































ELECTRICAL SYMBOLS










	DUPLEX RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
	DUPLEX RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R) MOUNT 4" ABOVE COUNTER TOP, SINK, OR BACKSPLASH (IF PRESENT)
	SINGLE RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
	FLOOR RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
	SINGLE RECEPTACLE OUTLET (50A, 250V, 3 POLE, 3 WIRE, NEMA 10-50R)
	SINGLE RECEPTACLE OUTLET (20A, 250V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 6-20R)
	SINGLE RECEPTACLE OUTLET (30A, 250V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 6-30R)
	SINGLE RECEPTACLE OUTLET (30A, 250V, 3 POLE, 4 WIRE, TWIST-LOCK, GROUNDING TYPE, NEMA L15-30R)
	SINGLE SPECIAL-PURPOSE RECEPTACLE OUTLET; NUMBER CORRESPONDS TO THE SPECIAL-PURPOSE RECEPTACLE SCHEDULE
	SINGLE RECEPTACLE FOR ELECTRIC RANGE (50A, 125/250V, 3 POLE, 4 WIRE, GROUNDING TYPE, NEMA 14-50R)
	DUPLEX RECEPTACLE MOUNTED IN CEILING (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
	TWO (2) DUPLEX RECEPTACLES MOUNTED IN DOUBLE GANG BACKBOX (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
	TWO (2) DUPLEX RECEPTACLES FLOOR MOUNTED IN DOUBLE GANG BACKBOX (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)

	LIGHT FIXTURE, CEILING MOUNTED
	LIGHT FIXTURE, CEILING MOUNTED, ON EMERGENCY CIRCUIT
	LIGHT FIXTURE, CEILING MOUNTED, WITH EMERGENCY SELF CONTAINED BATTERY PACK. BATTERY PACK IS TO REMAIN UNSWITCHED.
	LIGHT FIXTURE, WALL MOUNTED
	LIGHT FIXTURE, INDUSTRIAL STRIP, SURFACE OR PENDANT MOUNTED
	LIGHT FIXTURE, INDUSTRIAL STRIP, SURFACE OR PENDANT MOUNTED, ON EMERGENCY CIRCUIT
	LIGHT FIXTURE, INDUSTRIAL STRIP, SURFACE OR PENDANT MOUNTED, WITH EMERGENCY SELF CONTAINED BATTERY PACK. BATTERY PACK IS TO REMAIN UNSWITCHED.
	LIGHT FIXTURE, CEILING MOUNTED
	LIGHT FIXTURE, CEILING MOUNTED, ON EMERGENCY CIRCUIT
	LIGHT FIXTURE, CEILING MOUNTED, WITH EMERGENCY SELF CONTAINED BATTERY PACK. BATTERY PACK IS TO REMAIN UNSWITCHED.
	LIGHT FIXTURE, WALL MOUNTED
	EMERGENCY BATTERY POWERED LIGHTING UNIT, WITH SELF CONTAINED BATTERY, CHARGER, ETC. (REFER TO FIXTURE SCHEDULE FOR BATTERY TYPE, VOLTAGE, LAMP TYPE, WATTAGE, ETC.) TRIANGLES DEPICT QUANTITY AND AIMING OF LAMP HEADS
	EXIT SIGN, LIGHTED, CEILING MOUNTED. SHADED AREA INDICATES FACE. ARROW DEPICTS DIRECTIONAL ARROW ON SIGN. WHEN REQUIRED BY THE FIXTURE SCHEDULE, AN EMERGENCY SELF-CONTAINED BATTERY PACK IS TO REMAIN UNSWITCHED.
	EXIT SIGN, LIGHTED, WALL MOUNTED AT 7'-6" AFF (TO BOTTOM OF SIGN) UNLESS INDICATED OTHERWISE. ARROW DEPICTS DIRECTIONAL ARROW ON SIGN. WHEN REQUIRED BY THE FIXTURE SCHEDULE, AN EMERGENCY SELF-CONTAINED BATTERY PACK IS TO REMAIN UNSWITCHED.
	FLOOD LIGHT, ARROW INDICATES DIRECTION OF BEAM
	DOCK LIGHT
	PARKING AREA LIGHT FIXTURE, POLE MOUNTED

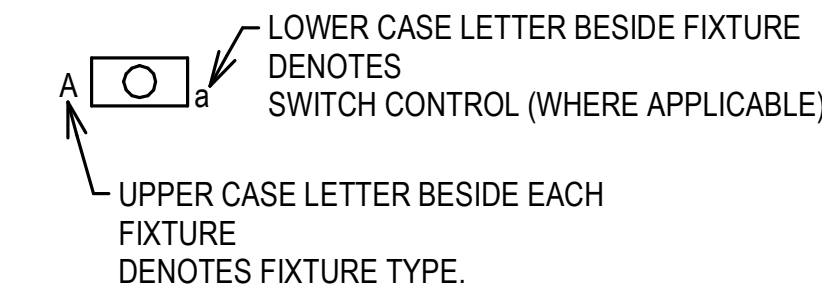
COLOR LEGEND:










- EXISTING TO REMAIN
- DEMOLISH
- NEW CONSTRUCTION

ELECTRICAL SYMBOLS



	TELEPHONE/COMMUNICATIONS/DATA (OUTLETS SHALL BE MOUNTED 18" AFF UNLESS INDICATED OTHERWISE)
	TELEPHONE OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD. SUBSCRIPT: W - WALL MOUNTED AT 54" AFF;
	TELEPHONE FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
	DATA OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
	DATA FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
	COMBINATION VOICE/DATA OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
	COMBINATION VOICE/DATA FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
	4'-0" HIGH x 3/4" THICK FIRE-RETARDANT PLYWOOD BACKBOARD. SEE PLANS FOR LENGTH.
	WIRELESS ACCESS POINT OUTLET CEILING MOUNTED. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESS CEILING SPACE AND PULL CORD. NUMBER INDICATES QUANTITY OF DATA JACKS. ABSENCE OF A NUMBER INDICATES ONE DATA JACK.
	CABLE TRAY

LIGHT FIXTURE IDENTIFICATION



	MAGNETIC MOTOR STARTER (FURNISHED BY DIVISION 23, UNLESS NOTED OTHERWISE)
	ELECTRICAL PANELBOARD, FLUSH MOUNTED
	ELECTRICAL PANELBOARD, SURFACE MOUNTED
	EXISTING ELECTRICAL PANELBOARD, FLUSH MOUNTED
	EXISTING ELECTRICAL PANELBOARD, SURFACE MOUNTED
	SAFETY SWITCH; 30A CURRENT RATING UNLESS NOTED OTHERWISE. +4'-0" TO HANDLE
	FUSIBLE SAFETY SWITCH; CURRENT RATING AND FUSE RATING NOTED. +4'-0" TO HANDLE
	CIRCUIT BREAKER IN WALL MOUNTED ENCLOSURE
	ELECTRICAL TRANSFORMER, FLOOR MOUNTED UNLESS INDICATED OTHERWISE

SWITCHES (MOUNTED AT 46", UNLESS INDICATED OTHERWISE) (LOWER CASE LETTER INDICATES DEVICES CONTROLLED)










\$a	SWITCH, SINGLE POLE, 20A
\$2	SWITCH, DOUBLE POLE, 20A SWITCH
\$3	3-WAY, 20A SWITCH
\$4	4-WAY, 20A SWITCH
\$K	KEY OPERATED
\$P	SINGLE POLE SWITCH, WITH PILOT LIGHT
\$M	SINGLE POLE MANUAL MOTOR STARTING SWITCH, WITH THERMAL OVERLOAD ELEMENT AND PROVISIONS FOR LOCKING OPEN
\$D	SWITCH, DIMMING (COORDINATE WITH FIXTURE MANUFACTURER)
\$X	SWITCH, MULLION SWITCH
\$LV	LOW VOLTAGE WITH MOMENTARY CONTACTS SWITCH
\$O	OCCUPANCY SENSOR, WALL MOUNTED, DUAL TECHNOLOGY
	OCCUPANCY SENSOR, CEILING MOUNTED, DUAL TECHNOLOGY
	PHOTOCELL

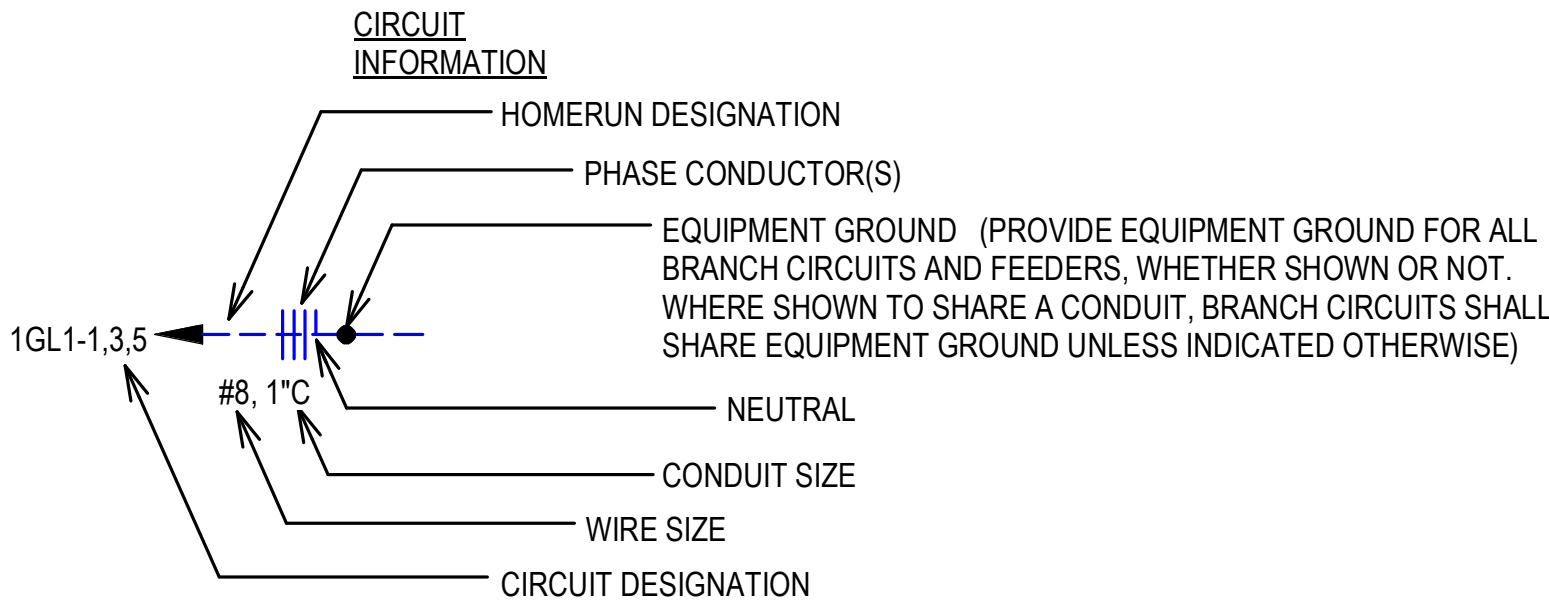
MULTIPLE DEVICES LOCATED SIDE BY SIDE (OR ABOVE AND BELOW, IF DIFFERENT ELEVATIONS ARE SHOWN) AT THE LOCATION INDICATED)

ELECTRICAL SYMBOLS

WALL MOUNTED VISUAL DEVICES TO BE LOCATED SUCH THAT THE ENTIRE LENS OF THE STROBE IS BETWEEN 80" AND 96" AFF. ALL WALL MOUNTED NOTIFICATION DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT AFF TO ACHIEVE A UNIFORM APPEARANCE OR AS DIRECTED BY THE A/E.

