

# TOWN OF LLOYD HUDSON RIVER PUMP STATION GENERATOR

BID DOCUMENTS  
APRIL 2024

TOWN OF LLOYD  
ULSTER COUNTY, NEW YORK



**LOCATION PLAN**  
SCALE: 1"=1000'

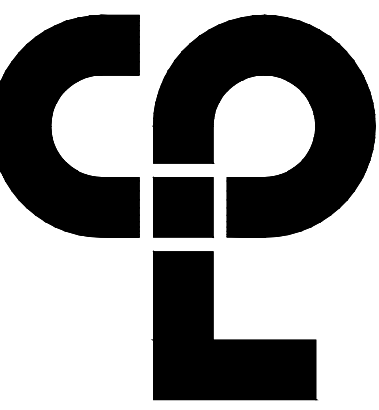
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E001	ONE-LINE DIAGRAMS
E002	ELECTRICAL SITE PLAN
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**PROJECT INFORMATION**

Project Number  
16218.00

Client Name

**TOWN OF LLOYD**

Project Name

**HUDSON RIVER PUMP STATION GENERATOR**

Project Address

TOWN OF LLOYD, OAKES ROAD, HIGHLAND, NY

**PROJECT ISSUE & REVISION SCHEDULE**

No. Date Description

**PROFESSIONAL STAMPS**

NEW YORK STATE EDUCATION STATUTE  
E-16. A MEMBER OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONERS  
REGULATIONS FOR ANY PERSON, IN SO ACTING UNDER THE DIRECTION OF A LICENSED  
ARCHITECT, ENGINEER OR LAND SURVEYOR, SHALL BE DEEMED TO BE A MEMBER OF A PROFESSION  
BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR & AS SUCH, THE ACTING  
PARTY SHALL ABIDE BY THE ETHICS RULE AND BE SOLELY RESPONSIBLE FOR FOLLOWING  
THEY SIGNATURE AND THE DATE OF SUCH ABIDANCE, AND A SPECIFIC DESCRIPTION OF THE  
ABIDANCE.

**SHEET INFORMATION**

Issued 4/8/2024 Scale AS NOTED

Project Status

**BID DOCUMENTS**

Drawn By JM

Checked By AL

Drawing Title

**TITLE SHEET**

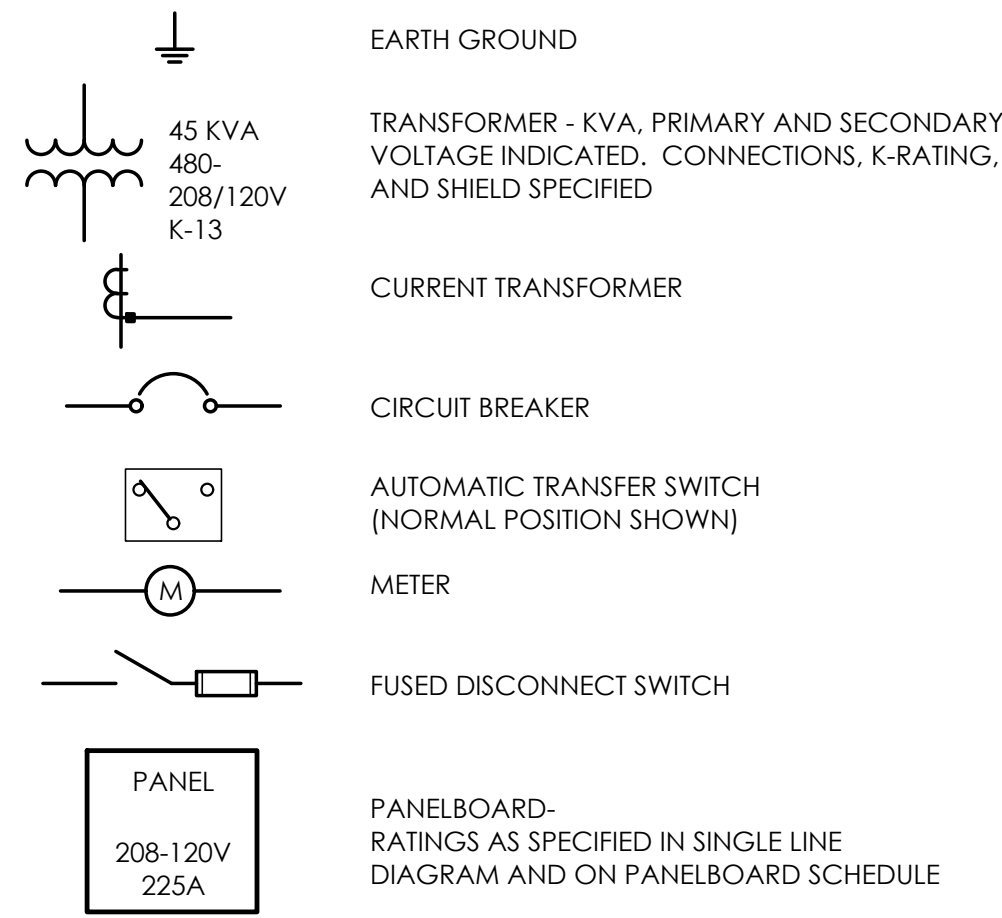
Drawing Number

**HRPG  
G000**

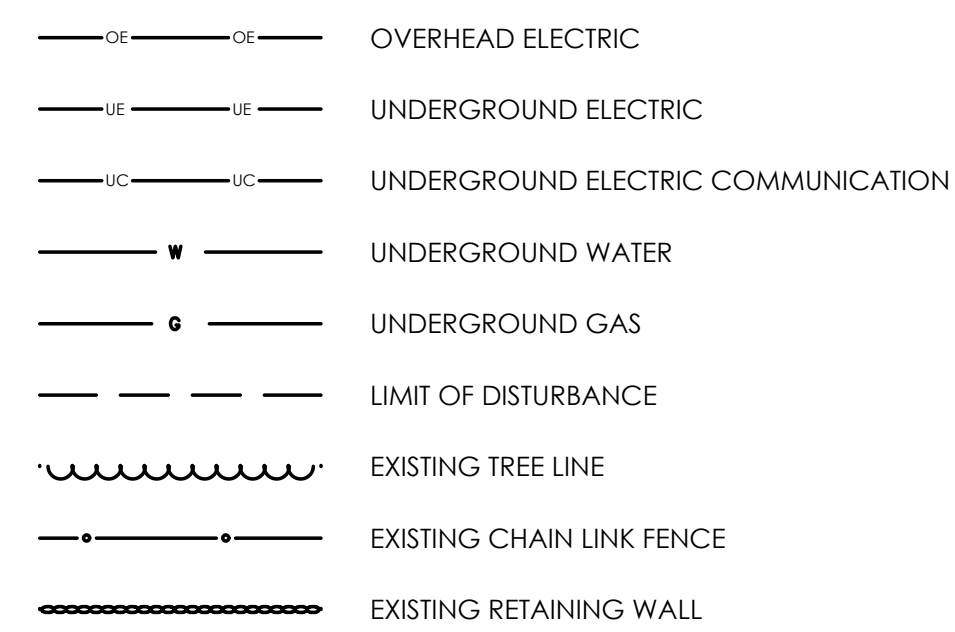
Revision Number

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Plotted By: Mark Long  
Date last plotted: 4/30/2024 3:56 PM  
Date last accessed: 4/30/2024 12:28 PM

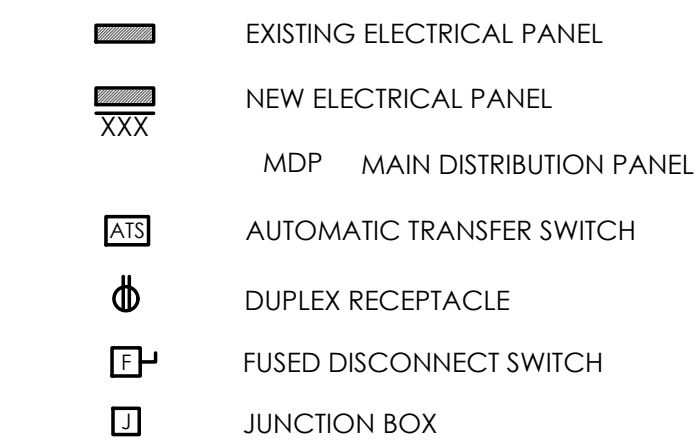
## ONE-LINE DIAGRAM LEGEND:



## SITE PLAN LEGEND:



## EQUIPMENT LEGEND:



## ELECTRICAL NOTES AND SPECIFICATIONS:

### GENERAL:

THE INSTALLATION SHALL COMPLY WITH ALL REQUIREMENTS OF THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70) AND WITH THE NEW YORK STATE BUILDING CODE.

