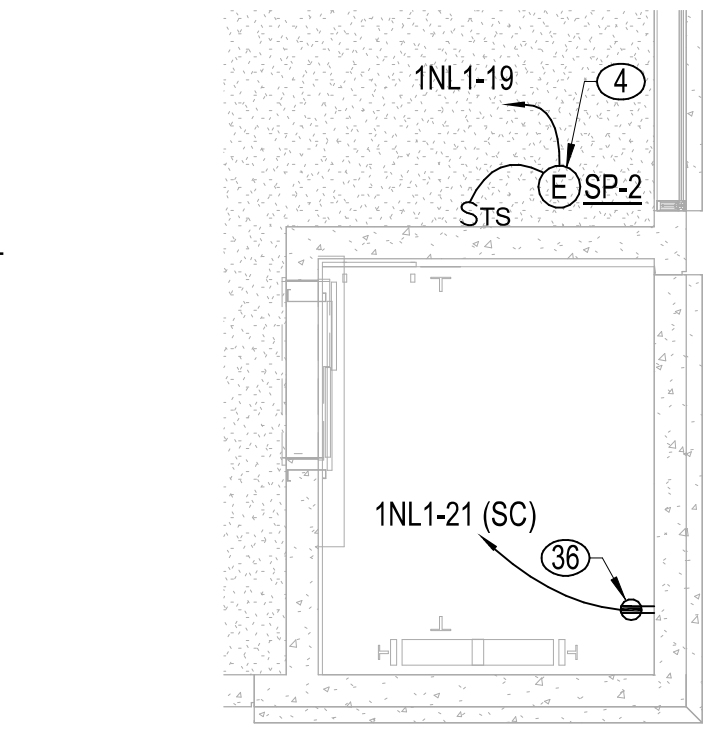


3 ELECTRICAL/TELECOM ROOMS
1/4" = 1'-0"

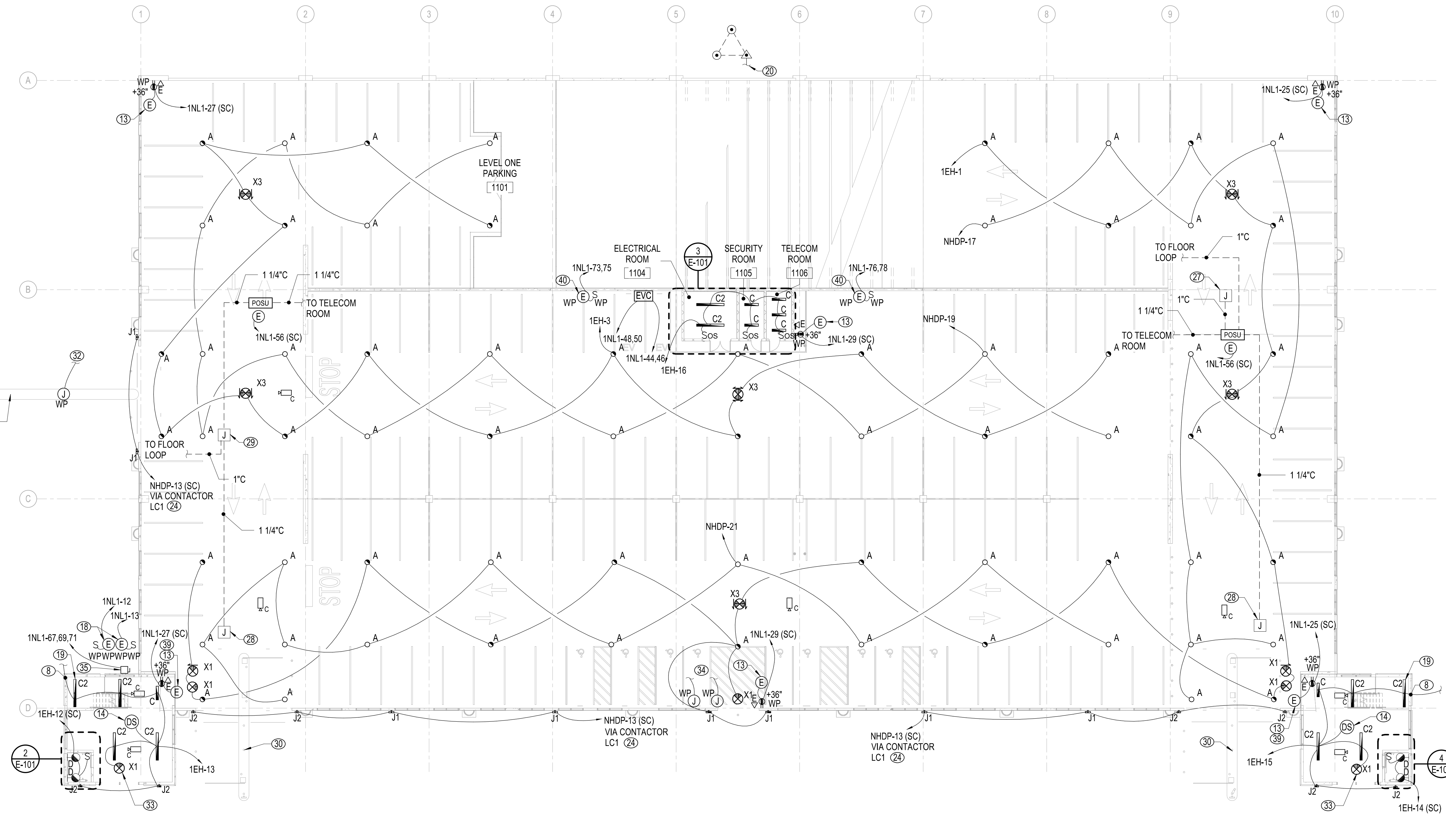


4 ENLARGED SOUTHEAST ELEVATOR POWER PLAN
1/4" = 1'-0"

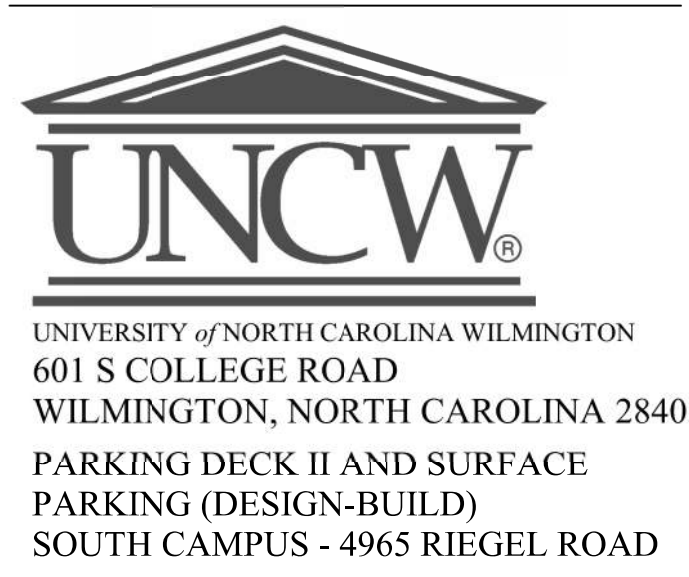
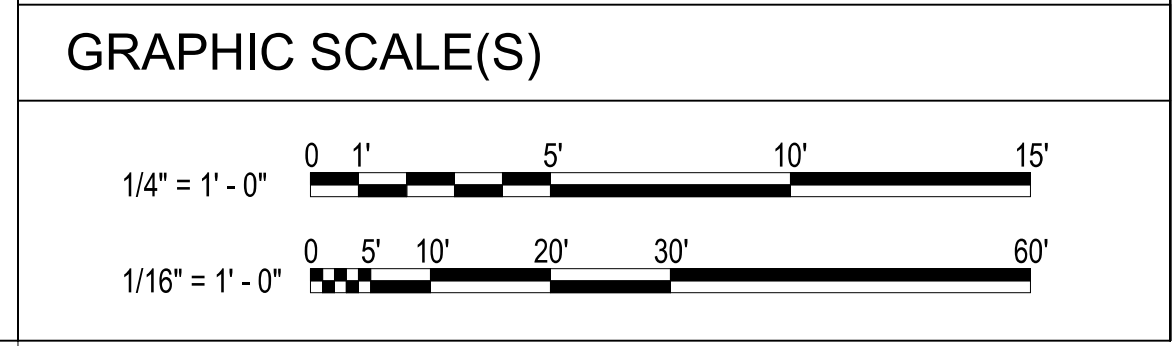
2 ENLARGED SOUTHWEST ELEVATOR POWER PLAN
1/4" = 1'-0"

- GENERAL NOTES**
1. PROVIDE EMERGENCY LIGHTING AND SIGNAGE AS REQUIRED BY LOCAL CODES TO ILLUMINATE AND IDENTIFY EGRESS PATHS UTILIZING THE CENTRAL LIGHTING INVERTER. WIRING FROM EMERGENCY SOURCE DISTRIBUTION OVERCURRENT PROTECTION TO EMERGENCY LOADS SHALL BE KEPT ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND EQUIPMENT AND SHALL NOT ENTER THE SAME REACEWAY, CABLE BOX OR CABINET WITH OTHER WIRING.
 2. CONDUITS ARE TO BE LOCATED IN THE GARAGE INTERIOR TO MINIMIZE VISUAL IMPACT. DO NOT ROUTE CONDUITS ON THE EXTERIOR OF ANY PART OF THE STRUCTURE. FIXTURES LOCATED ON THE EXTERIOR OF THE STRUCTURE ARE TO BE FED FROM BEHIND WITH NO CONDUIT VISIBLE FROM THE OUTSIDE.
 3. ALL RECEPTACLES SHALL BE GFI TYPE, UNLESS OTHERWISE NOTED. ALL RECEPTACLES EXCEPT THOSE IN ENCLOSED ROOMS SHALL HAVE WEATHERPROOF WHILE-IN-USE COVERS.
- NOTES**
40. PROVIDE CONNECTION TO HEAT TAPE. REFER TO PLUMBING DRAWINGS P101 AND P201 FOR LOCATION AND COORDINATE CONNECTION WITH EQUIPMENT INSTALLER.

