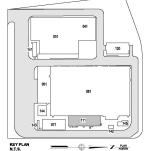


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25 Mohawk Avenue Sparts, NJ 07871

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470 Chestnut Ridge Rd # 2, 901 Main Campus Woodcliff Lake, NJ 07677 Raleigh, North Ca

PROJECT



Astoria HVDC Converter Station

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

SERVICE BUILDING 2ND FLOOR POWER PLAN



DATE 12112/2022

PROJECT NO 109121

DRAWNEG BY XLIJ

CHECKED BY D.DLZAN

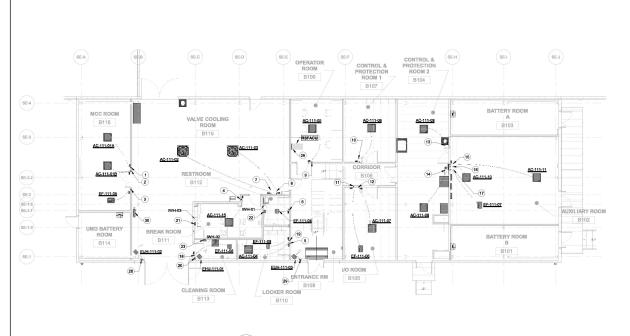
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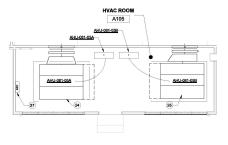
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HVAC POWER PLAN SERVICE BUILDING LEVEL 1



2 HVAC ROOM FOR DC A105 HVAC POWER E-125.00 1/8" = 1'-0"

REFER TO SHEET E-001.00 FOR GENERAL NOTES.
REFER TO SHEET E-860.00 FOR CABLE/CONDUIT SCHEDULE.
REFER TO MECHANICAL PACKAGE FOR HYAC DEVICES DETAILS
INCLUDING ELECTRICAL LOAD CHARACTERISTICS.

- PROVIDE MOTOR RATED DISCONNECT SWITCH MS-AC-111-01A, CONNECT TO CIRCUIT PNL-111-X3.N2.1.1-15,17 WITH CABLE NUMBER CA-K1-M-111-100.
- PROVIDE MOTOR RATED DISCONNECT SWITCH MS-AC-111-01B. CONNECT TO CIRCUIT PNL-111-X3.N2.1.1-16,17 WITH CABLE NUMBER CA-K1-M-111-100.
- PROVIDE MOTOR RATED DISCONNECT SWITCH MSEE-11-10. CONNECT TO CIRCUIT PN.-111-X3NZ-1.1-18 WITH CABLE NUMBER CA-K1-M-111-10. PROVIDE MOTOR RATED DISCONNECT SWITCH MS-AC-111-X5. CONNECT TO CIRCUIT PN.-111-X3NZ-1.1-19.ZI WITH CABLE NUMBER CA-K1-M-111-10. CONNECT TO CIRCUIT PN.-111-X3NZ-1.1-19.ZI WITH CABLE NUMBER CA-K1-M-111-10.ZI X1-11-19.ZI WITH CABLE NUMBER CA-K1-M-111-10.ZI X1-11-19.ZI WITH CABLE NUMBER CA-K1-M-111-10.ZI X1-11-10.ZI X

- PROVIDE MOTOR RATED DISCONNECT SWITCH MS-AC-111-04. CONNECT TO CIRCUIT PNL-111-38 NA2.1.1-19.21 WITH CABLE NUMBER CA-K1-M-111-102. PROVIDE MOTOR RATED DISCONNECT SWITCH MS-EF-111-04. CONNECT TO CIRCUIT PNL-111-38 N2.1.1-3 WITH CABLE NUMBER CA-K1-M-111-104.

- CIRCUIT PN.-11-X3.N2.1.1-3 WITH CABLE NUMBER CA-K14-M11-104.
  PROVIDE MOTOR PATED DISCONNECT SWITCH MASCH-11-102. CONNECT TO PROVIDE MOTOR NATED DISCONNECT SWITCH MASCH-11-02. CONNECT TO PROVIDE MOTOR NATED DISCONNECT SWITCH MASCH-11-03. CONNECT SWITCH MA
- PROVIDE MOTOR RATED DISCONNECT SWITCH MS-AC-111-06, CONNECT TO CIRCUIT PNL-111-X3.N2.1.1-14,16 WITH CASLE NUMBER CA-K1-M-111-101. PROVIDE MOTOR RATED DISCONNECT SWITCH MS-ET-11-168, CONNECT TO CIRCUIT PNL-111-X3.N2.1.1-3 WITH CABLE NUMBER CA-K1-M-111-104.
- UPINGUIT PNL-11-X3.NC.1.1-3 WITH CABILE NUMBER CAPKT-M-11-1198.

  12. PROVIDE MOTOR RATED DISCONNECT SWITCH MS.A-C.11-107. CONNECT TO CIRCUIT PNL-11-X3.NC.1.1-19.2 WITH CABILE NUMBER CA-K1-M-111-102.

  13. PROVIDE MOTOR RATED DISCONNECT SWITCH MS.A-C.111-09. CONNECT TO CIRCUIT PNL-111-X3.NC.1.1-14,16 WITH CABILE NUMBER CA-K1-M-111-101.

- 14 PROVIDE MOTOR RATED DISCONNECT SWITCH MS-AC-111-08, CONNECT TO CIRCUIT PNL-111-X3.N2.1.1-19,21 WITH CABLE NUMBER CA-K1-M-111-102.
- 5 PROVIDE MOTOR RATED DISCONNECT SWITCH MSA-CH-11-1, CONNECT TO CIRCUIT PNL-111-28. N2.1-14.16 WITH CABLE NUMBER CA-K1-M-11-101.

  8 PROVIDE MOTOR RATED DISCONNECT SWITCH MSA-CH-11-0, CONNECT TO CIRCUIT PNL-111-28.N2.1.1-4,16 WITH CABLE NUMBER CA-K1-M-11-101.
- PROVIDE MOTOR RATED DISCONNECT SWITCH MS-EF-111-07.
  PROVIDE MOTOR RATED DISCONNECT SWITCH MS-EF-111-07.
  CIRCUIT PNL-111-X33.21.1-3 WITH CABLE NUMBER CA-K1-M-111-104.
  PROVIDE MOTOR RATED DISCONNECT SWITCH MS-EF-111-08. CONNECT TO CIRCUIT PNL-111-X3.N2.1-1-18 WITH CABLE NUMBER CA-K1-M-111-105.

