

ELECTRICAL NOTES

THESE NOTES APPLY TO ENTIRE PROJECT:

- CODES. ALL ELECTRICAL WORK SHALL COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL CODES, WHICHEVER IS MORE STRINGENT.
- ENERGY CODE. LIGHT FIXTURES ARE TO COMPLY WITH THE FLORIDA ENERGY CODE. FULL COMPLIANCE WITH THE ENERGY CODE IS REQUIRED, WITH PROVISIONS FOR AUTOMATIC SHUT OFF LIGHTING.
- CONDUCTORS. ALL CONDUCTORS ARE TO BE COPPER THWN UNLESS OTHERWISE SHOWN OR REQUIRED BY CODES. ALL POWER CONDUITS ARE TO CONTAIN A GROUND WIRE.
- RACEWAYS. RIGID GALVANIZED CONDUIT AND ELECTRICAL METAL TUBING IS TO BE USED IN INTERIOR SPACES.
- HVAC. THE ELECTRICAL CONTRACTOR IS TO COORDINATE WITH THE HEATING, VENTILATING AND AIR CONDITIONING (HVAC) TRADE TO MAKE CERTAIN ALL POWER CIRCUITS, CONTROL CIRCUITS AND CONDUITS ARE INCLUDED IN THE BIDS. ALL HVAC EQUIPMENT IS TO BE INSTALLED BY THE HVAC CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL MEET WITH THE HVAC CONTRACTOR PRIOR TO BIDDING TO DETERMINE ALL FEATURES, FUNCTIONS AND LOCATIONS OF SERVICE. FURTHERMORE, THE ELECTRICAL CONTRACTOR IS TO MAINTAIN CONTINUOUS CONTACT WITH THE POWER COMPANY DURING THE PROJECT, AND IS TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY CHANGE PROPOSED. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE SERVICE THOROUGHLY AND DOCUMENT THE COORDINATION.
- TELEPHONE. THE ELECTRICAL CONTRACTOR IS TO ARRANGE FOR TELEPHONE SERVICE, PRIOR TO BIDDING, THE ELECTRICAL CONTRACTOR IS TO MEET WITH THE TELEPHONE COMPANY AND COORDINATE THE LOCATION OF THE SERVICE POINT ON THE PROPERTY LINE. THE INCOMING SERVICE CABLE CATEGORIES, STAIRWELLS, EXIT STAIRS, EXIT PASSAGEWAYS, POLICE HOLDING AREAS, ELEVATOR LOBBIES, FIRE PUMP ROOMS, SPRINKLER SECTIONAL VALVE LOCATIONS, AND OTHER AREAS CONSIDERED BY THE AHJ. THE CONTRACTOR SHALL PROVIDE THE AHJ TO CONFIRM CRITICAL AREAS IN THE NEW CONSTRUCTION.
- SCALES. DO NOT SCALE OR TAKE DIMENSIONS FROM ELECTRICAL DRAWINGS.
- MAIN DISCONNECTS. MAIN DISCONNECTS MAY BE HEAVY DUTY FUSED SWITCHES OR CIRCUIT BREAKERS PROPERLY COORDINATED. FUSES ARE TO BE BUSSMAN TYPE LPM-R, LPS-R, OR KXP-C. CIRCUIT BREAKERS ARE TO BE RATED FOR THE AC SHORT CIRCUITS INDICATED.
- UNDERGROUND WORK. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT ROUTES OF ALL UNDERGROUND WORK. ROUTES SHOWN ARE APPROXIMATE. POWER, TELEPHONE, CABLE COMPANIES, AND ALL OTHER UTILITY COMPANIES SHALL BE CONSULTED, AND LINES SHALL BE STAKED. DIGGING BY HAND IS REQUIRED AROUND EXISTING UTILITIES.
- TVSS. THE POWER SERVICE IS TO BE PROTECTED FROM LIGHTNING WITH SURGE SUPPRESSORS THROUGH A 300kV BREAKER (42,000V).
- LED LIGHT FIXTURES. LED LIGHTS ARE TO BE CAPABLE OF DIMMING 0-100 WITH DRIVERS AND DIMMERS PROVIDED BY SAME MANUFACTURER. THE CONTRACTOR IS TO INSTALL ALL MULTIPLE CONDUCTORS REQUIRED BY DRIVERS, AND IS TO FIELD MEASURE ALL LOCATIONS AND DIMENSIONS. ALL LENSES, ADJUSTABLE MOUNTING HARDWARE, POWER SUPPLIES, METALLIC HOUSINGS TO BE INCLUDED.
- LIGHT FIXTURE VOLTAGES. OBTAIN LIGHT FIXTURE VOLTAGES FROM CIRCUITS ON PLANS. DO NOT OBTAIN FROM MODEL NUMBERS ON LIGHT FIXTURE SCHEDULE.
- RECEPTACLE HEIGHTS. COORDINATE WITH BUILDING DEPARTMENT THE MINIMUM HEIGHT FOR RECEPTACLES. AMERICAN DISABILITY ACT REQUIRES 36" ABOVE FINISHED FLOOR.
- EQUIPMENT DISCONNECTS. DISCONNECTS SHOWN CAN BE DELETED IF DISCONNECTING MEANS BUILT IN AND PERMITTED BY THE BUILDING DEPARTMENT.
- COMPLETION REQUIREMENTS. WITHIN 30 DAYS AFTER SYSTEM ACCEPTANCE, RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED BY THE CONTRACTOR TO BUILDING DEPARTMENT WITH A SINGLE LINE DIAGRAM OF THE DISTRIBUTION SYSTEM PLUS FLOOR PLANS SHOWING LOCATIONS AND AREAS SERVED.
- OPERATING AND MAINTENANCE MANUALS. OPERATING AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT SHALL BE TURNED OVER BY THE CONTRACTOR TO OWNER WITH SUBMITTAL DATA AND REQUIRED MAINTENANCE PROCEDURES. THE NAME AND ADDRESS OF A QUALIFIED SERVICE AGENCY SHALL BE PROVIDED.
- SHARED NEUTRALS. WHENEVER THE CONTRACTOR USES SHARED NEUTRALS, BREAKERS ARE TO HAVE A COMMON HANDLE (I.E. 2 POLE OR 3 POLE).
- GFCI. OUTLETS INSTALLED OUTDOORS, WITHIN 6' OF A SINK, AND OTHERWISE REQUIRED BY CODE ARE TO BE ON GFCI TYPE CIRCUIT BREAKERS.
- WHERE DISCREPANCY EXISTS BETWEEN DRAWINGS, SPECIFICATION, CODES, STANDARDS, QUANTITIES AND THE LIKE THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED.

ELECTRICAL SPECIFICATIONS

GENERAL PROVISIONS. PROVIDE ALL LABOR, MATERIALS, TOOLS, SUPPLIES, EQUIPMENT AND TEMPORARY POWER FACILITIES TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND SPECIFICATIONS. ALL SYSTEMS ARE TO BE COMPLETELY OPERATIONAL. ALL ELECTRICAL WORK SHALL COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL CODES, WHICHEVER IS MOST STRINGENT.

OPERATING CLEARANCES. INSTALL ALL WORK NEATLY SO AS TO BE PROPERLY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR.

JOB SITE VISIT. VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID. VERIFY ALL DIMENSIONS AND DETERMINE THE CHARACTERISTICS OF EXISTING FACILITIES WHICH WILL AFFECT THE PERFORMANCE OF THE WORK, INCLUDING THOSE NOT SHOWN ON DRAWINGS OR SPECIFICATIONS.

SUBSTITUTIONS. ALL EQUIPMENT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO BIDDING.

TEMPORARY LIGHT AND POWER. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID THE COST OF FURNISHING, INSTALLING, MAINTAINING AND REMOVING ALL MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE LIGHT AND POWER TO PERFORM ALL WORK OF ALL TRADES DURING CONSTRUCTION, AND UNTIL WORK IS COMPLETE. COST OF ALL POWER CONSUMED DURING CONSTRUCTION SHALL BE PAID BY THE PARTY DESIGNATED BY THE PRIME CONTRACTOR.

MATERIAL SUBMITTALS. SUBMIT ELECTRONIC PDF SHOP DRAWINGS AND EQUIPMENT DESCRIPTIONS FOR ALL ELECTRICAL WORK PRIOR TO ORDERING. ELECTRICAL MATERIALS FOUND ON THE PROJECT WHICH DO NOT HAVE THE ENGINEER'S APPROVAL MUST BE REMOVED AND REPLACED AT THE ELECTRICAL CONTRACTOR'S EXPENSE.

TRENCHING, BORING AND BACKFILLING. EXCAVATION OR BORING, BACKFILLING AND REPAIRING OF PAVING AND GRASSING IS TO BE IN THE BID OF THE ELECTRICAL CONTRACTOR. THE ACTUAL WORK NEED NOT BE PERFORMED BY THE ELECTRICAL TRADES. HOWEVER, THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION, BORING, DEWATERING, BACKFILLING, TAMPING AND REPAIR OF PAVEMENTS AND GRASSING REQUIRED IN SUPPORT OF ELECTRICAL WORK. LOCATE AND PROTECT EXISTING UTILITIES AND OTHER UNDERGROUND WORK IN A MANNER WHICH WILL ENSURE THAT NO DAMAGE OR SERVICE INTERRUPTION WILL RESULT FROM EXCAVATING OR BACKFILLING. THE ELECTRICAL CONTRACTOR IS COMPLETELY RESPONSIBLE FOR DAMAGE TO UTILITIES OR PROPERTY. PROTECT PROPERTY FROM DAMAGE WHICH MIGHT RESULT FROM EXCAVATING, BORING OR BACKFILLING. PROTECT PERSONS FROM INJURY AT EXCAVATIONS BY BARRICADES WITH WARNINGS AND ILLUMINATION. IN THE EVENT, IT IS SUSPECTED THAT ACTIVE ELECTRICAL LINES ARE BURIED IN THE AREA OF WORK, POWER IS TO BE DISCONNECTED. AN UNDERGROUND LOCATOR SERVICE SHALL BE EMPLOYED.

TESTS. CONDUCT OPERATING TESTS FOR APPROVAL. THE SYSTEMS SHALL BE DEMONSTRATED TO OPERATE IN ACCORDANCE WITH THE REQUIREMENTS OF THESE SPECIFICATIONS AND MANUFACTURERS INSTRUCTIONS. TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER OR AN AUTHORIZED REPRESENTATIVE. FURNISH ALL ITEMS REQUIRED TO PERFORM TESTS.

DIVISION OF WORK. ALL POWER WIRING IS TO BE BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF DISCONNECTS, STARTERS, THERMOSTATS, FIRESTATS, CONTROL TRANSFORMERS, SWITCHES, ETC. WITH THE OTHER CONTRACTORS TO MAKE CERTAIN NO ITEMS ARE LEFT OUT OF THE BIDS. THE PRIME CONTRACTOR SHALL MAKE ANY SPECIAL DECISIONS REGARDING THE DIVISION OF WORK BETWEEN CONTRACTORS. IN NO EVENT SHALL SUCH WORK REQUIRE ADDITIONAL EXPENSE TO THE OWNER.

LOCATIONS. THE ENGINEER MAY MOVE ANY ELECTRICAL DEVICES BY AS MUCH AS TEN (10) FEET PRIOR TO ROUGH-IN AT NO ADDITIONAL COST.

CIRCUITS. ALL OUTLETS, LIGHT FIXTURES AND OTHER ITEMS OR EQUIPMENT SHOWN ON DRAWINGS ARE TO BE CIRCUITED.

BIDDING FROM A FULL SET OF DRAWINGS. THE ELECTRICAL CONTRACTOR IS TO OBTAIN A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS PRIOR TO BIDDING, AND IS TO BECOME THOROUGHLY FAMILIAR WITH THE ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL AND LANDSCAPING FEATURES OF THE PROJECT.

PRIOR TO BIDDING, THE ELECTRICAL CONTRACTOR IS TO HAVE A COMPLETE UNDERSTANDING OF CEILING CONFIGURATIONS, WIRING SPACES, FIRE RATED SURFACES, FOUNDATIONS, AIR CONDITIONING UNDERWORK, SPRINKLER PIPING, PLUMBING AND ALL OTHER FEATURES WHICH BEAR ON THE ELECTRICAL WORK. UNDER NO CONDITIONS IS THIS PROJECT TO BE BIDDING WITH A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS.

FIRE RATED SURFACES. FIRE WALL, CEILING AND FLOOR PENETRATIONS ARE TO BE MADE WITH METALLIC RACEWAYS IN A U.L. APPROVED MANNER. DO NOT KNOCK HOLES INTO VOID SPACES OR OTHERWISE DEGRADE FIRE WALLS. ALL PASSAGES INTO OR THROUGH FIRE WALLS ARE TO BE PERFORMED IN A MANNER ACCEPTABLE TO THE BUILDING DEPARTMENT. (NO PENETRATIONS ARE PERMITTED THROUGH FOUR (4) HOUR WALLS). ONE (1) HOUR FIRE WALLS ARE TO BE PENETRATED IN EACH STUD CAVITY FROM ONLY ONE (1) SIDE IN A U.L. APPROVED MANNER.

BASIC MATERIALS AND METHODS

U.L. APPROVALS. ALL ELECTRICAL MATERIALS ARE TO BE APPROVED BY THE UNDERWRITERS LABORATORIES.

GALVANIC ACTION (CORROSION). GALVANIC ACTION (CORROSION) IS TO BE AVOIDED BY JOINING METALS WHICH ARE COMPATIBLE. FOR EXAMPLE, ALUMINUM CONDUITS ARE NOT TO MAKE CONTACT WITH BARE STEEL, GALVANIZED STEEL, OR BRASS. STAINLESS STEEL FITTINGS AND HARDWARE ARE REQUIRED OUTSIDE.

GALVANIZED RIGID CONDUITS. RIGID STEEL CONDUIT (RSC) AND FITTINGS ARE TO BE SCHEDULE 40 MILD STEEL PIPE.

ELECTRICAL METAL TUBING. TUBING (EMT) SHALL BE STEEL TUBING, ZINC-COATED INSIDE AND OUTSIDE. FITTINGS SHALL BE ZINC-COATED. BENDS WHICH TURN UP OUT OF CONCRETE SHALL BE TREATED WITH ASPHALT EMULSION TO RESIST CORROSION.

PVC CONDUITS. NON-METALLIC CONDUITS SHALL BE POLYVINYL CHLORIDE (PVC), U.L. APPROVED FOR RSC, SCHEDULE 40 RIGID, EXCEPT SERVICES TO BE SCHEDULE 80. STRAIGHT RUNS ARE TO HAVE EXPANSION COUPLINGS EVERY 40 FEET.

NON-METALLIC TUBING. ENT MAY NOT BE USED.

RACEWAY LOCATIONS. LOCATION REQUIREMENTS SET FORTH BY THE BUILDING DEPARTMENT SHALL PREVAIL IF MORE STRINGENT. ALL CONDUITS SHALL BE OF RSC EXCEPT WHERE OTHERWISE SHOWN ON DRAWINGS, AND AS FOLLOWS: EMT MAY BE USED ONLY INDOORS, IN DRY LOCATIONS, OUT OF SOIL, WHERE NOT PHYSICALLY SUBJECT TO DAMAGE. FLEXIBLE CONDUIT SHALL BE USED ONLY FOR MAKING EQUIPMENT CONNECTIONS. PVC CONDUITS ARE TO BE USED ONLY UNDERGROUND OR IN CONCRETE FLOORS. METALLIC RACEWAYS ARE REQUIRED IN CEILING SPACES WHICH SERVED AS RETURN AIR PLENUMS. CONDUITS SHALL NOT BE RUN ABOVE ROOFS.

ELECTRICAL SPECIFICATIONS

RACEWAY INSTALLATION. WHERE CONDUITS CROSS EXPANSION JOINTS, INSTALL OFFSET EXPANSION JOINTS OR SLIDING EXPANSION JOINTS WITH BONDING STRAPS AND CLAMPS. EXPOSED RUNS OF CONDUIT OR TUBING SHALL BE INSTALLED WITH RUNS PARALLEL OR PERPENDICULAR TO WALLS. STRUCTURAL MEMBERS OR INTERSECTIONS OF VERTICAL PLANES AND CEILING ARE TO BE USED FOR CONDUITS IN STRUCTURAL SLABS AND ARE TO BE PLACED BETWEEN THE UPPER AND LOWER LAYERS OF REINFORCING STEEL. CONDUIT RUNS SHALL ALWAYS BE CONCEALED EXCEPT WHERE INDICATED ON PLANS. A PULL BOX SHALL BE INSTALLED IN ALL EMPTY CONDUITS. CONDUITS SHALL BE SUPPORTED BY APPROVED PIPE STRAPS, SECURED BY MEANS OF TOGGLE BOLTS ON METAL SURFACES, AND WOOD SCREWS ON WOOD CONSTRUCTION. THE USE OF PERFORATED STRAP OR WIRES WILL NOT BE PERMITTED. UNDERGROUND CONDUITS NOT UNDER CONCRETE SLABS ARE TO BE BURIED AT LEAST TWO (2) FEET BELOW FINISHED GRADE FOR CIRCUITS RATED 600 VOLTS OR LESS.

CABINETS. CABINETS FOR OUTDOOR SWITCHES, PANELBOARDS, BREAKERS, WIREWAYS, RECEPTACLES, FIRE ALARM EQUIPMENT, ETC. SHALL BE RATED WEATHERPROOF. STAINLESS STEEL IS REQUIRED FOR ALL EXTERIOR MOUNTED ELECTRICAL EQUIPMENT ENCLOSURES UNLESS OTHERWISE NOTED OR SPECIFIED.

MAIN DISCONNECTS. UNLESS SPECIFICALLY SHOWN OTHERWISE, ALL MAIN DISCONNECTS ARE TO BE HEAVY DUTY FUSED SWITCHES. GENERAL PURPOSE CIRCUIT BREAKERS SHALL BE RATED AND REPLACED BY THE ELECTRICAL CONTRACTOR'S EXPENSE. FUSES SHALL BE REJECTION TYPE, U.L. CLASS RK1, UNLESS SHOWN OTHERWISE.

SHORT CIRCUIT DESIGN. THE DESIGN CALLS FOR A NUMBER OF SPECIAL CONDITIONS IN ORDER TO HANDLE THE SHORT CIRCUITS AVAILABLE THROUGHOUT THE ELECTRICAL SYSTEM. UNDER NO CONDITIONS MAY THE ELECTRICAL CONTRACTOR DEVIATE FROM THE DESIGN IN TYPES OF SWITCHES, FUSES, CONDUCTORS, BREAKERS OR AIR RATINGS OF INTERRUPTING DEVICES.

WIRING DEVICES GENERAL. WIRING DEVICES SHALL BE RATED FOR CURRENT, VOLTAGE AND PHASES AS APPLICABLE FOR THE LOADS. WHERE BOXES ARE TO BE MOUNTED ON OPPOSITE SIDES OF A WALL, A MINIMUM SEPARATION OF TWELVE (12) INCHES SHALL BE MAINTAINED. NO THROUGH BOXES ARE PERMITTED. BOXES SHALL BE MOUNTED LEVEL AND FLUSH.

SWITCHES ARE TO BE SILENT. 20A, 120V.

RECEPTACLES. NEMA 5-20R RECEPTACLES SHALL BE STANDARD TYPES EXCEPT WHERE SPECIAL RECEPTACLES ARE SHOWN. SPECIAL RECEPTACLES ARE TO MATCH EQUIPMENT PLUGS AS COORDINATED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL PLUGS AND CORDS ON WATER HEATERS, DISHWASHERS, DISPOSALS, CLOTHES WASHERS, DRYERS, ETC., UNLESS PROVIDED BY OTHER TRADES. COORDINATE PRIOR TO BIDDING.

FACE PLATES. FACE PLATES ARE REQUIRED IN INTERIOR SPACES. COLORS ARE TO BE SELECTED BY THE ARCHITECT. OUTSIDE PLATES AND COVERS, PUBLIC BUILDINGS, STRAIGHT, AND PLT FLUSH WITH FINISHED SURFACES WITHOUT THE USE OF SHIMS OR SPACERS. PLATES SHALL NOT SUPPORT WIRING. COMMON GANGED PLATES ARE TO BE EMPLOYED WHEREVER TWO (2) OR MORE DEVICES ARE SHOWN ON THE DRAWINGS IN THE VERTICAL OR HORIZONTAL ALIGNMENT.

PANELBOARDS. PANELBOARDS SHALL BE DEAD-FRONT, CIRCUIT BREAKER TYPE. DIRECTORIES SHALL BE COMPLETE AND TYPEWRITTEN. LOADCENTERS ARE NOT PERMITTED.

MOLDED CASE CIRCUIT BREAKERS. BREAKERS SHALL BE THERMAL-MAGNETIC OPERATED, WITH SHORT CIRCUIT RATINGS IN SYMMETRICAL AMPERES EQUAL TO OR GREATER THAN THE AIR RATINGS SHOWN ON THE DRAWINGS.

MOTOR PROTECTION. ALL MOTORS ON THIS PROJECT ARE TO BE FULLY PROTECTED IN ACCORDANCE WITH THE NEC. EVERY MOTOR IS TO BE PROTECTED FROM OVERCURRENTS BY THE INSTALLATION OF FUSED SWITCHES LOCATED IN SIGHT OF THE MOTORS. EACH AIR HANDLING UNIT IS TO BE FED WITH A FUSED SWITCH FOR THE HEATER, AND A SECOND FUSED SWITCH FOR THE MOTOR (MOTOR SWITCH MAY BE ELIMINATED IF THE AHU IS EQUIPPED WITH INTEGRAL PROTECTION COORDINATED PRIOR TO BIDDING).

IN APPLICATIONS WITH MOTORS OVER ONE (1) HORSEPOWER, AND WHERE CONTROLS OTHER THAN MANUAL "ON" AND "OFF" ARE REQUIRED, MAGNETIC COIL OPERATORS ARE REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR PROPER VOLTAGES, ENCLOSURE TYPES AND START-STOP OR HAND-OFF-AUTO SWITCHES AS REQUIRED BY THE APPLICATION. OVERLOAD ELEMENTS ARE REQUIRED FOR ALL ABOVE GROUND. STARTERS SHALL BE ALLEN-BRADLEY OR SQUARE D.

CONDUCTORS. CONDUCTORS SHALL BE RATED FOR 600 VOLTS. ALL CONDUCTORS ARE TO BE COPPER. INSULATION SHALL BE TYPE THWN, EXCEPT WHERE SHOWN OTHERWISE. WIRING RACEWAYS IS TO HAVE A GROUND WIRE (EXCEPT SERVICE).

TWO-WAY EMERGENCY PUBLIC RADIO DESIGN CRITERIA

THIS BUILDING SHALL REQUIRE THE INSTALLATION OF A TWO-WAY PUBLIC RADIO ENHANCEMENT SYSTEM WHICH COMPLIES WITH THE FOLLOWING REQUIREMENTS:

- THE INSTALLER SHALL DETERMINE THE LOCAL AGENCY THAT RESPONDS TO THE SPECIFIC LOCATION WHERE THE NEW SYSTEM WILL BE DEPLOYED (I.E. POLICE, FIRE DEPT., ETC) AND SHALL CONTACT THEM TO DETERMINE THE FREQUENCY BAND THAT IS REQUIRED. MOST PUBLIC AGENCIES UTILIZE 800 MHZ, BUT THIS SHALL BE VERIFIED PRIOR TO INSTALLATION.
- THE IN-BUILDING PUBLIC SAFETY RADIO CONVERSE SYSTEM AND OTHER RADIO SYSTEMS OPERATING WITHIN (OR IN THE VICINITY OF) THE FACILITY SHALL NOT INTERFERE WITH EACH OTHER.
- CONTRACTOR SHALL DETERMINE THE EXISTING SIGNAL STRENGTH AT THE SITE, PRIOR TO CONSTRUCTION.
- FOR THE DOWNLINK SIGNAL, A MINIMUM SIGNAL STRENGTH OF NEGATIVE (-95 DBM THROUGHOUT THE FACILITY WITH A DAQ OF 3.4 OR BETTER IS REQUIRED 100% OF THE TIME.
- FOR GENERAL STRUCTURE AREAS, THE IN-BUILDING RF SOLUTION SHALL PROVIDE THE ABOVE SPECIFIED COVERAGE IN 95% OF THE FLOOR AREA. GENERAL STRUCTURE AREAS ARE DEFINED AS LIVING AREAS, BASEMENTS, PARKING GARAGES, ADMINISTRATIVE OFFICES AND CONFERENCE ROOMS.
- FOR CRITICAL AREAS, THE IN-BUILDING RF SOLUTION SHALL PROVIDE THE ABOVE SPECIFIED COVERAGE IN 99% OF THE FLOOR AREA. CRITICAL AREAS ARE DEFINED AS MECHANICAL AND UTILITY ROOMS, PUBLIC BATHROOMS, EMPLOYEE ONLY ACCESS AREAS, STAIRWELLS, EXIT STAIRS, EXIT PASSAGEWAYS, POLICE HOLDING AREAS, ELEVATOR LOBBIES, FIRE PUMP ROOMS, SPRINKLER SECTIONAL VALVE LOCATIONS, AND OTHER AREAS CONSIDERED BY THE AHJ. THE CONTRACTOR SHALL PROVIDE THE AHJ TO CONFIRM CRITICAL AREAS IN THE NEW CONSTRUCTION.
- THE SYSTEM SHALL PROVIDE THE REQUIRED COVERAGE IN THE FREQUENCY BANDS OR CHANNELS AS SPECIFIED BY THE AHJ.
- SIGNAL BOOSTERS SHALL BE FCC-TYPE ACCEPTED AND MUST OPERATE IN ACCORDANCE WITH FCC RULES.
- ALL ACTIVE COMPONENTS SHALL BE POWERED VIA DEDICATED CIRCUITS ("HOME RUN") AND TWELVE-HOUR BATTERY BACKUP FOR THE IN-BUILDING SYSTEM OPERATING AT 100% CAPACITY.
- NEMA TWIST-LOCK ELECTRICAL PLUG AND RECEPTACLE SET SHALL BE UTILIZED TO CONNECT THE ACTIVE COMPONENTS OF THE SYSTEM TO THE AC POWER.
- SURGE PROTECTION DEVICE(S) SHALL BE UTILIZED TO PROTECT ACTIVE COMPONENTS OF THE SYSTEM FROM ELECTRICAL TRANSIENTS.
- THE SYSTEM MUST MONITOR AND PRODUCE AN ALARM IN THE EVENT OF ANTENNA SYSTEM MALFUNCTION OR SIGNAL BOOSTER FAILURE. ADDITIONALLY, IN CASE THAT AN IN-BUILDING SOLUTION BASED ON RF/IBER OPTICS CONVERTERS IS SELECTED, THE SYSTEM SHALL ALSO BE CAPABLE OF ALARMING IN THE EVENT OF A MALFUNCTION OF THE MAIN AND THE EXPANSION HUBS.
- THE MAXIMUM RADIO SIGNAL PROPAGATION DELAY INTRODUCED BY THE IN-BUILDING COVERAGE SOLUTION SHALL NOT EXCEED 15 μ S; IF A DELAY GREATER THAN 15 μ S IS EXPECTED BY DESIGN, THEN FURTHER ANALYSIS SHALL BE CONDUCTED IN CONJUNCTION WITH THE AHJ TO EVALUATE POTENTIAL SIGNAL DEGRADATION IN AREAS WHERE THE DIRECT SIGNAL COMING FROM A RADIO SITE COINCIDES WITH THE SYSTEM OUTPUT SIGNAL.
- AN EXTERIOR ANTENNA SYSTEM (DONOR ANTENNA) SHALL BE INSTALLED ON THE ROOF FOR RECEIPT OF SIGNAL. THE ORIENTATION OF THE DONOR ANTENNA SHALL BE DETERMINED IN COORDINATION WITH THE AHJ. IF REQUIRED BY FAA REGULATIONS, OBSTRUCTION LIGHTING AND/OR MARKING SHALL BE INSTALLED.
- ALL EXTERIOR ANTENNAS ARE TO BE NARROWBAND, HIGH-GAIN, VERTICALLY POLARIZED AND DESIGNED FOR THE SPECIFIED FREQUENCY BAND YAGI OR CORNER REFLECTOR TYPE. ANTENNAS ARE RECOMMENDED. MULTIBAND ANTENNAS ARE NOT AN ADVISABLE OPTION AND ITS USE SHALL BE LIMITED TO, FOR EXAMPLE, A BUILDING WHERE BOTH 700 AND 800 MHC BANDS SHALL BE IMPLEMENTED.
- THE ANTENNA INSTALLATION, INCLUDING THE SHIELD OF THE COAXIAL CABLE SHALL BE SUITABLY CONNECTED TO THE BUILDING'S ELECTRICAL GROUND SYSTEM AT THE BASE OF THE ANTENNA MAST AND AT A COAXIAL LIGHTNING PROTECTOR DESIGNED FOR THE PROPER FREQUENCY BAND SHALL BE INSTALLED IN THE COAXIAL CABLE FEED OUTSIDE THE FACILITY.
- THE IN-BUILDING ANTENNA SYSTEM SHALL CONSIST OF A SUFFICIENT BUT NOT EXCESSIVE NUMBER OF IN-DOOR ANTENNAS. THEY SHALL BE DISTRIBUTED THROUGHOUT THE BUILDING IN A MANNER WHICH MEETS THE COVERAGE CRITERIA PREVIOUSLY SPECIFIED.
- SPLITTERS AND ANY OTHER ACTIVE OR PASSIVE COMPONENTS INSTALLED IN LOCATIONS OTHER THAN COMMUNICATION CLOSETS SHALL BE MOUNTED IN A SEPARATE COLOR CODE JUNCTION BOX CONSPICUOUSLY LOCATED SO AS TO BE EASILY ACCESSIBLE FOR MAINTENANCE WHILE MAINTAINING THEM SECURE FROM UNAUTHORIZED TAMPERING.
- ALL CABLEING/CONDUIT SHALL UTILIZE 2-HOUR FIRE RATED CABLE OR BE INSTALLED IN A 2-4-HOUR ROOM OR SHAFT, AND HAVE A PATHWAY SURVIVABILITY OF LEVEL 3, PER NFPA 72, 24.3.6.8.1.
- PRIMARY POWER SUPPLY FOR BDA SHALL COMPLY WITH NFPA 72, 24.5.2.5.1 AND 10.6.5.1.
- SECONDARY POWER SUPPLY SHALL CONSIST OF A BATTERY WITH A MINIMUM SUPPLY OF 12 HOURS OF 100% OPERATING CAPACITY PER NFPA 72, 24.5.2.5.2. BATTERY SHALL BE ARRANGED PER NFPA 72, 10.6.10.
- SIGNAL ISOLATION SHALL BE MAINTAINED BETWEEN THE DONOR ANTENNA AND ALL INSIDE ANTENNAS, AND SHALL BE A MINIMUM OF 15 dB ABOVE THE SIGNAL BOOSTER GAIN UNDER ALL OPERATING CONDITIONS.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE OUTLET NEMA 5-20R
	DUPLEX RECEPTACLE OUTLET NEMA 5-20R SPLIT WIRED
	DUPLEX RECEPTACLE OUTLET NEMA 5-20R OVER COUNTER
	DUPLEX RECEPTACLE OUTLET NEMA 5-20R UNDER COUNTER
	SPECIAL PURPOSE OUTLET MUST MATCH EQUIP. PLUG
	FLOOR OUTLET W/ BRASS PLATE & CARPET RING
	SPST SWITCH
	3-WAY SWITCH
	4-WAY SWITCH
	SWITCH WITH PILOT LIGHT
	DIMMER SWITCH WATTAGE AS NOTED
	LIGHT FIXTURE (SURFACE / RECESSED)
	FLUORESCENT LIGHT FIXTURE (SURFACE / RECESSED) EMERG.
	FLUORESCENT LIGHT FIXTURE (SURFACE / RECESSED) EMERG.
	FLUORESCENT STRIP LIGHT FIXTURE
	EMERGENCY BATTERY PACK LIGHT FIXTURE W/ (2) 25W LITS.
	EXIT SIGN, UNIVERSAL MOUNTING (DOUBLE / SINGLE FACE) ARROWS AS INDICATED
	FUSED SWITCH, 30A SWITCH, 20A FUSES, 2 POLES
	MOTOR STARTER, NEMA SIZE 1
	SWITCH/STARTER, 30A, NEMA 1, 3 POLE
	PANELBOARD, SEE SCHEDULES
	TIME CLOCK SWITCH, 4P-ASTRONOMIC WIRESERVICE
	TELEPHONE RECEPT-44A BOX WITH SINGLE GANG ADAPTER AND 3/4" EMT TO ACCESSIBLE CEILING SPACE
	DATA RECEPT-44A BOX WITH SINGLE GANG ADAPTER AND 3/4" EMT TO ACCESSIBLE CEILING SPACE
	MOTOR
	STRIP HEATER WITH INTEGRAL CONTACTOR
	VOLUME CONTROL, 1/4"
	QUADRUPEX RECEPT
	CLOCK, 1/4" 96" SEE RISER
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR PANEL
	SMOKE DETECTOR W/BASE
	HEAT DETECTOR W/BASE
	DUCT DETECTOR
	REMOTE TEST STATION
	PULL STATION
	CONTROL RELAY MODULE
	SINGLE INPUT MODULE
	DUAL INPUT MODULE
	TAMPER SWITCH
	WATERFLOW SWITCH
	HORN STROBE
	WEATHERPROOF HORN STROBE
	STROBE
	VOLTAGE SURGE PROTECTOR - 120 VAC
	VOLTAGE SURGE PROTECTOR - TELEPHONE LINES
	SYSTEM RECORD DOCUMENTS
	CELL DIALER

DEVICE MOUNTING HEIGHTS

LIGHT SWITCHES	48" A.F.F. TO CENTER LINE OF BOX, UON
RECEPTACLES	18" A.F.F. TO CENTER LINE, UON
COUNTER HEIGHT RECEPTACLES	48" A.F.F. TO CENTER LINE OR 2" ABOVE SPLASHBOARD, UON
DATA OUTLETS	18" A.F.F. TO CENTER LINE, UON
TELEPHONES	48" A.F.F. TO CENTER LINE OF BOX, UON
EXTERIOR RECEPTACLES	24" A.F.G. TO BOTTOM, UON

ALL HEIGHTS ARE BASED ON NON-OBSTRUCTED REACH. MODIFY MOUNTING HEIGHTS IF/AS NECESSARY PER ADA AS REQUIRED. REFER TO ARCHITECTURAL ELEVATION FOR SPECIFIC HEIGHTS SPECIFIED THEREIN.