- NOTES**
1. ELEVATION MOTOR FUSED DISCONNECT. FUSE PER MANUFACTURER'S RECOMMENDATION. REFER TO RISER DIAGRAM E-600 FOR ADDITIONAL INFORMATION. DISCONNECT SHALL BE LOCKABLE IN THE OPEN POSITION.
 2. ELEVATOR CAB LIGHT AND CONTROL FUSED DISCONNECT. PROVIDE 120V, 30A, 20A FUSE LOCKABLE IN THE OPEN POSITION.
 3. PROVIDE (1) VOICE LINE FOR EACH ELEVATOR. FIELD COORDINATE SPECIFICS AND FINAL LOCATION WITH ELEVATOR SUPPLIER.
 4. SUMP PUMP CONTROLLER. COORDINATE LOCATION WITH SUMP PUMP SUPPLIER.
 5. PROVIDE NEMA L6-20R, 208V, TWIST-LOCK STYLE RECEPTACLE. LOCATE BELOW THE PROPOSED TELECOMMUNICATIONS CABINET. REFER TO DRAWING E-600 FOR CABINET REQUIREMENTS.
 6. PROVIDE NEMA-5-20R, 120V, 20A, RECEPTACLE. LOCATE BELOW THE PROPOSED WALL MOUNT TELECOMMUNICATIONS CABINET. REFER TO DRAWING E-600 FOR CABINET REQUIREMENTS.
 7. VOICE LINE FOR FIRE ALARM DIGITAL COMMUNICATOR. COORDINATE SPECIFICS WITH FIRE ALARM SYSTEM SUPPLIER.
 8. CONNECT TO STAIR LUMINAIRE ON TIER ABOVE.
 9. CONNECT TO STAIR LUMINAIRE ON TIER ABOVE AND TIER BELOW.
 10. CONNECT TO STAIR LUMINAIRE ON TIER BELOW.
 11. (2) 4" INCOMING TELECOM CONDUITS FROM MANHOLE MH-14A5. REFER TO DRAWING ES101 FOR CONTINUATION.
 12. REFER TO LUMINAIRE SCHEDULE FOR MOUNTING SPECIFICS OF LUMINAIRE LOCATED AT TOP OF ELEVATOR SHAFT.
 13. PROVIDE CONNECTION TO EMERGENCY PHONE. EXTEND 2#12, #12, 3/4" FROM RECEPTACLE JUNCTION BOX TO BUTTON OF CALL BOX AND CONDUIT FROM CALL BOX TO STROBELOCATER LIGHT.
 14. DAYLIGHT SENSOR FOR DAYLIGHT HARVESTING. PROVIDE ONE SENSOR PER STAIR TOWER AND CONNECT TO FOUR (3) TYPE C2 AND (1) TYPE C LUMINAIRES ON EACH TIER AND (2) TYPE C2 AND (2) TYPE C LUMINAIRES ON THE TOP TIER FIFTH LEVEL. LOCATE SENSOR ON GROUND TIER LEVEL PER MANUFACTURER RECOMMENDATIONS. DO NOT CONNECT LAMINAR TYPE C2 AT THE STAIR LOWER LANDING TO THE DAYLIGHT SENSOR.
 15. COORDINATE ANCHOR BOLT PATTERN OF POLE WITH DECK MANUFACTURER PRIOR TO ORDERING POLE. COORDINATE DRILL PATTERN AND BOLT PATTERN OF LUMINAIRE MOUNT WITH POLE MANUFACTURER PRIOR TO ORDERING POLE.
 16. BOND LIGHT POLE WITH #4 BARE COPPER WIRE TO CONCRETE-ENCASED ELECTRODE CONSISTING OF AT LEAST 20 FEET OF BARE COPPER CONDUCTOR NOT SMALLER THAN #4 AWG. INSTALLATION SHALL COMPLY WITH NEC-250.52(A)(3)(2).
 17. CONDUCTORS IN LIGHT POLES SHALL BE SUPPORTED AS PROVIDED IN NEC-300.19.
 18. PROVIDE CONNECTION TO HEATED BACKFLOW AND IRRIGATION ENCLOSURE, IRRIGATION CONTROLLER, AND ASSOCIATED HEAT TRACING. COORDINATE CONNECTION REQUIREMENT WITH EQUIPMENT INSTALLER. REFER TO SITE DRAWING CG100 AND PLUMBING DRAWINGS P101 AND P201 FOR LOCATION.
 19. CONNECT LUMINAIRE A HEAD OF LOCAL CONTROL.
 20. GROUND TRIAD. LOCATE MINIMUM 5' FROM BUILDING. EXTEND 1-1/4" FROM GROUND TEST WELL TO MAIN GROUND ROD LOCATED IN THE ELECTRICAL ROOM 1104 (MGB). INSTALL CONDUIT MINIMUM 30" BELOW FINISHED GRADE. REFER TO DETAILS 1 AND 2 DRAWING E-500 FOR ADDITIONAL REQUIREMENT.
 21. PHOTOCELL FOR BRANCH CIRCUITS VIA LIGHTING CONTACTOR LC1. MOUNT PHOTOCELL UNDER ROOF EAVE OF STAIR TOWER. ORIENT FACING NORTH.
 22. MOUNT A COPY OF THE ELECTRICAL POWER RISER DIAGRAM, UNDER CLEAR PROTECTIVE MATERIAL AT THIS LOCATION.
 23. PROVIDE NEMA1 SCREW-OVER WIREWAY, 8" WIDE X 8" HIGH X 36" LONG FOR SITE LIGHTING UNDERGROUND CONDUIT TERMINATIONS. MOUNT 24" AFF.
 24. TYPE J1 AND J2 CONNECTED VIA LIGHTING CONTACTOR LC1 LUMINAIRES SHALL NOT BE PROVIDED WITH INTEGRAL PHOTOCELL. REFER TO LUMINAIRE SCHEDULE'S NOTES.
 25. MOUNT LUMINAIRE AT 16-4" AFF TO CENTER. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS. REFER TO LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION.
 26. JUNCTION BOXES FOR FUTURE ELECTRIC VEHICLE CHARGER. REFER TO SYMBOL LEGEND FOR ADDITIONAL INFORMATION. TYPICAL FOR SECOND AND THIRD LEVELS ONLY.
 27. PROVIDE TWO-GANG JUNCTION BOX FOR CONNECTION TO VEHICLE COUNTING SENSORS. EXTEND LOW VOLTAGE CABLE 1" CONDUIT TO EACH SENSOR AND MAKE CONNECTIONS. COORDINATE LOCATION WITH STRUCTURAL DRAWINGS AG401 AND AG402 AND SYSTEM VENDOR.
 28. PROVIDE TWO-GANG JUNCTION BOX FOR CONNECTION TO LIGHTED SIGNS HANGING FROM BOTTOM OF DOUBLE TEES OVER EACH LANE (GREEN ARROW / X) AND EXTERIOR LIGHTED SIGNS, (ENTER/ EXIT) OVER EACH LANE. COORDINATE SIGNAGE LOCATION WITH STRUCTURAL DRAWINGS, AG401 AND AG402 AND SYSTEM VENDOR. EXTEND LOW VOLTAGE CABLE IN 1" CONDUIT TO EACH SIGN.
 29. PROVIDE TWO-GANG JUNCTION BOX FOR CONNECTION TO LIGHTED SIGNS HANGING FROM BOTTOM OF DOUBLE TEES OVER EACH LANE (GREEN ARROW / X). COORDINATE SIGNAGE LOCATION WITH STRUCTURAL DRAWINGS, AG401 AND AG402 AND SYSTEM VENDOR. EXTEND LOW VOLTAGE CABLE IN 1" CONDUIT TO EACH SIGN.
 30. REFER TO DETAIL 9 DRAWING E-500 FOR POWER AND DATA REQUIREMENTS AND AG401 FOR EQUIPMENT LOCATION.
 31. EXTEND (1) 1" CONDUIT UNDERGROUND FROM EACH BARRIER GATE TO PANEL 1N1 SECTION II CIRCUITS 1N1-68 AND 1N1-70 FOR THE WEST GATE. REFER TO DETAIL 3/AG401 FOR BARRIER GATE LOCATION. COORDINATE ALL REQUIREMENTS WITH PARKING ACCESS CONTROL SYSTEM VENDOR PRIOR TO CONSTRUCTION.
 32. EXTEND (1) 1-1/2" CONDUIT UNDERGROUND FROM WEATHERPROOF JUNCTION BOX TO TELECOM ROOM EAST WALL FOR WEST GATE. MOUNT JUNCTION BOX 10' AFF. PROVIDE WEATHERPROOF COVER PLATE AND LABEL. STUB-UP CURTAIN IN TELECOM ROOM 10' AFF. REFER TO ARCHITECTURAL CURTAIN WALL DETAIL DRAWING FOR EXIT SIGN MOUNTING LOCATION.
 34. EXTEND (1) 1" CONDUIT FOR POWER AND (1) 1" CONDUIT FOR DATA. SAME AS NOTES 31 AND 32 EXCEPT FOR FUTURE PAY BY SPACE MACHINE. COORDINATE FINAL LOCATION WITH UNCW PRIOR TO INSTALLATION.
 35. PROVIDE HEAVY DUTY NEMA 4X, 240 V, 30 AMP NON-FUSED DISCONNECT FOR BOOSTER PUMP. EXTEND 3#8, #8 G, 1" CONDUIT UNDERGROUND FROM DISCONNECT TO PANEL 1N1 SECTION II TO CIRCUIT INDICATED. AND EXTEND 3#12, #12 G, 3/4" CONDUIT FROM DISCONNECT TO PUMP AND MAKE CONNECTIONS. PUMP HEATED ENCLOSURE SHALL BE CONNECTED TO THE BACKFLOW HEATED ENCLOSURE CIRCUIT 1N1-12 AT THIS LOCATION. REFER TO KEY NOTE 18 FOR ADDITIONAL INFORMATION.
 36. MOUNT RECEPTACLE 12" AFF IN REAR WALL.
 37. PROVIDE SUPPORT STRUCTURE (4" SQUARE POLE) FOR THE STROBE / LOCATOR LIGHT TO BE MOUNTED 96" AFF.
 38. TELECOMMUNICATIONS WALL MOUNTED EQUIPMENT CABINET. REFER TO DRAWING E-600 FOR ADDITIONAL INFORMATION.
 39. LOCATE STROBELOCATER LIGHT AT THIS LOCATION TO THE FACE OF THE WALL, SO THAT LIGHT IS VISIBLE FROM ALL SIDES. REFER TO ARCHITECTURAL DETAIL 3/AE601.



