- B. RECEPTACLES. SWITCHES AND COVERPLATES COLOR SHALL BE SELECTED BY THE ARCHITECT FROM STANDARD COLORS.
- C. VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGHING-IN WALL FOR SWITCHES.
- D. LOCATION OF LIGHTING FIXTURES, DISCONNECT SWITCHES, ETC. FOR MECHANICAL EQUIPMENT/ROOM SHALL BE COORDINATED WITH FINAL MECHANICAL EQUIPMENT LOCATION TO PROVIDE NATIONAL ELECTRIC CODE REQUIRED ACCESS SPACE
- E. FINAL CONNECTION TO ALL MOTORS SHALL BE WITH FLEXIBLE CONDUIT CONNECTION.
- F. ALL EXIT AND EMERGENCY FIXTURES SHALL BE CONNECTED TO LIGHT CIRCUIT AHEAD OF LOCAL SWITCH.
- G. ALL PANELBOARDS, BACKBOARDS, TERMINAL CABINETS, ETC SHALL HAVE CUSTOM ENGRAVED MICARTA NAMEPLATE MECHANICALLY AFFIXED IDENTIFYING SYSTEM.
- H. PROVIDE GREEN GROUND CONDUCTOR IN ALL CIRCUITS SIZE PER N.E.C.
- . ALL EXPOSED CONDUITS, BOXES, STRAPS AND HANGERS IN THE CONTRACT AREA WHETHER NEW OR EXISTING THAT ARE PART OF THE ELECTRICAL SYSTEM SHALL BE PAINTED TO MATCH ADJACENT FINISH.
- J. PROVIDE CONCRETE MARKER AT END OF ALL CONDUITS STUBBED OUT OF BUILDING FOR FUTURE USE. MARKER SHALL BE 6" DIA X 18" HIGH WITH 2" ABOVE FINISHED GRADE. INSCRIBE IN TOP OF MARKER "E" FOR ELECTRICAL, "T" FOR TELEPHONE, "V" FOR TV CABLE, "F" FOR FIRE ALARM, AND "IC" FOR INTERCOM.
- K. GENERAL CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. FAILURE TO DO SO INDICATES THAT THE CONTRACTOR ACCEPTS THE CONDITIONS AS THEY EXIST, AND SHALL PERFORM THE WORK REQUIRED AS SHOWN AND SPECIFIED.
- L. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND REVIEW THE MECHANICAL AND SPECIAL EQUIPMENT SUBMITTALS PRIOR TO SUBMITTING THE ELECTRICAL SUBMITTALS. ANY ELECTRICAL EQUIPMENT, CONDUIT, AND WIRE SIZE CHANGES RESULTING FROM THIS REVIEW SHALL ALSO BE SUBMITTED FOR APPROVAL.
- M. FIRE ALARM LOW VOLTAGE SOURCE AND BATTERY STANDBY SHALL ENERGIZE ALL ITEMS IN FIRE ALARM SYSTEM THAT REQUIRE POWER.
- N. VERIFY EXACT LOCATION OF ALL FLOOR OUTLETS WITH THE ARCHITECT PRIOR TO ROUGHING-IN.
- O. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FAULT CURRENT CALCULATIONS FOR THE SERVICE EQUIPMENT AND SHALL MARK THE EQUIPMENT WITH THE AVAILABLE FAULT CURRENT AND DATE OF THE CALCULATION PER NEC 110.24. REFER TO TYPICAL SERVICE EQUIPMENT FAULT CURRENT LABEL DETAIL.
- P. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ARC FAULT LABELS PER NFPA 70E ARTICLE 110.16 FOR NEW EQUIPMENT. THE OWNER SHALL PROVIDE AVAILABLE CALCULATION DATA FOR THE EXISTING EQUIPMENT IN THE ELECTRICAL SYSTEM. REFER TO TYPICAL ARC FLASH HAZARD LABEL DETAIL.
- Q. PROVIDE NEUTRAL AT ALL LINE VOLTAGE SWITCH LOCATIONS PER N.E.C. 404.2(C).
- R. PROVIDE 'LSI' TRIP UNITS FOR ALL BREAKERS GREATER THAN OR EQUAL TO 200A.
- S. PROVIDE BUSHINGS ON ALL CONDUIT

	SHEET INDEX
SHEET ID	DRAWING TITLE
E001	LEGEND AND NOTES
E101	SITE PLAN - ELECTRICAL
E201	FLOOR PLAN - POWER
E202	ENLARGED PLAN - POWER
E301	FLOOR PLAN - HVAC
E302	MEZZANINE PLAN - HVAC
E401	FLOOR PLAN - LIGHTING
E402	MEZZANINE PLAN - LIGHTING
E501	ROOF PLAN - LIGHTNING PROTECTION
E601	ELECTRICAL DETAILS
E602	ELECTRICAL DETAILS
E603	GROUNDING DETAILS
E604	LIGHTNING PROTECTION DETAILS
E701	LIGHTING CONTROLS AND FIXTURE SCHEDULE
E702	LIGHTING CONTROL DETAILS
E703	LIGHTING CONTROL DETAILS
E801	SINGLE LINE POWER RISER
E901	PANEL SCHEDULES

# ELECTRICAL LEGEND

4−1 <b>Q</b> 'B'	A-1 ADJACENT TO ARROW INDICATES HOMERUN OF CIRCUIT NO. 1 TO PANEL A; "B" INDICATES FIXTURE TYPE; MARKS ACROSS RACEWAY RUN INDICATES THE NUMBER OF 12 CONDUCTORS; UNLESS NOTED OTHERWISE NO MARKS INDICATES TWO NO. 12 CONDUCTORS AND ONE NO. 12 GREEN GROUND CONDUCTOR IN 1/2" CONDUIT (2#12 & 1#12 GND-1/2"C)
<b>8</b>	PENDANT FIXTURE BY ARCHITECT

DECORATIVE CEILING FAN/LIGHT COMBINATION

CEILING FIXTURE

O→ WALL BRACKET FIXTURE

POLE MOUNTED FIXTURE

2' X 2' FIXTURE; CEILING MOUNTED; ARROW INDICATES LENS DIRECTION

2' X 2' FIXTURE WITH SELF CONTAINED EMERGENCY DRIVER; CEILING MOUNTED; ARROW INDICATES LENS DIRECTION

LINEAR FIXTURE; CEILING MOUNTED;

■ LINEAR FIXTURE WITH SELF CONTRAINED EMERGENCY DRIVER; CEILING MOUNTED;

EXIT SIGN; CEILING MOUNTED; ARROWS AS NOTED; SHADED SECTION INDICATES LIGHTED FACE OF EXIT SIGN

EXIT SIGN; BACK MOUNTED; ARROWS AS NOTED; SHADED SECTION INDICATES LIGHTED FACE OF EXIT SIGN

JUNCTION BOX; MOUNTED ABOVE CEILING

JUNCTION BOX; MOUNTED FLUSH IN WALL WITH BLANK COVER

DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5-20R; HUBBELL SERIES HBL5352

CEILING MOUNTED DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; MT FLUSH IN CEILING UNLESS NOTED OTHERWISE; NEMA 5-20R: HUBBELL SERIES HBL5352

QUAD RECEPTACLE; 125V; 20A; 3 POLE GND; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5-20R; HUBBELL SERIES HBL5352

RANGE RECEPTACLE; 220V; 50A; 3 POLE GND; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 14-50; HUBBELL SERIES HBL9450A

DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; GFI; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA GF-5-20R; HUBBELL SERIES GF5362

LETTERS "WP" ADJACENT TO SYMBOL INDICATES GFI WEATHER RESISTANT RECEPTACLE; HUBBELL HBLGFBFHP20 SERIES WITH WEATHERPROOF COVER; PASS AND SEYMOUR WIUFC10S COVER/BOX.

DUPLEX RECEPTACLE FOR TELEVISION WITH TVSS PROTECTION, LED AND ALARM; 125V; 20A; 2 POLE; 3 WIRE; GND; SEE TELECOM PLANS FOR MOUNTING DETAILS. NEMA 5-20R; HUBBELL SERIES HBL5362SA

DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; HALF-CONTROLLED RECEPTACLE; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5-20R; HUBBELL SERIES BR20C1

COMBINATION POWER/TELECOM FLOOR BOX; FOUR DUPLEX RECEPTACLES; 125V; 20A; 3 POLE GND; NEMA 5-20R; HUBBELL SERIES HBL5352; REFER TO TELECOM AND A/V PLANS FOR FLOOR BOX PART NUMBERS, INSTALLATION DETAILS AND LOCATION.

€ LETTERS +XX" ADJACENT TO SYMBOL INDICATES RECEPTACLE MOUNTING HEIGHT.

+AC" = ABOVE COUNTER. +DF" = VERIFY HEIGHT FOR DRINKING FOUNTAIN WITH MECHANICAL CONTRACTOR

+TV" = VERIFY HEIGHT OF TV WITH OWNER. +DW" = DISHWASHER RECEPTACLE, VERIFY MOUNTING REQUIREMENTS WITH MECHANICAL CONTRACTOR.

O DRYER RECETACLE; 250V, 30A, 3P, 4W, NEMA 14-30R; HUBBELL SERIES HBL9430.

WALL SWITCH; 120/277V; 20A; 1 POLE; A.C. ONLY; MT 48" AFF TO C/L; HUBBELL SERIES HBL1221

WALL SWITCH; 120/277V; 20A; 1 POLE; A.C. ONLY; MT 48" AFF TO C/L; HUBBELL SERIES HBL1221; IN WEATHER PROOF ENCLOSURE

WALL SWITCH; 120/277V; 20A; VACANCY SENSOR DUAL TECHNOLOGY MULTI-WAY TYPE; MT 48" AFF TO C/L; REFER TO SPECS; WATTSTOPPER #DWS-301-W.

SL# LOW VOLTAGE WALL SWITCH; CONNECT TO NETWORKED ROOM CONTROLLER OR LIGHTING CONTROL PANEL; MT 48" AFF TO C/L; REFER TO SPECS; SEE LIGHTING CONTROL DETAILS. NUMBER "#" INDICATES BUTTON COUNT; REFER TO LOW VOLTAGE SWITCH MATRIX FOR SPECIFIC INFORMATION.

MOTOR CONTROL SWITCH: 600V: 30A: 2 POLE: A.C. ONLY: NEAR OR ON EQUIPMENT BEING SERVED: HUBBELL SERIES 30102D.

SWP WALL SWITCH; 120/277V; 20A; 1 POLE; A.C. ONLY; MT 48" AFF TO C/L; HUBBELL SERIES HBL1221; IN WEATHER PROOF

RED MUSHROOM PUSH-BUTTON WITH KEY RELEASE; MT. 60" AFF TO C/L. LABEL 'EMERGENCY STOP', EQUAL TO SQUARE D MODEL XB6AS9345B

LIGHTING CONTROLS SYSTEM NETWORK BRIDGE; INSTALL CONCEALED ABOVE CEILING; REFER TO LIGHTING CONTROLS

LIGHTING CONTROLS ROOM CONTROLLER; INSTALL CONCEALED ABOVE CEILING SPACE; REFER TO LIGHTING CONTROLS

LOW VOLTAGE OCCUPANCY SENSOR; 360° DUAL-TECHNOLOGY TYPE; CEILING MOUNTED; UNLESS OTHERWISE NOTED; REFER TO LIGHTING CONTROLS DETAILS

PANEL; 120/208V; MT 72" AFF TO TOP

110 NON-FUSED DISCONNECT SWITCH; AMP SIZE AS NOTED

RACEWAY INSTALLED CONCEALED IN WALLS AND/OR ABOVE CEILING

RACEWAY INSTALLED CONCEALED IN FLOOR SLAB AND/OR BELOW GRADE

- □ ■ EMERGENCY RACEWAY INSTALLED CONCEALED

→ FLEXIBLE CONDUIT CONNECTION

CONDUIT STUB UP WITH FLEXIBLE CONDUIT CONNECTION TO EQUIPMENT

DATA SYSTEM WALL OUTLET WITH ONE(1) RJ-45 JACK AND COVERPLATE; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE - INSTALL 3/4"C WITH PULLRIBBON UP INTO CEILING SPACE.

FIRE ALARM SYSTEM MANUAL PULL STATION; MT 48" AFF TO C/L

FIRE ALARM SYSTEM SIGNAL HORN/STROBE; MT 80" AFF TO BOTTOM, '110' INDICATES CANDELA RATING, NO NUMBER INDICATES 75 CANDELA MINIMUM

FIRE ALARM SYSTEM EXTERIOR, WEATHERPROOF SIGNAL HORN; MT 90" AFF TO BOTTOM

FIRE ALARM SYSTEM STROBE; MT 80" AFF TO BOTTOM, '110' INDICATES CANDELA RATING, NO NUMBER INDICATES 75 CANDELA MINIMUM

FIRE ALARM SYSTEM AUTOMATIC HEAT DETECTOR; 135 DEGREE/RATE OF RISE TYPE; CEILING MOUNTED

FIRE ALARM SYSTEM AUTOMATIC SMOKE DETECTOR; CEILING MOUNTED

FIRE ALARM SYSTEM CARBON MONOXIDE DETECTOR; CEILING MOUNTED

FIRE SPRINKLER SYSTEM FLOW/TAMPER SWITCH

TELEVISION CABLE WALL OUTLET WITH COAXIAL SCREW JACK AND COVERPLATE; MT 18" AFF TO C/L - INSTALL 3/4"C WITH PULLRIBBON UP INTO CEILING SPACE.

