REQUEST FOR PROPOSAL

RFP # **026-23**

DATE: 11/15/2022

BURLINGTON ELECTRIC DEPARTMENT
585 Pine street
Burlington, VT 05401-4891
Phone: 802-865-7456

REQUEST FOR QUOTATION

THIS IS AN INQUIRY, NOT AN ORDER

PLEASE QUOTE PROMPTLY

ALL RFP'S RESPONSES ARE TO BE UPLOADED TO OUR SECURE WEB SITE USING YOUR UNIQUE LOGIN

DELIVERY REQUIRED BY:	QUOTATION DUE BY	REQUISITION NO:	DEPT:
asap	NLT 12/20/2022 10:30am		

QTY	DESCRIPTION
	Burlington Electric Department is seeking proposals for the following items. Shipping must be included in all prices. All prices need to include lead-time from date of order. 15 kV,Padmount Switch for UVM Reservoir 4-way.

ALL TECHNICAL QUESTIONS SHOULD BE DIRECTED TO BURLINGTON ELECTRIC VIA EMAIL and must include the RFP number. purchasing@burlingtonelectric.com. No communications with BED employees on this RFP. Any communications other then described could get your response null and void for this RFP.

When quoting more than one Manufacturer please clearly indicate on each bid what manufacturer is being quoted..

DELIVERY REQUIREMENT: SHIP FOB DESTINATION FREIGHT ALLOWED . 585 Pine Street, Burlington VT 05401

BED RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL PROPOSALS RECEIVED IN RESPONSE TO THIS RFP OR TO TAKE OTHER ACTION CONSISTENT WITH THE BEST INTEREST OF BED. BED RESERVES THE RIGHT TO NEGOTIATE SEPARATELY WITH ANY SOURCE TO SERVE THE BEST INTEREST OF BED.

EXCEPTIONS TO THIS RFP SHALL BE SUBMITTED IN WRITING & ACCEPTED BY B.E.D. ON THE AWARDED P.O. TO BE BINDING. ALL SUBMITTED BIDS BECOME THE PROPERTY OF BURLINGTON ELECTRIC DEPARTMENT. AFTER THE AWARDING OF THE CONTRACT TO THE SUCCESSFUL BIDDER, ALL BIDS ARE OPEN FOR PUBLIC VIEWING

ALL PROPOSALS MUST BE SUBMITTED VIA THE SECURE WEB SITE. BED WILL NO LONGER ACCEPT FAXED BIDS, EMAIL OR MAILED. ALL RFQ'S MUST INCLUDE OUTLINE DRAWING SHOWING DIMENSIONS OF TRANSFORMER. IF ANY INFORMATION IS MISSING THE RFP WILL BE DEEMED INVALID AND WILL NOT BE EVALUATED

VENDOR MUST COMPLETE THIS INFORMATION

1.SHIPMENT CAN BE MADE _____ DAYS FROM RECEIPT OF ORDER

2. F.O.B. DESTINATION FREIGHT ALLOWED BURLINGTON ELECTRIC DEPT. DOCK.

3. TERMS _____ DISCOUNT OF _____ % IF PAID NET _____ DAYS

4. QUOTE VALID _____ DAYS

SIGNED_____ DATE:_____

TITLE:_____ COMPANY:_____

B.E.D. RESERVES THE RIGHT TO ACCEPT OR DECLINE ANY AND ALL BIDS. ALL BIDS BECOME THE PROPERTY OF BURLINGTON ELECTRIC DEPARTMENT

Jeffry W. Turner Jr

FOR INQUIRE ON ABOVE QUOTE PLEASE CALL PURCHASING DEPARTMENT DIRECT AT:

JEFF TURNER 865-7456
email: jturner@burlingtonelectric.com

BURLINGTON ELECTRIC DEPARTMENT
MATERIAL SPECIFICATION

15 kV, 600 Amp, Outdoor, Deadfront, Air-Insulated, Padmount Switch, Motor Operated

SCOPE

This specification covers the requirements for a padmount switch with load interrupting capability, for use on 13800 Grounded Y/7970 volt, 60 hertz underground electrical distribution systems. The switch shall be three phase, group operated with 600 amp dead break bushings per ANSI / IEEE 386. The switch shall be suitable for use in switching load, loop, capacitor, cable charging and magnetizing currents.

A single line diagram indicating the circuit configuration, number of switched ways and type of bushings required will accompany the request for quotation.

Bidders must complete the "15 kV, 600 Amp, Padmount Switch Data Sheet" (page 6 of this specification) and return it with their quotation.

