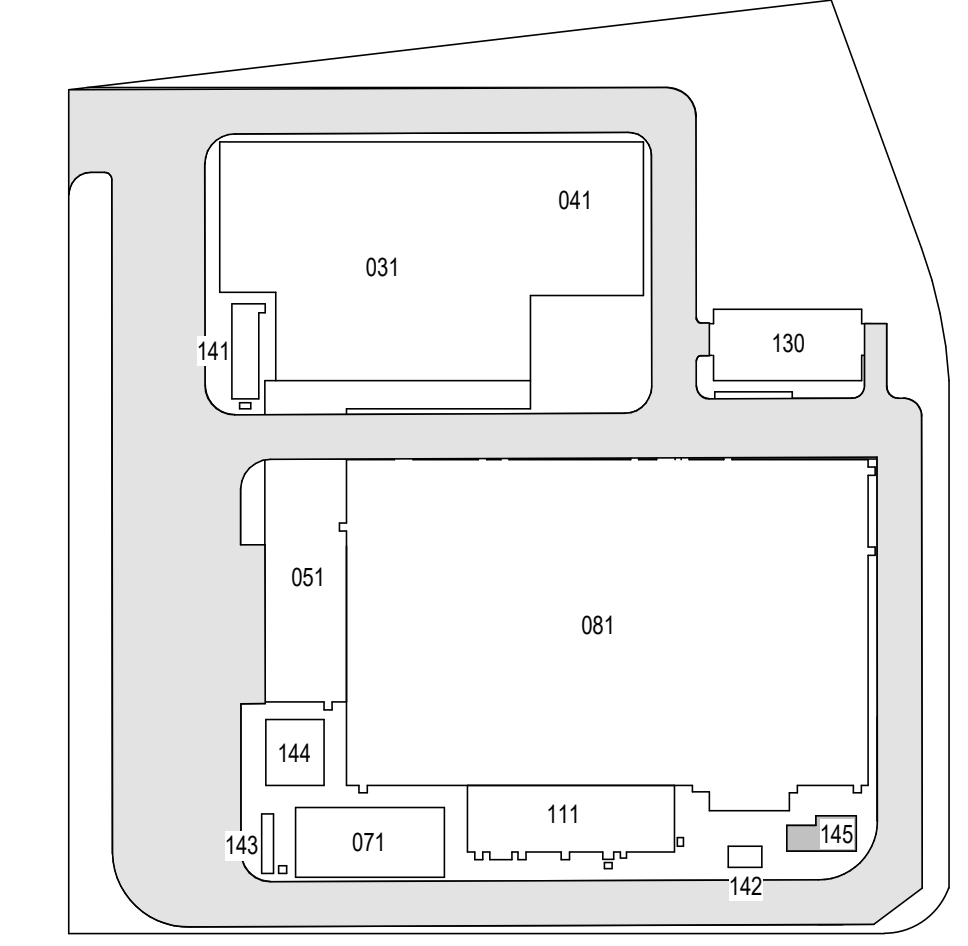
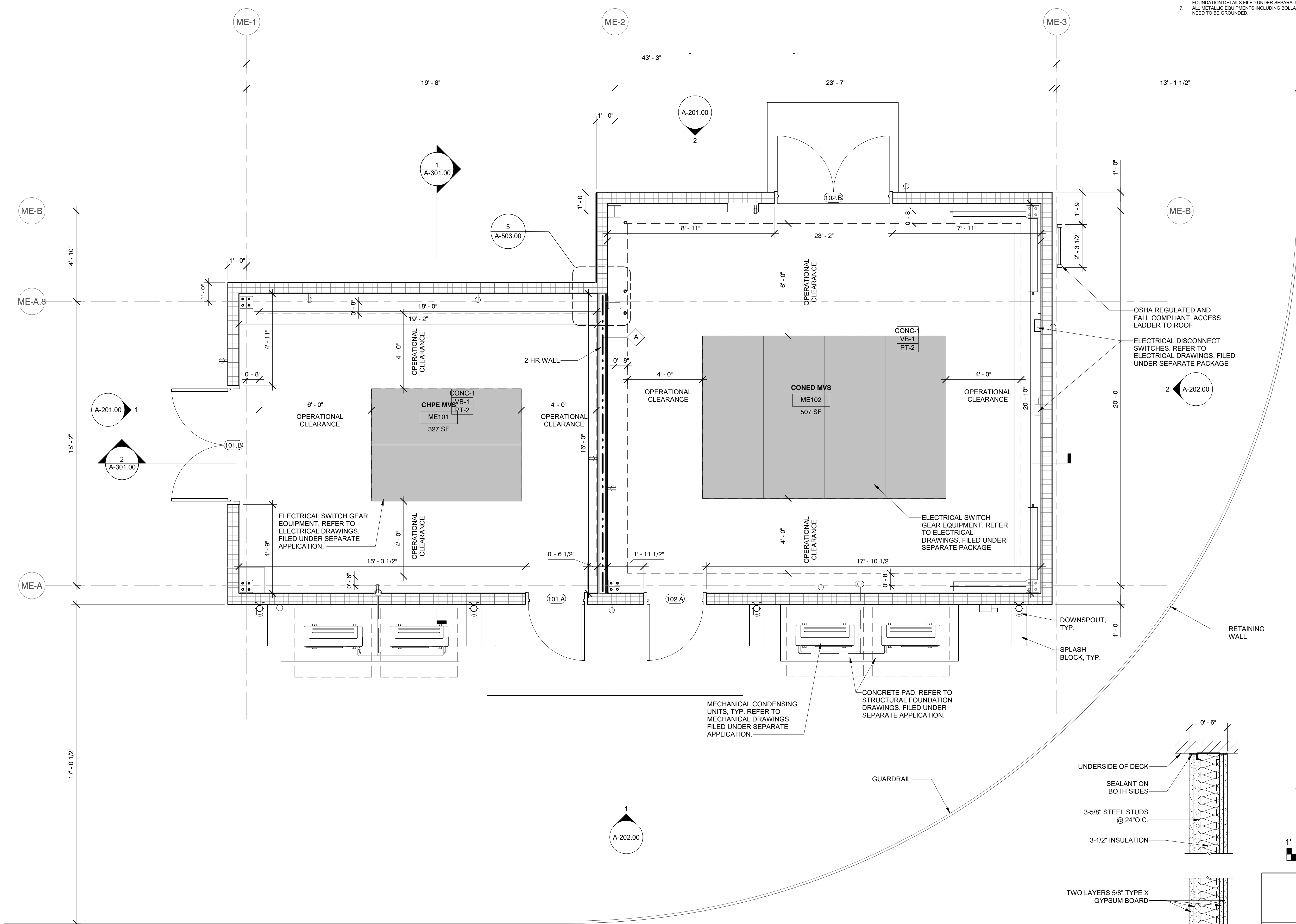


1 STORAGE ENCLOSURE - SITE PLAN  
A-012.00 1/8" = 1'-0"



ISSUED FOR PERMIT

- SHEET NOTES:**
- REFER TO A-601.00 FOR DOOR SCHEDULE
  - REFER TO A-201.00 AND A-202.00 FOR METAL PANEL WALL DETAILS AND WALL PENETRATION DETAILS.
  - REFER TO MECHANICAL DRAWINGS FOR FRESH AIR INTAKE, HEATER AND DAMPER/LOUVER DETAILS FILED UNDER SEPARATE APPLICATION.
  - REFER TO BUILDING ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.
  - REFER TO PLUMBING DRAWINGS, NOTES FOR GUTTER SIZES AND DOWNSPOUT SIZES DETAILS, SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.
  - REFER TO BUILDING STRUCTURAL DRAWINGS FOR COLUMN SIZES AND CONNECTIONS AND FOUNDATION DETAILS FILED UNDER SEPARATE APPLICATION.
  - ALL METALLIC EQUIPMENTS INCLUDING BOLLARDS, ROOF ACCESS LADDERS, LIGHTING POLES, ETC. NEED TO BE GROUNDED.



KEY PLAN  
N.T.S.

**Engineering and Land Surveying, P.C.**  
370 7th Avenue  
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New York, NY 10001

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Sparta, NJ 07871

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A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

**PROJECT**

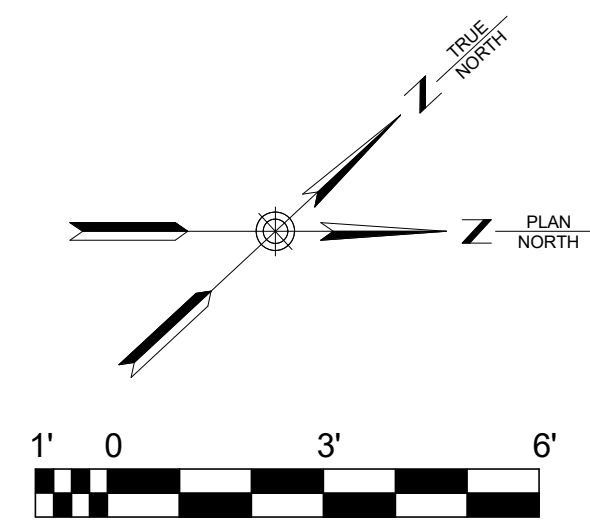
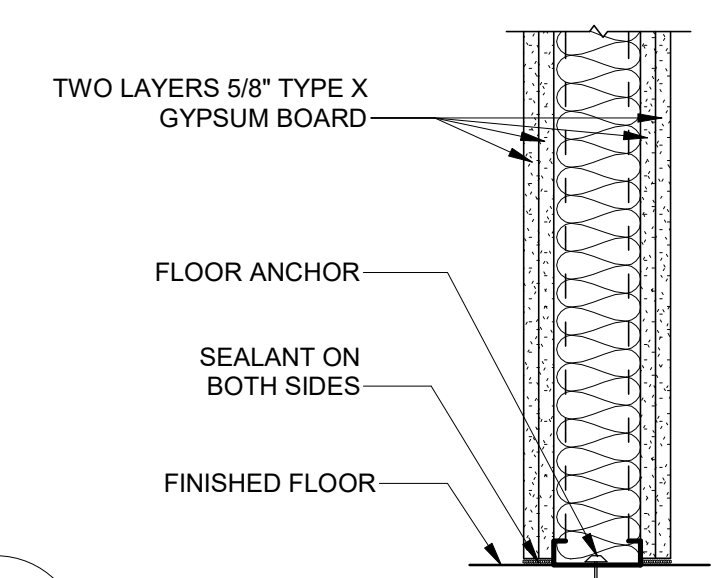
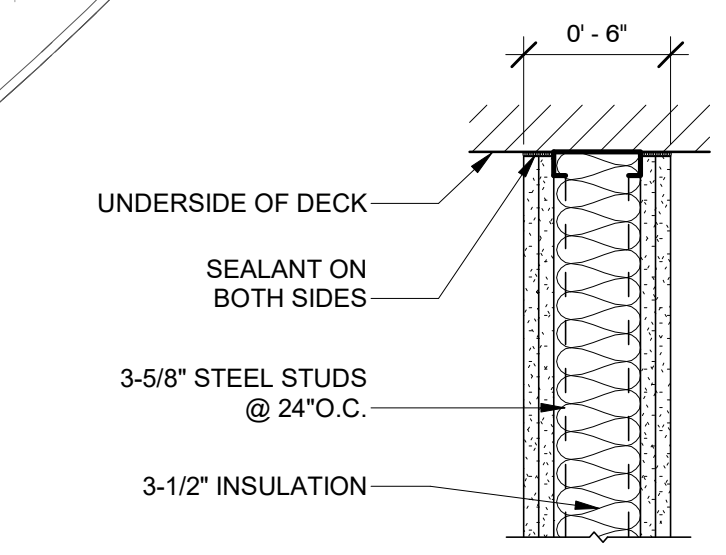
**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**MVS ENCLOSURE FLOOR PLAN**

**REGISTERED ARCHITECT**  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026049

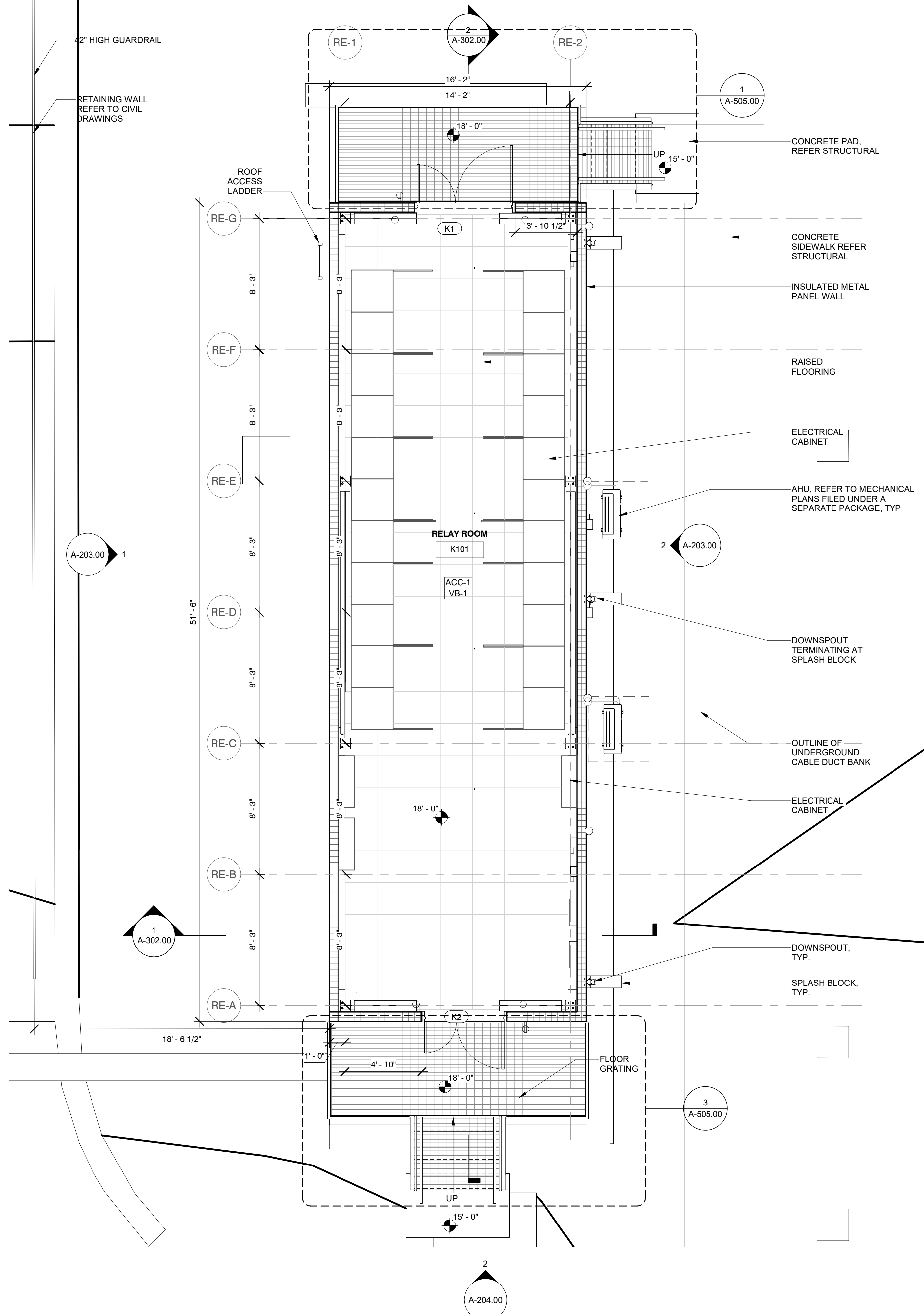
DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-101.00**  
CADD FILE NO:  
Astoria/CHA-RE-141-ZZ-M3-A-001.rvt



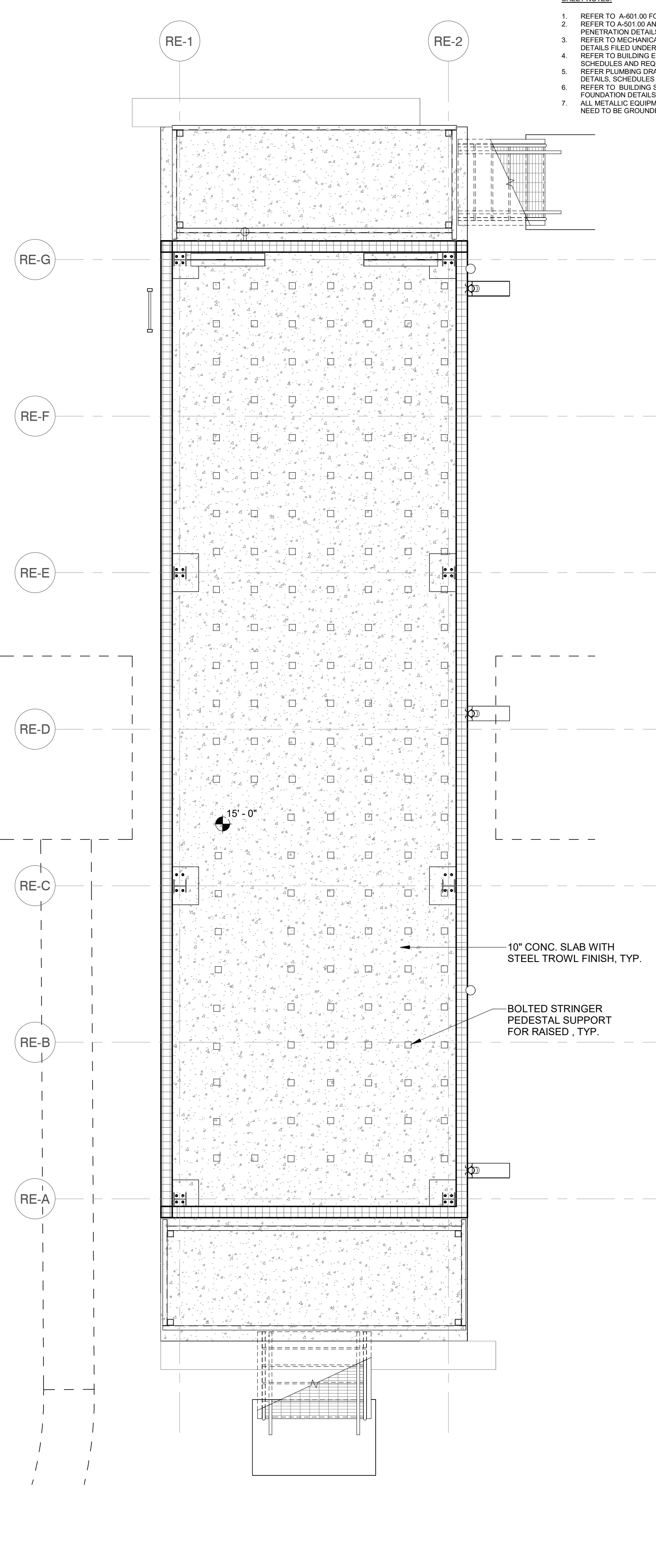
1  
A-101.00  
MVS ENCLOSURE FLOOR LEVEL PLAN  
3/8" = 1'-0"

2  
A-101.00  
WALL TYPE A UL U#419  
1 1/2" = 1'-0"

12/21/2022 5:31:26 PM



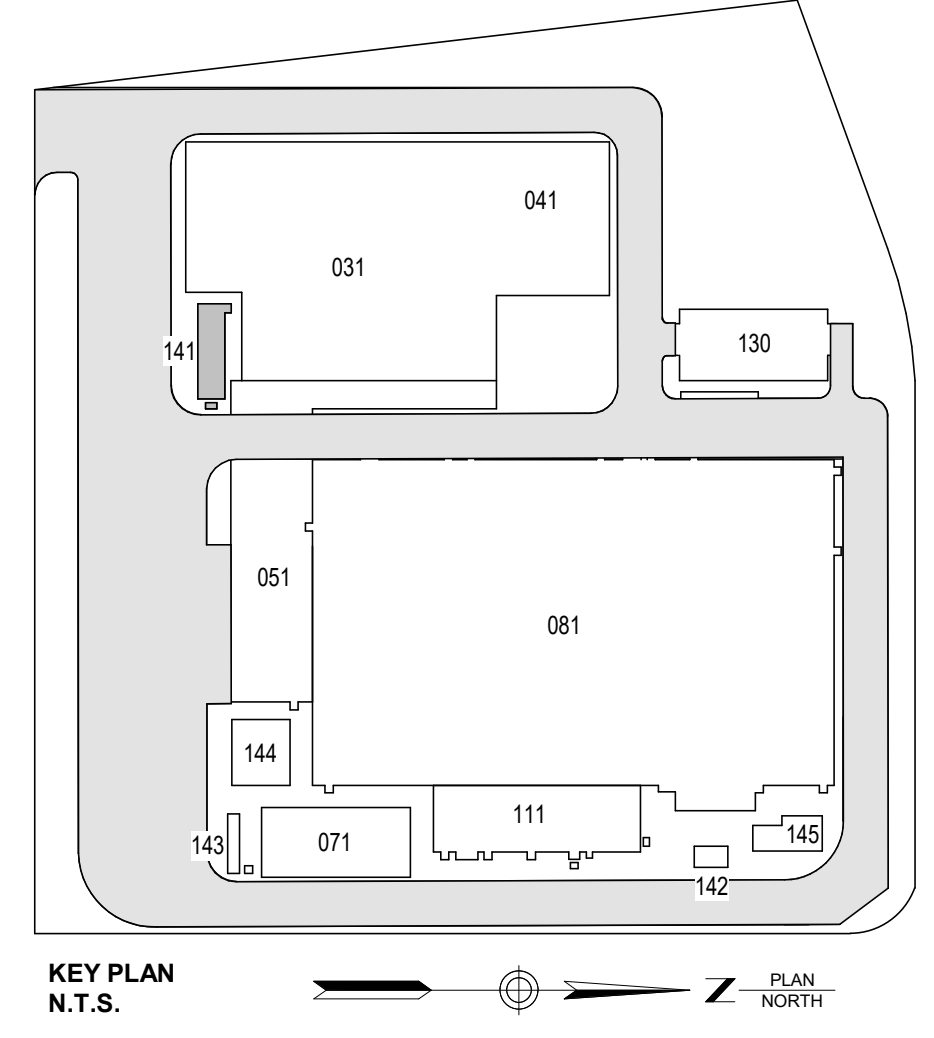
1 RELAY ENCLOSURE FLOOR LEVEL AND FINISH PLAN  
A-102.00 1/4" = 1'-0"



2 RELAY ENCLOSURE SLAB PLAN  
A-102.00 1/4" = 1'-0"

- SHEET NOTES:
1. REFER TO A-601.00 FOR DOOR SCHEDULE
  2. REFER TO A-501.00 AND A-502.00 FOR METAL PANEL WALL DETAILS AND WALL PENETRATION DETAILS.
  3. REFER TO MECHANICAL DRAWINGS FOR FRESH AIR INTAKE, HEATER AND DAMPER/LOUVER DETAILS FILED UNDER SEPARATE APPLICATION.
  4. REFER TO BUILDING ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.
  5. REFER TO PLUMBING DRAWINGS, NOTES FOR GUTTER SIZES AND DOWNSPOUT SIZES DETAILS, SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.
  6. REFER TO BUILDING STRUCTURAL DRAWINGS FOR COLUMN SIZES AND CONNECTIONS AND FOUNDATION DETAILS FILED UNDER SEPARATE APPLICATION.
  7. ALL METALLIC EQUIPMENTS INCLUDING BOLLARDS, ROOF ACCESS LADDERS, LIGHTING POLES, ETC. NEED TO BE GROUNDED.

ISSUED FOR PERMIT



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REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit** 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677  
**Hitachi Energy** 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT **CHPE** Champlain Hudson Power Express  
**Astoria HVDC Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

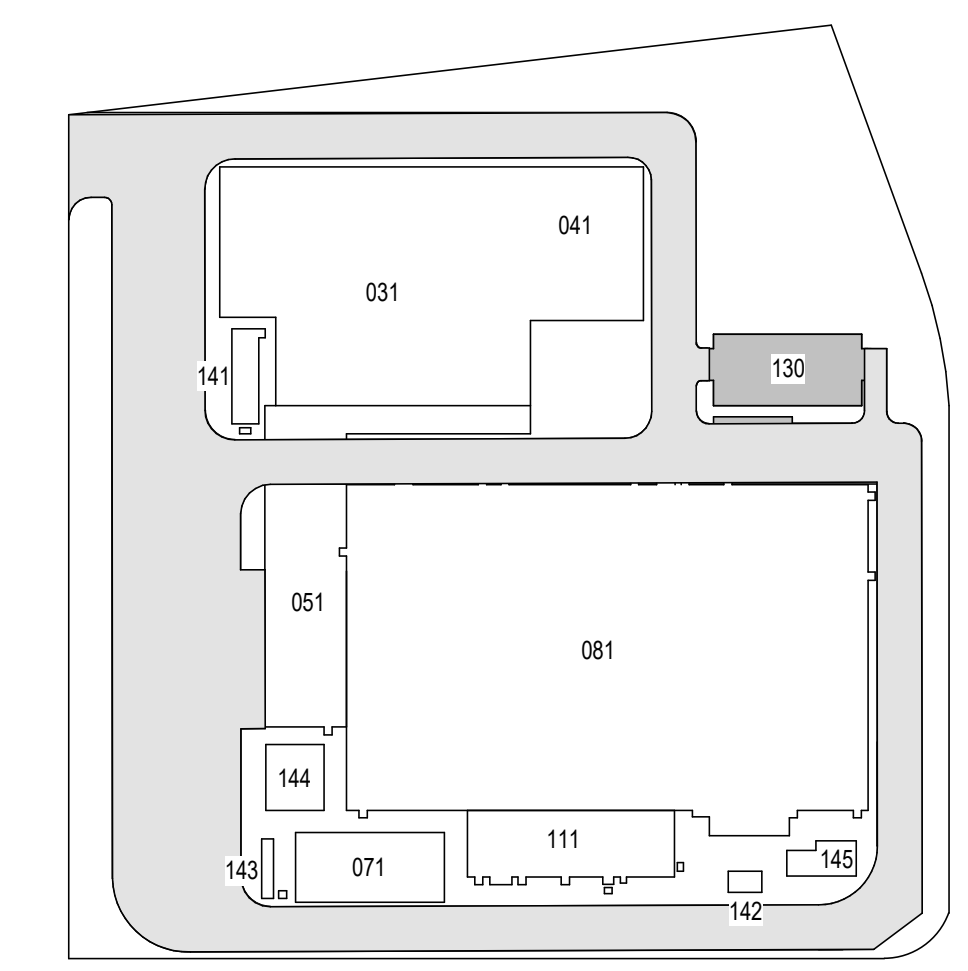
RELAY ENCLOSURE FLOOR PLAN

REGISTERED ARCHITECT  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY S. WARYAH  
CHECKED BY J. STEPHENS  
DRAWING NO **A-102.00**  
CADD FILE NO  
Astoria HVDC Converter Station  
Astoria/CHA-RE-141-ZZ-M3-A-001.rvt

**SHEET NOTES:**

1. REFER TO A-601.00 FOR DOOR SCHEDULE.
2. REFER TO A-607.00 TO A-611.00 FOR METAL PANEL WALL DETAILS AND WALL PENETRATION DETAILS.
3. REFER TO MECHANICAL SHEETS FOR FRESH AIR INTAKE, HEATER AND DAMPER/LOUVER DETAILS.
4. REFER TO BUILDING ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS.
5. REFER PLUMBING DRAWINGS, NOTES FOR GUTTER SIZES AND DOWNSPOUT SIZES, DETAILS, SCHEDULES AND REQUIREMENTS.
6. REFER TO BUILDING STRUCTURAL DRAWINGS FOR COLUMN SIZES AND CONNECTIONS AND FOUNDATION DETAILS.
7. ALL METALLIC EQUIPMENTS INCLUDING BOLLARDS, ROOF ACCESS LADDERS, LIGHTING POLES, ETC. NEED TO BE GROUNDED. REFER TO A-508 FOR GROUNDING DETAILS.

**ISSUED FOR PERMIT**



KEY PLAN  
N.T.S.

**Engineering and Land Surveying, P.C.**  
370 7th Avenue  
SUITE 1604  
New York, NY 10001

**SOWINSKI SULLIVAN**  
ARCHITECTURE + ENGINEERING  
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Sparta, NJ 07871

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A	INTERIM SUBMITTAL	JP	JS	DEC 12, 2022
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**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

**PROJECT**

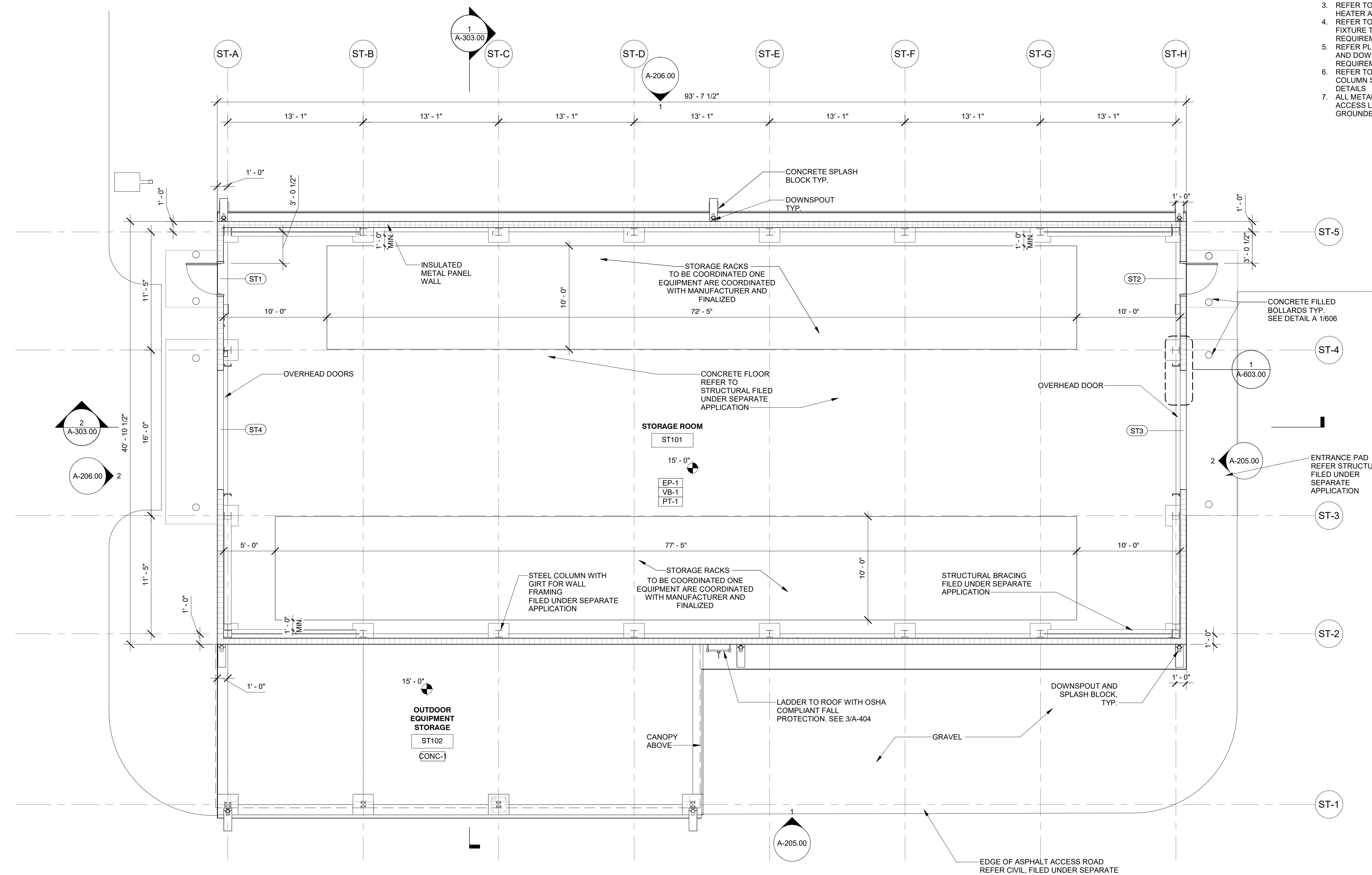
**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**STORAGE ENCLOSURE FLOOR PLAN**

REGISTERED ARCHITECT  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-103.00**  
CADD FILE NO:  
Astoria HVDC Converter Station  
Astoria CHA-RE-130-ZZ-M3-A-001.rvt

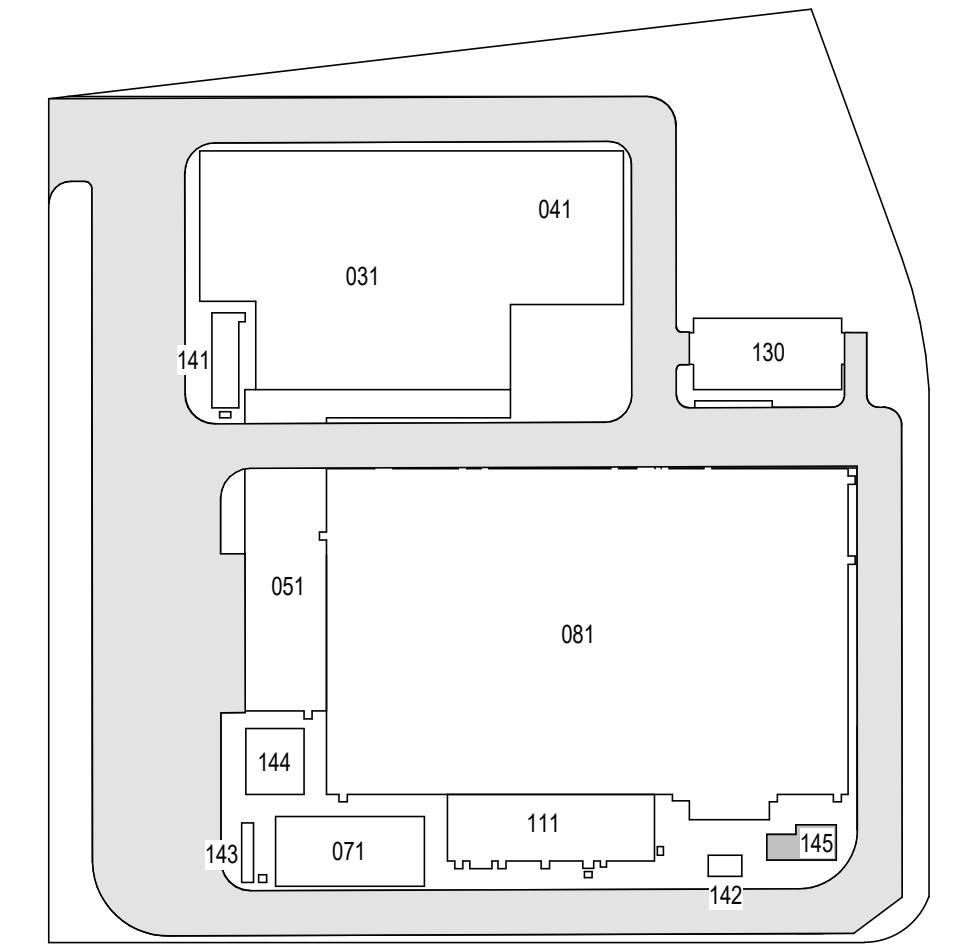


1 STORAGE ENCLOSURE FLOOR PLAN  
A-205.00 3/16" = 1'-0"

ISSUED FOR PERMIT

SHEET NOTES

1. REFER TO A-601.00 FOR DOOR SCHEDULE
2. REFER TO A-601.00 AND A-602.00 FOR METAL PANEL WALL DETAILS AND WALL PENETRATION DETAILS.
3. REFER TO MECHANICAL DRAWINGS FOR FRESH AIR INTAKE, HEATER AND DAMPER/OVERHEAD DETAILS FILED UNDER SEPARATE APPLICATION.
4. REFER TO BUILDING ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.
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KEY PLAN  
N.T.S.

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A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

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Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT

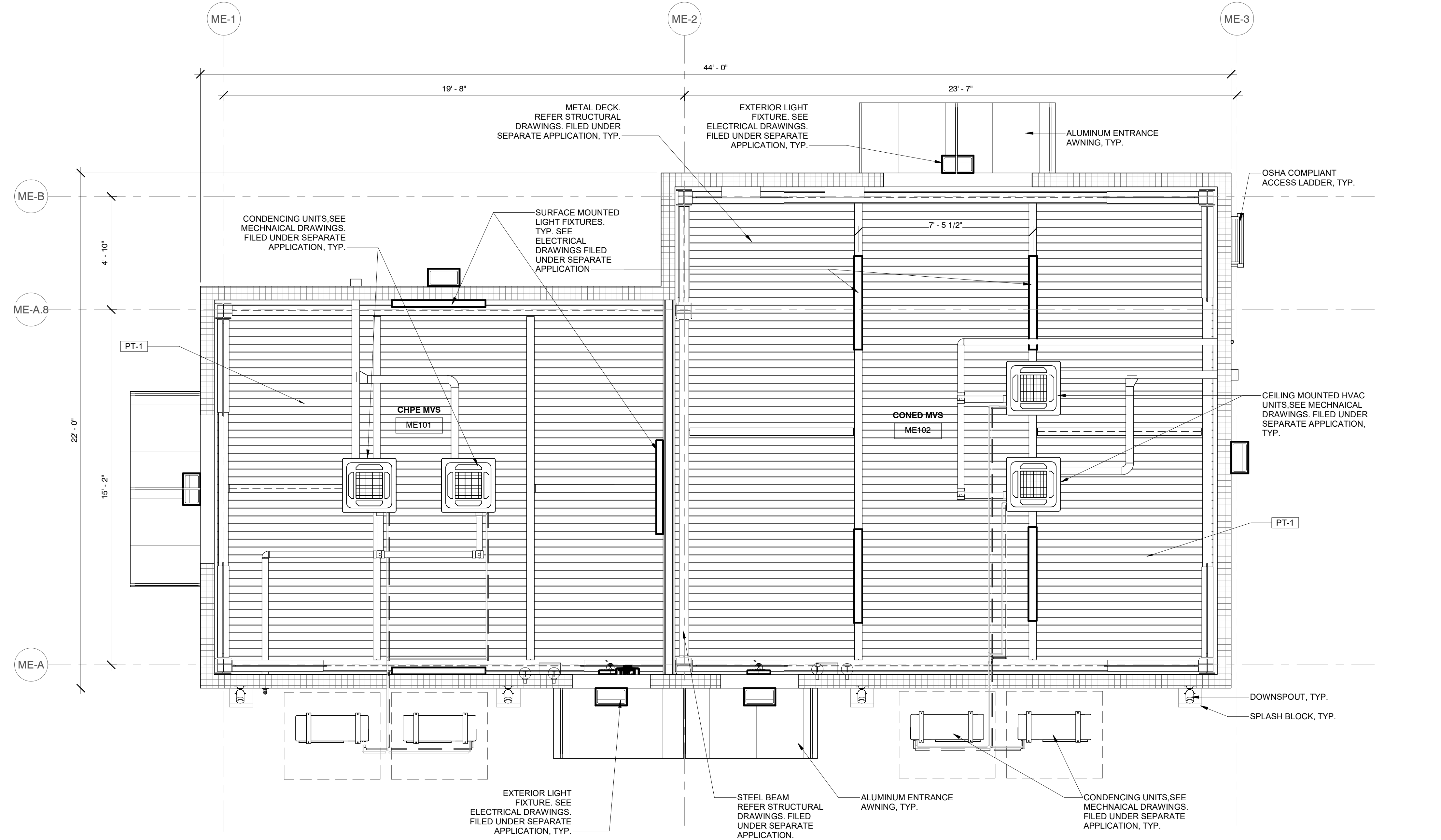
**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

MVS ENCLOSURE RCP

REGISTERED ARCHITECT  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-111.00**  
CADD FILE NO:  
Astoria/CHA-RE-141-ZZ-M3-A-001.rvt



1 MVS ENCLOSURE RCP  
A-111.00 3/8" = 1'-0"

CEILING LEGEND		LIGHTING LEGEND	
0' - 0"	CEILING HEIGHT	○	22" DIA PENDANT LIGHT FIXTURE
■	ACOUSTIC CEILING TILE	—	8" W. X 4' L. LINEAR LIGHT
□	GYPSUM WALLBOARD	□	2' X 2' RECESSED LED LIGHT FIXTURE
⊠	HVAC EQUIPMENT, SEE MECHANICAL DRAWINGS	□	2' X 4' RECESSED LED LIGHT FIXTURE



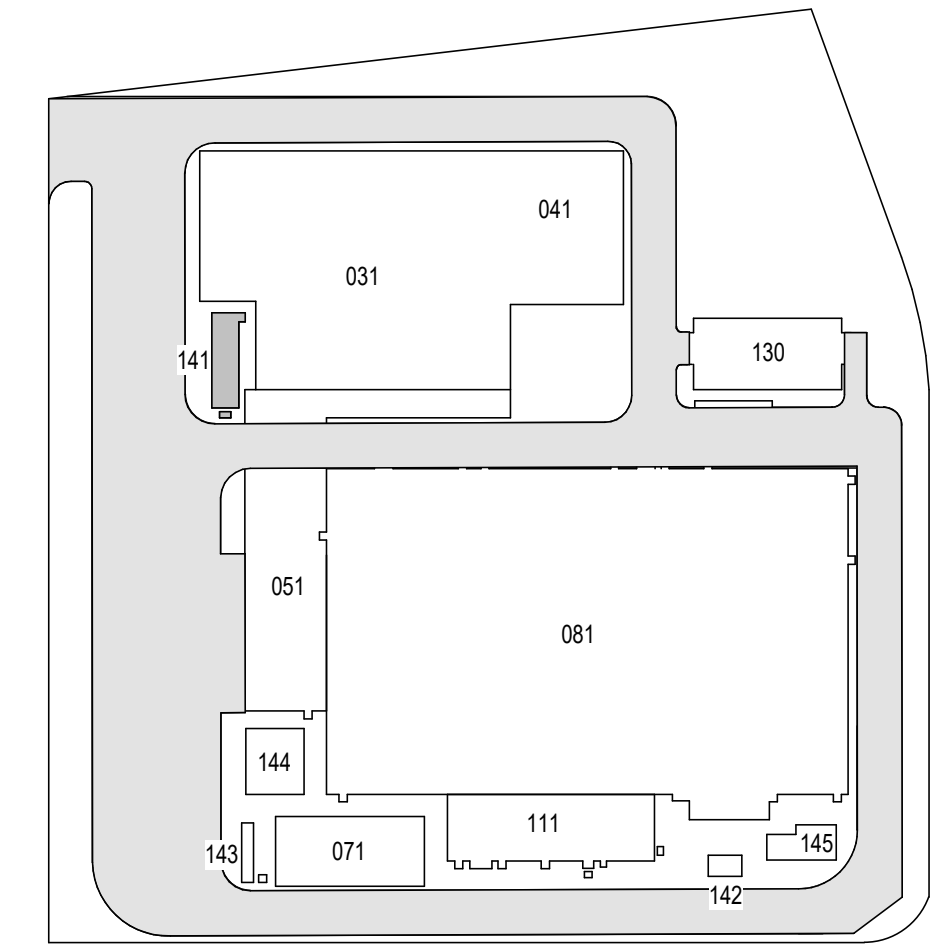
12/21/2022 5:31:31 PM



**SHEET NOTES:**

1. REFER TO A-601.00 FOR DOOR SCHEDULE
2. REFER TO A-501.00 AND A-502.00 FOR METAL PANEL WALL DETAILS AND WALL PENETRATION DETAILS.
3. REFER TO MECHANICAL DRAWINGS FOR FRESH AIR INTAKE, HEATER AND DAMPER/OVERHEAD DETAILS FILED UNDER SEPARATE APPLICATION.
4. REFER TO BUILDING ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.
5. REFER TO PLUMBING DRAWINGS, NOTES FOR GUTTER SIZES AND DOWNSPOUT SIZES DETAILS, SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.
6. REFER TO BUILDING STRUCTURAL DRAWINGS FOR COLUMN SIZES AND CONNECTIONS AND FOUNDATION DETAILS FILED UNDER SEPARATE APPLICATION.
7. ALL METALLIC EQUIPMENTS INCLUDING BOLLARDS, ROOF ACCESS LADDERS, LIGHTING POLES, ETC. NEED TO BE GROUNDING.

**ISSUED FOR PERMIT**



KEY PLAN  
N.T.S.

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New York, NY 10001

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REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

**PROJECT**

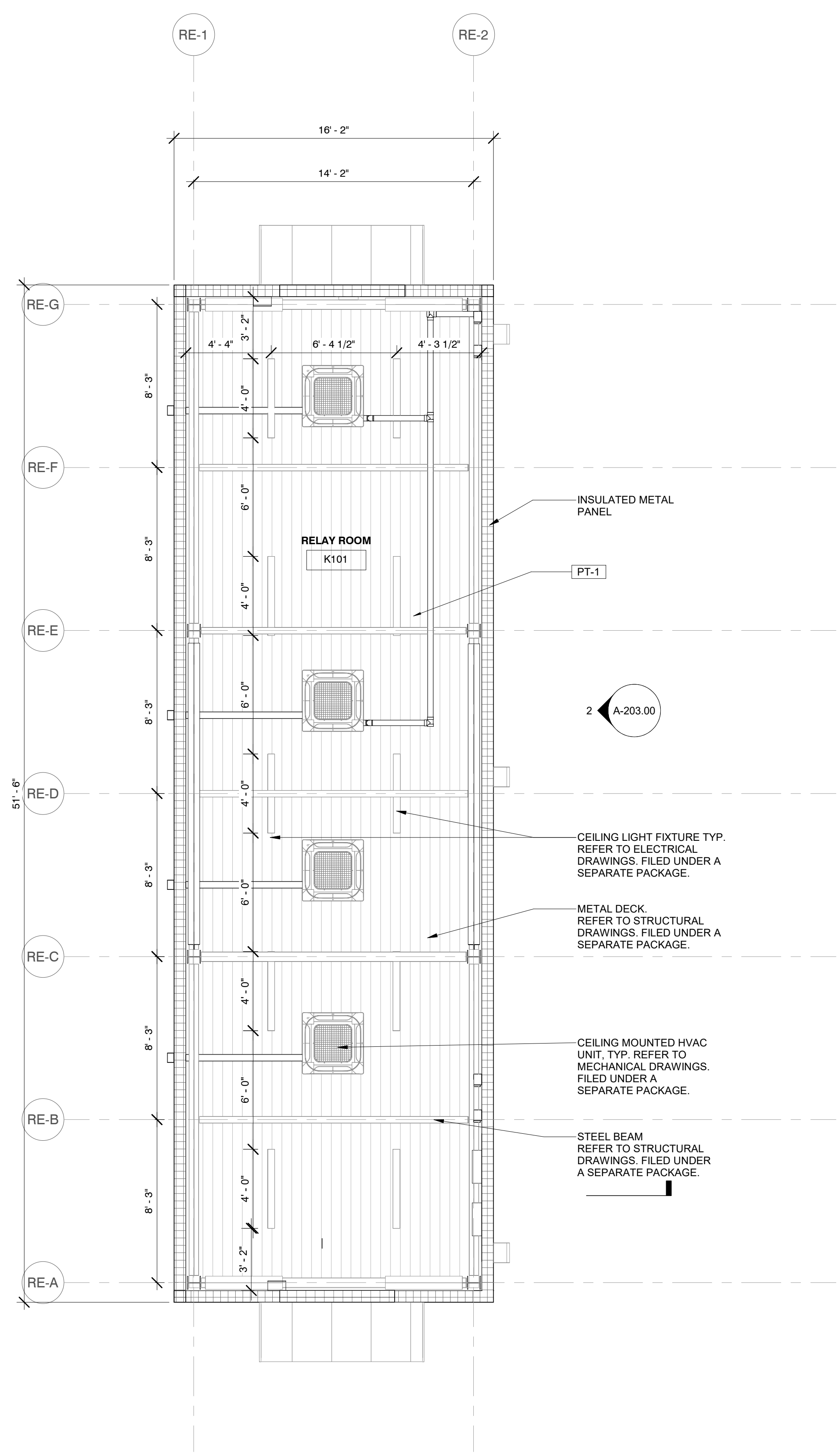
**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**RELAY ENCLOSURE RCP**

**REGISTERED ARCHITECT**  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-112.00**  
CADD FILE NO:  
Astoria HVDC - CHPE  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt



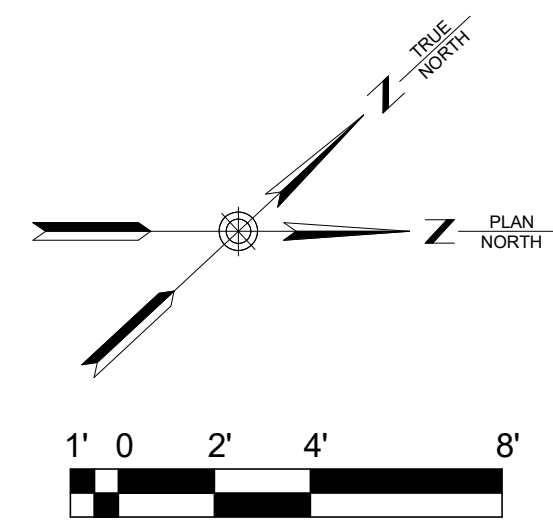
1  
A-203.00

2  
A-203.00

1  
A-302.00

1  
A-112.00  
RELAY ENCLOSURE RCP  
1/4" = 1'-0"

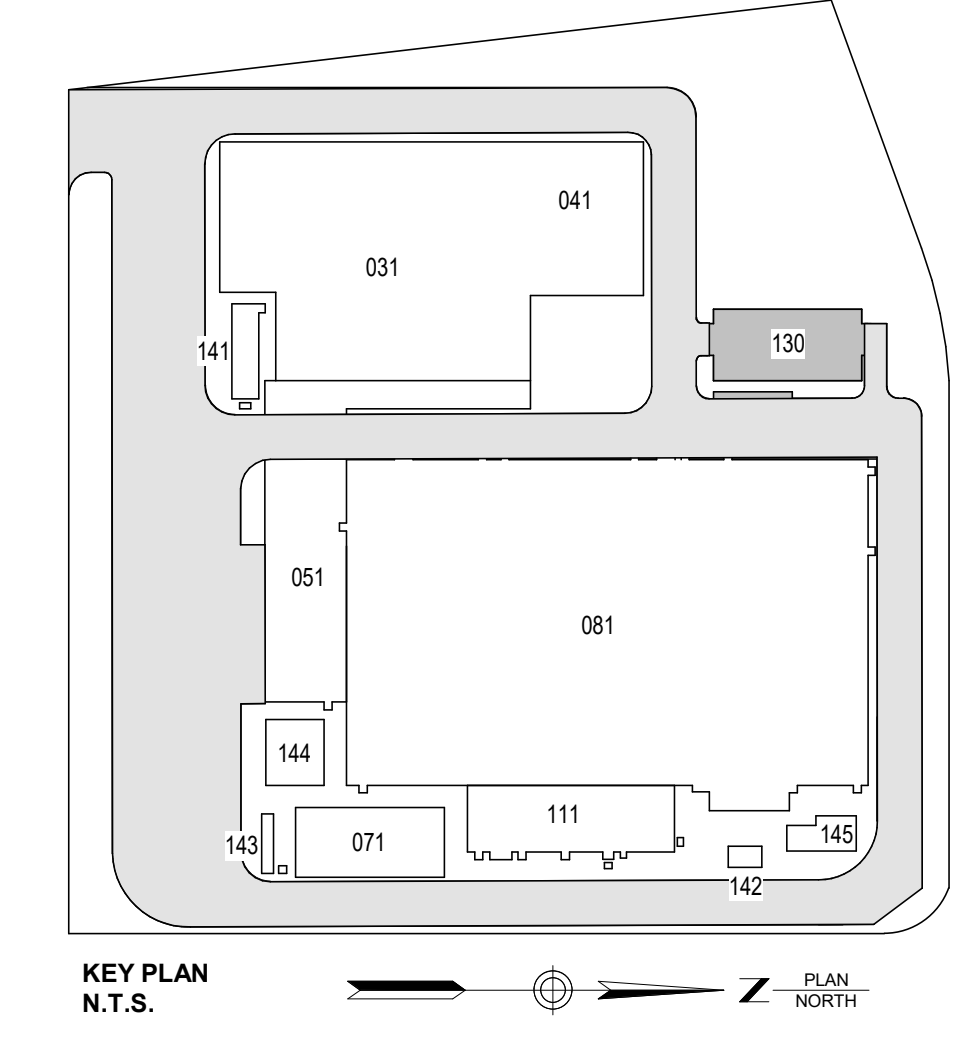
CEILING LEGEND		LIGHTING LEGEND	
0' - 0"	CEILING HEIGHT	○ ●	22" DIA PENDANT LIGHT FIXTURE
■	ACOUSTIC CEILING TILE	—	8" W. X 4' L. LINEAR LIGHT
■	GYPSUM WALLBOARD	□	2' X 2' RECESSED LED LIGHT FIXTURE
□	HVAC EQUIPMENT, SEE MECHANICAL DRAWINGS	□	2' X 4' RECESSED LED LIGHT FIXTURE



12/21/2022 5:31:34 PM

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- SHEET NOTES:**
- REFER TO A-601.00 FOR DOOR SCHEDULE
  - REFER TO A-607.00 TO A-611.00 FOR METAL PANEL WALL DETAILS AND WALL PENETRATION DETAILS.
  - REFER TO MECHANICAL SHEETS FOR FRESH AIR INTAKE, HEATER AND DAMPER/LOUVER DETAILS.
  - REFER TO BUILDING ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS.
  - REFER PLUMBING DRAWINGS, NOTES FOR GUTTER SIZES AND DOWNSPOUT SIZES, DETAILS, SCHEDULES AND REQUIREMENTS.
  - REFER TO BUILDING STRUCTURAL DRAWINGS FOR COLUMN SIZES AND CONNECTIONS AND FOUNDATION DETAILS
  - ALL METALLIC EQUIPMENTS INCLUDING BOLLARDS, ROOF ACCESS LADDERS, LIGHTING POLES, ETC. NEED TO BE GROUNDED. REFER TO A-508 FOR GROUNDING DETAILS.



