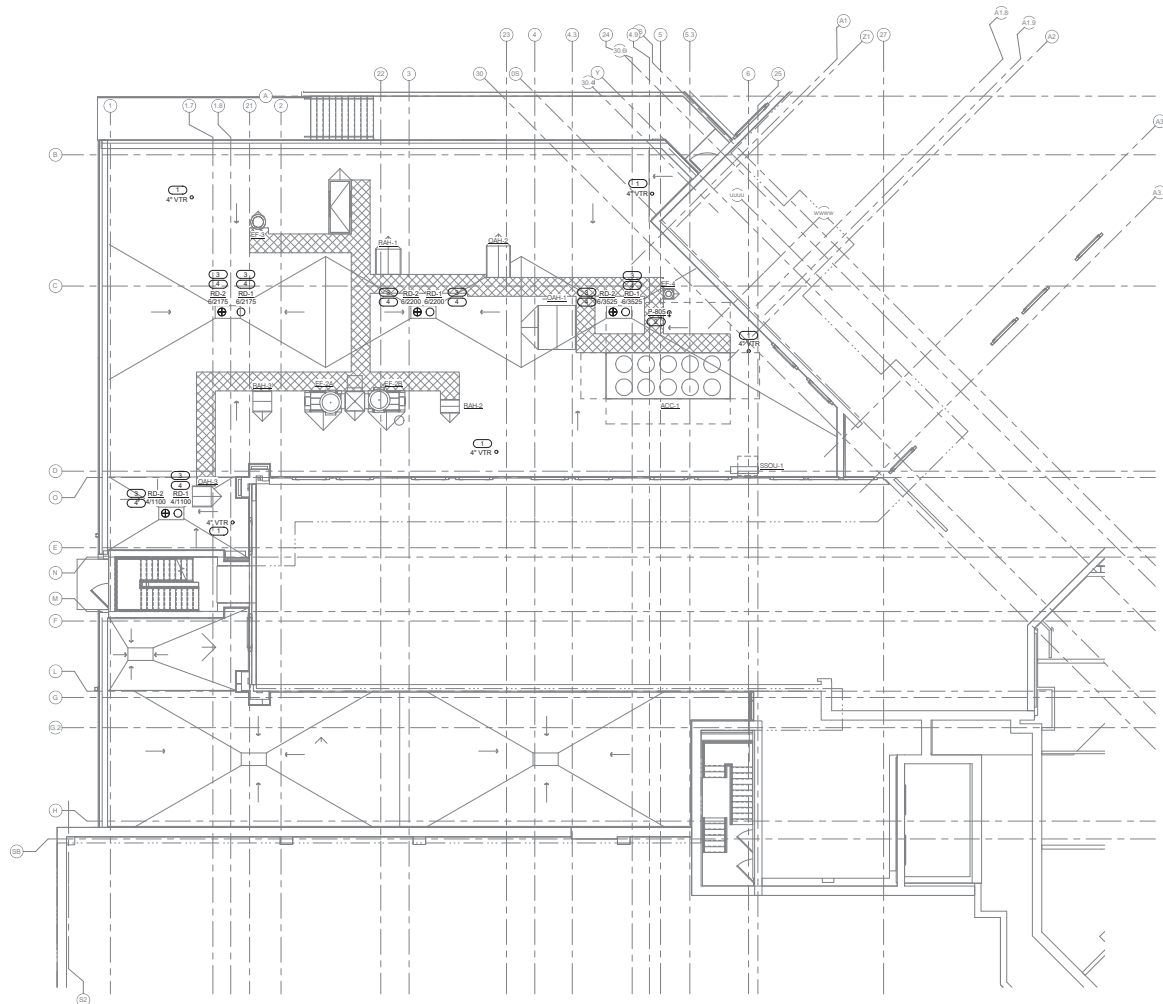


- GENERAL PLUMBING NOTES:**
1. REFERENCE P100 - PLUMBING COVERSHEET FOR PLUMBING SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
  2. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
  3. G.C. SHALL CUT AND PATCH EXISTING AS REQUIRED FOR NEW WORK. REFERENCE SPECIFICATION SECTION 22 05 06 FOR COMPLETE LAYOUT DRAWINGS SHALL BE REQUIRED BY SPECIFICATION SECTION 22 05 11. CONSTRUCTION WORK SHALL NOT BEGIN UNTIL SYSTEM LAYOUT DRAWINGS HAVE BEEN APPROVED BY THE C.O.R.
  4. CONTRACTOR SHALL MINIMIZE DOWNTIME OF EXISTING SYSTEMS BY INSTALLING NEW SYSTEMS PRIOR TO TYPING INTO EXISTING. NOTIFY C.O.R. A MINIMUM OF 24 HOURS PRIOR TO SYSTEM SHUTDOWN.
  5. ALL PIPING OF ANY KIND ABOVE SOLE LID CEILING SHALL BE CONSTRUCTED OF AS FEW PIECES AS POSSIBLE AND SHALL ONLY UTILIZE WELDED OR SWEATED JOINTS AND CONNECTIONS.
  6. REFERENCE P1000 FOR PLUMBING FLOW DIAGRAM.
  7. REFERENCE P1000 FOR PLUMBING MATERIAL LIST.
- KEYNOTES: (K)**
1. REFERENCE 7PL400 FOR VENT PIPE FLASHING DETAIL.
  2. REFERENCE 2PL401 FOR ROOF HOSE BIBB DETAIL.
  3. REFERENCE 8R400 FOR ROOF DRAIN DETAIL.
  4. PROVIDE HEAT TRACES AT ROOF DRAIN, ROOF DRAIN BASINS, AND THE FIRST 12" OF BOTH PRIMARY AND SECONDARY STORM PIPING INSIDE BUILDING. COORDINATE EXACT LOCATION WITH ELECTRICAL CONTRACTOR.



**1 ROOF PLAN - PLUMBING**  
1/8" = 1'-0"

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 2/14/2025 10:22:14 AM

| Revisions: | Date: |
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**CONSULTANT**

**IMEG**  
1800 SOUTH STREET  
 SUITE 1000  
 MILWAUKEE, WI 53234  
 PHONE: 414.224.8888  
 WWW.IMEG.COM

DATE: 02/14/2025  
 PROJECT # 1000000000

THIS COMPANY'S DESIGN PROFESSIONAL SEAL IS A REQUIREMENT FOR THE CONTRACTOR TO OBTAIN A LICENSE TO PRACTICE AS A DESIGN PROFESSIONAL IN THE STATE OF IOWA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND LICENSES FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND LICENSES FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND LICENSES FROM THE APPROPRIATE AGENCIES.

**ARCHITECT/ENGINEER OF RECORD**

**ANDERSON**  
1860S 3rd Ave. W. 8180 Plymouth, MN 55441  
 P 788.432.4000 | F 788.432.5000 | anderson.com  
 Anderson Engineering of Minnesota, LLC | PWS # 10000

**STAMP**

**PROFESSIONAL ENGINEER**  
 IOWA  
 LEWELLEN J. DELLE  
 2700  
 2700  
 2700

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**  
 ROOF PLAN - PLUMBING

**Phase**  
 BID DOCUMENTS

**Project Title**  
 CONSTRUCT NEW SPS

**Project Number**  
 438-460

**Building Number**  
 5

**Drawing Number**  
 PL121

**Approved:**

**Location**  
 Sioux Falls, SD

**Issue Date**  
 02/14/2025

**Checked**  
 NAT/JAC

**Drawn**  
 DELLE

**Phase**  
 FULLY SPRINKLERED

**Location**  
 Sioux Falls, SD

**Issue Date**  
 02/14/2025

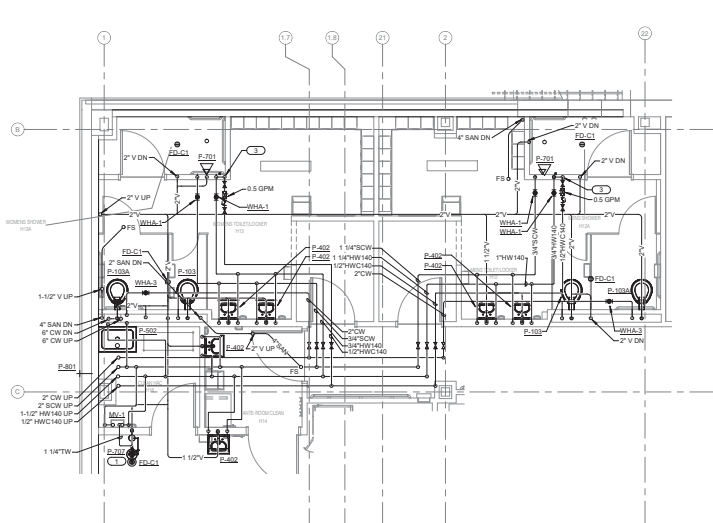
**Checked**  
 NAT/JAC

**Drawn**  
 DELLE

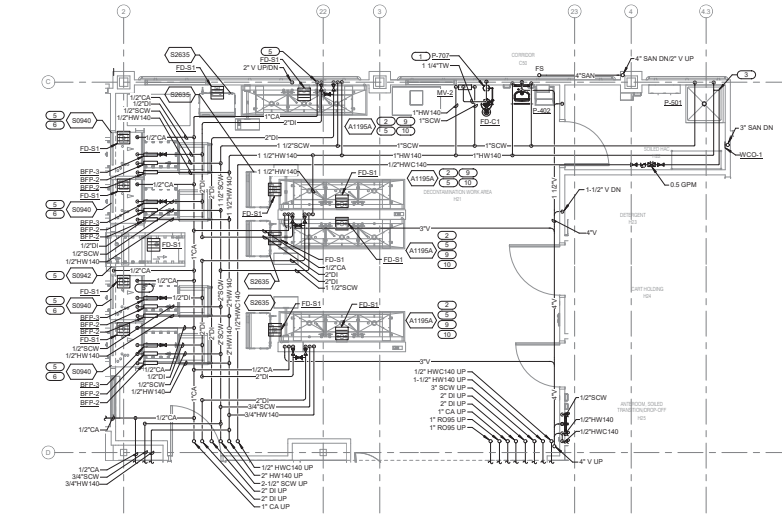
**Project Number**  
 438-460

**Building Number**  
 5

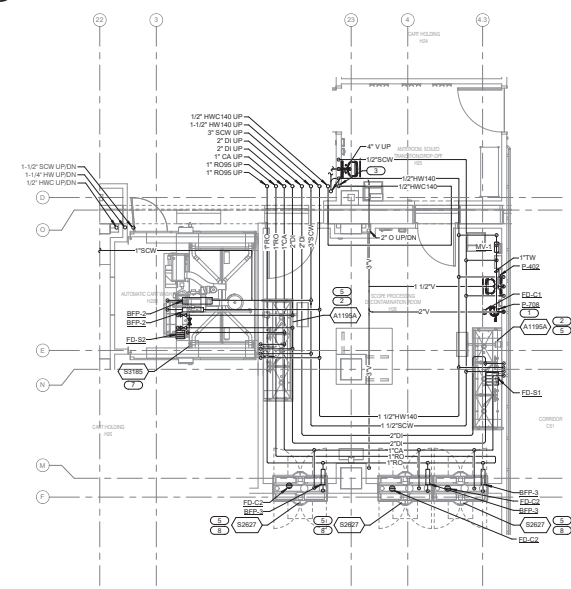
**Drawing Number**  
 PL121



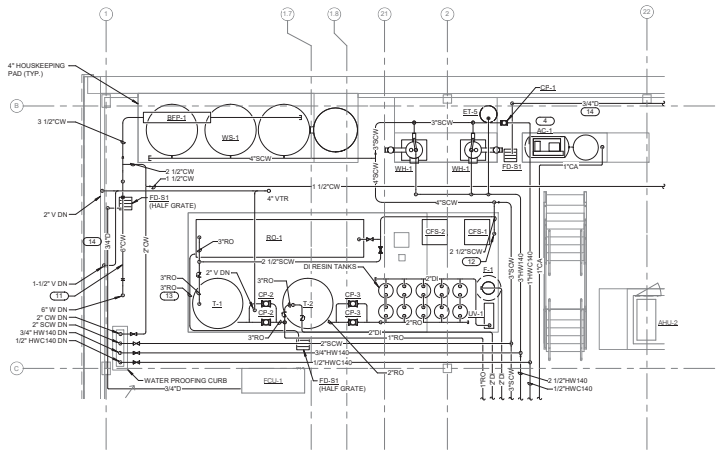
**1 GROUND LEVEL FLOOR PLAN - PLUMBING - LOCKERS**  
1/8" = 1'-0"



**2 GROUND LEVEL FLOOR PLAN - PLUMBING - DECONTAMINATION WORK AREA**  
1/8" = 1'-0"



**3 GROUND LEVEL FLOOR PLAN - PLUMBING - SCOPE PROCESSING**  
1/8" = 1'-0"

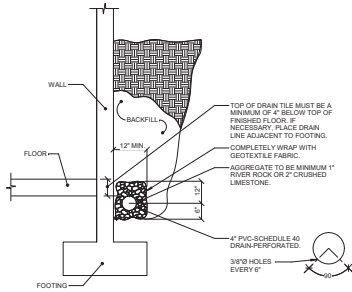


**4 INTERSTITIAL/FIRST LEVEL FLOOR PLAN - PLUMBING - WATER TREATMENT**  
1/8" = 1'-0"

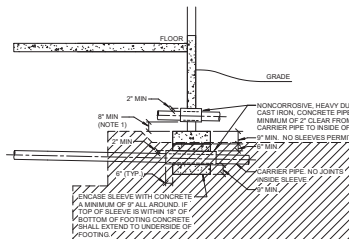
- GENERAL PLUMBING NOTES:**
1. REFERENCE P100 - PLUMBING COVER SHEET FOR EXISTING SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
  2. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
  3. G.C. SHALL CUT AND PATCH EXISTING AS REQUIRED FOR NEW WORK. REFERENCE SPECIFICATION SECTION 22 05 06 FOR COMPLETE LAYOUT.
  4. WORK SHALL BE REQUIRED BY SPECIFICATION SECTION 22 05 11.
  5. CONSTRUCTION WORK SHALL BE DONE IN UNITS. SYSTEM LAYOUT DRAWINGS HAVE BEEN PROVIDED BY THE CONTRACTOR.
  6. CONTRACTOR SHALL MINIMIZE DOWNTIME OF EXISTING SYSTEMS.
  7. SYSTEMS PRIOR TO TYPING INTO EXISTING NOTION C.O.R. A MINIMUM OF 30 DAYS PRIOR TO SYSTEM SHUT/DOWN.
  8. ALL PIPING OF ANY KIND ABOVE SOLID LID CEILING SHALL BE CONSTRUCTED OF AS FEW PIECES AS POSSIBLE AND SHALL ONLY UTILIZE WELDED OR SWEATED JOINTS AND CONNECTORS.
  9. REFERENCE P100 FOR PLUMBING FLOW DIAGRAM.
  10. REFERENCE P100 FOR PLUMBING MATERIAL LIST.
  11. REFERENCE BR-400 FOR FIRE RATED FLOORWALL PENETRATION DETAIL.
  12. REFERENCE 100-440 FOR NON-FIRE RATED WALL PENETRATION DETAIL.
- KEYNOTES:**
1. REFERENCE 11PL401 FOR EMERGENCY SHOWER & EYEWASH DETAIL.
  2. REFERENCE BR-401 FOR THREE COMPARTMENT SINK DETAIL.
  3. REFERENCE BR-401 FOR FUTURE HOT WATER ROUTING DETAIL.
  4. REFERENCE 11PL401 FOR COMPRESSED AIR DRAIN DETAIL.
  5. REFERENCE 11PL401 FOR COMPRESSED AIR TERMINAL DETAIL.
  6. REFERENCE 11PL401 FOR WASHER DISINFECTOR PIPING DIAGRAM.
  7. REFERENCE 100-440 FOR GAIT WASH PIPING DETAIL.
  8. REFERENCE 11PL401 FOR ENDOSCOPIC REPROCESSOR PIPING DETAIL.
  9. 354V REPROCESSING SINKS ARE LOCATED ON PREDOMINATELY HALF-HEIGHT BACKWALLS. SANITARY VENT, COMPRESSED AIR, DEIONIZED WATER, SOFT COLD WATER, AND HOT WATER SERVING REPROCESSING SHALL BE ROUTED DOWN THROUGH SECTION OF BACKWALL WHICH IS FULL HEIGHT. CONDUITS ARE PROVIDED WITH POWER AND DATA CONDUIT PROVIDED BY ELECTRICAL AND TECHNICAL CONTRACTORS. REFERENCE ARCHITECTURAL SHEETS FOR DIMENSIONS OF BACKWALL. NOTIFY ARCHITECT/ENGINEER OF ANY REVISIONS TO WALL DIMENSIONS NECESSARY FOR ACCOMMODATING ALL UTILITIES.
  10. CONTRACTOR SHALL LOCATE VERTICAL THREE VALVE ARRANGEMENT IN VERTICAL RISERS AND PROVIDE ACCESS PANEL IN BACKWALL. VALVES AND PIPING ACCESSORIES SHALL NOT BE LOCATED ABOVE HARD LID CEILING. VALVES SHOWN FOR CLARITY ON THIS PLAN.
  11. PROVIDE 4'-0" LENGTH OF PIPE SPOOL WITH BLIND FLANGE END FOR FLEXIBILITY TO INSTALL FUTURE BACKFLOW PREVENTER.
  12. 1/2" CW DN TO PURE WATER PRODUCTION EQUIPMENT. REFERENCE P100 FOR PURE WATER FLOW DIAGRAM.
  13. 3/4" RD BACKWALL DRAIN PIPES ALONG FLOOR FROM RD TRAIN TO FLOOR SINK. DISCHARGE OVER FLOOR SINK THROUGH 3/4" ELBOW WITH 1" AIR GAP ABOVE FLOOR SINK RIM.
  14. ROUTE CONDENSATE DRAIN TO FLOOR SINK. DISCHARGE THROUGH 45° ELBOW WITH 1" GAP BETWEEN ELBOW OUTLET AND FLOOR SINK RIM.

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|                              |                       |   |           |   |  |                                |  |                                   |
|------------------------------|-----------------------|---|-----------|---|--|--------------------------------|--|-----------------------------------|
| Revisions: _____ Date: _____ | <b>CONSULTANT</b><br> | <b>ARCHITECT/ENGINEER OF RECORD</b><br> | STAMP<br> | Office of Construction and Facilities Management<br>U.S. Department of Veterans Affairs | Drawing Title:<br><b>PLUMBING ENLARGED PLANS</b> | Phase:<br><b>BID DOCUMENTS</b> | Project Title:<br><b>CONSTRUCT NEW SPS</b> | Project Number:<br><b>438-460</b> |
|                              |                       |   |           |   | Approved: _____                                  | <b>FULLY SPRINKLERED</b>       | Location:<br><b>Sioux Falls, SD</b>        | Drawing Number:<br><b>5</b>       |
|                              |                       |   |           |   | Issue Date:<br><b>02/14/2025</b>                 | Checked:<br><b>NAT/JAC</b>     | Drawn:<br><b>DELLE</b>                     | Drawing Number:<br><b>PL300</b>   |

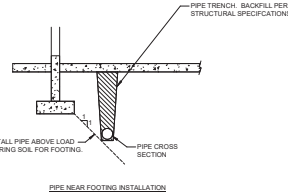


**1 DRAIN TILE DETAIL**  
NO SCALE



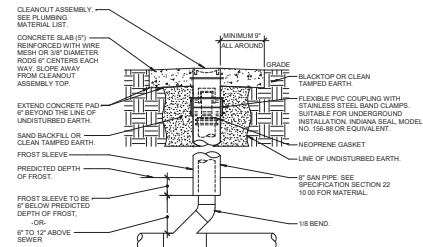
**2 PIPE FOUNDATION AND SLEEVE DETAIL**  
NO SCALE

1. STEP FOOTING DOWN AS REQUIRED TO MAINTAIN 8" MINIMUM DIMENSION

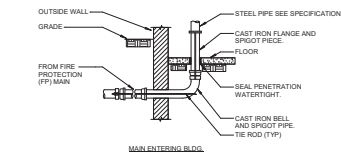


**3 PIPE UNDERFLOOR TRENCH DETAIL**  
NO SCALE

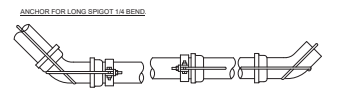
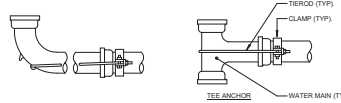
1. STEP FOOTING DOWN AS REQUIRED TO MAINTAIN 8" MINIMUM DIMENSION



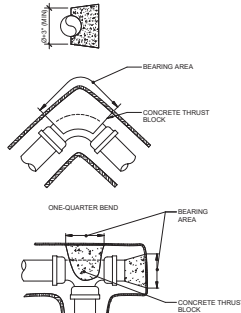
**4 YARD CLEANOUT DETAIL**  
NO SCALE



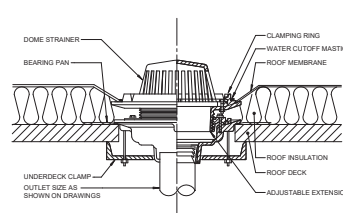
MAIN ENTERING BLOCK



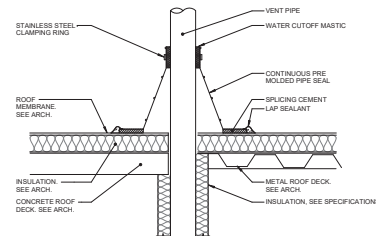
ANCHOR RODS



THRUST BLOCKS

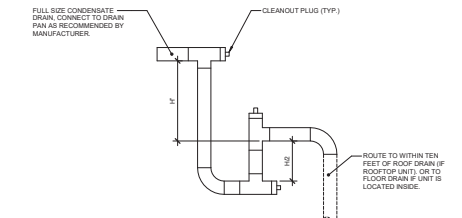


**6 ROOF DRAIN DETAIL**  
NO SCALE



**7 VENT PIPE FLASHING**  
NO SCALE

- VENT PIPE SHALL BE A MINIMUM OF 3" DIAMETER UNLESS NOTED LARGER ON FLOOR PLANS. INCREASES, IF REQUIRED TO TRANSITION TO THE LARGER SIZE, MUST BE INSTALLED AT LEAST 12" BEHIND THE THERMAL ENVELOPE OF THE BUILDING.
- EXTEND VENT PIPE AT LEAST 7 FEET ABOVE ROOF LEVEL WHEN ROOF AREA IS INTENDED TO BE USED BY THE GENERAL PUBLIC. THIS INCLUDES PROMENADES, OBSERVATION DECKS, ETC. THIS IS NOT REQUIRED FOR ROOFS THAT ARE ACCESSIBLE BY MAINTENANCE PERSONNEL ONLY.

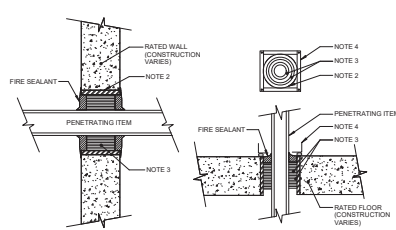


**8 CONDENSATE TRAP DETAIL (DRAW-THROUGH)**  
NO SCALE

| PIPE NOMINAL SIZE (IN.) | CLAMP SIZE (IN.) | BOLT SIZE (IN.) | WASHER (IN.) | NUMBER OF RODS AND ROD SIZES (IN.) FOR ROD AND CLAMP ANCHORAGE |   |                      |   |               |   |   |   |
|-------------------------|------------------|-----------------|--------------|--|---|----------------------|---|---------------|---|---|---|
|                         |                  |                 |              | MECHANICAL JOINT   |   | TEE HYDRANT CAP PLUG |   | PUSH ON JOINT |   |   |   |
| 6                       | 10x2             | 5/8             | 5/8x2        | 2  | 2 | 2                    | 2 | 2             | 2 | 2 | 2 |
| 8                       | 12x2             | 5/8             | 5/8x2        | 2  | 2 | 2                    | 2 | 2             | 2 | 2 | 2 |

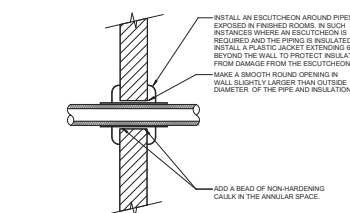
| PIPE NOMINAL SIZE (IN.) | MIN. SQ. FT. CAST IRON AND DUCTILE IRON |
|-------------------------|---|
| 6                       | 7                                       |
| 8                       | 14                                      |
| 10                      | 21                                      |

BASED 2,000 LB/SQ. FT. SOIL RESISTANCE  
50 PSI WATER PRESSURE  
CORRECTION FACTORS FOR OTHER SOILS:  
SOFT CLAY: .4  
SAND: .2  
SAND/GRAVEL: .33  
SHALE: .04



**9 FIRE RATED FLOOR/WALL PENETRATION DETAIL**  
NO SCALE

- THIS GENERAL DETAIL APPLIES TO ALL ITEMS PENETRATING FIRE RATED WALLS OR FLOORS. THE INTENT IS TO MAINTAIN THE FIRE RATING AND TO ALLOW LONGITUDINAL MOVEMENT. REFER TO SPECIFICATION SECTION 22.05 FOR SELECTION OF THROUGH PENETRATION FIRE STOPPING.
- SCHEDULE 40 PIPE SLEEVE EMBEDDED IN WALL OR FLOOR, OR SMOOTH CORE DRILL. EACH CONTRACTOR FURNISHES SLEEVE TO O.C., COORDINATES SLEEVE LOCATIONS AND DEBURS SLEEVE. O.C. BUILDS SLEEVE INTO WALL OR FLOOR ALLOWING NO GAP AROUND SLEEVE. IF SLEEVE IS NOT PROVIDED WHEN WALL OR FLOOR IS BUILT, CONTRACTOR SHALL INSTALL SLEEVE. SLEEVE SIZE SHALL ALLOW ANNUAL SPACE REQUIRED BY THE SELECTED FIRE STOP SYSTEM.
- INSTALL BACKING MATERIAL, SUCH AS MINERAL WOOL, AS REQUIRED FOR FIRE STOP. INSTALL IN ACCORDANCE WITH FIRE STOP SYSTEM APPLICATION LISTING. SECURE TO WALL OR FLOOR TO ALLOW LONGITUDINAL MOVEMENT OF PENETRATING ITEM WITHOUT MOVEMENT OF FIRE BARRIER.
- WATERTIGHT WELDED 1/4" X 20 GAUGE MINIMUM GALVANIZED SHEET METAL ANGLE FRAME. BY CONTRACTOR IN EQUIPMENT ROOMS FOR WATER STOP. PLACE A BEAD OF WATERPROOF SEALANT BETWEEN FLOOR AND BOTTOM OF ANGLE FRAME. SECURE TO FLOOR WITH MASONRY ANCHORS IN CORNERS AND ON 12" MAXIMUM CENTERS. MULTIPLE PENETRATING ITEMS MAY BE ENCLOSED IN ONE FRAME.



**10 NON-FIRE RATED WALL PENETRATION DETAIL**  
NO SCALE

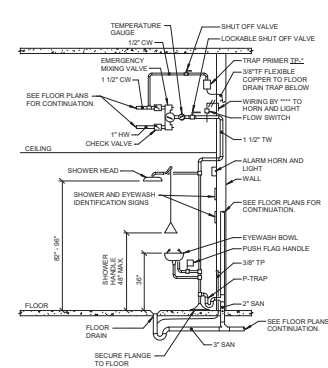
- THIS DETAIL APPLIES TO ALL PIPES. THE INTENTION IS TO CONTINUE THE INSULATION AND VAPOR BARRIER THROUGH ALL PENETRATIONS. PERMIT THERMAL EXPANSION WITHOUT DAMAGING INSULATION, AND TO SEAL AIRTIGHT AROUND INSULATED AND UNINSULATED PIPES FOR NOISE TRANSMISSION CONTROL.
- SEE SPECIFICATION SECTIONS 22.05 OR 29 FOR ADDITIONAL INFORMATION.
- FLOOR OPENINGS ARE SIMILAR. SEE SPECIFICATION SECTION 22.05.2 FOR DIFFERENCES BETWEEN FLOOR AND WALL PENETRATIONS.

**5 UNDERGROUND WATER MAIN ANCHORING DETAIL**  
NO SCALE

- AFTER INSTALLATION, PROTECT THE RODS, BOLTS, NUTS, WASHERS AND CLAMPS AGAINST CORROSION WITH A HEAVY COAT OF ASPHALT MATERIAL.
- THE LENGTH OF THE ROD REQUIRED WILL VARY WITH THE PIPE FITTING, AND MUST BE DETERMINED BY FIELD MEASUREMENT. IF THE DISTANCE BETWEEN THE JOINTS IS LESS THAN 12 FEET, EXTEND THE ANCHORAGE TO THE SECOND JOINT.
- BOTH THRUST BLOCKING AND ANCHOR RODS ARE REQUIRED.
- REFER TO THE GOVERNING CODE AND WPA FOR ADDITIONAL REQUIREMENTS.

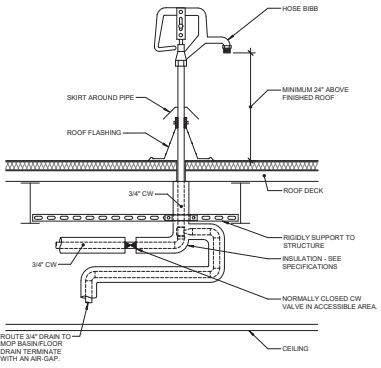
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| <b>CONSULTANT</b><br>           |  | <b>ARCHITECT/ENGINEER OF RECORD</b><br>  |  | STAMP<br>             | Office of Construction and Facilities Management<br> | Drawing Title<br><b>PLUMBING DETAILS</b> | Phase<br><b>BID DOCUMENTS</b>      | Project Title<br><b>CONSTRUCT NEW SPS</b> | Project Number<br><b>438-460</b> |
| Revisions: _____ Date: _____    |  | 18605 3rd Ave. N. #1200 Plymouth, MN 55441<br>P 788.412.0880   F 788.412.5990   www.anderson.com<br>Anderson Engineering Inc. Minneapolis, MN   P 612.333.1666 |  | Approved: _____       | U.S. Department of Veterans Affairs                  | Fully Sprinklered                        | Location<br><b>Sioux Falls, SD</b> | Building Number<br><b>5</b>               | Drawing Number<br><b>PL400</b>   |
| Issue Date<br><b>02/14/2025</b> |  | Checked<br><b>NAT/JAC</b>  |  | Drawn<br><b>DELLE</b> |  | Date<br><b>02/14/2025</b>                |                                    |   |                                  |

A  
B  
C  
D  
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F

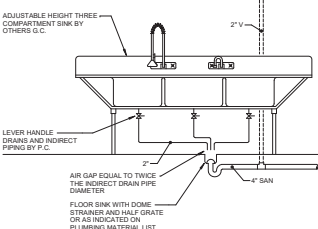


**1 EMERGENCY SHOWER & EYEWASH DETAIL**  
NO SCALE

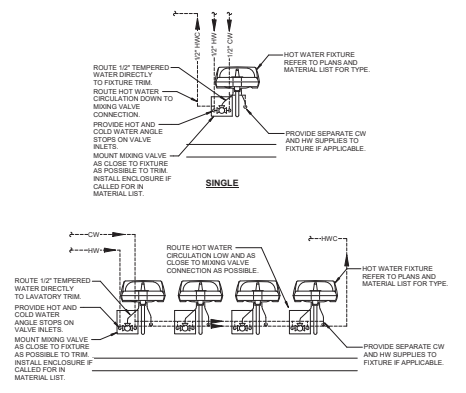
- NOTES:**
- EYEWASH AND SHOWER PERFORMANCE AND ROUGH-IN SHALL MEET THE CURRENT VERSION OF ANSI Z35.1.
  - GENERAL CONTRACTOR SHALL PAINT AREA AROUND AND BEHIND SHOWER/EYEWASH A BRIGHT COLOR AS DIRECTED BY THE ARCHITECT.