MINIMUM CONDUCTOR SIZING FOR 120V/1Ø BRANCH CIRCUITS									
(FOR NEC 13-413.BC.1.2 COMPLIANCE)									
DESIGN LOAD ON CIRCUIT IN VA (FROM PANELBOARD SCHEDULE) UP TO:									
UP TO LENGTH OF CIRCUIT	50'	100'	150'	200'	250'	300'	350'	400'	500'
LENGTH OF CIRCUIT	12	12	12	12	12	12	12	12	12
100'	12	12	12	12	12	10	10	10	10
150'	12	12	10	8	6	6	6	8	8
200'	10	8	6	4	4	4	4	6	6
250'	10	6	6	4	4	4	4	6	6
300'	8	6	4	4	4	4	4	6	6
MINIMUM CONDUCTOR SIZING FOR 208V/1Ø BRANCH CIRCUITS									
(FOR NEC 13-413.BC.1.2 COMPLIANCE)									
DESIGN LOAD ON CIRCUIT IN VA (FROM PANELBOARD SCHEDULE) UP TO:									
UP TO LENGTH OF CIRCUIT	50'	100'	150'	200'	250'	300'	350'	400'	500'
LENGTH OF CIRCUIT	12	12	12	12	12	12	12	12	12
100'	12	12	12	12	12	10	10	10	10
150'	12	12	12	12	10	8	8	8	8
200'	12	12	10	10	8	8	8	6	6
250'	12	10	10	8	8	6	6	6	6
300'	12	10	8	8	6	6	6	6	4
MINIMUM CONDUCTOR SIZING FOR 208V/3Ø BRANCH CIRCUITS									
(FOR NEC 13-413.BC.1.2 COMPLIANCE)									
DESIGN LOAD ON CIRCUIT IN VA (FROM PANELBOARD SCHEDULE) UP TO:									
UP TO LENGTH OF CIRCUIT	50'	100'	150'	200'	250'	300'	350'	400'	500'
LENGTH OF CIRCUIT	12	12	12	12	12	12	12	12	12
100'	12	12	12	12	12	12	12	10	10
150'	12	12	12	12	12	12	10	10	10
200'	12	12	12	10	10	10	10	10	8
250'	12	12	10	10	10	10	8	8	8
300'	12	10	10	10	10	8	8	8	8
MINIMUM CONDUCTOR SIZING FOR 480V/3Ø BRANCH CIRCUITS									
(FOR NEC 13-413.BC.1.2 COMPLIANCE)									
DESIGN LOAD ON CIRCUIT IN VA (FROM PANELBOARD SCHEDULE) UP TO:									
UP TO LENGTH OF CIRCUIT	10,000	15,000	20,000	25,000	30,000	35,000	40,000	45,000	50,000
LENGTH OF CIRCUIT	12	12	10	8	8	8	8	8	8
200'	12	10	8	8	8	8	8	8	8
300'	12	10	8	8	8	6	6	6	6

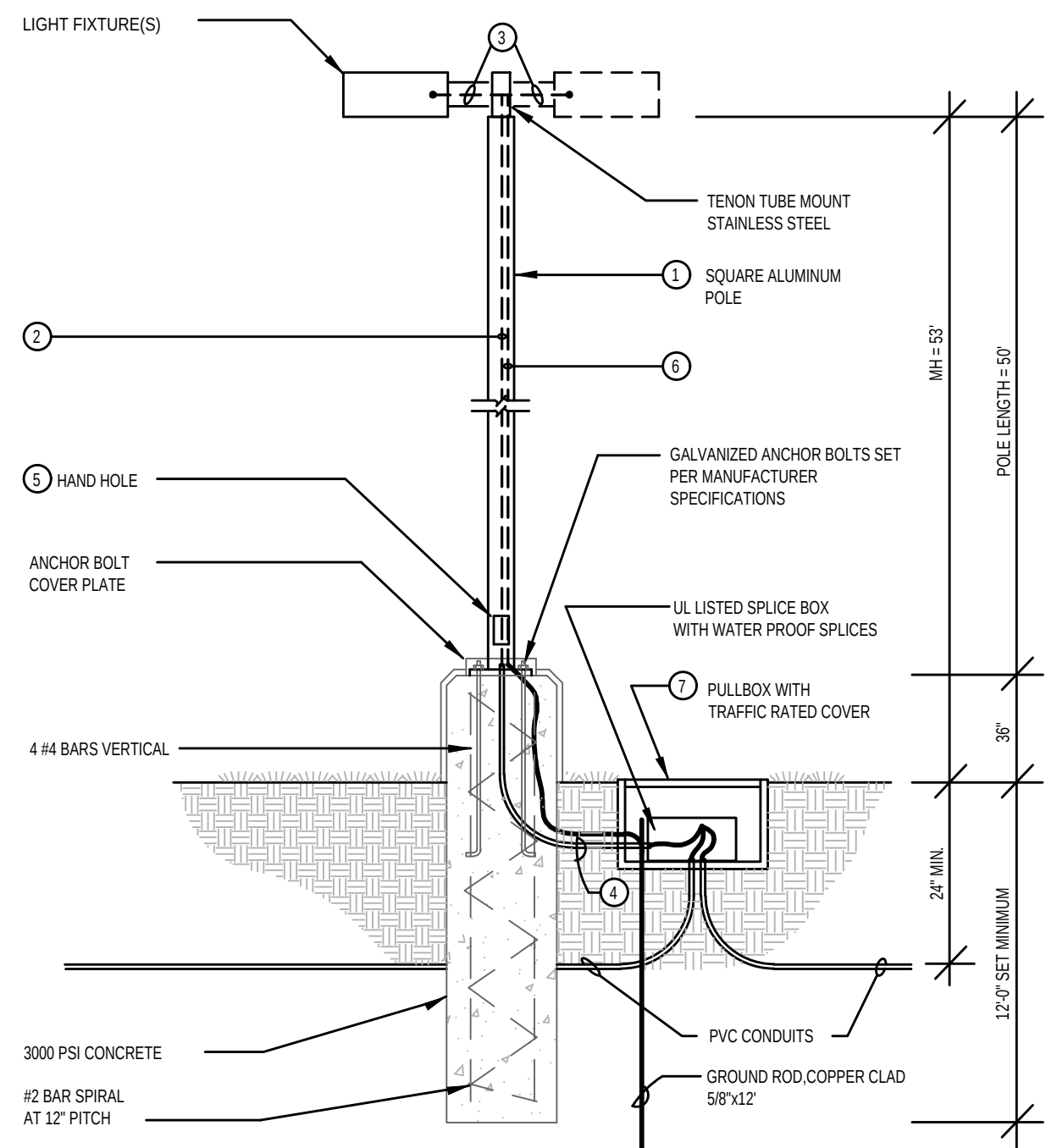
VOLTAGE DROP CONSIDERATIONS

SITE											
TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMP COLOR	LUMENS	LAMP TYPE	DIM TYPE	WATTS	MOUNTING	NOTES
SA	SINGLE HEAD LED STREET LIGHT	MCGRAW-EDISON	SLNA-AF-08-LED-E1-5W-Q-FINISH-QMMS / MA1030-30	UNV	4000	50072	LED	0-10V	445W	30' POLE	NOTE 1
SC	NOT USED SINGLE HEAD LED STREET LIGHT	MCGRAW-EDISON	SLNA-AF-08-LED-E1-T4W-FINISH-QMMS / MA1030-30	UNV	4000	47210	LED	0-10V	445W	30' POLE	NOTE 1
SD	NOT USED SINGLE HEAD LED HIGH-MAST STREET LIGHT	MCGRAW-EDISON	4XCTN-CA10-700-740-U-T5-FINISH	UNV	4000	377504	LED	0-10V	3040W	50' POLE	NOTE 2
SE	NOT USED SINGLE HEAD LED STREET LIGHT	MCGRAW-EDISON	SLNA-AF-08-LED-E1-T4T-FINISH-QMMS / MA1030-30	UNV	4000	47825	LED	0-10V	445W	30' POLE	NOTE 1
SF	LED WALLPACK	MCGRAW-EDISON	GW-C-SA2-C-740-U-SL2-FINISH	UNV	4000	14461	LED	0-10V	113W	WALL	
SG	FLAG POLE LIGHT	INVUE	VFS-K-B-20-7-LED-E1-TS-FINISH / SMF-FINISH	UNV	4000	3320	LED	0-10V	48W	STANCHION	
FIXTURE SCHEDULE NOTES											
NOTE 1: MOUNTED ON 30' DIRECT BURIAL CONCRETE POLES #USH07III-11086											
NOTE 2: MOUNTED ON VALMONT 50' HIGH-MAST ALUMINUM ANCHOR-BASE POLE WITH LOWERING MECHANISM											

FPL Service Center in Columbia County											
LIGHTING FIXTURE SCHEDULE											
TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMP COLOR	LUMENS	LAMP TYPE	DIM TYPE	WATTS	MOUNTING	NOTES
BUILDING A - SERVICE CENTER											
A	2'x4' LED TROFFER	METALUX	24CZ2-40-UNV-L840-CD1-U	UNV	4000	4000	LED	0-10V	31.6W	RECESSED	
AE	2'x4' LED TROFFER W/EMERGENCY BATTERY PACK	METALUX	24CZ2-40-UNV-EL7W-L840-CD1-U	UNV	4000	4000	LED	0-10V	31.6W	RECESSED	
B	2'x2' LED TROFFER	METALUX	22CZ2-44-UNV-L840-CD1-U	UNV	4000	4400	LED	0-10V	33.2W	RECESSED	
BE	2'x2' LED TROFFER W/EMERGENCY BATTERY PACK	METALUX	22CZ2-44-UNV-EL7W-L840-CD1-U	UNV	4000	4400	LED	0-10V	33.2W	RECESSED	
C	LED CANOPY	E LUMINAIRE	CIPS1-G-25-40K-FINISH	UNV	4000	2343	LED	0-10V	21W	SURFACE	
D	NOT USED 4" DOWNLIGHTS	HALO COMMERCIAL	HC415D010-1EM7-HM40S22640-41MDW	UNV	4000	1500	LED	0-10V	14W	RECESSED	
DE	4" DOWNLIGHTS W/EMERGENCY BATTERY PACK	HALO COMMERCIAL	HC415D010-1EM7-HM40S22640-41MDW	UNV	4000	1500	LED	0-10V	14W	RECESSED	
F	4' LINEAR LED	METALUX	4SNLED-LD5-50SL-LW-UNV-L840-CD1-U	UNV	4000	5000	LED	0-10V	46W	SURFACE	
FE	4' LINEAR LED W/EMERGENCY BATTERY PACK	METALUX	4SNLED-LD5-50SL-LW-UNV-EL7W-L840-CD1-U	UNV	4000	5000	LED	0-10V	46W	SURFACE	
H	1'x4' LED TROFFER	METALUX	14CZ2-48HE-S-UNV-L840-CD1-U	UNV	4000	4800	LED	0-10V	35.7W	RECESSED	
HE	1'x4' LED TROFFER W/EMERGENCY BATTERY PACK	METALUX	14CZ2-48HE-S-UNV-EL7W-L840-CD1-U	UNV	4000	4800	LED	0-10V	35.7W	RECESSED	
K	NOT USED LED WALLPACK	MC GRAW EDISON	GW-C-SA1C-740-U-T5	UNV	4000	7552	LED	0-10V	59W	WALL	
KE	LED WALLPACK W/EMERGENCY BATTERY PACK	MC GRAW EDISON	GW-C-SA1C-740-U-T3-CBP	UNV	4000	7552	LED	0-10V	59W	WALL	
Q	LED WALLPACK	MC GRAW EDISON	GW-C-SA1C-740-U-T4W	UNV	4000	7552	LED	0-10V	59W	WALL	
QE	LED WALLPACK W/EMERGENCY BATTERY PACK	MC GRAW EDISON	GW-C-SA1C-740-U-T4W-CBP	UNV	4000	7552	LED	0-10V	59W	WALL	
SE	4" DOWNLIGHTS W/EMERGENCY BATTERY PACK	HALO COMMERCIAL	HC415D010-1EM7-HM40S22640-41MDW	UNV	4000	1500	LED	0-10V	14W	RECESSED	
X	EXT SIGN	SURELITE	CX7G	UNV	N/A	N/A	LED	N/A	1.12W	SURFACE	
FIXTURE SCHEDULE NOTES											
NOTE 1: MOUNTED ON 30' DIRECT BURIAL CONCRETE POLES #USH07III-11086											
NOTE 2: MOUNTED ON VALMONT 50' HIGH-MAST ALUMINUM ANCHOR-BASE POLE WITH LOWERING MECHANISM											

LIGHTING POLE DETAIL

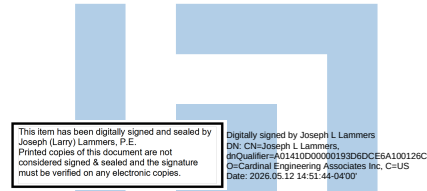
- 1 LIGHTING POLE. THE MANUFACTURER IS TO PROVIDE CERTIFICATION BY FLORIDA PE, SHOWING WIND LOAD RATING OF 140 MPH PER FBC WITH SPECIFIED FIXTURES INSTALLED. THE FINAL POLE SET IS TO BE DETERMINED BY THE PROFESSIONAL ENGINEER.
- 2 INTERNAL WIRING. INTERNAL WIRING TO BE IN UL LISTED CONDUITS, INSIDE POLE. SEE NOTE 3.
- 3 LIGHT FIXTURE CONNECTIONS. REFER TO LIGHT MANUFACTURER FOR REQUIREMENTS, INCLUDING TEMPERATURE REQUIREMENTS (COMMONLY 150C). CONDUCTORS TO BE UL LISTED "FIXTURE" CONDUCTORS. (UL "RECOGNIZED" APPLIANCE WIRES NOT PERMITTED). OBTAIN BUILDING DEPARTMENT APPROVAL FOR CONDUCTORS, CONNECTORS, AND ACCESSIBILITY.
- 4 CONDUITS. CONDUITS BELOW HAND HOLE IN POLE TO BE UL LISTED WITH "BRANCH CIRCUIT" THWN CONDUCTORS.
- 5 HAND HOLE. HAND HOLE WITH UL LISTED BOX CAST IN POLE WITH WATERPROOF SPLICES.
- 6 GROUND WIRE IN POLE. CONNECT BOTTOM TO GROUND ROD. CONNECT TOP TO GROUND LUG(S) IN FIXTURE(S).
- 7 TRAFFIC RATED PULL BOX. HIGH STRENGTH COMPOSITE CONSTRUCTION RATED FOR DESIGN LOAD OF 22,000 LBS OVER A 10" SQUARE. COVER LETTERING = "LIGHTING".
- 8 SITE CONDITIONS. IF SITE CONDITIONS ARE DISCOVERED WHICH REQUIRE ANY POLE(S) TO BE MOVED OVER 3 FEET, NOTIFY THE ENGINEER IMMEDIATELY.



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PROJECT TEAM
PRINCIPAL IN CHARGE
DAVID LITHGOW
PROJECT MANAGER
DAVID LITHGOW
DESIGN TEAM
CEA

COLUMBIA STORM
PROCESSING & SERVICE
CENTER - BUILDING A -
SERVICE CENTER
FLORIDA POWER & LIGHT

PROJECT NO.
814C632800

SHEET TITLE
LIGHT FIXTURE
SCHEDULE

A-E002

Single Level Switching - Single Circuit

120/277 VAC BLACK BLUE LOAD

GROUND GREEN

NEUTRAL

ONW-D-1001-MV-W
WALL SENSOR DIAGRAM

The diagram shows the SP20-RD4 unit connected to a local switch and a GMDS-W unit. The SP20-RD4 has four input wires (Blue, White, Black, Blue) and five output wires (Yellow/Orange, White/Blue, Blue, Red, Black). The local switch (OAC-DT-1000-R) has three output wires (Blue, Red, Black). The GMDS-W unit has a single input wire (Blue). The wiring is as follows: SP20-RD4 Blue to LOAD; SP20-RD4 White to LOAD; SP20-RD4 Black to SP20-RD4 Blue; SP20-RD4 Blue to SP20-RD4 White; SP20-RD4 Yellow/Orange to OAC-DT-1000-R Blue; SP20-RD4 White/Blue to OAC-DT-1000-R Red; SP20-RD4 Blue to OAC-DT-1000-R Black; SP20-RD4 Red to GMDS-W Blue; SP20-RD4 Black to GMDS-W Blue.

AUTO ON/AUTO OFF WITH LOCAL SWITCH

Hot (Black) - LTG CKT

0-10 VDC Ballast

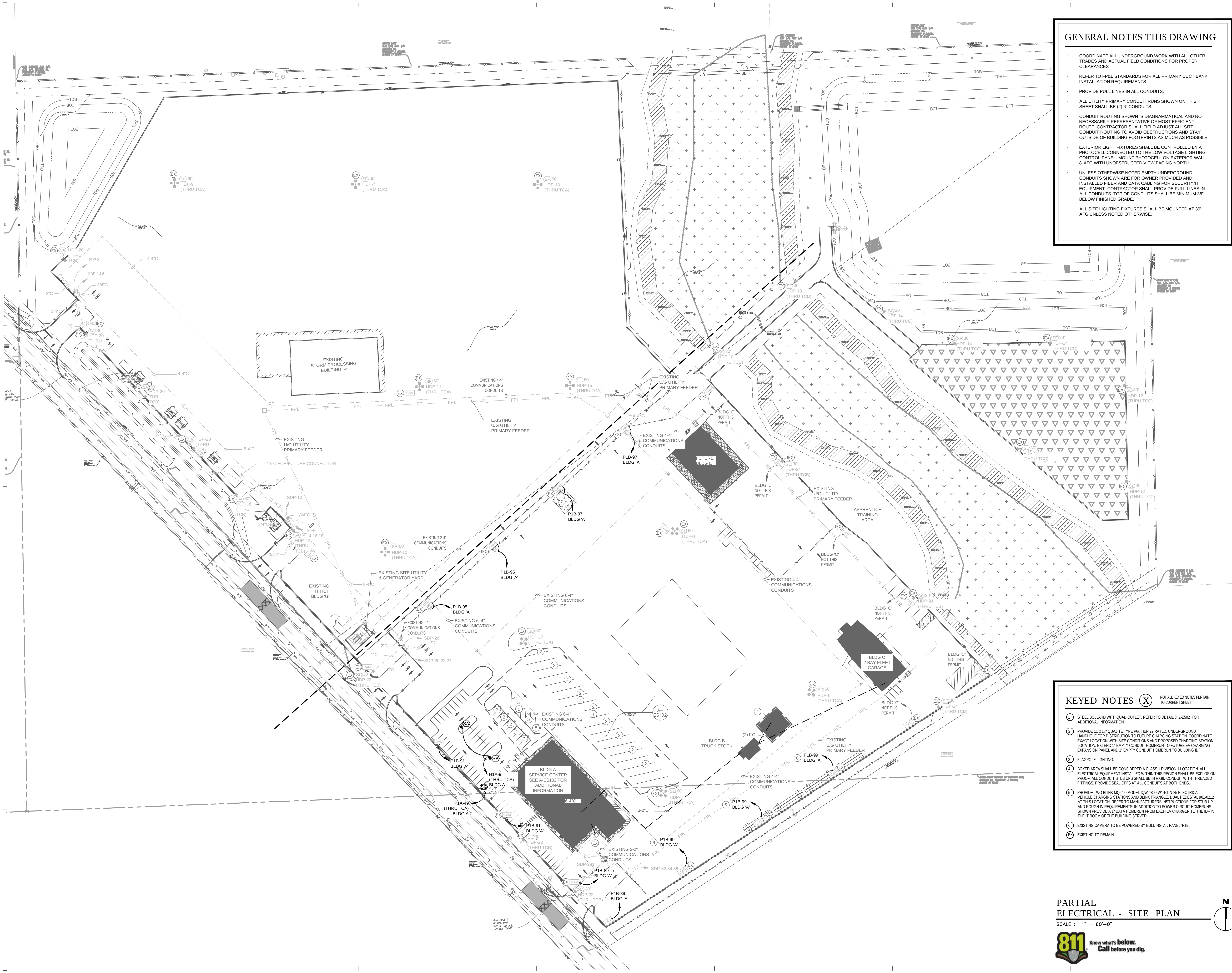
SP20-RD4

WBS0-010M-C1 Dimmer

OAC-DT-1000-R

AUTO ON/AUTO OFF WITH LOCAL DIMMER





GENERAL NOTES THIS DRAWING

- COORDINATE ALL UNDERGROUND WORK WITH ALL OTHER TRADES AND ACTUAL FIELD CONDITIONS FOR PROPER CLEARANCES
- REFER TO FPL STANDARDS FOR ALL PRIMARY DUCT BANK INSTALLATION REQUIREMENTS.
- PROVIDE PULL LINES IN ALL CONDUITS.
- ALL UTILITY PRIMARY CONDUIT RUNS SHOWN ON THIS SHEET SHALL BE (2) 6" CONDUITS.
- CONDUIT ROUTING SHOWN IS DIAGRAMMATICAL AND NOT NECESSARILY REPRESENTATIVE OF MOST EFFICIENT ROUTE. CONTRACTOR SHALL FIELD ADJUST ALL SITE CONDUIT ROUTING TO AVOID OBSTRUCTIONS AND STAY OUTSIDE OF BUILDING FOOTPRINTS AS MUCH AS POSSIBLE.
- EXTERIOR LIGHT FIXTURES SHALL BE CONTROLLED BY A PHOTOCELL CONNECTED TO THE LOW VOLTAGE LIGHTING CONTROL PANEL. MOUNT PHOTOCELL ON EXTERIOR WALL 8' AFG WITH UNOBSTRUCTED VIEW FACING NORTH.
- UNLESS OTHERWISE NOTED EMPTY UNDERGROUND CONDUITS SHOWN ARE FOR OWNER PROVIDED AND INSTALLED FIBER AND DATA CABLING FOR SECURITY/IT EQUIPMENT. CONTRACTOR SHALL PROVIDE PULL LINES IN ALL CONDUITS. TOP OF CONDUITS SHALL BE MINIMUM 36" BELOW FINISHED GRADE.
- ALL SITE LIGHTING FIXTURES SHALL BE MOUNTED AT 30' AFG UNLESS NOTED OTHERWISE.

KEYED NOTES (X) NOT ALL KEYED NOTES PERTAIN TO CURRENT SHEET

- STEEL BOLLARD WITH QUAD OUTLET. REFER TO DETAIL 8.2-ES02 FOR ADDITIONAL INFORMATION.
- PROVIDE 11"x18" QUARTZITE TYPE PG, TIER 22 RATED, UNDERGROUND HANDHOLE FOR DISTRIBUTION TO FUTURE CHARGING STATION. COORDINATE EXACT LOCATION WITH SITE CONDITIONS AND PROPOSED CHARGING STATION LOCATION. EXTEND 1" EMPTY CONDUIT HOMERUN TO FUTURE EV CHARGING EXPANSION PANEL AND 1" EMPTY CONDUIT HOMERUN TO BUILDING IDF.
- FLAGPOLE LIGHTING.
- BOXED AREA SHALL BE CONSIDERED A CLASS 1 DIVISION 1 LOCATION. ALL ELECTRICAL EQUIPMENT INSTALLED WITHIN THIS REGION SHALL BE EXPLOSION PROOF. ALL CONDUIT STUB UPS SHALL BE IN RIGID CONDUIT WITH THREADED FITTINGS. PROVIDE SEAL OFFS AT ALL CONDUITS AT BOTH ENDS.
- PROVIDE TWO BLINK MQ-200 MODEL (QW2-800-W1-N1-N-25) ELECTRICAL VEHICLE CHARGING STATIONS AND BLINK TRIANGLE. DUAL PEDESTAL #01-0212 AT THIS LOCATION. REFER TO MANUFACTURER'S INSTRUCTIONS FOR STUB UP AND ROUGH IN REQUIREMENTS. IN ADDITION TO POWER CIRCUIT HOMERUNS SHOWN PROVIDE A 1" DATA HOMERUN FROM EACH EV CHARGER TO THE IDF IN THE IT ROOM OF THE BUILDING SERVED.
- EXISTING CAMERA TO BE POWERED BY BUILDING 'A', PANEL 'P18'.
- EXISTING TO REMAIN

PARTIAL ELECTRICAL - SITE PLAN
SCALE: 1" = 60'-0"

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ARCHITECT IN CHARGE
DAVID LITHGOW

PROJECT MANAGER
DAVID LITHGOW

DESIGN TEAM
CEA

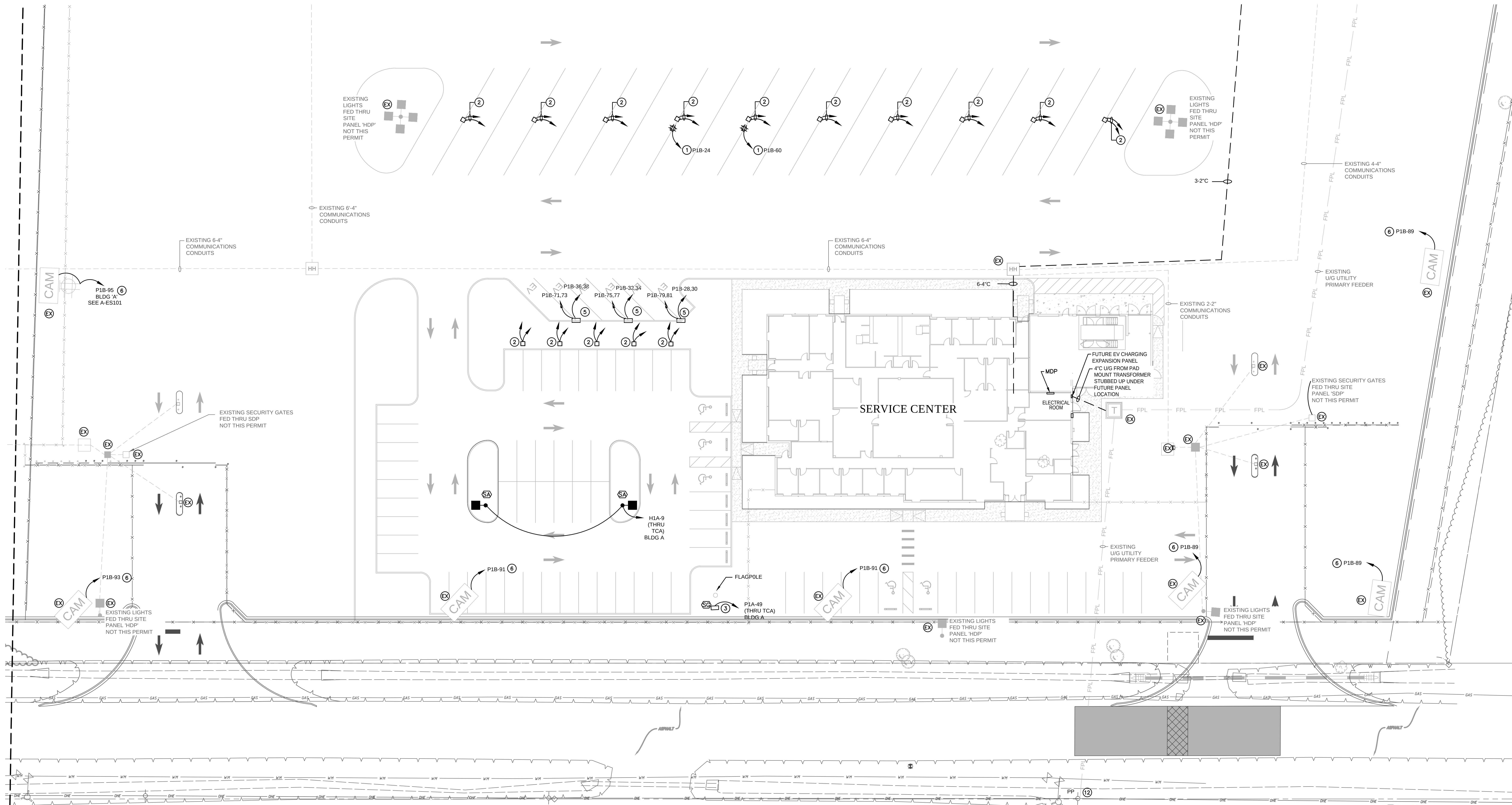
PROJECT NAME
COLUMBIA STORM PROCESSING & SERVICE CENTER - BUILDING A - SERVICE CENTER
FLORIDA POWER & LIGHT

PROJECT NO.
814C632800

SHEET TITLE
PARTIAL ELECTRICAL SITE PLAN

SHEET NUMBER
A-ES101

CARDINAL ENGINEERING ASSOCIATES INC.-21-03-34-00 FPL COLUMBIA- FPL 13 Feb 2026 - 11:55am



GENERAL NOTES THIS DRAWING

- COORDINATE ALL UNDERGROUND WORK WITH ALL OTHER TRADES AND ACTUAL FIELD CONDITIONS FOR PROPER CLEARANCES
- REFER TO FPL STANDARDS FOR ALL PRIMARY DUCT BANK INSTALLATION REQUIREMENTS.
- PROVIDE PULL LINES IN ALL CONDUITS.
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- CONDUIT ROUTING SHOWN IS DIAGRAMMATICAL AND NOT NECESSARILY REPRESENTATIVE OF MOST EFFICIENT ROUTE. CONTRACTOR SHALL FIELD ADJUST ALL SITE CONDUIT ROUTING TO ALLOW FOR SHORTEST POSSIBLE RUNS.
- EXTERIOR LIGHT FIXTURES SHALL BE CONTROLLED BY A PHOTOCELL CONNECTED TO THE LOW VOLTAGE LIGHTING CONTROL PANEL. MOUNT PHOTOCELL ON EXTERIOR WALL 8' AFG WITH UNOBSTRUCTED VIEW FACING NORTH.
- UNLESS OTHERWISE NOTED ALL UNDERGROUND CONDUITS SHOWN ARE FOR OWNER PROVIDED AND INSTALLED FIBER AND DATE CABLING FOR SITE SECURITY/IT EQUIPMENT. CONTRACTOR SHALL PROVIDE PULL LINES IN ALL SITE CONDUITS. TOP OF CONDUITS SHALL BE MINIMUM 36\"/>
- ALL SITE LIGHTING FIXTURES SHALL BE MOUNTED AT 30' AFG UNLESS NOTED OTHERWISE.