CONTRACTOR SHALL CONTACT ALL LOCAL UTILITY COMPANIES AND SHALL PERFORM ALL WORK AS REQUIRED TO ACCOMMODATE UTILITY SERVICES TO PROJECT.

CONTRACTOR IS RESPONSIBLE TO REVIEW AND UNDERSTAND ALL DRAWINGS AND ALL WORK TO ENSURE A COMPLETE AND THOROUGH PROJECT.

CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS, VERIFY LOCATIONS, CONDUIT ROUTINGS, ETC., BEFORE SUBMITTING A BID. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT A MINIMUM OF 6 DAYS PRIOR TO BID DATE.

FURNISH ALL MATERIALS, EQUIPMENT, SERVICES, AND LABOR FOR A COMPLETE OPERABLE ELECTRICAL INSTALLATION AS INDICATED ON THE DRAWINGS. ALL MATERIAL SHALL BE NEW AND BEAR THE UNDERWRITERS LABORATORIES, INC. (UL) LABEL WHERE AVAILABLE. INCIDENTAL ITEMS NOT INDICATED ON THE DRAWINGS, NOR MENTIONED IN THE SPECIFICATIONS, THAT CAN BE LEGITIMATELY & REASONABLY INFERRED TO BELONG TO THE WORK DESCRIBED OR BE NECESSARY IN GOOD PRACTICE TO PROVIDE A COMPLETE SYSTEM, SHALL BE FURNISHED & INSTALLED AS THOUGH ITEMIZED HERE IN EVERY DETAIL.

ALL WORK SHALL BE EXECUTED IN ACCORDANCE WITH RECOGNIZED STANDARDS OF WORKMANSHIP. ALL WORK SHALL BE INSTALLED IN A NEAT AND ORDERLY MANNER.

ALL EQUIPMENT SUPPLIED SHALL BE THE STANDARD EQUIPMENT OF THE MANUFACTURER.

ELECTRICAL WORK TO BE INSPECTED BY A LICENSED THIRD PARTY INSPECTION AGENCY. INSPECTION FEE TO BE PAID BY CONTRACTOR AND REPORT SHALL BE SUBMITTED TO ENGINEER/ARCHITECT.

SUBMIT PRODUCT DATA FOR ENGINEER REVIEW AND APPROVAL ON THE FOLLOWING ITEMS:

- WIRING DEVICES & COVERS
- PANELBOARDS
- CIRCUIT BREAKERS
- SURGE PROTECTIVE DEVICES
- ENCLOSURES
- CONDUIT
- WIRING
- BOLLARDS
- HANDHOLES
- EQUIPMENT LABELS

### GROUNDING:

THE CONTRACTOR SHALL PROVIDE, INSTALL, AND CONNECT A COMPLETE SYSTEM OF GROUNDING FOR ALL EQUIPMENT AND STRUCTURES. A GOOD MECHANICAL AND ELECTRICAL CONNECTION SHALL BE MADE WITH APPROVED GROUNDING CONNECTORS.

ALL METAL RACEWAYS, INCLUDING CONDUIT, WIRE TROUGHS, ETC., SHALL BE GROUNDED. ALL CONNECTIONS IN METAL RACEWAYS SHALL BE COMPLETED IN SUCH A MANNER AS TO MAINTAIN A CONTINUOUS PATH TO GROUND THROUGHOUT THE ENTIRE LENGTH OF THE RACEWAY.

THE METALLIC CONDUIT SYSTEM SHALL BE USED AS PERMITTED BY THE ELECTRICAL CODE FOR EQUIPMENT AND ENCLOSURE GROUNDING SYSTEM. PROVIDE, AS DEFINED BY THE ELECTRICAL CODE, GROUNDING LUGS, STRAPS AND GREEN INSULATED COPPER GROUNDING CONDUCTORS, SIZED ACCORDING TO THE ELECTRICAL CODE.

GROUND CONDUCTOR SHALL BE SUPPLIED IN ALL NON-METALLIC CONDUIT.

GROUNDING CONDUCTORS SHALL BE COPPER. USE EXOTHERMIC WELDED CONNECTIONS TO STRUCTURAL STEEL AND FOR UNDERGROUND CONNECTIONS. USE BOLTED PRESSURE CLAMPS FOR ALL OTHER CONNECTIONS.

MAKE ALL JOINTS AND CONNECTIONS OF THE CONDUIT SYSTEM TIGHT TO MAINTAIN CONTINUITY OF MECHANICAL AND ELECTRICAL GROUND THROUGHOUT ENTIRE SYSTEM.

### RACEWAYS & WIRING:

CONDUIT RUNS SHOWN ARE SCHEMATICAL AND DO NOT INDICATE THE NECESSARY FITTINGS AND JUNCTION BOXES THAT ARE INCLUDED IN THE SCOPE OF THE WORK.

ALL CONDUIT ROUTES SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL FIELD VERIFY FINAL ROUTE.

JUNCTION, PULL AND OUTLET BOXES SHALL BE INSTALLED SUCH THAT THE WIRING CONTAINED IN BOX MAY BE RENDERED ACCESSIBLE.

ALL ELECTRICAL EQUIPMENT OUTSIDE SHALL BE IN NEMA-3R OR 4X ENCLOSURES.

ALL CONDUCTORS SHALL BE IN CONDUIT. EXPOSED CONDUIT AND WHERE SUBJECT TO PHYSICAL DAMAGE SHALL BE RIGID GALVANIZED STEEL.

ALL NEW UNDERGROUND ELECTRIC SHALL BE INSTALLED IN SCHEDULE 80 PVC CONDUIT.

ALL ABOVE GRADE EXPOSED CONDUITS AND SHALL BE IN RIGID GALVANIZED STEEL.

ALL UNDERGROUND CONDUIT ELBOWS AND SWEEPS SHALL BE IN RIGID GALVANIZED STEEL.

ALL CONDUITS SHALL BE SEALED WATERTIGHT ON INTERIOR AND EXTERIOR OF EQUIPMENT AND BUILDING TO PREVENT MOISTURE INFILTRATION. SEALANTS SHALL BE LISTED AND IDENTIFIED FOR USE WITH THE WIRE TYPE AND OTHER COMPONENTS.

USE COLOR CODED ADHESIVE MARKING TAPE FOR RACEWAYS, WIRES AND CABLES. CODE WIRING AS FOLLOWS: PHASE A: BLACK, PHASE B: RED, PHASE C: BLUE, NEUTRAL: WHITE, GROUND: GREEN.

CONDUCTORS SHALL BE COPPER, 600 VOLTS, THHN-THWN, 75 DEGREES C. INSULATION. MINIMUM SIZE BRANCH CIRCUIT CONDUCTORS SHALL BE NUMBER 12 AWG. ALL CONDUCTORS SHALL BE IN CONDUIT.

NUMBER 12 AWG SHALL BE SOLID, AND NUMBER 10 AWG AND LARGER SHALL BE STRANDED.

MULTI-WIRE BRANCH CIRCUITS WITH SHARED NEUTRALS ARE NOT PERMITTED UNLESS SPECIFICALLY NOTED.

### EQUIPMENT LABELING:

ALL WORK SHALL BE LABELED WITH PERMANENT TYPE WRITTEN OR ENGRAVED LABELS. HANDWRITING IS NOT ACCEPTABLE. COLORS OF ALL LABELS SHALL BE COORDINATED WITH THE OWNER. LABEL PANELBOARDS AND OTHER DISTRIBUTION EQUIPMENT (DISCONNECT SWITCHES, AUTOMATIC TRANSFER SWITCHES, ETC.) WITH ENGRAVED PHENOLIC LABELS INDICATING THE FOLLOWING INFORMATION:

LINE 1 - EQUIPMENT TYPE AND NAME  
LINE 2 - VOLTAGE AND PHASE  
LINE 3 - WHERE EQUIPMENT IS FED FROM

EXAMPLE: 

PANEL H1 480Y/208V-3Ø-4W FED FROM MSB
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LABEL RECEPTACLES WITH PRINTED SELF-ADHESIVE LABEL INDICATING PANEL AND CIRCUIT NUMBER. PROVIDE ALL EXISTING PANELBOARDS AFFECTED BY CONSTRUCTION WITH UPDATED TYPED DIRECTORIES INDICATED LOADS SERVED FOR EACH CIRCUIT.

### ELECTRICAL DEVICES & EQUIPMENT:

MULTIPLE ITEMS SUCH AS WIRING DEVICES, RACEWAYS, ETC. SHALL BE FROM THE SAME MANUFACTURER. ALL EQUIPMENT SUPPLIED SHALL BE THE STANDARD EQUIPMENT OF THE MANUFACTURER.