- PROVIDE MOTOR RATED DISCONNECT SWITCH MS-EF-111-09, CONNECT TO CIRCUIT PNL-111-X3.N2.1.1-18 WITH CABLE NUMBER CA-K1-M-111-105.
- 20 PROVIDE DISCONNECT SWITCH DS-EHU-111-01. CONNECT TO CIRCUIT PNL-111-X3.N2.1-8.10.12 WITH CABLE NUMBER CA-K1-M-111-106.
- 21 PROVIDE DISCONNECT SWITCH DS-IWH-03,240V,100A,2P, CONNECT TO CIRCUIT PNL-111-X3.N2.1.3-9,11 WITH CABLE NUMBER CA-K1-PL-111-100.

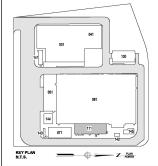
- 24 AHU-081-05A AIR HANDLING UNIT SHALL BE FED FROM SWITCHBOARD X1.N2.UC1. REFER TO E-301.00 FOR DETAILS.
  25 AHU-081-056 AIR HANDLING UNIT SHALL BE FED FROM SWITCHBOARD X1.N2.UC2. REFER TO E-301.00 FOR DETAILS.
- 28 RELEASING SERVICE FIRE ALARM CONTROL UNIT. REFER TO FIRE ALARM PACKAGE FOR DETAILS. CONNECT TO CIRCUIT PNL-ENG-111-X3.N2.11.1-7 WITH CABLE NUMBER CA-K1-F-111-100.
- 27 CONNECT TO CIRCUIT PNL-ENG-111-X3.N2.11.1-11 WITH CABLE NUMBER CA-K1-F-111.104.
- GAK1-F-111.104.

  28 PROVIDE DISCONNECT SWITCH DS-EHU-111-02. CONNECT TO CIRCUIT PNL-111.X3.N2.1-19.21.23 WITH CABLE NUMBER CAK1-M-11-115.

  PROVIDE DISCONNECT SWITCH DS-EHU-111-03. CONNECT TO CIRCUIT PNL-111.X3.N2.1-20.22.24 WITH CABLE NUMBER CAK1-M-11-116.

- INITINGEN GENERATOR, REFER TO FIRE PROTECTION PACKAGE FOR DETAILED INFORMATION, CONNECT TO CIRCUIT PNL-111.X3.N2.1.1-42,44 WITH CABLE NUMBER CA-K1-F-111-105.

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PROJECT

Hitachi Energy

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



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Astoria HVDC

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

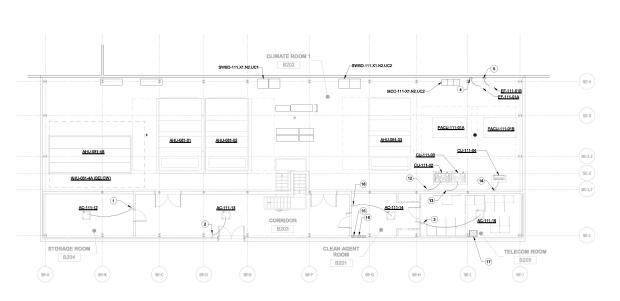
**SERVICE BUILDING 1ST** FLOOR HVAC POWER PLAN

PROJECT NO

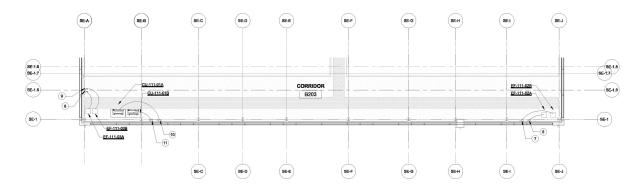


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# 1 HVAC POWER PLAN SERVICE BUILDING LEVEL 2 E-126.00 1/8" = 1'-0"



2 HVAC POWER PLAN SERVICE BUILDING LEVEL 2 - EQUIPMENT PLATFORM
1/8" = 1'-0"

### GENERAL NOTES:

#### ELECTRICAL KEYNOTES

- PREVISE MOTOR MATTED DESCRINGET SWITTON IMPACTIFIES, CONNECT TO SIGNAL THE TAX AREA TO AREA THAT AREA EN AREA THAT A

- GIRCUIT PRIC-111-33,782,71-30,22 WITH CABLE NUMBER CARAT-MT11-103 PROVIDE DISCONNECT SWITCH MSEE-111-01A. CONNECT TO CIRCUIT PNI-111-X3.N2.1-13,15,17 WITH CABLE NUMBER CARAT-MT11-107. PROVIDE DISCONNECT SWITCH MS-EF-111-01B. CONNECT TO CIRCUIT PNI-111-X3.N2.1-13,16,17 WITH CABLE NUMBER CARAT-MT11-107.

- PRICHING ARE 1-13 ARE
- GROUP PRE-11-53/RC1.1-23 WITH CABLE NUMBER CART-R-111-109.
  PROVIDE MOTOR RATED DISCONNECT SWITCH MS-E-11-1038, CONNECT TO CIRCUIT PRI-111-X3/RC1.1-23 WITH CABLE NUMBER CART-R-111-109.
  PROVIDE DISCONNECT SWITCH DS-ACCU-111-014. CONNECT TO CIRCUIT PRI-111-3/RC1.1-25.27 WITH CABLE NUMBER CART-R-111-110.

- PNI-111-X3.N2.11-X5.82 WITH CABLE NOMBER CARKT-M-T11-110.

  PROVIDE DISCONNECT SWITCH DS-ACCU-111-018. CONNECT TO CIRCUIT PNI-111-X3.N2.11-24.28 WITH CABLE NUMBER CA-KT-M-T11-111.

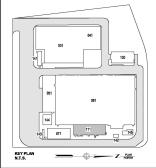
  PROVIDE DISCONNECT SWITCH DS-ACCU-111-02. CONNECT TO CIRCUIT PNI-111-X3.N2.11-33.95.97 WITH CABLE NUMBER CA-KT-M-T11-112.
- PROVIDE DISCONNECT SWITCH DS-ACCU-111-03. CONNECT TO CIRCUIT PNL-111-X3.N2.1.1-34,38,38 WITH CABLE NUMBER CA-K1-M-111-113.
- PN.-111-3.2N.Z.1.1-34.38.3W THT CABLE INJURIES CAKE-MAI-11-13.

  1 PROVIDE DROCKNECT SWYCH DE AGD-L1114-04. CORNICOT TO CIRCUIT PN.-111-32.N.Z.1.1-39.4 W THI CABLE INJURIES CAKE-MAI-11-14.