PHOTOCELL; REFER TO LIGHTING CONTROL DIAGRAM



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No.	Description	Date

LEGEND AND NOTES

Project number: 18106

Date: 06-20-2023

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**ABBREVIATIONS** 

AFF - ABOVE FINISHED FLOOR

C. - CONDUIT

C/L - CENTERLINE EC - ELECTRICAL CONTRACTOR

EF - EXHAUST FAN
GND - GROUND CONDUCTOR

GFI - GROUND FAULT PROTECTION

LTG - LIGHTING

LTS - LIGHTS REC - RECEPTACLE

UNO - UNLESS NOTED OTHERWISE WH - WATER HEATER

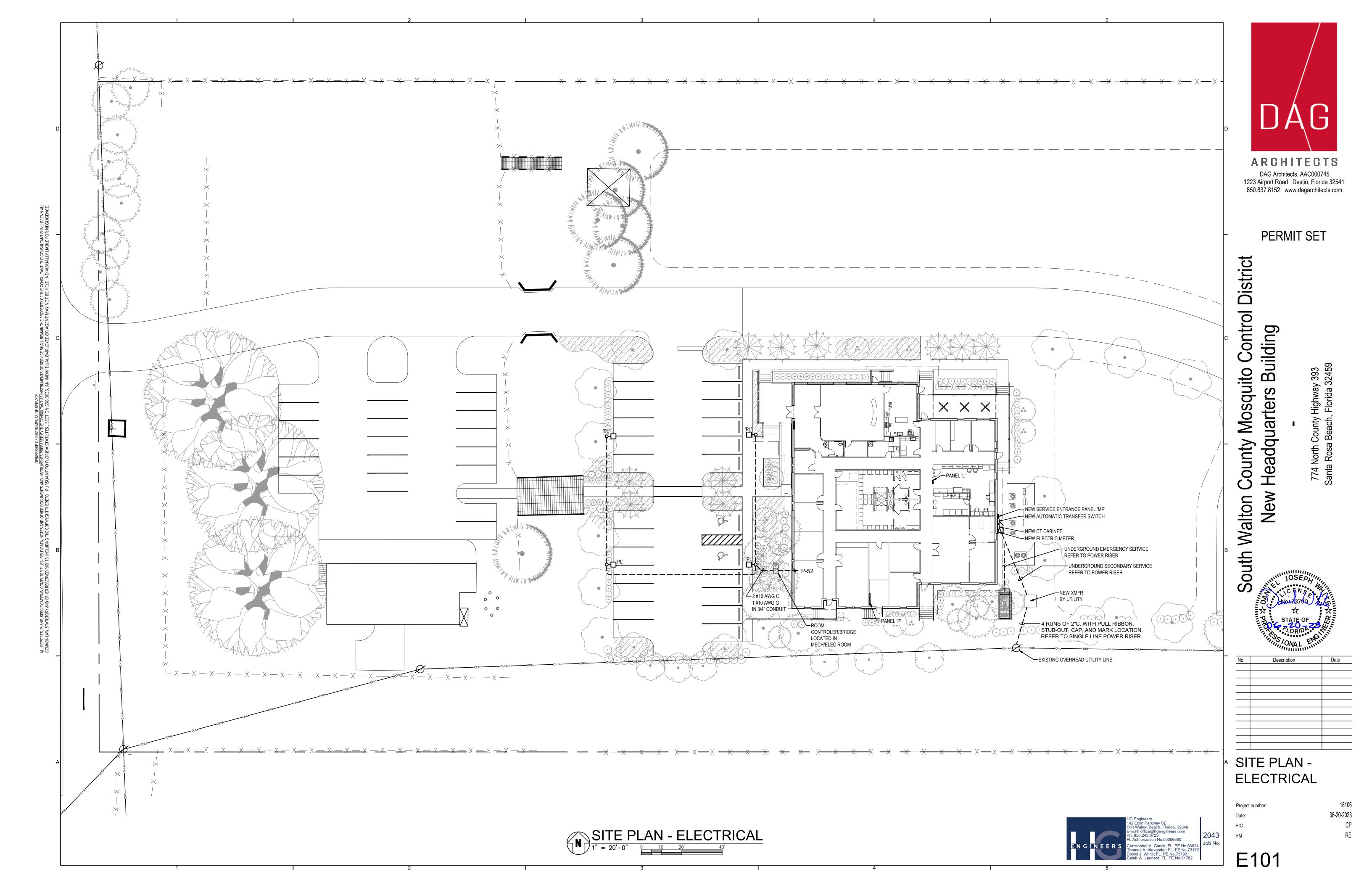
WH - WATER HEATER
WP - WEATHERPROOF

A/C - AIR CONDITIONER

COND - CONDENSING UNIT IHP - INDOOR HEAT PUMP

OHP - OUTDOOR HEAT PUMP

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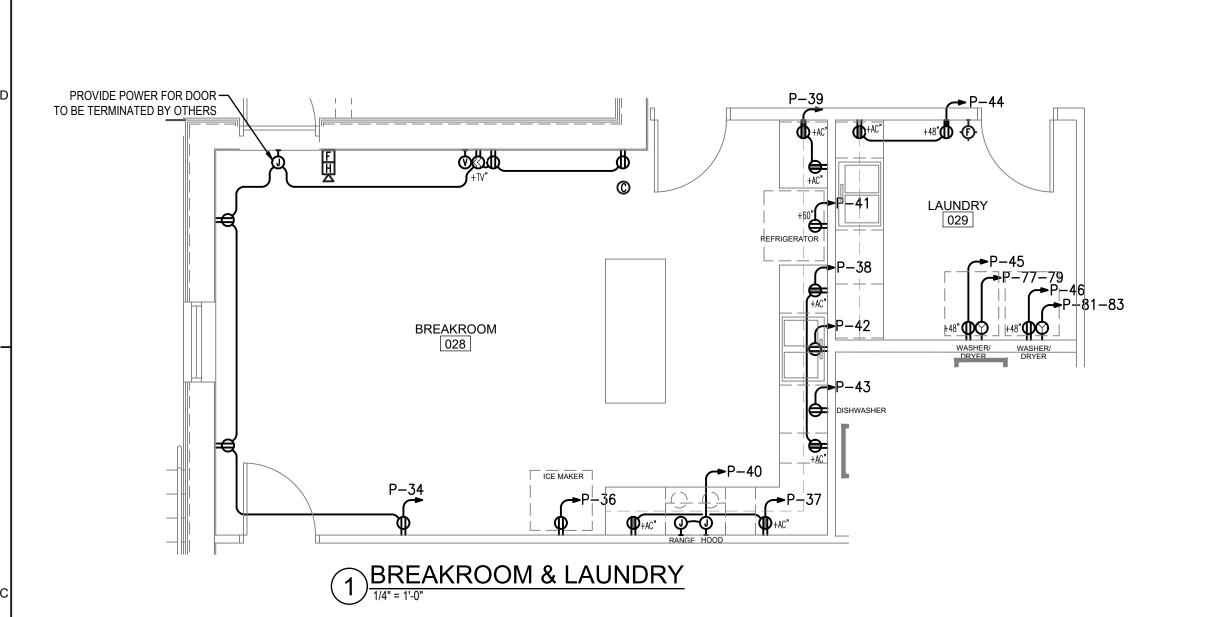
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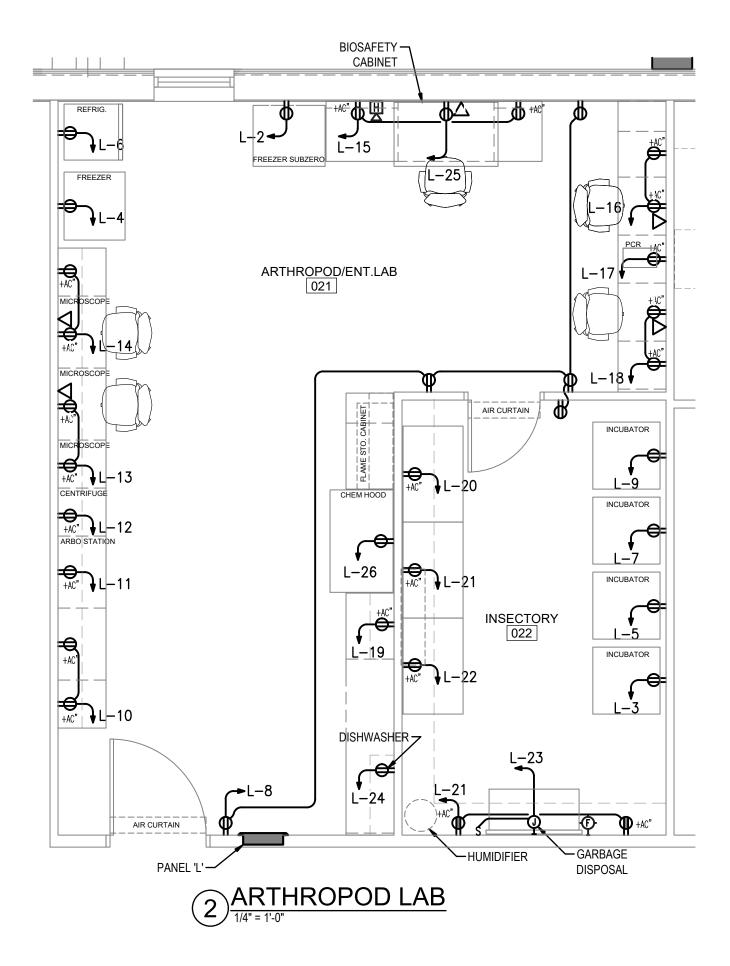
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Headquarters Building

FLOOR PLAN -POWER

18106 06-20-2023





LAB EQUIPMENT SCHEDULE  (VERIFY ALL EQUIPMENT CIRCUIT REQUIREMENTS WITH MANUFACTURERS SHOP DRAWINGS PRIOR TO ROUGH-IN)																							
								RICAL	LOAD			PROTE				CONDU	CTOR / CON		1				
					МО	TOR(S) I	1	+		× ×			SPECI	FIED	<b>-</b>		CONDUCTO	RS	-				
DESCRIPTION	MANUFACTURER	MODEL	VOLT	Φ	QΤΥ	LARGEST	SUM OF REMAINING	ELECTRIC HEAT KW	OTHER VA	TOTAL CONNECTEE	MCA	MOCP	TRIP	POLE	SETS	QTY.	SIZE	GND	CONDUIT	DISC.	REMARKS		
INCUBATOR	PERCIVAL	I-36VL	120	1	2	5.2	5.1			1236	13.3	20	20	1	1	2	#12	#12	3/4"	GF5-20R	TWO CORD CONNECTIONS		
STIR TABLE																							
MINI REFRIGERATOR	GENERAL ELECTRIC	TAX4SNYBWH	120	1	1	4				480	6.3	20	20	1	1	2	#12	#12	3/4"	GF5-20R			
LARGE REFRIGERATOR	GENERAL ELECTRIC	TBX16SATDRWH	120	1	1	5				600	5	20	20	1	1	2	#12	#12	3/4"	GF5-20R			
LARGE CHEST FREEZER	THERMO SCIENTIFIC REVCO	CXF SERIES ULT350-10-A	120	1	1	6				720	10	15	15	1	1	2	#12	#12	3/4"	GF5-20R			
LARGE UPRIGHT FREEZER	FRIGIDAIR	FFFH20F2QW	120	1	1	5				600	6.3	20	20	1	1	2	#12	#12	3/4"	GF5-20R			
SHAKER INCUBATOR																							
BIO INCUBATOR																							
DISHWASHER	STEAM SCRUBBER FREESTANDING	705521	120	1					1000	1000	8.3	20	20	1	1	2	#12	#12	3/4"	GF5-20R			
BIOSAFETY CABINET	THERMO SCIENTIFIC 1300	CLASS II TYPA A2 BIOLOGICAL	120	1	1	1.2			600	744	6.5	20	20	1	1	2	#12	#12	3/4"	GF5-20R			
CHEMICAL HOOD	SHELDON LABORATORY SYSTEMS	EH-111-48	120	1					1000	1000	8.3	20	20	1	1	2	#12	#12	3/4"	GF5-20R			
FLA MMA BLE LOCKER	JUSTRITE	17-GAL																					







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**Control District** Headquarters Building

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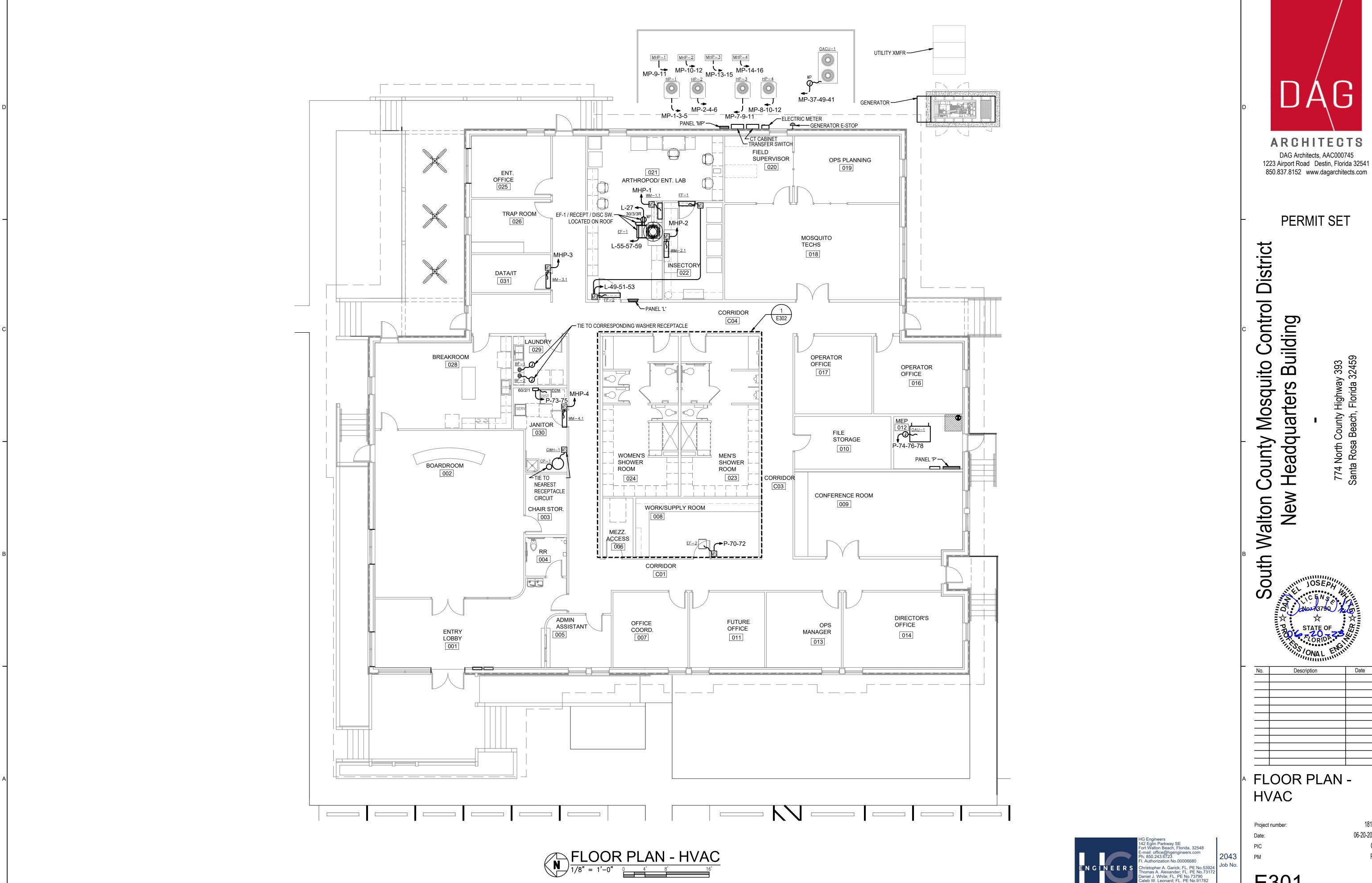
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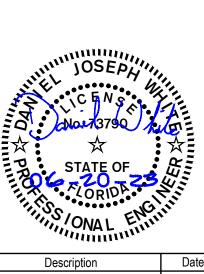
**ENLARGED PLAN** - POWER