1 FIRST LEVEL - LIGHTING, POWER, AND SYSTEMS PLAN
1/16" = 1'-0"



SCO ID NUMBER: 18-19226-01A
CODE: 41828
ITEM: 301



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PROFESSIONAL SEAL



NC CORPORATE ENGINEERING LICENSE #C-1028

SUBMITTAL
AUGUST 1, 2019
BID DOCUMENTS

REVISIONS

KEY PLAN

SHEET
FIRST LEVEL - LIGHTING, POWER AND SYSTEMS PLAN

E-101

DESIGN: JE
DRAWN: KAW
REVIEW: WAZ
CN 8112

GENERAL NOTES

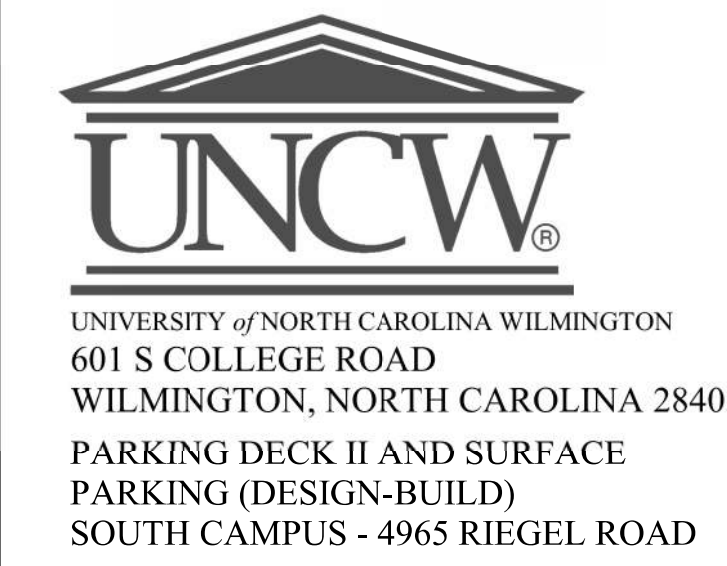
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3. ALL RECEPTACLES SHALL BE GFI TYPE, UNLESS OTHERWISE NOTED. ALL RECEPTACLES EXCEPT THOSE IN ENCLOSED ROOMS SHALL HAVE WEATHERPROOF WHILE-IN-USE COVERS.

NOTES

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NOTES

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2. ELEVATOR CAB LIGHT AND CONTROL FUSED DISCONNECT. PROVIDE 120V, 30A, 20A FUSE LOCKABLE IN THE OPEN POSITION.
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23. PROVIDE NEMA1 SCREW-OVER WIREWAY, 8" WIDE X 8" HIGH X 36" LONG FOR SITE LIGHTING UNDERGROUND CONDUIT TERMINATIONS. MOUNT 24" AFF.
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32. EXTEND (1) 1-1/2" CONDUIT UNDERGROUND FROM WEATHERPROOF JUNCTION BOX TO TELECOM ROOM EAST WALL FOR WEST GATE. MOUNT JUNCTION BOX 10" AFF. PROVIDE WEATHERPROOF COVER PLATE AND LABEL. STUB-UP CONDUIT IN TELECOM ROOM 10" AFF. REFER TO ARCHITECTURAL CURTAIN WALL DETAIL DRAWING FOR EXIT SIGN MOUNTING LOCATION.
33. EXTEND (1) 1" CONDUIT FOR POWER AND (1) 1" CONDUIT FOR DATA. SAME AS NOTES 31 AND 32 EXCEPT FOR FUTURE PAY BY SPACE MACHINE. COORDINATE FINAL LOCATION WITH UNCW PRIOR TO INSTALLATION.
34. PROVIDE HEAVY DUTY NEMA 4X, 240 V, 30 AMP NON-FUSED DISCONNECT FOR BOOSTER PUMP. EXTEND 3#8, #8 G, 1" CONDUIT UNDERGROUND FROM DISCONNECT TO PANEL 1N1 SECTION II TO CIRCUIT INDICATED. AND EXTEND 3#12, #12 G, 3/4" CONDUIT FROM DISCONNECT TO PUMP AND MAKE CONNECTIONS. PUMP HEATED ENCLOSURE SHALL BE CONNECTED TO THE BACKFLOW HEATED ENCLOSURE CIRCUIT 1N1-12 AT THIS LOCATION. REFER TO KEY NOTE 18 FOR ADDITIONAL INFORMATION.
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36. PROVIDE SUPPORT STRUCTURE (4" SQUARE POLE) FOR THE STROBE / LOCATOR LIGHT TO BE MOUNTED 96" AFF.
37. TELECOMMUNICATIONS WALL MOUNTED EQUIPMENT CABINET. REFER TO DRAWING E-600 FOR ADDITIONAL INFORMATION.
38. LOCATE STROBEOCATOR LIGHT AT THIS LOCATION TO THE FACE OF THE WALL, SO THAT LIGHT IS VISIBLE FROM ALL SIDES. REFER TO ARCHITECTURAL DETAIL 3/AE601.



SCO ID NUMBER: 18-19226-01A
CODE: 41828
ITEM: 301

CONTRACTOR
Balfour Beatty Construction

DESIGNER

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CLARK NEXSEN LICENSE NUMBER: C-1028