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REV	DESCRIPTION	DRW BY	CHK BY	DATE
A	INTERIM SUBMITTAL	JP	JS	DEC 12, 2022
B	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

**PROJECT**

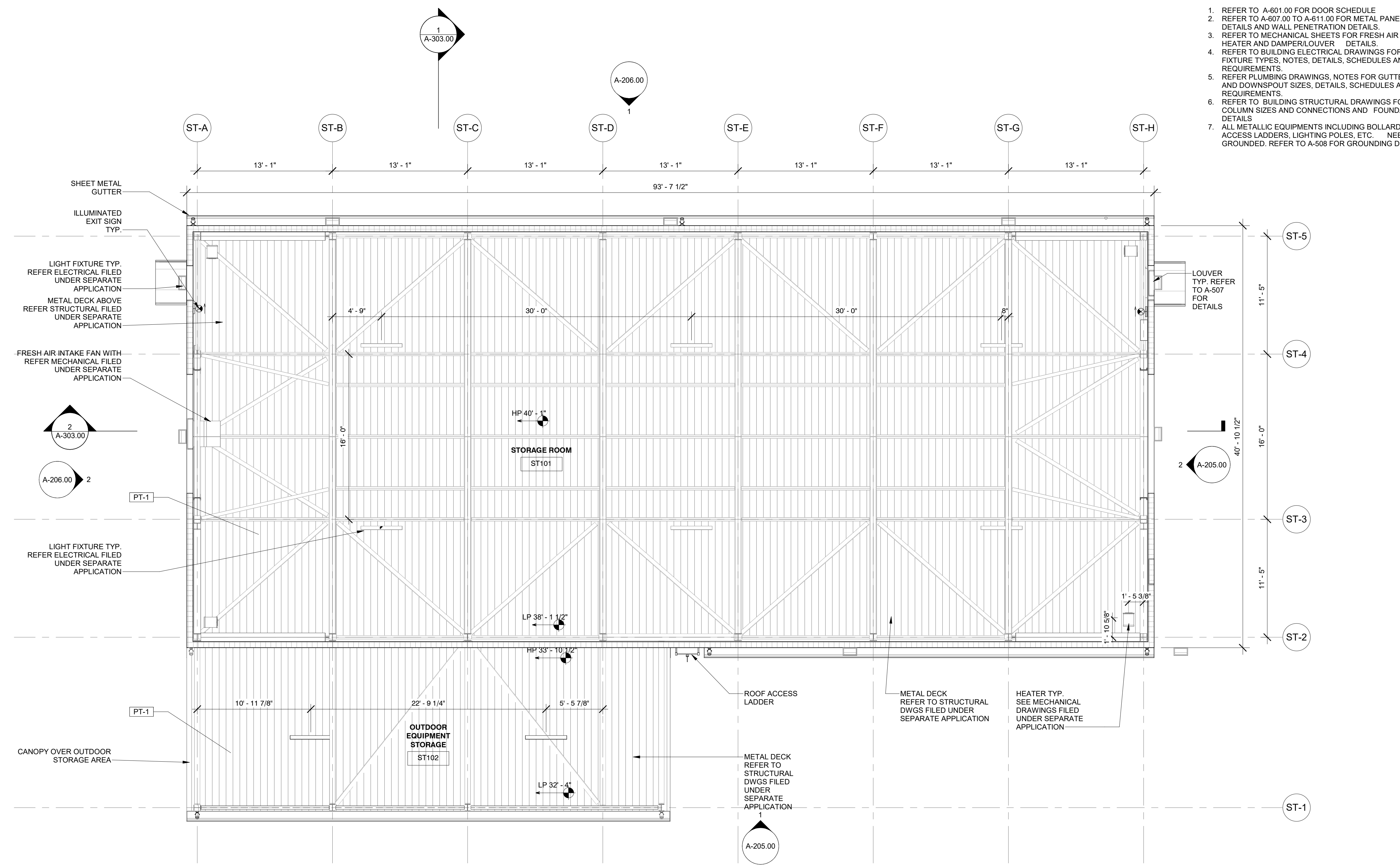
**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**STORAGE ENCLOSURE  
RCP**

**REGISTERED ARCHITECT**  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026049

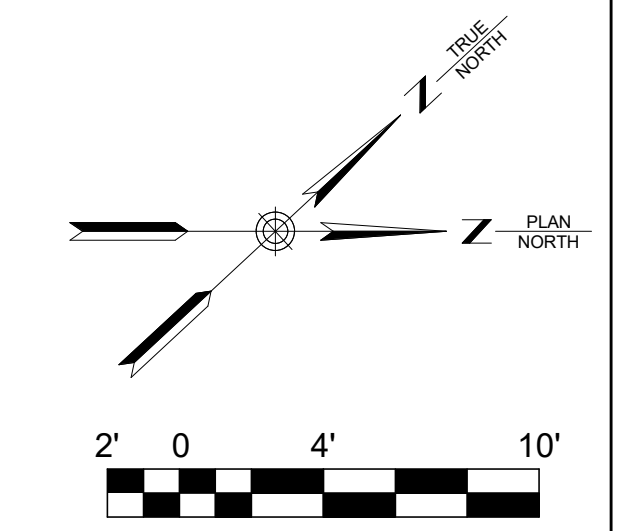
DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO:  
**A-113.00**  
CADD FILE NO:  
Astoria/CHA-RE-130-ZZ-M3-A-001.rvt



1 STORAGE ENCLOSURE RCP  
A-113.00 3/16" = 1'-0"

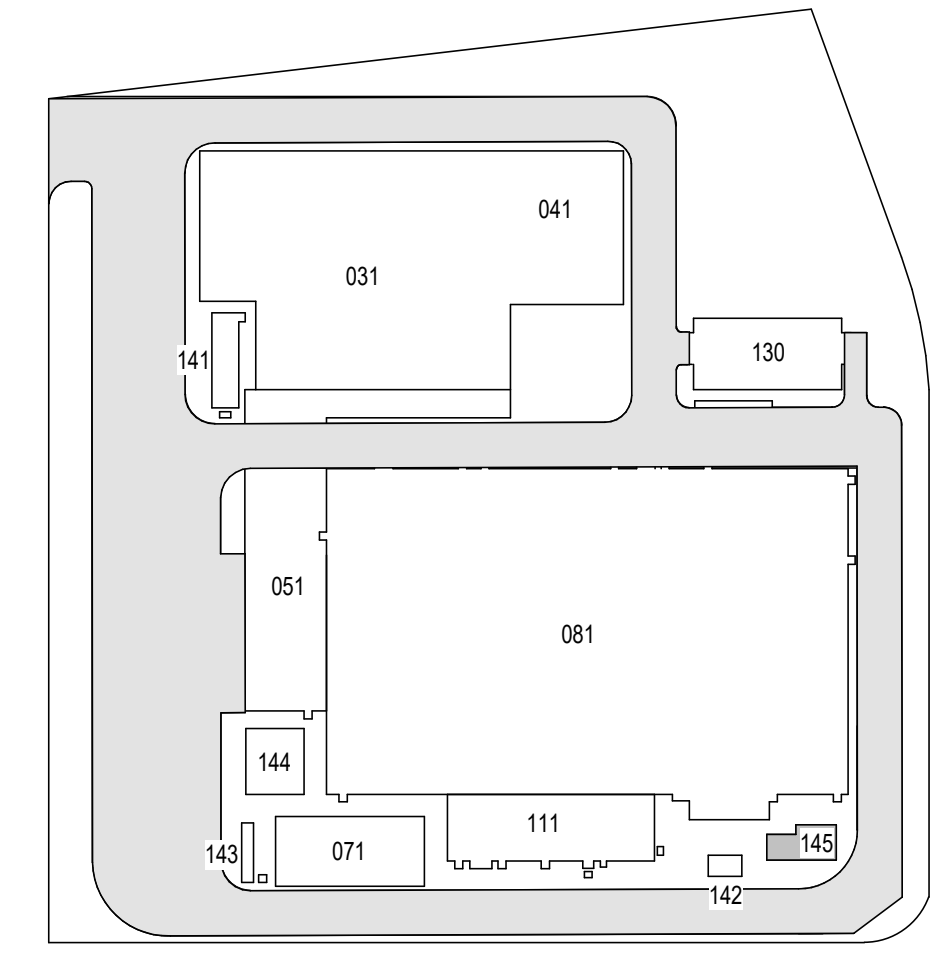
**CEILING LEGEND**

0' - 0"	CEILING HEIGHT		HVAC EQUIPMENT, SEE MECHANICAL DRAWINGS
	ACOUSTIC CEILING TILE		GYPSUM WALLBOARD



12/21/2022 5:46:13 PM

ISSUED FOR PERMIT



KEY PLAN  
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B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

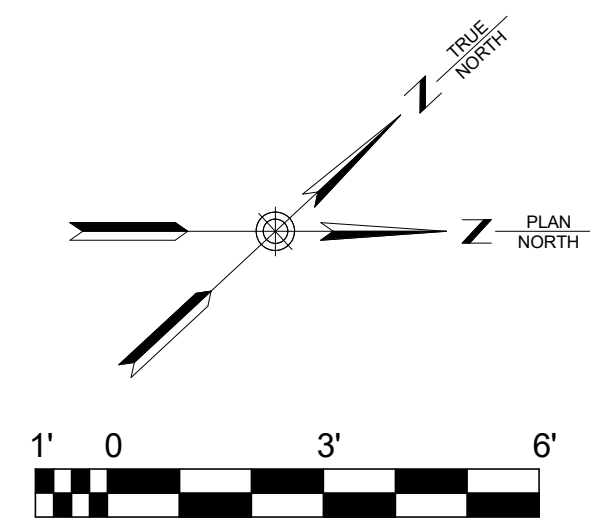
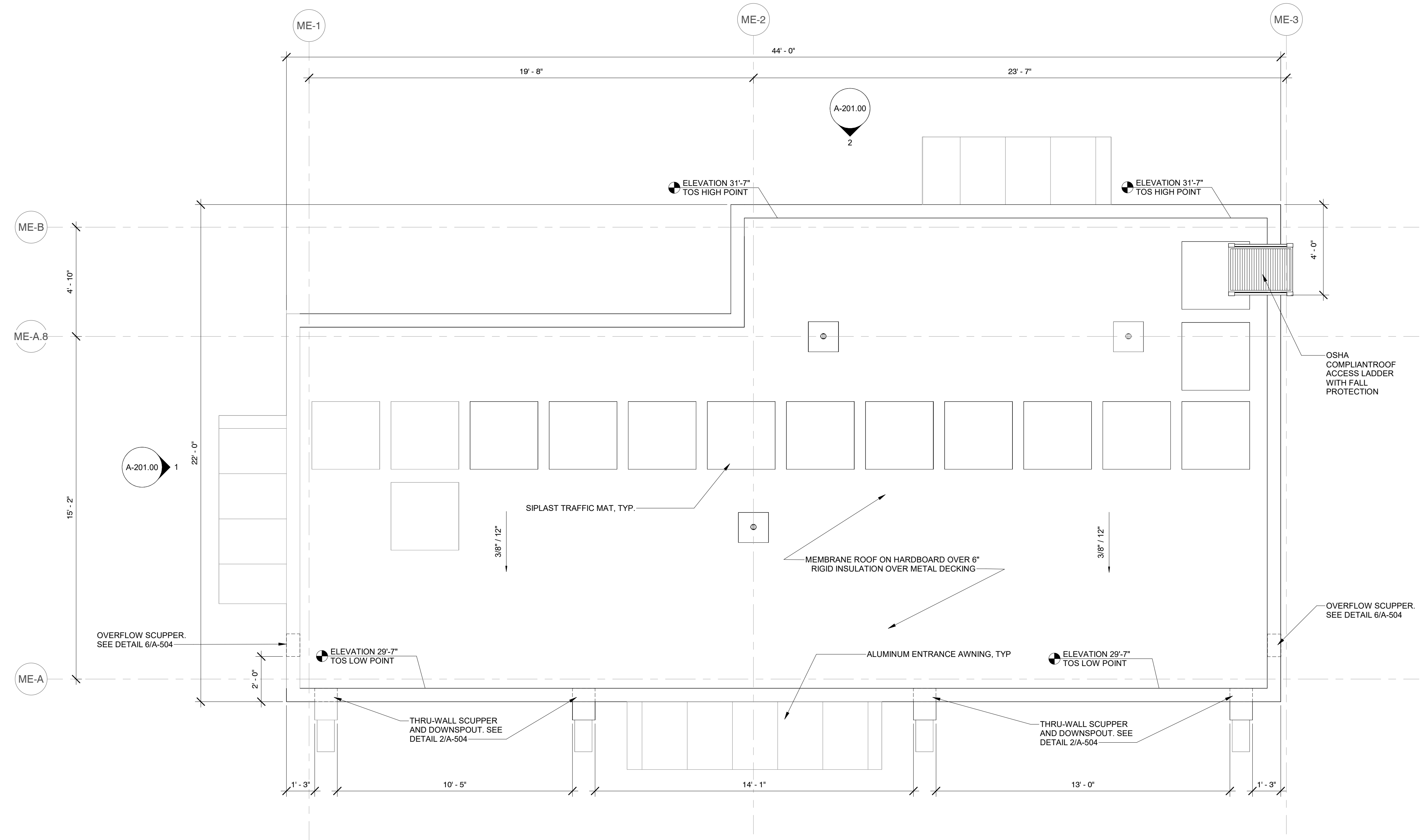
**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**MVS ENCLOSURE ROOF  
PLAN**

REGISTERED ARCHITECT  
STATE OF NEW YORK  
026049

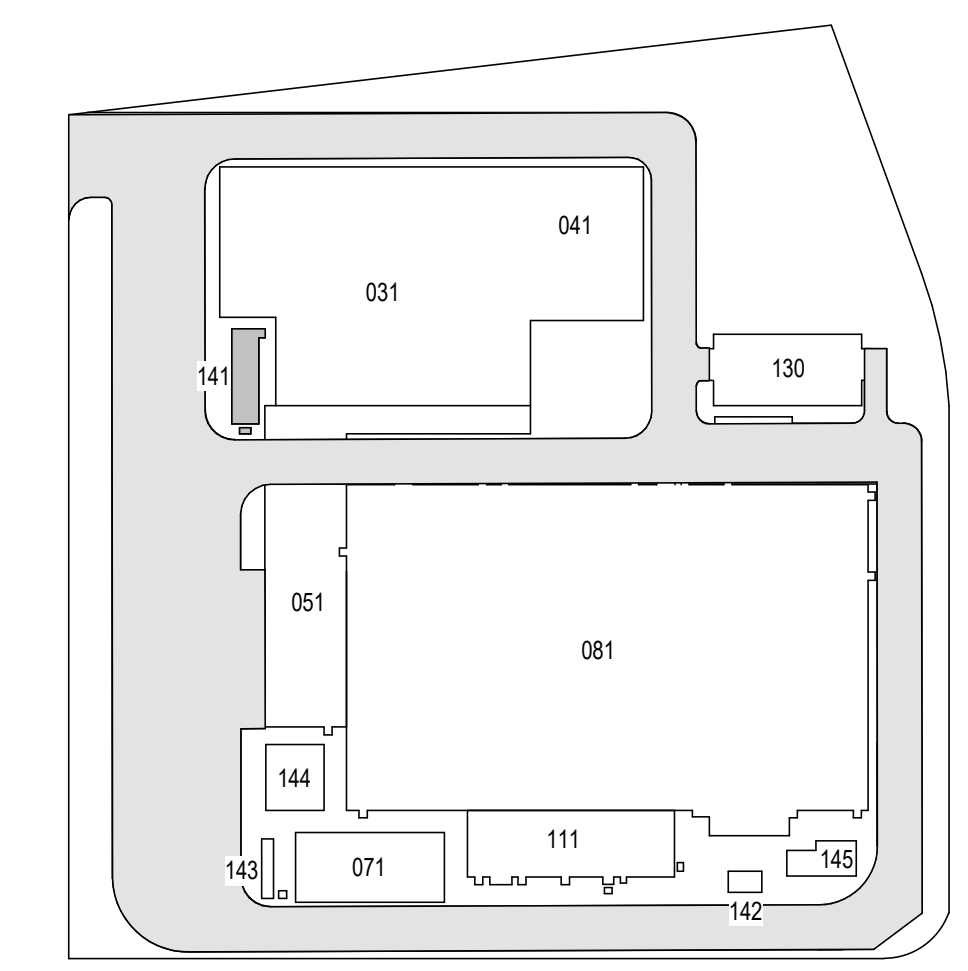
DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO:  
**A-121.00**  
CADD FILE NO:  
Astoria HVDC CHPE  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt



2 MVS ENCLOSURE ROOF LEVEL PLAN  
A-121.00 3/8" = 1'-0"

12/21/2022 5:31:36 PM

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B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

REV	DESCRIPTION	DRW BY	CHK BY	DATE

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT

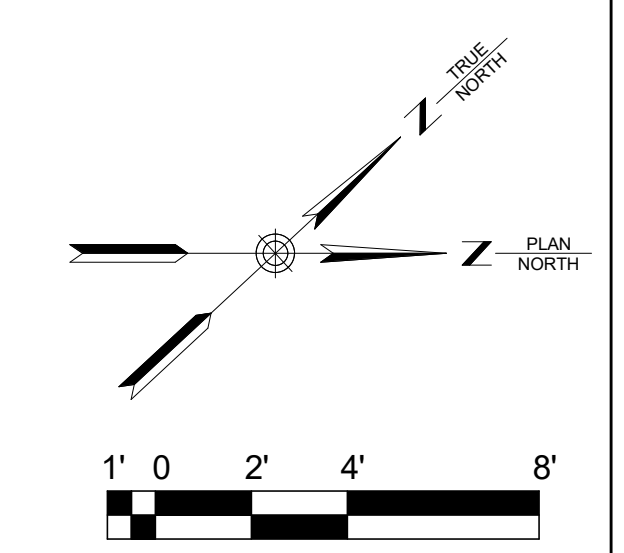
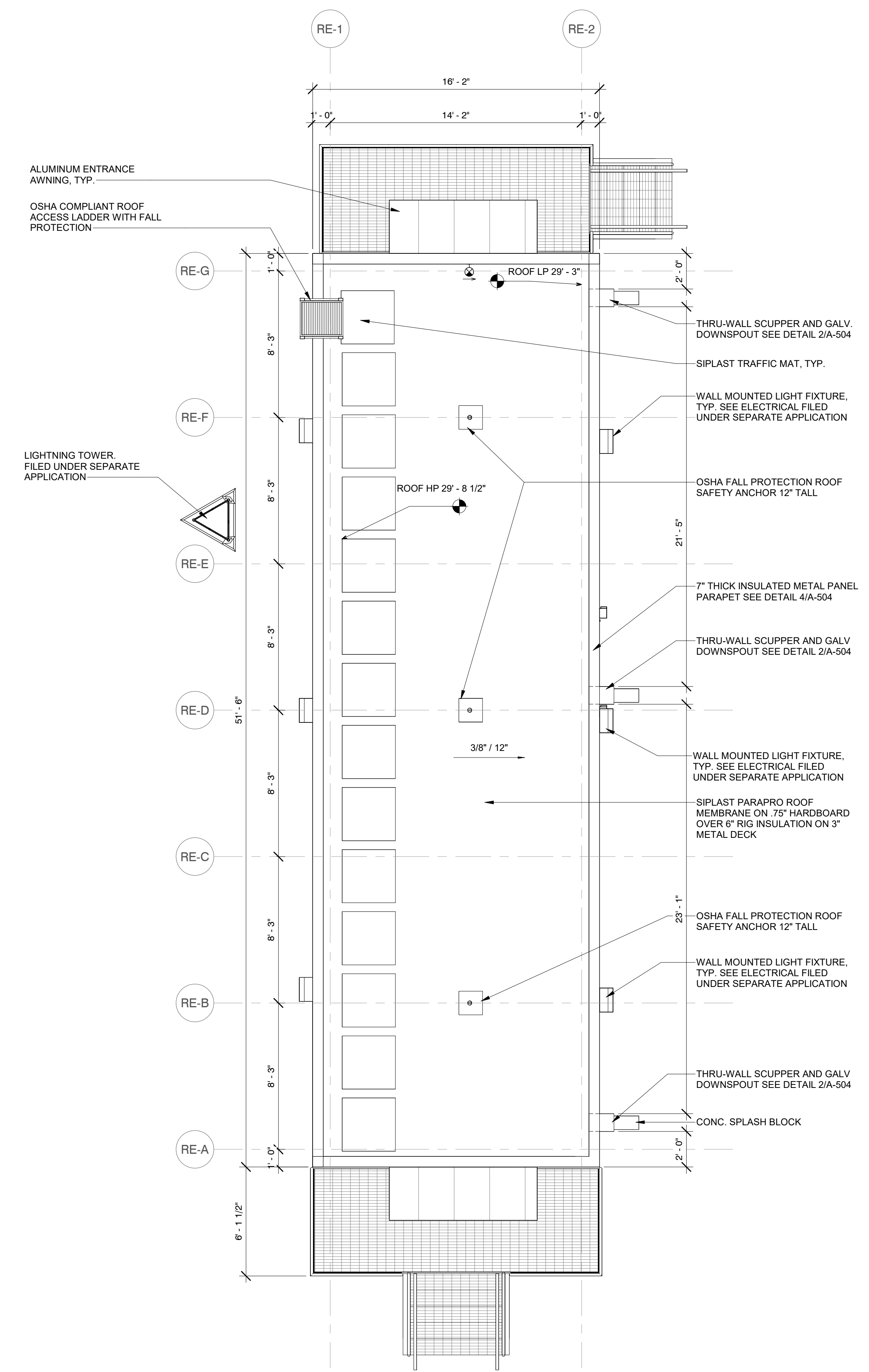
**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**RELAY ENCLOSURE -  
ROOF PLANS**

REGISTERED ARCHITECT  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-122.00**  
CADD FILE NO:  
Astoria CHPE  
Astoria CHPE-141-ZZ-M3-A-001.rvt

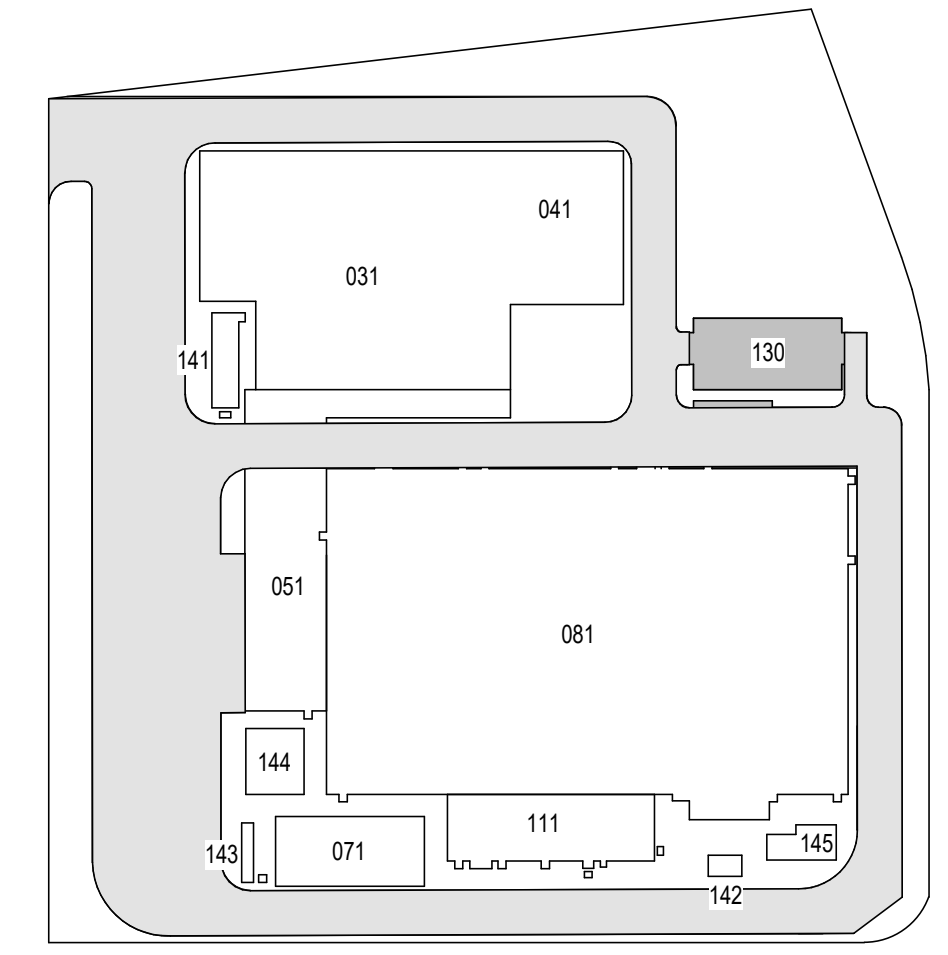


12/21/2022 5:31:38 PM

1  
A-203.00 RELAY ENCLOSURE ROOF PLAN  
1/4" = 1'-0"

2  
A-204.00

ISSUED FOR PERMIT



KEY PLAN  
N.T.S.

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370 7th Avenue  
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A	INTERIM SUBMITTAL	JP	JS	DEC 12, 2022
B	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022

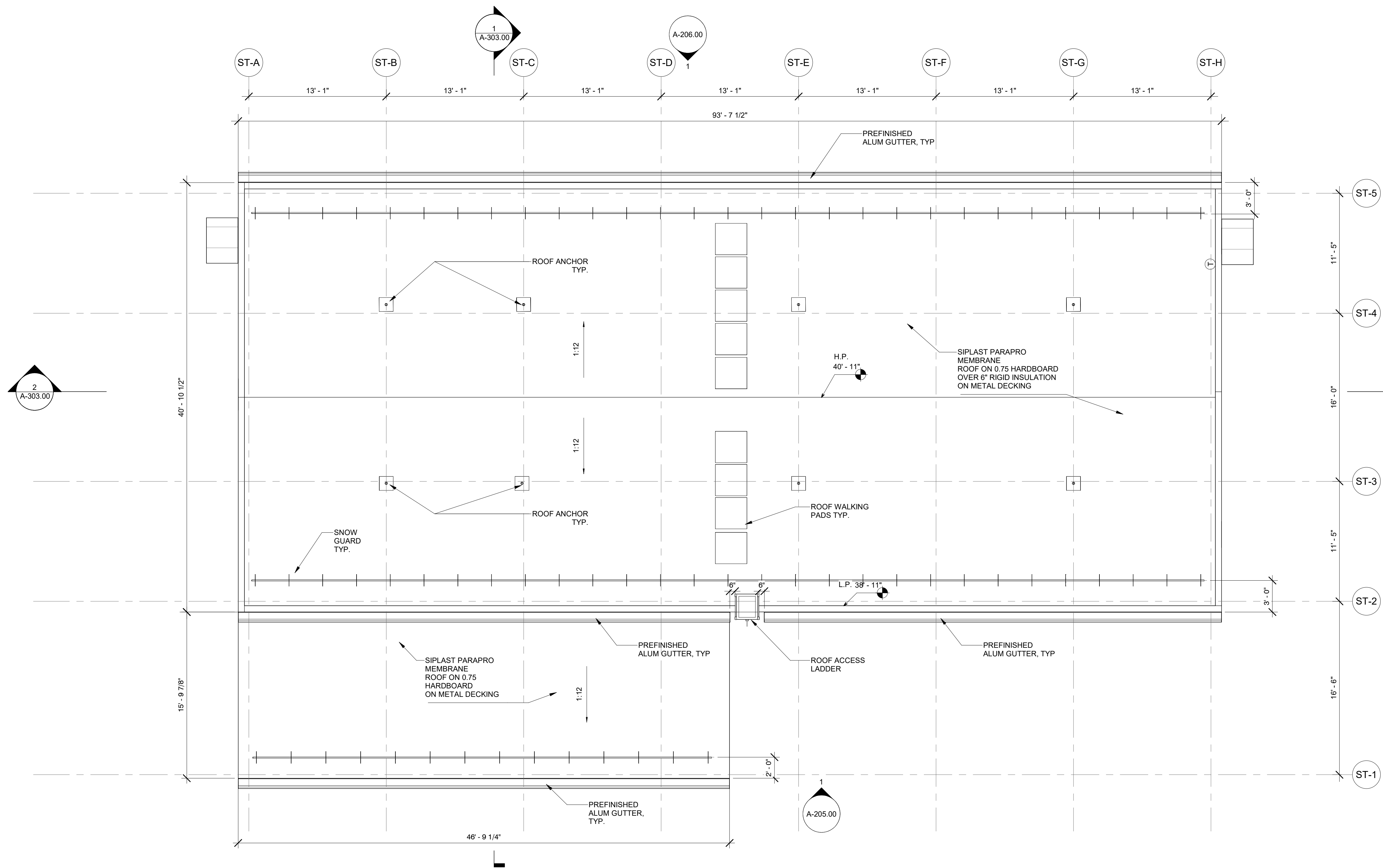
**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

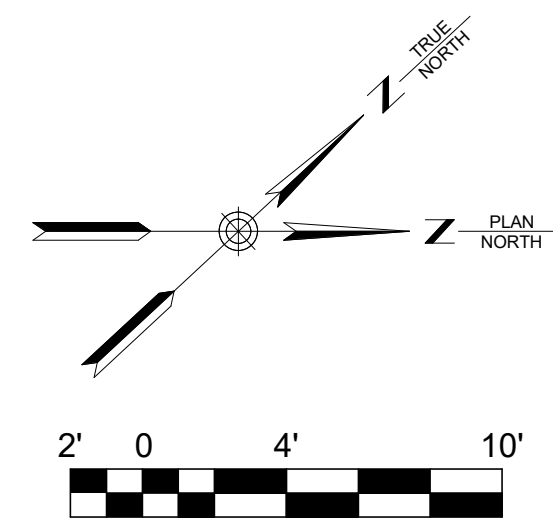
PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**STORAGE ENCLOSURE  
ROOF PLAN**

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO:  
**A-123.00**  
CADD FILE NO:  
Astoria HVDC CHPE  
Astoria CHA-RE-130-ZZ-M3-A-001.rvt

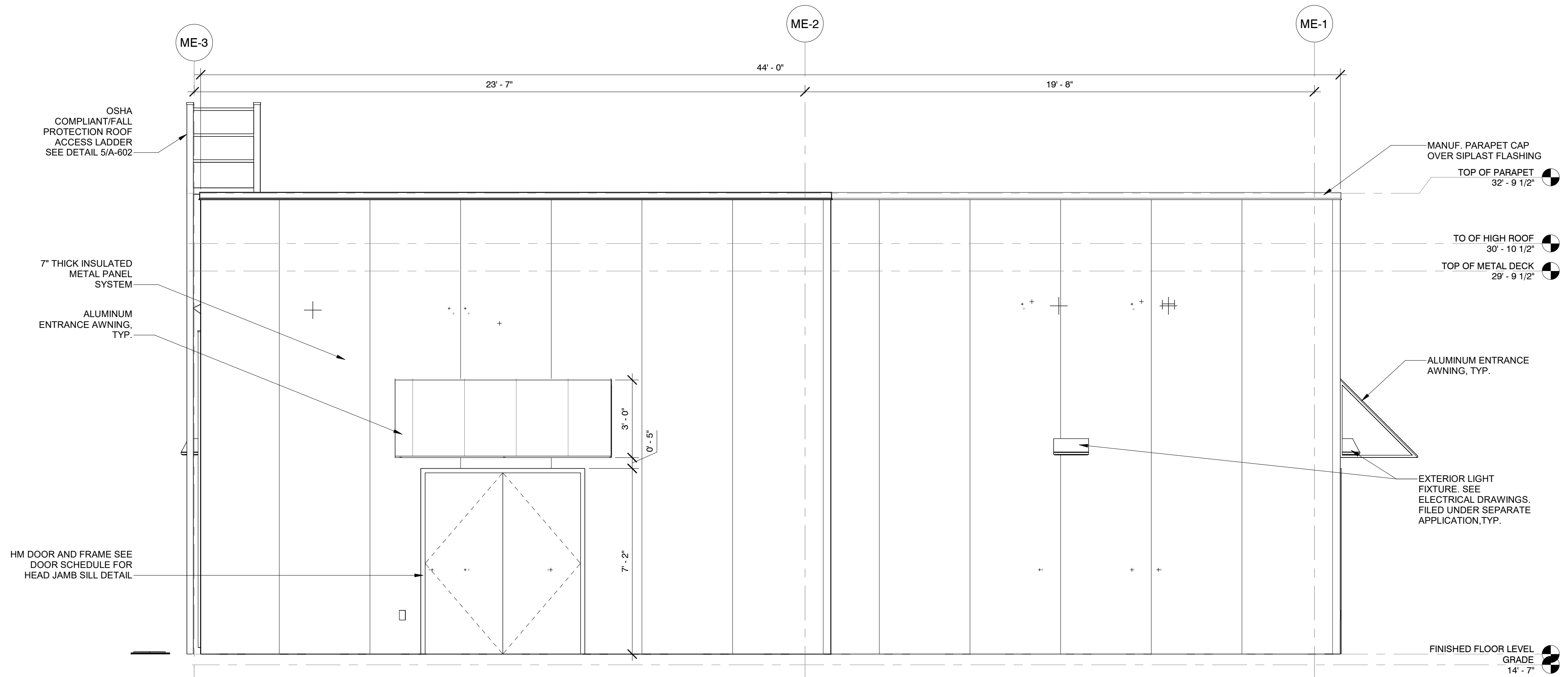


1 STORAGE ENCLOSURE - ROOF PLAN  
A-123.00 3/16" = 1'-0"

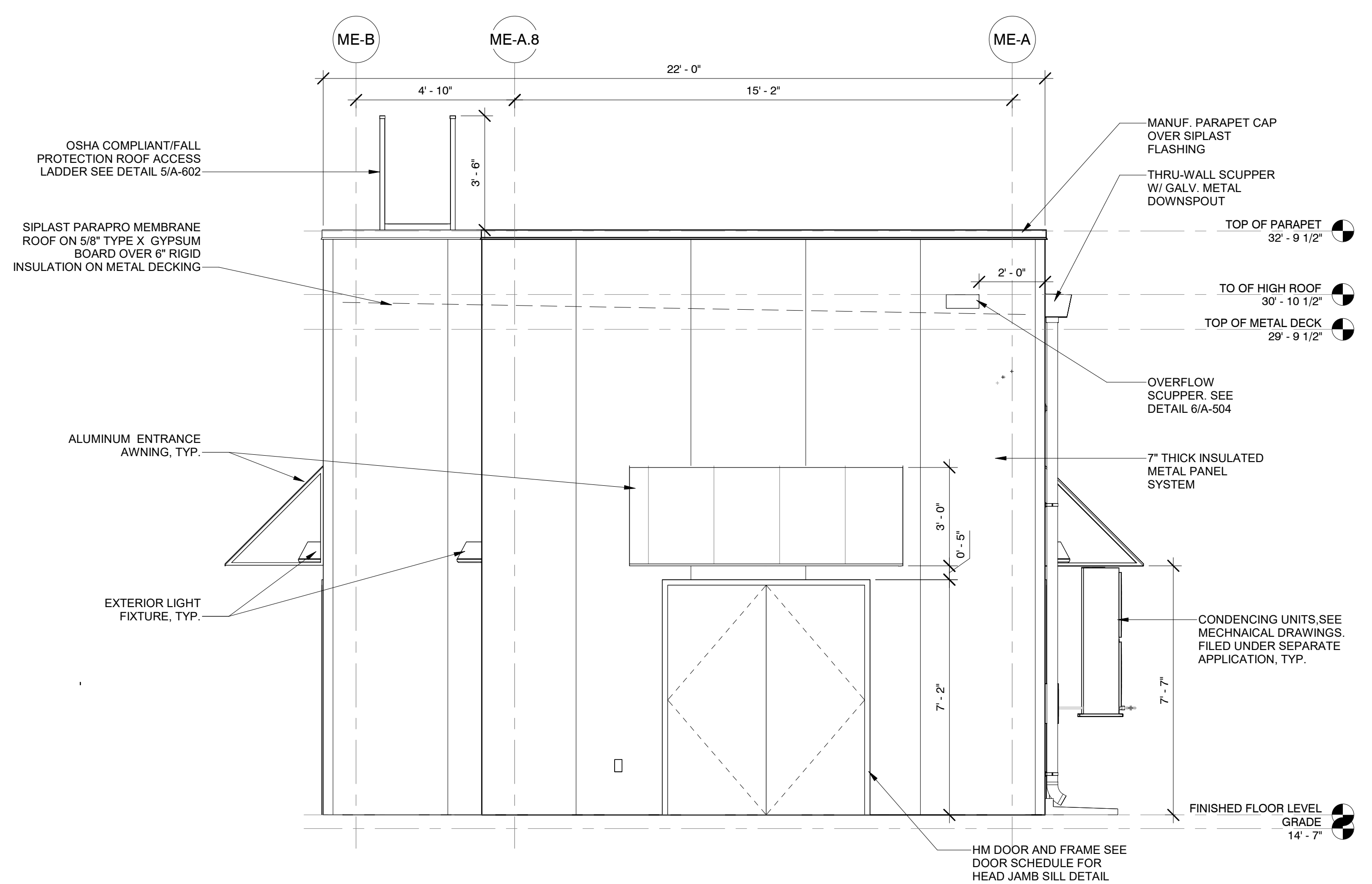


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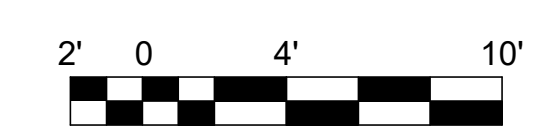
ISSUED FOR PERMIT



2 MVS WEST ELEVATION  
A-201.00 3/8" = 1'-0"



1 MVS SOUTH ELEVATION  
A-201.00 3/8" = 1'-0"



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**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

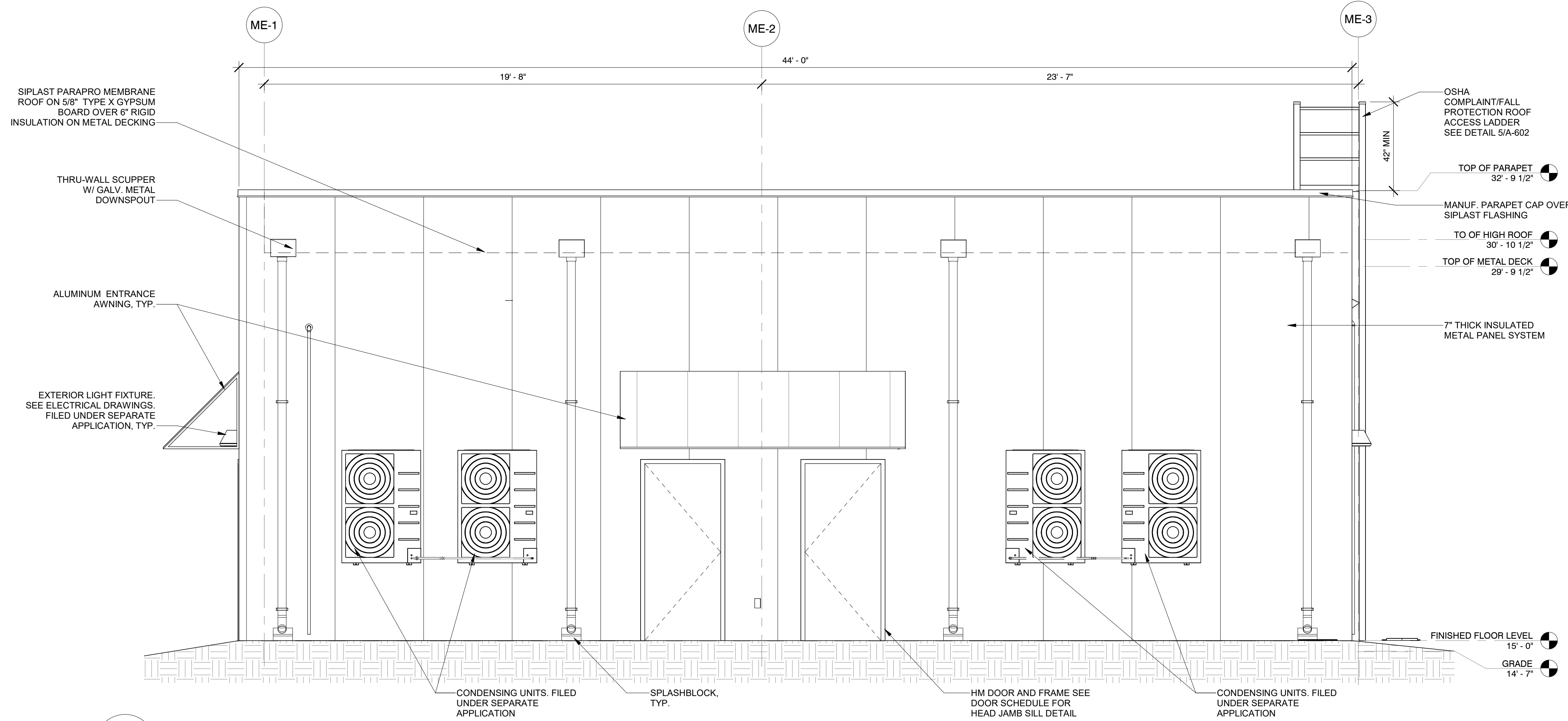
PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**MVS ENCLOSURE  
ELEVATIONS**

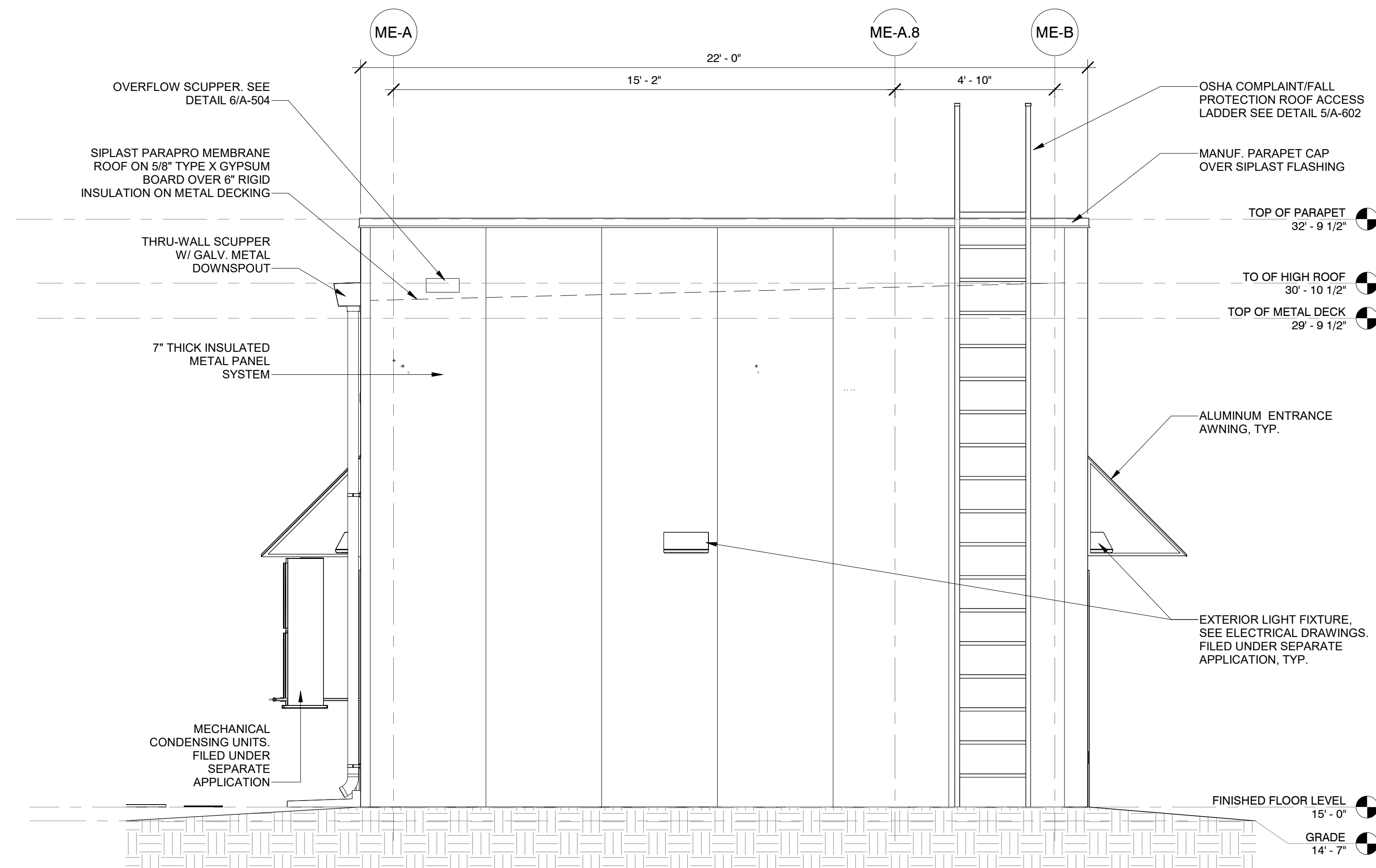
REGISTERED ARCHITECT  
STATE OF NEW YORK  
DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-201.00**  
CADD FILE NO:  
Astoria HVDC CHPE  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt

12/21/2022 5:31:40 PM

ISSUED FOR PERMIT



1 MVS EAST ELEVATION  
A-202.00 3/8" = 1'-0"



2 MVS NORTH ELEVATION  
A-202.00 3/8" = 1'-0"



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Sparta, NJ 07871

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**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT

**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**MVS ENCLOSURE ELEVATIONS**

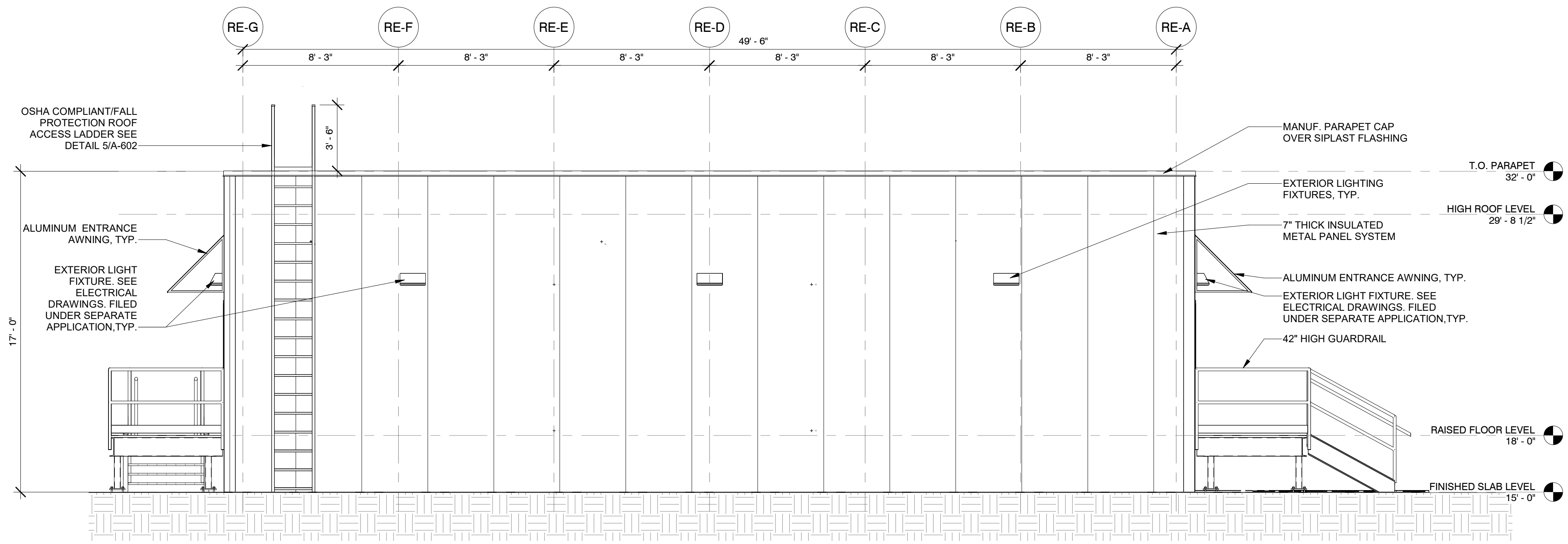
REGISTERED ARCHITECT  
STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-202.00**  
CADD FILE NO:  
Astoria HVDC Converter Station  
Astoria/CHA-RE-141-ZZ-M3-A-001.rvt

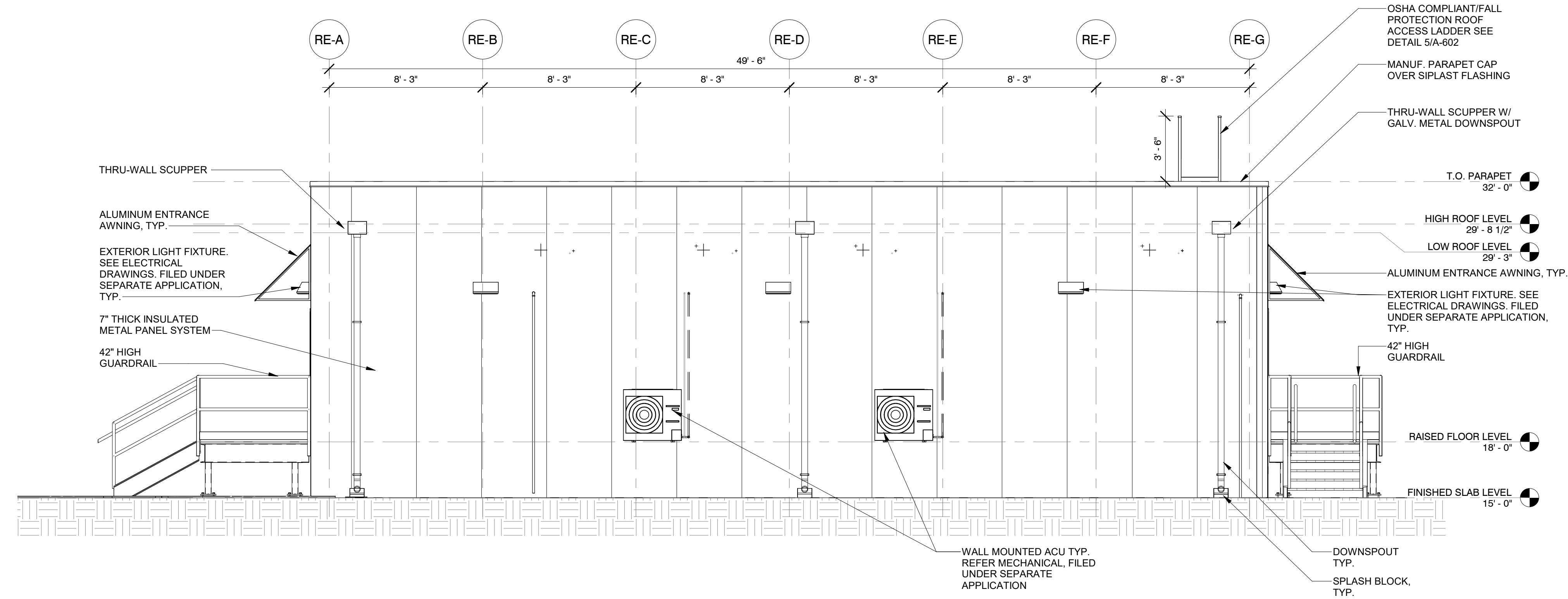
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ISSUED FOR PERMIT

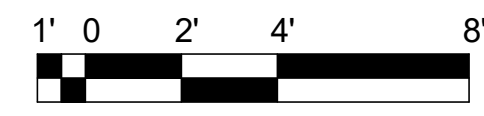
- SHEET NOTES:**
- REFER TO A-601.00 FOR DOOR SCHEDULE
  - REFER TO A-601.00 AND A-502.00 FOR METAL PANEL WALL DETAILS AND WALL PENETRATION DETAILS.
  - REFER TO MECHANICAL DRAWINGS FOR FRESH AIR INTAKE, HEATER AND DAMPER/LOUVER DETAILS FILED UNDER SEPARATE APPLICATION.
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  - REFER TO PLUMBING DRAWINGS, NOTES FOR UTTER SIZES AND DOWNSPOUT SIZES DETAILS, SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.
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1 RELAY ENCLOSURE SOUTH ELEVATION  
A-203.00 1/4" = 1'-0"



2 RELAY ENCLOSURE NORTH ELEVATION  
A-102.00 1/4" = 1'-0"



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B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

**PROJECT**

**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**RELAY ENCLOSURE ELEVATIONS 1 OF 2**

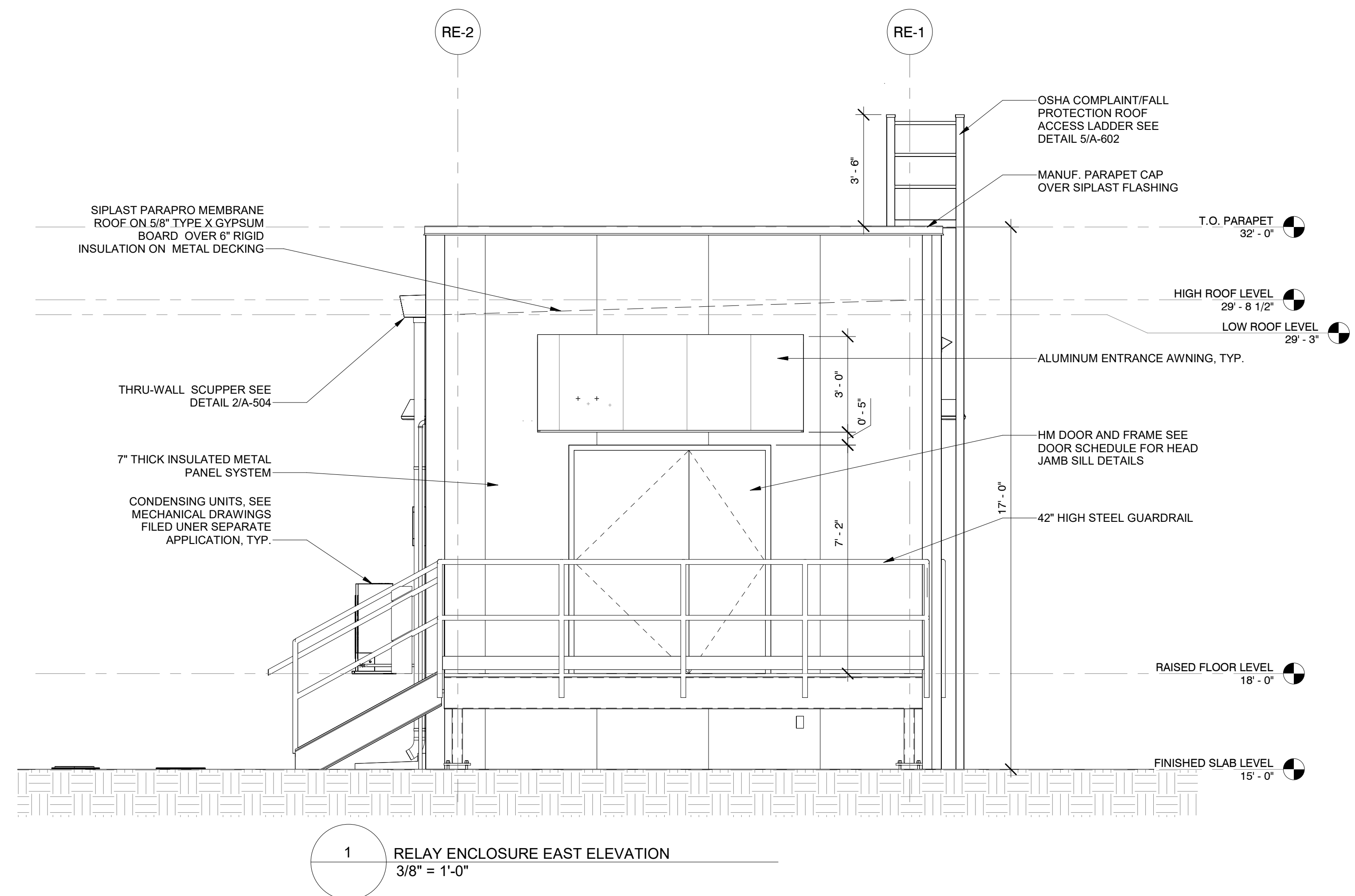
REGISTERED ARCHITECT  
STATE OF NEW YORK  
026049

DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY S. WARYAH  
CHECKED BY J. STEPHENS  
DRAWING NO  
**A-203.00**  
CADD FILE NO  
Astoria HVDC Converter Station  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt

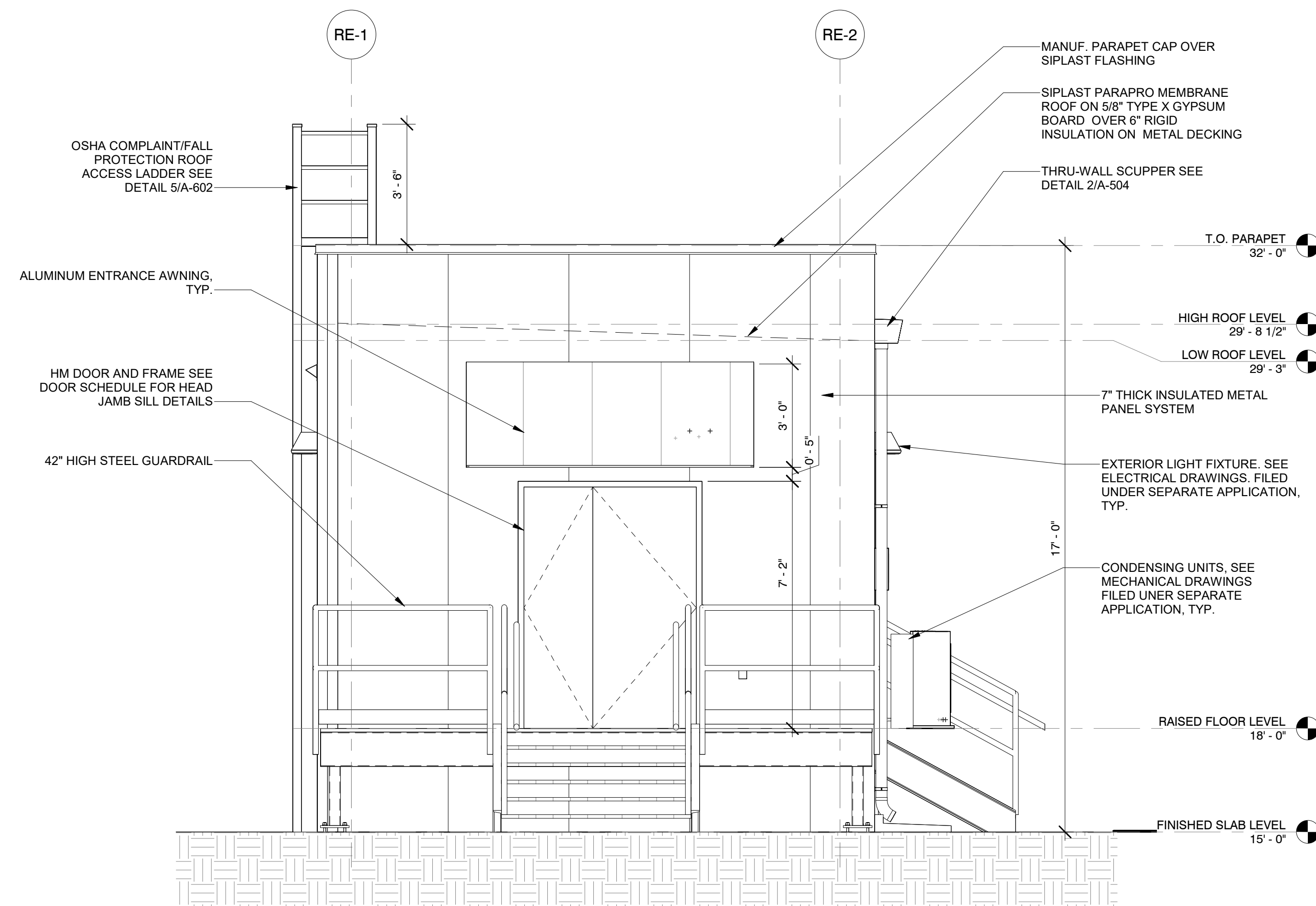
12/21/2022 5:31:45 PM



ISSUED FOR PERMIT



1 RELAY ENCLOSURE EAST ELEVATION  
3/8" = 1'-0"



2 RELAY ENCLOSURE WEST ELEVATION  
3/8" = 1'-0"



**Engineering and Land Surveying, P.C.**  
370 7th Avenue  
SUITE 1604  
New York, NY 10001

**SOWINSKI SULLIVAN**  
ARCHITECTURE+ENGINEERING  
25 Mohawk Avenue  
Sparta, NJ 07871

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REV	DESCRIPTION	DRW BY	CHK BY	DATE

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT

**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

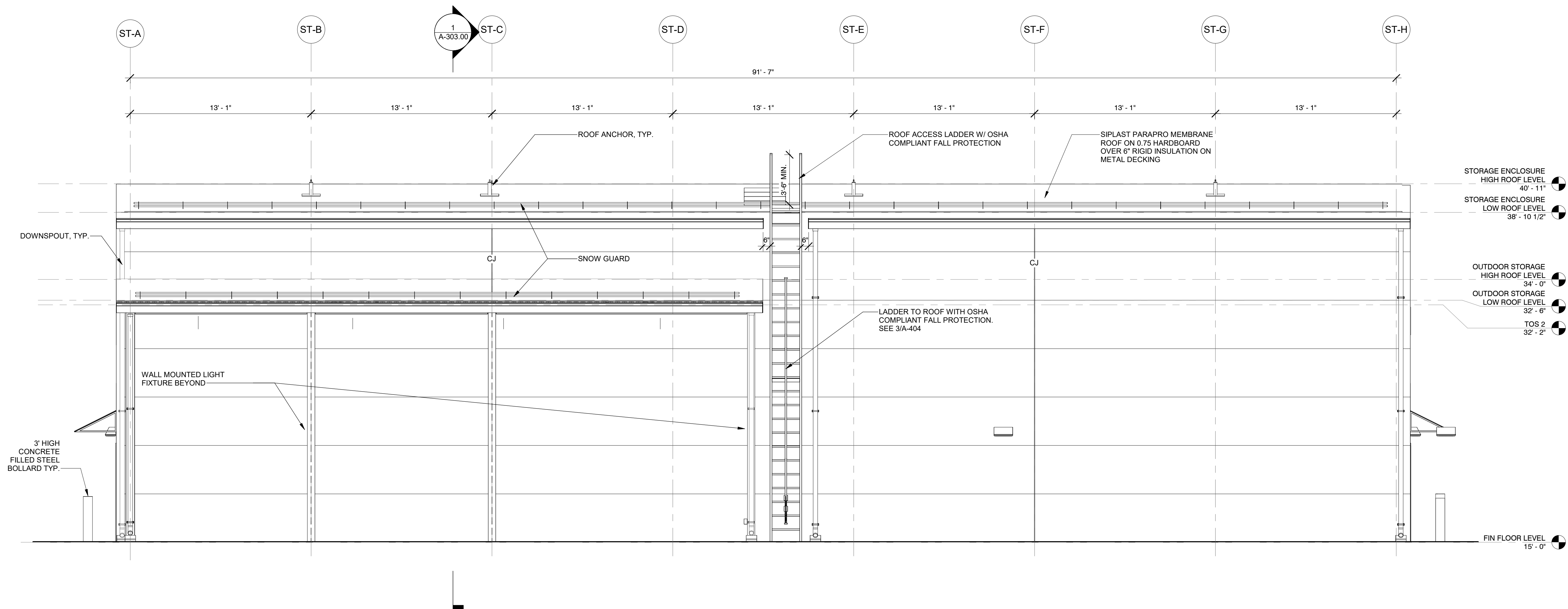
**RELAY ENCLOSURE ELEVATIONS 2 OF 2**

REGISTERED ARCHITECT  
STATE OF NEW YORK  
026049

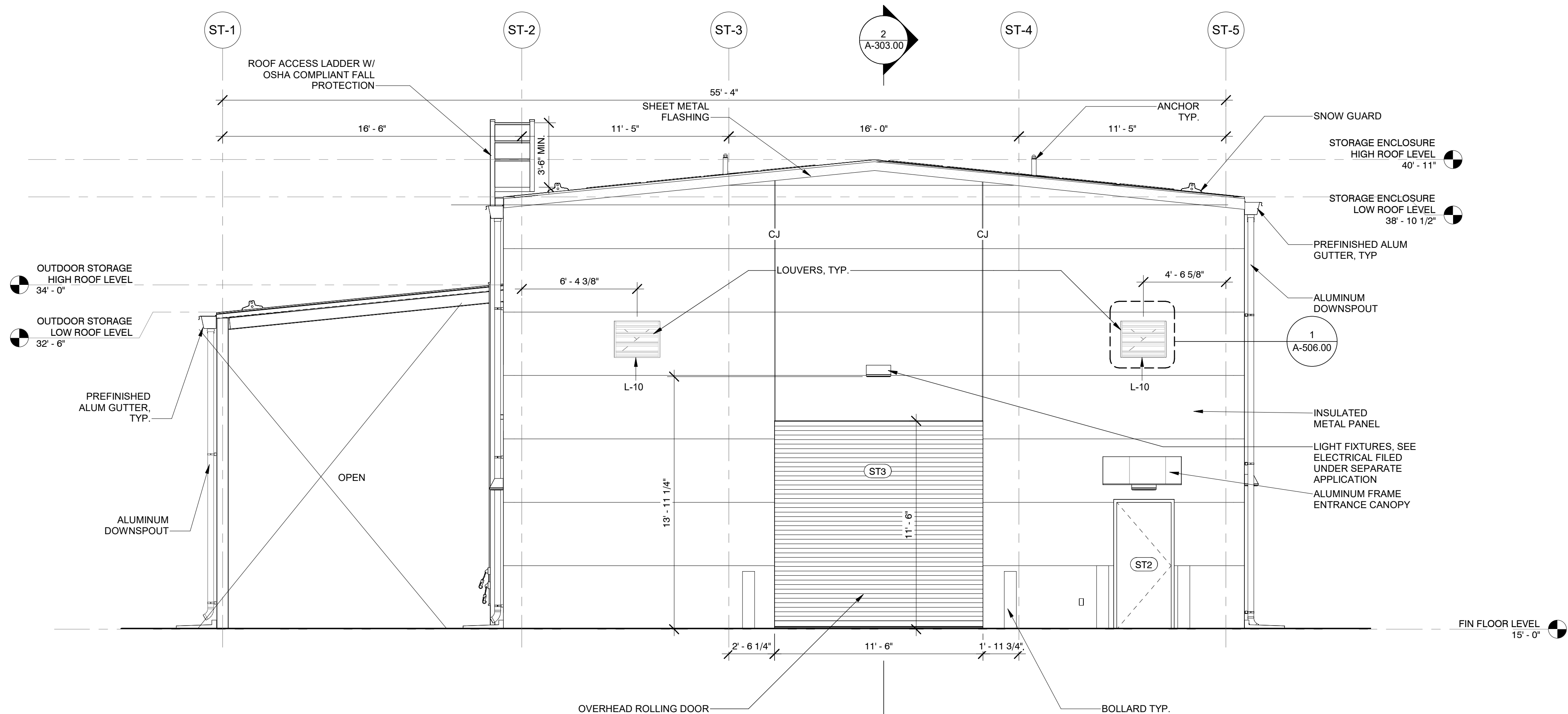
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PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-204.00**  
CADD FILE NO: Astoria CHA-RE-141-ZZ-M3-A-001.rvt

