

APPENDIX C.22

CASE 10-T-0139

SITE PLANS AND CONSTRUCTION DRAWINGS

PLUMBING DRAWINGS - SITE

ASTORIA HVDC CONVERTER STATION

SEGMENT 22

ASTORIA HVDC CONVERTER STATION

SITE PLUMBING PACKAGE

SCOPE OF WORK

THE PLUMBING SCOPE OF WORK INCLUDES FURNISHING AND INSTALLATION OF PLUMBING FIXTURES AND EQUIPMENT, POTABLE HOT AND COLD-WATER PIPING SYSTEMS, AND SANITARY WASTE AND VENT PIPING SYSTEMS FOR THE FOLLOWING AREAS AS SUBJECT TO THE REQUIREMENTS AND PERFORMANCE CRITERIA PROVIDED IN THE PRELIMINARY PERFORMANCE SPECIFICATION:

1. SITE PLUMBING

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:

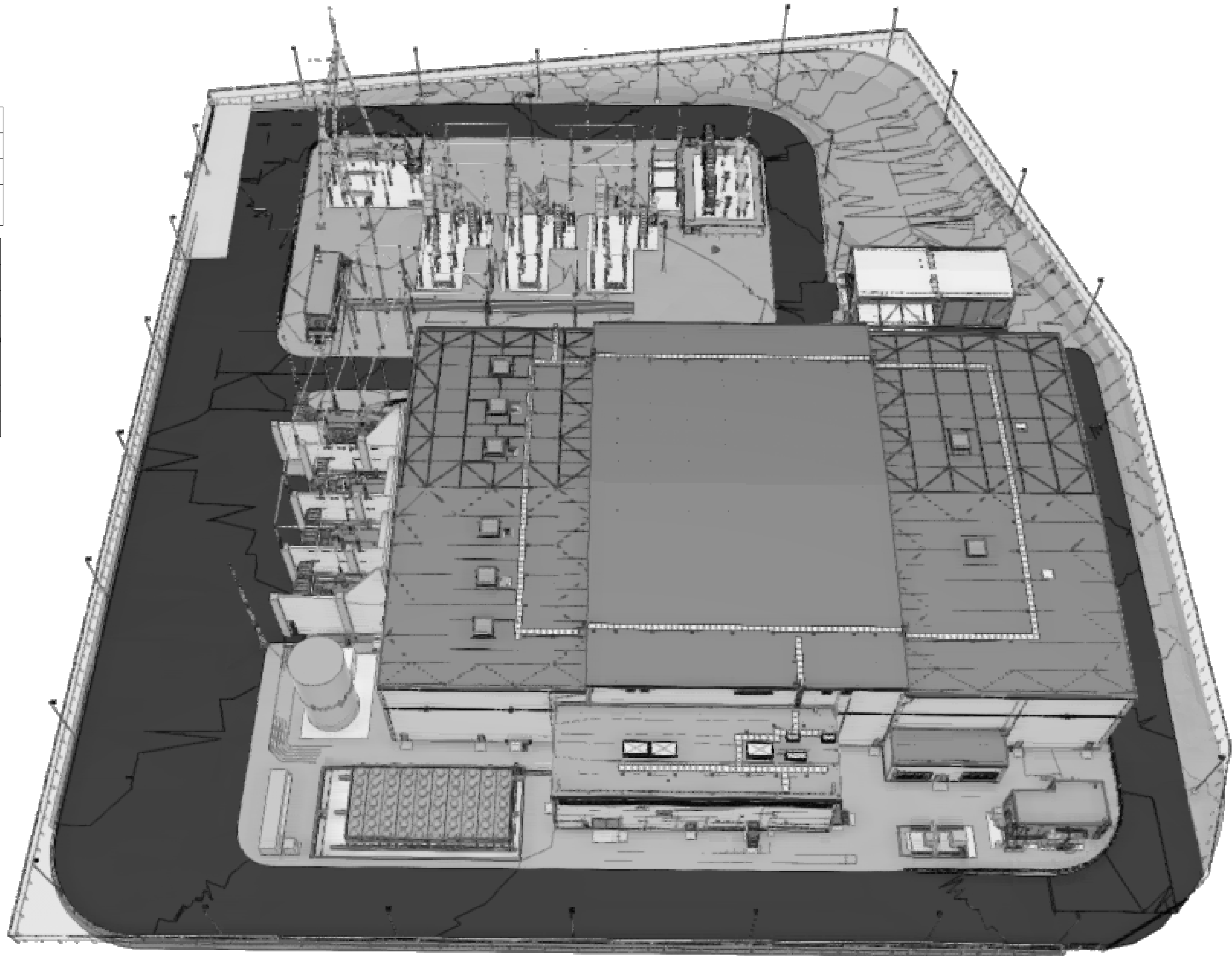
STATEMENT: TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CODE. PROPOSED WORK MEETS THE GUIDELINES AND INSTRUCTIONS OUTLINED IN THE 2020 NYC ECC CHAPTER 4.

SPECIAL INSPECTION AND
PROGRESS INSPECTIONS:

FOLLOWING SPECIAL AND PROGRESS INSPECTIONS SHALL BE PERFORMED PER NYC BUILDING CODE 2022. NOTIFY ARCHITECT, ENGINEER AND OWNER FOR SPECIAL INSPECTIONS AT LEAST 72 HOURS BEFORE THE SPECIAL INSPECTION WORK STARTS.

SPECIAL INSPECTIONS	
INSPECTION AND TEST	CODE / SECTION
HEATING SYSTEMS	BC 1704.25
EMERGENCY & STAND BY POWER SYSTEMS (GENERATORS)	BC 1704.31

PROGRESS INSPECTIONS	
INSPECTION AND TEST	CODE / SECTION
ENERGY CODE COMPLIANCE INSPECTIONS	BC 110.3.5
FINAL	28-116.2.4.2 BC 110.5
HVAC-R AND SERVICE WATER HEATING DESIGN AND INSULATION	IB5, IIB5
ELECTRICAL MOTORS AND ELEVATORS	IIC6
MAINTENANCE INFORMATION	ID1, IID1



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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

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

COVER SHEET



DATE 12/12/2022
PROJECT NO 105121
DRAWING BY V. PATEL
CHECKED BY E. KIDANE
DRAWING NO
P-001.00
CADD FILE NO
Astoria-CHPE-081-00-M3-H-001.rvt

FL-1.	THE SITE IS DEFINED AS A ZONE (NON-COASTAL).
FL-2.	BASE FLOOD ELEVATION, BFE, = 13 FEET NAVD 88.
FL-3.	RECOMMENDED FREE BOARD BY THE 2022 NYCBC-APPENDIX G IS 2.0 FEET.
FL-4.	RECOMMENDED DESIGN FLOOD ELEVATION, DFE = 15 FEET NAVD 88.
FL-5.	THE STRUCTURE IS NOT SUBJECTED TO HYDRODYNAMIC LOADS.

DESIGN ELEVATION / DEPTH	FEET IN NAVD 88
DESIGN BASE FLOOD ELEVATION	13.0
FINISH FLOOR ELEVATION	15.0
SEA LEVEL RISE	NOT CONSIDERED

SHEET NUMBER	SHEET NAME
-----------------	------------

03-PLUMBING	
P-001.00	COVER SHEET
P-002-00	SHEET INDEX
P-003.00	OVERALL PLUMBING SITE PLAN
P-004.00	PLUMBING - GENERAL NOTES, LEGENDS, SYMBOLS & ABBREVIATIONS
P-005.00	LEGEND - P&ID PIPING AND COMPONENTS
P-200.00	SUMP PUMP PLUMBING PLAN
P-201.00	FIRE PROTECTION WATER & TANK ENLARGED PLAN
P-202.00	FIRE WATER TANK P&ID
P-203.00	TRANSFORMER SUMP 01
P-204.00	TRANSFORMER SUMP 02
P-205.00	TRANSFORMER SUMP 03
P-206.00	DRYCOOLER SUMP
P-207.00	SPARE TRANSFORMER SUMP
P-208.00	AUXILIARY TRANSFORMER SUMP 01
P-209.00	AUXILIARY TRANSFORMER SUMP 02
P-600.00	PLUMBING DETAILS SHEET #1
P-601.00	PLUMBING DETAILS SHEET #2
P-602.00	PLUMBING DETAILS SHEET #3
P-701.00	SERVICE BUILDING PLUMBING - SCHEDULES

KEY PLAN
N.T.S.

 PLAN NORTH

**370 7th Avenue
SUITE 1604
New York, NY 10001**

25 Mohawk Avenue
Sparta, NJ 07871

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECIPIENT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

B	FINAL SUBMISSION	WP	SD	12-12-22
A	INTERIM SUBMISSION	WP	AZ	09-13-22
REV	DESCRIPTION	DRW BY	CHK BY	DATE



470 Chestnut Ridge Rd # 2
Woodcliff Lake, NJ 07677



901 Main Campus Drive
Raleigh, North Carolina 27606

CHPE
Champlain Hudson
Power Express

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

P-002-00

CADD FILE NO
Autodesk Docs\CHPE
Astoria\CHA-KIE-081-00-M3-H-001.rvt

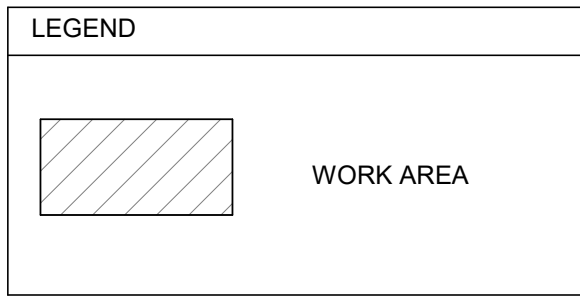
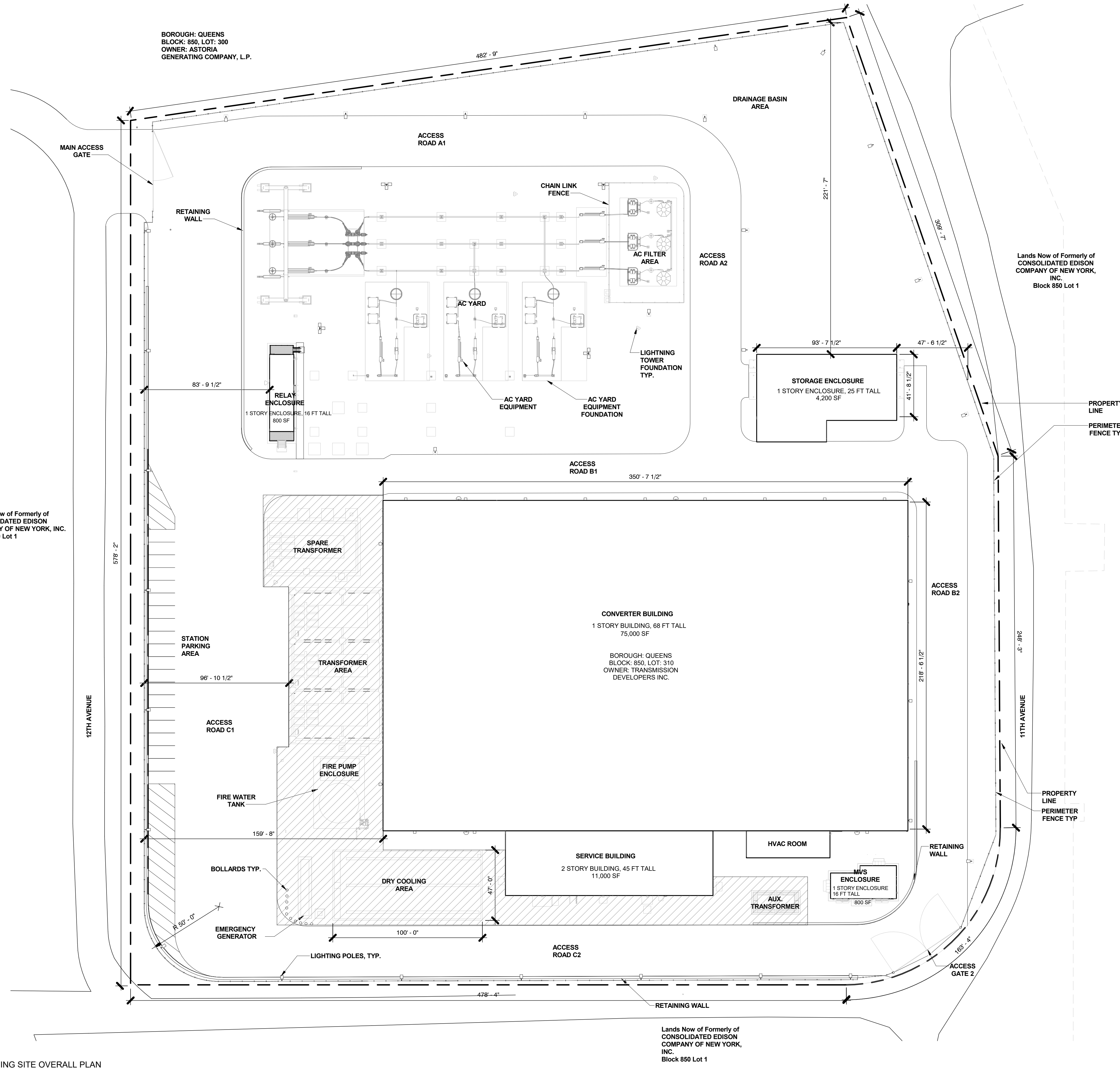
12/21/2022 12:59:14 PM

1
P-003.02

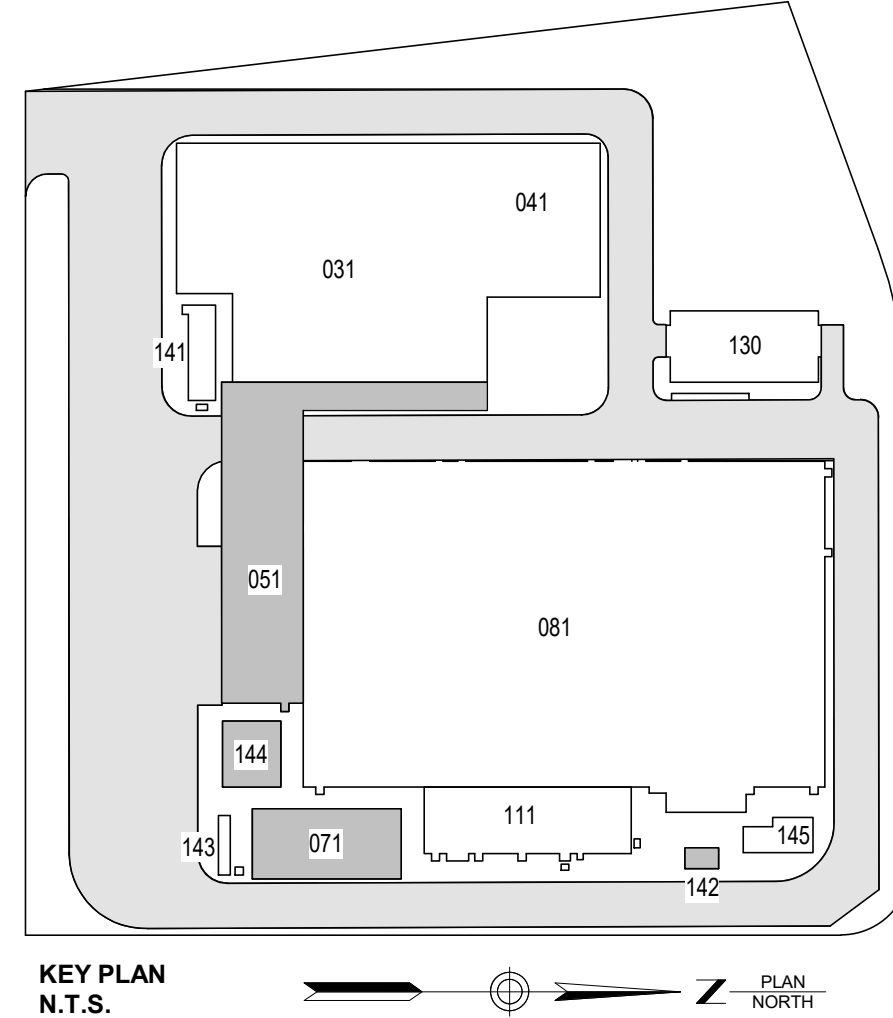
PLUMBING SITE OVERALL PLAN
1/32" = 1'-0"

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

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



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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEPTOR SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	WP	SD	12-12-22
A	INTERIM SUBMISSION	WP	AZ	09-13-22

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 PLUMBING SITE
PLAN**



DATE 12/12/2022
PROJECT NO 105121
DRAWING BY W.PENDLETON
CHECKED BY S.DEVADKAR
DRAWING NO
P-003.02
CADD FILE NO
Astoria-HVDC-CHPE
Astoria-CHPE-081-00-M314-001.rvt

PLUMBING GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF ALL MATERIALS, PIPING AND EQUIPMENT. DO NOT SCALE DRAWINGS. THE EXACT LOCATION AND/OR ROUTING OF EQUIPMENT, PLUMBING, SANITARY PIPING, ETC., SHALL BE FOLLOWED AS CLOSELY AS BUILDING CONSTRUCTION AND ALL OTHER WORK WILL PERMIT.

2. MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS. THEY SHALL BE INSTALLED PLUMB, LEVEL, AND TRUE-TO-LINE WITH ADJACENT WORK. WHERE INSTALLATION METHODS ARE NOT SPECIFICALLY COVERED BY THE DRAWINGS AND/OR SPECIFICATIONS, FIRST CLASS TRADE PRACTICES AND MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS SHALL GOVERN.

3. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION, BUILDING DEPARTMENTS, APPLICABLE TO THE LATEST EDITION OF THE APPLICABLE BUILDING CODE, PROVINCIAL FIRE CODE, APPLICABLE OSHA AND NFPA STANDARDS, COUNTY AND CITY BUILDING REGULATIONS AND CODES.

4. CAREFULLY EXAMINE ALL ARCHITECTURAL, STRUCTURAL, PLUMBING, HVAC, FIRE PROTECTION, AND ELECTRICAL DRAWINGS PERTAINING TO CONSTRUCTION. COOPERATE WITH OTHER TRADES IN LOCATING DUCTWORK, PIPING, EQUIPMENT, ETC., IN ORDER TO AVOID CONFLICT WITH OTHER TRADES WORK. NO CLAIM FOR COSTS WILL BE ALLOWED FOR RELOCATING EQUIPMENT, PIPING, DUCTWORK, ETC., WHICH INTERFERES WITH OTHER TRADES WORK.

5. VERIFY ALL ROUGH-IN LOCATION AND COORDINATE PIPING AND EQUIPMENT LOCATIONS WITH WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID CONFLICTS. CONTRACTOR MUST COORDINATE WITH OTHER TRADES FOR ALL STRUCTURES, PIPING, CONDUIT, DUCTWORK, LIGHTING, ETC. TO PROPERLY BE INSTALLED. ANY CONFLICTS SHALL BE RESOLVED AT NO EXPENSE TO THE OWNER.

6. LABEL ALL PLUMBING PIPING WITH ADHESIVE PIPE LABELS INDICATING SERVICE AND DIRECTION OF FLOW. PIPE LABELS SHALL BE LOCATED NEAR ALL BRANCH CONNECTIONS, NEAR ALL FLOOR AND WALL PENETRATIONS, AND AT MAXIMUM INTERVALS OF 10 FEET ALONG EACH RUN.

7. PLUMBING SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO:

a. PLUMBING FIXTURES AND EQUIPMENT

b. FIRE STOPPING

c. DOMESTIC WATER SYSTEM

d. SANITARY WASTE AND VENT SYSTEM

8. PROVIDE COMPLETE FIXTURES AND INCLUDE SUPPLIES, STOPS, VALVES, FAUCETS, DRAINS, TRAPS, TAILPIECES, ESCUTCHEONS, ETC. EXPOSED COPPER OR BRASS MATERIALS SHALL BE CHROME PLATED.

9. SEAL ALL EDGES OF PLUMBING FIXTURES IN CONTACT WITH FLOORS, WALLS OR COUNTERTOPS USING SANITARY-TYPE, ONE-PART, MILDEW RESISTANT SILICONE SEALANT. USE CLEAR SEALANT OR MATCH SEALANT COLOR TO FIXTURE COLOR.

10. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES.

11. FIRE STOP ALL PENETRATIONS, BY PIPING OR CONDUITS, OF FIRE RATED WALLS, FLOORS, AND PARTITIONS. PROVIDE DEVICE(S) OR SYSTEM(S) WHICH HAS BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814 OR UL 1479 AND INSTALL IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE DEVICE(S) OR SYSTEM(S) WITH AN 'F' RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING PENETRATED.

12. FURNISH AND INSTALL A COMPLETE SYSTEM OF DOMESTIC HOT AND COLD WATER FROM EXISTING SUPPLIES TO ALL FIXTURES AND/OR EQUIPMENT REQUIRING DOMESTIC WATER SUPPLIES. VERIFY LOCATION OF BEGINNING POINTS.

13. DOMESTIC WATER PIPING: ASTM B 88 TYPE 'L' HARD COPPER TUBE WITH WROT COPPER FITTINGS, AND SOLDERED OR PRESSURE-SEALED JOINTS.

14. STERILIZE DOMESTIC WATER PIPING IN ACCORDANCE WITH THE NYC PLUMBING CODE AND LOCAL HEALTH DEPARTMENT REGULATIONS.

15. INSULATE DOMESTIC WATER PIPING AS PER SPECIFICATION SECTION 220719 PLUMBING PIPING INSULATION.
16. DOMESTIC WATER PIPING INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS, AND ADHESIVES SHALL NOT EXCEED A FLAME SPREAD RATING OF 25 AND A SMOKE DEVELOP RATING OF 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.

17. ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH WALLS AND PARTITIONS.

18. DO NOT INSTALL DOMESTIC WATER PIPING IN AREAS SUBJECT TO FREEZING TEMPERATURES. INSTALL DOMESTIC WATER PIPING IN EXTERIOR WALLS ON THE CONDITIONED SIDE OF THE WALL INSULATION.

19. SHUT-OFF VALVES SHALL BE NIBCO TWO-PIECE, BRONZE, FULL PORT, BALL-TYPE. PROVIDE SHUT-OFF VALVES WHERE INDICATED ON THE SCHEDULES. INSTALL VALVES IN A LOCATION THAT PERMITS ACCESS FOR SERVICE AND OPERATION WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. PROVIDE ACCESS DOORS IF REQUIRED.

20. PROTECT COPPER PLATING AGAINST CONTACT WITH DISSIMILAR METALS. ALL HANGARS, ANCHORS, AND CLIPS SHALL BE COPPER OR COPPER-PLATED.

21. FURNISH AND INSTALL COMPLETE SYSTEMS OF SANITARY WASTE AND VENT PIPING FROM ALL PLUMBING FIXTURES AND/OR EQUIPMENT REQUIRING WASTE AND VENT CONNECTIONS. ALL WASTE AND VENT PIPING SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION WHERE POSSIBLE.

22. SANITARY WASTE AND VENT PIPING ABOVE GROUND: ASTM A 888 AND CISPI 301 HUBLESS, CAST IRON SOIL PIPE AND FITTINGS; AND HEAVY DUTY SHIELDED, STAINLESS STEEL COUPLINGS. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE, AND LISTED BY NSF INTERNATIONAL.

23. INVERTS ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE SANITARY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED. SLOPE SANITARY PIPING 2-1/2 IN AND SMALLER AT 2 PERCENT (1/4 IN/1 FOOT) MINIMUM, AND SLOPE SANITARY PIPING 3 IN AND LARGER AT 1 PERCENT (1/8 IN/1 FOOT) MINIMUM.

24. SANITARY WASTE BELOW GROUND: BELOW GROUND SANITARY WASTE PIPING SHALL BE CAST IRON.

25. WHERE SANITARY PIPING IS EXPOSED IN TOILET ROOMS, PROVIDE CHROME-PLATED BRASS PIPING WITH MATCHING STOPS AND ESCUTCHEONS. PROVIDE REMOVABLE TRAPS WITH INTEGRAL CLEANOUT PLUG FOR ALL LAVATORIES.