18106 06-20-2023





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FLOOR PLAN -**HVAC** 

18106 06-20-2023

County Mosquito Control District w Headquarters Building **→**MP-22-24 <u>AHU-4</u> MP-21-23 60/2/1 AHU-3 →MP-18-20 MECH. MEZZANINE 100 AHU-2 South Walton ( ACCESS **MP-17-19** MEZZANINE PLAN - HVAC

1/8" = 1'-0"

1/8" = 1'-0"

1/8" = 1'-0"

1/8" = 1'-0"



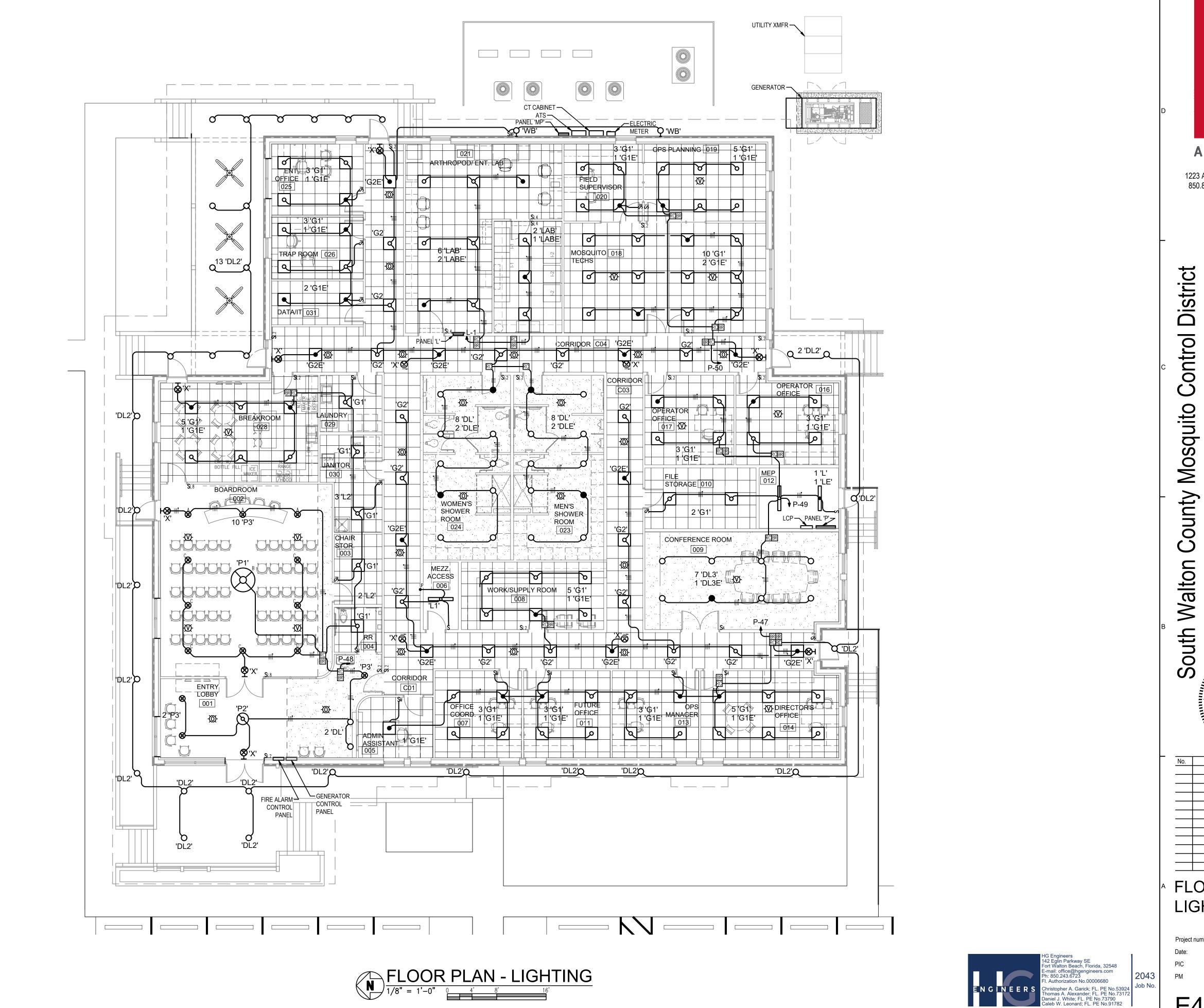
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MEZZANINE PLAN - HVAC

18106 06-20-2023



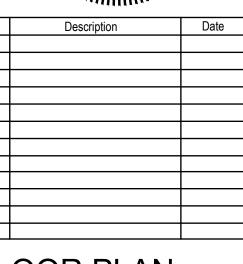
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Headquarters Building

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FLOOR PLAN -LIGHTING

> 18106 06-20-2023

County Mosquito Control District w Headquarters Building 6 'L1' 2 'L1E' MECH. MEZZANINE 100 South Walton ( MEZZANINE PLAN - LIGHTING

1/8" = 1'-0" 0 4' 8' 16'



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No.	Description	Date				

**MEZZANINE PLAN** - LIGHTING

> 18106 06-20-2023

### SHEET NOTES

- 1 GROUND RINGS SHALL BE INSTALLED IN DIRECT CONTACT WITH THE EARTH AT A DEPTH OF 30 INCHES BELOW GRADE, OR BELOW THE FROST LINE, WHICHEVER IS DEEPER.
- 2 BUILDING GROUND RINGS SHALL BE INSTALLED AT LEAST 3 FEET FROM THE BUILDING OR STRUCTURE FOUNDATION AND SHOULD BE INSTALLED BEYOND THE DRIP LINE OF THE ROOF OF BUILDING OR
- 3 THE DESIGN & DETAILS SHOWN WILL MEET THE REQUIREMENTS OF UNDERWRITERS LABORATORY CODE 96/96A, NATIONAL FIRE PROTECTION ASSOCIATION CODE 780 & THE LIGHTNING PROTECTION INSTITUTE CODE 175 FOR LIGHTNING PROTECTION SYSTEMS
- 4 JOB CONDITIONS MAY DICTATE SLIGHT VARIATIONS IN AIR TERMINAL AND GROUND ROD LOCATIONS

#### BONDING & GROUNDING NOTES

- 1 ALL MISCELLANEOUS STEEL INCLUDING BUT NOT LIMITED TO STRUCTURAL STEEL, REBAR, FRAMING & RAILINGS, SHALL BE MADE ELECTRICALLY CONTINUOUS THROUGH CONSTRUCTION(NOT THE RESPONSIBILITY OF THE LIGHTNING PROTECTION CONTRACTOR.)
- 2 ELECTRICAL GROUNDING ELECTRODE SYSTEM, AND OTHER MISCELLANEOUS GROUNDING SYSTEM SHALL BE CONNECTED WITH MAIN SIZED CONDUCTOR TO ANY LIGHTNING PROTECTION SYSTEM.
- 3 METAL BODIES OF INDUCTANCE LOCATED WITHIN 6' OF A MAIN LIGHTNING CONDUCTOR SHALL BE BONDED TO THE LIGHTNING PROTECTION SYSTEM. (INCLUDING BUT NOT LIMITED TO EXHAUST FANS. VENTS, HANDRAILS, METAL SCREENS AND PANELS, HVAC UNITS, HATCHES, SKYLIGHTS, COOLING TOWERS, FLAG POLES, ANTENNAS, ETC, OR ANY LARGE METAL BODY SUBJECT TO DIRECT STRIKE OR WHICH EXCEEDS THE HEIGHT OF ADJACENT AIR TERMINALS.)
- 4 CONNECTIONS TO GROUND AND/OR COUNTERPOISE SHALL BE MADE AT A POINT NOT LESS THAN 2'-0 BELOW GRADE, AND 3'-0 TO 8'-0 AWAY FROM FOUNDATION WALL.

#### AIR TERMINAL SPACING

- 1 PERIMETER AIR TERMINALS THAT ARE LESS THAN 24" IN HEIGHT SHALL BE SPACED AT 20'-0" O.C. MAX. PERIMETER AIR TERMINALS THAT ARE 24" IN HEIGHT OR GREATER SHALL BE SPACED AT 25'-0" O.C. MAX.(NFPA 780 EDITION 2020 SECTION 4.7.2.2 & 4.7.2.3)
- 2 MID-ROOF AIR TERMINALS FOR GENTLY SLOPING OR FLAT ROOFS SHALL BE SPACED AT 50'-0" O.C. MAX. SPACING.(NFPA 780 EDITION 2020 SECTION 4.7.5.1)
- 3 AIR TERMINAL SHALL BE PLACED NOT MORE THAN 2'-0 FROM THE ENDS OF RIDGES, OUTSIDE CORNERS, OR OUTSIDE EDGES OF MAIN ROOFS(NFPA 780 EDITION 2020 SECTION 4.7.2.1), AND MUST EXTEND A MINIMUM OF 10" ABOVE THE OBJECT TO BE PROTECTED.(NFPA 780 EDITION 2020 SECTION 4.6.2.1). SEE "TYPICAL PLACEMENT OF AIR TERMINALS AT OUTSIDE CORNERS" DETAIL
- 4 PROVIDE AIR TERMINAL BRACING FOR TERMINALS LONGER THAN 24"(NFPA 780 EDITION 2020 SECTION 4.6.2.2).

#### MATERIAL REQUIREMENTS

- 1 CLASS I MATERIALS ARE REQUIRED FOR STRUCTURE LESS THAN 75'-0" IN HEIGHT(NFPA 780 EDITION 2020 SECTION 4.1.1.1.1).
- 2 CLASS II MATERIALS ARE REQUIRED FOR BUILDINGS GREATER THAN 75'-0" IN HEIGHT(NFPA 780 EDITION 2020 SECTION 4.1.1.1.2).
- 3 COPPER MATERIAL MAY NOT BE PLACED ON METALS WHICH ARE INCOMPATIBLE. THESE AREAS WILL BE SUBSTITUTED WITH ALUMINUM COMPONENTS.
- 4 ALL ADHESIVE FIXTURES SHALL BE SET WITH AN ADHESIVE COMPOUND COMPATIBLE WITH THE ROOFING MATERIAL. ADHESIVES SHALL BE APPROVED IN ADVANCE BY THE ROOFING CONTRACTOR.
- ALUMINUM MATERIALS SHALL NOT BE USED IN DIRECT CONTACT WITH EARTH. CONNECTION OF ALUMINUM CONDUCTORS TO COPPER SHALL BE MADE AT A POINT NO LESS THAN 18" ABOVE GRADE LEVEL. FITTINGS CONNECTING THE ALUMINUM CONDUCTORS TO COPPER SHALL BE OF THE BIMETALLIC TYPE SPECIALLY DESIGNED AND APPROVED FOR MAKING CONNECTIONS BETWEEN THE DISSIMILAR METALS.
- 7 CONDUCTORS SHALL MAINTAIN A HORIZONTAL OR DOWNWARD PATH FREE FROM "U" AND "V" POCKETS. ANY RISE IN CONDUCTOR SHALL BE NO STEEPER THAN 3" OF RISE PER 12" OF RUN.

	MINIMUM CLASS I MATERI	AL REQUIREMENTS	
TYPE OF CONDUCTOR	PARAMETER	COPPER	ALUMINUM
AIR TERMINAL, SOLID	DIAMETER	3/8"	1/2"
AIR TERMINAL, TUBULAR	DIAMETER	5/8"	5/8"
MAIN CONDUCTOR	CROSS-SECTION	57,400 cir mils	98,600 cir mil
MAIN CONDUCTOR	STRAND SIZE	17 AWG	14 AWG
BONDING CONDUCTOR	CROSS-SECTION	26,240 cir mils	41,100 cir mil
OLACO LAMBIL CONDUCTOR	STRAND SIZE	17 AWG	14 AWG

CLASS I-COPPER: MINIMUM GAUGE 2 AWG, WITH MINIMUM INDIVIDUAL STRAND SIZE OF 17 AWG CLASS I—ALUMINUM: MINIMUM GAUGE 1/O AWG, WITH MINIMUM INDIVIDUAL STRAND SIZE OF 14 AWG.

CLASS I SECONDARY CONDUCTOR SUMMARY CLASS I-COPPER: MINIMUM GAUGE 6 AWG, WITH MINIMUM INDIVIDUAL STRAND SIZE OF 17 AWG CLASS I-ALUMINUM: MINIMUM GAUGE 4 AWG, WITH MINIMUM INDIVIDUAL STRAND SIZE OF 14 AWG.