DISTRIBUTION EQUIPMENT (PANELBOARDS, DISCONNECT SWITCHES, BREAKERS, ETC.) SHALL BE BY SQUARE D, SIEMENS, EATON, OR GENERAL ELECTRIC.

PANELBOARDS SHALL HAVE COPPER BUS BARS AND MOLDED-CASE THERMAL-MAGNETIC CIRCUIT BREAKERS. AIC RATINGS SHALL BE RATED AS INDICATED ON PANELBOARD SCHEDULES. AIC RATINGS ARE FULLY-RATED. SERIES RATINGS ARE NOT ALLOWED.

PANELBOARD ENCLOSURES SHALL HAVE ENTIRE FRONT TRIM HINGED TO BOX WITH LOCKABLE PIANO-HINGED DOOR WITHIN COVER. SQUARE D IS BASIS OF DESIGN UNLESS NOTED OTHERWISE. LOAD CENTERS ARE NOT ACCEPTABLE. PROVIDE OWNER WITH (2) SPARE SETS OF KEYS.

GFCI RECEPTACLE SHALL BE GENERAL DUTY, DUPLEX RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTER, GROUNDING TYPE UL-RATED CLASS A, GROUP 1, 20A, 120V, 60 HZ WITH SOLID-STATE GROUND FAULT SENSING. MANUFACTURERS SHALL BE HUBBELL OR EQUAL.

WEATHER RESISTANT RECEPTACLES SHALL BE LISTED AND LABELED AS WEATHER RESISTANT TYPE COMPLY WITH UL 498 SUPPLEMENT SE SUITABLE FOR INSTALLATION IN WET LOCATIONS.

PROVIDE EXTERIOR RECEPTACLES WITH WEATHERPROOF ENCLOSURE. ENCLOSURE SHALL BE CAST ALUMINUM, WHILE IN-USE TYPE WITH HINGED, GASKET COVER. MANUFACTURER SHALL BE RED-DOT OR EQUAL.

FOR OTHER MISCELLANEOUS EQUIPMENT, PROVIDE SAFETY AND DISCONNECT SWITCHES, FUSED OR NON-FUSED AS REQUIRED BY CODE OR SHOWN ON DRAWING. SWITCHES SHALL BE HEAVY DUTY, LOAD AND HORSEPOWER RATED AS MANUFACTURED BY SQUARE-D, GENERAL ELECTRIC, OR EQUAL.

### DEMOLITION:

HATCHED AREAS DESIGNATE EXISTING EQUIPMENT TO BE REMOVED, UNLESS OTHERWISE NOTED.

EXISTING CIRCUITS INDICATED ARE DIAGRAMMATIC ONLY. VERIFY EXACT ROUTING OF EXISTING CONDUIT RUNS AND NUMBERS OF CONDUCTORS AND PROVIDE ADDITIONAL CONDUITS/CONDUCTORS AS NECESSARY TO ACCOMPLISH DESIGN INTENT.

DRAWINGS INDICATE SPECIFIC ITEMS TO BE REMOVED AND/OR RELOCATED. ADDITIONAL ITEMS NOT INDICATED, BUT NECESSARY FOR PROJECT RENOVATIONS SHALL BE REMOVED, RELOCATED, AND/OR REROUTED.

FOR ITEMS TO BE REMOVED, THEY AND THEIR RELATED WIRING/CONDUIT SHALL BE REMOVED BACK TO THE SOURCE PANELBOARD OR NEAREST JUNCTION POINT FOR CIRCUITS WITH OTHER DEVICES TO REMAIN, UNLESS NOTED OTHERWISE.

PROPERLY DISPOSE OF ALL ITEMS BEING REMOVED AS PART OF THIS PROJECT. THE OWNER SHALL HAVE THE RIGHT TO RETAIN ANY ELECTRICAL ITEMS REMOVED FROM THE PROJECT AND NOT INDICATED TO BE REUSED. IF THE OWNER DOES NOT WANT THE ITEMS, CONTRACTOR SHALL REMOVE ITEMS FROM THE SITE. COORDINATE ITEMS TO BE RETAINED WITH THE OWNER.

CONTRACTOR SHALL COMPILE A WRITTEN LIST OF EXISTING DAMAGE TO FINISHES, WALLS, DOORS, FURNITURE, FIXTURES, ETC. IN THE ACCESS PATHS AND AREAS OF CONSTRUCTION AND SUBMIT TO ENGINEER BEFORE ANY DEMOLITION OR CONSTRUCTION IS STARTED. ANY ITEM NOT ON THIS LIST THAT IS LATER FOUND TO BE DAMAGED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR OR REPLACE.

### CONSTRUCTION SEQUENCE NOTES:

THE OWNER WILL MAINTAIN AND OPERATE EXISTING FACILITY AT CURRENT LEVEL UP TO AND UNTIL THAT TIME AT WHICH THE CONTRACTOR REQUIRES ACCESS AS DETAILED BELOW FOR DEMOLITION OR RENOVATION PURPOSES.

GENERAL AND CONTRACTORS ARE REQUIRED TO COORDINATE ALL CONSTRUCTION WITH EACH OTHER.

THE OWNER WILL PAY ALL NECESSARY UTILITY CHARGES RELATED TO THE OPERATION OF THE EXISTING FACILITY AND THOSE NEWLY-CONSTRUCTED FACILITIES DEEMED OPERATIONAL BY THE ENGINEER. THESE SHALL INCLUDE BUT NOT BE LIMITED TO ANY TEMPORARY ELECTRIC AND TELEPHONE SERVICE REQUIRED.

THE CONTRACTOR SHALL BEAR ALL UTILITY COSTS ASSOCIATED WITH UTILITY SERVICE WORK REQUIRED FOR PROJECT.

THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL TEMPORARY FACILITIES REQUIRED TO PERFORM HIS WORK.

THE CONTRACTOR SHALL COORDINATE ALL OPERATIONAL CHANGES WITH THE OWNER AND ENGINEER. THE CONTRACTOR SHALL TEST AND SUCCESSFULLY START-UP ALL NEW AND RECONDITIONED UNITS. WHEN AN AREA IS TURNED OVER TO THE OWNER FOR THEIR OPERATION, THE WARRANTY PERIOD BEGINS FOR THAT AREA.

### COORDINATION:

THE CONTRACTOR SHALL COORDINATE SEQUENCE OF WORK WITH ALL OTHER TRADES.

NOTIFY ENGINEER IMMEDIATELY OF POSSIBLE CONFLICTS WITH EXISTING OR NEW SITE FEATURES. WHERE JOB CONDITIONS REQUIRE REASONABLE CHANGES IN LOCATIONS & ARRANGEMENT OF INDICATED EQUIPMENT, CONDUIT, OUTLETS, OR WIRING, CONTRACTOR SHALL MAKE SUCH CHANGES WITHOUT COST TO OWNER.

IF ANY CONFLICT IN VOLTAGE, PHASE OR LOAD IS ENCOUNTERED WHICH WOULD ALTER THE CIRCUIT SIZE, THIS CONTRACTOR SHALL NOTIFY THE ENGINEER OR OWNER IMMEDIATELY. FAILURE TO DO SO SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT CIRCUIT CHANGE DIRECTLY UPON THE CONTRACTOR.

CIRCUIT BREAKERS ADDED TO EXISTING PANELS SHALL MATCH EXISTING BREAKERS TYPE, MANUFACTURER AND I/C RATING. UPDATE DIRECTORIES IN EXISTING PANELS TO REFLECT CHANGES BY THIS RENOVATION.

### WARRANTY/COMPLETION OF WORK:

CONTRACTOR SHALL GUARANTEE WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP & MATERIALS, USUAL WEAR EXCEPTED. SHOULD ANY SUCH DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR ACCEPTANCE, THIS CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DEFECTIVE ITEMS & DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE TO THE OWNER.

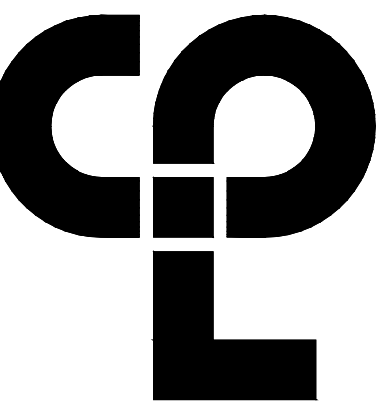
PERTINENT CERTIFICATES SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE, PRIOR TO FINAL BILLING.

