

BIDDING REQUIREMENTS for PURCHASING

NOTICE AND INFORMATION FOR BIDDERS

Attachment A: Bid Breakdown & Schedule

Bidder: _____
DASNY Contact: Nicole White, Procurement Administrator

Product Required By: ASAP based on lead time. Awarded Bidder will be required to coordinate delivery with Contractor identified on the Purchase Order.

Description: Furnish and Deliver Medium Voltage Pad-Mounted Switch Gear

Bid Open Location: DASNY, Corporate Headquarters, 515 Broadway, Albany, NY 12207
Bid Open Date and Time: January 19, 2024

| Item No. | Description | Price |
|----------|--|-------|
| 1 | Medium Voltage pad-mounted switch gear as per Detailed Specifications* | \$ |
| 2 | Delivery | \$ |

TOTAL BID _____

*Bidder to provide all manufacturer/model product information and all product data required in the Detailed Specifications for this Bid.

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(The below questions 1) and 2) need only be answered if the above total bid is for one million dollars or more)

1. Does your firm anticipate the use of subcontractors and outside suppliers specific to this procurement
Yes No
2. Does your firm anticipate the creation of employment opportunities arising from this procurement?
Yes No

(The below information must be completed for all bids.)

Identify all subcontractors, if any: _____

STATE, PROVINCE FOR FOREIGN COUNTRY
THAT YOUR FIRM'S PRINCIPAL PLACE OF
BUSINESS IS LOCATED:

BIDDER (FIRM NAME)

ADDRESS OF FACTORY OR PLANT WHERE
ITEMS ARE MANUFACTURED AND/OR
ASSEMBLED. *(Attach additional sheet(s) if more
than one manufacturer)*

SIGNATURE

NAME (TYPE/PRINTED)

TITLE

Date

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Attachment B: Detailed Specifications

SECTION 261329 – PRE-PURCHASE - MEDIUM-VOLTAGE, PAD-MOUNTED SWITCHGEAR

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes dead-front, remotely controlled insulated vacuum load and fault interrupting switchgear.

1.3 DEFINITIONS

- A. BIL: Basic Impulse Insulation Level.
- B. Bushing: An insulating structure including a central conductor, or providing a central passage for a conductor, with provision for mounting on a barrier, conducting or otherwise, for insulating the conductor from the barrier and conducting current from one side of the barrier to the other.
- C. Bushing Elbow: An insulated device used to connect insulated conductors to separable insulated connectors on dead-front, pad-mounted switchgear and to provide a fully insulated connection. Also called an "elbow connector."
- D. Bushing Insert: That component of a separable insulated connector that is inserted into a bushing well to complete a dead-front, load break or non-load break, separable insulated connector (bushing).
- E. Bushing Well: A component of a separable insulated connector, either permanently welded or clamped to an enclosure wall or barrier, having a cavity that receives a replaceable component (bushing insert) to complete the separable insulated connector (bushing).
- F. Fault Interrupter: A self-controlled mechanical switching device capable of making, carrying, and automatically interrupting an alternating current. It includes an assembly of control elements to detect overcurrents and control the fault interrupter. A fault interrupter always consists of a switching device, a control unit, and sensors for current and/or voltage sensing.
- G. Hotstick: An insulated stick, usually made of fiberglass, that is used to work energized overhead conductors and operate electrical equipment that is overhead, underground, and compartmentalized.
- H. NETA ATS: Acceptance Testing Specification.