KEYED NOTES (X)

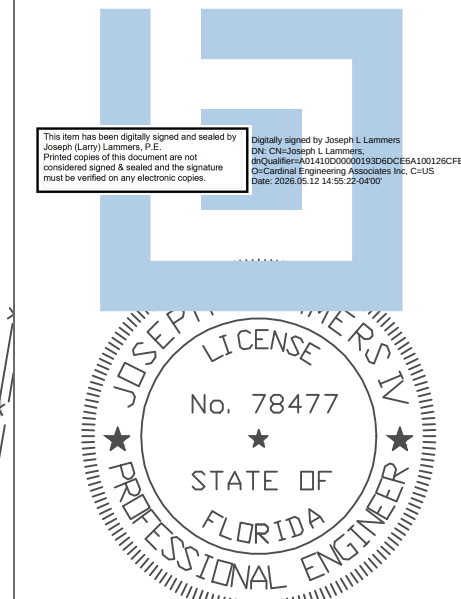
NOT ALL KEYED NOTES PERTAIN TO CURRENT SHEET

- STEEL BOLLARD WITH QUAD OUTLET. REFER TO DETAIL 8.2-E502 FOR ADDITIONAL INFORMATION.
- PROVIDE 11\"/>
- FLAGPOLE LIGHTING.
- BOXED AREA SHALL BE CONSIDERED A CLASS 1 DIVISION 1 LOCATION. ALL ELECTRICAL EQUIPMENT INSTALLED WITHIN THIS REGION SHALL BE EXPLOSION PROOF. ALL CONDUIT STUB UPS SHALL BE IN RIGID CONDUIT WITH THREADED FITTINGS. PROVIDE SEAL OFFS AT ALL CONDUITS AT BOTH ENDS.
- PROVIDE TWO BLANK MQ-200 MODEL QW2-800 W/1-N-1-N-25 ELECTRICAL VEHICLE CHARGING STATIONS AND BLINK TRIANGLE, DUAL PEDESTAL #01-0212 AT THIS LOCATION. REFER TO MANUFACTURERS INSTRUCTIONS FOR STUB UP AND ROUGH IN REQUIREMENTS. IN ADDITION TO POWER CIRCUIT HOMERUNS SHOWN PROVIDE A 1\"/>
- EXISTING CAMERA TO BE POWERED BY BUILDING 'A' PANEL 'P1B'. EX EXISTING TO REMAIN

PARTIAL ELECTRICAL SITE PLAN
SCALE : 1" = 20'-0"



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PROJECT MANAGER
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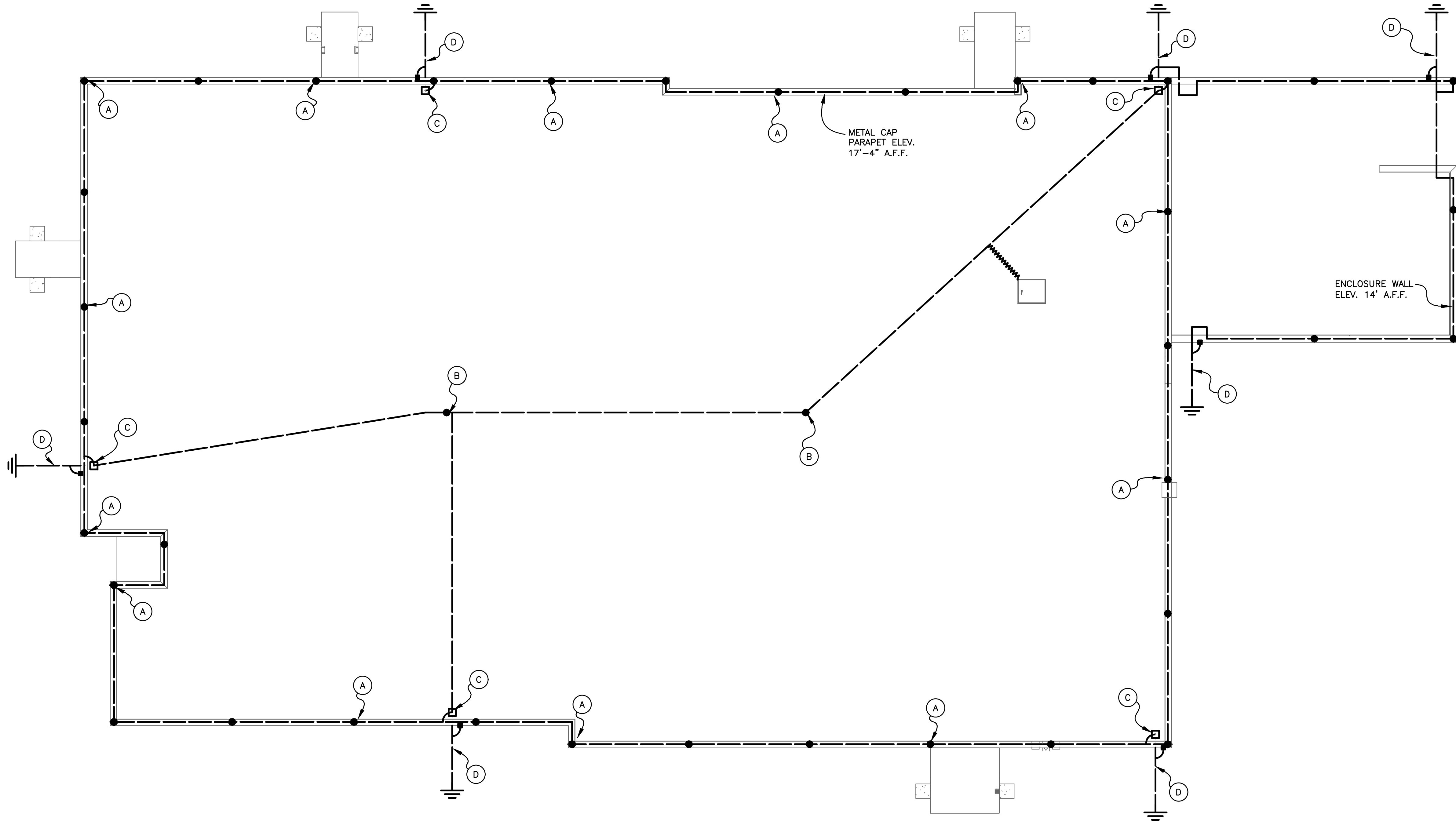
PROJECT NAME
COLUMBIA STORM
PROCESSING & SERVICE
CENTER - BUILDING A -
SERVICE CENTER
FLORIDA POWER & LIGHT

PROJECT NO.
814C632800

SHEET TITLE
ELECTRICAL
SITE PLAN

SHEET NUMBER

A-ES102



SEE a-E502 FOR GROUNDING & LIGHTNING PROTECTION DETAILS

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

LEGEND			
●	AIR TERMINAL LOCATION		
□	THRU-ROOF LOCATION		
■	REBAR BOND PROVIDED BY BONDED LIGHTNING PROTECTION AND INSTALLED BY THE ELECTRICAL CONTRACTOR.		
⎓	GROUND ROD LOCATION		
NO. C29 COPPER CABLE, U.L. LABELED, 28 ST., 17 GA., 192 LBS./1,000 FT., 59.450 OZ. (#2 AWG).			
NO. C29 COPPER CABLE, U.L. LABELED, SAME SPECS AS ABOVE, COARSE CABLE CONCEALED FROM VIEW SHOWN.			
⌒	ROOF HATCH		
A.F.F.	ABOVE FIRST FLOOR		
GENERAL INSTALLATION NOTES			
1	CURRENT U.L. LISTED TVSS/SPD ARE REQUIRED ON ALL SERVICE ENTRANCES AND SHALL BE FURNISHED AND INSTALLED BY OTHERS.		
2	TELEPHONE AND/OR ELECTRICAL SERVICE ENTRANCE GROUNDS SHALL BE INTERCONNECTED TO ONE LIGHTNING PROTECTION GROUND OR WATER PIPE.		
3	METAL BODIES OF INDUCTANCE LOCATED ABOUT THE ROOF SUCH AS METAL FLASHING, DRAINS, ROOF DRAINS, SOIL PIPE VENTS, INSULATION VENTS, LOUVERS AND DOOR FRAMES SITUATED WITHIN 8'-0" OF A LIGHTNING CONDUCTOR OR BONDED METAL BODY SHALL BE INTERCONNECTED TO THE LIGHTNING CONDUCTOR SYSTEM.		
4	NO BEND OF A CONDUCTOR SHALL FORM A FINAL INCLUDED ANGLE OF LESS THAN 90° NOR SHALL HAVE A RADIUS OF BEND OF LESS THAN 8".		
5	CONDUCTORS SHALL INTERCONNECT ALL AIR TERMINALS AND SHALL FORM A TWO-WAY PATH FROM EACH AIR TERMINAL HORIZONTALLY OR DOWNWARD TO CONNECTIONS WITH GROUND TERMINALS.		
6	ALL LIGHTNING PROTECTION CONDUCTORS SHALL BE FASTENED NOT MORE THAN 3'-0" MAXIMUM SPACING.		
7	GROUND RODS SHALL BE DRIVEN TO A MINIMUM DEPTH OF 10'-0" BELOW GRADE AND 2'-0" AWAY FROM FOUNDATION WALL.		
8	CONNECTIONS TO GROUND LOOP CONDUCTOR SHALL BE MADE AT A POINT NOT LESS THAN 18" BELOW GRADE AND 2'-0" AWAY FROM FOUNDATION WALL.		
9	AIR TERMINALS SHALL BE PLACED AT ALL UNPROTECTED OUTSIDE CORNERS AND LOCATED INTERMEDIATELY ON 20'-0" MAXIMUM SPACING AROUND THE ROOF PERIMETER OR RIDGE AND WITHIN 2'-0" OF OUTSIDE EDGE.		
10	FOR SAKE OF CLARITY, WE HAVE NOT LABELED EACH INDIVIDUAL ITEM OF LIGHTNING PROTECTION MATERIALS ON THE ROOF PLAN. WE HAVE SHOWN INSTALLATION DETAILS AND HAVE CALLED OUT EACH OF THESE DETAILS ON THE ROOF PLAN ONLY AT RANDOM LOCATIONS.		
11	BOND ALL METALLIC PIPES INCLUDING WATER, FIRE, GAS, SEWER, STORM, ETC. WHICH ENTER THE STRUCTURE TO THE NEAREST DOWNLEAD, GROUND ROD OR GROUND LOOP.		
12	BARE COPPER LIGHTNING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON ALUMINUM ROOF OR SIDING OR OTHER ALUMINUM SURFACES AND VICE VERSA. ALUMINUM LIGHTNING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON COPPER ROOFING OR COPPER SIDING OR OTHER COPPER SURFACES.		
13	THE LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED IN A NEAT AND INCONSPICUOUS MANNER SO THAT ALL COMPONENTS WILL BLEND IN WITH THE APPEARANCE OF THE BUILDING.		
14	ACTUAL JOB-SITE CONDITIONS MAY NECESSITATE SLIGHT ALTERATIONS IN AIR TERMINAL AND GROUND ROD LOCATIONS.		
15	MIDROOF AIR TERMINALS SHALL BE PLACED ON 50'-0" MAXIMUM SPACING.		
16	IF REQUIRED, ANY SACRIFICIAL ROOFING PADS, SHALL BE FURNISHED AND INSTALLED BY THE ROOFING CONTRACTOR.		
17	ALL ADHESIVE TYPE FITTINGS SHALL BE SET IN PLACE WITH AN APPLICATION OF CHEM LINK M-1 STRUCTURAL SEALANT ON NON-BALUSTED ROOFS.		
18	SEAL ENDS OF CONDUIT MOISTURE TIGHT WITH DUCT SEAL OR LEAD WEDGE.		
19	ALL CONDUIT, CONDUIT FASTENERS AND MISCELLANEOUS ACCESSORIES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.		
20	ALL REINFORCING, STRUCTURAL, FRAMING AND MISCELLANEOUS STEEL SHALL BE MADE ELECTRICALLY CONTINUOUS THROUGHOUT CONSTRUCTION BY WELDING, CLIPPING, BOLTING OR OTHER APPROVED METHODS.		
21	THE DESIGN LAYOUT AND INSTALLATION DETAILS SHOWN HEREON SHALL MEET THE REQUIREMENTS OF UNDERWRITERS' LABORATORIES STANDARD 98A FOR MASTER LABELED OR LETTER OF FINDINGS LIGHTNING PROTECTION SYSTEMS WHEN REQUIRED BY SPECIFICATION.		
22	THE DESIGN LAYOUT AND INSTALLATION DETAILS SHOWN HEREON SHALL MEET THE REQUIREMENTS OF NATIONAL FIRE PROTECTION ASSOCIATION STANDARD #780, CURRENT EDITION WHEN REQUIRED BY SPECIFICATION.		
23	THE LIGHTNING PROTECTION INSTALLATION SHALL COMPLY IN ALL RESPECTS TO LIGHTNING PROTECTION INSTITUTE STANDARD 175. THE INSTALLATION SHALL BE MADE BY OR UNDER THE SUPERVISION OF AN L.P.I. CERTIFIED MASTER INSTALLER, WHEN REQUIRED BY SPECIFICATION.		
NOTE: THE DESIGN LAYOUT AND INSTALLATION PROCEDURES SHOWN FOR THE BUILDING LIGHTNING PROTECTION SYSTEM AND THE COMPONENT PARTS SHOWN HEREON ARE ILLUSTRATED AS A STANDARD OF QUALITY BY BONDED LIGHTNING PROTECTION 2080 W. INDIANTOWN ROAD, JUPITER, FLORIDA 33458. PHONE: 561-746-4336 FAX: 561-747-8233			
EVALUATION:			
PROJECT: SERVICE CENTER BUILDING A			
FLORIDA INSTALLER & DESIGNER: BONDED LIGHTNING PROTECTION SYSTEMS, INC.			
LIGHTNING PROTECTION SYSTEMS, INC. INSTALLING MEMBER OF THE LIGHTNING PROTECTION INSTITUTE PHONE: 561-746-4336 FAX: 561-747-8233 2080 W. INDIANTOWN ROAD, SUITE 100 JUPITER, FLORIDA 33458 333 N. FALKENBURG ROAD UNIT D-401 TAMPA, FLORIDA 33619 1505 CAPITAL CIRCLE NW UNIT B TALLAHASSEE, FLORIDA 32303			
JOB NO.	MANUFACTURER EAST COAST LIGHTNING EQUIPMENT® L.P.I. MEMBER- U.L.P.A. PHONE: 1-800-680-9462 E-MAIL: info@ecslbz 24 LANSON DRIVE WINSTED, CT. 06098		
BLD/22030			
DWN. BY			
RES			
CHK. BY			
PCD			
DATE:			
6-20-22			
SCALE AS SHOWN			
SHEET NO.			
1			
-OF-			
2			
NO.	DATE:	DESCRIPTION	BY
REVISIONS			

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PE # 78477
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02/15/2026

NO.	REASON	DATE

PROJECT TEAM:
PRINCIPAL IN CHARGE
DAVID LITHGOW
PROJECT MANAGER
DAVID LITHGOW
DESIGN TEAM
CEA

COLUMBIA STORM
PROCESSING & SERVICE
CENTER - BUILDING A -
SERVICE CENTER
FLORIDA POWER & LIGHT

PROJECT NO.
814C632800
SHEET TITLE
LIGHTNING
PROTECTION
PLAN
SHEET NUMBER
A-EG101

Photometrics Calculation Software Generated Luminaire Schedule								
Scene: EM MODE								
Symbol	Qty	Label	Arrangement	Lum. Lumens	Arr. Lum. Lumens	LLF	Lum. Watts	Arr. Watts
	4	C	Single	2543	2543	0.900	20.53	20.53
	7	KE	Single	7556	7556	0.900	59	59
	7	QE	Single	7502	7502	0.900	59	59

Calculation Summary						
Scene: EM MODE						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
EXIT - DOOR 1	ILLUMINANCE	Fc	4.01	5.5	2.8	1.43
EXIT - DOOR 2	ILLUMINANCE	Fc	2.29	2.8	1.6	1.43
EXIT - DOOR 3	ILLUMINANCE	Fc	2.53	3.1	2.0	1.27
EXIT - DOOR 4	ILLUMINANCE	Fc	2.25	2.8	1.6	1.41
EXIT - DOOR 5	ILLUMINANCE	Fc	5.27	5.5	5.0	1.05
PERIMETER BUILDING	ILLUMINANCE	Fc	1.05	2.2	0.4	2.63

Scene/Channel Summary			
Scene: EM MODE			
Channel	Switched	Dimming	# Lums
C	Off	1.00	4
KE	On	0.17	7
QE	On	0.17	7

Calculation Summary						
Scene: EM MODE						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
100 - LOBBY_Floor	ILLUMINANCE	Fc	3.42	5.4	1.6	2.14
102 - CONFERENCE ROOM_Floor	ILLUMINANCE	Fc	1.60	2.9	0.7	2.29
103 - FIRE RISER_Floor	ILLUMINANCE	Fc	3.73	4.4	3.2	1.17
104 - STORAGE_Floor	ILLUMINANCE	Fc	2.39	3.5	1.1	2.17
105 - MECHANICAL ROOM_Floor	ILLUMINANCE	Fc	2.22	3.6	0.8	2.78
106 - ELECTRICAL ROOM_Floor	ILLUMINANCE	Fc	4.37	6.0	2.5	1.75
107 - RESTROOM_Floor	ILLUMINANCE	Fc	3.10	4.0	2.1	1.49
109 - RECEPTION & OPEN OFFICE_Floor	ILLUMINANCE	Fc	2.97	5.3	0.8	3.71
111 - OPERATIONS_Floor	ILLUMINANCE	Fc	3.68	5.2	1.6	2.30
112 - IDF1_Floor	ILLUMINANCE	Fc	2.14	3.6	0.7	3.06
113 - CONFERENCE ROOM_Floor	ILLUMINANCE	Fc	2.79	4.6	1.1	2.54
114 - DISPATCH_Floor	ILLUMINANCE	Fc	2.77	4.6	1.1	2.52
115 - SUPPORT_Floor	ILLUMINANCE	Fc	2.88	4.6	1.2	2.40
116 - LARGE TOOL STORAGE_Floor	ILLUMINANCE	Fc	1.86	3.2	0.6	3.10
117 - OFFICE_Floor	ILLUMINANCE	Fc	3.16	4.8	1.5	2.11
118 - OFFICE_Floor	ILLUMINANCE	Fc	3.18	4.9	1.5	2.12
119 - OFFICE_Floor	ILLUMINANCE	Fc	3.16	4.8	1.6	1.98
120 - OFFICE_Floor	ILLUMINANCE	Fc	3.19	4.9	1.6	1.99
121 - COPY_Floor	ILLUMINANCE	Fc	3.14	5.3	1.1	2.85
122 - WOMEN RESTROOM_Floor	ILLUMINANCE	Fc	6.70	12.1	2.3	2.91
124 - ASSEMBLY ROOM_Floor	ILLUMINANCE	Fc	2.56	4.9	0.5	5.12
125 - CORRIDOR_Floor	ILLUMINANCE	Fc	2.67	5.1	0.7	3.81
126 - MEN RESTROOM_Floor	ILLUMINANCE	Fc	5.89	11.9	2.2	2.68
127 - STORAGE_Floor	ILLUMINANCE	Fc	2.45	4.3	0.8	3.06
128 - CORRIDOR_Floor	ILLUMINANCE	Fc	3.70	5.2	1.0	3.70
129 - FITNESS ROOM_Floor	ILLUMINANCE	Fc	2.13	3.6	0.8	2.66
130 - FOREMAN ROOM_Floor	ILLUMINANCE	Fc	3.71	5.8	1.2	3.09
131 - STORAGE_Floor	ILLUMINANCE	Fc	2.52	4.3	1.0	2.52
133 - BREAK ROOM_Floor	ILLUMINANCE	Fc	2.81	5.2	0.7	4.01
134 - SECURE STORAGE_Floor	ILLUMINANCE	Fc	3.86	5.1	2.8	1.38
135 - SAFETY OFFICE_Floor	ILLUMINANCE	Fc	2.87	4.6	1.2	2.48
137 - OFFICES_Floor	ILLUMINANCE	Fc	3.17	4.8	1.5	2.11
138 - OFFICES_Floor	ILLUMINANCE	Fc	3.18	4.8	1.5	2.12
139 - OFFICES_Floor	ILLUMINANCE	Fc	3.17	4.8	1.6	1.98
140 - OFFICES_Floor	ILLUMINANCE	Fc	3.17	4.8	1.6	1.98
141 - OFFICES_Floor	ILLUMINANCE	Fc	3.16	4.8	1.6	1.98
142 - OFFICES_Floor	ILLUMINANCE	Fc	3.18	4.8	1.6	1.99
143 - CORRIDOR_Floor	ILLUMINANCE	Fc	2.95	5.6	0.4	7.38
144 - CONFERENCE ROOM_Floor	ILLUMINANCE	Fc	2.60	4.5	1.1	2.36
GENERATOR ROOM_Floor	ILLUMINANCE	Fc	1.19	1.7	0.5	2.38

Photometrics Calculation Software Generated Luminaire Schedule								
Scene: EM MODE								
Symbol	Qty	Label	Arrangement	Lum. Lumens	Arr. Lum. Lumens	LLF	Lum. Watts	Arr. Watts
	59	A	Single	4169	4169	0.900	31.6	31.6
	40	AE	Single	4169	4169	0.900	31.6	31.6
	9	B	Single	4547	4547	0.900	33.2	33.2
	16	BE	Single	4547	4547	0.900	33.2	33.2
	9	D	Single	1481	1481	0.900	14	14
	17	F	Single	5420	5420	0.900	47.1	47.1
	15	FE	Single	5420	5420	0.900	47.1	47.1
	1	H	Single	5073	5073	0.900	35.7	35.7
	8	HE	Single	5073	5073	0.900	35.7	35.7
	4	Q	Single	7502	7502	0.900	59	59
	2	QE	Single	7502	7502	0.900	59	59
	5	SE	Single	1481	1481	0.900	14	14

Scene/Channel Summary			
Scene: EM MODE			
Channel	Switched	Dimming	# Lums
A	Off	1.00	59
AE	On	0.23	40
B	Off	1.00	9
BE	On	0.19	16
D	Off	1.00	9
F	Off	1.00	17
FE	On	0.15	15
H	Off	1.00	1
HE	On	0.20	8
Q	Off	1.00	4
QE	On	0.17	2
SE	On	0.50	5



Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and architect must determine the appropriateness of the fixture selection for the site conditions. Any data shown under controlled conditions allowing current industry standard test methods and procedures with the following Engineering Division approval remains. Actual performance of any manufacturer's luminaire may vary due to variation in physical ratings, tolerance in design and other variables (see comments).

NOTES:

1	PHOTOMETRIC STUDY	07/14/22
No.	Revision/Issue	Date

LIGHTING DYNAMICS, INC.
7835 West Commercial Blvd.
Tamarac, FL 33351
(954) 944-0286
www.lightingdynamics.com

Project Name and Address:
FPL SERVICE CENTER
BUILDING A - INTERIORS
EM MODE
Columbia County, FL

FILE: P:\PROJECTS\2022\APRIL

CLIENT: OCI Engineering

Project: FPL Service Center
Columbia County

Date: 07/14/2022

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

Drawn by: MR

2	PHOTOMETRIC STUDY	09/09/22
1	PHOTOMETRIC STUDY	07/14/22
No.	Revision/Issue	Date

Project Name and Address:

FPL SERVICE CENTER
BUILDING A - EXTERIORS
EM MODE
Columbia County, FL

FILE: P:\PROJECTS\2022\APRIL

CLIENT: OCI Engineering

Project: FPL Service Center
Columbia County

Date: 07/14/2022

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

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Professional Engineer
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PRINCIPAL IN CHARGE
DAVID LITHGOW
PROJECT MANAGER
DAVID LITHGOW
DESIGN TEAM
CEA

COLUMBIA STORM
PROCESSING & SERVICE
CENTER - BUILDING A -
SERVICE CENTER
FLORIDA POWER & LIGHT

PROJECT NO.
814C632800

SHEET TITLE
PHOTOMETRIC
PLAN

A-EL101

CARDINAL ENGINEERING ASSOCIATES INC. 21-03-34-00 FPL COLUMBIA- FPL 13 Feb 2026 - 11:55am



LIGHTING CONTROL PLAN
SCALE : 3/16" = 1'-0"

SEE A-E002 FOR LIGHTING CONTROLS DIAGRAMS

CONTROLS LEGEND	
SYMBOL	MODEL/DESCRIPTION
	RCD-PL DIMMING ROOM CONTROLLER
	RC-3TLB-Z1D-W ROOM CONTROLLER WALL STATION
	OCC-RJ45 ROOM CONTROLLER INPUT/OUTPUT DEVICE
	OAC-DT-1000-R 360 DEGREE 1000FT ² DT CEILING SENSOR
	OAC-DT-2000-R 360 DEGREE 2000FT ² DT CEILING SENSOR
	OAC-U-2000-R 2000FT ² ULTRASONIC CEILING SENSOR
	SP20-RD4 120/277VAC SINGLE RELAY SWITCHPACK FOR LIGHTING LOADS
	ONW-D-1001-MV-W 120/277VAC SINGLE RELAY DT WALL SWITCH SENSOR
	WBSD-010M-C1 0-10V SLIDE DIMMER WALLSTATION & MASTER OVERRIDE
	GMD5-W MOMENTARY SWITCH FOR OVERRIDING SENSOR
	LINE VOLTAGE SWITCH (BY ELECTRICAL CONTRACTOR)
COLOR KEY	
ROOM CONTROLLER RELAY	



NOTES:

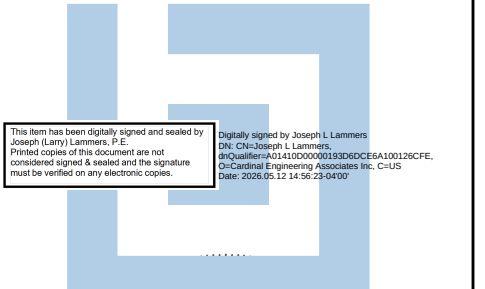
NO.	REASON	DATE
2	CONTROLS LAYOUT	09/13/22
1	CONTROLS LAYOUT	07/18/22
No.	Revision/Issue	Date

LIGHTING DYNAMICS, INC.
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Tamarac, FL 33351
(954) 944-0286
www.lightingdynamics.com

Project Name and Address
FPL Service in Columbia Country
Building A
Controls Diagram - First floor

FILE P:\PROJECTS\2022\APR
CLIENT Cardinal Engineering Associates, Inc.

Project FPL Service in Columbia Country Building A
Date 09/13/2022
Scale 3/32" = 1'
Sheet LC2
Drawn by EC



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No.	Revision/Issue	Date

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PRINCIPAL IN CHARGE
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PROJECT MANAGER
DAVID LITHGOW
DESIGN TEAM
CEA

COLUMBIA STORM
PROCESSING & SERVICE
CENTER - BUILDING A -
SERVICE CENTER
FLORIDA POWER & LIGHT

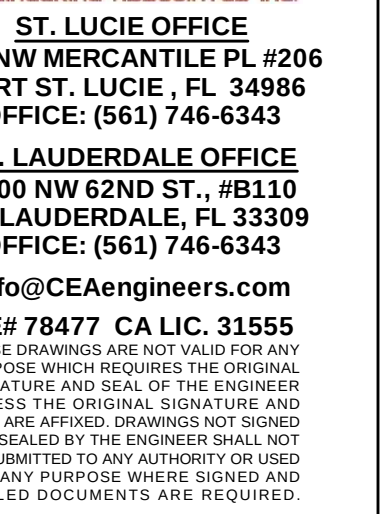
PROJECT NO.
814C632800

SHEET TITLE
LIGHTING
CONTROLS
PLAN

SHEET NUMBER
A-EL102

1. LIGHT FIXTURES SHALL BE FED FROM PANEL 'H1A' UNLESS OTHERWISE NOTED.
2. EXIT LIGHTS SHALL BE WIRED TO A CIRCUIT IN THE SAME SPACE AHEAD OF ANY SWITCHES AND OCCUPANCY SENSORS.
3. EXTERIOR BUILDING MOUNTED LIGHT FIXTURES ON THIS DRAWING SHALL BE CONTROLLED BY A TIMECLOCK IN CONJUNCTION WITH PHOTOCCELL AND LIGHTING CONTACTOR 'E-LCC'.

Little 2026 —



D.	REASON	DATE

A-EL103



SEE E-002 FOR LIGHT FIXTURE SCHEDULE

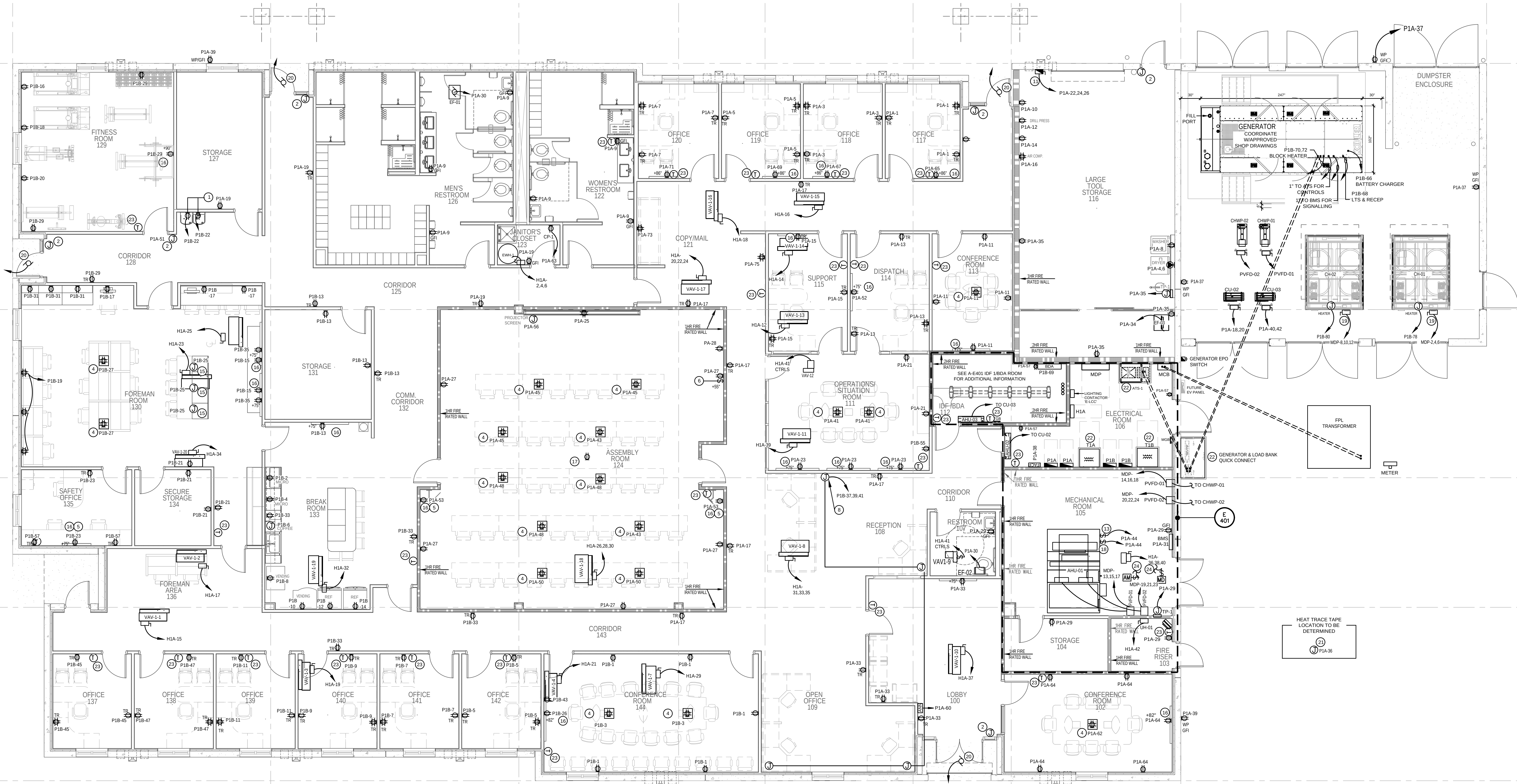
CARDINAL ENGINEERING ASSOCIATES INC. 21-03-34-00 FPL COLUMBIA: FPL 13 Feb 2026 - 11:55am

GENERAL NOTES THIS DRAWING

- CONTROL WIRING FOR MECHANICAL EQUIPMENT AND SYSTEMS PLANS (A-T101 THRU A-T102) WILL BE PROVIDED BY THE DIVISION 23 CONTRACTOR UNLESS OTHERWISE NOTED.
- REFER TO SYSTEMS PLANS (A-T101 THRU A-T102) FOR COMMUNICATIONS DEVICES. WHERE 120V RECEPTACLE ARE IN CLOSE PROXIMITY TO COMMUNICATIONS DEVICES, SUCH DEVICES SHALL BE INSTALLED AT THE SAME HEIGHT AS RECEPTACLES WITH NO MORE THAN 2" OF SEPARATION BETWEEN THEM.
- COORDINATE LOCATION OF FLOOR BOXES WITH OWNER AND FURNITURE PROVIDERS. LOCATIONS SHALL BE APPROVED BY OWNER PRIOR TO INSTALLATION.

KEYED NOTES (X)

- PROVIDE GFCI TYPE BRANCH CIRCUIT BREAKER AT SOURCE PANELBOARD FOR RECEPTACLES INDICATED.
- PROVIDE JUNCTION BOX FOR LOW VOLTAGE CONDUITS. COORDINATE WITH INSTALLER.
- INSTALL WEATHERPROOF DISCONNECT SWITCH TO BE PROVIDED BY THE DIVISION 23 CONTRACTOR WITH LOAD SIDE CONNECTIONS AND HOME RUN AS INDICATED.
- LEGAND FOUR COMPARTMENT FLOOR BOXES DESIGNED TO INCLUDE POWER, COMMUNICATIONS AND AV DEVICES.
- INSTALL TV RECEPTACLE WITH TOP OF OUTLET BOX 6" BELOW THE CEILING.
- PROVIDE A SWITCH TO CONTROL PROJECTOR SCREEN.
- NOT USED.
- FOUR CIRCUIT, 3-1/1 MODULAR FURNITURE WIRING SYSTEM. PROVIDE 2000PSH AND 120V/3PH ELECTRICAL CONNECTION TO EACH WIRING SYSTEM. REFER TO DETAIL 8 ON E504.
- INSTALL MOTOR RATED DISCONNECT SWITCH FURNISHED WITH EQUIPMENT BY DIVISION 23.
- FUSED DISCONNECT SWITCH FOR VAV FURNISHED WITH EQUIPMENT BY DIVISION 23. INSTALL DISCONNECT SWITCH IN AN ACCESSIBLE LOCATION WITHIN SIGHT OF MECHANICAL UNIT. FUSE SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATION. FIELD COORDINATE EXACT LOCATION OF UNIT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
- PROVIDE A 30A/3P HEAVY DUTY FUSED DISCONNECT SWITCH FOR OVERHEAD ROLL-UP DOOR. FUSE SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATION. PROVIDE ADDITIONAL CONDUIT, WIRING AND CONNECTION FOR DOOR CONTROLS AS DIRECTED BY DOOR MANUFACTURER AND INSTALLER.
- CHILLER'S ELECTRICAL REQUIREMENTS PER MANUFACTURER:
-VOLTAGE: 460/3/60
-MCA: 99A
-MCCP: 110A
-SCCR: 65000A
-CONNECTION TYPE: SINGLE POINT
- CONNECT UV-C EMITTER DEVICE. PROVIDE DOOR INTERLOCK SWITCH SO THAT SYSTEM AUTOMATICALLY TURNS OFF WHEN UNIT SERVICE DOOR IS OPEN.
- PROVIDE A 120V, 1 PHASE ELECTRICAL CONNECTION FOR AUTOMATIC MOTION SENSOR TRANSFORMER. COORDINATE ROUGH-IN REQUIREMENTS AND EXACT TRANSFORMER LOCATION WITH THE PLUMBING CONTRACTOR.
- PROVIDE A LEGRAND WIRMOLO DEQUORUM FLIP-UP TABLE BOX RECEPTACLE WITH USB PORTS. RECESS MOUNTED WITHIN TABLE TOP MILLWORK.
- TV RECEPT. COORDINATE W/ARCHITECTURAL DISPLAY A-400 FOR EXACT HEIGHT & LOCATION.
- PROJECTOR. COORDINATE EXACT LOCATION W/ARCHITECT & OWNER.
- CONNECT SERVICE LIGHTS. COORDINATE W/MECHANICAL TRADE AND ASSIST AS REQUIRED.
- DISCONNECTS TO MOUNTED ON UNISTRUT. COORDINATE W/MECHANICAL TRADE.
- CEILING DOOR MOTOR. PROVIDE ADDITIONAL CONDUIT, WIRING AND CONNECTION FOR DOOR CONTROLS AS DIRECTED BY DOOR MANUFACTURER AND INSTALLER.
- COORDINATE HEAT TRACE TAPE WITH FIRE SPRINKLER CONTRACTOR. PROVIDE CONNECTIONS IN ACCORDANCE WITH APPROVED SHOP DRAWINGS FOR THIS DESIGNATED DESIGN. USE 120V 3W PER FOOT HEAT TRACE TAPE.
- ALL GROUND MOUNTED ELECTRICAL EQUIPMENT SHALL BE MOUNTED ON A 4" HOUSEKEEPING PAD.
- COORDINATE FINAL THERMOSTAT LOCATIONS WITH HVAC AND CONTROLS TRADES. PROVIDE ROUGH-IN BOX AND 3/4" EMPTY CONDUIT WITH PULL STRING TO ACCESSIBLE CEILING SPACE.
- COORDINATE CONTROL VOLTAGE AND WIRING REQUIREMENTS WITH CONTROLS CONTRACTOR.