BEFORE FINAL ACCEPTANCE BY THE OWNER WILL BE GRANTED, THE CONTRACTOR SHALL CLEAN ALL ITEMS FURNISHED UNDER THIS CONTRACT.

AT COMPLETION OF WORK, CONTRACTOR SHALL DELIVER TO OWNER (2) SETS OF O&M MANUALS AND AS-BUILT DRAWINGS SHOWING LOCATION AND SIZE OF ALL ELECTRICAL WORK. AS-BUILT TO INCLUDE LOCATION OF UNDERGROUND CONDUIT WITH ACCURATE DIMENSIONING TO KNOWN ABOVE GROUND FEATURES.

EVERY PART OF THE INSTALLATION SHALL BE TESTED, OPERATED, AND LEFT IN PERFECT WORKING ORDER.

ELECTRICAL INSPECTION AGENCY REPORT TO BE SUBMITTED TO OWNER'S REPRESENTATIVE.



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### PROJECT INFORMATION

Project Number  
16218.00  
Client Name

TOWN OF LLOYD

Project Name

HUDSON RIVER PUMP STATION  
GENERATOR

Project Address

TOWN OF LLOYD, OAKES ROAD, HIGHLAND, NY

### PROJECT ISSUE & REVISION SCHEDULE

No. Date Description

### PROFESSIONAL STAMPS

### NEW YORK STATE EDUCATION DEPARTMENT

REG. A PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK UNDER THE EDUCATION LAW AND THE COMMERCE CLERK'S ACT AND/OR ANY OTHER LAW OR REGULATION UNDER THE SUPERVISION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR. THIS SEAL IS VALID FOR ONE YEAR FROM THE DATE OF ISSUANCE AND THE SEAL OF AN ARCHITECT, ENGINEER OR LAND SURVEYOR IS VALID FOR TWO YEARS FROM THE DATE OF ISSUANCE. THIS SEAL APPLIES TO THE SIGNATURE AND THE SIGNATURE AND THE SIGNATURE AND THE DATE OF SUCH SIGNATURE, AND A SPECIFIC DESCRIPTION OF THE ACTIVATION.

### SHEET INFORMATION

Issued 04/08/2024 Scale NOT TO SCALE

Project Status

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Drawing Title

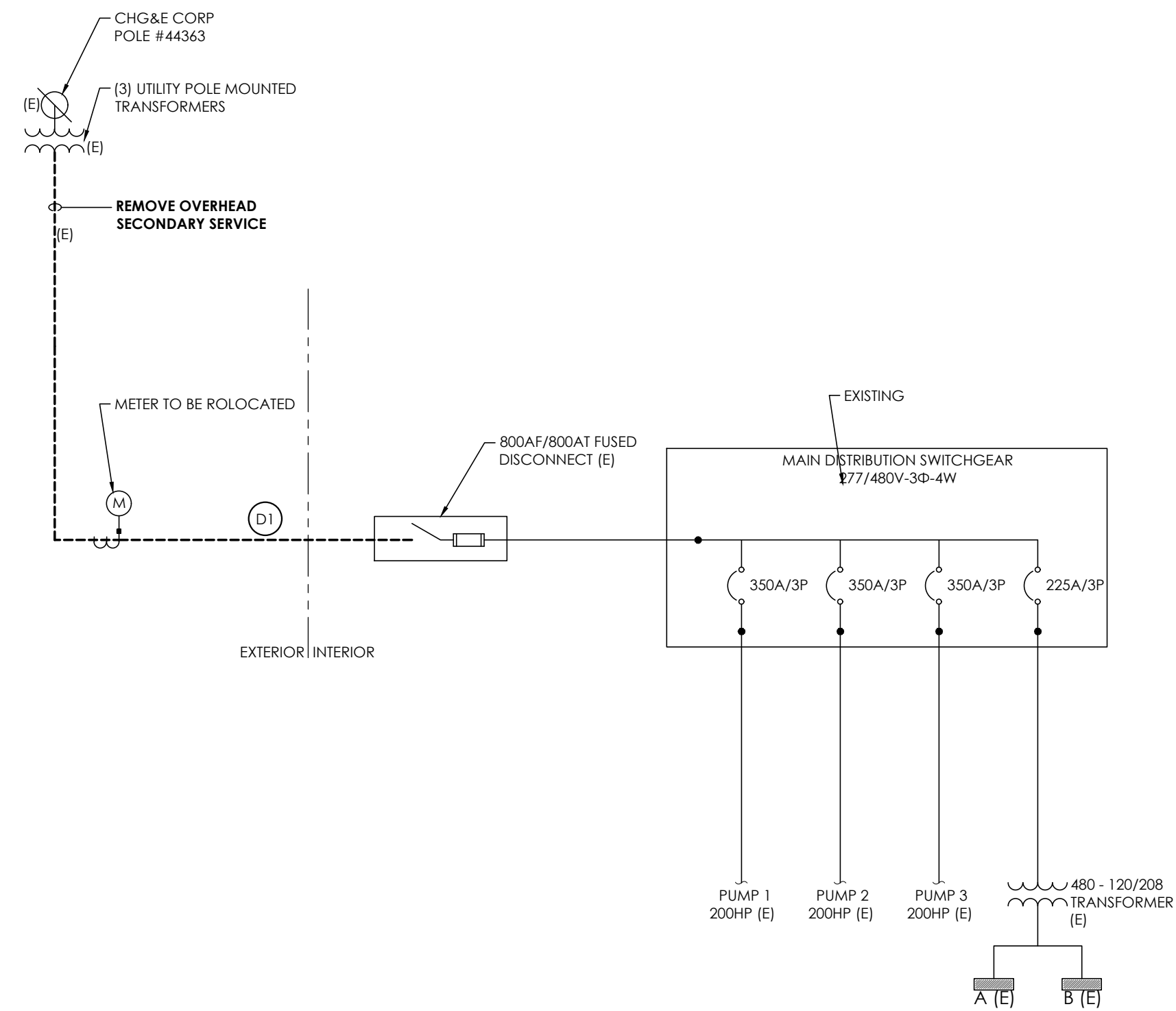
ELECTRICAL SYMBOLS AND NOTES

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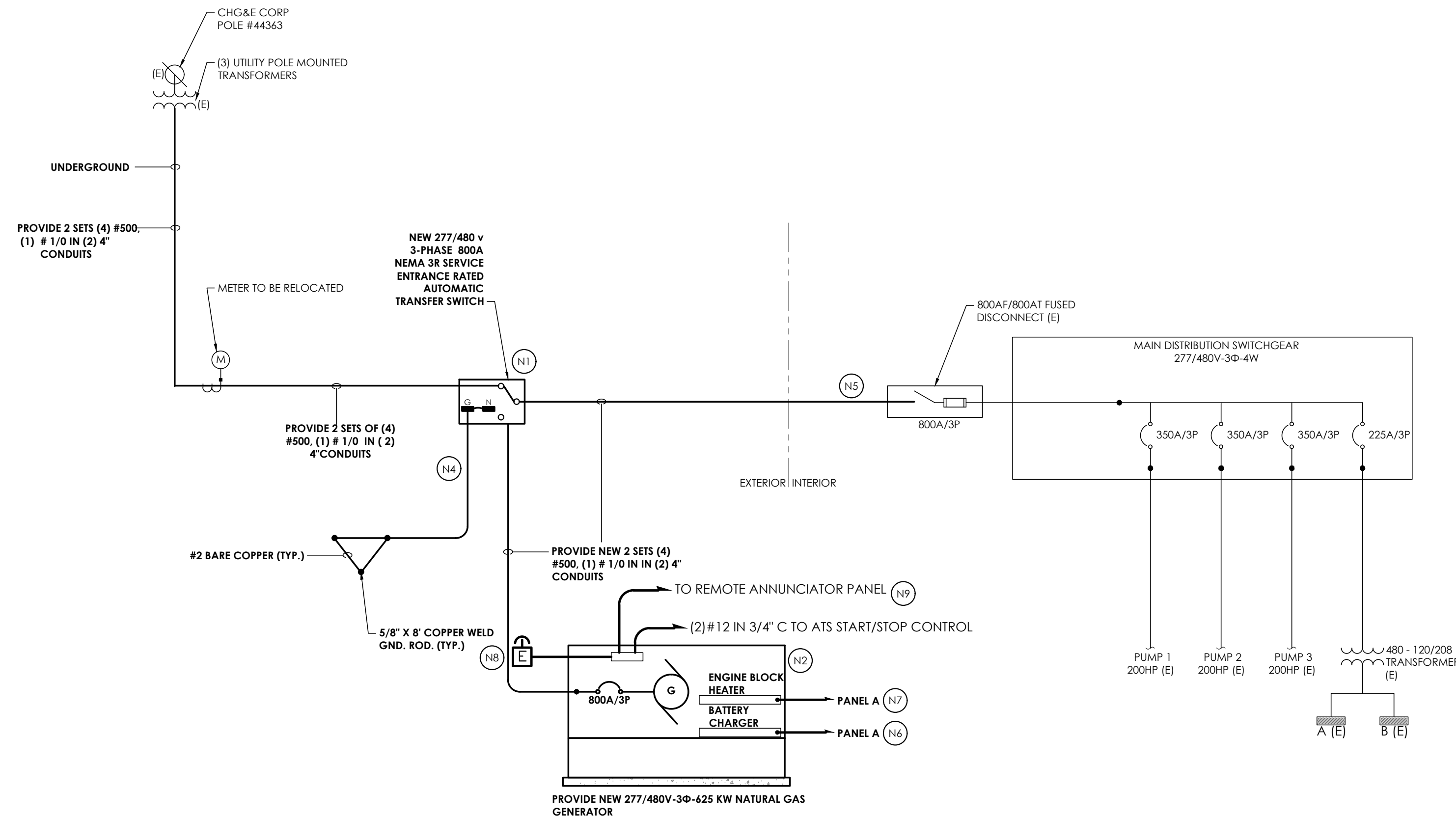
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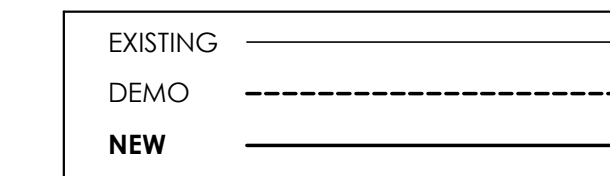