12/21/2022 5:31:48 PM

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1 STORAGE ENCLOSURE SOUTH ELEVATION  
1/4" = 1'-0"



2 STORAGE ENCLOSURE EAST ELEVATION  
1/4" = 1'-0"

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B	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022

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Woodcliff Lake, NJ 07677

Hitachi Energy  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

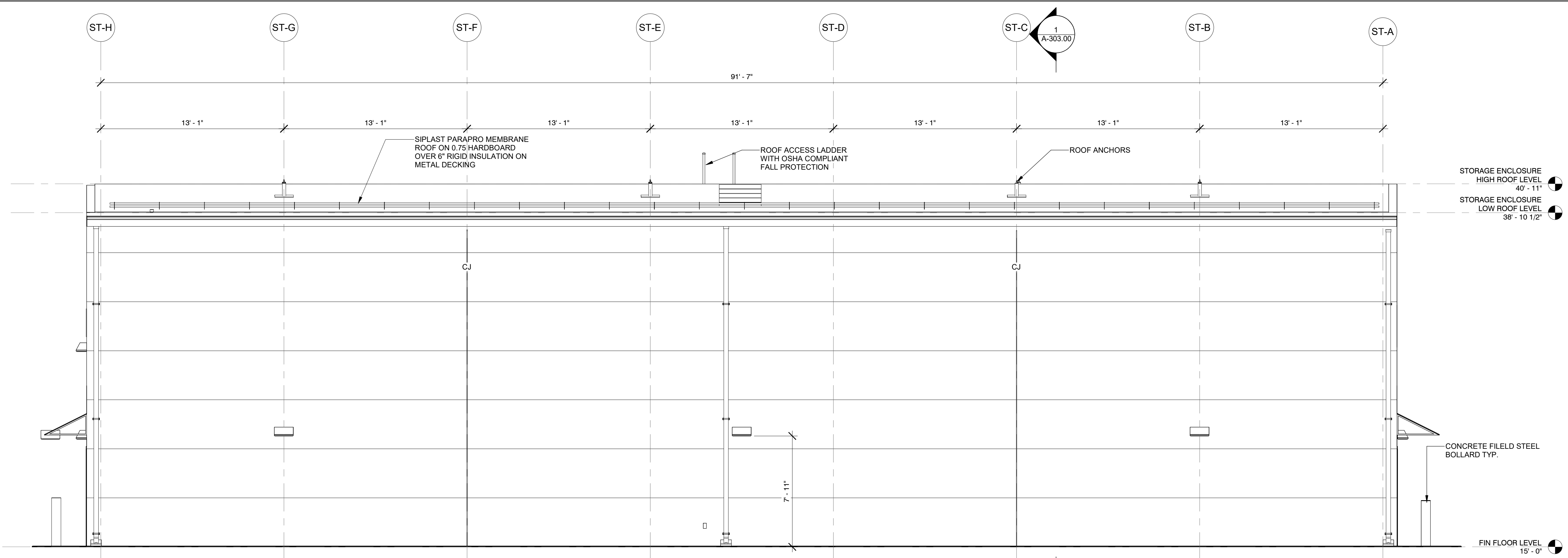
STORAGE ENCLOSURE  
ELEVATIONS 1 OF 2

REGISTERED ARCHITECT  
STATE OF NEW YORK  
026049

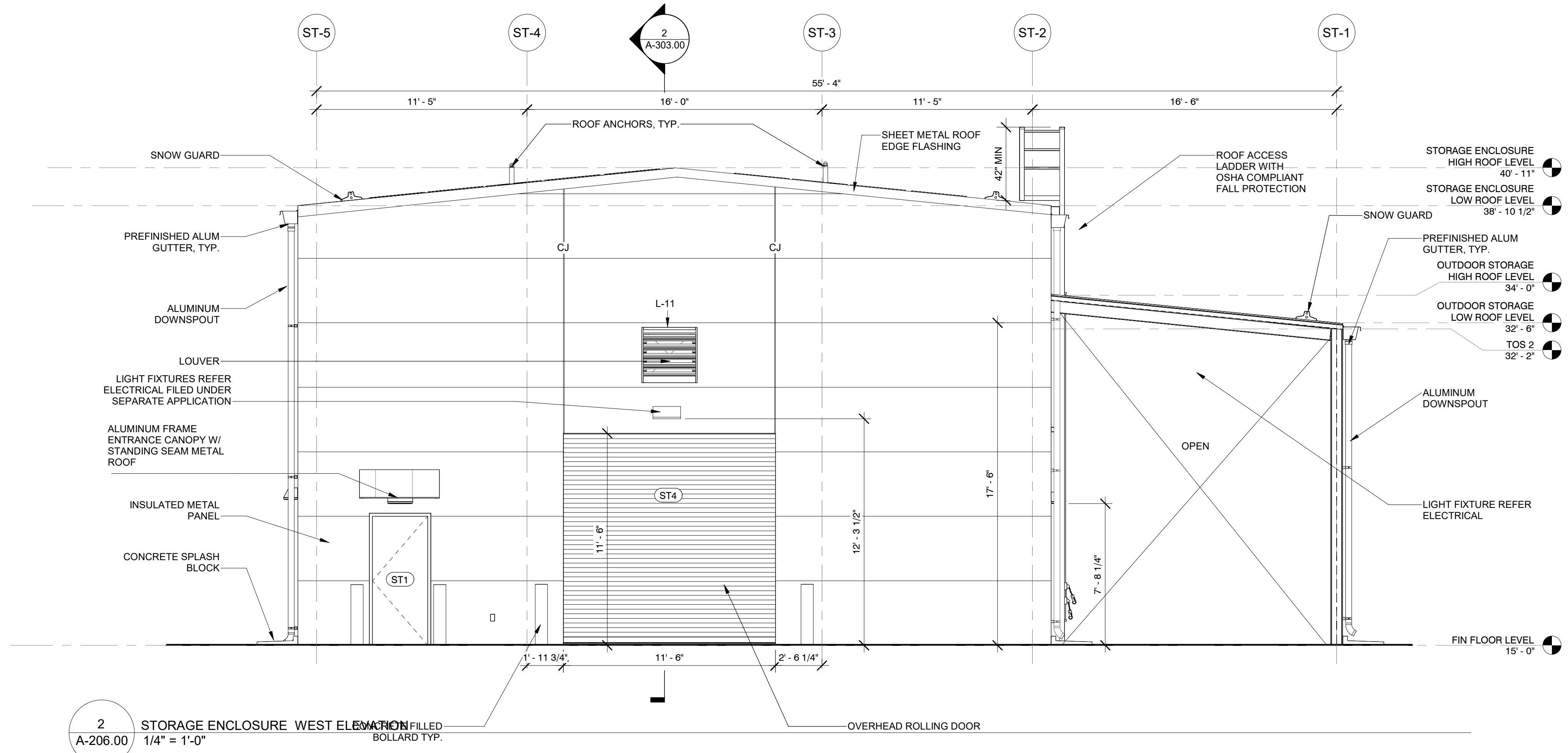
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PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO:  
**A-205.00**  
CADD FILE NO:  
Astoria HVDC - CHPE  
Astoria CHA-RE-130-ZZ-M3-A-001.rvt

12/21/2022 5:46:18 PM

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1 STORAGE ENCLOSURE NORTH ELEVATION  
A-206.00 1/4" = 1'-0"



2 STORAGE ENCLOSURE WEST ELEVATION  
A-206.00 1/4" = 1'-0"

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**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

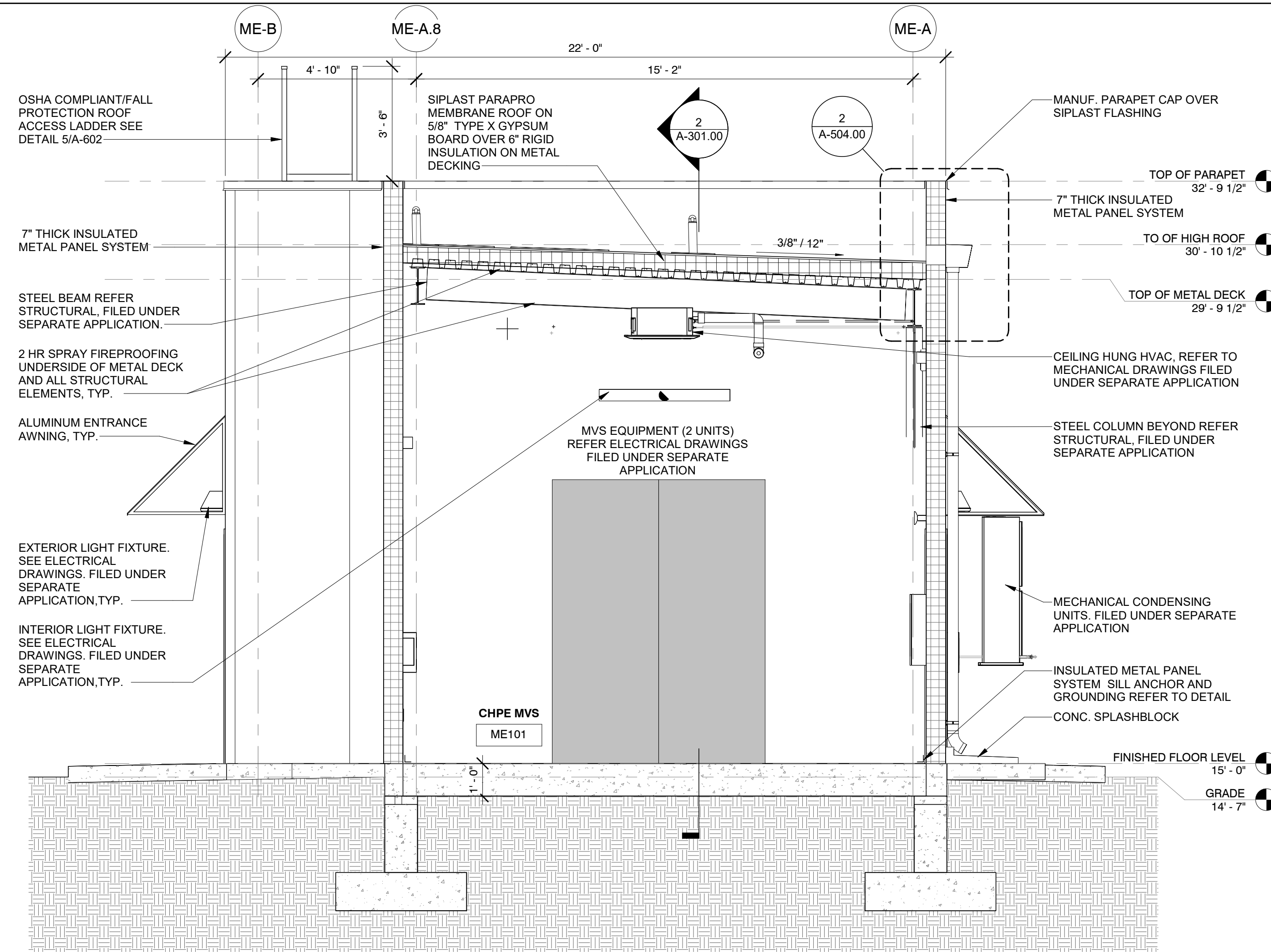
PROJECT  
**CHPE**  
Champlain Hudson Power Express  
**Astoria HVDC Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

STORAGE ENCLOSURE ELEVATIONS 2 OF 2

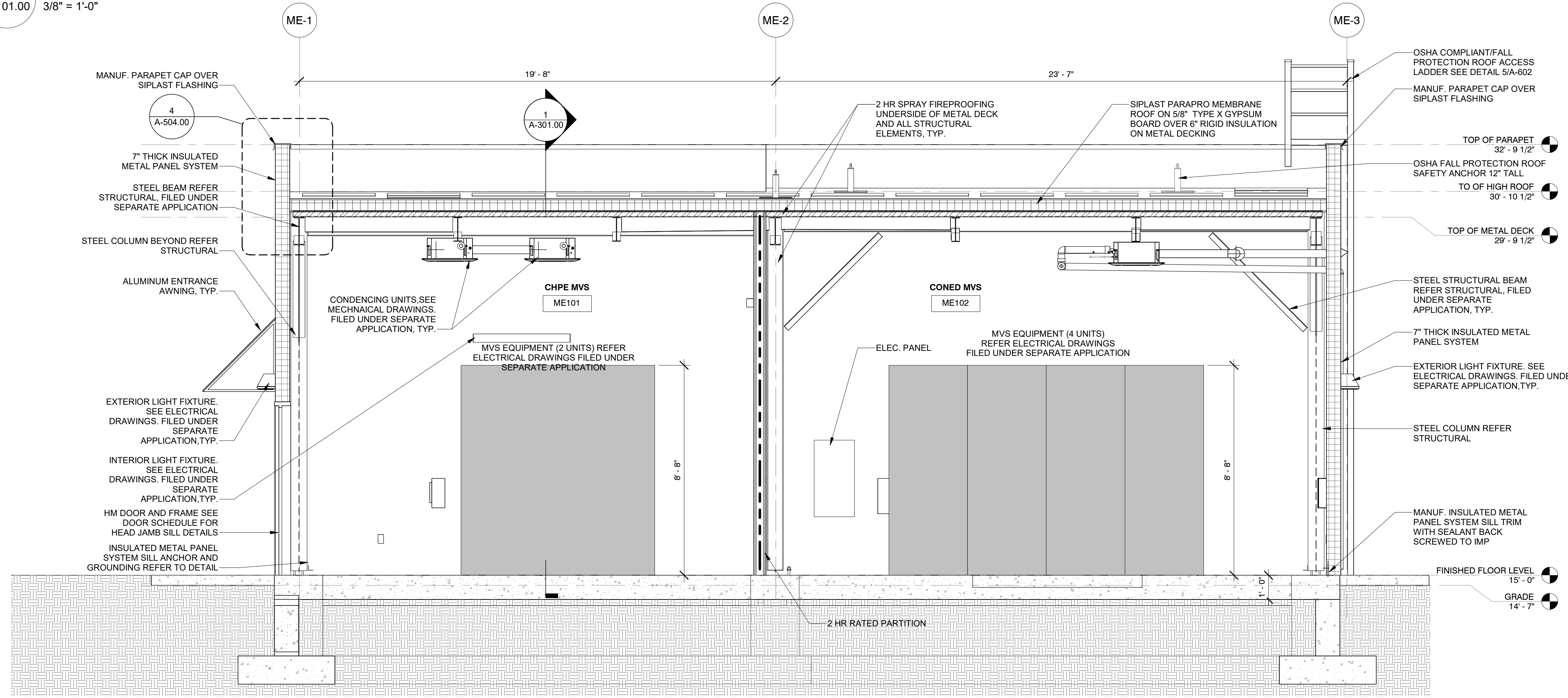
REGISTERED ARCHITECT  
STATE OF NEW YORK  
DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: A-206.00  
CADD FILE NO: Astoria/CHPE/CHPE  
Astoria/CHPE-130-ZZ-M3-A-001.rvt

12/21/2022 5:46:21 PM

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1 MVS ENCLOSURE TRANSVERSE BLDG SECTION  
3/8" = 1'-0"



2 MVS ENCLOSURE LONGITUDINAL SECTION  
3/8" = 1'-0"

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REV	DESCRIPTION	DRW BY	CHK BY	DATE

Kiewit 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677

Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT CHPE Champlain Hudson Power Express Astoria HVDC Converter Station 31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

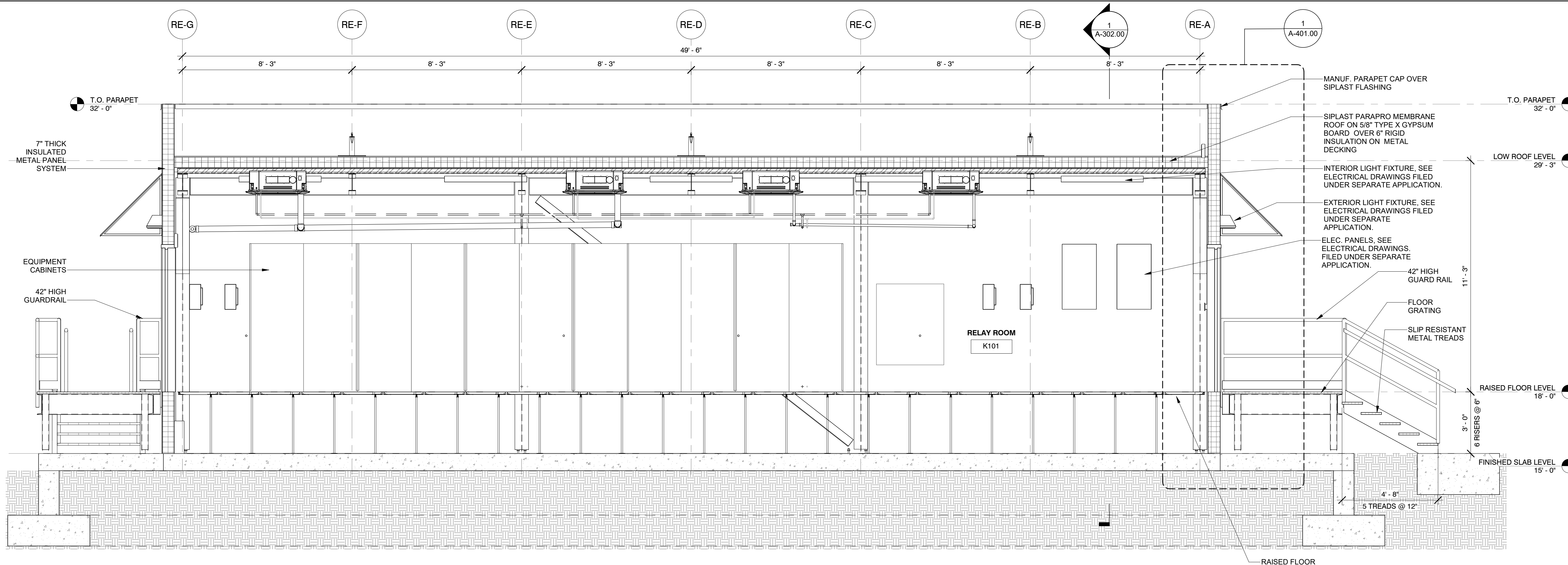
MVS ENCLOSURE SECTIONS



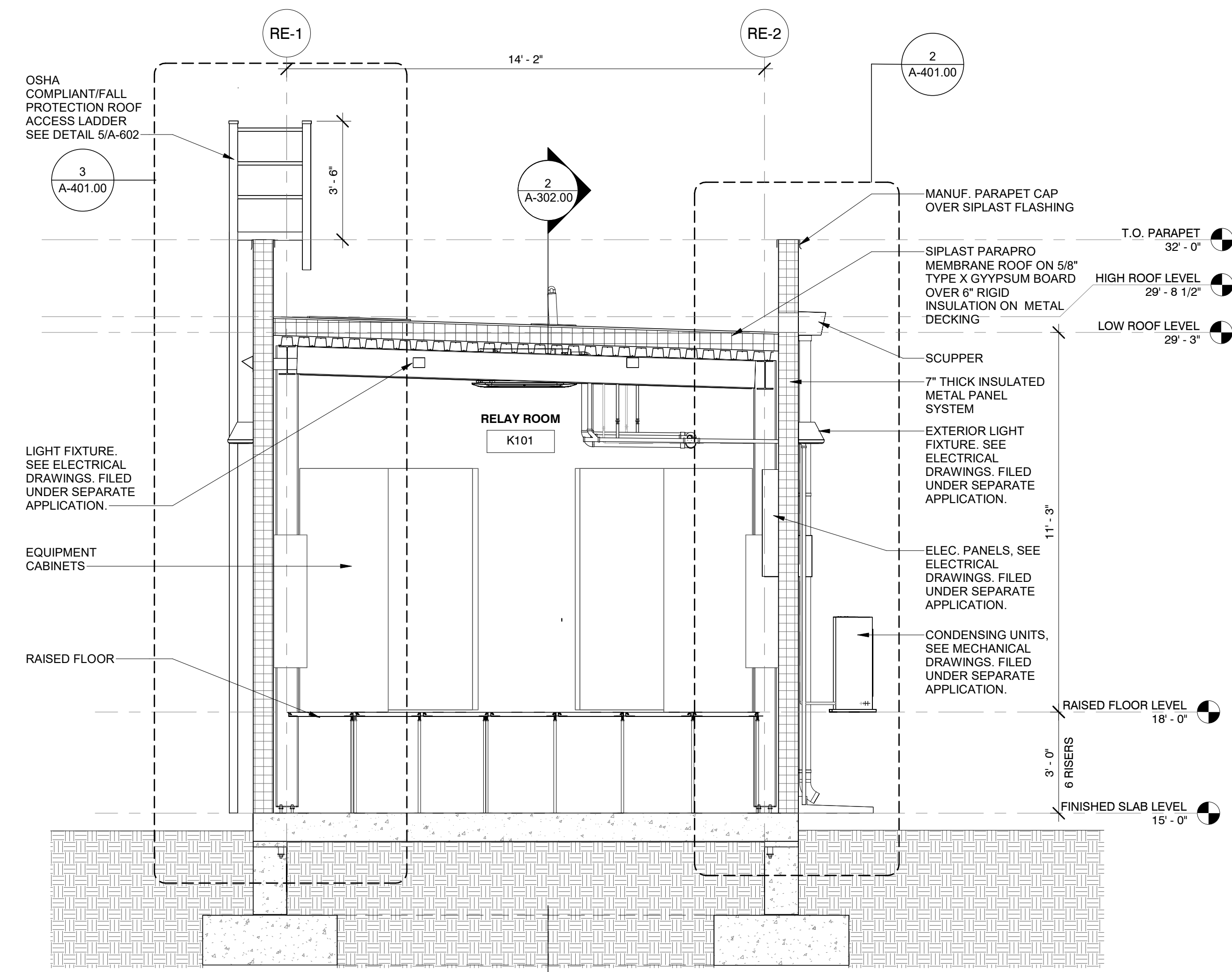
DATE 12/12/2022 PROJECT NO 105121 DRAWING BY S. WARYAH CHECKED BY J. STEPHENS DRAWING NO A-301.00 CADD FILE NO Astoria CHA-RE-141-ZZ-M3-A-001.rvt

12/21/2022 5:31:50 PM

ISSUED FOR PERMIT



2 RELAY ENCLOSURE SECTION 1  
A-102.00 3/8" = 1'-0"



1 RELAY ENCLOSURE SECTION 2  
A-102.00 3/8" = 1'-0"

Engineering and Land Surveying, P.C. 370 7th Avenue SUITE 1604 New York, NY 10001

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**Kiewit** 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677  
**Hitachi Energy** 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT **CHPE** Champlain Hudson Power Express  
**Astoria HVDC Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

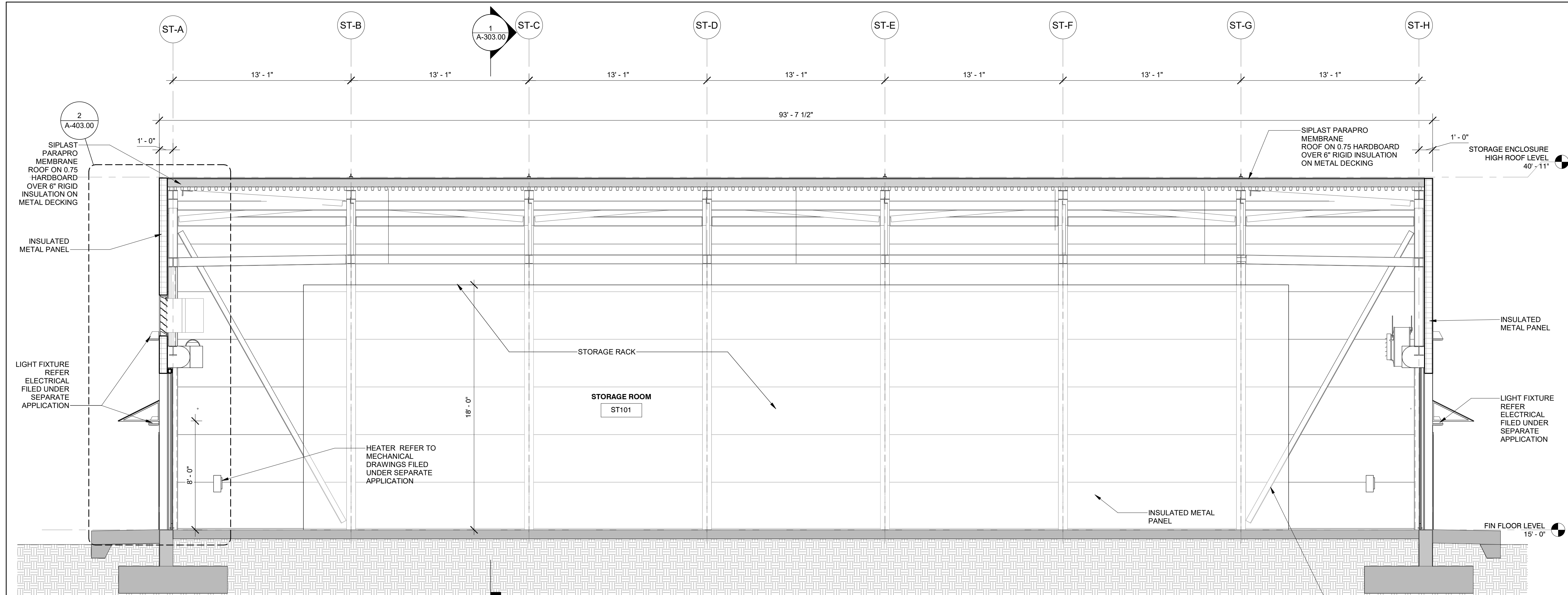
RELAY ENCLOSURE SECTIONS

REGISTERED ARCHITECT  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026048

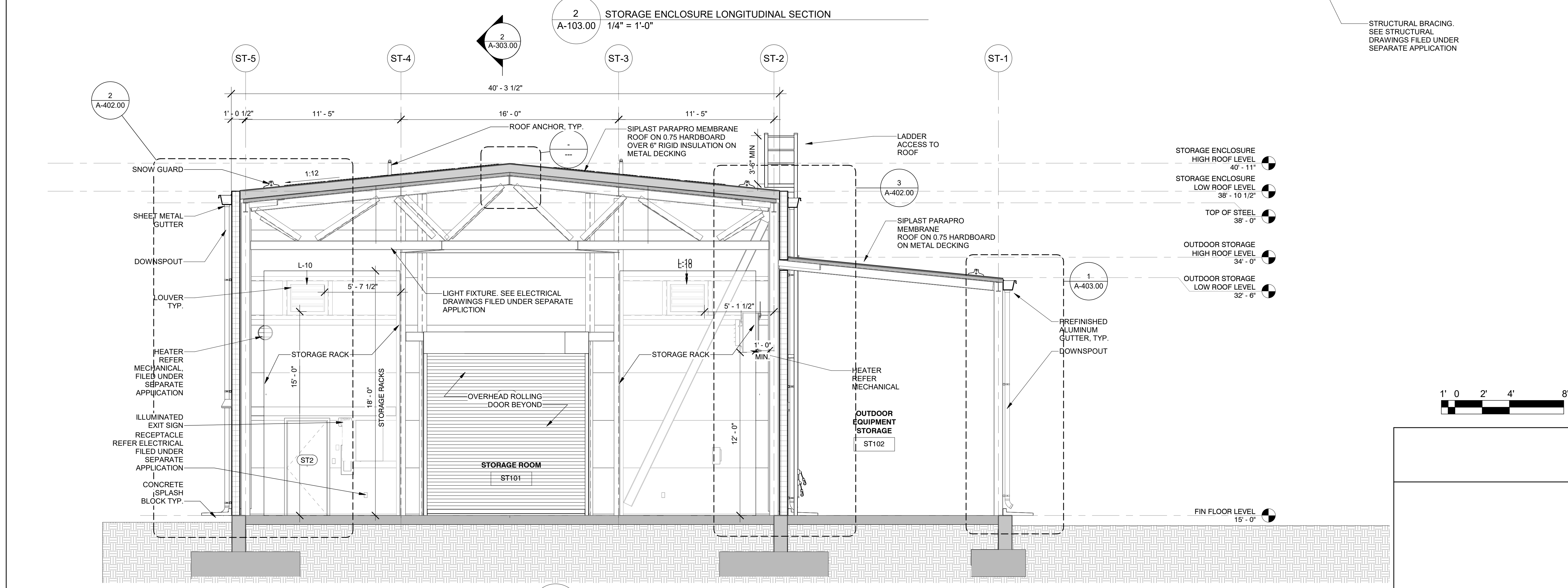
DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY S. WARYAH  
CHECKED BY J. STEPHENS  
DRAWING NO **A-302.00**  
CADD FILE NO  
Astoria HVDC Converter Station  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt

12/21/2022 5:31:57 PM

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2 STORAGE ENCLOSURE LONGITUDINAL SECTION  
1/4" = 1'-0"



1 STORAGE ENCLOSURE TRANSVERSE SECTION  
1/4" = 1'-0"

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370 7th Avenue  
SUITE 1604  
New York, NY 10001

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470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT  
**CHPE**  
Champlain Hudson Power Express  
**Astoria HVDC Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

STORAGE ENCLOSURE SECTIONS

REGISTERED ARCHITECT  
STATE OF NEW YORK  
DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-303.00**  
CADD FILE NO:  
Astoria HVDC Converter Station  
Astoria/CHA-RE-130-ZZ-M3-A-001.rvt

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**Hitachi Energy**  
901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT **CHPE**  
Champlain Hudson Power Express

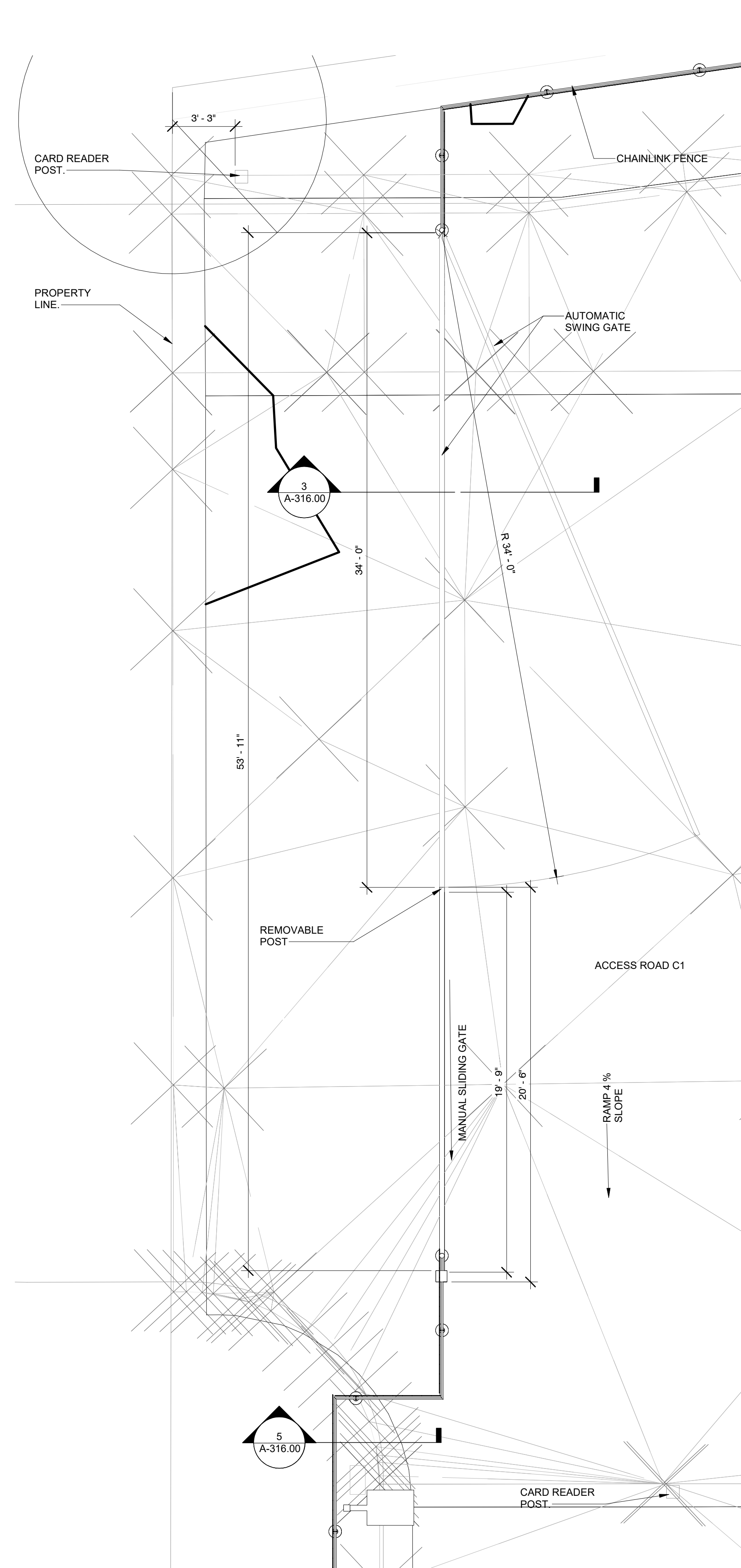
**Astoria HVDC Converter Station**

31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

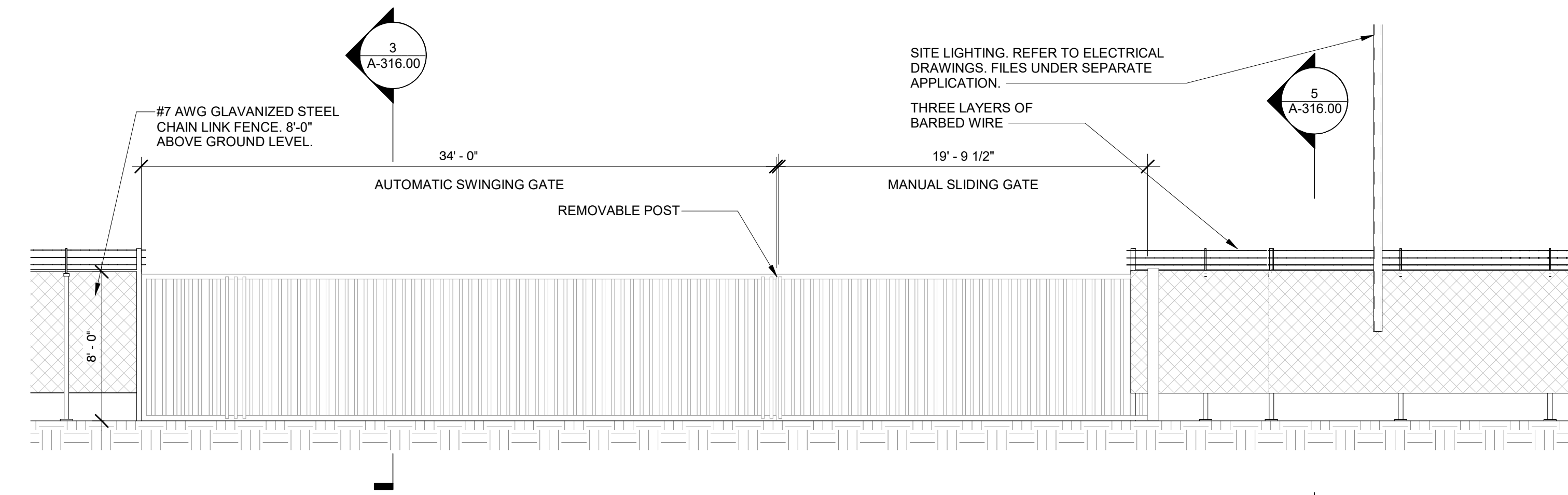
**NORTH ENTRANCE GATE PLAN, ELEVATION AND SECTION**



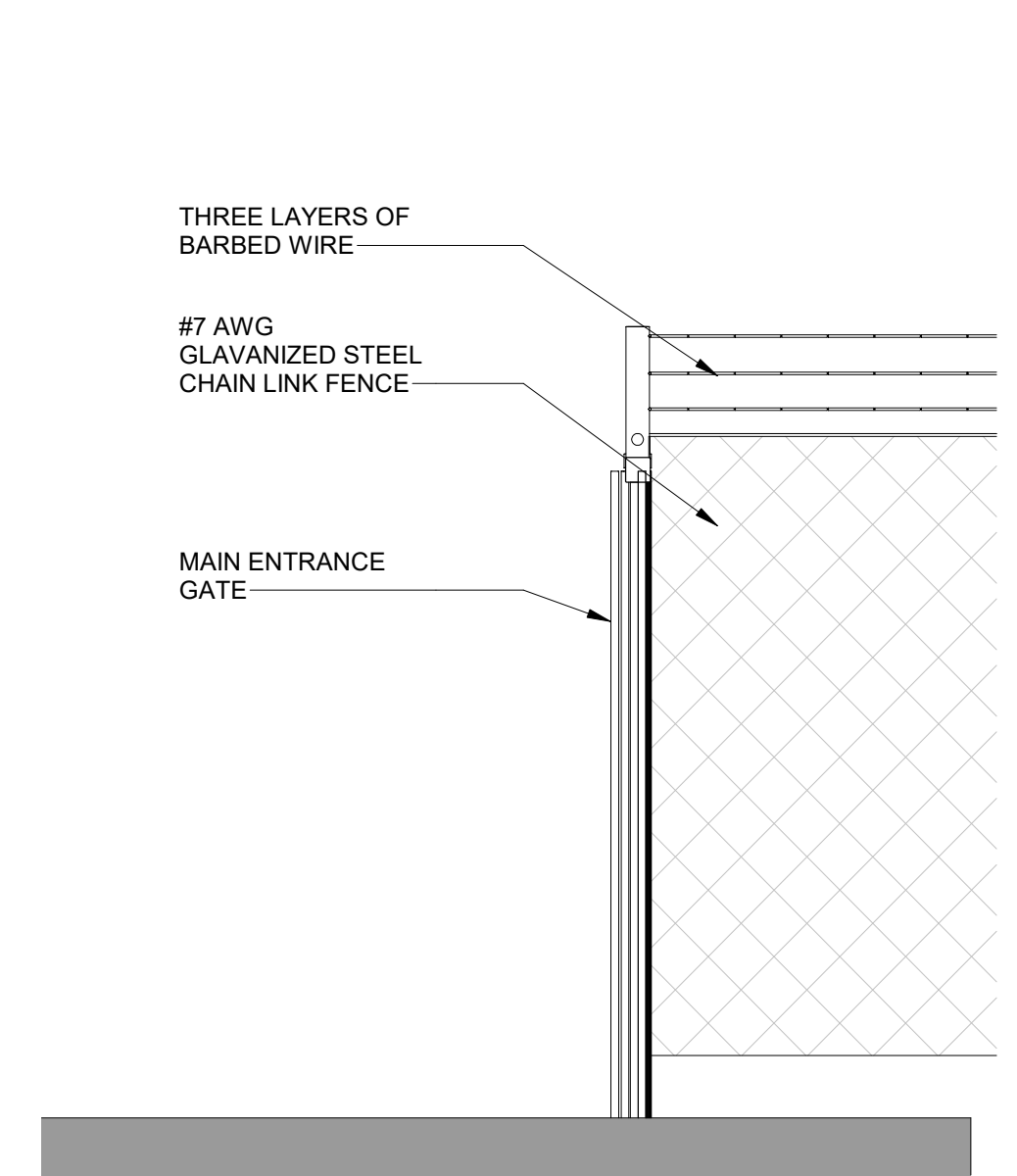
DATE	12/12/2022
PROJECT NO.	105121
DRAWING BY	S. WARYAH
CHECKED BY	J. STEPHENS
DRAWING NO.	<b>A-316.00</b>
CADD FILE NO.	Astoria HVDC Converter Station CHPE
Astoria CHA-RE-141-ZZ-M3-A-001.rvt	



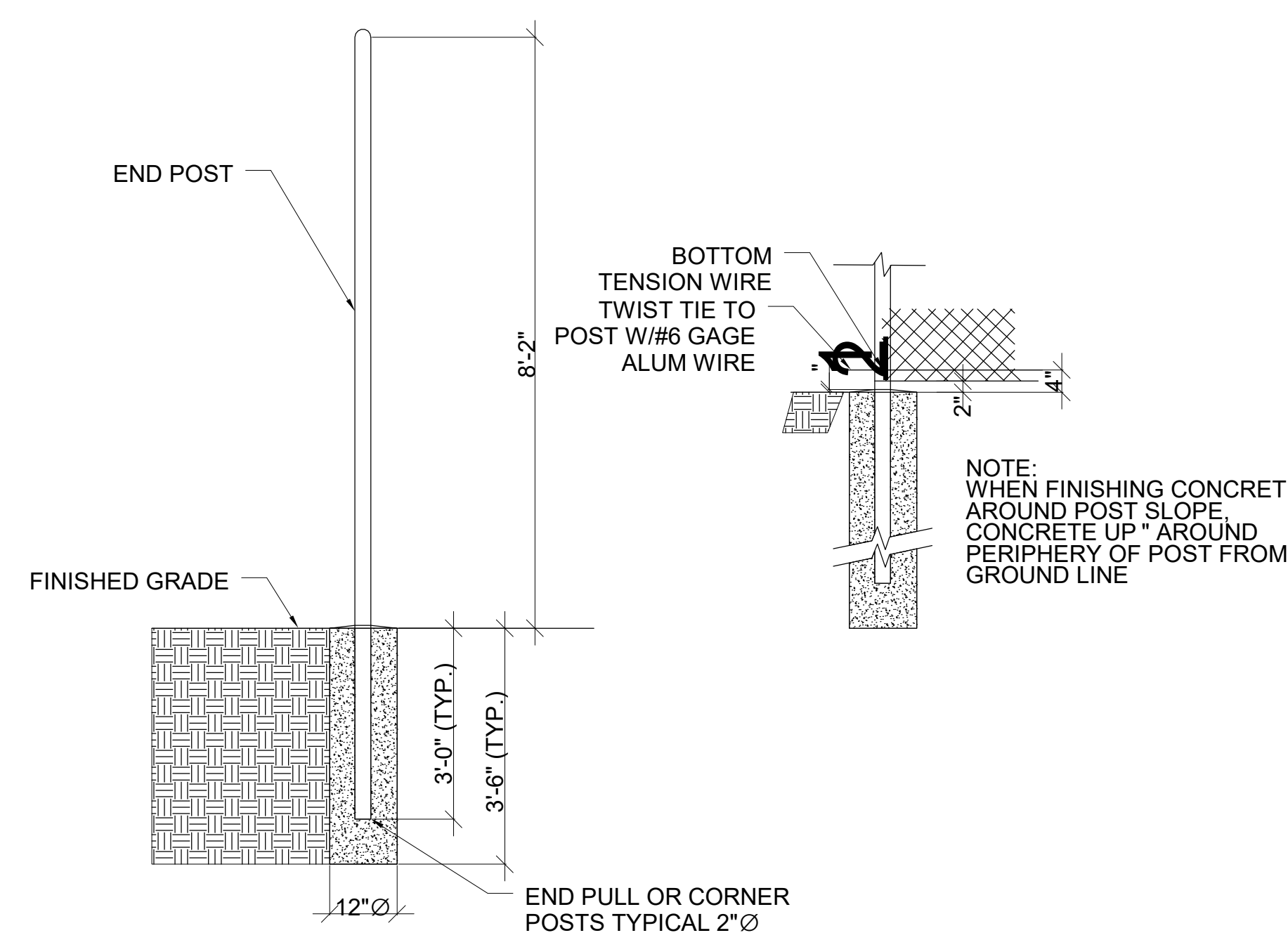
1 NORTH ENTRANCE GATE PLAN  
A-001.00 1/4" = 1'-0"



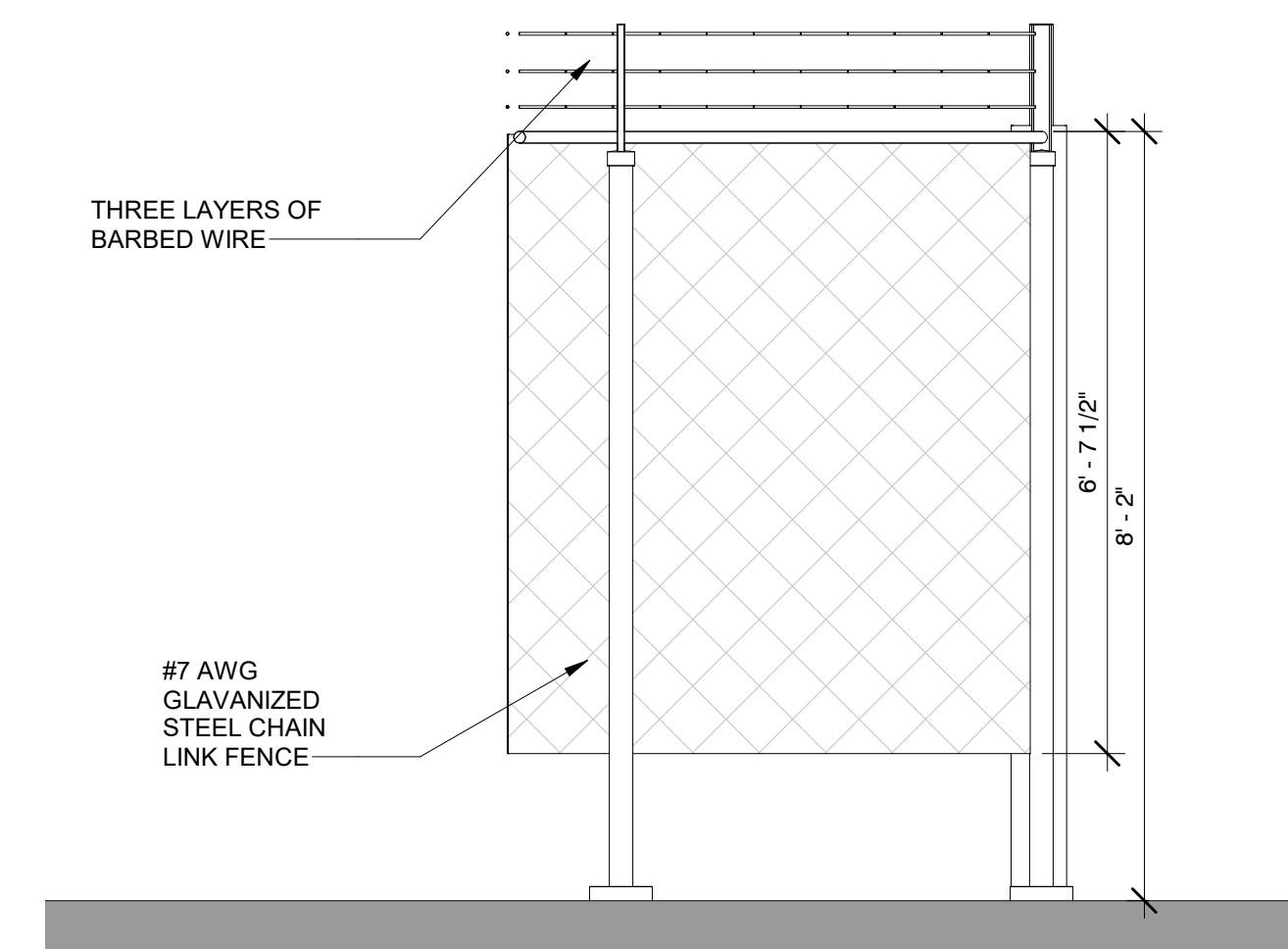
2 GATE & FRONT ELEVATION  
A-316.00 3/16" = 1'-0"



3 ENTRANCE GATE SECTION  
A-316.00 1/2" = 1'-0"



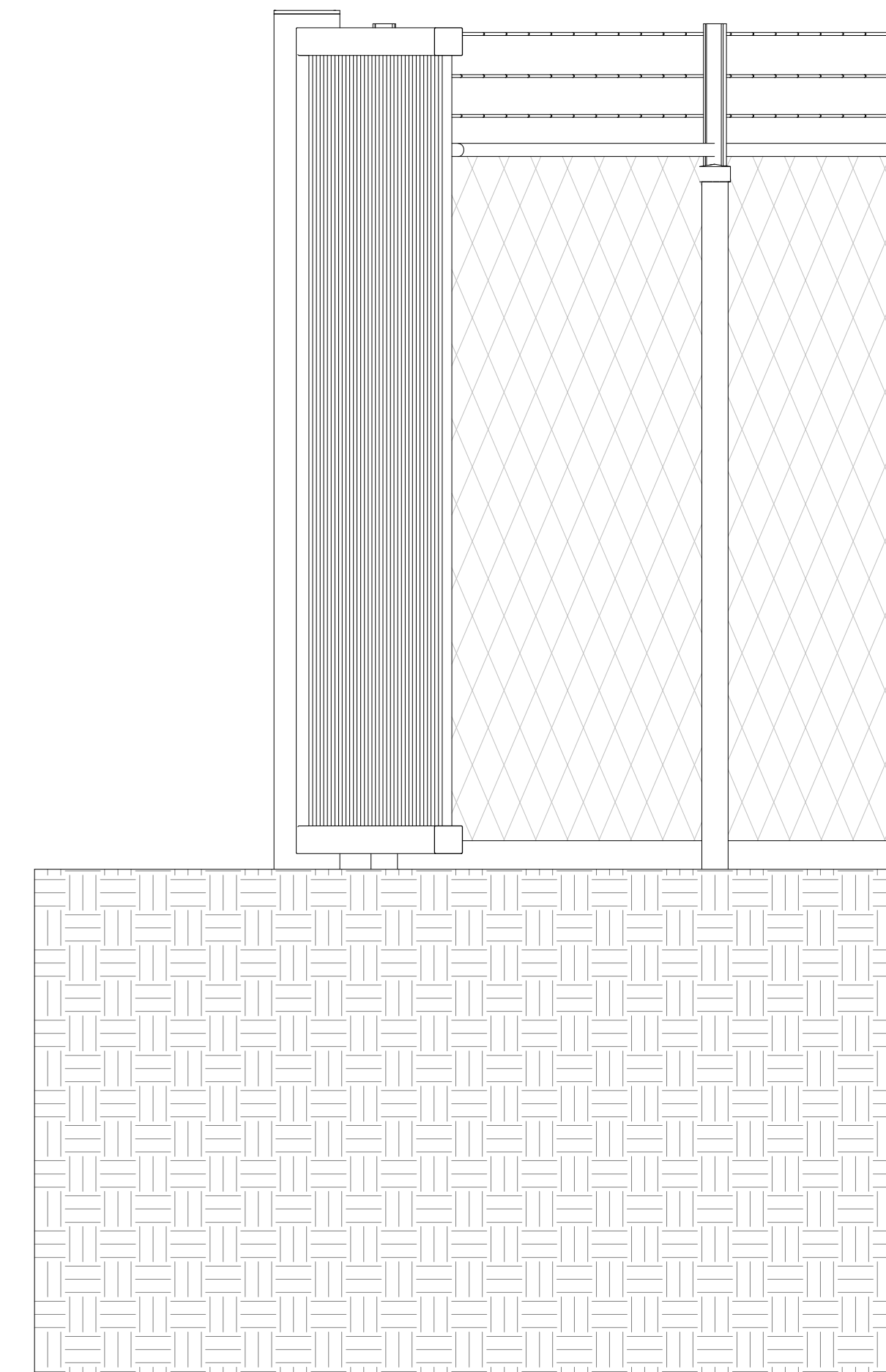
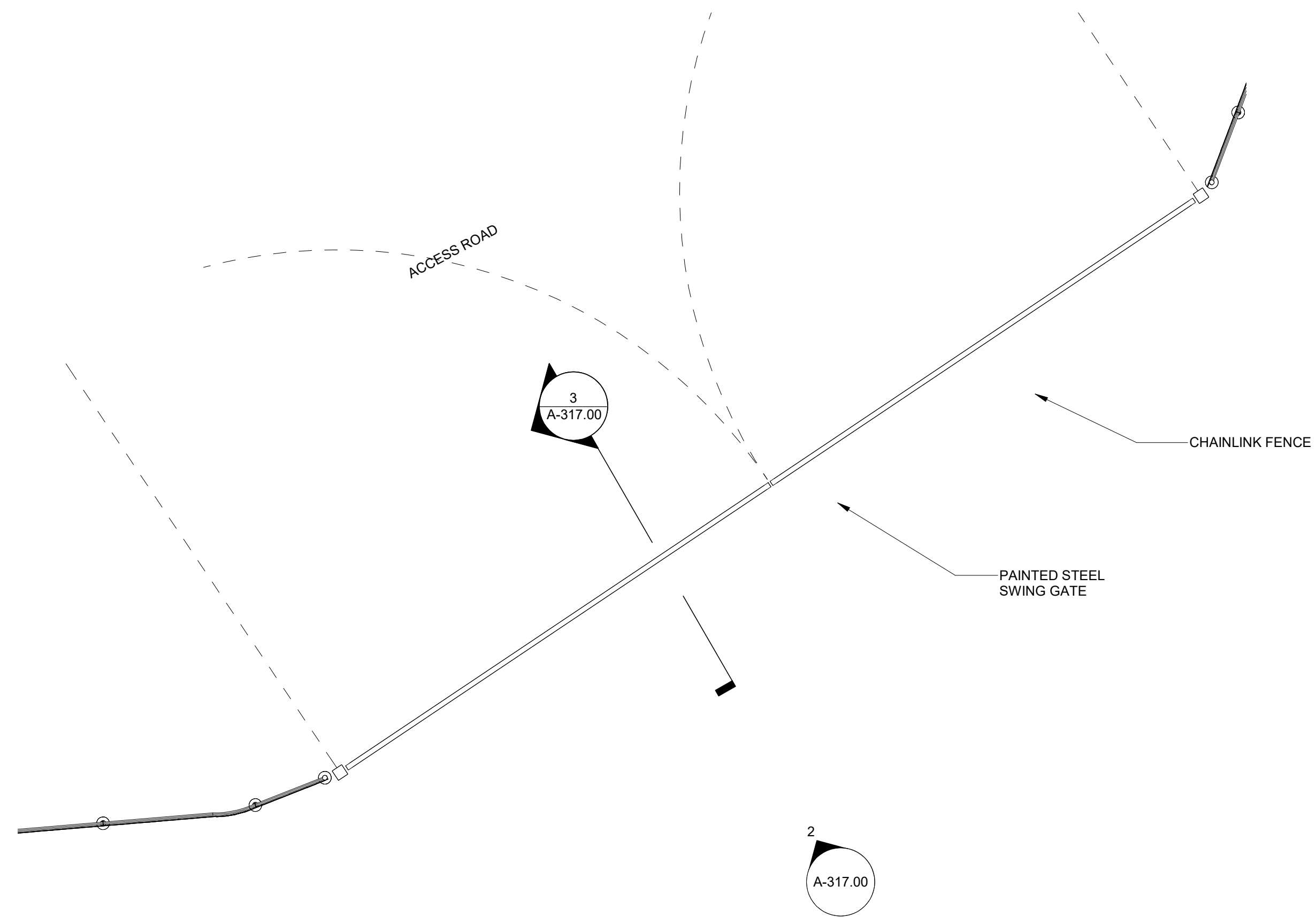
4 TYP. FENCE FOUNDATION  
A-316.00 1/2" = 1'-0"



5 CHAINLINK FENCE SECTION  
A-316.00 1/2" = 1'-0"

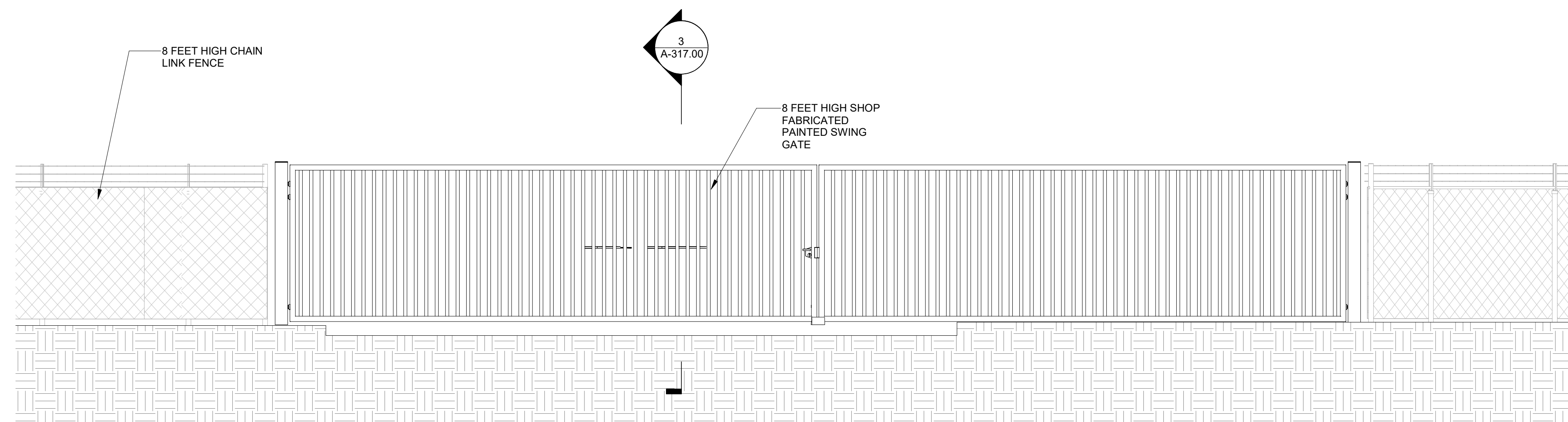
12/21/2022 5:32:03 PM

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1  
A-001.00 NORTHEAST ENTRANCE GATE PLAN  
3/16" = 1'-0"

3  
A-317.00 SOUTH GATE CROSS SECTION  
3/4" = 1'-0"



2  
A-317.00 GATE FRONT ELEVATION  
1/4" = 1'-0"

**K** Engineering and Land Surveying, P.C.  
370 7th Avenue  
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Champlain Hudson  
Power Express  
**Astoria HVDC  
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31-45 20<sup>th</sup> Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