26. INSTALL CLEANOUTS IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. CLEANOUT PLUGS SHALL BE IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS.

27. PROVIDE WATER HAMMER ARRESTORS CONFORMING TO PDI-WH201 OR ASSE 1010, INSTALLED PER MANUFACTURER'S SPECIFICATIONS, WHERE QUICK CLOSING VALVES ARE UTILIZED. A QUICK CLOSING VALVE IS A VALVE OR FAUCET THAT CLOSSES AUTOMATICALLY WHEN RELEASED, OR THAT IS CONTROLLED BY MECHANICAL MEANS FOR FAST-ACTION CLOSING. REFER TO WATER HAMMER ARRESTOR SCHEDULE.

28. AS A MINIMUM PROVIDE ONE WATER HAMMER ARRESTOR FOR EACH BRANCH LINE TO EACH TOILET ROOM LESS THAN 20 FEET IN LENGTH, LOCATED BETWEEN THE LAST TWO FIXTURES SERVED. FOR BRANCH LINES GREATER THAN 20 FEET IN LENGTH, A SECOND WATER HAMMER ARRESTOR IS REQUIRED.

29. THE PLANS INCLUDE A COMBINATION OF INDIVIDUAL AND COMMON VENTS AND SHALL BE INSTALLED PER 2022 NYC PLUMBING CODE.

30. ALL PLUMBING WORK SHALL BE PERFORMED IN ACCORDANCE WITH 2022 NYC PLUMBING CODE.

31. ALL SUPPLY COLD AND HOT WATER PIPES ARE SIZED IN ACCORDANCE WITH 2022 NYC PLUMBING CODE. THE INSTALLATION OF HOT AND COLD WATER DISTRIBUTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE 2022 NYC PLUMBING CODE.

PLUMBING STANDARD ABBREVIATIONS

BCO	BUILDING CLEAN OUT
BFP	BACKFLOW PREVENTER
BOI	BOTTOM OF INSULATION
CI	CAST IRON
CO	CLEANOUT
CW	COLD WATER
DF	DRINKING FOUNTAIN
DN	DOWN
DRN OR D	DRAIN OR DRAIN PIPING
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
HW	HOT WATER
JS	JANITORS SINK
L	LAVATORY
NPW	NON-POTABLE WATER
OD	OVERFLOW DRAIN
OWS	OIL WATER SEPARATOR
PC	PUMPED CONDENSATE
RD	ROOF DRAIN
S	SINK
SS	SANITARY DRAIN
SAN	WASTE (SAME AS SS)
UR	URINAL
V	VENT
VTR	VENT THRU ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WHA	WALL HAMMER ARRESTOR
WM	WATER METER

SHEET NOTES:

1. REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
2. REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
3. REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
4. REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
5. REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
6. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

PLUMBING SYMBOLS

	SANITARY DRAIN		LAVATORY (LAV)
	PLANT DRAINS		WATER CLOSET (WC)
	ROOF DRAIN		URINAL (UR)
	VENT		MOP SINK (MS)
	OVERFLOW DRAIN		
	POTABLE COLD WATER (CW)		
	POTABLE HOT WATER (HW)		
	POTABLE HOT WATER RECIRCULATION (HWR)		
	DEMINERALIZED WATER		
	DEMINERALIZED WATER TREATMENT		
	FLOOR DRAIN		
	FLOOR CLEANOUT (FCO)		
	WALL CLEANOUT (WCO) OR HORIZONTAL CLEANOUT		
	WATER HAMMER ARRESTOR		
	CAP		
	BACKFLOW PREVENTER W/ ISOLATION VALVES		
	WATER METER		
	ROOF DRAIN		
	ROOF DRAIN CLEANOUT (CO)		
	DIRECTION OF SCOPE DOWN		
	BUILDING CLEANOUT (BCO)		

ISSUED FOR PERMIT

Engineering and
Land Surveying, P.C.

370 7th Avenue
SUITE 1604
New York, NY 10001

25 Mohawk Avenue
Sparta, NJ 07871

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEPTOR SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

B	FINAL SUBMISSION	WP	SD	12-12-22
A	INTERIM SUBMISSION	WP	AZ	09-13-22
REV	DESCRIPTION	DRW BY	CHK BY	DATE

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

901 Main Campus Drive
Raleigh, North Carolina 27606

PROJECT

Champlain Hudson
Power Express

Astoria HVDC
Converter Station

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

PLUMBING - GENERAL
NOTES, LEGENDS,
SYMBOLS &
ABBREVIATIONS

DATE

12/12/2022

PROJECT NO

105121

DRAWING BY

W.PENDLETON

CHECKED BY

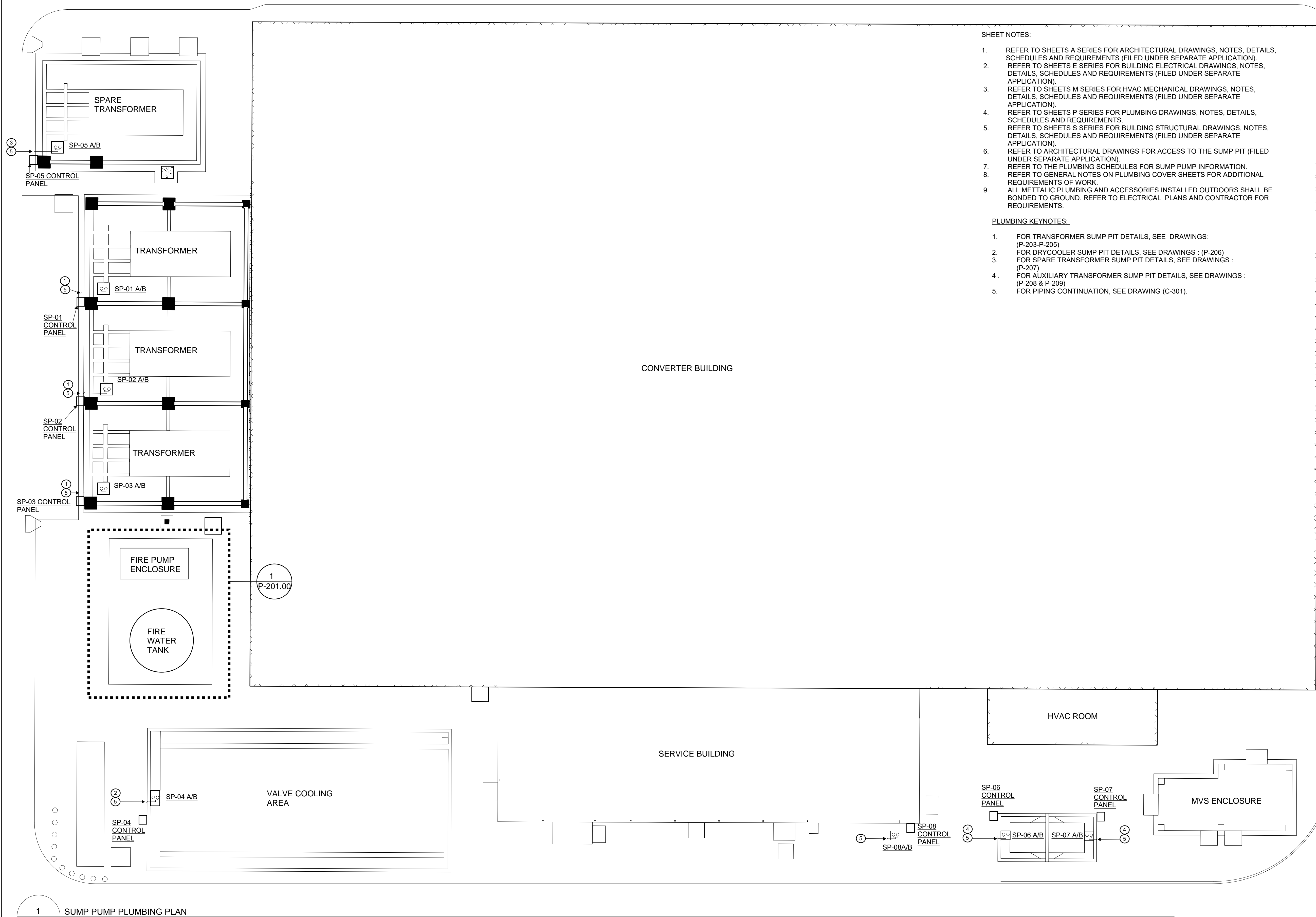
S.DEVADKAR

DRAWING NO

P-004.00

CADD FILE NO

Astoria\CHA-KIE-081-00-M314-001.rvt

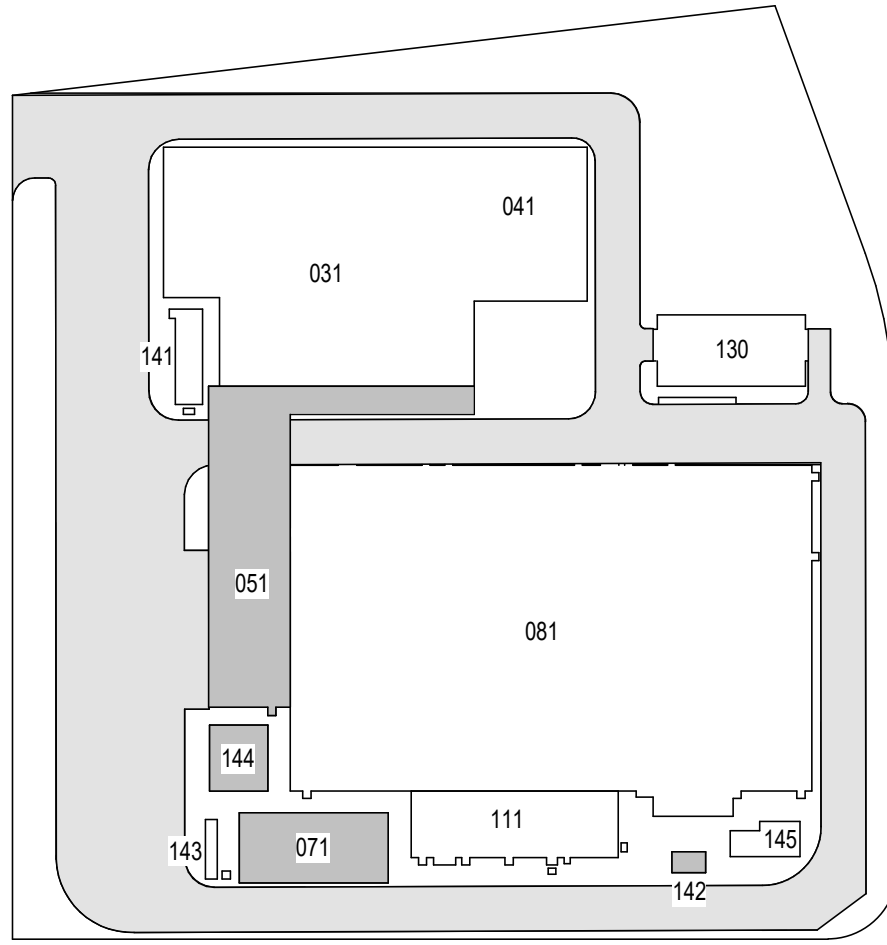


1 SUMP PUMP PLUMBING PLAN
P-200.00 3/4" = 1'-0"

- SHEET NOTES:**
- REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
 - REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
 - REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
 - REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS.
 - REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
 - REFER TO ARCHITECTURAL DRAWINGS FOR ACCESS TO THE SUMP PIT (FILED UNDER SEPARATE APPLICATION).
 - REFER TO THE PLUMBING SCHEDULES FOR SUMP PUMP INFORMATION.
 - REFER TO GENERAL NOTES ON PLUMBING COVER SHEETS FOR ADDITIONAL REQUIREMENTS OF WORK.
 - ALL METTALIC PLUMBING AND ACCESSORIES INSTALLED OUTDOORS SHALL BE BONDED TO GROUND. REFER TO ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

- PLUMBING KEYNOTES:**
- FOR TRANSFORMER SUMP PIT DETAILS, SEE DRAWINGS: (P-203-P-205)
 - FOR DRYCOOLER SUMP PIT DETAILS, SEE DRAWINGS : (P-206)
 - FOR SPARE TRANSFORMER SUMP PIT DETAILS, SEE DRAWINGS : (P-207)
 - FOR AUXILIARY TRANSFORMER SUMP PIT DETAILS, SEE DRAWINGS : (P-208 & P-209)
 - FOR PIPING CONTINUATION, SEE DRAWING (C-301).

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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEPTOR SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	JH	SD	12-12-22
A	INTERIM SUBMISSION	JH	SD	09-13-22

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

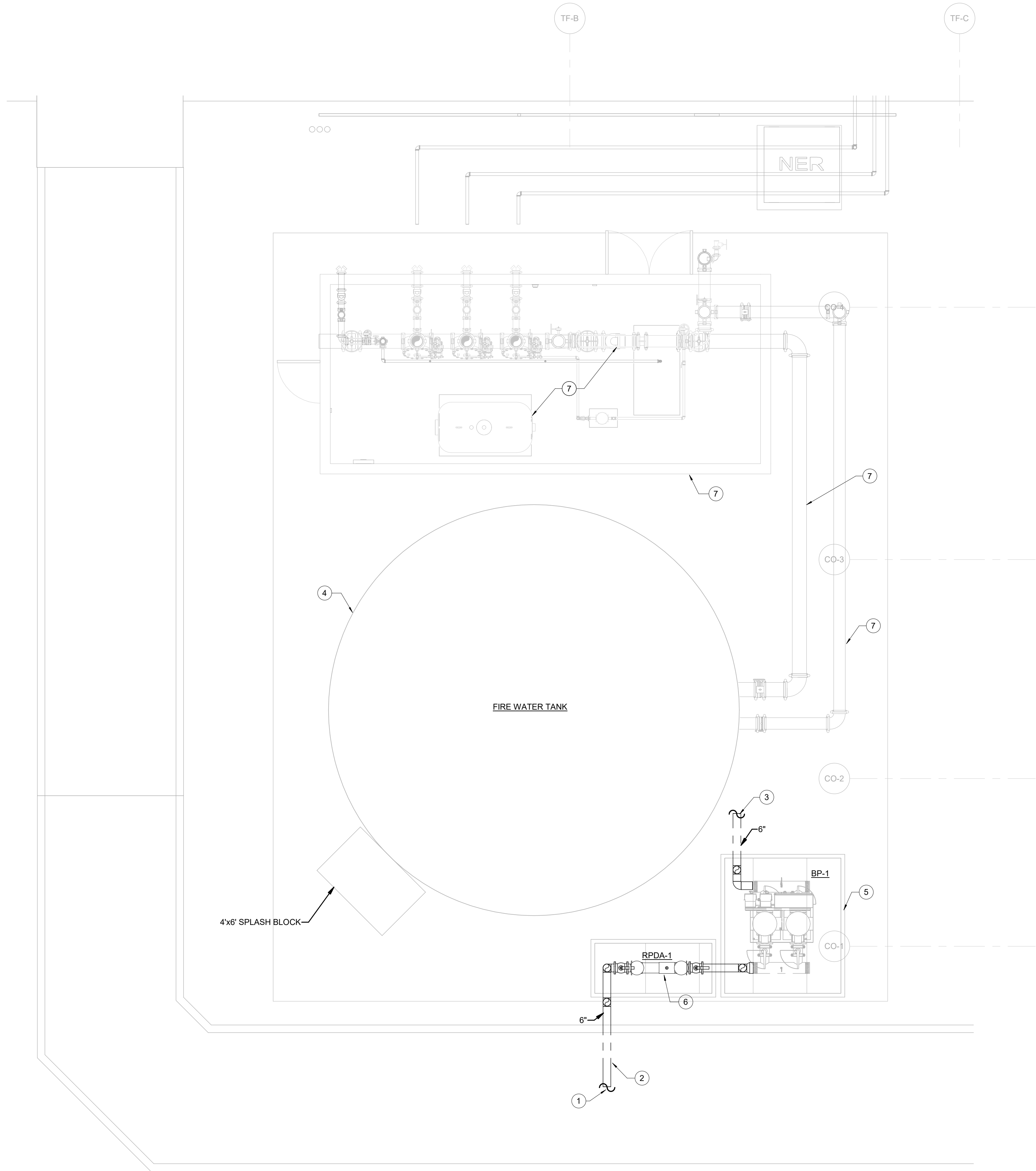
**Astoria HVDC
Converter Station**

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

**SUMP PUMP PLUMBING
PLAN**



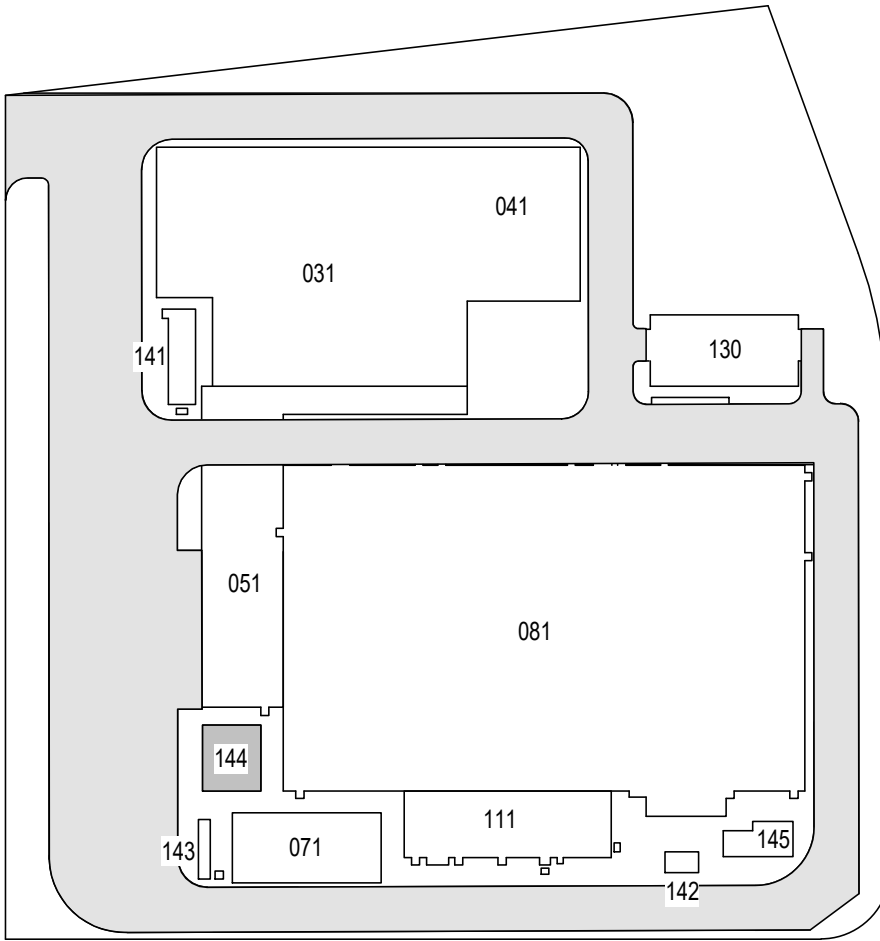
DATE 12/12/2022
PROJECT NO 105121
DRAWING BY J.HUTTON
CHECKED BY S.DEVADKAR
DRAWING NO
P-200.00
CADD FILE NO
Astoria\CHA-KIE-081-00-M3-H-001.rvt



- SHEET NOTES:**
- REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
 - REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
 - REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
 - REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
 - REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
 - REFER TO GENERAL NOTES ON PLUMBING COVER SHEETS FOR ADDITIONAL REQUIREMENTS OF WORK.
 - ALL METTALIC PLUMBING AND ACCESSORIES INSTALLED OUTDOORS SHALL BE BONDED TO GROUND. REFER TO ELECTRICAL PLANS AND CONTRACTOR FOR REUIREMENTS.

- PLUMBING KEYNOTES**
- UNDERGROUND PIPE. REFER TO CIVIL DRAWINGS FOR INVERT ELEVATION AND CONTINUATION. PROVIDE DIELECTRIC CONNECTION WHEN CONNECTING PIPES WITH DISSIMILAR METALS. CIVIL DRAWINGS ARE FILED UNDER SEPARATE APPLICATION.
 - FIRE-WATER MAIN PIPE FROM THE BOOSTER PUMP TO THE UNDERGROUND CIVIL PIPE SHALL BE INSULATED AND HEAT TRACED WITH 8 WATTS/FT OF HEAT. HEAT TRACE CONTROLLER TO BE INSTALLED ON BOOSTER PUMP ENCLOSURE. REFER TO ELECTRICAL DRAWINGS AND COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER.
 - 6" CARBON STEEL WATER PIPE FROM BOOSTER PUMP TO FIRE TANK. PIPE TO BE HEAT TRACED WITH 8 WATTS/FT OF HEAT. HEAT TRACE CONTROLLER TO BE INSTALLED INSIDE FIRE PUMP ENCLOSURE. REFER TO FIRE TANK P&ID AND SPECS. REFER TO ELECTRICAL DRAWINGS AND COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER.
 - FIRE TANK TO BE PROVIDED BY PLUMBING CONTRACTOR AND INSTALLED ON CONCRETE PAD. REFER TO FIRE TANK SPECS AND P&ID FOR MORE INFORMATION.
 - BOOSTER PUMP TO BE INSTALLED INSIDE HEATED AND INSULATED ENCLOSURE. THE ENCLOSURE SHALL MEET ASSE STANDARD 1080 CLASS ONE FOR FREEZE PROTECTION. PROVIDED WITH ACCESS FROM ALL 4 SIDES. COORDINATE FINISH WITH ARCHITECT PRIOR TO ORDERING.
 - WATTS SERIES 6" 957RPDA TO BE INSTALLED INSIDE HEATED AND INSULATED ENCLOSURE. THE ENCLOSURE SHALL MEET ASSE STANDARD 1080 CLASS ONE FOR FREEZE PROTECTION. PROVIDED WITH ACCESS FROM ALL 4 SIDES. PROVIDE HINGED DRAIN OPENING ON THE SIDE OF RPDA. COORDINATE FINISH WITH ARCHITECT PRIOR TO ORDERING.
 - REFER TO FIRE PROTECTION DRAWINGS FOR THE FIRE PUMP ENCLOSURE, FIRE PROTECTION EQUIPMENT, AND PIPES. ALL PIPES, EQUIPMENT, AND ASSOCIATED ACCESSORIES DOWNSTREAM OF THE FIRE TANK ARE TO BE PROVIDED BY THE FIRE PROTECTION CONTRACTOR. FIRE PRTECTION DRAWINGS ARE FILED UNDER SEPARATE APPLICATION.