**2 ROOF HOSE BIBB DETAIL**  
NO SCALE

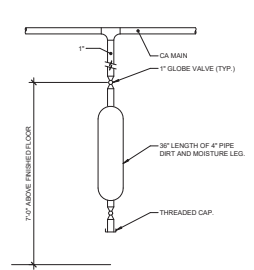


**3 THREE COMPARTMENT SINK DETAIL**  
NO SCALE

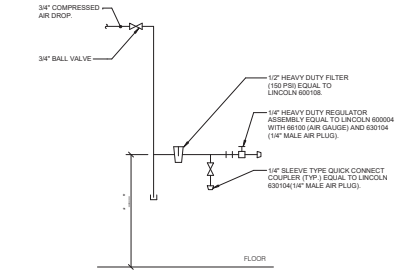


**4 FIXTURE HOT WATER ROUTING DETAIL**  
NO SCALE

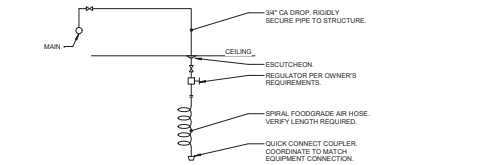
- NOTES:**
- LAVATORY SHOWING DETAIL IS APPLICABLE TO ALL HW FIXTURES AND DEVICES (E.G. LAVATORIES, SINKS, SHOWERS, TUBS, MOP SINKS, LAUNDRY TUBS, ETC.).



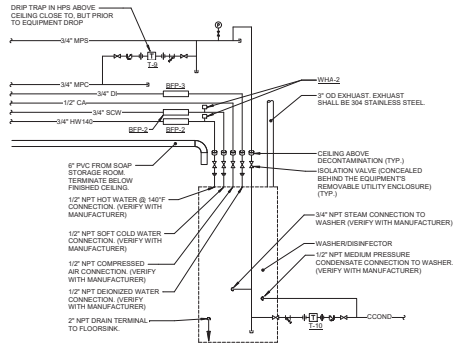
**5 COMPRESSOR AIR DRAIN**  
NO SCALE



**6 COMPRESSED AIR TERMINAL DETAIL**  
NO SCALE

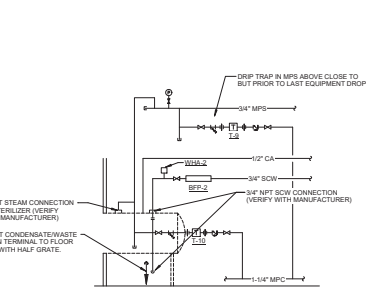


**7 COMPRESSED AIR TERMINAL DETAIL (AT CEILING)**  
NO SCALE



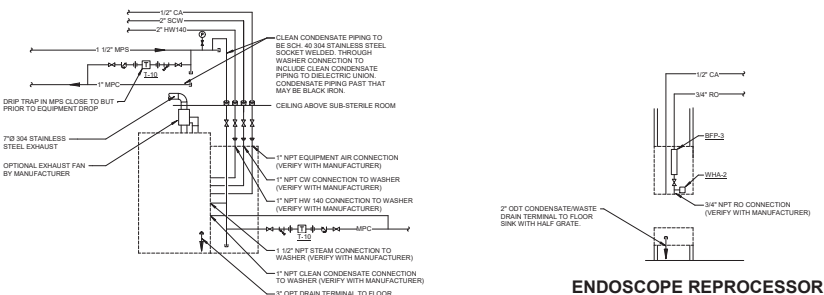
**8 WASHER DISINFECTER PIPING DIAGRAM**  
NO SCALE

- NOTES:**
- REFER TO EQUIPMENT MANUFACTURER DETAILED PRODUCT SUBMITTALS FOR SPECIFIC ROUGH-IN LOCATION AND INSTALLATION REQUIREMENTS.



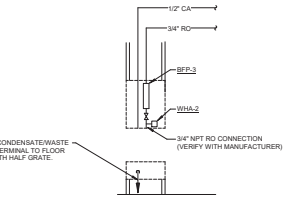
**9 STERILIZER PIPING DETAIL**  
NO SCALE

- NOTES:**
- REFER TO EQUIPMENT MANUFACTURER DETAILED PRODUCT SUBMITTALS FOR SPECIFIC ROUGH-IN LOCATIONS AND INSTALLATION REQUIREMENTS.



**10 CART WASH PIPING DIAGRAM**  
NO SCALE

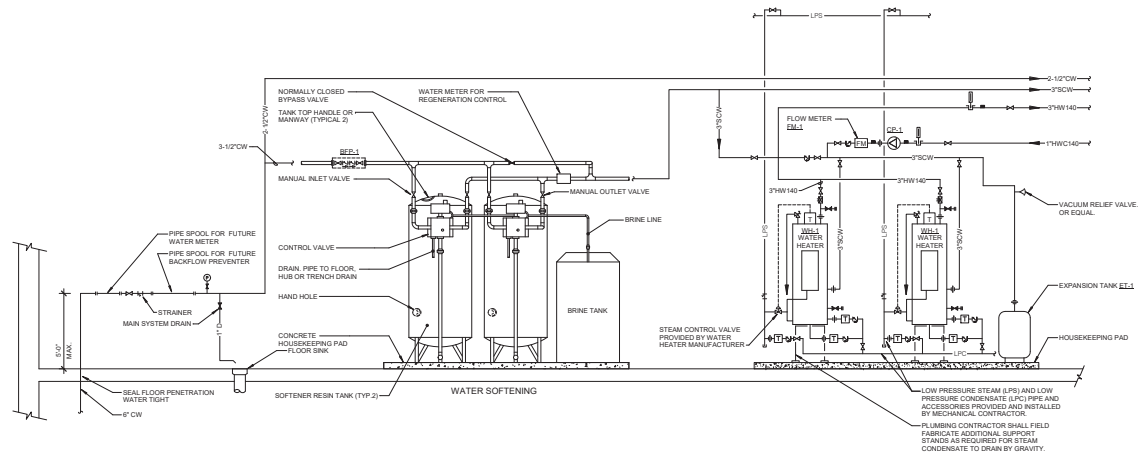
- NOTES:**
- REFER TO EQUIPMENT MANUFACTURER DETAILED PRODUCT SUBMITTALS FOR SPECIFIC ROUGH-IN LOCATIONS AND INSTALLATION REQUIREMENTS.



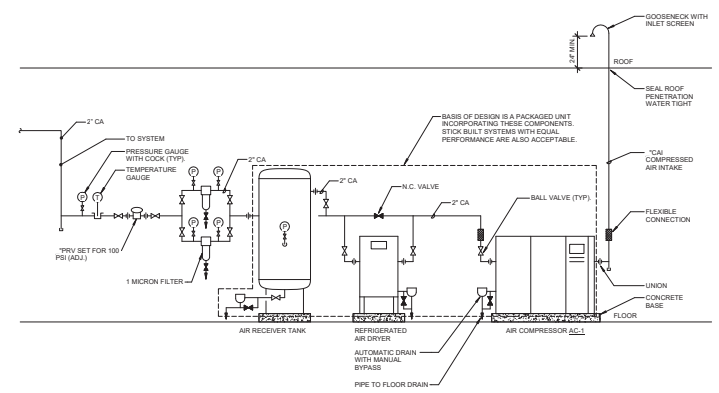
**11 ENDOSCOPE REPROCESSOR PIPING DETAIL**  
NO SCALE

- NOTES:**
- REFER TO EQUIPMENT MANUFACTURER DETAILED PRODUCT SUBMITTALS FOR SPECIFIC ROUGH-IN LOCATIONS AND INSTALLATION REQUIREMENTS.

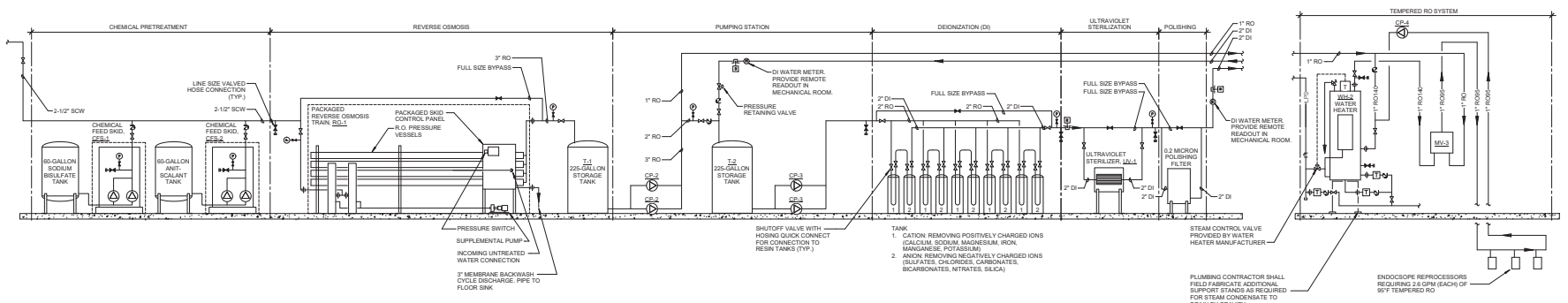
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| <b>CONSULTANT</b><br><br>IMEG<br>1000 SOUTH STREET<br>DIX MOORE APTS.<br>424 BARRACADE AVE. SUITE 200<br>WASHINGTON, MO 64788<br>PROJECT # 190800000 |       | <b>ARCHITECT/ENGINEER OF RECORD</b><br><br><b>ANDERSON</b><br>1805 S 3rd Ave. W. 5130 Plymouth, MN 55441<br>P 788.432.4080   F 788.432.4500   www.a-e.com<br>AutoCAD 2014   AutoCAD LT 2014   AutoCAD 3D 2014 |  | STAMP<br><br>M. J. DELLE<br>2014 | Office of<br>Construction and<br>Facilities<br>Management<br>VA U.S. Department<br>of Veterans<br>Affairs | Drawing Title<br><b>PLUMBING DETAILS</b><br>Approved: | Phase<br><b>BID DOCUMENTS</b><br><b>FULLY SPRINKLERED</b> | Project Title<br><b>CONSTRUCT NEW SPS</b><br>Location<br>Sioux Falls, SD | Project Number<br>438-460<br>Building Number<br>5<br>Drawing Number<br>PL401 |
| Revisions:   | Date: |   |  |                                  |   |   |   |  |  |



**1 DOMESTIC WATER FLOW DIAGRAM**  
NO SCALE



**2 COMPRESSED AIR FLOW DIAGRAM**  
NO SCALE



**3 PURE WATER FLOW DIAGRAM**  
NO SCALE

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| Revisions: | Date: |
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**CONSULTANT**

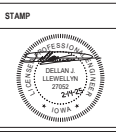
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1860S 3rd Ave., B. B180 Pittsburgh, PA 15241  
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Anderson Engineering Co. Harrisburg, PA | PAJ # 16004



Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

|               |                        |
|---------------|------------------------|
| Drawing Title | PLUMBING FLOW DIAGRAMS |
| Approved:     |                        |

|       |                   |
|-------|-------------------|
| Phase | BID DOCUMENTS     |
|       | FULLY SPRINKLERED |

|               |                   |
|---------------|-------------------|
| Project Title | CONSTRUCT NEW SPS |
| Location      | Sioux Falls, SD   |
| Issue Date    | 02/14/2025        |
| Checked       | NAT/JAC           |
| Drawn         | DELLE             |

|                 |         |
|-----------------|---------|
| Project Number  | 438-460 |
| Building Number | 5       |
| Drawing Number  | PL500   |

Plumbing Material List grid with columns for Item No., Description, Manufacturer and Model, and Item No., Description, Manufacturer and Model. Includes sections for Plumbers, Electricians, and Plasterers. Item details include specifications for valves, pumps, and piping.

Consultant: IMEG. Architect/Engineer of Record: ANDERSON. Office of Construction and Facilities Management. Drawing Title: PLUMBING MATERIAL LISTS. Project Title: CONSTRUCT NEW SPS. Phase: BID DOCUMENTS. Project Number: 438-00. Revision: 5. Date: 02/14/2025. Location: Sioux Falls, SD. Drawn: DELLE. Checked: NATJAC. Fully Sprinklered. PL600.



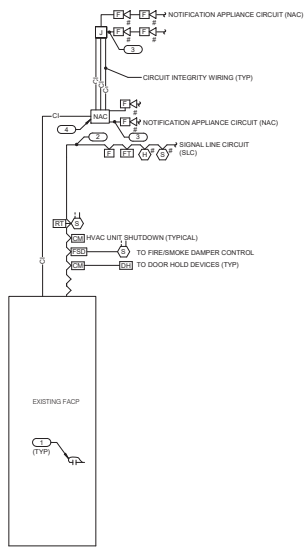
| ELECTRICAL SYMBOL LIST   |        |               |   |
|--|--------|---------------|---|
| SYMBOL:  | TAG:   | SPEC SECTION: | DESCRIPTION:  |
| COMMON AND SEQUENCE OF OPERATION SUBSCRIPTS:<br>WG = WIRE GUARD IS REQUIRED<br>WF = WEATHERPROOF<br>A = ALTRUM<br>CA = CLEAN AGENT SYSTEM<br>CR = COMPUTER ROOM<br>E = ELEVATOR RECALL<br>D = HVAC CONTROL<br>DR = DOOR HOLD RELEASE<br>DPS = DUAL INTERLOCK PREACTION SYS<br>FS = FIRE DOOR RELEASE<br>M = MEDICAL PROCEDURES<br>S = SLEEPING / PATIENT ROOM<br># = 11, 10, 75, 110, 177 CANDELA RATING<br>CD = CANDELA RATING SELECTED BY NICET DESIGNER |        |               |   |
|  | NAC-#  | 28-31.00      | NOTIFICATION APPLIANCE CIRCUIT PANEL  |
|  | AMP-#  | 28-31.00      | AMPLIFIER RACK, FIRE ALARM  |
|  | FA-120 | 28-31.00      | FIRE ALARM SMOKE DETECTOR, CEILING OR WALL MOUNT  |
|  | FA-122 | 28-31.00      | FIRE ALARM DUCT SMOKE DETECTOR  |
|  | ASSD-# | 28-31.50      | FIRE ALARM AIR SAMPLING SMOKE DETECTION   |
|  | FA-140 | 28-31.00      | FIRE ALARM HEAT DETECTOR  |
|  | FA-151 | 28-31.00      | BLANK COMBINATION RATE OF RISE (FIXED TEMP AT 1' AT 1' LOCATED IN) (FIR (FIXED) RC = RATE COMPENSATED X - EXPLOSION PROOF |
|  | FA-130 | 28-31.00      | FIRE ALARM FLAME DETECTOR, CEILING OR WALL MOUNT  |
|  | FA-131 | 28-31.00      | FIRE ALARM MANUAL PULL STATION  |
|  | FA-200 | 28-31.00      | FIRE ALARM MANUAL PULL STATION W/ COVER   |
|  | FA-201 | 28-31.00      | FIRE ALARM VISUAL ALARM DEVICE, CEILING OR WALL MOUNT   |
|  | FA-202 | 28-31.00      | ELECTRIC BELL FOR SPRINKLER SYSTEM  |
|  | FA-210 | 28-31.00      | AUDIO HORN/CHIME ALARM DEVICE, CEILING OR WALL MOUNTED  |
|  | FA-211 | 28-31.00      | COMBINATION AUDIO HORN/CHIME AND VISUAL ALARM DEVICE, CEILING OR WALL MOUNTED   |
|  | FA-220 | 28-31.00      | AUDIO (SPEAKER) ALARM DEVICE, CEILING OR WALL MOUNTED   |
|  | FA-221 | 28-31.00      | COMBINATION AUDIO (VOICE) AND VISUAL ALARM DEVICE, CEILING OR WALL MOUNTED  |
|  | FA-241 | 28-31.00      | FIRE ALARM REMOTE INDICATOR   |
|  | FA-242 | 28-31.00      | FIRE ALARM REMOTE INDICATOR W/ TEST SWITCH  |
|  | FA-260 | 28-31.00      | FIRE ALARM FLOW SWITCH TO MONITOR SPRINKLER SYSTEM  |
|  | FA-261 | 28-31.00      | FIRE ALARM TAMPER SWITCH TO MONITOR SPRINKLER SYSTEM  |
|  | FA-180 | 28-31.00      | FIRE ALARM ADDRESSABLE MONITOR MODULE   |

| SEQUENCE OF OPERATION  | PANEL MANIPULATION ALARM INDICATION | PANEL MANIPULATION ALARM INDICATION | PANEL MANIPULATION ALARM INDICATION | ALDRIVE AL ARMS | INDICATOR | INDICATOR | INDICATOR | INDICATOR | INDICATOR | INDICATOR | INDICATOR | INDICATOR | INDICATOR | INDICATOR | INDICATOR |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| FIRE ALARM PANEL, TRANSPOUNDER, NAC PANEL (LOW BATTERY)                              |                                     | X                                   |                                     |                 |           |           |           |           |           |           |           |           |           |           |           |
| FIRE ALARM PANEL, TRANSPOUNDER, NAC PANEL BATTERY OR CHARGER FAILURE                 |                                     |                                     | X                                   |                 |           |           |           |           |           |           |           |           |           |           |           |
| FIRE ALARM PANEL, TRANSPOUNDER, NAC PANEL ABNORMAL SWITCH OR CONTROL POSITION        |                                     |                                     | X                                   |                 |           |           |           |           |           |           |           |           |           |           |           |
| FIRE ALARM PANEL, TRANSPOUNDER, NAC PANEL GROUND FAULT, OPEN CIRCUIT, SHORT CIRCUIT  |                                     |                                     |                                     | X               |           |           |           |           |           |           |           |           |           |           |           |
| FIRE ALARM PANEL, TRANSPOUNDER, NAC PANEL AC POWER LOSS OR IRREGULARITY              |                                     |                                     |                                     | X               |           |           |           |           |           |           |           |           |           |           |           |
| NOTIFICATION APPLIANCE CIRCUIT OR RLC LOOP GROUND FAULT, OPEN CIRCUIT, SHORT CIRCUIT |                                     |                                     |                                     |                 | X         |           |           |           |           |           |           |           |           |           |           |
| INITIATING DEVICE FAILURE OR COMMUNICATION ERROR                                     |                                     |                                     |                                     |                 |           | X         |           |           |           |           |           |           |           |           |           |
| FIRE ALARM PANEL MANUAL FIRE DRILL   |                                     | X                                   |                                     | X               | X         |           |           |           |           |           |           |           |           |           |           |
| MANUAL PULL STATION  |                                     | X                                   |                                     | X               | X         |           |           |           |           |           |           |           |           |           |           |
| SMOKE DETECTOR   |                                     | X                                   |                                     | X               | X         |           |           |           |           |           |           |           |           |           |           |
| HEAT DETECTOR  |                                     | X                                   |                                     | X               | X         |           |           |           |           |           |           |           |           |           |           |
| SPRINKLER SYSTEM FLOW SWITCH   |                                     |                                     | X                                   | X               | X         | X         | X         |           |           |           |           |           |           |           |           |
| SPRINKLER SYSTEM CABINET MONITOR   |                                     |                                     | X                                   | X               | X         | X         | X         |           |           |           |           |           |           |           |           |
| SMOKE DETECTOR FOR HVAC CONTROL  |                                     |                                     | X                                   |                 |           |           |           |           |           | X         | X         |           |           |           |           |

NOTES:  
1. ALL SEQUENCE OF OPERATION SHALL MATCH EXISTING FIRE ALARM SEQUENCE IN FACILITY. COORDINATE REQUIREMENTS PRIOR TO PROGRAMMING.

1 FIRE ALARM OPERATION MATRIX  
NO SCALE

2 FIRE ALARM RISER  
NO SCALE



- NOTES:
- THE RISER DIAGRAM IS INTENDED TO CONVEY THE TYPES OF FIRE ALARM CONNECTIONS AND SPECIFICALLY DOES NOT INDICATE QUANTITIES, NUMBER OF CIRCUITS REQUIRED OR DISTANCES.
  - THE COMPLETE FIRE ALARM SYSTEM SHALL MEET ALL APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS.
  - CONTRACTOR SHALL COORDINATE ALL WIRE SIZES, TYPES AND REQUIREMENTS WITH THE VENDOR PRIOR TO BID. REFER TO SPECIFICATIONS TO DETERMINE CIRCUIT STYLES AND IF CONDUIT IS REQUIRED OR PLENUM RATED CABLE IS ACCEPTABLE.
  - ALL +120VAC WIRING REQUIRED FOR OPERATION OF THE SYSTEM AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
  - ALL NECESSARY RELAYS MAY NOT BE SHOWN ON THIS PLAN, BUT WHERE REQUIRED FOR PROPER OPERATION OF THE SYSTEM THEY SHALL BE PROVIDED BY THE CONTRACTOR.
  - PARTIAL EVACUATION OR RELOCATION OF OCCUPANTS IS THE STANDARD OPERATING PROCEDURE FOR THIS FACILITY IN THE EVENT OF AN ALARM. THEREFORE, ALL NOTIFICATION APPLIANCE CIRCUITS MUST BE INSTALLED AND PROTECTED IN ACCORDANCE WITH THE CIRCUIT SURVIVABILITY REQUIREMENTS DESCRIBED IN NFPA 72. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

- KEYNOTES:
- REPRESENTATIVE OF PROGRAMMABLE I/O POINTS IN THE PANEL OR A GENERAL SYSTEM TROUBLE ALARM CONTACT CONNECTED TO THE SYSTEM NOTED. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
  - REFER TO SPECIFICATION FOR REQUIREMENTS OF EACH INITIATION LOOP AND WIRING STYLE. REFER TO FLOOR PLANS FOR DEVICES AND THEIR LOCATIONS.
  - REFER TO SPECIFICATION FOR REQUIREMENTS OF EACH NOTIFICATION APPLIANCE CIRCUIT AND WIRING STYLE. REFER TO FLOOR PLANS FOR DEVICES AND THEIR LOCATIONS.
  - PROVIDE NOTIFICATION APPLIANCE EXTERIOR PANELS AS REQUIRED. DETERMINATION OF NEED TO BE MADE BY FIRE ALARM VENDOR. REFER TO SPECIFICATIONS FOR REQUIREMENTS AND ACCEPTABLE MOUNTING LOCATIONS.

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|---|--------------|---|--|--|---|---|---|--|
| <b>CONSULTANT</b><br><br><small>10800 SOUTH STREET<br/>DIX NOTED A BLDG<br/>FAX 408.888.4444<br/>WWW.IMEG.COM<br/>PROJECT # 108000000</small> |              | <b>ARCHITECT/ENGINEER OF RECORD</b><br><br><small>1860S 1st Ave., # 2100 Plymouth, MN 55441<br/>P 788.412.4000   F 788.412.4000   248-00-0110<br/>Anderson Engineering Co. Minneapolis, LLC   PWS © 16004</small> |  | <b>STAMP</b><br><br><small>KRISTEN SPAHN<br/>REGISTERED PROFESSIONAL ENGINEER<br/>NO. 24800<br/>EXPIRES 12/31/2025</small> | <b>Office of Construction and Facilities Management</b><br><br><small>U.S. Department of Veterans Affairs</small> | <b>Drawing Title</b><br>ELECTRICAL FIRE ALARM COVERSHEET<br><b>Approved:</b>  | <b>Phase</b><br>BID DOCUMENTS<br><b>FULLY SPRINKLERED</b> | <b>Project Title</b><br>CONSTRUCT NEW SPS<br><b>Project Number</b><br>438-460<br><b>Building Number</b><br>5<br><b>Drawing Number</b><br>FA001 |
| <b>Revisions:</b>   | <b>Date:</b> |   |  |  |   | <b>Location</b><br>Sioux Falls, SD<br><b>Issue Date</b><br>02/14/2025<br><b>Checked</b><br>JMK<br><b>Drawn</b><br>JDR |   |  |

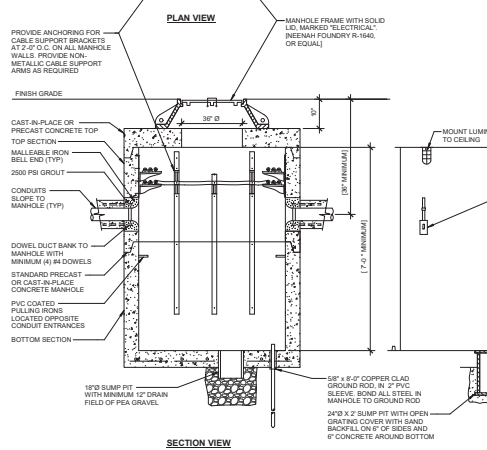
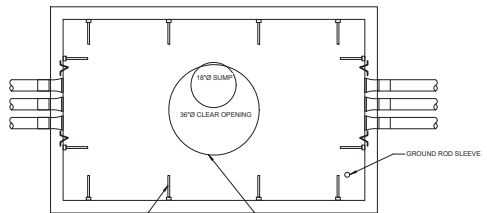
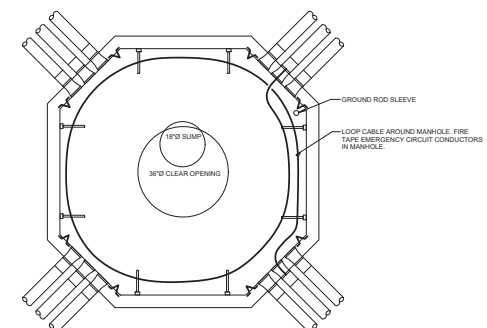


**SHEET NOTES**

1. ALL EXISTING FEEDER AND CONTROL WIRING LOCATIONS WERE OBTAINED FROM EXISTING DRAWINGS. FIELD VERIFY ALL EXISTING CONDITIONS.
2. SITE VISIT REQUIRED PRIOR TO BID DATE FOR ON-SITE REVIEW OF EXISTING MANHOLE MH-20. COORDINATE VISITATION WITH COR.

**REMARKS**

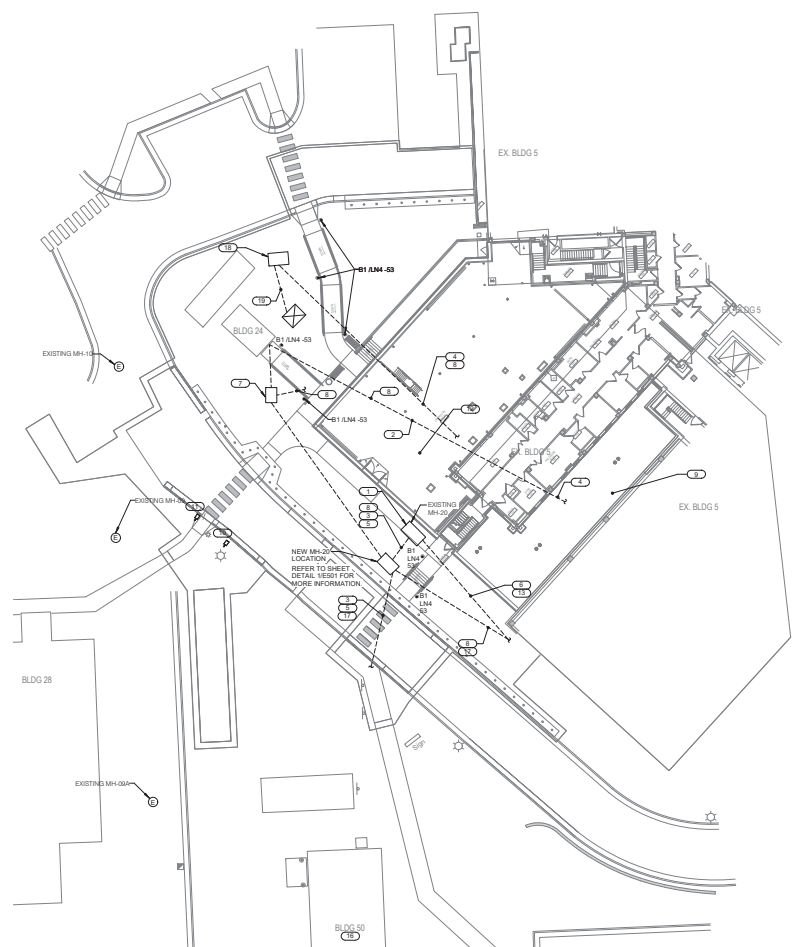
1. EXISTING MANHOLE MH-20 TO BE REMOVED. ALL FEEDERS AND CONTROL WIRING ROUTED THROUGH MANHOLE TO BE REPLACED FROM POINT OF ORIGIN TO EXISTING LOADS TO ACCOMMODATE NEW CONSTRUCTION.
2. REMOVE AND REPLACE ALL EXISTING FEEDERS, CONTROL CABLEING, AND CONDUIT BETWEEN BUILDING 24 AND BUILDING 5 TO ACCOMMODATE NEW CONSTRUCTION. REFER TO FEEDER SCHEDULE ON THIS SHEET FOR MORE INFORMATION. EXISTING FEEDERS ARE CONCRETE ENCASED.
3. THROUGH MH-20 BETWEEN BUILDING 24 AND BUILDING 5 BELOW GRADE PIPE SPACE TO BE REPLACED TO ACCOMMODATE NEW CONSTRUCTION. RACEWAYS ARE CONCRETE ENCASED.
4. EXISTING FEEDERS ROUTED BETWEEN BUILDING 24 AND BUILDING 5 BELOW GRADE PIPE SPACE TO BE REPLACED TO ACCOMMODATE NEW CONSTRUCTION. RACEWAYS ARE CONCRETE ENCASED.
5. ALL FEEDERS AND CONTROL WIRING ROUTED THROUGH MH-20 BETWEEN BUILDING 30 AND BUILDING 5 TO BE REPLACED TO ACCOMMODATE NEW CONSTRUCTION. ALL RACEWAYS ARE CONCRETE ENCASED. REFER TO E-01 FOR MORE INFORMATION.
6. FEEDERS AND CONTROL WIRING BETWEEN BLDG 24 AND THE EMERGENCY SYSTEM ELECTRICAL ROOM OF THE OPERATING SUITE BUILDING SHALL BE NEW. RACEWAY MAY BE CONCRETE ENCASED. REFER TO E-01 FOR MORE INFORMATION.
7. PROVIDE NEW MANHOLE SIZED PER NEC FOR REPLACEMENT OF EXISTING FEEDERS AND CABLES AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION.
8. NEW FEEDERS AND CONTROL WIRING, AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION, PORTIONS OF SEVERAL RACEWAYS IN PIPE SPACE OF BUILDING 5 SHALL REQUIRE REPLACEMENT DUE TO NEW FOOTING AND REARS FOR DENSESSED FLOOR SLABS IN ROOMS H20A AND H08. NEW UNDERGROUND RACEWAYS SHALL BE CONCRETE ENCASED WHERE NOT LOCATED BELOW BUILDING. COORDINATE SHUTDOWN AND PHASING WITH COR.
9. PROTECT EXISTING MAIN FACILITY TELEPHONE LINE UNTIL NEW FIBER SERVICE IS ESTABLISHED. COORDINATE WITH TELEPHONE PROVIDER AND COR.
10. REMOVE EXISTING LIGHT POLE FOR RELACEMENT. REMOVE EXISTING POLE BASE FOR DEMOLITION. RETAIN AS MUCH OF THE EXISTING RACEWAYS AS POSSIBLE. REMOVE WIRING FROM CONDUIT BACK TO ADJACENT LUMINAIRE IN BOTH DIRECTIONS.
11. INSTALL RELOCATED POLE AND LUMINAIRE APPROXIMATELY 9 FEET TO THE NORTHWEST OF THE PREVIOUS LOCATION. PROVIDE NEW POLE BASE. DIMENSIONS OF POLE BASE SHALL MATCH EXISTING. PROVIDE NEW RACEWAY BETWEEN RELOCATED POLE BASE AND EXISTING WITH NEW WIRING BACK TO ADJACENT LUMINAIRE.
12. EXISTING UNDERGROUND TELEPHONE LINE TERMINATES IN MECHANICAL ROOM 028 TO BE REMOVED. CONTRACTOR TO FIELD VERIFY ALL LINES INVOLVED AND DETERMINE IF LINES ARE ACTIVE. THEN REPLACE LINE WITH NEW AS REQUIRED. THE RELOCATED LOCATION IN ROOM 028 SHOWS ONE 24-50 PAIR TELEPHONE CABLE, ONE SIGNAL CABLE AND TWO INDIVIDUAL TWISTED PAIR CABLES.
13. PROVIDE NEW CONDUIT ENCASED FEEDERS FOR PANELS P50-01, P50-02, P50-03B AND P50-03C.
14. REMOVE AND REPLACE WITH NEW FROM POINT OF ORIGIN TO EXISTING PANELS. LOCATION. ROUTE NEW FEEDERS, CABLEING AND CONDUIT THROUGH NEW MANHOLE LOCATION. REFER TO E-01 FOR MORE INFORMATION.
15. NOT USED.
16. EXISTING PARALLELING SWITCHGEAR MGS-1 LOCATED IN THIS BUILDING.
17. NEW CONDUCTORS, CABLEING, AND CONDUIT FROM POINT OF ORIGIN TO EXISTING LOADS. LOCATION OF ORIGIN TO EXISTING MANHOLE LOCATION. REFER TO E-01 FOR SIZING INFORMATION.
18. EXISTING MANHOLE MH-08.
19. EXISTING FEEDER TO BLDG 24 PAD MOUNTED TRANSFORMER.



