

H

G

F

E

D

C

B

A

| Cable Schedule |                |                                              |           |                      |                  |              |
|----------------|----------------|----------------------------------------------|-----------|----------------------|------------------|--------------|
| Circuit Id     | Voltage Rating | Conductor Quantity, Size and Material        | Wire Type | Quantity of Conduits | Size of Conduits | Conduit Type |
| B              | 15kV           | (3) 350 KCMIL AL Jacketed Concentric Neutral | MV-10S    | 1                    | 5"               | PVC          |
| C              | 15kV           | (1) #1/0 AWG Jacketed Concentric Neutral     | MV-10S    | 1                    | 5"               | PVC          |
| D              | 1kV            | 8 Sets [ (3) 600 KCMIL Cu ]                  | XHHW-2    | 8                    | 5"               | PVC          |
| E              | 600V           | (3) #1/0 AWG AL, (1) #8 AWG Cu GND           | THWN-2    | 1                    | 2"               | PVC          |
| F              | -              | (1) CAT6 OR (1) Fiber Optic                  | -         | 1                    | 1"               | PVC          |
| G              | 600V           | (3) #6 AWG Cu, (1) #10 AWG Cu GND            | THWN-2    | 1                    | 2"               | PVC          |
| H              | 600V           | (3) #12 AWG Cu, (1) #12 AWG Cu GND           | THWN-2    | 1                    | 2"               | PVC          |
| I              | 600V           | (3) #8 AWG Cu, (1) #10 AWG Cu GND            | THWN-2    | 1                    | 2"               | PVC          |

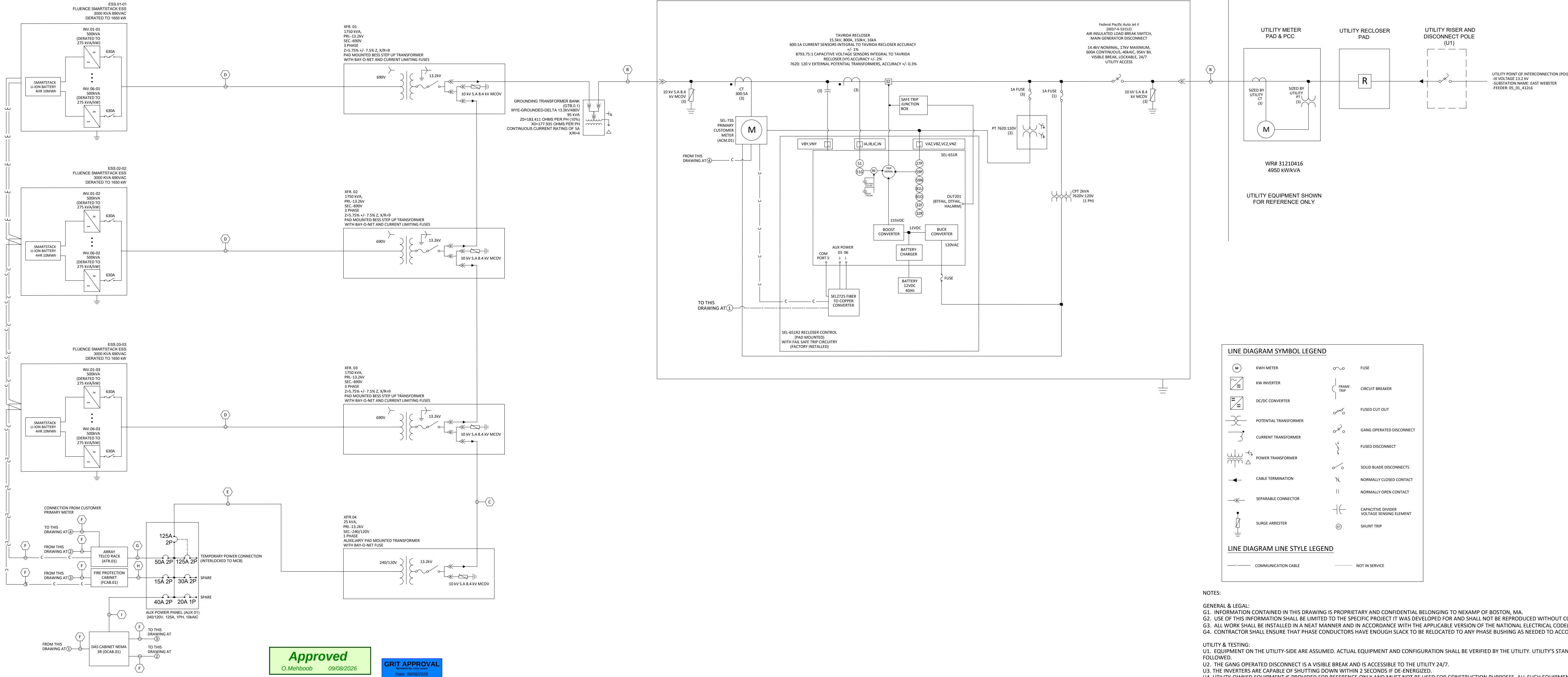
| Inverter Protection Settings |         |        |         |                                    |                 |
|------------------------------|---------|--------|---------|------------------------------------|-----------------|
| Inverter Protective Function | Enabled | Pickup | Unit    | Total Clearing Time Cyc. (Seconds) | Description     |
| 27-1                         | Y       | 50%    | V (L-L) | 66 (1.1)                           | Under Voltage   |
| 27-2                         | Y       | 88%    | V (L-L) | 180 (3)                            |                 |
| 27-3                         | N       | -      | -       | -                                  |                 |
| 59-1                         | Y       | 110%   | V (L-L) | 120 (2)                            | Over Voltage    |
| 59-2                         | Y       | 120%   | V (L-L) | 9.6 (0.16)                         |                 |
| 59-1                         | Y       | 140%   | V (L-L) | 80 (1.33)                          |                 |
| 81U-1                        | Y       | 56.5   | Hz      | 9.6 (0.16)                         | Under Frequency |
| 81U-2                        | Y       | 58.5   | Hz      | 18000 (300)                        |                 |
| 81O-1                        | Y       | 61.2   | Hz      | 18000 (300)                        |                 |
| 81O-2                        | Y       | 62     | Hz      | 9.6 (0.16)                         | Over Frequency  |
| Block Close                  | N       | -      | -       | -                                  |                 |
| Block Close                  | N       | -      | -       | -                                  |                 |
| Block Close                  | N       | -      | -       | -                                  |                 |
| Block Close                  | N       | -      | -       | -                                  |                 |
| Block Close                  | N       | -      | -       | -                                  |                 |

