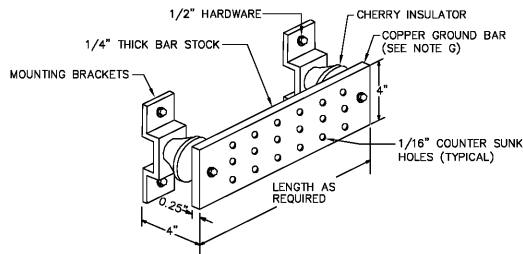


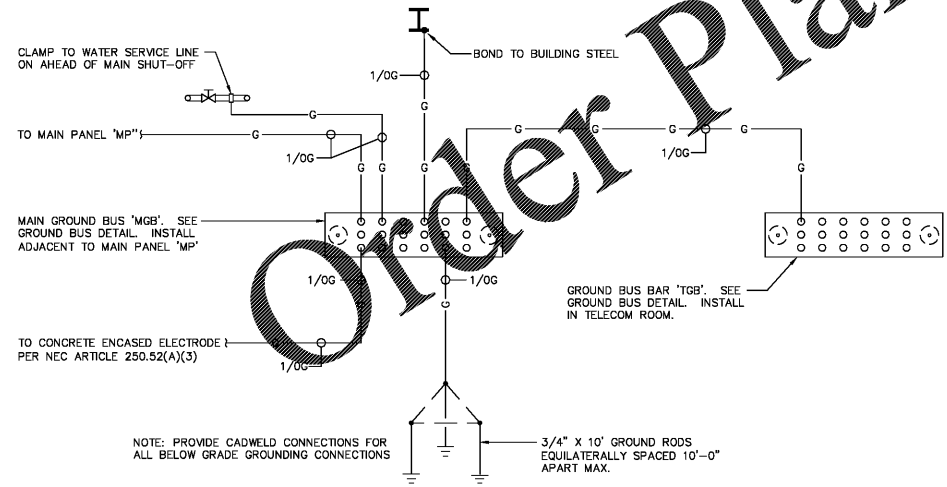
| PANEL         |              | BUS RATING   |                               | 400 AMP                 |                           | VOLTAGE                      |                              | 120 / 240, 1 PHASE, 3 WIRE, 60 HZ  |                               | MOUNTING                                    |         | SURFACE         |  |
|---------------|--------------|--------------|-------------------------------|-------------------------|---------------------------|------------------------------|------------------------------|--|-------------------------------|---|---------|-----------------|--|
| MP            |              | MAIN TYPE    |                               | MAIN BREAKER RATING     |                           | CALC FAULT CURRENT           |                              | BREAKER FEATURES   |                               | NEMA RATING                                 |         | ROOM ELECT. 108 |  |
| TYPE          |              | BQL          |                               | 100%                    |                           | 100%                         |                              | GF = GROUND FAULT CIRCUIT INTERRUPTER AF = ARC FAULT CIRCUIT INTERRUPTOR |                               | NEMA 1                                      |         | NEMA 1          |  |
| OCT NO        | BREAKER      | LOAD TYPE    | LOAD DESCRIPTION              | WIRE SIZE               | OCT LOAD                  | LOAD IN WATTS                |                              | WIRE SIZE  | LOAD DESCRIPTION              | LOAD TYPE                                   | BREAKER | OCT NO          |  |
|               |              |              |                               |                         |                           | LINE 1                       | LINE 2                       |  |                               |   |         |                 |  |
| 1             | 30/3         | HTG          | HVAC UNIT AH-1                | (3) #8, (1) #10G, 1" C  | 2750                      | 3990                         | 1240                         | (3) #8, (1) #10G, 1" C   | OUTDOOR HEAT PUMP HP-1        | HTG   |         | 2               |  |
| 3             |              | HTG          |                               |                         |                           | 3990                         | 1240                         |  |                               | HTG   |         | 4               |  |
| 5             | 50/2         | HTG          | HVAC UNIT AH-2                | (3) #8, (1) #10G, 1" C  | 4668                      | 7132                         | 2484                         | (3) #8, (1) #10G, 1" C   | OUTDOOR HEAT PUMP HP-2        | HTG   |         | 6               |  |
| 7             |              | HTG          |                               |                         |                           | 7132                         | 2484                         |  |                               | HTG   |         | 8               |  |
| 9             | 30/3         | HTG          | HVAC UNIT AH-3                | (3) #8, (1) #10G, 1" C  | 2750                      | 3990                         | 1240                         | (3) #8, (1) #10G, 1" C   | OUTDOOR HEAT PUMP HP-3        | HTG   |         | 10              |  |
| 11            |              | HTG          |                               |                         |                           | 3990                         | 1240                         |  |                               | HTG   |         | 12              |  |
| 13            | 30/3         | HTG          | WATER HEATER                  | (3) #10, (1) #10G, 1" C | 2250                      | 4302                         | 2052                         | (3) #10, (1) #10G, 1" C  | DMSA-C-1 AND DMSA-H-1         | HTG   |         | 14              |  |
| 15            |              | HTG          |                               |                         |                           | 4302                         | 2052                         |  |                               | HTG   |         | 16              |  |
| 17            | 20/1         | MTR          | DRIVE UP TELLER 1 BLOWER UNIT | #10                     | 1000                      |                              | 1000                         | #10  | DRIVE UP TELLER 3 BLOWER UNIT | MISC  | 20/1    | 18              |  |
| 19            | 20/1         | MTR          | DRIVE UP TELLER 1 BLOWER UNIT | #10                     | 1000                      |                              | 1000                         | #10  | DRIVE UP TELLER 3 BLOWER UNIT | MTR   | 20/1    | 20              |  |
| 21            | 20/1         | MTR          | DRIVE UP TELLER 2 BLOWER UNIT | #10                     | 1000                      | 2000                         | 1000                         | #10  | DRIVE UP TELLER 4 BLOWER UNIT | MISC  | 20/1    | 22              |  |
| 23            | 20/1         | MTR          | DRIVE UP TELLER 2 BLOWER UNIT | #10                     | 1000                      |                              | 1000                         | #10  | DRIVE UP TELLER 4 BLOWER UNIT | MTR   | 20/1    | 24              |  |