MINIMUM CLASS II MATERIAL REQUIREMENTS PARAMETER TYPE OF CONDUCTOR COPPER ALUMINUM AIR TERMINAL, SOLID 5/8"

#### CROSS-SECTION STRAND SIZE 115,000 cir mils 192,000 cir mil MAIN CONDUCTOR 13 AWG 15 AWG 26,240 cir mils 41,100 cir mil CROSS-SECTION BONDING CONDUCTOR STRAND SIZE 17 AWG CLASS II MAIN CONDUCTOR SUMMARY

CLASS II—COPPER: MINIMUM GAUGE 2/0 AWG, WITH MINIMUM INDIVIDUAL STRAND SIZE OF 15 AWG. CLASS II-ALUMINUM: MINIMUM GAUGE 4/0 AWG, WITH MINIMUM INDIVIDUAL STRAND SIZE OF 13 AWG

CLASS II SECONDARY CONDUCTOR SUMMARY CLASS II-COPPER: MINIMUM GAUGE 6 AWG, WITH MINIMUM INDIVIDUAL STRAND SIZE OF 17 AWG. CLASS II—ALUMINUM: MINIMUM GAUGE 4 AWG, WITH MINIMUM INDIVIDUAL STRAND SIZE OF 14 AWG

INSTALL U.L. LISTED LIGHTNING PROTECTION SYSTEM PER THE LIGHTNING PROTECTION

INSTITUTE (LP) STANDARDS. INSTALLATION MUST BEAR U.L. MASTER LABEL.



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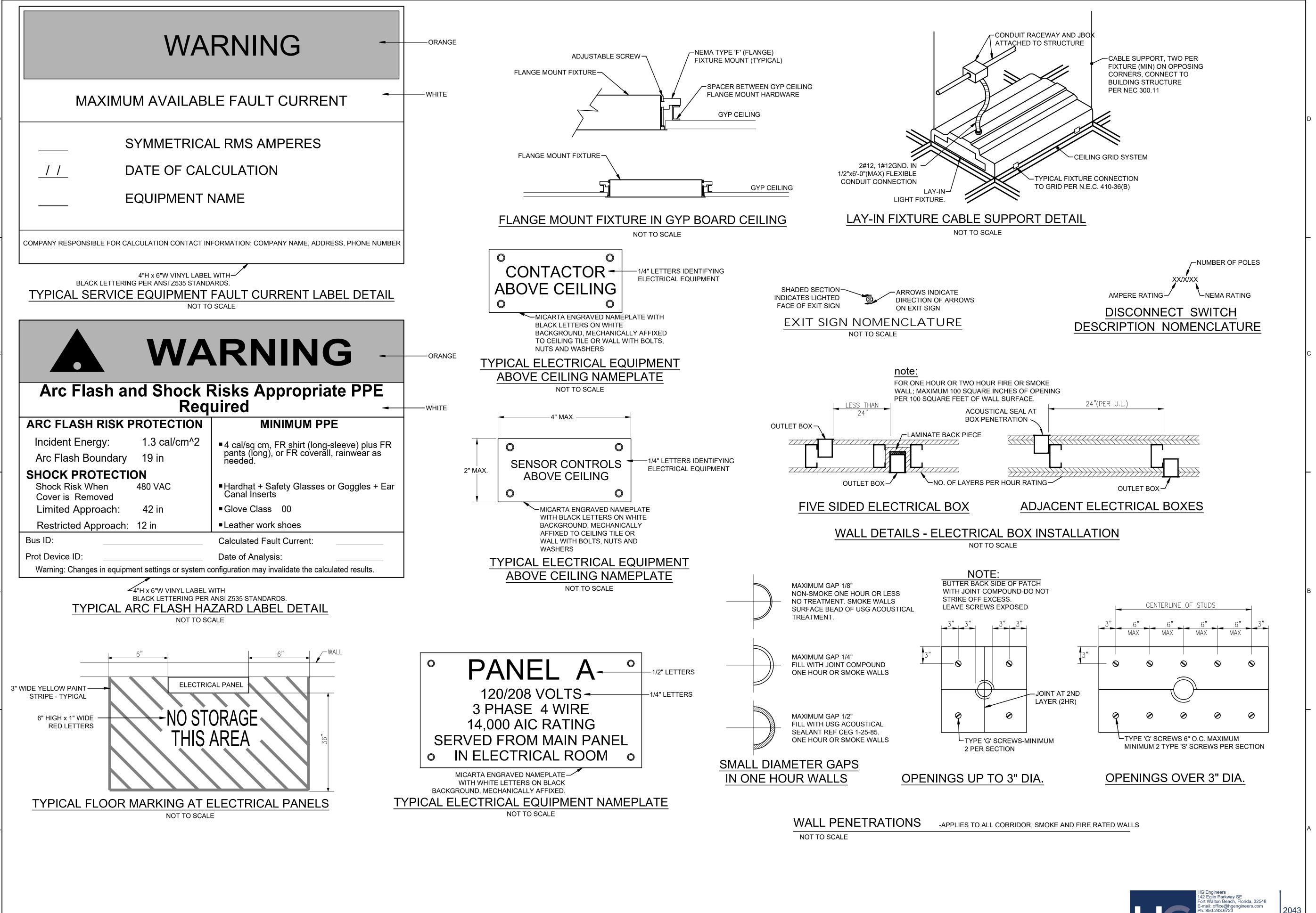
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ROOF PLAN -LIGHTNING **PROTECTION** 

18106 Project number: 06-20-2023



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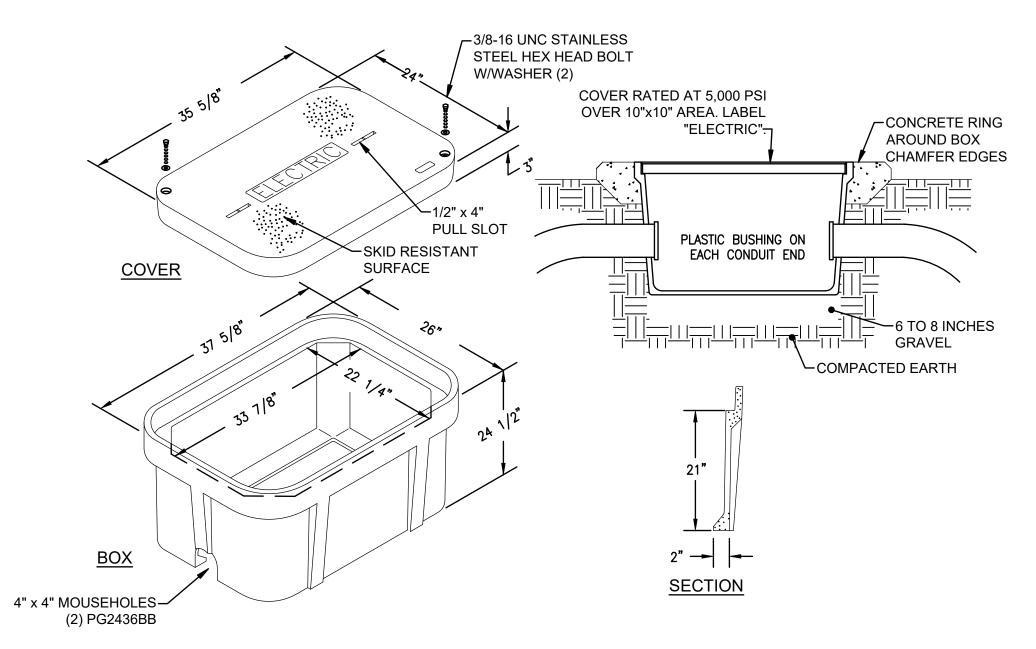
**District** Control Headquarters Building

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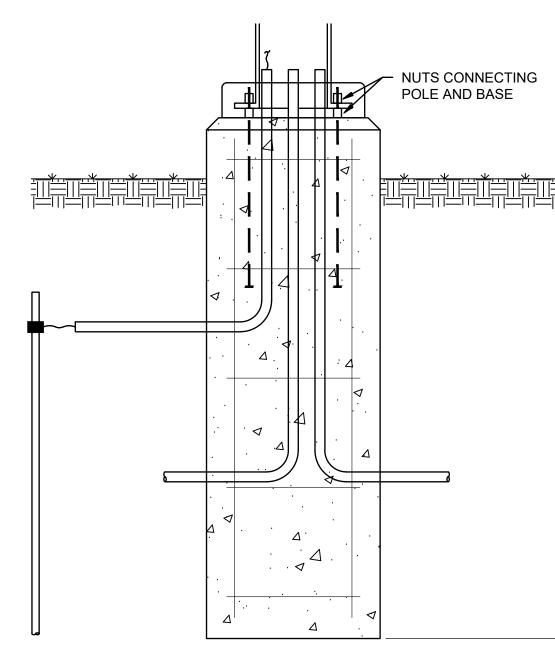
**ELECTRICAL DETAILS** 

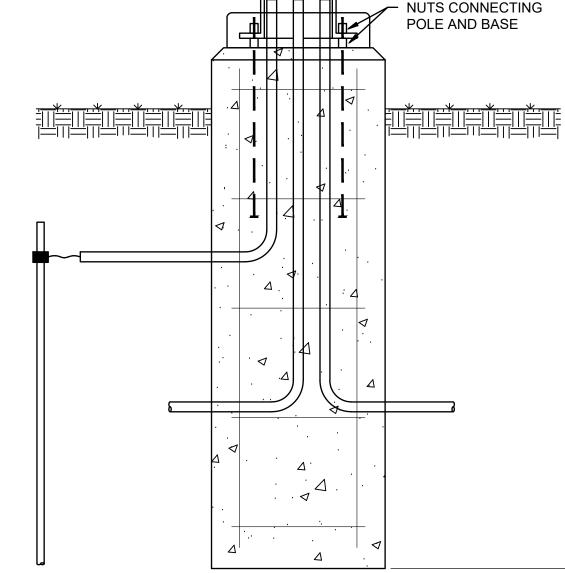
18106 Project number 06-20-2023

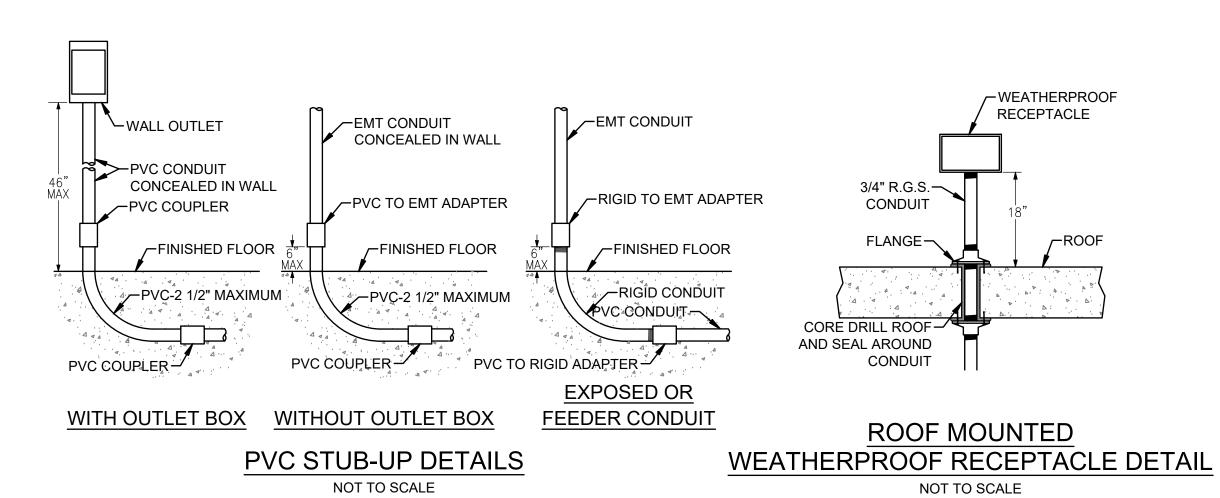


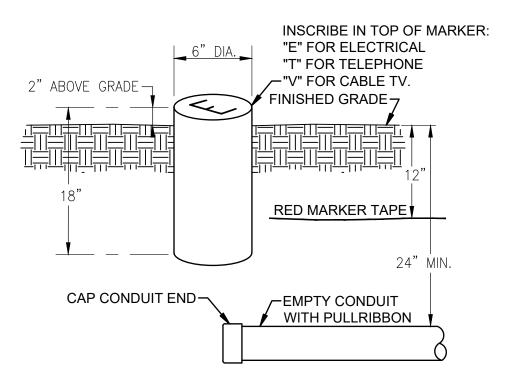
## **ELECTRICAL PULLBOX DETAIL**

NOT TO SCALE









CONDUIT MARKER DETAIL NOT TO SCALE

CONCRETE POLE BASE FOR FIXTURE "PL" & "PLA" NOT TO SCALE





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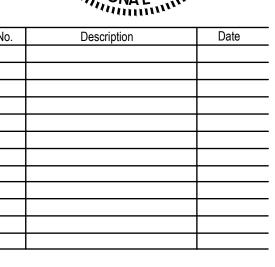
**Control District** 

Headquarters Building

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**ELECTRICAL DETAILS** 

Project number:	1810
Date:	06-20-202
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PM	R

208Y/120V GROUNDING SYSTEM DIAGRAM

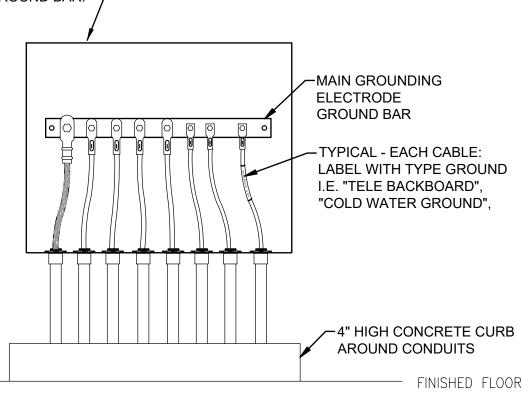
NOT TO SCALE

LIGHTING PANELBOARD

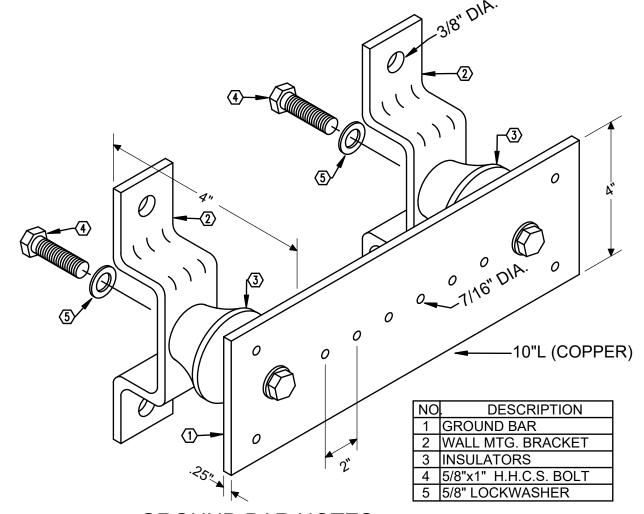
NEUTRAL

GROUND

TYPICAL ENCLOSURE: EQUAL TO CARLON 'CIRCUIT-SAFE' JIC ENCLOSURE: NON-METALLIC; SIDE OPENING, HINGED DOOR WITH LOCK OR CATCH; POLYCARBONATE CONSTRUCTION. PROVIDE A MICARTA PLATE. MECHANICALLY ATTACHED TO OUTSIDE OF DOOR, ENGRAVED IN LETTERS 1" HIGH TO READ "MAIN GROUND BUS BAR". SIZE ENCLOSURE TO ENSURE A MINIMUM OF 2" CLEARANCE AT EACH END OF THE GROUND BAR.