INDUSTRY STANDARDS

The switch shall meet or exceed the requirements of the latest versions of all applicable ANSI, ASTM, NFPA, IEEE and NEMA standards. In the event that this specification conflicts with these industry standards, this specification shall take precedence. Specific exceptions to this specification or to applicable industry standards shall be clearly noted with each quotation.

ELECTRICAL RATINGS

The switch shall meet or exceed the electrical ratings shown below:

Maximum Design Voltage:	15.0 kV
B.I.L., Impulse Withstand:	95 kV
Continuous and Interrupting Current:	600 Amps
Symmetrical One Second Current:	16,000 Amps

Electrical ratings shown assume the use of 600 amp elbows for all connections.

SWITCH CONSTRUCTION

The enclosure shall be outdoor, weatherproof, free standing, self-supporting, and shall be constructed of minimum 11 gauge steel for all structural panels. The enclosure shall meet or exceed the latest revision of ANSI C57.12.28 "Padmount Equipment Enclosure Integrity." Included in this specification are the requirements for enclosure tamper-proofing and coating system performance. The enclosure shall also conform to or exceed the tamper resistance requirements of NEMA TR-1-20.1.

The enclosure shall be of continuously welded construction to maximize strength, minimize weight and inhibit corrosion. A structural frame and bolted sheet metal is not acceptable.
The switch shall be capable of withstanding internal failure without explosion or fire.

The switch shall have a parking stand bracket next to each bushing with the elbows parking to the outside.

Access to the cable compartments shall be made through side opening access doors. The outer doors shall

have a three point latching system and include provisions for locking with a padlock. Each door shall also have a pentahead bolt which secures it to the compartment center support member. The pentahead bolt shall only be operable with the padlock removed.

The inside surface of the switch roof shall have a coating of "no-drip" compound to prevent condensation.

The unit shall have a finish coating conforming to Munsell designation, 7.0 GY3.29/1.5 padmounted green.

The roof of the switch shall be crowned to ensure proper water drainage.

The base of the enclosure shall have a minimum one inch flange around the entire bottom to facilitate cleat clamping.

All hinges, hinge pins, parking stands and permanent lifting provisions shall be stainless steel. The actual tabs used for lifting the switch shall be removable.

The bottom panel of the switch shall be of corrosion resistant material and have a sufficient number of screened drains to allow moisture out, but prevent the entrance of animals, insects, or weeds. The floor shall be affixed to the enclosure such that it is easily removable in the shop.

The interconnecting bus work shall consist of continuous one piece copper bar with no intermediate splices. Flexible braid or cable is not acceptable.

A space heater with sheaths of high-temperature chrome steel shall be provided to maintain air circulation inside the enclosure. The space heater shall be wired to a terminal block in such a way that one, 240 volt AC external power supply can be used.

Control Cabinet

The cabinet shall have a finish coating identical to that of the switch enclosure.

Cabinet shall be mounted to the padmount enclosure. The bottom of the cabinet shall be a minimum of 18” above the bottom of the padmount enclosure.

The inside surface of the cabinet roof shall have a coating of "no-drip" compound to prevent condensation.

The control cabinet compartment door shall have provisions for a padlock.

The control cabinet shall include provisions (such as a heater) to protect equipment from freezing, condensation, and corrosion.

The control cabinet compartment shall have a 120VAC convenience outlet fused at 15A and an LED light.

Switch Components

Switch shall contain three (3) switched ways all of which shall have load interrupting capability and one (1) fused way.

All switched ways shall have motor operators that can be mechanically decoupled and are field replaceable.

The interrupter switches shall be rated for continuous and load interrupting capability in conformance with the requirements of ANSI C37.72.

The switch shall provide for visual verification of the switch position. The enclosure shall withstand a fault of 16,000 amps, symmetrical.

600 amp bushings, meeting the latest version of ANSI/IEEE 386 shall be provided for all switch side terminations. These bushings must be externally (field) replaceable without requiring any disassembly of the enclosure.

200 amp bushing wells, meeting the latest version of ANSI/IEEE 386 shall be provided for the fused switch terminations. These bushing wells must be externally (field) replaceable without requiring any disassembly of the enclosure, and these bushing wells shall have replaceable studs.

The 200 amp compartments of the switch shall be capable of accepting S&C type SME-4 (or equivalent) fuses, S&C type SME-20 (or equivalent) or Cooper type NX (or equivalent) current limiting fuses. The actual type of fusing to be quoted will be specified by BED.