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PROFESSIONAL SEAL



NC CORPORATE ENGINEERING LICENSE #C-1028

SUBMITTAL
AUGUST 1, 2019
BID DOCUMENTS

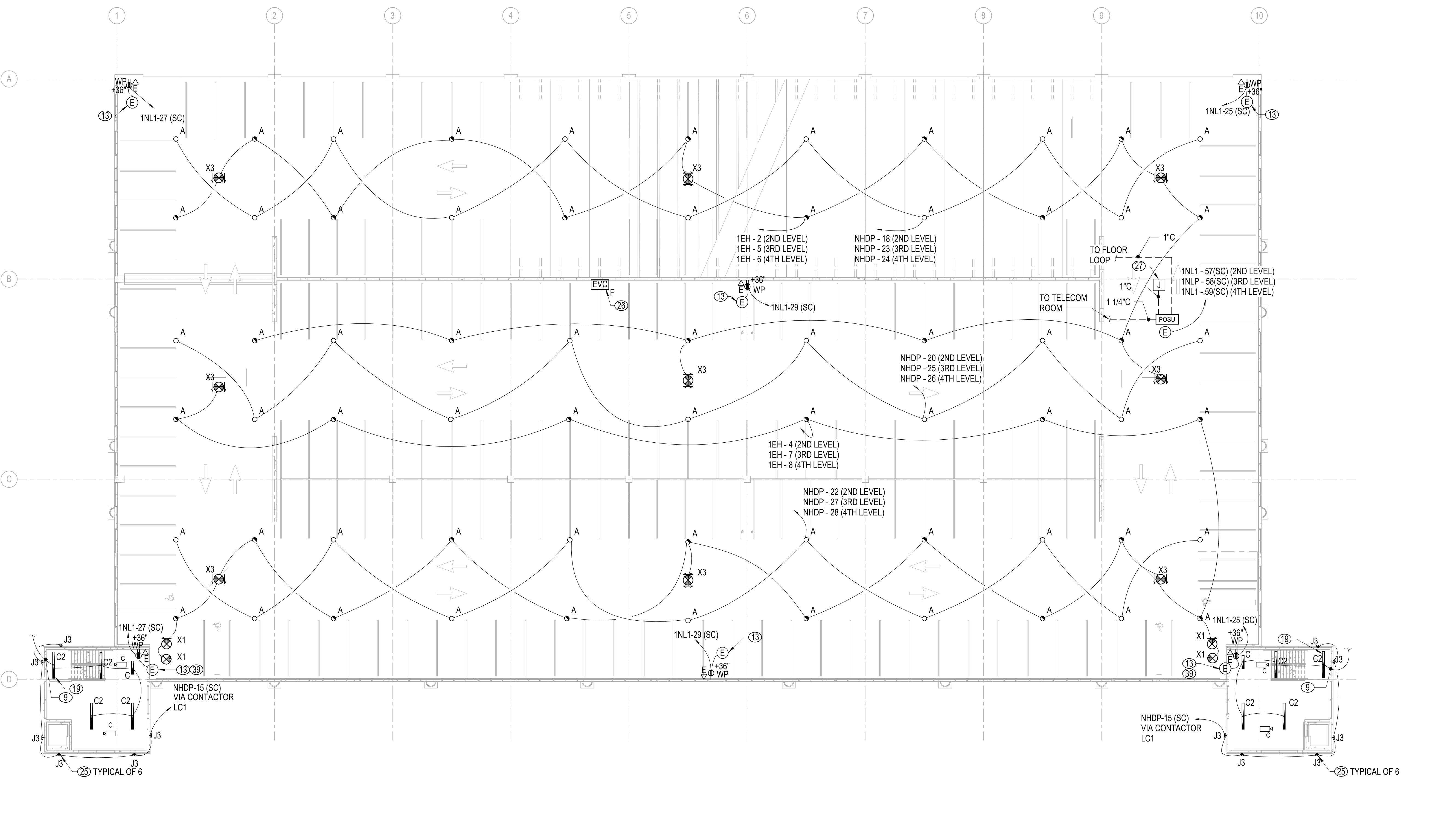
REVISIONS

KEY PLAN

SHEET
TYPICAL LEVELS SECOND-FOURTH - LIGHTING, POWER AND SYSTEMS PLAN

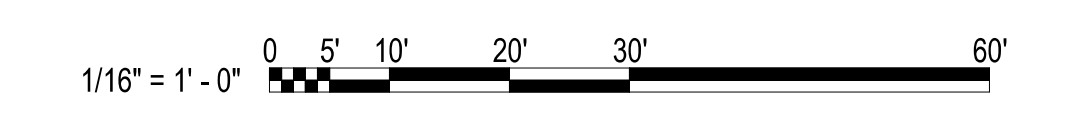
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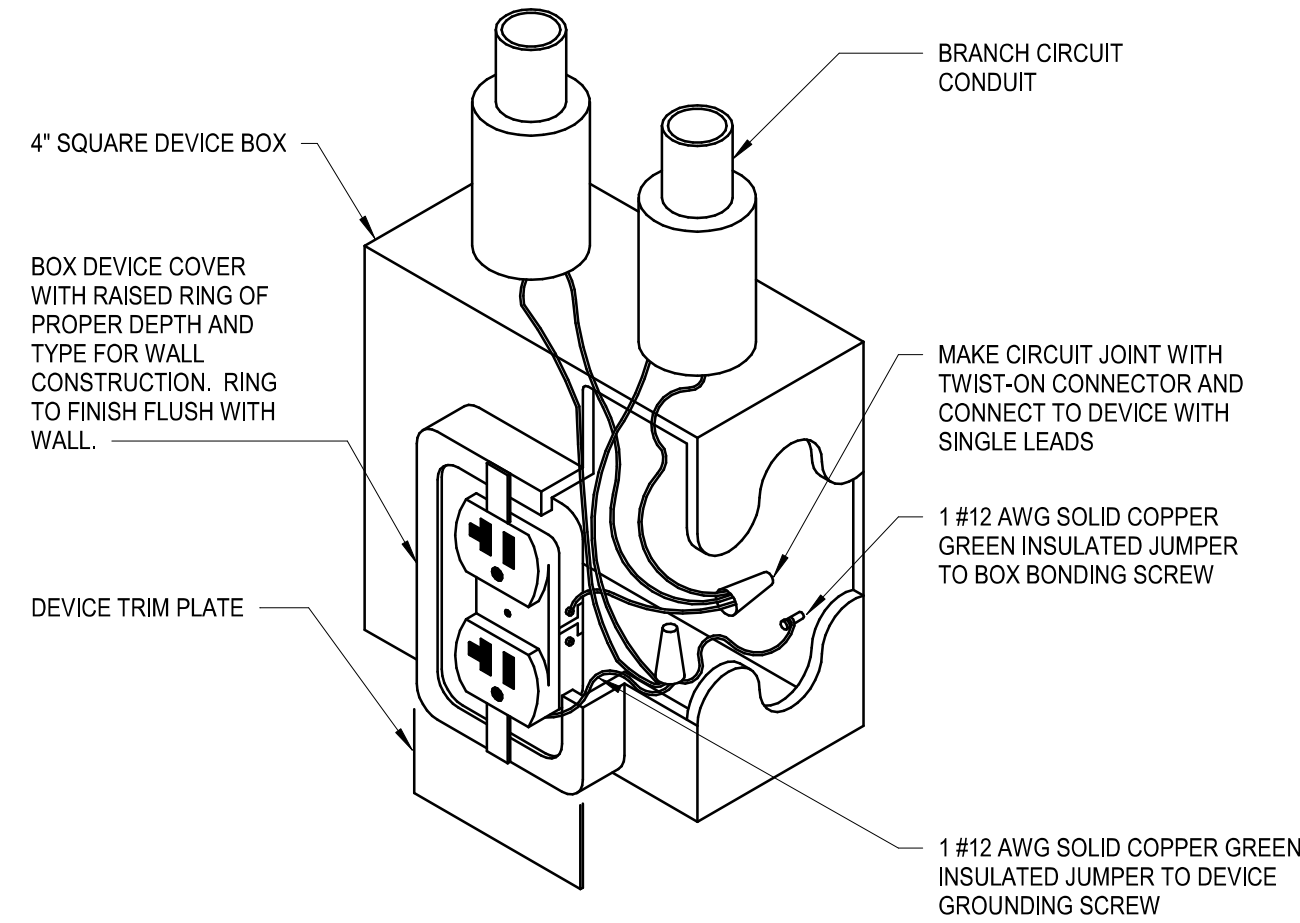
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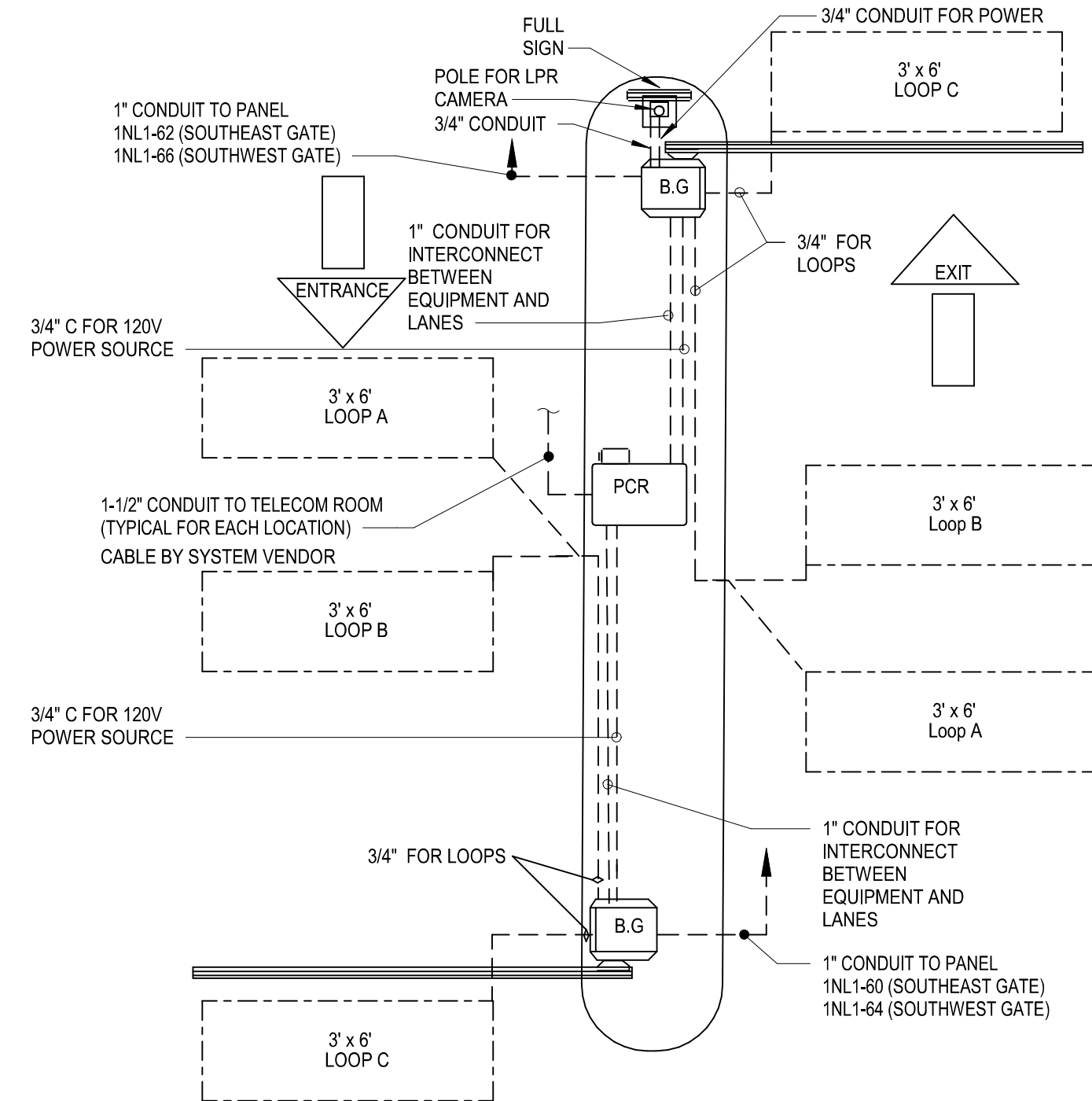
1 TYPICAL LEVELS SECOND-FOURTH - LIGHTING, POWER, AND SYSTEMS PLAN
1/16" = 1'-0"