MISCELLANEOUS

	JUNCTION BOX, WALL MOUNT AS INDICATED
	JUNCTION BOX, CEILING MOUNT AS INDICATED
	CLOCK OUTLET, WALL MOUNTED 7'-6" AFF
	MOTOR
	10' BARE #6 COILED & EXOTHERMICALLY WELDED TO COLUMN
	CABLE TELEVISION OUTLET BOX MOUNTED 18" AFF WITH CONDUIT STUBBED ABOVE CEILING. PROVIDE PULL CORD.
	CONDUIT RUN, EXPOSED
	CONDUIT RUN, CONCEALED
	FLEXIBLE CONDUIT



- CIRCUIT DESIGNATION INDICATES PANELBOARD AND CIRCUIT(S) TO WHICH HOMERUN IS CONNECTED.
- WIRE SIZE SHALL BE NO. 12, UNLESS INDICATED OTHERWISE.
- CONDUIT SIZE SHALL BE MINIMUM ALLOWED BY SPECIFICATIONS FOR NO. 12 SIZE WIRE, 3/4" FOR NO. 10, UNLESS INDICATED OTHERWISE.
- CIRCUIT INFORMATION PROVIDED AT THE HOMERUN SYMBOL SHALL APPLY THE ENTIRE LENGTH OF THE CIRCUIT (FROM PANELBOARD TO LAST LOAD).
- WHEN NO PHASE CONDUCTOR OR NEUTRAL IS INDICATED AT THE HOMERUN SYMBOL, PROVIDE ONE PHASE CONDUCTOR AND ONE NEUTRAL, BOTH NO. 12.
- SWITCHING CONDUCTORS, CONDUCTORS FOR NIGHT LIGHT CIRCUITS (UNSWITCHED), ETC. ARE NOT SHOWN, BUT SHALL BE PROVIDED AS NECESSARY.
- WIRE SIZE INDICATED ON THESE DOCUMENTS AS INDICATED BY "NO." OR "#" HAS THE SAME MEANING AS "AWG" (N.E.C. NOMENCLATURE). (I.E. "NO. 12" OR "12" MEANS "12AWG" IN N.E.C. NOMENCLATURE.)

ELECTRICAL SYMBOLS















ABBREVIATIONS:

AFF = ABOVE FINISHED FLOOR
AFL = ABOVE FINISHED LANDING
GFI = GROUND FAULT INTERRUPTER
IG = ISOLATED GROUND
U/O = UNLESS INDICATED OTHERWISE
WP = WEATHERPROOF CONSTRUCTION
O/F/OI = OWNER FURNISHED / OWNER INSTALLED
C/F/CI = CONTRACTOR FURNISHED / CONTRACTOR INSTALLED
TYP = TYPICAL
NIC = NOT IN CONTRACT






GENERAL SYMBOLS NOTES:

- ALL SYMBOLS MAY NOT BE USED.
- MOUNTING HEIGHTS ARE ABOVE FINISHED FLOOR OR GRADE TO THE CENTER LINE OF THE OUTLET, DEVICE, ETC. UNLESS INDICATED OTHERWISE.
- LARGE AMPACITY CIRCUIT DESIGNATION
EXAMPLE: 4 SETS OF 3#500, #250, #1/0G, 4"C MEANS IN EACH OF FOUR 4" CONDUITS INSTALL THREE 500 KCM CONDUCTORS, ONE 250 KCM NEUTRAL AND ONE #1/0 GROUND.
- FOR CONCRETE SLAB PENETRATIONS WITH PVC, SEE DETAIL x, SHEET E-50x.

SINGLE LINE

	CIRCUIT BREAKER, TRIP RATING AS INDICATED, 3 POLE OR AS INDICATED
	DISCONNECT SWITCH OR LOAD INTERRUPTER SWITCH, CURRENT RATING AS INDICATED, 3 POLE OR AS INDICATED
	SWITCH WITH GROUND FAULT INTERRUPTER
	F30 FRS FUSE, CURRENT RATING AND TYPE WHEN INDICATED
	TRANSFORMER, DESCRIPTION AS NOTED OR PER SCHEDULE
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	PHASE SELECTOR SWITCH
	AMMETER
	VOLTMETER
	WATT-HOUR METER
	SURGE PROTECTIVE DEVICE
	AUTOMATIC TRANSFER SWITCH
	GENERATOR

LIGHTNING PROTECTION LEGEND:

	SURFACE MOUNTED LIGHTNING PROTECTION MAIN CONDUCTOR
	AIR TERMINAL
	DOWN CONDUCTOR
	GROUND ROD
	COUNTERPOISE CONDUCTOR
	BOND

Project

AEROJET BUILDING 66B
CURE OVEN BUILDING
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions		
No.	Date	Description

Stamp

CROMWELL ARCHITECTS/ENGINEERS #5
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 22761
ALBERT OGGENCHE
07-31-2024

Notes

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Project Number 2024-045

Issue Date 07-31-2024

Sheet Title

ELECTRICAL LEGEND

Sheet Number

E-001

GENERAL NOTES:

- A. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT CONTRACTORS EXPENSE
- B. COORDINATE WITH EACH LOCAL UTILITY COMPANY FOR CONNECTION OF NEW LINES AND METERS. PAY COSTS IF ANY.
- C. ALL UTILITIES ROUTED UNDERGROUND MAY REQUIRE SAW CUTTING EXISTING PAVEMENTS AND ROAD. PATCH ALL PAVEMENTS AND ROAD TO MATCH EXISTING.
- D. DASHED LINES IN CONDUIT INDICATE THAT THE CONDUITS ARE BURIED UNDERGROUND. CONDUITS SHALL BE BURIED NO LESS THAN 3'-0" UNDERGROUND.
- E. GENERATOR PAD SHALL BE LOCATED NO LESS THAN 50'-00" FROM BUILDING. REFER TO E-503 DETAIL 4 FOR PAD DETAIL.

KEYED NOTES:

- 1 ROUTE (3) 4" PVC SCHEDULE 80 CONDUIT BURIED 3'-0" MINIMUM UNDERGROUND FOR UTILITY POWER. TRANSITION TO 4" RIGID METAL CONDUIT APPROXIMATELY 52'-0" FROM BUILDING. ONE CONDUIT IS SPARE.
- 2 3" SCHEDULE 80 PVC PIPE ROUTED UNDERGROUND TO UTILITY TIE IN POINT FOR PRIMARY SERVICE, PROVIDE A PULL STRING AND ELBOWS ON BOTH ENDS. COORDINATE WITH UTILITY AND PROVIDE ALL REQUIREMENTS.
- 3 TIE IN TO EXISTING FIBER PATCH PANEL. LOCATION INDICATED BY THIS KEYNOTE IS APPROXIMATE, FIELD VERIFY EXACT LOCATION OF EXISTING FIBER HUT.
- 4 PROVIDE AN INGROUND WEATHER PROOF BOX.
- 5 240V,3POLE,60A,NF WEATHERPROOF DISCONNECT BOX TO POWER LIFT STATION CONTROL PANEL. COORDINATE EXACT LOCATION AND POWER REQUIREMENTS WITH INSTALLER.
- 6 JUNCTION BOX POWERS GENERATOR BATTERY AND BLOCK HEATER. COORDINATE EXACT LOCATION WITH GENERATOR. POWER FROM ELP1-23, ELP1-25.
- 7 ROUTE ONE 4" AND THREE 1" PVC SCHEDULE 80 CONDUIT BURIED 3'-0" MINIMUM UNDERGROUND FOR GENERATOR BATTERY CHARGER, BLOCK HEATER AND CONTROLS. TRANSITION TO 4" RIGID METAL CONDUIT APPROXIMATELY 52'-0" FROM BUILDING.

AEROJET BUILDING 66B
CURE OVEN BUILDING
EAST CAMDEN,
ARKANSAS

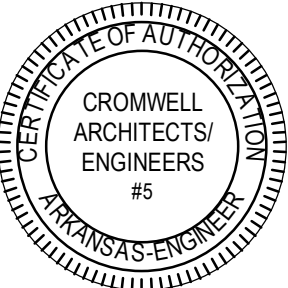
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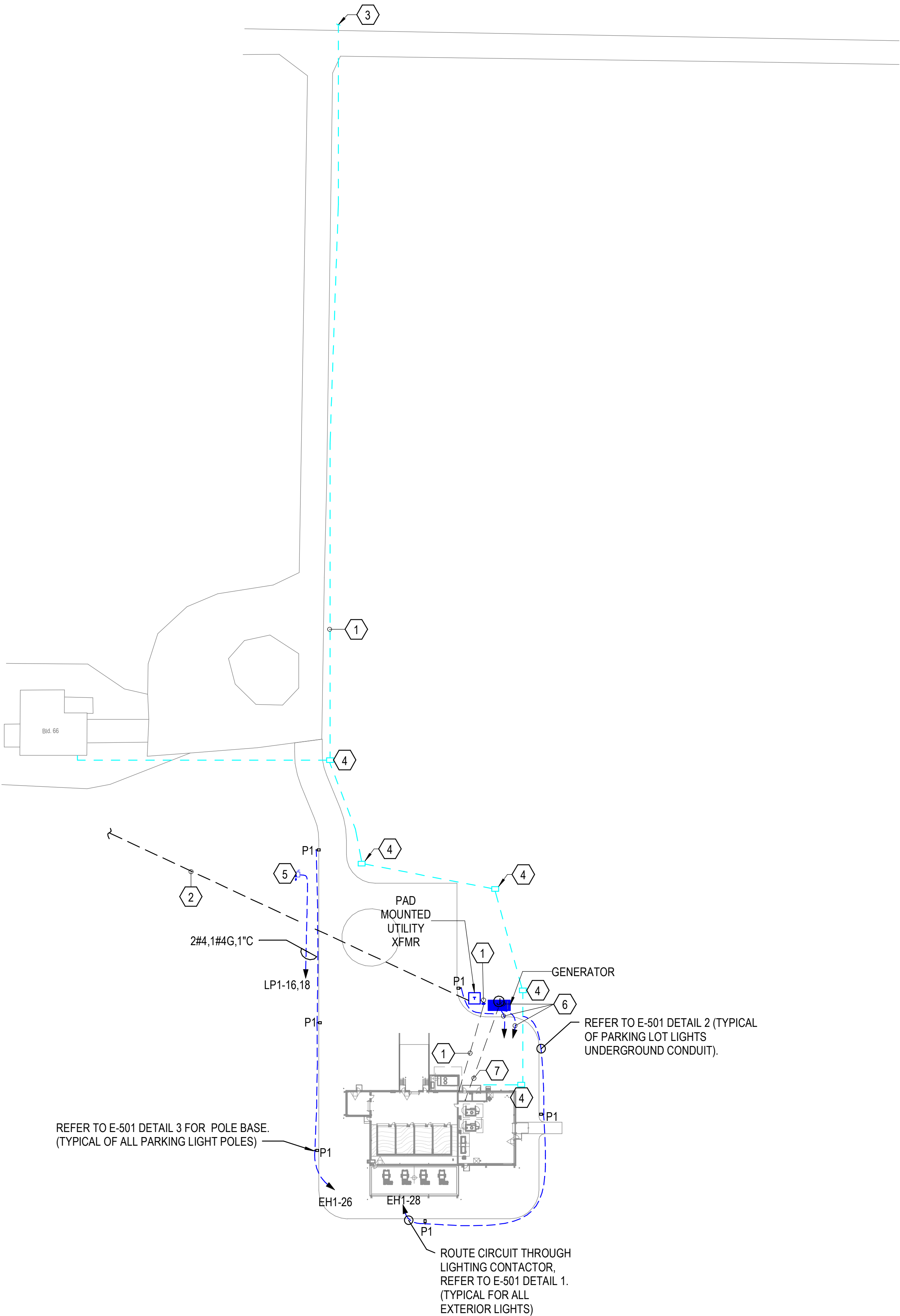
07-31-2024