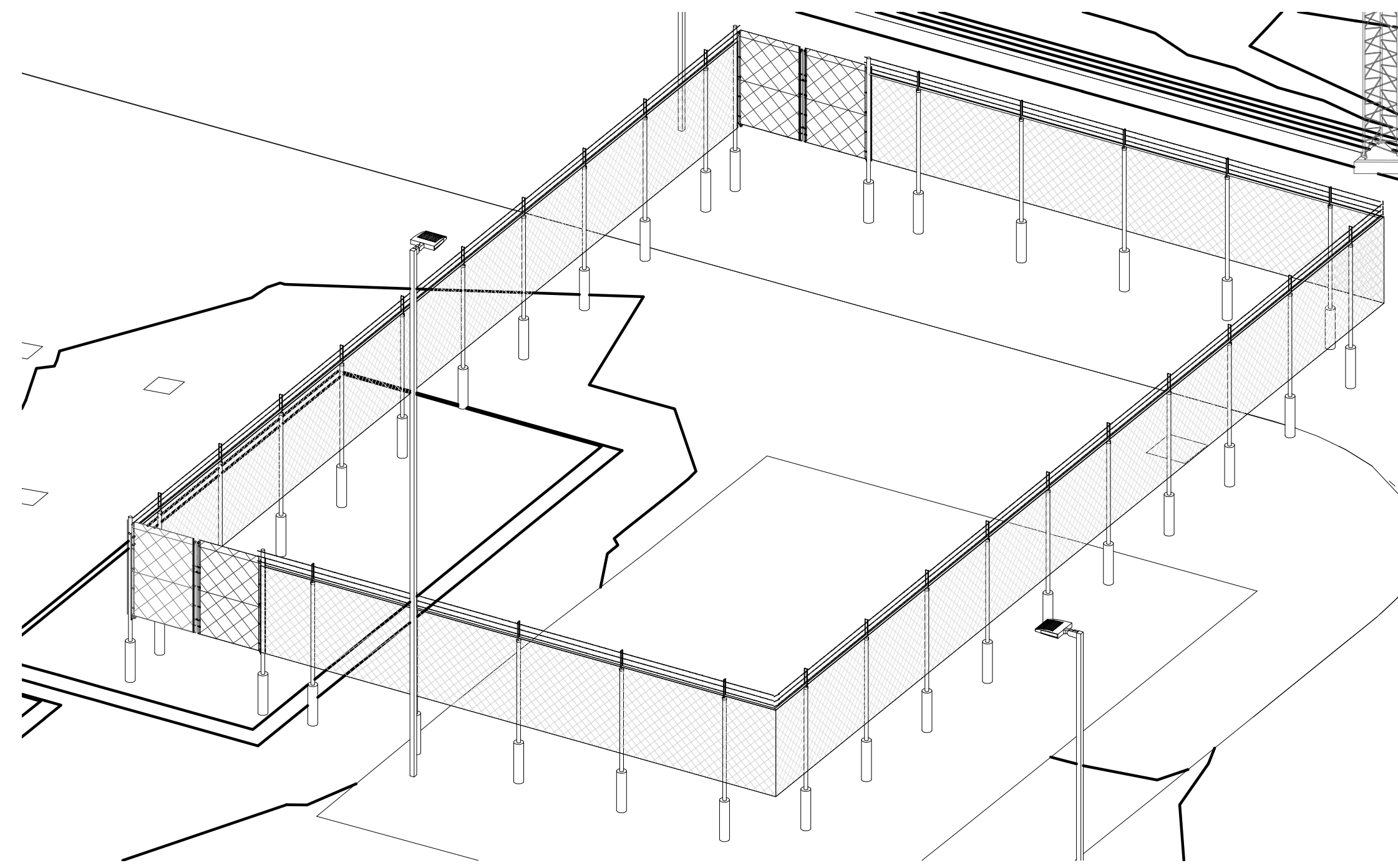
**SOUTH ENTRANCE GATE  
PLAN, ELEVATION AND  
SECTION**



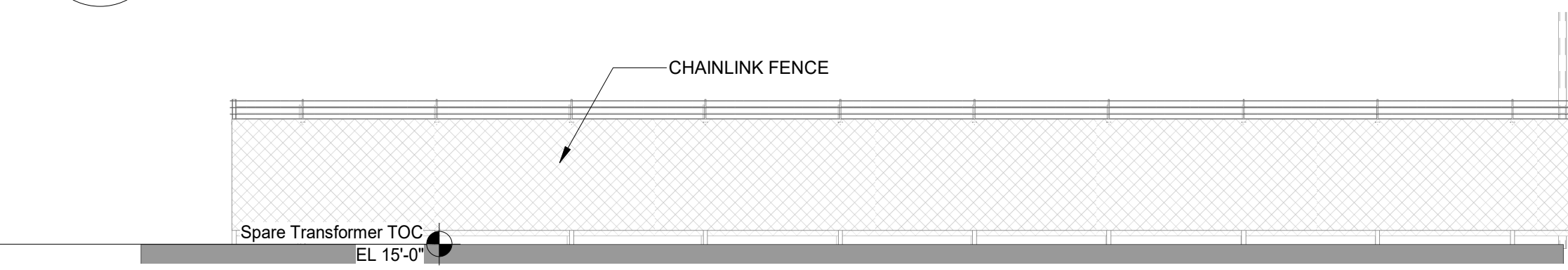
DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO:  
**A-317.00**  
CADD FILE NO:  
Astoria HVDC CHPE  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt

12/21/2022 5:32:08 PM

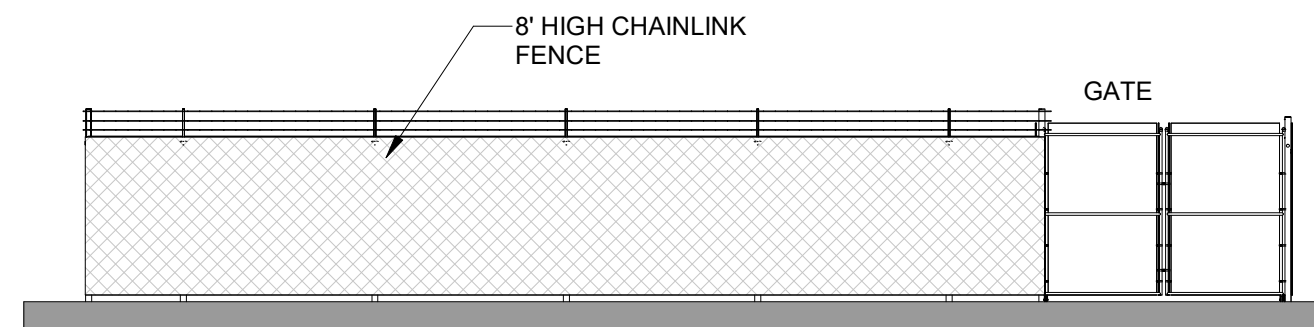




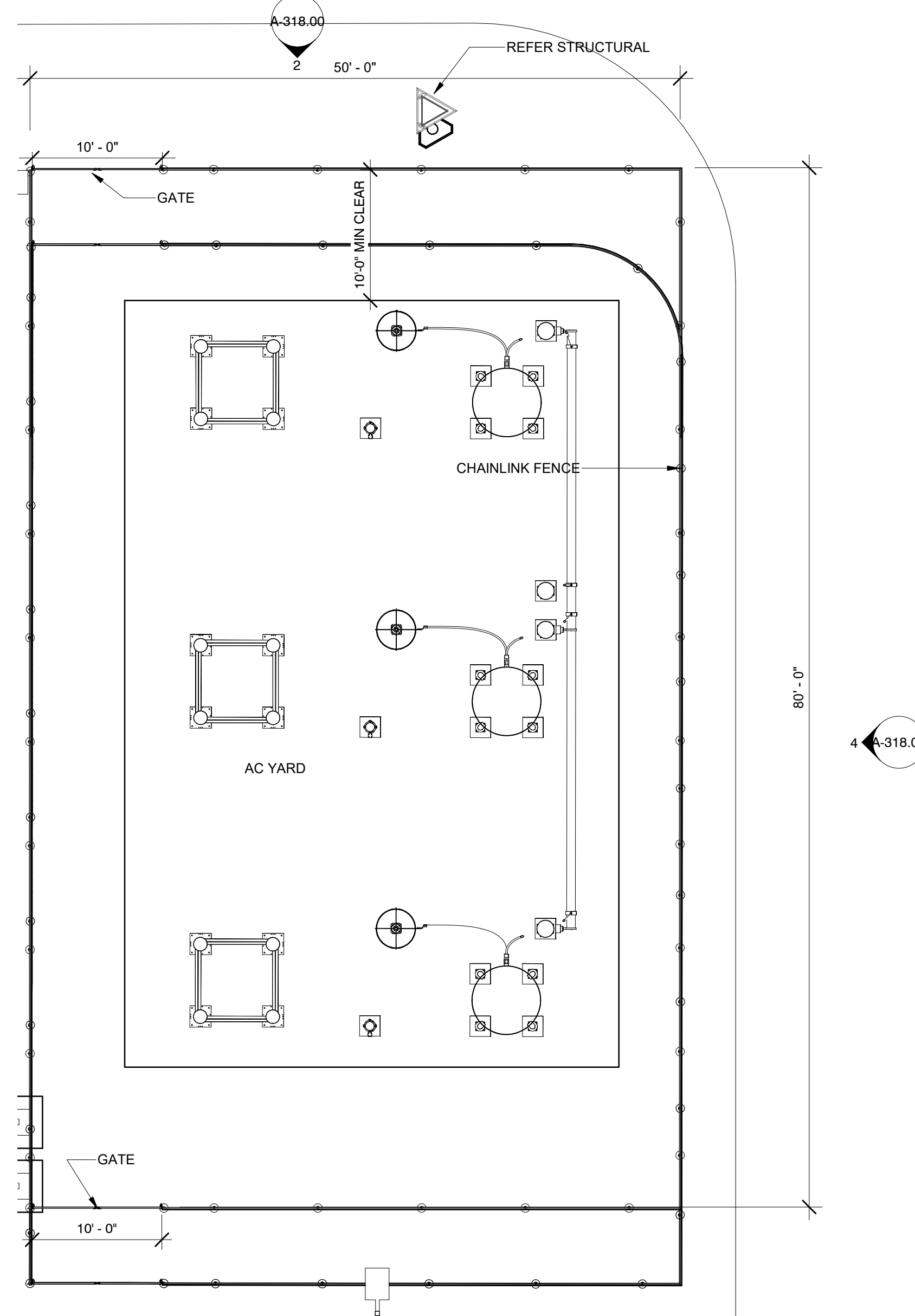
5 AC YARD FENCE VIEW  
A-318.00



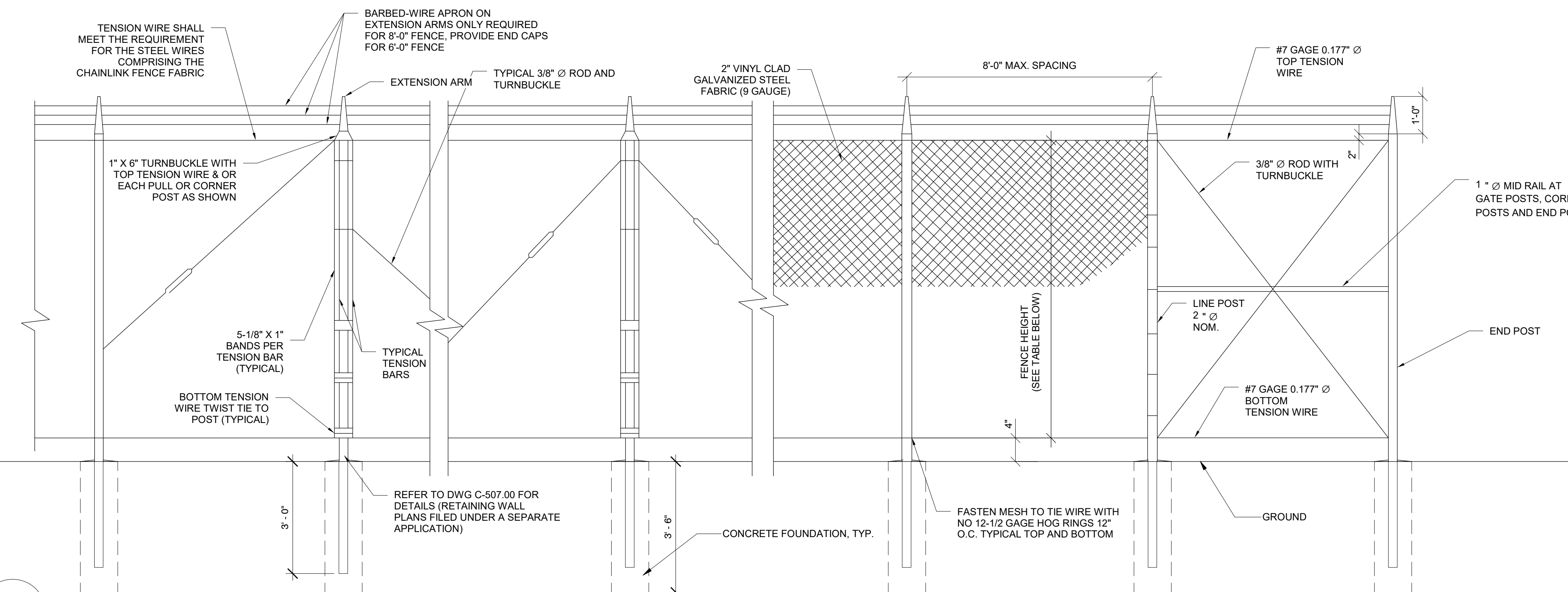
4 FENCE WEST ELEVATION  
A-318.00 1/8" = 1'-0"



2 FENCE SOUTH ELEVATION  
A-318.00 1/8" = 1'-0"



1 AC YARD FENCE PLAN  
A-318.00 1/8" = 1'-0"



3 TYP. FENCE ELEVATION  
A-318.00 1/2" = 1'-0"

NOTES

1. THE TENSION WIRE SHALL BE SECURED AT THE TOP WITH A TWO-WAY CLAMP AT EACH SEVENTH POST FOR 6'-0" HIGH OR AT EACH FIFTH POST FOR 8'-0" HIGH FENCING SO THAT THE MAX. UNTIED SPAN OF TENSION WIRE DOES NOT EXCEED 36'-0" FOR 6'-0" HIGH OR 32'-0" FOR 8'-0" HIGH FENCE. WHEREAS, IF THE TOTAL LENGTH OF DAMAGED FABRIC TO BE REPLACED IS LESS THAN 16'-0", NO TENSION WIRE SHALL BE INSTALLED, BUT THE DAMAGED TOP RAIL SHALL BE REPLACED WITH NEW TOP RAIL. NEW TENSION WIRES SHALL BE INSTALLED ONLY WHEN DAMAGES TO TOP OR BOTTOM RAILS HAVE BEEN INCURRED AND REPLACEMENT IS NECESSARY.
2. CORNER POSTS SHALL BE USED AT SHARP BREAKS IN VERTICAL GRADE AND CHANGES IN HORIZONTAL ALIGNMENT OF 15' AND OVER. INTERMEDIATE PULL POSTS SHALL BE INSTALLED ALONG TANGENT FENCE RUNS AND SHALL BE SPACED AT INTERVALS NOT EXCEEDING 180'.
3. ALL FABRICATION AND INSTALLATION DETAILS OF THIS FENCING ARE SHOWN ON THE CONTRACT PLANS. ANY PROPOSED CHANGES BY THE CONTRACTOR SHALL BE SUBMITTED IN WRITING, EXPLAINING THE REASON FOR SUCH REQUESTED CHANGE AND SUPPLEMENTED BY CLEAR SHOP DRAWINGS DEFINING THE CONTRACTOR'S PROPOSAL.
4. LAYOUT OF CHAIN LINK FENCE POST LOCATIONS SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE INTENT OF THE CONTRACT PLANS. ALL SUCH LAYOUT SHALL BE CHECKED AND APPROVED BY THE ENGINEER PRIOR TO ERECTION OF FENCE.
5. THE FENCE SHALL BE CAREFULLY ALIGNED TO A UNIFORM GRADE BY THE CONTRACTOR, BEFORE THE POSTS ARE PERMANENTLY AFFIXED. THE ENGINEER SHALL INSPECT THE LINE AND GRADE, ORDER ANY NECESSARY ADJUSTMENTS AND APPROVE THE FINAL ALIGNMENT IN THAT SECTION OF FENCING.

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Engineering and Land Surveying, P.C. 370 7th Avenue SUITE 1604 New York, NY 10001

SOWINSKI SULLIVAN ARCHITECTURE + ENGINEERING 25 Mohawk Avenue Sparta, NJ 07871

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REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit** 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677  
**Hitachi Energy** 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT **CHPE** Champlain Hudson Power Express  
**Astoria HVDC Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

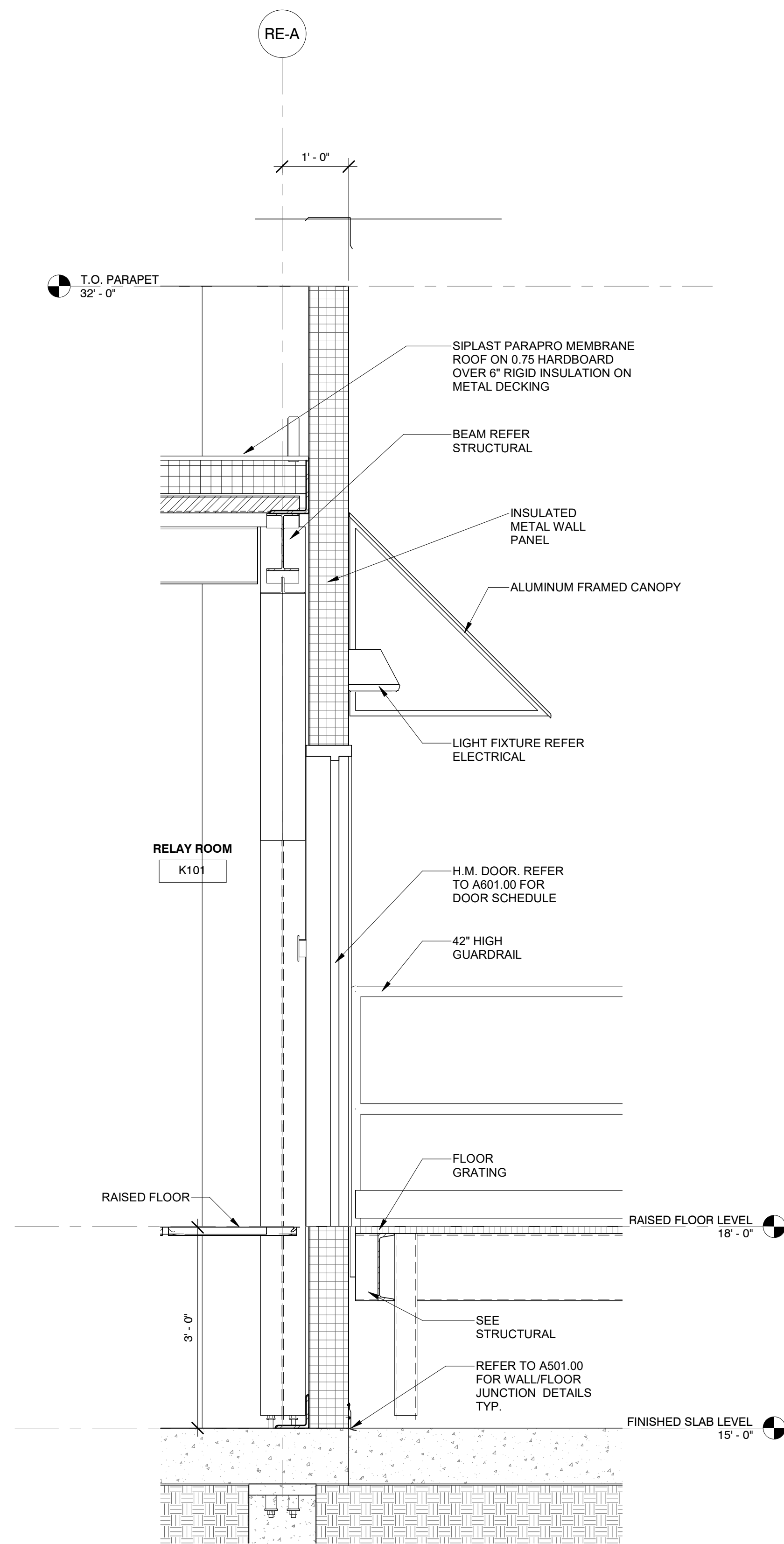
FENCE- AC YARD

REGISTERED ARCHITECT  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026048  
Astoria/CHPE-141-ZZ-M3-A-001.rvt

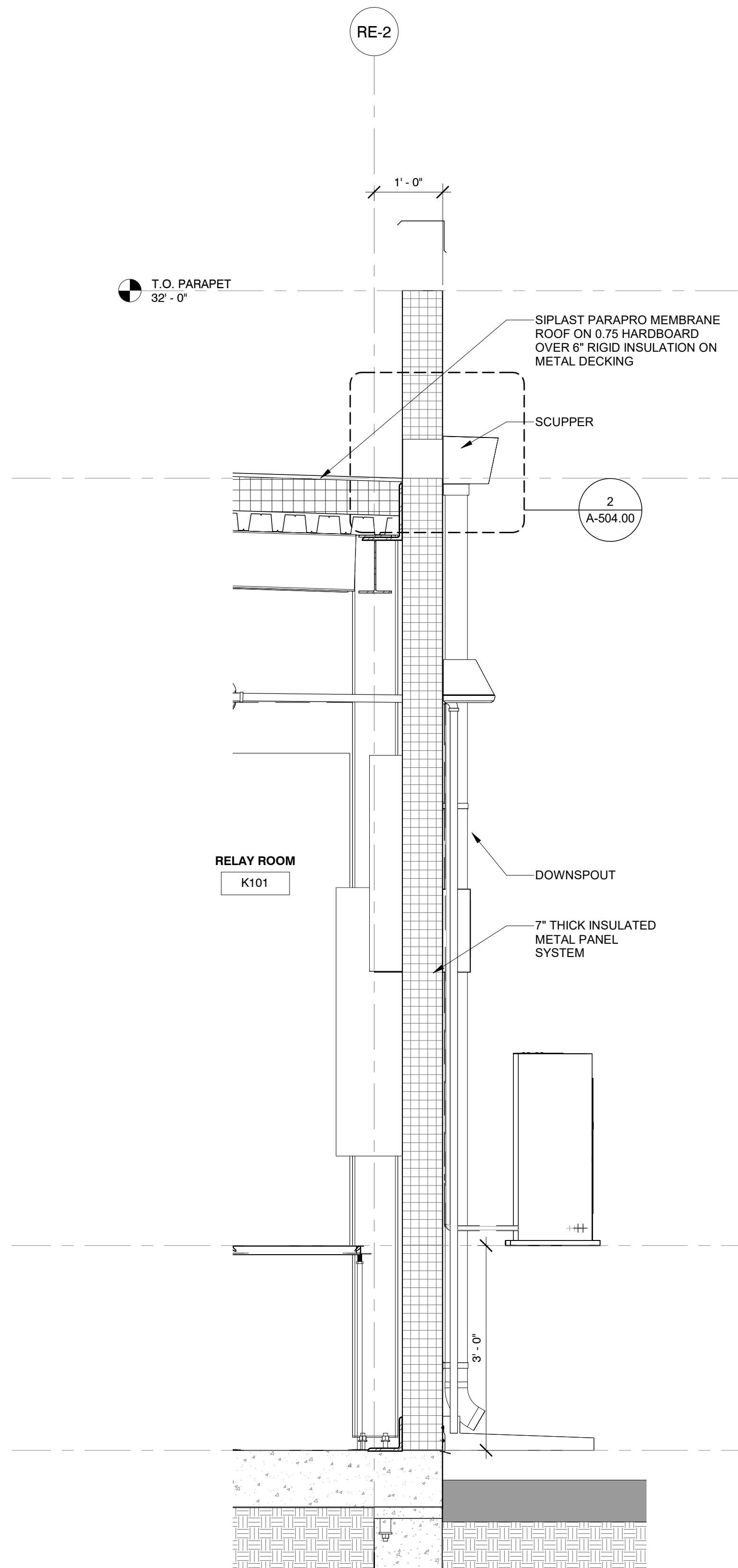
DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY S. WARYAH  
CHECKED BY J. STEPHENS  
DRAWING NO **A-318.00**  
CADD FILE NO

12/21/2022 5:32:21 PM

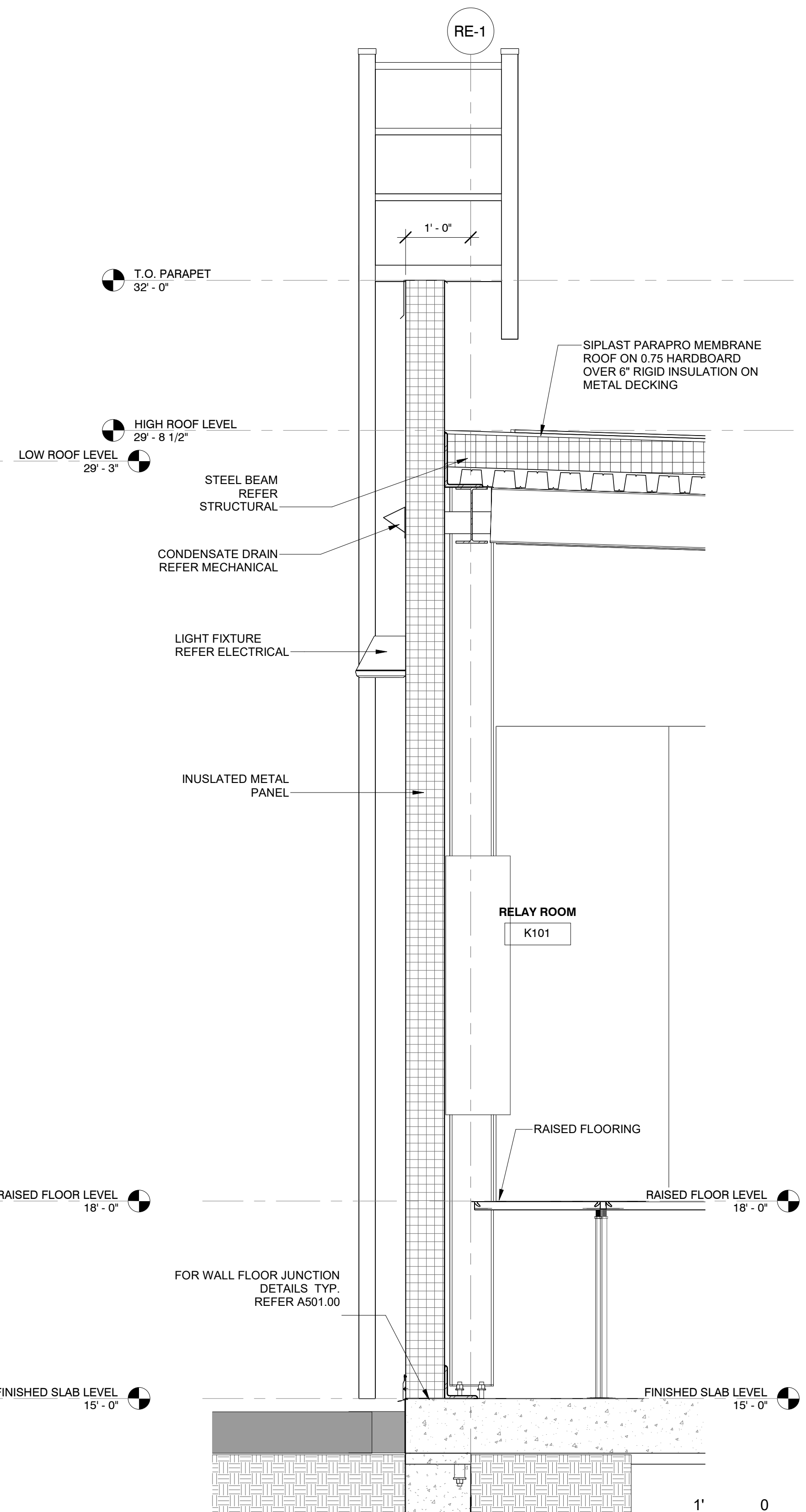
ISSUED FOR PERMIT



1 RELAY ENCLOSURE WALL SECTION 1  
A-302.00 3/4" = 1'-0"



2 RELAY ENCLOSURE WALL SECTION 2  
A-302.00 3/4" = 1'-0"



3 RELAY ENCLOSURE WALL SECTION 3  
A-302.00 3/4" = 1'-0"

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370 7th Avenue  
SUITE 1604  
New York, NY 10001

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**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

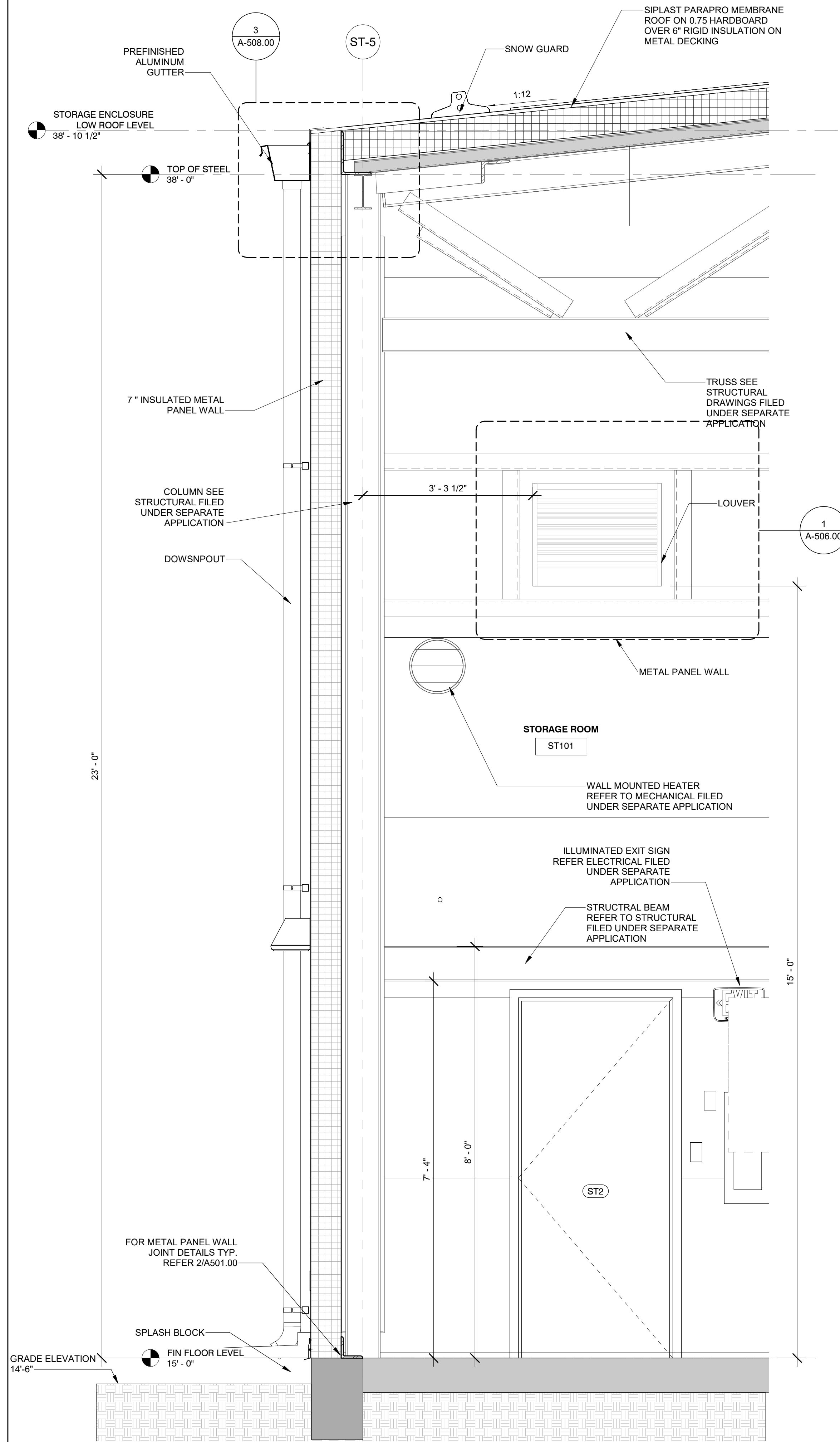
**RELAY ENCLOSURE WALL SECTIONS**

REGISTERED ARCHITECT  
STATE OF NEW YORK  
026048

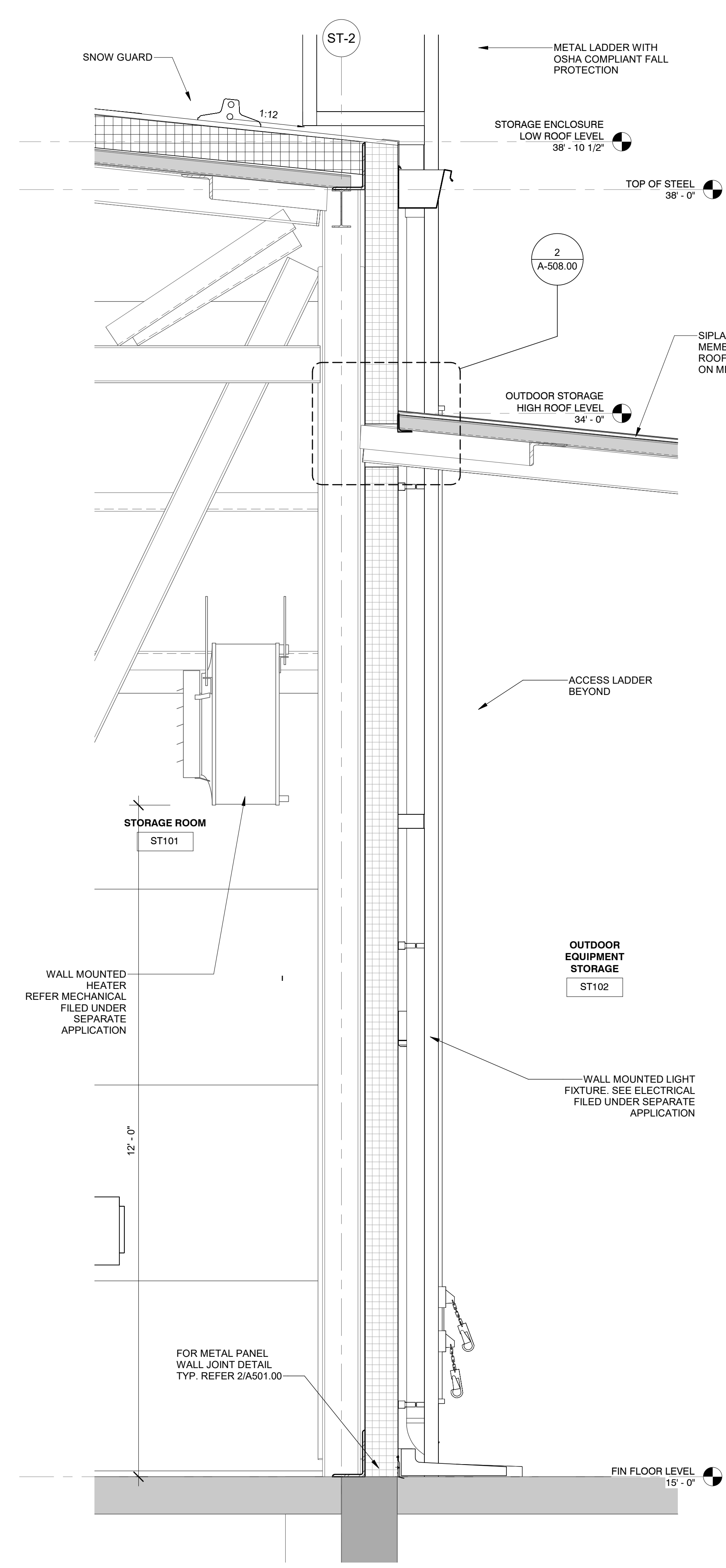
DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO:  
**A-401.00**  
CADD FILE NO:  
Astoria HVDC - CHPE  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt

12/21/2022 5:32:28 PM

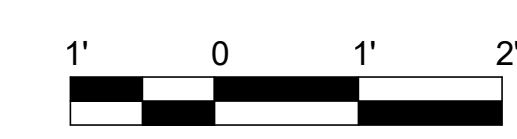
ISSUED FOR PERMIT



2 STORAGE ENCLOSURE WALL SECTION 1  
A-303.00 3/4" = 1'-0"



3 STORAGE ENCLOSURE WALL SECTION 2  
A-303.00 3/4" = 1'-0"



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B	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT

**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

**STORAGE ENCLOSURE WALL SECTIONS 1 OF 2**

REGISTERED ARCHITECT  
STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-402.00**  
CADD FILE NO: Astoria/CHA-RE-130-ZZ-M3-A-001.rvt

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B	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
 470 Chestnut Ridge Rd # 2,  
 Woodcliff Lake, NJ 07677

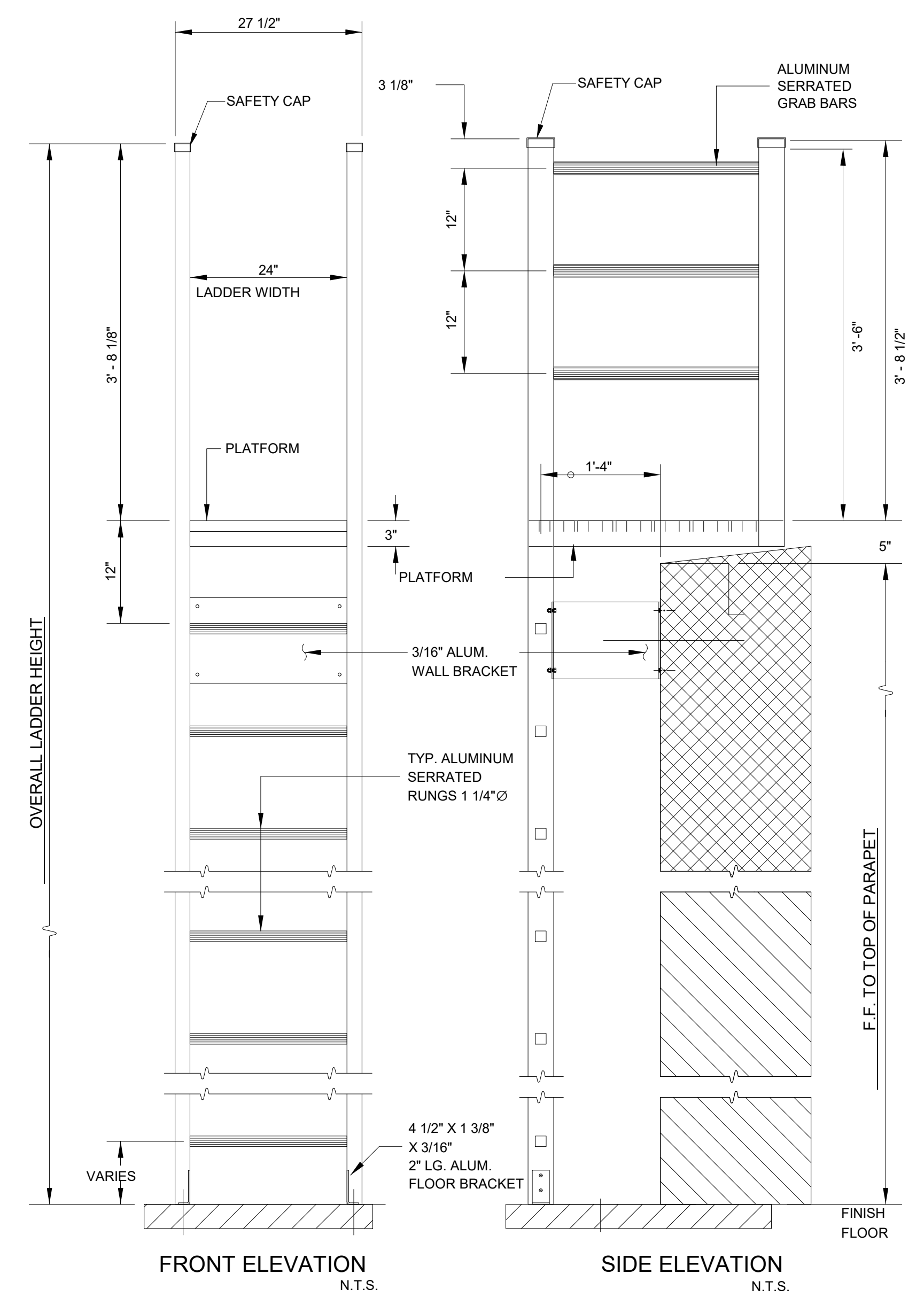
**Hitachi Energy**  
 901 Main Campus Drive  
 Raleigh, North Carolina 27606

PROJECT **CHPE**  
 Champlain Hudson Power Express  
**Astoria HVDC Converter Station**  
 31-45 20th Avenue, Astoria, Queens NY 11105  
 Block #850 - Lot #310 - BIN #4624437

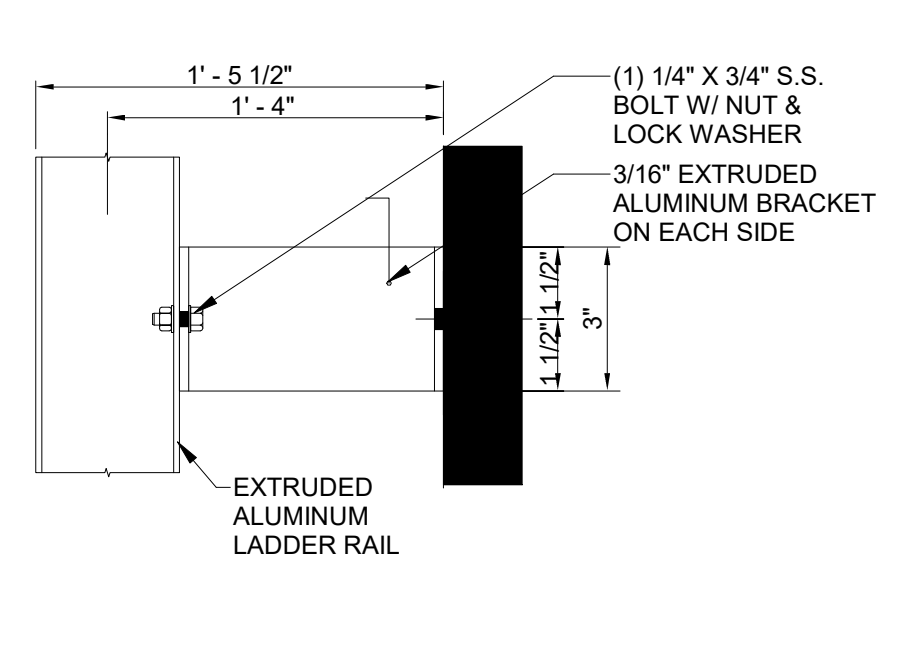
**STORAGE ENCLOSURE WALL SECTIONS 2 OF 2**

REGISTERED ARCHITECT  
 SOWINSKI SULLIVAN  
 STATE OF NEW YORK  
 026049

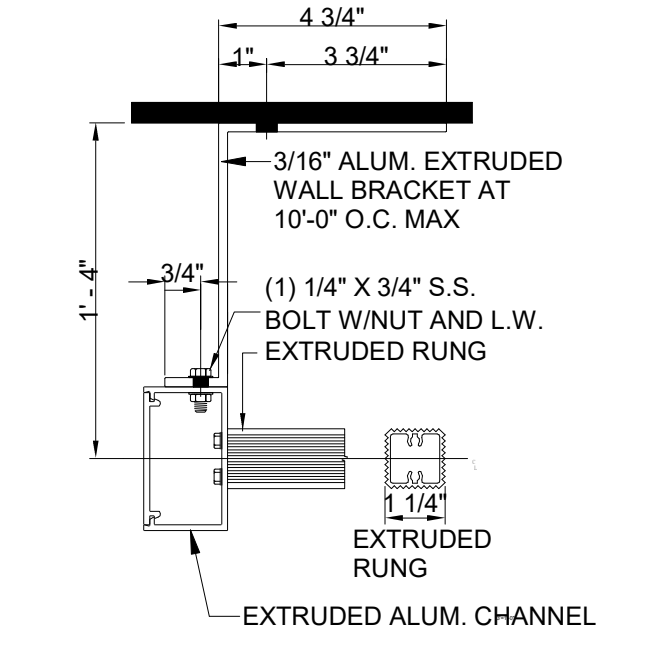
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 PROJECT NO: 105121  
 DRAWING BY: S. WARYAH  
 CHECKED BY: J. STEPHENS  
 DRAWING NO: **A-403.00**  
 CADD FILE NO: Astoria CHA-RE-130-ZZ-M3-A-001.rvt



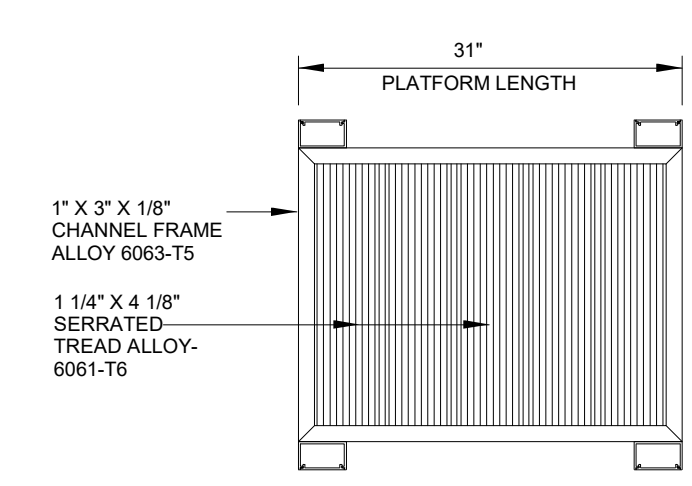
**3 STORAGE LADDER ELEVATION**  
 1" = 1'-0"



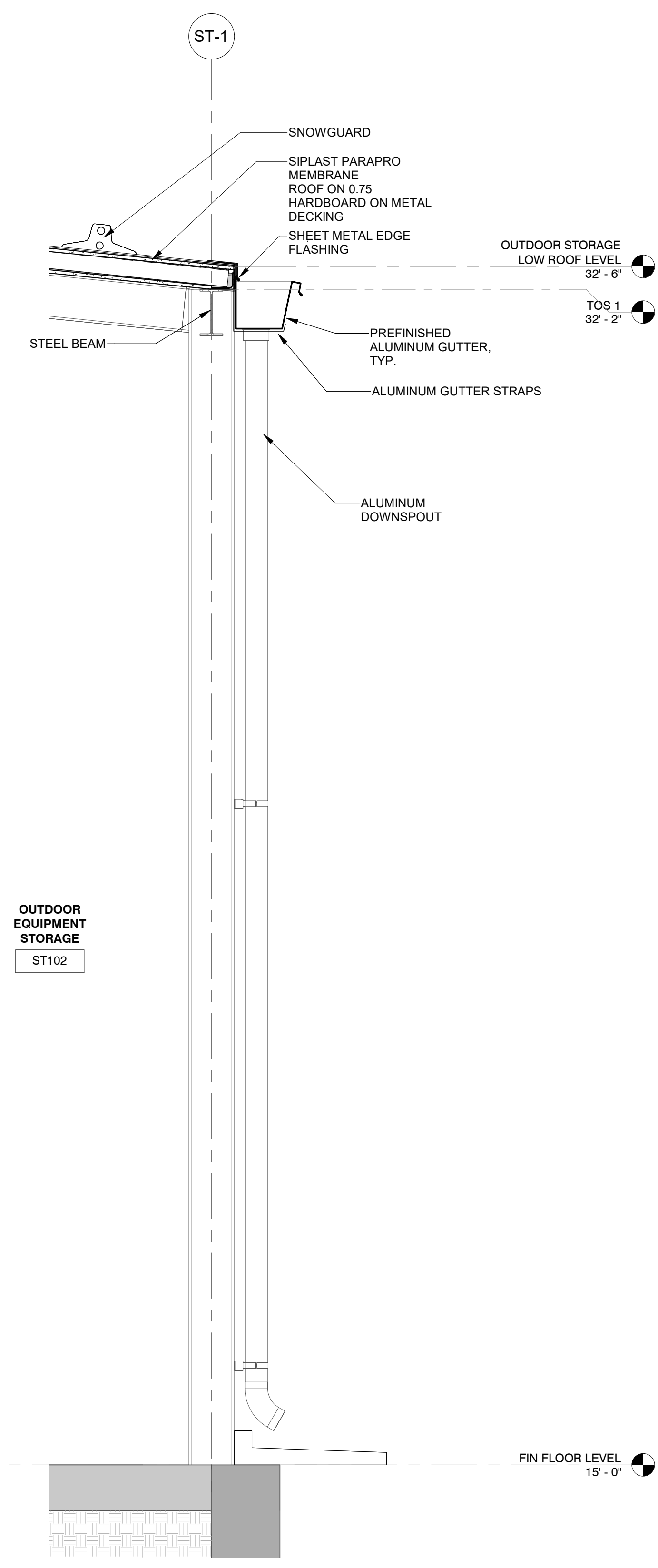
**4 INTERMEDIATE BRACKET - SIDE VIEW**  
 3" = 1'-0"



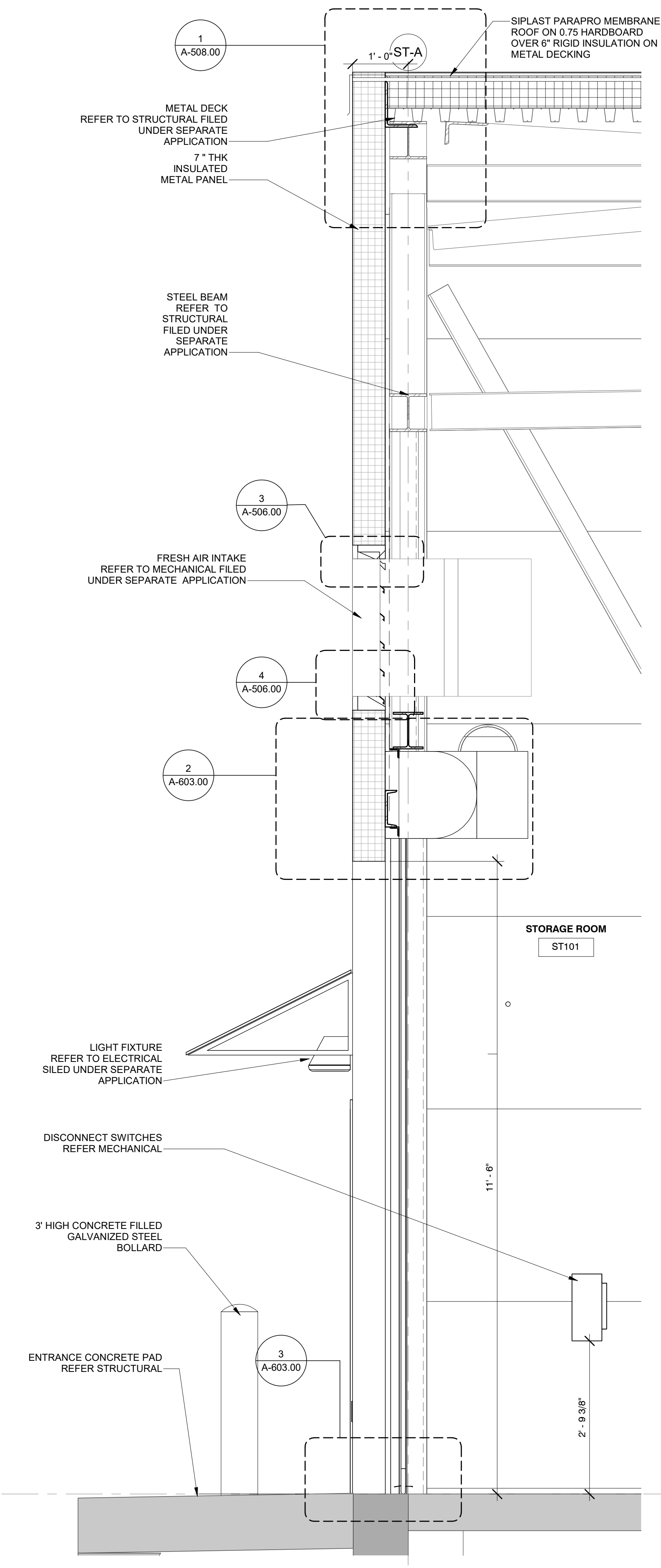
**5 INTERMEDIATE BRACKET - TOP VIEW**  
 3" = 1'-0"



**6 PLATFORM PLAN**  
 1" = 1'-0"



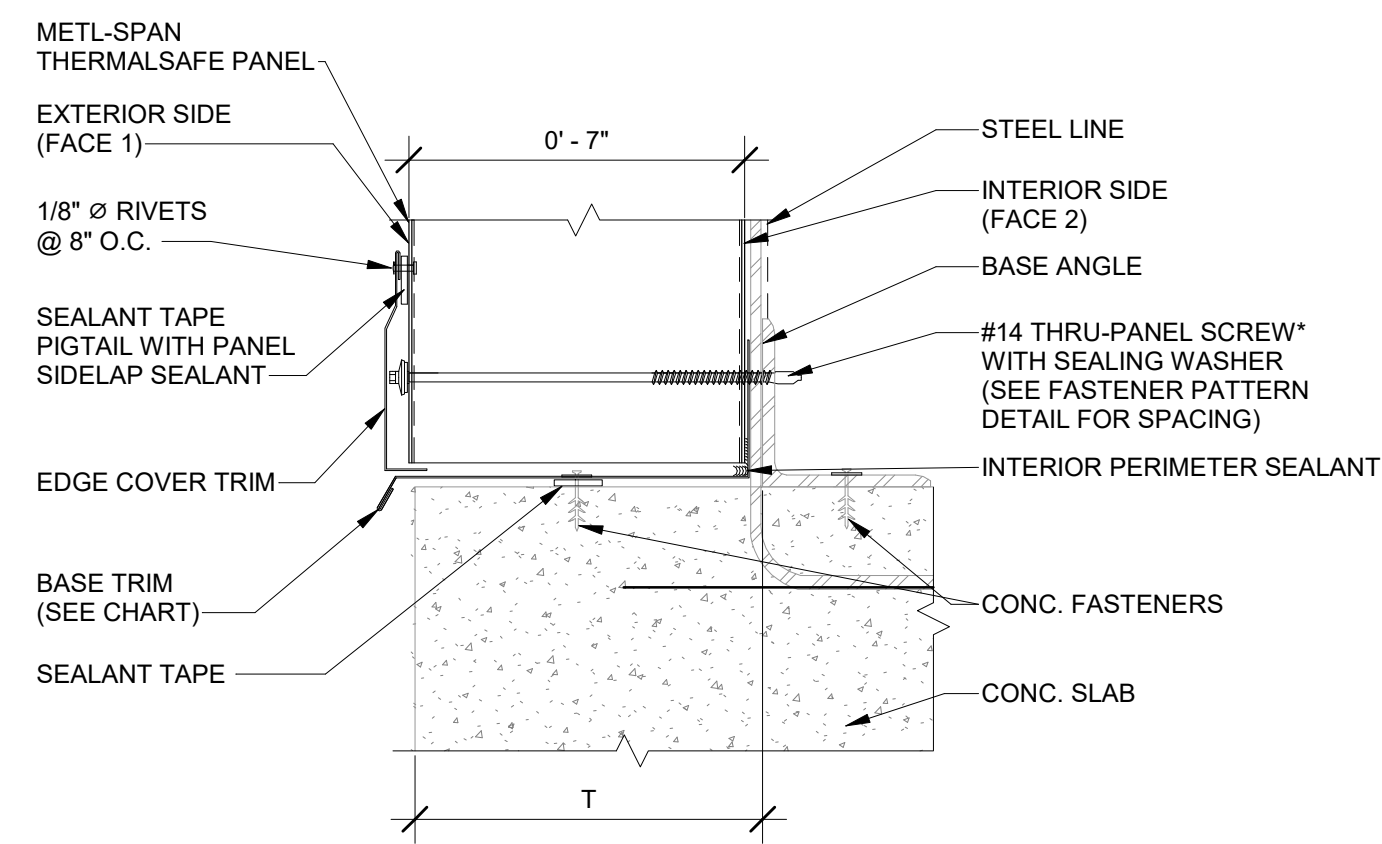
**1 STORAGE ENCLOSURE WALL SECTION 4**  
 3/4" = 1'-0"



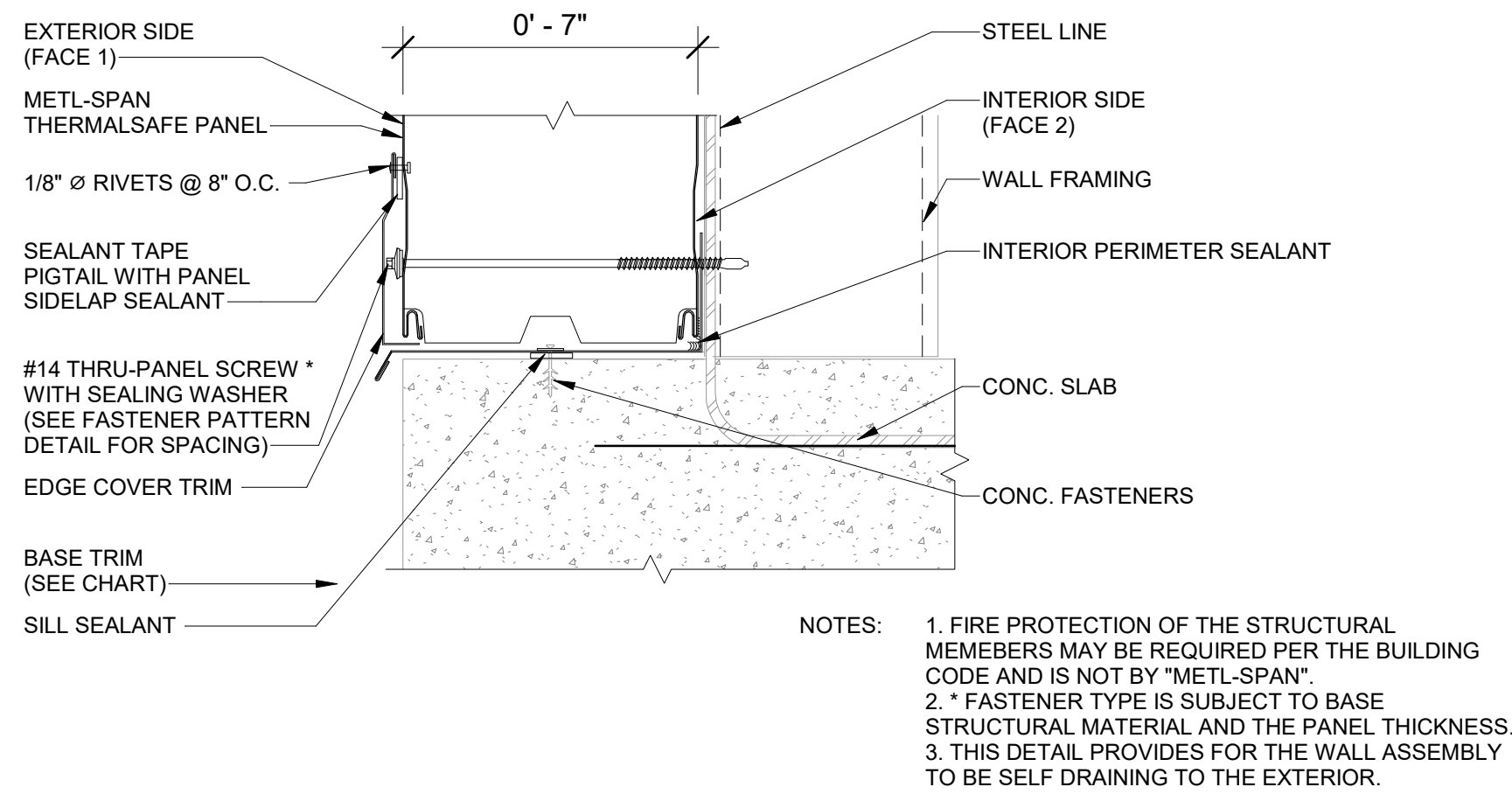
**2 STORAGE ENCLOSURE WALL SECTION 3**  
 3/4" = 1'-0"