  5 VESIDA PRE ALAMP ANNEL, REFER TO FREE ALAMP MACCAGE FOR DETAILS. CORNICOT TO CIRCUIT PILL-BIN-111-33.N.Z.1.1-1-4 WITH CABLE INJURIES OF THE ALAMP MAILE, REFER TO FREE ALAMP MACCAGE FOR DETAILS. CORNICOT TO CIRCUIT PILL-BIN-111-33.N.Z.1.1-1-2 W THI CABLE INJURIES CAKE-MAILE CORNICOT TO CIRCUIT PILL-BIN-111-33.N.Z.1.1-1-2 W THI CABLE INJURIES CAKE-MAILE CORNICOT TO CIRCUIT PILL-BIN-111-33.N.Z.1.1-1-2 W THI CABLE INJURIES COM-SIGNED TO CIRCUIT PILL-BIN-111-13.N.Z.1.1-1-2 W THI CABLE INJURIES CAKE-MAIL-BIN-11-10.

- 18 PROVIDE MOTOR RATED DISCONNECT SWITCH MS-AC-111-14, CONNECT TO CIRCUIT PNL-111-X3.N2.1.1-20.22 WITH CABLE NUMBER CA-K1-M-111-103.

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Hitachi Energy

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

PROJECT

1

Z PLAN



Astoria HVDC **Converter Station** 

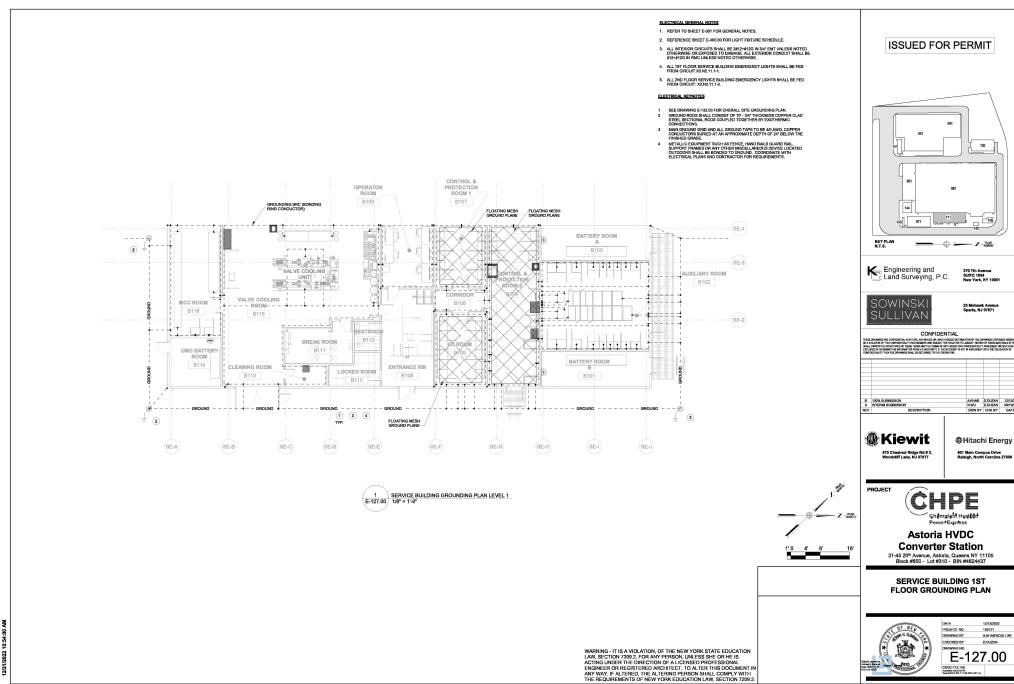
31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

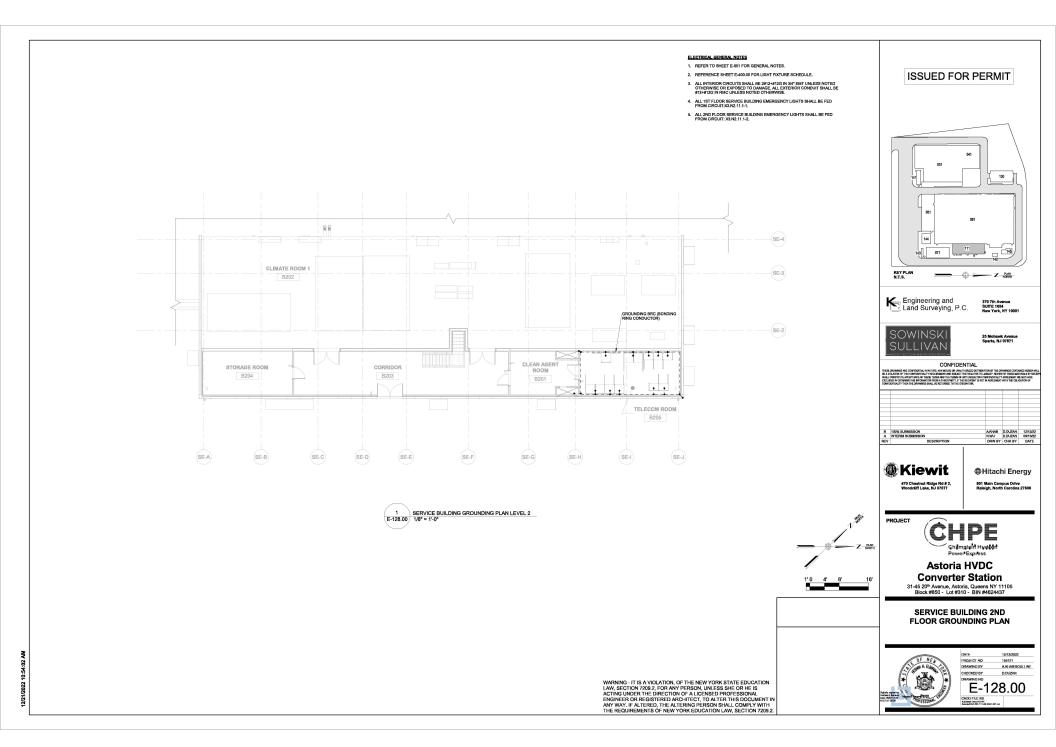
SERVICE BUILDING 2ND FLOOR HVAC POWER PLAN