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

CONFIDENTIAL
THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEIPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	WP	SD	12-12-22
A	INTERIM SUBMISSION	WP	BH	09-13-22

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

**FIRE PROTECTION WATER
& TANK ENLARGED PLAN**

STATE OF NEW YORK
ALEXANDER ZABOLOTSKY
071371
REGISTERED PROFESSIONAL ENGINEER

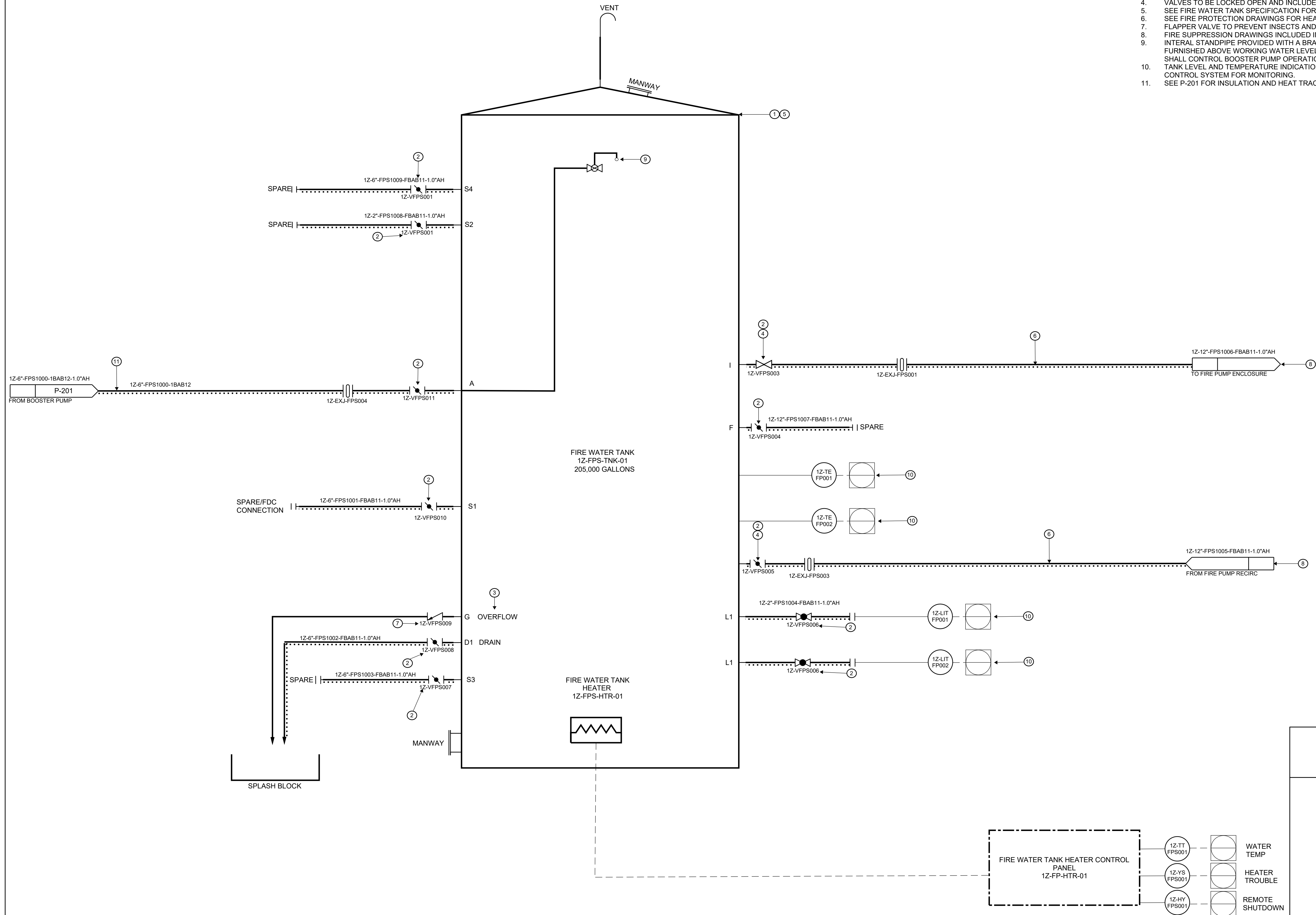
DATE: 12/12/2022
PROJECT NO: 105121
DRAWING BY: J. HUTTON
CHECKED BY: S. DEVAIDKAR
DRAWING NO: **P-201.00**
CADD FILE NO: Astoria/CHA-KIE-081-00-M314-001.rvt

ISSUED FOR PERMIT

1. REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
2. REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
3. REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
4. REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS.
5. REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
6. REFER TO GENERAL NOTES ON PLUMBING COVER SHEETS FOR ADDITIONAL REQUIREMENTS OF WORK.
7. ALL METALLIC PLUMBING AND ACCESSORIES INSTALLED OUTDOORS SHALL BE BONDED TO THE GROUND. REFER TO ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

PLUMBING KEYNOTES:

1. FIRE WATER TANK IS 26.74" IN DIAMETER X 50" IN HEIGHT. TANK HAS A 12" FREEBOARD.
2. VALVE TO BE LOCATED AT TANK NOZZLE.
3. INTERNAL STANDPIPE PROVIDED WITH A BRASS OR BRONZE STRAINER TO BE REMOVED ABOVE WORKING WATER LEVEL.
4. VALVES TO BE LOCKED OPEN AND INCLUDE TAMPER SWITCHES.
5. SEE FIRE WATER TANK SPECIFICATION FOR FIRE TANK NOZZLE ELEVATIONS.
6. SEE FIRE PROTECTION DRAWINGS FOR HEAT TRACE AND INSULATION INFORMATION.
7. FLAPPER VALVE TO PREVENT INSECTS AND VERMIN FROM ENTERING THE TANK.
8. FIRE SUPPRESSION DRAWINGS INCLUDED IN A SEPARATE PERMITTING PACKAGE.
9. INTERNAL STANDPIPE PROVIDED WITH A BRASS OR BRONZE STRAINER TO BE REMOVED ABOVE WORKING WATER LEVEL. TANK HAS AN AUTOMATIC BALL FLOAT VALVE SHALL CONTROL BOOSTER PUMP OPERATION.
10. TANK LEVEL AND TEMPERATURE INDICATION TO BE INTEGRATED WITH SITE CONTROL SYSTEM FOR MONITORING.
11. SEE P-201 FOR INSULATION AND HEAT TRACE INFORMATION.



KE 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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECIPIENT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

B	FINAL SUBMISSION	JH	SD	12-12-22	
A	INTERIM SUBMISSION	JH	SD	09-13-22	
REV	DESCRIPTION	DRW BY	CHK BY	DATE	




Kiewit

470 Chestnut Ridge Rd # 2
Woodcliff Lake, NJ 07677



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

PROJECT



Astoria HVDC Converter Station

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

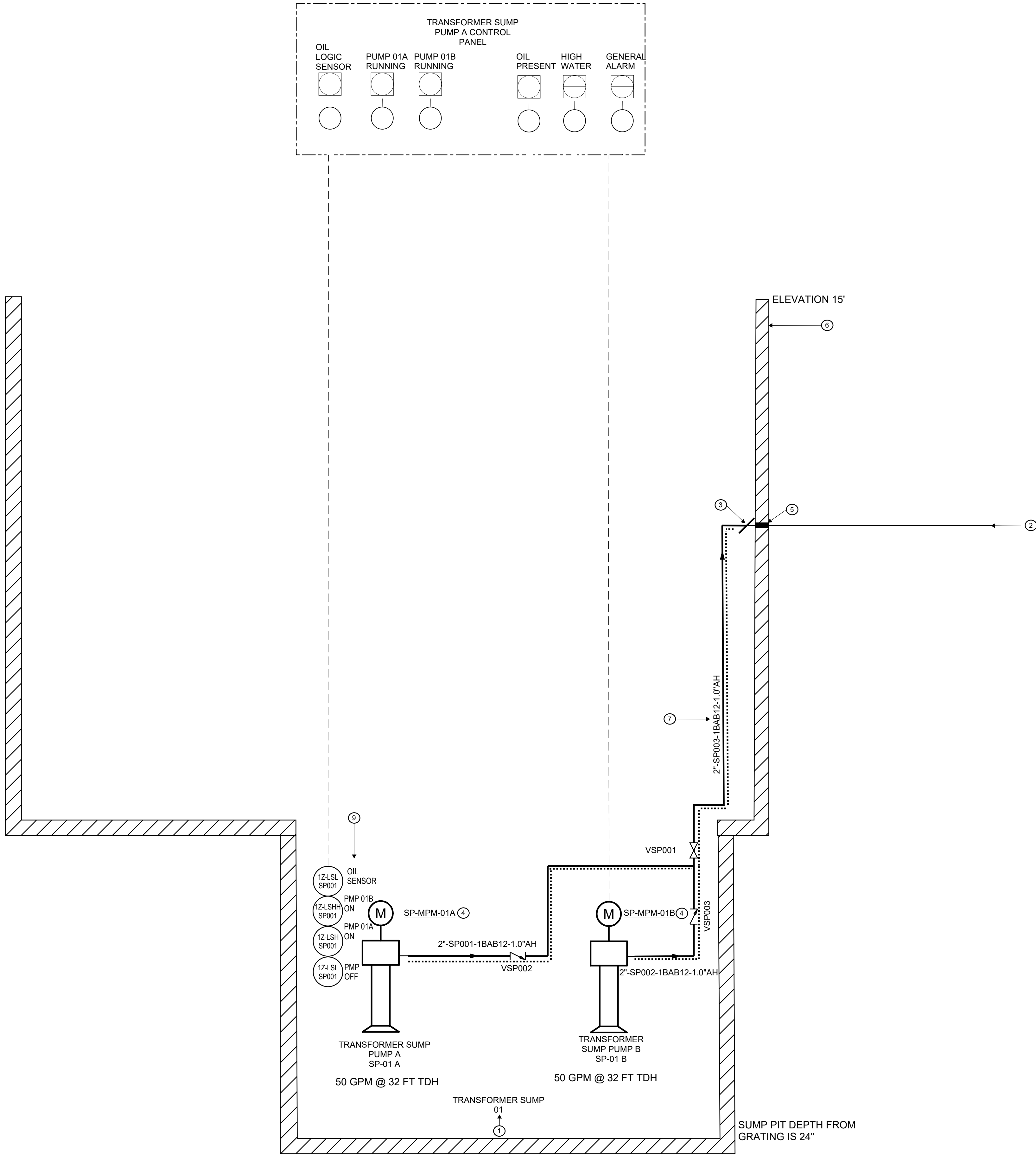
FIRE WATER TANK P&ID



DATE	12/12/2022
PROJECT NO	105121
DRAWING BY	J.HUTTON
CHECKED BY	S.DEVADKAR
DRAWING NO	
P-202.00	
CADD FILE NO	
Autodesk Docs://CHPE	
Astorla/CHA-KIE-001-00-M3-H-001.rvt	

12/7/2022 1:28:04 PM

12/7/2022 1:28:04 PM



1 TRANSFORMER SUMP PIT 01
P-203 NTS

SHEET NOTES:

1. REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
2. REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
3. REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
4. REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS.
5. REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
6. REFER TO ARCHITECTURAL DRAWINGS FOR ACCESS TO THE SUMP PIT (FILED UNDER SEPARATE APPLICATION).
7. REFER TO THE PLUMBING SCHEDULES FOR SUMP PUMP INFORMATION.
8. SEE COUGAR SPARTAN OIL LOGIC CONTROL PANEL SUBMITTAL. PANEL TO BE INTEGRATED WITH SITE BMS.
9. REFER TO GENERAL NOTES ON PLUMBING COVER SHEETS FOR ADDITIONAL REQUIREMENTS OF WORK.
10. ALL METTALIC PLUMBING AND ACCESSORIES INSTALLED OUTDOORS SHALL BE BONDED TO GROUND. REFER TO ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

PLUMBING KEYNOTES:

1. SECONDARY CONTAINMENT TO SLOPE TOWARDS THE SUMP PIT. FOR CONTAINMENT DETAILS, SEE STRUCTURAL DRAWINGS: (FO-135, FO-136, FO-137 & FO-310 FILED UNDER SEPARATE APPLICATION).
2. REFER TO C-301 CIVIL DRAWING FOR PIPING CONTINUATION AND INVERT ELEVATION (FILE UNDER SEPARATE APPLICATION).
3. SUMP PUMP DRAIN PIPE TO BE CONNECTED TO CIVIL PIPE INSIDE THE CONTAINMENT PIT.
4. FOR PUMP INFORMATION, REFER TO SUMP PUMP SCHEDULE.
5. PIPE SEAL AND PENETRATION SLEEVE TO BE SPECIFIED BY CIVIL AND PROVIDED BY CIVIL (FILED UNDER SEPARATE APPLICATION).
6. PIT ACCESS TO BE PROVIDED AND SHOWN ON STRUCTURAL DRAWINGS (FILED UNDER SEPARATE APPLICATION).
7. SUMP PUMP DISCHARGE PIPING TO BE INSULATED AND HEAT TRACED UP UNTIL EXITING OF CONTAINMENT FOR FREEZE PROTECTION. REFER TO ELECTRICAL DRAWINGS FOR CONTROL PANEL AND JUNCTION BOX INFORMATION.
8. SEE PUMP PLAN (P-200) FOR TRANSFORMER SUMP PUMP DENOTATION.

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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	JH	SD	12-12-22
A	INTERIM SUBMISSION	JH	SD	09-13-22

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

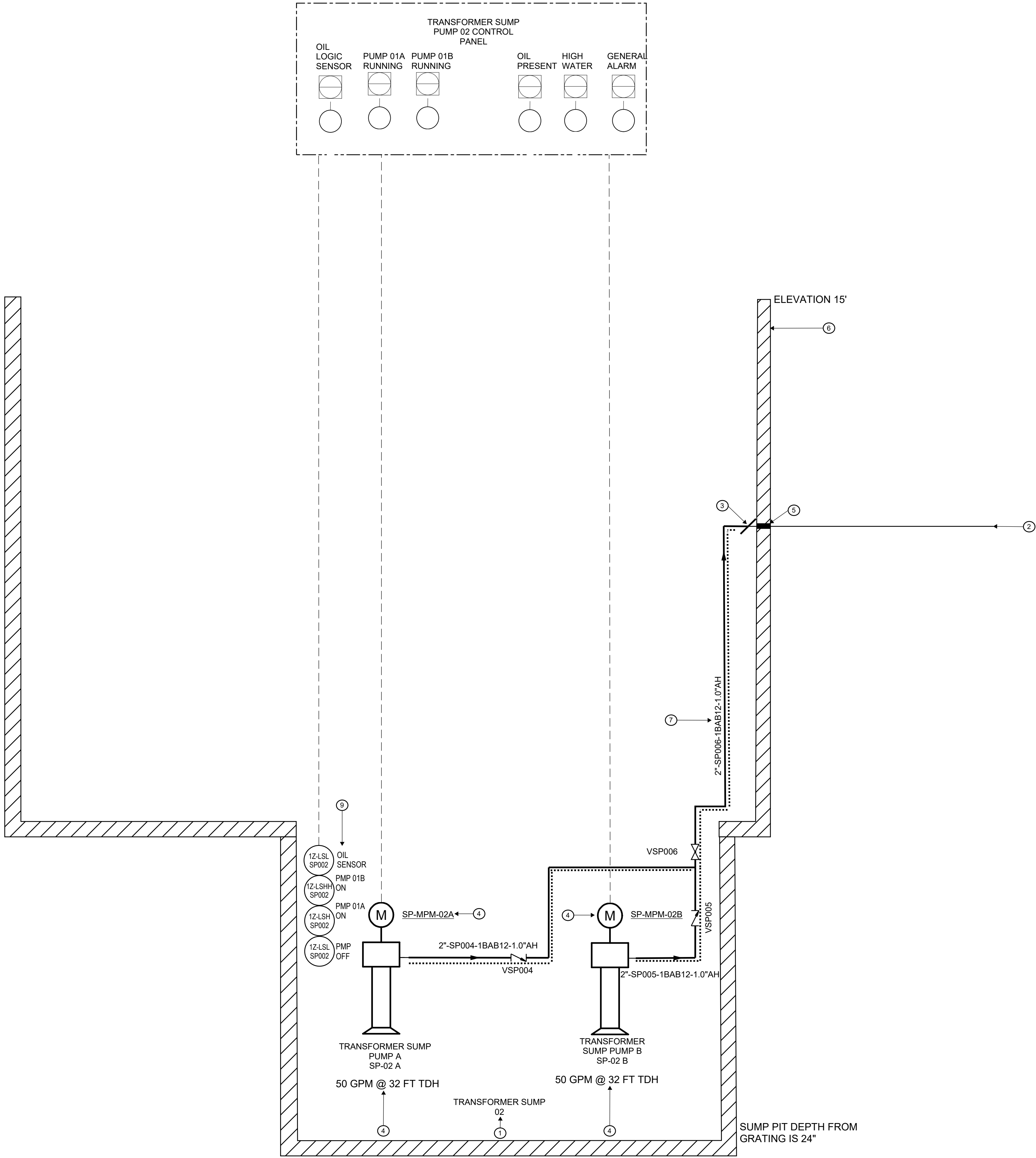
Astoria HVDC
Converter Station

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

TRANSFORMER SUMP 01



DATE 12/12/2022
PROJECT NO 105121
DRAWING BY J.HUTTON
CHECKED BY S.DEVADKAR
DRAWING NO
P-203.00
CADD FILE NO
Astoria\CHA-KIE-081-00-M314-001.rvt



1
P-204
TRANSFORMER SUMP PIT 02
NTS

SHEET NOTES:

1. REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
2. REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
3. REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
4. REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS.
5. REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
6. REFER TO ARCHITECTURAL DRAWINGS FOR ACCESS TO THE SUMP PIT (FILED UNDER SEPARATE APPLICATION).
7. REFER TO THE PLUMBING SCHEDULES FOR SUMP PUMP INFORMATION.
8. SEE COUGAR SPARTAN OIL LOGIC CONTROL PANEL SUBMITTAL. PANEL TO BE INTEGRATED WITH SITE BMS.
9. REFER TO GENERAL NOTES ON PLUMBING COVER SHEETS FOR ADDITIONAL REQUIREMENTS OF WORK.
10. ALL METTALIC PLUMBING AND ACCESSORIES INSTALLED OUTDOORS SHALL BE BONDED TO GROUND. REFER TO ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

PLUMBING KEYNOTES:

1. SECONDARY CONTAINMENT TO SLOPE TOWARDS THE SUMP PIT. FOR CONTAINMENT DETAILS, SEE STRUCTURAL DRAWINGS: (FO-135, FO-136, FO-137 & FO-310).
2. REFER TO C-301 CIVIL DRAWING FOR PIPING CONTINUATION AND INVERT ELEVATION. (FILED UNDER SEPARATE APPLICATION)
3. SUMP PUMP DRAIN PIPE TO BE CONNECTED TO CIVIL PIPE INSIDE THE CONTAINMENT PIT.
4. FOR PUMP INFORMATION, REFER TO SUMP PUMP SCHEDULE.
5. PIPE SEAL AND PENETRATION SLEEVE TO BE SPECIFIED BY CIVIL AND PROVIDED BY CIVIL. (FILED UNDER SEPARATE APPLICATION)
6. PIT ACCESS TO BE PROVIDED AND SHOWN ON STRUCTURAL DRAWINGS. (FILED UNDER SEPARATE APPLICATION)
7. SUMP PUMP DISCHARGE PIPING TO BE INSULATED AND HEAT TRACED UP UNTIL EXITING OF CONTAINMENT FOR FREEZE PROTECTION. REFER TO ELECTRICAL DRAWINGS FOR CONTROL PANEL AND JUNCTION BOX INFORMATION.
8. SEE PUMP PLAN (P-200) FOR TRANSFORMER SUMP PUMP DENOTATION.
9. SUMP PUMPS TO BE CONTROL BY FLOATS. THE PUMP OFF AND LOW LEVEL FLOAT WILL BE LOCATED AT THE MINIMUM SUBMERGENCE LEVEL OF THE PUMP. PUMP 01A ON WILL BE 6 INCHES ABOVE THE MINIMUM SUBMERGENCE. PUMP 01B WILL BE 1 FOOT ABOVE THE MINIMUM SUBMERGENCE.

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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEIPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	JH	SD	12-12-22
A	INTERIM SUBMISSION	JH	SD	09-13-22

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

TRANSFORMER SUMP 02

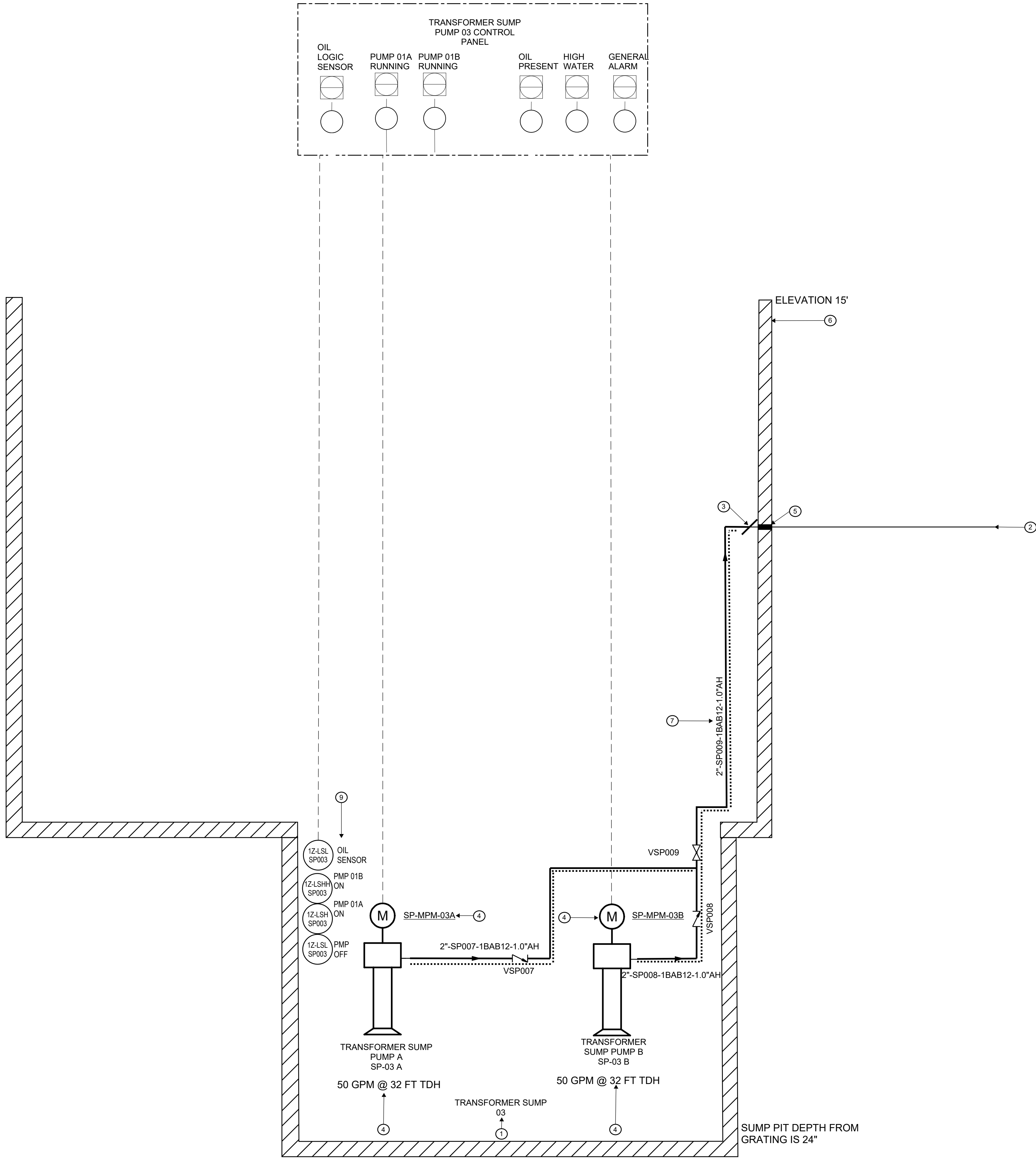


DATE 12/12/2022
PROJECT NO 105121
DRAWING BY J.HUTTON
CHECKED BY S.DEVADKAR

DRAWING NO

P-204.00

CADD FILE NO
Astoria\CHA-KIE-081-00-M314-001.rvt



SHEET NOTES:

1. REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
2. REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
3. REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
4. REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS.
5. REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
6. REFER TO ARCHITECTURAL DRAWINGS FOR ACCESS TO THE SUMP PIT (FILED UNDER SEPARATE APPLICATION).
7. REFER TO THE PLUMBING SCHEDULES FOR SUMP PUMP INFORMATION.
8. SEE COUGAR SPARTAN OIL LOGIC CONTROL PANEL SUBMITTAL. PANEL TO BE INTEGRATED WITH SITE BMS.
9. REFER TO GENERAL NOTES ON PLUMBING COVER SHEETS FOR ADDITIONAL REQUIREMENTS OF WORK.
10. ALL METTALIC PLUMBING AND ACCESSORIES INSTALLED OUTDOORS SHALL BE BONDED TO GROUND. REFER TO ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

PLUMBING KEYNOTES:

1. SECONDARY CONTAINMENT TO SLOPE TOWARDS THE SUMP PIT. FOR CONTAINMENT DETAILS, SEE STRUCTURAL DRAWINGS: (FO-135, FO-136, FO-137 & FO-310).
2. REFER TO C-301 CIVIL DRAWING FOR PIPING CONTINUATION AND INVERT ELEVATION. (FILED UNDER SEPARATE APPLICATION).
3. SUMP PUMP DRAIN PIPE TO BE CONNECTED TO CIVIL PIPE INSIDE THE CONTAINMENT PIT.
4. FOR PUMP INFORMATION, REFER TO SUMP PUMP SCHEDULE.
5. PIPE SEAL AND PENETRATION SLEEVE TO BE SPECIFIED BY CIVIL AND PROVIDED BY CIVIL. (FILED UNDER SEPARATE APPLICATION).
6. PIT ACCESS TO BE PROVIDED AND SHOWN ON STRUCTURAL DRAWINGS. (FILED UNDER SEPARATE APPLICATION).
7. SUMP PUMP DISCHARGE PIPING TO BE INSULATED AND HEAT TRACED UP UNTIL EXITING OF CONTAINMENT FOR FREEZE PROTECTION. REFER TO ELECTRICAL DRAWINGS FOR CONTROL PANEL AND JUNCTION BOX INFORMATION.
8. SEE PUMP PLAN (P-200) FOR TRANSFORMER SUMP PUMP DENOTATION.
9. SUMP PUMPS TO BE CONTROL BY FLOATS. THE PUMP OFF AND LOW LEVEL FLOAT WILL BE LOCATED AT THE MINIMUM SUBMERGENCE LEVEL OF THE PUMP. PUMP 01A ON WILL BE 6 INCHES ABOVE THE MINIMUM SUBMERGENCE. PUMP 01B WILL BE 1 FOOT ABOVE THE MINIMUM SUBMERGENCE.