**1 DEMOLITION ONE-LINE DIAGRAM**  
E001 N.T.S.



**2 NEW WORK ONE-LINE DIAGRAM**  
E001 N.T.S.

**WIRING LEGEND:**



**GENERAL NOTES:**

- A. ALL EQUIPMENT AND CONDUCTORS/RACEWAY LABELED AS "EJ" ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE.
- B. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE ALL WORK ASSOCIATED WITH THE SERVICE ENTRANCE WITH CENTRAL HUDSON GAS & ELECTRIC CORPORATION. ALL WORK SHALL CONFORM WITH CENTRAL HUDSON GAS & ELECTRIC CORPORATION SPECIFICATIONS AND REQUIREMENTS FOR ELECTRIC INSTALLATIONS. ALL UTILITY COMPANY FEES RELATED TO THIS WORK SHALL BE PAID BY THE ELECTRICAL CONTRACTOR.
- C. EXISTING EQUIPMENT/FEEDERS SHOWN WITH (E) DESIGNATION ARE EXISTING TO REMAIN. ALL ASSOCIATED ELECTRICAL DOWNSTREAM EQUIPMENT AND/OR CONDUCTORS AND CONDUIT TO REMAIN UNLESS OTHERWISE NOTED.
- D. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ASSOCIATED SHUTDOWN AND EQUIPMENT OUTAGES WITH THE OWNER PRIOR TO CONSTRUCTION AND WILL BE RESPONSIBLE TO PROVIDE AND INSTALL TEMPORARY GENERATOR POWER DURING THE ENTIRE SHUT DOWN PERIOD. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A MINIMUM OF (2) WEEKS NOTICE PRIOR TO SHUT DOWN OF EQUIPMENT.
- E. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE PHASING OF CONSTRUCTION PRIOR TO START OF WORK.

**INSTALLATION, PHASING AND TEMPORARY POWER NOTES:**

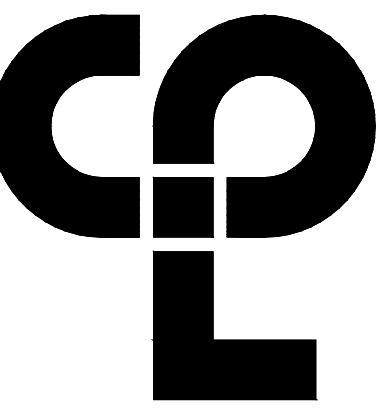
- A. THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE TO COORDINATE THE TIMING OF SERVICE SHUT DOWN WITH THE UTILITY COMPANY. DURING UTILITY SHUT DOWN, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY POWER TO ENTIRE BUILDING. PROVIDE A MINIMUM OF 500 KW DIESEL MOBILE GENERATOR AND ASSOCIATED DISTRIBUTION EQUIPMENT, AND TEMPORARY CABLING TO SERVE BUILDING MAIN DISTRIBUTION PANEL.
- B. THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR ALL TEMPORARY GENERATOR RENTAL AND ASSOCIATED FUEL COSTS. ELECTRICAL CONTRACTOR SHALL CHECK FUEL LEVELS DAILY TO ENSURE THAT BUILDING IS NOT LEFT WITHOUT POWER.
- C. COORDINATE LOCATION OF GENERATOR AND DISTRIBUTION SECTION WITH OWNER PRIOR TO ANY EQUIPMENT BEING BROUGHT ON SITE.

**DEMOLITION KEY NOTES:**

- (D1) DISCONNECT AND REMOVE CONDUCTORS AND CONDUIT AT LOAD SIDE BACK TO SERVICE ENTRANCE.

**NEW WORK KEY NOTES:**

- (N1) PROVIDE NEW 277/480 V, 3-PHASE, 800A NEMA 3R SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH ON EXTERIOR OF PUMP STATION BUILDING NEAR EXISTING SERVICE ENTRANCE.
- (N2) PROVIDE NEW 277/480V, 3-PHASE 625 KW GENERATOR ON EXTERIOR OF PUMP STATION BUILDING NEAR EXISTING SERVICE ENTRANCE.
- (N3) NOT USED.
- (N4) CONNECT NEW GROUND TO EXISTING BUILDING GROUNDING ELECTRODE SYSTEM PER NEC 250. PROVIDE NEUTRAL TO GROUND BOND AT SERVICE ENTRANCE DISCONNECT.
- (N5) CONNECT NEW GENERATOR TO EXISTING DISTRIBUTION EQUIPMENT THROUGH NEW AUTOMATIC TRANSFER SWITCH.
- (N6) PROVIDE (1) 20-AMP, 1-POLE CIRCUIT BREAKER IN PANEL INDICATED FOR BATTERY CHARGER CIRCUIT. WIRE WITH (2) #10, #10G IN 1" C.
- (N7) PROVIDE (1) 20-AMP, 1-POLE CIRCUIT BREAKER IN PANEL INDICATED FOR BLOCK HEATER CIRCUIT. WIRE WITH (2) #10, #10G IN 1" C.
- (N8) PROVIDE NEW REMOTE WEATHERPROOF GENERATOR EMERGENCY STOP BUTTON ON EXTERIOR WALL OF BUILDING, WITHIN SIGHT OF GENERATOR. E-STOP SHALL BE PUSH BUTTON STYLE, MOUNTED IN A SURFACE MOUNT BOX, RED IN COLOR WITH THE WORDS "EMERGENCY STOP" IN WHITE LETTER. E-STOP SHALL BE PROVIDED WITH A PLEXIGLASS WEATHERPROOF COVER WITH THE WORDS "GENERATOR SHUT DOWN" IN WHITE LETTERS. E-STOP SHALL BE CONNECTED TO "STOP" AUXILIARY CONTACTS ON GENERATOR. WIRE WITH (2) #12 WITHIN 1" CONDUIT. COORDINATE EXACT LOCATION OF REMOTE STOP WITH OWNER PRIOR TO INSTALLATION
- (N9) PROVIDE RS232 COMMUNICATION CABLE IN 1" CONDUIT TO GENERATOR ANNUNCIATION PANEL. COORDINATE EXACT LOCATION OF PANEL WITH OWNER PRIOR TO INSTALLATION



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**PROJECT ISSUE & REVISION SCHEDULE**

NO. Date Description

**PROFESSIONAL STAMPS**

NEW YORK STATE EDUCATION STATUTE  
§ 1405.4(2)(b) OF THE NEW YORK STATE EDUCATION LAW AND THE COMPLEMENTARY REGULATIONS THEREOF REQUIRE AN INDIVIDUAL PROVIDING PROFESSIONAL SERVICES TO BE A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR. THIS DRAWING BEARS THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK. ANY REVISIONS TO THIS DRAWING SHALL BE MADE BY THE REGISTERED PROFESSIONAL ENGINEER WHOSE SIGNATURE AND THE DATE OF SUCH REVISION, AND A SPECIFIC DESCRIPTION OF THE REVISION.