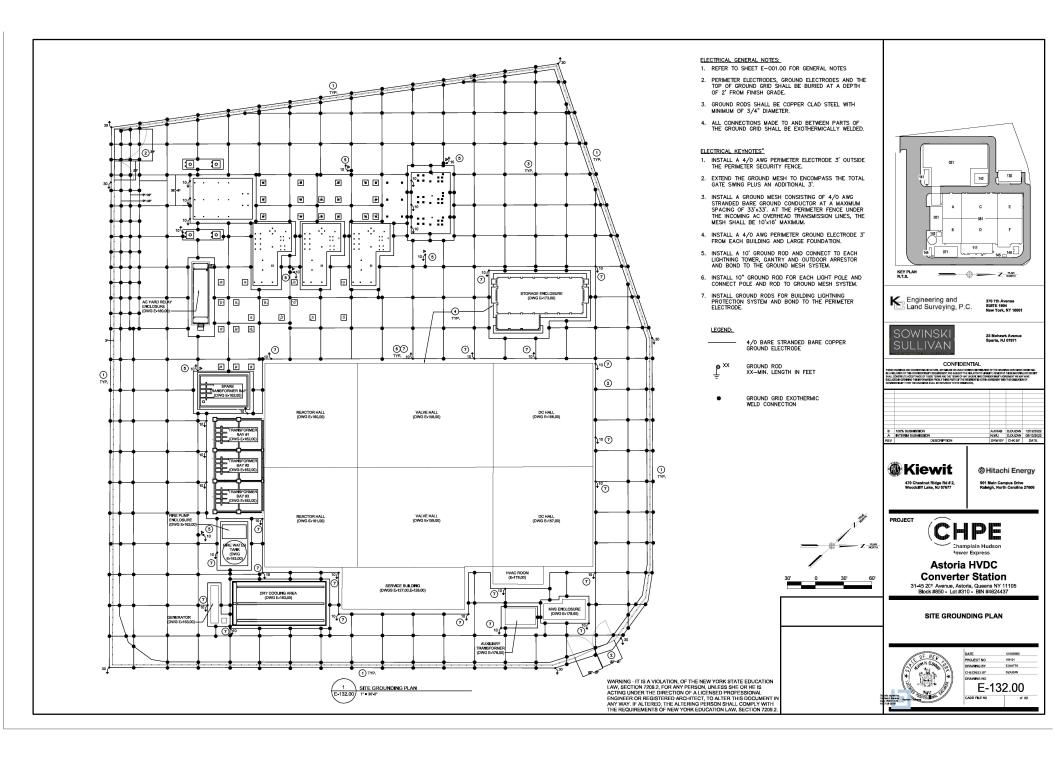


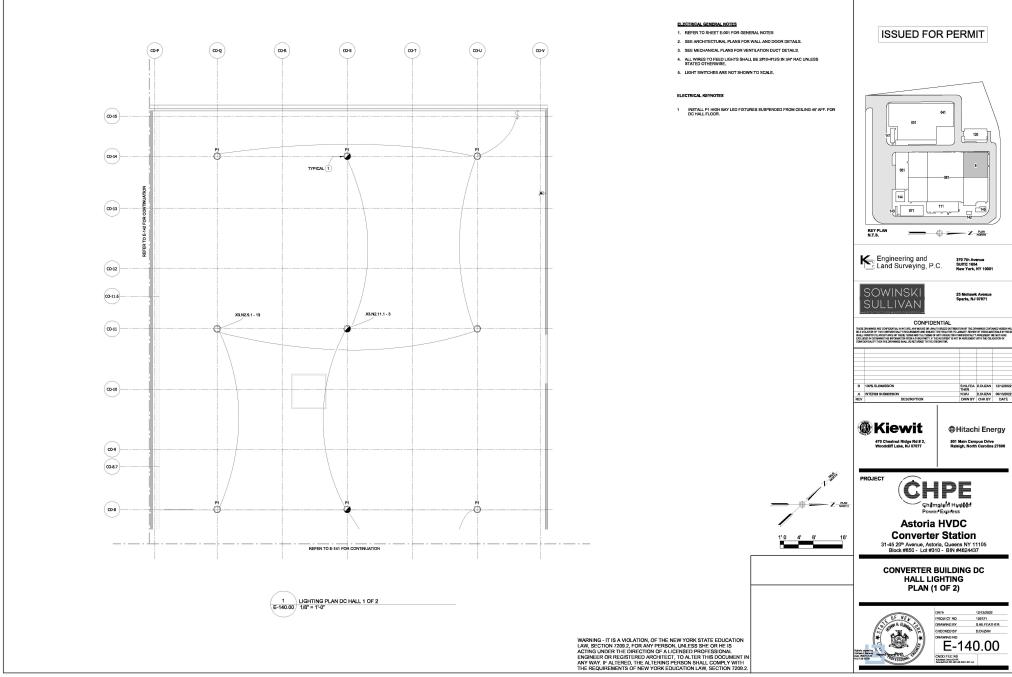
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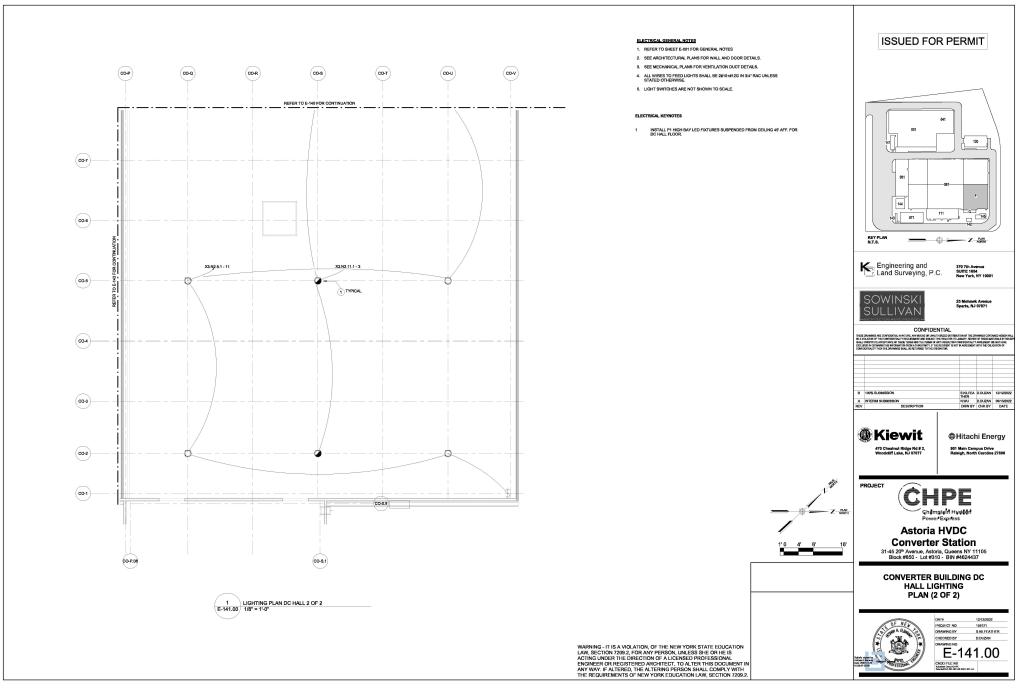