Sufficient depth must be provided in the cable compartments to accommodate 200 amp load break elbows connected to the 600 amp bushings via reducing bushings.

Sufficient depth must be provided in the switch side cable compartment to accommodate either:

- A 15 kV, MOV elbow arrester piggyback connected to a 600 amp non-loadbreak elbow or
- Two 600 amp non-loadbreak elbows mounted piggyback.

Switch Dimension

Dimensions of the pad that will house the switch are 94” long and 116” wide. Pad opening for the cable access is 67” long and 73” wide. See the pad dimensions drawings included with the bid documents.

Bids for switches deviating from the above dimension are acceptable and will be reviewed by a member of Burlington Electric Department engineering team.

Control Cabinet

Each switched way shall have SEL distribution protection relay (e.g. SEL-351/A or SEL-751/A) with power elements. Relays will be used for voltage / current monitoring that will be the source of supervisory metering data (kV, A, MW, MVAR, pf). Relays shall be configured such to have capability to simultaneously communicate to SEL Ethernet Security Gateway and Ruggedcom Utility Grade Ethernet Switch.

Each switched way shall have three-phase current transformers with shorting terminal blocks.

All switched ways shall be supervised by a single manual Local / Remote permissive control (i.e. one local/remote switch that controls all ways). It shall be wired to each relay such that the relay front panel can be used for local control.

Voltage monitoring shall be provided for all three phases.

Each relay shall have a set of FT-1 test switches associated with it. At minimum, all current input and voltage inputs shall have test switches.

SEL Ethernet Security Gateway shall be included (Part# 3620XHC0XXX0). It shall have capability to connect to all of the relays. All necessary cabling for connecting all the relays to the security gateway shall be included.

Ruggedcom Utility Grade Ethernet switch shall be included (Part# RS900G-24-P-2SC10-XX)

Labeling

The switch shall have a stainless steel nameplate in the switch side compartment which is permanently stamped, embossed or engraved with the following information:

- Name of manufacturer.
- Type of load break switch (Number of ways, number of switched ways).
- Catalog number.
- Model number.
- Serial number.
- Date of manufacture.
- Maximum voltage.
- BIL (kV).
- Amps, continuous.
- Amps, load interrupting.
- KA Asymmetrical, momentary and fault close.
- Weight, in pounds.

The following labels will be provided as a minimum.

- Danger labels (in all compartments).
- Schematic diagram (in all compartments).
- Each bushing shall have a phase identification tag ("A", "B" or "C").
- Other warnings and instructional labels, as necessary.

Wiring

All the wiring in the cabinet will be labeled as follows:

- Each wire will consist of minimum of two labels or tags on each end.
- Label closest to the end of the wire will indicated the terminal that wire is terminated to.

- Label next to that will indicated the terminal the wire is terminated to on the opposite end.
- Additional label can be added, to indicated wire schedule assignment if necessary (optional).

SWITCH OPERATION

The switch shall be operable from the control cabinet without the need to enter deadfront compartment of the switch.

The switch shall be operable manually, in case of failure of the control cabinet equipment.

One operating mechanism will be provided per gang switch. The operating mechanism must operate all three phases simultaneously and must be tease proof and provide for quick-make, quick-break operation in either switching direction regardless of the speed of the operator. Position indicators shall clearly identify the "open" and "closed" positions of the contacts. The operating mechanism shall be padlockable in either position. The operating mechanism must be capable of delivering sufficient torque to assure load interrupting, fault closing and momentary ratings.

QUALITY ASSURANCE

One hundred percent (100%) production testing shall include a contact resistance test and an AC one minute withstand test.

Certified test reports shall be furnished to demonstrate accurate compliance with all required production tests.

MISCELLANEOUS

Any exceptions taken to the specification shall be clearly indicated on the quotation.

An outline drawing of the switch shall be submitted with the quotation.

The manufacturer shall provide warranty information on the switch with the quotation.

Approval drawings shall be submitted prior to the fabrication of the switch. The submittal shall include all dimensions, weights, information on the switch and all associated equipment, changes from specifications and any accessories. The vendor shall allow two (2) weeks for approval drawing review by BED.

One hard copy and one electronic copy of instructions and checklists for the inspection, installation, operation, and maintenance of the padmounted switch shall be provided with the switch.

Elbows and bushing well inserts will be provided by the user.

SHIPMENT

The switch shall be shipped FOB destination.