GRAPHIC SCALE(S)





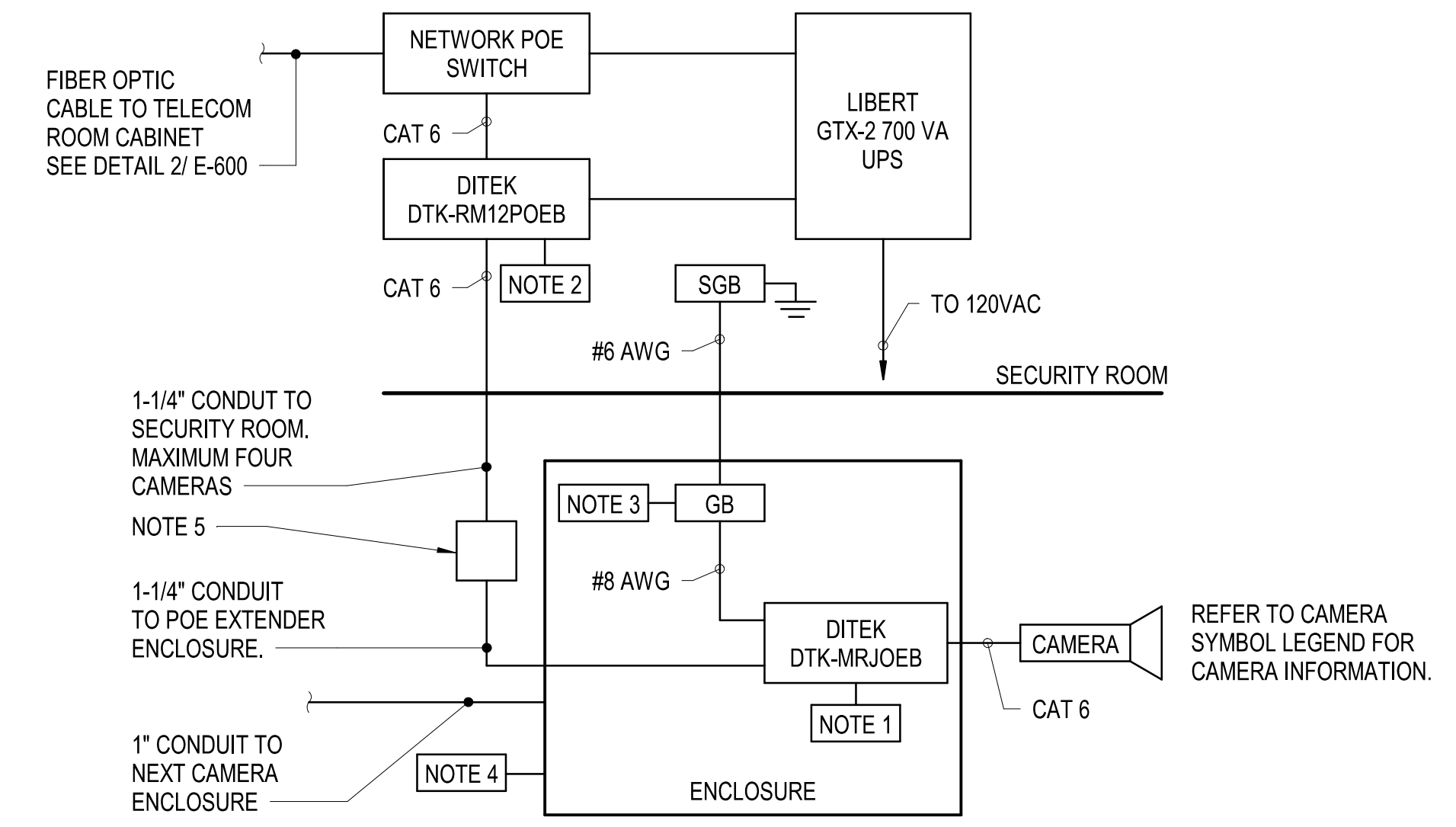
8 RECEPTACLE GROUNDING DETAIL
NO SCALE



9 ENLARGED ENTRANCE GATE WIRING DETAIL (SOUTHEAST AND SOUTHWEST)
NO SCALE

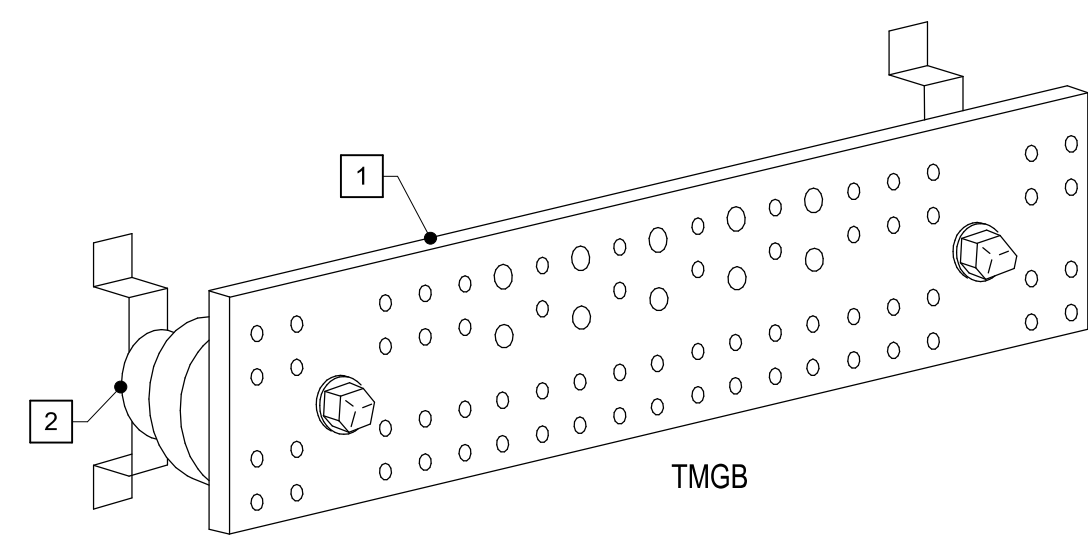
DETAIL LEGEND	
B.G.	BARRIER GATE
PCR	PROXIMITY CARD READER AND AUTOMATIC GATE INTERCOM
LPR	LICENSE PLATE RECOGNITION

NOTES:
1. REFER TO SPECIFICATION SECTION 11226 AND DRAWING AG401 FOR EQUIPMENT LOCATION AND ADDITIONAL INFORMATION.
2. COORDINATE CONDUIT AND WIRING REQUIREMENTS WITH PARKING ACCESS CONTROL SYSTEM (PACS) VENDOR PRIOR TO CONSTRUCTION.