**NOTES**

1. MANHOLE SHALL BE DESIGNED TO AASHTO HS-20 LIVE LOADS. SUBMITTAL SHALL SHOW DESIGN LOADINGS AND MATERIAL SPECIFICATIONS FOR SUPPLIED PRODUCTS.

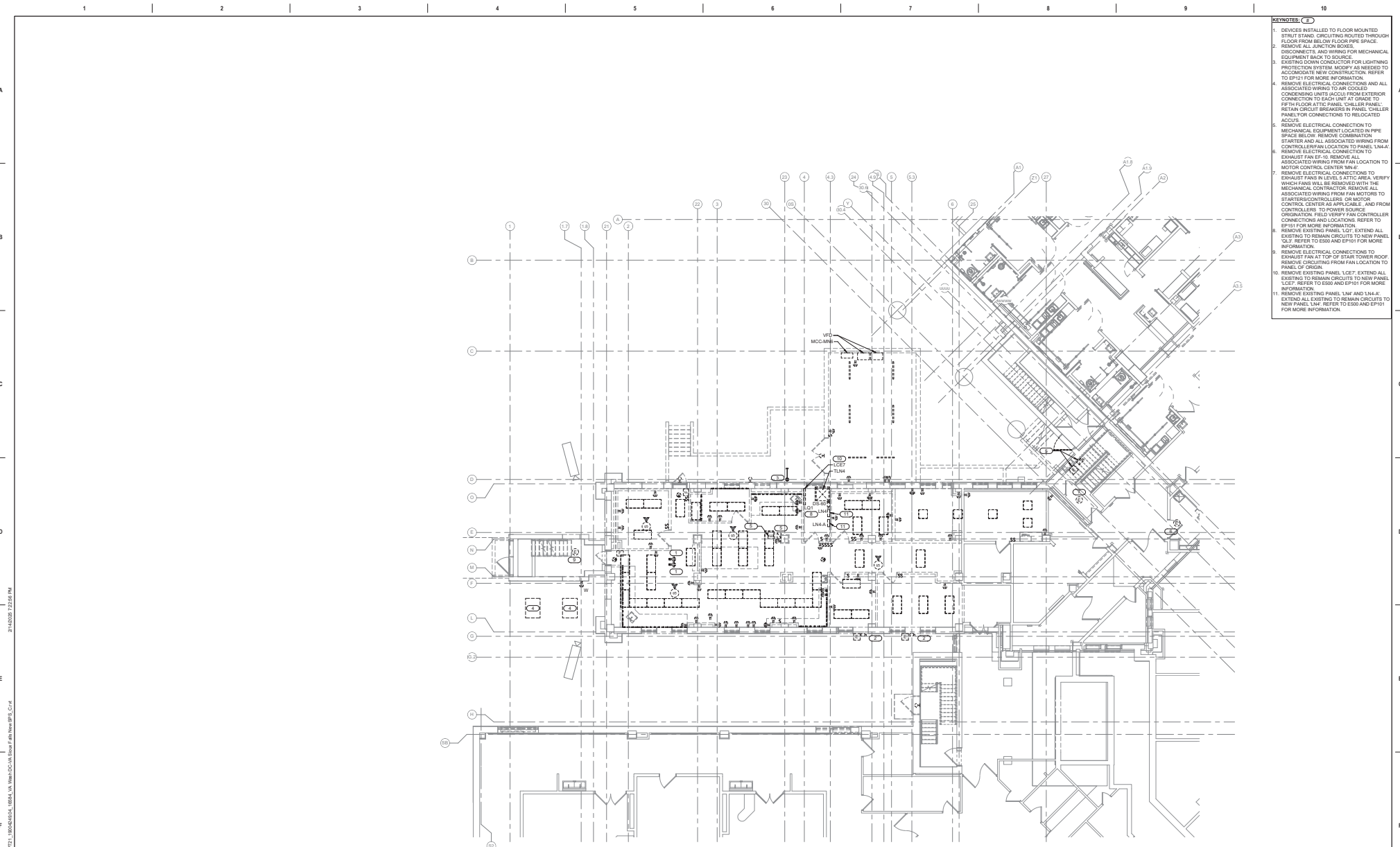
**2 ELECTRICAL MANHOLE DETAIL TO SCALE**



**1 SITE PLAN - ELECTRICAL 1"=30'**

| BLDG 24 - BLDG 5 FEEDER DEMOLITION & REPLACEMENT         |                                       |                 |                                   |  |
|--|---------------------------------------|-----------------|-----------------------------------|--|
| EMERGENCY FEEDER CIRCUITS FROM BUILDING 24 TO BUILDING 5 |                                       |                 |                                   |  |
| LOAD   | BLDG & ROOM LOCATION                  | FLOOR LOCATION  | CONDUCTOR QTY & SIZE              |  |
| DISTRIBUTION PANEL DPIC                                  | BLDG 5                                | ATTIC           | 2 SIX (6) 4/0 ALU & 1 (1) 2/0 GND |  |
| PANEL SL   | BLDG 5                                | ATTIC           | 3 (3) 500 KCMIL & 1 (1) 2/0 GND   |  |
| PANEL IRR PANEL IRE                                      | BLDG 5                                | MULTIPLE FLOORS | 4 (4) 2/0 & 1 (1) 2/0 GND         |  |
| UNKNOWN 1 1/2" C   | UNKNOWN - FIELD VERIFICATION REQUIRED | UNKNOWN         | MULTIPLE 4/0 SINGLE CONDUCTORS    |  |
| UNKNOWN 1" C   | UNKNOWN - FIELD VERIFICATION REQUIRED | UNKNOWN         | 800V AND DATA/COMM. CABLEING      |  |
| UNKNOWN 2" C   | UNKNOWN - FIELD VERIFICATION REQUIRED | UNKNOWN         | UNKNOWN                           |  |

|   |  |   |                               |   |   |   |  |  |
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| Revisions: _____ Date: _____<br>VA FORM 08 - 0231 | <b>CONSULTANT</b><br><b>IMEG</b><br>1800 SOUTH STREET<br>SUITE 1000<br>FARGO, ND 58103<br>PHONE: 701.785.4444<br>FAX: 701.785.4444<br>PROJECT # 18060000 | <b>ARCHITECT/ENGINEER OF RECORD</b><br><b>ANDERSON</b><br>1860S 3rd Ave. N. BLDG 100<br>FARGO, ND 58103<br>PHONE: 701.785.4444<br>FAX: 701.785.4444<br>PROJECT # 18060000 | STAMP<br>WRITTEN<br>2/14/2025 | Office of<br>Construction and<br>Facilities<br>Management<br>VA U.S. Department<br>of Veterans<br>Affairs | Drawing Title<br><b>NEW ELECTRICAL SITE PLAN</b><br>Approved: _____ | Phase<br><b>BID DOCUMENTS</b><br><b>FULLY SPRINKLERED</b> | Project Title<br><b>CONSTRUCT NEW SPS</b><br>Location<br>Sioux Falls, SD<br>Issue Date<br>02/14/2025<br>Checked<br>JMK<br>Drawn<br>JDR | Project Number<br><b>438-460</b><br>Building Number<br><b>5</b><br>Drawing Number<br><b>ES-100</b> |
|---|--|---|-------------------------------|---|---|---|--|--|



- KEYNOTES:**
1. DEVICES INSTALLED TO FLOOR MOUNTED STRUT STAND. CIRCUITING ROUTED THROUGH FLOOR FROM BELOW FLOOR PIPE SPACE. REMOVE ALL JUNCTION BOXES.
  2. DISCONNECTS AND WIRING FOR MECHANICAL EQUIPMENT BACK TO SOURCE.
  3. EXISTING DOWN CONDUCTOR FOR LIGHTNING PROTECTION SYSTEM, MOST AS NEEDED TO ACCOMMODATE NEW CONSTRUCTION. REFER TO EP101 FOR MORE INFORMATION.
  4. REMOVE ELECTRICAL CONNECTIONS AND ALL ASSOCIATED WIRING TO AIR COOLED CONDENSING UNITS (ACCU) FROM EXTERIOR CONNECTION TO EACH UNIT. IT IS OK TO RETAIN FLOOR ATYC PANEL, CHILLER PANEL, RETAIN CIRCUIT BREAKERS IN PANEL, CHILLER PANEL, OR CONNECTIONS TO RELOCATED ACCU'S.
  5. REMOVE ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT LOCATED IN PIPE SPACE BELOW. REMOVE COMBINATION STARTER AND ALL ASSOCIATED WIRING FROM CONTROLLER. REMOVE CONNECTION TO PANEL L1M-L4.
  6. REMOVE ELECTRICAL CONNECTION TO EXHAUST FAN EF-10. REMOVE ALL ASSOCIATED WIRING FROM FAN LOCATION TO MOTOR CONTROL CENTER N1M.
  7. REMOVE ELECTRICAL CONNECTIONS TO EXHAUST FAN IN LEVEL 1 ATTIC AREA. VERIFY WHICH FANS WILL BE REMOVED WITH THE MECHANICAL CONTRACTOR. REMOVE ALL ASSOCIATED WIRING FROM FAN MOTORS TO STARTERS/CONTROLLERS OR MOTOR CONTROL CENTER AS APPLICABLE AND FROM CONTROLLERS TO POWER SOURCE. IDENTIFY FAN CONTROLLER CONNECTIONS AND LOCATIONS. REFER TO EP101 FOR MORE INFORMATION.
  8. REMOVE EXISTING PANEL L01. EXTEND ALL EXISTING TO REMAIN CIRCUITS TO NEW PANEL L01. REFER TO E500 AND EP101 FOR MORE INFORMATION.
  9. REMOVE ELECTRICAL CONNECTIONS TO EXHAUST FAN AT TOP OF STAIR TOWER ROOF. REMOVE CIRCUITING FROM FAN LOCATION TO PANEL OF ORIGIN.
  10. REMOVE EXISTING PANEL L07. EXTEND ALL EXISTING TO REMAIN CIRCUITS TO NEW PANEL L07. REFER TO E500 AND EP101 FOR MORE INFORMATION.
  11. REMOVE EXISTING PANEL L1M AND L1M-A. EXTEND ALL EXISTING TO REMAIN CIRCUITS TO NEW PANEL L1M. REFER TO E500 AND EP101 FOR MORE INFORMATION.

**1 GROUND LEVEL FLOOR DEMOLITION PLAN - ELECTRICAL**  
SEP 11-20

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**CONSULTANT**

**IMEG**

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SCALE: AS SHOWN

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 Anderson Engineering Co. Minneapolis, MN | PEO # 16004

**STAMP**

**KRISTEN SPAN**  
 ARCHITECT

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**  
 GROUND LEVEL FLOOR DEMOLITION PLAN - ELECTRICAL

**Approved:**

**Phase**  
 BID DOCUMENTS

**FULLY SPRINKLERED**

**Project Title**  
 CONSTRUCT NEW SPS

**Location**  
 Sioux Falls, SD

**Project Number**  
 438-460

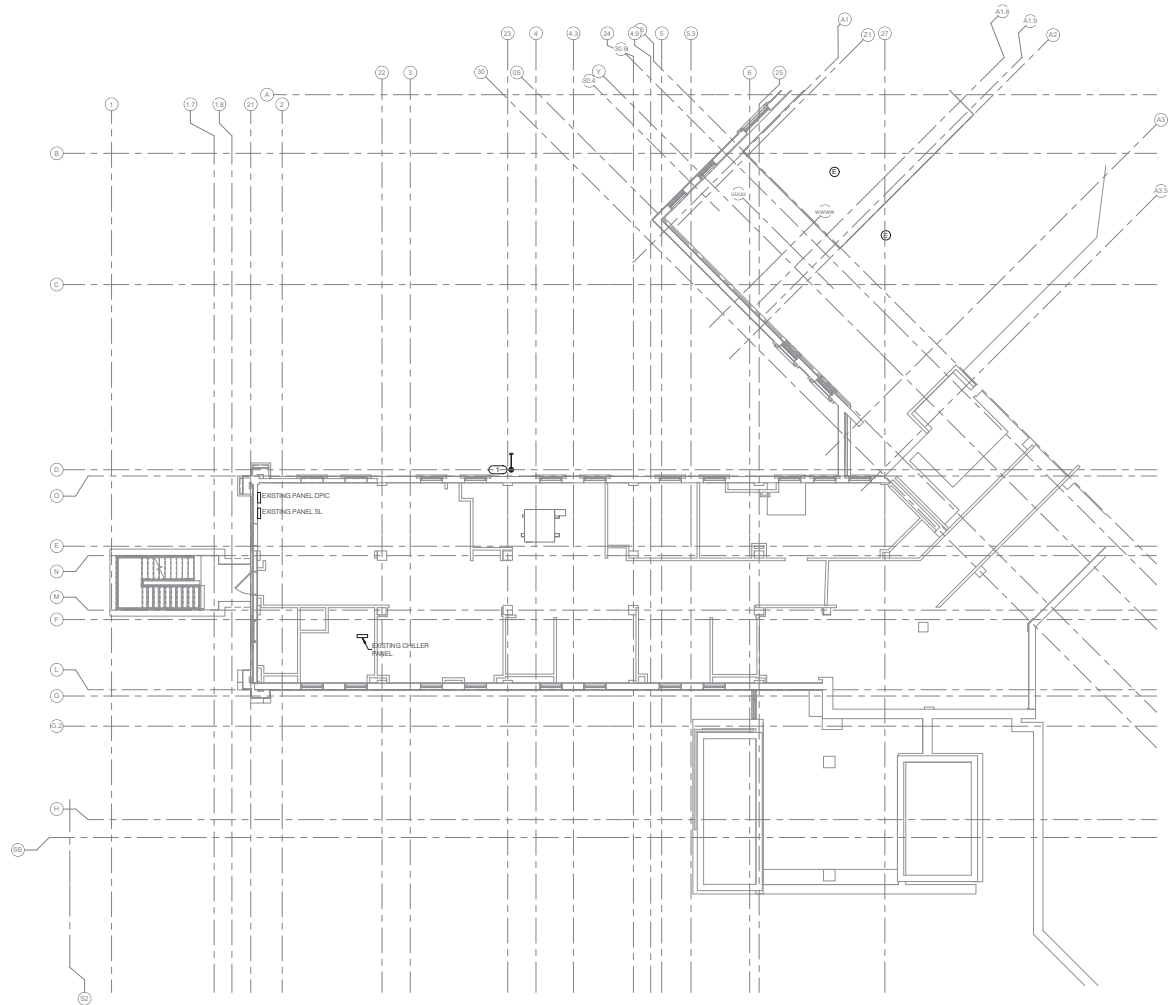
**Building Number**  
 5

**Drawing Number**  
 ED101

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| <b>Issue Date</b><br>02/14/2025 | <b>Checked</b><br>JMK | <b>Drawn</b><br>JDR |
|---------------------------------|-----------------------|---------------------|

**KEYNOTES:**

- EXISTING DOWN CONDUCTOR FOR LIGHTNING PROTECTION SYSTEM. MODIFY AS NEEDED TO ACCOMMODATE NEW CONSTRUCTION. REFER TO EPT21 FOR MORE INFORMATION.



**1 ROOF DEMOLITION PLAN - ELECTRICAL**  
1/8" = 1'-0"

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**CONSULTANT**

**IMEG**

1800 SOUTH STREET  
 ONE FLOOR PLAZA  
 112 ANDERSON AVE. SUITE 200  
 www.imeg.com  
 PROJECT # 100000101

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1/8" = 1'-0"

**ARCHITECT/ENGINEER OF RECORD**

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13605 1st Ave. N. 5130 Plymouth, MN 55441  
 P 788.432.4080 | F 788.432.4500 | [and@and.com](mailto:and@and.com)  
 Anderson Engineering of Minnesota, LLC | PEO # 16064

**STAMP**

PROFESSIONAL ENGINEER  
 KRISTEN SPAN  
 2/14/2025

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**

ROOF DEMOLITION PLAN - ELECTRICAL

**Approved:**

**Phase**

BID DOCUMENTS

FULLY SPRINKLERED

**Project Title**

CONSTRUCT NEW SPS

**Location**

Sioux Falls, SD

**Project Number**

438-460

**Building Number**

5

**Drawing Number**

ED121

|                   |                |              |
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| <b>Issue Date</b> | <b>Checked</b> | <b>Drawn</b> |
| 02/14/2025        | JMK            | JDR          |

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C

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E

F

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VA Form 08-0231

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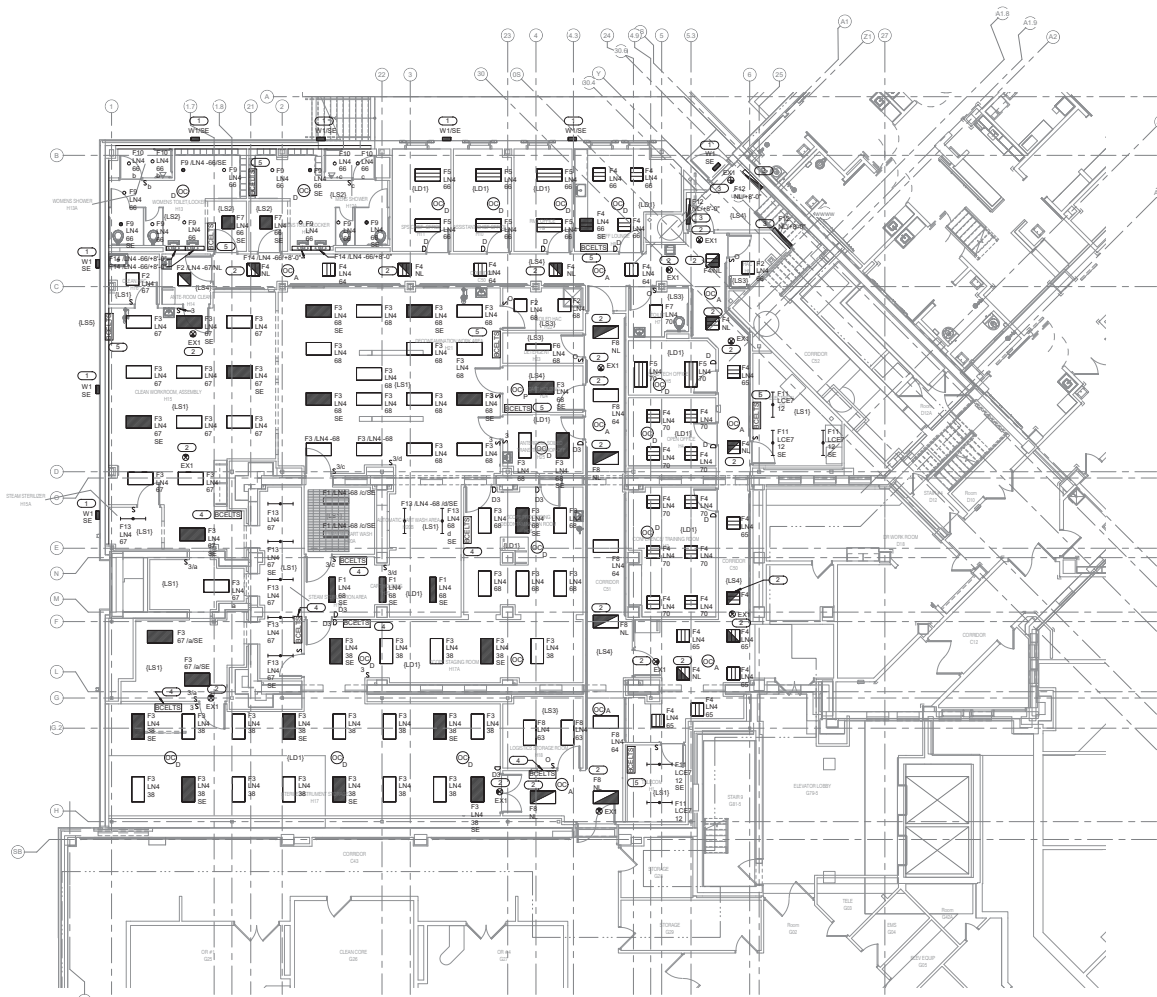
VA FORM 08-0231

**KEYNOTES:**

1. IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY ALL EQUIPMENT AND REQUIRED OPENINGS SHOWN ON THE DRAWINGS MATCH WHAT EQUIPMENT IS ACTUALLY PROVIDED. ANY CHANGES REQUIRED TO BE MADE IS THE CONTRACTOR'S RESPONSIBILITY TO REVISE DRAWINGS AS NEEDED, INCLUDING ANY PROFESSIONAL ENGINEERING FEES ASSOCIATED AND SHALL BE AT NO ADDITIONAL COST TO THE VA.

**KEYNOTES:**

1. CONNECT ALL EXTERIOR LIFE SAFETY LIGHT FIXTURES TO ONE EXISTING 20A/1P SPARE CIRCUIT IN PANEL L5E2.
2. CONNECT ALL CORRIDORS LIFE SAFETY LIGHT FIXTURES TO EXISTING 20A/1P SPARE CIRCUIT IN PANEL L5E2. INSTALL NEW 20/1P CIRCUIT BREAKER IF REQUIRED. MATCH NEW BREAKER WITH EXISTING PANEL CHARACTERISTICS.
3. CONNECT ALL STAIR CASE LIFE SAFETY LIGHT FIXTURES TO EXISTING 20A/1P SPARE CIRCUIT IN PANEL L5E2. INSTALL NEW 20/1P CIRCUIT BREAKER IF REQUIRED. MATCH NEW BREAKER WITH EXISTING PANEL CHARACTERISTICS.
4. CONNECT TIGL TO DEVICES TO EXISTING 20A/1P SPARE CIRCUIT IN PANEL L5E2. INSTALL NEW 20/1P CIRCUIT BREAKER IF REQUIRED. MATCH NEW BREAKER WITH EXISTING PANEL CHARACTERISTICS.
5. CONNECT TIGL TO DEVICES TO EXISTING 20A/1P SPARE CIRCUIT IN PANEL L5E2. INSTALL NEW 20/1P CIRCUIT BREAKER IF REQUIRED. MATCH NEW BREAKER WITH EXISTING PANEL CHARACTERISTICS.



**1** GROUND LEVEL FLOOR PLAN - LIGHTING  
1/8" = 1'-0"

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| Revisions: | Date: |
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**CONSULTANT**

**IMEG**

1000 NORTH STREET  
DIX NOTED A 200  
1124 BROADWAY, SUITE 200  
ANN ARBOR, MI 48106  
www.imeg.com  
PROJECT # 16080240

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DATE: 02/14/2025

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13605 3rd Ave. N., 5130 Plymouth, MN 55441  
P 783.432.4080 | F 788.432.5090 | anderson.com  
Anderson Engineering & Architecture, LLC | PEOB # 16084



**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**  
GROUND LEVEL FLOOR PLAN - LIGHTING

**Approved:**

**Phase**  
BID DOCUMENTS

**FULLY SPRINKLERED**

**Project Title**  
CONSTRUCT NEW SPS

**Location**  
Sioux Falls, SD

**Issue Date**  
02/14/2025

**Checked**  
JMK

**Drawn**  
JDR

**Project Number**  
438-460

**Bidding Number**  
5

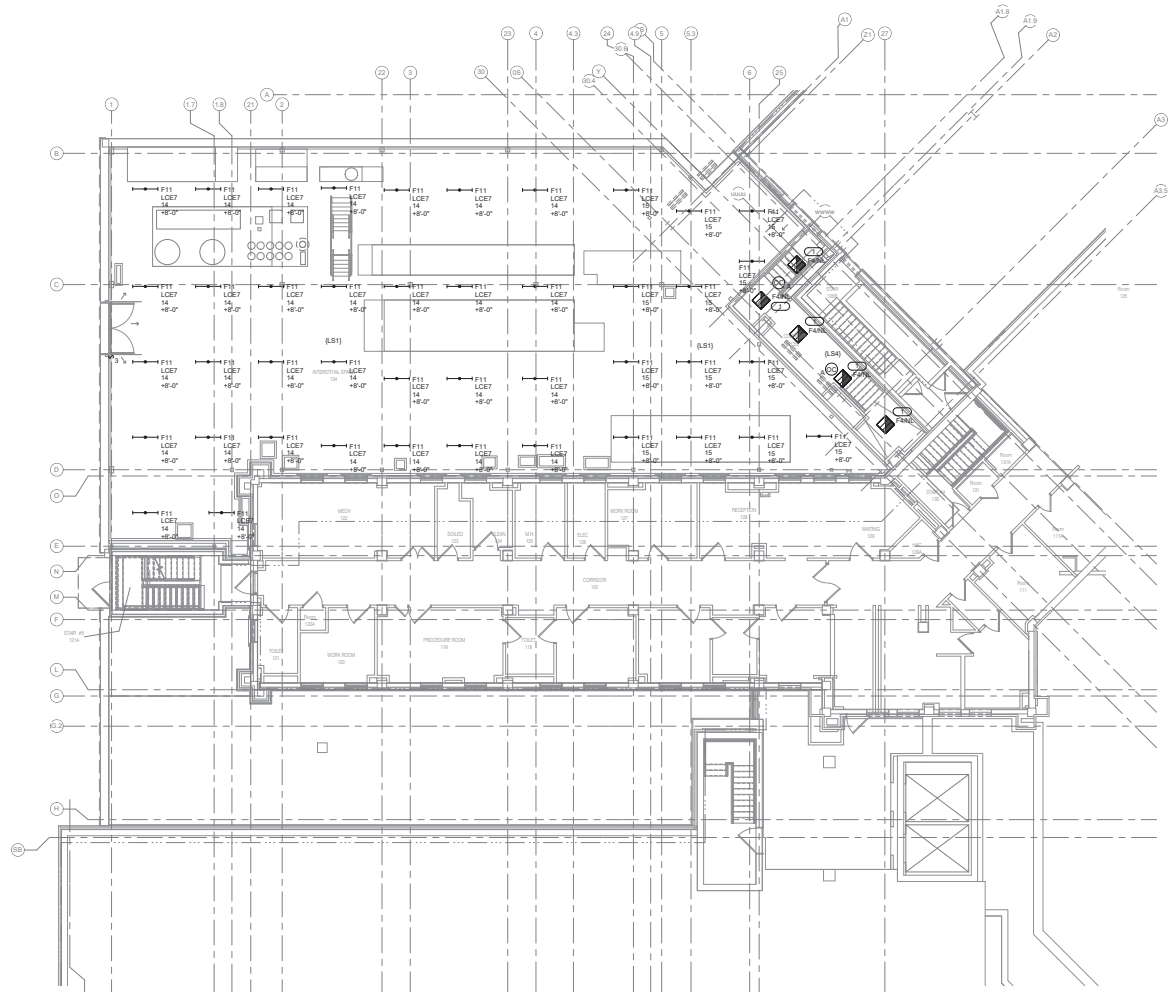
**Drawing Number**  
EL101

**SHEET NOTES:**

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**KEYNOTES:**

- CONNECT ALL STAIR CASE LIFE SAFETY LIGHT FIXTURES TO EXISTING 20A/1P SPARE CIRCUIT IN PANEL L5E2.