Sheet Title

ELECTRICAL SITE
PLAN

Sheet Number

ES101



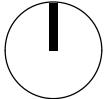
1 SITE PLAN

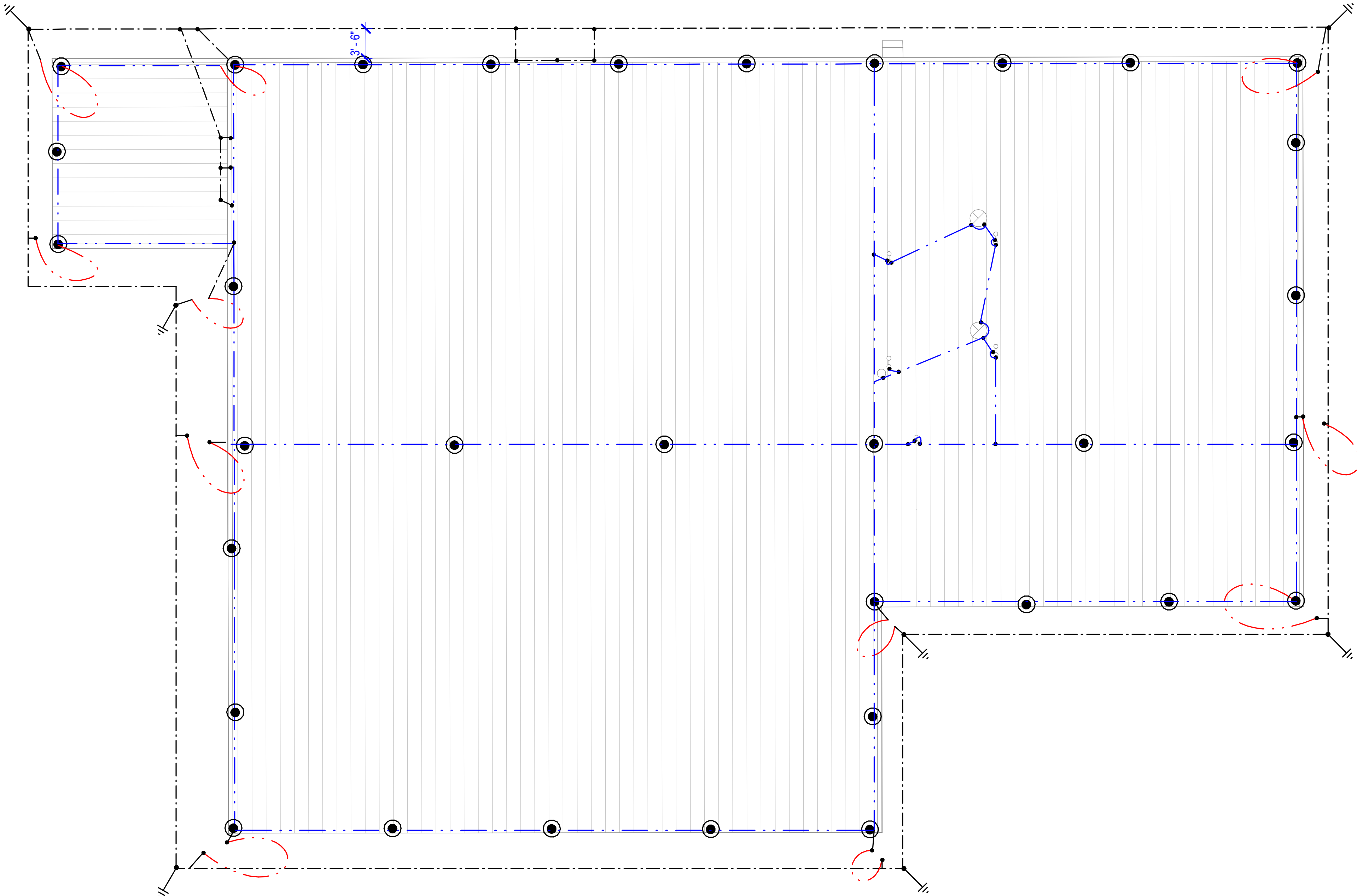
1" = 60'-0"



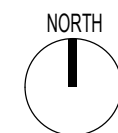
SCALE : 1" = 60'

NORTH





1 LIGHTNING PROTECTION PLAN
1/8" = 1'-0"
0 4 8 16
SCALE : 1/8" = 1'-0"



- GENERAL NOTES:**
- A. LIGHTNING PROTECTION DESIGN IS TO SHOW INTENT ONLY, CONTRACTOR SHALL ENGAGE A THIRD PARTY LIGHTNING PROTECTION DESIGNER / ENGINEER WHOSE SOLE PURPOSE IS DESIGNING AND CERTIFYING LIGHTNING PROTECTION SYSTEMS TO PROVIDE A COMPLETE SYSTEM WITH UL MASTER LABEL. THE DESIGN SHALL MEET OR EXCEED REQUIREMENTS PRESCRIBED IN NFPA 780 CHAPTER 8.
- B. ALL MATERIALS SHALL BE CLASS II, UNDERWRITERS LABORATORIES LISTED AND LABELED. LABELS TO BE ON ALL AIR TERMINALS AND AT 10' INTERVALS ON CONDUCTOR CABLE.
- C. LOCATE AIR TERMINALS AS SHOWN AND AS REQUIRED BY NFPA 780. ENSURE THAT ALL AIR TERMINALS ARE WITHIN 2'-0" OF OUTSIDE BUILDING EDGE, OUTSIDE CORNER. ENSURE AIR TERMINAL PROJECTS 10" ABOVE OBJECT PROTECTED AND THAT SPACING DOES NOT EXCEED 20'-0". AIR TERMINALS 2'-0" ABOVE OBJECT PROTECTED SHALL NOT EXCEED SPACING OF 25'-0".
- D. MAINTAIN DOWNWARD OR HORIZONTAL COURSING OF MAIN CONDUCTOR CABLE AND ENSURE THAT ALL BENDS HAVE AT LEAST AN 8" RADIUS AND DO NOT EXCEED 90 DEGREES.
- E. SUPPORT ALL EXPOSED CONDUCTOR CABLE AT 3'-0" ON CENTER MAXIMUM.
- F. BOND TO WATER SERVICE AND OTHER PIPING SYSTEMS AS REQUIRED BY CODE(S).
- G. INTERCONNECT LIGHTNING PROTECTION GROUND WITH OTHER BUILDING GROUND SYSTEMS AS REQUIRED BY CODE(S).
- H. BOND METAL BODIES ON ROOF THAT ARE OUTSIDE THE ZONE OF PROTECTION THAT ARE SUBJECT TO A DIRECT LIGHTNING STRIKE OR WHICH EXCEED THE HEIGHT OF ADJACENT AIR TERMINALS WITH MAIN SIZE CONDUCTOR CABLE. TYPICAL METAL BODIES INCLUDE BUT ARE NOT LIMITED TO: EXHAUST FANS, VENTS, HANDRAILS, AIR HANDLING UNITS, LADDERS, ANTENNAS, COOLING TOWERS, SKYLIGHTS, ETC.
- I. ACTUAL JOBSITE CONDITIONS MAY ALTER SOME AIR TERMINAL AND GROUNDING LOCATIONS.
- J. INSTALL GROUND ELECTRODES AS SHOWN AND AS REQUIRED BY CODE(S) BUT IN NO INSTANCE SHALL THEY BE LESS THAN 1'-0" BELOW GRADE AND 2'-0" FROM FOUNDATION WALL. ELECTRODES SHALL PENETRATE EARTH AT LEAST 10'-0".
- K. STRUCTURAL STEEL MAY BE USED AS A DOWN CONDUCTOR WHERE PERMITTED BY NFPA 780. MAKE ADDITIONAL CONNECTIONS AS REQUIRED BY NFPA 780.
- L. ADJUST LOCATIONS IN FIELD AS REQUIRED TO COMPLY WITH NFPA 780 BASED ON ACTUAL CONDITIONS.
- M. PROVIDE SURGE PROTECTION DEVICES MEETING THE REQUIREMENTS OF NFPA 780 FOR ALL POWER SERVICE ENTRANCES AND CONDUCTIVE COMMUNICATIONS SYSTEMS, AND ANTENNA SYSTEMS. MAKE ALL CONNECTIONS.
- N. PROTECT DOWN CONDUCTORS IN CONDUIT. ENTIRE VERTICAL ROUTING ON EXTERIOR OF BUILDING. PAINT TO MATCH ADJACENT SURFACE.
- O. REPAIR AREAS DISTURBED FOR GROUND ROD INSTALLATION TO EXISTING OR BETTER CONDITIONS AND GRADE PRIOR TO INSTALLATION. CUT CONCRETE AT EXISTING JOINTS WHERE APPLICABLE.