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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

B	FINAL SUBMISSION	JH	SD	12-12-22
A	INTERIM SUBMISSION	JH	SD	09-13-22
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

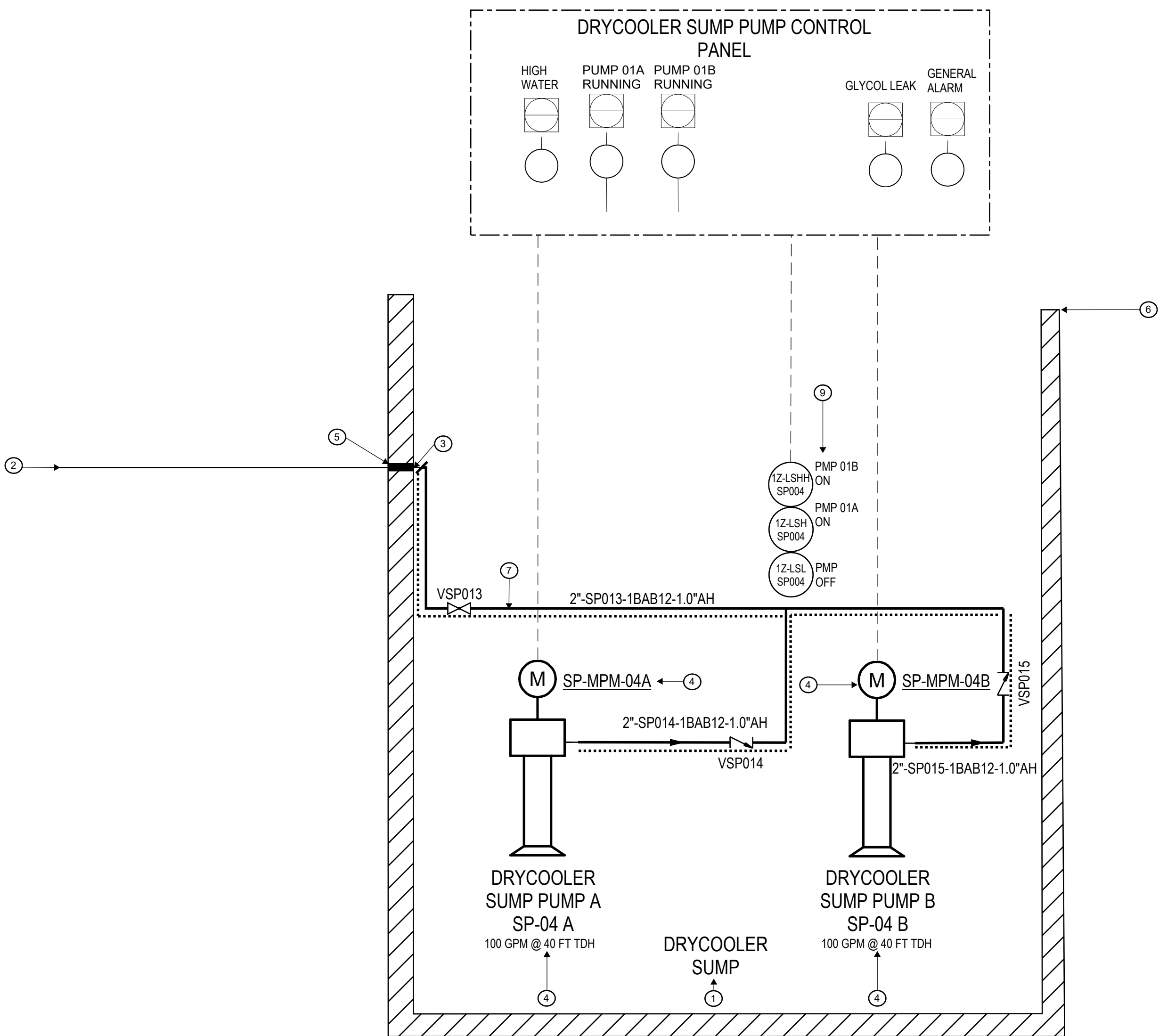
TRANSFORMER SUMP 03



DATE 12/12/2022
PROJECT NO 105121
DRAWING BY J.HUTTON
CHECKED BY S.DEVADKAR
DRAWING NO
CADD FILE NO
Astoria/CHA-KIE-081-00-M3-H-001.rvt

P-205.00

1 TRANSFORMER SUMP PIT 03
P-205 NTS



1 DRYCOOLER SUMP PIT
P-206 NTS

SHEET NOTES:

- REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS.
- REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO ARCHITECTURAL DRAWINGS FOR ACCESS TO THE SUMP PIT (FILED UNDER SEPARATE APPLICATION).
- REFER TO THE PLUMBING SCHEDULES FOR SUMP PUMP INFORMATION.
- CONTROL PANEL TO BE INTEGRATED WITH SITE BMS.
- REFER TO GENERAL NOTES ON PLUMBING COVER SHEETS FOR ADDITIONAL REQUIREMENTS OF WORK.
- ALL METTALIC PLUMBING AND ACCESSORIES INSTALLED OUTDOORS SHALL BE BONDED TO GROUND. REFER TO ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

PLUMBING KEYNOTES:

- SECONDARY CONTAINMENT TO SLOPE TOWARDS THE SUMP PIT. FOR CONTAINMENT DETAILS, SEE STRUCTURAL DRAWINGS: (FO-145 & FO-315).
- REFER TO C-301 CIVIL DRAWING FOR PIPING CONTINUATION AND INVERT ELEVATION. (FILE UNDER SEPARATE APPLICATION)
- SUMP PUMP DRAIN PIPE TO BE CONNECTED TO CIVIL PIPE INSIDE THE CONTAINMENT PIT.
- FOR PUMP INFORMATION, REFER TO SUMP PUMP SCHEDULE.
- PIPE SEAL AND PENETRATION SLEEVE TO BE SPECIFIED BY CIVIL AND PROVIDED BY CIVIL. (FILE UNDER SEPARATE APPLICATION)
- PIT ACCESS TO BE PROVIDED AND SHOWN ON STRUCTURAL DRAWINGS. (FILE UNDER SEPARATE APPLICATION)
- SUMP PUMP DISCHARGE PIPING TO BE INSULATED AND HEAT TRACED UP UNTIL EXITING OF CONTAINMENT FOR FREEZE PROTECTION.
- SUMP PUMP TO BE INTEGRATED WITH BMS. DRYCOOLER SYSTEM MUST BE ABLE TO SHUT OFF PUMP IN THE EVENT OF A LEAK.
- SUMP PUMPS TO BE CONTROL BY FLOATS. THE PUMP OFF AND LOW LEVEL FLOAT WILL BE LOCATED AT THE MINIMUM SUBMERGENCE LEVEL OF THE PUMP. PUMP 01A ON WILL BE 6 INCHES ABOVE THE MINIMUM SUBMERGENCE. PUMP 01B WILL BE 1 FOOT ABOVE THE MINIMUM SUBMERGENCE.

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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEPTOR SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	JH	SD	12-12-22
A	INTERIM SUBMISSION	JH	SD	09-13-22

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

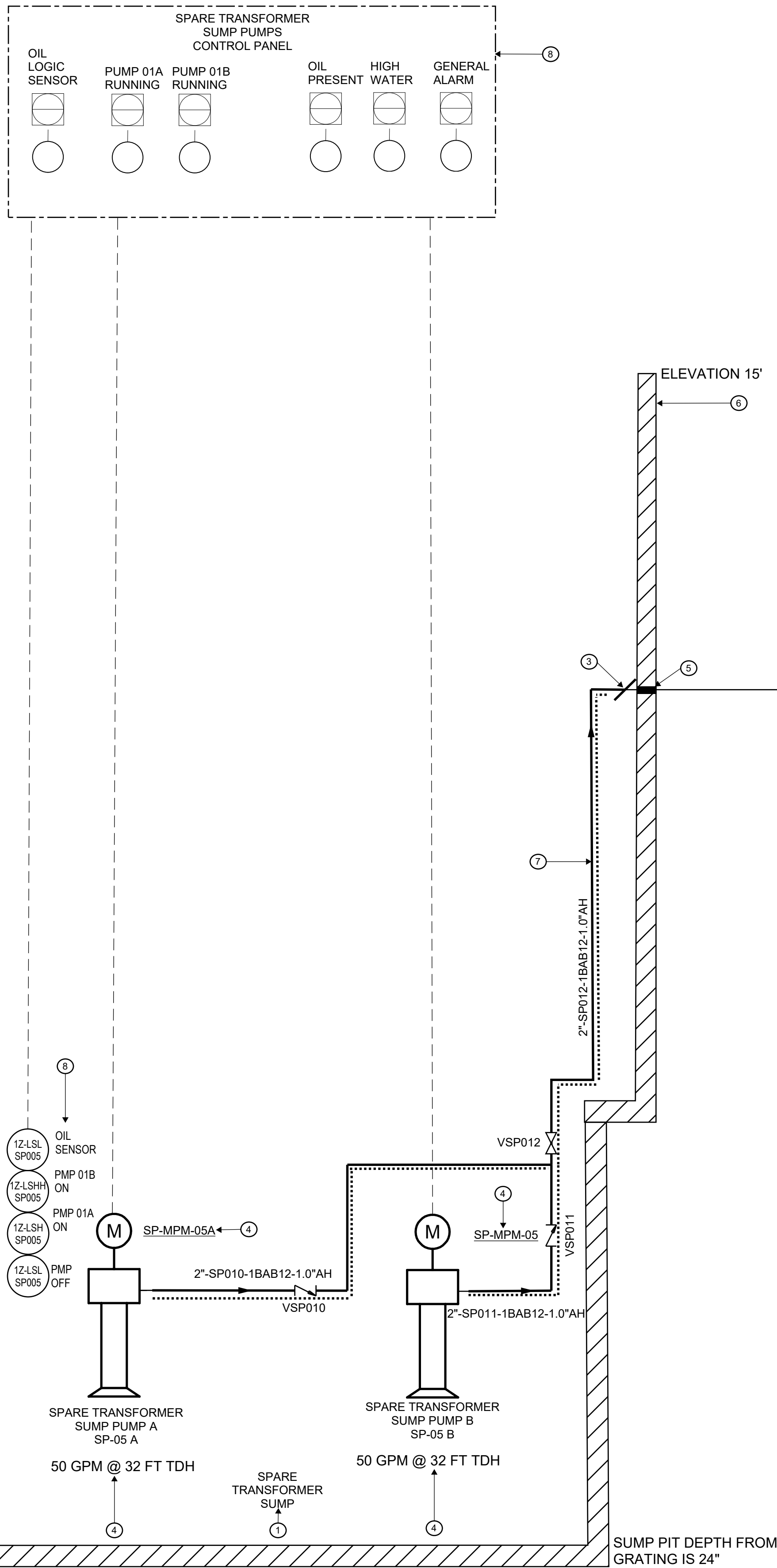
DRYCOOLER SUMP



DATE 12/12/2022
PROJECT NO 105121
DRAWING BY J.HUTTON
CHECKED BY S.DEVADKAR
DRAWING NO
P-206.00
CADD FILE NO
Astoria-CHA-KIE-081-00-M314-001.rvt

12/7/2022 1:28:04 PM

1
P-207
NTS
SPARE TRANSFORMER SUMP PIT



SHEET NOTES:

1. REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
2. REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
3. REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
4. REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS.
5. REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
6. REFER TO ARCHITECTURAL DRAWINGS FOR ACCESS TO THE SUMP PIT (FILED UNDER SEPARATE APPLICATION).
7. REFER TO THE PLUMBING SCHEDULES FOR SUMP PUMP INFORMATION.
8. SEE COUGAR SPARTAN OIL LOGIC CONTROL PANEL SUBMITTAL. PANEL TO BE INTEGRATED WITH SITE BMS.
9. REFER TO GENERAL NOTES ON PLUMBING COVER SHEETS FOR ADDITIONAL REQUIREMENTS OF WORK.
10. ALL METTALIC PLUMBING AND ACCESSORIES INSTALLED OUTDOORS SHALL BE BONDED TO GROUND. REFER TO ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

PLUMBING KEYNOTES:

1. SECONDARY CONTAINMENT TO SLOPE TOWARDS THE SUMP PIT. FOR CONTAINMENT DETAILS. SEE STRUCTURAL DRAWINGS: (FO-175 & FO-320).
2. REFER TO C-301 CIVIL DRAWING FOR PIPING CONTINUATION AND INVERT ELEVATION. (FILE UNDER SEPARATE APPLICATION)
3. SUMP PUMP DRAIN PIPE TO BE CONNECTED TO CIVIL PIPE INSIDE THE CONTAINMENT PIT.
4. FOR PUMP INFORMATION, REFER TO SUMP PUMP SCHEDULE.
5. PIPE SEAL AND PENETRATION SLEEVE TO BE SPECIFIED BY CIVIL AND PROVIDED BY CIVIL. (FILE UNDER SEPARATE APPLICATION)
6. PIT ACCESS TO BE PROVIDED AND SHOWN ON STRUCTURAL DRAWINGS. (FILE UNDER SEPARATE APPLICATION)
7. SUMP PUMP DISCHARGE PIPING TO BE INSULATED AND HEAT TRACED UP UNTIL EXITING OF CONTAINMENT FOR FREEZE PROTECTION.
8. SUMP PUMPS TO BE CONTROL BY FLOATS. THE PUMP OFF AND LOW LEVEL FLOAT WILL BE LOCATED AT THE MINIMUM SUBMERGENCE LEVEL OF THE PUMP. PUMP 01A ON WILL BE 6 INCHES ABOVE THE MINIMUM SUBMERGENCE. PUMP 01B WILL BE 1 FOOT ABOVE THE MINIMUM SUBMERGENCE.

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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	JH	SD	12-12-22
A	INTERIM SUBMISSION	JH	SD	09-13-22

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

SPARE TRANSFORMER SUMP



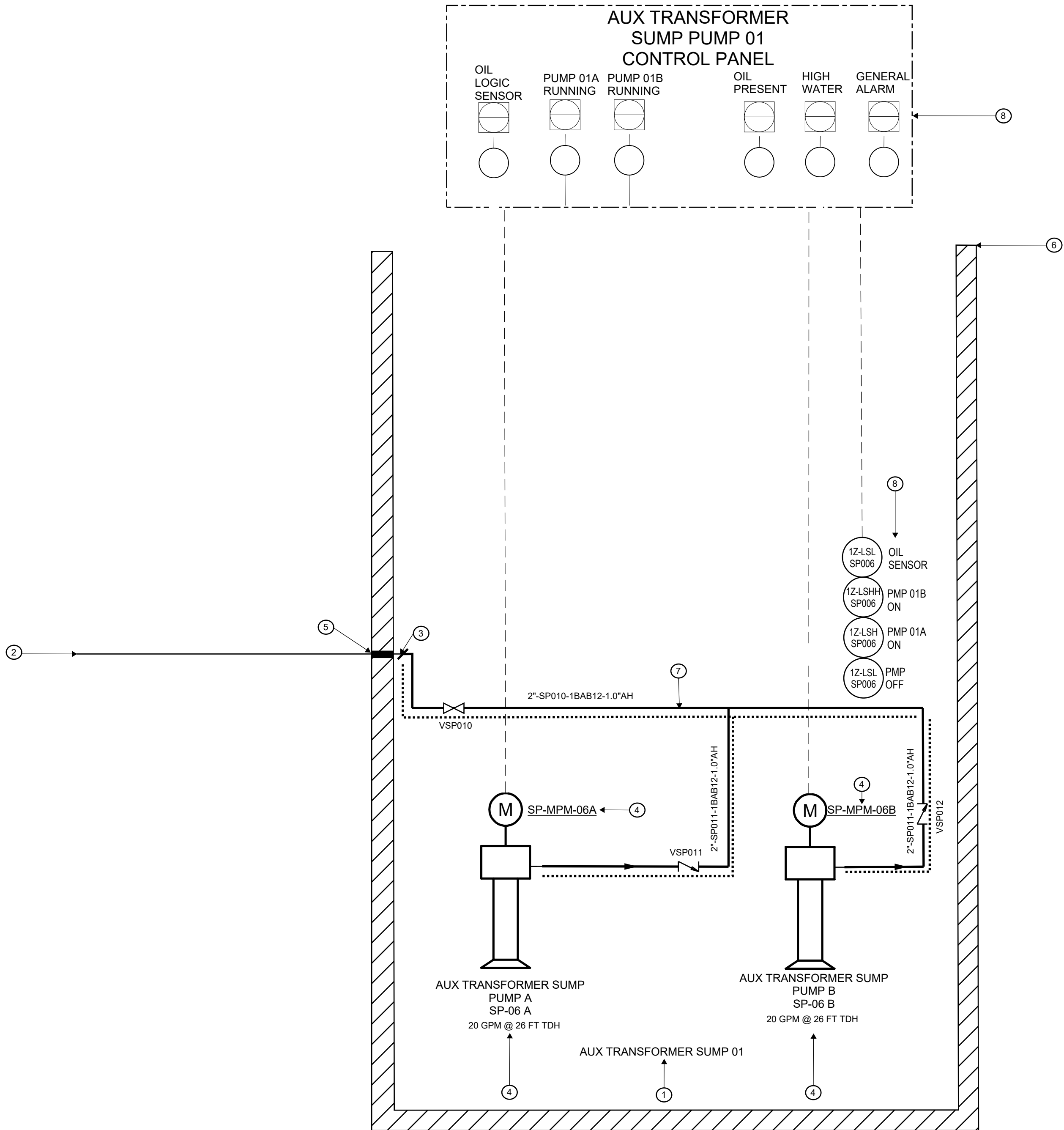
DATE 12/12/2022
PROJECT NO 105121
DRAWING BY W.PENDLETON
CHECKED BY J.HUTTON

DRAWING NO

P-207.00

CADD FILE NO
Astoria-CHPE-081-00-M314-001.rvt

12/7/2022 1:28:04 PM



1 AUXILIARY TRANSFORMER SUMP PIT 01
P-208 NTS

SHEET NOTES:

- REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS.
- REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO ARCHITECTURAL DRAWINGS FOR ACCESS TO THE SUMP PIT (FILED UNDER SEPARATE APPLICATION).
- REFER TO THE PLUMBING SCHEDULES FOR SUMP PUMP INFORMATION.
- SEE COUGAR SPARTAN OIL LOGIC CONTROL PANEL SUBMITTAL. PANEL TO BE INTEGRATED WITH SITE BMS.
- REFER TO GENERAL NOTES ON PLUMBING COVER SHEETS FOR ADDITIONAL REQUIREMENTS OF WORK.
- ALL METTALIC PLUMBING AND ACCESSORIES INSTALLED OUTDOORS SHALL BE BONDED TO GROUND. REFER TO ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

PLUMBING KEYNOTES:

- SECONDARY CONTAINMENT TO SLOPE TOWARDS THE SUMP PIT. FOR CONTAINMENT DETAILS, SEE STRUCTURAL DRAWINGS: (FO-180 & FO-335).
- REFER TO C-301 CIVIL DRAWING FOR PIPING CONTINUATION AND INVERT ELEVATION. (FILE UNDER SEPARATE APPLICATION)
- SUMP PUMP DRAIN PIPE TO BE CONNECTED TO CIVIL PIPE INSIDE THE CONTAINMENT PIT.
- FOR PUMP INFORMATION, REFER TO SUMP PUMP SCHEDULE.
- PIPE SEAL AND PENETRATION SLEEVE TO BE SPECIFIED BY CIVIL AND PROVIDED BY CIVIL. (FILE UNDER SEPARATE APPLICATION)
- PIT ACCESS TO BE PROVIDED AND SHOWN ON STRUCTURAL DRAWINGS. (FILE UNDER SEPARATE APPLICATION)
- SUMP PUMP DISCHARGE PIPING TO BE INSULATED AND HEAT TRACED UP UNTIL EXITING OF CONTAINMENT FOR FREEZE PROTECTION.
- SUMP PUMPS TO BE CONTROL BY FLOATS. THE PUMP OFF AND LOW LEVEL FLOAT WILL BE LOCATED AT THE MINIMUM SUBMERGENCE LEVEL OF THE PUMP. PUMP 01A ON WILL BE 6 INCHES ABOVE THE MINIMUM SUBMERGENCE. PUMP 01B WILL BE 1 FOOT ABOVE THE MINIMUM SUBMERGENCE.