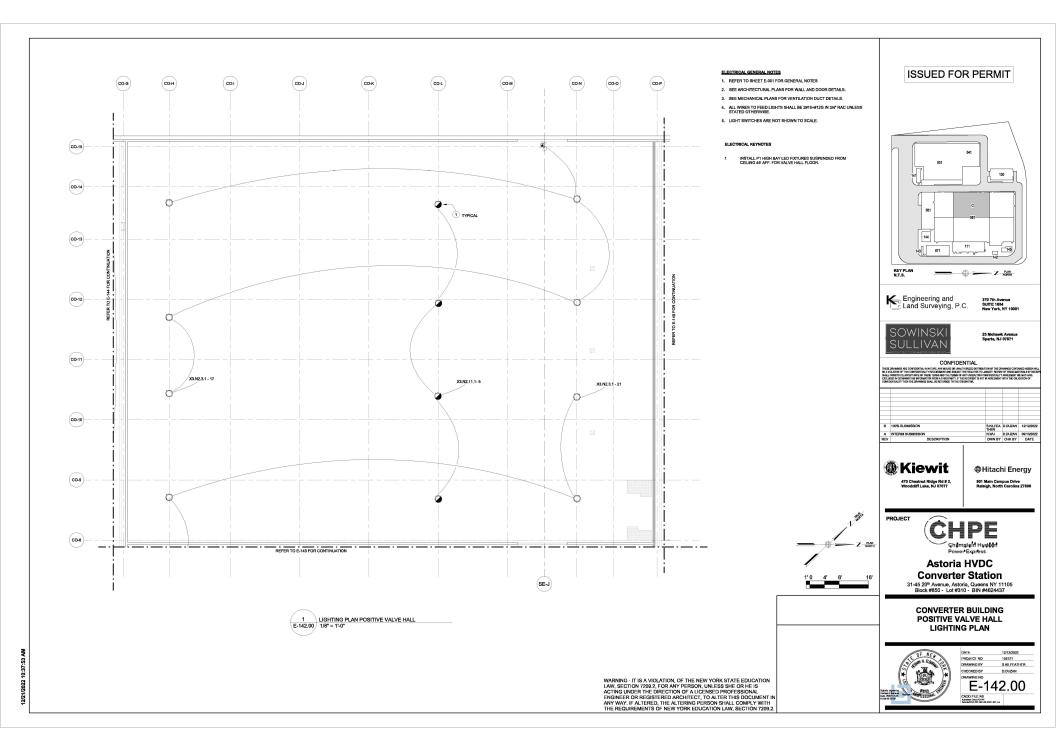


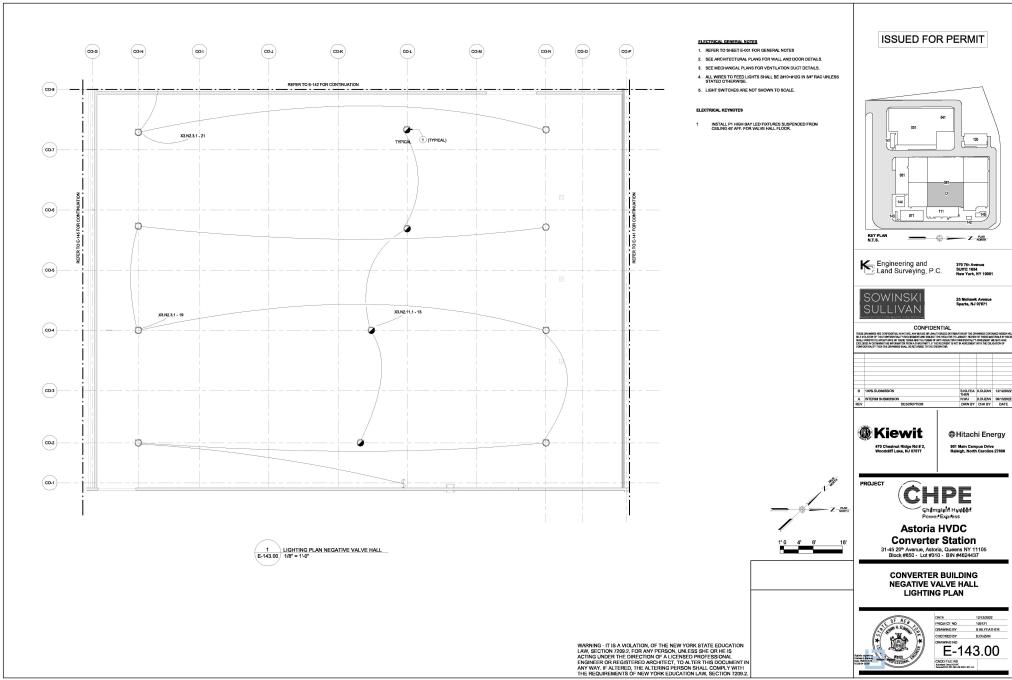


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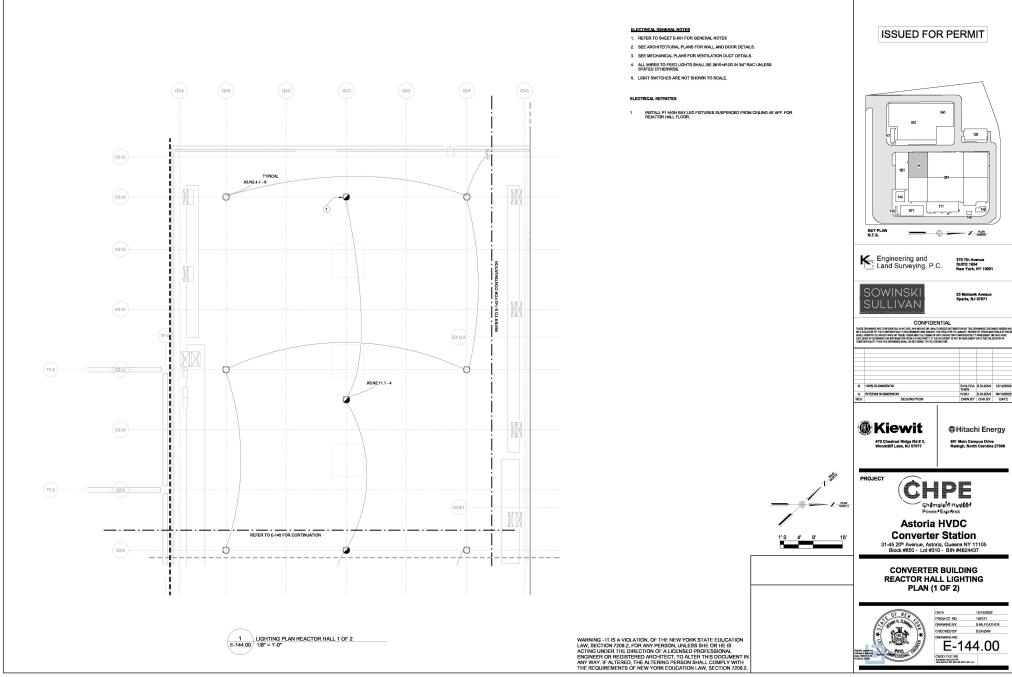