**GROUNDING SYSTEM** TYPICAL ENCLOSURE NOT TO SCALE



GROUND BAR NOTES: 1. INSTALL ONE BAR AT EACH COMMUNICATIONS

- 2. ROUTE 1#4 BARE CU IN 1"CONDUIT FROM GROUND BAR TO BUILDING ELECTRICAL SERVICE ENTRANCE GROUND.
- 3. CONNECT BARS WITH 1#6 BARE CU IN 1" CONDUIT.

#### INSULATED GROUNDING BAR DETAIL NOT TO SCALE

#### **KEY NOTES:**

- ① INSTALL GROUNDED (NEUTRAL) CONDUCTOR SAME SIZE AS THE LARGEST PHASE CONDUCTOR IF THE LINE-TO-NEUTRAL LOAD EXCEEDS 5% OF THE CONNECTED LOAD. IF NEUTRAL LOAD IS SMALLER, INSTALL THE NEC MINIMUM GROUNDED CONDUCTOR.
- ② NSTALL GROUNDING ELECTRODE CONDUCTOR, SIZED BASED ON NEC TABLE 250.66 USING THE SERVICE PHASE CONDUCTOR SIZE, BUT NOT SMALLER THAN NO 4.
- 3 INSTALL EQUIPMENT GROUNDING CONDUCTOR SIZED BASED ON NEC TABLE 250.122 USING THE FEEDER OVERCURRENT DEVICE SIZE.
- 4 10 FOOT MINIMUM X 3/4" DIAMETER COPPER CLAD STEEL SECTIONAL DRIVEN GROUND ROD.
- (5) NSTALL BONDING JUMPER WIRE THAT IS SIZED BASED ON NEC TABLE 250-66 OR 250.28(D)(1) USING THE SERVICE OR SEPARATELY-DERIVED SYSTEM PHASE PHASE CONDUCTOR SIZE.
- 6 NSTALL A CONCRETE-ENCASED MAIN GROUNDING ELECTRODE IN THE BUILDING FOUNDATION PER NEC ARTICLE 250.52 (A) (3).
- ① BOND EACH PERIMETER STRUCTURAL STEEL COLUMN TO THE CONCRETE-ENCASED MAIN GROUNDING ELECTRODE. USE COMPRESSION CONNECTORS THAT MEET IEEE 837 REQUIREMENTS OR USE EXOTHERMIC
- 8 INSTALL A "MAIN GROUND ELECTRODE GROUND BAR" FOR SINGLE POINT GROUNDING. LOCATE AT AN ACCESSIBLE POINT NEAR THE SERVICE ENTRANCE EQUIPMENT. MAKE CONNECTIONS TO THE GROUND ELECTRODE CONDUCTOR USING IRREVERSIBLE CONNECTORS OR EXOTHERMIC WELDS. MAKE OTHER CONNECTIONS TO THE GROUND BAR USING TWO-HOLE COMPRESSION SPADE LUGS THAT MEET IEEE 837 REQUIREMENTS. LABEL EACH CONNECTION TO THE GROUND BAR.
- 9 FIRE ALARM CONTROL PANEL GROUND #6 COPPER CONDUCTOR.
- 10 INSTALL A COPPER GROUNDING BAR IN EACH TELECOMMUNICATIONS ROOM. CONNECT TO THE "MAIN GROUNDING ELECTRODE GROUND BAR" USING 600V INSULATED #4 COPPER CABLE AND COMPRESSION SPADE LUGS.

#### **GENERAL NOTES**

- 1. BOND HOT AND COLD WATER PIPING SYSTEMS.
- 2. CONDUCTOR SIZES SHOWN ARE MINIMUM AND MAY BE LARGER THAN THE MINIMUM SIZES REQUIRED BY NEC.
- 3. INSTALL GROUNDING CONNECTIONS TO BUILDING STRUCTURE AND WATER PIPES AT LOCATIONS THAT ARE VISIBLE AND ACCESSIBLE FOR INSPECTION, MAINTENANCE, AND TESTING.
- 4. INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC SERVICE ENTRANCE CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250-66 USING THE SERVICE PHASE CONDUCTOR
- 5. INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC FEEDER CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250-122 USING THE FEEDER CIRCUIT OVERCURRENT DEVICE SIZE OR THE SEPARATELY DERIVED SYSTEM OVERCURRENT DEVICE SIZE.





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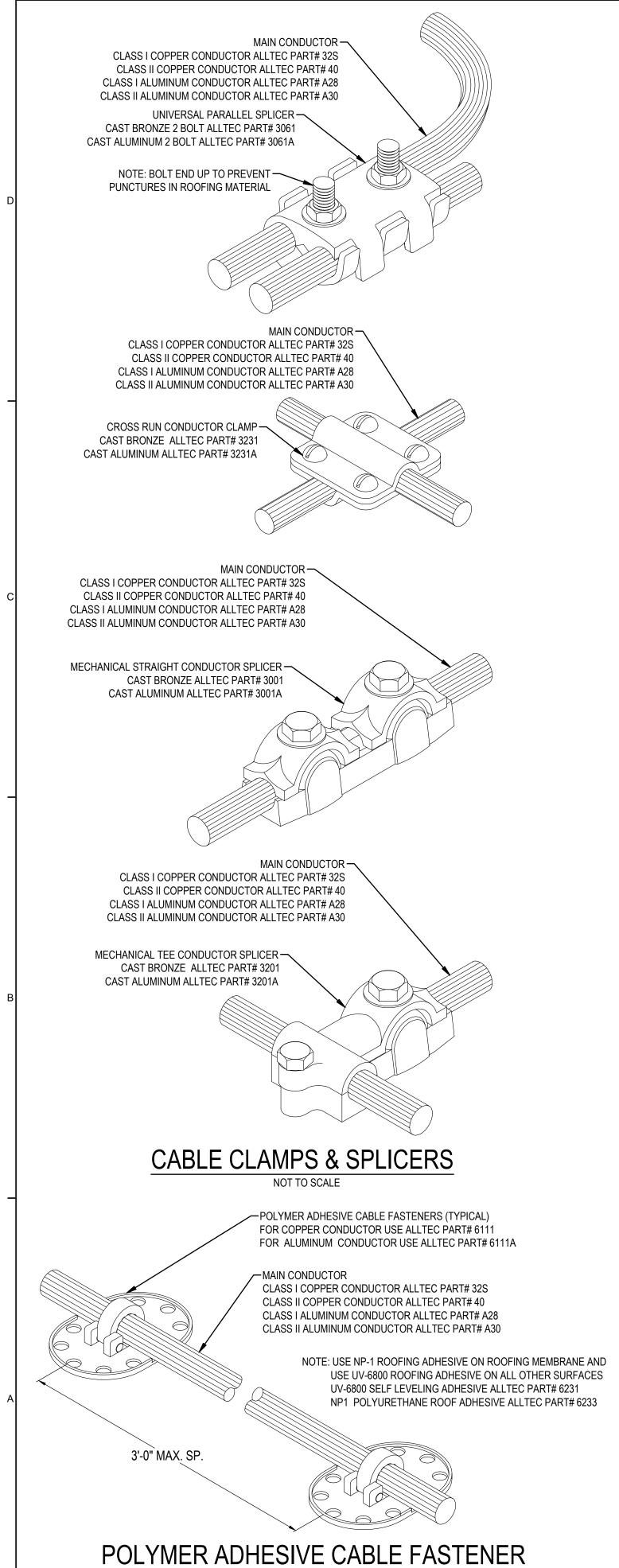
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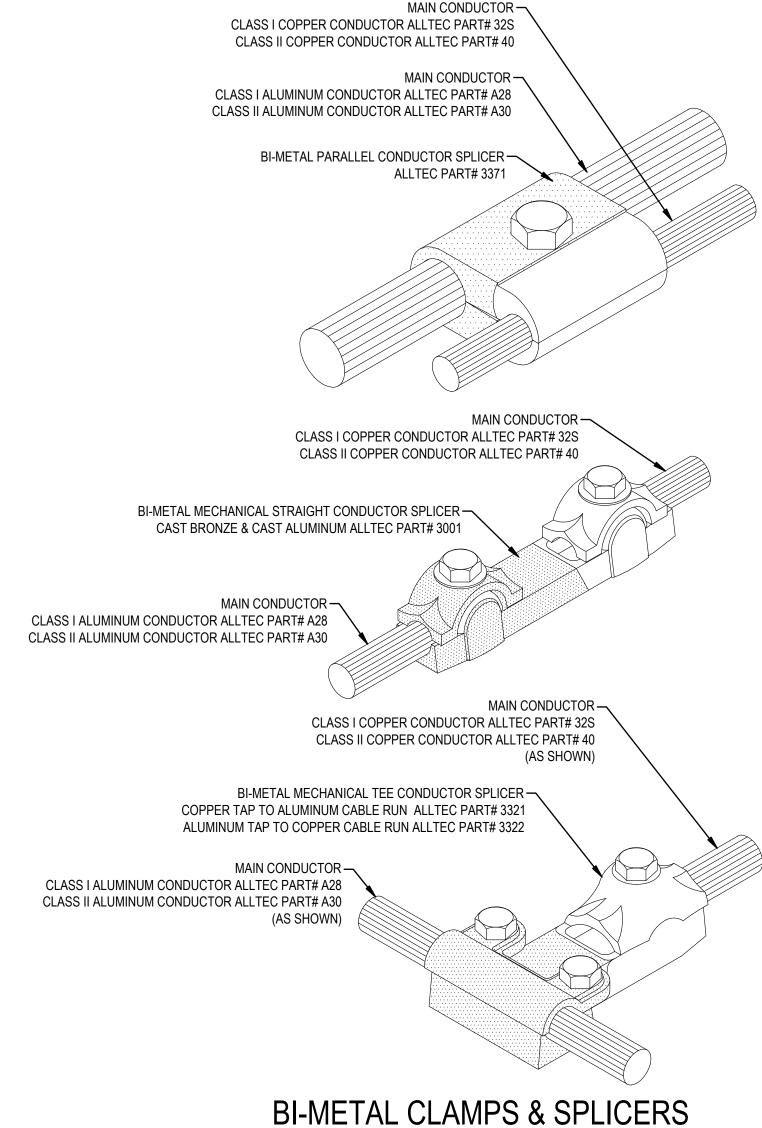


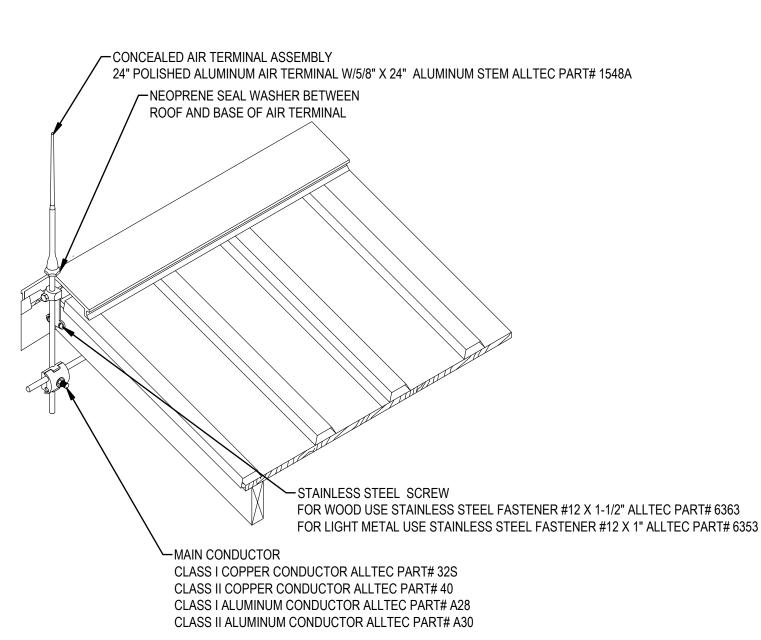
No.	Description	Date

**GROUNDING DETAILS** 

18106 Project number: 06-20-2023



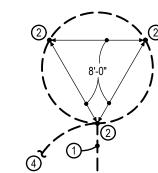




NOT TO SCALE

# CONCEALED RIDGE MOUNTED AIR TERMINAL

NOT TO SCALE

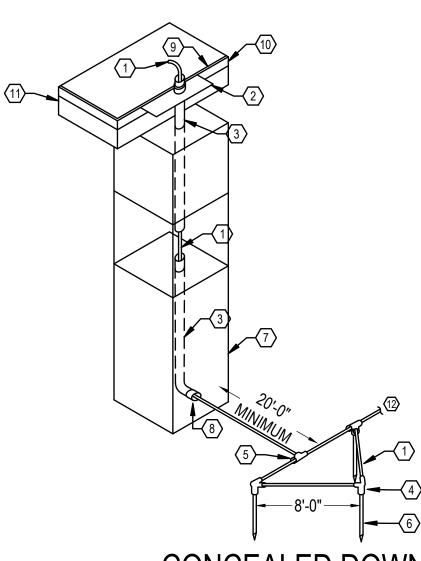


#### NOTES:

- (1) LIGHTNING PROTECTION SYSTEM DOWNLEAD CONDUCTOR; SIZE TO BE DETERMINED BY SYSTEM SUPPLIER AND INSTALLER.
- ② 3/4"DIAx10' SECTIONAL DRIVEN GROUND ROD.
- ③ TYPICAL LIGHTNING PROTECTION AIR TERMINAL, REFER TO SPECS AND DETAIL THIS SHEET.
- (4) GROUND CONDUCTOR TO MAIN BUILDING GROUND.