POWER PLAN

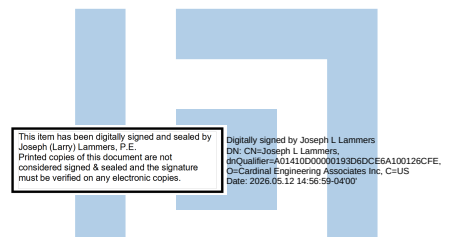
SCALE: 3/16" = 1'-0"

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02/15/2026

NO. REASON DATE

DAVID LITHGOW
DAVID LITHGOW
CEA

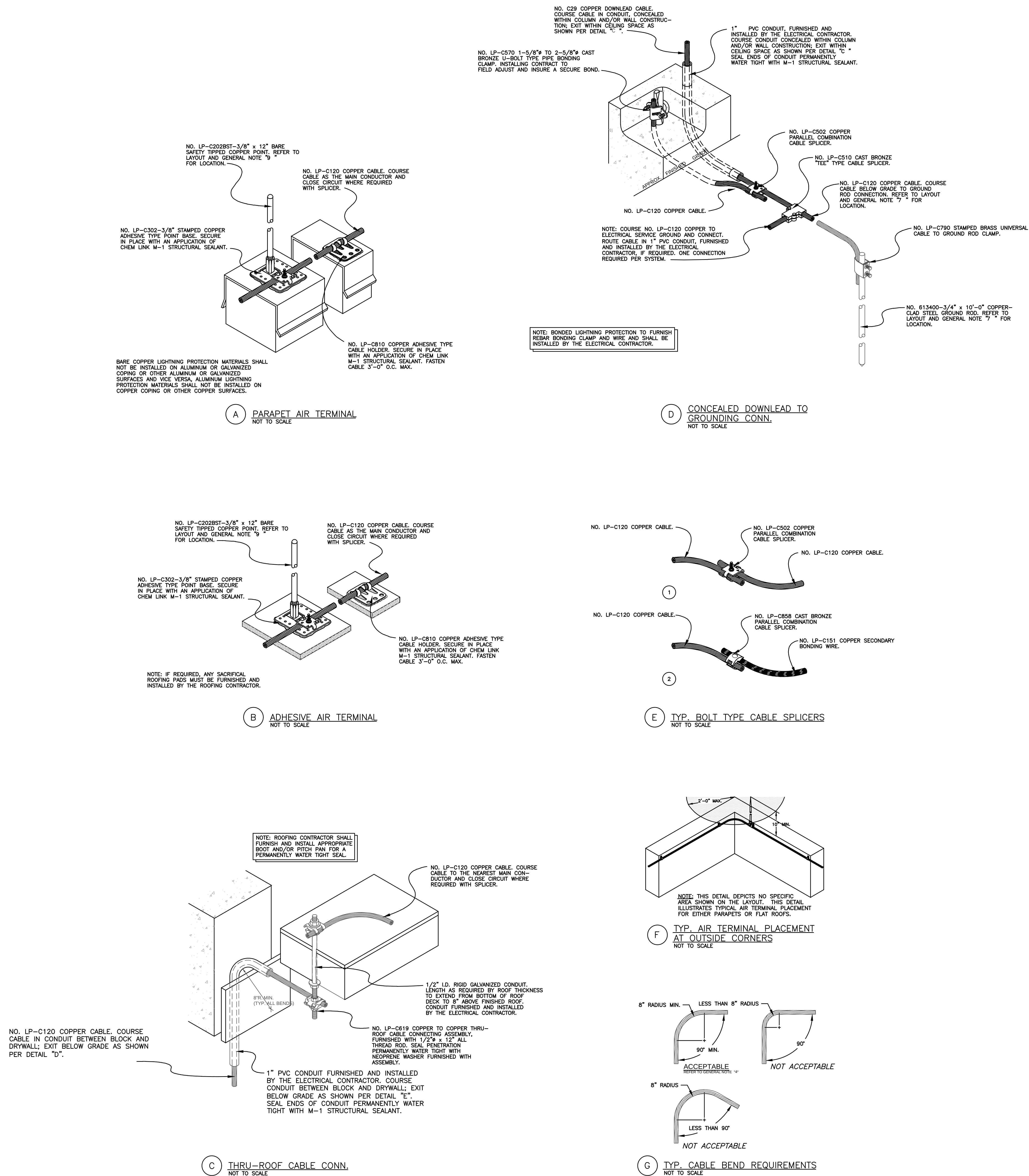
COLUMBIA STORM
PROCESSING & SERVICE
CENTER - BUILDING A -
SERVICE CENTER
FLORIDA POWER & LIGHT

814C632800

POWER PLAN

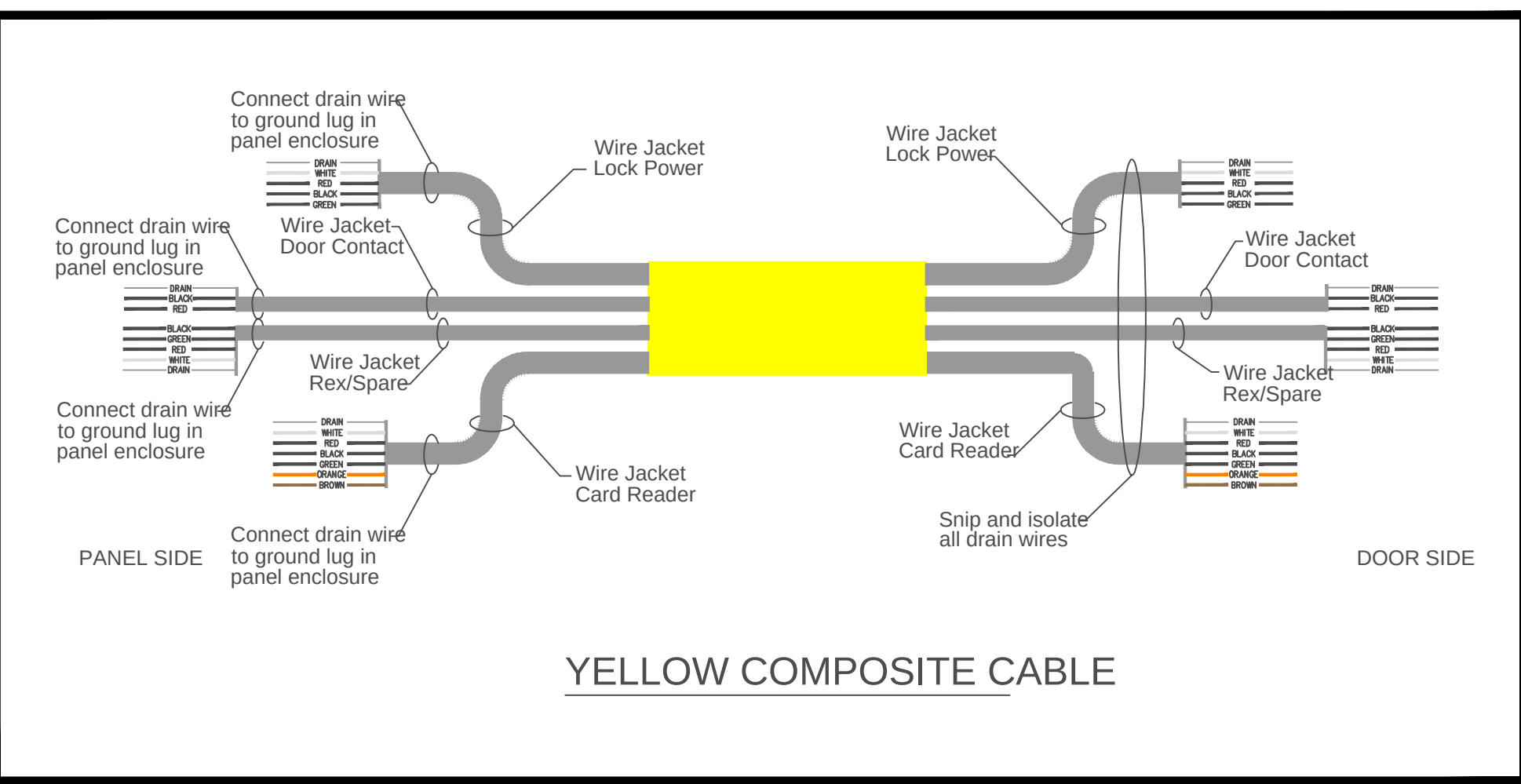
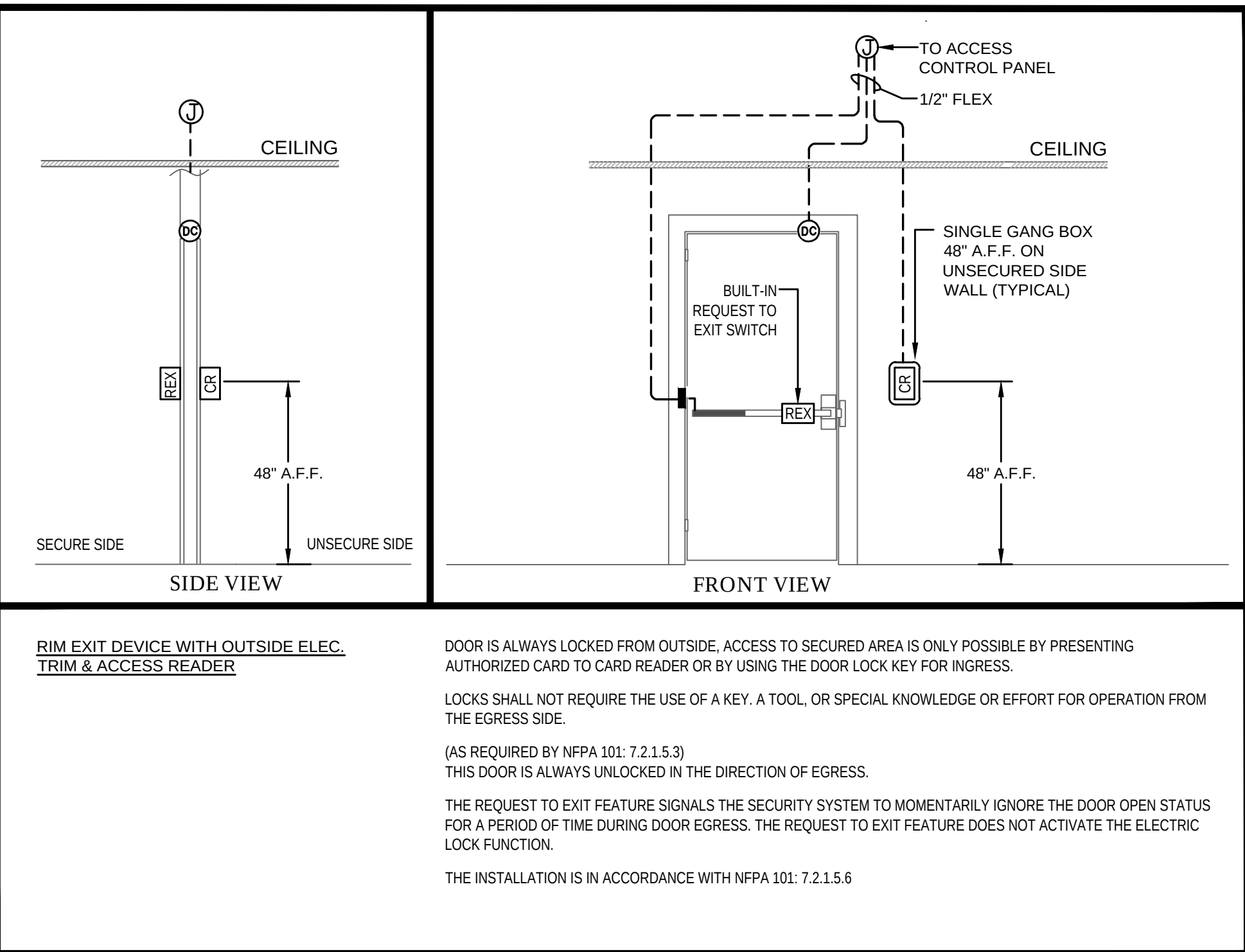
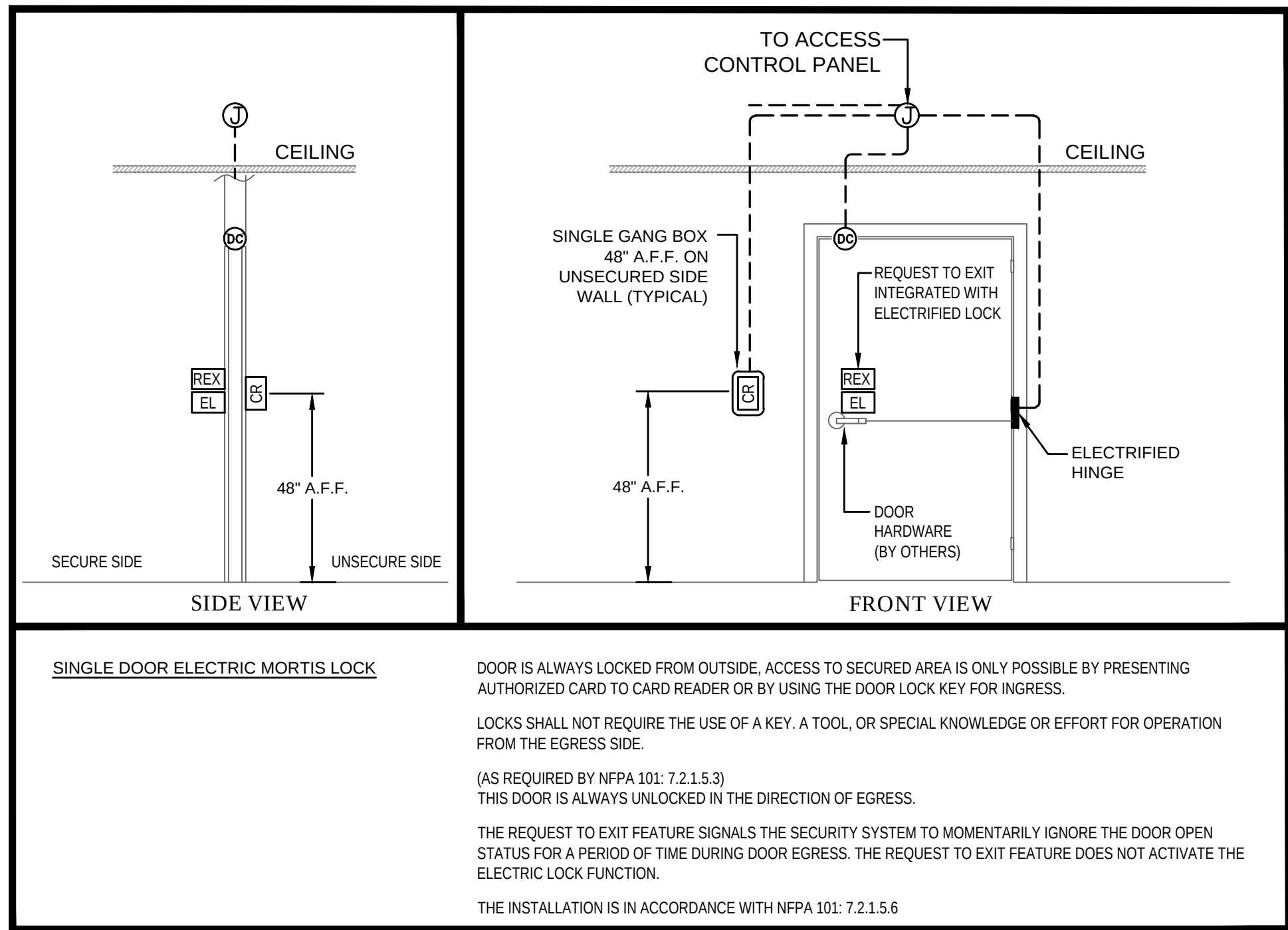
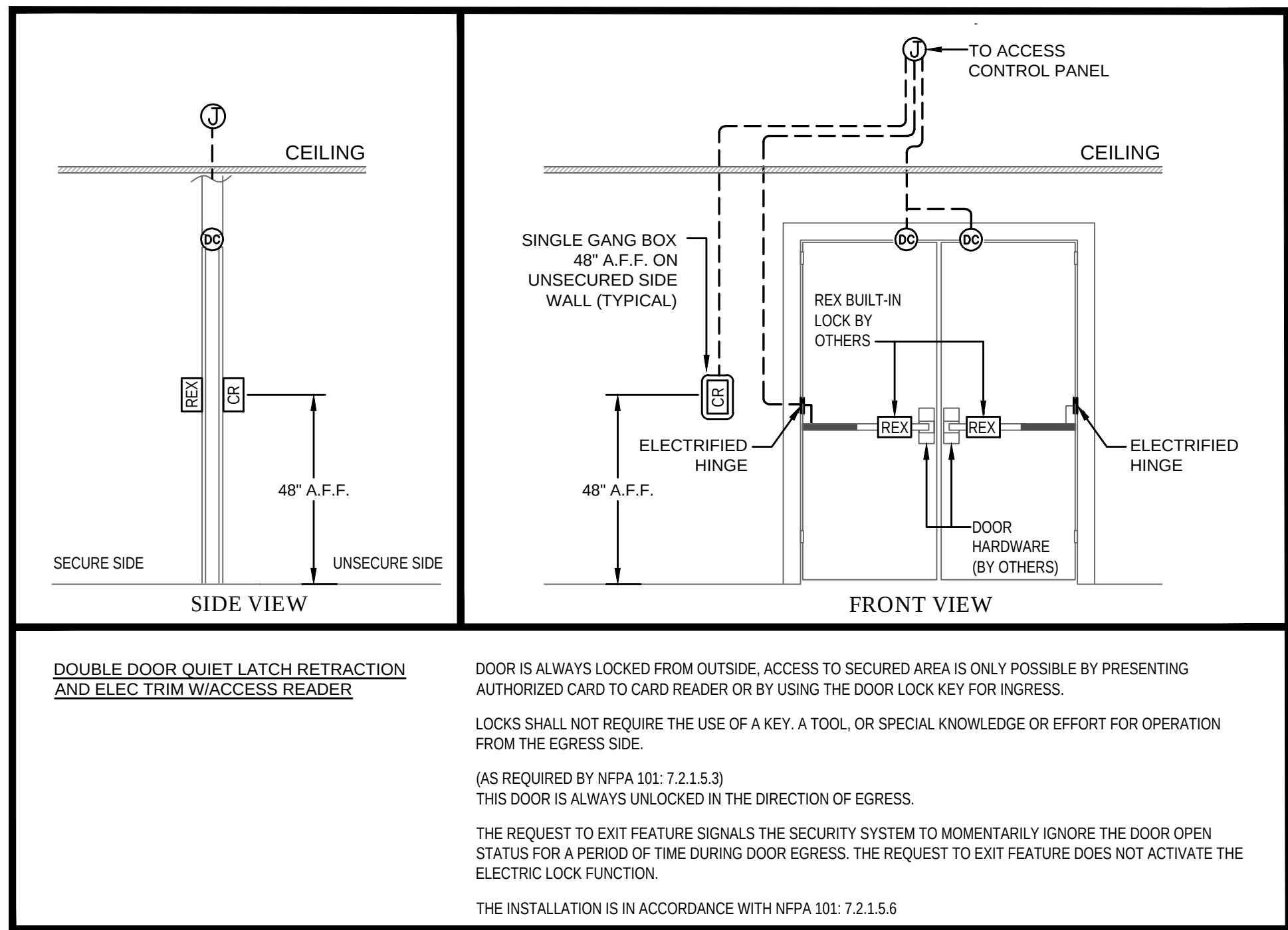
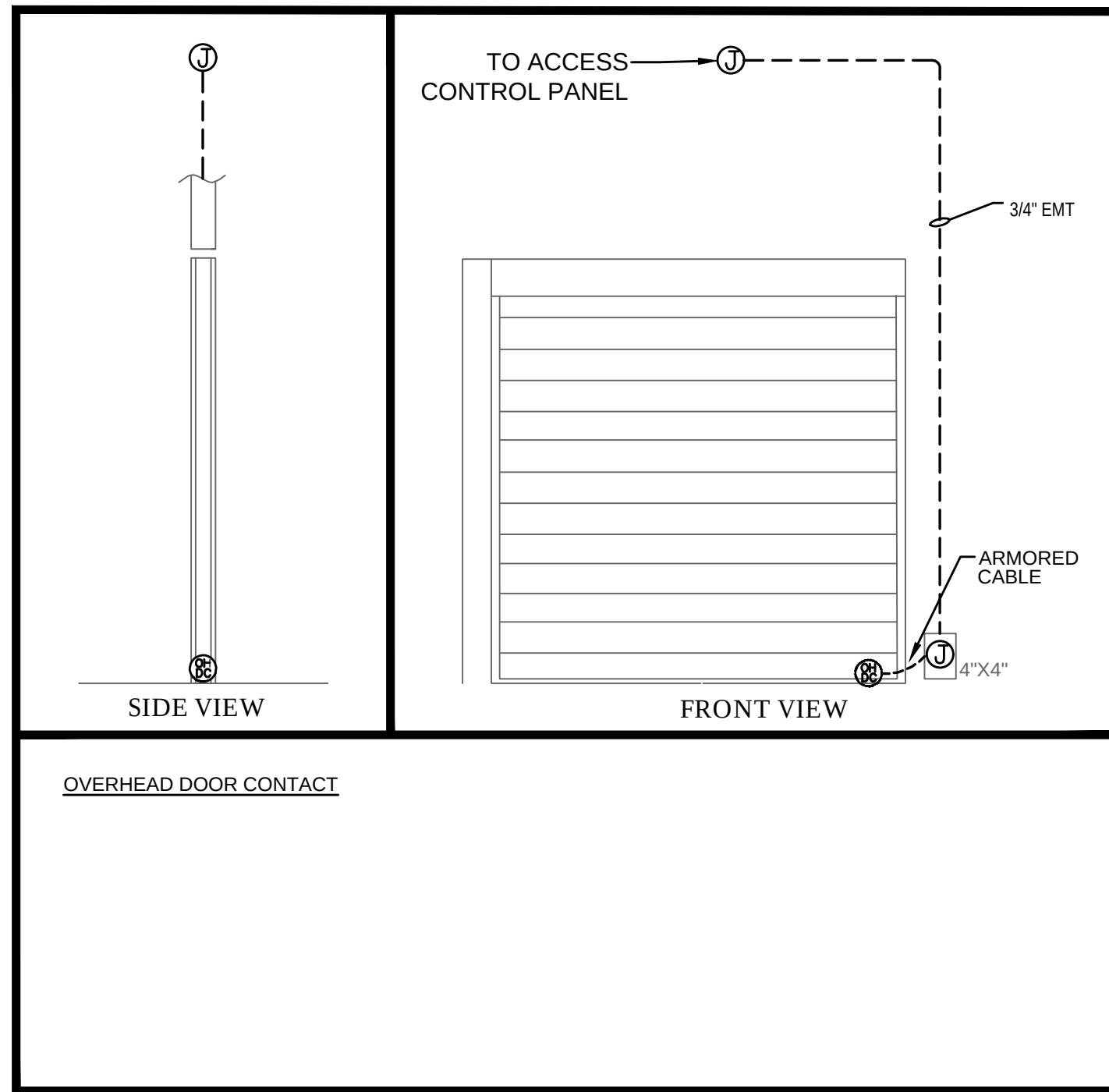
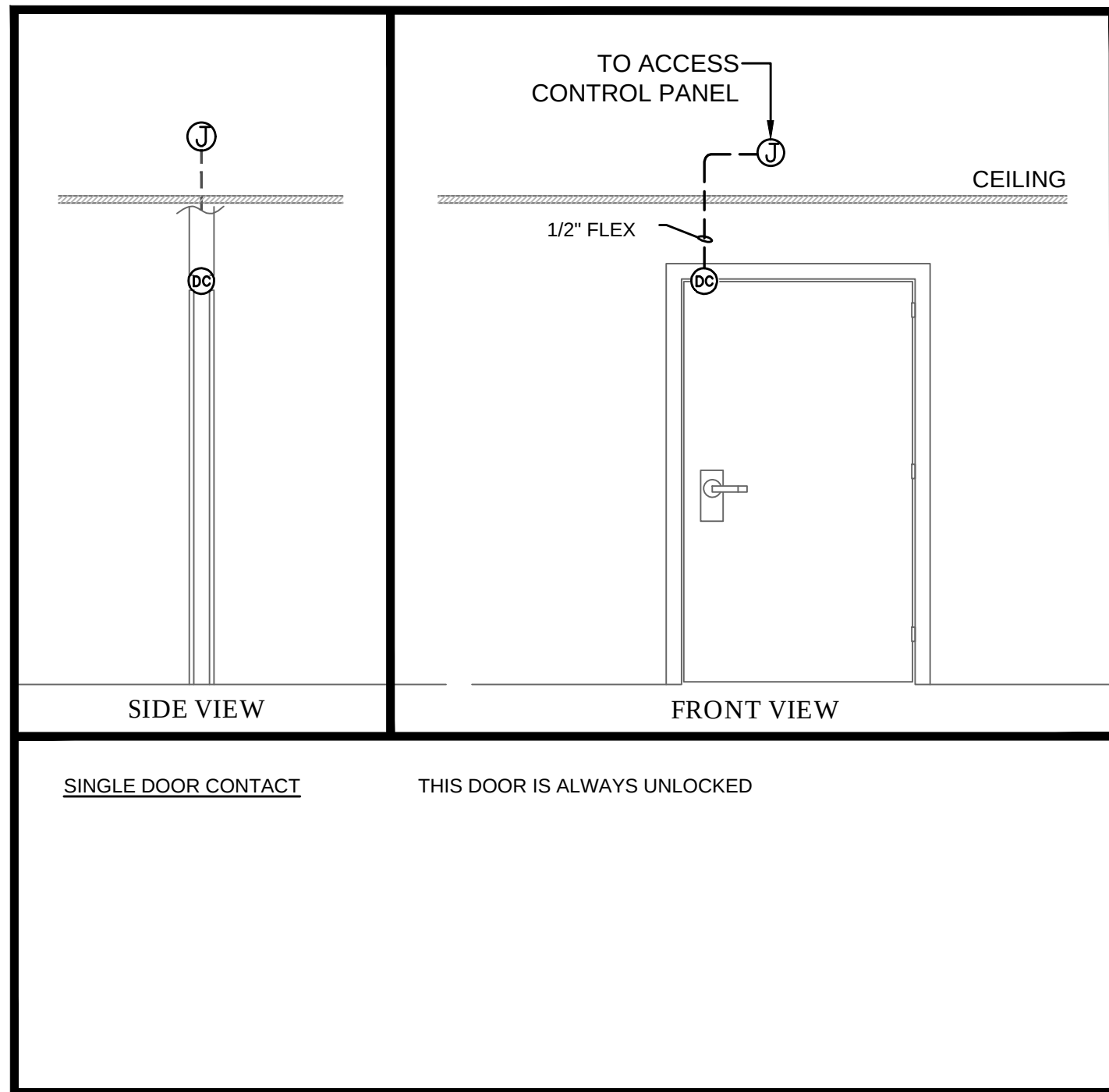
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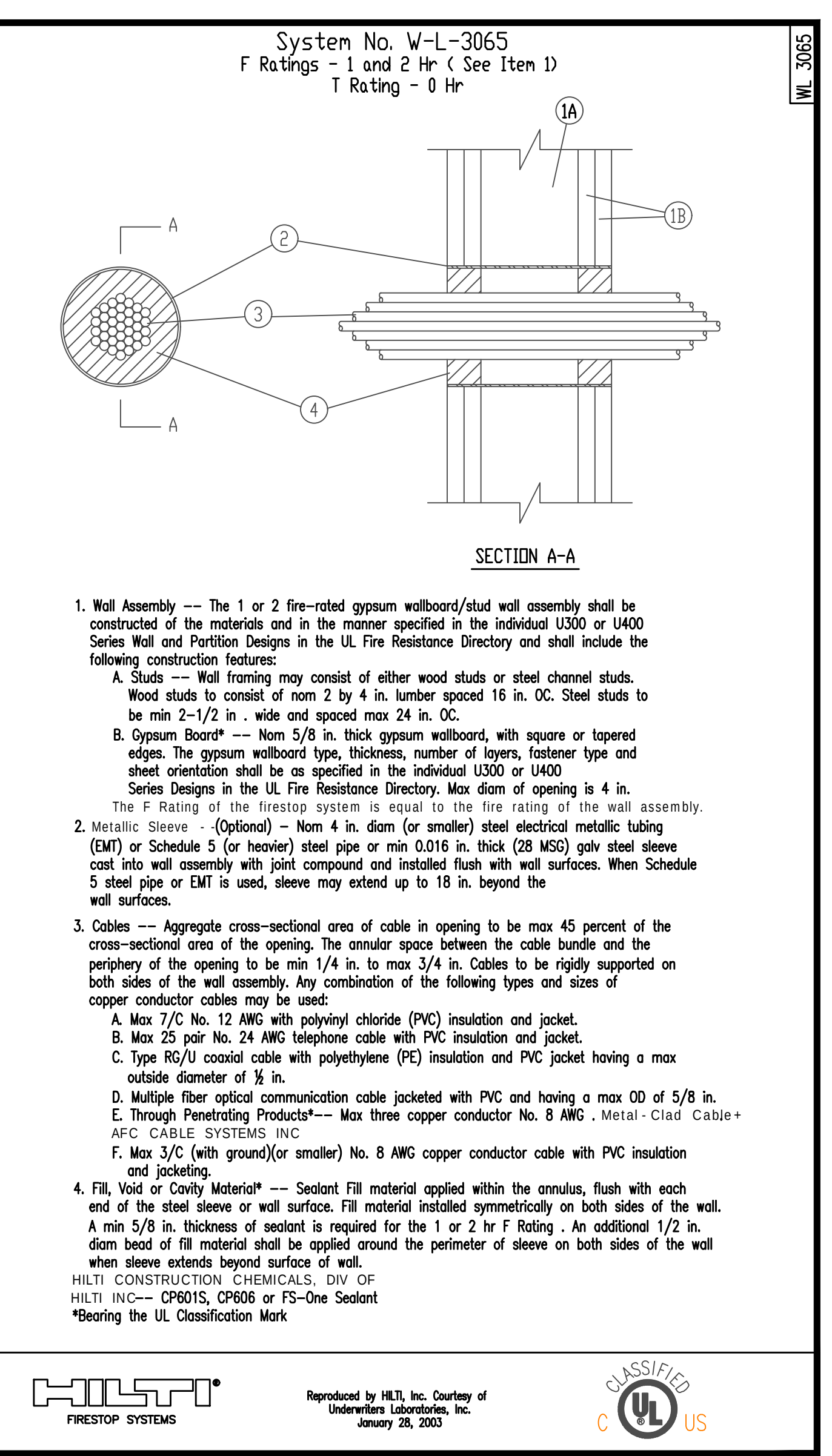
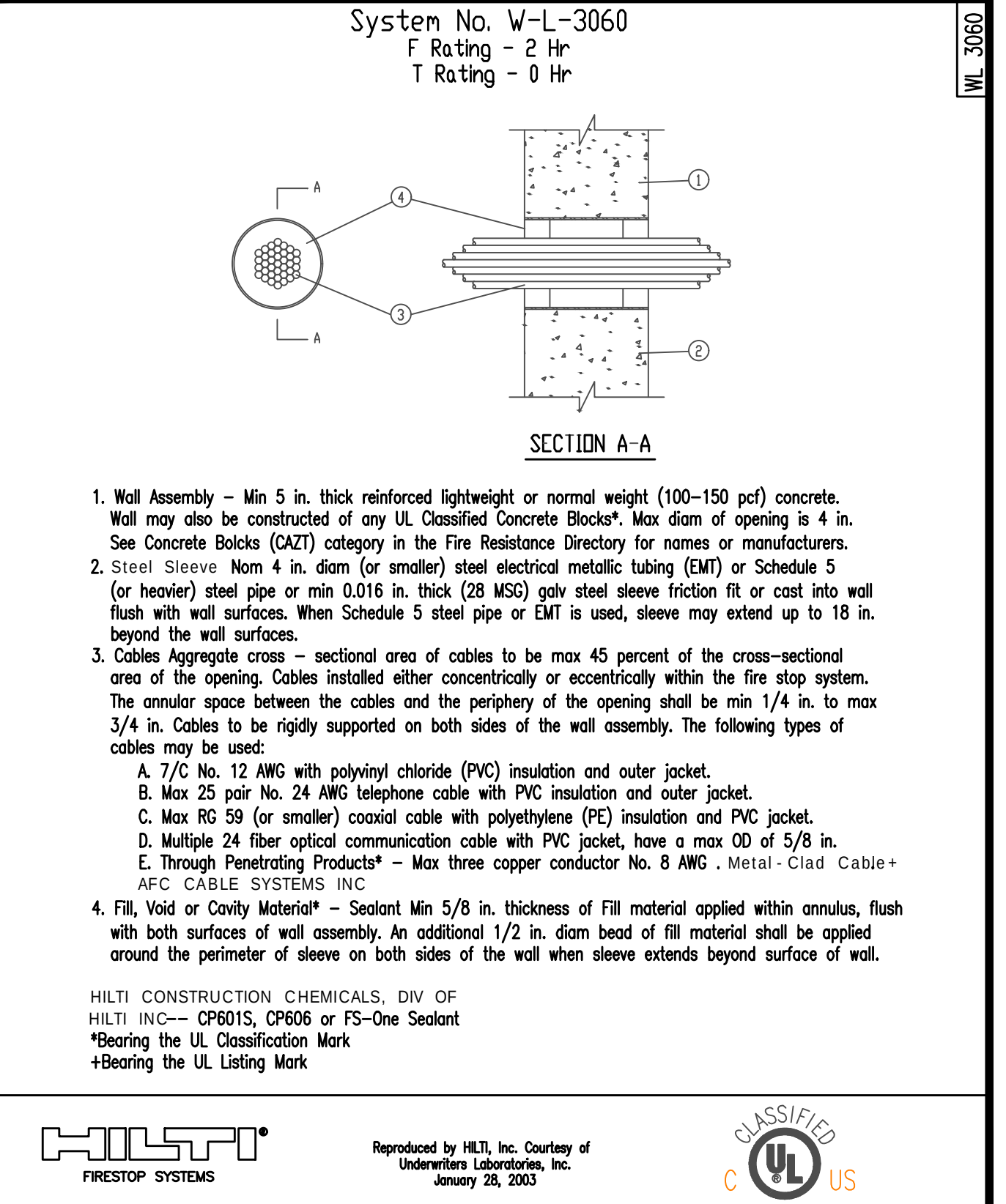
NOTE: THE DESIGN LAYOUT AND INSTALLATION PROCEDURES SHOWN FOR THE BUILDING LIGHTNING PROTECTION SYSTEM AND THE COMPONENT PARTS SHOWN HEREON ARE ILLUSTRATED AS A STANDARD OF QUALITY BY BONDED LIGHTNING PROTECTION 2080 W. INDIANTOWN ROAD, JUPITER, FLORIDA 33458. PHONE:561-746-4336 FAX:561-747-8233			
EVALUATION:			
LIGHTNING PROTECTION SYSTEM			
PROJECT: <u>SERVICE CENTER</u> <u>BUILDING A</u>			
FLORIDA  BONDED LIGHTNING PROTECTION LIGHTNING PROTECTION SYSTEMS, INC.			
INSTALLING MEMBER OF THE LIGHTNING PROTECTION INSTITUTE PHONE 561-746-4336 FAX 561-747-8233 2080 W. INDIANTOWN ROAD SUITE 100 JUPITER, FLORIDA 33458 333 N. FALKENBURG ROAD UNIT D-401 TAMPA, FLORIDA 33619 1505 CAPITAL CIRCLE NW UNIT 8 TALLAHASSEE, FLORIDA 32303			
JOB NO. MANUFACTURER		 EAST COAST LIGHTNING EQUIPMENT L.P.I. - MEMBER - U.L.F.A. PHONE 1-800-680-9462 E-MAIL: info@ecle.biz 24 LANSON DRIVE WINSTED, CT. 06098	
BLD20303			
DWN. BY RES CHK. BY PCD DATE: 6-20-22			
SCALE AS SHOWN			
SHEET NO. 2 -OF- 2			
NO.		DESCRIPTION	
BY		REVISIONS	

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ISSUE DATE		
02/15/2026		
PROJECT NAME		
NO.	REASON	DATE
DESIGN TEAM		
DAVID LITHGOW		
PROJECT MANAGER		
DAVID LITHGOW		
DESIGN TEAM		
CEA		
ISSUED BY NAME		
COLUMBIA STORM PROCESSING & SERVICE CENTER - BUILDING A - SERVICE CENTER FLORIDA POWER & LIGHT		
PROJECT NO.		
814C632800		
SUBJECT		
GROUNDING & LIGHTNING PROTECTION DETAILS		
SHEET NUMBER		
A-E502		



SYSTEMS TO BE INSTALLED WILL COMPLY WITH NFPA 101 2018 SECTION 7.2.1.5.6 (1-6)

- 7.2.1.5.6 DOOR HARDWARE RELEASE OF ELECTRICALLY LOCKED EGRESS DOOR ASSEMBLIES. DOOR ASSEMBLIES IN THE MEANS OF EGRESS SHALL BE PERMITTED TO BE EQUIPPED WITH APPROVED ELECTRICAL LOCKING SYSTEMS RELEASED BY THE OPERATION OF DOOR HARDWARE PROVIDED THAT ALL THE FOLLOWING CONDITIONS ARE MET:
- THE HARDWARE FOR EGRESS-SIDE OCCUPANT RELEASE OF THE ELECTRICAL LOCK IS AFFIXED TO THE DOOR LEAF.
 - THE HARDWARE HAS AN OBVIOUS METHOD OF OPERATION THAT IS READILY OPERATED IN THE DIRECTION OF EGRESS UNDER ALL LIGHTING CONDITIONS.
 - THE HARDWARE IS CAPABLE OF BEING OPERATED WITH ONE HAND IN THE DIRECTION OF EGRESS.
 - OPERATION OF THE HARDWARE DIRECTLY INTERRUPTS THE POWER SUPPLY TO THE ELECTRIC LOCK AND UNLOCKS THE DOOR ASSEMBLY IN THE DIRECTION OF EGRESS.
 - LOSS OF POWER TO THE LISTED RELEASING HARDWARE AUTOMATICALLY ELECTRICALLY UNLOCKS THE DOOR ASSEMBLY IN THE DIRECTION OF EGRESS.
 - HARDWARE FOR NEW INSTALLATIONS IS LISTED IN ACCORDANCE WITH ANSI/UL 294, STANDARD FOR ACCESS CONTROL SYSTEM UNITS.