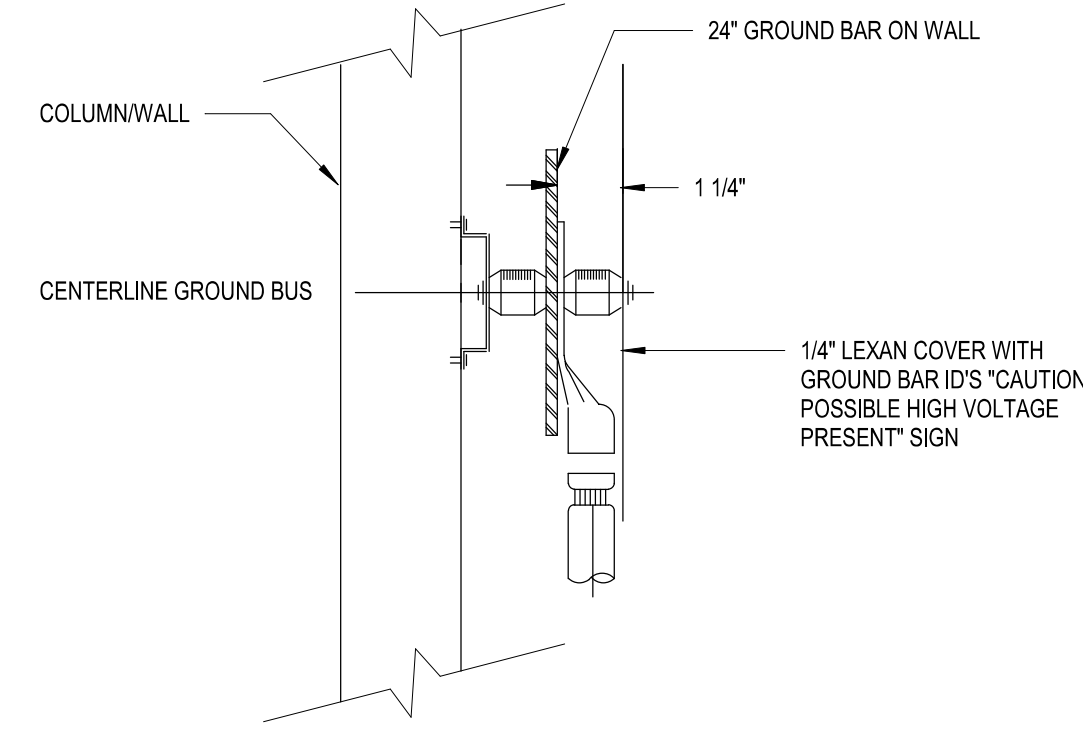
- PROVIDE CAT 6 SURGE PROTECTOR (DTK-MRJOEB) IN AN ENCLOSURE LOCATED WITHIN 6 FEET OF EACH CAMERA.
- PROVIDE RACK MOUNTED DITEK DTK-RM12POE 12 PORT SURGE PROTECTION PATCH PANEL. SURGE PROTECTION PATCH PANEL SHALL BE GROUNDED USING #8 AWG WIRE TO SGB.
- PROVIDE GROUND BAR IN ENCLOSURE TO PROVIDE A CONNECTION TO GROUND FOR CAMERA SURGE PROTECTORS. THE DISTANCE BETWEEN THE DITEK MRJOEB MODULES AND THE CAMERA IT PROTECTS. PROVIDE #6 AWG, GREEN, INSULATED, AND STRANDED GROUND CONDUCTOR FROM SGB IN THE SECURITY ROOM TO GROUND BAR. PROVIDE #8 AWG, GREEN, INSULATED, AND STRANDED GROUND CONDUCTOR FROM GROUND BAR TO EACH CAMERA SURGE PROTECTOR.
- PROVIDE HINGED ENCLOSURE LOCATED WITHIN 6 FEET OF EACH CAMERA TO HOUSE DTK-MRJOEB AND GROUND BAR. HINGED ENCLOSURE SHALL BE 8" SQUARE AND 6" DEEP.
- PROVIDE 18" x 18" x 6" DEEP HINGED ENCLOSURE FOR POE EXTENDER (AXIS MODEL# T8129-E). INSTALL ENCLOSURE AT MAXIMUM 250 FEET FROM SECURITY ROOM TO EACH HOME RUN. PROVIDE ONE POE EXTENDER PER EACH CAT6 CABLE AND LABEL.
- UNCW WILL PROVIDE THE NETWORK EQUIPMENT TO INCLUDE POE NETWORK SWITCH, AND ASSIGN SWITCH, PORTS AND IP ADDRESSES FOR USE IN NEW CAMERA INSTALLATIONS.
- SECURITY CAMERA INSTALLER SHALL COMPLY WITH UNCW SECURITY CAMERA STANDARD DATED 06-28-2017, PROVIDE THE LENSEL CAMERA LICENSE FOR THE NUMBER OF CAMERAS INSTALLED, AND SHALL BE A LENSEL PROFESSIONAL CERTIFIED.

10 CAMERA STANDARDS DETAIL
NO SCALE



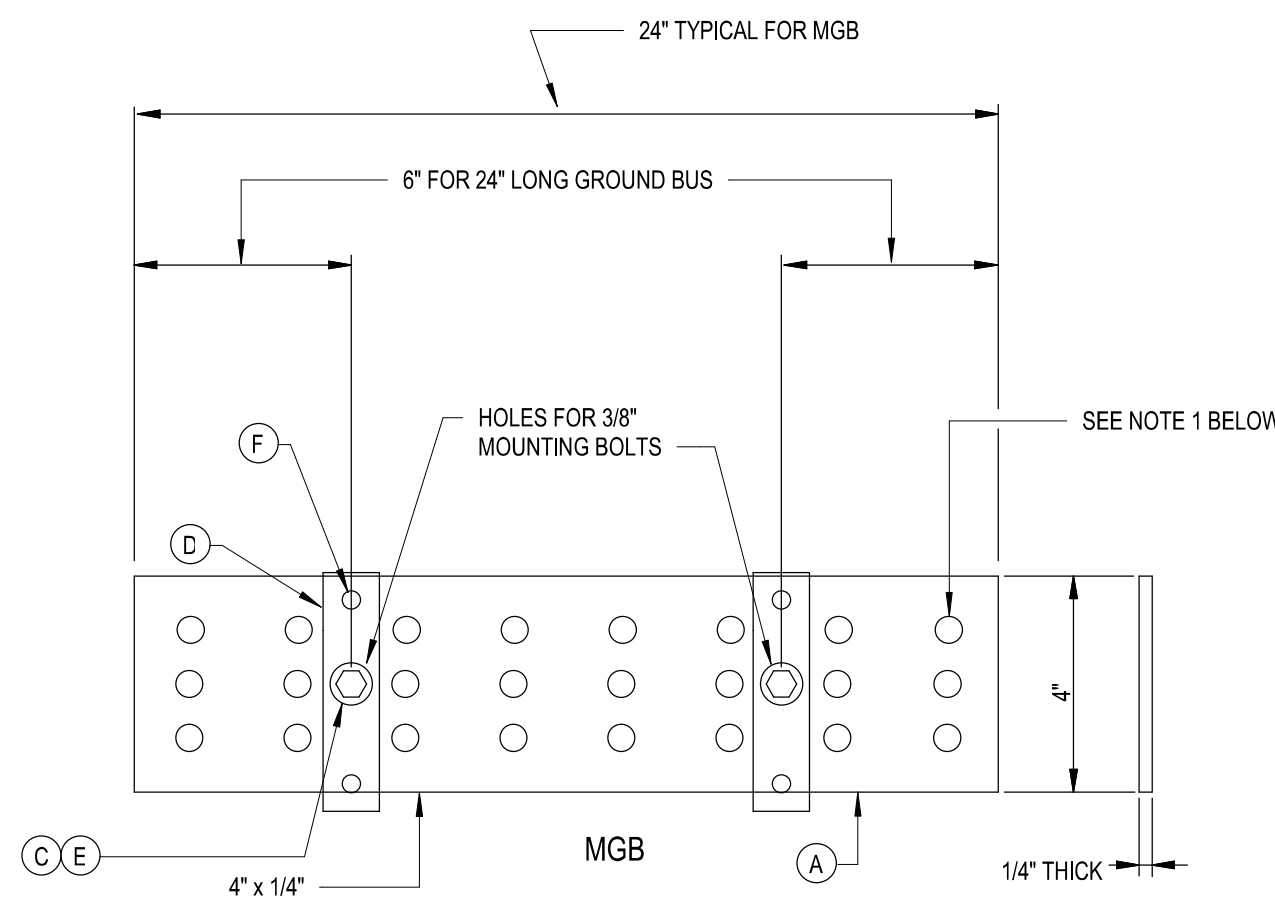
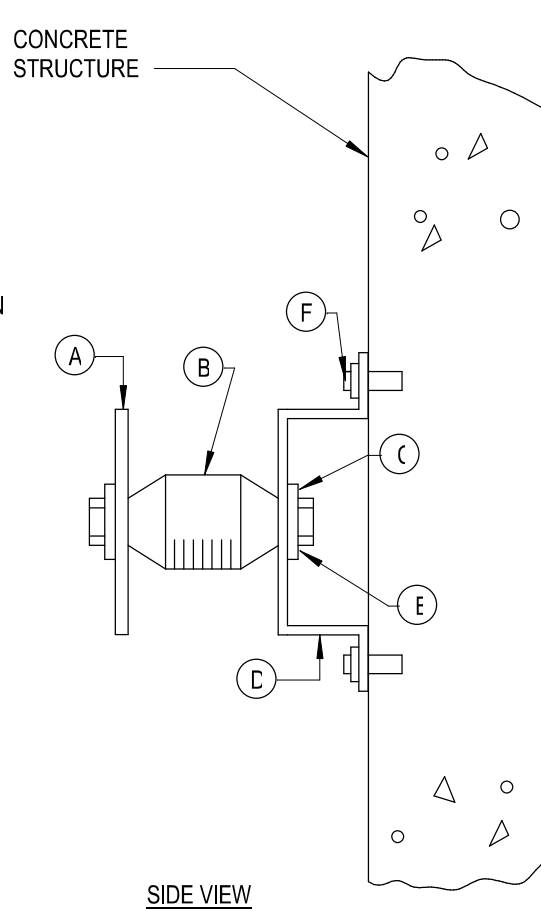
- NOTES:
- COPPER GROUND BAR, DOUBLE LUG CONFIGURATION; TMGB 1/4 X 4" X 24". UL LISTED WITH PRE DRILLED HOLES IN BICSI PATTERN.
 - STANDOFF BRACKET ASSEMBLY WITH INSULATORS, TYPICAL FOR TWO.