**SHEET INFORMATION**

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ELECTRICAL SYMBOLS AND NOTES

Drawing Number Revision Number

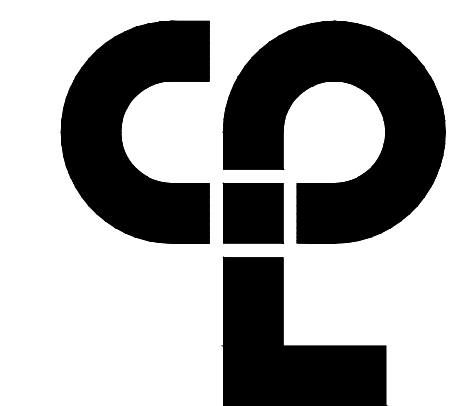
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E001

**GENERAL NOTES:**

- A. ANY EXISTING UNDERGROUND UTILITIES SHOWN WERE OBTAINED THROUGH EXISTING DOCUMENTS AND FIELD WORK AND ARE SHOWN FOR REFERENCE PURPOSES ONLY. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL UNDERGROUND UTILITIES IN AREAS OF NEW UNDERGROUND ELECTRICAL WORK PRIOR TO EXCAVATION. ALL EXISTING ADJACENT UTILITIES SHALL BE TRACED AND MARKED ON SITE PRIOR TO EXCAVATION. ELECTRICAL CONTRACTOR SHALL HAND EXCAVATE AS REQUIRED. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO ADJACENT UNDERGROUND UTILITIES AND SHALL INCUR ALL ASSOCIATED REPAIR COSTS.
- B. ALL EQUIPMENT, FIXTURES, DEVICES, ETC., AS WELL AS ITS ASSOCIATED CIRCUITING AND RACEWAY LABELED AS "[E]" ARE EXISTING.
- C. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH TRENCHING, SAW CUTTING, ETC., ASSOCIATED WITH UNDERGROUND ELECTRICAL WORK.
- D. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FULL RESTORATIONS OF ALL EXISTING CONDITIONS INCLUDING, BUT NOT LIMITED TO, REPLACING AND PATCHING OF ALL PAVEMENT, CONCRETE, SIDEWALKS, GRASS, CURBS, STRIPING, SIGNAGE, ETC.
- E. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE ALL WORK ASSOCIATED WITH THE SERVICE ENTRANCE WITH CENTRAL HUDSON GAS & ELECTRIC CORPORATION. ALL UTILITY COMPANY FEES RELATED TO THIS WORK SHALL BE PAID BY THE ELECTRICAL CONTRACTOR.
- F. UNDERGROUND SECONDARY CONDUIT SHALL BE PLACED IN TRENCH SO THAT TOP OF CONDUIT IS 36" BELOW GRADE. ALL OTHER CONDUIT SHALL BE PLACED IN TRENCH SO THAT TOP OF CONDUIT IS 24" BELOW GRADE. INSTALL WARNING TAPE 12" ABOVE CONDUIT.
- G. REFER TO DRAWING E800 FOR SITE ELECTRICAL DETAILS.
- H. REFER TO NEW WORK ONE-LINE DIAGRAM 2/E001 FOR ADDITIONAL INFORMATION.
- I. BASE FLOOD ELEVATION TAKEN FROM FIRM MAP 3611C0780E DATED SEPTEMBER 25, 2009
- J. TOPOGRAPHY OBTAINED FROM NYS GIS CLEARING HOUSE, ULSTER COUNTY CONTOUR SHAPE FILE. THE TOPOGRAPHY IS LIDAR AND IS IN THE NAD 83 NY STATE PLANE COORDINATE SYSTEM WITH NAVD 88 VERTICAL DATUM

**KEY NOTES:**

- 1 PROVIDE (2) 4" CONDUIT FOR SECONDARY FROM POLE TO ATS.
- 2 PROVIDE (2) 1" UNDERGROUND CONDUIT FOR FEEDER FROM ATS TO GENERATOR. PROVIDE (2) 4" CONDUITS FOR BRANCH CIRCUITS FROM EXISTING SWITCHGEAR IN PUMP STATION BUILDING TO GENERATOR.
- 3 PROVIDE (3) 1" CONDUITS FOR COMMUNICATIONS WIRING FROM GENERATOR TO TRANSFER SWITCH AND EMERGENCY STOP BUTTON. REFER TO DETAIL 2, DRAWING E001 FOR FURTHER INFORMATION
- 4 PROVIDE BOLLARDS TO PROTECT GENERATOR. LOCATE A MINIMUM OF 4' FROM FRONT OF GENERATOR.
- 5 LOCATION OF NEW OVERHEAD ELECTRICAL SERVICE AND RELOCATED UTILITY METER. REFER TO DETAIL 2 DRAWING E001 FOR FURTHER INFORMATION.
- 6 GAS SERVICE: COORDINATE LOCATION OF EXISTING MAIN WITH CENTRAL HUDSON. SET UP SERVICE WITH CENTRAL HUDSON. PAY ALL FEES ASSOCIATED WITH THE SERVICE. PROVIDE SERVICE PIPE AND METER AND COMPLY WITH ALL CENTRAL HUDSON REQUIREMENTS. PROVIDE SERVICE TESTING AS REQUIRED BY CENTRAL HUDSON. CENTRAL HUDSON CONTACT: EMILY REIS PH: 845-486-5444; EMAIL: ereis@cenhud.com



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 30 Century Hill Dr. Suite 104  
 Latham, NY 12110  
 CFLteam.com

**PROJECT INFORMATION**

Project Number: 16218.00  
 Client Name: TOWN OF LLOYD

**TOWN OF LLOYD**

Project Name: HUDSON RIVER PUMP STATION GENERATOR

Project Address: TOWN OF LLOYD, OAKES ROAD, HIGHLAND, NY

**PROJECT ISSUE & REVISION SCHEDULE**

No. Date Description

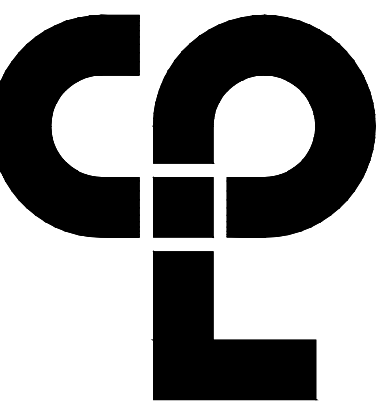
**PROFESSIONAL STAMPS**

NEW YORK STATE EDUCATION DEPARTMENT  
 FILE A VALIDATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMPLETION OF THE REGISTRATION FOR ANY PROFESSION. IN SO DOING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR. TO ALLOW AN ARCHITECT, ENGINEER OR LAND SURVEYOR TO BE RE-REGISTERED AS AN ARCHITECT, ENGINEER OR LAND SURVEYOR IN THIS STATE, THE ARCHITECT, ENGINEER OR LAND SURVEYOR MUST FIRST BE RE-REGISTERED IN THEIR RESPECTIVE PROFESSIONS. THIS SIGNATURE AND THE DATE OF SUCH RE-REGISTRATION, AND A SPECIFIC DESCRIPTION OF THE ASSIGNMENT.

**SHEET INFORMATION**

Issued: 04/08/2024 Scale: 1" = 10'  
 Project Status: BIDDING  
 Drawn By: AL Checked By: AL  
 Drawing Title: ELECTRICAL SITE PLAN