- LIGHTNING PROTECTION LEGEND:**
- SURFACE MOUNTED LIGHTNING PROTECTION MAIN CONDUCTOR
- AIR TERMINAL
- - - DOWN CONDUCTOR
- GROUND ROD
- COUNTERPOISE CONDUCTOR
- BOND

Project **AEROJET BUILDING 66B**
CURE OVEN BUILDING
EAST CAMDEN,
ARKANSAS

Design Phase **CONSTRUCTION DOCUMENTS**

Revisions		
No.	Date	Description

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Project Number **2024-045**

Issue Date **07-31-2024**

Sheet Title **LIGHTNING PROTECTION PLAN**

Sheet Number **EG101**

GENERAL NOTES:

- A. ALL EXIT LIGHTS AND EMERGENCY LIGHTING UNIT TYPE EL SHALL BE POWERED FROM UNSWITCHED LIGHTING CIRCUIT INDICATED.
- B. MOUNT ALL EXIT LIGHTS 1' ABOVE DOOR JAMB.
- C. MOUNT TYPE W1 & W1E 8'-0" ABOVE FINISHED GRADE.
- D. MOUNT FIXTURE TYPE A & AE AT 14'-6" AFF. COORDINATE WITH OTHER DISCIPLINES ON FIXTURE PLACEMENT.
- E. ALL EXTERIOR LIGHTING SHALL BE POWERED THROUGH A LIGHTING CONTACTOR. REFER TO E-501 DETAIL 1.

KEYED NOTES:

- 1 JUNCTION BOX POWERS OVEN LIGHT FIXTURE, COORDINATE EXACT LOCATION WITH OVEN LIGHT LOCATION.
- 2 SURFACE MOUNT FIXTURES UNDERNEATH ROOF STRUCTURE.
- 3 MOUNT FIXTURES 8'-6" AFF IN THIS SPACE.
- 4 MOUNT FIXTURES 11'-0" AFF IN THIS SPACE.

Project

AEROJET BUILDING 66B
CURE OVEN BUILDING
EAST CAMDEN,
ARKANSAS

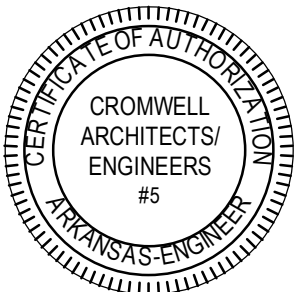
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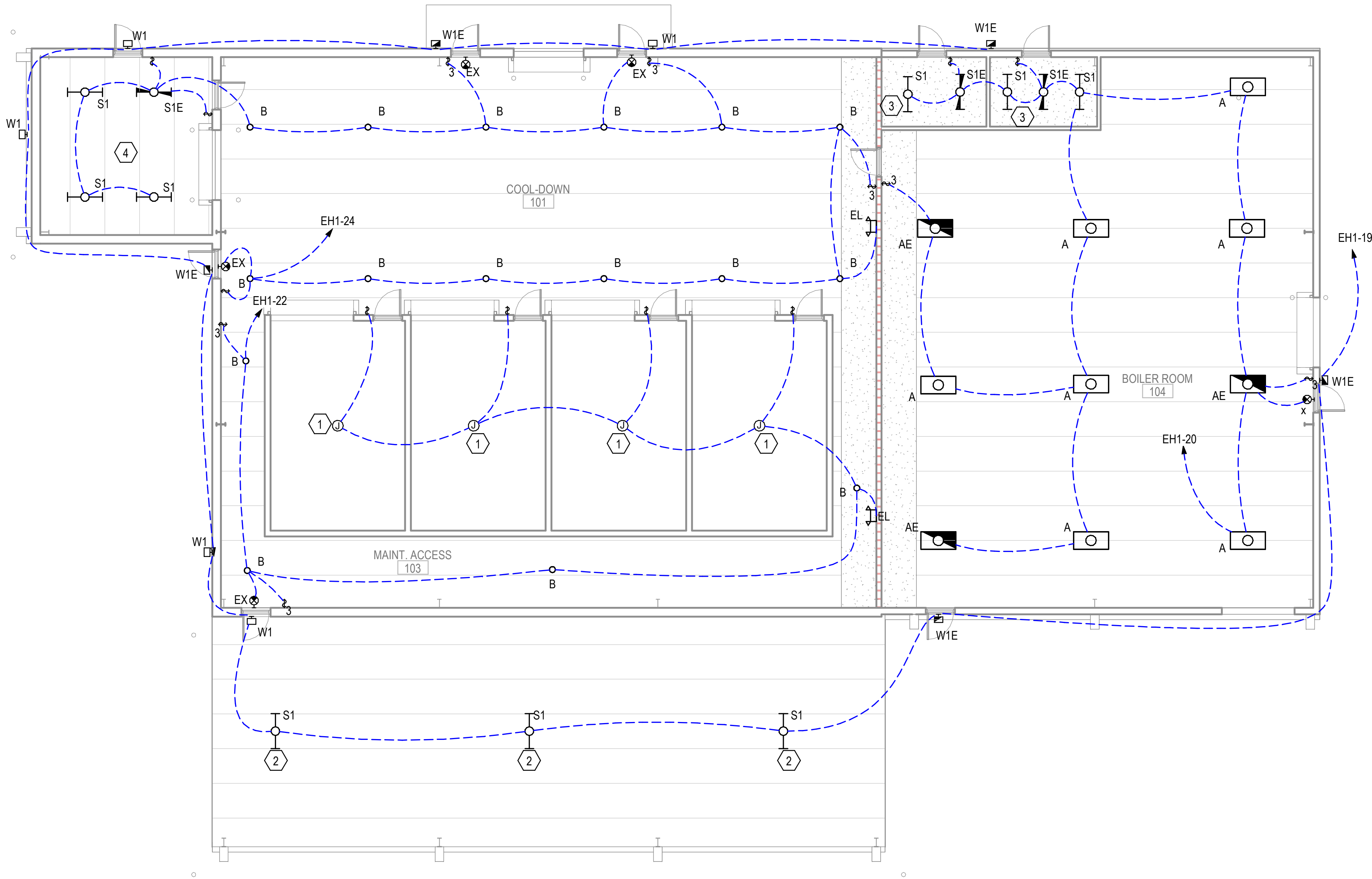
07-31-2024

Sheet Title

LIGHTING PLAN

Sheet Number

EL101



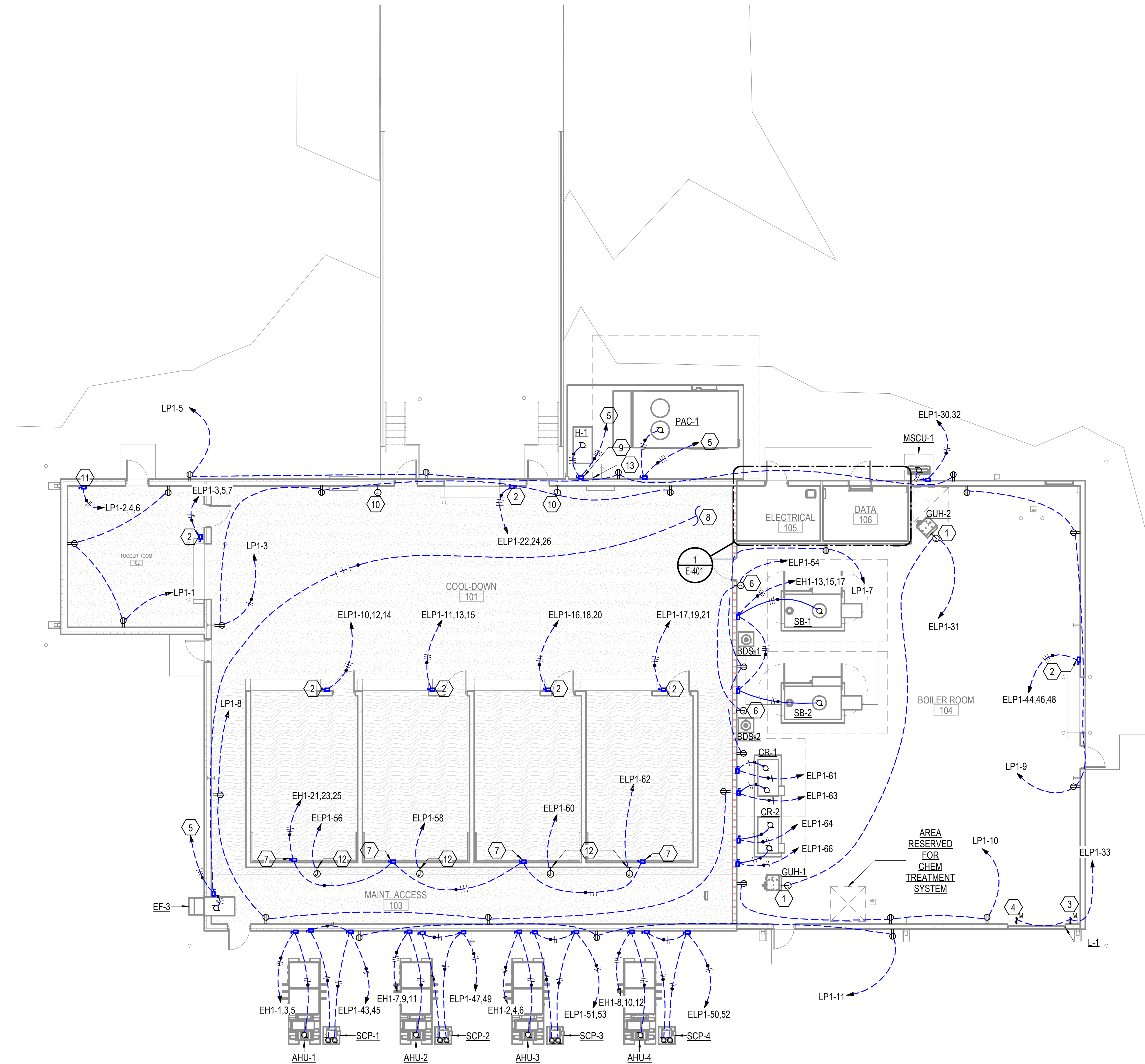
1 LIGHTING PLAN

1/8" = 1'-0"



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





1 POWER PLAN
1/8" = 1'-0"
NORTH
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- COORDINATE EXACT LOCATION OF DISCONNECTS POWERING MECHANICAL EQUIPMENT WITH INSTALLER. MAKE FINAL CONNECTIONS TO EQUIPMENT.
- CONTRACTOR SHALL WIRE EQUIPMENT PER MANUFACTURER INSTRUCTIONS. ALL WIRING AND CONNECTIONS SHALL BE PER MANUFACTURERS RECOMMENDATIONS.
- COORDINATE ALL CONDUIT LOCATIONS WITH OTHER DISCIPLINES.
- ALL EXTERIOR RECEPTACLES SHALL BE GFI TYPE WITH HEAVY DUTY WEATHERPROOF IN USE COVER.
- POWER INDICATED ON PLANS IS BASED ON BASIS OF DESIGN. IF DIFFERENT EQUIPMENT IS USED CONTRACTOR SHALL PROVIDE POWER PER MANUFACTURER'S RECOMMENDATIONS AT NO EXTRA CHARGE.