| 25            | 20/1         | MISC         | ATM                           | #10                     | 1050                      |                              | 1050                         |  | SPARE                         |   | 20/1    | 26              |  |
| 27            | 20/1         |              | SPARE                         |                         |                           |                              |                              |  | SPARE                         |   | 20/1    | 28              |  |
| 29            |              |              | PREPARED SPACE                |                         |                           |                              |                              |  | PREPARED SPACE                |   |         | 30              |  |
| 31            |              |              | PREPARED SPACE                |                         |                           |                              |                              |  | PREPARED SPACE                |   |         | 32              |  |
| 33            |              |              | PREPARED SPACE                |                         |                           |                              |                              |  | PREPARED SPACE                |   |         | 34              |  |
| 35            |              |              | PREPARED SPACE                |                         |                           |                              |                              |  | PREPARED SPACE                |   |         | 38              |  |
| 39            | 150/3        | GF           | PANEL P1                      | (3) #10, (1) #10G, 2" C | 13174                     | 13155                        | 13174                        |  |                               |   |         | 38              |  |
| PHASE TOTALS  |              |              |                               | 35649                   |                           |                              |                              | 36588  |                               |   |         |                 |  |
| LOAD SUMMARY  |              |              |                               |                         |                           |                              |                              |  |                               |   |         |                 |  |
| LOAD DESCR.   | DESIGN LOADS | LINE 1 TOTAL | LINE 2 TOTAL                  | MAXIMUM PHASE AMPS      | MAXIMUM PHASE AMPS X 1.25 | TOTAL CONNECTED HEATING LOAD | TOTAL CONNECTED COOLING LOAD | DESIGN LOAD HEATING SEASON   | DESIGN LOAD COOLING SEASON    | MINIMUM PANEL AMPACITY BASED ON DESIGN LOAD | AMPS    |                 |  |
| LIGHTING      | 0            | 0            | 0                             | 0                       | 0                         | 41                           | 17                           | 41   | 17                            | 170   | 170     |                 |  |
| RECEPTACLES   | 0            | 0            | 0                             | 0                       | 0                         | 0                            | 0                            | 0  | 0                             | 0   | 0       |                 |  |
| KITCHEN       | 0            | 0            | 0                             | 0                       | 0                         | 0                            | 0                            | 0  | 0                             | 0   | 0       |                 |  |
| CLEANING      | 0            | 0            | 0                             | 0                       | 0                         | 0                            | 0                            | 0  | 0                             | 0   | 0       |                 |  |
| WATER HEATER  | 0            | 0            | 0                             | 0                       | 0                         | 41                           | 17                           | 41   | 17                            | 170   | 170     |                 |  |
| HEATING       | 35228        | 35228        | 35228                         | 35228                   | 35228                     | 41                           | 17                           | 41   | 17                            | 170   | 170     |                 |  |
| A/C (COOLING) | 14600        | 14600        | 14600                         | 14600                   | 14600                     | 0                            | 0                            | 0  | 0                             | 0   | 0       |                 |  |
| MOTOR         | 1000         | 1000         | 1000                          | 1000                    | 1000                      | 0                            | 0                            | 0  | 0                             | 0   | 0       |                 |  |
| MISCELLANEOUS | 1000         | 1000         | 1000                          | 1000                    | 1000                      | 0                            | 0                            | 0  | 0                             | 0   | 0       |                 |  |