ISSUED FOR PERMIT

K 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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEIPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

B	FINAL SUBMISSION	JH	SD	12-12-22
A	INTERIM SUBMISSION	JH	SD	09-13-22
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**

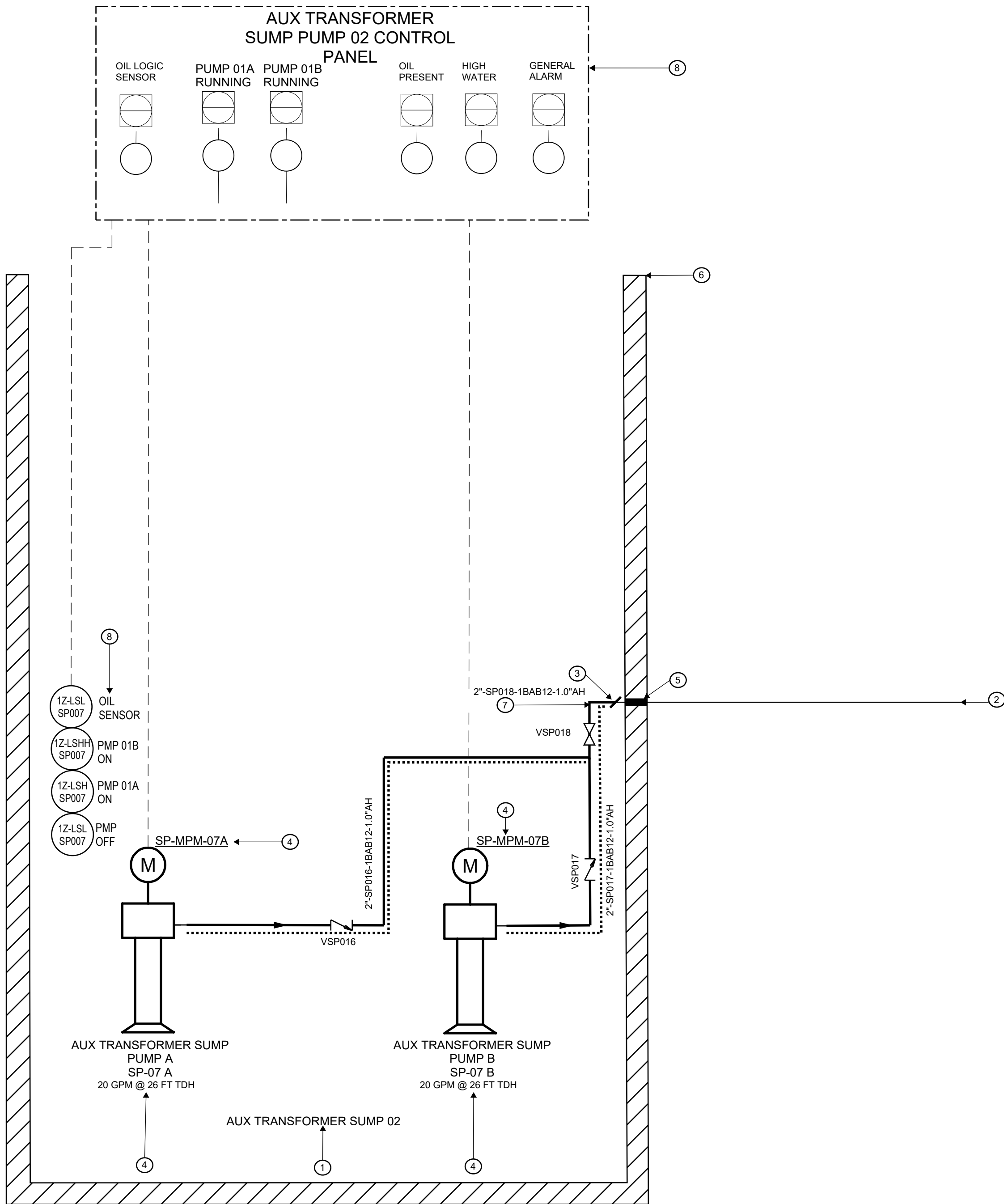
31-45 20th Avenue, Astoria, Queens NY 11105
Block #850 - Lot #310 - BIN #4624437

**AUXILIARY TRANSFORMER
SUMP 01**



DATE 12/12/2022
PROJECT NO 105121
DRAWING BY J.HUTTON
CHECKED BY S.DEVADKAR
DRAWING NO
P-208.00
CADD FILE NO
Astoria\CHA-KIE-081-00-M3-H-001.rvt

1
P-209
AUXILIARY TRANSFORMER SUMP PIT 02
NTS



SHEET NOTES:

- REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS.
- REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS (FILED UNDER SEPARATE APPLICATION).
- REFER TO ARCHITECTURAL DRAWINGS FOR ACCESS TO THE SUMP PIT (FILED UNDER SEPARATE APPLICATION).
- REFER TO THE PLUMBING SCHEDULES FOR SUMP PUMP INFORMATION.
- SEE COUGAR SPARTAN OIL LOGIC CONTROL PANEL SUBMITTAL. PANEL TO BE INTEGRATED WITH SITE BMS.
- REFER TO GENERAL NOTES ON PLUMBING COVER SHEETS FOR ADDITIONAL REQUIREMENTS OF WORK.
- ALL METTALIC PLUMBING AND ACCESSORIES INSTALLED OUTDOORS SHALL BE BONDED TO GROUND. REFER TO ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

PLUMBING KEYNOTES:

- SECONDARY CONTAINMENT TO SLOPE TOWARDS THE SUMP PIT. FOR CONTAINMENT DETAILS, SEE STRUCTURAL DRAWINGS: (FO-180 & FO-335).
- REFER TO C-301 CIVIL DRAWING FOR PIPING CONTINUATION AND INVERT ELEVATION. (FILE UNDER SEPARATE APPLICATION)
- SUMP PUMP DRAIN PIPE TO BE CONNECTED TO CIVIL PIPE INSIDE THE CONTAINMENT PIT.
- FOR PUMP INFORMATION, REFER TO SUMP PUMP SCHEDULE.
- PIPE SEAL AND PENETRATION SLEEVE TO BE SPECIFIED BY CIVIL AND PROVIDED BY CIVIL. (FILE UNDER SEPARATE APPLICATION)
- PIT ACCESS TO BE PROVIDED AND SHOWN ON STRUCTURAL DRAWINGS. (FILE UNDER SEPARATE APPLICATION)
- SUMP PUMP DISCHARGE PIPING TO BE INSULATED AND HEAT TRACED UP UNTIL EXITING OF CONTAINMENT FOR FREEZE PROTECTION.
- SUMP PUMPS TO BE CONTROL BY FLOATS. THE PUMP OFF AND LOW LEVEL FLOAT WILL BE LOCATED AT THE MINIMUM SUBMERGENCE LEVEL OF THE PUMP. PUMP 01A ON WILL BE 6 INCHES ABOVE THE MINIMUM SUBMERGENCE. PUMP 01B WILL BE 1 FOOT ABOVE THE MINIMUM SUBMERGENCE.

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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

B	FINAL SUBMISSION	JH	SD	12-12-22
A	INTERIM SUBMISSION	JH	SD	09-13-22
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

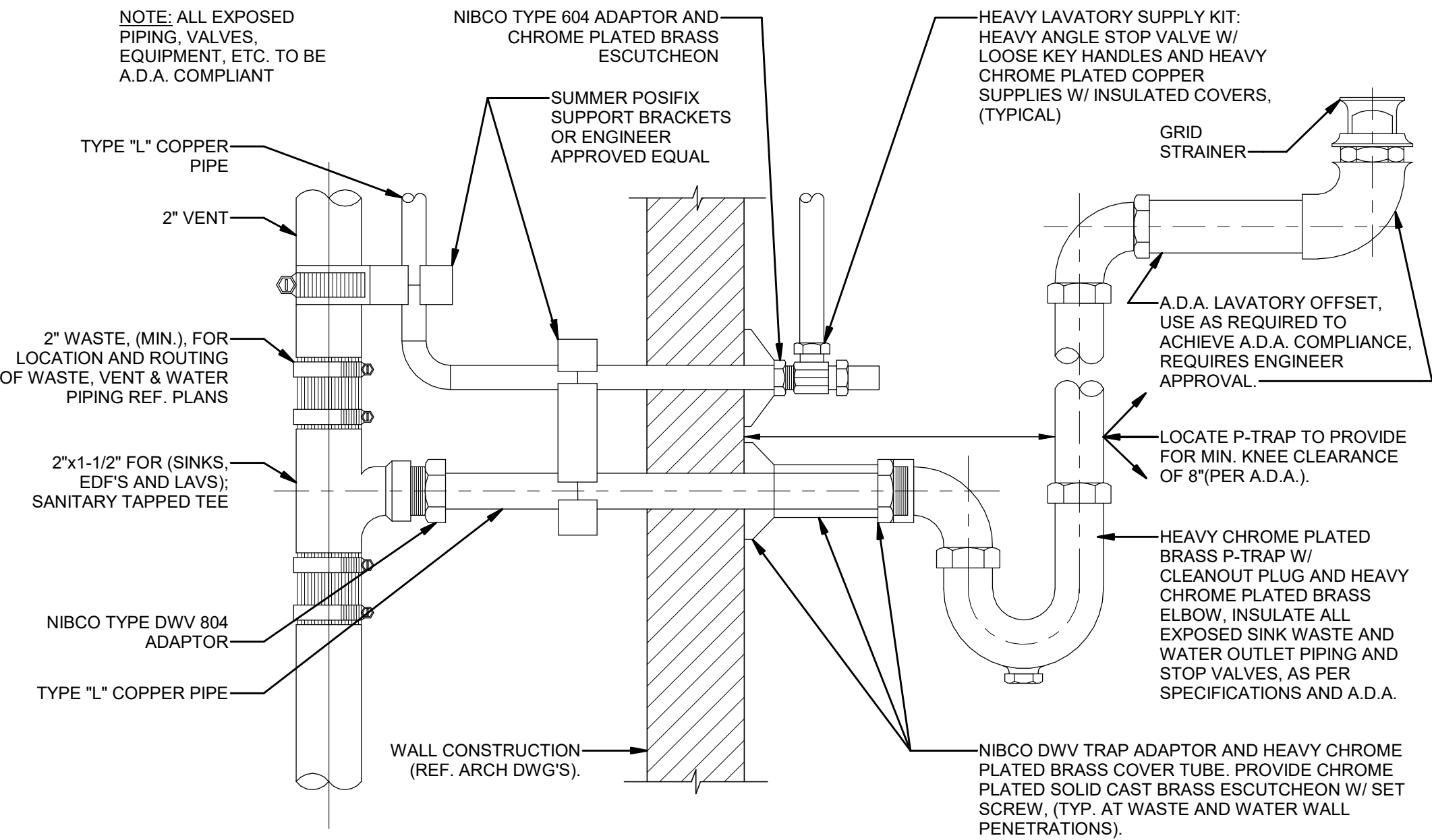
Astoria HVDC
Converter Station

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

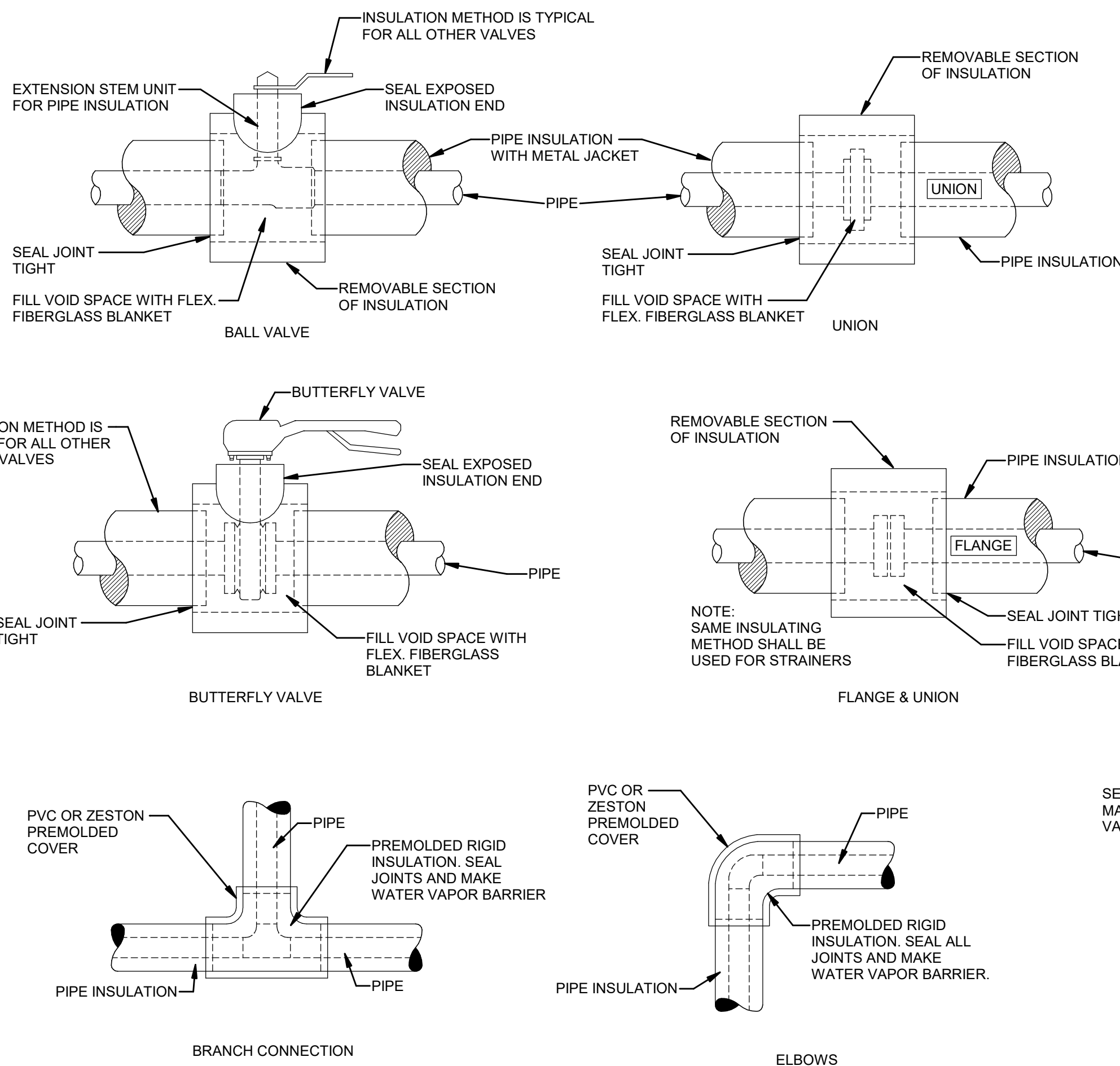
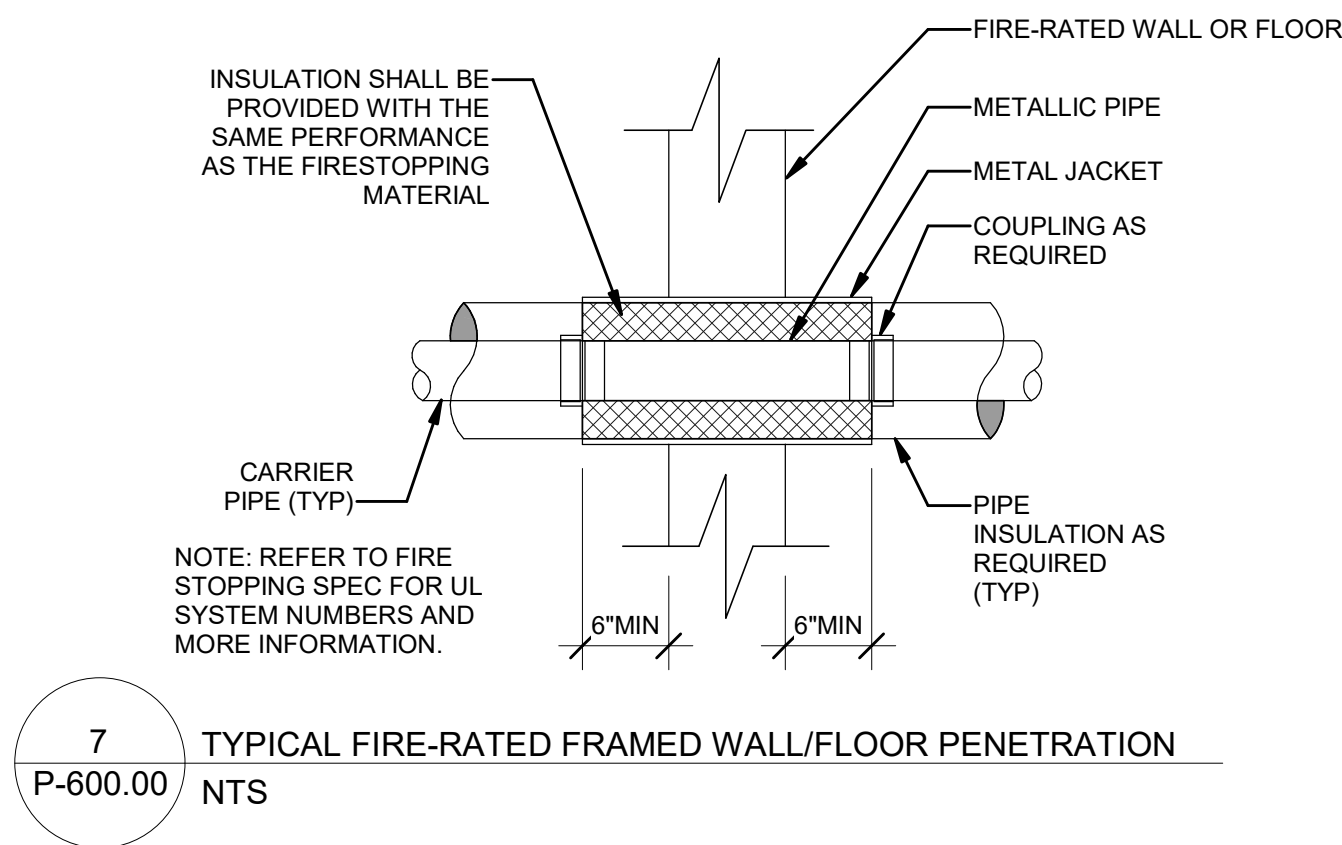
AUXILIARY TRANSFORMER
SUMP 02



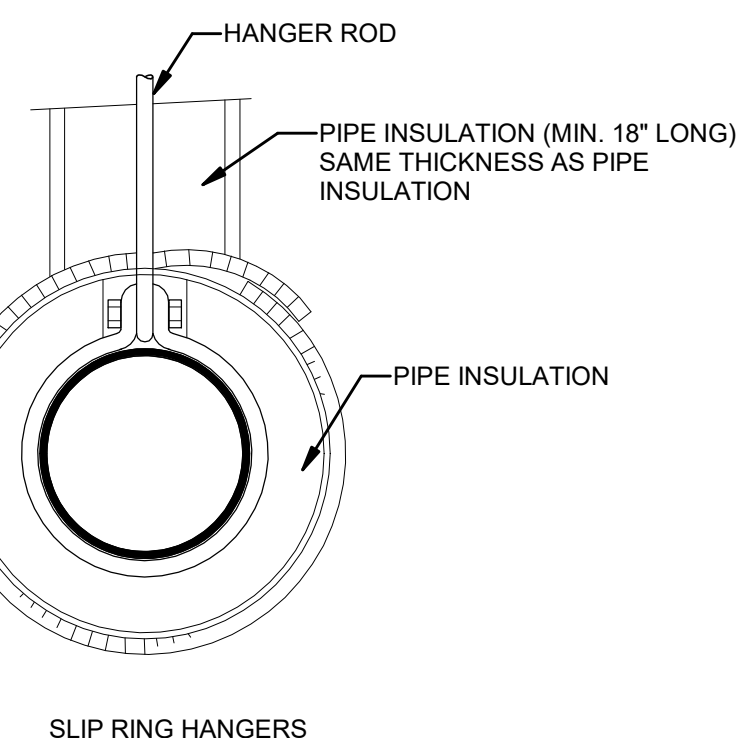
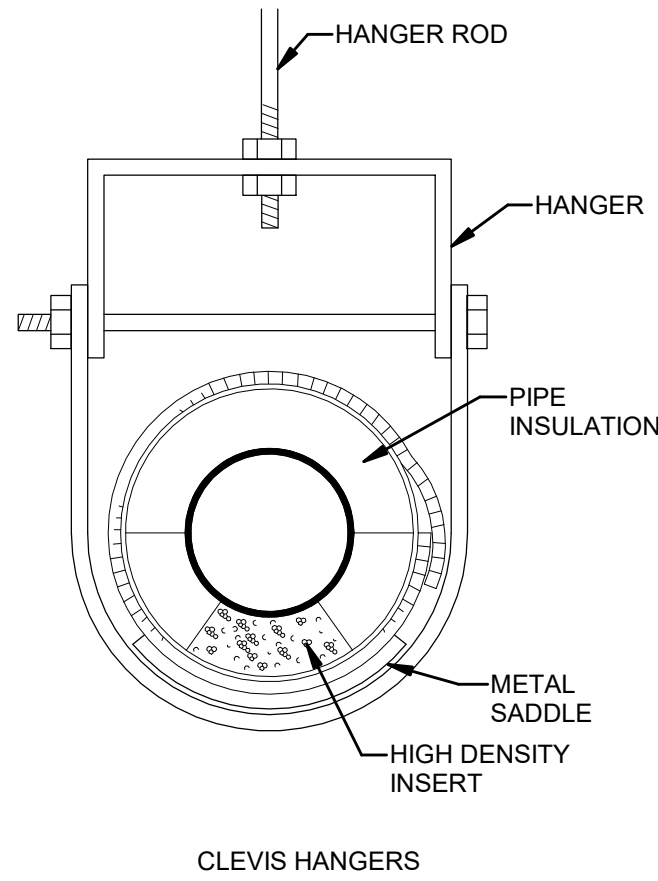
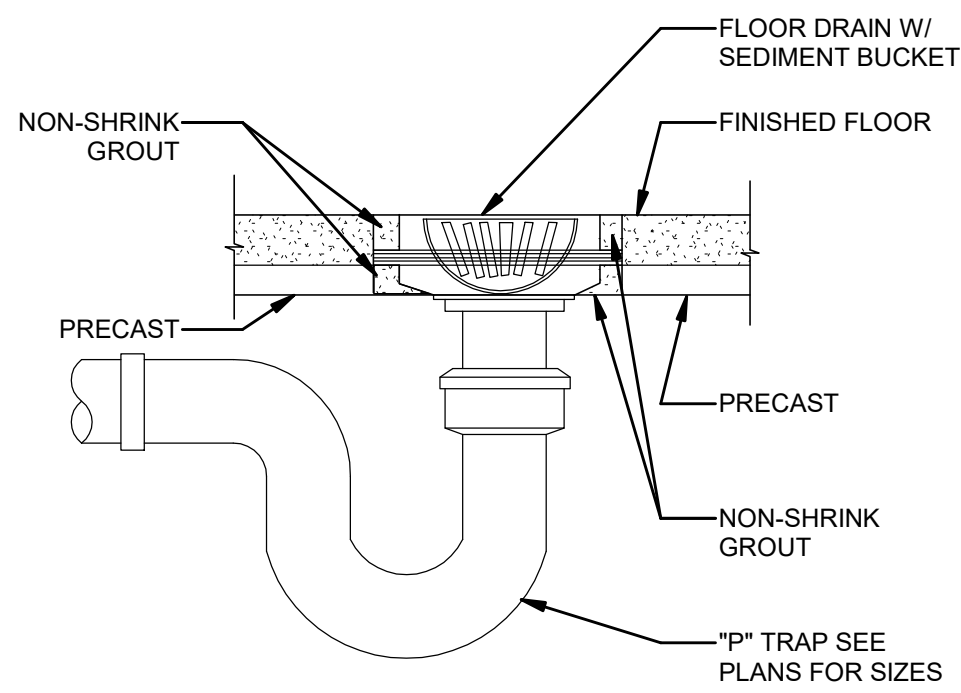
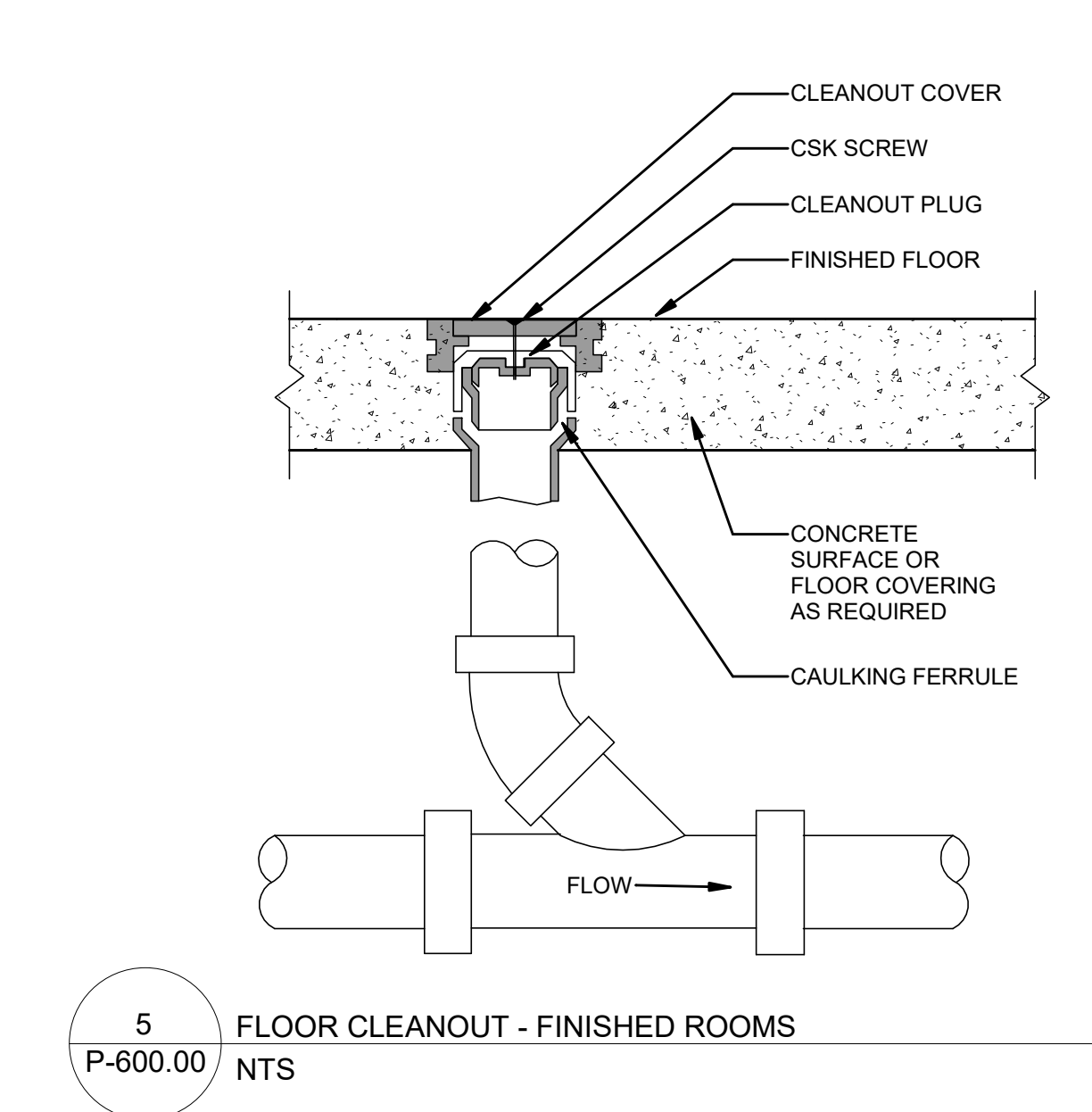
DATE 12/12/2022
PROJECT NO 105121
DRAWING BY J.HUTTON
CHECKED BY S.DEVADKAR
DRAWING NO
P-209.00
CADD FILE NO
Astoria\CHA-KIE-081-00-M3-H-001.rvt