**1 INTERSTITIAL/FIRST LEVEL FLOOR PLAN - LIGHTING**  
1/8" = 1'-0"

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| Revisions: | Date: |
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**CONSULTANT**

**IMEG**

1800 SOUTH STREET  
DIX INWOOD PLAZA  
SIOUX FALLS, SD 57104  
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PROJECT # 180824000

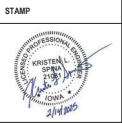
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REGISTERED ARCHITECT IN SD

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Anderson Engineering & Architecture, LLC | PEO # 18084



Office of  
Construction and  
Facilities  
Management

**VA** U.S. Department  
of Veterans  
Affairs

Drawing Title  
**INTERSTITIAL/FIRST LEVEL FLOOR  
PLAN - LIGHTING**

Approved:

Phase  
**BID DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**CONSTRUCT NEW SPS**

Location  
**Sioux Falls, SD**

Issue Date  
**02/14/2025**

Checked  
**JMK**

Drawn  
**JDR**

Project Number  
**438-460**

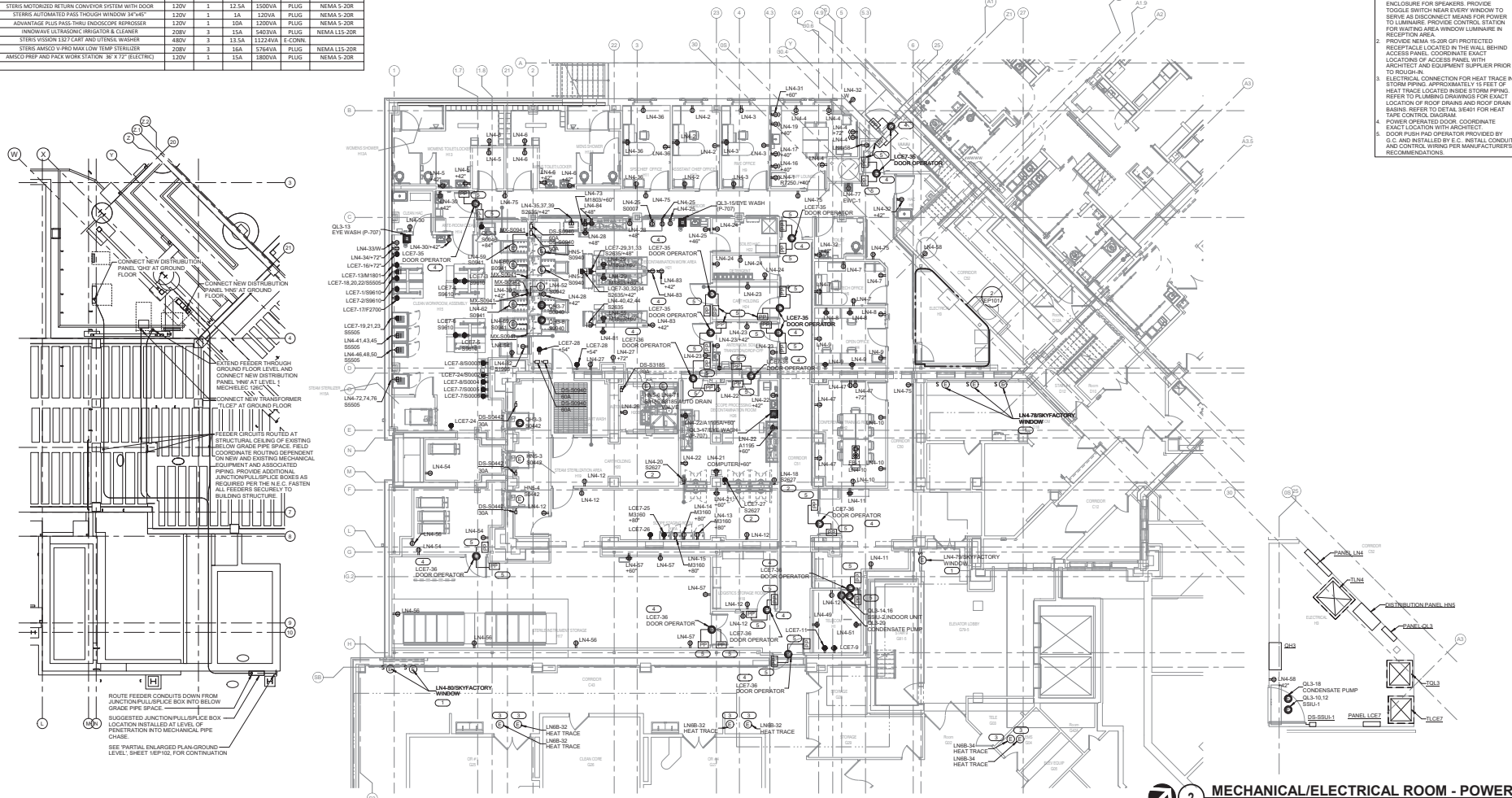
Building Number  
**5**

Drawing Number  
**EL111**

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| EQUIP. NUMBER | DESCRIPTION   | VOLTAGE | PHASE | AMPS  | VA      | TYPE   | RECEPTACLE  |
|---------------|---|---------|-------|-------|---------|--------|-------------|
| F2700         | BAR CODE READER   | 120V    | 1     |       | 200VA   | PLUG   | NEMA 5-20R  |
| M1801         | COMPUTER WITH FLAT PANEL MONITOR                        | 120V    | 1     |       | 300VA   | PLUG   | NEMA 5-20R  |
| M1805         | WALL MOUNTED CONVERTER WORKSTATION                      | 120V    | 1     |       | 300VA   | PLUG   | NEMA 5-20R  |
| M3160         | MEDIA TOR   | 120V    | 1     | 0.7A  | 85VA    | PLUG   | NEMA 5-20R  |
| R7250         | REFRIGERATOR  | 120V    | 1     |       | 800VA   | PLUG   | NEMA 5-20R  |
| S0002         | READER 300  | 120V    | 1     |       | 200VA   | PLUG   | NEMA 5-20R  |
| S0003         | SCANNER CHARGING STATION                                | 120V    | 1     |       | 600VA   | PLUG   | NEMA 5-20R  |
| S0004         | INCUBATOR   | 120V    | 1     |       | 500VA   | PLUG   | NEMA 5-20R  |
| S0005         | BATTERY CHARGING STATION                                | 120V    | 1     |       | 500VA   | PLUG   | NEMA 5-20R  |
| S0007         | ULTRASONIC CLEANER                                      | 120V    | 1     |       | 1000VA  | PLUG   | NEMA 5-20R  |
| S0046         | STERIS AMSCO DRYING CABINET                             | 120V    | 1     |       | 1500VA  | PLUG   | NEMA 5-20R  |
| S0442         | AMSCO 600 TUM TUM STERILIZER                            | 480V    | 3     | 7A    | 3820VA  | E-CONN |             |
| S0940         | STERIS AMSCO 20LPH WASHER / DISINFECTOR                 | 480V    | 3     | 34.5A | 28882VA | E-CONN |             |
| S0941         | STERIS WASHER / DISINFECTOR CONVEYOR SYSTEM             | 120V    | 1     | 12.5A | 1500VA  | PLUG   | NEMA 5-20R  |
| S0942         | STERIS MOTORISED RETURN CONVEYOR SYSTEM WITH DOOR       | 120V    | 1     | 12.5A | 1500VA  | PLUG   | NEMA 5-20R  |
| S1905         | STERIS AUTOMATED PASS THROUGH WINDOW 34"x40"            | 120V    | 1     | 1A    | 120VA   | PLUG   | NEMA 5-20R  |
| S2677         | ADVANCE PLUS PASS-THRU ENDOSCOPE REPROCESSOR            | 120V    | 1     | 10A   | 1200VA  | PLUG   | NEMA 5-20R  |
| S2655         | ENDOWAVE ULTRASONIC WIGGLER & CLEANER                   | 208V    | 3     | 15A   | 3420VA  | PLUG   | NEMA 15-20R |
| S3185         | STERIS VISION 1307 CART AND UTENSIL WASHER              | 480V    | 3     | 13.5A | 11224VA | E-CONN |             |
| S3905         | STERIS AMSCO VIND MAX LOW TEMP STERILIZER               | 208V    | 3     | 15A   | 3760VA  | PLUG   | NEMA 15-20R |
| S9810         | AMSCO PREP AND PACK WORK STATION 36" X 72" (ELECTRICAL) | 120V    | 1     | 15A   | 1800VA  | PLUG   | NEMA 5-20R  |

- REVISIONS:**
- REVISIONS:**
1. IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY ALL EQUIPMENT AND REQUIRED OPENINGS SHOWN ON THE DRAWINGS MATCH WHAT EQUIPMENT IS ACTUALLY PROVIDED. ANY CHANGES REQUIRED TO BE MADE IS THE CONTRACTOR'S RESPONSIBILITY TO REVERSE DRAWINGS AS NEEDED, INCLUDING ANY PROFESSIONAL ENGINEERING FEES ASSOCIATED AND SHALL BE AT NO ADDITIONAL COST TO THE VA.
  1. INSTALL DIGITAL CAMERA SCREEN AT REMOVED WINDOW LOCATION. SEE ARCHITECTURAL DRAWINGS FOR INFORMATION REGARDING OPENING WITH HEADER POCKET FROM LOCATION ABOVE OR AT HEADER POCKET. PROVIDE SURFACE METAL RACEWAY W/EMERALD OR EQUAL TO CONTROL STATION LOCATED ADJACENT TO WINDOW. PROVIDE SURFACE METAL RACEWAY FOR STATION W/EMERALD OR EQUAL TO CEILING SPACE. LOCATE AND MOUNT SPEAKERS IN CEILING. PROVIDE SURFACE ENCLASURE FOR SPEAKERS. PROVIDE TRIGGERS SWITCH NEARBY WINDOW TO SERVE AS DISCONNECT MEANS FOR POWER TO LUMINAIRE. PROVIDE CONTROL STATION FOR WAITING AREA WINDOW LUMINAIRE IN RECEPTION AREA.
  2. PROVIDE NEMA 15-20R GFI PROTECTED RECEPTACLE LOCATED IN THE WALL SERVING ACCESS PANEL. COORDINATE EXACT LOCATION OF ACCESS PANEL WITH ARCHITECT AND EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
  3. ELECTRICAL CONNECTION FOR HEAT TRACE IN STORM PIPING APPROXIMATELY 15 FEET OF HEAT TRACE LOCATED INSIDE STORM PIPING. REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION OF ROOF DRAINS AND ROOF DRAIN BASINS. REFER TO DETAIL SHEET FOR HEAT TRACE CONTROL DIAGRAM.
  4. POWER OPERATED DOOR. COORDINATE EXACT LOCATION WITH ARCHITECT.
  5. DOOR PUSH PAD OPERATOR PROVIDED BY U.S.C. AND INSTALLED BY E.C. INSTALL CONDUIT AND CONTROL WIRING PER MANUFACTURER'S RECOMMENDATIONS.

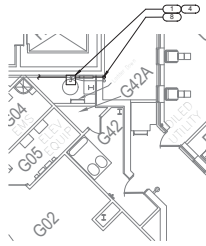


**3 PIPE BASEMENT FLOOR PLAN - POWER**  
10' x 10'

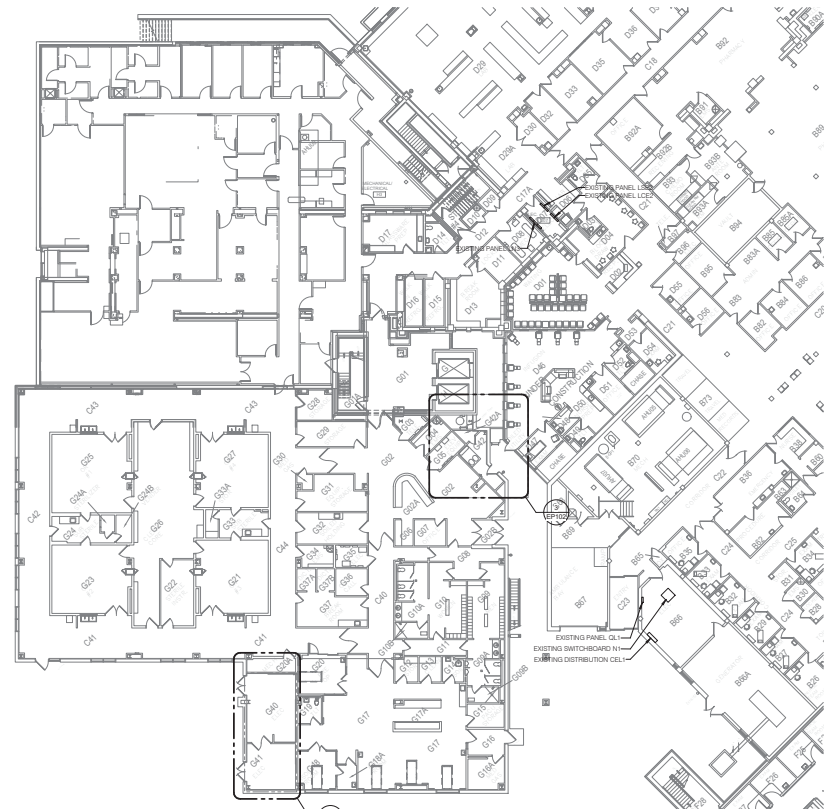
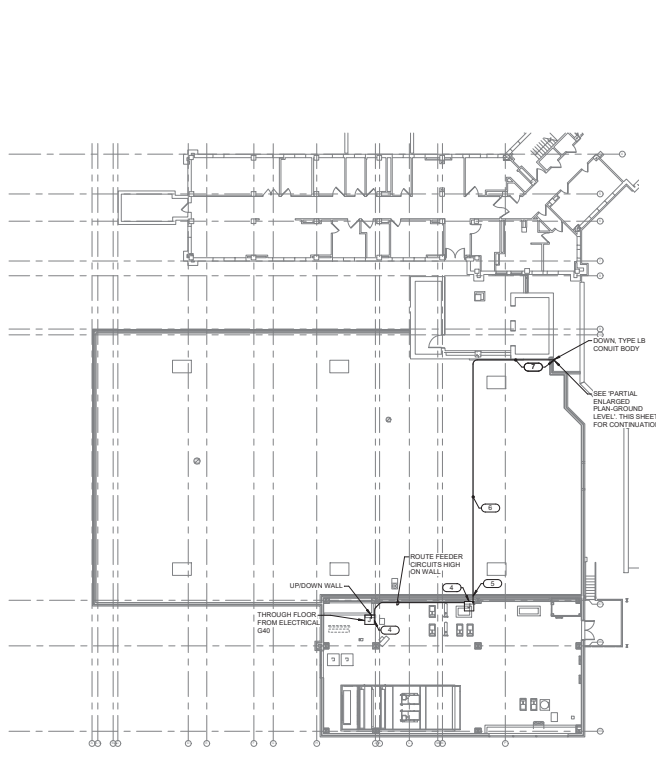
**1 GROUND LEVEL FLOOR PLAN - POWER**  
10' x 10'

**2 MECHANICAL/ELECTRICAL ROOM - POWER**  
10' x 10'

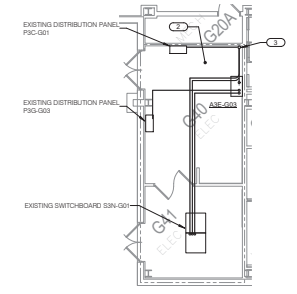
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| <b>Revisions:</b><br>_____<br>_____<br>_____<br>_____<br>_____<br>_____ | <b>Date:</b><br>_____ | <b>CONSULTANT</b><br><br>IME CONSULTANTS<br>1000 N. HIGHWAY 101, SUITE 100<br>ANDERSON, MISSOURI 64401<br>PHONE: 816.452.1000<br>FAX: 816.452.1001<br>WWW.IMECONSULTANTS.COM | <b>ARCHITECT/ENGINEER OF RECORD</b><br><br><b>ANDERSON</b><br>18605 3rd Ave. W. #150 Plymouth, MN 55441<br>P 783.432.4080   F 788.432.4090   JAM@A.COM<br>ANDERSON ENGINEERING & ARCHITECTURE, L.L.C.   PEOB # 16584 | <b>STAMP</b><br><br>WRITTEN BY: [Signature]<br>DATE: 1/14/2025 | <b>Office of Construction and Facilities Management</b><br><br>U.S. Department of Veterans Affairs | <b>Drawing Title</b><br>GROUND LEVEL FLOOR PLAN - POWER | <b>Phase</b><br>BID DOCUMENTS | <b>Project Title</b><br>CONSTRUCT NEW SPS | <b>Project Number</b><br>438-460 |
|   |                       |  |  |  |  | <b>Approved:</b><br>_____                               | <b>FULLY SPRINKLERED</b>      | <b>Location</b><br>Sioux Falls, SD        | <b>Building Number</b><br>5      |
|   |                       |  |  |  |  | <b>Issue Date</b><br>02/14/2025                         | <b>Checked</b><br>JMK         | <b>Drawn</b><br>JDR                       | <b>Drawing Number</b><br>EP101   |



**3 PARTIAL ENLARGED GROUND LEVEL FLOOR PLAN - POWER**  
1/8" = 1'-0"



- KEYNOTES:**
- SUGGESTED JUNCTION/PULL/PLACE BOX LOCATION INSTALLED AT LEVEL OF PENETRATION INTO MECHANICAL PIPE CHASE. FEEDER CIRCUITS ORIGINATING FROM ELECTRICAL ROOM G40 ARE NOT PERMITTED TO BE ROUTED THROUGH ANY PORTION OF THE FIRST FLOOR OPERATING SPACE. A SUGGESTED FEEDER CIRCUIT ROUTING IS SHOWN THAT ROUTING CONSISTS OF FOUR FEEDERS FOR DISTRIBUTION PANELS G41-1 AND TWO (2) ETL AND TRANSFORMER "LIFE". THE CONTRACTOR IS PERMITTED TO FIND AND USE ANOTHER ROUTE CONSIDERING PLACEMENT/USE OF JUNCTION/PULL/PLACE BOXES. CONDUIT BODIES ACCESS FOR INSTALLATION, SUPPORT, ETC. AFTER COORDINATION WITH THE COR.
  - ROUTE FEEDER CIRCUITS FROM THEIR RESPECTIVE PANELS TO CEILING OF ELECTRICAL ROOM. EXTEND THROUGH CEILING INTO MECHANICAL ROOM MEZZANINE ABOVE.
  - SUGGESTED LOCATION OF JUNCTION/PULL/PLACE BOX. COORDINATE MOUNTING WITH MECHANICAL EQUIPMENT AND PIPING. SIZE JUNCTION BOX PER THE LIST FOR MECHANICAL ROOM WIRE. AT A LEVEL AT THE EXTERIOR OF THE BUILDING ABOVE THE JOINT OF THE ROOF-ACCESS DOOR SILL AND THE BRICK WALL PENETRATION SHALL BE MADE BY CORE DRILLING, PATCH AND SEAL WALL PENETRATION TO MAKE WEATHERWATERTIGHT. ROUTE FEEDERS ACROSS THE EXISTING ROOF AT A HEIGHT LEVEL WITH THE EXT AT THE WALL OF THE MECHANICAL MEZZANINE. SUPPORT FEEDER CONDUITS PER THE M.E.C. AND FASTEN SECURELY TO THE EXISTING BUILDING STRUCTURE. EXTEND CONDUITS ALONG THE BRICK WALL AND THROUGH THE ROOF PARAPET WALL. TURN CONDUITS DOWN AFTER PENETRATION OF PARAPET TO LEVEL OF THE GROUND FLOOR CEILING SPACE. PARAPET WALL PENETRATION SHALL BE MADE BY CORE DRILLING, PATCH AND SEAL WALL PENETRATION TO MAKE WEATHERWATERTIGHT. FEEDER CONDUITS ROUTED DOWN FROM ROOF LEVEL. FASTEN SECURELY TO WALL ENTER BUILDING HIGH MECHANICAL PIPE CHASE. FIELD COORDINATE ENTRY THROUGH WALL INTO CHASE WITH EXISTING PIPING INSTALLED AT THE NORTH WALL.

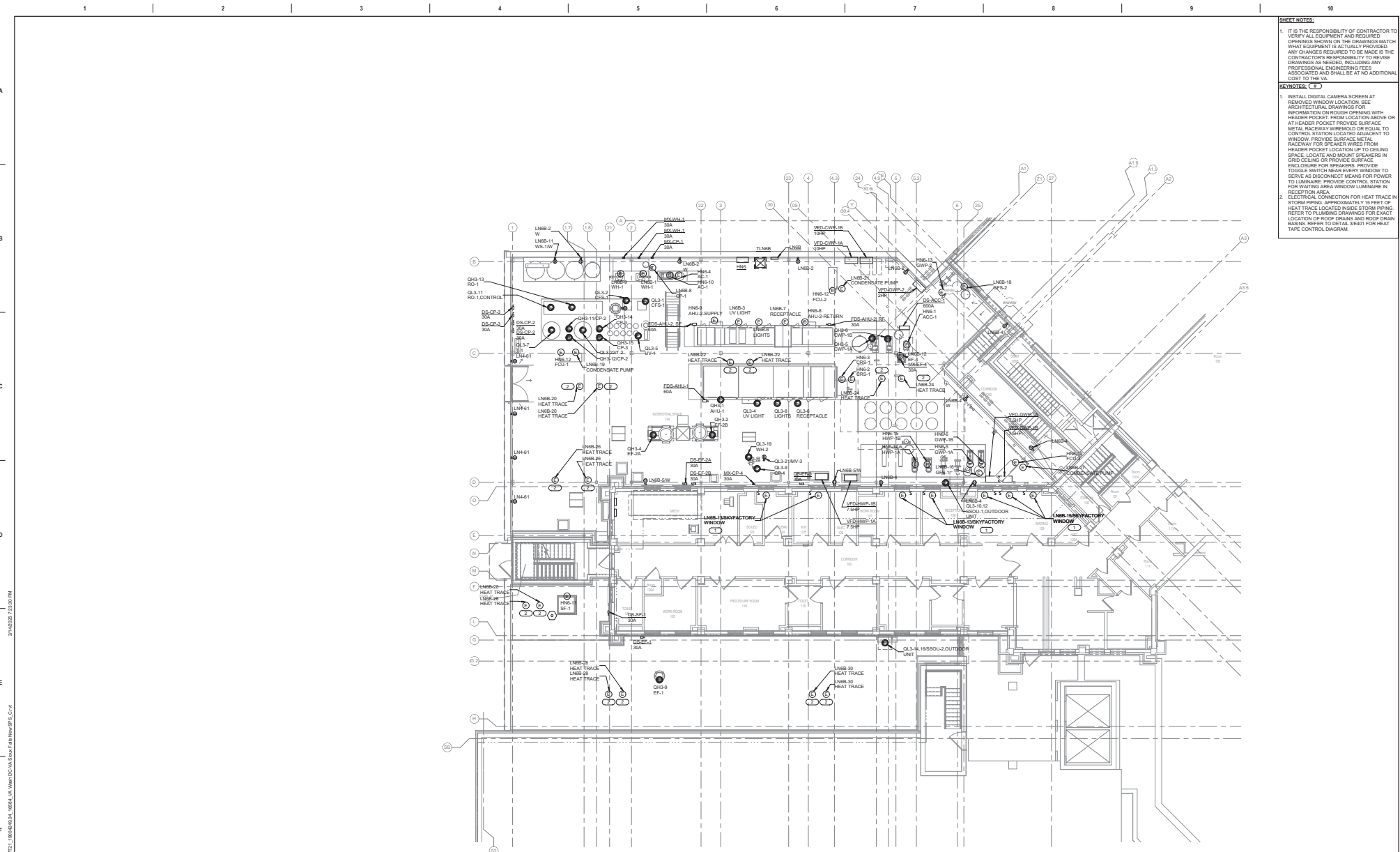


**4 PARTIAL GROUND LEVEL FLOOR PLAN - POWER - G40 & G41**  
1/8" = 1'-0"

**1 OR MEZZANINE/ROOF FLOOR PLAN - POWER**  
1/8" = 1'-0"

**2 PARTIAL GROUND LEVEL FLOOR PLAN - POWER**  
1/8" = 1'-0"

|   |  |   |                  |  |   |   |  |   |
|---|--|---|------------------|--|---|---|--|---|
| Revisions: _____ Date: _____<br>VA FORM 08 - 0231 | <b>CONSULTANT</b><br><br><small>18605 3rd Ave. N. #2100 Plymouth, MN 55441<br/>         P 788.432.4080   F 788.432.4090   www.imeg.com<br/>         Anderson Engineering &amp; Architecture, LLC   PWS # 16064</small> | <b>ARCHITECT/ENGINEER OF RECORD</b><br><b>ANDERSON</b><br><small>18605 3rd Ave. N. #2100 Plymouth, MN 55441<br/>         P 788.432.4080   F 788.432.4090   www.imeg.com<br/>         Anderson Engineering &amp; Architecture, LLC   PWS # 16064</small> | <b>STAMP</b><br> | <b>Office of Construction and Facilities Management</b><br>U.S. Department of Veterans Affairs | <b>Drawing Title</b><br>PARTIAL GROUND LEVEL FLOOR PLAN - POWER<br><b>Approved:</b> _____ | <b>Phase</b><br>BID DOCUMENTS<br><b>FULLY SPRINKLERED</b> | <b>Project Title</b><br>CONSTRUCT NEW SPS<br><b>Location</b><br>Sioux Falls, SD<br><b>Issue Date</b><br>02/14/2025<br><b>Checked</b><br>JMK<br><b>Drawn</b><br>JDR | <b>Project Number</b><br>438-460<br><b>Building Number</b><br>5<br><b>Drawing Number</b><br>EP102 |
|---|--|---|------------------|--|---|---|--|---|



**SHEET NOTES:**

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**REVISIONS:**

- INSTALL DIGITAL CAMERA SCREEN AT REMOVED WINDOW LOCATION SEE ARCHITECTURAL DRAWINGS FOR INFORMATION ON BUSH OPENING WITH METAL RACEWAY WIREMOLD OR EQUAL TO CONTROL STATION LOCATED ADJACENT TO WINDOW. PROVIDE SURFACE METAL RACEWAY FOR SPEAKER WIRES FROM HEADER POCKET LOCATION UP TO CEILING SPACE. LOCATE AND MOUNT SPEAKERS IN GRID SQUARE ON PROVIDED SURFACE ENCLOSURE FOR SPEAKERS. PROVIDE TOGGLE SWITCH NEAR EVERY WINDOW TO SERVE AS DISCONNECT MEANS FOR POWER TO LUMINAIRE. PROVIDE CONTROL STATION FOR WAITING AREA WINDOW LUMINAIRE IN RECEPTION AREA.
- ELECTRICAL CONNECTION FOR HEAT TRACE IN STORM PIPING APPROXIMATELY 1/2 FEET OF HEAT TRACE LOCATED INSIDE STORM PIPING. REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION OF ROOF DRAINS AND ROOF DRAIN BASINS. REFER TO DETAIL SHEET FOR HEAT TAPE CONTROL DIAGRAM.

**1 INTERSTITIAL/FIRST LEVEL FLOOR PLAN - POWER**  
1/8" = 1'-0"

|                              |                       |   |                  |  |   |                               |   |                                  |
|------------------------------|-----------------------|---|------------------|--|---|-------------------------------|---|----------------------------------|
| Revisions: _____ Date: _____ | <b>CONSULTANT</b><br> | <b>ARCHITECT/ENGINEER OF RECORD</b><br> | <b>STAMP</b><br> | <b>Office of Construction and Facilities Management</b><br>U.S. Department of Veterans Affairs | <b>Drawing Title</b><br>INTERSTITIAL/FIRST LEVEL FLOOR PLAN - POWER | <b>Phase</b><br>BID DOCUMENTS | <b>Project Title</b><br>CONSTRUCT NEW SPS | <b>Project Number</b><br>438-460 |
|                              |                       |   |                  |  | <b>Approved:</b> _____  | <b>FULLY SPRINKLERED</b>      | <b>Location</b><br>Sioux Falls, SD        | <b>Building Number</b><br>5      |
|                              |                       |   |                  |  |   |                               | <b>Drawing Number</b><br>EP111            | <b>Issue Date</b><br>02/14/2025  |
|                              |                       |   |                  |  |   |                               | <b>Checked</b><br>JMK                     | <b>Drawn</b><br>JDR              |

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 VA FORM 08-0221



**SHEET NOTES:**

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- E.G. SHALL PROVIDE A CLASS LIGHTING PROTECTION SYSTEM PER NFPA 780 AND U.L. 984 GUIDELINES FOR ENTIRE ROOF AREA. INTEGRATED WITH EXISTING LIGHTING PROTECTION SYSTEM IN PLACE. REFER TO SPECIFICATION 08 41 00 FOR LIGHTING PROTECTION SYSTEM REQUIREMENTS.

**KEYNOTES:**

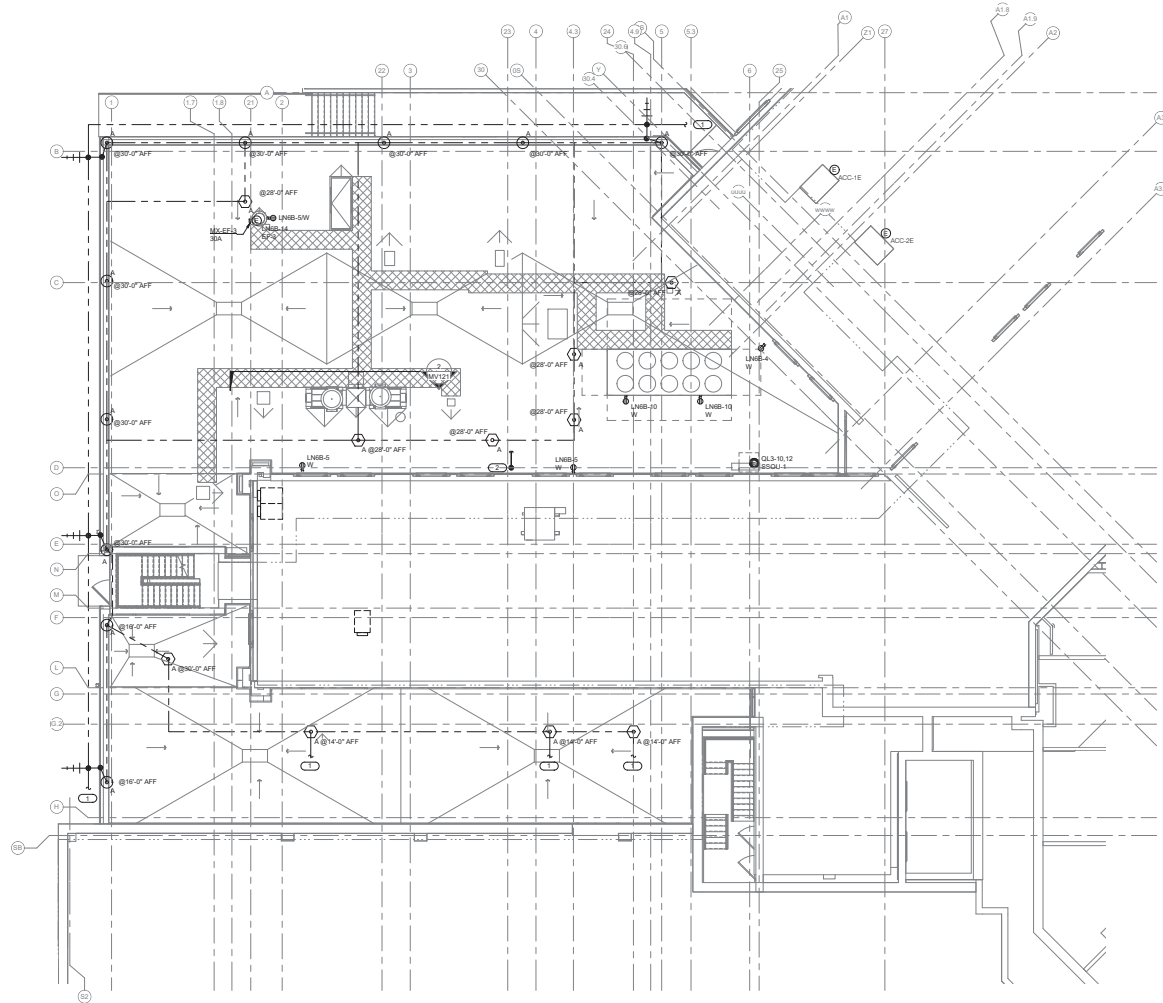
- EXTEND AND CONNECT TO EXISTING LIGHTING PROTECTION SYSTEM.
- EXISTING DOWN CONDUCTOR. REMOVE AND MODIFY TO ACCOMMODATE NEW CONSTRUCTION. EXISTING LIGHTING PROTECTION SYSTEM TO BE EXTENDED TO NEW LIGHTING PROTECTION SYSTEM LOCATED ON ADDITION.