| PANEL       |         | BUS RATING |  | 150 AMP             |          | VOLTAGE            |        | 120 / 240, 1 PHASE, 3 WIRE, 60 HZ  |                                   | MOUNTING    |         | SURFACE         |  |
|-------------|---------|------------|--|---------------------|----------|--------------------|--------|--|-----------------------------------|-------------|---------|-----------------|--|
| P1          |         | MAIN TYPE  |  | MAIN BREAKER RATING |          | CALC FAULT CURRENT |        | BREAKER FEATURES   |                                   | NEMA RATING |         | ROOM ELECT. 108 |  |
| TYPE        |         | BQL        |  | 100%                |          | 100%               |        | GF = GROUND FAULT CIRCUIT INTERRUPTER AF = ARC FAULT CIRCUIT INTERRUPTOR |                                   | NEMA 1      |         | NEMA 1          |  |
| OCT NO      | BREAKER | LOAD TYPE  | LOAD DESCRIPTION                       | WIRE SIZE           | OCT LOAD | LOAD IN WATTS      |        | WIRE SIZE  | LOAD DESCRIPTION                  | LOAD TYPE   | BREAKER | OCT NO          |  |
|             |         |            |  |                     |          | LINE 1             | LINE 2 |  |                                   |             |         |                 |  |
| 1           | 20/1    | LTG        | LOBBY 103                              | #12                 | 651      | 954                | 303    | #12  | WORK RM 111, STOR 110, TELLER 107 | LTG         |         | 2               |  |
| 3           | 20/1    | LTG        | ROOMS 112 THRU 118                     | #12                 | 445      | 825                | 380    | #12  | ROOMS 104 THRU 109                | LTG         |         | 4               |  |
| 5           | 20/1    | LTG        | EXTERIOR BUILDING VIA 'LC1'            | #12                 | 540      | 640                | 100    | #12  | DRIVE THRU 'OPEN-CLOSED' SIGNS    | LTG         |         | 6               |  |
| 7           | 20/1    | LTG        | DRIVE THRU CANOPY & ATM SIGN VIA 'LC2' | #12                 | 800      | 700                | 100    | #12  | DRIVE THRU 'OPEN-CLOSED' SIGNS    | LTG         |         | 8               |  |
| 9           | 20/1    | LTG        | MONUMENT SIGN VIA 'LC3'                | #8                  | 1200     | 1200               |        | (2) #8, (1) #10G, 1" C   | PARKING LOT LIGHTING VIA 'LC5'    | LTG         |         | 10              |  |
| 11          | 20/1    | LTG        | FLAG POLE VIA 'LC4'                    | #10                 | 120      | 120                |        |  |                                   | LTG         |         | 12              |  |
| 13          | 20/1    |            | SPARE                                  |                     |          | 540                | 540    | #12  | ELECTRICAL DATA 109               | RCPT        | 20/1    | 14              |  |
| 15          | 20/1    | RCPT       | WORK ROOM 108 FRINTER                  | #12                 | 1000     | 1540               | 540    | #12  | WORK ROOM 108                     | RCPT        | 20/1    | 16              |  |
| 17          | 20/1    | RCPT       | WORK ROOM 108                          | #12                 | 360      |                    | 1440   | #12  | FSR #2 106                        | RCPT        | 20/1    | 18              |  |
| 19          | 20/1    | RCPT       | FSR #1 105                             | #12                 | 1080     |                    | 2160   | #12  | FLEX OFFICE 104                   | RCPT        | 20/1    | 20              |  |
| 21          | 20/1    | RCPT       | FSR 117                                | #12                 | 1250     | 2340               | 1080   | #12  | MANAGER 119                       | RCPT        | 20/1    | 22              |  |
| 23          | 20/1    | RCPT       | VESTIBULE 101/DOORCOVER ZONE 102       | #12                 | 540      |                    | 720    | #12  | LOBBY 103                         | RCPT        | 20/1    | 24              |  |
| 25          | 20/1    | MISC       | VESTIBULE 101 SIGNAGE                  | #10                 | 1000     | 1800               | 800    | #12  | ELECTRIC WATER COOLER             | RCPT        | 20/1    | 26              |  |
| 27          | 20/1    | RCPT       | JANITOR 114/ WOMENS 115 / MENS 116     | #12                 | 1080     |                    | 1800   | #12  | TELLERS AREA 107                  | RCPT        | 20/1    | 28              |  |
| 29          | 20/1    | RCPT       | TELLERS AREA 107                       | #12                 | 720      | 1080               | 360    | #12  | WORK ROOM 111                     | RCPT        | 20/1    | 30              |  |
| 31          | 20/1    | RCPT       | TELLERS AREA 107                       | #12                 | 720      |                    | 1440   | #12  | BREAK 112                         | RCPT        | 20/1    | 32              |  |
| 33          | 20/1    | RCPT       | WORK ROOM 111                          | #12                 | 360      | 720                | 360    | #12  | WORK ROOM 111                     | RCPT        | 20/1    | 34              |  |
| 35          | 20/1    | RCPT       | STORAGE 110                            | #12                 | 360      |                    | 1080   | #12  | LOBBY 103                         | RCPT        | 20/1    | 36              |  |
| 37          | 20/1    | RCPT       | TELLERS AREA 107                       | #12                 | 540      | 1080               | 540    | #12  | TELLERS AREA 107                  | RCPT        | 20/1    | 38              |  |
| 39          | 20/1    | RCPT       | BREAK 112 REFRIGERATOR                 | #12                 | 800      |                    | 1160   | #12  | BREAK 112                         | RCPT        | 20/1    | 40              |  |
| 41          | 20/1    | RCPT       | BREAK 112 MICROWAVE                    | #12                 | 1200     | 1350               | 180    | #12  | IRRIGATION                        | RCPT        | 20/1    | 42              |  |
| 43          | 20/1    | RCPT       | FA CP                                  | #12                 | 200      |                    | 920    | #12  | ELECTRICAL BACK                   | RCPT        | 20/1    | 44              |  |
| 45          | 20/1    | RCPT       | ELECTRICAL DATA 109 RACK               | #12                 | 720      | 1440               |        | #12  | ELECTRICAL DATA 109 SECT.         | RCPT        | 20/1    | 46              |  |
| 47          | 20/1    | RCPT       | ELECTRICAL DATA 109 SECURITY           | #12                 | 720      |                    | 720    |  | SPARE                             |             | 20/1    | 48              |  |
| 49          | 20/1    |            | SPARE                                  |                     |          | 0                  |        |  | SPARE                             |             | 20/1    | 50              |  |
| 51          | 20/1    |            | SPARE                                  |                     |          | 0                  |        |  | SPARE                             |             | 20/1    | 52              |  |
| 53          | 20/1    |            | SPARE                                  |                     |          | 0                  |        |  | SPARE                             |             | 20/1    | 54              |  |
| 55          |         |            | PREPARED SPACE                         |                     |          |                    |        |  | PREPARED SPACE                    |             |         | 56              |  |
| 57          |         |            | PREPARED SPACE                         |                     |          |                    |        |  | PREPARED SPACE                    |             |         | 58              |  |
| 59          |         |            | PREPARED SPACE                         |                     |          |                    |        |  | PREPARED SPACE                    |             |         | 60              |  |
| LINE TOTALS |         |            |  | 11115               |          |                    |        | 11115  |                                   |             |         |                 |  |