Drawing Number: HRP  
 Revision Number: E002



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**PROJECT INFORMATION**

Project Number  
16218.00  
Client Name

**TOWN OF LLOYD**

Project Name  
**HUDSON RIVER PUMP STATION GENERATOR**

Project Address  
TOWN OF LLOYD, OAKES ROAD, HIGHLAND, NY

**PROJECT ISSUE & REVISION SCHEDULE**

NO. DATE DESCRIPTION

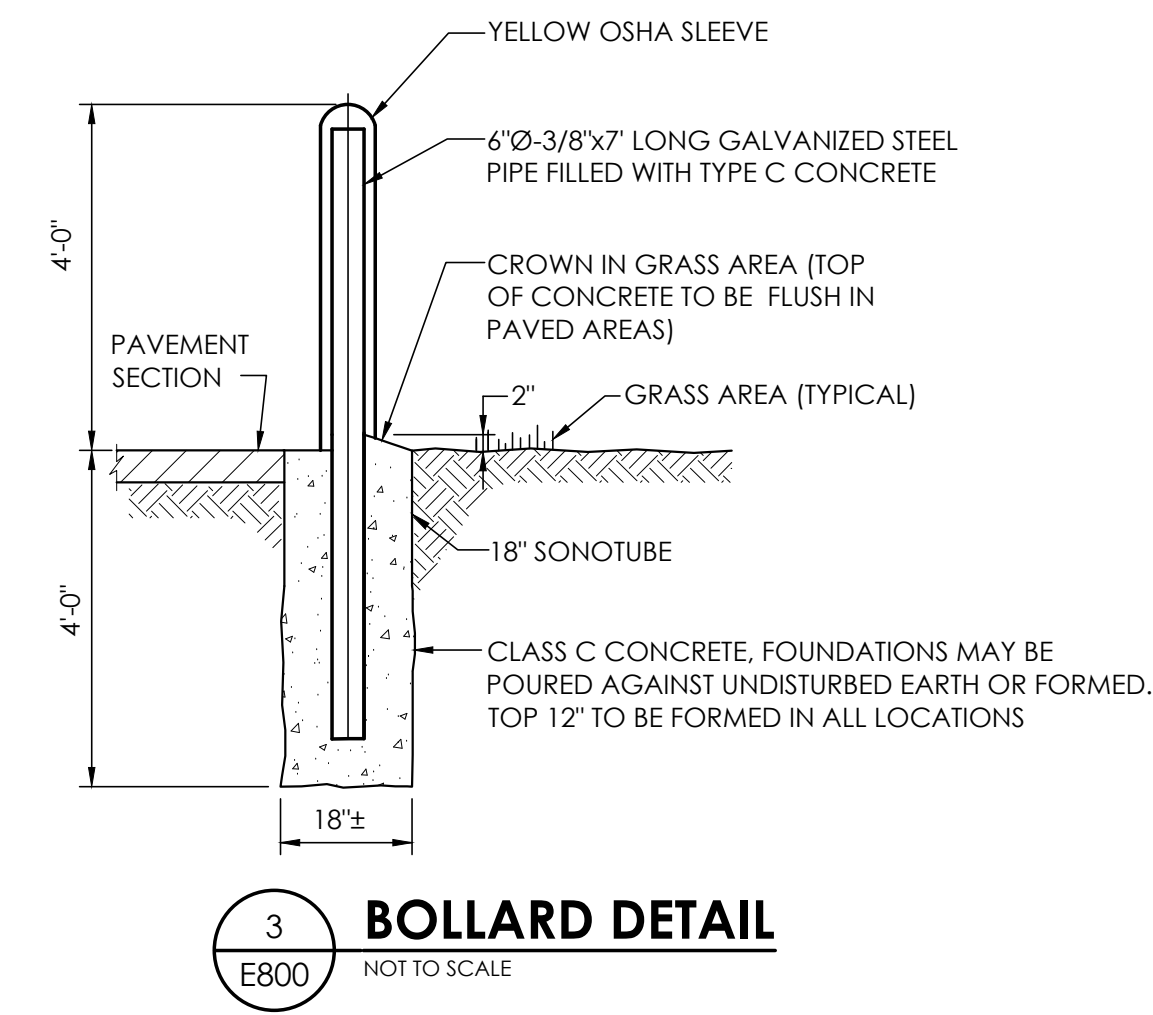
**PROFESSIONAL STAMPS**

NEW YORK STATE EDUCATION DEPARTMENT  
I am a holder of the New York State Education Law and the Commissioner's  
REGULATIONS FOR ARCHITECTS, ENGINEERS AND PROFESSIONAL LANDSCAPE ARCHITECTS.  
I hereby certify that I am a duly licensed professional in the State of New York and  
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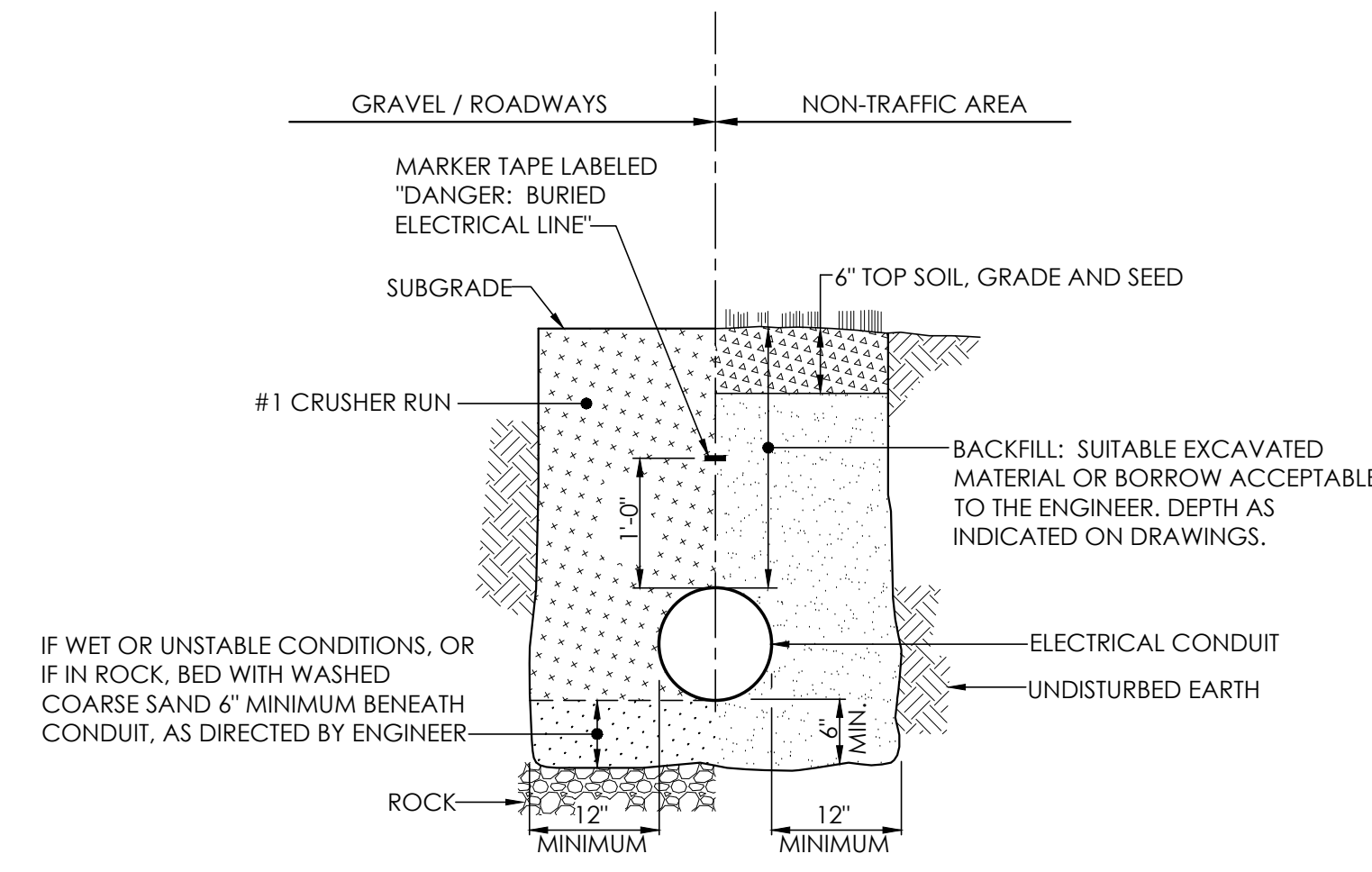
**SHEET INFORMATION**

Issued 04/08/2024 Scale NOT TO SCALE  
Project Status  
BIDDING  
Drawn By AL Checked By AL  
Drawing Title  
ELECTRICAL DETAILS