# DOWNLEAD AND GROUND ROD CONNECTION DETAIL

NOT TO SCALE



#### NOTES:

- (1) CONDUCTOR TO LIGHTNING PROTECTION SYSTEM.
- ② ROOF FLASHING-FURNISHED AND WEATHERPROOFED BY ROOFING CONTRACTOR
- (3) 1 1/4"PVC SCH.40 CONDUIT IN COLUMN OR WALL-FURNISHED, INSTALLED, WEATHERPROOFED AND MAINTAINED FREE FROM OBSTRUCTIONS BY ELECTRICAL CONTRACTOR.
- ④ GROUND ROD CONNECTION-CADWELD OR MECHANICAL (TYPICAL FOR 3)
- (5) CONDUCTOR CONNECTION-CADWELD OR MECHANICAL
- (6) COPPERWELD GROUND ROD-3/4"x10'-0" MIN. (TYPICAL FOR 3).
- 7 BUILDING STRUCTURE
- 8 PVC EXITS 18" BELOW GRADE
- ROOF MATERIAL-FELT, TAR, STONE, ETC.
- ® ROOF INSULATION MATERIAL
- ① CONCRETE OR METAL ROOF DECK
- ② GROUND CONDUCTOR TO MAIN BUILDING GROUND

CONCEALED DOWNLEAD AND GROUND ROD CONNECTION DETAIL

IOT TO SCALE





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No. Description Date

LIGHTNING PROTECTION DETAILS

Project number:
Date:
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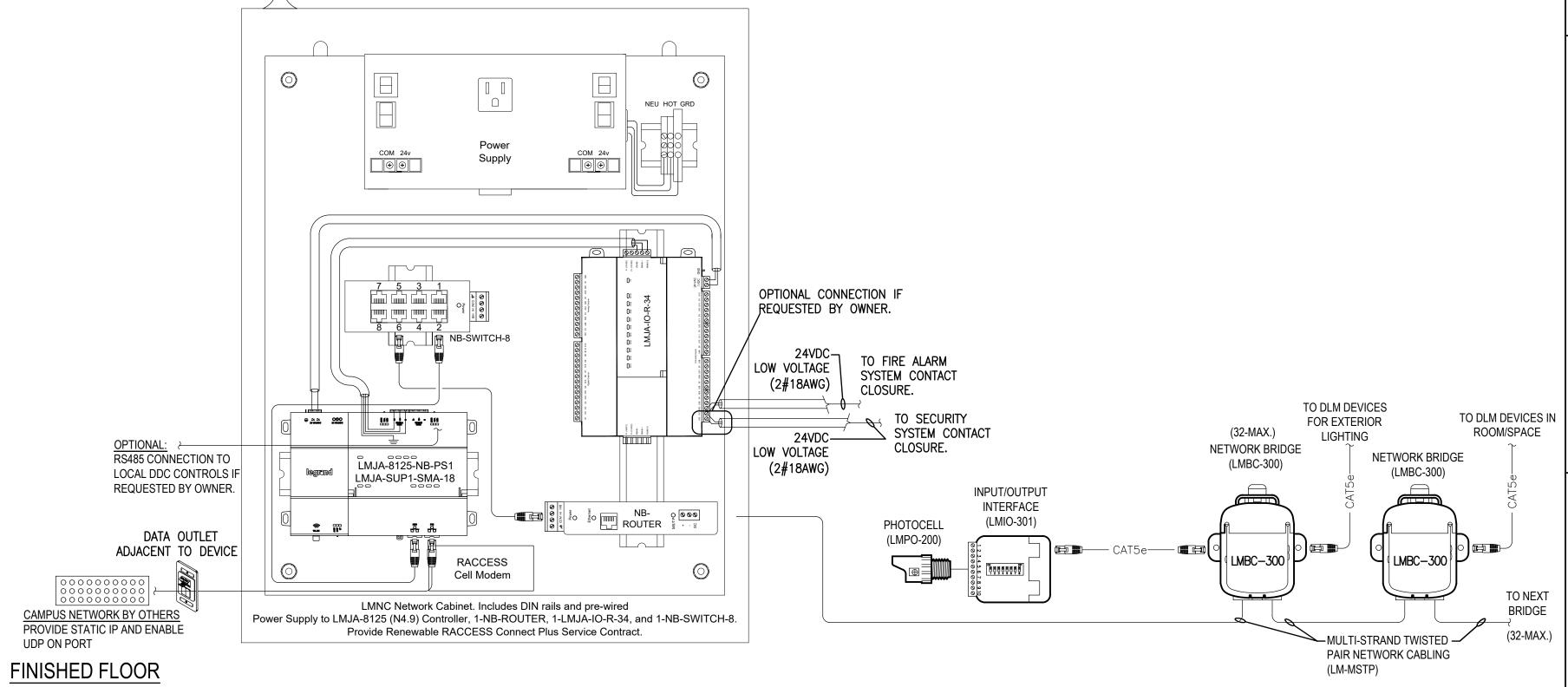
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06-20-2023

		L	IGH	TING	FI	XTUR	E S C	HEDULE	
Project:	2043 - South Walton	Mosquito Admin Bldg							
Note:	Per elec	trical specifications, alternate fixtures shall be	submitted to t	ne engineer for p	orior approva	al a minimum of (	10) ten business da	ays prior to bid date. Any alt	ernate fixtures not submitted for prior approval will not be reviewed.
Luminaire Designation	Manufacturer	Catalog Number	Connected Voltage	Luminaire Load (va)	Lamping Source	Color Rendering Index (CRI)	Kelvin Temperature	Mounting	Comments
DL	H.E. WILLIAMS	4DR-TL-L15-840-DIM-UNV-LW-OF-CS-N-F1	120	13.9	LED	>80	4000	CELING RECESSED	
DLE	H.E. WILLIAMS	4DR-TL-L15-840-EM/10W-DIM-UNV-LW-OF- CS-N-F1	120	13.9	LED	>80	4000	CELING RECESSED	
DL2	H.E. WILLIAMS	4DR-TL-L10-840-DIM-UNV-L-W-OF-CS-IP-N- F1	120	16	LED	>80	4000	SOFFIT RECESSED	
DL3	H.E. WILLIAMS	4DR-TL-L30-840-DIM-UNV-LW-OF-CS-N-F1	120	13.9	LED	>80	4000	CELING RECESSED	
DL3E	H.E. WILLIAMS	4DR-TL-L30-840-EM/10W-DIM-UNV-LW-OF- CS-N-F1	120	13.9	LED	>80	4000	CELING RECESSED	
G1	H.E. WILLIAMS	50G-S22-L43-840-F-AF12125-L33-DRV-UNV	120	33.7	LED	>80	4000	CEILING RECESSED	
G1E	H.E. WILLIAMS	50G-S22-L43-840-F-AF12125-EM/10W-L33- DRV-UNV	120	33.7	LED	>80	4000	CEILING RECESSED	
G2	H.E. WILLIAMS	50G-S22-L26-840-F-AF12125-L21-DRV-UNV	120	21.3	LED	>80	4000	CEILING RECESSED	
G2E	H.E. WILLIAMS	50G-S22-L26-840-F-AF12125-EM/10W-L21- DRV-UNV	120	21.3	LED	>80	4000	CEILING RECESSED	
L1	H.E. WILLIAMS	75R-4-L30-840-DRV-UNV	120	19.7	LED	>80	4000	CELING SURFACE	
L1E	H.E. WILLIAMS	75R-4-L30-840-EM/10WLP-DRV-UNV	120	19.7	LED	>80	4000	CELING SURFACE	
LAB	H.E. WILLIAMS	50G-S22-L43-950-F-AF12125-DRV-UNV	120	33.7	LED	>90	5000	CELING SURFACE	
LABE	H.E. WILLIAMS	50G-S22-L43-950-F-AF12125-EM/10W-DRV- UNV	120	33.7	LED	>90	5000	CELING SURFACE	
P1			120		LED			PENDANT MOUNT	SELECTED BY ARCHITECT
P2			120		LED			PENDANTMOUNT	SELECTED BY ARCHITECT
P3			120		LED			PENDANT MOUNT	SELECTED BY ARCHITECT
PL	H.E. WILLIAMS	VA1-L110-740-T4-F-S-BLK-DIM-UNV VATM-R-TM238-S-BLK	120	110	LED	>70	4000	POLE MOUNT 20'-0" AFF	TENON MOUNT
POLE	VALMONT	R-200050506S4-P2-DBL	N/A	N/A	N/A	N/A	N/A	CONCRETE ANCHOR BASE	TENON TOP
WB	H.E. WILLIAMS	VWMH-L20-740-T3-BLK-SDGL-DIM-UNV	120	27	LED	>70	4000	WALL MOUNT 10'-0"AFF	
Х	H.E. WILLIAMS	EXIT-R-EM-WHT-D	120	4.8	LED	N/A	N/A	CEILING SURFACE	

# LIGHTING CONTROL GENERAL NOTES

- A. THE DIAGRAMS ARE NOT INTENDED TO SHOW EXACT QUANTITIES OF DEVICES. REFER TO PLAN FOR ESTIMATED DEVICE QUANTITIES AND LOCATIONS.
- B. THE LIGHTING CONTROL SYSTEM BASIS OF DESIGN IS WATTSTOPPER DLM PRODUCTS.
- C. THE LOCAL DEVICE INTERCONNECTIONS FOR ALL LIGHTING CONTROL DEVICES SHALL BE OF THE TOPOLOGY FREE TYPE.
- D. COLORS FOR ALL DEVICES AND DEVICE COVERS SHALL BE SELECTED BY THE ARCHITECT.
- E. ALL DATA LINE SWITCHES SHALL INCLUDE CUSTOM ENGRAVED LABEL INDICATING FUNCTION OF SWITCH. COORDINATE EXACT LABEL DESCRIPTIONS WITH OWNER PRIOR TO INSTALLATION.
- F. PROVIDE ADDITIONAL POWER AND CONTROL MODULES AS RECOMMENDED BY THE SYSTEM SUPPLIER.
- G. THE DIAGRAMS REPRESENT A TYPICAL SYSTEM AND ARE NOT INTENDED FOR INSTALLATION, SYSTEM SUPPLIER SHALL PROVIDE INSTALLATION DRAWINGS AND WIRING DIAGRAMS.
- H. E.C. SHALL COORDINATE FIELD PROGRAMMING OF LIGHTING CONTROL SYSTEM WITH SYSTEM PROGRAMMER, SPECIFYING ENGINEER, AND OWNER TO ENSURE PROPER OPERATION AND TIME SCHEDULES.
- ALL EMERGENCY AND EXIT LIGHTING CIRCUITS SHALL BE CONNECTED TO CONTINUOUS POWER SOURCE AHEAD OF RELAY PANEL OR INDIVIDUAL
- INSTALL ALL CEILING SENSORS MINIMUM OF 6FT CLEAR OF DUCT REGISTERS.
- K. THE LIGHTING CONTROL AND EMERGENCY LIGHTING SYSTEMS SHALL BE CAPABLE OF BEING ACCESSED VIA THE LOCAL AREA NETWORK AND REMOTELY VIA AUTHORIZED PERSONNEL ONLY.
- L. PROGRAMMER / COMMISSIONING AGENT SHALL BE CERTIFIED BY THE EQUIPMENT MANUFACTURER ON THE SYSTEM INSTALLED.
- M. THE MANUFACTURER CERTIFIED TECHNICIAN WILL MEET ONSITE WITH THE ELECTRICAL CONTRACTORS TO COORDINATE INSTALLATION DETAILS, REVIEW BEST PRACTICES, AND DISCUSS PROJECT SPECIFIC CHALLENGES; PRIOR TO THE INSTALLATION BEING STARTED, ENABLING THE CONTRACTORS TO WORK WITH THE TECHNICIAN TO PREPARE AND MAKE CHANGES UP FRONT.
- N. THE MANUFACTURER'S LIGHTING SYSTEMS TEAM SHALL WORK ONSITE AFTER FIXTURE AND CONTROLS INSTALLATION IS COMPLETED. THE MANUFACTURER'S AGENT IS TO VERIFY THE PROJECT IS REVIEWED AND CHECKED FOR PROPER WIRING, INSTALLATION AND FUNCTIONALITY OF THE SYSTEM AS A WHOLE. ANY PROBLEMS SHALL BE ADDRESSED AND RESOLVED WITH THE ONSITE CONTRACTORS.
- O. MANUFACTURER'S TECHNICIANS SHALL MAP OUT THE FIXTURE LOCATIONS AND ADDRESSES WITHIN THE LIGHTING CONTROL SOFTWARE. ASTRONOMIC TIMECLOCK EVENTS, SCENES, AND SCHEDULES ARE PROGRAMMED ACCORDING TO A PRE-DEFINED SCRIPT. THESE EVENTS, SCENES, AND SCHEDULES ARE TESTED AND FINALIZED FOR FINAL APPROVAL BY THE PROJECT'S OWNERSHIP.
- MANUFACTURER'S TECHNICIANS SHALL PROVIDE TRAINING FOR SYSTEM USERS AND THE SYSTEM MAINTENANCE TEAM. THE DETAILS OF THE TECHNOLOGY SHALL BE COVERED FROM A MAINTENANCE AND TROUBLESHOOTING POINT OF VIEW. THIS COVERS THE LIGHTING CONTROL SYSTEM AND ITS CORE FUNCTIONALITY, WITH A FOCUS ON HOW TO EDIT EXISTING SCENES AND ASTRONOMIC LIGHTING EVENTS.
- Q. THE MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE IN-DEPTH TRAINING TO THE END USER ON MANAGING THE SPECIFIC CONTROL SYSTEM, GIVING THEM THE TOOLS AND KNOWLEDGE TO OPERATE THEIR SYSTEM.