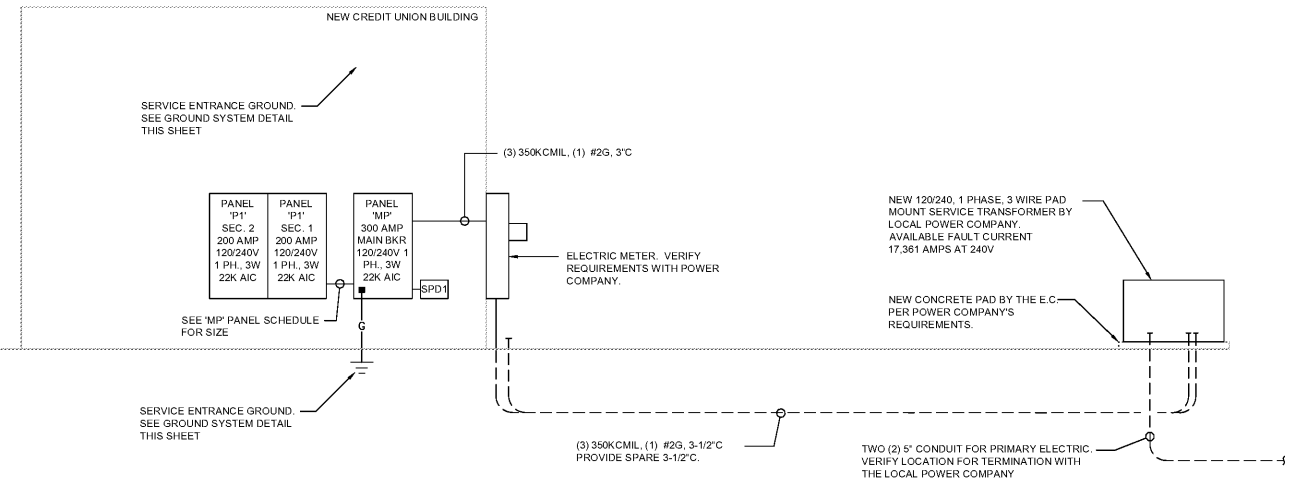
- GROUND BAR DETAIL NOTES:**
- FURNISH AND INSTALL BUS BAR AND CONDUCTORS AS SHOWN UNLESS OTHERWISE NOTED.
  - LABEL ALL BUS BARS WITH PERMANENT ENGRAVED NAMEPLATE.
  - USE NON-METALLIC CONDUIT AND PULL BOXES FOR GROUNDING CONDUCTORS EXCEPT EQUIPMENT GROUNDING CONDUCTORS
  - GROUND BAR CONDUCTORS SHALL NOT SHARE CONDUITS OR PULL BOXES WITH CONDUCTORS OR CABLES OF OTHER SYSTEMS.
  - SEE SPECIFICATIONS FOR REQUIRED MAXIMUM RESISTANCE TO GROUND.
  - GROUND BAR KIT SHALL BE OTRONICS #WBB-\*\* (LENGTH AS REQUIRED) MOUNT INSULATORS DIRECT TO INSIDE BACKING OF NEMA 3R ENCLOSURE (SEE EQUIPMENT ELEVATIONS FOR APPROXIMATE LOCATION). ENCLOSURE SHALL BE SIZE SUCH THAT ADEQUATE WIRE BENDING SPACE IS PROVIDED ON ALL SIDES.