8 TYPICAL LAVATORY AND SINK CONNECTION DETAIL
P-600.00 NTS

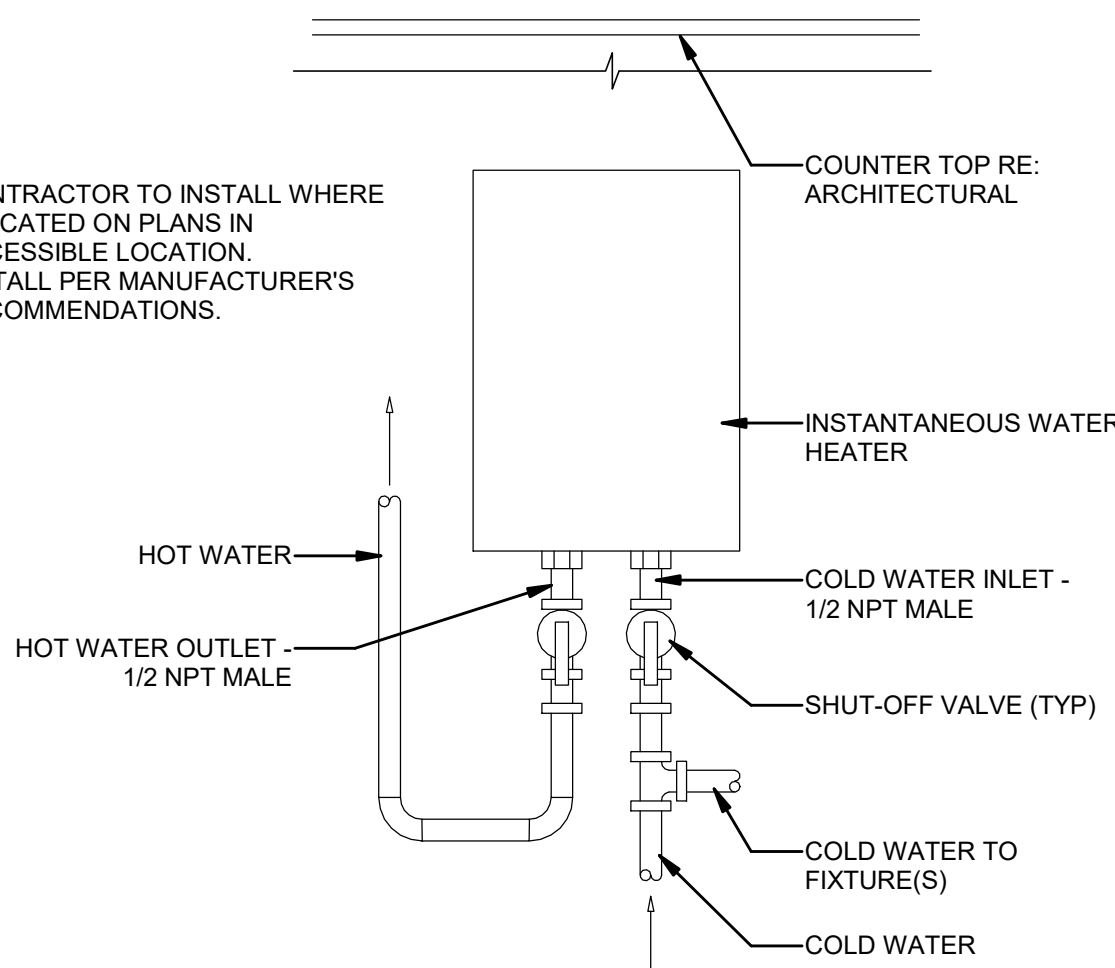


6 PIPE INSULATION DETAIL
P-600.00 NTS



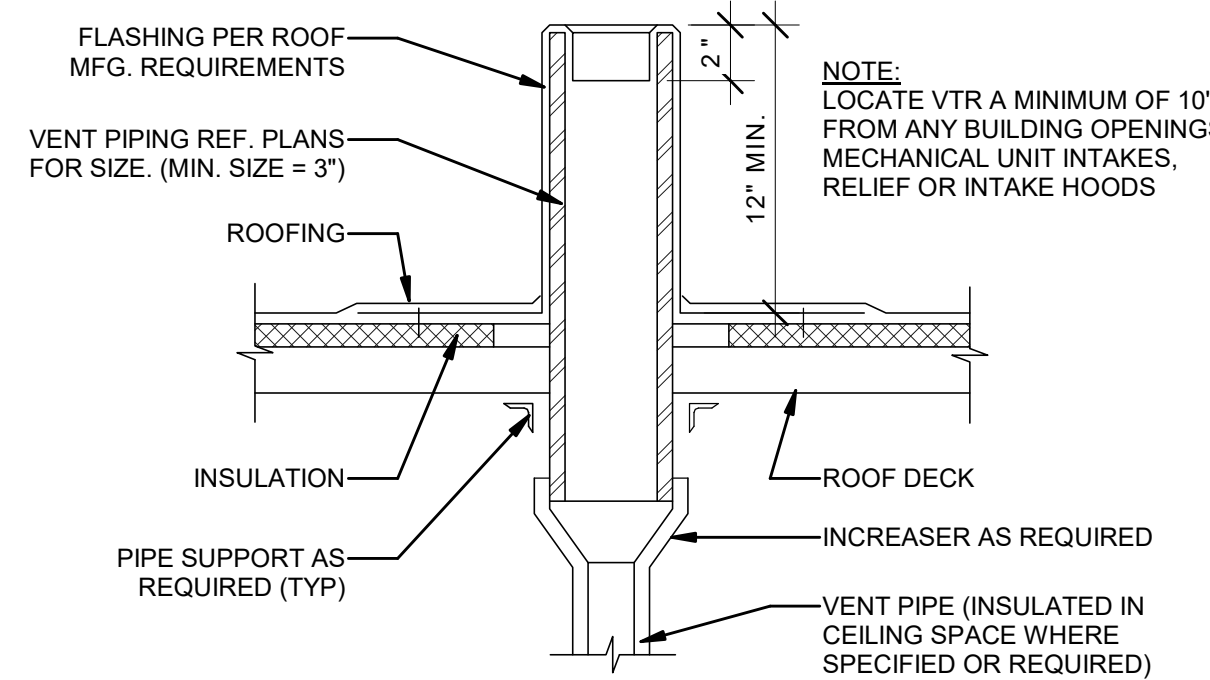
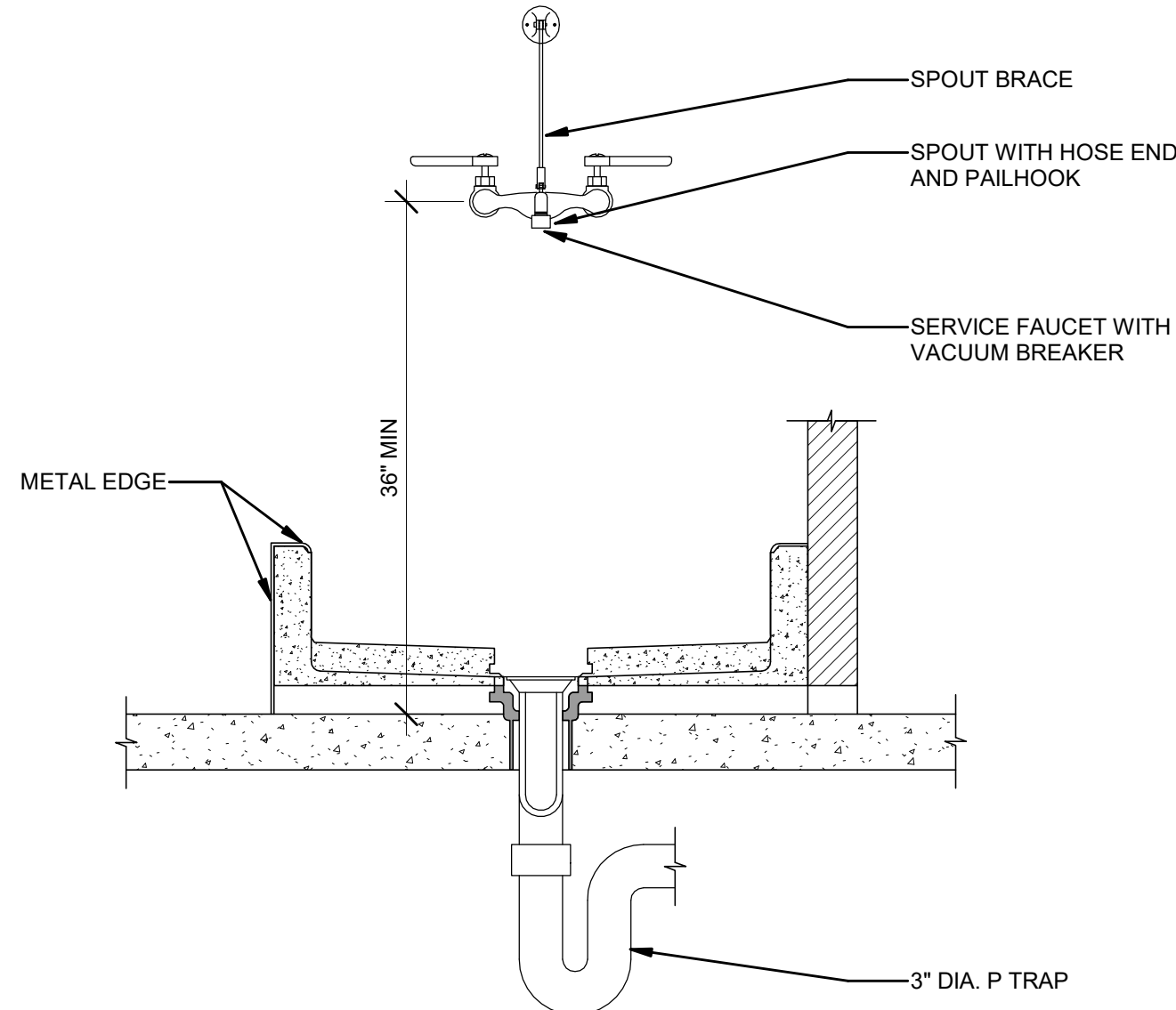
1 POINT OF USE ELECTRIC WATER HEATER
P-600.00 NTS

- NOTES:
- CONTRACTOR TO INSTALL WHERE INDICATED ON PLANS IN ACCESSIBLE LOCATION.
 - INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



SHEET NOTES:

- REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
- REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
- REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
- REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
- REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
- REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
- ALL PLUMBING METALLIC COMPONENTS INSIDE CONVERTOR BUILDING SHALL BE BONDED TO THE BUILDING RING CONDUCTOR. COORDINATE WITH ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.
- ALL PLUMBING METALLIC COMPONENTS INSTALLED OUTSIDE OF BUILDING SHALL BE BONDED TO GROUND. COORDINATE WITH ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.



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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEIPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE. EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	WP	SD	12-12-22
A	INTERIM SUBMISSION	WP	AZ	09-13-22

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

PLUMBING DETAILS
SHEET #1

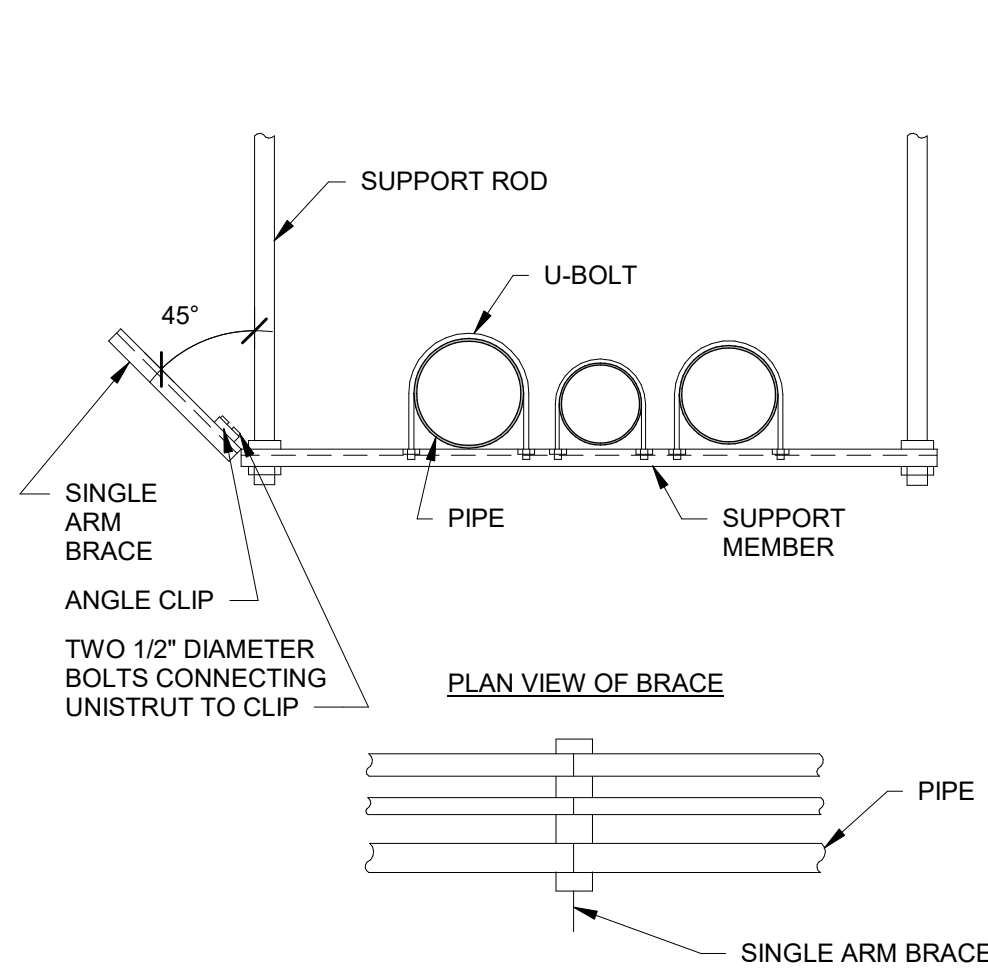


DATE 12/12/2022
PROJECT NO 105121
DRAWING BY W.PENDLETON
CHECKED BY S.DEVADKAR
DRAWING NO
P-600.00
CADD FILE NO
Astoria/CHPE-081-00-MD-H-001.rvt

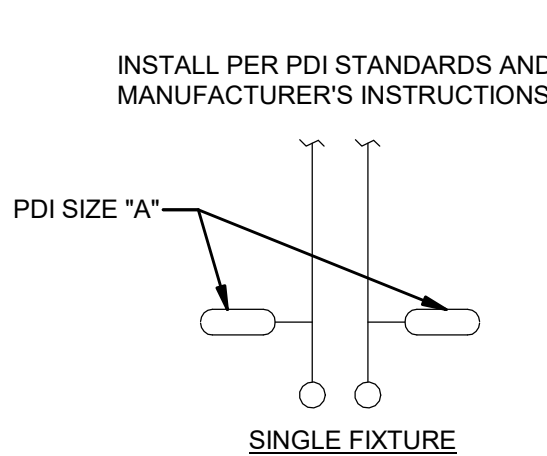
SHEET NOTES:

- REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
- REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
- REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
- REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
- REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
- REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
- ALL PLUMBING METALLIC COMPONENTS INSIDE CONVERTOR BUILDING SHALL BE BONDED TO THE BUILDING OR BUILDING RING CONDUCTOR. COORDINATE WITH ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.
- ALL PLUMBING METALLIC COMPONENTS INSTALLED OUTSIDE OF BUILDING SHALL BE BONDED TO GROUND. COORDINATE WITH ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

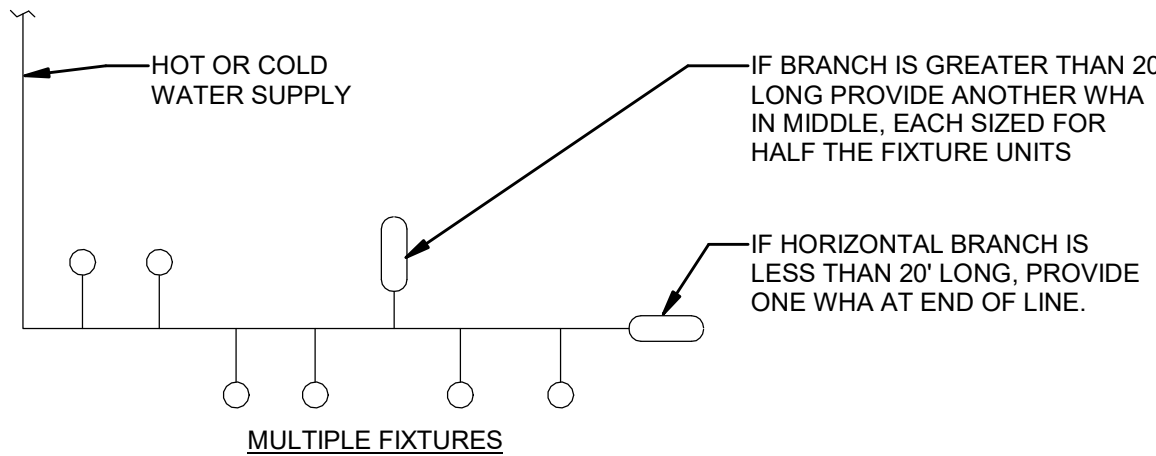
ISSUED FOR PERMIT



DETAILS SHOWN ON THIS DRAWING ARE TO BE USED AS A GUIDE FOR THE SUPPORT OF MECHANICAL EQUIPMENT, PIPING, DUCTWORK, ETC. PROVIDE SEISMIC CALCULATIONS, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER WITH A MINIMUM OF FIVE YEARS EXPERIENCE IN SEISMIC DESIGN AND MUST HAVE SEISMIC INSURANCE.



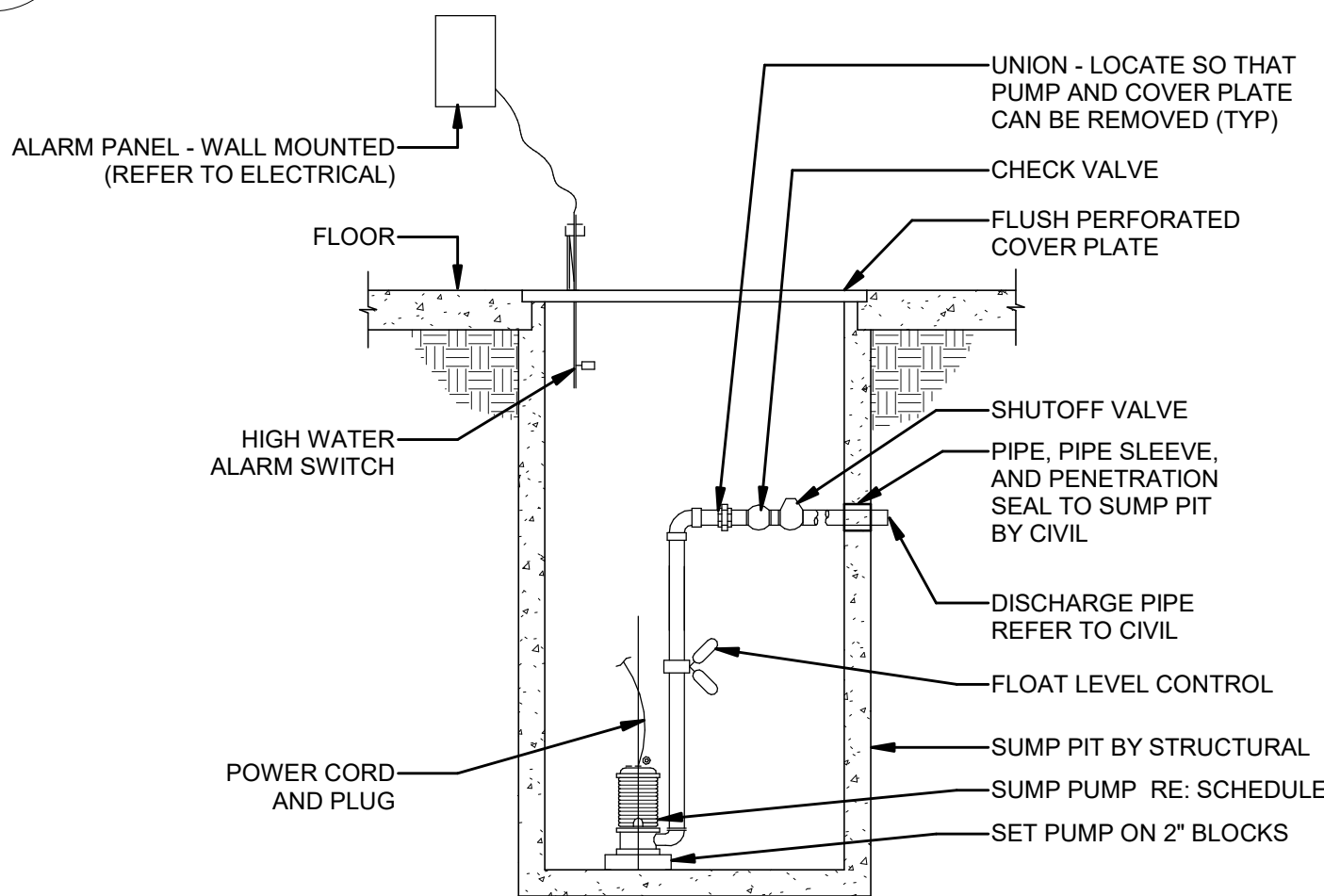
PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
AA	1/2"	1-3
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1 1/4"	61-113
E	1 1/2"	114-154
F	2"	155-330



FIXTURE	TYPE OF SUPPLY CONTROL	WEIGHT IN FIXTURE - UNITS					
		TOTAL	PUBLIC C.W.	H.W.	TOTAL	PRIVATE C.W.	H.W.
WATER CLOSET 1.66 GPF	FLUSH VALVE	8	8	-	5	5	-
LAVATORY	FAUCET	2	1.5	1.5	1	1	1
SERVICE SINK	FAUCET	3	3	3	-	-	-
ICE MAKER	EQUIPMENT CONNECTION	1	1	-	1	1	-