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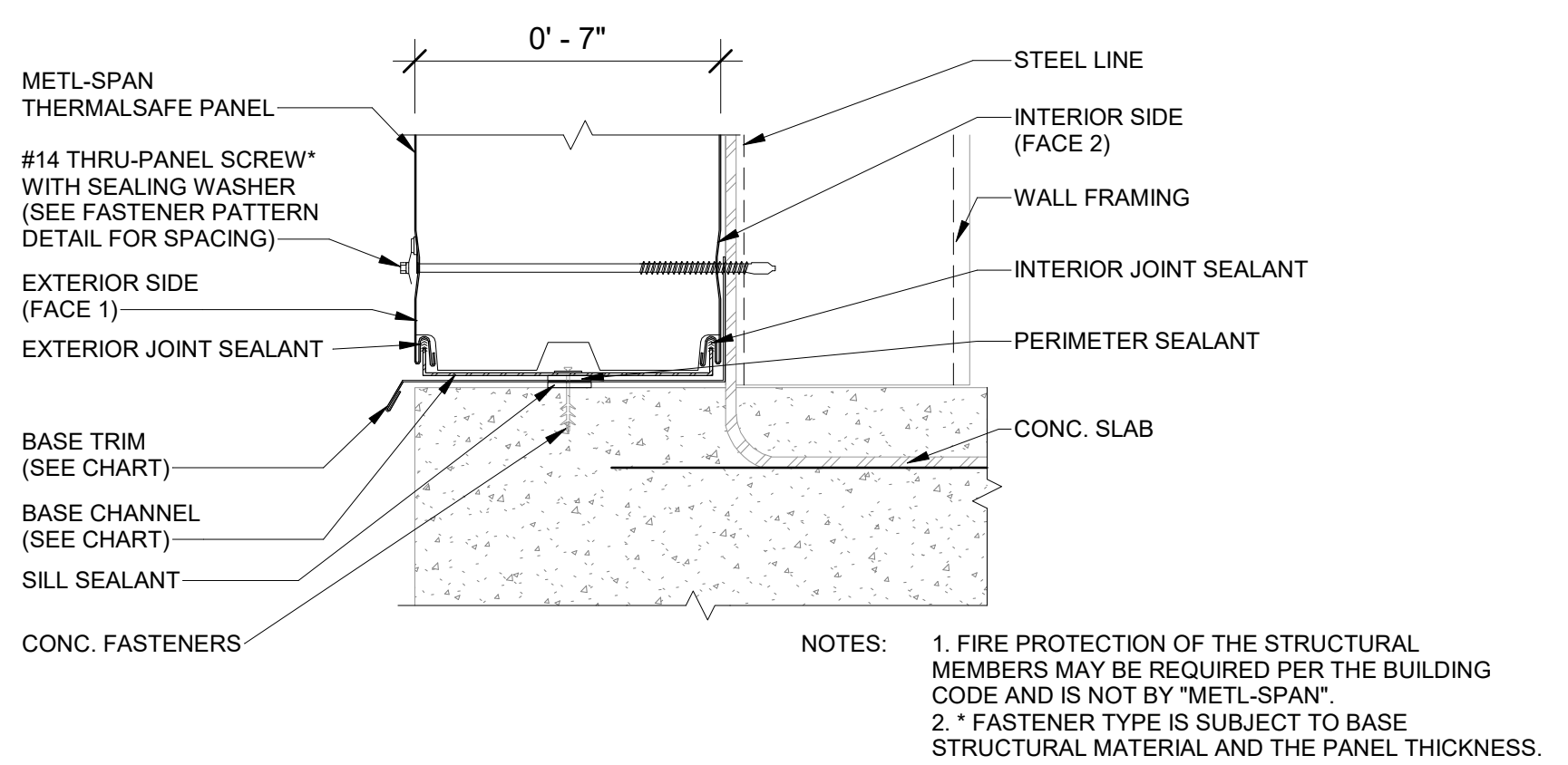
ISSUED FOR PERMIT



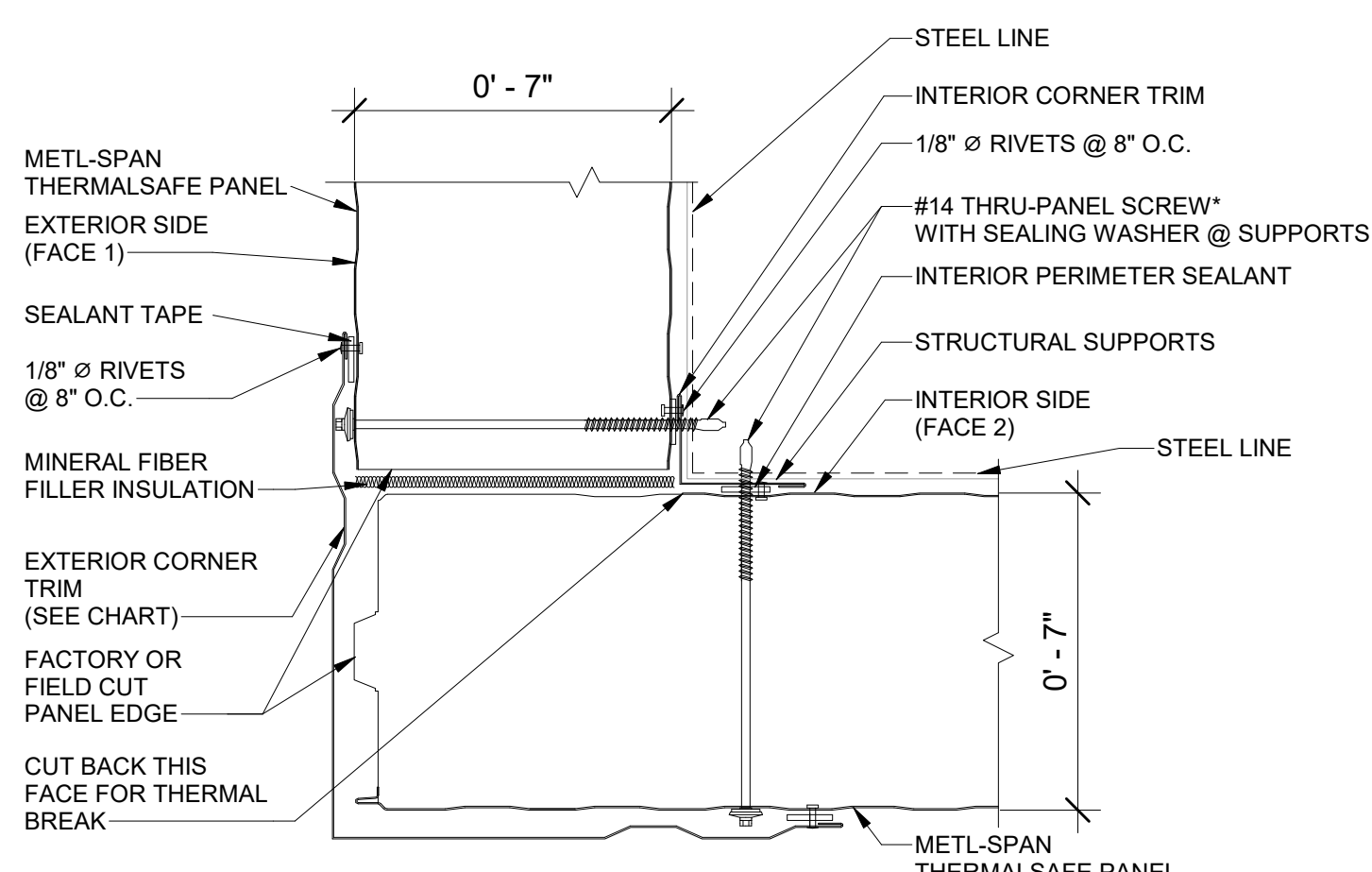
1 BASE DETAIL-BASE ANGLE VERTICAL THERMSAFE PANEL  
A-501.00 3" = 1'-0"



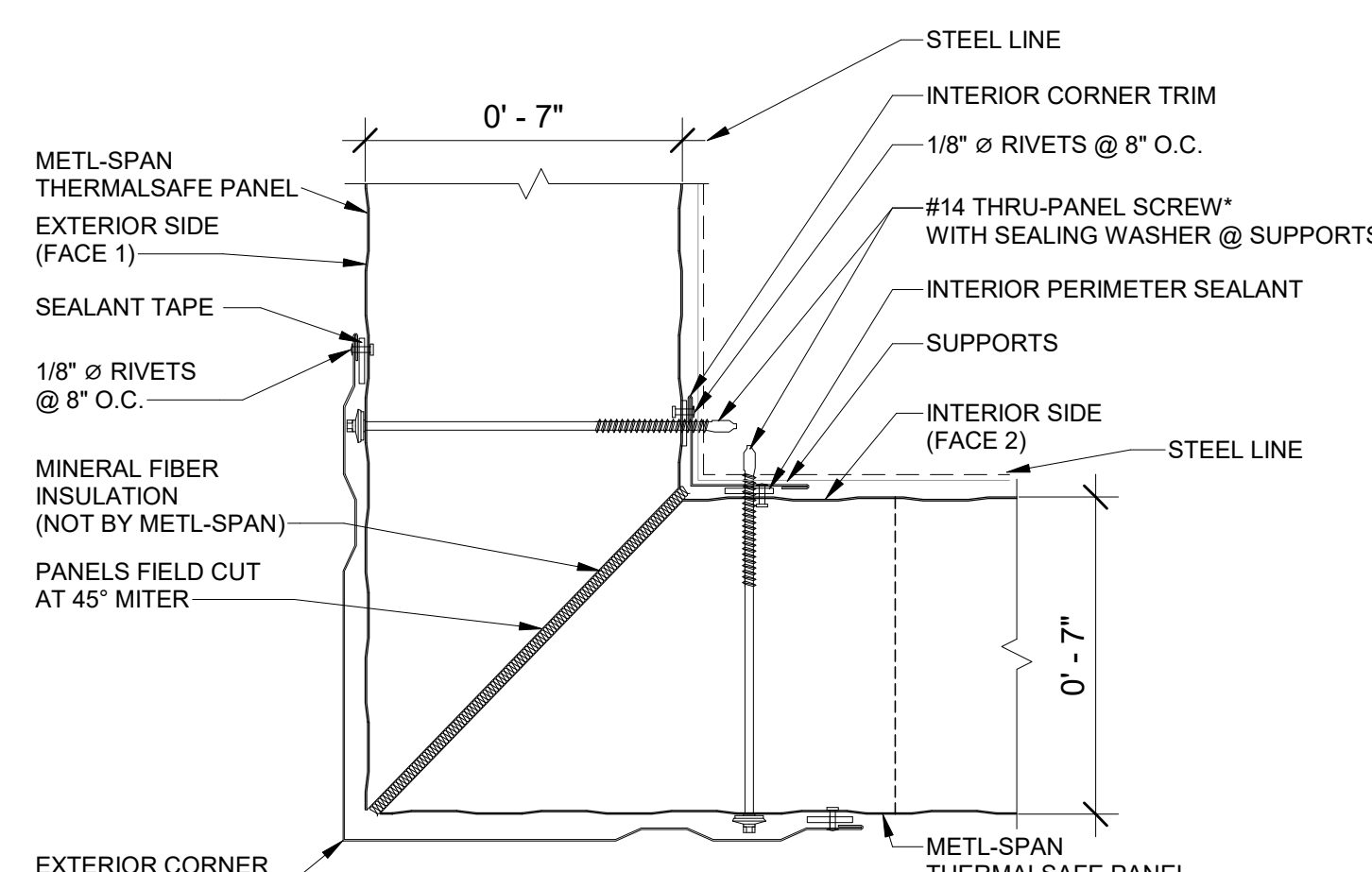
2 BASE DETAIL HORIZONTAL THERMSAFE PANEL  
A-501.00 3" = 1'-0"



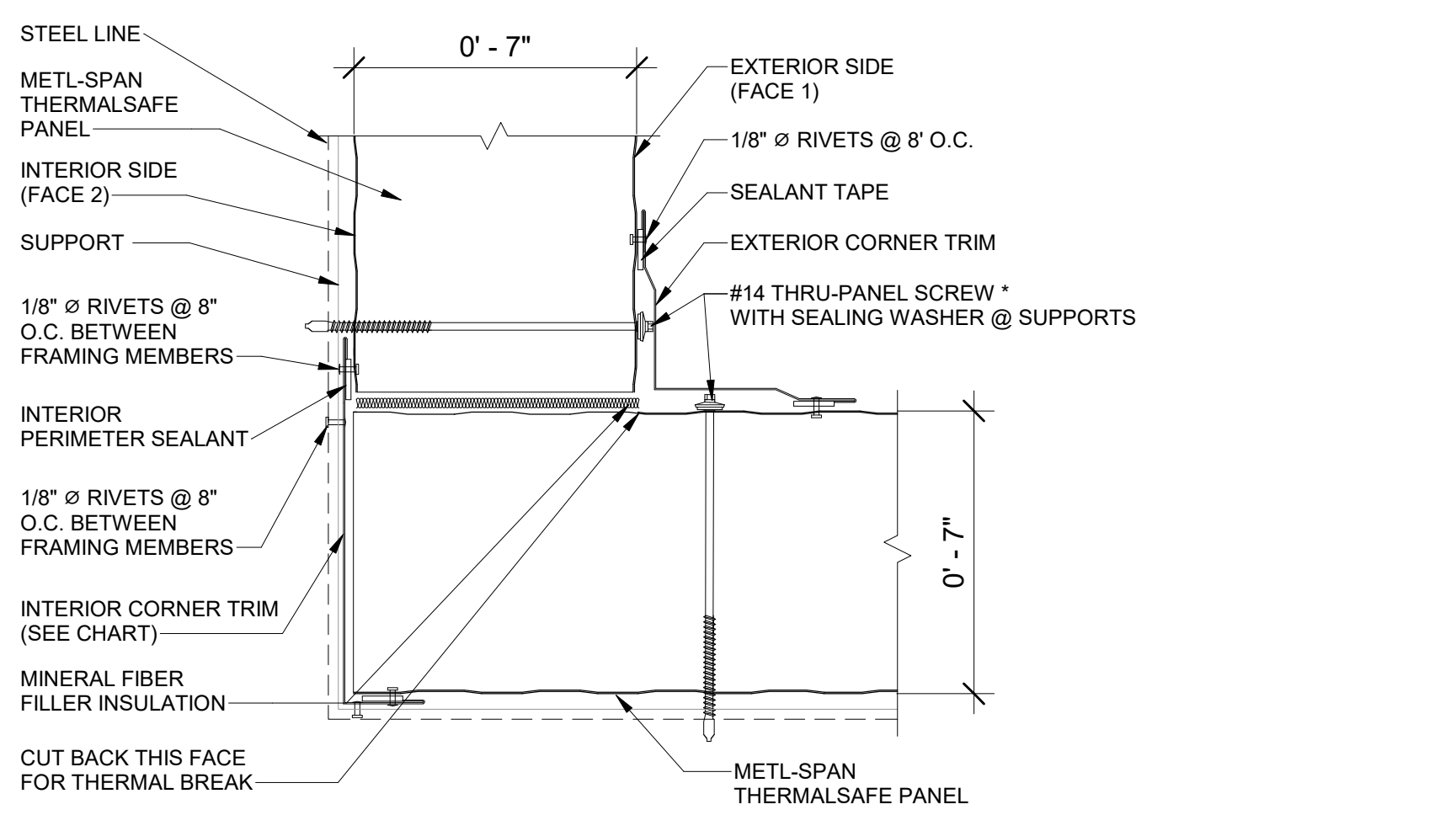
3 BASE DETAIL- BASE CHANNEL HORIZONTAL THERMSAFE PANEL  
A-501.00 3" = 1'-0"



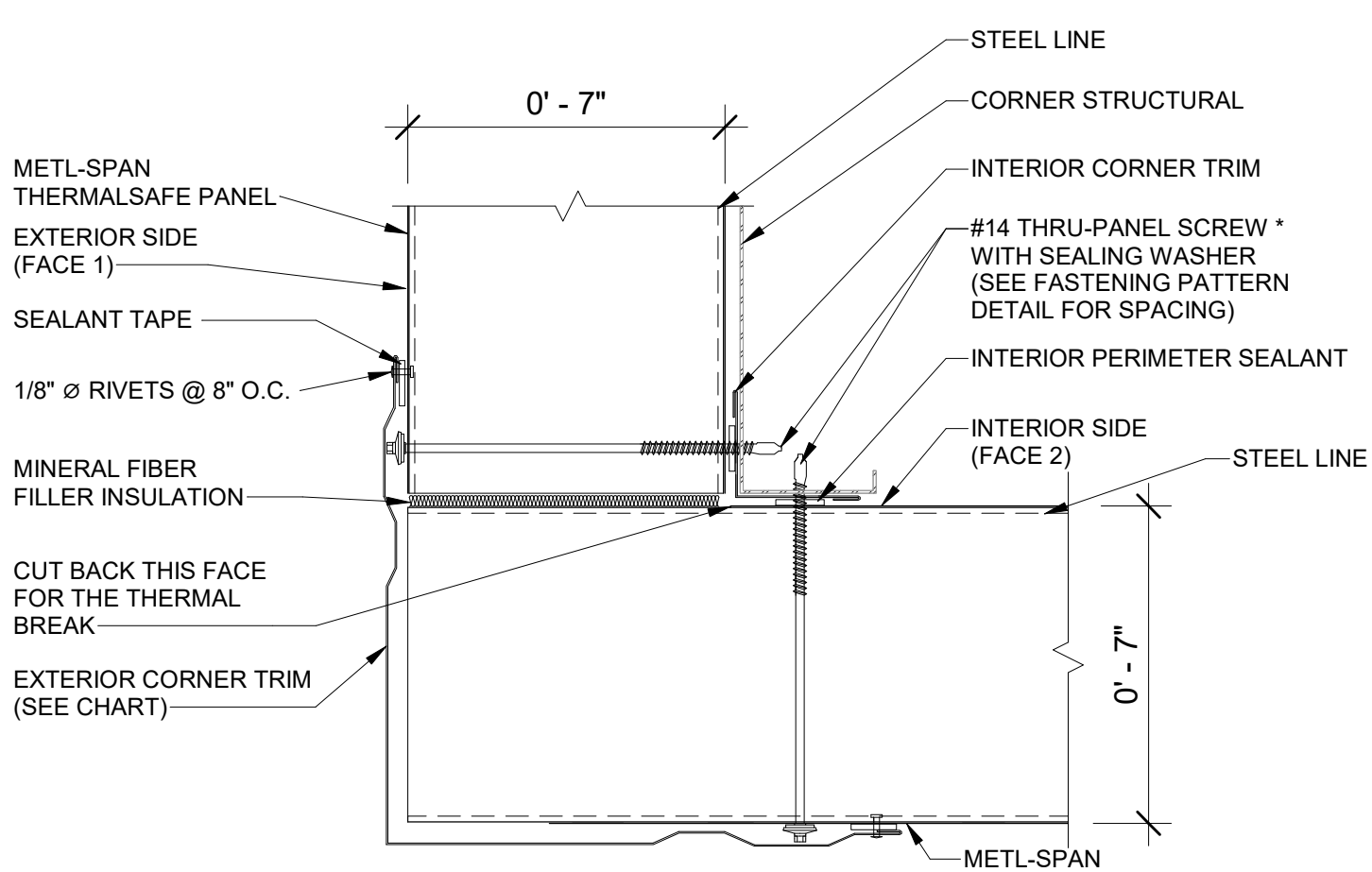
4 OUTSIDE CORNER VERTICAL THERMSAFE PANEL  
A-501.00 3" = 1'-0"



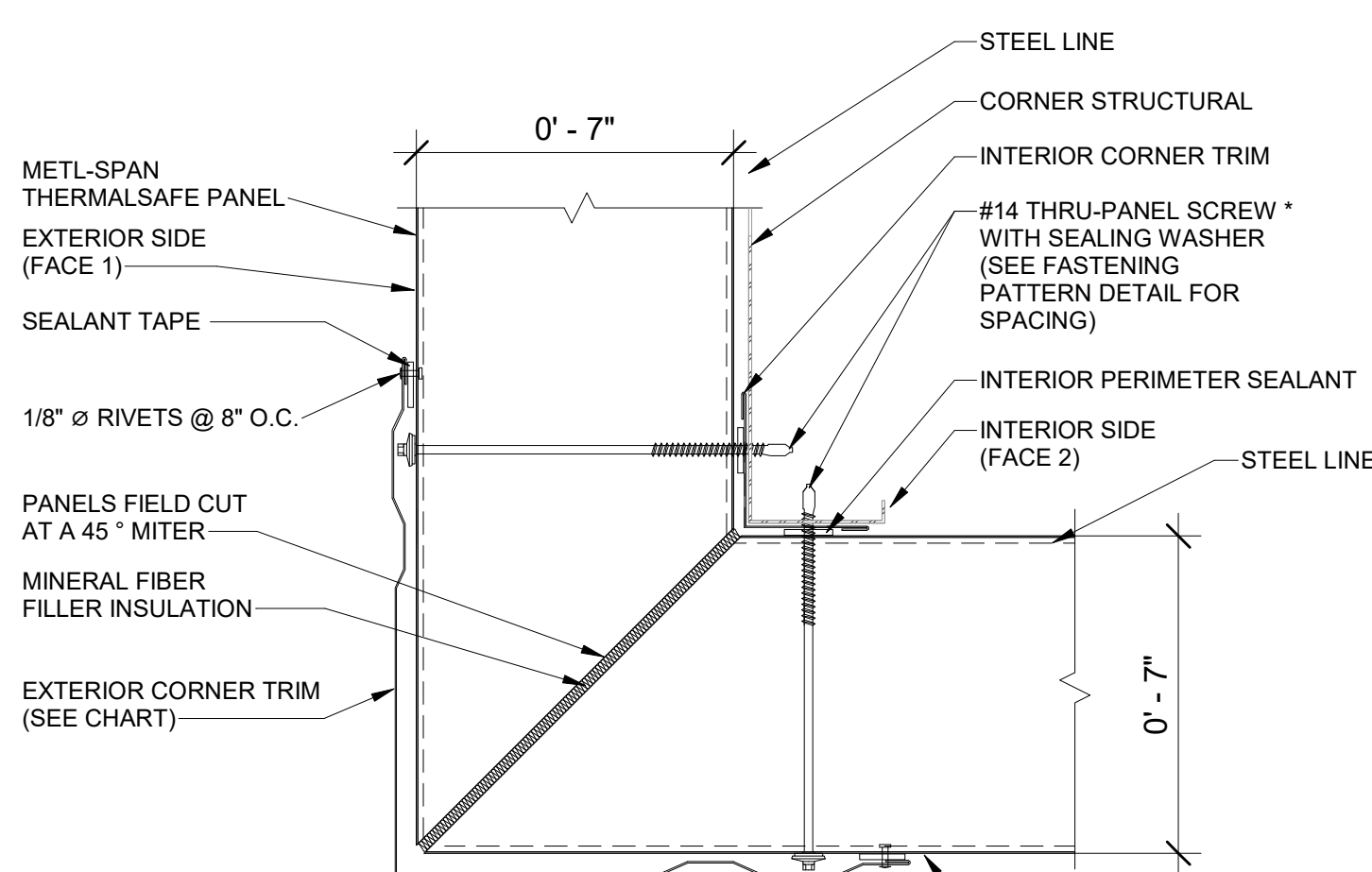
5 OUTSIDE CORNER - MITERED VERTICAL THERMSAFE PANEL  
A-501.00 3" = 1'-0"



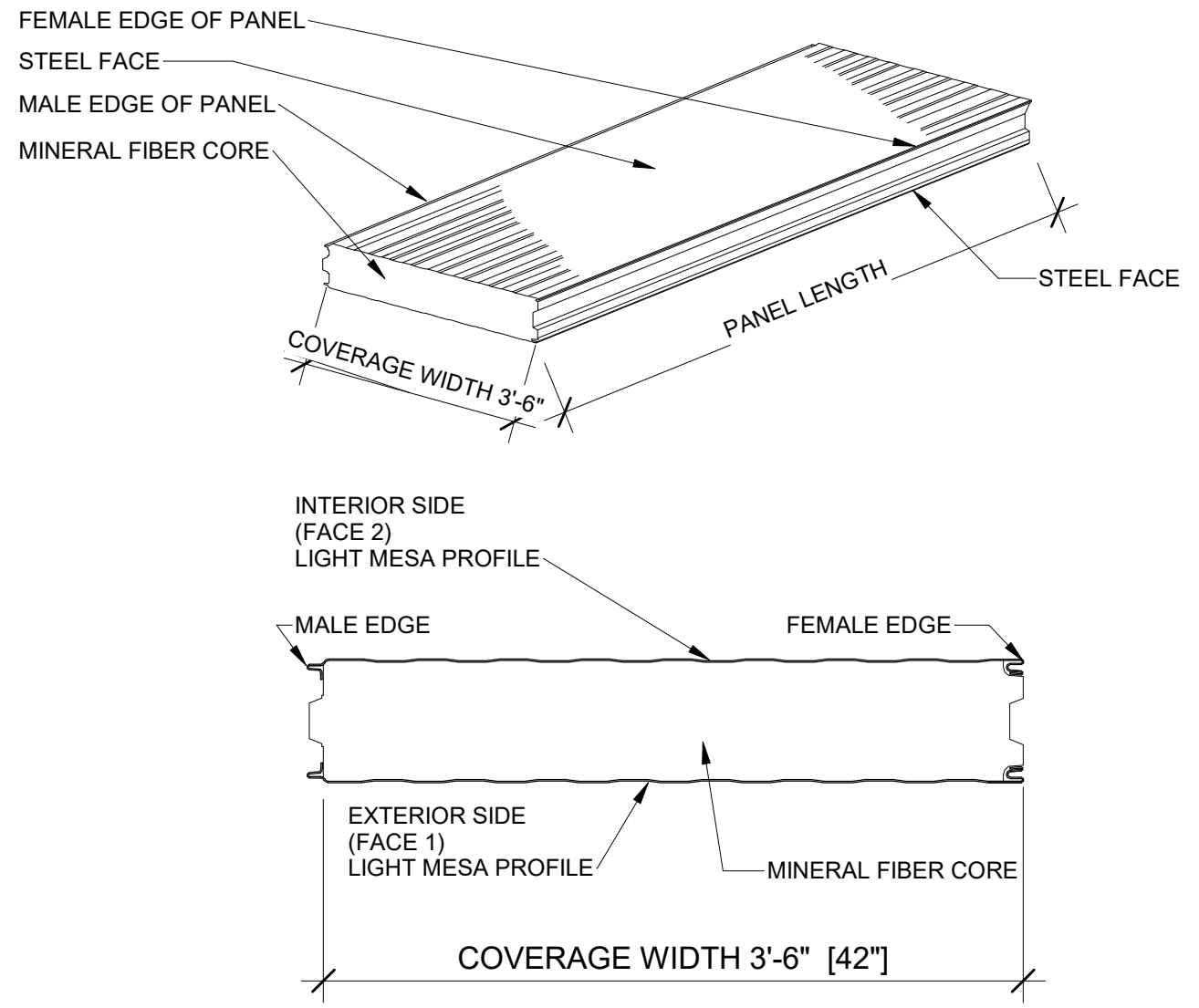
6 INSIDE CORNER VERTICAL THERMSAFE PANEL  
A-501.00 3" = 1'-0"



7 OUTSIDE CORNER HORIZONTAL THERMSAFE PANEL  
A-501.00 3" = 1'-0"



8 OUTSIDE CORNER - MITERED HORIZONTAL THERMSAFE PANEL  
A-501.00 3" = 1'-0"



9 CROSS SECTION THERMSAFE PANEL  
A-501.00 3" = 1'-0"

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A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

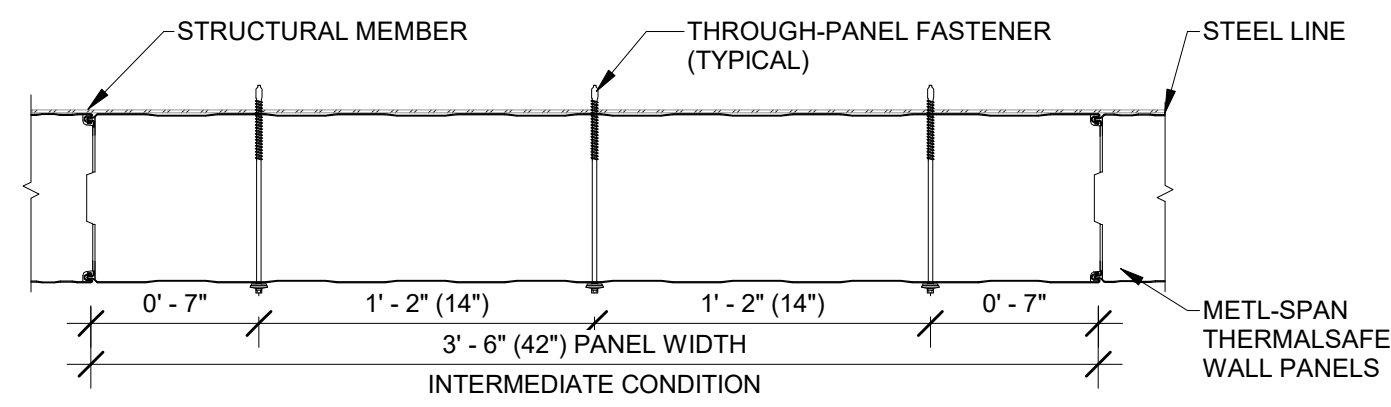
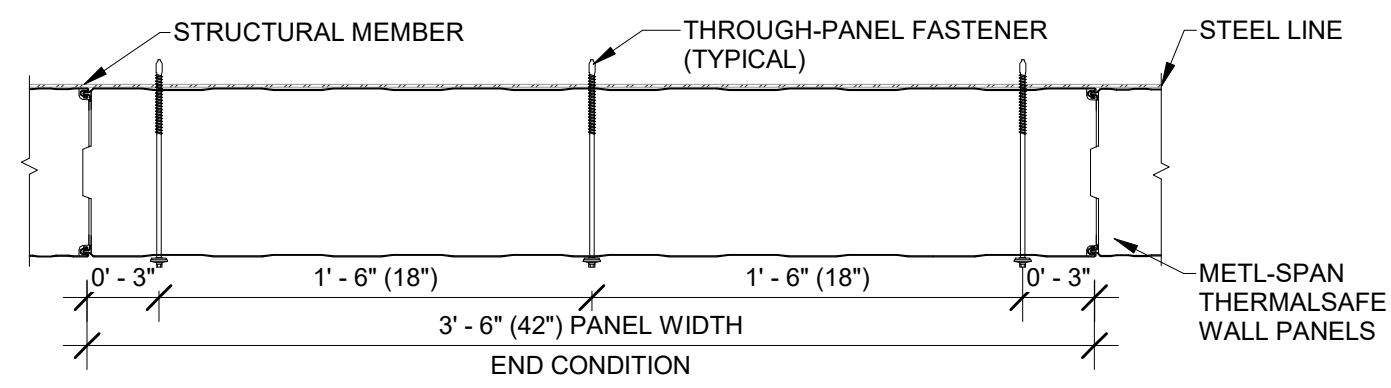
Kiewit 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677  
Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT CHPE Champlain Hudson Power Express Astoria HVDC Converter Station 31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

INSULATED METAL PANEL DETAILS 1 OF 2

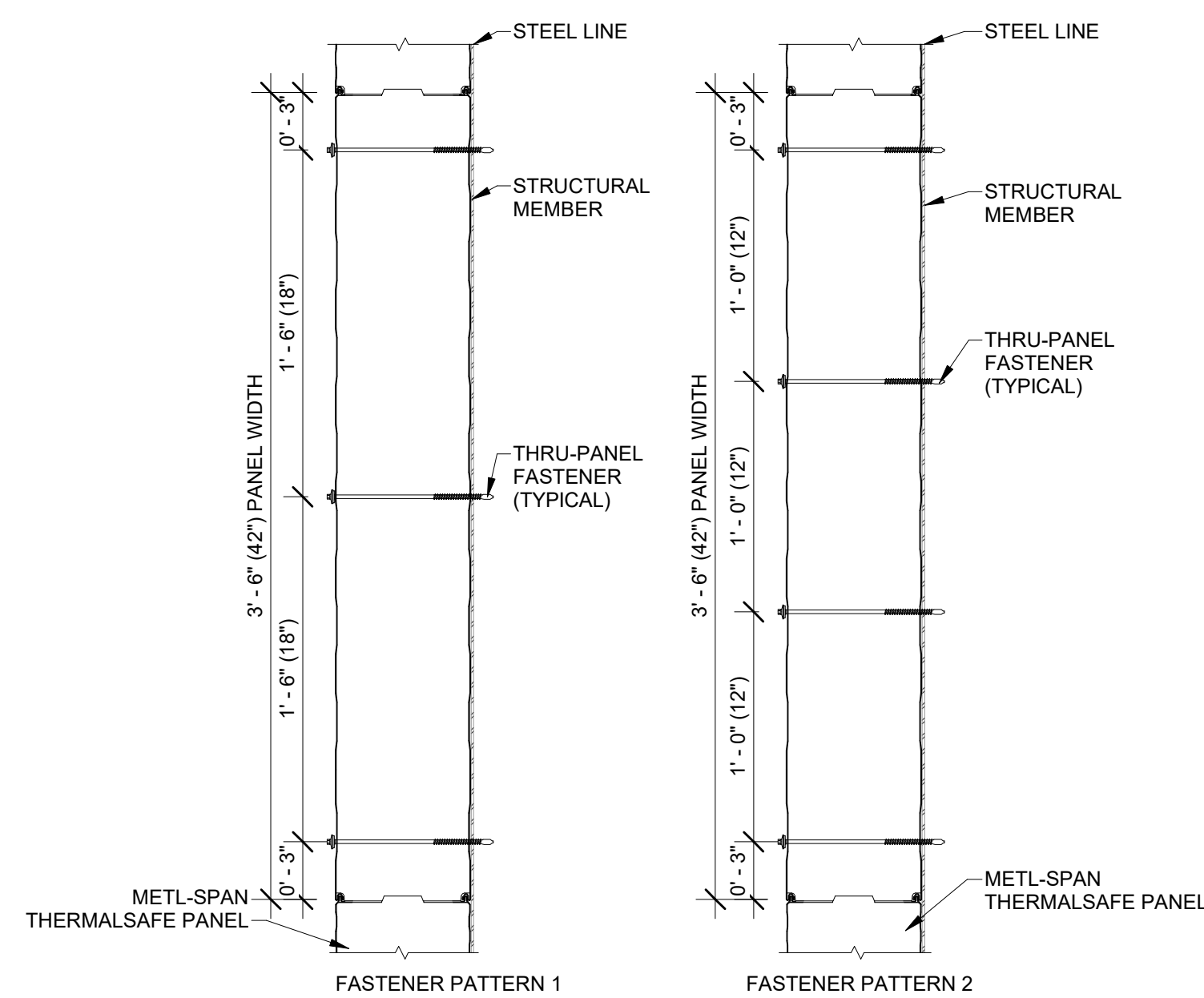
REGISTERED ARCHITECT STATE OF NEW YORK  
DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY S. WARYAH  
CHECKED BY J. STEPHENS  
DRAWING NO A-501.00  
CADD FILE NO Astoria CHA-RE-141-ZZ-M3-A-001.rvt

12/21/2022 5:32:31 PM



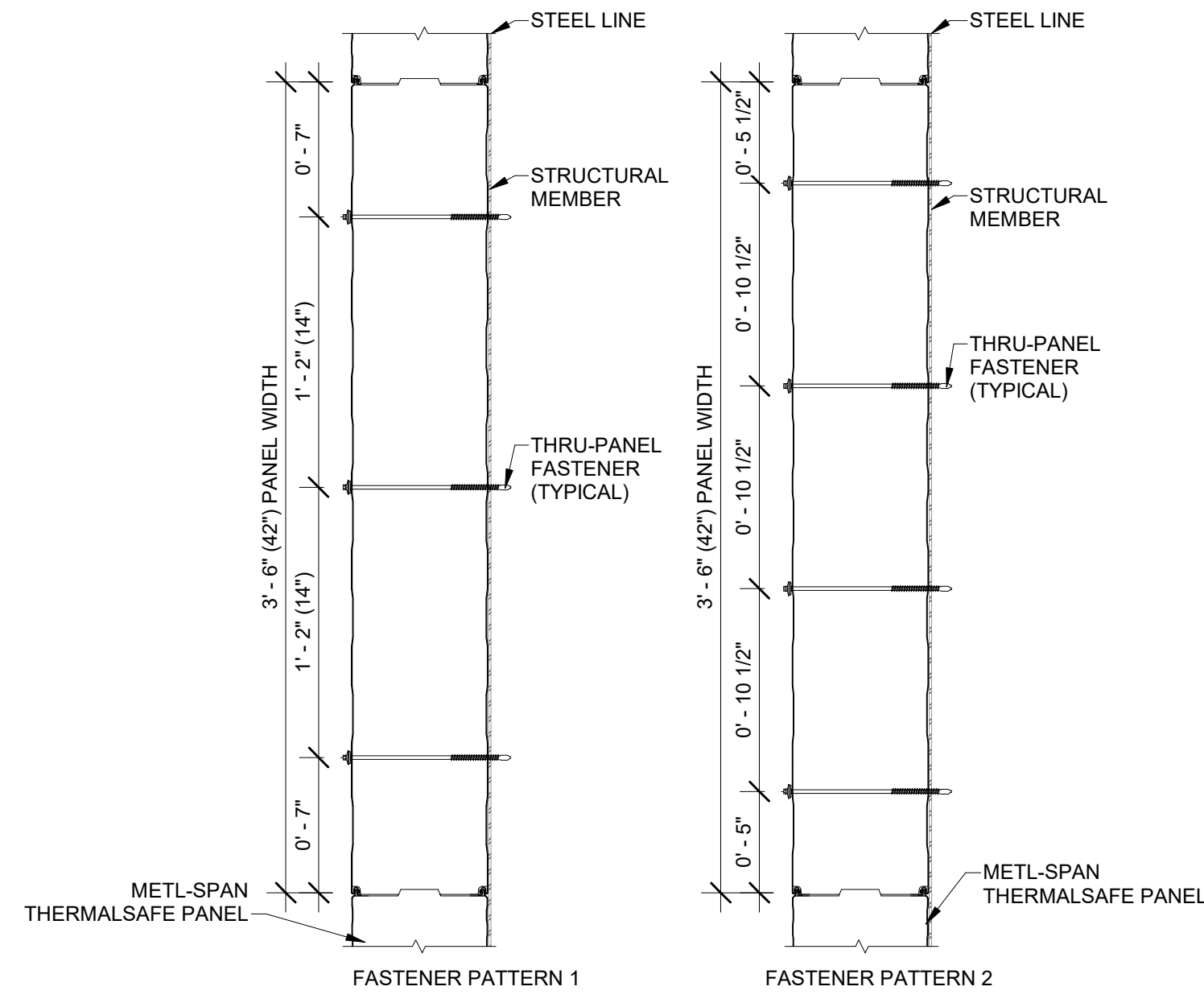
NOTE: FASTENER PATTERN TO BE DETERMINED PER SPECIFIC PROJECT DESIGN REQUIREMENTS.

1 FASTENER PATTERNS TSFP1 VERTICAL THERMALS SAFE PANEL  
A-502.00 1 1/2" = 1'-0"



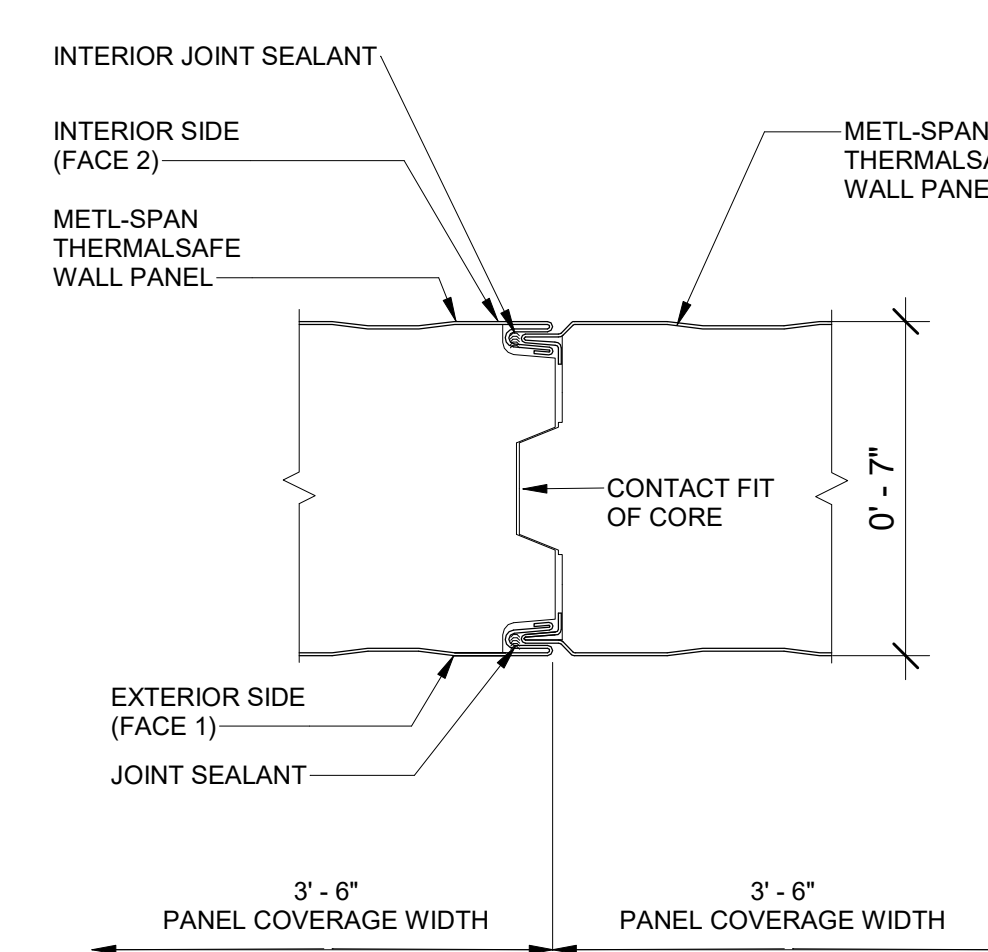
NOTE: FASTENER PATTERN TO BE DETERMINED PER SPECIFIC PROJECT DESIGN REQUIREMENTS.

2 FASTENER PATTERNS AT PANEL ENDS HORIZONTAL THERMALS SAFE PANEL  
A-502.00 1 1/2" = 1'-0"



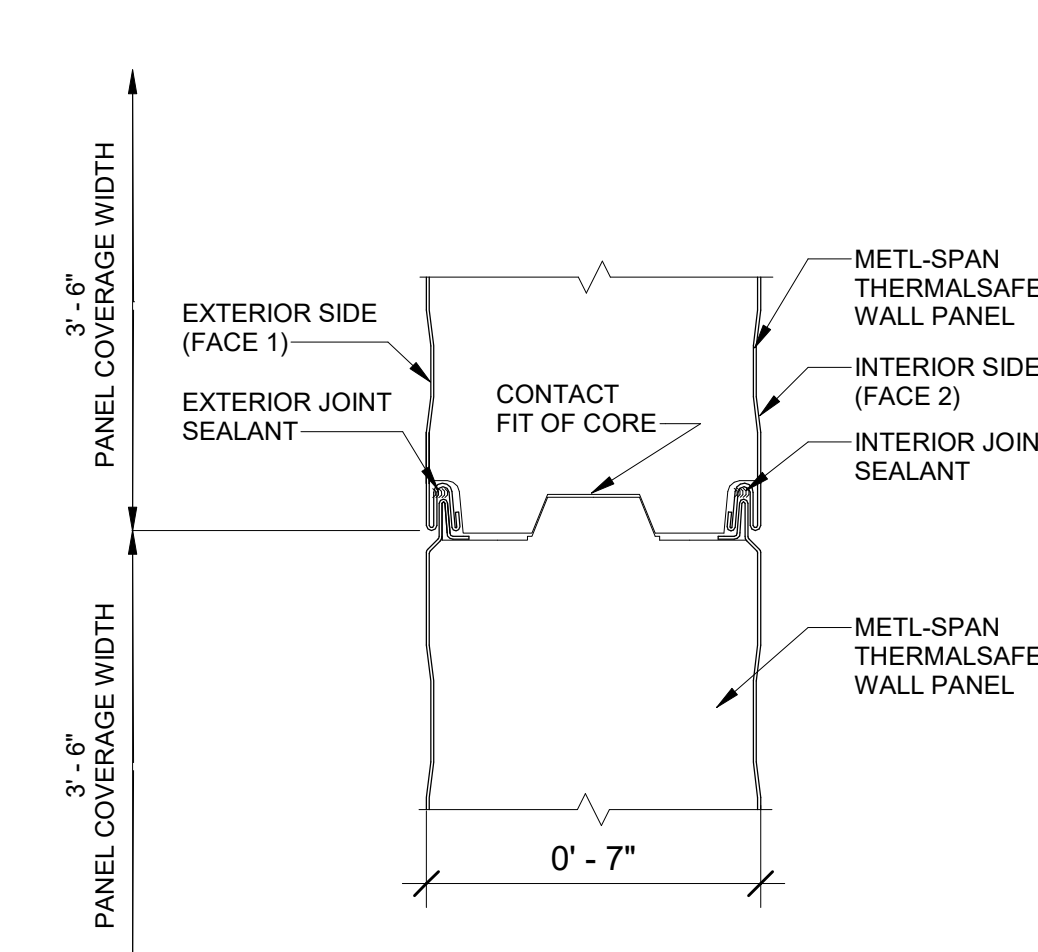
NOTE: FASTENER PATTERN TO BE DETERMINED PER SPECIFIC PROJECT DESIGN REQUIREMENTS.

3 INTERMEDIATE FASTENER PATTERNS FOR HORIZONTAL THERMALS SAFE PANEL  
A-502.00 1 1/2" = 1'-0"



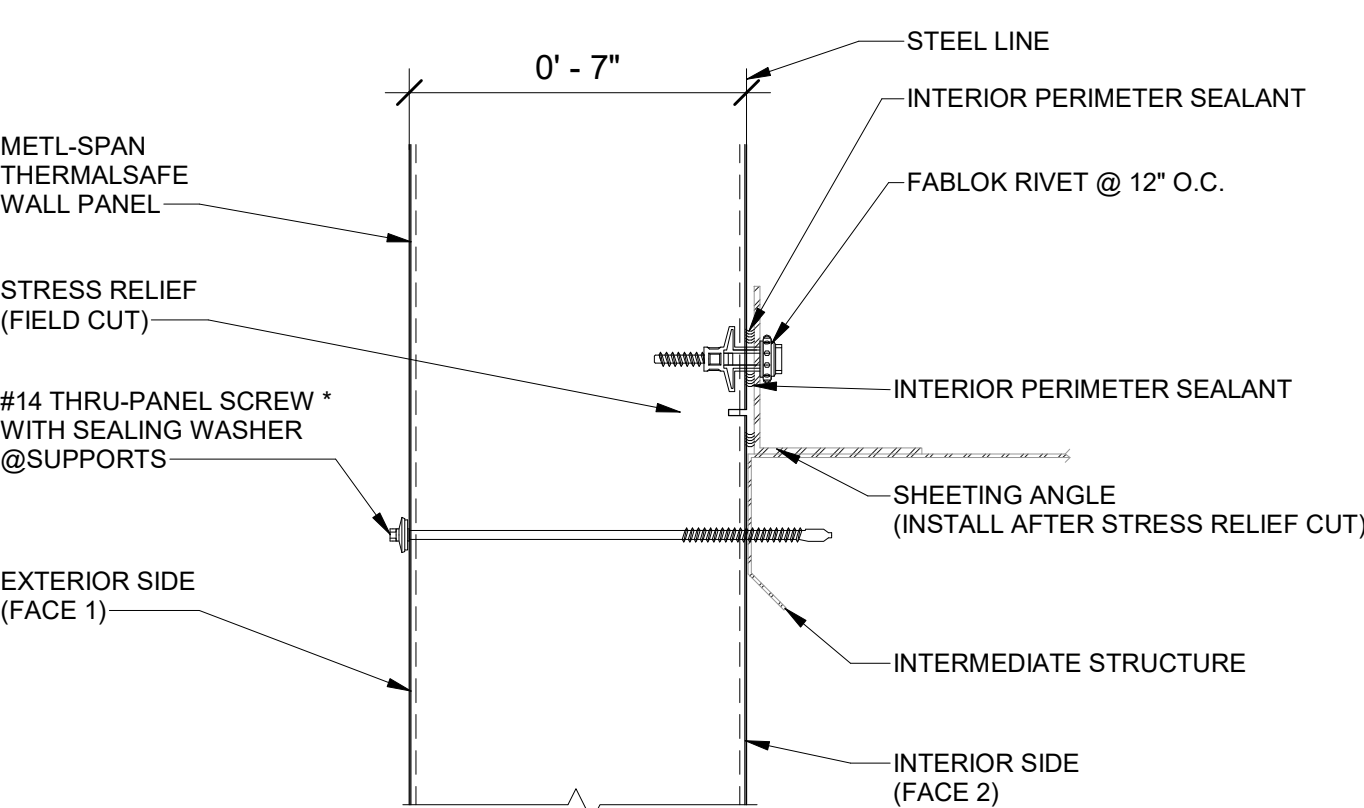
NOTES: 1. IF JOINT SEALANTS ARE REQUIRED, THEY ARE SPECIFIED AS A SILICONE SEALANT IN ORDER TO CONFORM TO THE PANEL'S ASTM E-119 FIRE RESISTANCE RATING. SEALANT IS REQUIRED IN BOTH JOINTS IF THE PANEL IS EXTERIOR AND EXPOSED TO WIND AND DRIVEN RAIN.  
2. IF PANEL IS USED AS AN INTERIOR PARTITION, NO SEALANT IS NEEDED UNLESS A VAPOR BARRIER IS REQUIRED. IF VAPOR BARRIER IS REQUIRED, THE SEALANT SHOULD BE APPLIED ON THE WARMER SIDE OF THE PANEL.

4 VERTICAL JOINT DETAIL THERMALS SAFE PANEL  
A-502.00 3" = 1'-0"



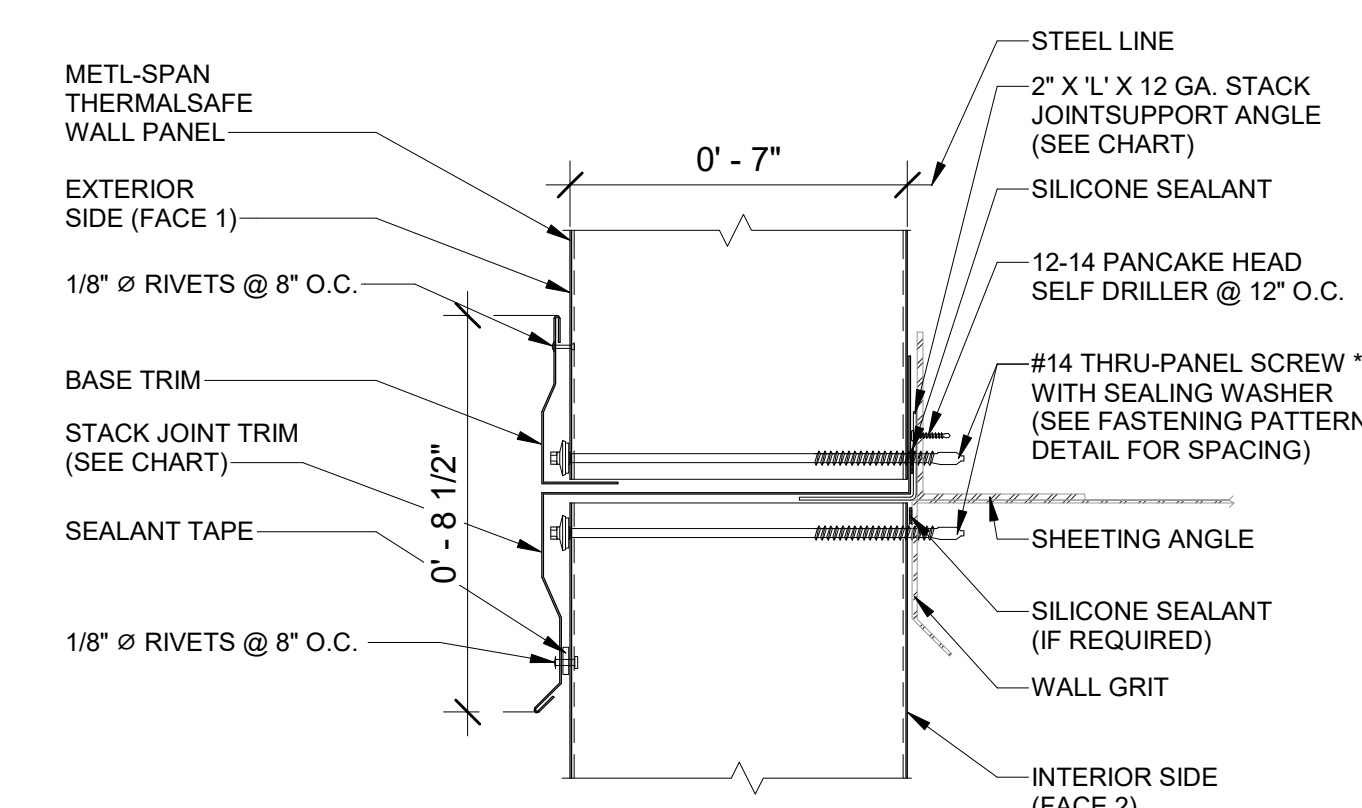
NOTES: 1. IF JOINT SEALANTS ARE REQUIRED, THEY ARE SPECIFIED AS A SILICONE SEALANT IN ORDER TO CONFORM TO THE PANEL'S ASTM E-119 FIRE RESISTANCE RATING. SEALANT IS REQUIRED IN BOTH JOINTS IF THE PANEL IS EXTERIOR AND EXPOSED TO WIND AND DRIVEN RAIN.  
2. IF PANEL IS USED AS AN INTERIOR PARTITION, NO SEALANT IS NEEDED UNLESS A VAPOR BARRIER IS REQUIRED. IF VAPOR BARRIER IS REQUIRED, THE SEALANT SHOULD BE APPLIED ON THE WARMER SIDE OF THE PANEL.

5 HORIZONTAL JOINT DETAIL THERMALS SAFE PANEL  
A-502.00 3" = 1'-0"



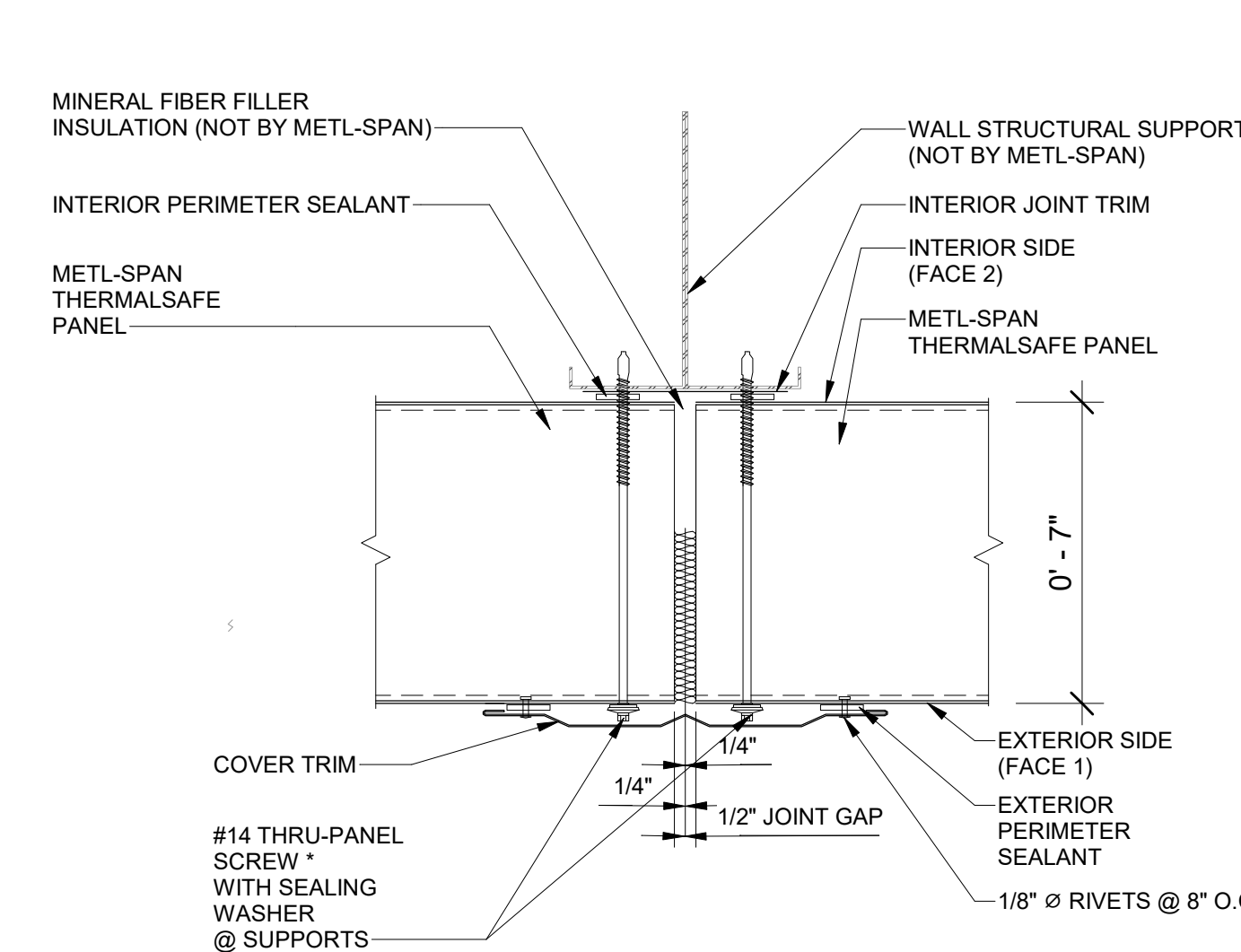
NOTES: 1. THERMAL STRESS CUT ON THE INTERIOR FACE MAY BE REQUIRED FOR SOME APPLICATIONS. SUBJECT TO THE PROJECT'S DESIGN AND OPERATING REQUIREMENTS.  
2. FASTENER TYPE IS SUBJECT TO THE INTERMEDIATE STRUCTURAL MATERIAL AND THE PANEL THICKNESS.  
3. FIRE PROTECTION OF THE STRUCTURAL MEMBERS MAY BE REQUIRED PER THE BUILDING CODE AND IS NOT BY METL-SPAN.

6 INTERMEDIATE FASTENER ATTACHMENT THERMAL STRESS RELIEF VERTICAL THERMALS SAFE PANEL  
A-502.00 3" = 1'-0"



NOTES: 1. FIRE PROTECTION OF THE CORNER STRUCTURAL MAY BE REQUIRED PER THE BUILDING CODE AND IS NOT BY METL-SPAN.  
2. TO CONFORM TO THE REQUIREMENTS OF THE ASTM E-119 FIRE CLASSIFICATION MARKING FOR SURFACE BURNING CHARACTERISTICS OR FIRE RESISTANCE.  
3. FASTENER TYPE IS SUBJECT TO THE SUPPORT STRUCTURAL MATERIAL AND THE PANEL THICKNESS.