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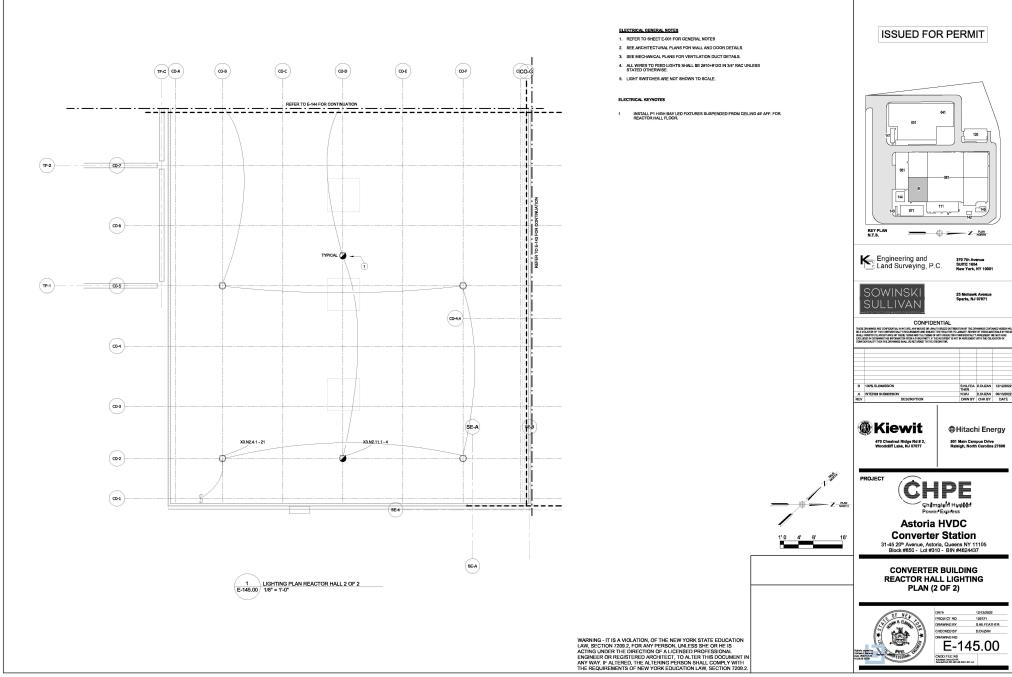




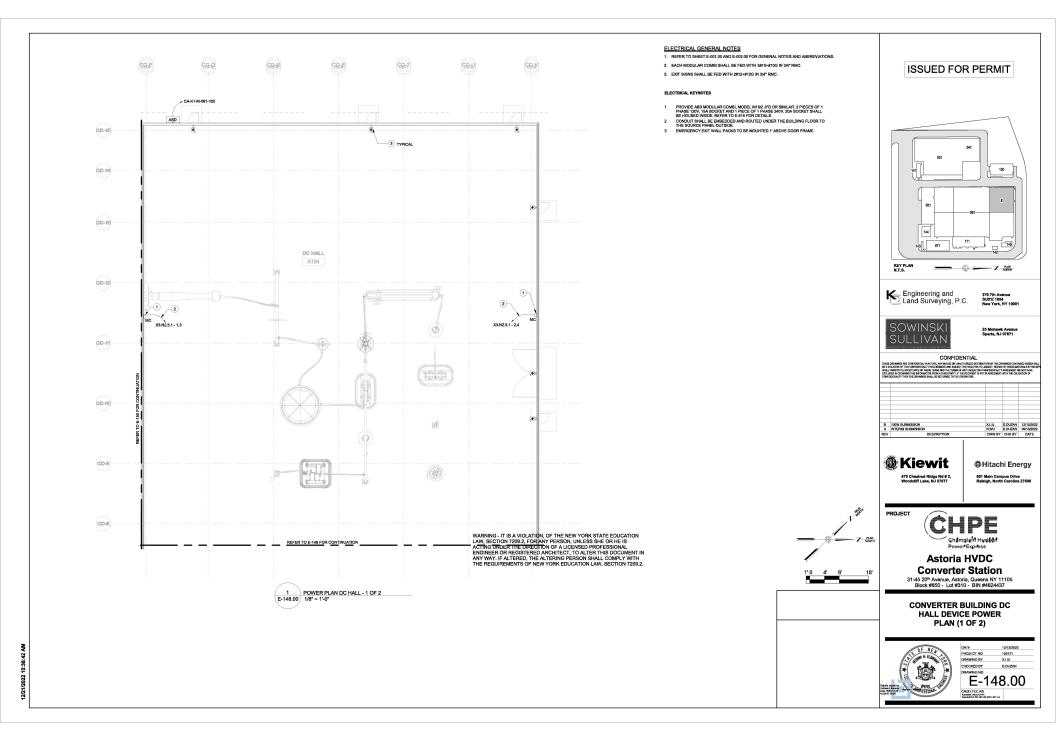
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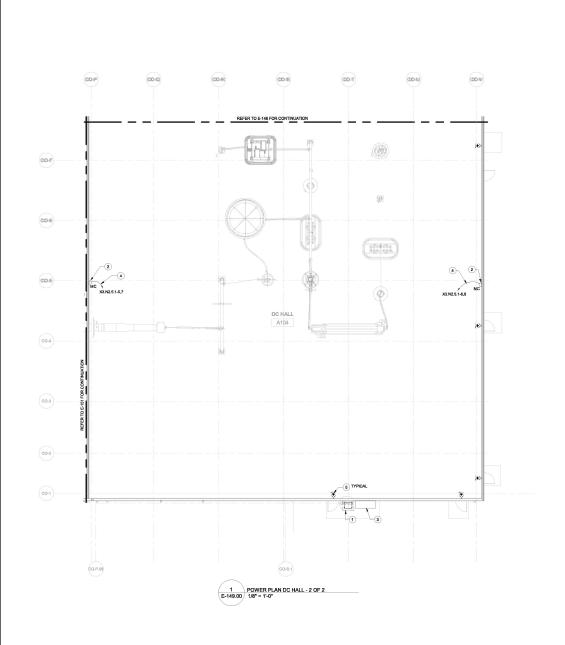