- I. SCADA: Supervisory control and data acquisition.
- J. Way: A three-phase or single-phase circuit connection to the bus that may contain combinations of switches and protective devices or may be a solid bus.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include rated capacities, operating characteristics, and furnished specialties and accessories.
 - 2. Time-current characteristic curves for overcurrent protective devices.
- B. Shop Drawings: For pad-mounted switchgear.
 - 1. Include plans and elevations showing major components and features.
 - a. Include a plan view and cross section of equipment base showing clearances, required work space, and locations of penetrations for grounding and conduits.
 - 2. Include details of equipment in each way and indicate dimensions, weights, loads, required clearances, and location and size of each field connection.
 - 3. Include single-line diagram.
 - 4. Include list of materials.
 - 5. Include nameplate data.
 - 6. Include control power wiring diagrams.
 - 7. Include battery, charger, and transfer switch ratings.
 - 8. Include copy of nameplate.
 - 9. Switchgear Ratings:
 - a. Voltage.
 - b. Continuous current.
 - c. Short-circuit rating.
 - d. BIL.
 - 10. Design Calculations: Signed and sealed by a qualified professional engineer.
 - 11. Wiring Diagrams: For each switchgear assembly, include the following:
 - a. Power, signal, and control wiring.
 - b. Schematic diagrams showing connections to remote devices.

1.5 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings:

1. Utilities site plan, drawn to scale, showing heavy equipment or truck access paths for maintenance and replacement.
 - B. Qualification Data: For testing agency.
 - C. Product Certificates: For pad-mounted switchgear.
 1. Switch ratings as listed in IEEE C37.74.
 2. Interrupter ratings as listed in IEEE C37.60.
 3. Coating system compliance with the IEEE standard listed in "Enclosure" Article.
 - D. Source quality-control reports.
 - E. Field quality-control reports.
- 1.6 CLOSEOUT SUBMITTALS
- A. Operation and Maintenance Data: For switchgear and switchgear components to include in emergency, operation, and maintenance manuals.
 1. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:
 - a. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
 - b. Time-current curves, including selectable ranges for each type of overcurrent protective device.
 - c. Record as-left set points of adjustable devices.

1.7 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Member company of NETA.
 1. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

1. ABB Control, Inc.
2. Eaton Corporation; Cutler-Hammer Products.
3. S&C Electric Company.
4. Siemens Energy & Automation, Inc.

2.2 SYSTEM DESCRIPTION

- A. Manufactured Unit: Pad-mounted switchgear, designed for application in impedance-grounded underground distribution systems.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Comply with IEEE C2.
- D. Comply with IEEE C37.74.

2.3 PERFORMANCE REQUIREMENTS

- A. Service Conditions:
 - 1. Switchgear shall be suitable for operation under service conditions specified as usual service conditions in IEEE C37.20.3

2.4 RATINGS

- A. Switchgear is applied to a nominal 13.2kV (L-L) medium-voltage electrical power system. Minimum ratings of the switchgear shall be as follows:
 - 1. Rated Maximum Voltage and Rated BIL: 27 kV and 125 kV BIL.
 - 2. Continuous and Load Interrupting Current: 600 A.
 - 3. Short-Time and Short-Circuit Interrupting Current: 16 kA rms Sym.

2.5 ENCLOSURE

- A. Weatherproof enclosure with an integral skid mounting frame, designed for mounting on a concrete pad, suitable to allow skidding or rolling of the switchgear in any direction, and with provision for anchoring the frame to the pad.
- B. Enclosure Integrity: Comply with IEEE C57.12.28 for compartmentalized enclosures that contain energized electrical equipment in excess of 600 V that may be exposed to the public.
- C. Corrosion Protection: Fabricate the support frame, enclosure base, and the enclosure from stainless steel, ASTM A 167, Type 304 or 304L. Enclosure coating system shall be factory applied, meeting the requirements of IEEE C57.12.28, standard color.

2.6 CONSTRUCTION

- A. Dead-front, front and rear access switchgear.