7 VERTICAL STACK JOINT THERMALS SAFE PANEL  
A-502.00 3" = 1'-0"



8 VERTICAL JOINT DETAIL HORIZONTAL THERMALS SAFE PANEL  
A-502.00 3" = 1'-0"

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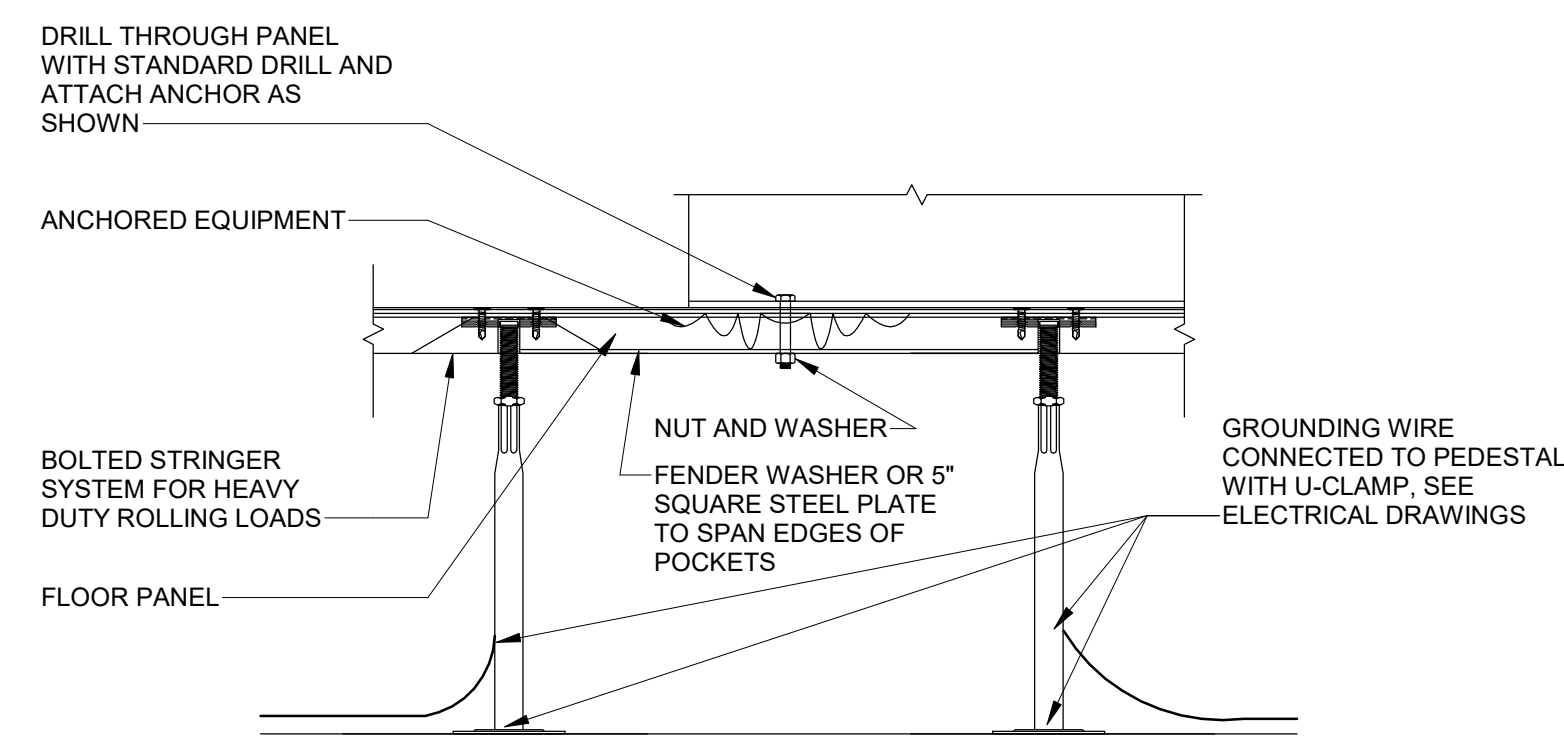
Kiewit 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677  
Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT CHPE Champlain Hudson Power Express Astoria HVDC Converter Station 31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

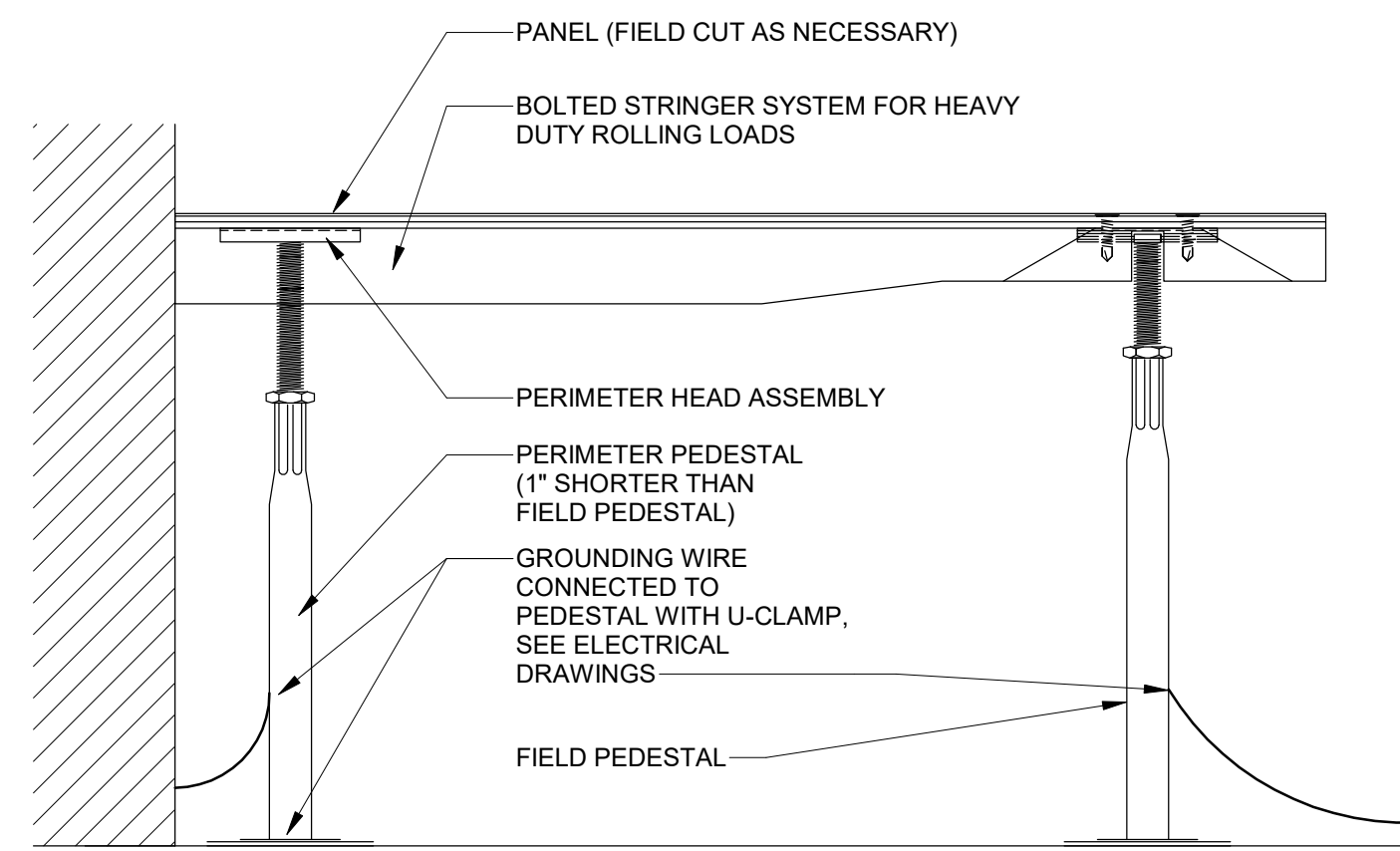
INSULATED METAL PANEL DETAILS 2 OF 2

REGISTERED ARCHITECT SOWINSKI SULLIVAN ARCHITECTURE + ENGINEERING STATE OF NEW YORK 026049  
DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: A-502.00  
CADD FILE NO: Astoria HVDC - CHPE  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt

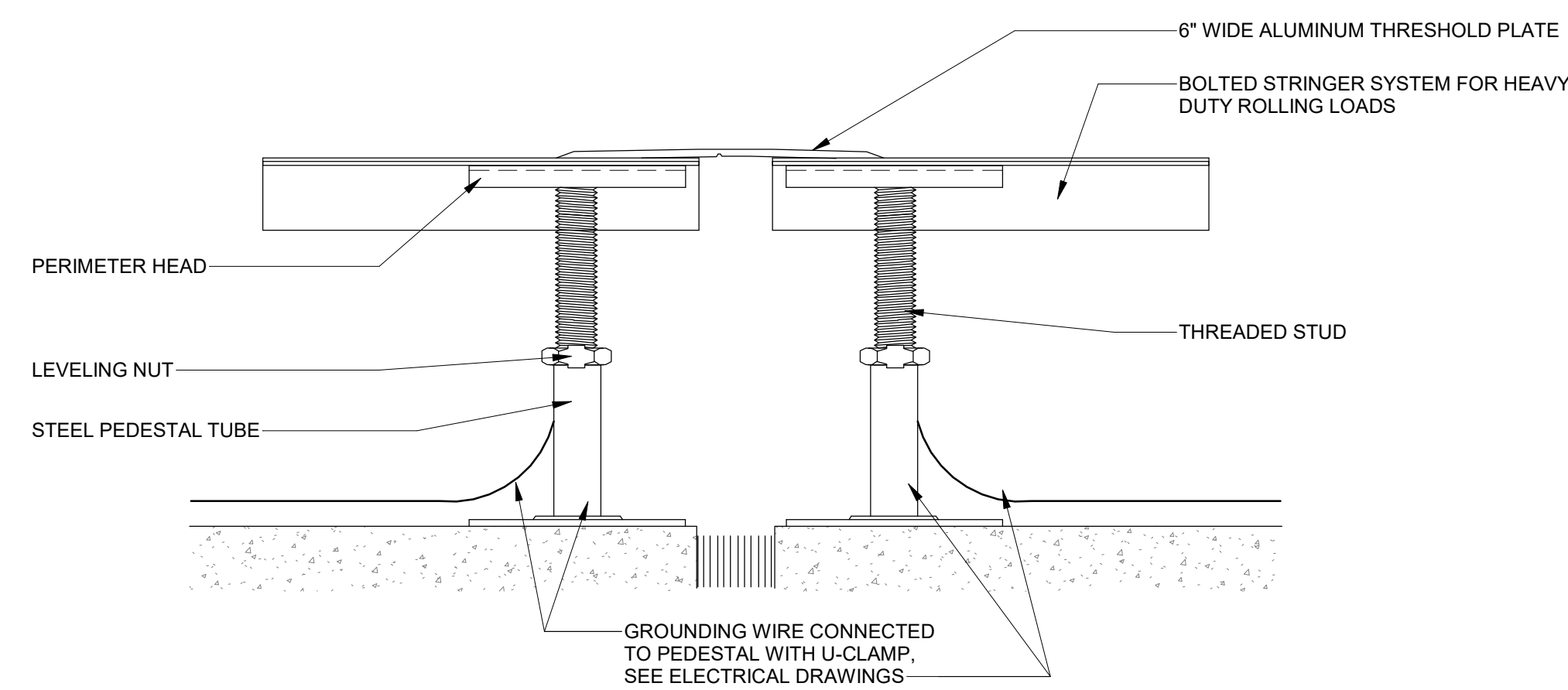
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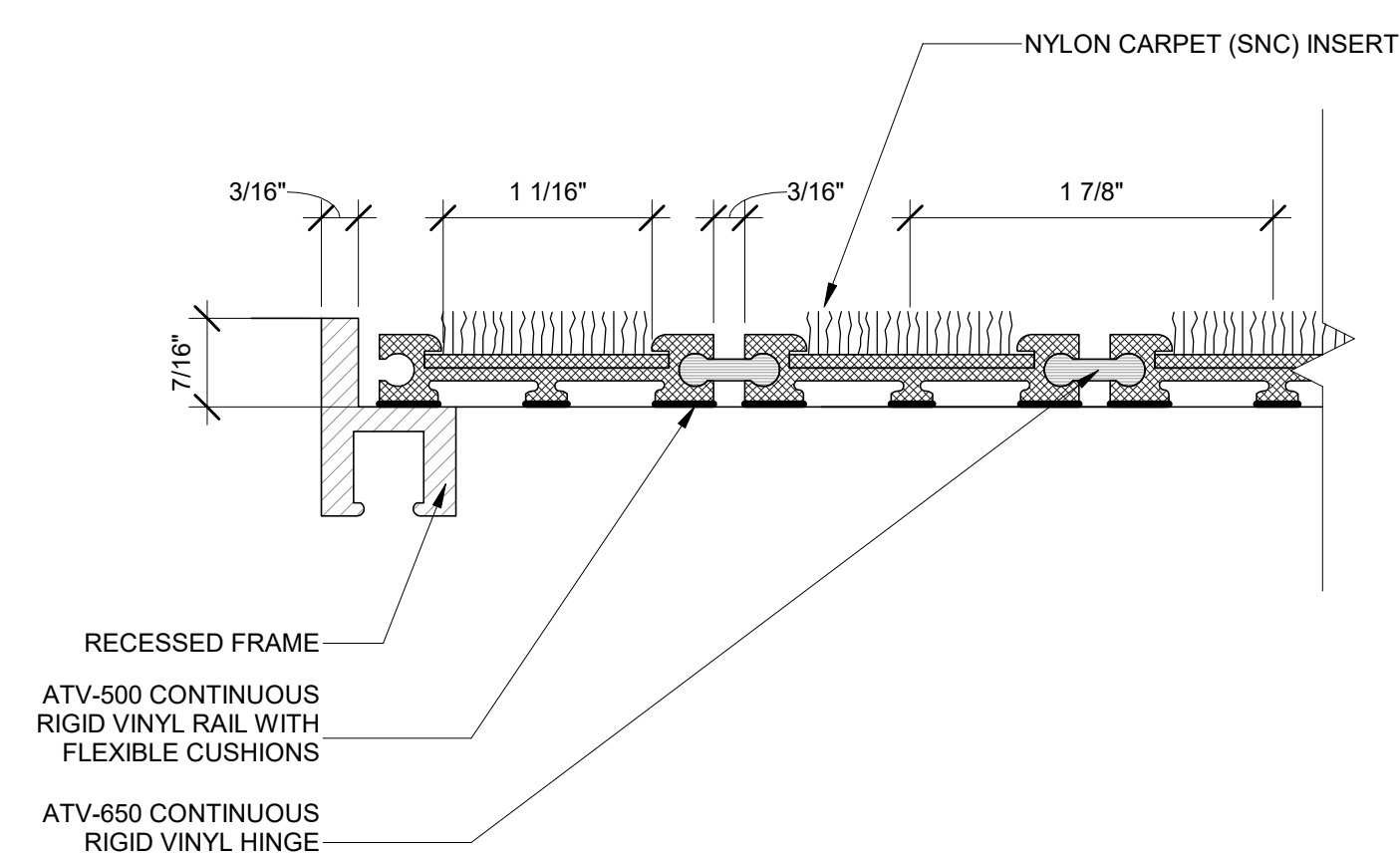
1 RAISED FLOOR ASSEMBLY  
A-503.00 1/2" = 1'-0"



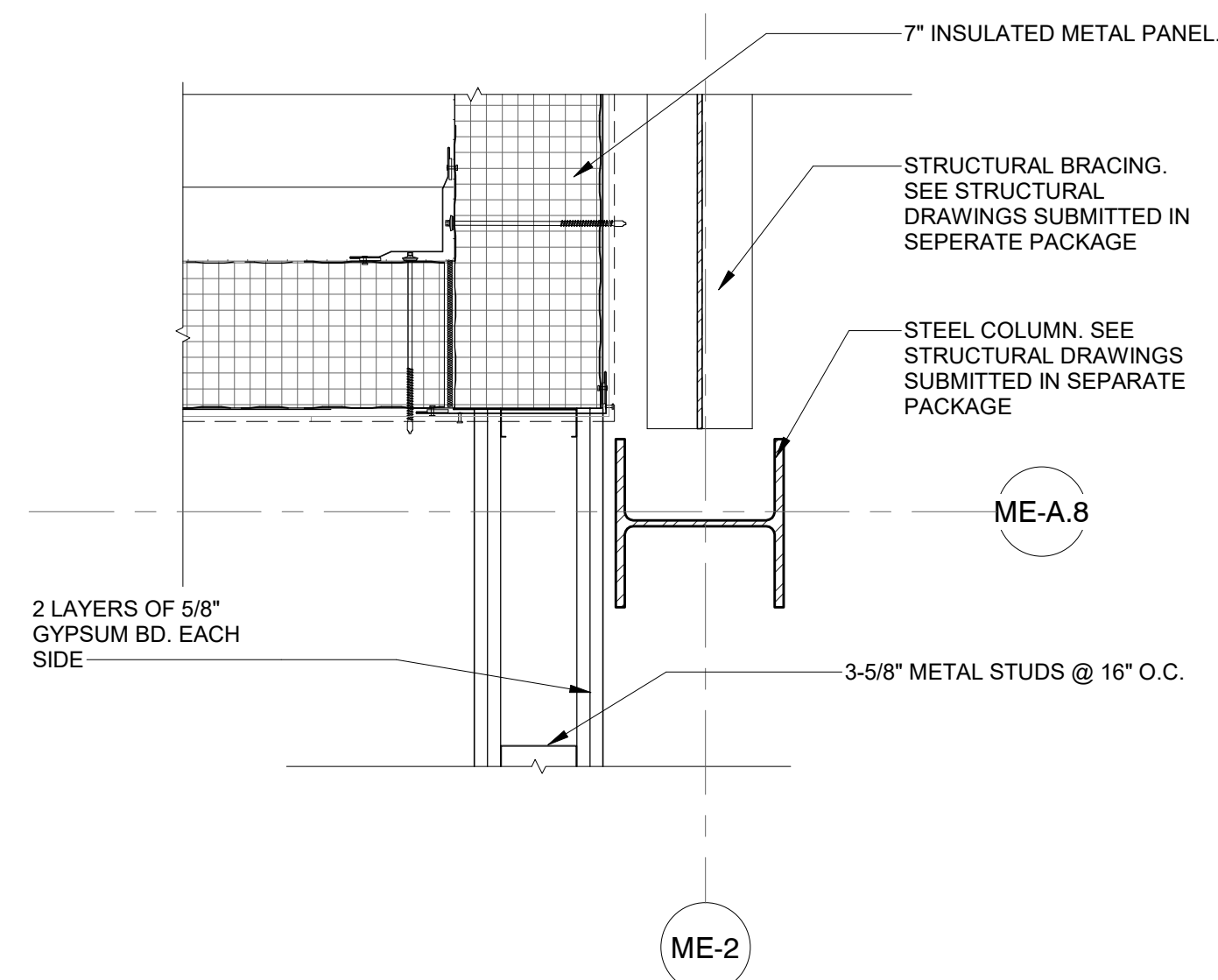
2 RAISED FLOOR SECTION DETAIL  
A-503.00 3/4" = 1'-0"



3 UNDERSTRUCTURE-EXPANSION JOINT DETAIL  
A-503.00 1 1/2" = 1'-0"



4 ENTRANCE WALK OFF MAT  
A-503.00 12" = 1'-0"



5 PLAN DETAIL  
A-503.00 1 1/2" = 1'-0"

**Engineering and Land Surveying, P.C.**  
370 7th Avenue  
SUITE 1604  
New York, NY 10001

**SOWINSKI SULLIVAN**  
ARCHITECTURE+ENGINEERING  
25 Mohawk Avenue  
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REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

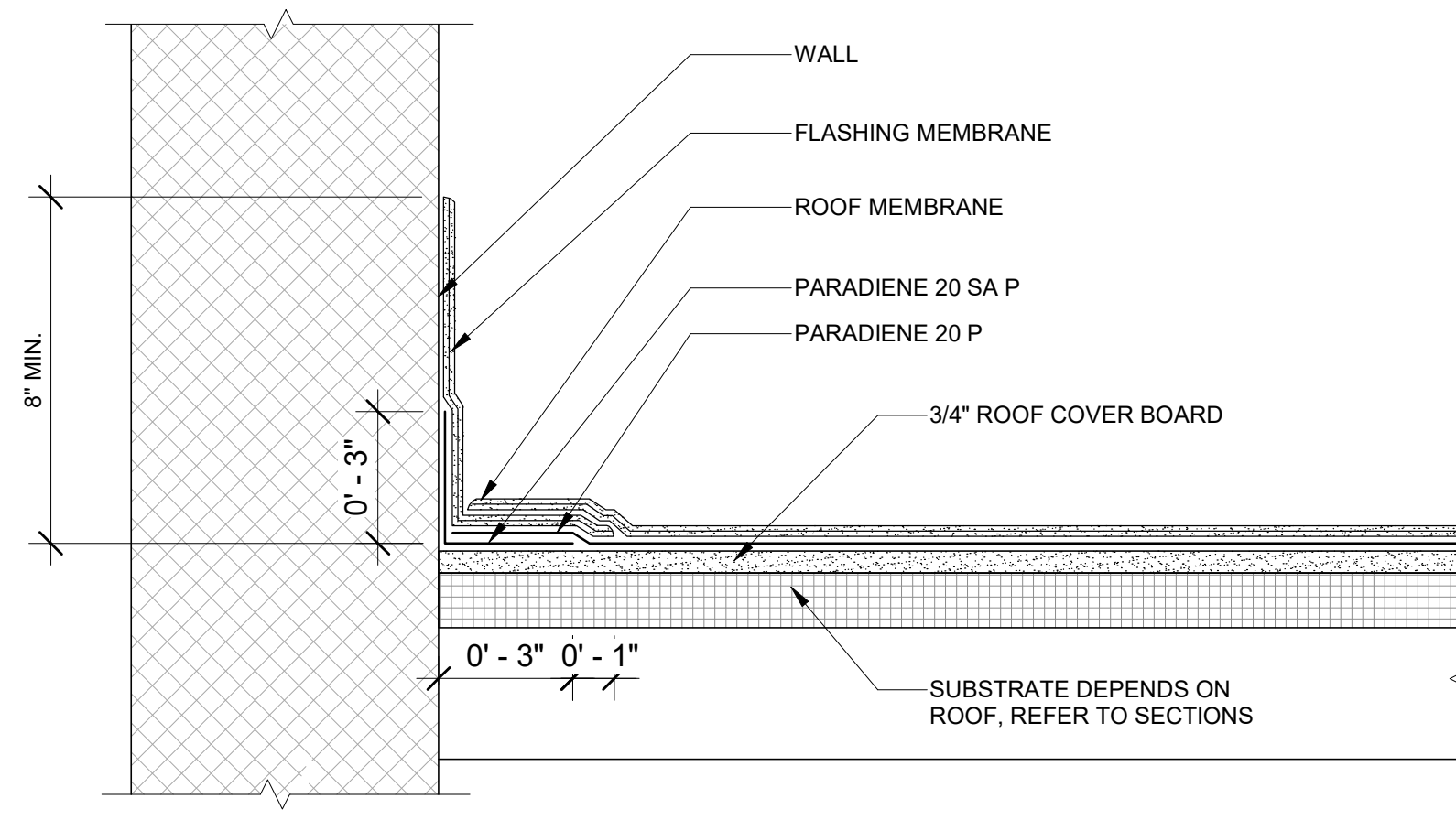
PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

FLOOR TYPE AND DETAILS

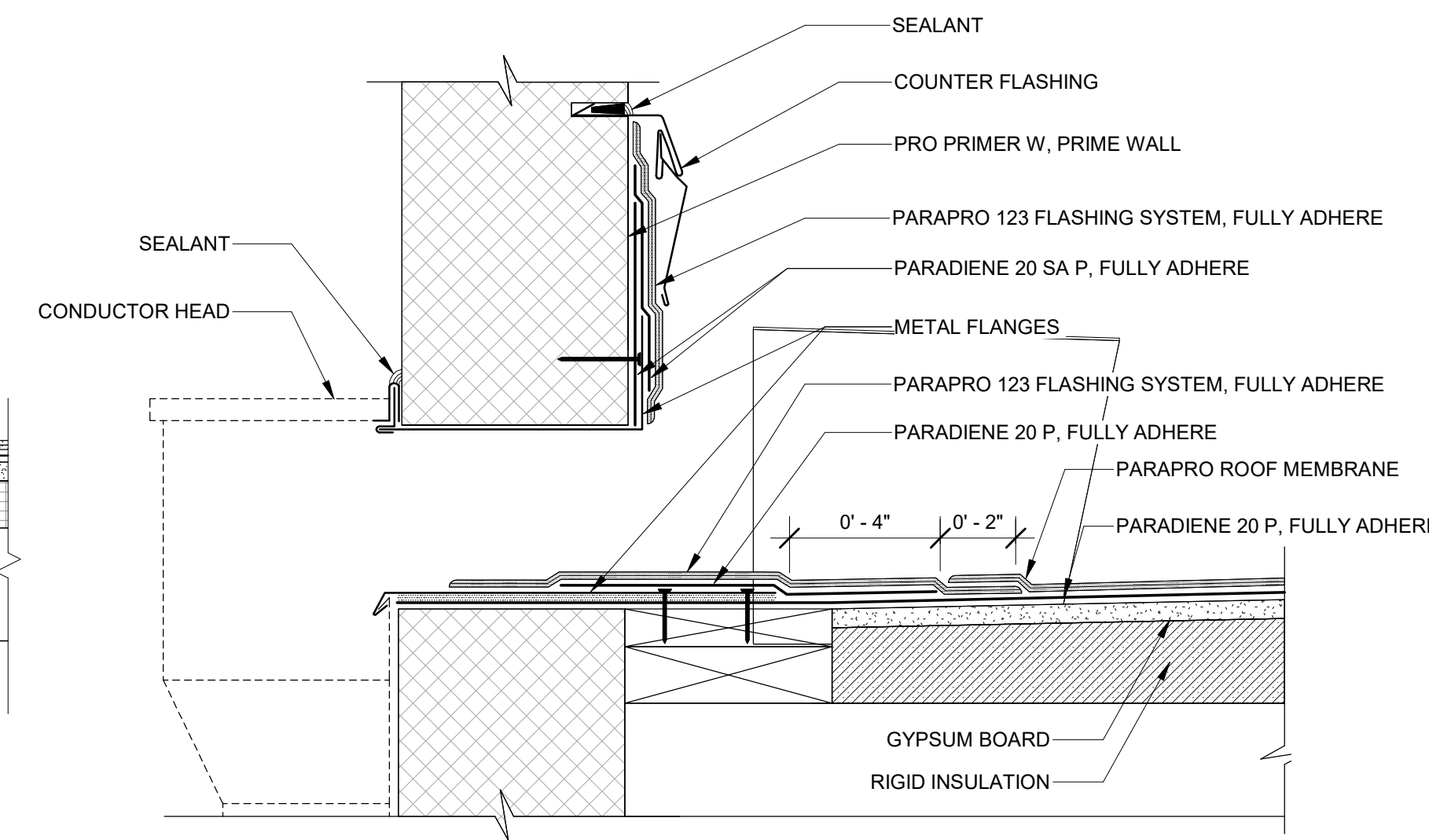
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STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-503.00**  
CADD FILE NO:  
Astoria/CHPE/CHPE  
Astoria/CHPE-141-ZZ-M3-A-001.rvt

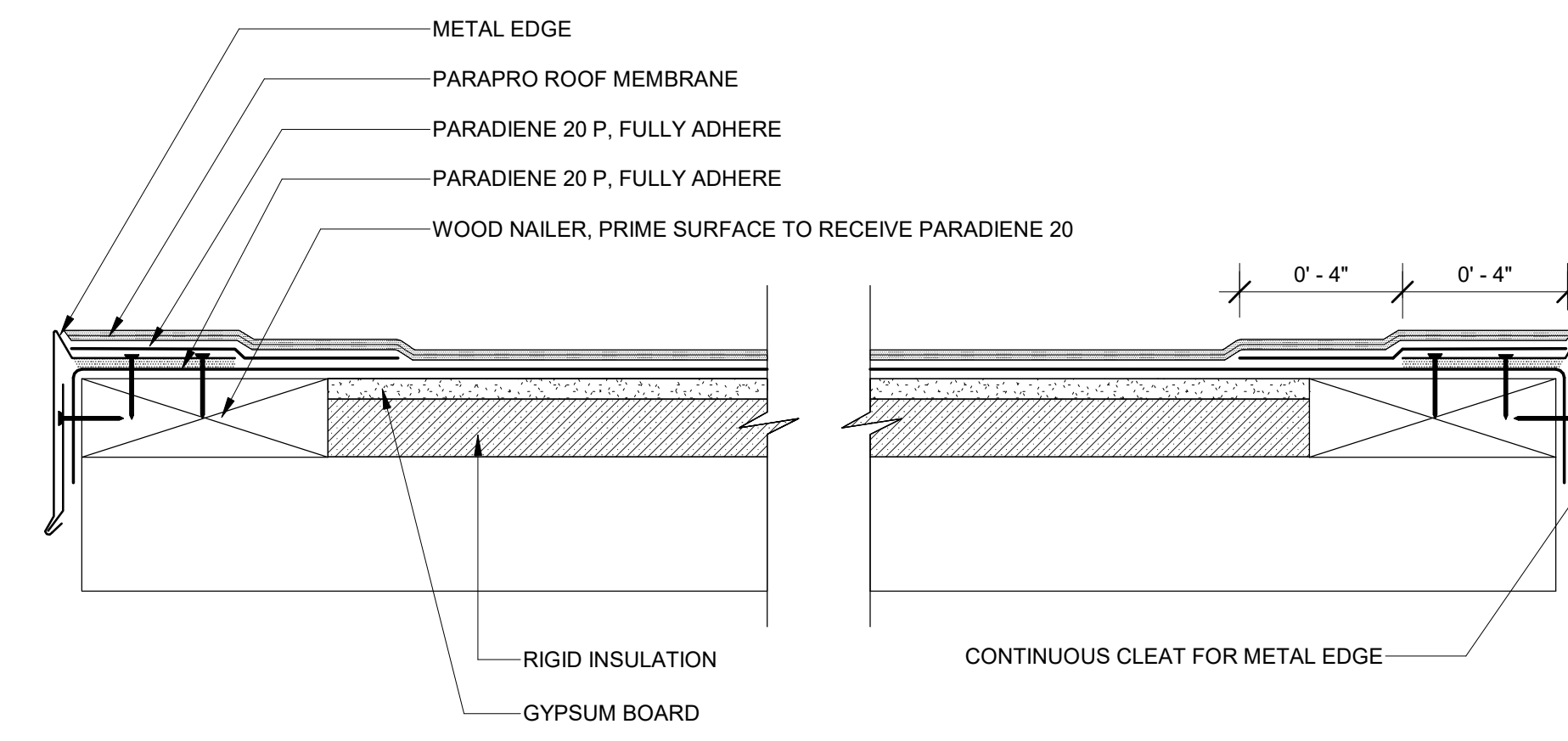
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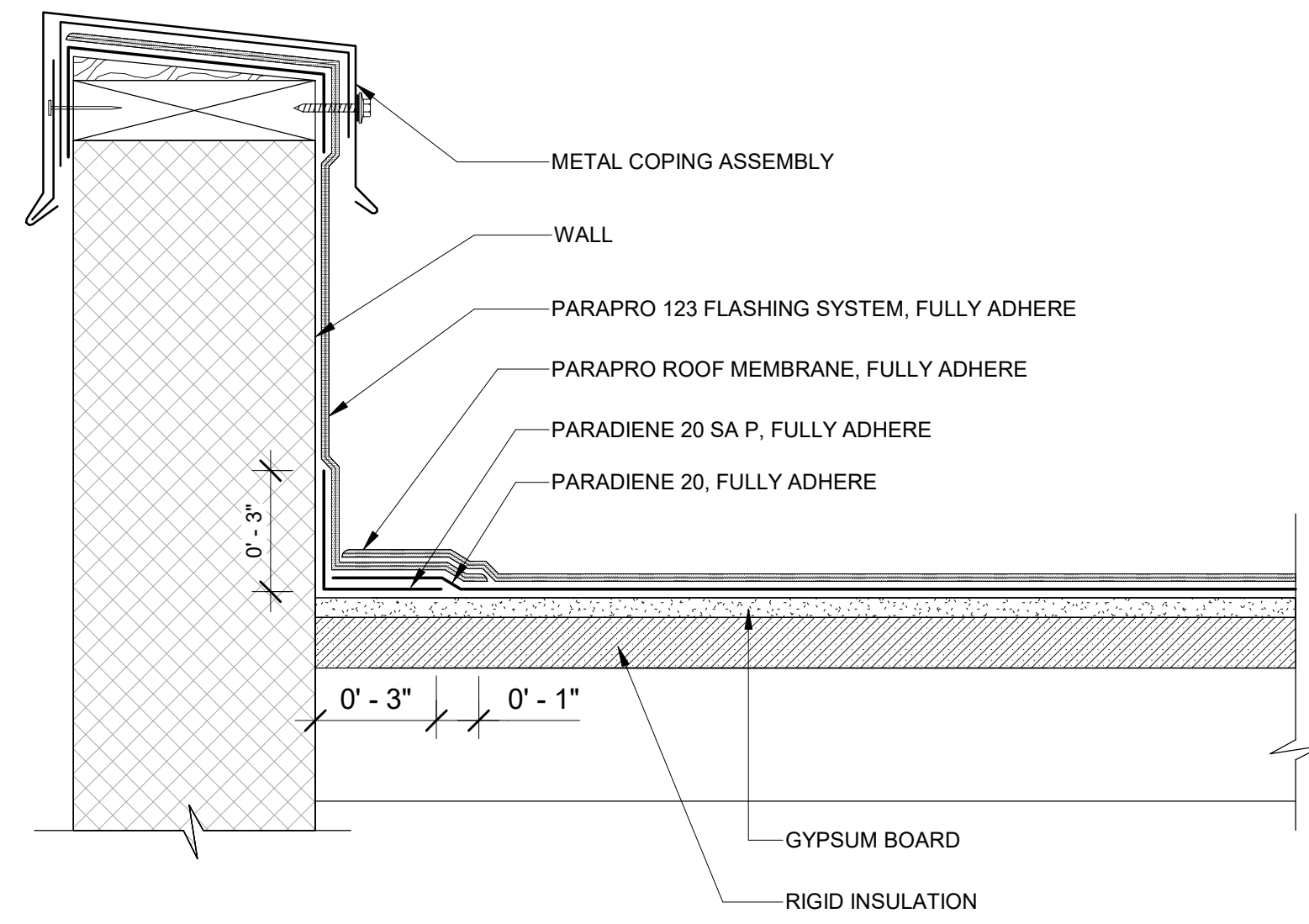
**1** WALL WITH SELF TERMINATING PARAPRO FLASHING DETAIL  
A-504.00 3" = 1'-0"



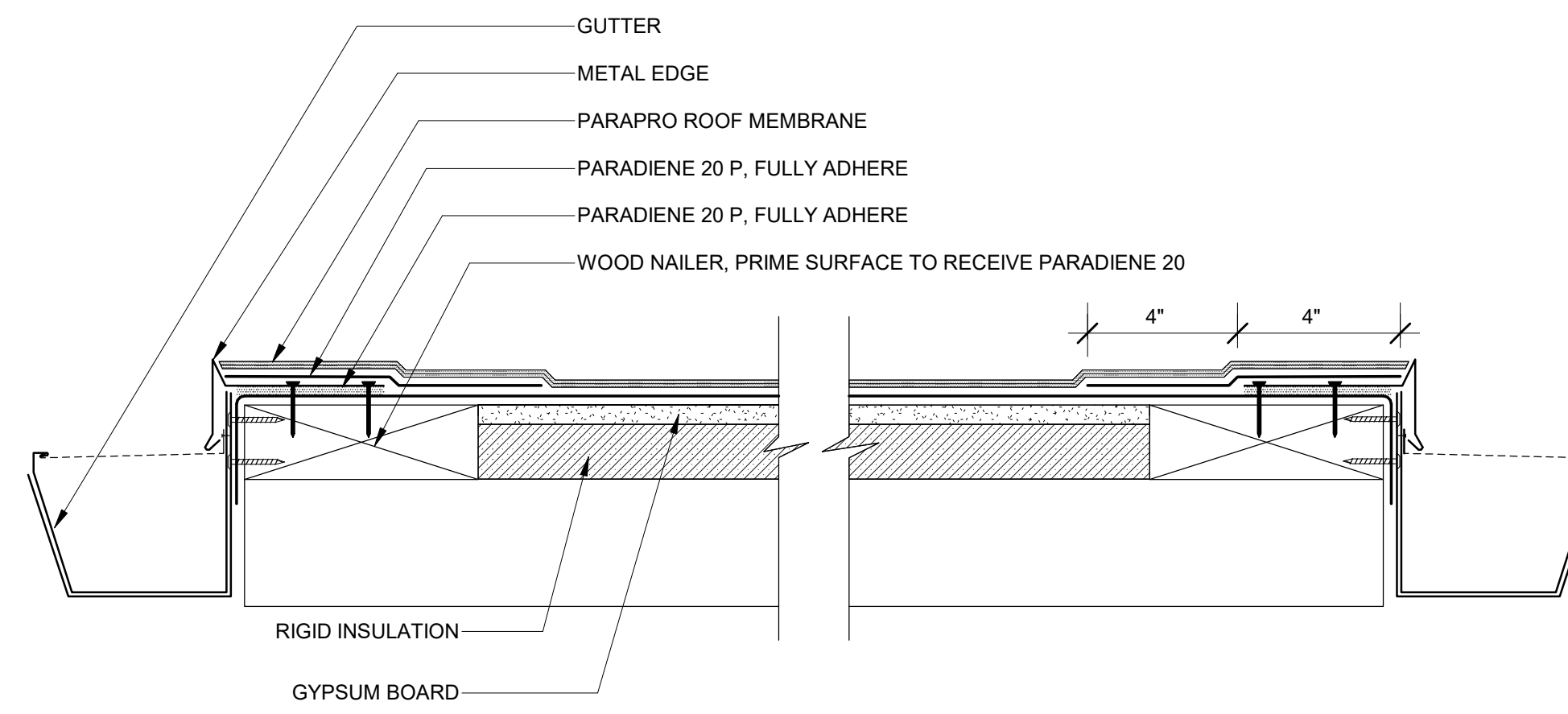
**2** SCUPPER DETAIL  
A-504.00 3" = 1'-0"



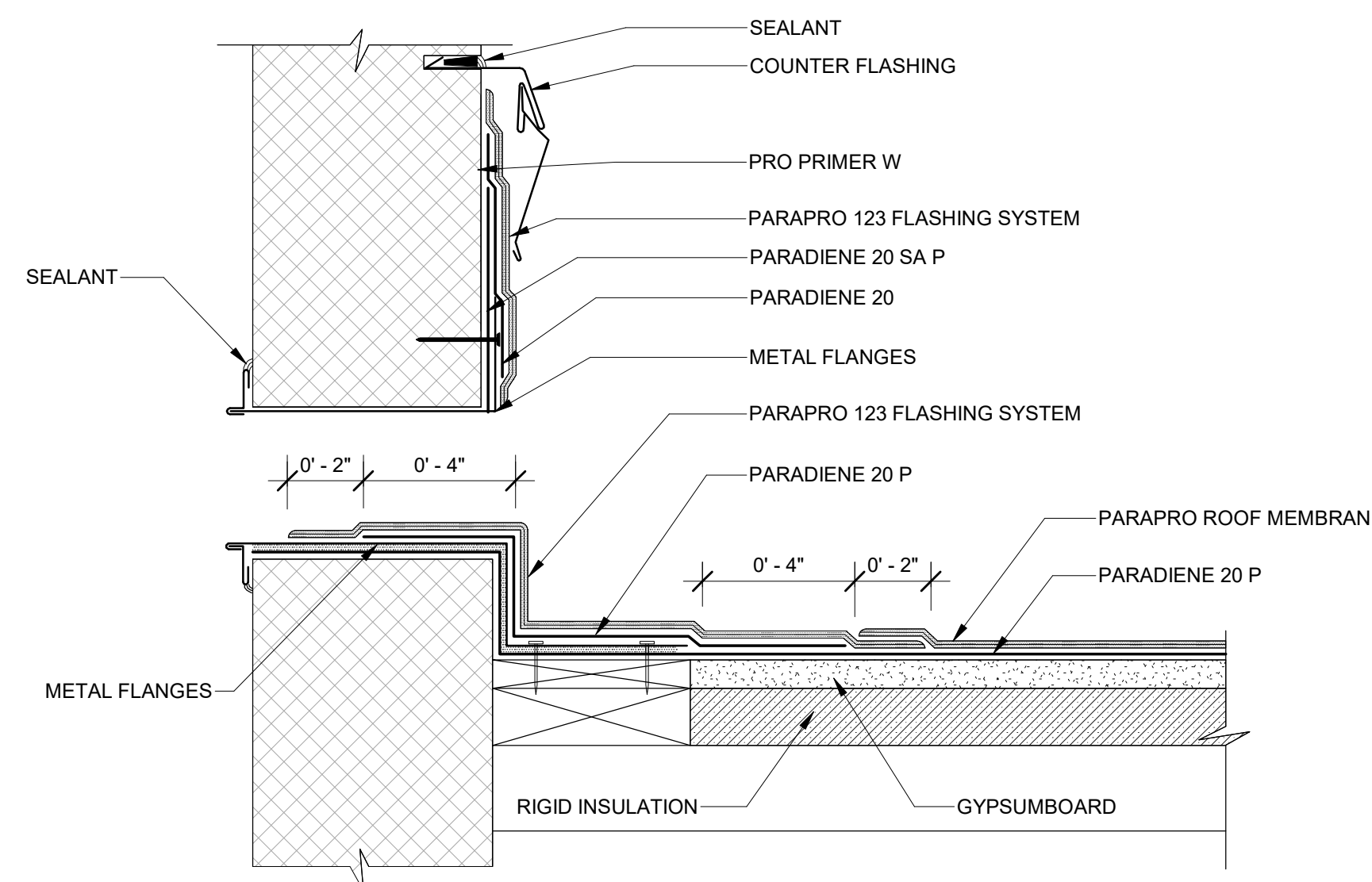
**3** ROOF EDGE DETAIL  
A-504.00 3" = 1'-0"



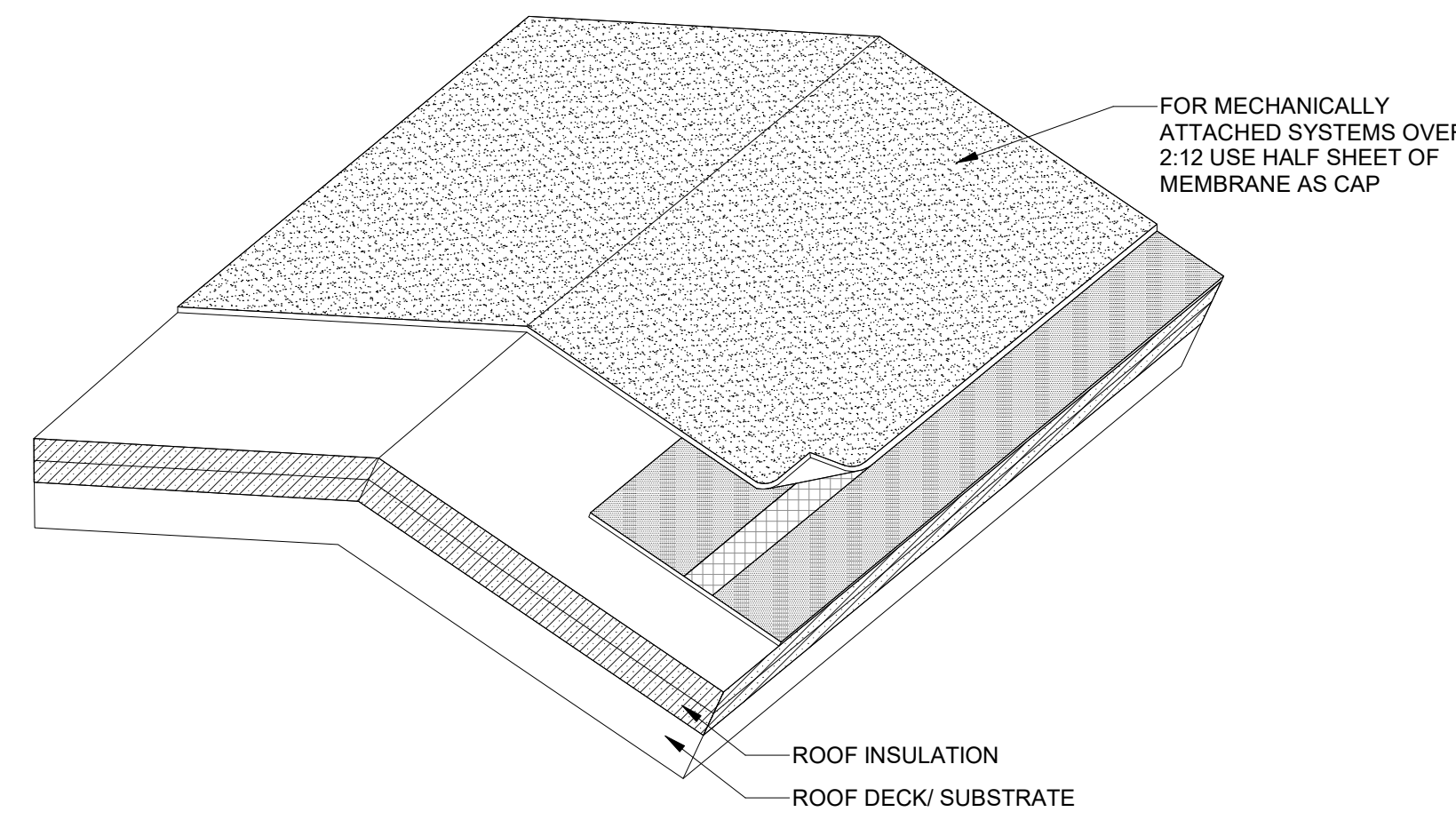
**4** PARAPET WITH COPING DETAIL  
A-504.00 3" = 1'-0"



**5** GUTTER EDGE DETAIL  
A-504.00 3" = 1'-0"



**6** OVERFLOW SCUPPER  
A-504.00 3" = 1'-0"



**7** RIDGE DETAIL  
A-504.00 1 1/2" = 1'-0"

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B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT  
**CHPE**  
Champlain Hudson  
Power Express  
**Astoria HVDC  
Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

ROOF TYPE AND DETAILS

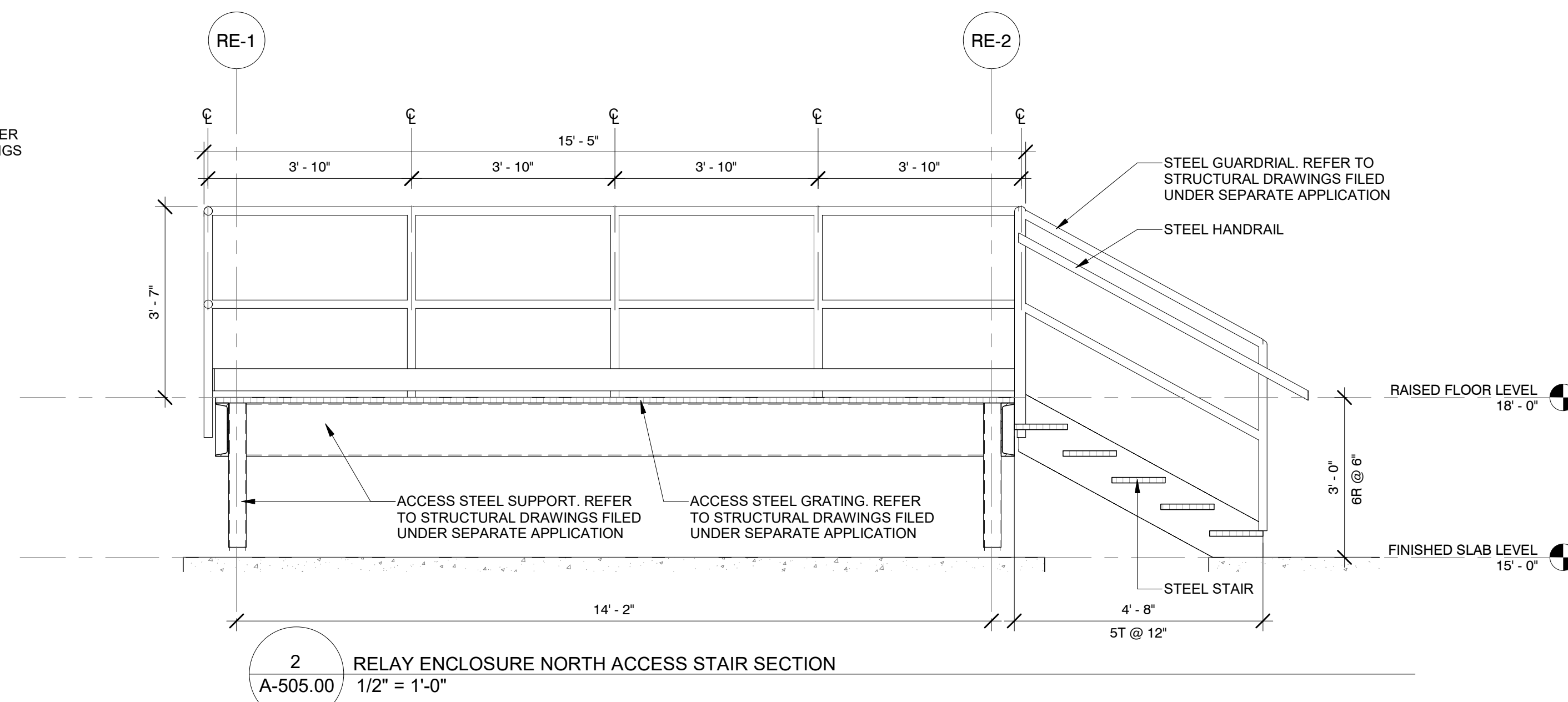
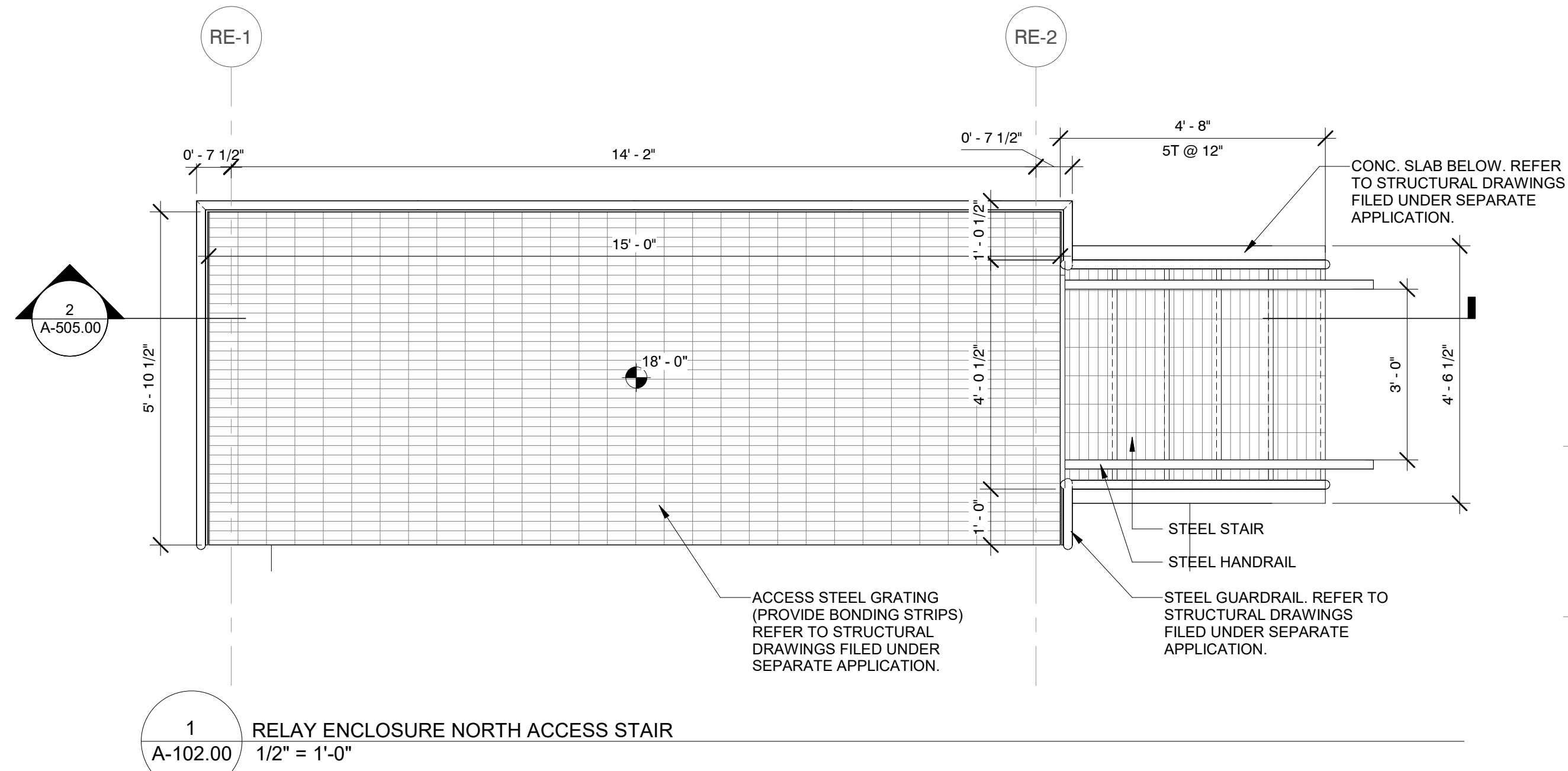
**REGISTERED ARCHITECT**  
SOWINSKI SULLIVAN  
STATE OF NEW YORK  
026049

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO:  
**A-504.00**  
CADD FILE NO:  
Astoria HVDC CHPE  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt

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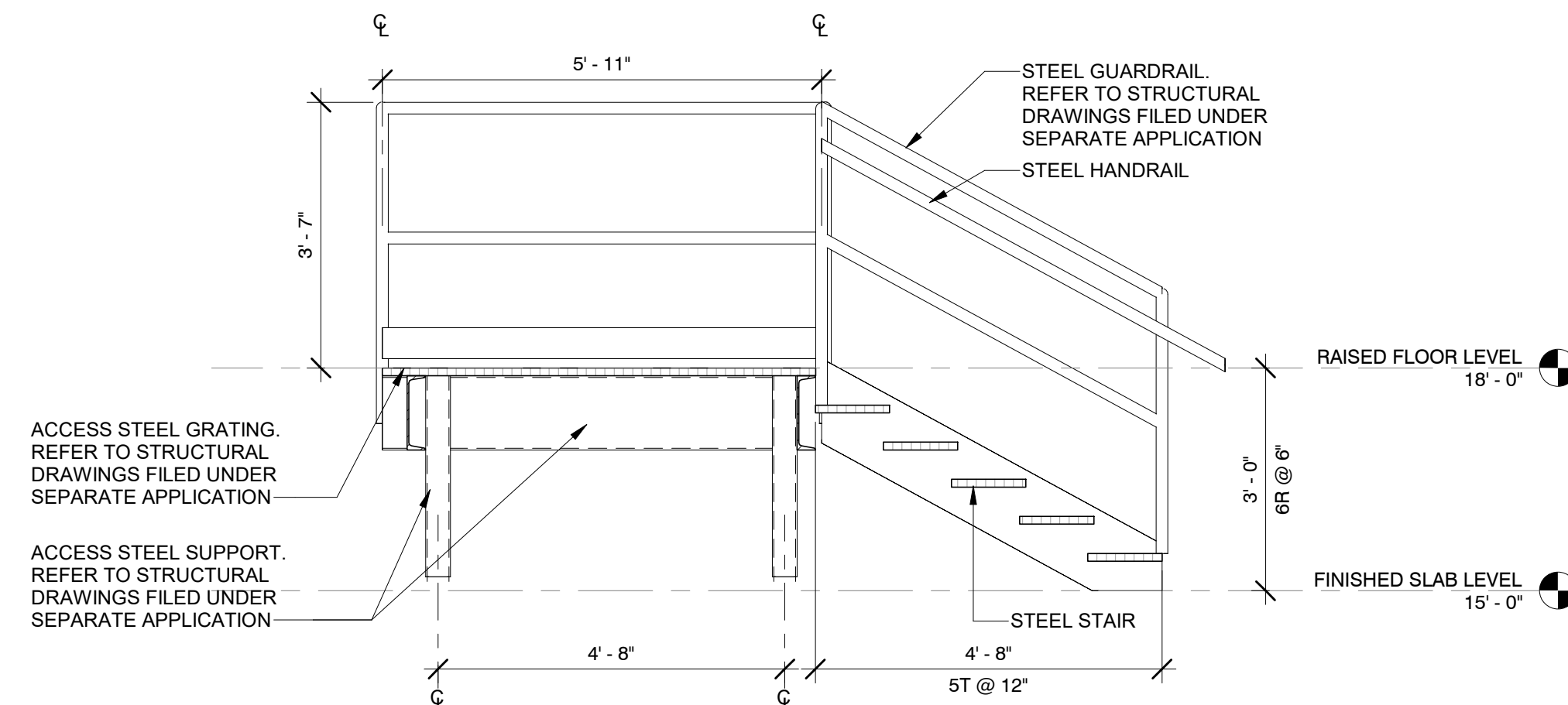
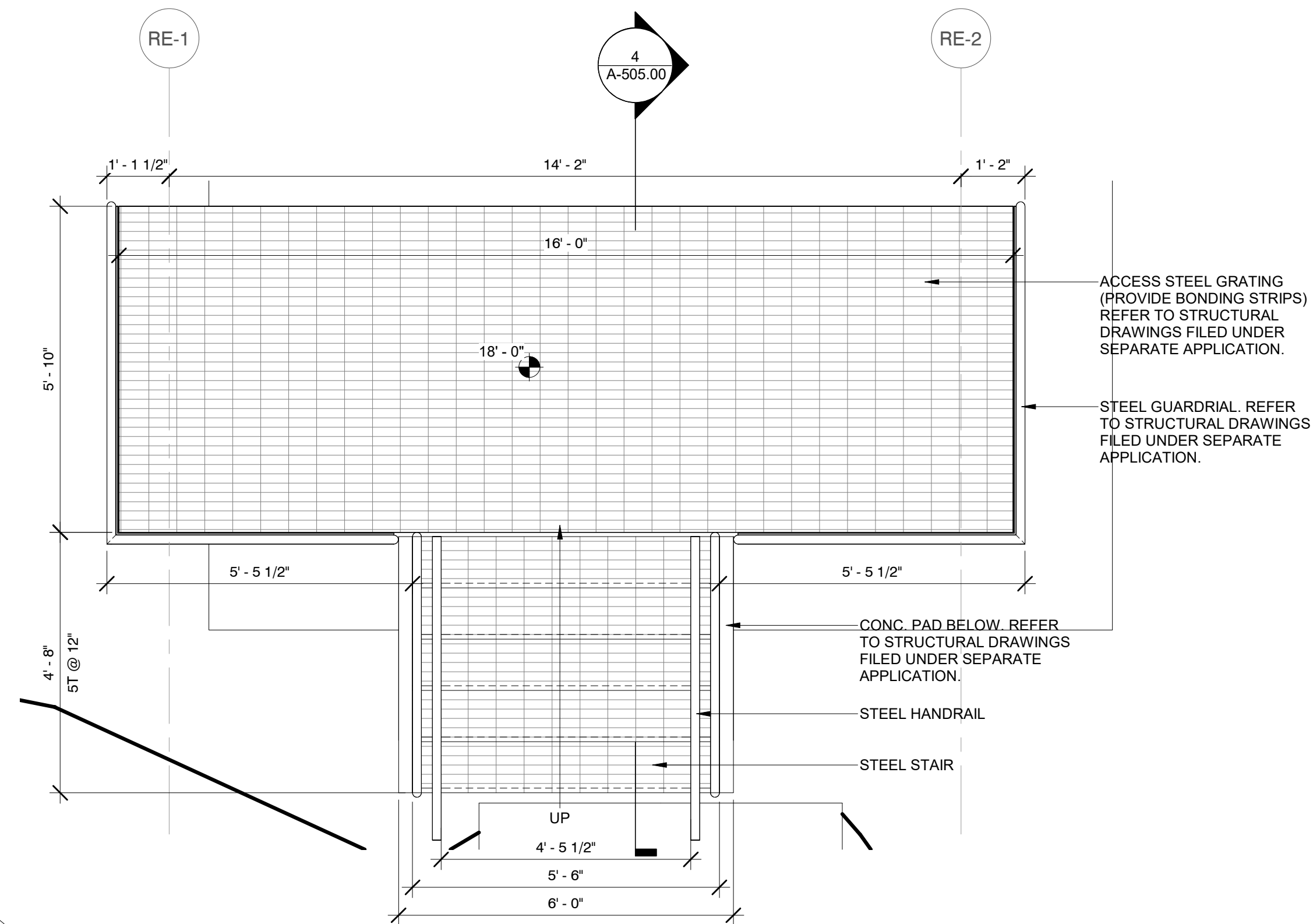