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2/21/2022 10:38:05 AM





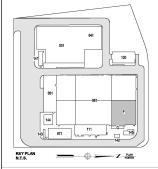
### ELECTRICAL GENERAL NOTES

- 1. REFER TO SHEET E-001.00 AND E-002.00 FOR GENERAL NOTES AND ABBREVIATIONS.
- 2. EACH MODULAR COMBI SHALL BE FED WITH 3#10+#10G IN 3/4" RMC.

#### ELECTRICAL KEYNOTES

- PROVIDE MINI-POWER CENTER, TLC-081-X3.N2.5.1, 480-120/240V, 1 PH, 3W, NEMA 4X ENCLOSURE.

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> **Astoria HVDC Converter Station**

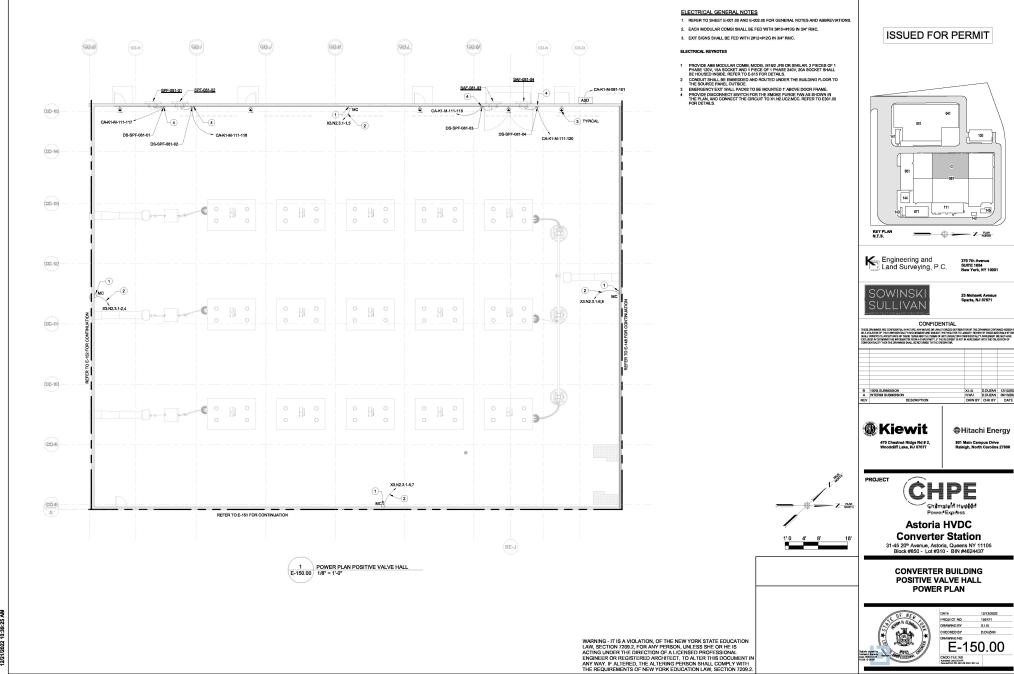
31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

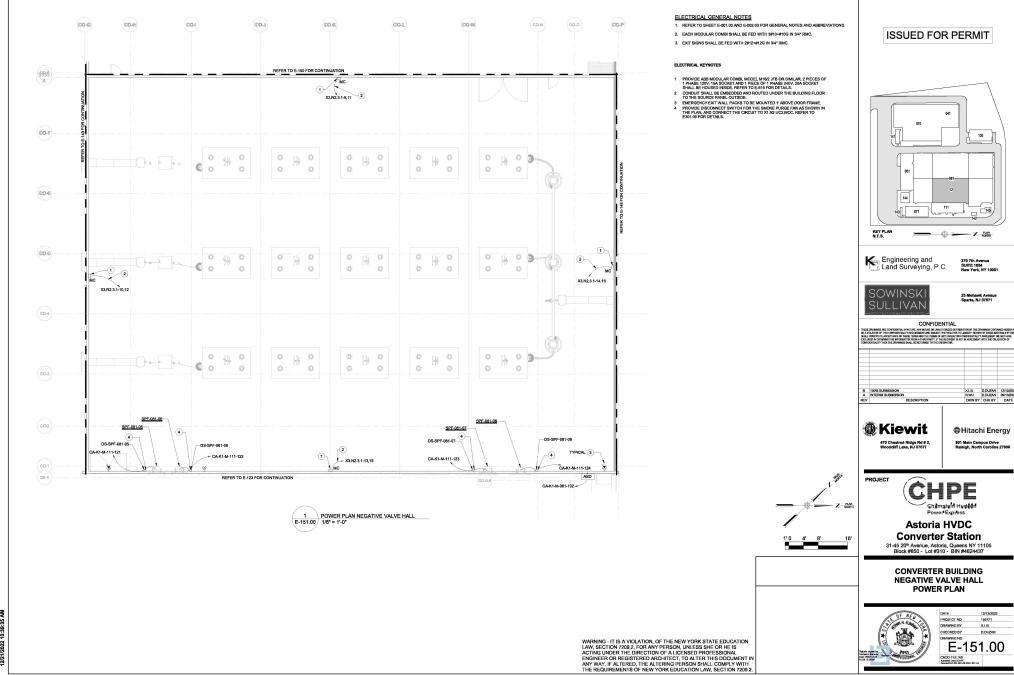
CONVERTER BUILDING DC HALL DEVICE POWER PLAN (2 OF 2)