BURLINGTON ELECTRIC DEPARTMENT
15 kV, 600 Amp, Padmount Switch Data Sheet

Vendor: _____ Quotation Date: _____

Switch manufacturer: _____ Type of switch: _____ Way, _____ Switched

Catalog number: _____ Model number: _____

Interrupting medium: _____ Insulating medium: _____

Weight, in pounds: _____

Dimensions (In inches)

Length: _____ Width: _____ Height: _____

Electrical Ratings

One Minute AC Withstand: _____ kV

Open Gap B.I.L. Flashover Withstand: _____ kV

Load Interrupting and Loop Switching: _____ Amps

Asymmetrical Momentary and 3 Operation Fault Close: _____ Amps

Symmetrical One Second Current: _____ Amps

Operations - 600 A Load Interrupting Endurance: _____ Operations

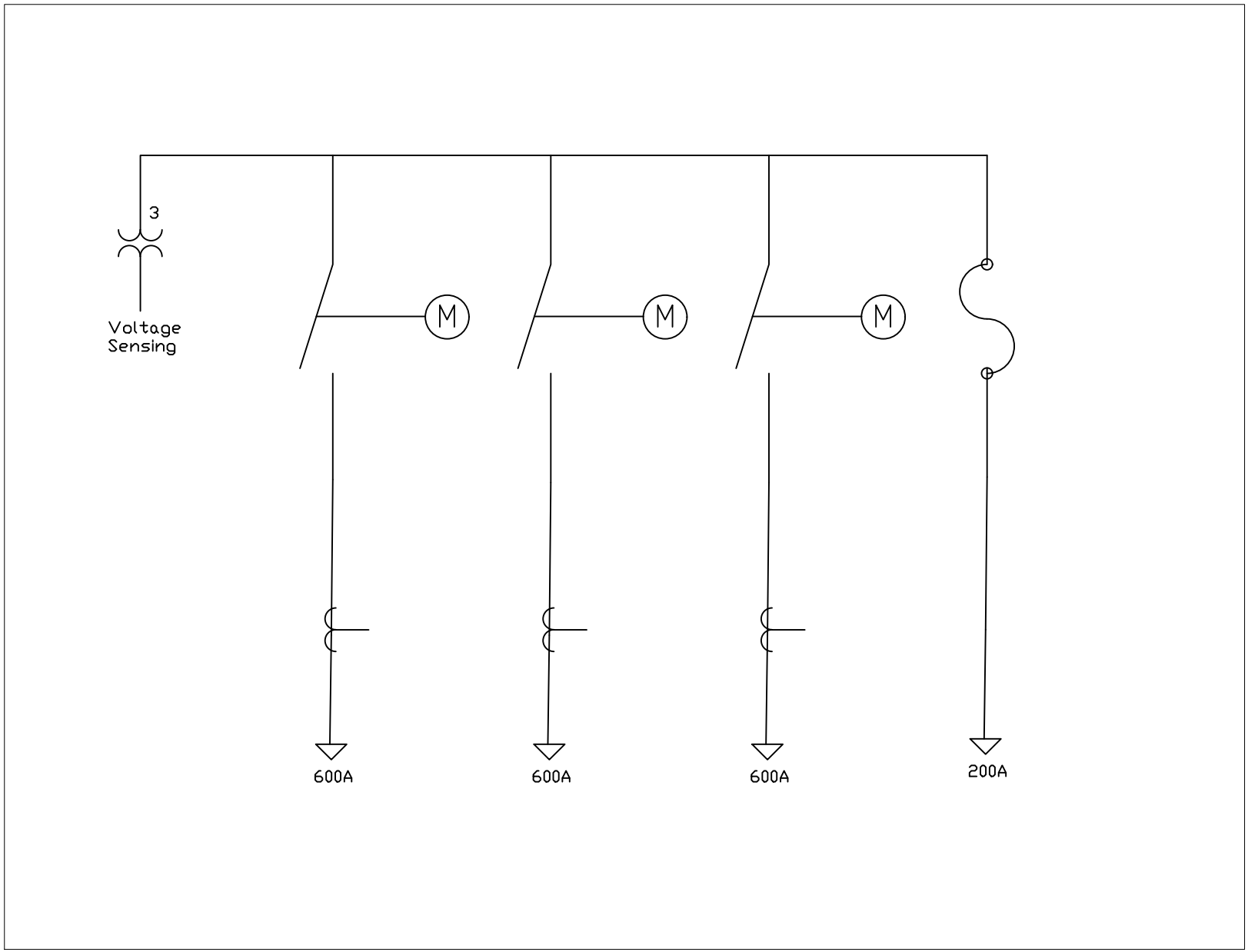
Mechanical Life - Operations: _____ Operations

Maximum Switch Operating (Open / close) Time: _____ Seconds or Cycles
(Total time to operate a switch equipped with an electrical operator = the total time for the electrical operator to operate + the total time for the switch to extinguish the arc.)