ISSUED FOR PERMIT



1 RELAY ENCLOSURE NORTH ACCESS STAIR  
A-102.00 1/2" = 1'-0"

2 RELAY ENCLOSURE NORTH ACCESS STAIR SECTION  
A-505.00 1/2" = 1'-0"



3 RELAY ENCLOSURE SOUTH ACCESS STAIR  
A-102.00 1/2" = 1'-0"

4 RELAY ENCLOSURE SOUTH ACCESS STAIR SECTION  
A-505.00 1/2" = 1'-0"



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Kiewit 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677

Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT CHPE Champlain Hudson Power Express

Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

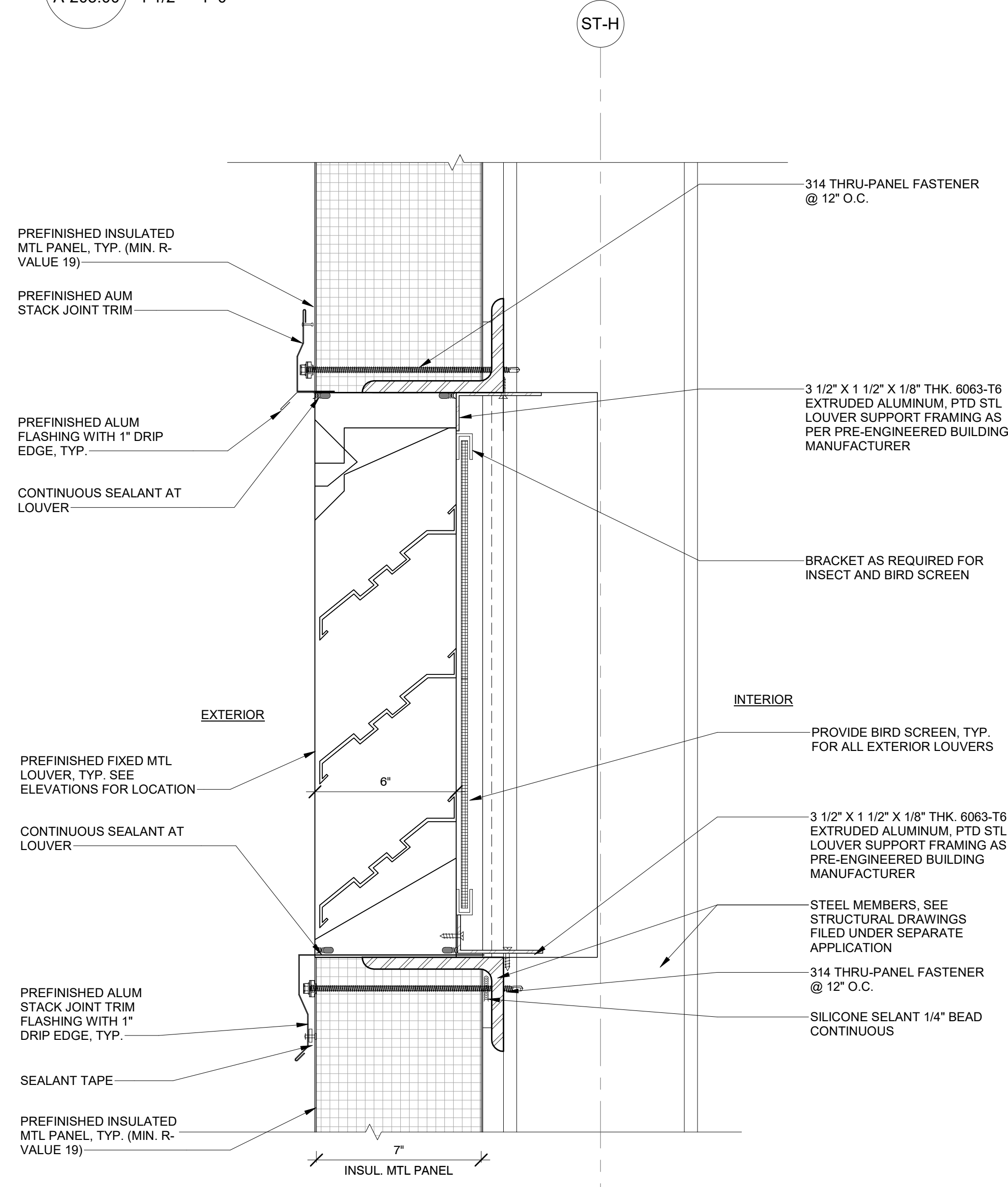
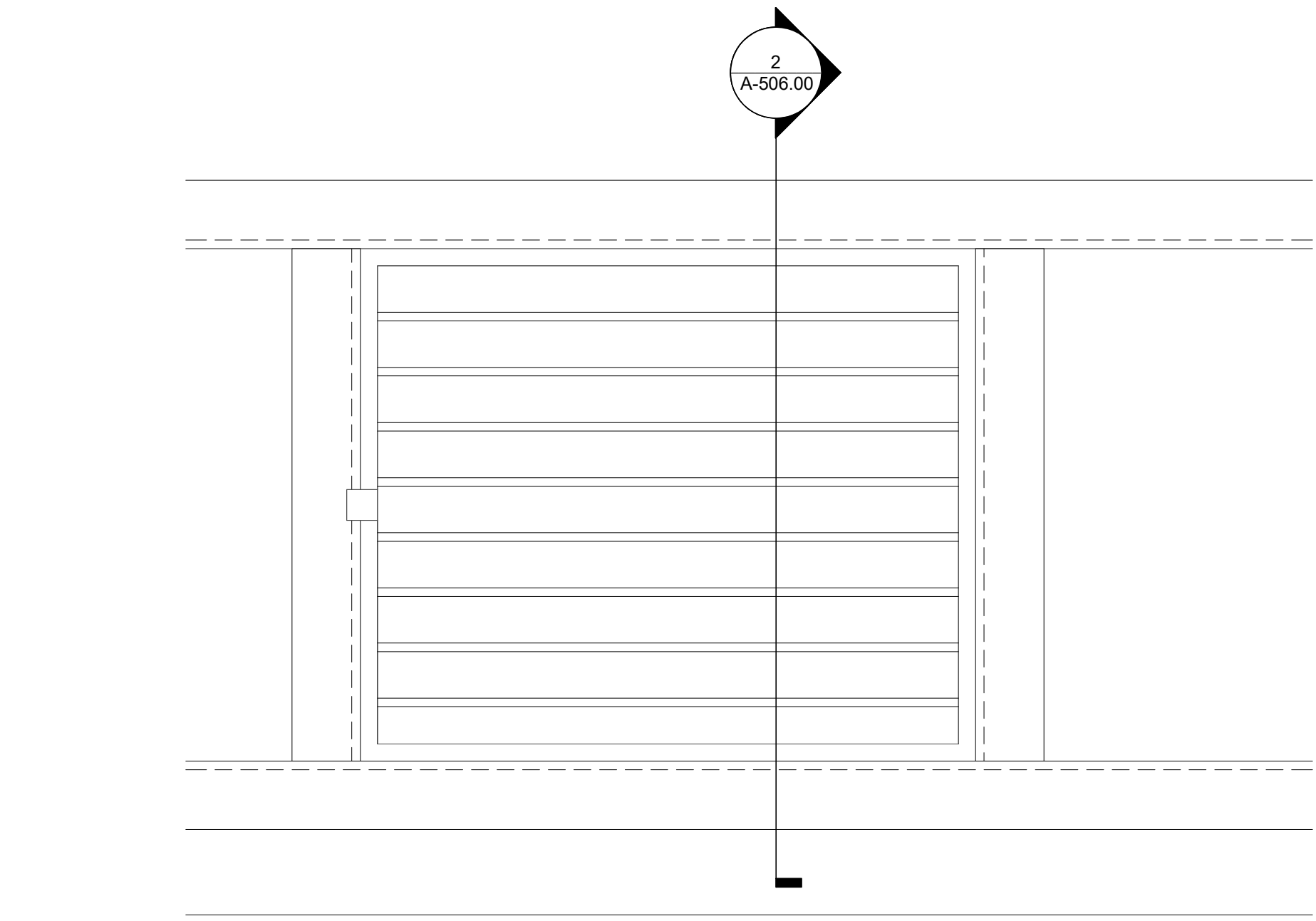
STAIR, GUARDRAIL DETAILS



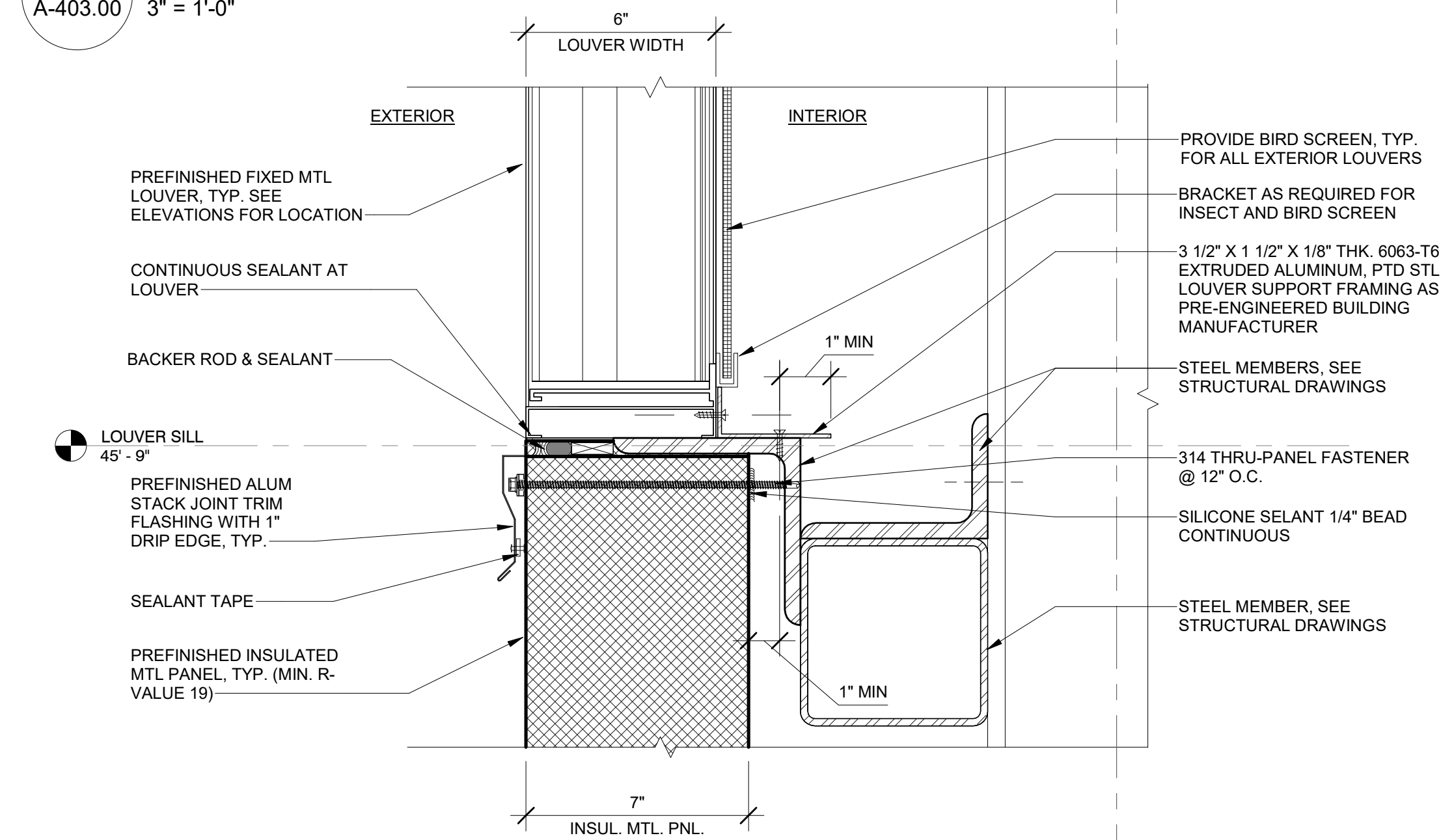
DATE 12/12/2022  
PROJECT NO 105121  
DRAWING BY S. WARYAH  
CHECKED BY J. STEPHENS  
DRAWING NO A-505.00  
CADD FILE NO Astoria HVDC CHPE  
Astoria CHA-RE-141-ZZ-M3-A-001.rvt

LOUVER SCHEDULE 1						
TYPE	HEIGHT	WIDTH	HEAD/SILL	JAMB	QUANTITY	EQUIPMENT TAG, SEE MECHANICAL DWGS
L-10	2' - 0"	2' - 6"	3/A-506.00	4/A-506.00	2	LVR-130-01 + LVR-130-02
L-11	2' - 6"	2' - 6"	2/A-506.00	2/A-506.00	1	LVR-130-03

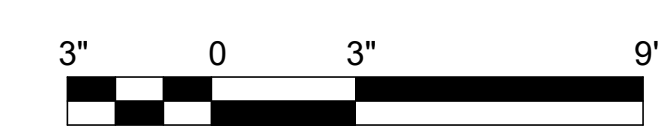
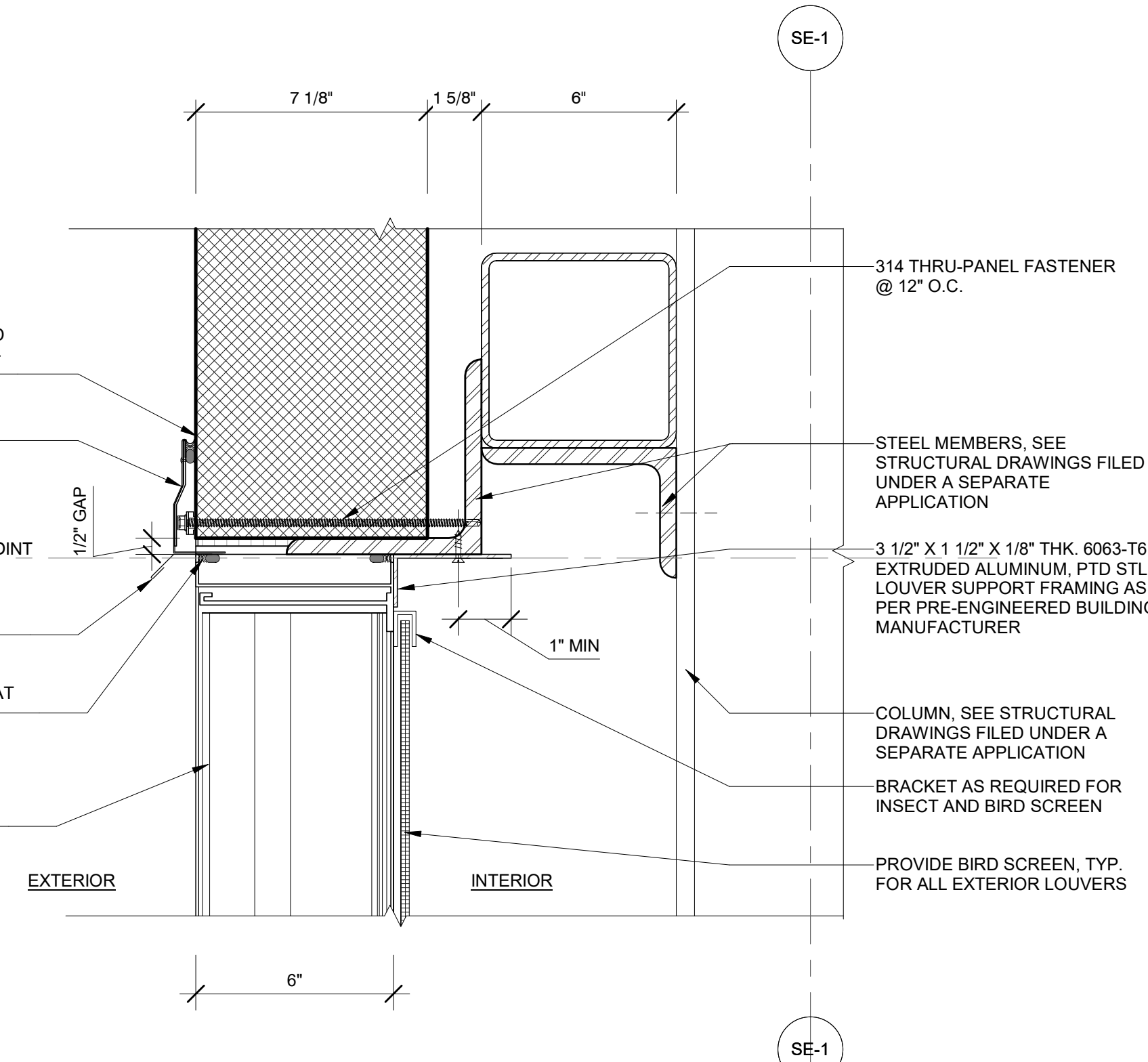
1 LOUVER ELEVATION  
A-205.00  
1 1/2" = 1'-0"



3 TYP. LOUVER HEAD DETAIL  
A-403.00  
3" = 1'-0"



4 TYP. LOUVER SILL DETAIL  
A-403.00  
3" = 1'-0"



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Block #850 - Lot #310 - BIN #4624437

**LOUVER DETAILS**

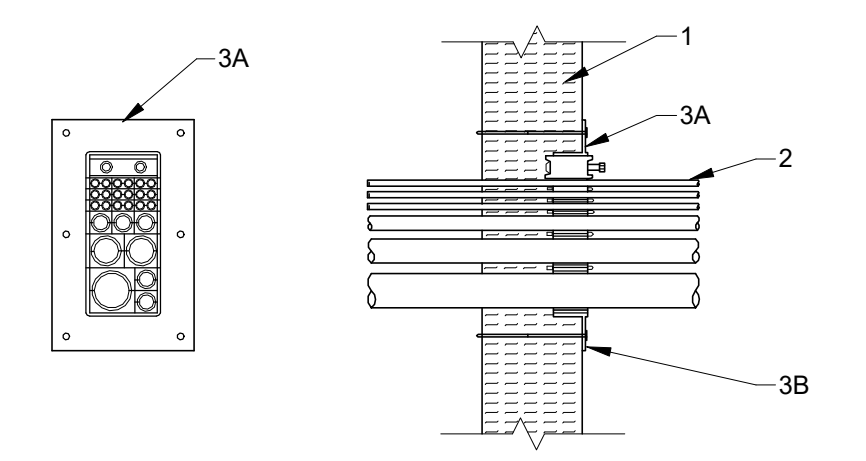
REGISTERED ARCHITECT  
STATE OF NEW YORK  
026048

DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO: **A-506.00**  
CADD FILE NO:  
Astoria HVDC Converter Station  
Astoria/CHA-RE-130-ZZ-M3-A-001.rvt

2 DETAIL @ LOUVER  
A-506.00  
3" = 1'-0"



ISSUED FOR PERMIT

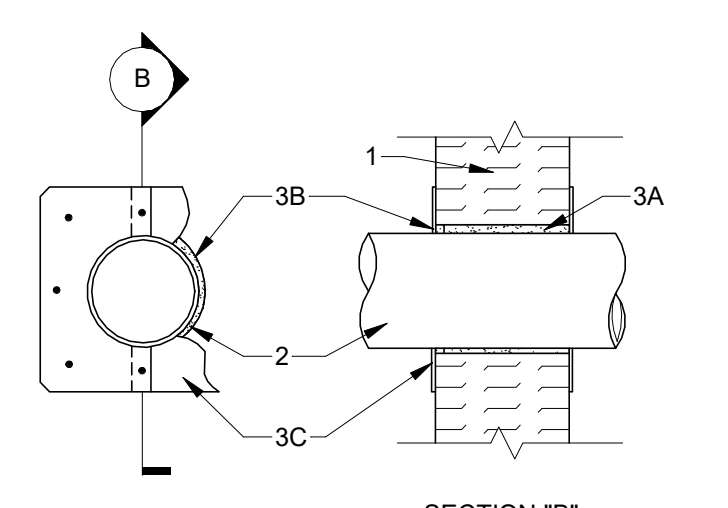


FIRE STOPPING DETAIL, THROUGH-PENETRATION FIRESTOP SYSTEMS

UL SYSTEM NO. W-N-8002, 2 HR. RATING

1. 2- HR RATED WALL ASSEMBLY
2. THROUGH-PENETRANTS — WITHIN THE LOADING AREA FOR THE FIRESTOP DEVICE, THE PENETRANTS MAY REPRESENT A 0 TO 100 PERCENT VISUAL FILL. PENETRANTS TO BE INSTALLED THROUGH THE FIRESTOP DEVICE AND THE INSULATION CORE OF THE PARTITION PANEL TO PASS THROUGH THE OPENING. PENETRANTS TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
  - A. CABLES — THE FOLLOWING CABLE TYPES MAY BE USED:
    - A1. MAX 750 KCMIL (OR SMALLER) COPPER CONDUCTOR SHIELDED OR UNSHIELDED POWER CABLE WITH POLYVINYL CHLORIDE (PVC) JACKET AND ETHYLENE-PROPYLENE RUBBER (EPR) INSULATION. WHEN THIS CABLE IS USED, THE T, FT AND FTH RATINGS ARE 1 HR.
    - A2. MAX 24 PAIR NO. 16 AWG (OR SMALLER) COPPER CONDUCTOR SHIELDED OR UNSHIELDED INSTRUMENTATION CABLE WITH POLYVINYL CHLORIDE INSULATION AND JACKET MATERIALS. WHEN THIS CABLE IS USED, THE T, FT AND FTH RATINGS ARE 1-1/4 HR.
    - A3. MAX 8 PAIR NO. 16 AWG (OR SMALLER) COPPER CONDUCTOR SHIELDED OR UNSHIELDED INSTRUMENTATION CABLE WITH POLYVINYL CHLORIDE INSULATION AND JACKET MATERIALS. WHEN THIS CABLE IS USED, THE T, FT AND FTH RATINGS ARE 1 HR.
    - A4. MAX 24 FIBER, FIBER OPTIC CABLE WITH POLYVINYL CHLORIDE JACKET AND INSULATION. WHEN THIS CABLE IS USED, THE T, FT AND FTH RATINGS ARE 1-1/4 HR.
    - A5. MAX 4 PAIR NO. 24 AWG (OR SMALLER) CAT 5E CABLES WITH PVC JACKET AND INSULATION. WHEN THIS CABLE IS USED, THE F, FT AND FTH RATINGS ARE 1-1/4 HR.
    - A6. MAX 4 PAIR NO. 23 AWG (OR SMALLER) CAT 6 CABLES WITH PVC JACKET AND INSULATION. WHEN THIS CABLE IS USED, THE F, FT AND FTH RATINGS ARE 1-1/4 HR.
    - A7. MAX 24 FIBER INTERLOCKING ARMORED FIBER OPTIC CABLE WITH POLYVINYL CHLORIDE JACKET AND INSULATION. WHEN THIS CABLE IS USED, THE T, FT AND FTH RATINGS ARE 1-1/4 HR.
  - B. METALLIC PENETRANTS — THE FOLLOWING TYPES AND SIZES OF METALLIC PENETRANTS MAY BE USED:
    - B1. NOM 2 IN. (51 MM) DIAM (OR SMALLER) SCH 40 STEEL CONDUIT. WHEN THIS CONDUIT IS USED, THE T, FT AND FTH RATINGS ARE 3/4 HR
3. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
  - A. FIRESTOP DEVICES — FIRESTOP DEVICES EACH CONSIST OF A RECTANGULAR STEEL FRAME WITH INTEGRAL FLANGE, MULTI DIAMETER ELASTOMERIC SEALING MODULES, STEEL STAY PLATES AND A COMPRESSION UNIT CONSISTING OF A ROXTEC WEDGE (OR OTHER APPROVED MATERIAL). FIRESTOP DEVICE FRAME SHALL BE INSTALLED INTO THE PANEL CUTOUT AT ONE SIDE OF WALL WITH THE FLANGE OF DEVICE INSTALLED FLUSH AGAINST STEEL SKIN OF PARTITION PANEL. THE RECTANGULAR PACKING AREA OF EACH FRAME SHALL BE FILLED WITH MULTIPLE ROWS OF MULTI DIAMETER ELASTOMERIC SEALING MODULES WITH A MAX OF ONE CABLE IN EACH SEALING MODULE. THE LAYERS OF THE MULTI DIAMETER SEALING MODULE HALVES ARE REMOVED ONE BY ONE UNTIL A MAX GAP OF 0.04" IS FORMED BETWEEN THE TWO MODULE HALVES. WHEN THE NUMBER OF SEALING MODULES EXCEEDS THE NUMBER OF CABLES, THE SOLID CYLINDRICAL CORES OF THE UNPENETRATED SEALING MODULES SHALL BE LEFT IN PLACE OR "BLANK" (SOLID) SEALING MODULES SHALL BE USED. DURING INSTALLATION OF THE ELASTOMERIC SEALING MODULES, THIN STEEL STAY PLATES SHALL BE USED TO SEPARATE THE ROWS OF SEALING MODULES AND TO RETAIN THE SEALING MODULES WITHIN THE STEEL FRAME. AFTER INSTALLATION OF THE MODULES, THE BOLTS OF THE COMPRESSION UNIT ARE TIGHTENED TO FORM AN EFFECTIVE SEAL AROUND THE THROUGH PENETRANTS AND INSERT MODULES. FIRESTOP DEVICE SECURED IN PLACE WITH MIN 1/4" DIAM BY MIN 6-1/2" LONG WASHER HEAD LAG SCREWS WITHIN EACH PREFORMED HOLE IN DEVICE FLANGE AROUND PERIPHERY OF OPENING AND EXTENDING THROUGH FULL THICKNESS OF PARTITION PANEL. THE FIRESTOP DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE ACCOMPANYING INSTALLATION INSTRUCTIONS.
  - B. FILL, VOID OR CAVITY MATERIAL — SEALANT — NOM 3/8" BEAD OF FILL MATERIAL APPLIED AROUND THE PERIPHERY OF THE FIRESTOP DEVICE FRAME FLANGE AT THE INTERFACE WITH THE STEEL SKIN OF THE PARTITION PANEL. IN ADDITION, FOR L RATING, SEALANT SHALL BE APPLIED ON THE DEVICE FRAME FLANGE TO SEAL EACH SCREW HEAD LOCATION AND AT THE PANEL SEAM.

1 THROUGH-PENETRATION FIRESTOPPING N.T.S.

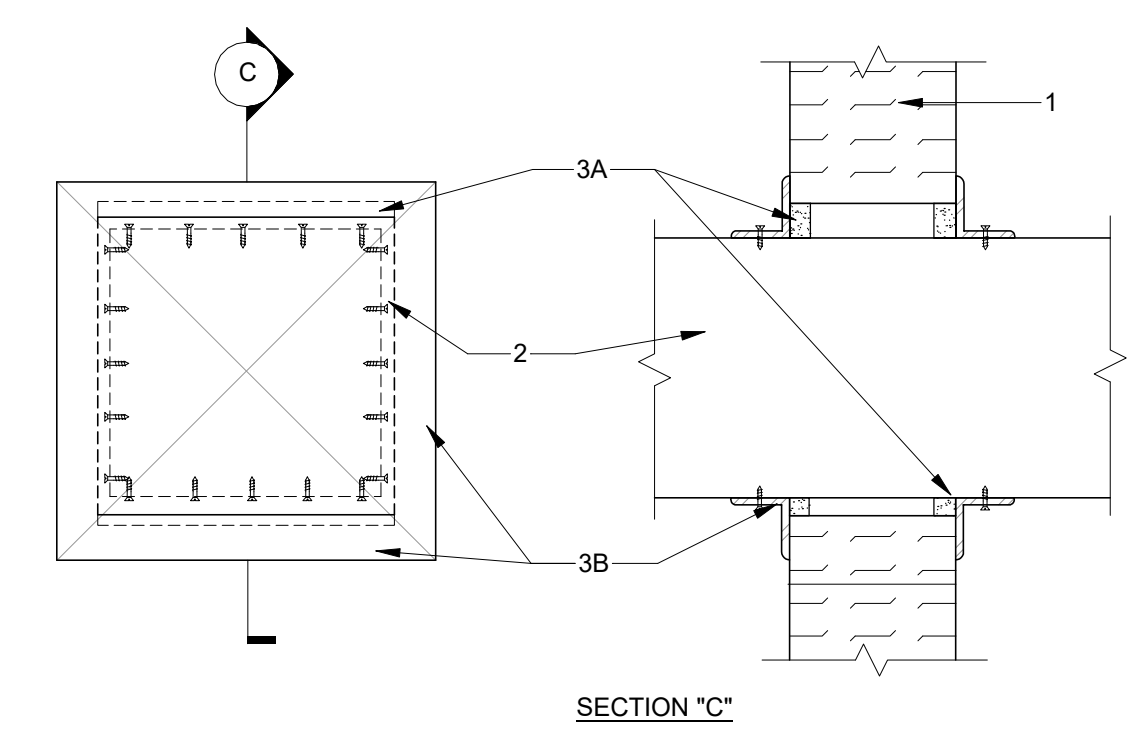


FIRE STOPPING DETAIL, THROUGH PENETRATION FIRESTOP SYSTEMS

UL SYSTEM NO. W-N-1001 FOR, 2 HR. RATING

1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE RATED COMPOSITE WALL ASSEMBLY SHALL BE CONSTRUCTED OF NOM 4" OR 7" THICK, RESPECTIVELY, GALVANIZED STEEL OR PAINTED GALVANIZED STEEL FACED PARTITION PANEL UNITS (CJMR) INSTALLED IN THE MANNER SPECIFIED IN WALL AND PARTITION DESIGN NO. U050 IN THE FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 20-1/4". OPENING CAN BE LOCATED ON OR OFF PANEL UNIT JOINTS.
2. THROUGH-PENETRANTS — ONE METALLIC PIPE, CONDUIT OR TUBE TO BE INSTALLED ECCENTRICALLY OR CONCENTRICALLY WITHIN THE OPENING. AN ANNULAR SPACE OF MIN 1/4 IN. (6 MM) TO MAX 1/2 IN. (13 MM) IS REQUIRED WITHIN THE FIRESTOP SYSTEM. PIPE, CONDUIT OR TUBE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUIT OR TUBING MAY BE USED:
  - A. STEEL PIPE — NOM 18" DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
  - B. IRON PIPE — NOM 18" DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
  - C. CONDUIT — NOM 6" DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 4 IN. DIAM (OR SMALLER) STEEL CONDUIT.
  - D. COPPER TUBING — NOM 6" DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
  - E. COPPER PIPE — NOM 6" DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
3. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
  - A. PACKING MATERIAL — MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. MIN 3-1/4" AND MIN 6-1/4" THICKNESS REQUIRED FOR 1 HR AND 2 HR FIRE RATED WALLS, RESPECTIVELY. PACKING MATERIAL MAY BE RECESSED FROM ONE OR BOTH SURFACES OF WALL TO ACCOMMODATE THE THICKNESS OF THE OPTIONAL FILL MATERIAL. (ITEM 3B).
  - B. FILL, VOID OR CAVITY MATERIAL\* — SEALANT — (OPTIONAL) - NOM 3/8" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH ONE OR BOTH WALL SURFACES. SEE FILL, VOID OR CAVITY MATERIAL (X-HW) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR THE NAMES OF MANUFACTURERS. ANY SEALANT OR CAULK MATERIAL MEETING THE ABOVE SPECIFICATION AND BEARING THE UL CLASSIFICATION MARKING MAY BE USED.
  - C. COVER PLATE — COVER PLATE AVAILABLE FROM THE WALL PANEL MANUFACTURER OR FIELD PROVIDED. COVER PLATE FABRICATED FROM TWO PIECES OF MIN 0.019" THICK GALV OR PAINTED GALV SHEET STEEL, CUT TO THE SHAPE AS SHOWN IN DETAIL ABOVE. INSIDE DIAMETER OF COVER PLATE TO EQUAL OUTSIDE DIAMETER OF PENETRANT. OUTSIDE DIMENSION OF COVER PLATE TO BE 4" GREATER THAN OUTER DIAM OF PENETRANT, WITH A RADIUS 2" GREATER THAN OUTER RADIUS OF METALLIC PENETRANT. TWO HALVES OF COVER PLATE INSTALLED AROUND THROUGH PENETRANT WITH NOM 1" OVERLAP AT THE MATING ENDS. COVER PLATE TO BE INSTALLED ON BOTH SIDES OF WALL AND SECURED TO STEEL WALL PANEL SKINS WITH MIN 1/8" DIAM STAINLESS STEEL RIVETS OR NO. 12 BY MIN 1/2" LONG HEX WASHER HEAD (HW) STEEL SCREWS. ONE FASTENER TO BE LOCATED AT EACH OVERLAP WITH INTERMEDIATE FASTENERS LOCATED MAX 4" ON CENTER AROUND PERIPHERY OF OPENING. FASTENERS LOCATED MIN 3/8" FROM CUT OPENING IN WALL PANEL.

2 THROUGH-PENETRATION FIRESTOP SYSTEM - PIPING N.T.S.



FIRE STOPPING DETAIL, THROUGH PENETRATION FIRESTOP SYSTEMS

UL SYSTEM NO. W-N-7001 FOR, 2 HR. RATING

1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE RATED COMPOSITE WALL ASSEMBLY SHALL BE CONSTRUCTED OF NOM 4" OR 7" THICK, RESPECTIVELY, GALVANIZED STEEL OR PAINTED GALVANIZED STEEL FACED PARTITION PANEL UNITS\* (CJMR) INSTALLED IN THE MANNER SPECIFIED IN WALL AND PARTITION DESIGN NO. U050 IN THE FIRE RESISTANCE DIRECTORY. MAX AREA OF OPENING IS 564 SQ IN. WITH A MAX DIMENSION OF 23-3/4". OPENING CAN BE LOCATED ON OR OFF PANEL UNIT JOINTS.
2. STEEL DUCT — NOM 23" BY 23", OR NOM 23" DIAM, (OR SMALLER) NO. 24 GAUGE (OR HEAVIER) GALV STEEL DUCT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE STEEL DUCT AND THE PERIPHERY OF THE OPENING SHALL BE MIN 1/4" TO MAX 1/2". STEEL DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY.
3. FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
  - A. PACKING MATERIAL — MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. MIN 3-1/4" AND MIN 6-1/4" THICKNESS REQUIRED FOR 1 HR AND 2 HR FIRE RATED WALLS, RESPECTIVELY. PACKING MATERIAL SHALL BE RECESSED FROM BOTH SURFACES OF WALL TO ACCOMMODATE THE REQUIRED THICKNESS OF THE FILL MATERIAL. (ITEM 3B).
  - B. FILL, VOID OR CAVITY MATERIAL\* — CAULK — MIN 5/8" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.
  - C. STEEL RETAINING ANGLES — MIN NO. 20 GA, 2" BY 2" GALV STEEL ANGLES. FOR CIRCULAR DUCTS, ANGLES TO BE ROLL FORMED TO FIT THE OD OF THE DUCT. ANGLES ATTACHED TO DUCT ONLY ON BOTH SIDES OF WALL WITH MIN NO. 10 BY 3/4" LONG STEEL SHEET METAL SCREWS SPACED A MAX OF 1-1/2" FROM EACH END OF STEEL DUCT AND SPACED MAX 6" OC. ANGLES INSTALLED SUCH THAT THEY TIGHTLY ABUT THE WALL SURFACE ON BOTH SIDES OF WALL.

3 THROUGH-PENETRATION FIRESTOP SYSTEM - DUCTWORK N.T.S.

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 Sparta, NJ 07871

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B	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022
REV	DESCRIPTION	DRW BY	CHK BY	DATE

**Kiewit**  
 470 Chestnut Ridge Rd # 2,  
 Woodcliff Lake, NJ 07677

**Hitachi Energy**  
 901 Main Campus Drive  
 Raleigh, North Carolina 27606

PROJECT

**CHPE**  
 Champlain Hudson Power Express

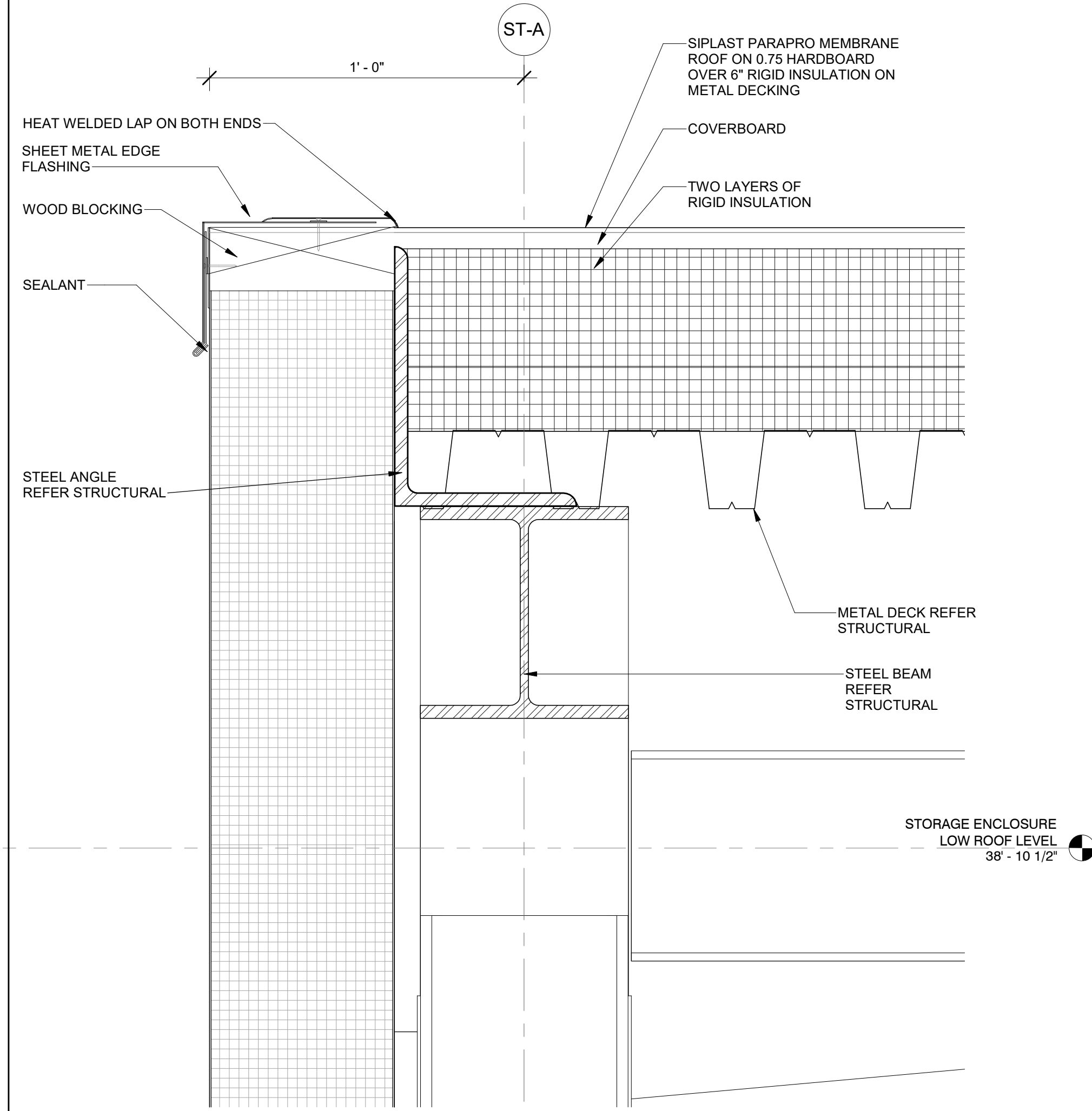
**Astoria HVDC Converter Station**  
 31-45 20th Avenue, Astoria, Queens NY 11105  
 Block #850 - Lot #310 - BIN #4624437

FIRESTOPPING DETAILS

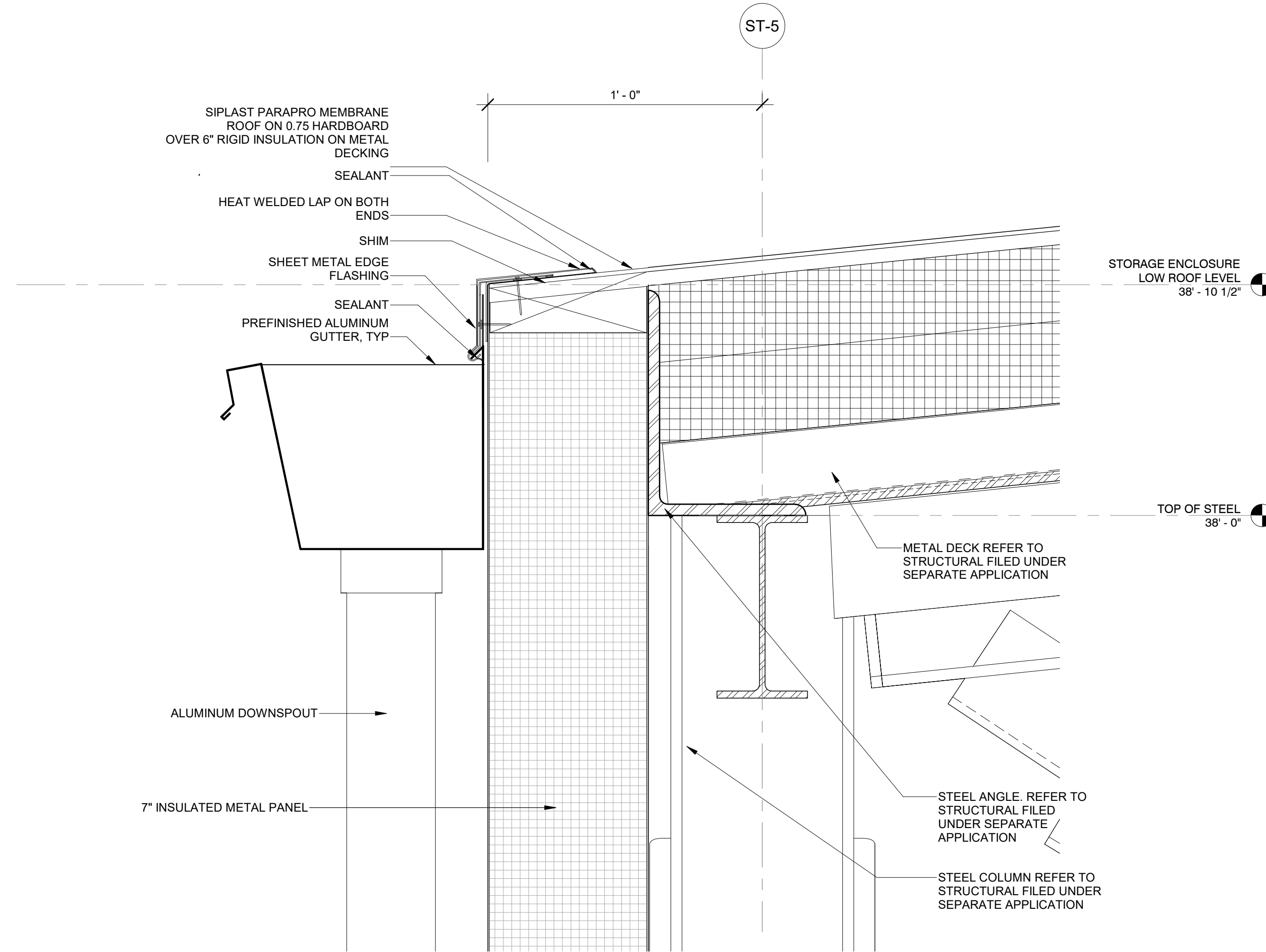
REGISTERED ARCHITECT  
 SOWINSKI SULLIVAN  
 STATE OF NEW YORK  
 026049

DATE: 12/12/2022  
 PROJECT NO: 105121  
 DRAWING BY: S. WARYAH  
 CHECKED BY: J. STEPHENS  
 DRAWING NO: **A-507.00**  
 CADD FILE NO:  
 Astoria CHA-RE: 141-ZZ-M3-A-001.rvt

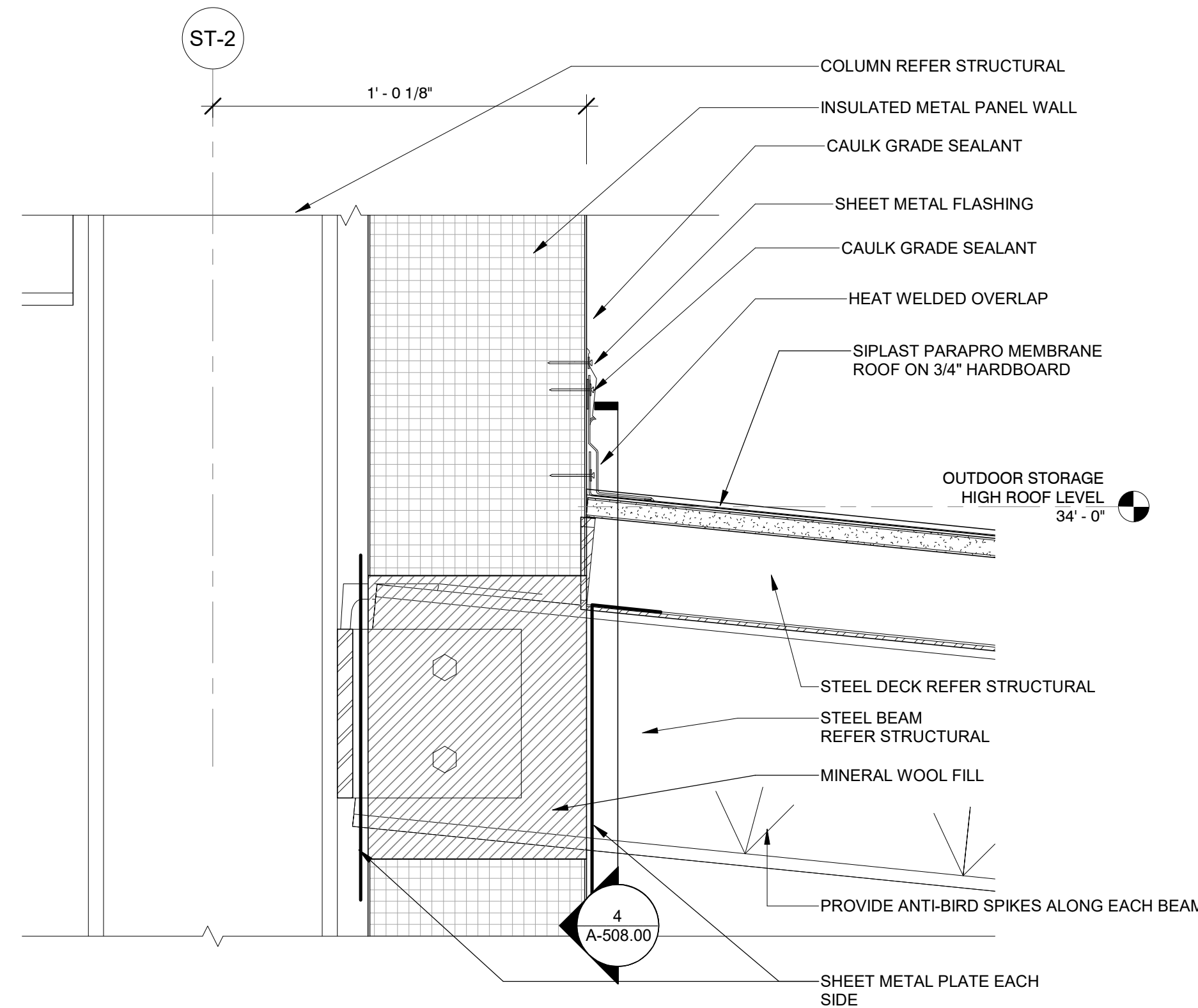
ISSUED FOR PERMIT



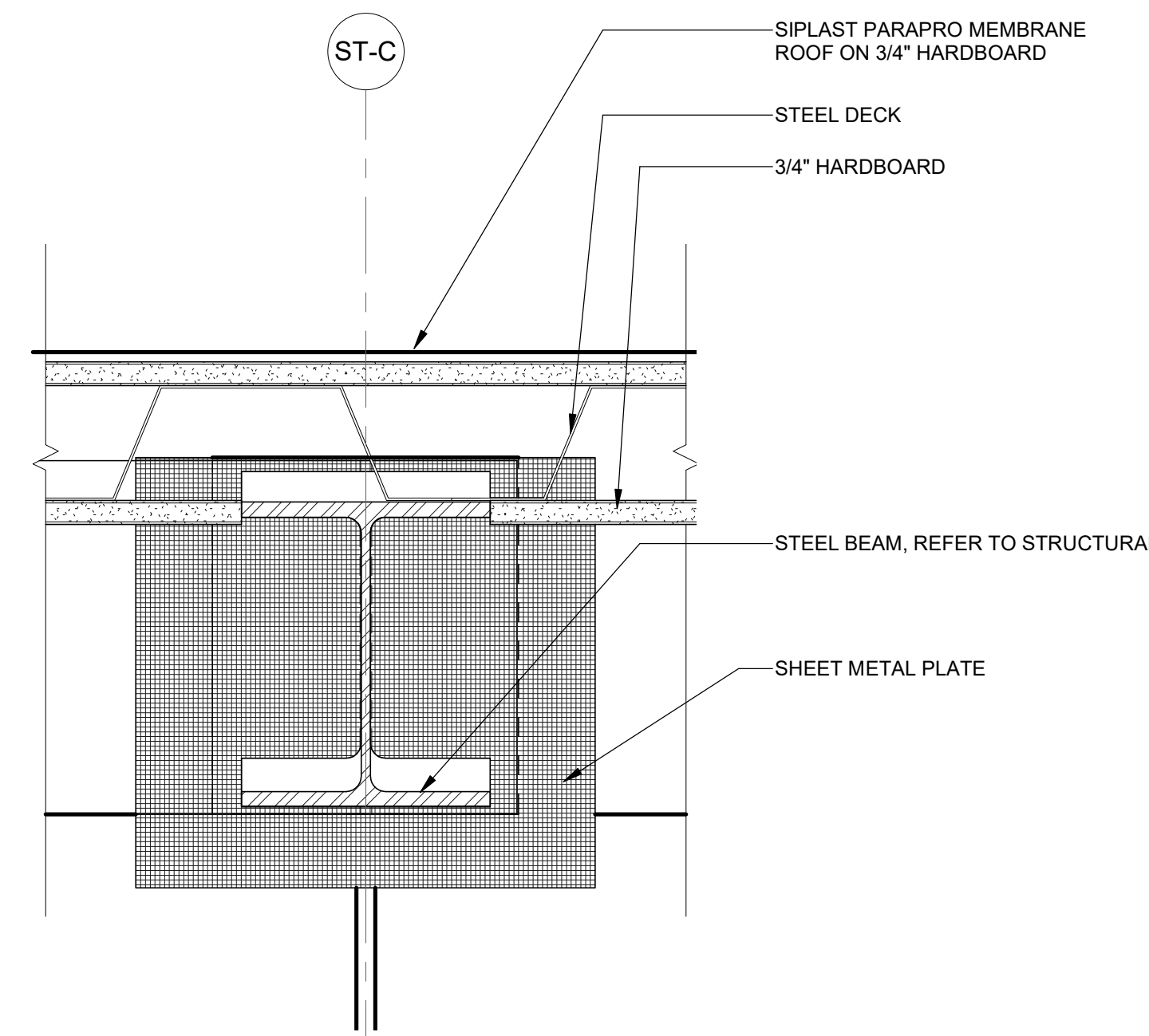
1 STORAGE ENCLOSURE ROOF EDGE DETAIL  
A-403.00 3" = 1'-0"



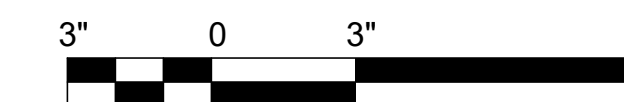
3 STORAGE ENCLOSURE ROOF GUTTER DETAIL  
A-402.00 3" = 1'-0"



2 OUTDOOR STORAGE AREA ROOF DETAIL  
A-402.00 3" = 1'-0"



4 ELEVATION AT BEAM PENETRATION  
A-508.00 3" = 1'-0"



Engineering and Land Surveying, P.C.  
370 7th Avenue  
SUITE 1604  
New York, NY 10001

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ARCHITECTURE + ENGINEERING  
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Sparta, NJ 07871

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B	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022

Kiewit  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

Hitachi Energy  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT  
**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC  
Converter Station**

31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

STORAGE ENCLOSURE -  
WALL SECTION DETAILS



DATE: 12/12/2022  
PROJECT NO: 105121  
DRAWING BY: S. WARYAH  
CHECKED BY: J. STEPHENS  
DRAWING NO:  
**A-508.00**  
CADD FILE NO:  
Astoria HVDC - CHPE  
Astoria CHA-RE-130-ZZ-M3-A-001.rvt

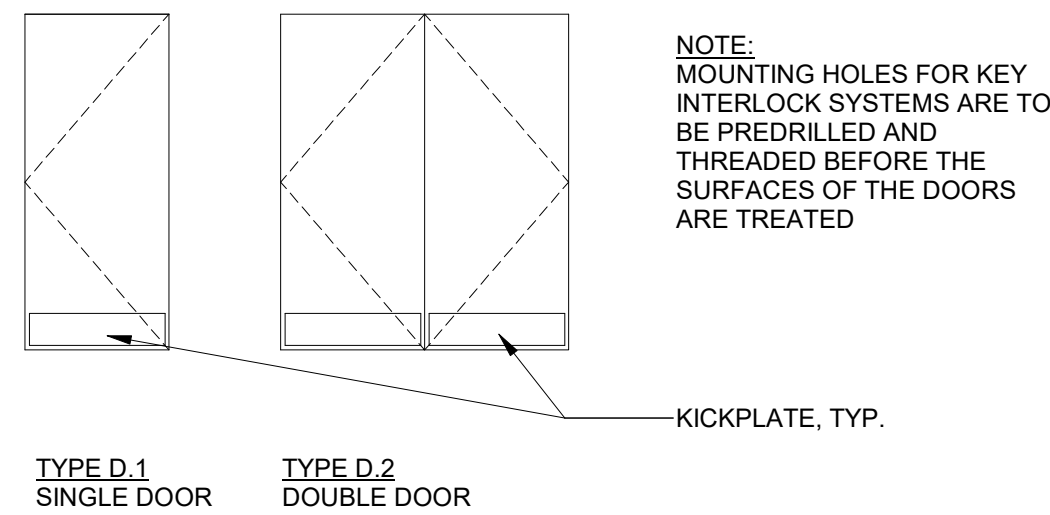
RELAY, MVS AND STORAGE ENCLOSURE DOOR SCHEDULE											
Mark	Door Finish	Door Type	Width	Height	Frame Type	Frame Finish	Head Detail	Jamb Detail	Threshold Detail	Fire Rating	Comments
101.A	SST	D.1	3' - 0"	7' - 0"	F.1	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER
101.B	SST	D.2	6' - 0"	7' - 0"	F.3	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER
102.A	SST	D.1	3' - 0"	7' - 0"	F.1	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER
102.B	SST	D.2	6' - 0"	7' - 0"	F.3	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER
K1	SST	D.3	6' - 0"	7' - 0"	F.3	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER
K2	SST	D.3	5' - 0"	7' - 0"	F.3	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER

FINISH LEGEND				
TAG	FINISH TYPE	MANUFACTURER OR APPROVED EQUAL	COLOR / FINISH	NOTES

ROOM FINISH SCHEDULE						
ROOM NUMBER	ROOM NAME	WALL BASE	FLOOR FINISH	WALL FINISH	CEILING FINISH	REMARKS
K101	RELAY ROOM	VINYL	ACC-1		PT-1	
ME101	CHPE MVS	VINYL	CONC-1	PT-2	PT-1	
ME102	CONED MVS	VINYL	CONC-1	PT-2	PT-1	
	EQUIPMENT PLATFORM 1	-	EP-1		PT-1	
	EQUIPMENT PLATFORM 1	-	EP-1		PT-1	
	EQUIPMENT PLATFORM 2	-	EP-1		PT-1	

COATING FINISH SCHEDULE						
ROOM NUMBER	ROOM NAME	COLUMNS	SECONDARY FRAMING	TRUSSES	ROOF DECK	ROOF FRAMING
	<varies>					
K101	RELAY ROOM					
ME101	CHPE MVS					
ME102	CONED MVS					

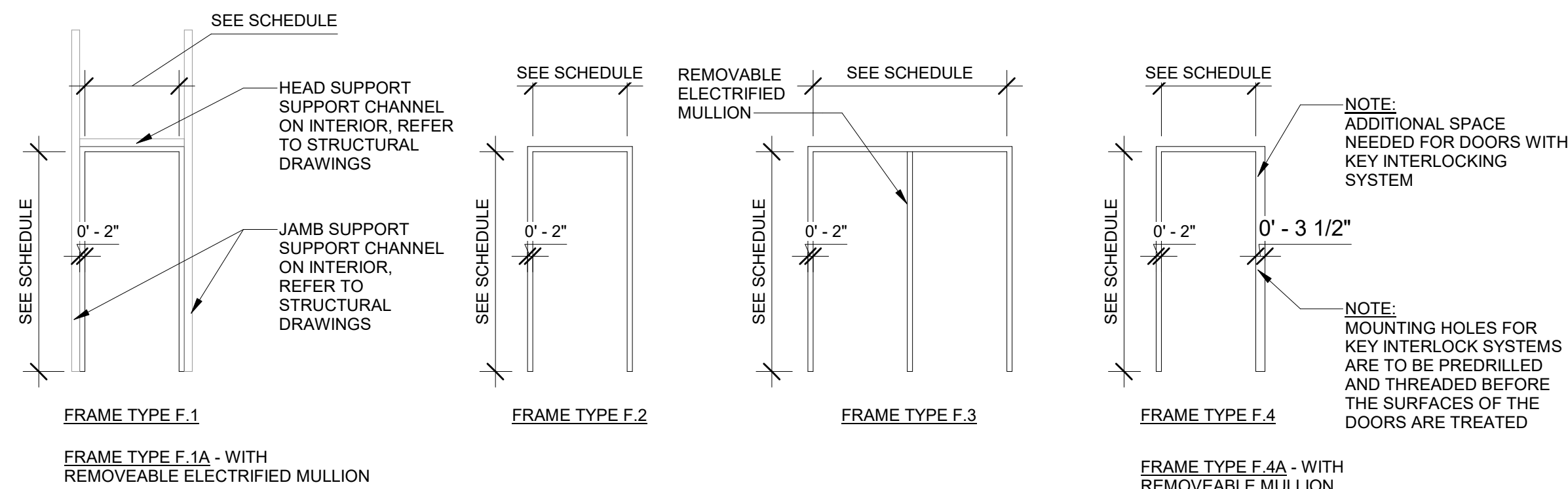
### DOOR TYPE LEGEND



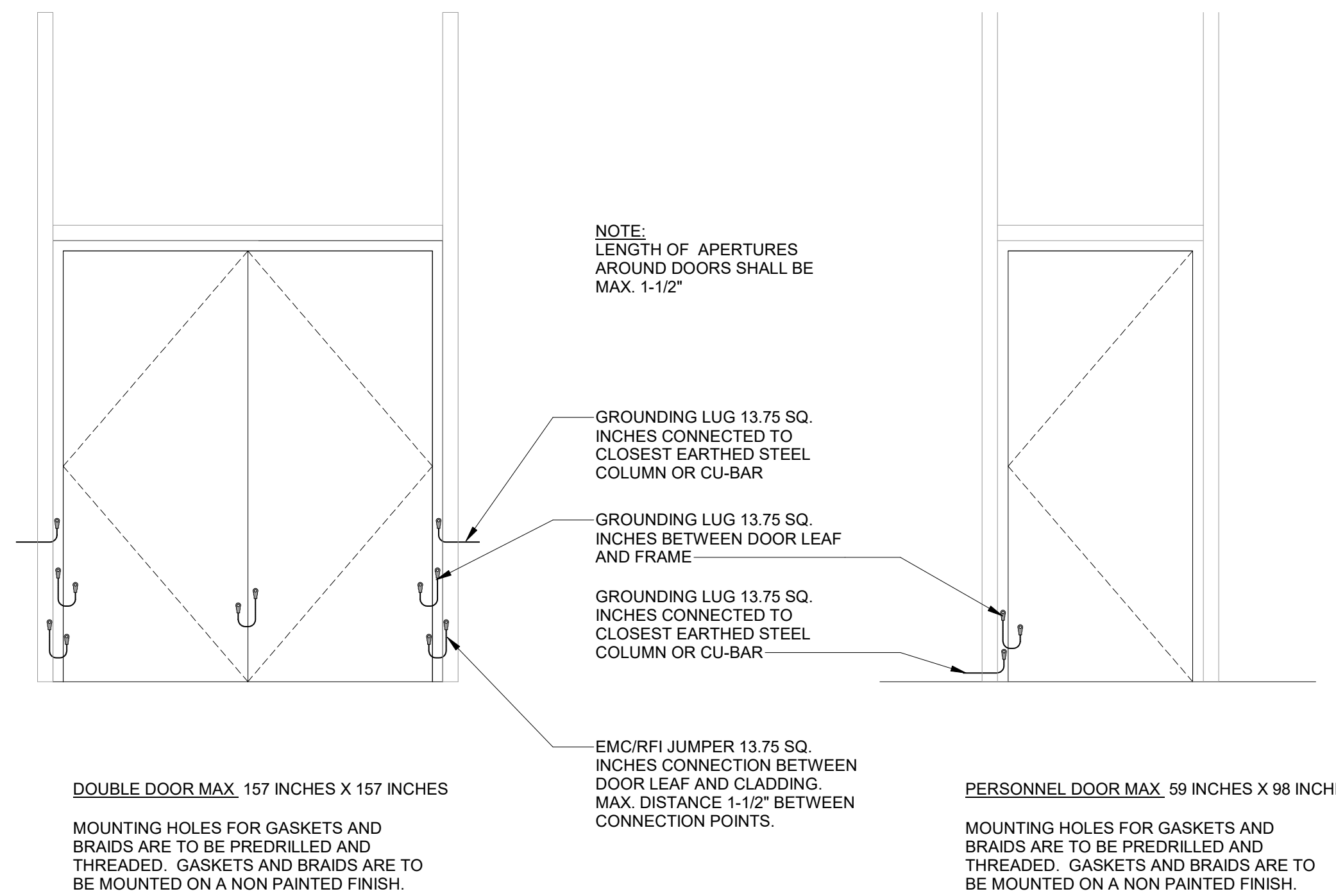
**MAN DOORS**  
ASSA ABLLOY CURRIES - 747 TEMP RISE 450 F TYPE, STEEL STIFFENED, MINERAL WOOL INFILL, HEAVY DUTY INDUSTRIAL DOOR, 14 GAUGE STAINLESS STEEL.