Voltage setting values are L-L  
Settings are based on IEEE-1547, UL 1741 SB, and utility requirements

| Relay Protection Settings              |             |                             |                                                  |                        |                                 |                          |
|----------------------------------------|-------------|-----------------------------|--------------------------------------------------|------------------------|---------------------------------|--------------------------|
| Relay Protective Functions             | Trip Output | Enabled (Relay Designation) | Voltage Settings (Sec.) Pri (P.U.)               | Frequency Setting (Hz) | Total Clearing Time Cyc. (Sec.) | Current Setting Sec (PW) |
| 27P1 - Fast Undervoltage               | X           | Y (Relay.01)                | (60) 3810.5 (0.5)                                | -                      | 66 (1.1)                        | -                        |
| 27P2 - Undervoltage                    | X           | Y (Relay.01)                | (105.6) 6706.5 (0.88)                            | -                      | 180 (3)                         | -                        |
| 27P3 - Undervoltage                    | -           | N                           | -                                                | -                      | -                               | -                        |
| 59P1 - Overvoltage                     | X           | Y (Relay.01)                | (132) 8383.1 (1.1)                               | -                      | 120 (2)                         | -                        |
| 59P2 - Fast Overvoltage                | X           | Y (Relay.01)                | (144) 9145.2 (1.2)                               | -                      | 9.6 (0.16)                      | -                        |
| 59N - Neutral Voltage Displacement     | X           | Y (Relay.01)                | (12) 762.1 (0.1)                                 | -                      | 80 (1.33)                       | -                        |
| 81UP1 - Underfrequency                 | X           | Y (Relay.01)                | -                                                | 56.5                   | 9.6 (0.16)                      | -                        |
| 81UP2 - Underfrequency                 | X           | Y (Relay.01)                | -                                                | 58.5                   | 18000 (300)                     | -                        |
| 81OP1 - Overfrequency                  | X           | Y (Relay.01)                | -                                                | 61.2                   | 18000 (300)                     | -                        |
| 81OP2 - Overfrequency                  | X           | Y (Relay.01)                | -                                                | 62                     | 9.6 (0.16)                      | -                        |
| 51 - Overcurrent                       | X           | Y (Relay.01)                | -                                                | -                      | CURVE: U4 TD: 2.0               | 0.45 (270.6A)            |
| 50 - Instantaneous Overcurrent         | -           | N                           | -                                                | -                      | -                               | -                        |
| 67 - Directional Overcurrent           | -           | N                           | -                                                | -                      | -                               | -                        |
| 50G - Instantaneous Ground Overcurrent | -           | N                           | -                                                | -                      | -                               | -                        |
| 51G - Ground Overcurrent               | X           | Y (Relay.01)                | -                                                | -                      | CURVE: U4 TD: 1.0               | 0.15 (90.2A)             |
| Block Close                            | -           | Y (Relay.01)                | (110.1) 6988.5 (0.917) ≤ V ≤ (126) 8002.1 (1.05) | 59.5 ≤ f ≤ 60.1        | 18000 (300)                     | -                        |
| 32F - Directional Power                | -           | N                           | -                                                | -                      | -                               | -                        |
| 32R - Reverse Power                    | -           | N                           | -                                                | -                      | -                               | -                        |
| Relay Fail Alarm                       | X           | Y (Relay.01)                | -                                                | -                      | 3 (0.05)                        | -                        |

Primary voltage setting values are L-N  
Time delay shown is total clear time, which includes mechanical operation time of 3 cycles (0.05 sec)  
Autorestation is enabled following voltage and frequency trips only. The relay will lockout for any overcurrent trips

OWNER | NATIONAL GRID-MA



NOTE: NOT FOR CONSTRUCTION. FOR UTILITY INTERCONNECTION APPLICATION PURPOSES ONLY.