KEYED NOTES:

- JUNCTION BOX POWERS GAS HEATER. COORDINATE EXACT LOCATION WITH INSTALLER
- 240V,30A,3PHASE DISCONNECT POWERS OVER HEAD DOOR COORDINATE EXACT LOCATION WITH INSTALLER. COORDINATE AND PROVIDE EXACT POWER REQUIREMENTS WITH DOOR MANUFACTURER.
- MOTOR STARTER POWERS LOUVERS, COORDINATE EXACT LOCATION WITH INSTALLER.
- MOTOR STARTER POWERS EXHAUST FAN. COORDINATE EXACT LOCATION WITH INSTALLER.
- REFER TO SINGLE-LINE FOR POWER INFORMATION.
- JUNCTION BOX POWERS BOILER CONTROL PANEL. COORDINATE EXACT LOCATION WITH INSTALLER.
- DISCONNECT POWERS COOL DOWN FANS. COORDINATE EXACT LOCATION WITH COOL DOWN FAN INSTALLER.
- PARTIAL CIRCUIT, SEE E-401 FOR CONTINUATION.
- PROVIDE A 480V,3POLE,200A NON-FUSED DISCONNECT IN A NEMA 3R ENCLOSURE.
- JUNCTION BOX POWERS ACCESS CONTROL. COORDINATE EXACT LOCATION WITH INSTALLER. POWER FROM ELP1-65.
- DISCONNECT POWERS TUGGER CHARGER, COORDINATE EXACT LOCATION WITH OWNER. POWER REQUIREMENTS ARE APPROXIMATE, FIELD VERIFY AND PROVIDE EXACT POWER REQUIREMENTS FROM EXISTING TUGGER.
- JUNCTION BOX TO POWER OVEN CONTROL PANEL, COORDINATE EXACT LOCATION WITH INSTALLER.
- JUNCTION BOX SERVES HEAT TRACE, ROUTE CONDUIT FROM ELECTRICAL ROOM TO THIS LOCATION. REFER TO E-401 KEYNOTE 9 FOR APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH HEAT TRACE INSTALLER.

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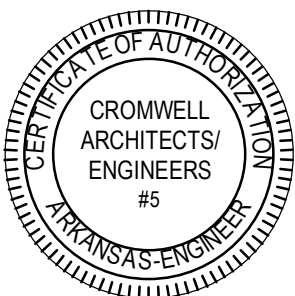
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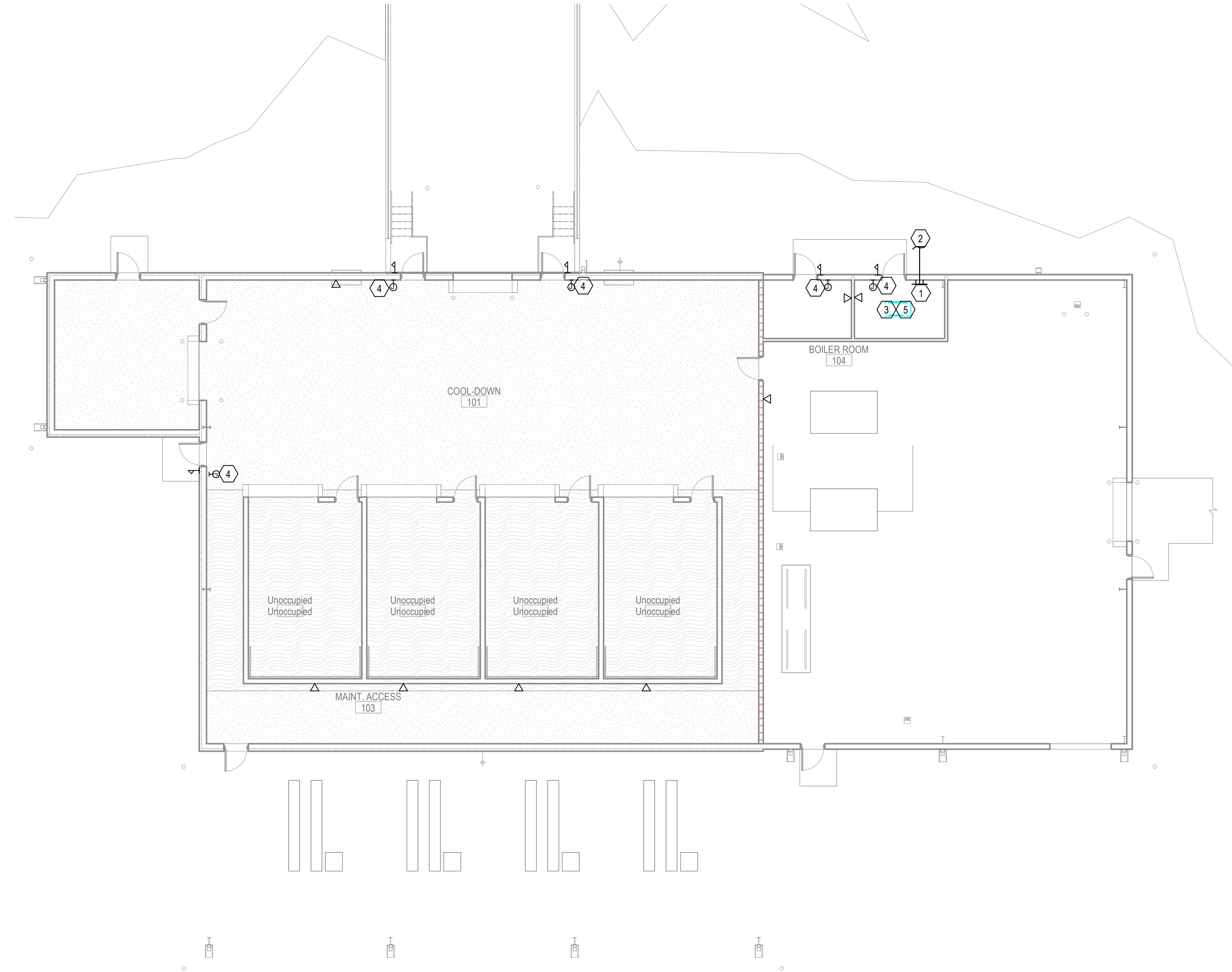
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POWER PLAN

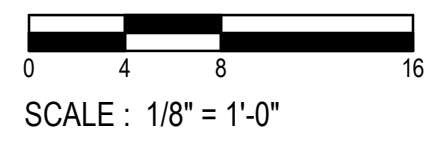
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EP101

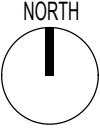


1 SYSTEMS PLAN

1/8" = 1'-0"



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



GENERAL NOTES:

- A. REFER TO E-502 FOR ACCESS CONTROL DOOR DETAIL. PROVIDE ALL REQUIREMENTS.
- B. PROVIDE 1" CONDUIT FOR ALL DATA DEVICES AND SECURITY INDICATED, ROUTE CONDUIT TO TELECOMMUNICATIONS ROOM.
- C. PROVIDE CAT 6 CABLE TO DATA LOCATIONS, AND TERMINATE AT PATCH PANEL AND AT THE COMMUNICATIONS DATA OUTLET LOCATION.

KEYED NOTES:

- 1 TELECOMMUNICATIONS GROUND BUS BAR. GROUND RACK TO GROUND BUS BAR.
- 2 CONNECT COMMUNICATIONS GROUND BUS BAR TO COUNTERPOISE USING A #4/0 CU BARE CONDUCTOR.
- 3 PROVIDE 4 POST RACK PER OWNERS IT STANDARDS.
- 4 ACCESS CONTROL JUNCTION BOX, COORDINATE EXACT LOCATION WITH INSTALLER.
- 5 PROVIDE 24 PORT PATCH PANEL, USE PATCH PANEL TO PATCH INCOMING FIBER, PROVIDE 24 PORT COPPER PATCH PANEL AND PATCH ALL CAT6 LOW VOLTAGE WIRING TO THIS PATCH PANEL. REFER TO AEROJET IT STANDARDS FOR EQUIPMENT SPECIFICATION, REQUIRED WIRE MANAGERS AND OTHER LOW VOLTAGE REQUIREMENTS.



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Project
**AEROJET BUILDING 66B
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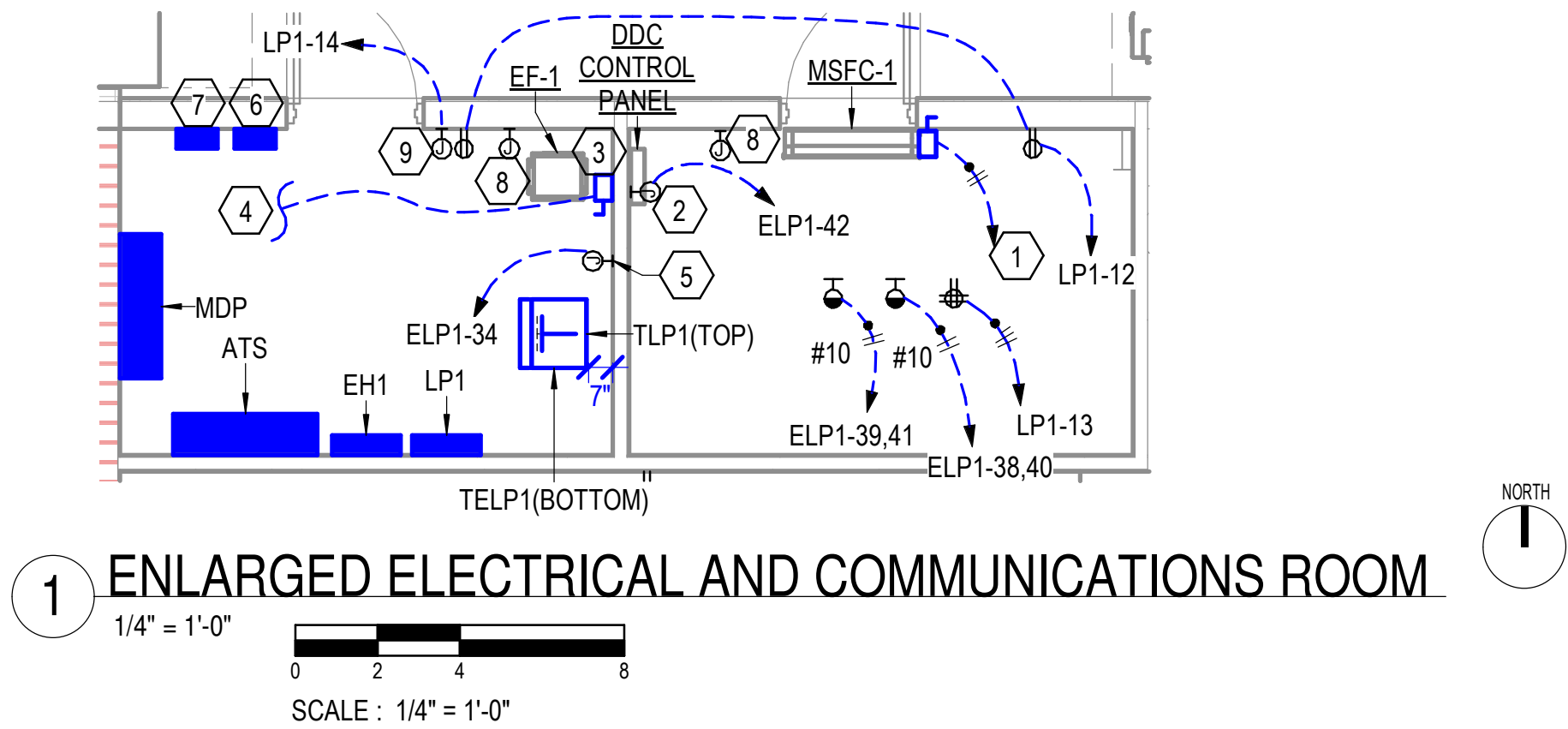
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SYSTEMS PLAN