- B. Each disconnect switch in switched ways shall be in a sealed, dielectric filled stainless-steel tank, factory-filled with **mineral oil** or less-flammable, high-firepoint fluid.
 - 1. Mineral Oil: Comply with ASTM D 3487, Type II, and tested for compliance with ASTM D 117. Provide enclosure with level gauge to monitor the dielectric level; automatic pressure relief valve; and fill, drain, and sampling valves.
 - 2. Less-flammable, high-firepoint fluid shall comply with ASTM D 6871 and IEC 61099. The temperature rating of the fluid shall be satisfactory for ambient air temperatures of minus 30 deg C and plus 40 deg C. Provide enclosure with level gage to monitor the dielectric level; automatic pressure relief valve; and fill, drain, and sampling valves.
- C. Construct switchgear assembly with switched ways that have front-accessible terminations for cables entering from below and with manual operating provisions with a lineman's hotstick.
- D. Trapped Key Interlocks: Kirk key interlock system using a dowel pin design having no openings. Brass housing and 316 stainless-steel key and lock bolts.
- E. Viewing Windows: For each switch, located adjacent to manual operating devices, and positioned to show switch contact position.
- F. Grounding: Provision to make grounding cable and wire connections at each way.

2.7 SWITCHED WAYS

- A. Source Switch Ways: Non-fused, hotstick operated, ganged vacuum load interrupter switches, in series with a visible-break disconnect switch.
 - 1. Rated Continuous Current and Load Switching Current: 600 A.
 - 2. Vacuum Load Interrupter:
 - a. With 24 V dc motor operators to open or close the load interrupter.
 - b. Trip-free switch mechanism. Closing the switch shall be independent of the speed of the operating handle.
 - 3. Visible-Break Disconnect Switch: Two positions, with open and closed positions. The switch shall be mechanically interlocked so that the vacuum interrupter opens and closes first.
 - a. Switch position indicator, clearly labeled.
 - b. Padlocking and tagging provisions.
- B. Fault Interrupting Switched Ways: Non-fused, hotstick-operated, ganged vacuum fault interrupter switches, in series with a visible-break disconnect. With internally mounted current transformers and electronic overcurrent sensing for three-phase ganged tripping of the interrupter. Comply with IEEE C37.60.
 - 1. Rated Continuous Current and Load Switching Current: 600 A.
 - 2. Vacuum Fault Interrupter:

2. An alternate power supply consisting of a 24 V dc uninterruptible power supply with a sealed lead-acid gel-cell maintenance free battery system.
 - a. The battery system shall be sized to meet all power demands, including the operation of all motor-operated switches in the pad-mounted switchgear at least once in a 24-hour period.
3. An automatic transfer switch to connect the alternate power supply when the primary power supply has failed.

2.9 AUTOMATIC SOURCE TRANSFER CONTROLS

- A. An automatic switch control system shall execute manual, automatic source-transfer, and SCADA operation of the source and fault interrupting switch ways. The source-transfer controls shall open an incoming switch way where voltage is lost and close the other incoming switch way if voltage is present. The controls shall include an overcurrent lockout that prevents the closing of a switch way into a system fault.
- B. The control shall have communication port provisions for connection to a multi-mode serial fiber link.

2.10 CONTROL NETWORK

- A. Controllers: Support serial MS/TP and Ethernet IP communications; able to communicate directly via RS-485 serial networks and Ethernet 10Base-T networks as a native device.

2.11 BUSHINGS

- A. Separable insulated connectors shall be used to connect primary cable. Comply with requirements in Section 260573 "Medium-Voltage Cables."
 1. Bushings: One-piece, 600 A, BIL ratings the same as the connectors. Comply with IEEE 386.
 2. Supply a standoff bracket or parking stand for each bushing, mounted horizontally adjacent to each bushing.

2.12 SURGE ARRESTERS

- A. Distribution class; metal-oxide-varistor type, fully shielded, separable elbow type, suitable for plugging into the inserts. Comply with IEEE C62.11 and IEEE 386.
 1. Nominal System Line-to-Line Voltage: 13.2 kV rms.
 2. Maximum Continuous Operating Voltage: 15 kV rms.
 3. Duty-Cycle Voltage: 13.2 kV rms.

- g. Devices and relays actually operate as intended. Circuits for which operation is not feasible shall be checked for continuity.