**DETAIL: GROUND BUS BAR**  
NO SCALE



**GROUND SYSTEM DETAIL**  
NO SCALE

| SURGE PROTECTIVE DEVICES |                 |         |                                   |                              |           |                        |              |       |
|--------------------------|-----------------|---------|-----------------------------------|------------------------------|-----------|------------------------|--------------|-------|
| MARK                     | LOCATION        | VOLTAGE | MODES                             | MIN. SURGE CURRENT PER PHASE | ENCLOSURE | MANUFACTURER           | MODEL NUMBER | NOTES |
| SPD1                     | MAIN PANEL 'MP' | 120/240 | L-L, L-N, L-G, N-G (FULL 10 MODE) | 300 KA                       | NEMA 1    | SURGE SUPPRESSION INC. |              |       |
| SPD2                     | PANEL 'P1'      | 120/240 | L-L, L-N, L-G, N-G (FULL 10 MODE) | 180 KA                       | NEMA 1    | SURGE SUPPRESSION INC. |              |       |



**ELECTRICAL RISER DIAGRAM**  
NO SCALE

**CONSULTING CONSTRUCTION ENGINEERING, LLC**  
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File: ER-01.dwg Time: 7:22:29 pm

**Professional Engineer**  
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6/23/2020

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A New Branch Bank for  
**Tyndall**  
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Dothan, Alabama

RELEASES / DESCRIPTION / DATES

NOT FOR CONSTRUCTION   
RELEASED FOR CONSTRUCTION

DATE 06.23.2020  
DRAWN  
CHECKED  
APPROVED HHA

PROJECT NUMBER 20012.01

SHEET TITLE ELECTRICAL RISER DIAGRAM & PANEL SCHEDULES

DRAWING NO. E0.04