**LIGHTNING PROTECTION SYMBOL KEY**

| SYMBOL | DESCRIPTION  |
|--------|--|
|        | AIR TERMINAL, PARAPET MOUNTED, SUBSCRIPT "A" 1/2" ABOVE SURFACE, "A" 1/4" 1/2" ABOVE SURFACE |
|        | AIR TERMINAL, FLAT ROOF  |
|        | AIR TERMINAL, EQUIPMENT MOUNTED  |
|        | LIGHTNING PROTECTION THROUGH PENETRATION   |
|        | EXPOSED DOWN CONDUCTOR   |
|        | EXPOSED GROUND ROD AND DOWN CONDUCTOR  |
|        | LIGHTNING PROTECTION CONDUCTOR   |

**CLASS 1 MATERIAL REQUIREMENTS**

| TYPE OF CONDUCTOR                            | COPPER   |                    |
|--|--|--------------------|
|  | STANDARD   | METRIC             |
| AIR TERMINAL, SOLID                          | 3/8 IN.  | 9.5 MM             |
| AIR TERMINAL, TUBULAR                        | MIN. DIAMETER: 5/8 IN.<br>MIN. WALL THICKNESS: 0.03 IN.  | 15.9 MM<br>0.8 MM  |
| MAIN CONDUCTOR, CABLE                        | MIN. SIZE 6/8 STRAND<br>NO. OF STRANDS: 16<br>PEELE LENGTH: 15 FT<br>CROSS SECT. AREA: 57 MM <sup>2</sup> CM | 278 MM<br>29 MM    |
| MAIN CONDUCTOR, SOLID STRIP                  | THICKNESS: 0.051 IN.<br>WIDTH: 1 IN.   | 1.30 MM<br>25.4 MM |
| BONDING CONDUCTOR, CABLE (SOLID OR STRANDED) | MIN. SIZE 6/8 STRAND<br>CROSS SECT. AREA: 17 MM <sup>2</sup> CM<br>26.51 CM                                  |                    |
| BONDING CONDUCTOR, SOLID STRIP               | THICKNESS: 0.051 IN.<br>WIDTH: 1/2 IN.   | 1.30 MM<br>12.7 MM |



**1 ROOF PLAN - POWER**  
1/8" = 1'-0"

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**CONSULTANT**

**IMEG**

1000 SOUTH STREET  
DIX NOTED BLDG.  
114 MILLERS AVE. #200-200A  
www.imeg.com  
PROJECT # 16062404

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**ARCHITECT/ENGINEER OF RECORD**

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13605 3rd Ave. N., 51300 Plymouth, MN 55441  
P 783.432.4080 | F 788.432.5090 | [www.anderson-engineers.com](http://www.anderson-engineers.com)  
Anderson Engineering Co. Minneapolis, MN | PEO # 16064

**STAMP**

PROFESSIONAL ENGINEER  
WRITTEN BY  
DATE

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**  
ROOF PLAN - POWER

**Approved:**

**Phase**  
BID DOCUMENTS

**FULLY SPRINKLERED**

**Project Title**  
CONSTRUCT NEW SPS

**Location**  
Sioux Falls, SD

**Issue Date**  
02/14/2025

**Checked**  
JMK

**Drawn**  
JDR

**Project Number**  
438-460

**Bidding Number**  
5

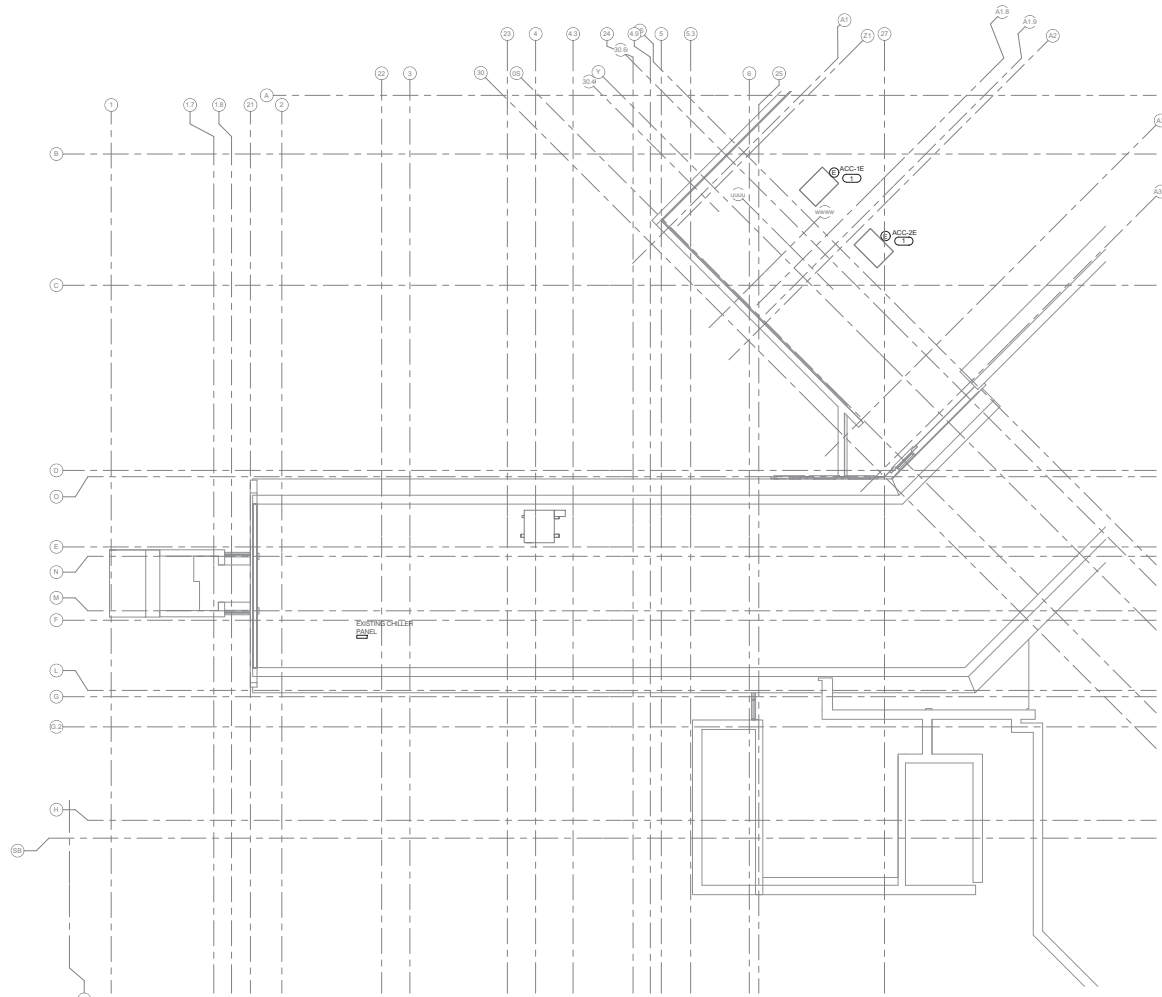
**Drawing Number**  
EP121

**SHEET NOTES:**

- IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY ALL EQUIPMENT AND REQUIRED OPENINGS SHOWN ON THE DRAWINGS MATCH WHAT EQUIPMENT IS ACTUALLY PROVIDED. ANY CHANGES REQUIRED TO BE MADE IS THE CONTRACTOR'S RESPONSIBILITY TO REVISE DRAWINGS AS NEEDED, INCLUDING ANY PROFESSIONAL ENGINEERING FEES ASSOCIATED AND SHALL BE AT NO ADDITIONAL COST TO THE VA.

**REVISIONS:** (P)

- EXTEND NEW CONDUCTORS AND CONDUIT FROM RELOCATED MECHANICAL UNIT TO EXISTING CIRCUIT BREAKER PREVIOUSLY SERVING UNIT IN CHILLER PANEL ON LEVEL 5.



**1 FIFTH LEVEL FLOOR PLAN - POWER**

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**CONSULTANT**

**IMEG**

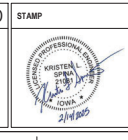
1800 SOUTH STREET  
 SUITE 2000  
 FARGO, ND 58103  
 WWW.IMEG.COM  
 PROJECT # 1800000000

DATE: 02/14/2025  
 DRAWN BY: JDR  
 CHECKED BY: JMK

**ARCHITECT/ENGINEER OF RECORD**

**ANDERSON**

18605 1st Ave. N. 8130 Plymouth, MN 55441  
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 Anderson Engineering of Minnesota, LLC | PEJ # 16064



**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

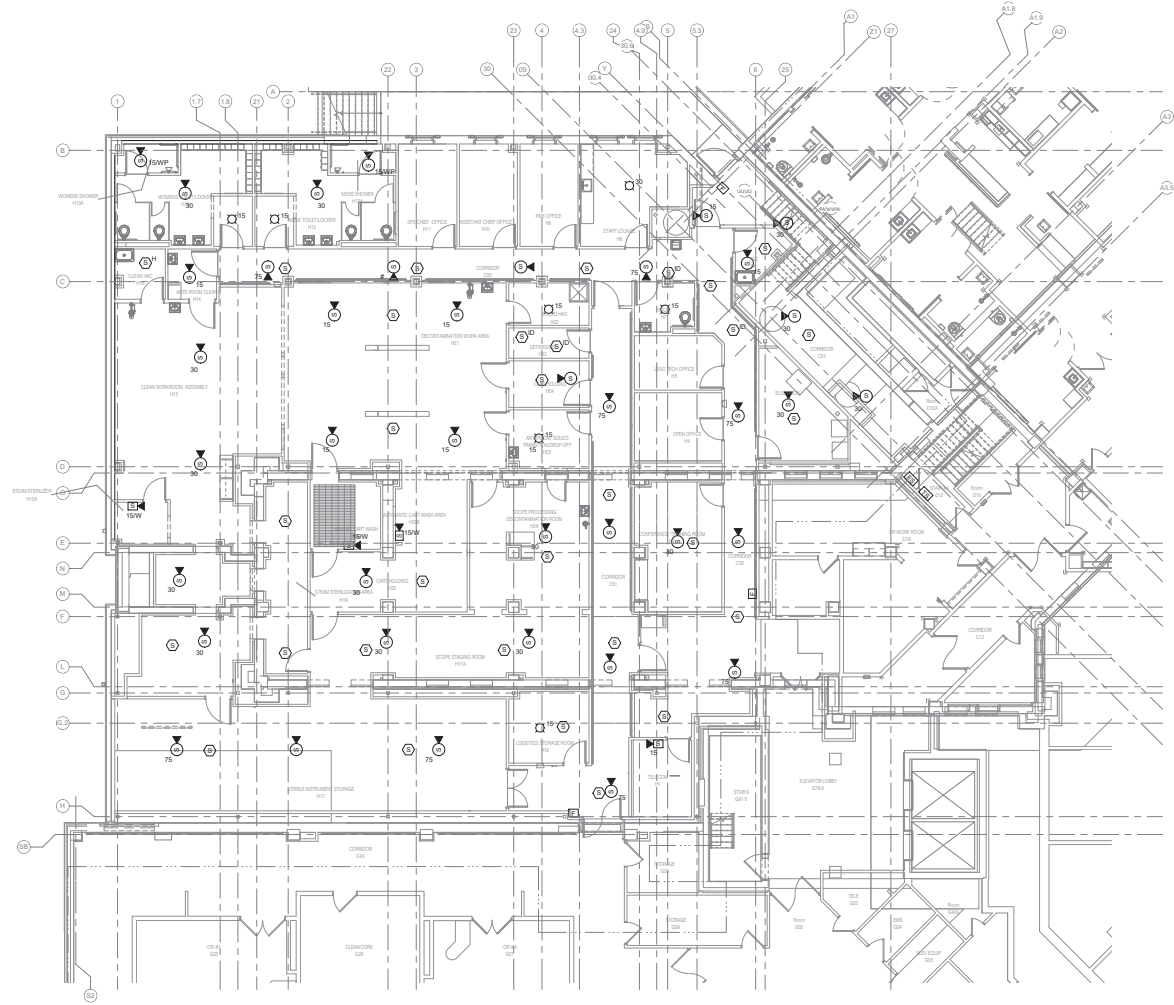
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| <b>Drawing Title</b> | FIFTH LEVEL FLOOR PLAN - POWER |
| <b>Approved:</b>     |                                |

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| <b>Phase</b>             | BID DOCUMENTS |
| <b>FULLY SPRINKLERED</b> |               |

|                      |                   |
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| <b>Project Title</b> | CONSTRUCT NEW SPS |
| <b>Location</b>      | Sioux Falls, SD   |
| <b>Issue Date</b>    | 02/14/2025        |
| <b>Checked</b>       | JMK               |
| <b>Drawn</b>         | JDR               |

|                        |         |
|------------------------|---------|
| <b>Project Number</b>  | 438-460 |
| <b>Building Number</b> | 5       |
| <b>Drawing Number</b>  | EP151   |

**SHEET NOTES.**  
 1. IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY ALL EQUIPMENT AND REQUIRED OPENINGS SHOWN ON THE DRAWINGS MATCH WHAT EQUIPMENT IS ACTUALLY PROVIDED. ANY CHANGES REQUIRED TO BE MADE IS THE CONTRACTOR'S RESPONSIBILITY TO REVISE DRAWINGS AS NEEDED, INCLUDING ANY PROFESSIONAL ENGINEERING FEES ASSOCIATED AND SHALL BE AT NO ADDITIONAL COST TO THE VA.



**1 GROUND LEVEL FLOOR PLAN - FIRE ALARM**  
 1/8" = 1'-0"

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**CONSULTANT**

**IMEG**

1800 SOUTH STREET  
 ONE FLOOR F.A. OFFICE  
 114 S. 14TH ST. SUITE 200  
 SIOUX FALLS, SD 57104  
 WWW.IMEG.COM  
 PROJECT # 18044

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APPROVED SCALE IN FEET

**ARCHITECT/ENGINEER OF RECORD**

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18605 1st Ave. W., 8120 Plymouth, MN 55441  
 P 781.412.4080 | F 781.412.4500 | JAH-AB-C-10  
 Anderson Engineering & Architecture, LLC | PROJ # 18044

**STAMP**

REGISTERED PROFESSIONAL ARCHITECT  
 WRITTEN SIGNATURE  
 JAH

Office of Construction and Facilities Management

**VA** U.S. Department of Veterans Affairs

Drawing Title  
**GROUND LEVEL FLOOR PLAN - FIRE ALARM**

Approved:

Phase  
**BID DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**CONSTRUCT NEW SPS**

Location  
**Sioux Falls, SD**

Issue Date  
 02/14/2025

Checked  
 JMK

Drawn  
 JDR

Project Number  
 438-460

Building Number  
 5

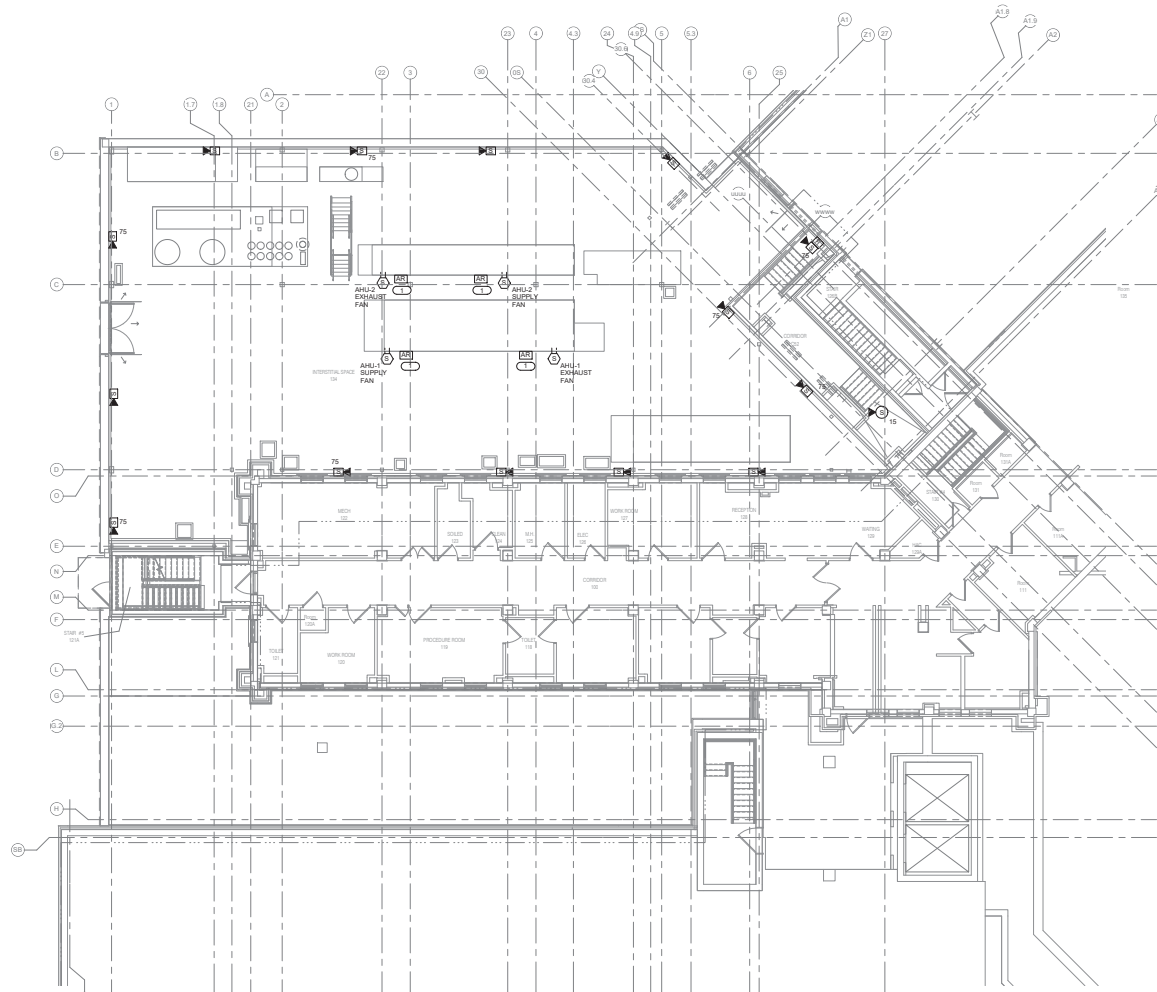
Drawing Number  
**FA101**

**SHEET NOTES:**

- IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY ALL EQUIPMENT AND REQUIRED OPENINGS SHOWN ON THE DRAWINGS MATCH WHAT EQUIPMENT IS ACTUALLY PROVIDED. ANY CHANGES REQUIRED TO BE MADE IS THE CONTRACTOR'S RESPONSIBILITY TO REVISE DRAWINGS AS NEEDED, INCLUDING ANY PROFESSIONAL ENGINEERING FEES ASSOCIATED AND SHALL BE AT NO ADDITIONAL COST TO THE VA.

**REVNOTES: (P)**

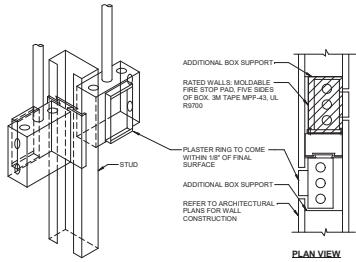
- ADDRESSABLE RELAY FOR FAN SHUTDOWN MOUNT WITHIN 5 FEET OF FAN CONTROLLER. REFER TO DETAIL 1E-01 FOR MORE INFORMATION.



**1 INTERSTITIAL/FIRST LEVEL FLOOR PLAN - FIRE ALARM**

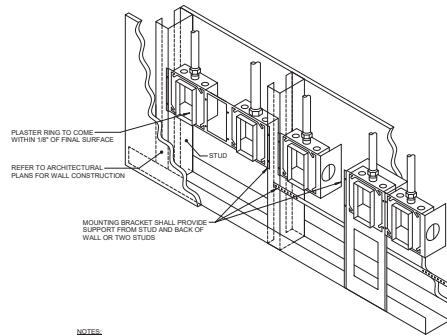
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| Revisions: _____ Date: _____<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10 | <b>CONSULTANT</b><br><br><small>1800 SOUTH STREET<br/>DIXIE HEIGHTS PLAZA<br/>114 S. BROADWAY, 4TH FLOOR<br/>ANN ARBOR, MI 48106<br/>www.imeg.com<br/>PROJECT # 180604000</small><br><small>THIS COPY REMAINS THE PROPERTY OF IMEG. NO PARTS OF THIS DRAWING ARE TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE EXPRESS WRITTEN PERMISSION OF IMEG CONSULTANT GROUP, INC.</small> | <b>ARCHITECT/ENGINEER OF RECORD</b><br><br><small>18605 3rd Ave. N., 2120 Plymouth, MN 55441<br/>P 781.432.4080   F 781.432.4500   jw@anderson.com<br/>Anderson Engineering of Minnesota, LLC   PEO # 16064</small> | <b>STAMP</b><br><br><small>CRISTEN SPAHN<br/>Professional Engineer<br/>No. 1000000000</small> | <b>Office of Construction and Facilities Management</b><br>U.S. Department of Veterans Affairs | <b>Drawing Title</b><br>INTERSTITIAL/FIRST LEVEL FLOOR PLAN - FIRE ALARM<br><b>Approved:</b> _____ | <b>Phase</b><br>BID DOCUMENTS<br>FULLY SPRINKLERED | <b>Project Title</b><br>CONSTRUCT NEW SPS<br><b>Location</b><br>Sioux Falls, SD<br><b>Issue Date</b><br>02/14/2025 | <b>Project Number</b><br>438-460<br><b>Building Number</b><br>5<br><b>Drawing Number</b><br>FA111 | <b>Checked</b><br>JMK<br><b>Drawn</b><br>JDR |
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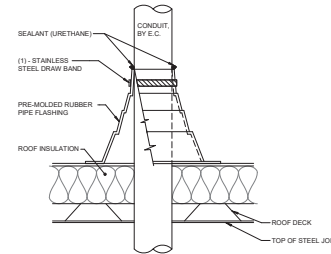
**NOTES:**  
 1. HORIZONTAL CONDUIT CONNECTION BETWEEN BOXES LESS THAN 2'-0" NOT PERMITTED. SEE SPECIFICATIONS AND DRAWING NOTES FOR ADDITIONAL SPACE REQUIREMENTS BETWEEN DEVICES.

**1 SIDE BY SIDE DEVICE OPENINGS**  
 NO SCALE



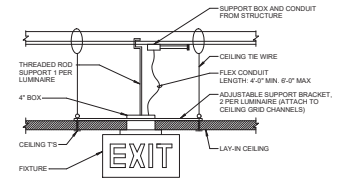
**NOTES:**  
 1. THE INTENT OF THE DETAIL IS TO ENSURE DEVICE ROUGHING ARE ALIGNED SOLIDLY MOUNTED AND THE SURFACE OF THE TRIM IS EITHER FLUSH WITH THE WALL SURFACE OR WITHIN 1/8" OF THE WALL SURFACE. JUNCTION BOXES LARGER THAN 4" SQUARE SHALL BE MOUNTED IN A MANNER THAT IS SIMILAR TO THE SYSTEM NOTED ABOVE OR ACHIEVES THE SAME RESULTS.  
 2. PLASTER RINGS DEPTH SHALL BE 1/8" DEEPER THAN THE GYP BOARD APPLIED TO THE WALL. PLASTER RING SHALL BE 3/8" FOR USE WITH 3/8" GYP BOARD.  
 3. MOUNTING BRACKET FOR 2 1/2" OR 3 1/2" STUDS SHALL BE CADDY #H23, OR B-LINE B84-23. MOUNTING BRACKET FOR 4" OR 6" STUDS SHALL BE CADDY #B215 OR B-LINE B84-F. FOR MULTIPLE BOXES BETWEEN STUDS, BRACKET SHALL BE CADDY #B8516#B854 OR B-LINE B85-# OR B89# FLOOR MOUNT SUPPORT WITH 3/8".  
 4. WHERE RECEIPTABLE AND TECHNOLOGY DEVICES ARE SHOWN SERVING A COMMON COMPUTER OR EQUIPMENT OR SHOWN IN SIMILAR LOCATIONS ON THE DRAWINGS, THE DEVICES SHALL BE REINSTALLED ON OPPOSITE SIDES OF A COMMON STUD OR IN ADJACENT OPENINGS WITH MOUNTING BRACKETS.

**2 BACKBOX MOUNTING DETAIL**  
 NO SCALE

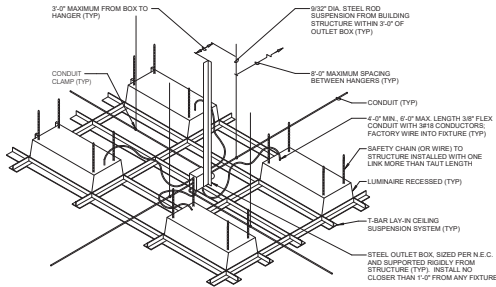


**NOTES:**  
 1. CONDUIT SHALL BE SUPPORTED WITHIN 24 INCHES ABOVE AND BELOW ROOF.  
 2. VERIFY FINAL REQUIREMENTS WITH GENERAL CONTRACTOR (G.C.) AND ROOFING INSTALLER PRIOR TO INSTALLATION.

**3 CONDUIT ROOF PENETRATION**  
 NO SCALE

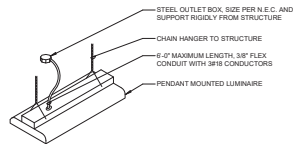


**4 EXIT SIGN MOUNTING DETAIL**  
 NO SCALE



**NOTES:**  
 1. DO NOT SUPPORT CONDUIT OR BOXES FROM CEILING GRID HANGERS.  
 2. PROVIDE A MINIMUM OF TWO INDEPENDENT #12 GAUGE SUSPENDED CEILING SUPPORT WIRES LOCATED ON DIAGONAL CORNERS OF THE LUMINAIRE. LUMINAIRE WEIGHING 66 LBS OR GREATER REQUIRE FOUR SUPPORT WIRES. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

**5 RECESSED LUMINAIRE DETAIL (SAFETY CHAIN)**  
 NO SCALE



**NOTES:**  
 1. SELECT CHAIN LENGTH TO PROVIDE MOUNTING HEIGHT AS REQUIRED ON DRAWINGS.  
 2. PROVIDE TWO CHAIN HANGERS FOR EACH LUMINAIRE. ADJUST TO HANG LUMINAIRE LEVEL.