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OVERALL LIGHTING CONTROL RISER





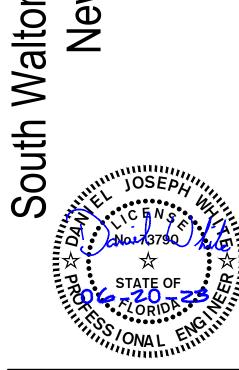
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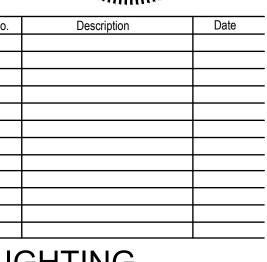
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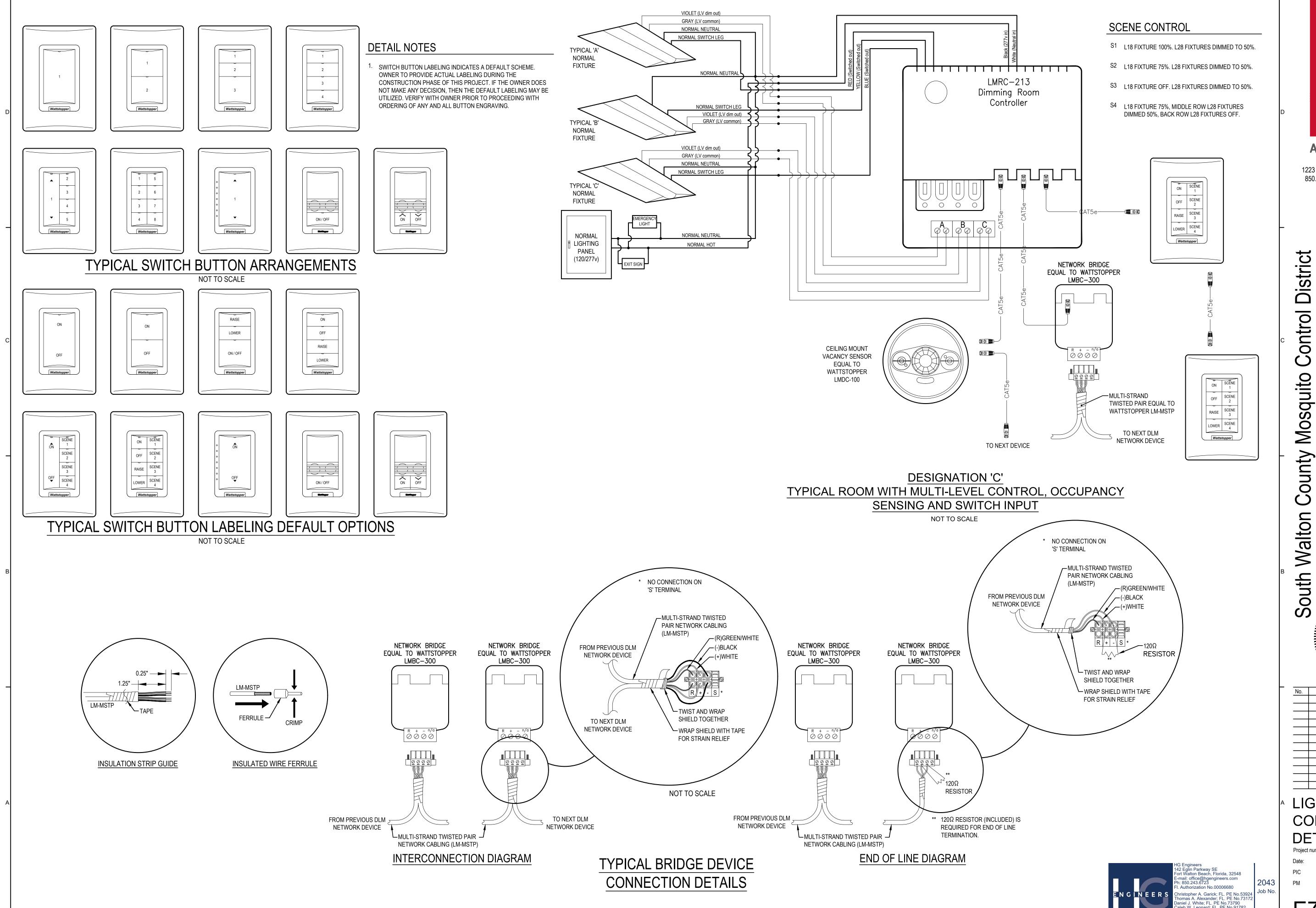
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LIGHTING **CONTROLS AND** FIXTURE SCHEDULE

Project number: 06-20-2023



ARCHITECTS

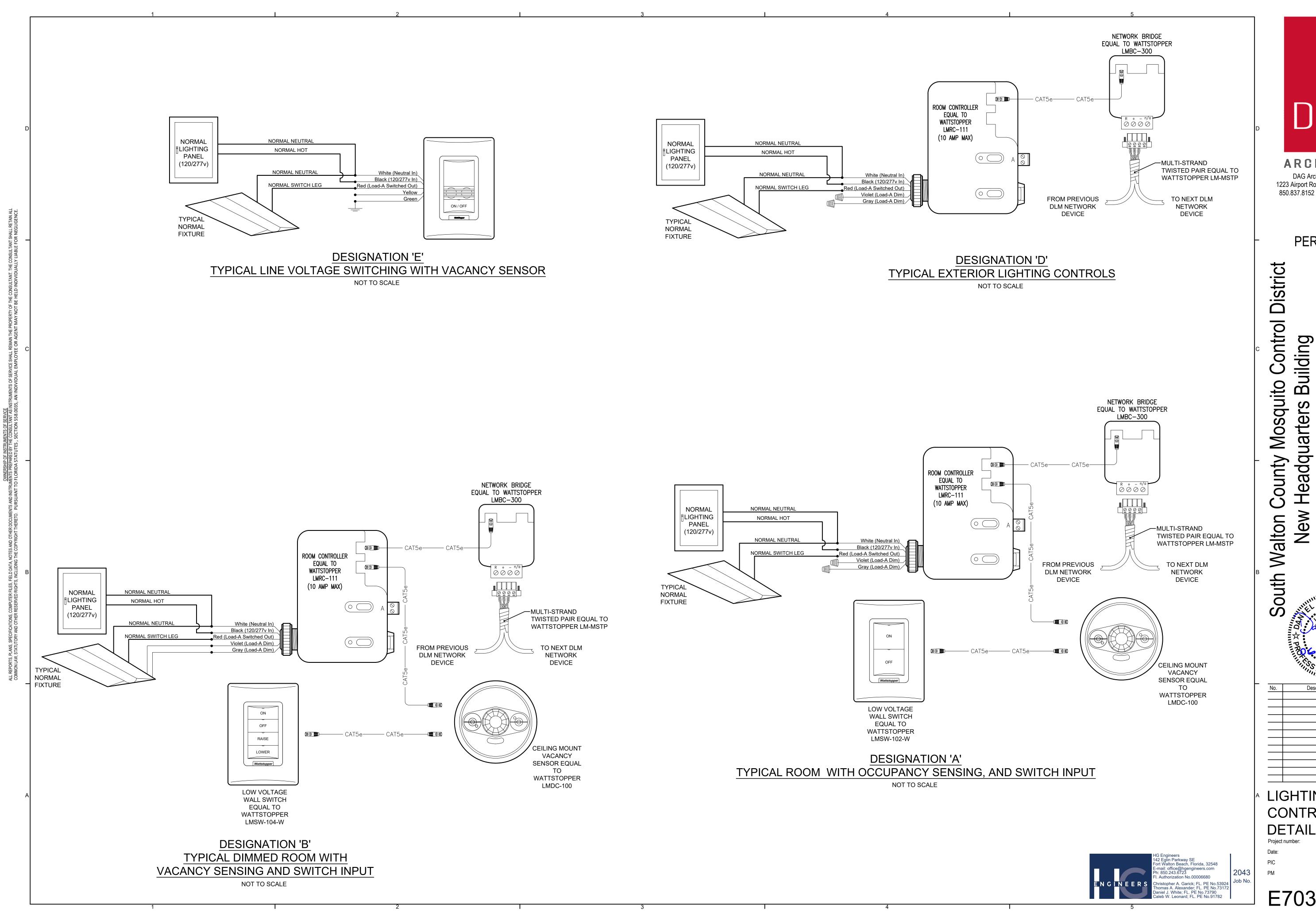
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Headquarters Building

LIGHTING CONTROL **DETAILS** 

18106 06-20-2023

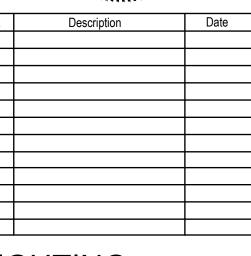




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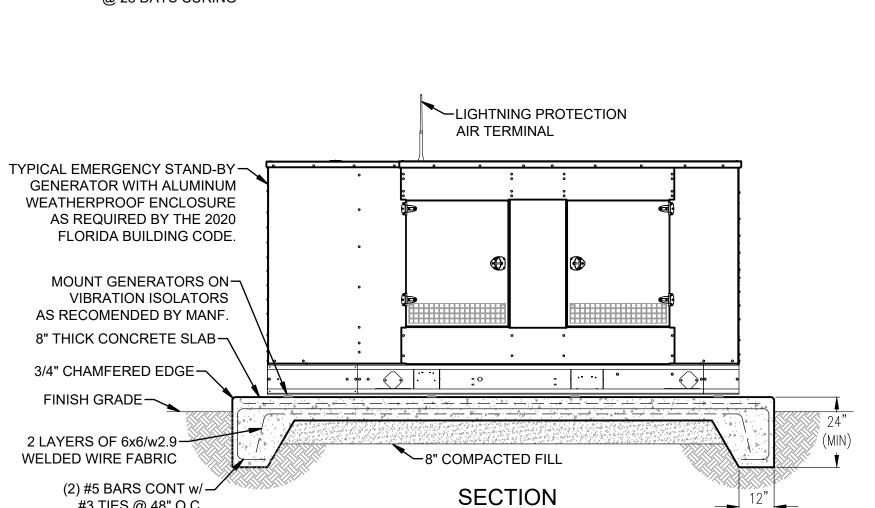
LIGHTING CONTROL **DETAILS** 

06-20-2023

18106

**GROUND FLOOR** 

- DAY COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 LBS. PAD SHALL NOT BE CURED LESS THAN 72
- HOURS. 3. SECURE GENERATOR TO CONCRETE PAD WITH ANCHOR BOLTS PER MANUFACTURER'S SPECIFICATIONS.
- 4. PROVIDE LIGHTING PROTECTION ON ENCLOSURE PER NFPA 780.



GENERATOR PAD MOUNTING DETAIL NOT TO SCALE

FIRE ALARM SYSTEM RISER DIAGRAM NOT TO SCALE

FIRE ALARM CONTROL PANEL

(FACP)

\*\*

QUANTITIES AND LOCATIONS.

B. THE RISER REPRESENTS A TYPICAL SYSTEM AND IS NOT

C. SEE FIRE PROTECTION INSTALLER FOR LOCATIONS AND

QUANTITIES OF FLOW AND TAMPER SWITCHES.

AS RECOMMENDED BY THE SYSTEM SUPPLIER.

FIRE ALARM SYSTEM SHALL HAVE U/L/ APPROVED

INTENDED FOR INSTALLATION, SYSTEM SUPPLIER SHALL

PROVIDE ADDITIONAL MONITOR AND CONTROL MODULES

DIGITAL ALARM DIALER/COMMUNICATOR TO SEND ALARM

SIGNAL TO LOCAL FIRE DEPARTMENT MONITORING SERVICE.

INSTALL

DEDICATED

ANALOG OUTSIDE TELEPHONE LINE

PROVIDE INSTALLATION DRAWINGS AND WIRING DIAGRAMS.

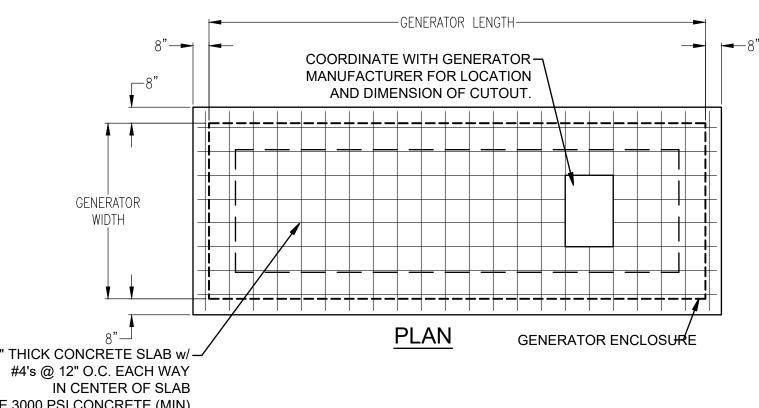


#### NOTES:

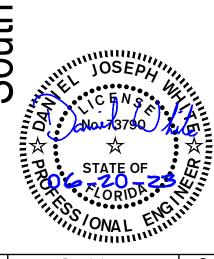
#3 TIES @ 48" O.C.