Drawing Number Revision Number  
**HRPG**  
**E800**



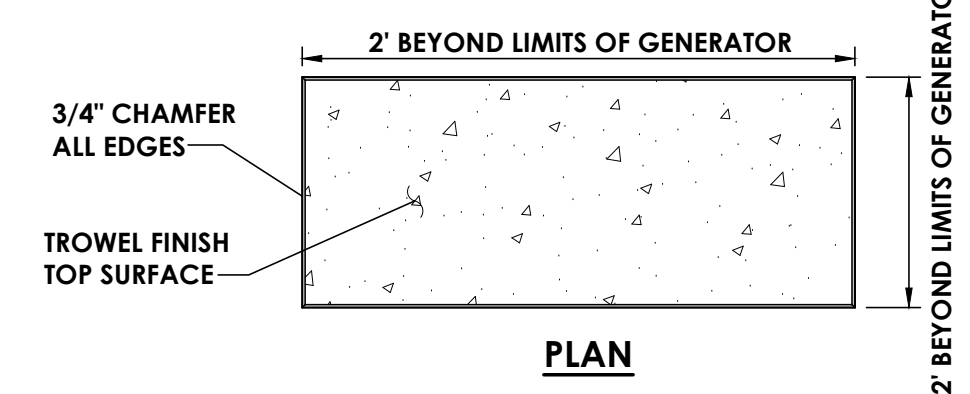
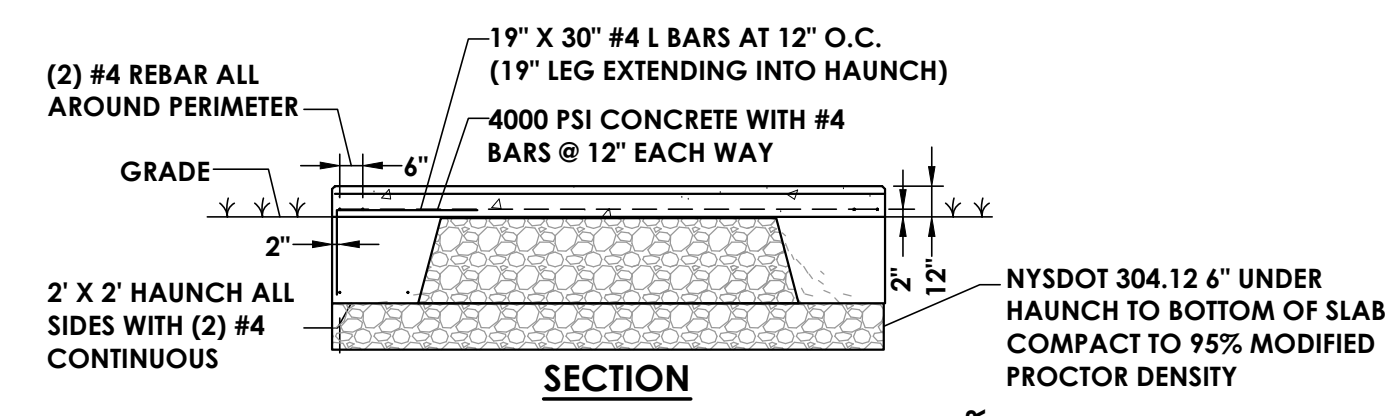
**3 BOLLARD DETAIL**  
E800 NOT TO SCALE



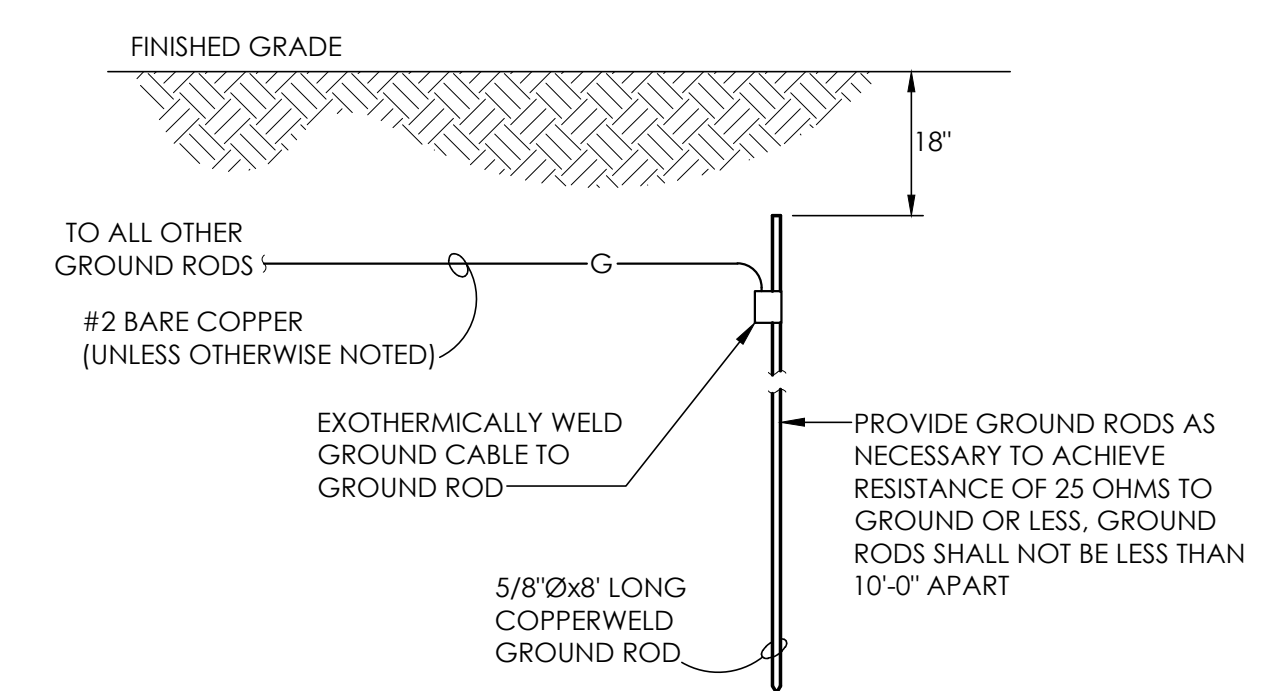
**NOTES:**

- 1) ALL MATERIAL PLACED IN GRAVEL/ROADWAY AREAS SHALL BE COMPACTED IN MAXIMUM 6" LIFTS.
- 2) THIS TRENCH DETAIL SHALL INCLUDE THE REQUIREMENTS COMMON TO MORE THAN ONE SECTION OF DIVISION 2 OF THE SPECIFICATIONS.

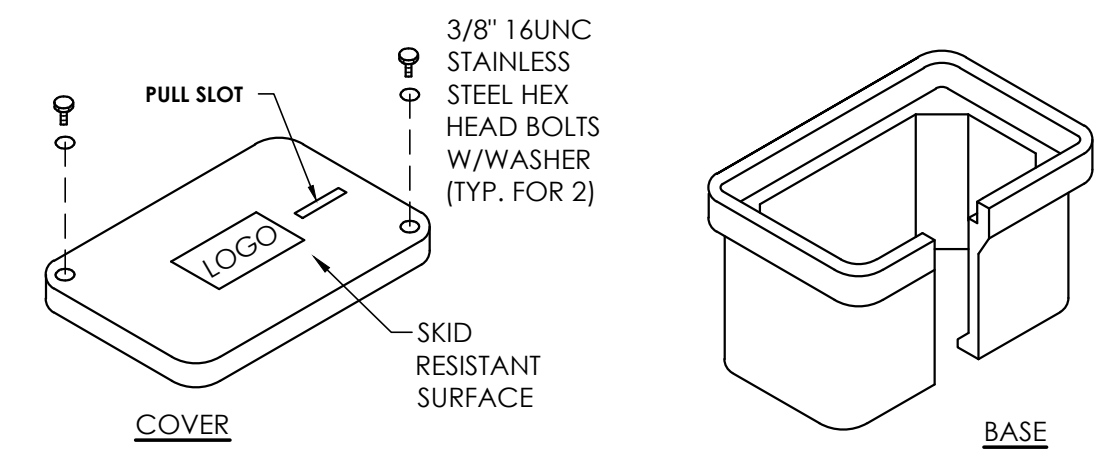
**2 TYPICAL TRENCH DETAIL FOR CONDUIT**  
E800 NOT TO SCALE



**6 GENERATOR PAD**  
E800 NOT TO SCALE



**4 GROUNDING ROD DETAIL**  
E800 NOT TO SCALE



**NOTES:**

1. PROVIDE TIER 22 QUARTZITE OPEN BOTTOM POLYMER HANDHOLE OR EQUAL.
2. COORDINATE DEPTH OF HANDHOLES WITH FIELD CONDITIONS. HANDHOLES TO BE LOCATED IN NON-TRAFFIC AREAS WITH TOP FLUSH WITH FINISHED GRADE.
3. PROVIDE 12" MINIMUM CRUSHED STONE BELOW HANDHOLE FOR DRAINAGE.
4. FILL AND COMPACT THE SOIL AROUND THE HANDHOLE TO GRADE LEVEL WITH THE COVER ON THE ENCLOSURE.
5. ALL HANDHOLE SPICES SHALL BE VIA SILICONE GEL WRAP-AROUND CLOSURE SPICES. RAYCHEM COLD APPLIED GELWRAP OR EQUIVALENT.

**5 TYPICAL HANDHOLE DETAIL**  
E800 NOT TO SCALE

Plotted By: Mark Long

Date last plotted: 5/1/2024 10:24 AM

Date last accessed: 5/1/2024 10:24 AM

Sheet Size: 24x36  
Drawing Name: S:\Projects\Lloyd\_Town\_Hudson River Pump Generator\ACAD\ELEC\E800.dwg