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ET101



KEYED NOTES:

- 1 DISCONNECT POWERS INDOOR SPLIT UNIT. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.
- 2 JUNCTION BOX POWERS DDC CONTROL PANEL. COORDINATE EXACT LOCATION WITH INSTALLER.
- 3 DISCONNECT POWERS EXHAUST FAN. COORDINATE EXACT LOCATION WITH INSTALLER.
- 4 PARTIAL CIRCUIT, REFER TO CIRCUIT EP101 FOR CIRCUIT CONTINUATION.
- 5 JUNCTION BOX POWERS FIRE ALARM CONTROL PANEL. COORDINATE EXACT LOCATION WITH INSTALLER.
- 6 EXTERIOR LIGHTING CONTACTOR.
- 7 REMOTE GENERATOR ANNUNCIATOR PANEL. ROUTE 1" CONDUIT TO GENERATOR LOCATION. USE MANUFACTURER RECOMMENDED CABLE TYPE AND SIZE.
- 8 JUNCTION BOX POWERS ACCESS CONTROL, COORDINATE EXACT LOCATION WITH INSTALLER. POWER FROM ELP1-65.
- 9 JUNCTION BOX POWERS HEAT TRACE CONTROLLER, COORDINATE EXACT LOCATION WITH INSTALLER. ROUTE 1" CONDUIT TO LOCATION INDICATED BY KEYNOTE 13 ON EP101.

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AEROJET BUILDING 66B
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ARKANSAS

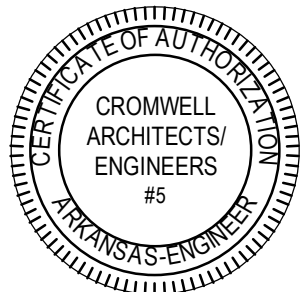
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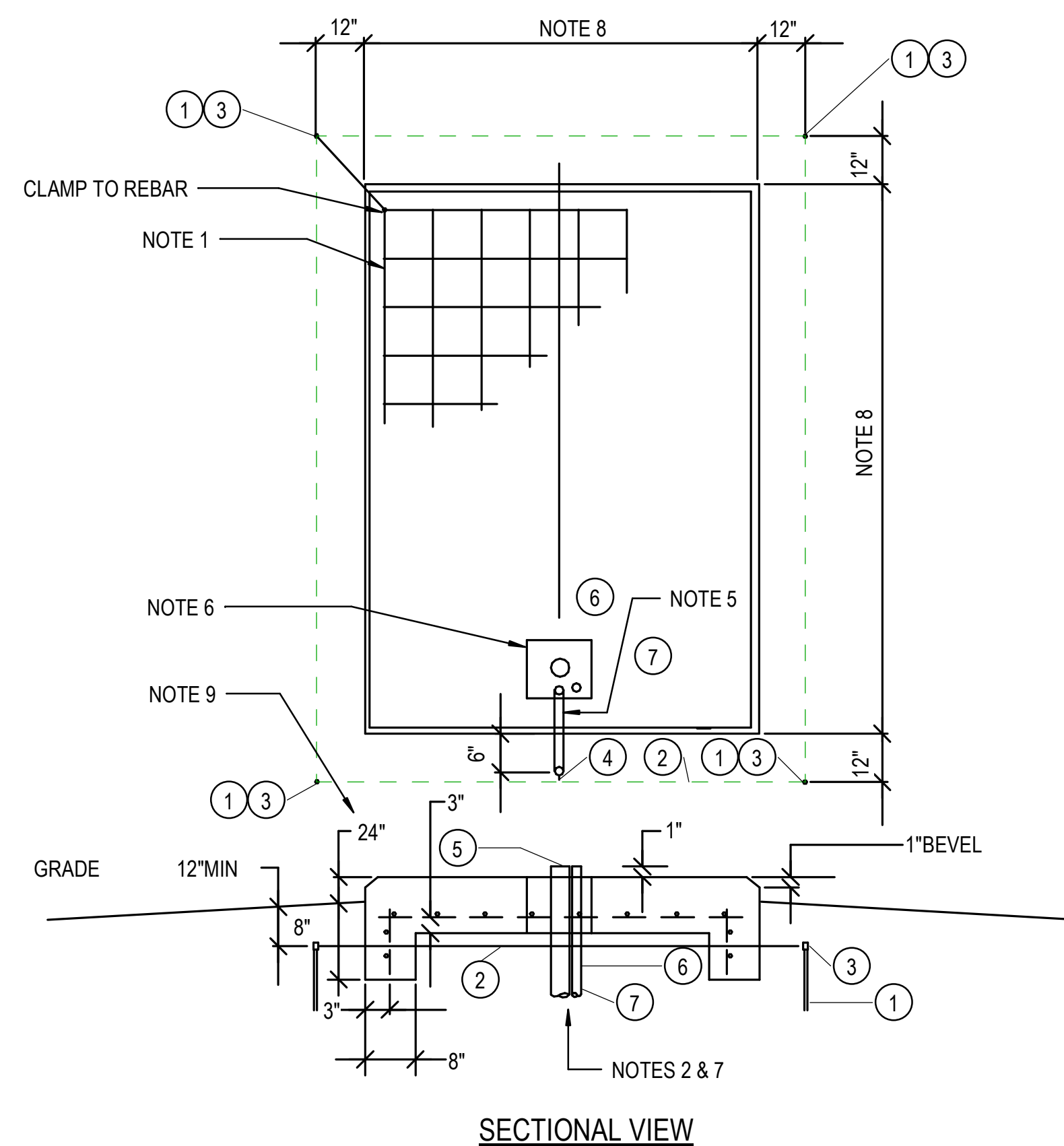
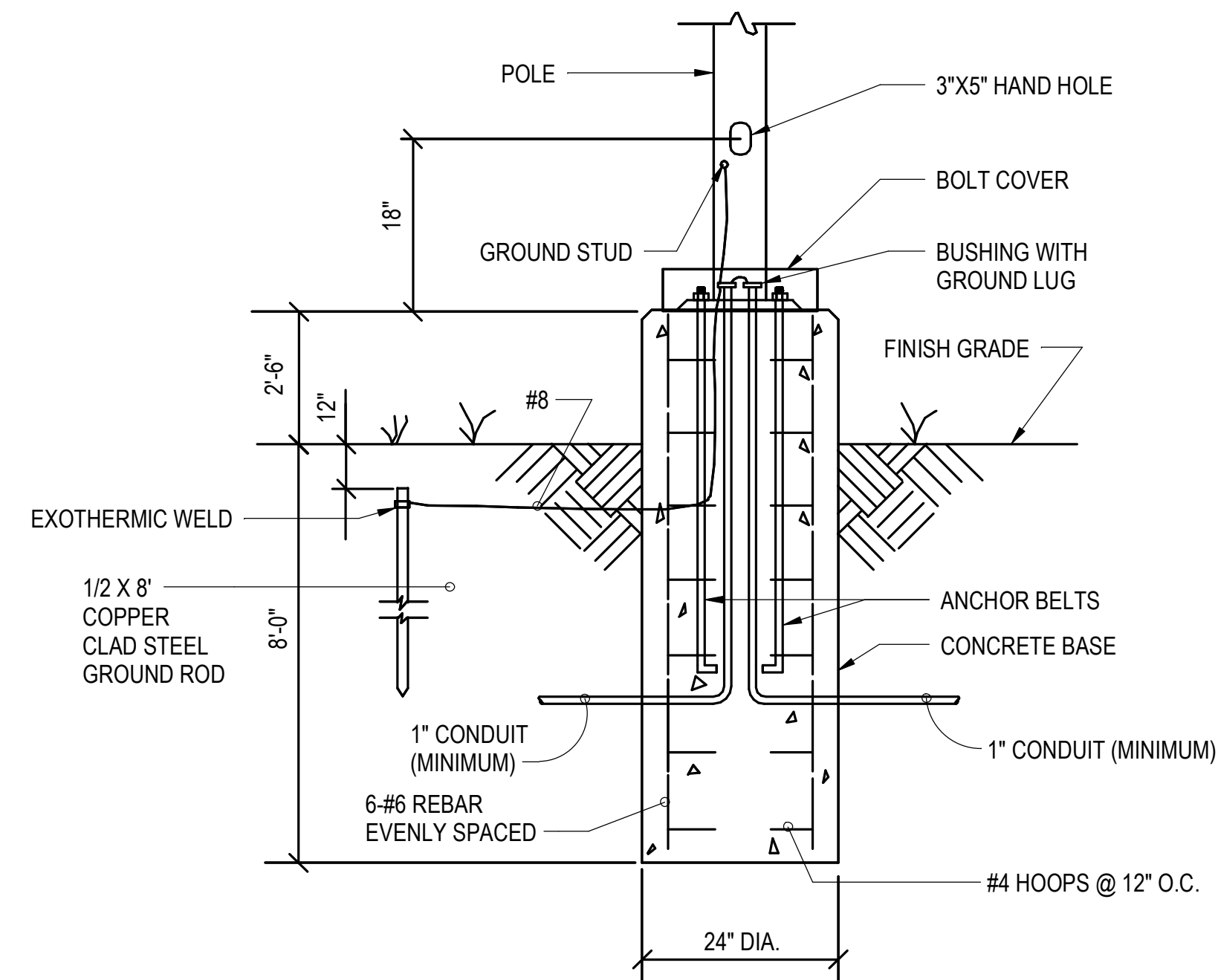
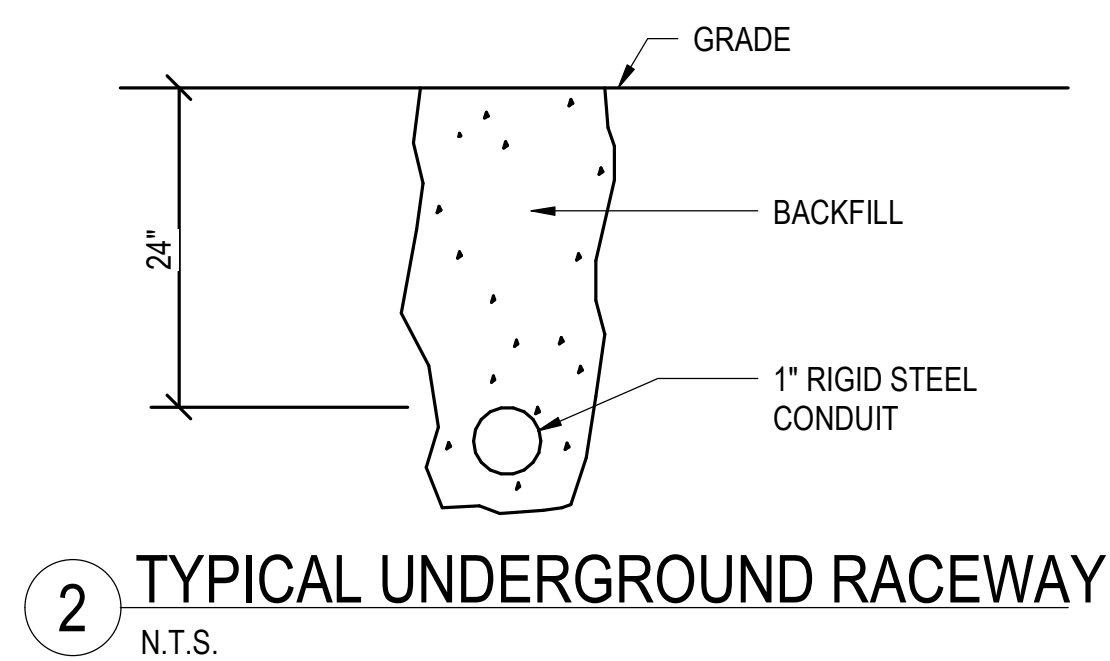
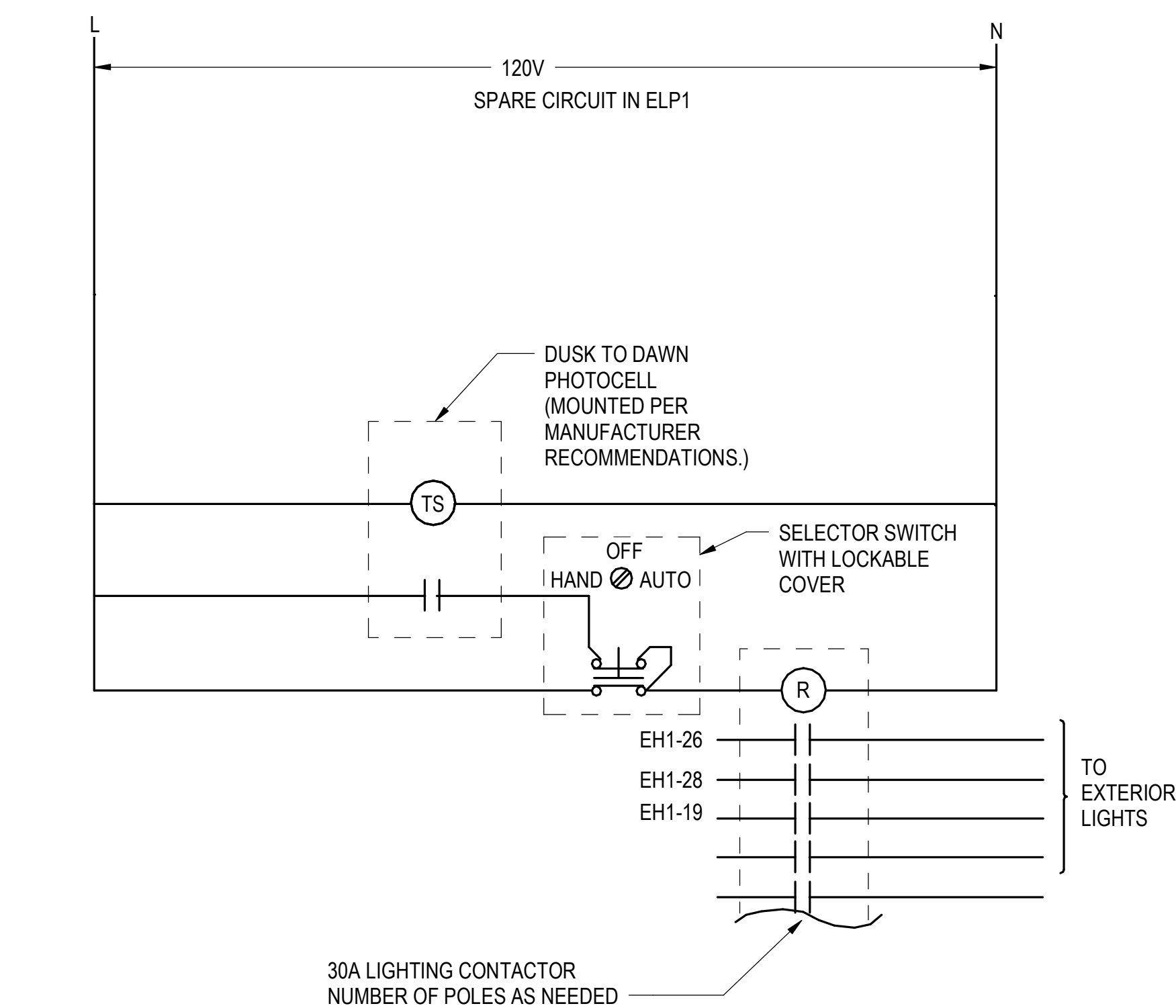
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Sheet Title