Exceptions to specifications: _____

_____

_____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Voltage
Sensing
M
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600A
600A
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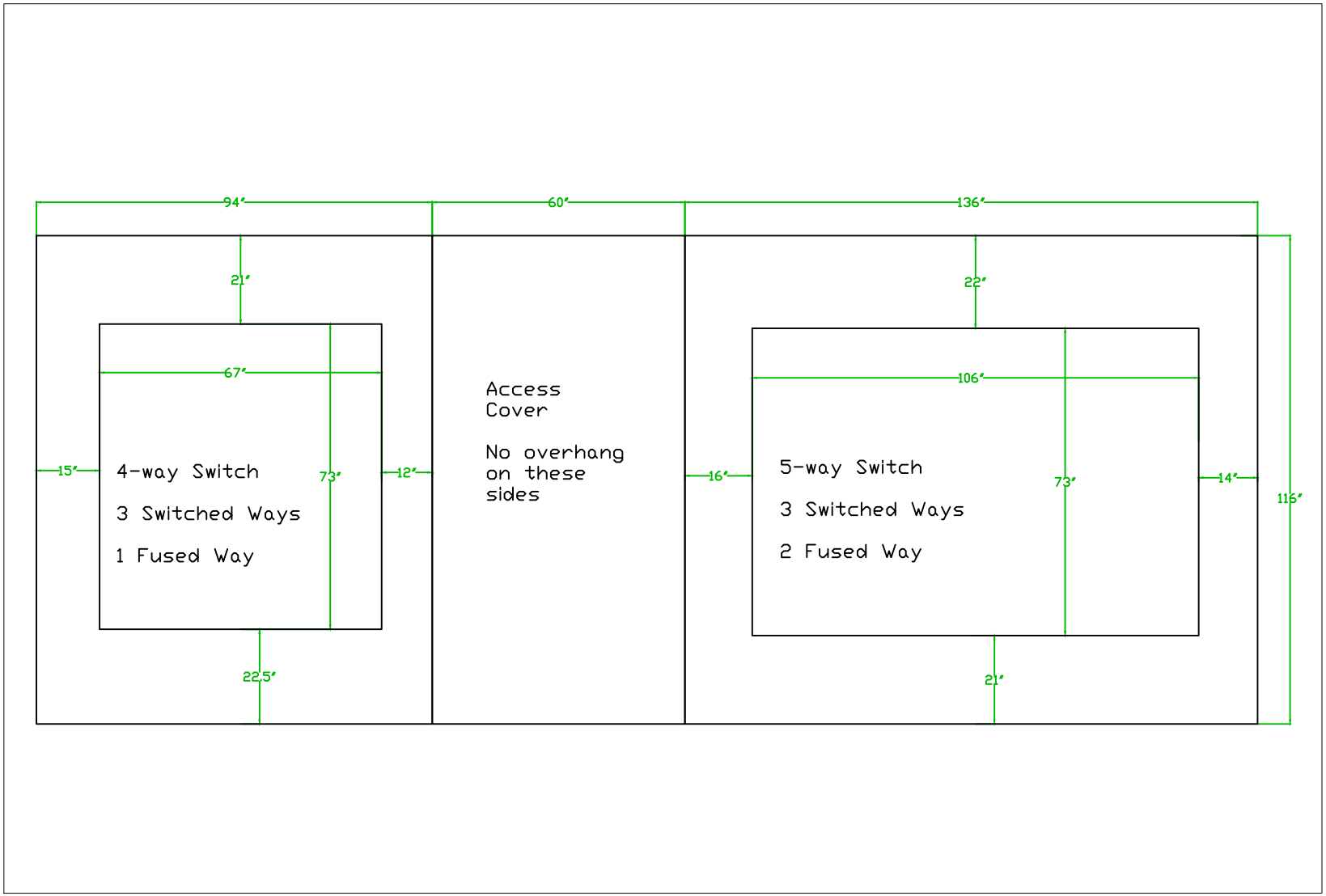
200A


94″
60″
136″
21″
22″
67″
106″
Access
Cover
No overhang
on these
sides
15″
4-way Switch
3 Switched Ways
1 Fused Way
73″
12″
16″
5-way Switch
3 Switched Ways
2 Fused Way
73″
14″
116″
22.5″
21″