- (1) INSTALL SURGE PROTECTIVE DEVICE IN BREAKER POSITION NEAREST TO NEUTRAL BAR WITH 3#6, 1#10 GND IN 3/4"C; LEAD LENGTH CANNOT EXCEED UL 1449 4TH EDITION TEST OF 14" - REFER TO SPECS. PROVIDE INTERNAL 60A. FUSING.
- ② INSTALL SURGE PROTECTIVE DEVICE IN BREAKER POSITION NEAREST TO NEUTRAL BAR WITH 3#10, 1#10 GND IN 3/4"C; LEAD LENGTH CANNOT EXCEED UL 1449 4TH EDITION TEST OF 14" - REFER TO SPECS. PROVIDE INTERNAL 30A. FUSING.
- 3 1" CONDUIT FOR GENERATOR CONTROLS WIRING PER MANUFACTURER'S REQUIREMENTS.
- REFER TO GROUNDING DETAILS FOR COMPLETE GROUNDING REQUIREMENTS.
- (5) 1" CONDUIT WITH MANUFACTURER RECOMMENDED CONTROL CABLES TO DDC PANEL. REFER TO MECHANICAL

	FEEDER SCHEDULE												
$\langle \# \rangle$	EQUIPMENT BREAKER CONDUCTOR / CONDUIT SIZ												
NO						CONDUCTORS							
DESIGNATION	SOURCE	TERMINA IIO N	TRIP	POLE	RUNS	CONDUIT	QTY.	SIZE	GND	MATERIAL			
1	UTILITY XFMR	AT S-MP	800	3	3	2-1/2"	4	#300kcmil	-	CU			
2	GENERATOR	AT S-MP	800	3	3	2-1/2"	4	#300kcmil	#1/0	CU			
3	AT S-MP	MP	800	3	3	2-1/2"	4	#300kcmil	#1/0	CU			
4	MP	P	400	3	2	2"	4	#3/0	#3	CU			
5	MP	L	125	3	1	1-1/2"	4	#1	#6	CU			



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0.	Description	Date								

SINGLE LINE **POWER RISER** 

18106 Project number: 06-20-2023 Date:

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ENGIN	PANEL MP	ENCI	RATING LOSURE			SURFAC	EMOUN		
CKT#	SERVING	CKT TRIP		CONNI	ECTED	CKT POLE		SERVING	скт
1	HP-1	50	3	5521	2282	3		HP-2	2
3		-	-	-	-	-	-		4
5	HP-3	40	3	4056	4056	3	20	HP-4	6
7		-	-	-	-	-	-		8
9	MHP-1	30	2	1872	1872	2	40	MHP-2	10
11		-	-	-	-	-	-		12
13	MHP-3	30	2	1456	3744	2	40	MHP-4	14
15		Ħ	-	-	-	-	=		16
17	AHU-1	60	2	8614	3774	2	25	AHU-2	18
19		-	-	-	-	-	-		20
21	AHU-3	50	2	7174	7174	2	50	AHU-4	22
23		=	-	-	_	-	=		24
25	BAT TERY CHARGER	20	1	1000	-	1	-	SPACE ONLY	26
27	BLOCKHEATER	20	2	2500	-	1	-	SPACE ONLY	28
29		H	-	-	-	1	Η	SPACE ONLY	30
31	PANEL P	400	3	110347	17630	3	125	Panel L	32
33		-	-	-	-	-	=		34
35		=	-	-	-	-	=		36
37	OACU-1	15	3	5404	0	3	30	SURGE PROTECTIVE DEVICE	38
39		-	-	-	_	-	=		40
41		-	-	-	-	-	=		42

# **POWER PANEL**

NGINE	PANEL L		OSURE	BOLT ON		NT			
<del></del>					1130.730 July 1130.0400.0700.0700				
KT#	SERVING	CKT TRIP	POLE		CONNECTED LOAD (VA)		BKR TRIP	SERVING	скт
1	LTG - LAB LIGHTING	20	1	300	720	1	20	SUBZERO FREEZER	
3	NCUBATOR	20	1	1236	600	1	15	FREEZER	4
5	NCUBATOR	20	1	1236	600	1	15	REFRIG.	- 1
7	NCUBATOR	20	1	1236	900	1	20	REC - CONVENIENCE	1
9	NCUBATOR	20	1	1236	360	1	20	REC - DESK	1
11 F	REC - ARBO STATION	20	1	180	180	1	20	REC - CENTRIFUGE	1
13 F	REC - DESK	20	1	360	360	1	20	REC - DESK	1
15 F	REC - DESK	20	1	360	360	1	20	REC - DESK	1
17 F	REC - PCR	20	1	180	360	1	20	REC - DESK	1
19	REC - DESK	20	1	180	180	1	20	REC - DESK	1
<b>21</b>	REC - DESK	20	1	360	180	1	20	REC - DESK	
23	REC - GARBAGE DISPOSAL	20	1	1000	1000	1	20	DISHWASHER	3
25	BIOSAFTEY CABINET	20	1	744	1000	1	20	CHEMHOOD	
27 F	REC - ROOF	20	1	180	-	1	20	SPARE	
29	SPARE	20	1	-	-	1	20	SPARE	;
1 5	SPARE	20	1	-	-	1	20	SPARE	
33	SPARE	20	1	-	-	1	20	SPARE	3
35	SPARE	20	1	-	-	1	20	SPARE	19
37	SPARE	20	1	-	-	1	20	SPARE	
39	SPACE ONLY	-	1	-	-	1		SPACE ONLY	
11	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	
13	SPACE ONLY	-	1	-	-	1	-1	SPACE ONLY	
15	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	
17	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	1
19	AR CURTAINS 'FF-1,2'	20	3	1296	-	1		SPACE ONLY	13
51 -		-	-	-	-	1		SPACE ONLY	
3 -	<del></del>	-	-	-	-	1	-	SPACE ONLY	1
55 E	EXHAUST FAN	15	3	746	0	3	30	SURGE PROTECTIVE DEVICE	4
-		-	-	-	-	:-	-		ı!
57 -		-	-	-	-	2-	-		10

	MECHANICAL EQUIPMENT SCHEDULE  (VERIFY ALL EQUIPMENT CIRCUIT REQUIREMENTS WITH MANUFACTURERS SHOP DRAWINGS PRIOR TO ROUGH-IN)																				
			l					RICAL I					CTION				ICTOR / CON	,			T
					МС	TOR(S)	LA			\$				IFIED			CONDUCTO				
EQUIPMENT DESIGNAITON	DESCRIPTION	CFM	VOLT	Φ	QTY	LARGEST	SUM OF REMAINING	ELECTRIC HEAT KW	OTHER VA	TOTAL CONNECTED V	МСА	MOCP	TRIP	POLE	SETS	QTY.	SIZE	GND	CONDUIT	DISC.	REMARKS
BF-1,2	BOOSTER FAN	188	120	1	1	0.54				65	0.7	20	20	1	1	2	#12	#12	3/4"	GF5-20R	TIE TO RECEPTACLE CIRCUIT
CP-1	CIRCULATION PUMP		120	1	1	0.54				65	0.7	20	20	1	1	2	#12	#12	3/4"	GF5-20R	TIE TO RECEPTACLE CIRCUIT
EF-1	EXHAUST FAN	3472	208	3	1	2.07				746	2.6	15	15	3	1	3	#12	#12	3/4"	30/3/3R	
EF-2	EXHAUST FAN	630	208	1	1	0.28				58	0.4	15	15	2	1	3	#12	#12	3/4"	SWTCH	
EWC-1	ELETRIC WATER COOLER		120	1					1000	1000	8.3	20	20	1	1	2	#12	#12	3/4"	GF5-20R	PROVIDE GFCI OUTLET
GWH-1	GAS WATER HEATER		120	1							0.5	20	20	1	1	3	#12	#12	3/4"	MOTORSWITCH	
FF-1	AIR CURTAIN	1379	208	3	1	1.8				648	2.3	15	15	3	1	3	#12	#12	3/4"	MOTORSWITCH	
FF-2	AIR CURTAIN	1442	208	3	1	1.8				648	2.3	15	15	3	1	3	#12	#12	3/4"	MOTORSWITCH	
AHU-1	AIR HANDLING UNIT	2000	208	1	1	6.8		7.2		8614	52	60	60	2	1	3	#6	#10	3/4"	60/2/1	
HP-1	HEAT PUMP	2000	208	1	2	23.7	2.8			5512	32	50	50	2	1	3	#8	#10	3/4"	BREAKER	
AHU-2	AIR HANDLING UNIT	870	208	1	1	4.3		2.88		3774	23	25	25	2	1	3	#10	#10	3/4"	30/2/1	
HP-2	HEAT PUMP	870	208	1	2	10.2	0.77			2282	15	20	20	2	1	3	#12	#12	3/4"	BREAKER	
AHU-3	AIR HANDLING UNIT	1200	208	1	1	6.8		5.76		7174	43	45	45	2	1	3	#8	#10	3/4"	60/2/1	
HP-3	HEAT PUMP	1200	208	1	2	16.7	2.8			4056	24	40	40	2	1	3	#8	#10	3/4"	BREAKER	
AHU-4	AIR HANDLING UNIT	1200	208	1	1	6.8		5.76		7174	43	45	45	2	1	3	#8	#10	3/4"	60/2/1	
HP-4	HEAT PUMP	1200	208	1	2	16.7	2.8			4056	24	40	40	2	1	3	#8	#10	3/4"	BREAKER	
MHP-1,2	MINISPLIT OUTDOOR UNIT	1940	208	1	1	9				1872	17	27	25	2	1	3	#10	#10	3/4"	BREAKER	
WM-1.1,2.1	MINISPLIT INDOOR UNIT									0										MOTORSWITCH	POWERED VIA OUTDOOR UNIT
MHP-3	MINISPLIT OUTDOOR UNIT	1590	208	1	1	7				1456	11	28	15	2	1	3	#12	#12	3/4"	BREAKER	
WM-3.1	MINISPLIT INDOOR UNIT									0										MOTORSWITCH	POWERED VIA OUTDOOR UNIT
MHP-4	MINISPLIT OUTDOOR UNIT	3880	208	1	1	18				3744	24	40	35	2	1	3	#8	#10	3/4"	BREAKER	
WM-4.1	MINISPLIT INDOOR UNIT									0										MOTORSWITCH	POWERED VIA OUTDOOR UNIT
OACU-1	OUTSIDE AIR UNIT COMPRESSOR	N/A	208	3	2	7.5	7.5			5404	7.4	15	15	3	1	3	#12	#12	3/4"	BREAKER	
OAU-1	OUTSIDE AIR UNIT AIR HANDLER	2000	208	3				36	17200	53200	141	150	150	3	1	3	#1/0	#6	1-1/2"	BREAKER	
DDM	DISTILLATION DEIONIZATION MACHINE		208	1					8320	8320	40	50	50	2	1	3	#8	#10	3/4"	60/2/1	

	PANELP	- FNO	RATING		M.L		,	NC MINIMUM	<u>.</u>
	IAILLI		LOSURE	-	MA1		CE MOUN	NT	
		C	PTIONS	BOLT ON	I BREAKEH	RS			
<b>/</b> т ц	CEDANO	CKT	BKR	CONN	ECTED	CKT	BKR	CEDVANC	скт :
<b>(T</b> #	SERMNG	TRIP	POLE	LOA	O (VA)	POLE	TRIP	SERVING	
1	REC - DIRECTORS OFFICE	20	1	1440	540	1	20	REC - WORK SUPPLY ROOM	2
3	REC - OPS MANAGER	20	1	900	720	1	20	REC - WORK SUPPLY ROOM	4
	REC - FUTURE OFFICE	20	1	1080	1000	1	20	REC - WORK SUPPLY ROOM PRINTER	6
	REC - OFFICE COORD.	20	1	900	1000	1	20	REC - WORK SUPPLY ROOM PRINTER	8
	REC - ADMIN ASSISTANT	20	1	1080	900	1	20	REC - CONFERENCE ROOM	10
	REC - ENTRY LOBBY	20	1	1080	720	1	20	REC - CONFERENCE ROOM	12
	TRAP ROOM	20	1	1260	720	1	20	REC - MECH/FILE STORAGE/CORRIDOR	14
	REC COORDIDOOR	20	1	540	900	1	20	REC - OPERATOR OFFICE	16
	REC - BOARDROOM	20	1	900	1080	1	20	REC - OPERATOR OFFICE	18
	REC - BOARDROOM/CHAIR STO/COORIDOR	20	1	1440	1000	1	20	REC - MOSQUITO TECH	20
	REC - WOMEN BATHROOM	20	1	720	540	1	20	REC - MEN BAT HROOM	22
	REC - EXTERIOR	20	1	900	1000	1	20	REC - MOSQUITO TECH	24
	ENT. OFFICE	20	1	1080	900	1	20	REC - MOSQUITO TECH	26
	REC - COMM ROOM	20	1	1000	1080	1		REC - MOSQUITO TECH	28
	REC - COMM ROOM	20	1	1000	1080	1	20	REC - FIELD SUPERMSOR	30
	REC - COMM ROOM	20	1	1000	1080	1	20	REC - OPS PLANNING	32
	REC - WATER FOUNTAIN	20	1	1000	1080	1	20	REC - KITCHEN	34
35	FIRE ALARM CONTROL PANEL (FACP)	20	*1	1000	1000	1	20	REC - MAKER	36
	REC - SMALL APPLIANCE	20	1		1000	1	20	SMALL APPLIANCE	38
			1	1000		1	20	COMMISSION CONTROL OF THE SIME OF TRANSPORT OF	1,571.11
	REC - SMALL APPLIANCE	20	1	1000	1000			REC - RANGE/HOOD	40
	REC - REFRIG	20	1	500	1000	1		REC - DISPOSAL	42
	REC - DISHWASHER	20	1	1000	360	1		REC - LAUNDRY	44
12.29	REC - WASHER	20	1	1000	1000	1	20	REC - WASHER	46
47	LTG - OFFICES, CORRIDOR, WORK/SUPPLY	20	1	1424	982	1	20	LTG - LOBBY, BOARDROOM, BREAKROOM	48
	LTG - MEP, CONFERENCE, OFFICES	20	1	600	1229	1	20	LTG - CORR., IT, OFFICES	50
	REC - MEZZANINE	20	1	360	440	1	20	LTG - PARKING LOT	52
	REC - BOARDROOM	20	1	540	_	1	20	SPARE	54
	EXTERIOR FANS	20	1	1000	-	1	20	SPARE	56
	SPARE	20	1	-	-	1	20	SPARE	58
	SPARE	20	1	-	-	1	20	SPARE	60
	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	62
	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	64
	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	66
	SPACE ONLY	-	1	-	-	1	-	SPACE ONLY	68
	SPACE ONLY	-	1	-	28	2	15	EXHAUST FAN	70
- "	SPACE ONLY	-	1	-	-	-	-		72
73	DISTILLATION DEIONIZATION MACHINE	50	2	8320	53200	3	150	OHU-1	74
75		-1	-	-	-	-	-		76
21 22	REC - DRYER	30	2	4992	-	-	-		78
79		-	-	-	0	3	30	SURGE PROTECTIVE DEVICE	80
	REC - DRYER	30	2	4992	-	-	Б		82
83		-	-	_	-	-	-		84
	TOTAL CONNECTED LOA	/D =		121627 VA	1	360	=	337.9 A	
	NEC 220.	44 =		110347 VA	1	360	( <b>=</b> )	306.5 A	

**SYSTEM** 208/120V 3Φ 4W

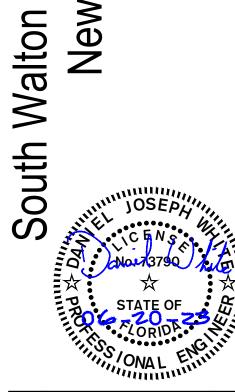




ARCHITECTS DAG Architects, AAC000745 1223 Airport Road Destin, Florida 32541 850.837.8152 www.dagarchitects.com

PERMIT SET

n County Mosquito Control District w Headquarters Building



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No.	Description	Date

PANEL SCHEDULES

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