Approved  
Q.Mehboob 09/08/2025

GRIT APPROVAL  
Date: 09/09/2025

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| Rev | Issued For | Date       | Init |
|-----|------------|------------|------|
| A   | UIA SLD    | 09/10/2025 | OM   |
| B   | UIA SLD    | 11/25/2025 | OM   |
| C   | UIA SLD    | 08/14/2026 | AA   |
| D   | UIA SLD    | 09/08/2026 | AA   |

P.E. seal/Consultant

249752 - Old Worcester Storage West  
13 Old Worcester Rd, Webster, MA 01570-2112, United States  
42.06747, -71.87017

AC Single Line Diagram

Dwg No: E-601 Size: D Sheet Rev: D

Drawing Title: 249752 - Old Worcester Storage West

Drawn by: A.Ansari Scale: N.T.S.

GENERAL & LEGAL:  
G1. INFORMATION CONTAINED IN THIS DRAWING IS PROPRIETARY AND CONFIDENTIAL BELONGING TO NEXAMP OF BOSTON, MA.  
G2. USE OF THIS INFORMATION SHALL BE LIMITED TO THE SPECIFIC PROJECT IT WAS DEVELOPED FOR AND SHALL NOT BE REPRODUCED WITHOUT CONSENT FROM NEXAMP, INC.  
G3. ALL WORK SHALL BE INSTALLED IN A NEAT MANNER AND IN ACCORDANCE WITH THE APPLICABLE VERSION OF THE NATIONAL ELECTRICAL CODE(NEC) AND ALL OTHER LAWS AND STANDARDS.  
G4. CONTRACTOR SHALL ENSURE THAT PHASE CONDUCTORS HAVE ENOUGH SLACK TO BE RELOCATED TO ANY PHASE BUSHING AS NEEDED TO ACCOMMODATE UTILITY PHASE ROTATION.

UTILITY & TESTING:  
U1. EQUIPMENT ON THE UTILITY-SIDE ARE ASSUMED. ACTUAL EQUIPMENT AND CONFIGURATION SHALL BE VERIFIED BY THE UTILITY. UTILITY'S STANDARDS FOR INTERCONNECTION WILL BE FOLLOWED.  
U2. THE GANG OPERATED DISCONNECT IS A VISIBLE BREAK AND IS ACCESSIBLE TO THE UTILITY 24/7.  
U3. THE INVERTERS ARE CAPABLE OF SHUTTING DOWN WITHIN 2 SECONDS IF DE-ENERGIZED.  
U4. UTILITY-OWNED EQUIPMENT IS PROVIDED FOR REFERENCE ONLY AND MUST NOT BE USED FOR CONSTRUCTION PURPOSES. ALL SUCH EQUIPMENT REMAINS SUBJECT TO MODIFICATION AT THE SOLE DISCRETION OF THE UTILITY. FINAL APPROVAL BY THE UTILITY IS REQUIRED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES INVOLVING OR ADJACENT TO SAID EQUIPMENT.  
U5. ALL CONSTRUCTION WORK WILL ABIDE BY THE ESB 750 & ESB 756. INSTALLATIONS WILL NOT INCLUDE ANY KIND OF TAPS, METER COLLARS OR ADAPTERS INSIDE METER SOCKETS, METER CABINETS OR ANYWHERE THERE ARE UN-METERED CONDUCTORS. ANY METERING AND DISCONNECTS WILL NEED TO BE GROUPED, POTENTIALLY LOCATED OUTSIDE AND 24/7 LOCKABLE AND ACCESSIBLE, IN ACCORDANCE WITH ESB 7.3.1. ANY JUNCTION BOX OR TROUGH FOR LINE SIDE TAP WILL NEED TO BE 24/7 LOCKABLE AND ACCESSIBLE. ALL EQUIPMENT & FINAL EQUIPMENT LOCATIONS WILL NEED TO BE APPROVED BY NATIONAL GRID PRIOR TO INSTALLATION.  
U6. DC POWER SUPPLY FOR RELAYING (INCLUDING FAIL-SAFE CONTROLS) WITH INCLUDED UTILITY RESTORATION SETTINGS, WILL DEPICT THAT THE BATTERY IS RATED TO LAST FOR >8 HOURS

PROJECT & EQUIPMENT DETAILS:  
P1. THE OPERATING SIZE OF THE BESS IS 4,950 kW / 30,000 kWh (6-HOURS).  
P2. (3) FLUENCE SMARTSTACK V25, EACH RATED AT 1,650 kW / 10,000 kWh.