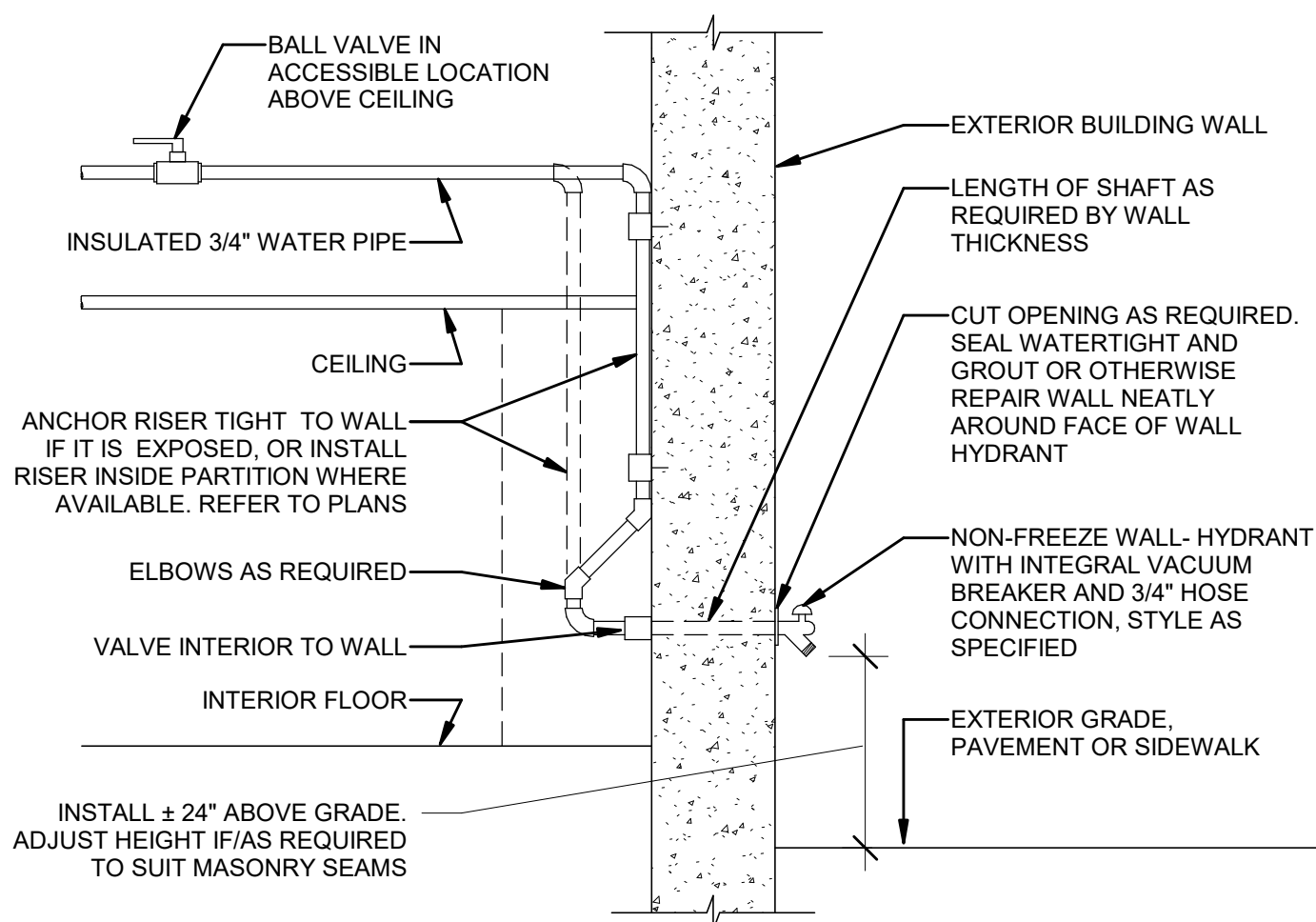
DO NOT PROVIDE AIR CHAMBERS. PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE # 1010, AND ANSI # A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS PER THE TABLES SHOWN ABOVE, BUT NOT LESS THAN WATER CONNECTION SIZE.

6 SINGLE ARM BRACE FOR TRAPEZE HUNG PLUMBING PIPING
P-601.00 NTS



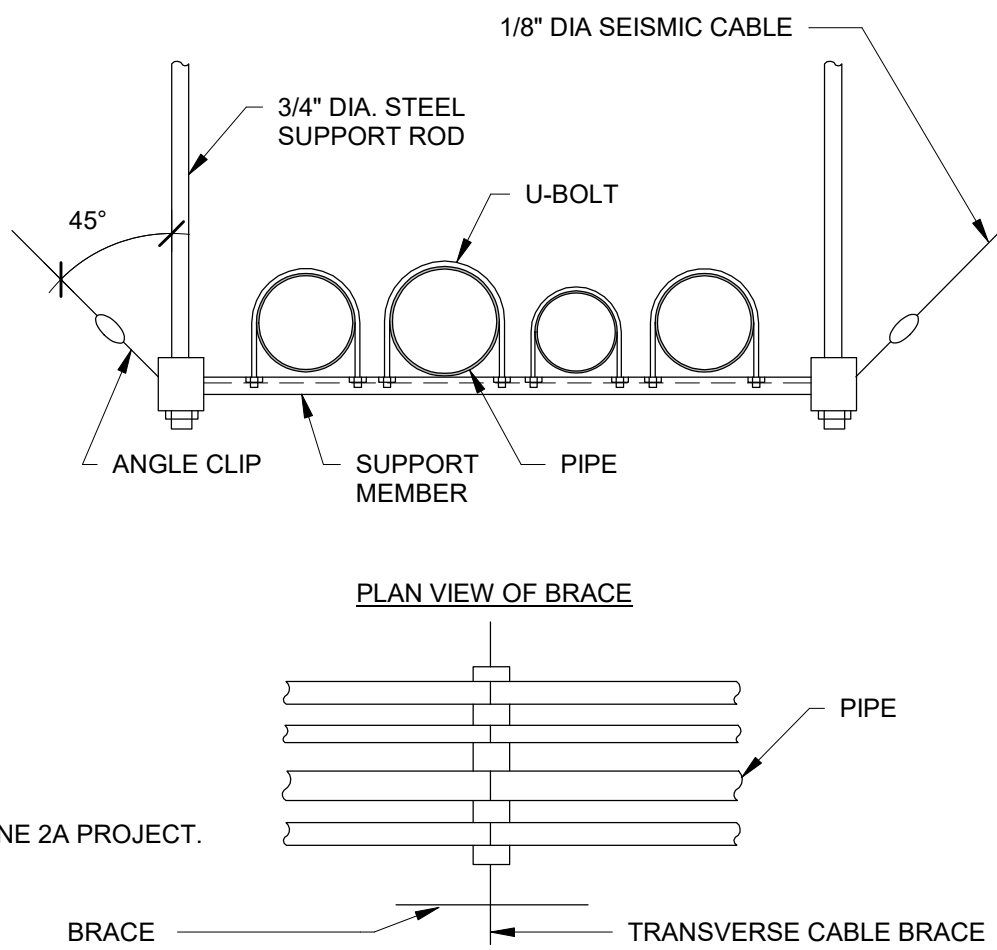
- NOTES:
- LEVEL CONTROL IS TYPICALLY A FLOAT.
 - DISCHARGE TO STORM FOR TRANSFORMER SUMP PUMP.
 - PROVIDE OIL SENSOR FOR TRANSFORMER SUMP PUMP.
 - VENT NORMALLY OMITTED WHEN CONNECTING TO STORM.

7 SUBMERSIBLE TRANSFORMER SUMP PUMP DETAIL
P-601.00 NTS



1 NON-FREEZE WALL HYDRANT DETAIL
P-601.00 NTS

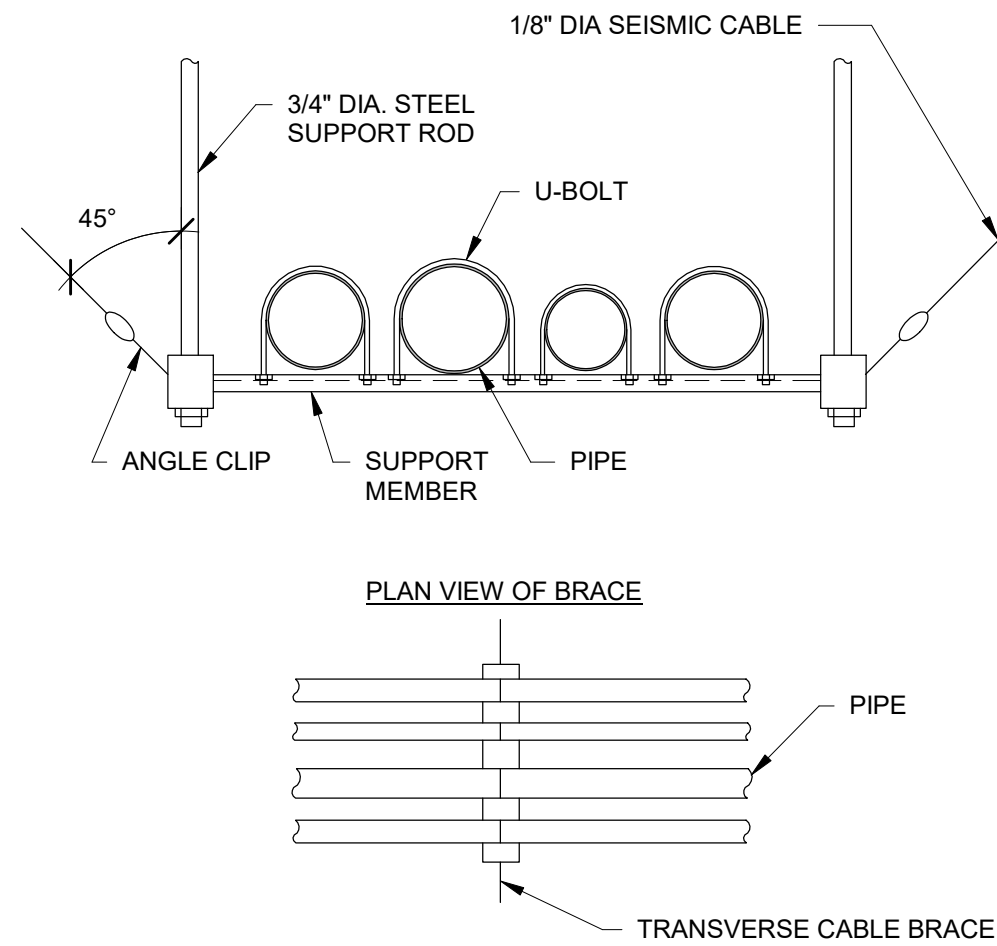
3 WATER HAMMER ARRESTER DETAIL
P-601.00 NTS



NOTE: THIS IS A SEISMIC ZONE 2A PROJECT.

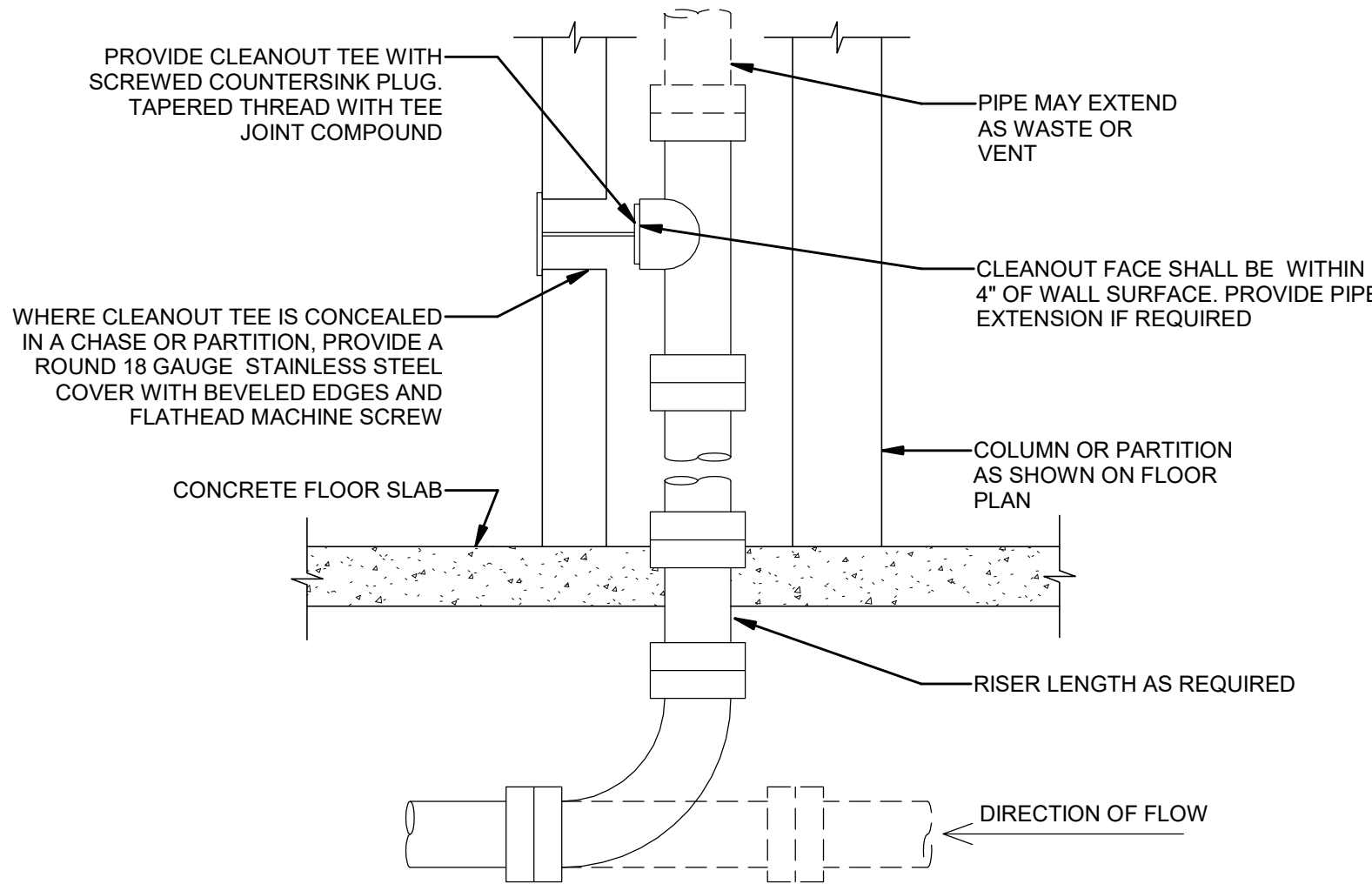
DETAILS SHOWN ON THIS DRAWING ARE TO BE USED AS A GUIDE FOR THE SUPPORT OF MECHANICAL EQUIPMENT, PIPING, DUCTWORK, ETC. PROVIDE SEISMIC CALCULATIONS, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER WITH A MINIMUM OF FIVE YEARS EXPERIENCE IN SEISMIC DESIGN AND MUST HAVE SEISMIC INSURANCE.

4 TRANSVERSE AND LONGITUDINAL CABLE BRACE FOR TRAPEZE HUNG PLUMBING PIPING
P-601.00 NTS



DETAILS SHOWN ON THIS DRAWING ARE TO BE USED AS A GUIDE FOR THE SUPPORT OF MECHANICAL EQUIPMENT, PIPING, DUCTWORK, ETC. PROVIDE SEISMIC CALCULATIONS, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER WITH A MINIMUM OF FIVE YEARS EXPERIENCE IN SEISMIC DESIGN AND MUST HAVE SEISMIC INSURANCE.

5 TRANSVERSE CABLE BRACE FOR TRAPEZE HUNG PLUMBING PIPING
P-601.00 NTS



NOTE: PROVIDE WCO WHERE SHOWN ON PLAN AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT. LOCATE ABOVE FIXTURE FLOOD RIM WITHIN FOUR FEET OF FLOOR. CONFORM TO LOCAL CODES FOR OTHER WCO REQUIREMENTS.

2 WALL CLEANOUT DETAIL
P-601.00 NTS

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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY AGREEMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEIPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	WP	SD	12-12-22
A	INTERIM SUBMISSION	WP	AZ	09-13-22

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

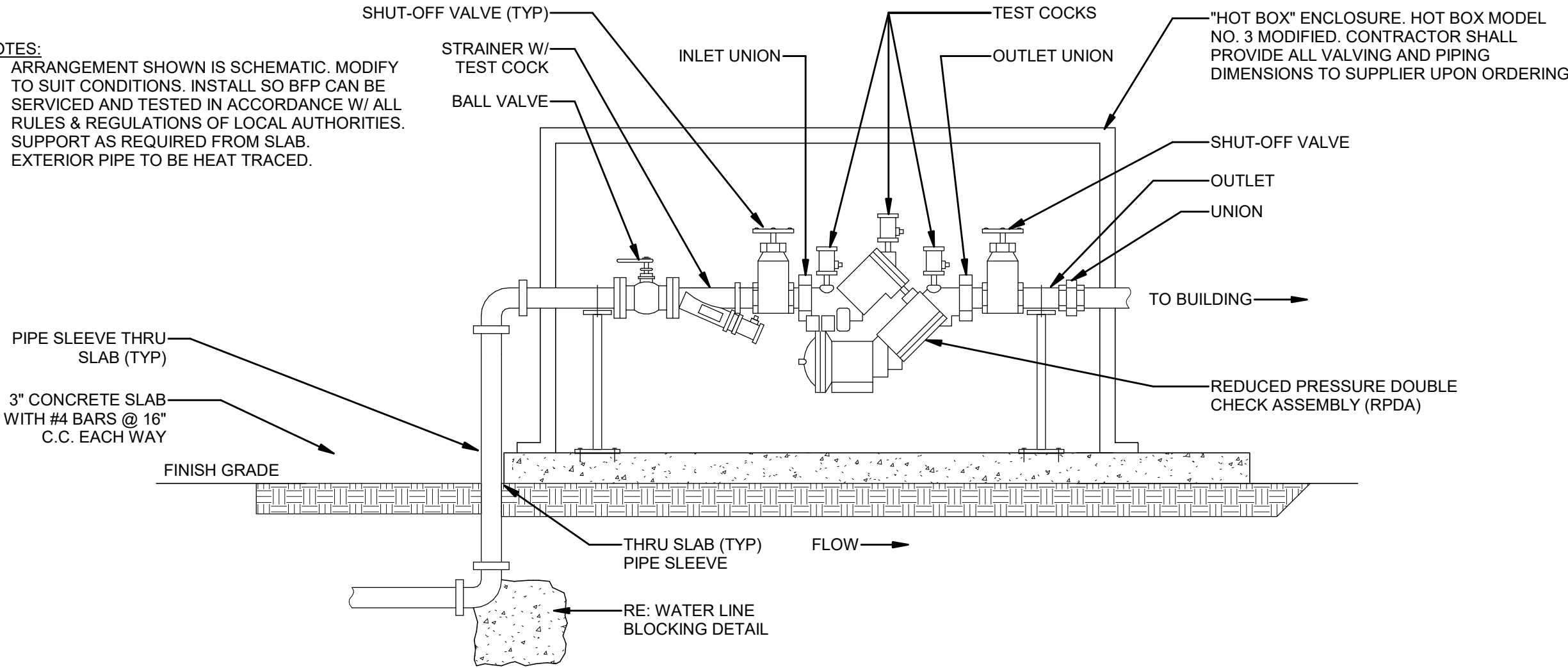
31-45 20th Avenue, Astoria, Queens NY 11105
Block #850 - Lot #310 - BIN #4624437

PLUMBING DETAILS
SHEET #2



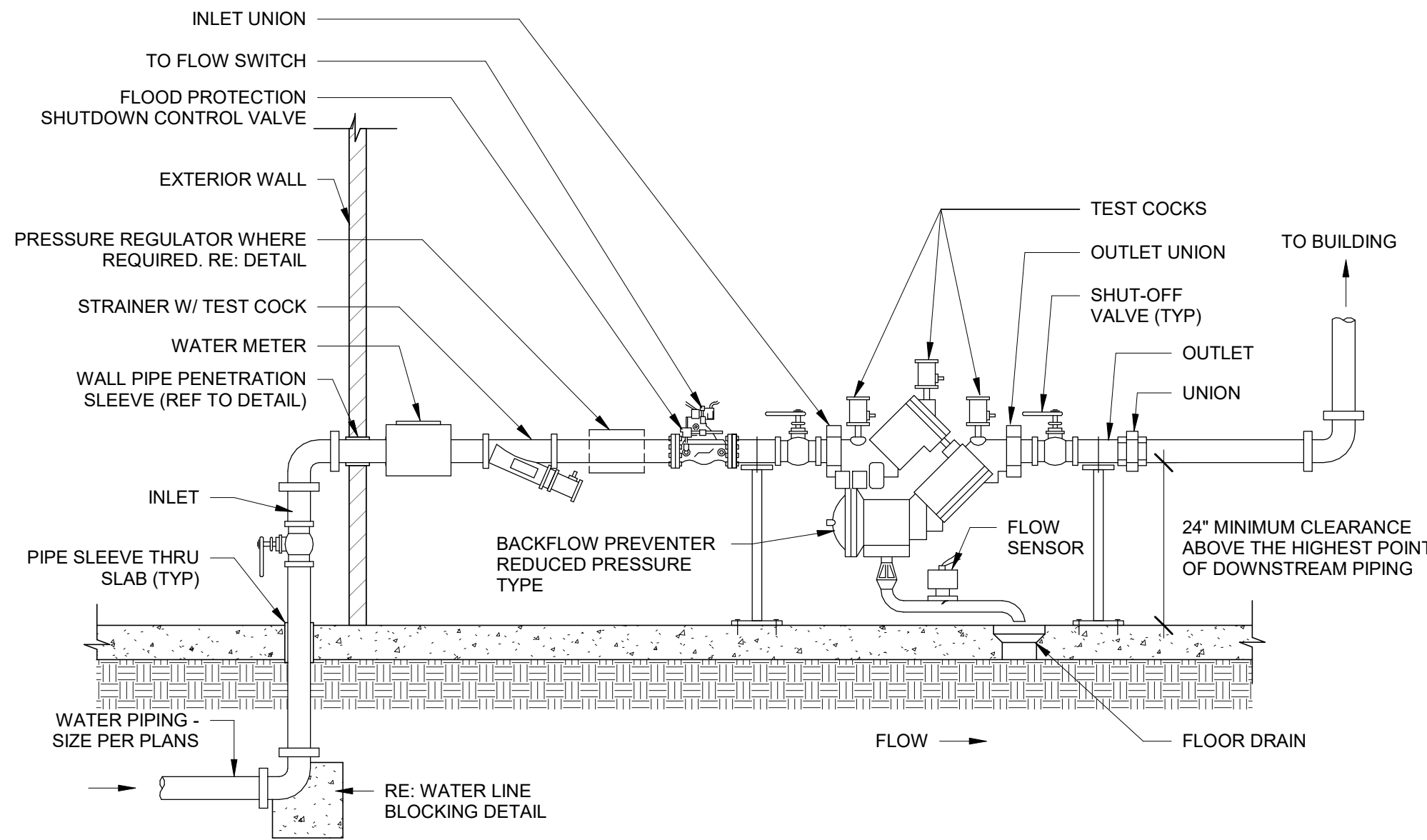
DATE 12/12/2022
PROJECT NO 105121
DRAWING BY W.PENDLETON
CHECKED BY S.DEVADKAR
DRAWING NO
P-601.00
CADD FILE NO
Astoria/CHA-KIE-081-00-M314-001.rvt

NOTES:
1. ARRANGEMENT SHOWN IS SCHEMATIC. MODIFY TO SUIT CONDITIONS. INSTALL SO BFP CAN BE SERVICED AND TESTED IN ACCORDANCE W/ ALL RULES & REGULATIONS OF LOCAL AUTHORITIES.
2. SUPPORT AS REQUIRED FROM SLAB.
3. EXTERIOR PIPE TO BE HEAT TRACED.