ACCESS CONTROL DEVICES LEGEND

D ACP ACCESS CONTROL PANEL & LOCK POWER SUPPLY

- (1) LNL-X2220
- (2) LNL-1320-S3
- (1) FPO150-B100C4D8NL4RB24M1

E ACP ACCESS CONTROL PANEL & LOCK POWER SUPPLY

- (1) LNL-X2220
- (8) LNL-1320-S3
- (2) FPO150-B100C4D8NL4RB24M1
- (1) FPO150-B100C4D8NL4RB2E2M

F ACP ACCESS CONTROL PANEL & LOCK POWER SUPPLY

- (1) LNL-X2220
- (1) LNL-1320-S3
- (1) FPO75-B100C4D8NL4RB2E2M

CR CARD READER
HID 920NNPNEK2009Y

IT INTERCOM
AXIS 18016-LVE

DC DOOR CONTACT
GRI 4400-A

OH DC OVERHEAD DOOR CONTACT (OHDC)
GRI 4700-A

REL REX QUIET LATCH RETRACTION (RX-REL-9847-EO & RX-QEL+9847-NL-OP-110MD) BY OTHERS

EL REX ELEC. MORTISE LOCK W/ BUILT IN REX (BEST 45HW-7-DEU-14H-C-RQE) BY OTHERS

PE REX RIM EXIT DEVICE WITH BUILT IN REX & ELEC. OUTSIDE TRIM (E996L) BY OTHERS

PTH POWER TRANSFER HINGE (BY OTHERS)

CCTV DEVICES LEGEND

CAK NETWORK CAMERA (P3375-V)

CAK NETWORK CAMERA (P3375-V)

GENERAL NOTES THIS DRAWING:

- DETAILS ON THIS DRAWING ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. THE ACTUAL LAYOUT OF THE EQUIPMENT, DEVICES, AND ROUTING OF CONDUIT(S) SHALL BE PROVIDED BY FPL'S SECURITY SYSTEM VENDOR.

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NO.	REASON	DATE
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PRINCIPAL IN CHARGE
DAVID LITHGOW

PROJECT MANAGER
DAVID LITHGOW

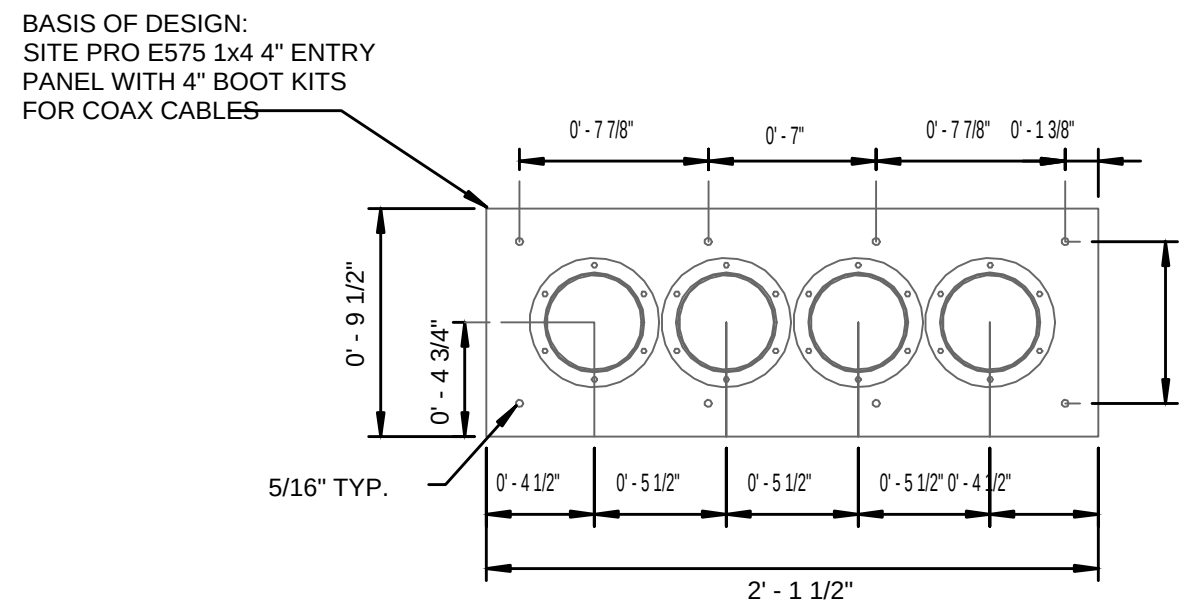
DESIGN TEAM
CEA

PROJECT NAME
COLUMBIA STORM PROCESSING & SERVICE CENTER - BUILDING A - SERVICE CENTER
FLORIDA POWER & LIGHT

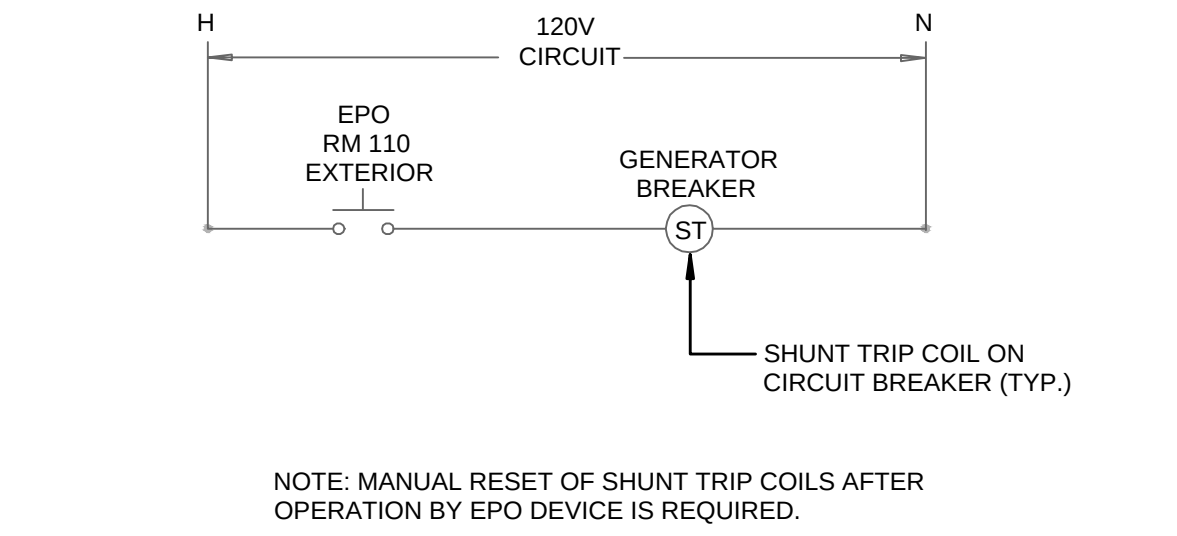
PROJECT NO.
814C632800

SHEET TITLE
DETAILS

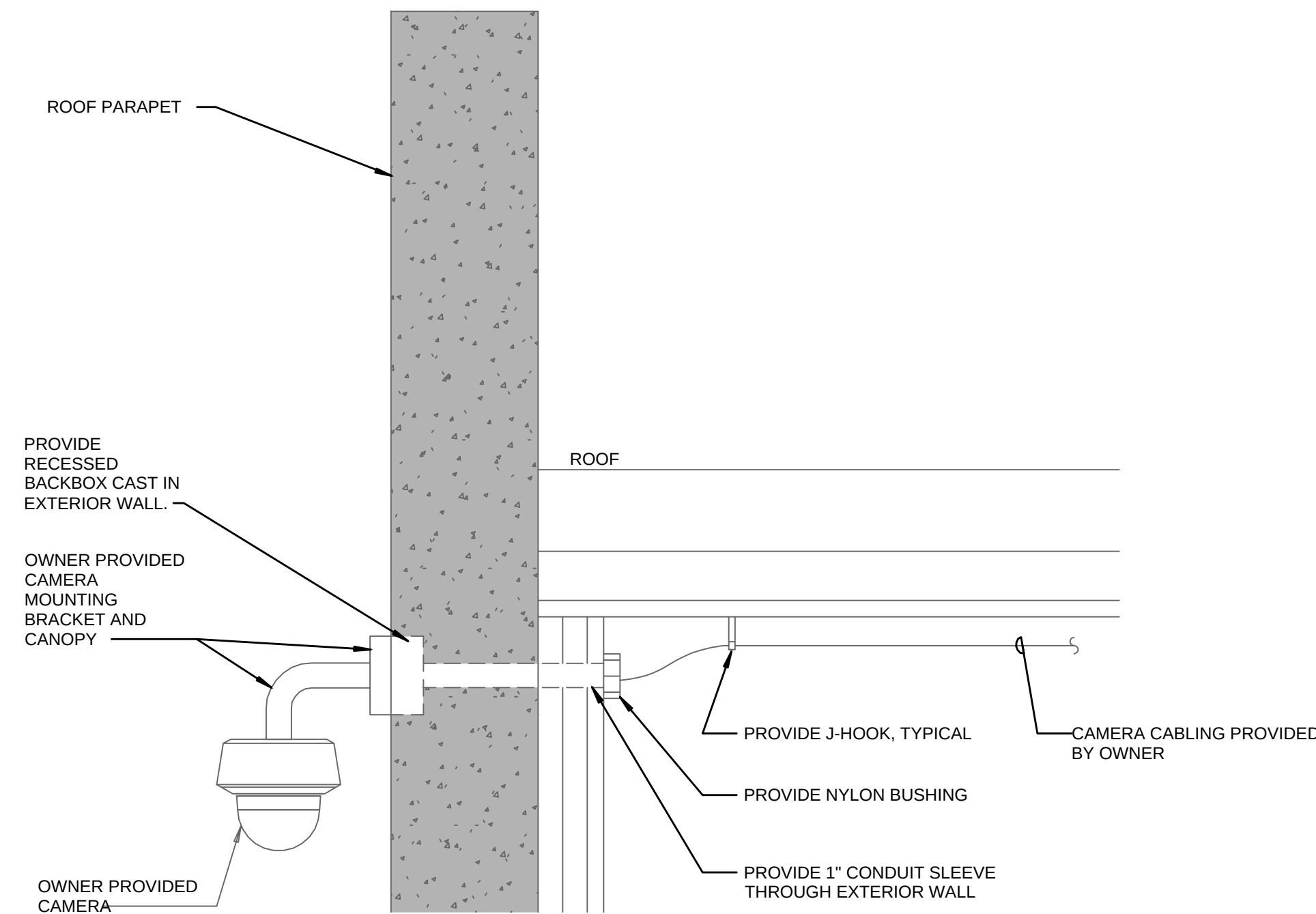
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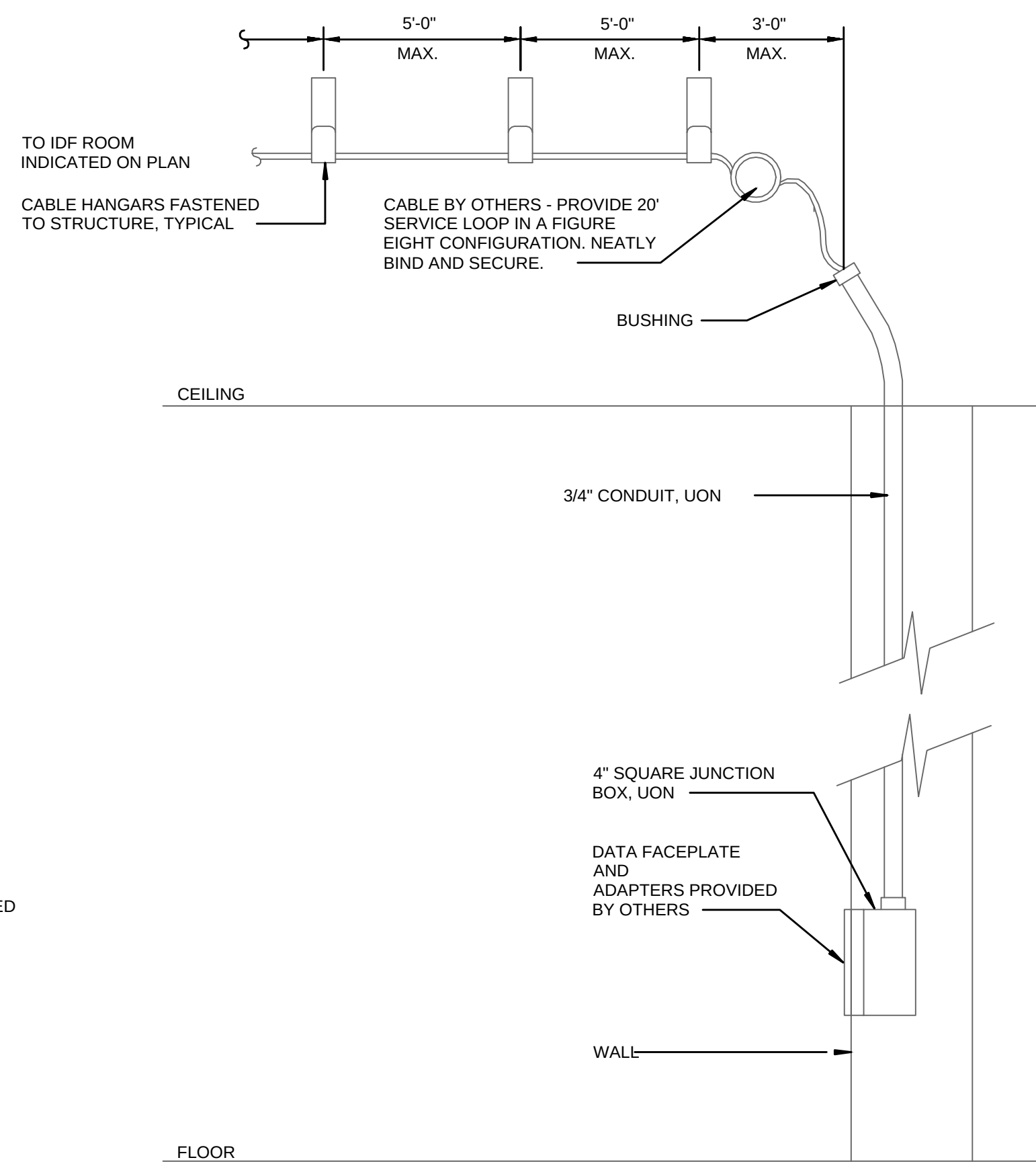
1 ANTENNA SLEEVE DETAIL
A-E504 NTS



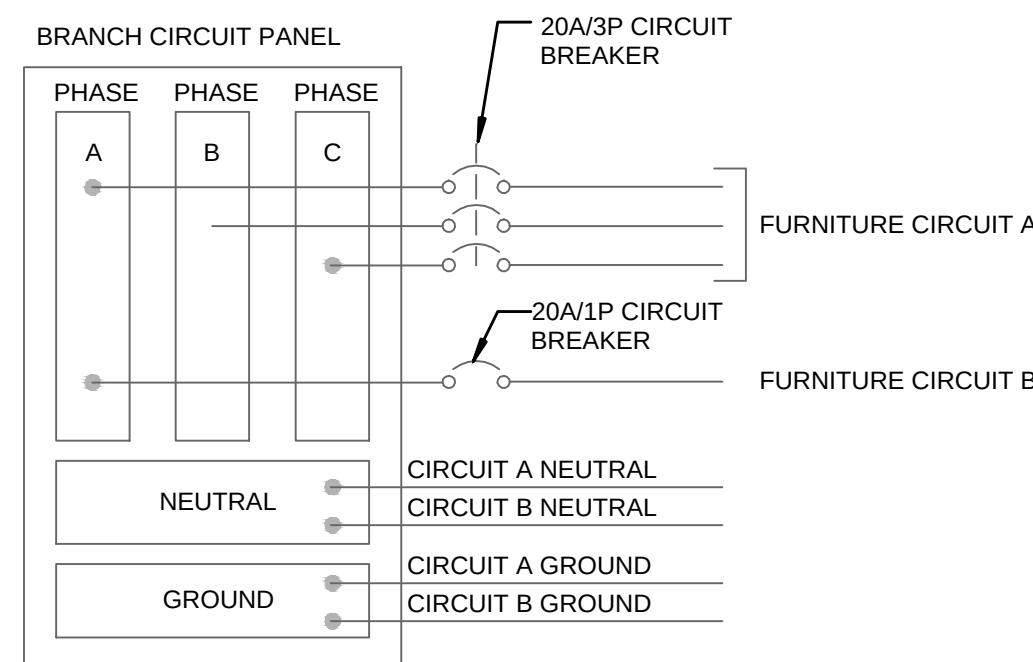
2 EPO SHUNT TRIP WIRING DIAGRAM
A-E504 NTS



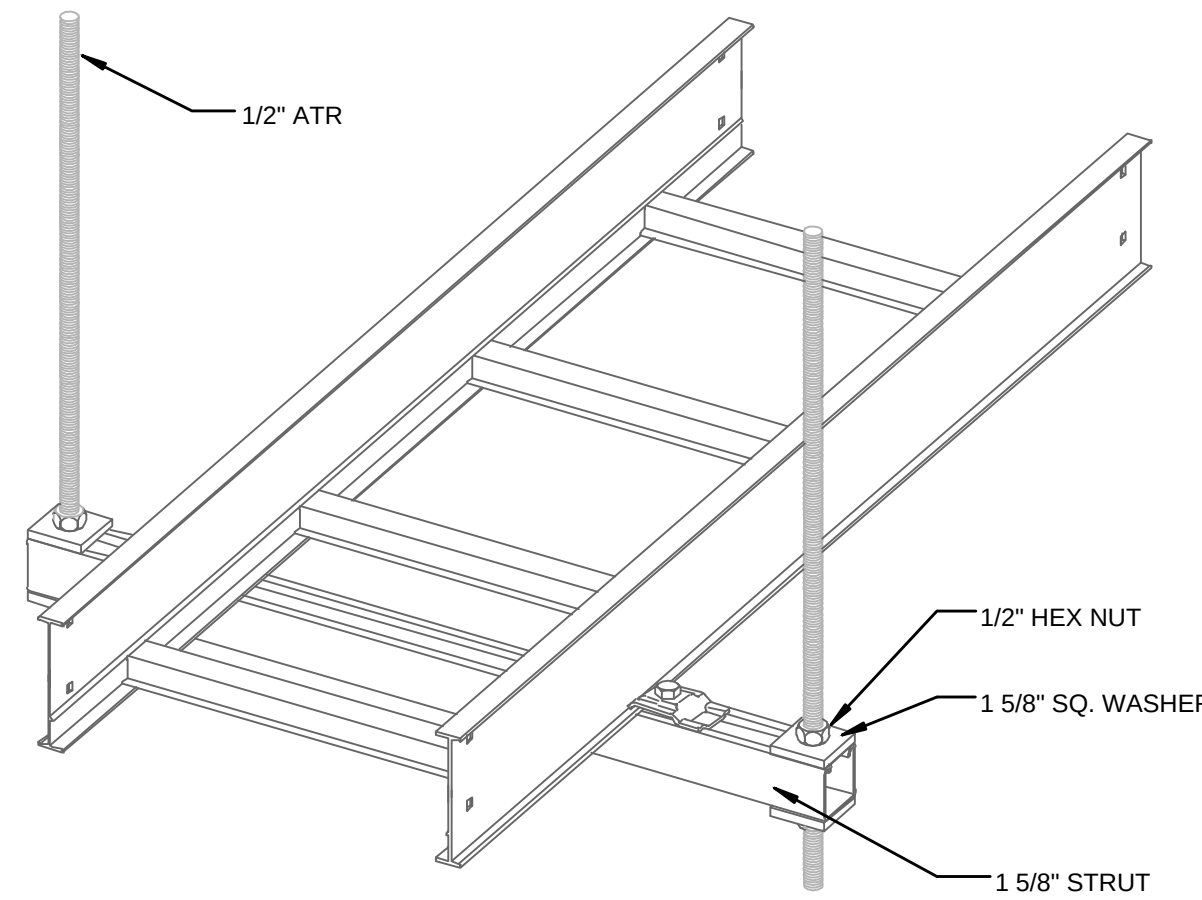
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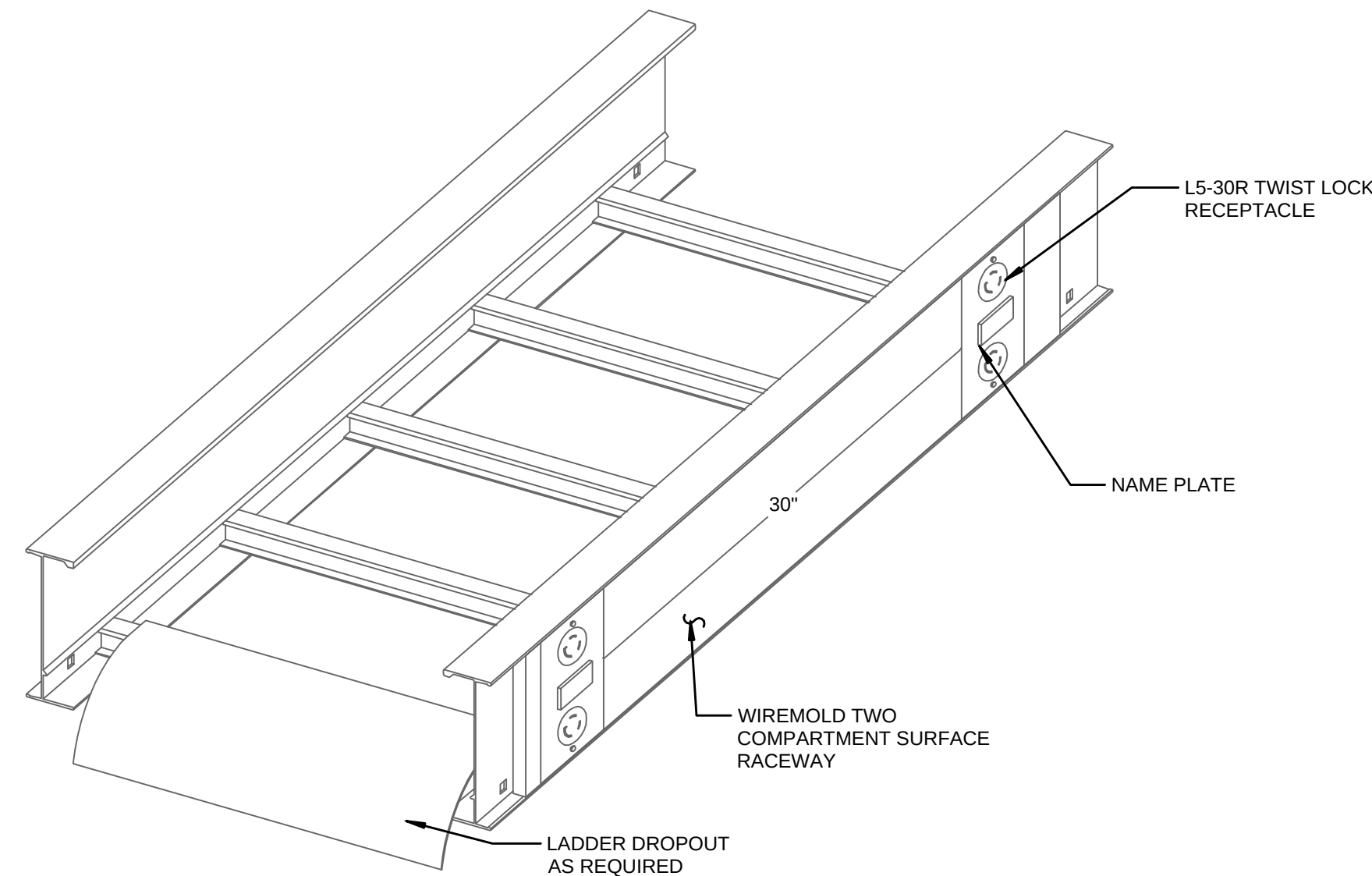
4 DATA OUTLET RACEWAY DETAIL
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5 SYSTEMS FURNITURE WIRING DIAGRAM
A-E504 NTS

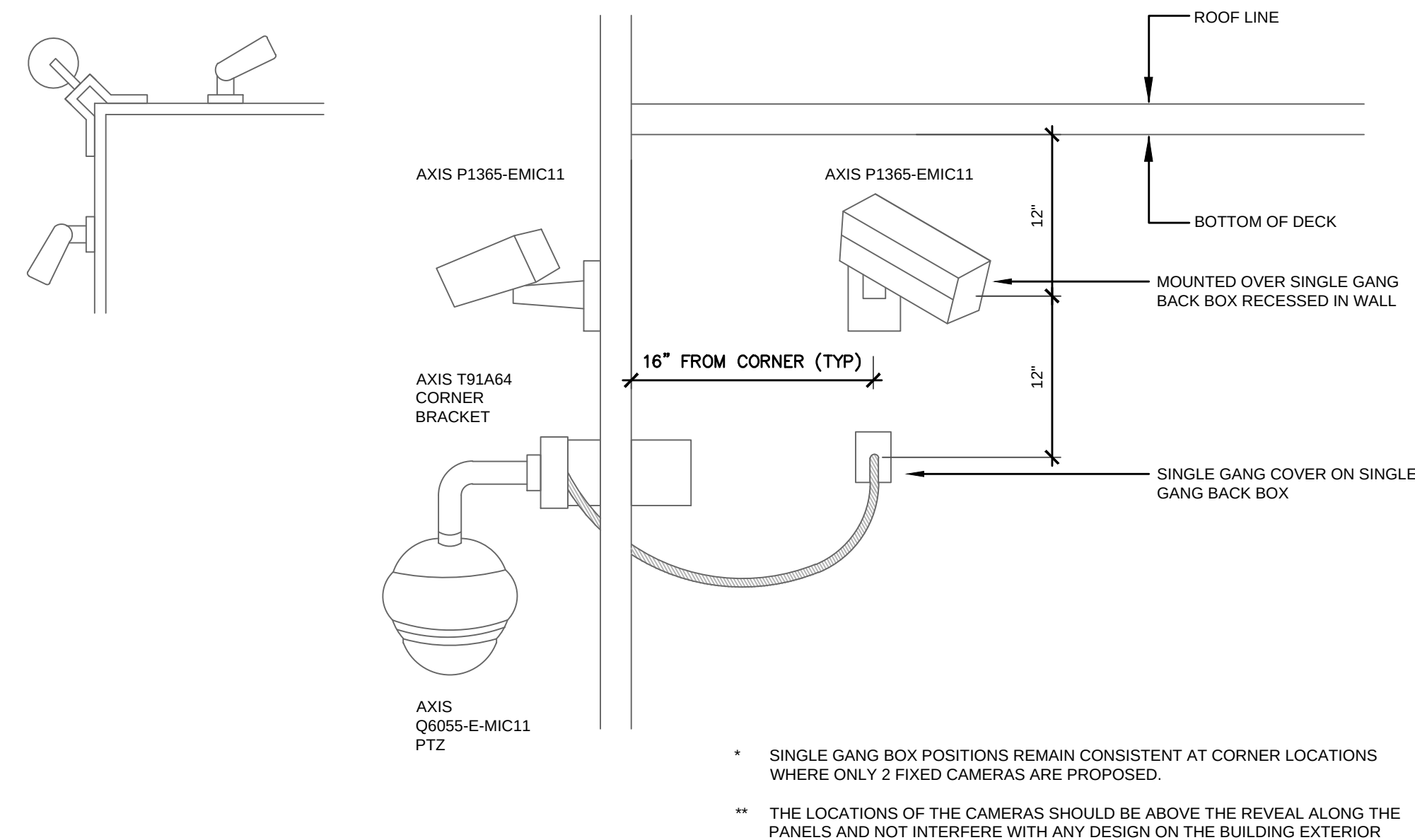


6 SINGLE TRAY TRAPEZE HANGER DETAIL
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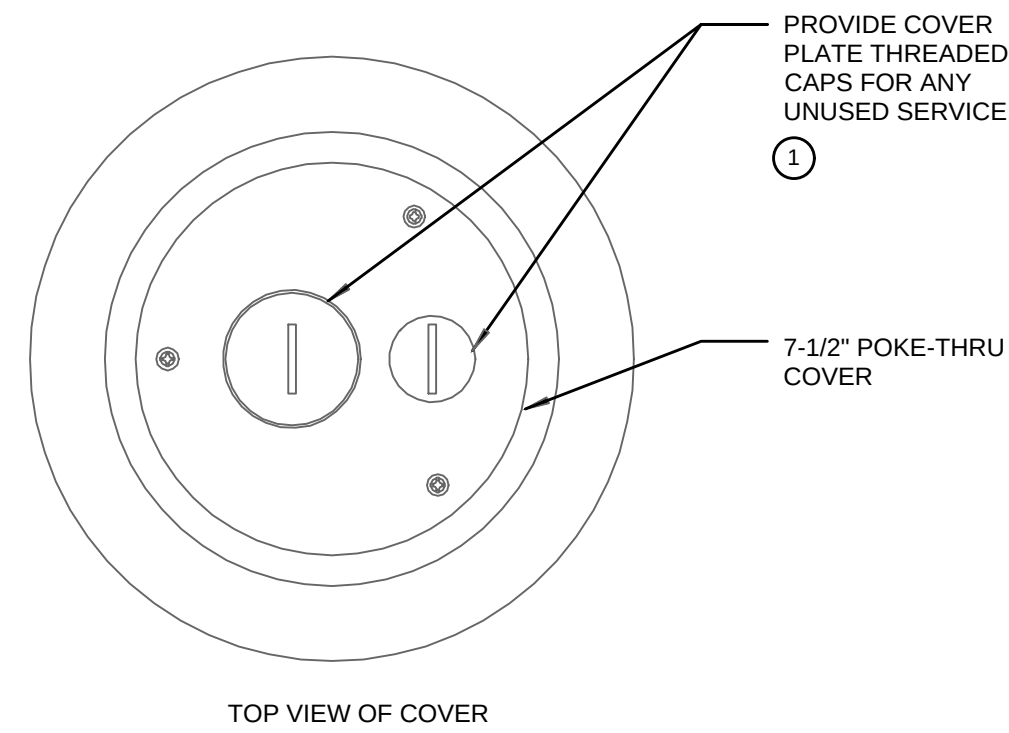
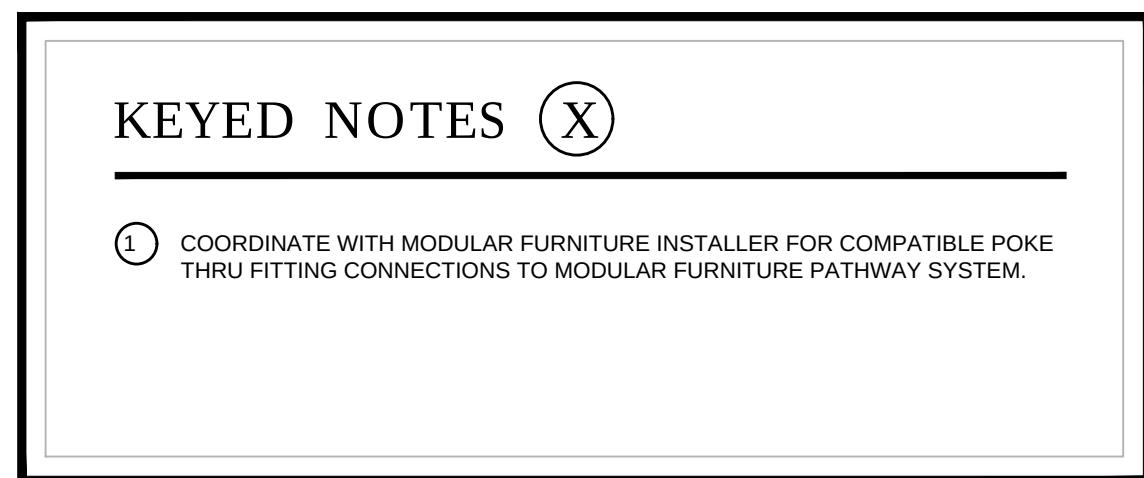