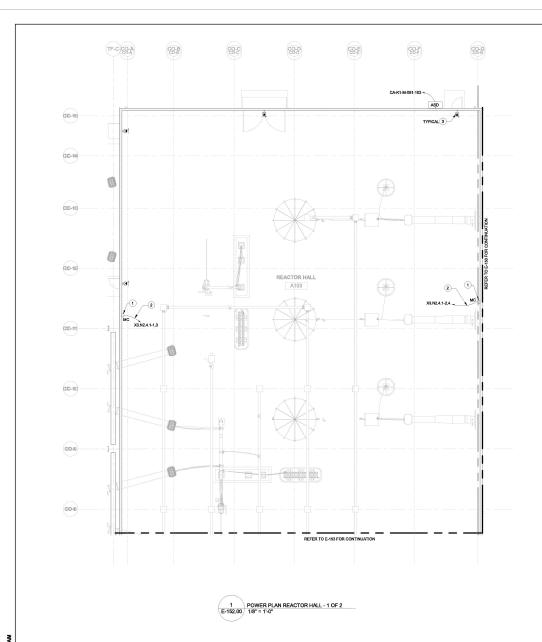


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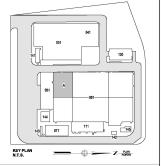
### ELECTRICAL GENERAL NOTES

- 1. REFER TO SHEET E-001.00 AND E-002.00 FOR
- 2. EACH MODULAR COMBI SHALL BE FED WITH 3810+W10G IN 3/4" RMC.
- 3. EXIT SIGNS SHALL BE FED WITH 2#12+#12G IN 3/4\* RMC.

### ELECTRICAL KEYNOTES

- 1 PROVIDE ASS MODULAR COMB, MODE M182\_FB OR SMILAR. 2 PECES OF 1
  BE HOUSED INSIDE. REPERT OF 6416 FOR DETAILS.
  2C CONDUT SHALL BE EMBEDDED AND ROUTED UNGAFF BE BUILDING FLOOR TO
  THE SOURCE PANEL OUTSIDE.
  3 EMERCIBENCY DET WIALL PAKONS TO BE MOUNTED I'S BOVE DOOR FRAME.

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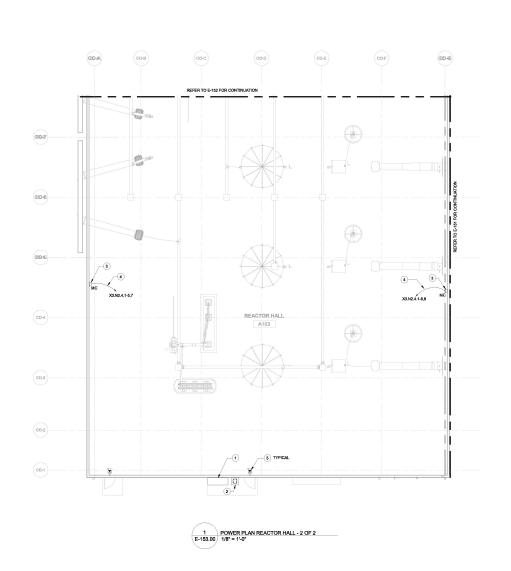
# **Astoria HVDC Converter Station**

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

CONVERTER REACTOR HALL POWER PLAN (1 OF 2)



DATE 12/12/2022
PROJECT NO 105121
DRAWING BY X.LIU E-152.00



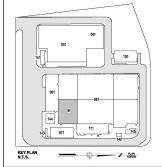
### ELECTRICAL GENERAL NOTES

- REFER TO SHEET E-001.00 AND E-002.00 FOR GENERAL NOTES AND ABBREVIATIONS
- 2. EACH MODULAR COMBI SHALL BE FED WITH 38/10+8/10G IN 3/4" RMC.
- 3. EXIT SIGNS SHALL BE FED WITH 2#12+#12G IN 3/4" RMC.

## ELECTRICAL KEYNOTES

- 5 EMERGENCY EXIT WALL PACKS TO BE MOUNTED 1' ABOVE DOOR FRAME.

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**Astoria HVDC Converter Station** 

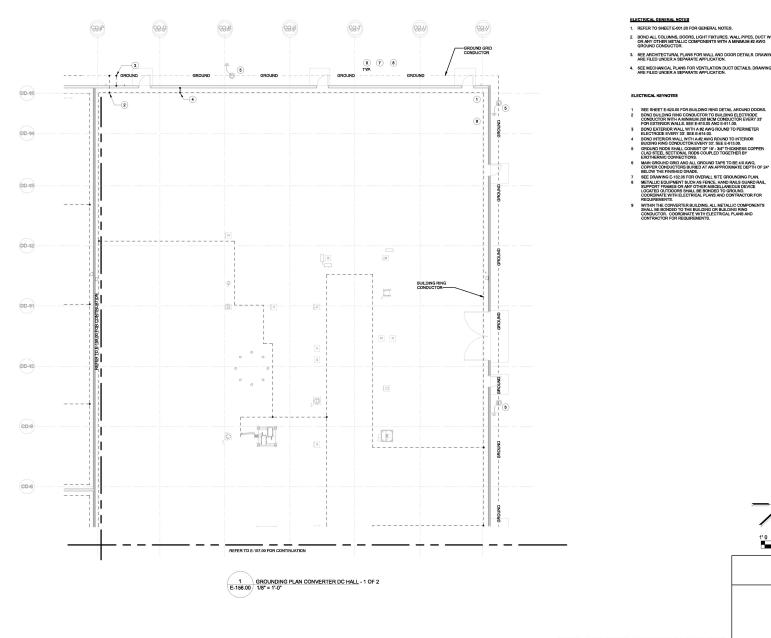
31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

CONVERTER REACTOR HALL POWER PLAN (2 OF 2)



DATE 12/12/2022
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- BOND ALL COLUMNS, DOORS, LIGHT FIXTURES, WALL PIPES, DUCT WORK OR ANY OTHER METALLIC COMPONENTS WITH A MINIMUM #2 AWG GROUND CONDUCTOR.
- SEE ARCHITECTURAL PLANS FOR WALL AND DOOR DETAILS, DRAWINGS ARE FILED UNDER A SEPARATE APPLICATION.
- SEE MECHANICAL PLANS FOR VENTILATION DUCT DETAILS, DRAWINGS ARE FILED UNDER A SEPARATE APPLICATION.

- GROUND RODS SHALL CONSIST OF 10' 3/4" THICKNESS COPPER CLAD STEEL SECTIONAL RODS COUPLED TOGETHER BY EXOTHERMIC CONNECTIONS.

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1 1

Z PLAN

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

CHPE

Champiain Hudgen Power Express **Astoria HVDC** 

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

> CONVERTER DC HALL **GROUNDING PLAN** (1 OF 2)



PROJECT NO DRAWING BY 105121 A.KHABIBOULLINE E-156.00

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