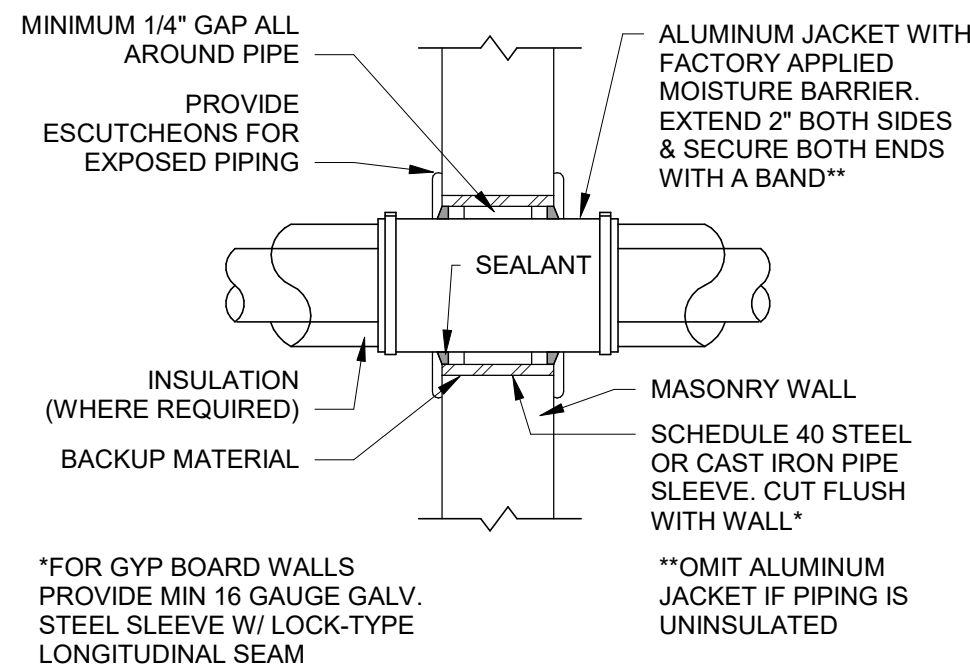


1 REDUCED PRESSURE DOUBLE CHECK ASSEMBLY
P-602.00 NTS

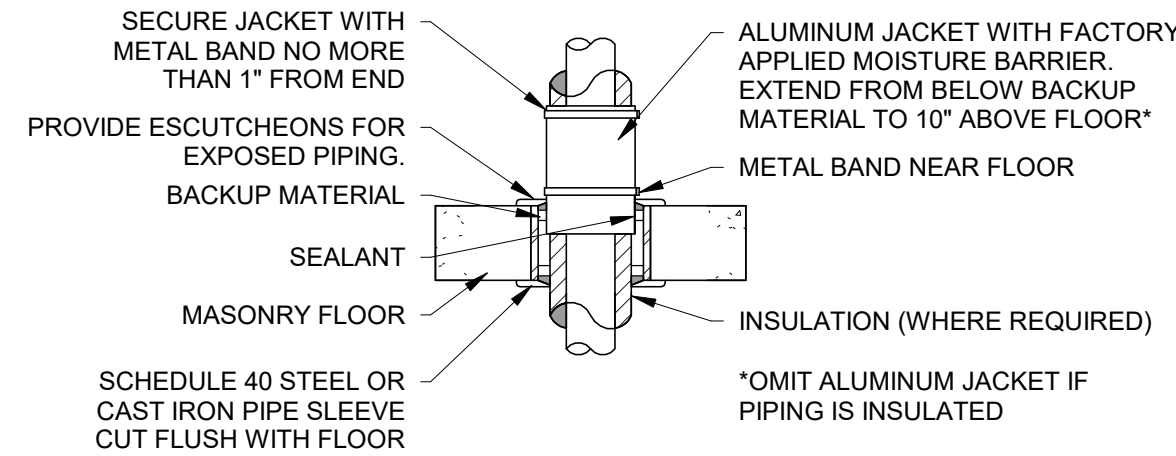
NOTES:
1. PROVIDE PRESSURE REGULATOR, SET TO 75 PSI WHERE SOURCE PRESSURE EXCEEDS 80 PSI. INSTALL BACKFLOW PREVENTER OUTLET, RE: DETAIL.
2. ARRANGEMENT SHOWN IS SCHEMATIC. MODIFY TO SUIT CONDITIONS. INSTALL SO BFP CAN BE SERVICED AND TESTED IN ACCORDANCE W/ ALL RULES & REGULATIONS OF LOCAL AUTHORITIES.
3. ROUTE DRAIN AS INDICATED ON PLANS.
4. SUPPORT AS REQUIRED FROM SLAB.
5. EXTERIOR PIPE TO BE HEAT TRACED.



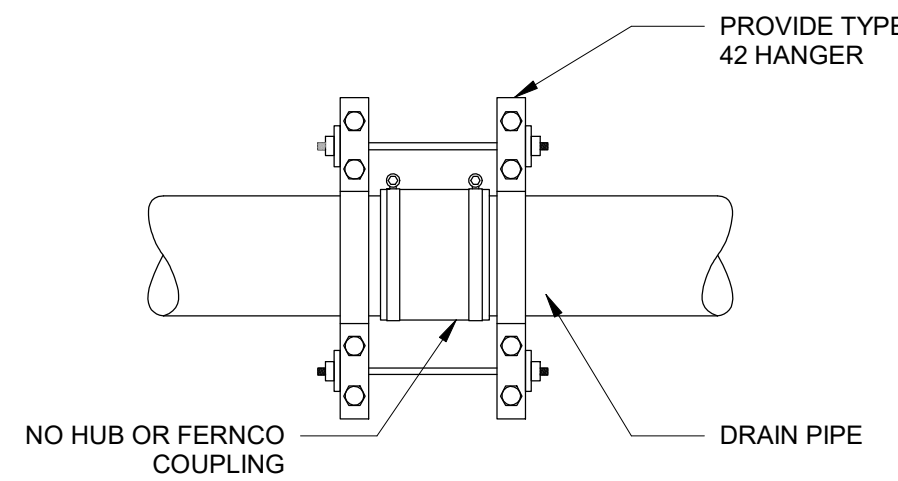
2 INTERIOR BACKFLOW PREVENTER WITH FLOOD CONTROL VALVE DETAIL
P-602.00 6" = 1'-0"



3 WALL PIPE PENETRATION DETAIL
P-602.00 3/4" = 1'-0"



4 FLOOR PIPE PENETRATION DETAIL
P-602.00 1/2" = 1'-0"

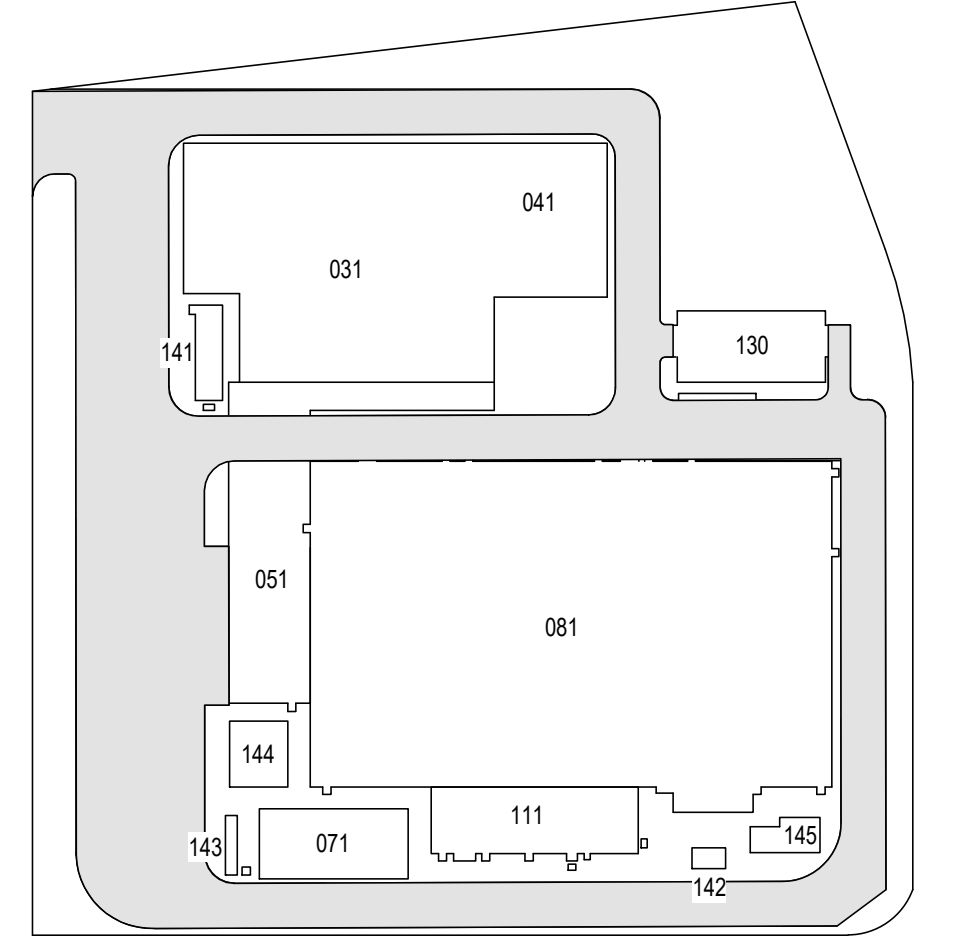


5 PIPE RESTRAINT
P-602.00 3/4" = 1'-0"

SHEET NOTES:

1. REFER TO SHEETS A SERIES FOR ARCHITECTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
2. REFER TO SHEETS E SERIES FOR BUILDING ELECTRICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
3. REFER TO SHEETS M SERIES FOR HVAC MECHANICAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
4. REFER TO SHEETS P SERIES FOR PLUMBING DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
5. REFER TO SHEETS S SERIES FOR BUILDING STRUCTURAL DRAWINGS, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS. FILED UNDER SEPARATE APPLICATION.
6. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
7. ALL PLUMBING METALLIC COMPONENTS INSIDE CONVERTOR BUILDING SHALL BE BONDED TO THE BUILDING OR BUILDING RING CONDUCTOR. COORDINATE WITH ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.
8. ALL PLUMBING METALLIC COMPONENTS INSTALLED OUTSIDE OF BUILDING SHALL BE BONDED TO GROUND. COORDINATE WITH ELECTRICAL PLANS AND CONTRACTOR FOR REQUIREMENTS.

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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DESCRIPTION	DRW BY	CHK BY	DATE
B	FINAL SUBMISSION	WP	SD	12-12-22
A	INTERIM SUBMISSION	WP	AZ	09-13-22

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

PLUMBING DETAILS
SHEET #3

STATE OF NEW YORK
ALEXANDER ZABOLOTSKY
REGISTERED PROFESSIONAL ENGINEER
071371

DATE 12/12/2022
PROJECT NO 105121
DRAWING BY W. PENDLETON
CHECKED BY S. DEVADKAR
DRAWING NO
P-602.00
CADD FILE NO
Astoria/CHPE-081-00-M3-H-001.rvt

12/20/2022 3:27:56 PM

PIPING MATERIAL APPLICATION

DIVISION	SERVICE	LOCATION	SIZE RANGE	MATERIAL	STANDARD INSULATION MATERIAL	OTHER INSULATION MATERIAL OPTIONS	JACKETING	REMARKS
22 - PLUMBING	SOIL , WASTE	UNDERGROUND	UP TO 10 INCH	PIPE: SOLID-WALL PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS: ASTM D 2665, DRAIN, WASTE, AND VENT, SCHEDULE 40. FITTINGS: PVC SOCKET FITTINGS, ASTM D 2665, SOCKET TYPE, MADE TO ASTM D 3311 DRAIN, WASTE, AND VENT PATTERNS.	-		-	-
		ABOVE GROUND	UP TO 10 INCH	PIPE: HUBLESS CAST-IRON PIPE AND FITTINGS OR DWV COPPER PIPING WITH HUBLESS FITTINGS OR DWV COPPER PIPE WITH WROUGHT-COPPER DRAINAGE FITTINGS AND SOLDER JOINTS. FITTINGS: ALL HUBLESS CAST-IRON FITTINGS SHALL MEET THE REQUIREMENTS OF ASTM A-888 OR CISPI 301 AS APPLICABLE. COUPLINGS, BOTH AT HORIZONTAL AND VERTICAL JOINTS, SHALL BE CLAMPED AND RESTRAINED WHERE REQUIRED AND IN ACCORDANCE WITH CISPI 301. COPPER DWV TUBE SHALL MEET THE REQUIREMENTS OF ASTM B306.	-		-	-
22 - PLUMBING	VENT	UNDERGROUND	UP TO 4 INCH	PIPE: SOLID-WALL PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS: ASTM D 2665, DRAIN, WASTE, AND VENT, SCHEDULE 40. FITTINGS: PVC SOCKET FITTINGS, ASTM D 2665, SOCKET TYPE, MADE TO ASTM D 3311 DRAIN, WASTE, AND VENT PATTERNS.	-		-	-
		ABOVE GROUND	UP TO 4 INCH	GALVANIZED STEEL PIPE WITH MALLEABLE IRON FITTINGS OR SERVICE WEIGHT CAST-IRON SOIL PIPE WITH HUBLESS FITTINGS (ASTM A-888 OR CISPI 301), OR DWV COPPER PIPE WITH WROUGHT-COPPER DRAINAGE FITTINGS AN SOLDER JOINTS. COPPER PIPE SHALL MEET ASTM B306 REQUIREMENTS.	1.5" CELLULAR GLASS	GLASS-FIBER, TYPE I MINERAL WOOL, TYPE II	ASJ	1
22 - PLUMBING	CONDENSATE DRAIN	ABOVE GROUND	UP TO 4 INCH	PIPE: SOLID-WALL PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS: ASTM D 2665, DRAIN, WASTE, AND VENT, SCHEDULE 40. FITTINGS: PVC SOCKET FITTINGS, ASTM D 2665, SOCKET TYPE, MADE TO ASTM D 3311 DRAIN, WASTE, AND VENT PATTERNS. PIPE: SOFT COPPER TUBE, ASTM B 88, TYPE K (ASTM B 88M, TYPE A) FITTINGS: ASME 16.22 & ASTM B75/B75M, WROUGHT-COPPER, SOLDER-JOINT FITTINGS; AND BRAZED JOINTS.	1.5" CELLULAR GLASS	GLASS-FIBER, TYPE I MINERAL WOOL, TYPE II	ASJ	5
22 - PLUMBING	DOMESTIC WATER INDOOR	UNDERGROUND	UP TO 4 INCH	PIPE: SOFT COPPER TUBE, ASTM B 88, TYPE K (ASTM B 88M, TYPE A) FITTINGS: ASME 16.22 & ASTM B75/B75M, WROUGHT-COPPER, SOLDER-JOINT FITTINGS; AND BRAZED JOINTS.	-		-	-
22 - PLUMBING	FIRE / DOMESTIC WATER SERVICE	UNDERGROUND	2-6 INCH	PIPE: AWWA C151, DUCTILE IRON FITTINGS: AWWA C111, MECH JOINTS	-		-	-
22 - PLUMBING	DOMESTIC WATER INDOOR	ABOVE GROUND	UP TO 6 INCH	PIPE: ASTM B88, TYPE L DRAWN TEMPER SEAMLESS COPPER TUBE. FITTINGS: ASME B16.22 WROUGHT COPPER OR ASME B16.18 CAST-COPPER ALLOY. FLANGES: ASME B16.24, CLASS 150 CAST BRONZE FLANGES WITH SOLDER JOINT ENDS. UNIONS: ASME B16.18 CAST-COPPER ALLOY, HEXAGONAL STOCK BODY WITH BALL-AND-SOCKET JOINT, METAL-TO-METAL SEATING SURFACES, AND SOLDER JOINT AND/OR THREADED ENDS.	1.5 INDOORS CELLULAR GLASS CELLULAR GLASS 2" OUTDOORS	FLEXIBLE ELASTOMETRIC GLASS-FIBER, TYPE I MINERAL WOOL, TYPE II PHENOLIC POLYOLEFIN	ASJ	3

REMARKS:

1. INSULATE PLUMBING VENTS WITHIN 6 FEET OF ROOF OUTLET.
2. INSULATE ALL DOMESTION HOT WATER, TEMPERED WATER, AND COLD WATER PIPING.
3. INSULATE CONDENSATE DRAINAGE PIPING.
4. INSULATE HYDRONIC PIPING - CHILLED WATER / HOT WATER.

JACKET MATERIALS:

ASJ WHITE, KRAFT-PAPER, FIBERGLASS-REINFORCED SCRIM WITH ALUMINUM-FOIL BACKING; COMPLYING WITH ASTM C 1136, TYPE I.
ALUM ASTM B209, TEMPER H14, MINIMUM THICKNESS OF 0.016 INCH, WITH FACTORY-APPLIED POLYETHYLENE AND KRAFT PAPER MOISTURE BARRIER ON THE INSIDE SURFACE
GLASS PLAIN-WEAVE GLASS CLOTH CONFORMING TO ASTM D579/, STYLE 141, WEIGHING NOT LESS THAN 7.23 OUNCES PER SQUARE YARD BEFORE SIZING. FACTORY APPLY CLOTH WHEREVER POSSIBLE.
PVC PROVIDE 0.010 INCH THICK, FACTORY-PREMOLEDDED POLYVINYLCHLORIDE, PIPE-BARREL SHEETING VAPOR-BARRIER JACKETING THAT IS SELF-EXTINGUISHING, WITH HIGH-IMPACT STRENGTH AND MODERATE CHEMICAL RESISTANCE.

PLUMBING BOOSTER PUMP SCHEDULE

UNIT DATA			BASIS OF DESIGN						ELECTRICAL DATA						GENERAL DATA	
TAG	LOCATION	FUNCTION	MANUFACTURER	MODEL	QUANTITY	FLUID TYPE	FLOW (GMP)	EXT WPD (FT HD)	HP	RPM	VOLTS	ø	HZ	AMPS	WEIGHT (LBS)	SCHEDULE NOTES
BP-1	SITE (FIRE SERVICE)	BOOSTER	TIGERFLOW	DVMV-15GF-C-S8-VM-P-VFD-NSF-DOL	2 (DUPLX)	WATER	525	69	(2) 15	3507	208V	3	60	38	700	ALL

NOTES:
1. PROVIDE INERTIA BASE.
2. PROVIDE ALL BRONZE/ STEEL CONSTRUCTION.
3. PROVIDE PUMP MOUNTED CONTROL PANEL AND DISCONNECT.
4. PROVIDE WITH BMS INTERFACE.
5. PROVIDE NEMA 3R FOR OUTDOOR OR 4X WET LOCATIONS.
6. PROVIDE WITH ASSE 1060 STANDARD CLASS ONE SAFE-T-COVER 800D-AL WITH 2000W SERIES HCH HEATER. PROVIDE HEATER WITH CONDIUIT, MOUNTING ACCESSORIES, FITTINGS AND LIQUID TIGHT THERMOSTAT.

PLUMBING SUMP PUMP SCHEDULE

UNIT DATA		BASISO F DESIGN			PERFORMANCE DATA									
TAG	LOCATION	MANUFACTURER	MODEL	QUANTITY	PUMP TYPE	FLUID TYPE	FLOW (GMP)	EXT WPD (FT HD)	HP	RPM	VOLTS	ø	FLA	SCHEDULE NOTES
SP-01 A/B	TRANSFORMER CONTAINMENT	ABS SULZER	SCAVENGER EF 10-2	2 (DUPLX)	WET PIT SUBMERSIBLE	WATER	50	32	0.5	3450	208	1	7.3	ALL
SP-02 A/B	TRANSFORMER CONTAINMENT	ABS SULZER	SCAVENGER EF 10-2	2 (DUPLX)	WET PIT SUBMERSIBLE	WATER	50	32	0.5	3450	208	1	7.3	ALL
SP-03 A/B	TRANSFORMER CONTAINMENT	ABS SULZER	SCAVENGER EF 10-2	2 (DUPLX)	WET PIT SUBMERSIBLE	WATER	50	32	0.5	3450	208	1	7.3	ALL
SP-04 A/B	DRYCOOLER CONTAINMENT	ABS SULZER	SCAVENGER EF 03 W	2 (DUPLX)	WET PIT SUBMERSIBLE	WATER	100	40	1	3450	460	3	2.9	ALL
SP-05 A/B	SPARE TRANSFORMER	ABS SULZER	SCAVENGER EJ 50D-3	2 (DUPLX)	WET PIT SUBMERSIBLE	WATER	50	32	0.5	3450	208	1	7.3	ALL
SP-06 A/B	AUX TRANSFORMER 01	ABS SULZER	SCAVENGER EF 03 W	2 (DUPLX)	WET PIT SUBMERSIBLE	WATER	20	26	0.33	3450	115	1	7.2	ALL
SP-07 A/B	AUX TRANSFORMER 02	ABS SULZER	SCAVENGER EF 03 W	2 (DUPLX)	WET PIT SUBMERSIBLE	WATER	20	26	0.33	3450	115	1	7.2	ALL
SP-08 A/B	UTILITY/ CABLE TRENCH	ABS SULZER	SCAVENGER EF 03 W	2 (DUPLX)	WET PIT SUBMERSIBLE	WATER	20	10	0.33	3450	115	1	7.2	ALL

NOTES:
1. PROVIDE PUMPS WITH BMS INTERFACE WITH NEMA 4X AND CLASS B INSULATION CONTROL PANEL ENCLOSURE.
2. PROVIDE PUMPS WITH 2" MOUNTING PAD AND QUICK REMOVAL RAILS AND CHAINS.
3. PROVIDE WITH HIGH-LEVEL ALARM AND FLOAT SWITCH, AND OIL/WATER SWITCH & ALARM.

BACKFLOW PREVENTER SCHEDULE

SYMBOL	DESCRIPTION	LOCATION	SYSTEM	MODEL	SIZE (IN)	FLOW (GPM)	PRESSURE DROP (PSI)	SHUT-OFF VALVES	MAX DESIGN TEMP (°F)	MAX WORKING PRESSURE (PSI)	HYDROSTATIC TEST PRESSURE (PSI)	NOTES
RPDA-1	REDUCED PRESSURE DOUBLE DETECTOR ASSEMBLY	FIRE WATER SERVICE	LOW PRESSURE	WATTS (957/RPDA)	6"	525	10	GATE	180	175	350	ALL

NOTES:
1. MOUNT WITHIN 48" OF FINISHED FLOOR.
2. FURNISH AND INSTALL BRONZE OR EPOXY COATED STRAINER UPSTREAM OF EACH UNIT AND ADDITIONAL VALVE UPSTREAM OF EACH STRAINER.
3. PROVIDE WITH ASSE 1060 STANDARD CLASS ONE SAFE-T-COVER 800D-AL WITH 2000W SERIES HCH HEATER. PROVIDE HEATER WITH CONDUIT, MOUNTING ACCESSORIES, FITTINGS AND LIQUID TIGHT THERMOSTAT. PROVIDE HINGED DOOR FOR DRAIN.

FIRE WATER TANK SCHEDULE

UNIT DATA	BASIS OF DESIGN		PERFORMANCE DATA				HEATER DATA				SCHEDULE NOTES
TAG	EQUIPMENT	TYPE	FLUID	CAPACITY (GALLONS)	DIAMETER	HEIGHT (FT)	TYPE	CAPACITY	VOLTS	ø	
TNK-1	FT-1	FIRE WATER TANK	WATER	205,000	27	50	IMMERSION	15 KW	480	3	

NOTES:

1. TANK AND ALL ASSOCIATED ACCESSORIES SHALL BE IN COMPLY WITH NYC BUILDING CODE.

2. PROVIDE FIRE TANK WITH BMS INTERFACE WITH NEMA 4X AND CLASS B INSULATION CONTROL PANEL ENCLOSURE.

3. PROVIDE CONTROL PANELS MOUNTED ON FIRE TANK SKID.

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

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEIPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

B	FINAL SUBMISSION	WP	SD	12-12-22
A	INTERIM SUBMISSION	WP	AZ	09-13-22
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

SERVICE BUILDING
PLUMBING - SCHEDULES



DATE 12/12/2022
PROJECT NO 105121
DRAWING BY W.PENDLETON
CHECKED BY S.DEVADKAR
DRAWING NO
P-701.00
CADD FILE NO
Astoria\CHA-KIE-081-00-M314-001.rvt