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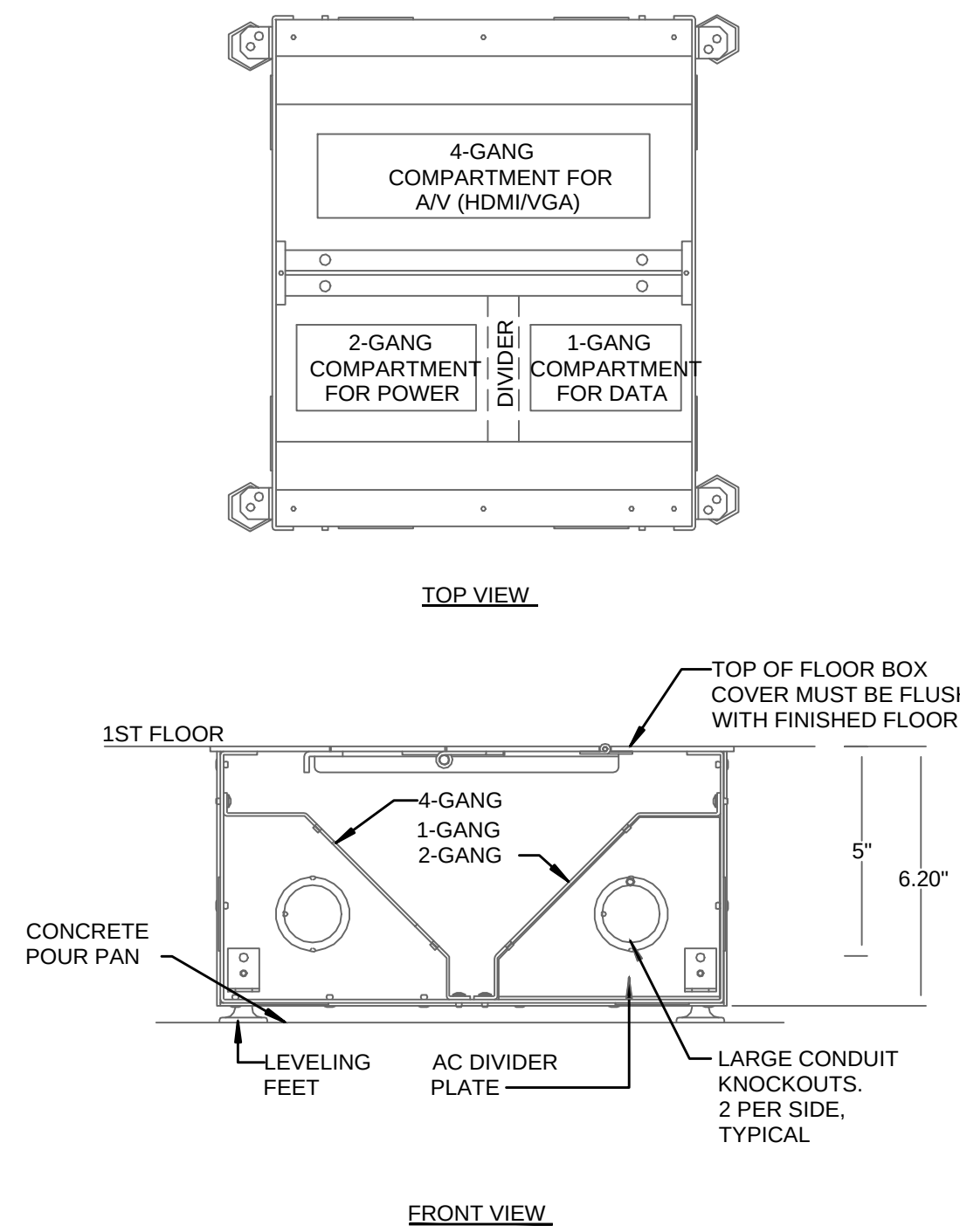
7 CABLE TRAY RECEPTACLE DETAIL
A-E504 NTS



8 EXTERIOR CAMERA MOUNTING
A-E504 NTS



9 FOUR COMPARTMENT FLOOR BOX DETAIL
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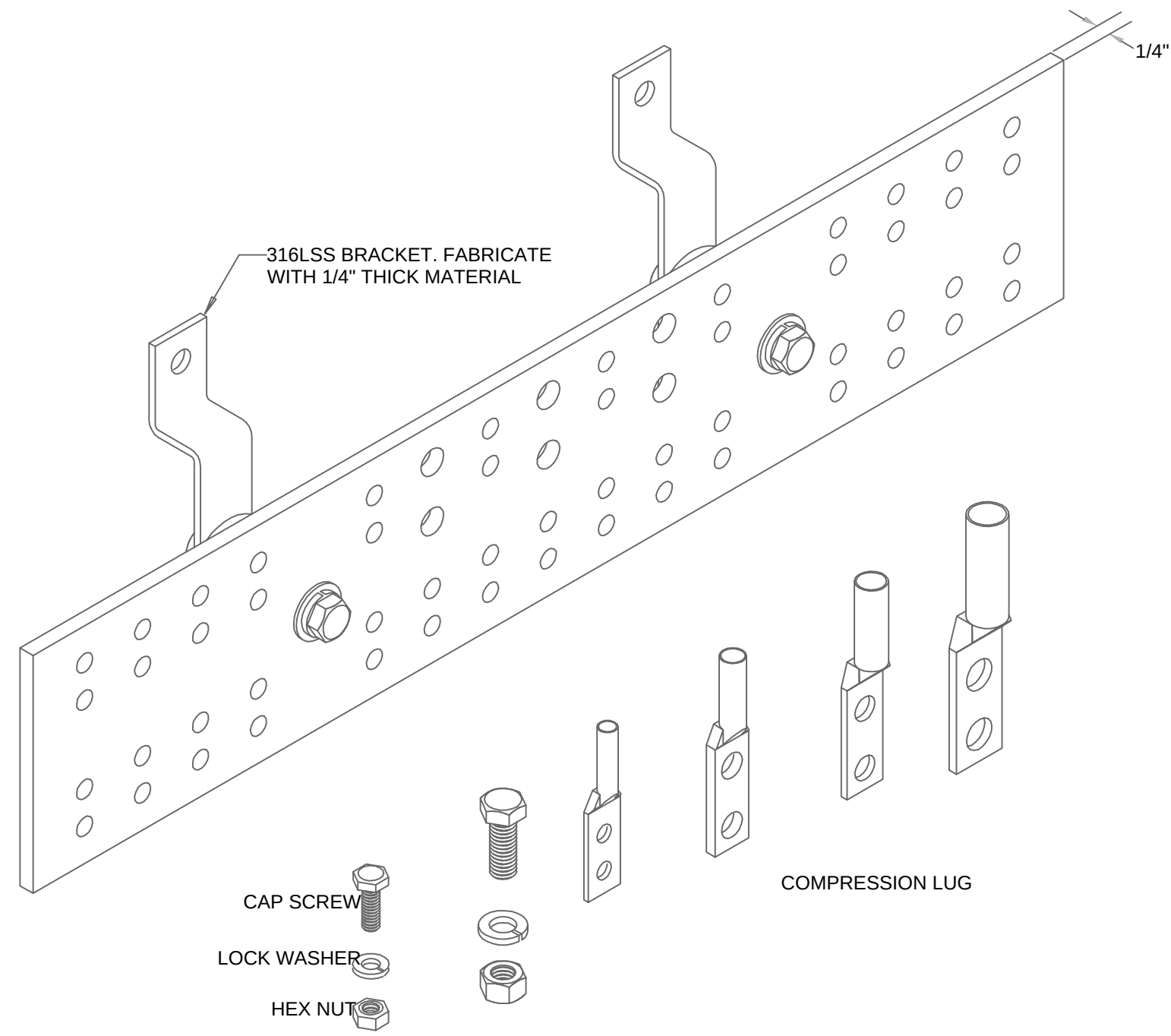
DESIGN TEAM
CEA

PROJECT TEAM
DAVID LITHGOW
DAVID LITHGOW

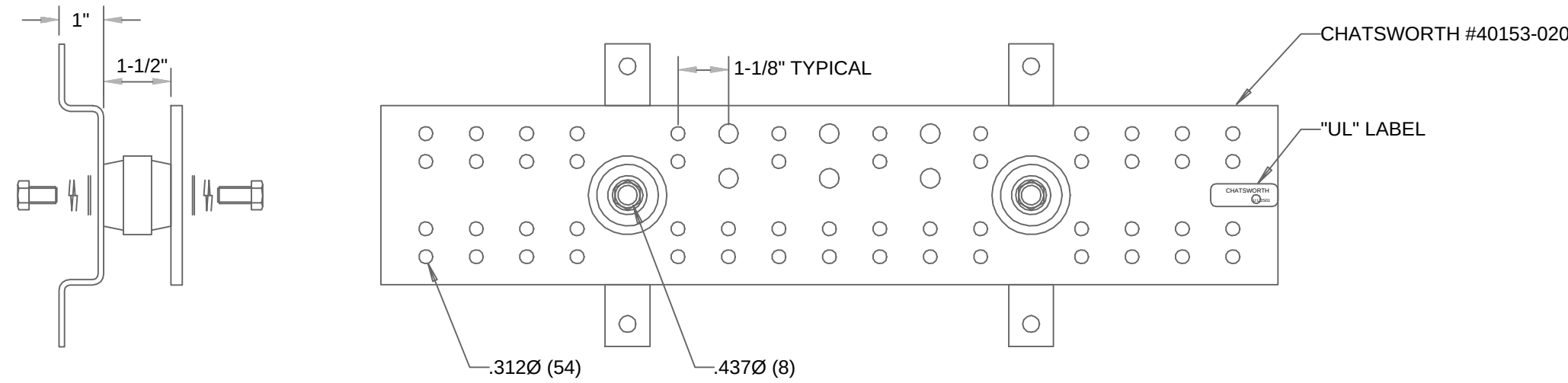
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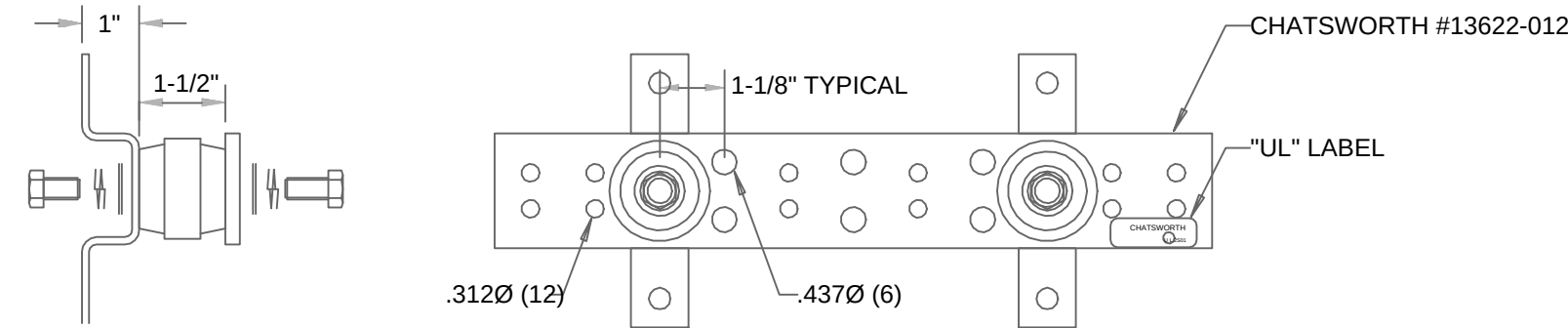
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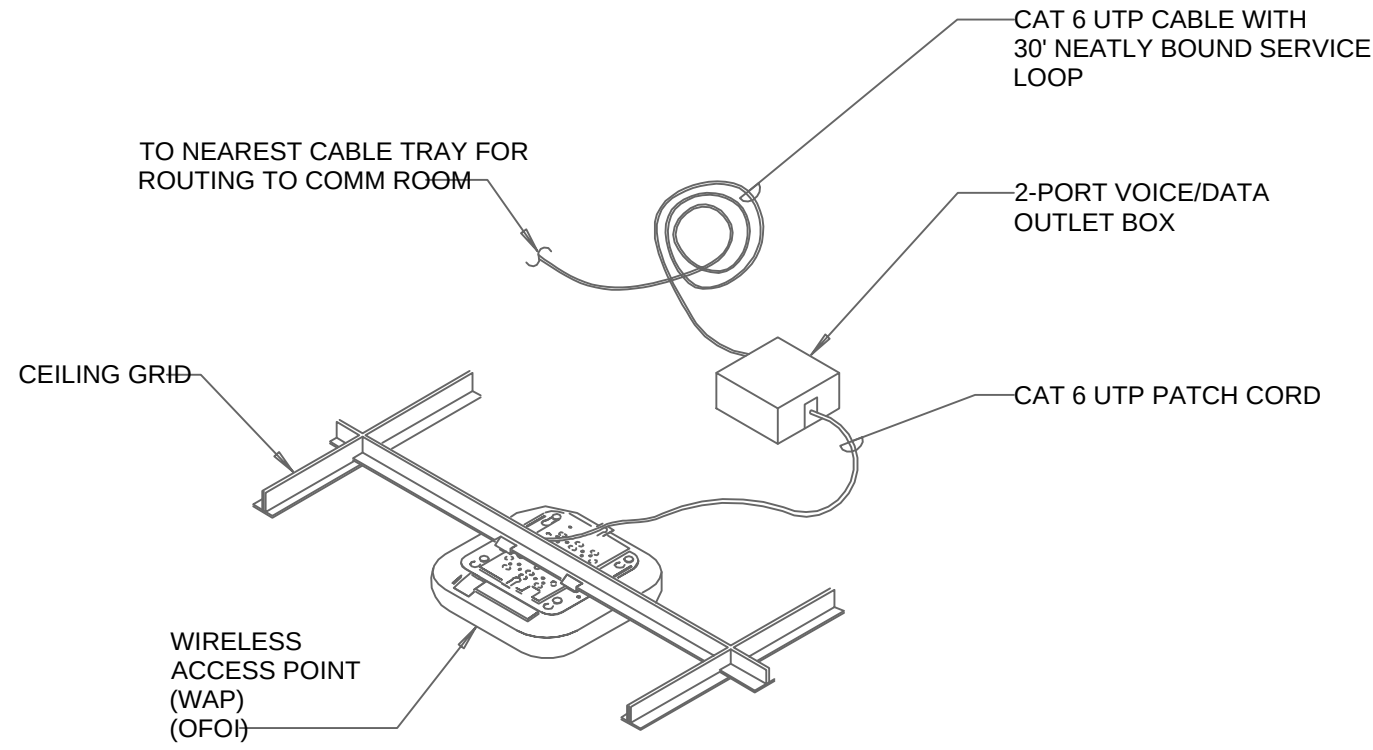
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A-E505 NTS



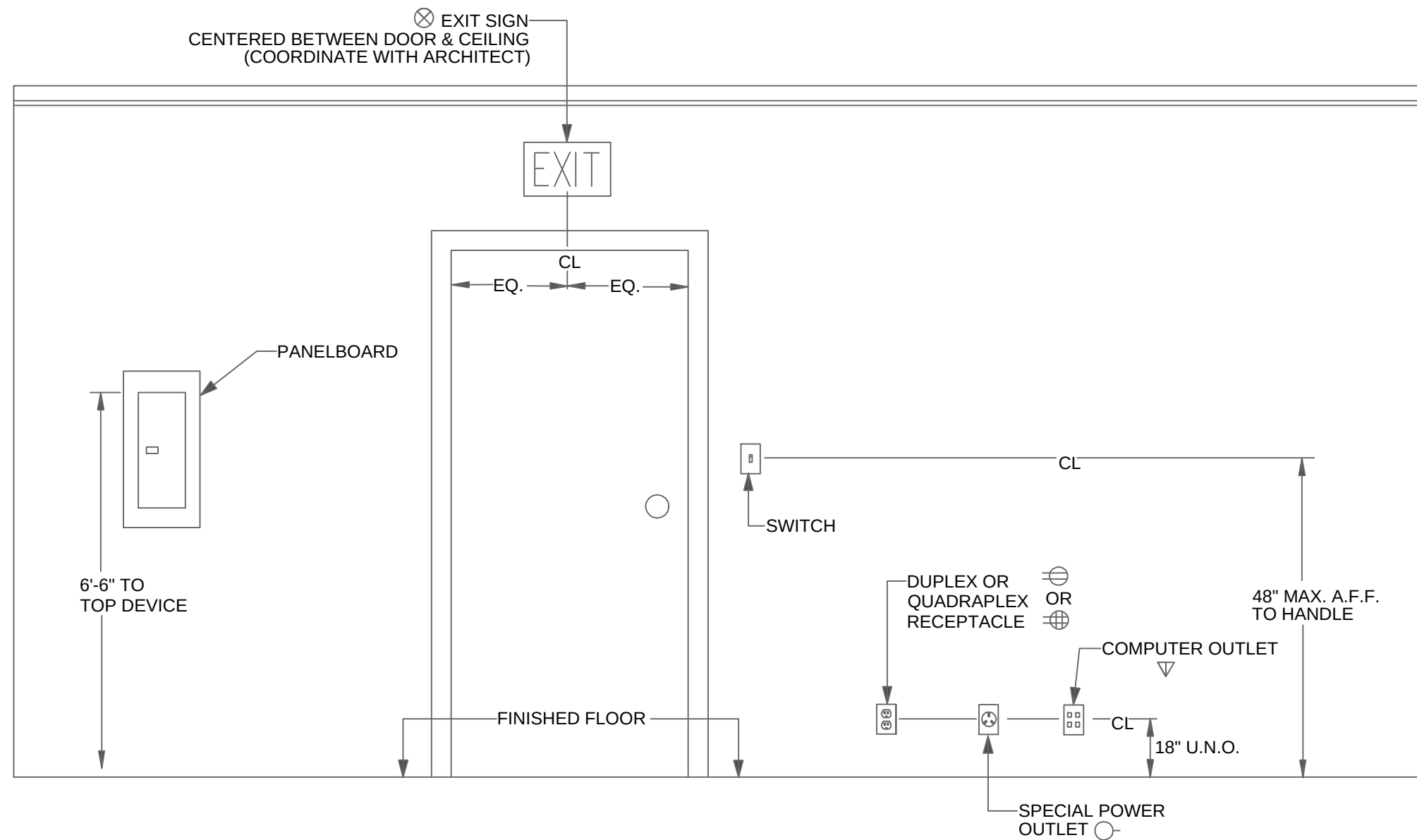
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A-E505 NTS



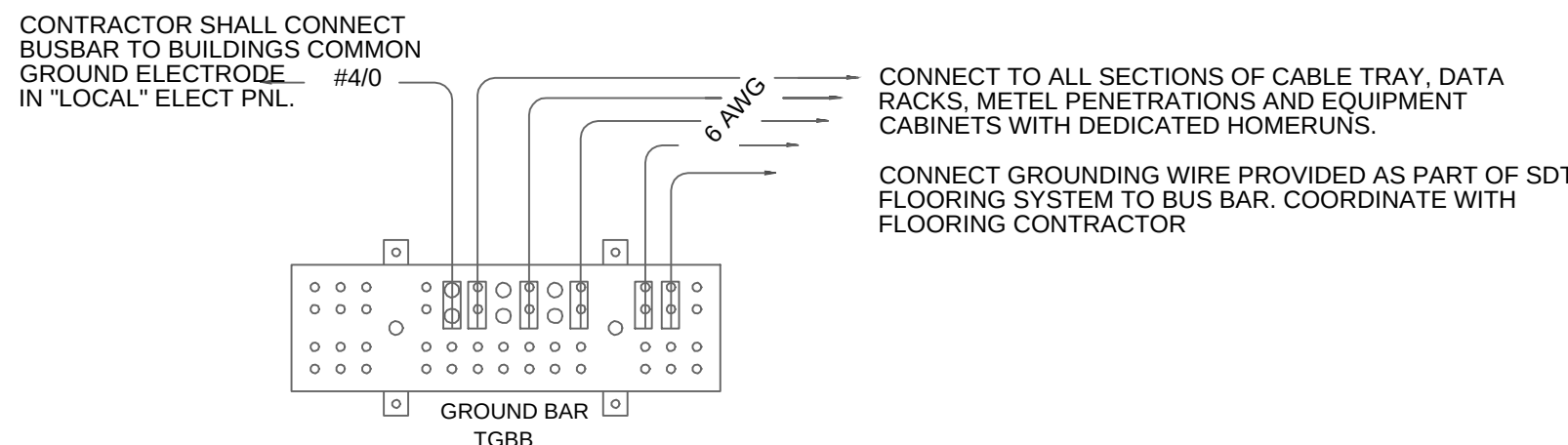
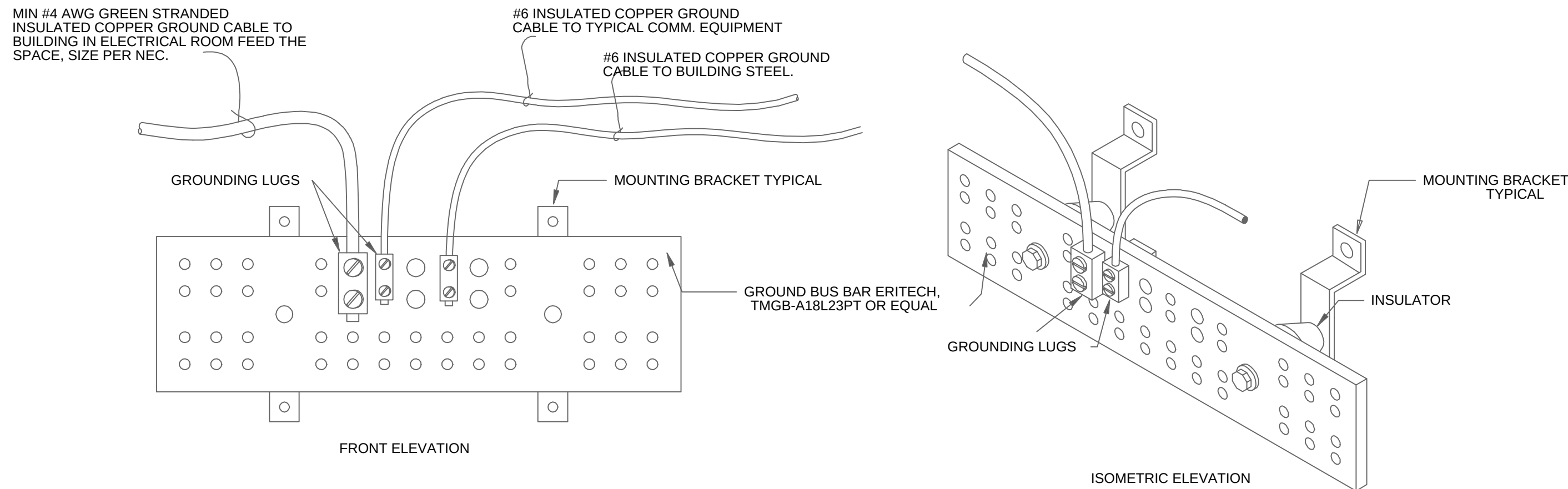
3 TELECOMMUNICATIONS GROUND BAR DETAIL (TGB)
A-E505 NTS



4 CEILING MOUNTED WAP DETAIL
A-E505 NTS



5 TYPICAL SYSTEM OUTLET MOUNTING HEIGHT
A-E505 NTS



GROUNDING NOTES:

- ALL GROUND CONNECTIONS SHALL BE MADE WITH HEAVY DUTY 2 HOLE COMPRESSION LUGS WITH STAINLESS STEEL HEX HEAD CAP SCREWS WITH SS LOCKING NUTS (TWO SCREWS AND NUTS PER 2 HOLE LUG).
- PROVIDE GROUNDING BUSBARS IN ALL COMMUNICATION CLOSETS AND DATA CENTER. GROUND MAIN BUSBAR TO BUILDING MAIN ELECTRICAL SERVICE GROUND WITH INSULATED (GREEN) COPPER GROUNDING CONDUCTOR (SIZE PER NEC) AND #6 BETWEEN BUSBARS IN THAT PARTICULAR SPACE. RUN CONDUCTOR FROM BUSBAR LOCATION TO BUILDING SERVICE GROUND IN EMT CONDUIT. PROVIDE INSULATED GROUNDING BUSHING - MALLEABLE IRON, AT CONDUIT ENDS AND GROUND PER NEC. GROUNDING TO BUILDING STRUCTURE, CONDUITS OR UTILITY PIPING IN LIEU OF BONDING TO BUILDING MAIN ELECTRICAL SERVICE GROUND IS NOT ACCEPTABLE.
- GROUND ALL COMMUNICATION RACK/CABINET WITH #6 AWG INSULATED (GREEN) COPPER GROUNDING CONDUCTOR TO MAIN GROUNDING BUSBAR. GROUND RACKS INDIVIDUALLY TO BUSBAR (DO NOT LOOP GROUNDS). ROUTE CONDUCTOR ALONG RACK REAR AND IN CABLE RUNWAY TO GROUNDING BUSBAR.
- GROUND EACH CONDUIT AND CONDUIT SUPPORTS STRUTS IN ALL COMMUNICATIONS ROOMS WITH #6 AWG INSULATED (GREEN) COPPER GROUNDING CONDUCTOR TO GROUNDING BUSBAR. ROUTE CONDUCTOR IN CABLE RUNWAY TO GROUNDING BUSBAR. ALL CONDUITS SHALL HAVE A BARE EQUIPMENT GROUND WIRE. CONTINUOUS FROM ALL EQUIPMENT CONNECTIONS, AND BONDED AT ALL BOXES, RUN TO THE FEED PANEL, AND SUBSEQUENTLY TO THE BUILDING EQUIPMENT GROUND.
- GROUND CABLE RUNWAY WITH #6 AWG INSULATED (GREEN) COPPER GROUNDING CONDUCTOR TO GROUNDING BUSBAR. ROUTE CONDUCTOR IN CABLE RUNWAY TO GROUNDING BUSBAR.

6 COMMUNICATIONS GROUNDING DETAIL
A-E505 NTS

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PREPARED BY

DAVID LITHGOW

PROJECT MANAGER

DAVID LITHGOW

DESIGN TEAM

CEA

PROJECT NAME

COLUMBIA STORM PROCESSING & SERVICE CENTER - BUILDING A - SERVICE CENTER FLORIDA POWER & LIGHT

PROJECT NO.