PART 3 - EXECUTION

3.1 Not used.

END OF SECTION 261329

OMH/DASNY
MID HUDSON FORENSIC
PSYCHIATRIC REPLACEMENT HOSPITAL
Electrical Equipment Pre-Purchase

November 9, 2023
100% CD Resubmission
DASNY #359000

Reference Documents

Bid Package #1 Electrical Site Plans

THESE DOCUMENTS CONTAIN POTENTIALLY SENSITIVE INFORMATION AND SHALL BE USED FOR THE INTENDED PURPOSE AND THE INFORMATION CONTAINED HEREIN SHALL BE KEPT CONFIDENTIAL AND NOT DISCLOSED TO ANY OTHER PARTY WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT OR ENGINEER OF RECORD.

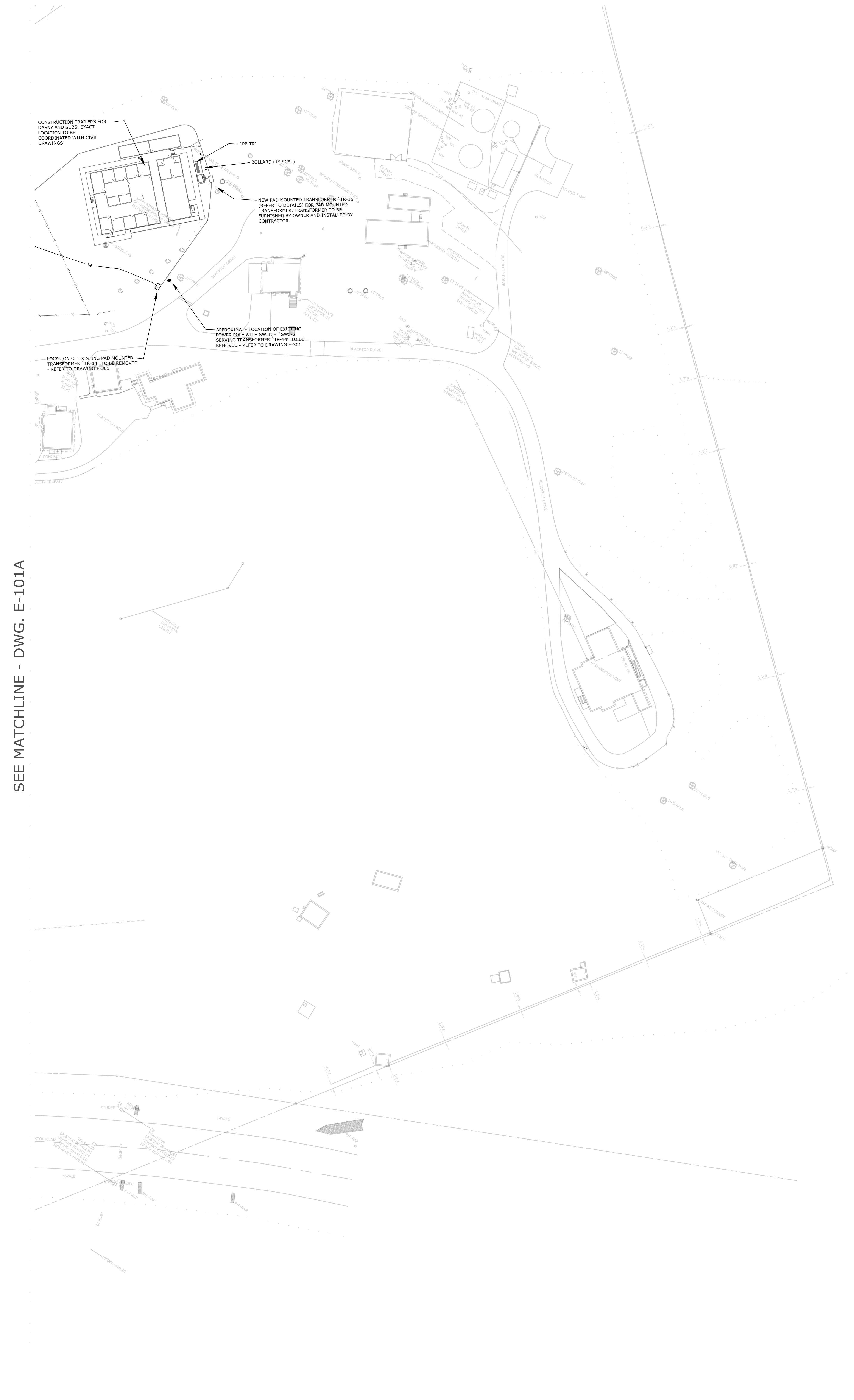
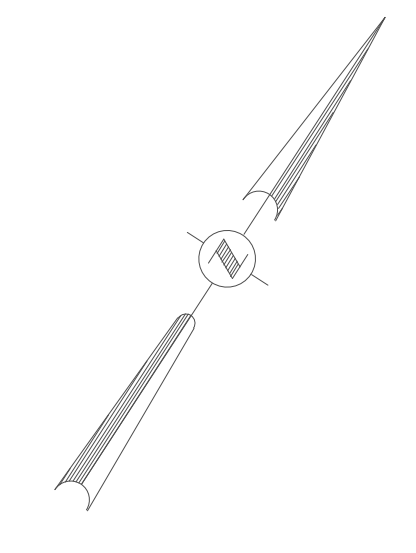
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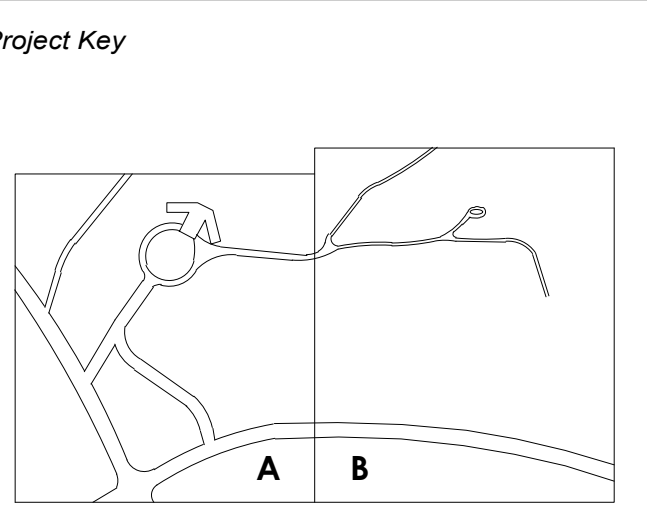
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SEE MATCHLINE - DWG. E-101A