**6 CHAIN SUSPENDED MOUNTING DETAIL**  
 NO SCALE

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**CONSULTANT**  
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 1800 Syc Ave., # 2100, Minneapolis, MN 55441  
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**Office of Construction and Facilities Management**  
 VA U.S. Department of Veterans Affairs

**Drawing Title**  
 ELECTRICAL DETAILS

**Approved:**

**Phase**  
 BID DOCUMENTS

**FULLY SPRINKLERED**

**Project Title**  
 CONSTRUCT NEW SPS

**Location**  
 Sioux Falls, SD

**Issue Date**  
 02/14/2025

**Checked**  
 JMK

**Drawn**  
 JDR

**Project Number**  
 438-460

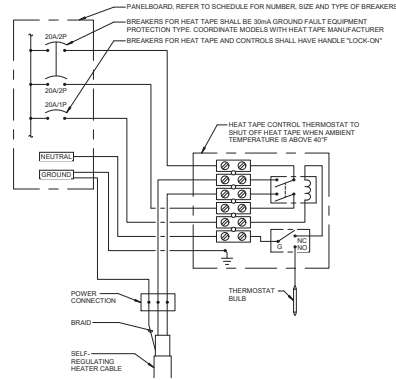
**Building Number**  
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**Drawing Number**  
 E400

**CONDUIT INSTALLATION SCHEDULE**

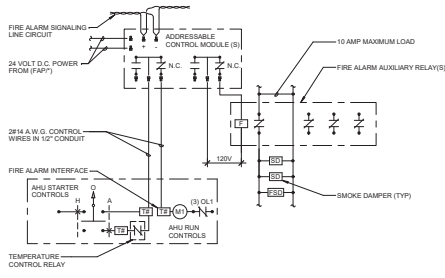
THE FOLLOWING SCHEDULE SHALL BE ADHERED TO UNLESS THEY CONSTITUTE A VIOLATION OF APPLICABLE CODES OR ARE NOTED OTHERWISE ON THE DRAWINGS. THE INSTALLATION OF PVC CONDUIT WILL BE PERMITTED IN PLACE OF ALL CONDUIT SPECIFIED IN THIS SCHEDULE. REFER TO CONDUIT AND BOXES SPECIFICATION 24.05.03 FOR ADDITIONAL INFORMATION.

| INSTALLATION TYPE  | RMC | IMC | EMT | RTRC | PVC COATED RMC | PVC | PVC CONCRETE ENCASED | HDPE | ASR |
|--|-----|-----|-----|------|----------------|-----|----------------------|------|-----|
| FEEDERS, SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, MOTOR CONTROL CENTERS, ETC.                               |     | X   | X   |      |                |     |                      |      |     |
| BRANCH CIRCUITS, LIGHTING, RECEPTACLES, CONTROLS, ETC.   |     | X   | X   |      |                |     |                      |      |     |
| MECHANICAL EQUIPMENT FEEDERS, PUMPS, CHILLERS, AIR HANDLING UNITS, ETC.  |     | X   | X   |      |                |     |                      |      |     |
| FLOOR MOUNTED EQUIPMENT FEEDERS, PUMPS, ETC. (INCLUDE NO MORE THAN 6 FEET OF LFMC TO PUMP)                         |     | X   | X   |      |                |     |                      |      |     |
| CONTROLS (LIGHTING, POWER, BUILDING AUTOMATION, ETC.)  |     | X   | X   |      |                |     |                      |      |     |
| FINISHED SPACES / CONCEALED  |     |     | X   |      |                |     |                      |      |     |
| WET AND DAMP LOCATIONS (CONDUIT, BOXES, FITTINGS, INSTALLED AND EQUIPPED TO PREVENT WATER ENTRY)                   | X   |     |     | X    |                |     |                      |      |     |
| CORROSIVE LOCATIONS  |     |     |     | X    | X              |     |                      |      |     |
| ELEVATED CONCRETE SLABS (ABOVE GRADE)  | X   |     |     |      |                | X   |                      |      |     |
| INTERIOR LOCATIONS: CONCEALED  |     |     | X   |      |                |     |                      |      |     |
| INTERIOR LOCATIONS: EXPOSED  |     | X   | X   |      |                |     |                      |      |     |
| INTERIOR LOCATIONS: EXISTING WALLS AND EXPOSED INSTALLATION (FINISHED SPACES)                                      |     |     | X   |      |                |     |                      |      | X   |
| <b>UNDERGROUND / SLABS ON GRADE (IN OR UNDER SLABS ON GRADE)</b>   |     |     |     |      |                |     |                      |      |     |
| WITHIN 5' FROM THE PERIMETER OF THE BUILDING   | X   |     |     |      |                | X   |                      |      |     |
| WITHIN 5' FROM THE PERIMETER OF THE BUILDING WHEN PASSING THROUGH THE PERIMETER OF THE BUILDING FOUNDATION.        | X   |     |     | X    |                |     | X                    |      |     |
| <b>UNDERGROUND SITE CONDUITS:</b>  |     |     |     |      |                |     |                      |      |     |
| WITHIN 5' FROM THE PERIMETER OF A BUILDING FOUNDATION  | X   |     |     | X    |                |     | X                    |      |     |
| 5' OR GREATER FROM THE PERIMETER OF A BUILDING FOUNDATION  | X   |     |     | X    | X              | X   |                      |      |     |
| UNDER ROADS, DRIVES, AND VEHICLE TRAVELED WAYS, WHEN HERE DIRECTIONAL BORING IS ALLOWED: PROVIDE PRESSURIZED GROUT |     |     |     |      | X              | X   |                      | X    |     |
| FIRE RATED ASSEMBLIES: FIRE RATED ASSEMBLIES LISTED WITH PHENOLIC RTRC RACEWAY                                     |     |     |     | X    |                |     |                      |      |     |



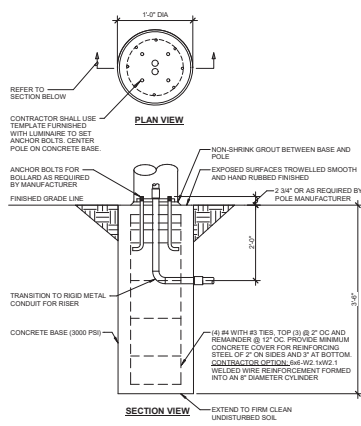
NOTE:  
1. ALL WIRING SHALL BE COPPER TYPE THWNY INSTALLED IN IMC CONDUIT.

**3 HEAT TAPE CONTROL DIAGRAM**  
NO SCALE



NOTES:  
1. SEQUENCE OF OPERATION: ADDRESSABLE CONTROL MODULE PROGRAMMED NORMALLY CLOSED FOR NORMAL OPERATION UPON ACTIVATION OF A SMOKE DETECTOR IN THE AREA SERVED BY THE AHU, THE CONTROL MODULE WILL OPEN (SHUTTING DOWN THE AHU) AND CLOSING THE SMOKE DAMPERS.

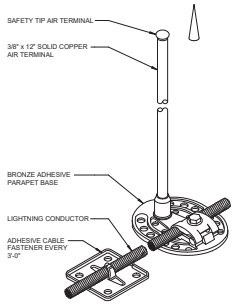
**1 AHU SHUT DOWN - ADDRESSABLE**  
1/2" = 1'-0"



**2 BOLLARD BASE DETAIL**  
NO SCALE

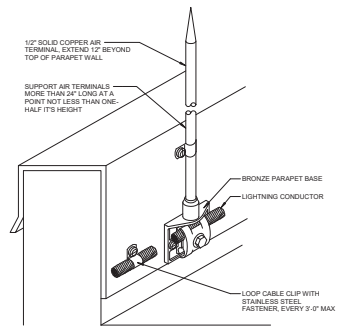
|  |   |  |  |  |   |   |                                  |
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| Revisions: _____ Date: _____<br>CONSULTANT<br><b>IMEG</b><br>1800 SOUTH STREET<br>DIX NOTED A-201<br>414 BARRIE AVE. #25-204<br>WILSONVILLE, OR 97150<br>PROJECT # 180600000 | ARCHITECT/ENGINEER OF RECORD<br><b>ANDERSON</b><br>1860S 1st Ave. W., 21200 Highway 10, MN 55441<br>P 783.432.4000   F 788.432.4500   248-881.0010<br>Anderson Engineering Co. Minneapolis, LLC   P&Q # 16004 | STAMP<br>WRITTEN BY: _____<br>CHECKED BY: _____<br>DATE: _____ | Office of Construction and Facilities Management<br>VA U.S. Department of Veterans Affairs | Drawing Title<br><b>ELECTRICAL DETAILS</b> | Phase<br><b>BID DOCUMENTS</b>                 | Project Title<br><b>CONSTRUCT NEW SPS</b> | Project Number<br><b>438-460</b> |
|  |   |  |  | Approved: _____                            | Fully Sprinklered<br><b>FULLY SPRINKLERED</b> | Location<br><b>Sioux Falls, SD</b>        | Building Number<br><b>5</b>      |

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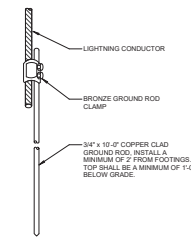


**1 ADHESIVE AIR TERMINAL**  
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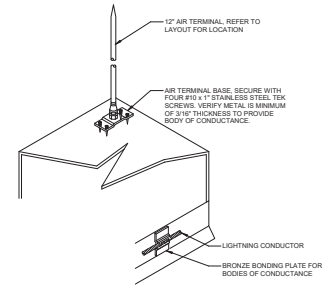
**NOTES:**  
1. E.C. SHALL VERIFY COMPATIBILITY OF ADHESIVE WITH ROOFING SYSTEM SUPPLIER PRIOR TO INSTALLATION.



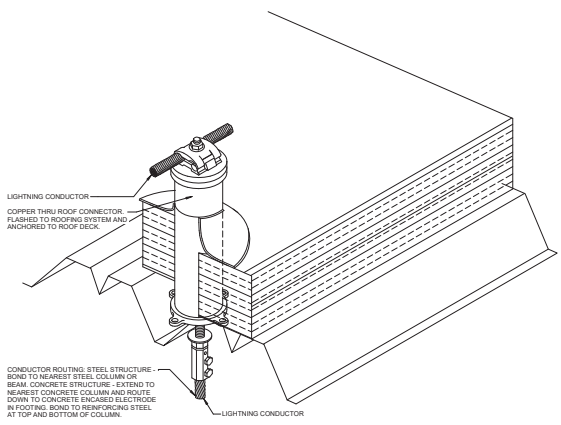
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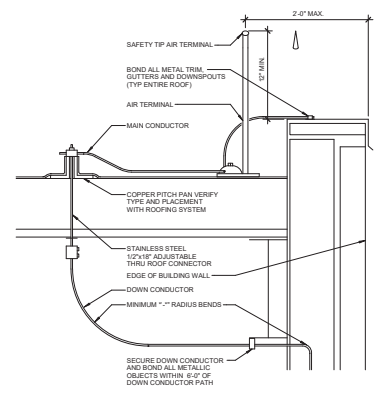
**3 TYPICAL GROUNDING DETAIL**  
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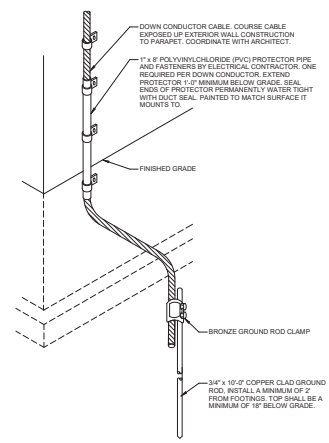
**4 EQUIPMENT AIR TERMINAL**  
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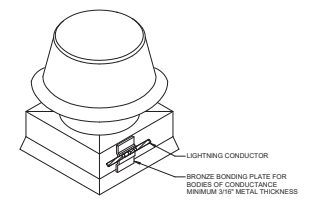
**5 ROOF PENETRATION DETAIL**  
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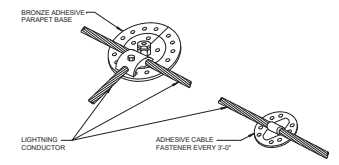
**6 PERIMETER AIR TERMINAL DETAIL**  
NO SCALE



**7 GROUNDING AT GRADE DETAIL**  
NO SCALE



**8 BONDING FOR METAL BODIES**  
NO SCALE



**9 CABLE JUNCTION POINT**  
NO SCALE

**NOTES:**  
1. E.C. SHALL VERIFY COMPATIBILITY OF ADHESIVE WITH ROOFING SYSTEM MANUFACTURER PRIOR TO INSTALLATION.

24 AUGUST 2023 PM 2:40:58 24 AUGUST 2023 PM 2:40:58 24 AUGUST 2023 PM 2:40:58

|            |       |
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| Revisions: | Date: |
|            |       |
|            |       |
|            |       |
|            |       |

**CONSULTANT**

**IMEG**  
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PROJECT # 16060004

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REDUCED SCALE IN NOTES

**ARCHITECT/ENGINEER OF RECORD**

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Anderson Engineering of Minnesota, LLC | PEO # 16064

**STAMP**

KRISTEN SPAIN  
2/14/2025

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**  
ELECTRICAL DETAILS

**Approved:**

**Phase**  
BID DOCUMENTS

**FULLY SPRINKLERED**

**Project Title**  
CONSTRUCT NEW SPS

**Location**  
Sioux Falls, SD

**Issue Date**  
02/14/2025

**Checked**  
JMK

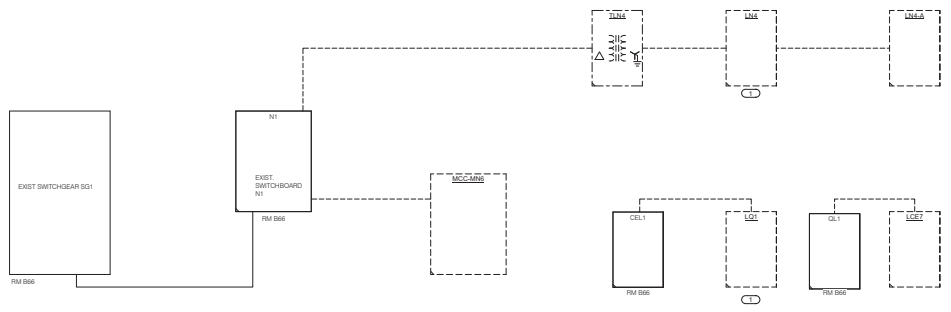
**Drawn**  
JDR

**Project Number**  
438-460

**Building Number**  
5

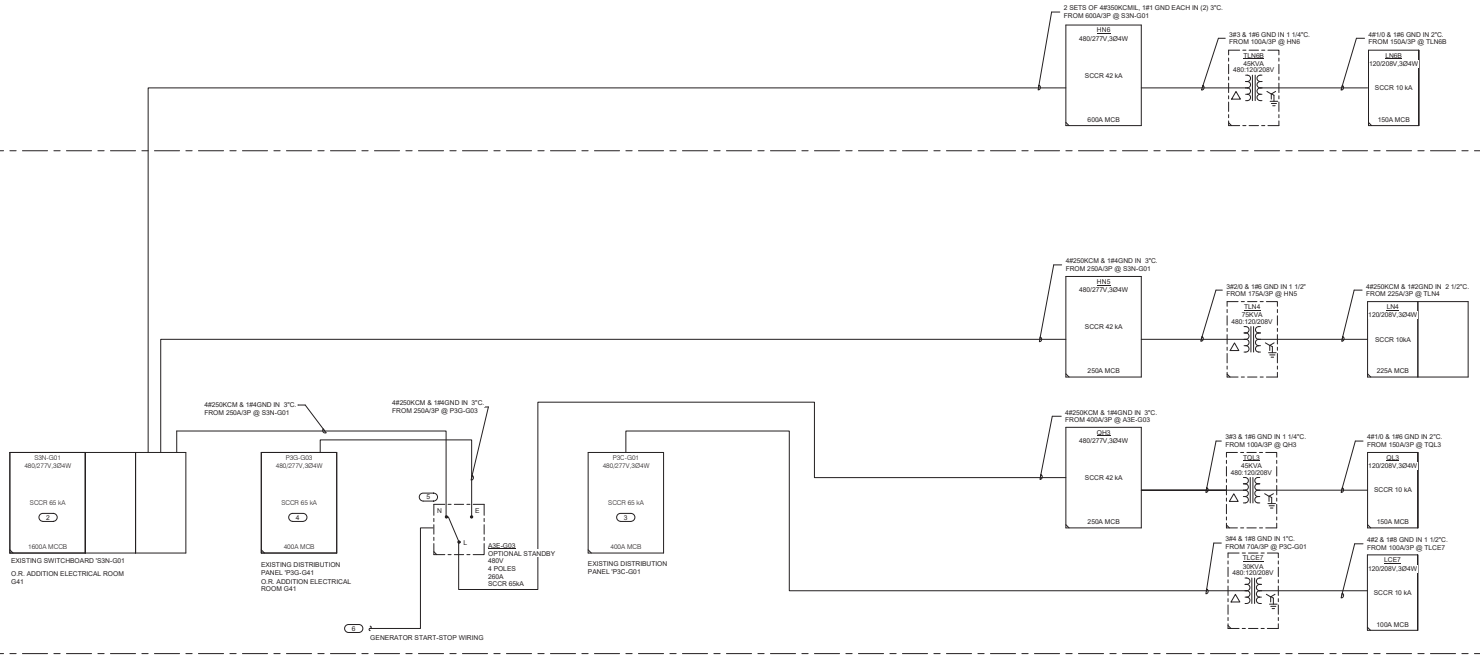
**Drawing Number**  
E402

**2 PARTIAL RISER DIAGRAM-DEMOLITION**  
NO SCALE



- KEYNOTES**
- INTERCEPT EXISTING OVERHEAD ROUTED BRANCH CIRCUITING AT LOCATION ABOVE LEVEL OF NEW CEILING FOR CONNECTION TO NEW PANEL INDICATED. SEE NEW PANEL LM OR OLY SCHEDULE AS APPLICABLE. FOR BALANCED CIRCUITS FROM EXISTING PANELS, PROVIDE NEW SPL SPLITTER BOX AND INSTAL TO INTERCEPT EXISTING CIRCUIT CONDUCTORS FOR CONNECTION TO BRANCH CIRCUITS FROM NEW PANEL. SEE NEW BOX PER THE N.E.C.
  - EXISTING SWITCHBOARD CONTAINS THREE (3) 800 AMP SPARE CIRCUIT BREAKERS. PROVIDE NEW TRIP PLUG AND OR ADJUST SETTING OF EXISTING BREAKERS. BREAKERS SERVING 1W1 AND 1S3 FOR PANEL 'OH1' SHALL BE RATED FOR 600AMPS. FOR 1W10 USE THE SPARE BREAKER IN THE CENTER SECTION. USE THE BREAKER IN THE END SECTION FOR 1W1 AND OLS.
  - PROVIDE SQUARE D 70A3P, 480V BREAKER FOR EXISTING 480V PANEL TO SERVE TRANSFORMER TLECF. CIRCUIT BREAKER SHALL BE RATED FOR 65,000 AMP INTERRUPTING CAPACITY.
  - PROVIDE SQUARE D J250, 480V BREAKER FOR EXISTING 480V PANEL TO SERVE ATS. BREAKER SHALL BE RATED FOR 60,000 AMP INTERRUPTING CAPACITY.
  - TRANSFER SWITCH SHALL BE ASCO 7000 SERIES OR EQUAL. SWITCH SHALL BE RATED FOR 250 AMPS WITH SHORT CIRCUIT CURRENT RATING OF 38,000A. PROVIDE TRANSFER SWITCH WITH FAILURE PACKAGE MOUNTED IN FACE OF TRANSFER SWITCH TO MATCH OTHER ASCO 7000 SWITCHES. FEATURE PACKAGE SHALL INCLUDE INDICATOR LIGHTS AND ROTARY SWITCH PROVIDING LOCKOUT RELAY TO OPERATE BREAKER F1 IN GENERATOR BUILDING 50. NOTE BREAKER F1 IS ALSO CONTROLLED FROM EXISTING ASCO TRANSFER SWITCH ASE-G02 IN THE SAME ROOM.
  - PROVIDE CONTROL WIRING FOR GENERATOR START-STOP AND REMOTE BREAKER CONTROL. EXISTING TRANSFER SWITCH CONTROL WIRING SHALL BE CONFIRMED BUT APPEARS TO CONSIST OF SHIELDED TWISTED PAIR WIRES. APPROXIMATE QUANTITY OF EIGHT (8) 2" C. PROVIDE NEW CONDUIT TO MANHOLE AND BUILDING 50 AS REQUIRED. EXISTING CONDUITS SHALL BE PERMITTED TO BE USED IF OF SUFFICIENT CAPACITY.

**1 PARTIAL RISER DIAGRAM**  
NO SCALE



**CONSULTANT**

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DATE: \_\_\_\_\_

**ARCHITECT/ENGINEER OF RECORD**

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Anderson Engineering Co. Minneapolis, MN | PWS # 16064

**STAMP**

KRISTEN SPAN  
Professional Engineer  
No. 24140  
2/14/2025

**Office of Construction and Facilities Management**

VA U.S. Department of Veterans Affairs

**Drawing Title**  
ELECTRICAL ONE-LINE DIAGRAMS

**Approved:**

**Phase**  
BID DOCUMENTS

**FULLY SPRINKLERED**

**Project Title**  
CONSTRUCT NEW SPS

**Location**  
Sioux Falls, SD

**Project Number**  
438-460

**Building Number**  
5

**Drawing Number**  
E500

**Issue Date**  
02/14/2025

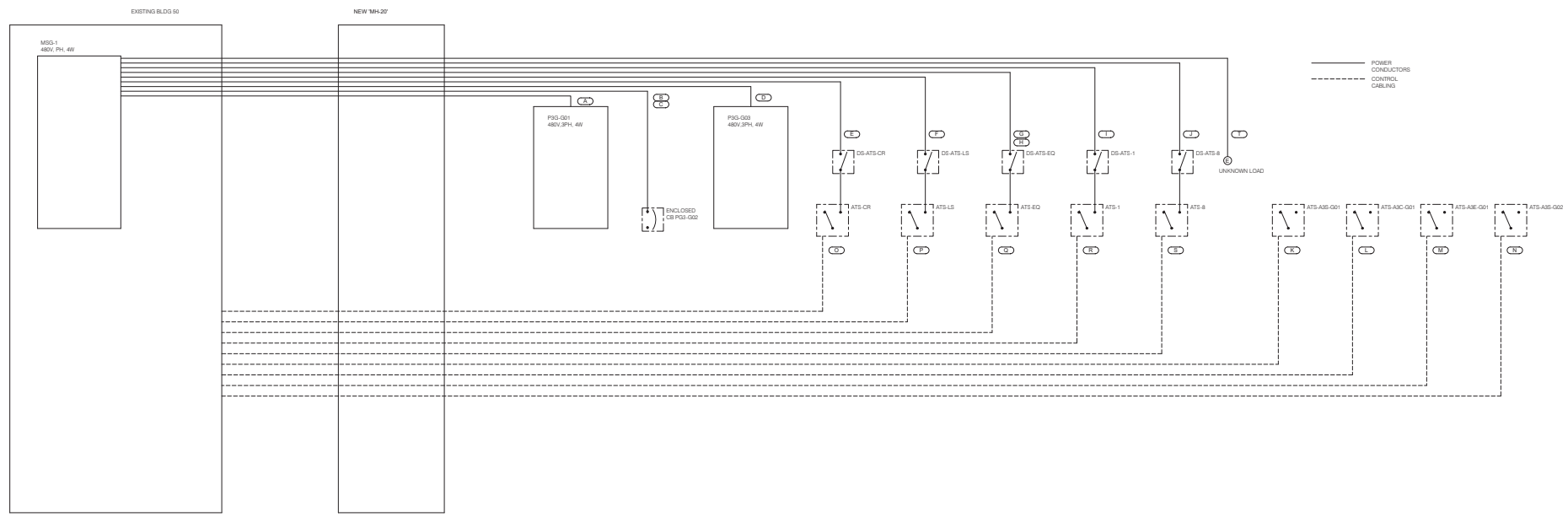
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JMK

**Drawn**  
JDR

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Revisions: \_\_\_\_\_ Date: \_\_\_\_\_



| MANHOLE MH-20 FEEDER DEMOLITION & REPLACEMENT SCHEDULE   |                        |                         |  |
|--|------------------------|-------------------------|--|
| EMERGENCY FEEDER CIRCUITS PASSING THROUGH EXISTING ELECTRICAL MANHOLE MH-20. ALL FEEDERS ORIGINATE AT MH-20, LOCATED IN BUILDING 50. |                        |                         |  |
| FAG  | LOAD                   | BLDG & ROOM LOCATION    | FLOOR LOCATION CONDUCTOR QTY. & SIZE               |
| A  | PSG-G01 (DIST. PANEL)  | BLDG 5 ELEC ROOM G4D    | GROUND FLOOR (4) 600 KCMIL & (1) #10 GND           |
| B,C  | PSG-G02 (ENCL. CB)     | BLDG 5 ELEC ROOM G4D    | GROUND FLOOR 2 SETS OF (4) 600 KCMIL & (1) #10 GND |
| D  | PSG-G03 (DIST. PANEL)  | BLDG 5 ELEC ROOM G4D    | GROUND FLOOR (4) 600 KCMIL & (1) #10 GND           |
| E  | ATS-CR (DISCON.)       | BLDG. 24                | (4) 350 KCMIL & (1) #10 GND                        |
| F  | ATS-L5 (DISCON.)       | BLDG 5 ELEC. DISTR. E01 | GROUND FLOOR (4) 350 KCMIL & (1) #10 GND           |
| G,H  | ATS-EG (DISCON.)       | BLDG 5 ELEC. DISTR. E03 | GROUND FLOOR 2 SETS OF (4) 350 KCMIL & (1) #10 GND |
| I  | ATS-L1 (DISCON.)       | BLDG. 1 - MECH. ROOM 1B | GROUND FLOOR (4) 350 KCMIL & (1) #10 GND           |
| J  | ATS-B (ENCL. CB)       | BLDG. 3 MECH. ROOM 120B | 3ST FLOOR (4) 600 KCMIL & (1) #10 GND              |
| K  | ATS-ASC-G01            | BLDG 5 ELEC ROOM G4D    | GROUND FLOOR CONTROL CABLING                       |
| L  | ATS-ASC-G01            | BLDG 5 ELEC ROOM G4D    | GROUND FLOOR CONTROL CABLING                       |
| M  | ATS-ASC-G01            | BLDG 5 ELEC ROOM G4D    | GROUND FLOOR CONTROL CABLING                       |
| N  | ATS-ASC-G02            | BLDG 5 ELEC ROOM G4D    | GROUND FLOOR CONTROL CABLING                       |
| O  | ATS-CR                 | BLDG. 24                | SEN. CONTROL - 16PR. 14 AWG                        |
| P  | ATS-L5                 | BLDG 5 ELEC. DISTR. E01 | GROUND FLOOR SEN. CONTROL - 16PR. 14 AWG           |
| Q  | ATS-EG                 | BLDG 5 ELEC. DISTR. E03 | GROUND FLOOR SEN. CONTROL - 16PR. 14 AWG           |
| R  | ATS-L1 (DISCON.)       | BLDG. 1 - MECH. ROOM 1B | GROUND FLOOR SEN. CONTROL - 16PR. 14 AWG           |
| S  | ATS-B (ENCL. CB)       | BLDG. 3 MECH. ROOM 120B | 3ST FLOOR CONTROL CABLING                          |
| T  | UNKNOWN - FIELD VERIFY | UNKNOWN                 | UNKNOWN (3) BS                                     |



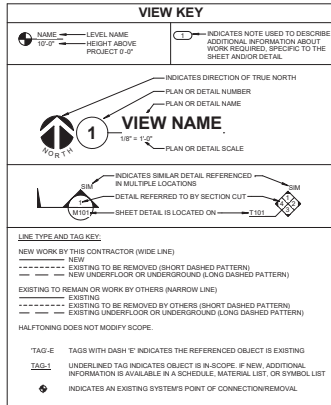
1 MANHOLE MH-20 POWER AND CONTROL DIAGRAM  
NO SCALE

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|  |  |   |  |   |  |  |                                    |   |                                  |
|--|--|---|--|---|--|--|------------------------------------|---|----------------------------------|
| <b>CONSULTANT</b><br><br><small>1000 SOUTH STREET<br/>         DIX NOTED PLACE<br/>         WILMINGTON, DE 19804<br/>         WWW.IMEG.COM<br/>         PROJECT # 10000001</small> |  | <b>ARCHITECT/ENGINEER OF RECORD</b><br><br><small>13605 3rd Ave. W. #100 Plymouth, MN 55441<br/>         P 783.432.0080   F 788.432.5000   JAW@A.E.CO.U<br/>         Anderson Engineering &amp; Architecture, LLC   P&amp;Q # 16004</small> |  | <b>STAMP</b><br><br>KRISTEN SPAHN<br>LICENSE # 10000001 | <b>Office of Construction and Facilities Management</b><br>U.S. Department of Veterans Affairs | <b>Drawing Title</b><br>ELECTRICAL ONE-LINE DIAGRAMS | <b>Phase</b><br>BID DOCUMENTS      | <b>Project Title</b><br>CONSTRUCT NEW SPS | <b>Project Number</b><br>438-460 |
| <b>Revisions:</b> _____ Date: _____  |  | <b>Approved:</b> _____  |  | <b>Approved:</b> _____                                  |  | <b>FULLY SPRINKLERED</b>                             | <b>Location</b><br>Sioux Falls, SD | <b>Building Number</b><br>5               |                                  |
|  |  |   |  |   |  | <b>Issue Date</b><br>02/14/2025                      | <b>Checked</b><br>JMK              | <b>Drawn</b><br>JDR                       | <b>Drawing Number</b><br>E501    |





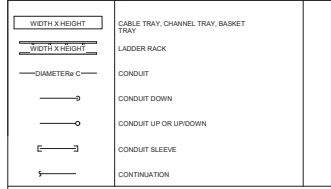


### CONTRACTOR ABBREVIATION KEY

| ABBR.  | DESCRIPTION:                        |
|--------|-------------------------------------|
| A.C.   | ASSESSMENT CONTRACTOR               |
| C.C.   | CIVIL CONTRACTOR                    |
| C.O.R. | CONTRACTING OFFICERS REPRESENTATIVE |
| E.C.   | ELECTRICAL CONTRACTOR               |
| F.P.C. | FIRE PROTECTION CONTRACTOR          |
| G.C.   | GENERAL CONTRACTOR                  |
| M.C.   | MECHANICAL CONTRACTOR               |
| P.C.   | PLUMBING CONTRACTOR                 |
| T.C.   | TECHNOLOGY CONTRACTOR               |
| T.G.C. | TEMPERATURE CONTROLS CONTRACTOR     |

### TECHNOLOGY SYMBOL LIST

| SYMBOL | EQUIPMENT LIST ABBREV. | DESCRIPTION:   | NOTE: |
|--------|------------------------|--|-------|
|        | N/A                    | CONTROLLED SECURITY SCHEME SCHEDULE IDENTIFIER   |       |
|        | AC-CR1                 | CARD ACCESS READER; LETTER INDICATES AS FOLLOWS:<br>M - MOUNT<br>C - CEILING<br>D - DESK<br>F - FLUSH<br>H - HIDDEN<br>M - MOUNT<br>P - PREDESTINATED<br>R - RACK<br>S - SURFACE<br>W - WALL |       |
|        | PA-S-C                 | FACILITY PAGING BREAKER (CEILING)  |       |
|        | PA-V-C                 | FACILITY PAGING VOLUME CONTROL (WALL)  |       |
|        | SC-DC                  | CEILING INFORMATION OUTLET, DATA COMMUNICATION ONLY, WIRELESS ACCESS POINT   | 1.    |
|        | SC-TV                  | WALL INFORMATION OUTLET, TELEVISION  | 1.    |
|        | SC-DW                  | WALL INFORMATION OUTLET, DATA COMMUNICATION ONLY   | 1.    |
|        | SC-DW                  | FLOOR INFORMATION OUTLET, DATA COMMUNICATION ONLY  | 1.    |
|        | N/A                    | VIDEO SURVEILLANCE CAMERA WITH LENS, WALL MOUNT OR CEILING MOUNT   |       |
|        | SC-E-R                 | FOUR POST EQUIPMENT RACK   |       |
|        | N/A                    | EXISTING TWO POST EQUIPMENT RACK   |       |
|        | SC-W-M                 | VERTICAL WIRE MANAGER  |       |
|        | SC-G-M                 | WALL MOUNT GROUND BAR  |       |
|        | SC-V-E                 | WALL MOUNT 110 BLOCK   |       |



### GENERAL NOTES:

- ALL SYMBOLS AND ABBREVIATIONS LISTED MAY NOT BE APPLICABLE TO THIS PROJECT. REFER TO THE TECHNOLOGY EQUIPMENT SCHEDULE FOR MORE COMPLETE DESCRIPTION AND ITEMS.
- ALL SYMBOLS AND ABBREVIATIONS REFER TO TECHNOLOGY SHEETS ONLY AS DEFINED ON THIS SHEET INDEX. REFER TO THE GENERAL TECHNOLOGY NOTES FOR ADDITIONAL INFORMATION.
- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION.
- REFER TO RISERS ON SHEETS T300.

### TECHNOLOGY SYMBOL NOTES:

- "R" INDICATES INFORMATION OUTLET FACELATE CONFIGURATION. REFER TO INFORMATION OUTLET SCHEDULE ON T100 FOR ADDITIONAL INFORMATION.
- INFORMATION OUTLET INSTALLED IN E.C. PROVIDED FLOOR BOX. "CF" INDICATES INFORMATION OUTLET FACELATE CONFIGURATION. REFER TO INFORMATION OUTLET SCHEDULE ON T100 FOR ADDITIONAL INFORMATION. REFER TO THE ELECTRICAL FLOOR PLANS AND ELECTRICAL EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.