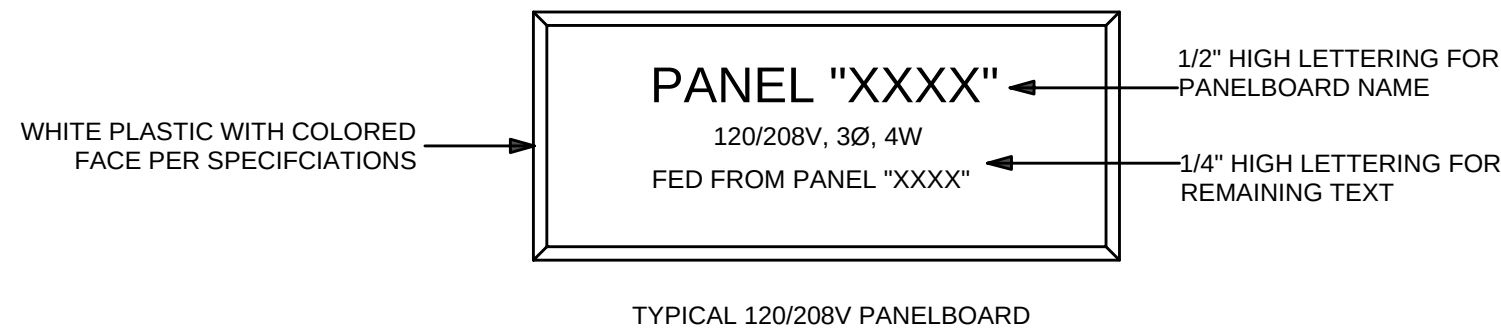
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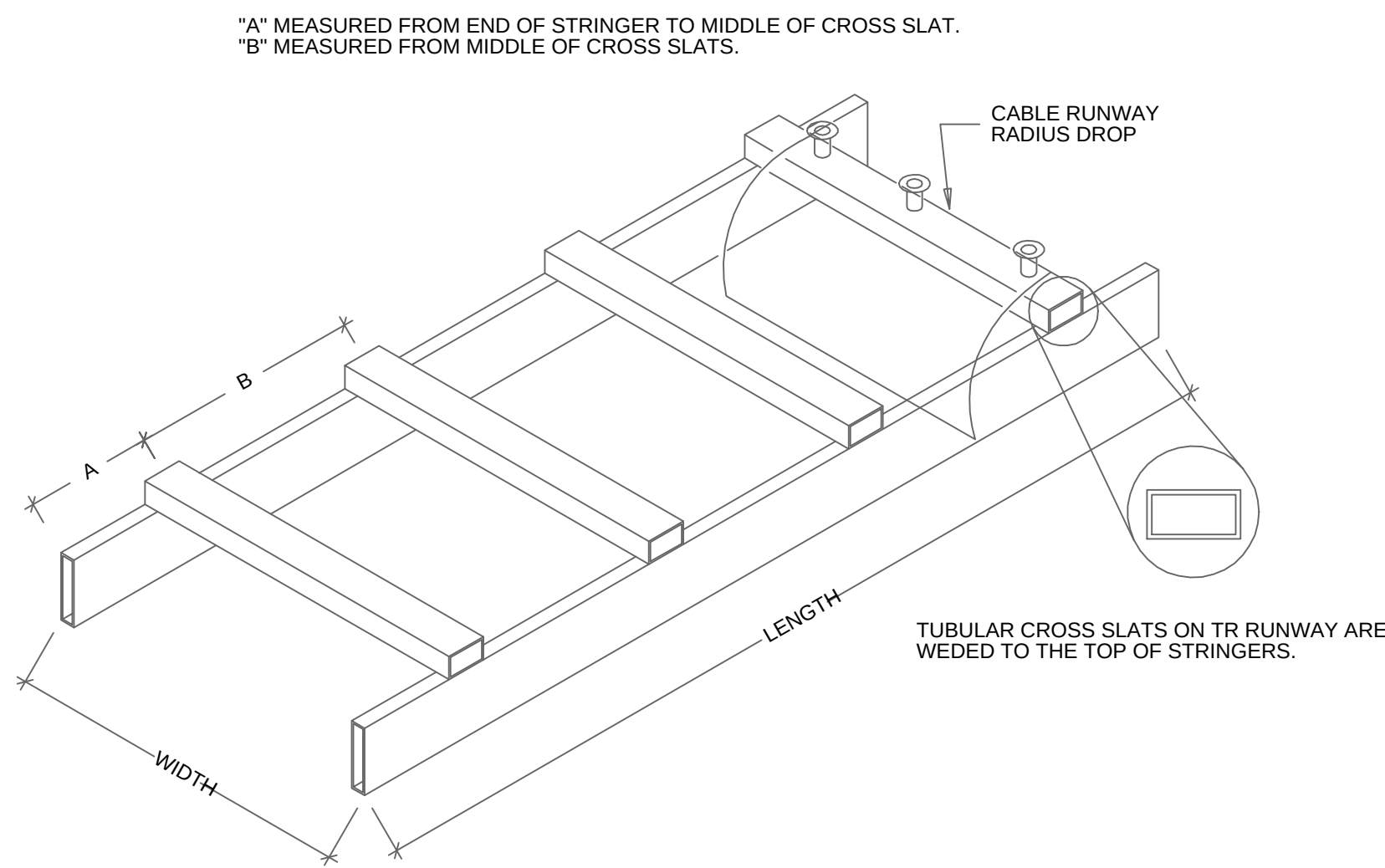
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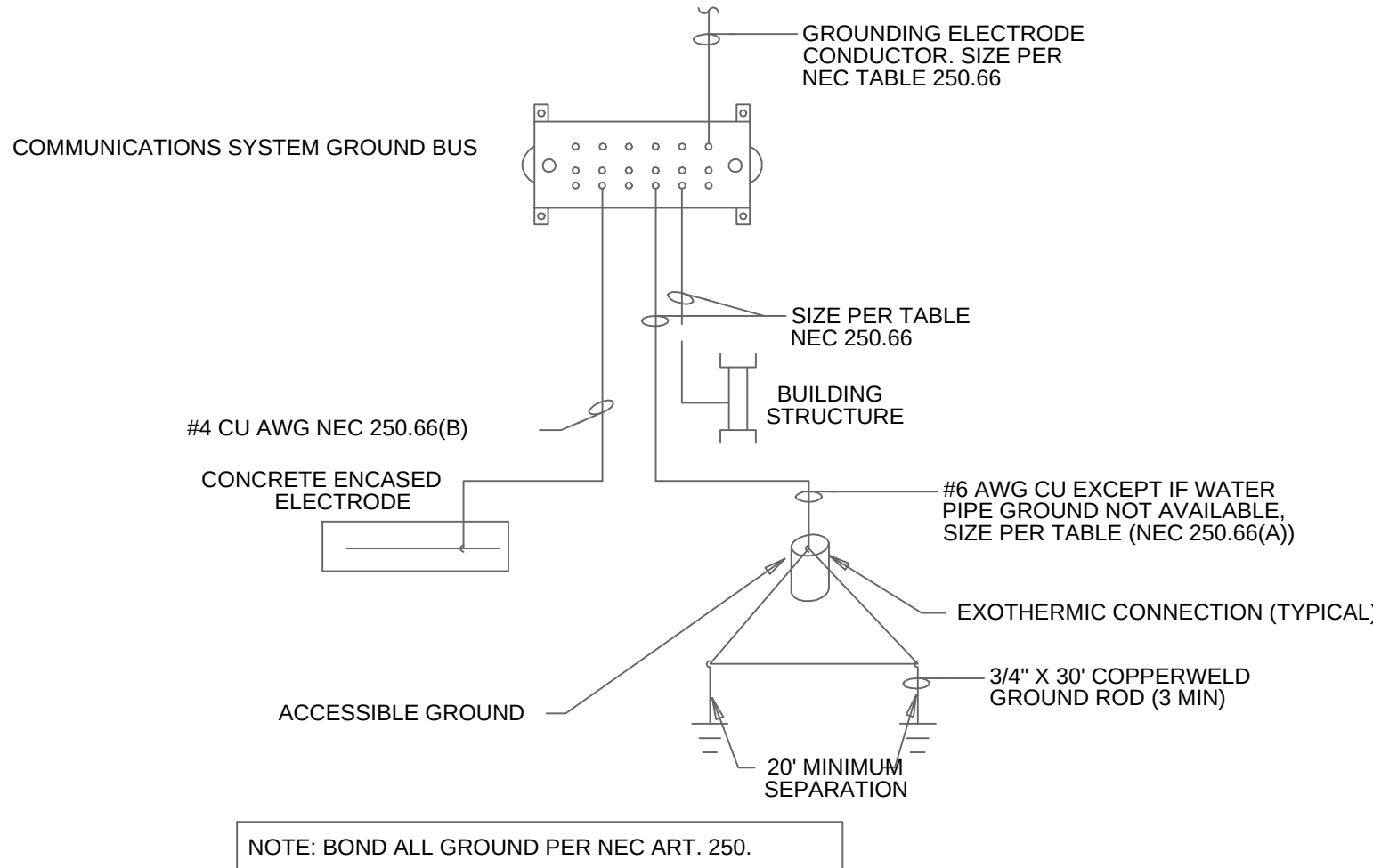
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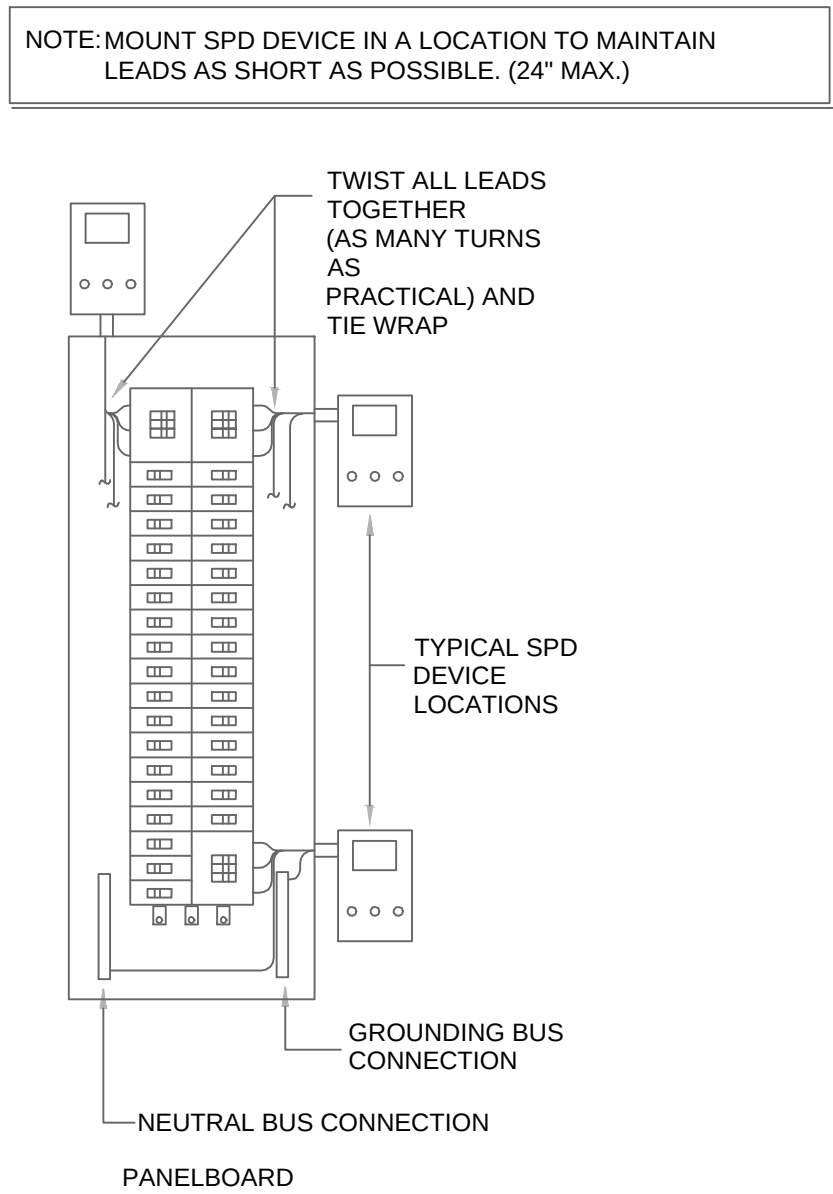
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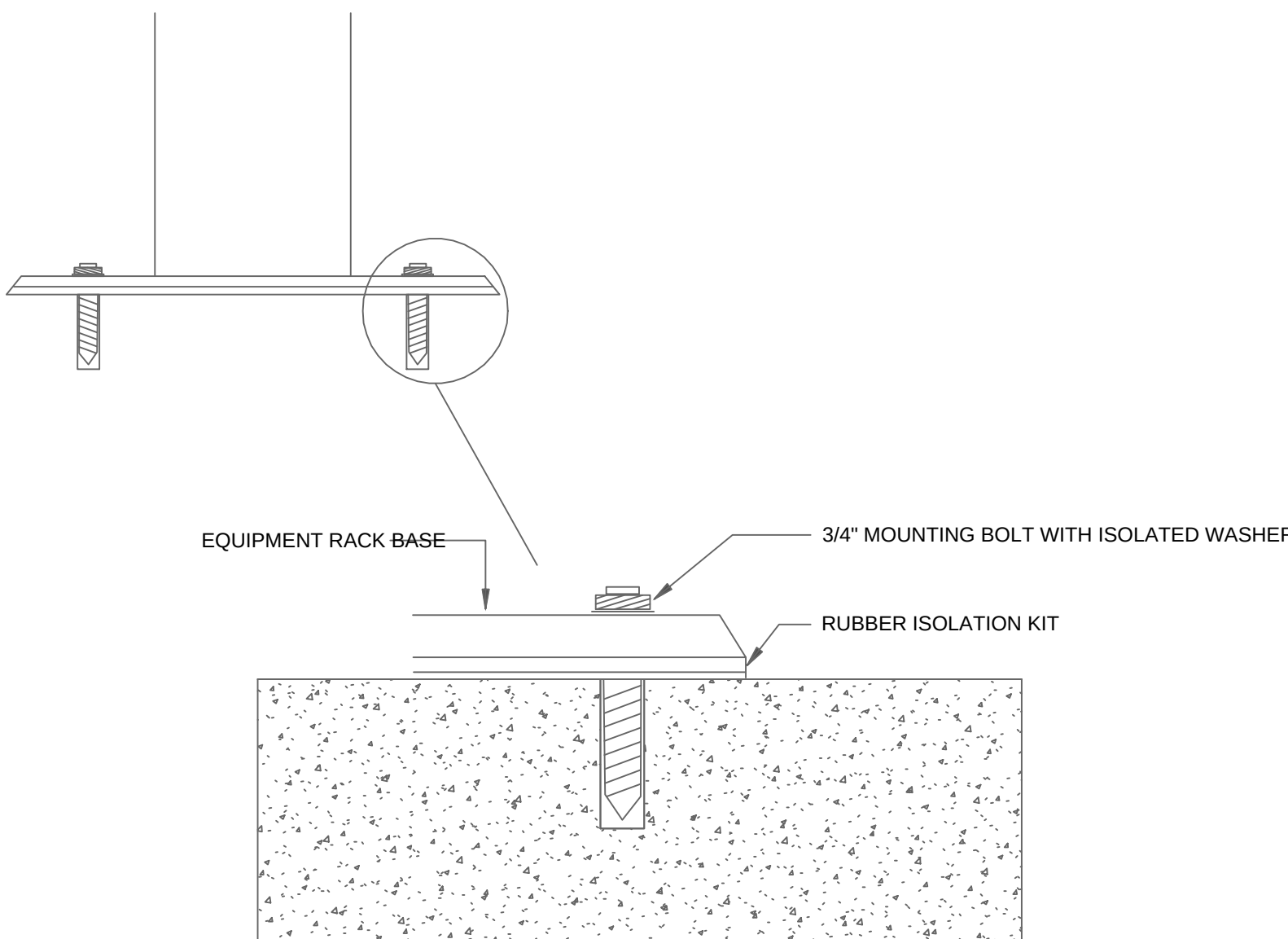
4 LADDER TRAY DETAIL
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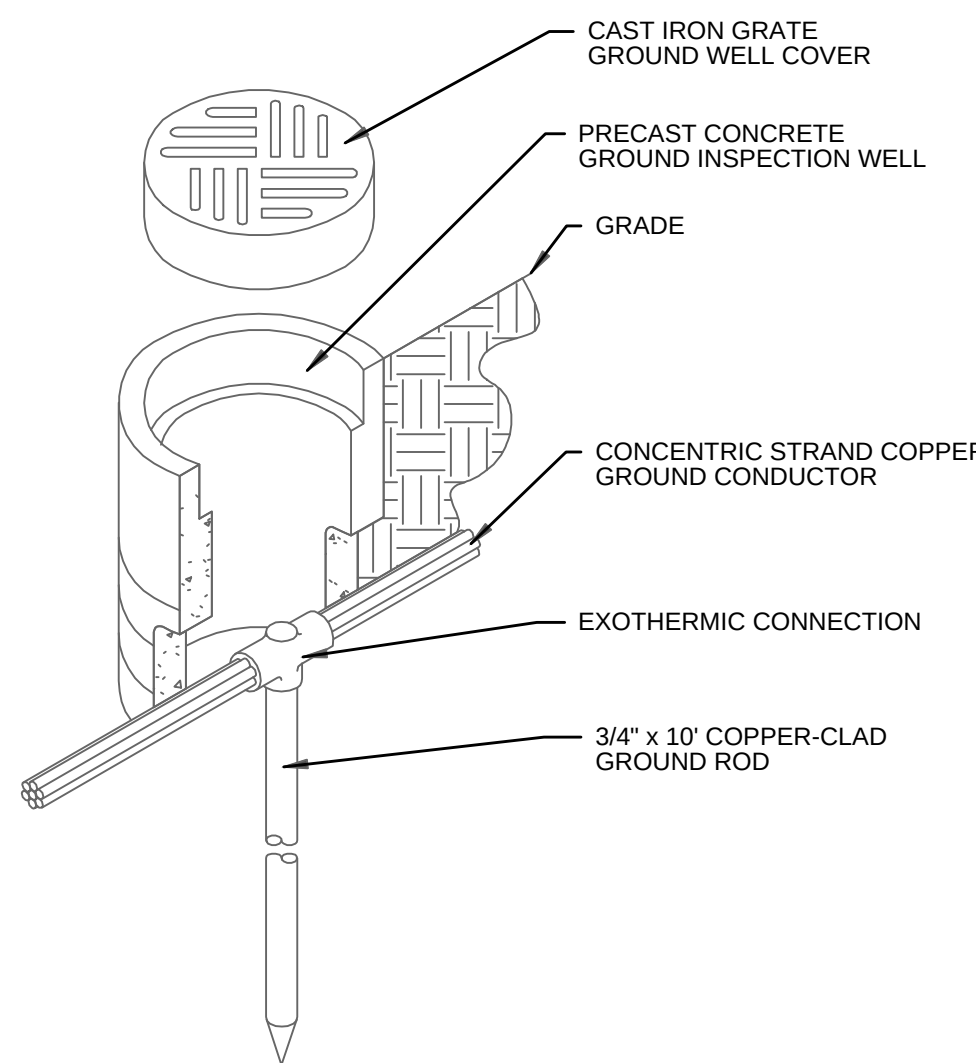
7 SERVICE GROUNDING DETAIL
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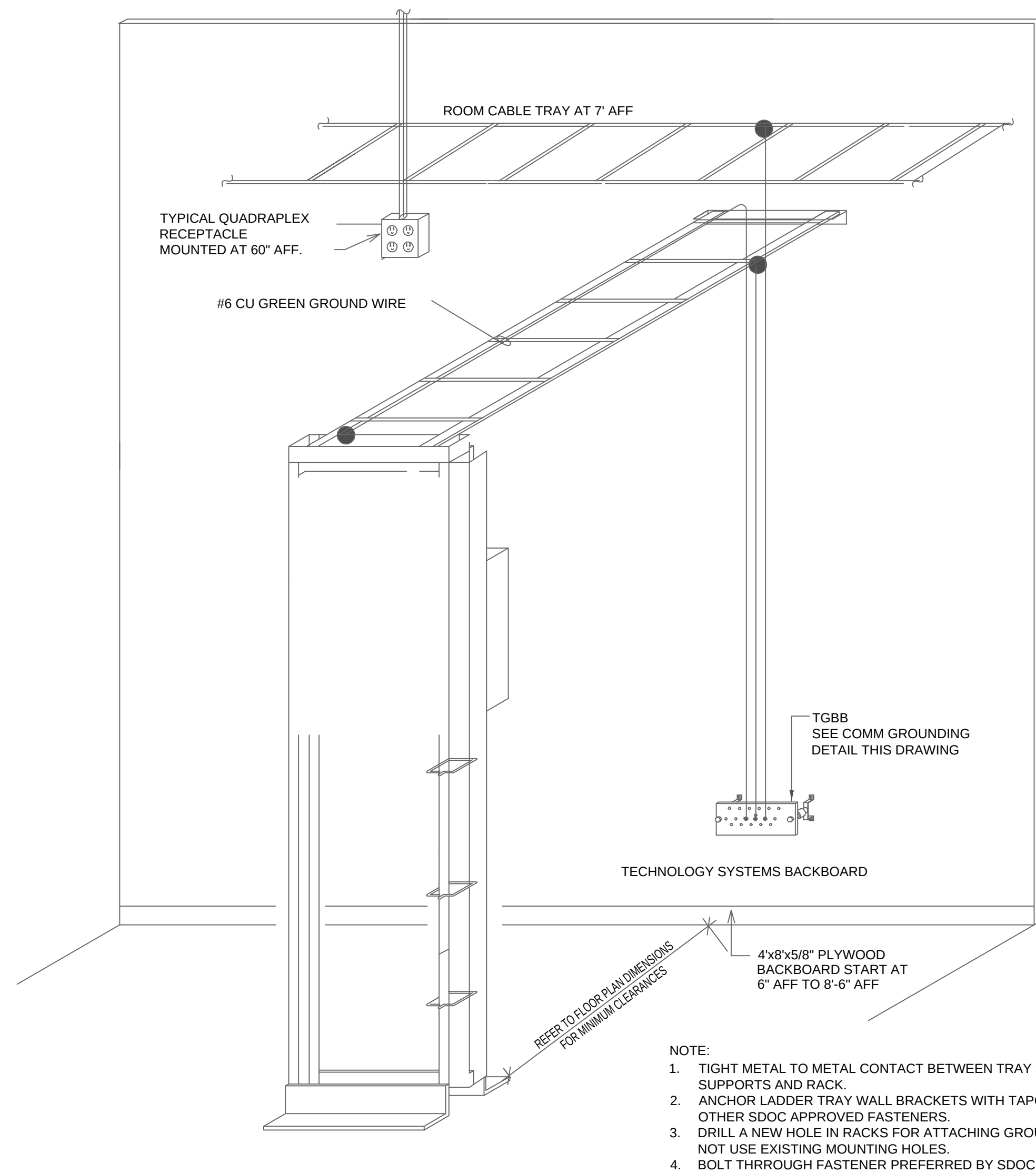
2 SPD INSTALLATION DETAIL
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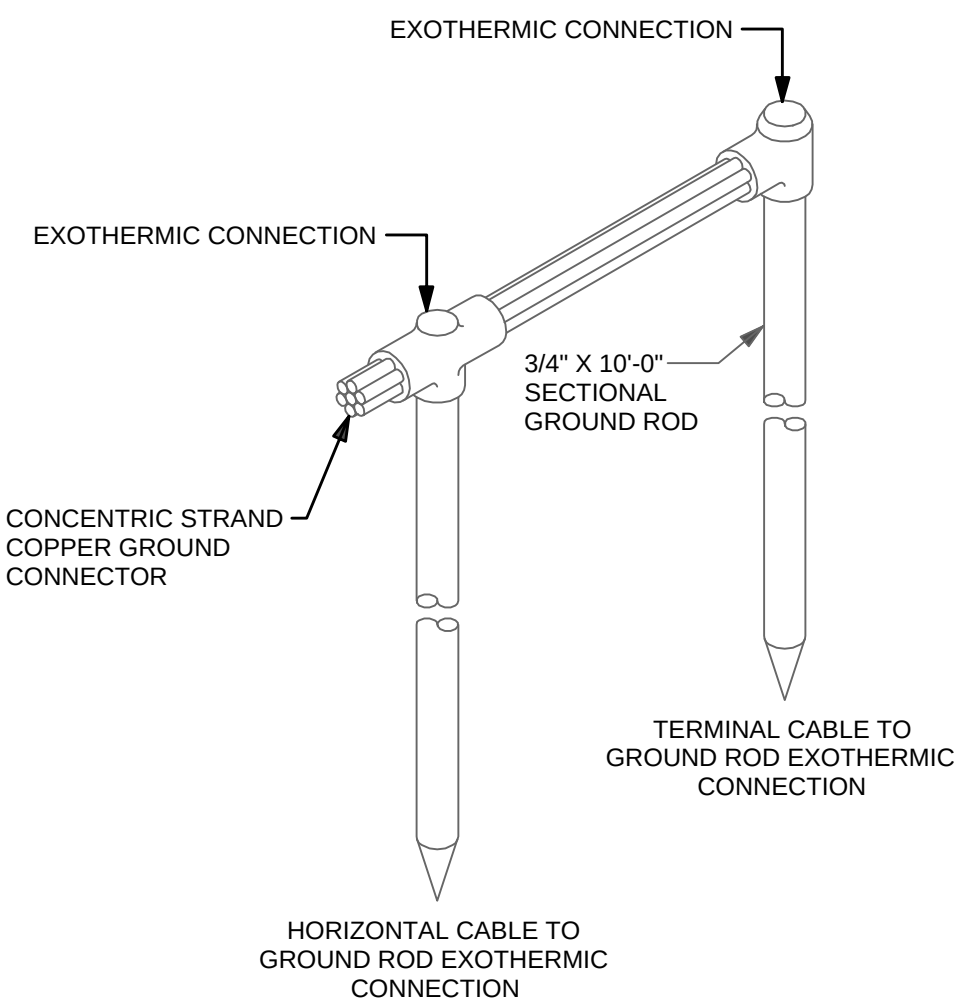
5 RACK FLOOR MOUNTING DETAIL
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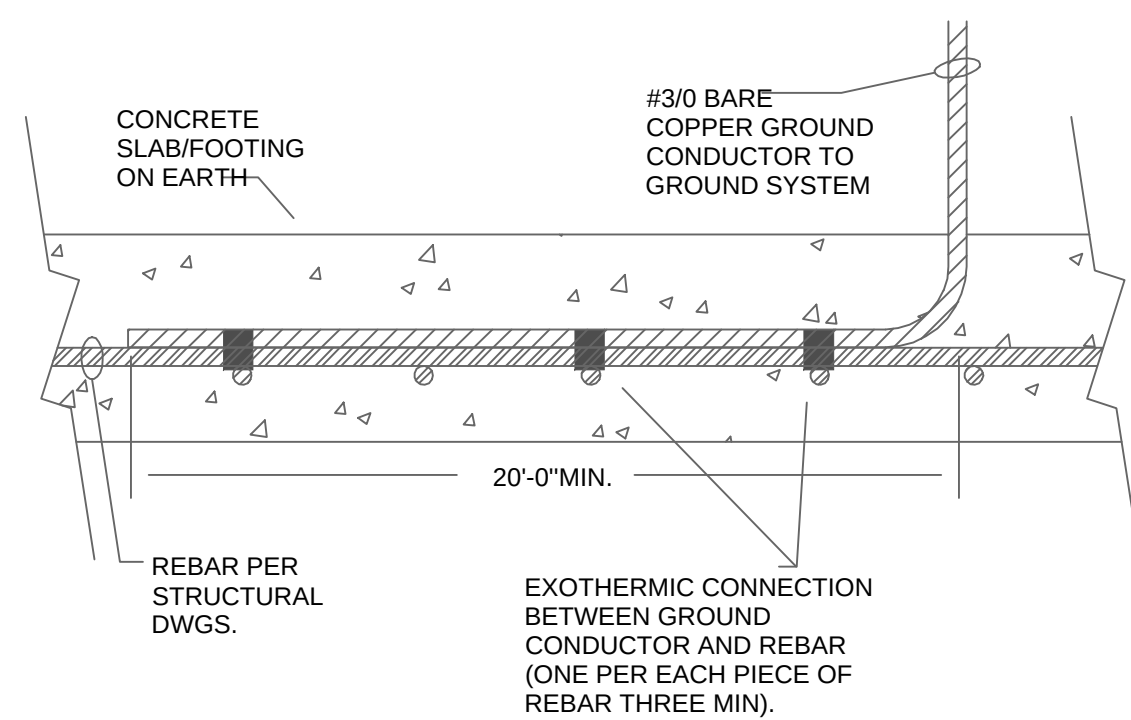
8 GROUND INSPECTION WELL
A-E506 NTS



3 TYPICAL TECHNOLOGY 2-RAIL RACK
A-E506 NTS



6 TYPICAL DOUBLE GROUND ROD CONNECTION DETAIL
A-E506 NTS



9 TYPICAL "UFER" GROUND
A-E506 NTS

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PRINCIPAL IN CHARGE
DAVID LITHGOW

PROJECT MANAGER
DAVID LITHGOW

DESIGN TEAM
CEA

PROJECT NAME

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FLORIDA POWER & LIGHT

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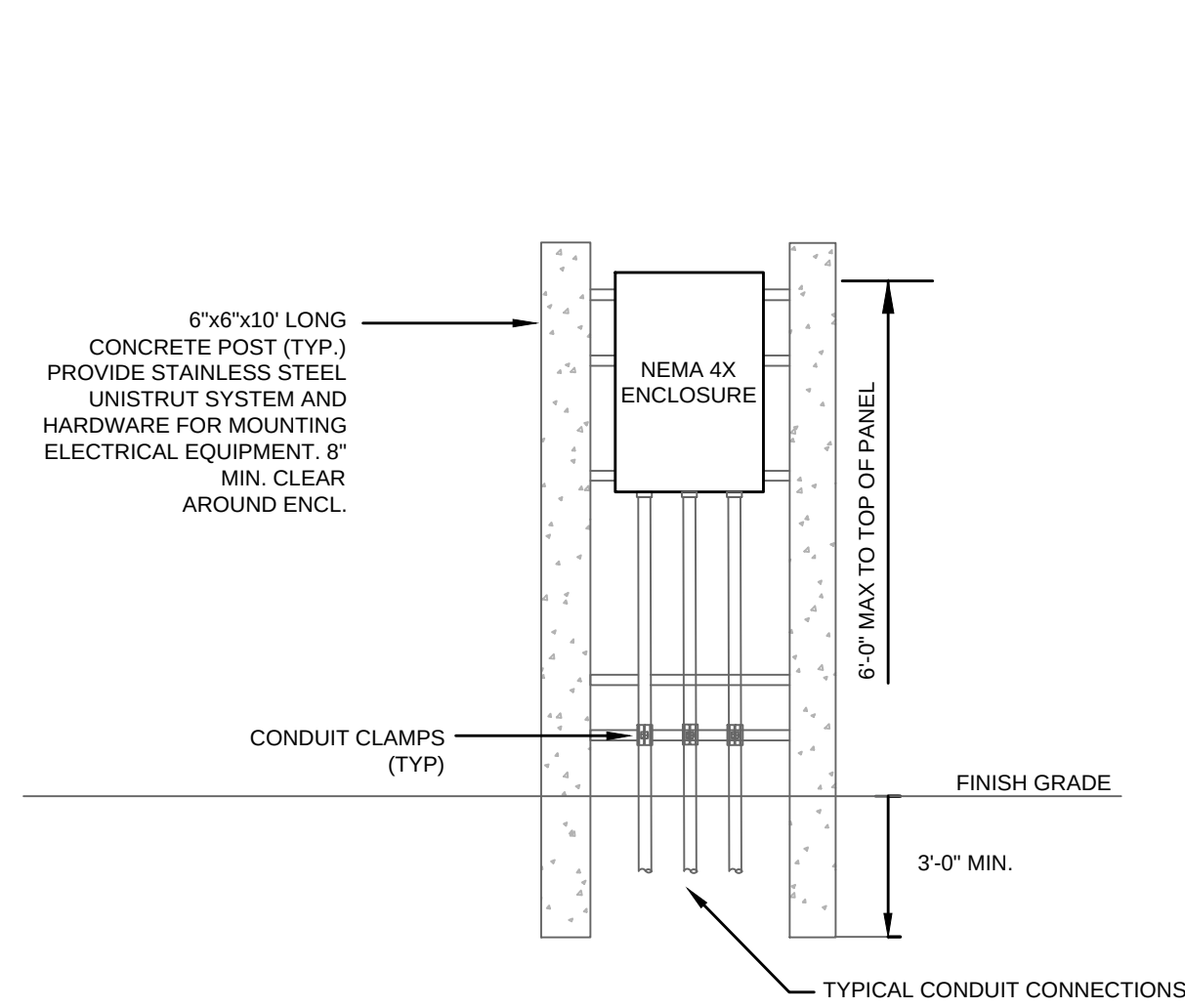
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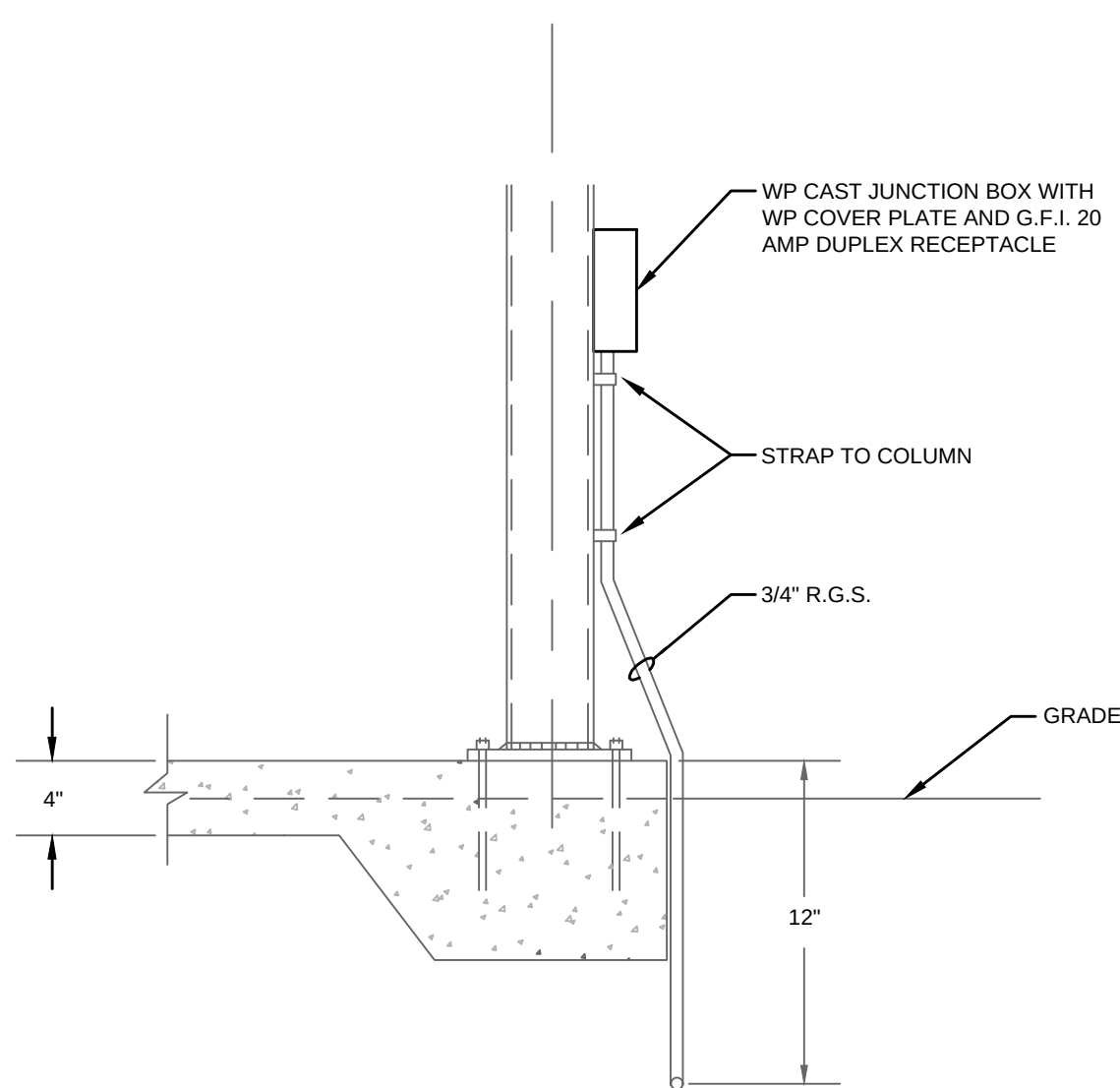
DETAILS