REVISIONS

| Description | Date |
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Project Title

NEW YORK STATE Office of Mental Health

MID-HUDSON FORENSIC PSYCHIATRIC CENTER

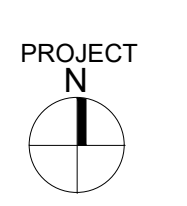
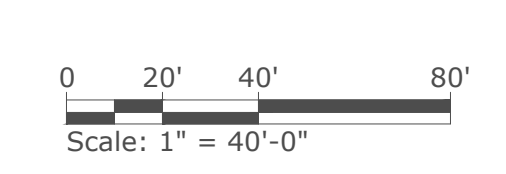
FORENSIC REPLACEMENT HOSPITAL NO. 60 SITE READINESS PACKAGE #1 CR #16

Phase
100% CD RE-SUBMISSION

ELECTRICAL SITE UTILITIES PLAN #2

Drawn By: OV | Checked By: CF | Date: 11/03/2023
 DASNY Project No: 359000
 Consultant Project No: 3020829/792.01
 Drawing Number: **E-101B**

ISSUED FOR REFERENCE ONLY



BIDDING REQUIREMENTS for PURCHASING

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Attachment C: Scope of Work

Furnish and deliver medium voltage pad-mounted switch gear to the Mid-Hudson Psychiatric Center project site per the system requirements provided in the Detailed Specifications as soon as possible based on product lead time and as coordinated with the Construction Manager. Project site drawings are included in the detailed specifications for reference. Bidder is responsible for submittals required in the Detailed Specifications.