### SUGGESTED MATRIX OF RESPONSIBILITY

| ITEM:   | SHOWN ON:    | FURNISHED BY: | INSTALLED BY: | NOTES: |
|---|--------------|---------------|---------------|--------|
| TECHNOLOGY ROUGH-IN, REFER TO TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR DEFINITION AND SPECIFICATIONS FOR DEFINITION | T-SERIES     | E.C.          | E.C.          | 3, 4   |
| INFORMATION OUTLET FACELATE, JACKS, AND TERMINATIONS  | T-SERIES     | T.C.          | T.C.          |        |
| CONDUIT SLEEVES OTHER SHOWN ON DRAWINGS   | T-SERIES     | E.C.          | E.C.          |        |
| CONDUIT SLEEVES NOT SHOWN BUT REQUIRED FOR PROPER INSTALLATION OF SYSTEM  | N/A          | T.C.          | T.C.          | 2, 4   |
| TELECOMMUNICATION SYSTEMS ROUGH-IN  | T-SERIES     | E.C. (T.C.)   | E.C.          | 1      |
| TELECOMMUNICATION EQUIPMENT CABLEING AND TERMINATIONS   | T-SERIES     | T.C.          | T.C.          |        |
| NURSE CALL ROUGH-IN   | T-SERIES     | N/C (E.C.)    | E.C.          |        |
| NURSE CALL EQUIPMENT CABLEING AND TERMINATIONS  | T-SERIES     | N/C (E.C.)    | E.C.          |        |
| CONDUIT TRAY INCLUDING WIRE BASKET TRAY REFER TO SPECIFICATION SECTION 27.05 FOR DEFINITION                                     | T-SERIES     | E.C.          | E.C.          |        |
| LADDER RACK   | T-SERIES     | T.C.          | T.C.          | 5      |
| BONDING CLIPS ON TECHNOLOGY EQUIPMENT   | T-SERIES     | T.C.          | E.C.          | 6      |
| BONDING CLIPS ON TECHNOLOGY SYSTEM, REFER TO SPECIFICATION SECTION 27.05 FOR DEFINITION   | T-SERIES     | E.C.          | E.C.          | 7, 8   |
| CONNECTION OF TECHNOLOGY BONDING SYSTEM TO THE ELECTRICAL GROUND SYSTEM   | T-SERIES     | E.C.          | E.C.          |        |
| LINE VOLTAGE POWER (120V OR GREATER)  | E-SERIES     | E.C.          | E.C.          |        |
| LINE VOLTAGE POWER NOT SHOWN BUT REQUIRED FOR PROPER INSTALLATION OF SYSTEM   | N/A          | T.C.          | E.C.          | 2, 4   |
| LINE VOLTAGE POWER FOR DOOR HARDWARE POWER SUPPLIES   | ARCH SPEC    | E.C.          | E.C.          |        |
| LOW VOLTAGE CABLEING FOR TECHNOLOGY SYSTEMS   | T-SERIES     | T.C.          | T.C.          |        |
| CABLE HANGERS AND SUPPORTS FOR OTHER CABLE ROUTING METHODS OTHER THAN CONDUIT AND CABLE TRAY                                    | T-SERIES     | T.C.          | T.C.          | 5      |
| TECHNOLOGY SERVICE ENTRANCE CONDUITS, HANDHOLES, AND MANHOLES   | BT-SERIES    | E.C.          | E.C.          |        |
| FLOOR BOX (ROUGH-IN)  | T & E-SERIES | E.C.          | E.C.          |        |

### SUGGESTED MATRIX OF RESPONSIBILITY NOTES:

- LOCATIONS OF TELECOMMUNICATIONS ROUGH-INS SHALL BE INDICATED BY THE INFORMATION OUTLET SYMBOLS ON THE DRAWINGS. REFER TO THE TECHNOLOGY SYMBOL LIST FOR ADDITIONAL INFORMATION.
- BASED ON THE PRESENT DIFFERENCES IN PRODUCTS FROM VARIOUS MANUFACTURERS, ALL REQUIRED EQUIPMENT MAY NOT BE SHOWN ON THE DRAWINGS FOR ALL ACCEPTABLE MANUFACTURERS.
- INCLUDES BACKBOXES AND CONDUIT REQUIRED FOR THE TECHNOLOGY SYSTEMS INSTALLATION. THE E.C. SHALL BASE THE BID ON THE BASIS OF DESIGN SHOWN ON THE CONTRACT DOCUMENTS.
- ALL CHANGES TO THE SLEEVES, BACKBOXES, CONDUITS, AND POWER REQUIRED BECAUSE OF THIS IS SELECTION OF AN ALTERNATE ACCEPTABLE MANUFACTURER OR FROM SYSTEM CONFIGURATIONS THAT ARE LEFT TO THE CHOICE OF THE CONTRACTOR SHALL BE INCLUDED IN THE T.C. BID. THIS BID SHALL INCLUDE INSTALLATION BY A LICENSED ELECTRICIAN.
- UNLESS TRADE RULES DICTATE OTHERWISE.
- FURNISHED AS PART OF THE EQUIPMENT WHEN POSSIBLE, OR FURNISHED TO THE E.C. FOR INSTALLATION IN THE FIELD.
- INCLUDES ALL CONDUITS, GROUND BARS, AND TERMINATIONS FOR THE COMPLETE BONDING SYSTEM REQUIRED BY THE SPECIFICATIONS.
- REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS OF PANELS AND SWITCHBOARDS SHOWN IN THE TECHNOLOGY BONDING RISER DIAGRAM AND TYPICAL TELECOM ROOM BONDING FLOOR DIAGRAM.

### TELECOM ROOM REFERENCES

| TELECOM ROOM | DETAIL SHEET REFERENCE | FLOOR PLAN REFERENCE | ARCH ROOM NUMBER |
|--------------|------------------------|----------------------|------------------|
| T100         | T1300                  | T101                 | R1               |

### TECHNOLOGY SHEET INDEX

|      |  |
|------|--|
| T100 | TECHNOLOGY COVERSHEET                          |
| T101 | GROUND LEVEL OVERALL PLAN - TECHNOLOGY         |
| T102 | LEVEL 01 OVERALL PLAN - TECHNOLOGY             |
| T103 | GROUND LEVEL FLOOR ELEVATION PLAN - TECHNOLOGY |
| T104 | GROUND LEVEL FLOOR PLAN - TECHNOLOGY           |
| T105 | GROUND LEVEL FLOOR PLAN - TECHNOLOGY           |
| T106 | TECHNOLOGY ROOM ENLARGEMENTS                   |
| T107 | TECHNOLOGY OUTLET SCHEDULE                     |
| T108 | TECHNOLOGY RISER DIAGRAMS                      |
| T109 | TECHNOLOGY SCHEDULES                           |
| T100 | GRAND TOTAL:                                   |

### TECHNOLOGY GENERAL NOTES:

- UNLESS INDICATED TECHNOLOGY EQUIPMENT SCHEDULE ITEM LABELED AS "EQUIPMENT" IS FOR TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.
- TECHNOLOGY MOUNTING SUBSCRIPT KEY:  
A - MOUNT AT 1" TO CENTERLINE ABOVE COUNTER OR BACKPLASH  
H - MOUNT ORIENTED HORIZONTALLY  
L - MOUNT IN CABINETWORK  
M - MOUNT IN MODULAR FURNITURE  
N - MOUNT ON SURFACE RACKWAY
- SLASH IS USED BETWEEN TWO SUBSCRIPTS, E.G., AH.

### TECHNOLOGY INSTALLATION NOTES:

- THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN.
- CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILING, IN FLOOR SLAB, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT IN MECHANICAL ROOMS AND STORAGE ROOMS WITHOUT CEILING MAY BE EXPOSED ON BUILDING STRUCTURE.
- BOXES LOCATED ON OPPOSITE SIDES OF NON-RATED WALLS SHALL BE OFFSET A MINIMUM OF 4" HORIZONTALLY. BOXES ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 24" HORIZONTALLY. UNLESS OTHERWISE INDICATED, BOXES SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
- VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVISER SHEET DRAWINGS. PRIOR TO MAKING THE ACTUAL TELECOMMUNICATIONS INSTALLATION, ADJUST OUTLETS OR CONNECTION LOCATIONS TO IMMEDIATE FURNITURE AND/OR EQUIPMENT.
- TELECOMMUNICATIONS EQUIPMENT SHALL BE MOUNTED TO ALLOW ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF TELECOMMUNICATION DEVICES OR EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THE CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED.
- ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPPERS. REFER TO DIVISION 7 FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
- ALL CABLE TRAY SIZES ARE AS DEFINED ON THE DRAWINGS. REFER TO SPECIFICATIONS FOR INSTALLATION REQUIREMENTS.

### TECHNOLOGY PHASING NOTES

THESE NOTES APPLY TO ALL TECHNOLOGY SHEETS AND TRACES, INCLUDING BUT NOT LIMITED TO: STRUCTURED CABLEING, PAGING, ACCESS CONTROL, CCTV AND NURSE CALL.

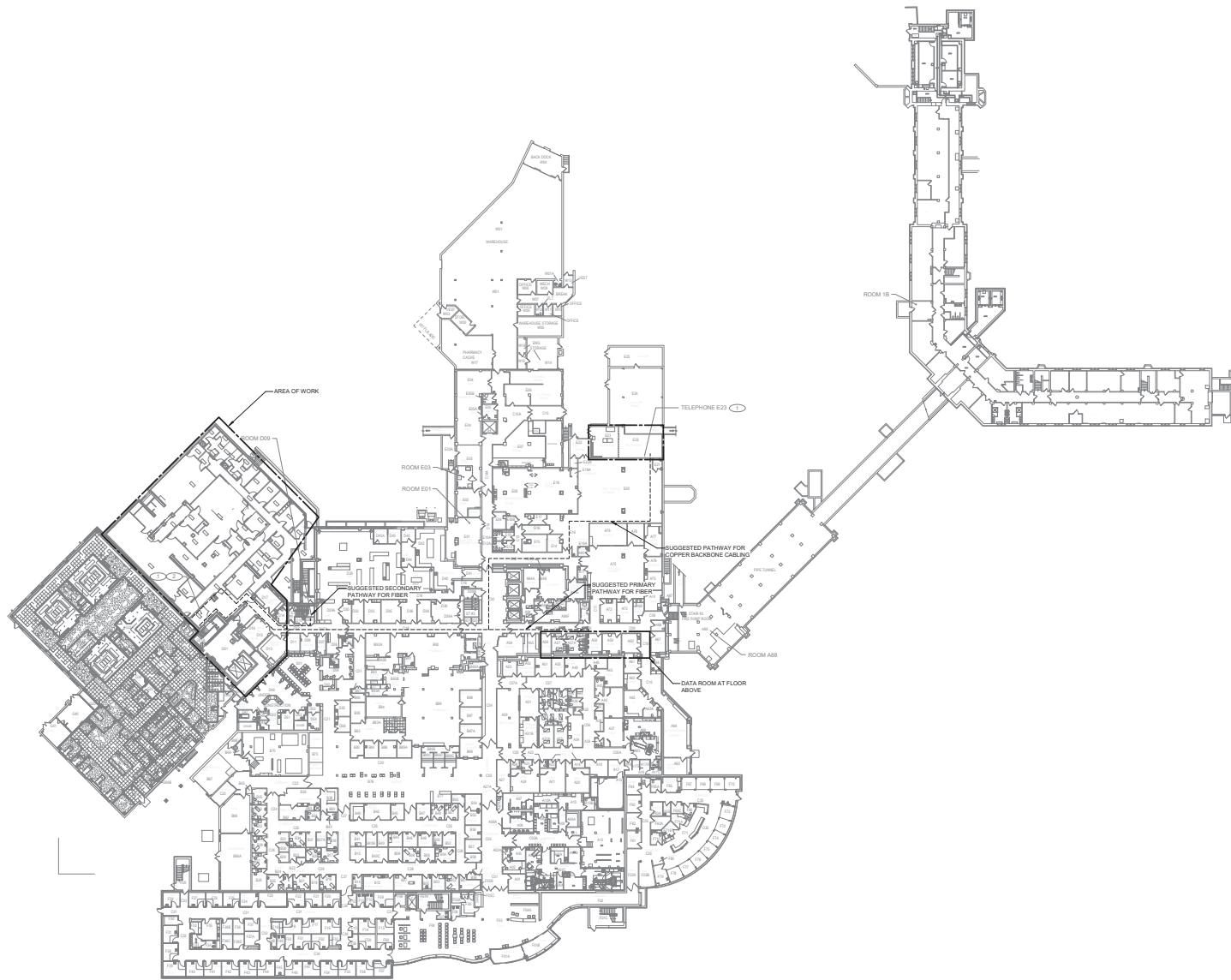
- REFER TO ARCHITECTURAL DRAWINGS FOR GENERAL DESCRIPTION OF PHASES. REFER TO ARCHITECTS INSTRUCTIONS FOR MORE DETAILS AND PHASING SCHEDULES AND FOR CONCURRENT WORK. MECHANICAL, ELECTRICAL, AND TECHNOLOGY DRAWINGS RESPECT THE INTENT OF THE FINAL DESIGN. THE MECHANICAL, ELECTRICAL, AND TECHNOLOGY DRAWINGS DO NOT DEPEND ON THE MEANS AND METHODS TO MEET THE REQUIREMENTS OF MANUFACTURERS.
- THE PHASING CRITERIA:
- WITH AFFECTED ADJACENT AREAS.
- WITH AFFECTED ADJACENT AREAS.
- PROVIDE TEMPORARY SYSTEMS AS NEEDED TO MAINTAIN SERVICE TO ALL AREAS DURING ALL PHASES OF PROJECT.
- PHASE DEMOLITION WORK TO MINIMIZE DOWNTIME.

### TECHNOLOGY ABBREVIATION KEY

| ABBR. | DESCRIPTION:                         |
|-------|--------------------------------------|
| AFF   | ABOVE FINISHED FLOOR                 |
| AFG   | ABOVE FINISHED GRADE                 |
| BFC   | BELOW FINISHED CEILING               |
| C     | CONDUIT                              |
| DE    | DELATED EGRESS                       |
| DPOT  | DOUBLE POLE DOUBLE THROW             |
| FOV   | FIELD OF VIEW                        |
| J-BOX | JUNCTION BOX                         |
| POE   | POWER OVER ETHERNET                  |
| PTZ   | PAN TILT ZOOM                        |
| SM    | SMALL                                |
| TYP   | TYPICAL                              |
| UN    | UNLESS OTHERWISE NOTED               |
| +H    | MOUNTING HEIGHT ABOVE FINISHED FLOOR |
| EP-I  | ENTRANCE FACILITY                    |
| MC-I  | MAIN CROSS-CONNECT                   |
| TR-S  | TELECOMMUNICATIONS ROOM              |

|   |   |   |   |                                   |   |                                  |
|---|---|---|---|-----------------------------------|---|----------------------------------|
| <b>CONSULTANT</b><br><br>IMEG CONSULTANTS<br>18605 3rd Ave., B. #2100 Plymouth, MN 55441<br>P 783.432.9080   F 788.432.6990   www.imeg.com<br>Anderson Engineering Group, LLC   PWS # 16084 | <b>ARCHITECT/ENGINEER OF RECORD</b><br><br>18605 3rd Ave., B. #2100 Plymouth, MN 55441<br>P 783.432.9080   F 788.432.6990   www.imeg.com<br>Anderson Engineering Group, LLC   PWS # 16084 | <b>Office of Construction and Facilities Management</b><br>VA U.S. Department of Veterans Affairs | Drawing Title<br><b>TECHNOLOGY COVERSHEET</b> | Phase<br><b>FULLY SPRINKLERED</b> | Project Title<br><b>CONSTRUCT NEW SPS</b> | Project Number<br><b>438-460</b> |
|   |   |   | Approved:                                     | BID DOCUMENTS                     | Location<br><b>Sioux Falls, SD</b>        | Drawing Number<br><b>T000</b>    |
| Revisions:  | Date:   | Issue Date<br><b>02/14/2025</b>   | Checked<br><b>PDN</b>                         | Drawn<br><b>VCP</b>               | Project Number<br><b>5</b>                | Drawing Number<br><b>T000</b>    |

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10



**1 GROUND LEVEL OVERALL PLAN - TECHNOLOGY**  
 1" = 30'-0"

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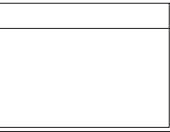
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**BICSI**  
 MEMBER OF A BICSI  
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**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

Drawing Title  
**GROUND LEVEL OVERALL PLAN - TECHNOLOGY**

Approved:

Phase  
**BID DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**CONSTRUCT NEW SPS**

Location  
**Sioux Falls, SD**

Issue Date  
**02/14/2025**

Checked  
**PDN**

Drawn  
**VCP**

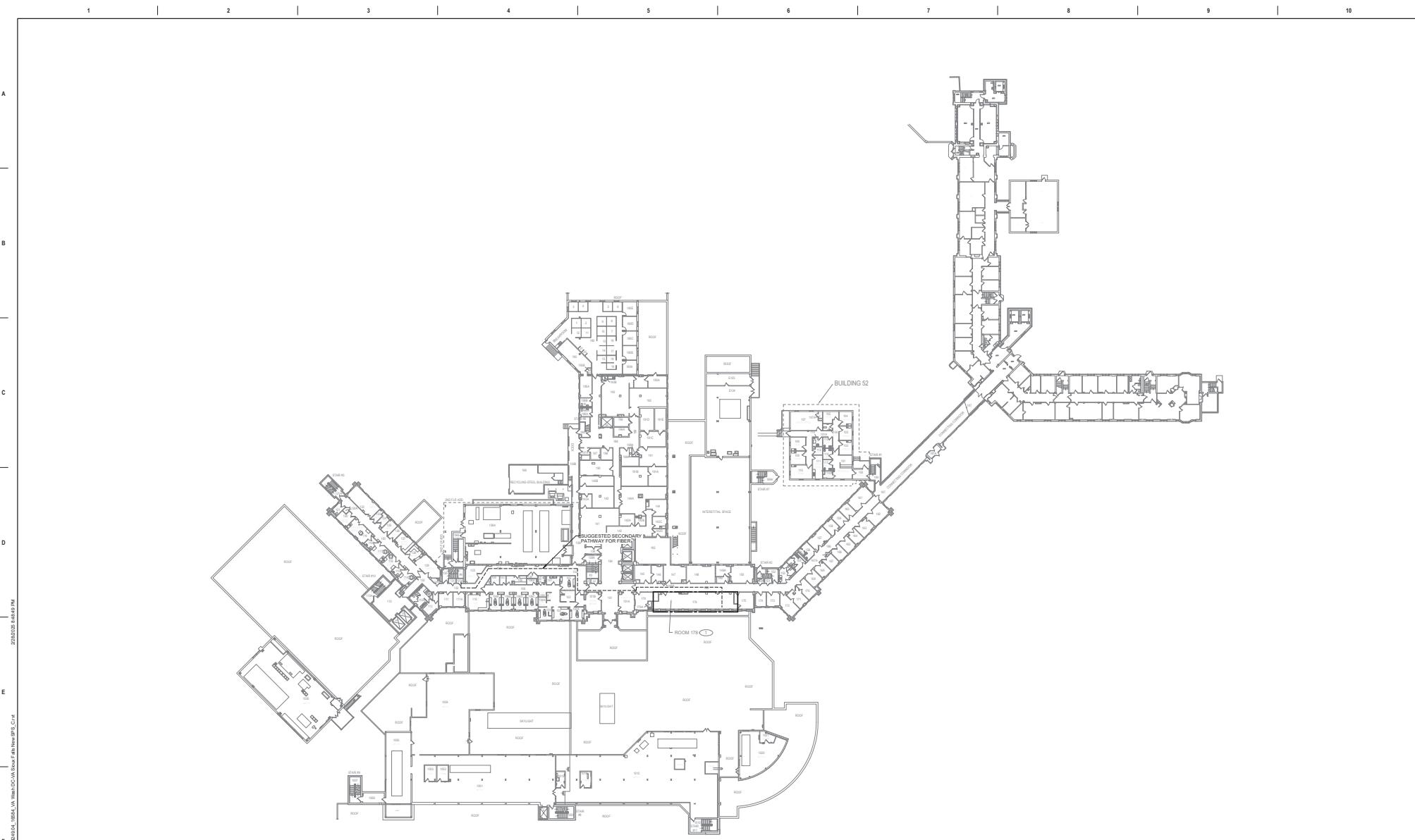
Project Number  
**438-460**

Building Number  
**5**

Drawing Number  
**T001**

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VA FORM 08-0231



**1 LEVEL 01 OVERALL PLAN - TECHNOLOGY**

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Professional Engineer  
 State of Minnesota  
 License No. 16064

*John*

Office of  
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**VA** U.S. Department  
 of Veterans  
 Affairs

Drawing Title  
**LEVEL 01 OVERALL PLAN - TECHNOLOGY**

Approved:

Phase  
**BID DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**CONSTRUCT NEW SPS**

Location  
 Sioux Falls, SD

Issue Date  
 02/14/2025

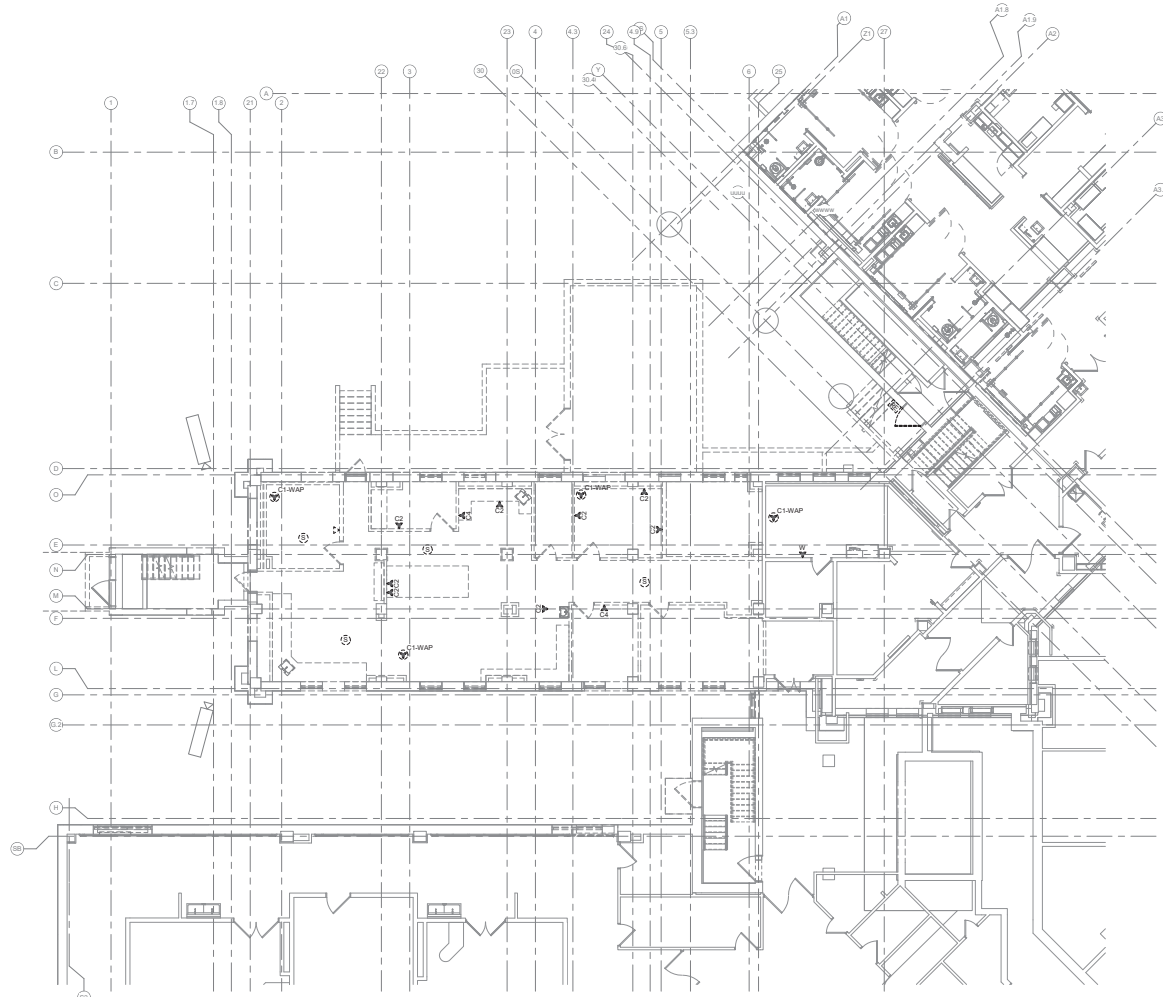
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 VCP

Project Number  
 438-460

Building Number  
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Drawing Number  
**T002**



**1** GROUND LEVEL FLOOR DEMOLITION PLAN - TECHNOLOGY  
1/8" = 1'-0"

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REGISTERED SCALE: 1/8" = 1'-0"

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 Anderson Engineering of Minnesota, LLC | PROJ # 16064

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CONSTRUCTION DOCUMENTS  
**Bicsi**  
 INC. ENGINEER  
 NO. 0410366  
 Minnesota

*John*

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

Drawing Title  
**GROUND LEVEL FLOOR DEMOLITION PLAN - TECHNOLOGY**

Approved:

Phase  
**BID DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**CONSTRUCT NEW SPS**

Location  
**Sioux Falls, SD**

Issue Date  
**02/14/2025**

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**PDN**

Drawn  
**VCP**

Project Number  
**438-460**

Building Number  
**5**

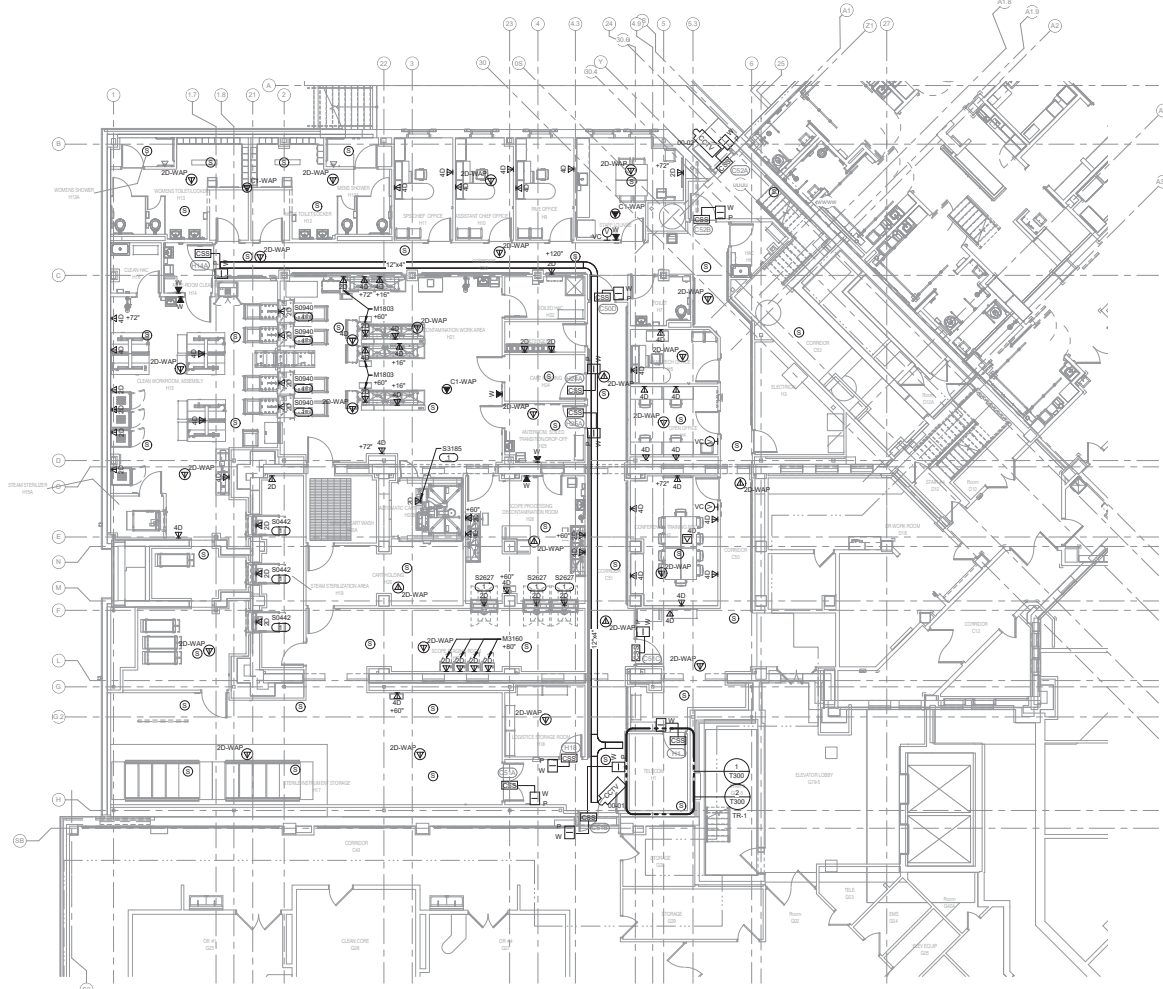
Drawing Number  
**TD101**

**SHEET NOTES:**

1. IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY ALL EQUIPMENT AND REQUIRED OPENINGS SHOWN ON THE DRAWINGS MATCH WHAT EQUIPMENT IS ACTUALLY PROVIDED. ANY CHANGES REQUIRED TO BE MADE IS THE CONTRACTOR'S RESPONSIBILITY TO REVISE DRAWINGS AS NEEDED, INCLUDING ANY PROFESSIONAL ENGINEERING FEES ASSOCIATED AND SHALL BE AT NO ADDITIONAL COST TO THE VA.
2. ALL NEW CABLING ROUTES TO TR-4 ON THIS SHEET.