**RADIO FREQUENCY INTERFERENCE DOORS**  
KRIEGER PRODUCTS - CUSTOM OVERSIZED DOOR, STAINLESS STEEL FINISH, ASSUME RFI-60 UNTIL CAN BE CONFIRMED. LARGE DOORS AND LARGE OPENINGS SHALL BE RFI SCREENED. KRIEGER CAN MAKE RATED RFI DOORS (CURRIES CAN NOT MAKE BOTH)

### FRAME TYPE LEGEND



### TYP. GROUNDING AND FRI PROTECTION



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**Engineering and Land Surveying, P.C.**  
370 7th Avenue  
SUITE 1604  
New York, NY 10001

**SOWINSKI SULLIVAN**  
ARCHITECTURE + ENGINEERING  
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Sparta, NJ 07871

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**Kiewit**  
470 Chestnut Ridge Rd # 2,  
Woodcliff Lake, NJ 07677

**Hitachi Energy**  
901 Main Campus Drive  
Raleigh, North Carolina 27606

PROJECT

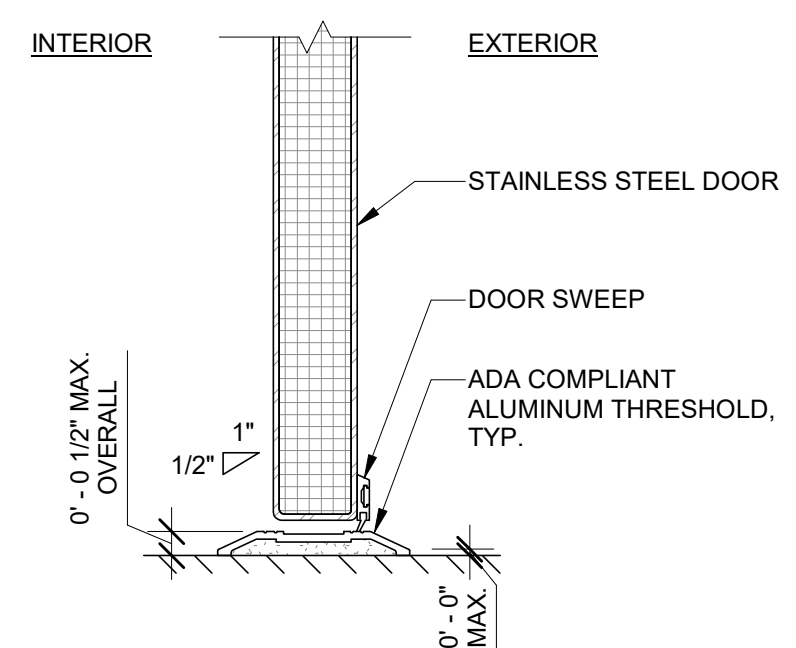
**CHPE**  
Champlain Hudson  
Power Express

**Astoria HVDC Converter Station**  
31-45 20th Avenue, Astoria, Queens NY 11105  
Block #850 - Lot #310 - BIN #4624437

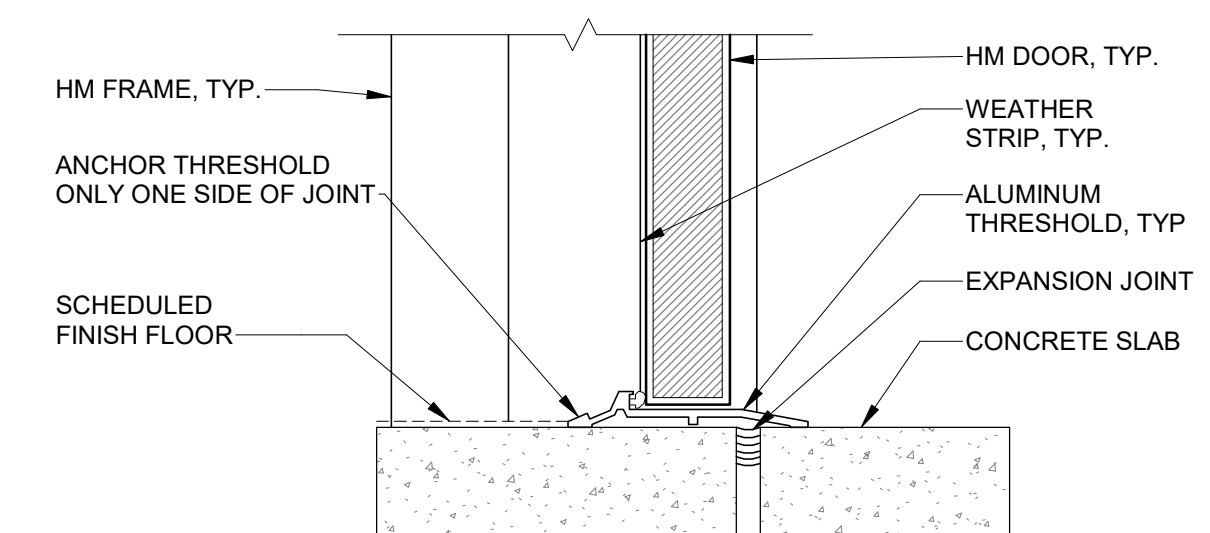
DOOR AND FINISH SCHEDULE

DATE	12/12/2022
PROJECT NO	105121
DRAWING BY	S. WARYAH
CHECKED BY	J. STEPHENS
DRAWING NO	<b>A-601.00</b>
CADD FILE NO	Astoria HVDC - CHPE
Astoria CHA-RE-141-ZZ-M3-A-001.rvt	

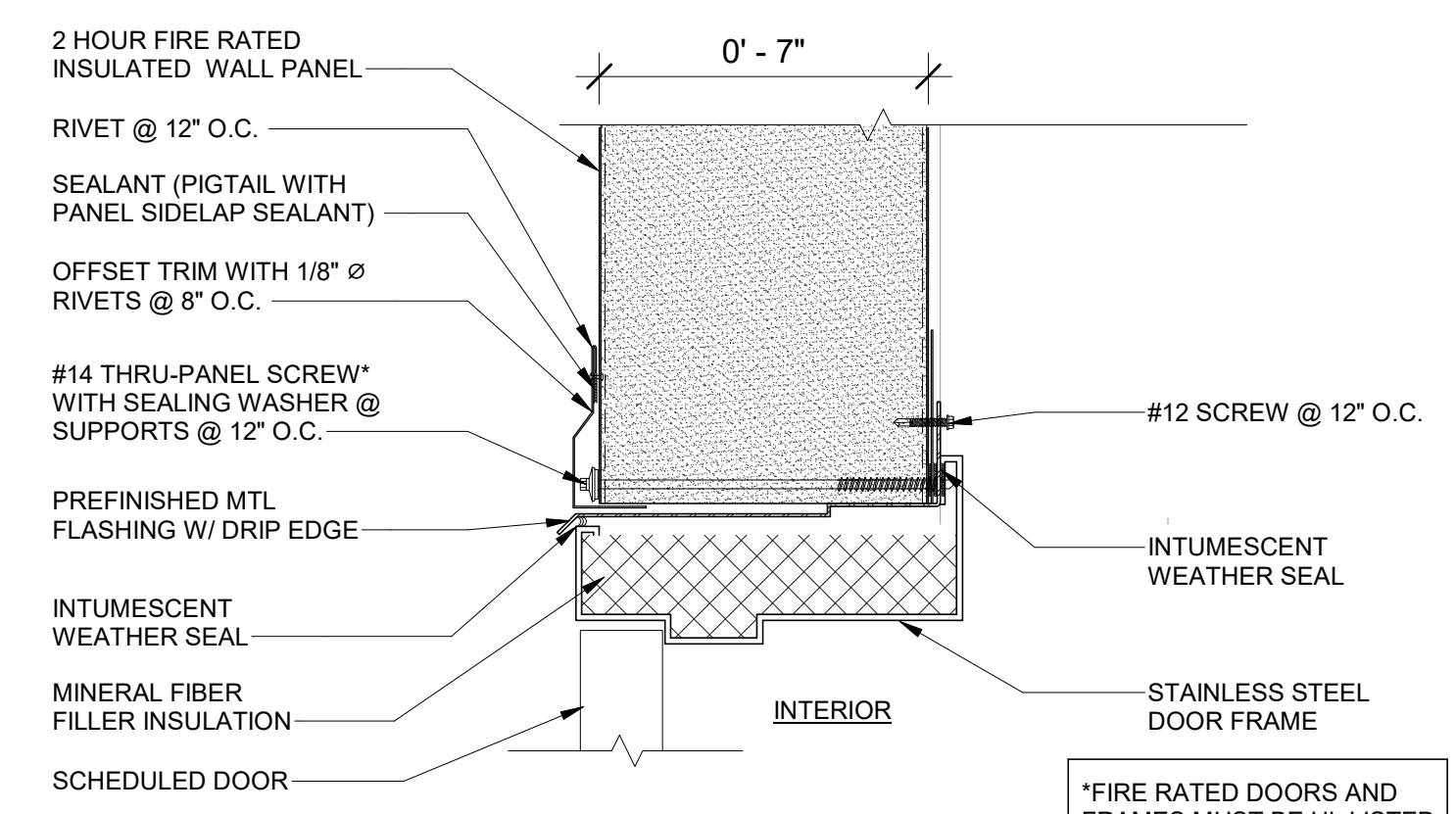
ISSUED FOR PERMIT



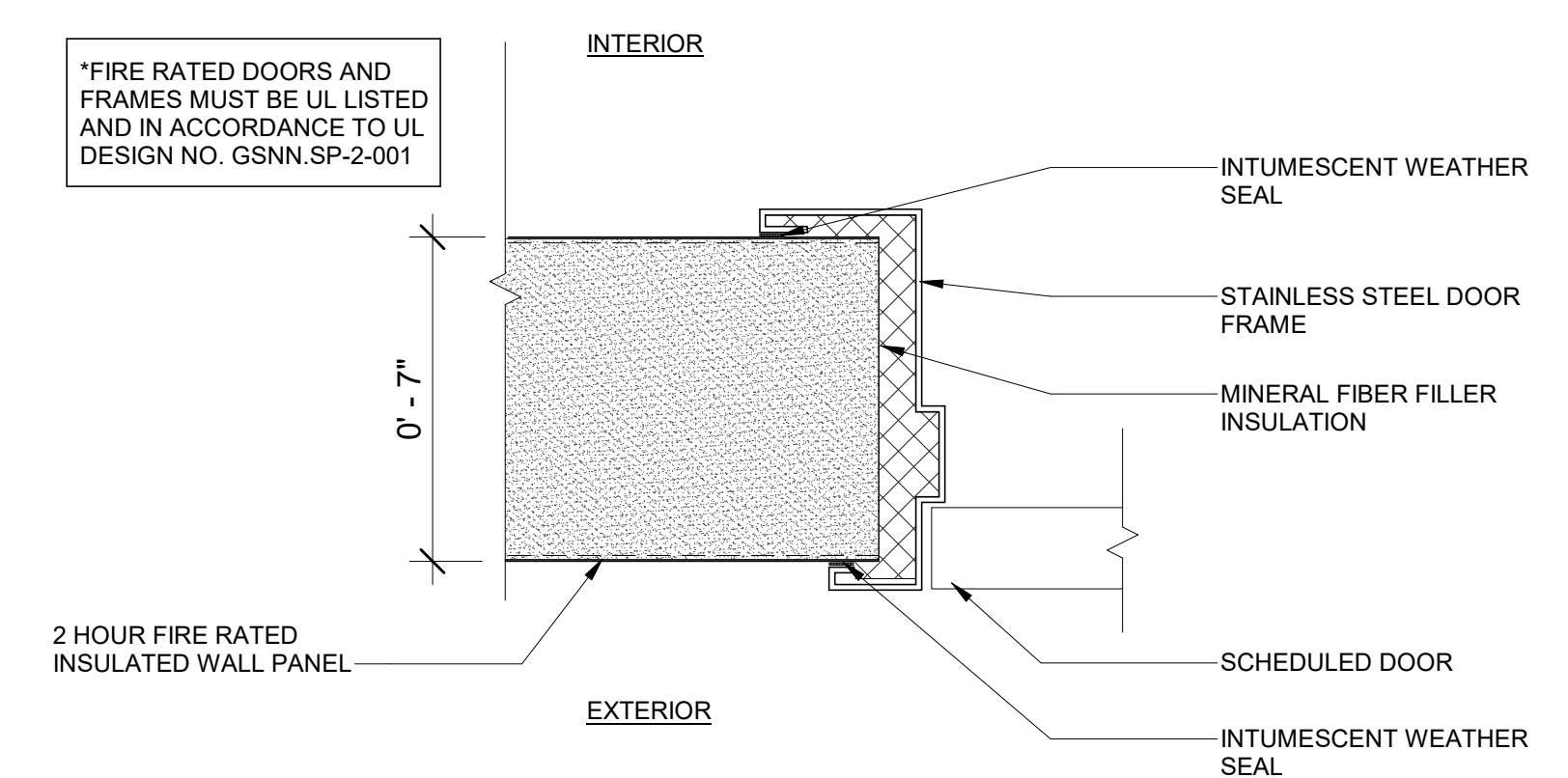
1 HM DOOR THRESHOLD DETAIL  
A-602.00 3" = 1'-0"



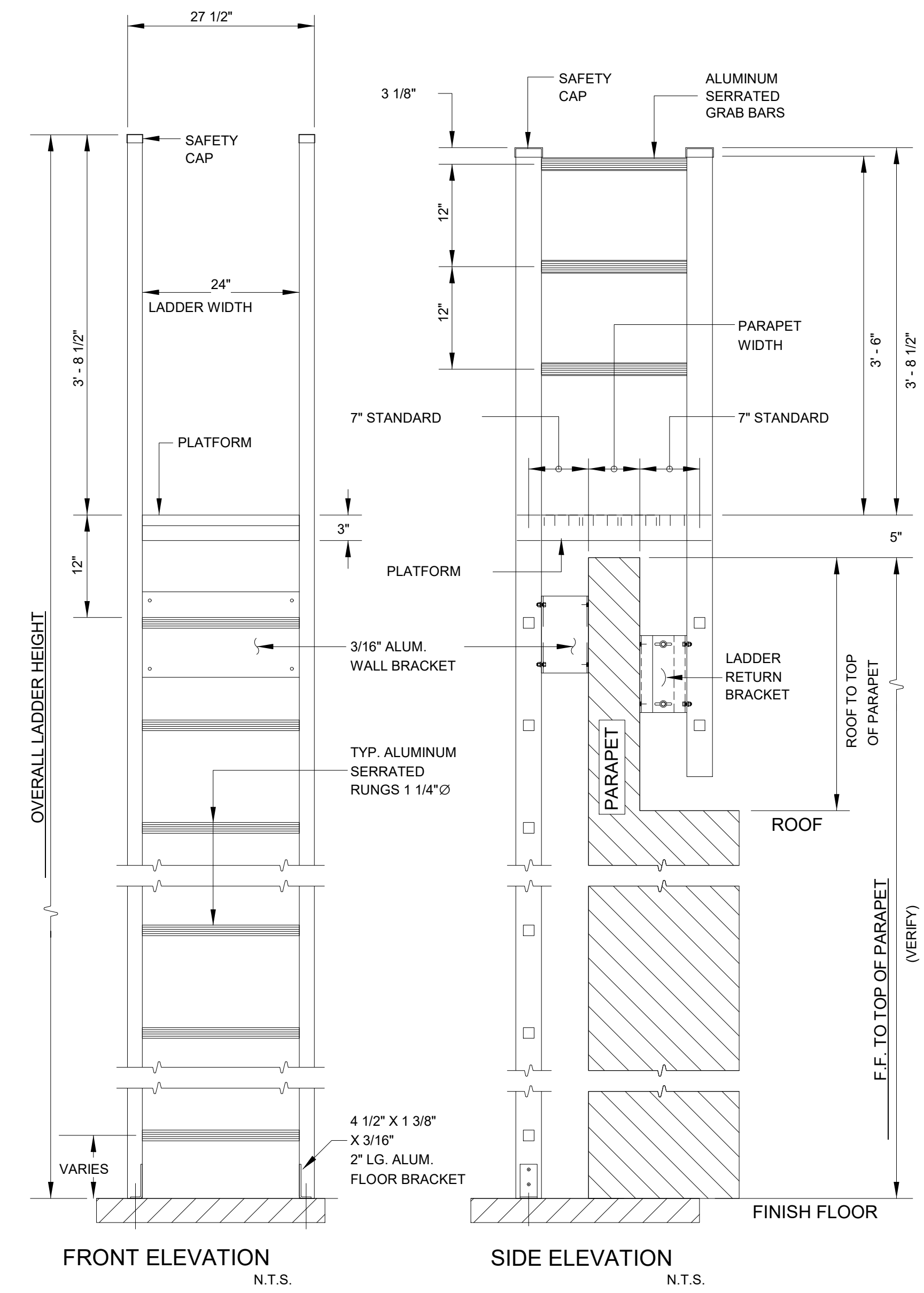
2 HM DOOR FIRE RATED SILL DETAIL  
A-602.00 3" = 1'-0"



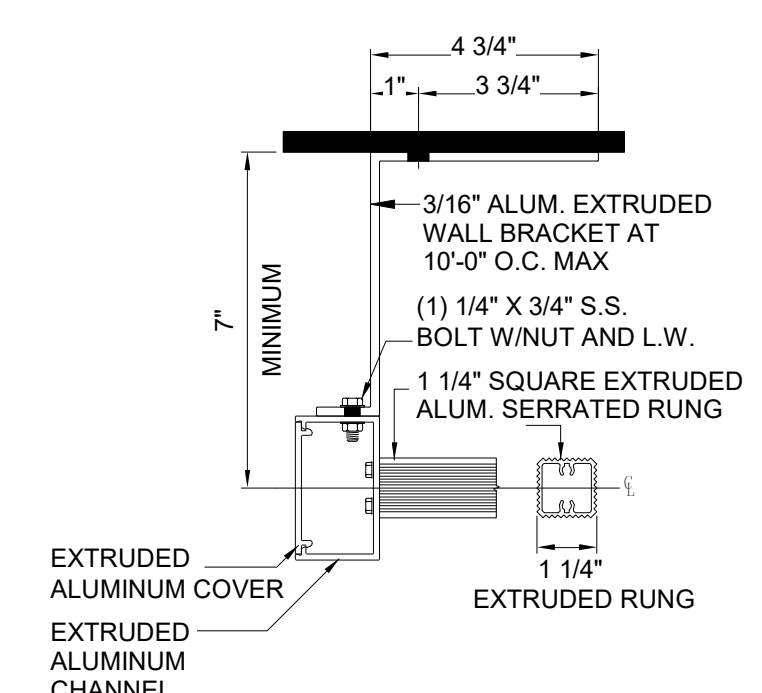
3 TYPICAL EXTERIOR DOOR HEAD DETAIL  
A-602.00 3" = 1'-0"



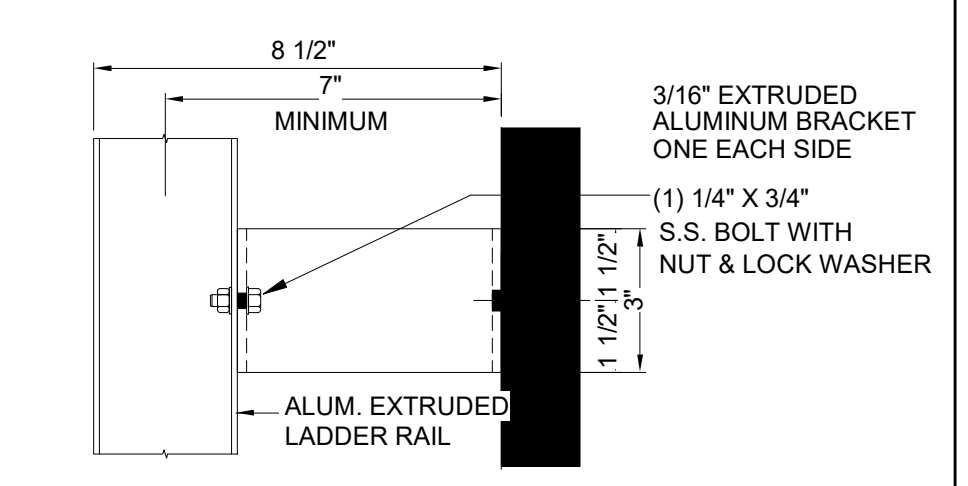
4 TYPICAL EXTERIOR DOOR JAMB DETAIL  
A-602.00 3" = 1'-0"



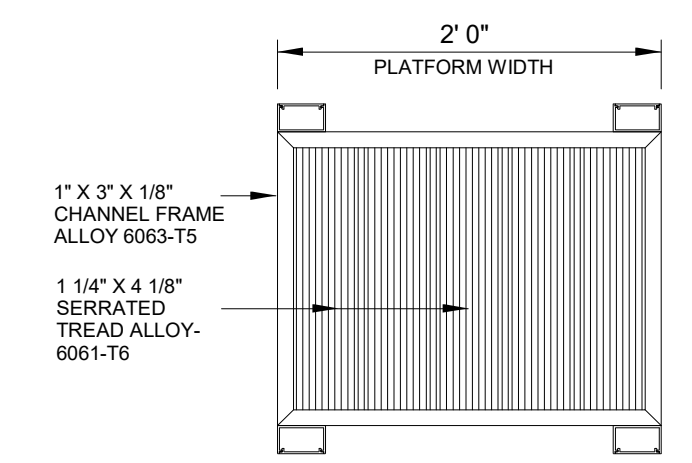
5 MVS & RELAY LADDER ELEVATIONS  
A-602.00 1" = 1'-0"



6 INTERMEDIATE BRACKETS - SIDE VIEW  
A-602.00 3" = 1'-0"



7 INTERMEDIATE BRACKETS - TOP VIEW  
A-602.00 3" = 1'-0"



8 PLATFORM PLAN  
A-602.00 1" = 1'-0"

Engineering and Land Surveying, P.C. 370 7th Avenue SUITE 1604 New York, NY 10001

SOWINSKI SULLIVAN ARCHITECTURE + ENGINEERING 25 Mohawk Avenue Sparta, NJ 07871

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A	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022

Kiewit 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677  
Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT CHPE Champlain Hudson Power Express Astoria HVDC Converter Station 31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

DOOR AND LADDER DETAILS

REGISTERED ARCHITECT STATE OF NEW YORK DATE 12/12/2022 PROJECT NO. 105121 DRAWING BY S. WARYAH CHECKED BY J. STEPHENS DRAWING NO. A-602.00 CADD FILE NO. Astoria HVDC - CHPE Astoria CHA-RE-141-ZZ-M3-A-001.rvt

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 370 7th Avenue  
 SUITE 1604  
 New York, NY 10001

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 25 Mohawk Avenue  
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**Kiewit**  
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**Hitachi Energy**  
 901 Main Campus Drive  
 Raleigh, North Carolina 27606

PROJECT

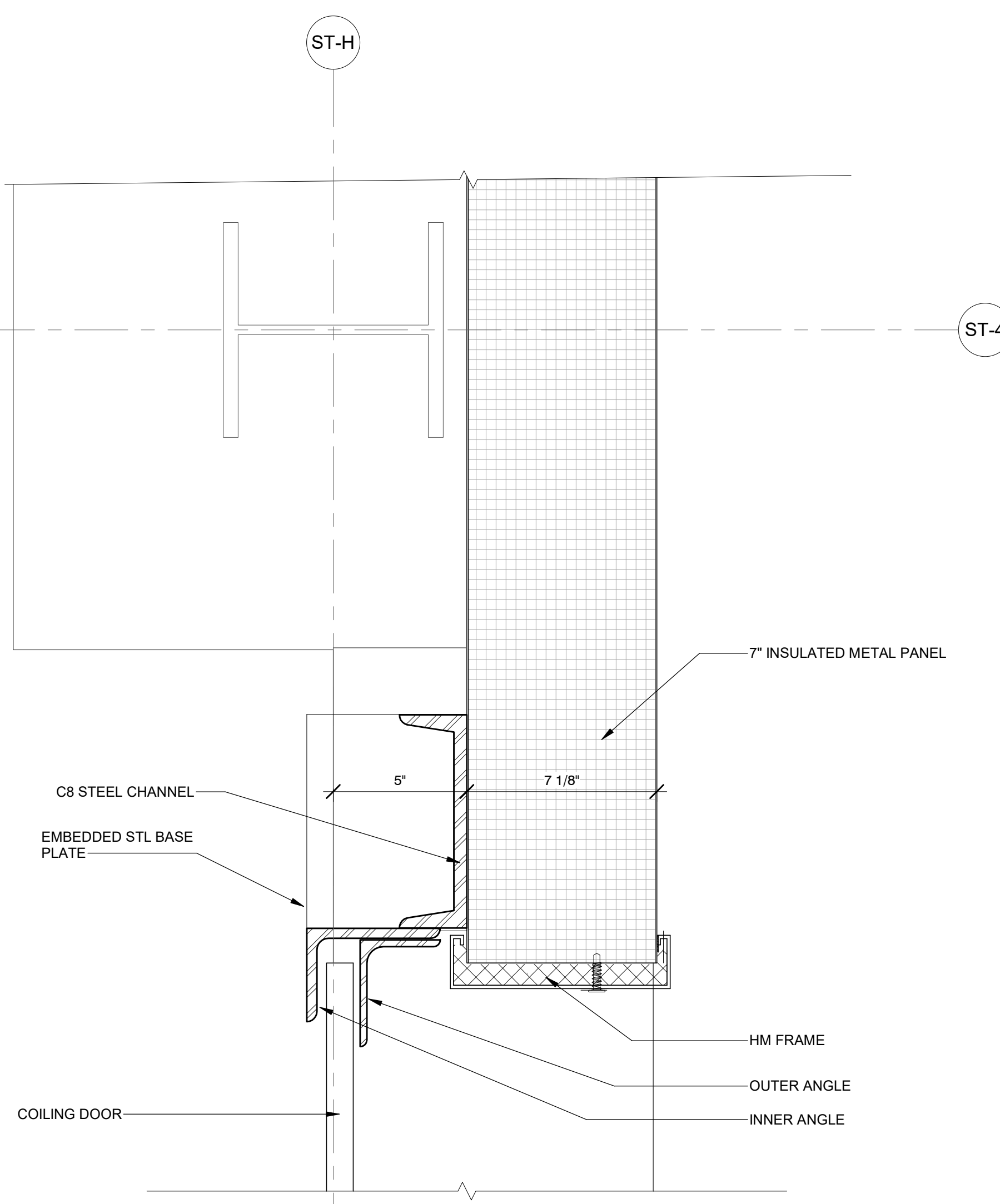
**CHPE**  
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 Power Express

**Astoria HVDC  
 Converter Station**  
 31-45 20th Avenue, Astoria, Queens NY 11105  
 Block #850 - Lot #310 - BIN #4624437

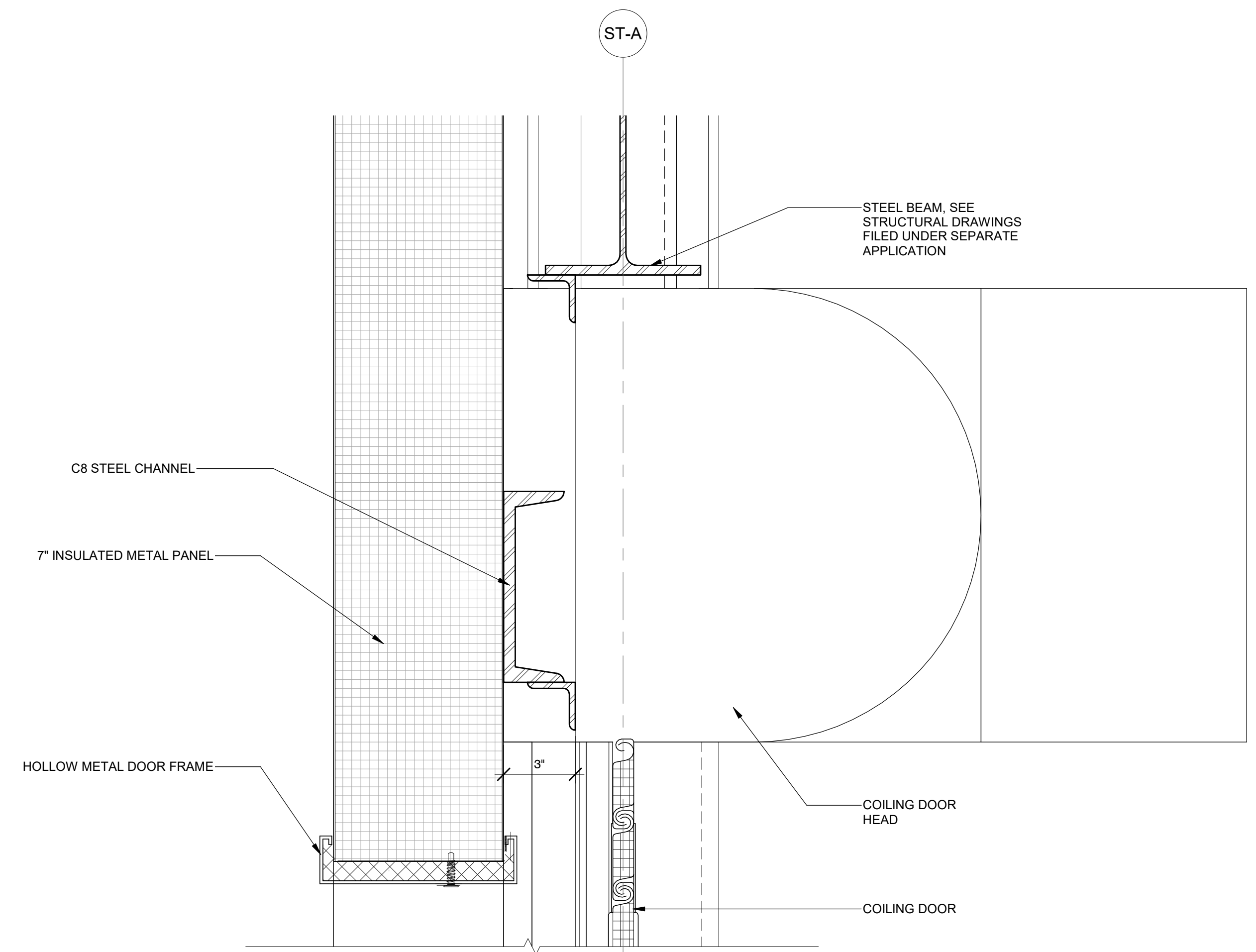
**OVERHEAD COILING DOOR  
 DETAILS**

REGISTERED ARCHITECT  
 STATE OF NEW YORK  
 026049

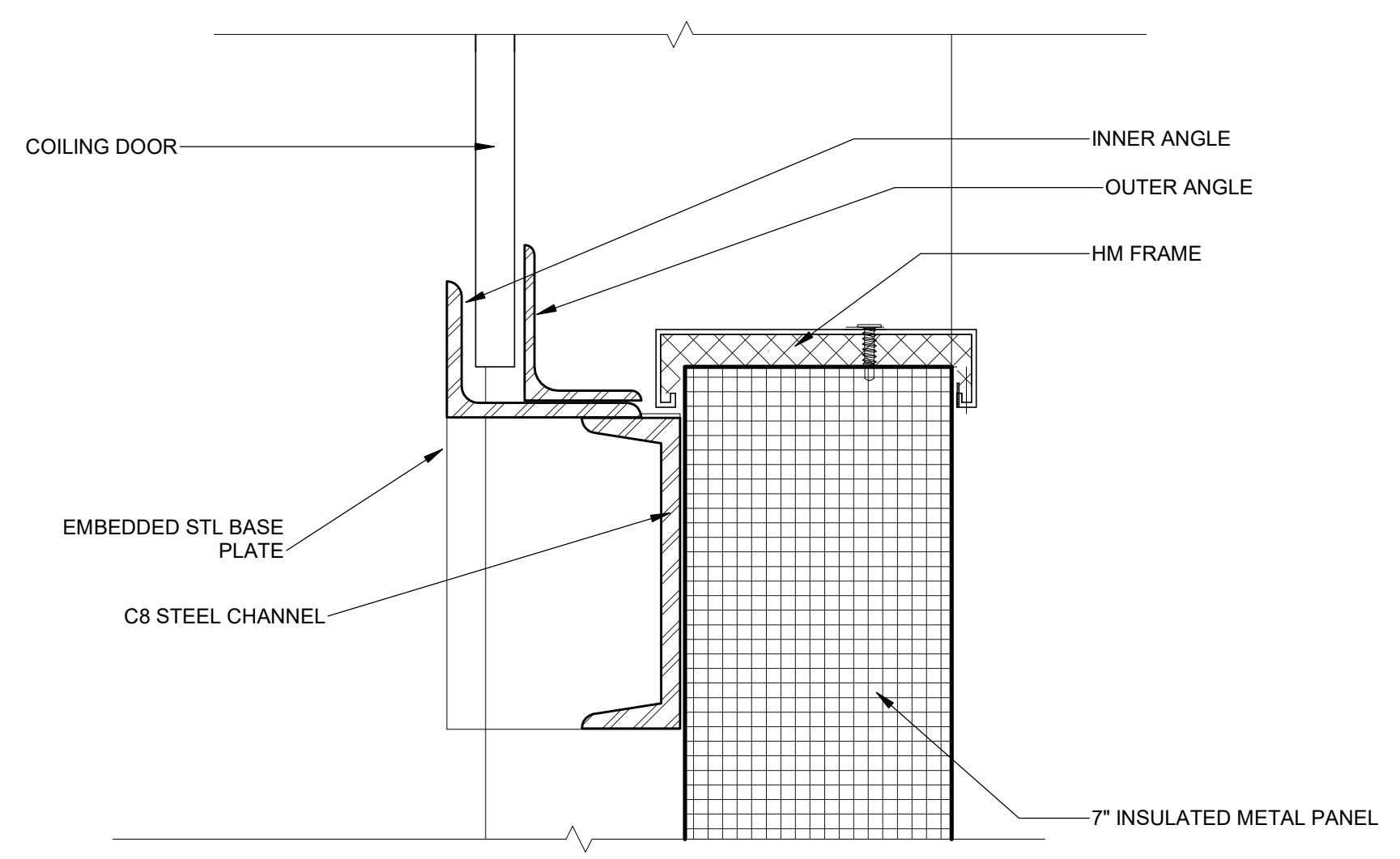
DATE: 12/12/2022  
 PROJECT NO: 105121  
 DRAWING BY: S. WARYAH  
 CHECKED BY: J. STEPHENS  
 DRAWING NO: **A-603.00**  
 CADD FILE NO:  
 Astoria HVDC - CHPE  
 Astoria CHA-RE-130-ZZ-M3-A-001.rvt



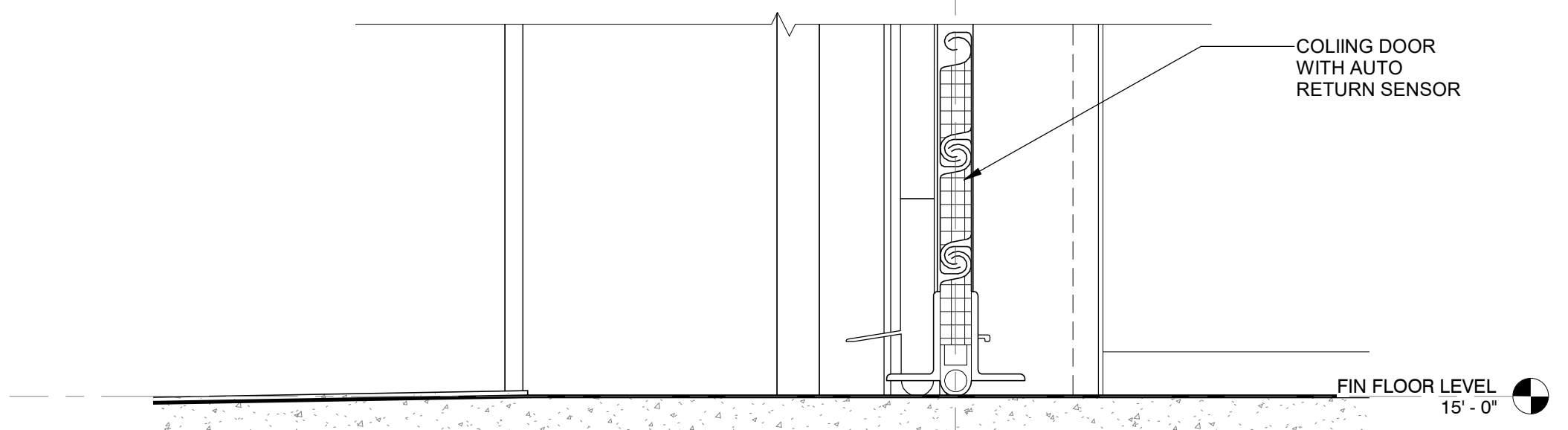
1 STORAGE ENCLOSURE OVERHEAD COILING DOOR JAMB DETAIL  
 A-103.00 3" = 1'-0"



2 HEAD DETAIL OVERHEAD DOOR  
 A-403.00 3" = 1'-0"



3 SILL DETAIL OVERHEAD DOOR  
 A-403.00 3" = 1'-0"

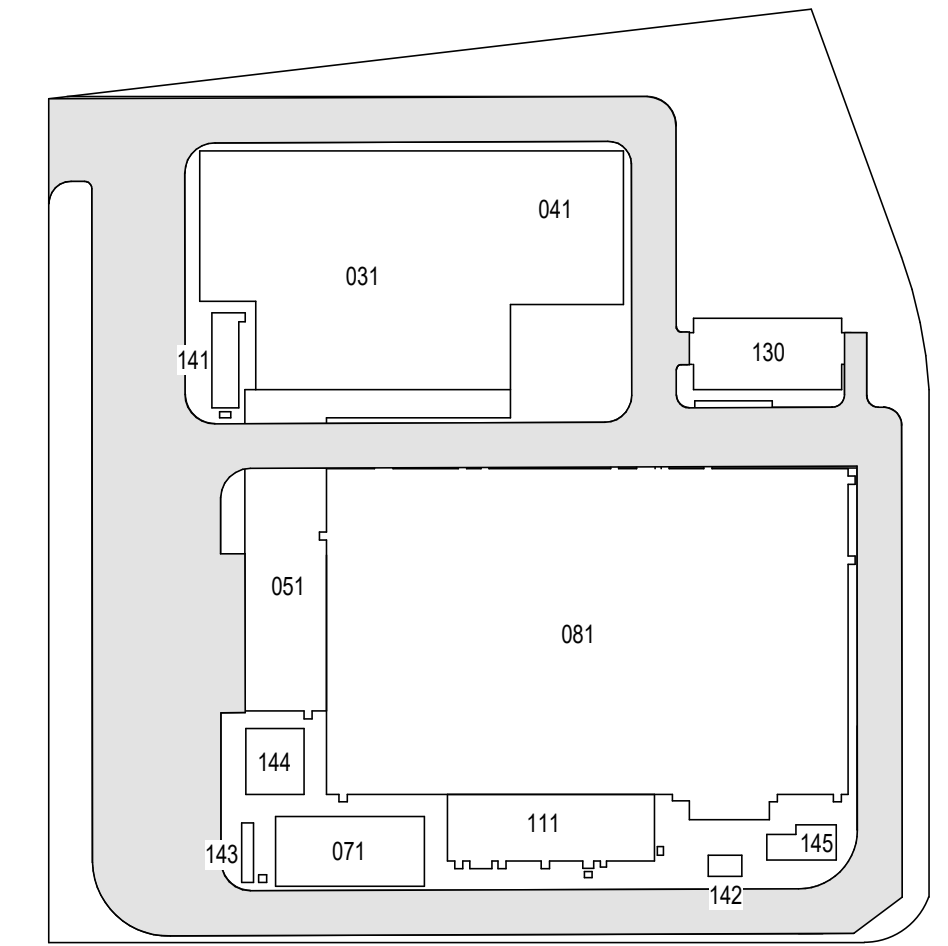


12/21/2022 5:46:45 PM

BOROUGH: QUEENS  
 BLOCK: 850, LOT: 300  
 OWNER: ASTORIA  
 GENERATING COMPANY, L.P.

LEGEND

ISSUED FOR PERMIT



KEY PLAN  
 N.T.S.

Lands Now of Formerly of  
 CONSOLIDATED EDISON  
 COMPANY OF NEW YORK, INC.  
 Block 850 Lot 1

Lands Now of Formerly of  
 CONSOLIDATED EDISON  
 COMPANY OF NEW YORK,  
 INC.  
 Block 850 Lot 1

Lands Now of Formerly of  
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Engineering and  
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 Raleigh, North Carolina 27606

PROJECT

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 Power Express

**Astoria HVDC  
 Converter Station**  
 31-45 20th Avenue, Astoria, Queens NY 11105  
 Block #850 - Lot #310 - BIN #4624437

OVERALL SITE PLAN


REGISTERED ARCHITECT  
 SOWINSKI SULLIVAN  
 STATE OF NEW YORK  
 026049

DATE: 12/12/2022  
 PROJECT NO: 105121  
 DRAWING BY: S. WARYAH  
 CHECKED BY: J. STEPHENS  
 DRAWING NO:  
**EN-100.00**  
 CADD FILE NO:  
 Astoria/CHPE/CHPE  
 Astoria/CHPE/141-ZZ-M3-A-001.rvt

1 OVERALL SITE PLAN Copy 4  
 EN-100.00 1/32" = 1'-0"

12/22/2022 11:15:41 AM





## COMcheck Software Version COMcheckWeb Envelope Compliance Certificate

### Project Information

Energy Code: 90.1 (2016) Standard  
 Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2  
 Location: New York, New York  
 Climate Zone: 4a  
 Project Type: New Construction  
 Performance Sim. Specs: EnergyPlus 8.1.0.009 (EPW: USA\_NY\_NewYork-LaGuardia.AP.725030\_TMY3.epw)

Construction Site: 21-45 20th Avenue, Astoria, Queens NY 11105  
 Owner/Agent: Designer/Contractor: Astoria, Queens, New York 11105

Building Area	Floor Area
1-Storage Enclosure (Manufacturing Facility) : Nonresidential	4486
2-Relay Enclosure (Manufacturing Facility) : Nonresidential	820
3-MVS Enclosure (Manufacturing Facility) : Nonresidential	831

### Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor <sub>req</sub>
Roof: Insulation Entirely Above Deck, [Bldg. Use 1 - Storage Enclosure]	4486	---	35.0	0.028	0.032
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Storage Enclosure] (c)	540	---	---	0.730	0.520
Roof: Insulation Entirely Above Deck, [Bldg. Use 2 - Relay Enclosure]	820	---	35.0	0.028	0.032
Floor: Unheated Slab-On-Grade, [Bldg. Use 2 - Relay Enclosure] (c)	182	---	---	0.730	0.520
Roof: Insulation Entirely Above Deck, [Bldg. Use 3 - MVS Enclosure]	831	---	35.0	0.028	0.032
Floor: Unheated Slab-On-Grade, [Bldg. Use 3 - MVS Enclosure] (c)	540	---	---	0.730	0.520
<b>NORTH</b>					
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 1 - Storage Enclosure] (b)	2124	---	---	0.038	0.064
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 2 - Relay Enclosure] (b)	657	---	---	0.038	0.064
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 3 - MVS Enclosure] (b)	331	---	---	0.038	0.064
<b>EAST</b>					
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 1 - Storage Enclosure] (b)	839	---	---	0.038	0.064
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 2 - Relay Enclosure] (b)	215	---	---	0.038	0.064
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 3 - MVS Enclosure] (b)	735	---	---	0.038	0.064
<b>SOUTH</b>					

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2  
 Data filename: Report date: 12/08/22  
 Page 1 of 12

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor <sub>req</sub>
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 1 - Storage Enclosure] (b)	2124	---	---	0.038	0.064
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 2 - Relay Enclosure] (b)	657	---	---	0.038	0.064
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 3 - MVS Enclosure] (b)	331	---	---	0.038	0.064
<b>WEST</b>					
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 1 - Storage Enclosure] (b)	839	---	---	0.038	0.064
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Storage Enclosure]	295	---	---	0.570	0.310
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 2 - Relay Enclosure] (b)	216	---	---	0.038	0.064
Door: Insulated Metal, Non-Swinging, [Bldg. Use 2 - Relay Enclosure]	84	---	---	0.570	0.310
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 3 - MVS Enclosure] (b)	735	---	---	0.038	0.064
Door: Insulated Metal, Non-Swinging, [Bldg. Use 3 - MVS Enclosure]	126	---	---	0.570	0.310

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.  
 (b) 'Other' components require supporting documentation for proposed U-factors.  
 (c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.


Envelope PASSES: Design 0.1% better than code

### Envelope Compliance Statement

*Compliance Statement:* The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2016) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2  
 Data filename: Report date: 12/08/22  
 Page 2 of 12



## COMcheck Software Version COMcheckWeb Interior Lighting Compliance Certificate

### Project Information

Energy Code: 90.1 (2016) Standard  
 Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2  
 Project Type: New Construction

Construction Site: 21-45 20th Avenue, Astoria, Queens NY 11105  
 Owner/Agent: Designer/Contractor: Astoria, Queens, New York 11105

### Allowed Interior Lighting Power

### Proposed Interior Lighting Power

Interior Lighting TBD: No lighting fixtures specified

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2  
 Data filename: Report date: 12/08/22  
 Page 3 of 12

ISSUED FOR PERMIT

Engineering and Land Surveying, P.C. 370 7th Avenue SUITE 1604 New York, NY 10001

SOWINSKI SULLIVAN ARCHITECTURE+ENGINEERING 25 Mohawk Avenue Sparta, NJ 07871

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B	FINAL SUBMISSION	VSP	EK	12/12/2022
A	INTERIM SUBMISSION	VSP	EK	09/13/2022

REV	DESCRIPTION	DRW BY	CHK BY	DATE


Kiewit 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677  
 Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT **CHPE**  
 Champlain Hudson Power Express

**Astoria HVDC Converter Station**  
 31-45 20<sup>th</sup> Avenue, Astoria, Queens NY 11105  
 Block #850 - Lot #310 - BIN #4624437

ENERGY COMPLIANCE ARCHITECTURE - 1

DATE	12/12/2022
PROJECT NO	105121
DRAWING BY	Author
CHECKED BY	Designer
DRAWING NO	<b>EN-101.00</b>
CADD FILE NO	Astoria/CHA-RE-141-ZZ-M3-A-001.rvt



## COMcheck Software Version COMcheckWeb Exterior Lighting Compliance Certificate

### Project Information

Energy Code: 90.1 (2016) Standard  
 Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2  
 Location: New York, New York  
 Climate Zone: 4a  
 Project Type: New Construction  
 Exterior Lighting Zone: 0 (Unspecified)

Construction Site: 21-45 20th Avenue, Astoria, Queens NY 11105  
 Owner/Agent: Designer/Contractor: Astoria, Queens, New York 11105

### Allowed Exterior Lighting Power


A	B	C	D	E
Area/Surface Category	Quantity	Allowed Watts /	Tradable Wattage	Allowed Watts (B X C)
		Total Tradable Watts (a) =		0
		Total Allowed Watts =		0
		Total Allowed Supplemental Watts (b) =		350

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.  
 (b) A supplemental allowance equal to 350 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

### Proposed Exterior Lighting Power

Exterior Lighting TBD: Exterior lighting zone not specified (see project screen)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2  
 Data filename: Report date: 12/08/22  
 Page 4 of 12



## COMcheck Software Version COMcheckWeb Mechanical Compliance Certificate

### Project Information

Energy Code: 90.1 (2016) Standard  
 Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2  
 Location: New York, New York  
 Climate Zone: 4a  
 Project Type: New Construction

Construction Site: 21-45 20th Avenue, Astoria, Queens NY 11105  
 Owner/Agent: Designer/Contractor: Astoria, Queens, New York 11105

### Mechanical Systems List

Quantity System Type & Description

### Mechanical Compliance Statement

*Compliance Statement:* The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2016) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2  
 Data filename: Report date: 12/08/22  
 Page 5 of 12



Inspection Checklist

Energy Code: 90.1 (2016) Standard

Requirements: 100.0% were addressed directly in the COMcheck software
Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen.

Table with 4 columns: Section # & Req.ID, Plan Review, Complies?, Comments/Assumptions. Rows include 4.2.2, 4.2.4, 5.8.1.2, 5.5.3.5, 5.8.1.7, 5.8.1.7.3, 6.4.4.1.5.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Report date: 12/08/22
Data filename: Page 6 of 12

Table with 6 columns: Section # & Req.ID, Footing / Foundation Inspection, Plans Verified Value, Field Verified Value, Complies?, Comments/Assumptions. Rows include 4.2.4, 5.8.1.2, 5.5.3.5, 5.8.1.7, 5.8.1.7.3, 6.4.4.1.5.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Report date: 12/08/22
Data filename: Page 7 of 12

Table with 6 columns: Section # & Req.ID, Framing / Rough-In Inspection, Plans Verified Value, Field Verified Value, Complies?, Comments/Assumptions. Rows include 5.4.3.2, 5.4.3.4, 5.5.4.3a, 5.5.4.3b, 5.5.4.4.1, 5.5.4.4.2, 5.8.2.1, 5.8.2.2, 5.8.2.3, 5.8.2.4, 5.8.2.5, 5.8.2.6, 5.8.2.7, 5.8.2.8, 5.8.2.9, 5.8.2.10, 5.8.2.11, 5.8.2.12, 5.8.2.13, 5.8.2.14, 5.8.2.15, 5.8.2.16, 5.8.2.17, 5.8.2.18, 5.8.2.19, 5.8.2.20, 5.8.2.21, 5.8.2.22, 5.8.2.23, 5.8.2.24, 5.8.2.25, 5.8.2.26, 5.8.2.27, 5.8.2.28, 5.8.2.29, 5.8.2.30, 5.8.2.31, 5.8.2.32, 5.8.2.33, 5.8.2.34, 5.8.2.35, 5.8.2.36, 5.8.2.37, 5.8.2.38, 5.8.2.39, 5.8.2.40, 5.8.2.41, 5.8.2.42, 5.8.2.43, 5.8.2.44, 5.8.2.45, 5.8.2.46, 5.8.2.47, 5.8.2.48, 5.8.2.49, 5.8.2.50, 5.8.2.51, 5.8.2.52, 5.8.2.53, 5.8.2.54, 5.8.2.55, 5.8.2.56, 5.8.2.57, 5.8.2.58, 5.8.2.59, 5.8.2.60, 5.8.2.61, 5.8.2.62, 5.8.2.63, 5.8.2.64, 5.8.2.65, 5.8.2.66, 5.8.2.67, 5.8.2.68, 5.8.2.69, 5.8.2.70, 5.8.2.71, 5.8.2.72, 5.8.2.73, 5.8.2.74, 5.8.2.75, 5.8.2.76, 5.8.2.77, 5.8.2.78, 5.8.2.79, 5.8.2.80, 5.8.2.81, 5.8.2.82, 5.8.2.83, 5.8.2.84, 5.8.2.85, 5.8.2.86, 5.8.2.87, 5.8.2.88, 5.8.2.89, 5.8.2.90, 5.8.2.91, 5.8.2.92, 5.8.2.93, 5.8.2.94, 5.8.2.95, 5.8.2.96, 5.8.2.97, 5.8.2.98, 5.8.2.99, 5.8.2.100.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Report date: 12/08/22
Data filename: Page 8 of 12

Table with 4 columns: Section # & Req.ID, Rough-In Electrical Inspection, Complies?, Comments/Assumptions. Rows include 8.4.2, 8.4.3.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Report date: 12/08/22
Data filename: Page 9 of 12

Table with 6 columns: Section # & Req.ID, Insulation Inspection, Plans Verified Value, Field Verified Value, Complies?, Comments/Assumptions. Rows include 4.2.4, 5.8.1.2, 5.8.1.3, 4.2.4, 5.8.1.2, 4.2.4, 5.8.1.2, 4.2.4, 5.8.1.1, 5.8.1.9, 5.8.1.4, 5.8.1.5, 5.8.1.6, 5.8.1.7.1.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Report date: 12/08/22
Data filename: Page 10 of 12

ISSUED FOR PERMIT

Engineering and Land Surveying, P.C. 370 7th Avenue SUITE 1604 New York, NY 10001

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Table with 4 columns: B, A, REV, DESCRIPTION. Rows include FINAL SUBMISSION, INTERIM SUBMISSION.

Kiewit 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677 Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT CHPE Champlain Hudson Power Express

Astoria HVDC Converter Station 31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

ENERGY COMPLIANCE ARCHITECTURE - 2

REGISTERED ARCHITECT STATE OF NEW YORK DATE 12/12/2022 PROJECT NO 105121 DRAWING BY Author CHECKED BY Designer DRAWING NO EN-102.00 CADD FILE NO Astoria/CHA-RE-141-ZZ-M3-A-001.rvt

Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.8.1.7.2 [N16]²	Foundation vents do not interfere with insulation.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
5.8.1.8 [N17]¹	Insulation intended to meet the roof insulation requirements cannot be installed on top of a suspended ceiling. Mark this requirement compliant if insulation is installed accordingly.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Report date: 12/08/22  
 Data filename: Page 11 of 12

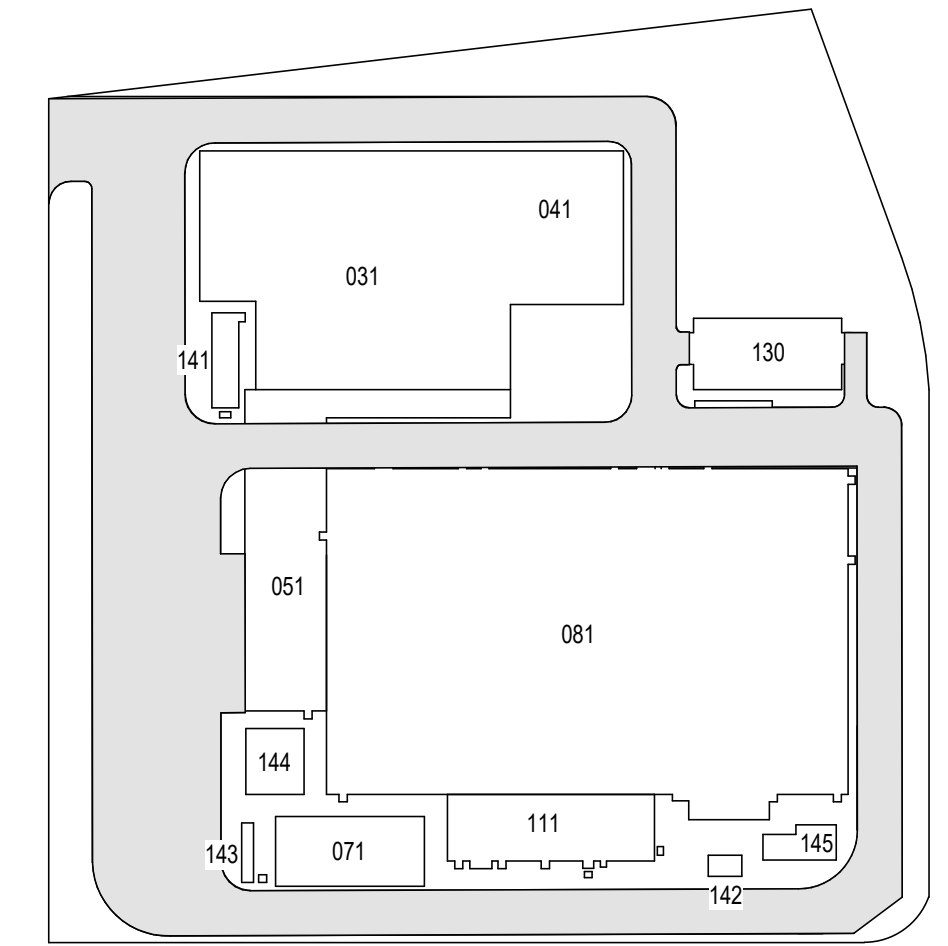
Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
5.4.3.3 [F1]¹	Weatherseals installed on all loading dock cargo doors in Climate Zones 4-8.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Report date: 12/08/22  
 Data filename: Page 12 of 12

ISSUED FOR PERMIT



KEY PLAN N.T.S. PLAN NORTH N

Engineering and Land Surveying, P.C. 370 7th Avenue SUITE 1604 New York, NY 10001

SOWINSKI SULLIVAN ARCHITECTURE+ENGINEERING 25 Mohawk Avenue Sparta, NJ 07871

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REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	VSP	EK	12/12/2022
A	INTERIM SUBMISSION	VSP	EK	09/13/2022

Kiewit 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677  
 Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT CHPE Champlain Hudson Power Express  
 Astoria HVDC Converter Station  
 31-45 20th Avenue, Astoria, Queens NY 11105  
 Block #850 - Lot #310 - BIN #4624437

ENERGY COMPLIANCE ARCHITECTURE - 3

REGISTERED ARCHITECT SOWINSKI SULLIVAN ARCHITECTURE+ENGINEERING STATE OF NEW YORK 026049  
 DATE: 12/12/2022  
 PROJECT NO: 105121  
 DRAWING BY: Author  
 CHECKED BY: Designer  
 DRAWING NO: EN-103.00  
 CADD FILE NO: Astoria HVDC - CHPE Astoria CHA-RE-141-ZZ-M3-A-001.rvt

PLAN NORTH N