5 TELECOMMUNICATIONS GROUNDING BUSBAR DETAILS
NO SCALE



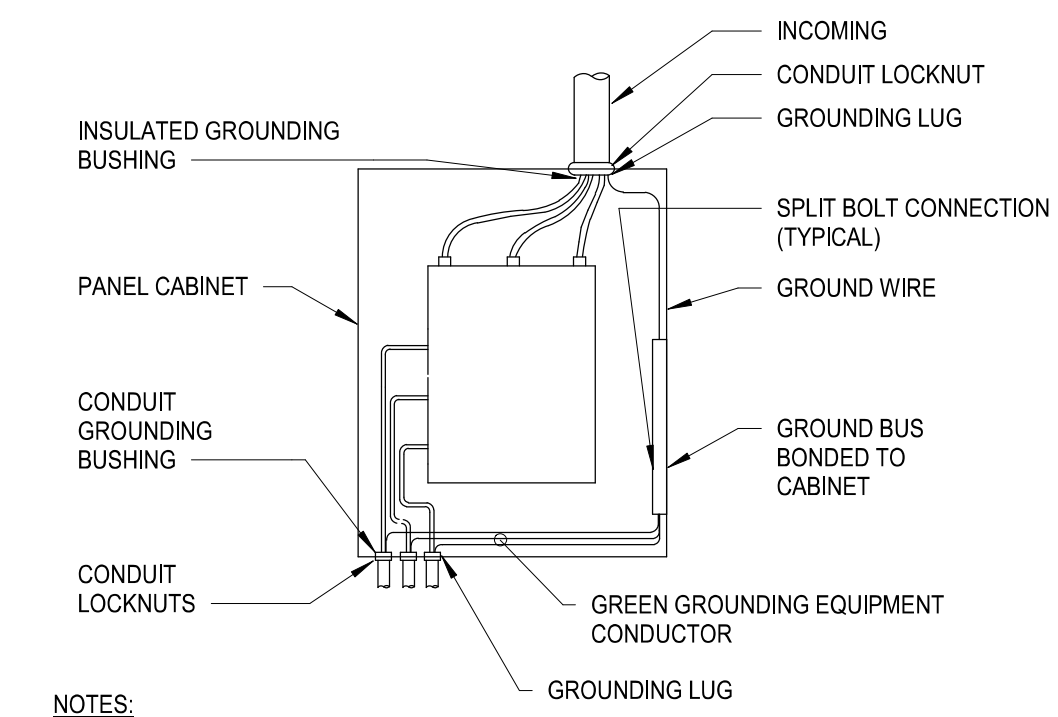
- LEGEND:
- (A) COPPER GROUND BAR
 - (B) INSULATORS
 - (C) 3/8" LOCKWASHERS
 - (D) WALL MOUNTING BRACKET
 - (E) 3/8 = 11x11" HEX CAP SCREW BOLT
 - (F) PROVIDE APPROPRIATE EXPANSION SHIELDS & BOLTS FOR MOUNTING ON CONCRETE STRUCTURE

6 ELECTRICAL GROUNDING BUSBAR DETAIL
NO SCALE

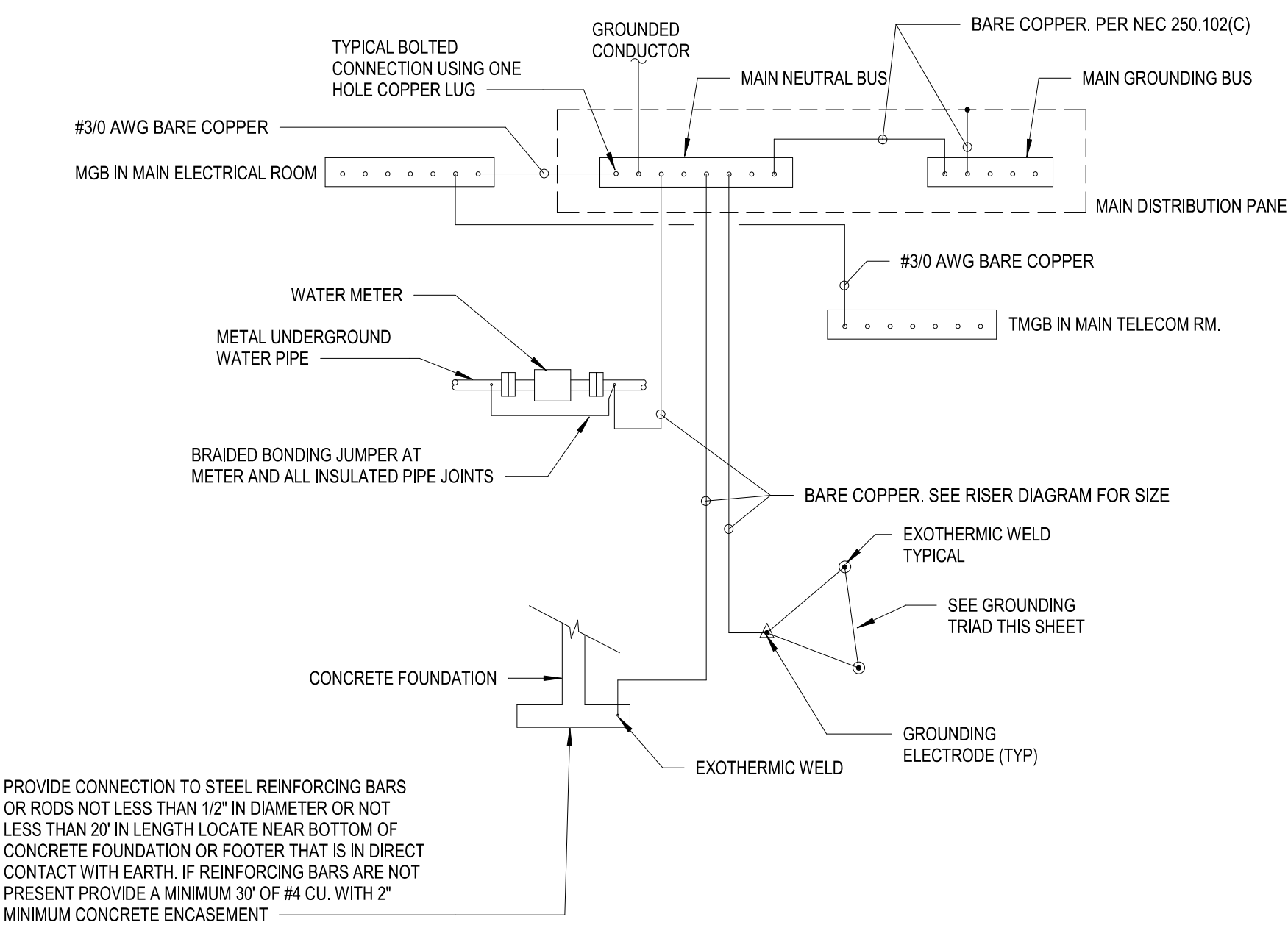


- GENERAL NOTES:
- PROVIDE THREE HOLES SUITABLE FOR NEMA SPACING FOR #10 THROUGH 500 KCMIL 2 HOLE COMPRESSION CONNECTORS.
 - PROVIDE 1/4" LEXAN COVER WITH GROUND BAR ID'S "CAUTION POSSIBLE HIGH VOLTAGE PRESENT" SIGN.
 - PROVIDE 3/8" SPARE HOLES FOR EACH GROUND BAR.