ENLARGED
ELECTRICAL PLANS

Sheet Number

E-401



ITEM	DESCRIPTION	QUANTITY
1	ROD, GROUND, 3/4" X 10'-0"	4
2	CONDUCTOR, COPPER #1/0 BARE	
3	CLAMP GROUND ROD	4
4	CONNECTOR, COMPRESSION #1/0 COPPER	1
5	CONDUIT BUSHING	7
6	CONDUIT, 2" RGS	1
7	CONDUIT, 3/4" RGS	1

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CURE OVEN BUILDING
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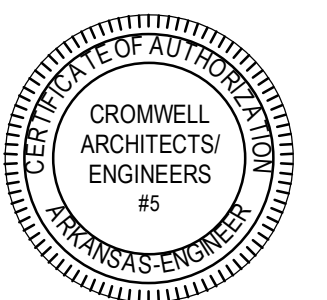
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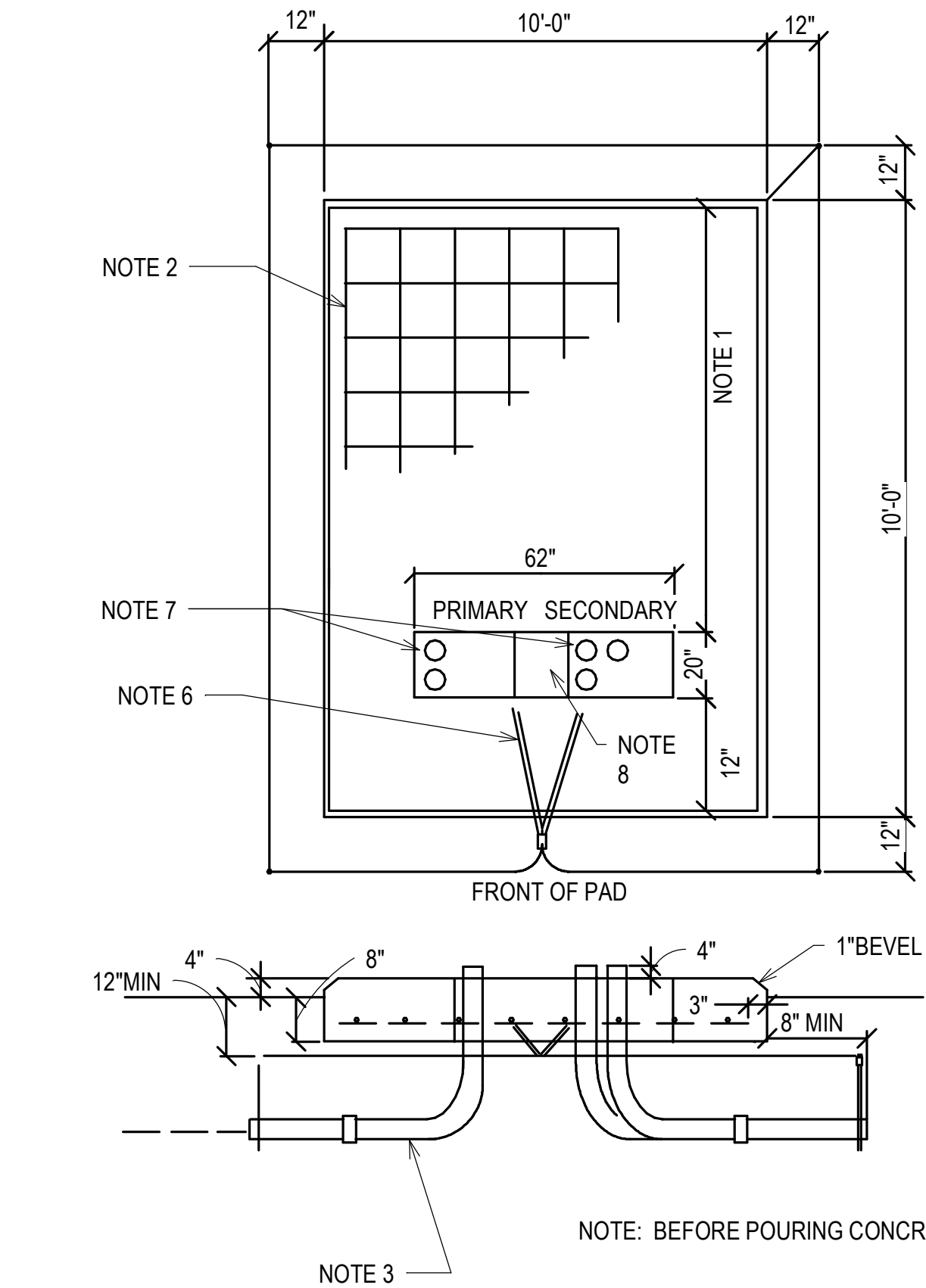
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ELECTRICAL DETAILS

Sheet Number —

E-501



- NOTES:
- WHERE POSSIBLE DO NOT PLACE CONDUIT UNDER THIS SECTION OF FOUNDATION.
 - REINFORCING - #4 BARS 12" C.C. BOTH WAYS.
 - WHEN INSTALLING CONDUIT DISTURB GROUND IN FOUNDATION AREA AS LITTLE AS POSSIBLE. EXTEND CONDUIT 1" ABOVE FOUNDATION.
 - TOP OF FOUNDATION TO BE SMOOTH AND LEVEL. FINAL GRADE SHALL SLOPE AWAY FORM PAD.
 - CONCRETE SHALL BE 3500 PSI AT 28 DAYS AND 1:2:4 MIXTURE WITH 6 GAL. MAX WATER CONTENT PER SACK OF CEMENT.
 - CONTRACTOR TO FURNISH 1" CONDUIT UNDER PAD FOR GROUND WIRE.
 - LOCATE CONDUITS UNDER PRIMARY & SECONDARY BUSHINGS.
 - PRIMARY AND SECONDARY CONDUITS AT LEAST 18" APART.
 - TRANSFORMER LOCATION:
 - * TRANSFORMER PAD REQUIRES A MIN. 3'-0" CLEARANCE AROUND EACH SIDE AND BACK OF PAD FOR NON-FLAMMABLE (BRICK) BUILDING AND 10' FOR FLAMMABLE MATERIALS (WOOD).
 - * A 15'-0" CLEARANCE IS REQUIRED ON FRONT SIDE OF PAD.
 - * THE TRANSFORMER SHALL BE INSTALLED SO THAT THE FRONT OF THE UNIT DOES NOT FACE THE BUILDING.
 - * THE TRANSFORMER MUST BE INSTALLED 10' AWAY FROM ANY DOORS AND WINDOWS.
 - * THERE MUST BE A 20' MIN.