**KEYNOTES: (P)**

1. COORDINATE EXACT LOCATION AND TERMINATION OF INFORMATION OUTLET WITH EQUIPMENT VENDOR PRIOR TO ROUGH-IN.



**1 GROUND LEVEL FLOOR PLAN - TECHNOLOGY**  
1/8" = 1'-0"

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**Bicsi**

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NO. 117086  
SD 11/1/2006

*John Bicsi*

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**

GROUND LEVEL FLOOR PLAN - TECHNOLOGY

**Approved:**

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**Project Title**

CONSTRUCT NEW SPS

**Location**

Sioux Falls, SD

**Issue Date**

02/14/2025

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PDN

**Drawn**

VCP

**Project Number**

438-460

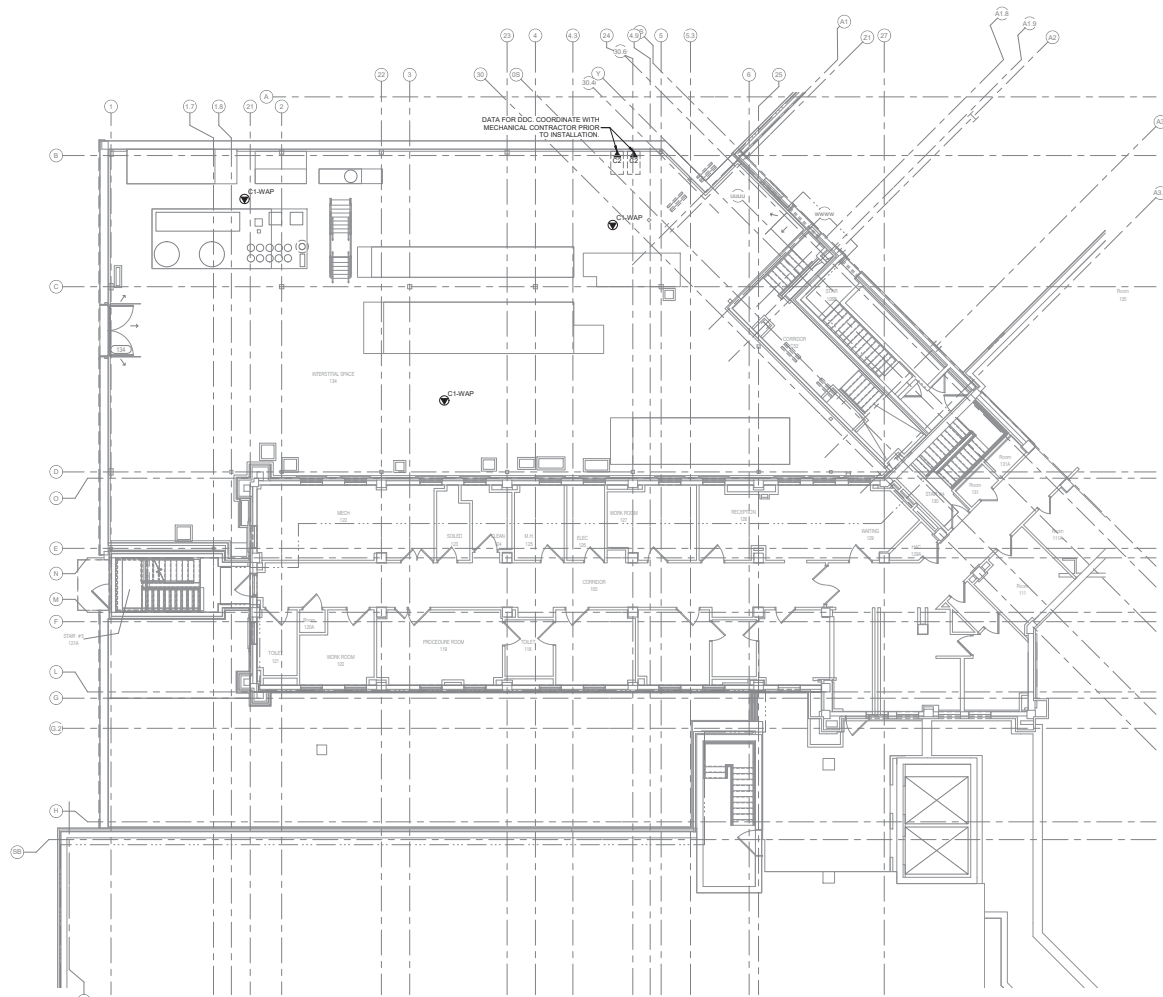
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**Drawing Number**

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**1** INTERSTITIAL/FIRST LEVEL FLOOR PLAN - TECHNOLOGY  
 1/8" = 1'-0"

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INTERSTITIAL/FIRST LEVEL FLOOR PLAN - TECHNOLOGY

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**Project Title**

CONSTRUCT NEW SPS

**Location**

Sioux Falls, SD

**Issue Date**

02/14/2025

**Project Number**

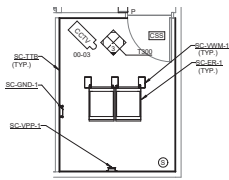
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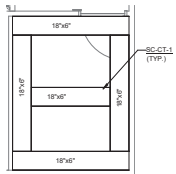
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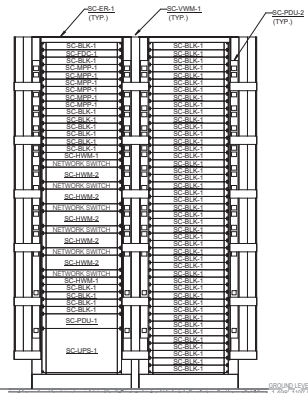
**1 EQUIPMENT ROOM LAYOUT -TR-1**

- NOTES:
- REFER TO 31700 FOR EQUIPMENT ROOM PATHWAY-TR-1
  - REFER TO 41700 CONNECTIVITY RISER DIAGRAM -TR-SC-105A
  - REFER TO 1600 FOR TECHNOLOGY EQUIPMENT SCHEDULE
- KEYNOTES: (K)
- REFER TO 11400 FOR GROUNDING DETAILS
  - INFORMATION OUTLET PROVIDED FOR SECURITY CONTROL PANEL. COORDINATE FINAL CONNECTION WITH E.I.C. PRIOR TO ROUGH-IN



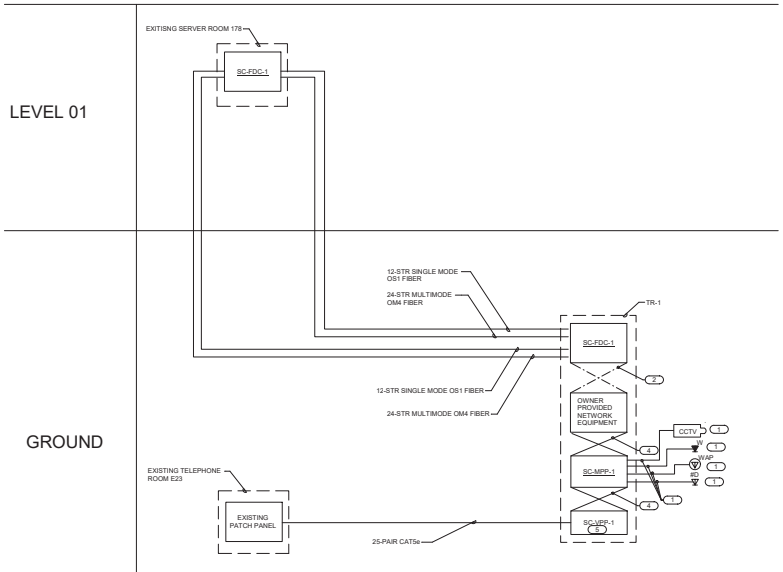
**2 EQUIPMENT ROOM PATHWAY -TR-1**

- NOTES:
- REFER TO 31700 FOR EQUIPMENT ROOM LAYOUT-TR-1
  - REFER TO 1600 FOR TECHNOLOGY EQUIPMENT SCHEDULE
  - INSTALL CABLE TRAY AT 7'0" AFF.



**3 EQUIPMENT RACK ELEVATION - TR-1**

- NOTES:
- REFER TO 11700 FOR EQUIPMENT ROOM LAYOUT-TR-1
  - REFER TO 41700 CONNECTIVITY RISER DIAGRAM -TR-1
  - REFER TO 1600 FOR TECHNOLOGY EQUIPMENT SCHEDULE



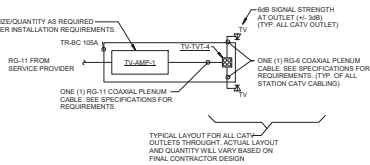
**4 CONNECTIVITY RISER DIAGRAM -TR -1**

- NO SCALE
- NOTES:
- THIS RISER IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS SHOWN. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CABLE TYPE. ALL INFORMATION OUTLETS ARE TYPICAL OF THE OUTLETS IN THE AREAS SHOWN. REFER TO FLOOR PLANS FOR MORE SPECIFIC ROUTING AND QUANTITY INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
  - REFER TO 1600 FOR TECHNOLOGY EQUIPMENT SCHEDULE
- KEYNOTES: (K)
- # INDICATES VOICE/DATA FACEPLATE CONFIGURATION. REFER TO INFORMATION OUTLET SCHEDULE ON 1600 FOR ADDITIONAL INFORMATION. REFER TO ELECTRICAL FLOOR PLANS AND ELECTRICAL EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
  - FIBER OPTIC PATCH CORDS. REFER TO SPECIFICATIONS
  - 24 GAUGE, CAT 6A UTP CABLE. REFER TO SPECIFICATIONS
  - RJ-45 TO RJ-45 CATEGORY 6A UTP PATCH CORDS. REFER TO SPECIFICATIONS FOR PATCH CORD REQUIREMENTS
  - CONTRACTOR SHALL TERMINATE 1 PAIR PER PORT, USING PINS 4 AND 5.



**5 PAGING SPEAKER CONNECTIVITY DIAGRAM**

- NO SCALE
- NOTES:
- THIS FLOW DIAGRAM IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS. THIS FLOW DIAGRAM IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CABLE TYPE. REFER TO FLOOR PLANS FOR MORE SPECIFIC ROUTING INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS
  - REFER TO TECHNOLOGY EQUIPMENT SCHEDULE ON SHEET 1600 FOR ADDITIONAL INFORMATION



**6 PARTIAL CATV RISER DIAGRAM**

- NO SCALE
- NOTES:
- CONTRACTOR PROVIDE CATV SYSTEM TO ALLOW 6 dB (+/- 3dB) OF ACTUAL OUTPUT AT ALL CATV OUTLETS. ACTUAL TAP/SPLITTER SETTINGS, LOCATION AND AMPLIFIER SENSITIVITY TO BE INCLUDED IN CONTRACTOR'S FINAL DESIGN. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS
  - ALL CABLING IS TO RG-6 COAXIAL UNLESS OTHERWISE NOTED.
  - REFER TO INFORMATION OUTLET SCHEDULE FOR QUANTITY OF CABLES AND JACKS TO BE INSTALLED AT EACH CATV OUTLET.
  - REFER TO 1600 FOR TECHNOLOGY EQUIPMENT SCHEDULE.

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**Office of Construction and Facilities Management**

**U.S. Department of Veterans Affairs**

Drawing Title: **TECHNOLOGY ROOM ENLARGEMENTS**

Approved: \_\_\_\_\_

Phase: **BID DOCUMENTS**

**FULLY SPRINKLERED**

Project Title: **CONSTRUCT NEW SPS**

Location: **Sioux Falls, SD**

Issue Date: 02/14/2025

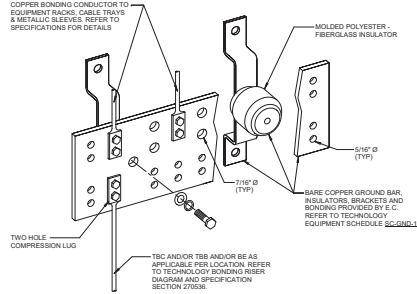
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Drawn: VCP

Project Number: **438-460**

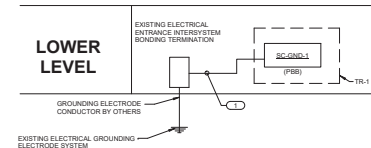
Building Number: **5**

Drawing Number: **T300**



**1 BONDING BUS BAR DETAIL**

NO SCALE  
 NOTES:  
 1. REFER TO TECHNOLOGY EQUIPMENT SCHEDULE SC-GND.1 FOR MINIMUM DIMENSION REQUIREMENTS.  
 2. REFER TO **SC-TBB** FOR TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM.

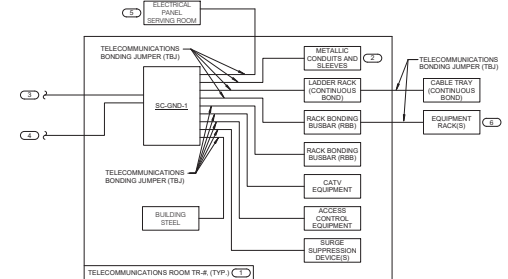


**2 TECHNOLOGY BONDING RISER DIAGRAM**

NO SCALE  
 NOTES:  
 1. THIS RISER IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CONDUCTOR TYPE. ALL CONNECTIONS AND SYSTEM DEVICES SHOWN ARE TYPICAL AND NOT REPRESENTATIVE OF ACTUAL PROJECT QUANTITIES. REFER TO FLOOR PLANS AND ENLARGED FLOOR PLANS FOR ACTUAL QUANTITIES AND LOCATIONS OF DEVICES AND MORE SPECIFIC ROUTING INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.  
 2. ALL CONDUCTORS IN THE TECHNOLOGY BONDING SYSTEM SHALL BE PLENUM RATED COPPER (GREEN OR MARKED WITH A DISTINCTIVE GREEN COLOR). REFER TO BONDING CONDUCTOR SIZING SCHEDULE FOR SIZING CRITERIA FOR CONDUCTORS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.  
 3. ALL BONDING CONDUCTORS AND BONDING JUMPERS SHALL BE CONNECTED BY COMPRESSION LUGS (EXOTHERMIC WELDING OR IRREVERSIBLE COMPRESSION CONNECTORS). SOLDER IS NOT AN ACCEPTABLE MEANS OF CONNECTION. SHEET METAL SCREWS SHALL NOT BE USED TO CONNECT COMMUNICATIONS BONDING CONDUCTORS TO EQUIPMENT. WHERE NECESSARY, REMOVE PAINT AND/OR USE PAINT-PIERCING WASHERS TO PROVIDE PROPER ELECTRICAL BOND AT ALL CONNECTIONS.  
 4. REFER TO **37030** FOR TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM.  
 5. REFER TO TELECOM ROOM REFERENCES SCHEDULE ON DRAWING 1001 FOR TELECOMMUNICATIONS ROOM NUMBER AND LOCATION INFORMATION.

KEYNOTES: **1**  
 1. TELECOMMUNICATIONS BONDING CONDUCTOR (TBC). TBC SHALL BE THE SAME SIZE AS THE TBB OR LARGER. REFER TO BONDING CONDUCTOR SIZING SCHEDULE FOR SIZING REQUIREMENTS.

| BONDING CONDUCTOR SIZING SCHEDULE |                               |
|-----------------------------------|-------------------------------|
| CONDUCTOR LENGTH IN FEET          | MINIMUM ACCEPTABLE SIZE - AWG |
| LESS THAN 15'                     | 6                             |
| 14' - 20'                         | 4                             |
| 21' - 25'                         | 3                             |
| 27' - 33'                         | 2                             |
| 34' - 41'                         | 1                             |
| 42' - 52'                         | 10                            |
| 53' - 66'                         | 20                            |
| 67' - 84'                         | 30                            |
| 85' - 105'                        | 40                            |
| 106' - 135'                       | 250 kcmil                     |
| 136' - 155'                       | 300 kcmil                     |
| 156' - 170'                       | 350 kcmil                     |
| 171' - 200'                       | 600 kcmil                     |
| 201' - 300'                       | 600 kcmil                     |
| GREATER THAN 300'                 | 750 kcmil                     |



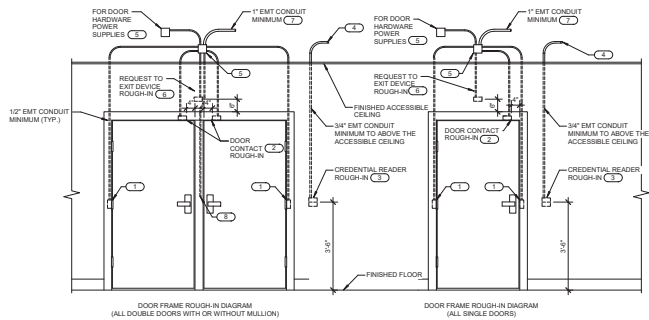
**3 TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM**

NO SCALE  
 NOTES:  
 1. THIS FLOW DIAGRAM IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS. THIS FLOW DIAGRAM IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CONDUCTOR TYPE. ALL CONNECTIONS AND SYSTEM DEVICES SHOWN ARE TYPICAL AND NOT REPRESENTATIVE OF ACTUAL PROJECT QUANTITIES. REFER TO FLOOR PLANS AND ENLARGED FLOOR PLANS FOR ACTUAL QUANTITIES AND LOCATIONS OF DEVICES AND SPECIFIC ROUTING INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.  
 2. ALL CONDUCTORS IN THE TECHNOLOGY BONDING SYSTEM SHALL BE PLENUM RATED COPPER (GREEN OR MARKED WITH A DISTINCTIVE GREEN COLOR). REFER TO BONDING CONDUCTOR SIZING SCHEDULE FOR SIZING CRITERIA FOR CONDUCTORS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.  
 3. ALL BONDING CONDUCTORS AND BONDING JUMPERS SHALL BE CONNECTED BY COMPRESSION LUGS, EXOTHERMIC WELDING, OR IRREVERSIBLE COMPRESSION CONNECTORS. SOLDER IS NOT AN ACCEPTABLE MEANS OF CONNECTION. SHEET METAL SCREWS SHALL NOT BE USED TO CONNECT COMMUNICATIONS BONDING CONDUCTORS TO EQUIPMENT. WHERE NECESSARY, REMOVE PAINT AND/OR USE PAINT-PIERCING WASHERS TO PROVIDE PROPER ELECTRICAL BOND AT ALL CONNECTIONS.

KEYNOTES: **1**  
 1. REFER TO TELECOM ROOM REFERENCES SCHEDULE FOR TELECOMMUNICATIONS ROOM NUMBER AND LOCATION INFORMATION.  
 2. INCLUDES HORIZONTAL AND VERTICAL CONDUIT SLEEVES FOR TECHNOLOGY CABLING.  
 3. TELECOMMUNICATIONS BONDING BACKSHELL (TBB). REFER TO TELECOMMUNICATIONS BONDING RISER DIAGRAM.  
 4. TELECOMMUNICATIONS BONDING CONDUCTOR (TBC). TO EXISTING ELECTRICAL ENTRANCE INTERSYSTEM BONDING TERMINATION. REFER TO TELECOMMUNICATIONS BONDING RISER DIAGRAM FOR CONTINUATION AND ADDITIONAL INFORMATION AND REQUIREMENTS.  
 5. REFER TO THE ELECTRICAL DRAWINGS FOR LOCATION.

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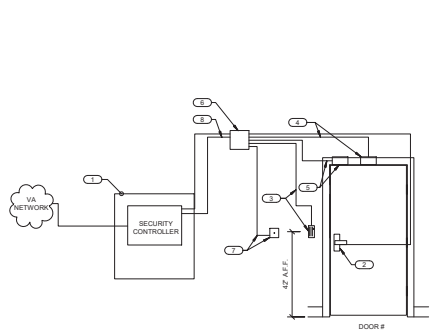
|  |                |   |  |  |  |  |                                |  |                                   |              |  |
|--|----------------|---|--|--|--|--|--------------------------------|--|-----------------------------------|--------------|--|
| <b>CONSULTANT</b><br><br><small>1800 SOUTH BROADWAY<br/>       SUITE 1000 FLOOR 10<br/>       HOUSTON, TEXAS 77002<br/>       WWW.IMEG.COM<br/>       PROJECT # 16030450</small><br><small>WE'VE GOT YOU COVERED. FROM INITIAL DESIGN THROUGH CONSTRUCTION AND OPERATION. ALWAYS ON YOUR SIDE.<br/>       PROTECT YOUR INVESTMENT. FROM THE DESIGN PHASE THROUGH CONSTRUCTION AND OPERATION. ALWAYS ON YOUR SIDE.<br/>       PROTECT YOUR INVESTMENT. FROM THE DESIGN PHASE THROUGH CONSTRUCTION AND OPERATION. ALWAYS ON YOUR SIDE.</small><br><small>REGISTERED SCALE IN TEXAS</small> |                | <b>ARCHITECT/ENGINEER OF RECORD</b><br><br><small>19605 3rd Ave. N. #1300 Plymouth, MN 55441<br/>       P 788.432.4000   F 788.432.4000   www.a-e.com<br/>       Anderson Engineering of Minnesota, LLC   Project # 16034</small> |  | <b>STAMP</b><br><br><small>16034</small> | <b>Office of Construction and Facilities Management</b><br><b>VA</b> U.S. Department of Veterans Affairs | Drawing Title:<br><b>TECHNOLOGY DETAILS</b><br><br>Approved:   | Phase:<br><b>BID DOCUMENTS</b> | Project Title:<br><b>CONSTRUCT NEW SPS</b> | Project Number:<br><b>438-460</b> |              |  |
| Revisions: _____ Date: _____   |                |   |  |  |  | Location:<br><b>Sioux Falls, SD</b>  |                                | Drawing Number:<br><b>T400</b>             |                                   |              |  |
| VA FORM 08-0231  |                |   |  |  |  | <table border="1" style="width: 100%;"> <tr> <td>Issue Date<br/>02/14/2025</td> <td>Checked<br/>PDN</td> <td>Drawn<br/>VCP</td> </tr> </table> |                                | Issue Date<br>02/14/2025                   | Checked<br>PDN                    | Drawn<br>VCP |  |
| Issue Date<br>02/14/2025   | Checked<br>PDN | Drawn<br>VCP  |  |  |  |  |                                |  |                                   |              |  |



**1 CONTROLLED SECURITY SCHEME DOOR ROUGH-IN DETAIL**  
NO SCALE

- NOTES:**
- CONFIGURATIONS SHOWN IN THE DETAIL ABOVE ARE DIAGRAMMATIC, INTENDED TO DESCRIBE THE CONTROLLED SECURITY SCHEME ROUGH-IN REQUIREMENTS OF THE DOORS. DETAILS ABOVE MAY NOT ACCURATELY REPRESENT DOOR SIZE, DOOR SWING, DOOR HARDWARE OR DOOR FUNCTIONALITY. REFER TO ARCHITECTURAL DOOR HARDWARE SCHEDULE, DOOR HARDWARE GROUPS AND DOOR HARDWARE SPECIFICATIONS FOR COMPLETE INFORMATION. REWORK THE DETAIL AS REQUIRED.
  - ROUGH-IN SHOWN IN THE DETAIL ABOVE REPRESENTS THE MINIMUM REQUIREMENTS FOR ALL CONTROLLED SECURITY SYSTEM DEVICES AND CABLES UNLESS OTHERWISE NOTED. COORDINATE EXACT REQUIREMENTS WITH SELECTED DOOR MATERIALS, DOOR HARDWARE, AND CONTROLLED SECURITY DEVICES AND CABLED PRIOR TO INSTALLATION.
  - ALL CABLES IN WALLS AND WHERE EXPOSED ON VERTICAL SURFACES SHALL BE INSTALLED IN EMT CONDUIT OR SURFACE MOUNT TRACKING CABLEING ROUTED HORIZONTALLY ABOVE THE ACCESSIBLE CEILING MAY BE INSTALLED FREE-AIR CABLEING PROPERLY RATED FOR THE CEILING ENVIRONMENT.
  - ELECTRICAL OR SECURITY CONTRACTOR SHALL NOT MODIFY ANY FIRE RATED DOOR AND/OR DOOR FRAME. REFER TO THE ARCHITECTURAL DOOR SCHEDULE, DOOR HARDWARE SCHEDULE, AND DOOR HARDWARE SPECIFICATION FOR ADDITIONAL INFORMATION. MODIFICATION TO ANY FIRE RATED DOOR AND/OR FRAME WILL REQUIRE A RE-CERTIFICATION OF THE DOOR AND FRAME WITH THE LOCAL AUTHORITY HAVING JURISDICTION (LAW).
  - INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR ALL CONTROLLED SECURITY SCHEME ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
  - REFER TO THE CONTROLLED SECURITY SCHEME WIRING DIAGRAM ON 27500 FOR DOOR REQUIREMENTS AND THE CONTROLLED SECURITY SCHEME SCHEDULE ON 1900 FOR ADDITIONAL INFORMATION.
  - INSTALLATION SHALL INCLUDE ALL POWER REQUIRED FOR SYSTEM OPERATION INCLUDING +120VAC. REFER TO THE SUGGESTED MATRIX OF SCOPE RESPONSIBILITY FOR ADDITIONAL INFORMATION.

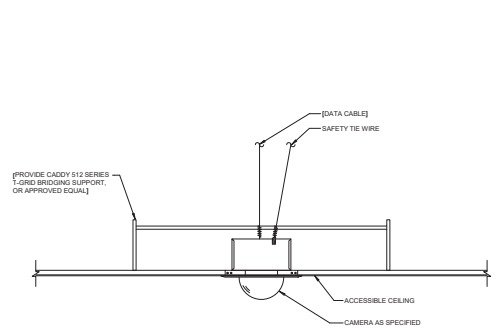
- KEYNOTES:**
- PROVIDE JUNCTION BOXES IN THE DOOR FRAME WHERE SHOWN ON THIS DETAIL. ROUGH-IN SHALL BE PROVIDED WHETHER THE CURRENT SECURITY SCHEME UTILIZES THEM OR NOT. ALL CONDUITS SHALL BE EMT CONDUIT UNLESS OTHERWISE NOTED. FLEXIBLE CONDUIT OF ANY TYPE WILL NOT BE ACCEPTED. COORDINATE INSTALLATION WITH ON-SITE DOOR FRAME INSTALLATION CONTRACTOR.
  - ALL LOCK POSITION SWITCHES ARE REQUIRED TO BE RECESSED UNLESS OTHERWISE NOTED. ELECTRIC RINGE MONITORS ARE NOT AN ACCEPTABLE REPLACEMENT FOR THE RECESSED DOOR POSITION SWITCH.
  - 4\"/>



**2 ACCESSIBLE CEILING CAMERA MOUNT AND ROUGH-IN DETAIL**  
NO SCALE

- NOTES:**
- DOOR # DESIGNATES THE ACCESS CONTROL SCHEME AT EACH DOOR LOCATION. REFER TO 130-T700 FOR REQUIREMENTS.
  - THIS RISER IS DIAGRAMMATIC AND NOT INTENDED TO SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS SHOWN. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CABLE TYPE. THIS RISER WILL NOT REPLICATE ALL DOOR CONFIGURATIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
  - REFER TO ARCHITECTURAL DRAWING FOR DETAILS.
  - PROVIDE INSTALLATION TO MATCH EXISTING SECURITY SYSTEM INSTALLATION. FIELD VERIFY AND COORDINATE INSTALLATION REQUIREMENTS AS REQUIRED.
  - ALL SECURITY CABLEING SHALL BE INSTALLED IN CONDUIT.

- KEYNOTES:**
- MOUNT LEVEL LN1300 SECURITY CONTROLLER ACCORDING TO MANUFACTURER SPECIFICATIONS. REFER TO SPECIFICATION SECTION 28 13 02 FOR ADDITIONAL INFORMATION.
  - ELECTRIC DOOR LOCK, BY OTHERS. CONTRACTOR SHALL PROVIDE 18 AWG 2-CONDUCTOR PLENUM RATED NON-SHEELED WIRING AND TERMINATIONS FROM LOCAL LOCKS TO EXIT DEVICES. THROUGH POWER TRANSFER TO SECURITY CONTROLLER PROVIDE 20 AWG 4-CONDUCTOR PLENUM RATED WIRING FROM INTEGRAL LOCK REQUEST SWITCH TO SECURITY CONTROLLER. EXPOSED POWER TRANSFER LOOPS AND CONDUITS ARE NOT ACCEPTABLE.
  - CARD READER. REFER TO DRAWINGS FOR EXACT LOCATIONS. CONTRACTOR SHALL PROVIDE 18 AWG 3-PAIR RATED SHEELED WIRING AND TERMINATIONS FROM CARD READER TO SECURITY CONTROLLER. MOUNT AT 4\"/>



**3 ACCESSIBLE CEILING CAMERA MOUNT AND ROUGH-IN DETAIL**  
NO SCALE

- NOTES:**
- COORDINATE EXACT LOCATION ON SITE WITH WORK BY OTHER TRADES TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLEING.
  - PROVIDE CAMERA MOUNTING ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED.

| CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE   |                |  |   |             |                 |               |          |  |  |
|--|----------------|--|---|-------------|-----------------|---------------|----------|--|--|
| ELECTRONIC DOOR HARDWARE SUCH AS ELECTRIC STRIKES, ELECTRIC LATCH RETRACTION, ETC. SHALL BE PROVIDED AND INSTALLED BY OTHERS. REFER TO THE GENERAL TECHNOLOGY EQUIPMENT SCHEDULE ON XXXX FOR CREDENTIAL READER TYPE INFORMATION. |                |  |   |             |                 |               |          |  |  |
| DOOR #   | PERSONNEL ONLY | CREDENTIAL READER                                  |   | INTEGRATION | REQUEST TO EXIT | DOOR HARDWARE |          | OTHER REFER TO NOTES                     |  |
|  |                | INDIVIDUAL CREDENTIAL READERS OPERATES SINGLE DOOR | MULTIPLE CREDENTIAL READERS OPERATES MULTIPLE DOORS |             |                 | WIRELESS      | WIRELESS | LOCAL INTERLOCK/DOOR HARDWARE CONNECTION | LOCAL INTERLOCK/DOOR HARDWARE CONNECTION |
| CS00   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS01   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS02   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS03   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS04   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS05   | CR1, CR2       | *  | *   | *           | *               | *             | *        | *  | *  |
| CS06   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS07   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS08   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS09   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS10   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS11   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS12   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS13   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS14   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS15   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS16   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS17   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS18   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS19   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS20   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS21   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS22   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS23   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS24   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS25   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS26   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS27   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS28   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS29   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |
| CS30   | CR1            | *  | *   | *           | *               | *             | *        | *  | *  |

| INDIVIDUAL CAMERA REQUIREMENTS SCHEDULE |             |                |                           |                  |              |                  |                        |       |  |
|---|-------------|----------------|---------------------------|------------------|--------------|------------------|------------------------|-------|--|
| CAMERA #                                | CAMERA TYPE | TELECOM ROOM # | FIELD OF VIEW DESCRIPTION | DETAIL REFERENCE | INSTALL DATE | SPRINKLER MOTION | ADDITIONAL INFORMATION | NOTES |  |
| 0502                                    | CM-1        | TR-1           | GENERAL VIEW OF ENTRANCE  | 37500            | 15           | 80               |                        |       |  |
| 0503                                    | CM-1        | TR-1           | GENERAL VIEW OF ENTRANCE  | 37500            | 15           | 80               |                        |       |  |

|  |                       |   |                             |  |  |                        |                                    |                           |
|--|-----------------------|---|-----------------------------|--|--|------------------------|------------------------------------|---------------------------|
| <b>Revisions:</b> _____<br>Date: _____ | <b>CONSULTANT</b><br> | <b>ARCHITECT/ENGINEER OF RECORD</b><br> | STAMP<br>                   | Office of Construction and Facilities Management<br> | Drawing Title<br>TECHNOLOGY RISER DIAGRAMS | Phase<br>BID DOCUMENTS | Project Title<br>CONSTRUCT NEW SPS | Project Number<br>438-460 |
|  | Approved: _____       | Fully Sprinklered                       | Location<br>Sioux Falls, SD | Drawing Number<br>T500                               |  |                        |                                    |                           |