7 TYPICAL PANEL GROUNDING
NO SCALE

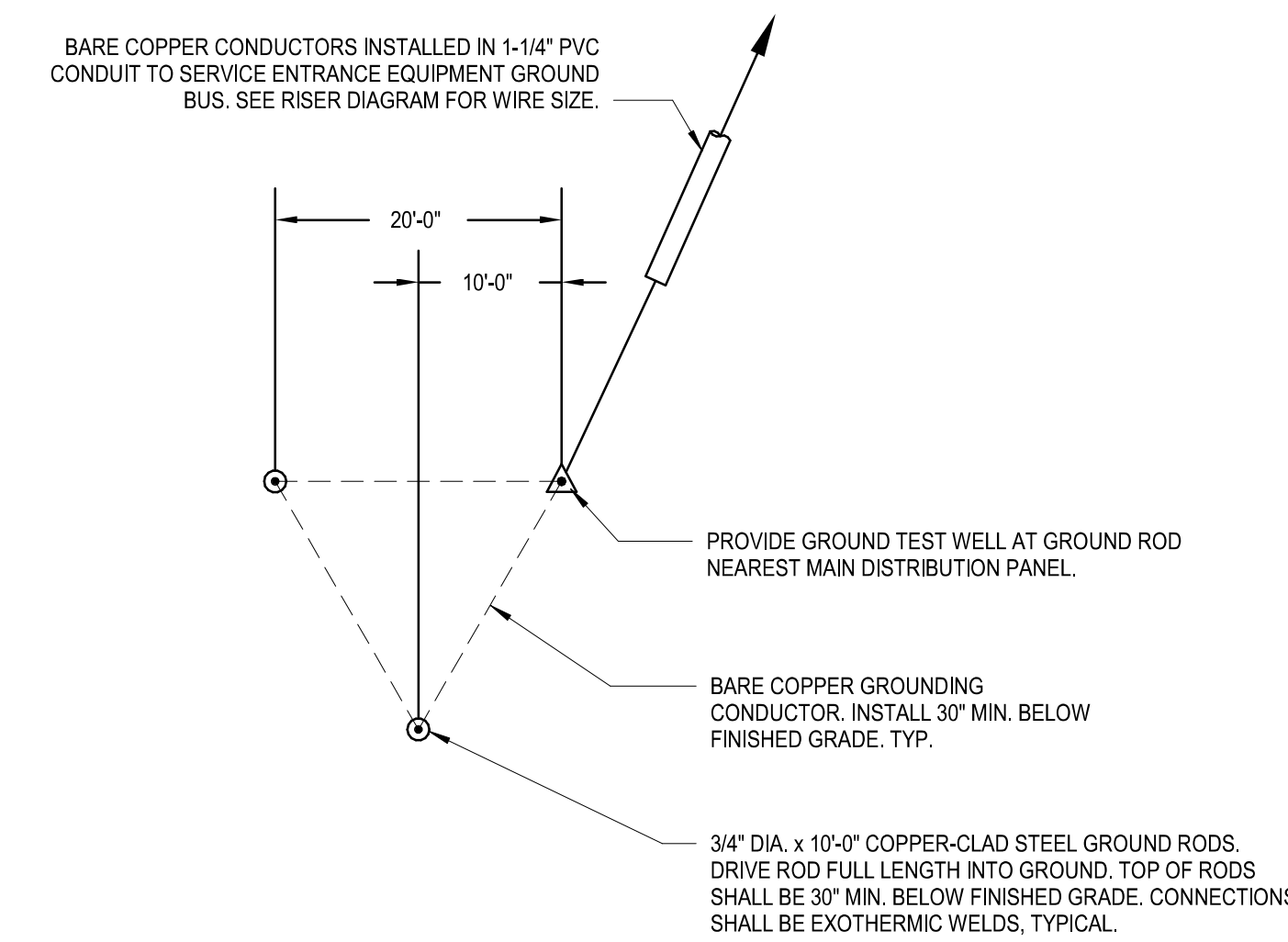


- NOTES:
- WIRES TO BE NEATLY LACED.
 - AT THE POINT OF ATTACHMENT OF THE GROUNDING LUG TO THE CABINET, THE SURFACES SHALL BE SCRAPED FREE OF PAINT AND THOROUGHLY CLEANED TO INSURE PROPER BONDING.
 - NEUTRAL CONDUCTOR NOT SHOWN FOR CLARITY.

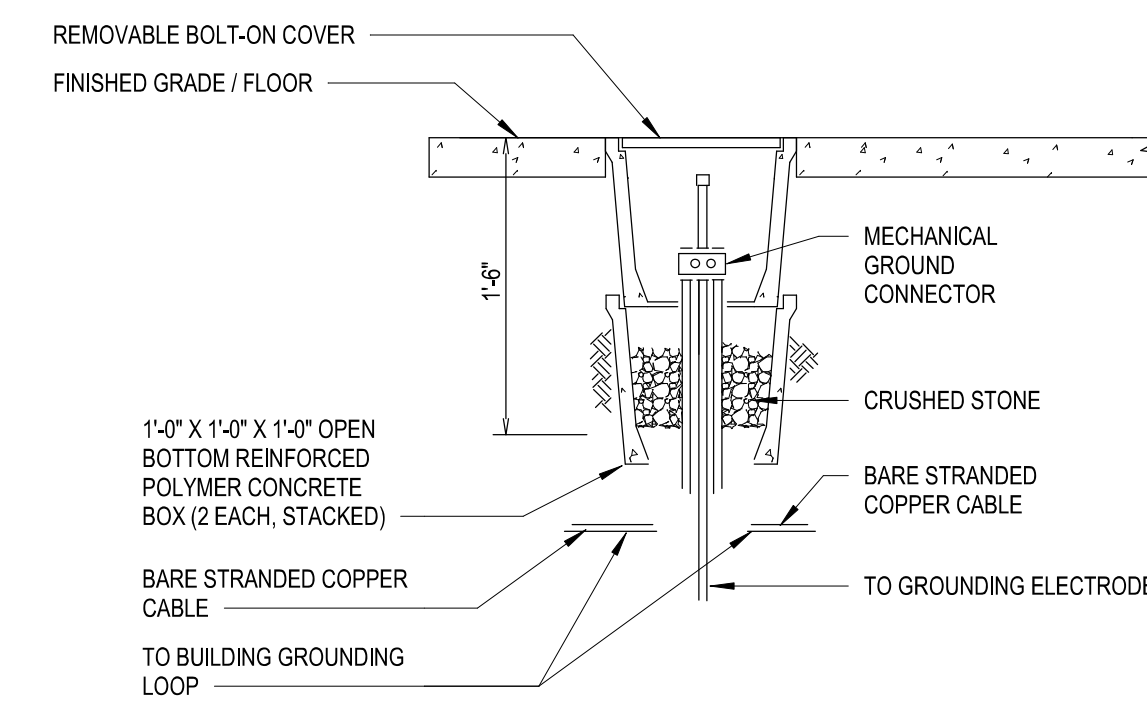


- NOTES:
- GROUNDING ELECTRODE SYSTEM, CONFORM TO NEC ARTICLE 250.

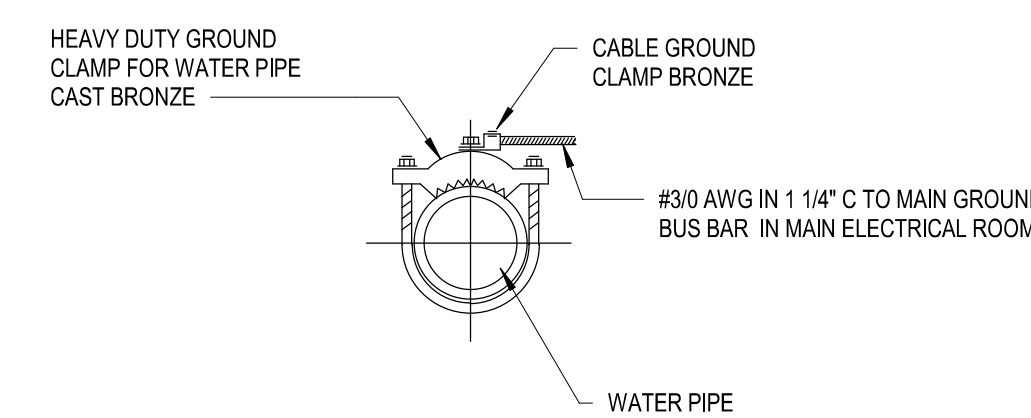
1 GROUNDING SYSTEM DETAIL
NO SCALE



2 GROUNDING TRIAD
NO SCALE



3 GROUNDING TEST WELL
NO SCALE



4 GROUND CABLE CONNECTION TO WATER PIPE
NO SCALE

SCO ID NUMBER: 18-19226-01A
CODE: 41828
ITEM: 301

CONTRACTOR
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DESIGNER

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PROFESSIONAL SEAL



NC CORPORATE ENGINEERING LICENSE #C-1028

SUBMITTAL
AUGUST 1, 2019
BID DOCUMENTS

REVISIONS

KEY PLAN

SHEET
ELECTRICAL DETAILS

E-500

DESIGN: WAZ
DRAWN: KAW
REVIEW: WAZ

CN 8112