1 DT161 - THREE PHASE TRANSFORMER PAD FOUNDATION 150KVA - 2500KVA
N.T.S.

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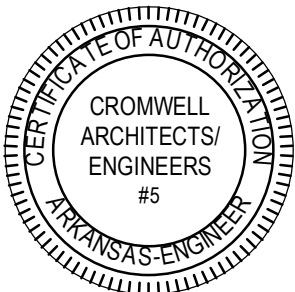
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ELECTRICAL DETAILS

Sheet Number

E-502

GENERAL NOTES:

- A. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL HAVE A NEMA 3R ENCLOSURE.
- B. SPD'S CABLE SIZES SHALL BE PER MANUFACTURER RECOMMENDATIONS.
- C. PROVIDE CONCRETE PADS FOR ALL GROUND MOUNTED ELECTRICAL EQUIPMENT.
- D. PROVIDE ARC FLASH LABELS ON ALL PANELBOARDS, ALL SAFETY SWITCHES AND TRANSFORMERS.

KEYED NOTES:

- 1 PROVIDE 480V,600AMP, 3PHASE, NEMA 3R DISCONNECT SWITCH TO DISCONNECT POWER PER UTILITY REQUIREMENTS.
- 2 PROVIDE TWO SETS OF 4#350 KCML IN 4" CONDUIT. PROVIDE A SPARE 4" CONDUIT.
- 3 SIZE PER MANUFACTURERS RECOMMENDATIONS.

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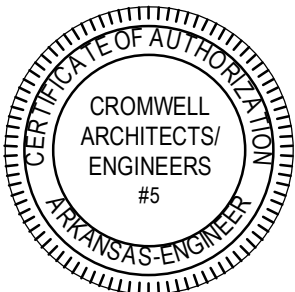
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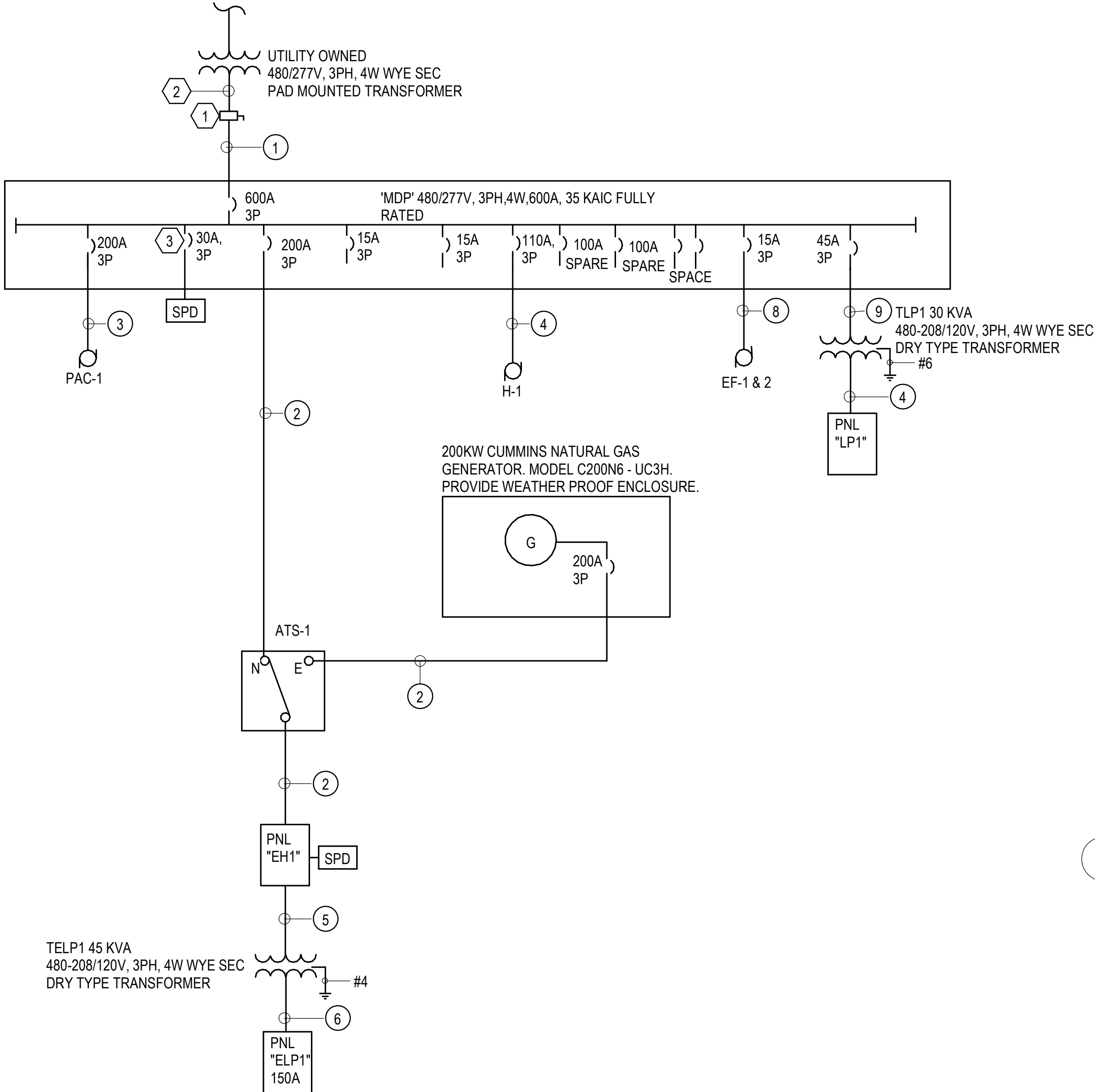
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ELECTRICAL
SINGLE-LINE DIAGRAM

Sheet Number

E-601



FEEDER SCHEDULE

NUMBER	SETS	PHASE CONDUCTOR S (PER SET)	NEUTRAL CONDUCTOR S (PER SET)	GROUND CONDUCTOR S (PER SET)	CONDUIT SIZE (PER SET)	NOTES
1	2	3-#350	1-#350	1-#2/0	4"	
2	1	3-#3/0	1-#3/0	1-#6	2"	
3	1	3-#3/0	-	1-#6	2"	
4	1	3-#1	-	1-#6	1.25"	
5	1	3-#4	-	1-#8	1"	
6	1	3-#1/0	1-#1/0	1-#6	2"	
7	1	3-#4	1-#4	1-#8	1"	
8	1	3-#12	1-#12	1-#12	0.75"	
9	1	3-#6	1-#6	1-#6	0.75"	

GENERAL NOTES-

- ELECTRICAL CONTRACTOR TO COORDINATE THE MAXIMUM NO. OF SETS OF SERVICE ENTRANCE CONDUCTORS WITH UTILITY AND SWITCHBOARD EQUIPMENT PROVIDER.
- ELECTRICAL CONTRACTOR TO COORDINATE AND PROVIDE APPROPRIATE LUG SETS AS REQUIRED FOR ALL TERMINATIONS SUITABLE TO CONDUCTOR TYPE, WIRE SPACE, AND ALL OTHER REQUIREMENTS.
- FIELD CONDITIONS OF ACTUAL INSTALLATION MAY REQUIRE ELECTRICAL CONTRACTOR TO ADJUST CONDUCTOR AND CONDUIT SIZES UPWARD PER NEC REQUIREMENTS FOR DERATING, VOLTAGE DROP, ETC.
- ALL RACEWAY SIZES (EMT/GRSC/PVC 400 ARE TO BE BASED ON THE NEC TABLE 4 (CHAPTER 9), 40% FILL COLUMN.

2 FEEDER SCHEDULE

N.T.S.

1 SINGLE - LINE DIAGRAM

N.T.S.

LIGHTING FIXTURE SCHEDULE								
TYPE	MANUFACTURER	CATALOG NUMBER	VOLTAGE	SOURCE	TOTAL FIXTURE LUMENS	MAXIMUM FIXTURE WATTAGE	DESCRIPTION	KEYED NOTES
A	COOPER METALUX	LHBS-1218-UNV-L84050-LHBS-PMK	UNV	LED	12000	85	2X4 LENS	
AE	COOPER METALUX	LHBS-1218-UNV-L84050-EL20W-REMLHBS-PMK	UNV	LED	12000	85	2X4 LENS	1
B	HOLOPHANE LIGHTING	HPLED-84LED-L5-MVOLT-40K-UNM-700MA-40C-DGXD	UNV	LED	21400	195	14" ROUND PENDANT LIGHT	2
EX	ENVOY LIGHTING	XPEH-1-R-DT-2-2-W	UNV	LED	420 PER HEAD	10	CLASS 1 / CLASS II EXIT EMERGENCY LIGHT COMBO	2
S1	COOPER LIGHTING	4VT3-LD5-5-W-UNV-L835-CD1	UNV	LED	5000	44	STRIP LIGHT	
S1E	COOPER LIGHTING	4VT3-LD5-5-W-UNV-EL10W-L835-CD1	UNV	LED	5000	44	STRIP LIGHT	1
EL	ENVOY LIGHTING	XPEL-U-2-2-W	120/277V	LED	N/A	11	EMERGENCY LIGHTING UNIT	1,2
W1	COOPER LIGHTING	PRV-P-PA1B-740-U-T4W-WM-BK	UNV	LED	4000	59	EXTERIOR WALL PACK	
P1	BEACON LIGHTING	(1) VP-4-720L-565-4K7-4W-UNV-DBT	UNV	LED	75000	565	PARKING LOT LIGHTING	
P-POLE	BEACON LIGHTING	RSS-B-30-60-C-XX-DBT	-	-	-	-	30'-0" SQUARE POLE	
W1	COOPER LIGHTING	PRV-P-PA1B-740-U-T4W-WM-BK	UNV	LED	4000	59	EXTERIOR WALL PACK	
X	COOPER LIGHTING	EDG-1-R-EL	120/277	LED	N/A	3.1	EXIT LIGHT, ARROWS AND FACES PER PLANS	1

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

1. PROVIDE FLANGE KIT AS REQUIRED

LIGHTING FIXTURE SCHEDULE KEYED NOTES:

1. BATTERY BACK UP. ARROWS AND FACES PER PLANS
2. CLASS 1 DIV2 & CLASS 2 DIV 1 RATED FIXTURE

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CURE OVEN BUILDING
EAST CAMDEN,
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CROMWELL ARCHITECTS/ ENGINEERS #5

STATE OF ARKANSAS

REGISTERED PROFESSIONAL ENGINEER

No. 22761

ALBERT OGENCE

07-31-2024

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ELECTRICAL SCHEDULES

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E-602