SHEET NUMBER

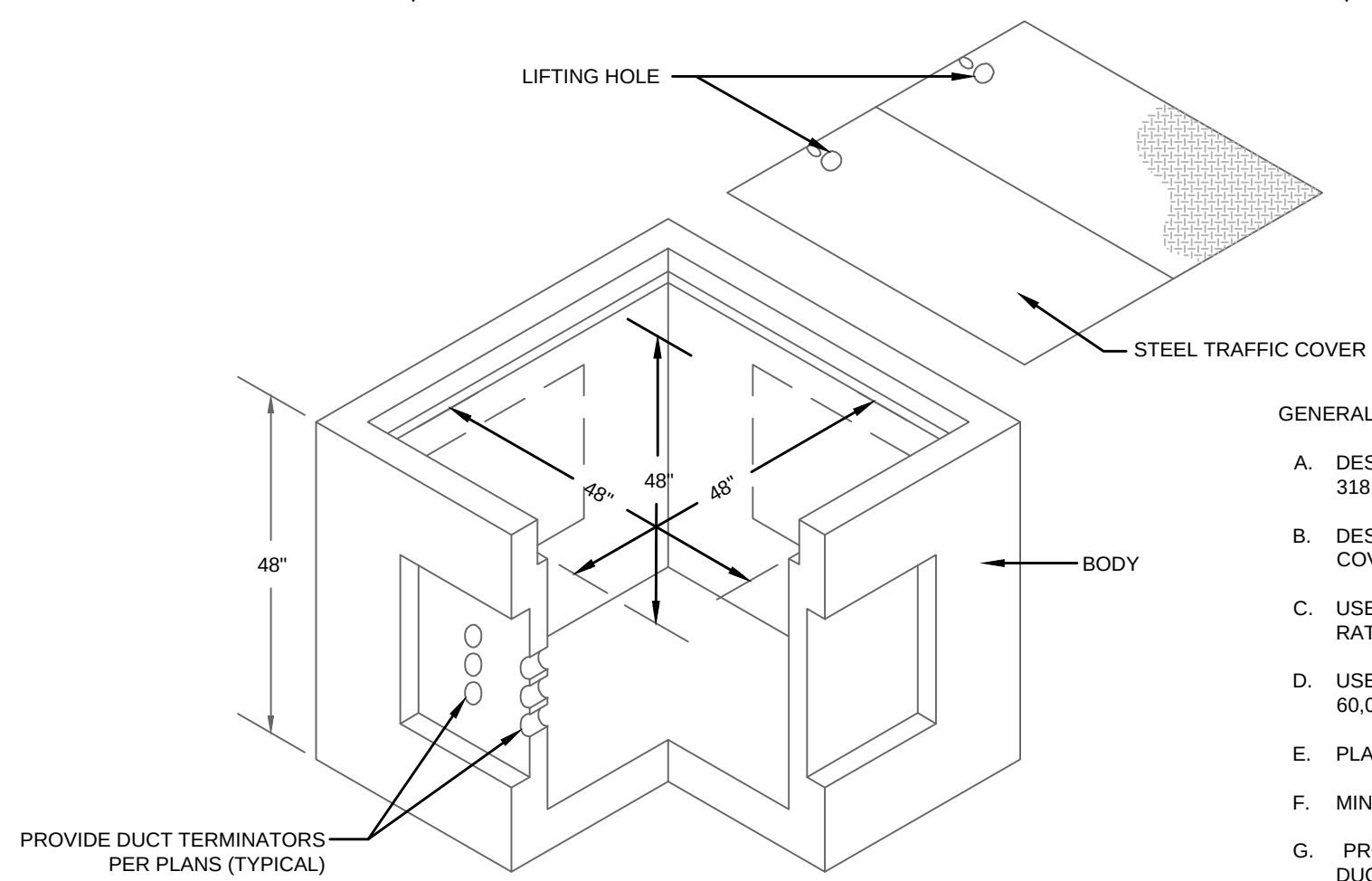
A-E506



1 TYPICAL EQUIPMENT MOUNTING FRAME
F-E507 NTS



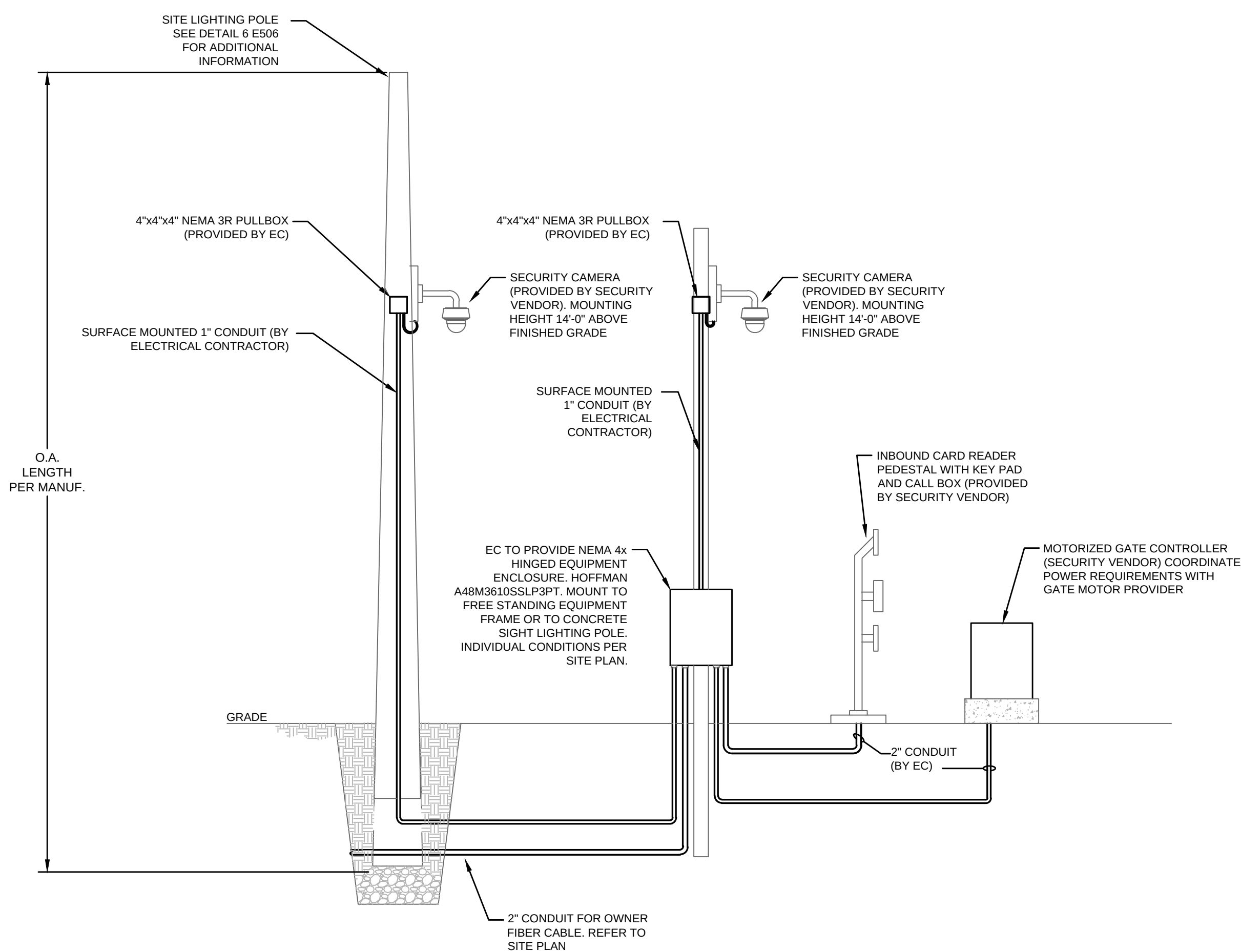
2 RECEPTACLE CONDUIT STUB-UP DETAIL
F-E507 NTS



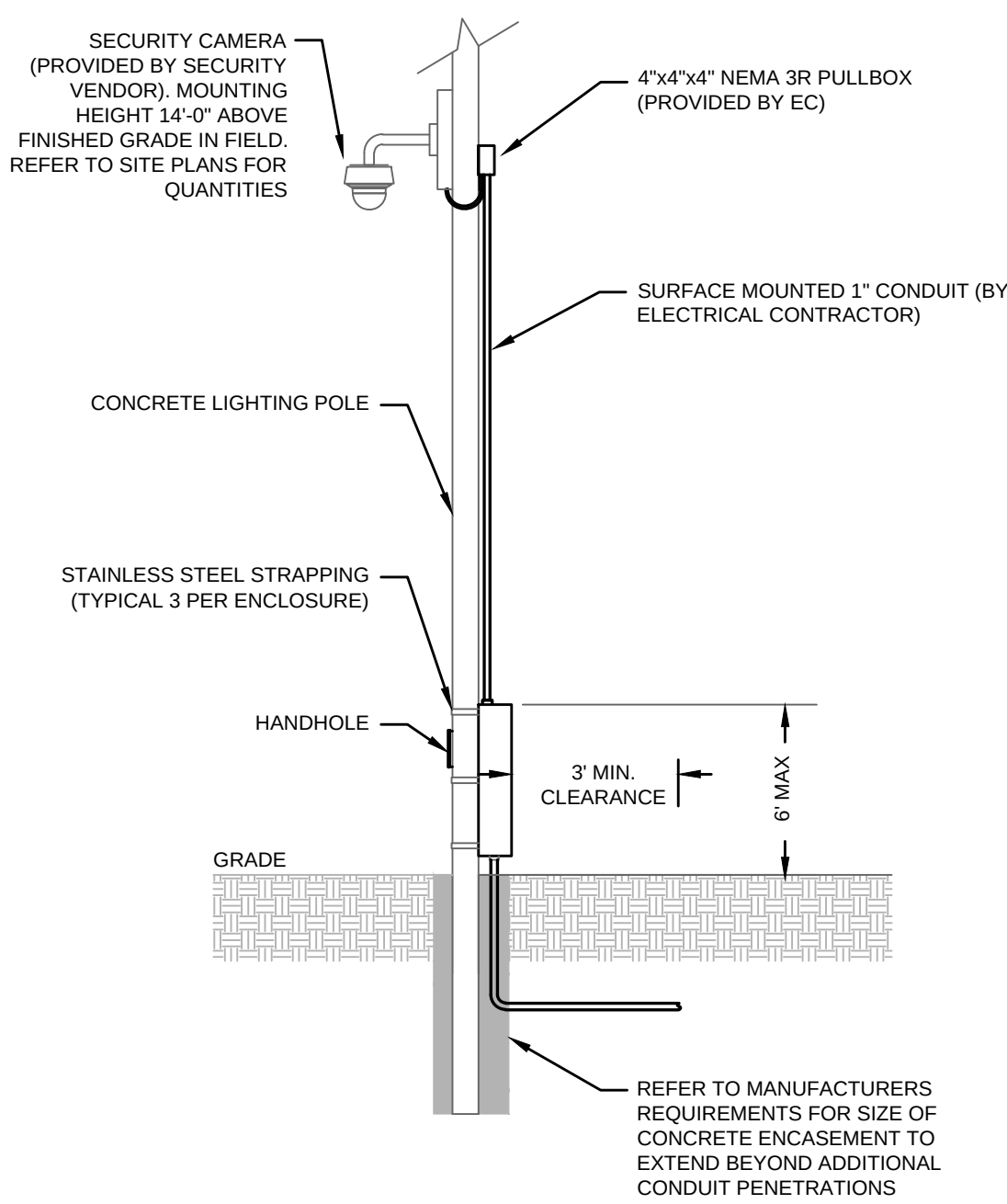
GENERAL NOTES:

- DESIGN PULLBOX IN ACCORDANCE WITH ACI 318, AASHTO & ASYM C857.
- DESIGN CONCRETE STRUCTURE AND STEEL COVER FOR HS-20-44 LOADING.
- USE CONCRETE HAVING 5500 psi COMPRESSIVE RATING AT 28 DAYS.
- USE ASTM A-615 REINFORCING STEEL WITH 60,000psi YIELD STRENGTH.
- PLACE HANHOLE ON 6" MIN. GRAVEL BASE.
- MIN. EXCAVATION 6'-0"x6'-0"x4'-6" DEPTH
- PROVIDE PULL EYES ON WALLS OPPOSITE ALL DUCT ENTRIES.
- PROVIDE INSERTS FOR TWO CABLE RACKS ON EACH WALL. LOCATE INSERTS TO CLEAR DUCT ENTRIES.

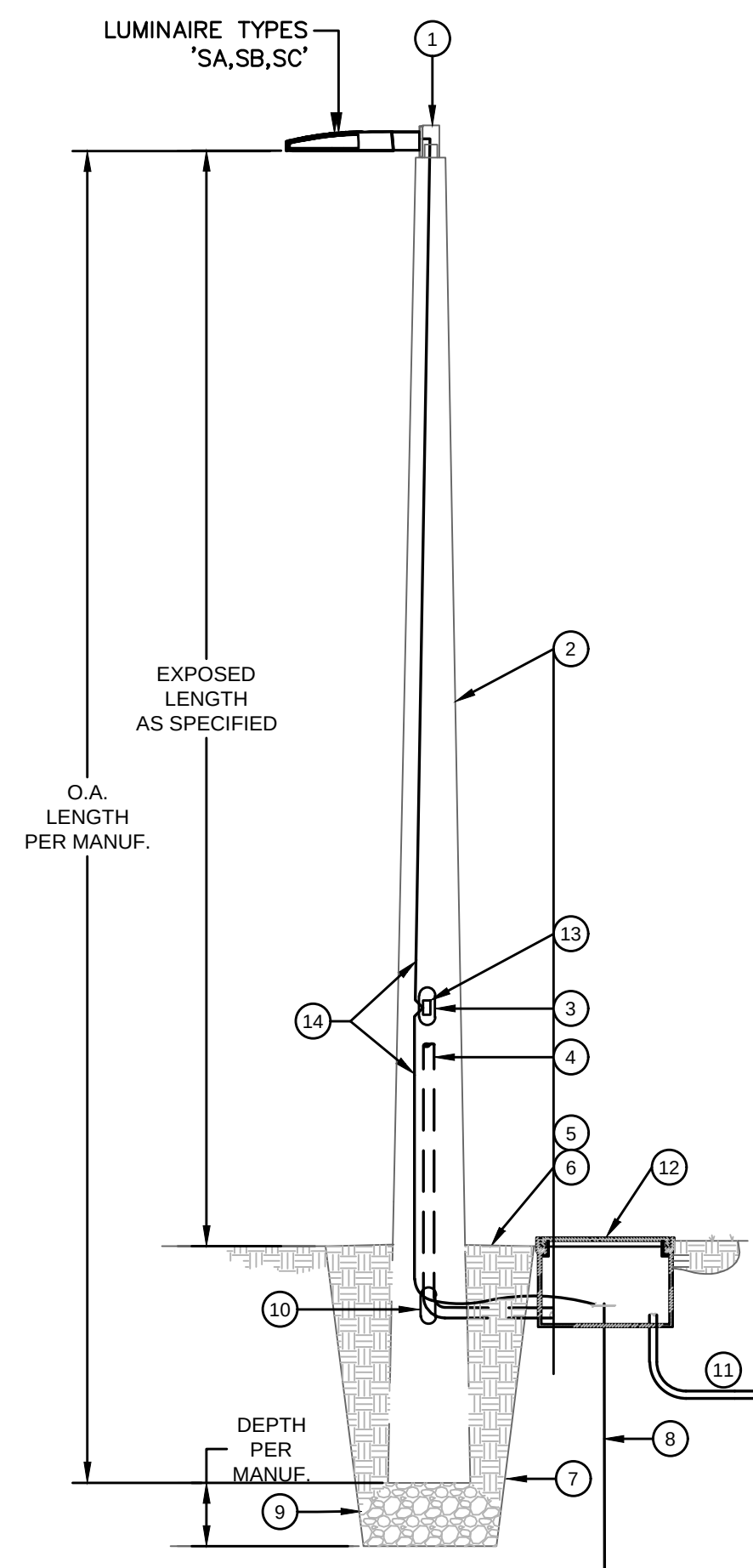
3 TYPICAL SYSTEMS PULLBOX DETAILS
F-E507 NTS



4 TYPICAL SITE EQUIPMENT ENCLOSURE DETAIL
F-E507 NTS



5 TYPICAL SITE EQUIPMENT ENCLOSURE MOUNTED TO SITE LIGHTING POLE
F-E507 NTS



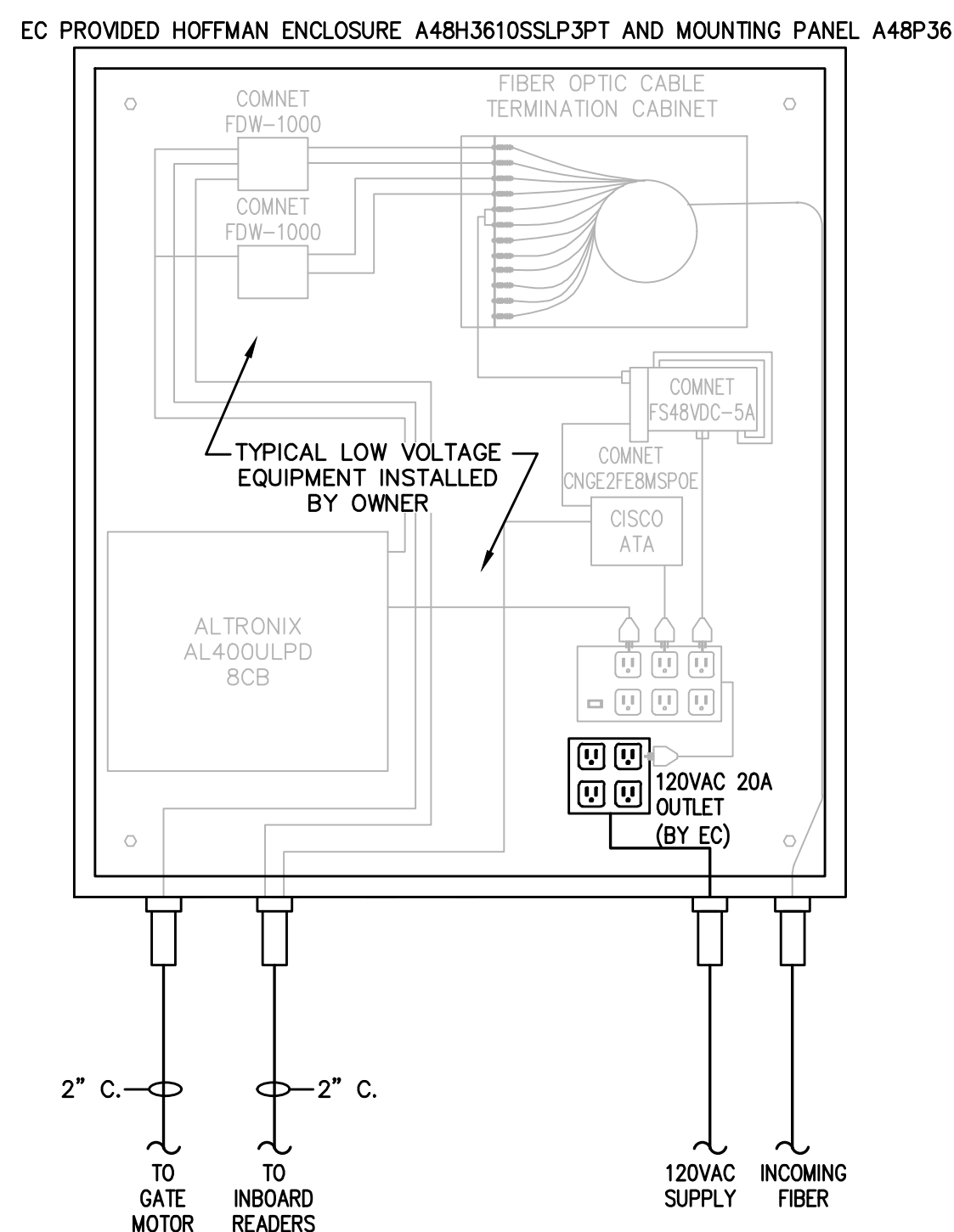
GENERAL POLE NOTES:

PROVIDE SHOP DRAWINGS AND CALCULATIONS FOR ALL EXTERIOR POLE MOUNTED FIXTURES WITH SIGNATURE AND SEAL OF REGISTERED PROFESSIONAL ENGINEER VERIFYING THAT THE FOUNDATION AND POLE/FIXTURE ASSEMBLY MEETS OR EXCEEDS FLORIDA BUILDING CODE AND ANSI A58.1. THE EXTERIOR POLE MOUNTED LIGHT FIXTURE ASSEMBLY SHALL BE CAPABLE OF WITHSTANDING WINDLOADS IN ACCORDANCE WITH ASCE 7-10. DESIGN WIND VELOCITY SHALL BE 150MPH, GUST FACTOR OF 1.2

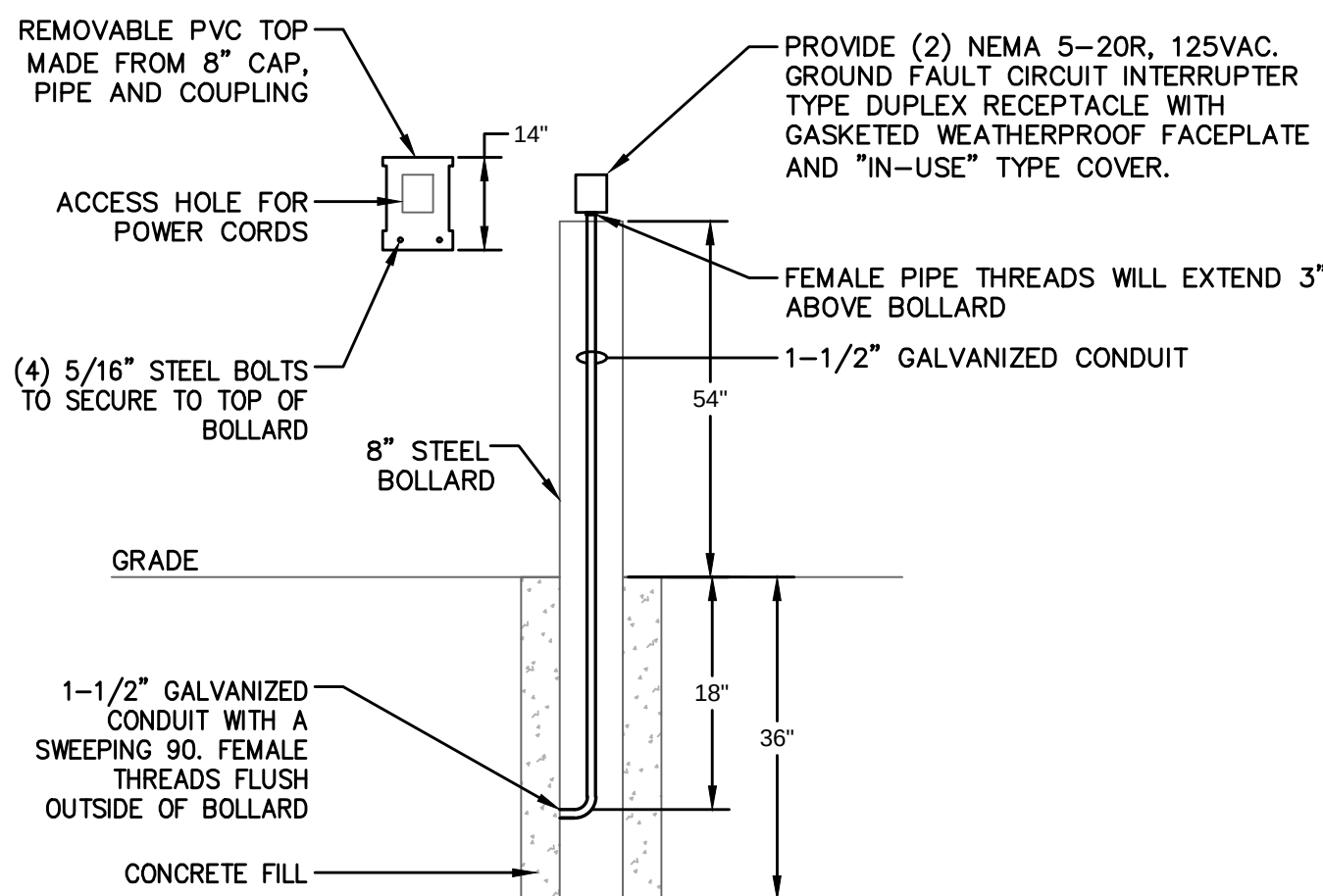
KEYED POLE NOTES:

- 2-3/8" TENON (VERIFY) WITH PROVISION FOR WRING. COORDINATE WITH POLE AND LUMINAIRE MANUFACTURER.
- SQUARE TAPERED CONCRETE, TYPE III LOCATE POLES AS SHOWN ON SITE PLAN.
- WIRING HANDHOLE - MINIMUM 3"x5" WITH ALUMINUM COVER AND STAINLESS STEEL SCREWS.
- TERMINATE CONDUIT INTERNALLY ADJACENT TO HANDHOLE.
- SLOPE TO SURROUNDING FINISHED GRADE.
- COMPACTED BACKFILL EQUAL TO EXISTING SURROUNDING AREA.
- CONTRACTOR SHALL AUGER HOLE AT POLE LOCATION AS NOT TO DISTURB THE SURROUNDING EARTH. AUGER HOLE TO POLE MANUFACTURER RECOMMENDED DEPTH. FILL IN HOLE WITH EARTH AND COMPACT.
- 5/8"x10" COPPERWELD GROUND ROD AND #6 BARE CU. TO FIXTURE AND SURGE SUPPRESSOR.
- 12" COARSE GRAVEL SETTING BED AT BOTTOM OF AUGERED HOLE.
- MINIMUM 3"x5" CONDUIT ENTRANCE.
- CONDUIT AND WIRE FROM/TO NEXT FIXTURE
- HANDHOLE/PULLBOX PER DETAIL THIS PAGE AT EACH POLE WITH GROUND ROD WITHIN.
- PROVIDE SURGE SUPPRESSOR IN EACH POLE HANDHOLE, PHASE TO GRN. JOSLYN "SHA" SERIES WITH INDICATOR. COORDINATE VOLTAGE, ALSO PROVIDE FUSING.
- #6 BARE CU TO FIXTURE AND SURGE SUPPRESSOR.

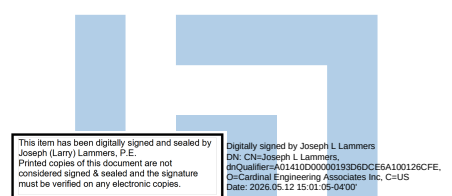
6 DIRECT BURIAL CONCRETE POLE INSTALLATION
F-E507 NTS



7 TYPICAL SITE ENCLOSURE DETAIL
F-E507 NTS



8 BOLLARD RECEPTACLE STATION DETAIL
F-E507 NTS



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ISSUE DATE
02/15/2026

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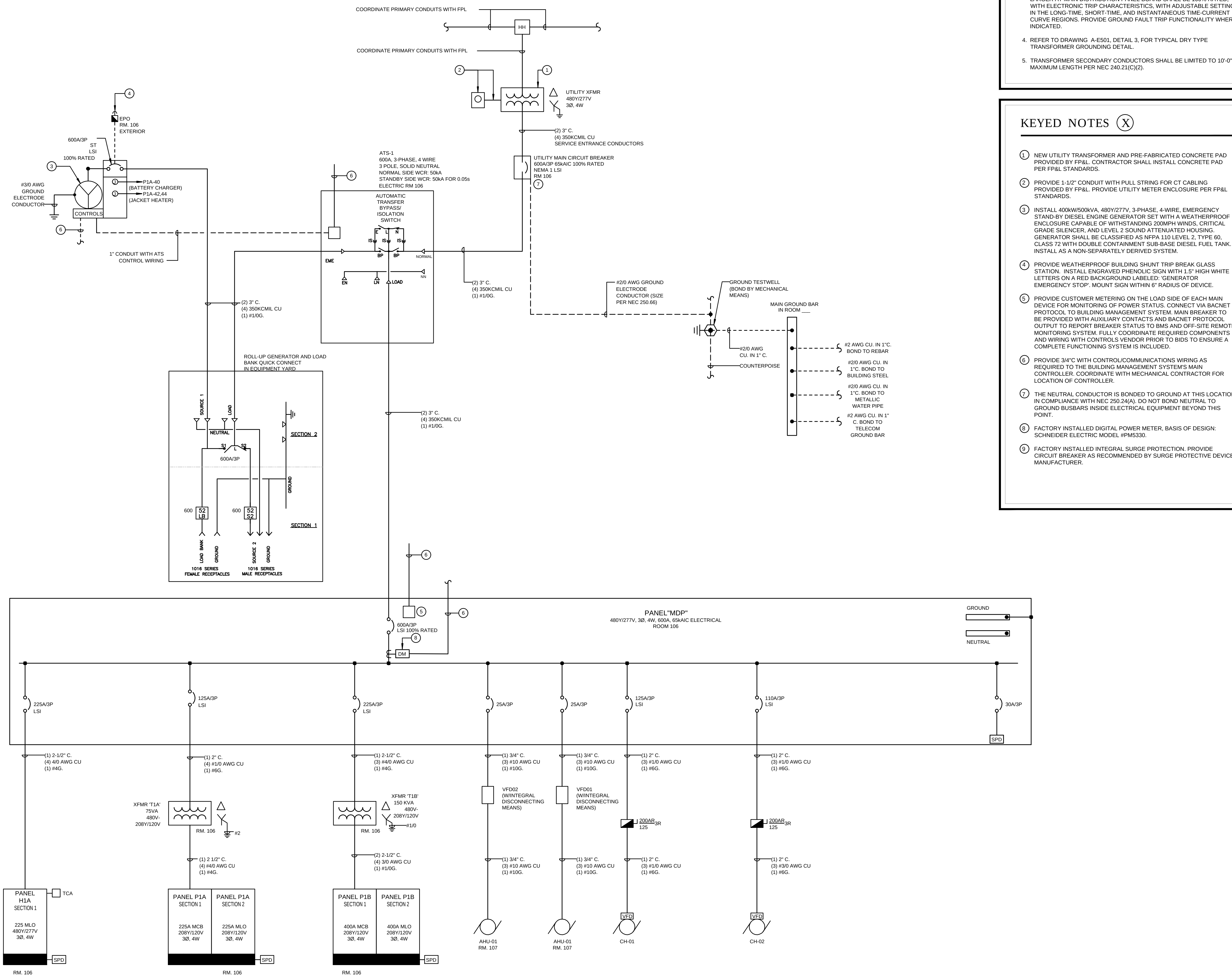
DESIGN TEAM
CEA
COLUMBIA STORM PROCESSING & SERVICE CENTER - BUILDING A - SERVICE CENTER
FLORIDA POWER & LIGHT

PROJECT NO.
814C632800
SHEET TITLE
DETAILS

PROJECT NO.
814C632800
SHEET TITLE
DETAILS

PROJECT NO.
814C632800
SHEET TITLE
DETAILS

A-E507



ELECTRICAL ONE-LINE DIAGRAM

N.T.S.

GENERAL NOTES THIS DRAWING

1. PROVIDE LABELS ON MAIN SERVICE PANEL INDICATING (AT MINIMUM) MAIN PANEL FAULT CURRENT, SERVICE ENTRANCE, AND OTHER LABELS AS REQUIRED BY THE NATIONAL ELECTRICAL CODES, AND AHJ LABELS AS REQUIRED PER NEC AND AHJ REQUIREMENTS. INCLUDE ARC-FLASH HAZARD LABELS.
2. PROVIDE TERMINAL LUGS ON EQUIPMENT SUITABLE TO ACCOMMODATE CONDUCTOR TYPES AND SIZES INDICATED.
3. OVERCURRENT PROTECTIVE DEVICE FRAMES RATED AT 250 AMP OR LARGER, AND DISCONNECT SWITCHES, BOARD SHALL BE 100% RATED WITH ELECTRONIC TRIP CHARACTERISTICS, WITH ADJUSTABLE SETTINGS IN THE LONG-TIME, SHORT-TIME, AND INSTANTANEOUS TIME CURRENT CURVES. PROVIDE GROUND FAULT TRIP FUNCTIONALITY WHERE INDICATED.
4. REFER TO DRAWING A-E501, DETAIL 3, FOR TYPICAL DRY TYPE TRANSFORMER GROUNDING DETAIL.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE LIMITED TO 10'-0" MAXIMUM LENGTH PER NEC 240.21(C)(2).

KEYED NOTES (X)

- ③ NEW UTILITY TRANSFORMER AND PRE-FABRICATED CONCRETE PAD PROVIDED BY F3AL. CONTRACTOR SHALL INSTALL CONCRETE PAD PER F3AL STANDARDS.
- ② PROVIDE 1-1/2" CONDUIT WITH PULL STRINGS FOR CT CABLING PROVIDED BY F3AL. PROVIDE UTILITY METER ENCLOSURE PER F3AL STANDARDS.
- ③ INSTALL 400kW/500KVA, 480V/277V, 3-PHASE, 4-WIRE, EMERGENCY START DIESEL ENGINE GENERATOR WITH A WEATHERPROOF ENCLOSURE CAPABLE OF WITHSTANDING 200MPH WINDS, CRITICAL GEAR SILENCER, AND LEVEL 2 SOUND ATTENUATED HOUSING. GENERATOR SHALL BE CLASSIFIED AS NFPA 110 LEVEL 2, TYPE 60, CLASS 72 WITH DOUBLE CONTAMINANT SUB-BASE DIESEL FUEL TANK. INSTALL AS A NON-SEPARATELY DERIVED SYSTEM.
- ④ PROVIDE WEATHERPROOF BUILDING SHUNT TRIP BREAK GLASS STATION. INSTALL ENGRAVED PNEUMATIC SIGN WITH 1.5" HIGH WHITE LETTERS ON A RED BACKGROUND. SIGN TO READ: "EMERGENCY STOP" MOUNT SIGN WITHIN 6" RADIUS OF DEVICE.
- ⑤ PROVIDE CUSTOMER METERING ON THE LOAD SIDE OF EACH MAIN DEVICE FOR MONITORING OF POWER STATUS. CONNECT VIA BACNET PROTOCOL TO BUILDING MANAGEMENT SYSTEM. MAIN BREAKER TO BE PROVIDED WITH AUXILIARY CONTACTS AND BACNET PROTOCOL. UTILIZE BACNET PROTOCOL FOR STATUS TO BAS AND OFF-SITE REMOTE MONITORING SYSTEM. FULLY COORDINATE REQUIRED COMPONENTS AND WIRING WITH CONTROLS VENDOR PRIOR TO BIDS TO ENSURE A COMPLETE FUNCTIONING SYSTEM IS INCLUDED.
- ⑥ PROVIDE 34C" WITH CONTROL/COMMUNICATIONS WIRING AS REQUIRED FOR THE BUILDING MANAGEMENT SYSTEM. PROVIDE MAIN CONTROLLER, COORDINATE WITH MECHANICAL CONTRACTOR FOR LOCATION OF CONTROLLER.
- ⑦ THE NEUTRAL CONDUCTOR IS BONDED TO GROUND AT THIS LOCATION IN COMPLIANCE WITH NEC 250.24(A). DO NOT BOND NEUTRAL TO GROUND BUSBARS INSIDE ELECTRICAL EQUIPMENT BEYOND THIS POINT.
- ⑧ FACTORY INSTALLED DIGITAL POWER METER. BASIS OF DESIGN: SCHNEIDER ELECTRIC MODEL IPMS530.
- ⑨ FACTORY INSTALLED INTEGRAL SURGE PROTECTION. PROVIDE CIRCUIT BREAKER AS RECOMMENDED BY SURGE PROTECTIVE DEVICE MANUFACTURER.

[illegible][illegible]

PANELBOARD 'P1B'		CONNECTED VA			DEMAND VA		
SECTION 1 TOTAL CONNECTED VA	22080	21520	20990	SECTION 1 TOTAL DEMAND VA			
SECTION 2 TOTAL CONNECTED VA	14400	11200	14200	SECTION 2 TOTAL DEMAND VA			
TOTAL CONNECTED VA	36480	32720	35190	TOTAL DEMAND VA			
TOTAL CONNECTED AMPS	304	273	293	TOTAL DEMAND AMPS			

CARDINAL ENGINEERING ASSOCIATES INC. 21-03-34-00 FPL COLUMBIA: FPL 13 Feb 2026 - 11:57am

SYSTEMS LEGEND

UNDERGROUND COMMUNICATIONS

- ▼ 2-PORT DATA OUTLET BY OWNER. PROVIDE 4" SQUARE BOX WITH SINGLE GANG MUD RING AND 3/4" CONDUIT WITH PULL STRING FROM BOX TO ACCESSIBLE LOCATION ABOVE CEILING.
- ▼ 4-PORT DATA OUTLET BY OWNER. PROVIDE 4" SQUARE BOX WITH SINGLE GANG MUD RING AND 3/4" CONDUIT WITH PULL STRING FROM BOX TO ACCESSIBLE LOCATION ABOVE CEILING.
- ▼_R DATA OUTLET FOR RADIO COMMUNICATION BY OWNER. PROVIDE 4" SQUARE BOX WITH SINGLE GANG MUD RING AND 1" CONDUIT WITH PULL STRING FROM BOX TO ACCESSIBLE LOCATION ABOVE CEILING.
- ▼_{BAS} DATA OUTLET FOR BUILDING AUTOMATION SYSTEM BY OWNER. PROVIDE 4" SQUARE BOX WITH SINGLE GANG MUD RING AND 3/4" CONDUIT WITH PULL STRING FROM BOX TO ACCESSIBLE LOCATION ABOVE CEILING.
- ▼ TELEPHONE OUTLET. PROVIDE 4" SQUARE BOX WITH SINGLE GANG MUD RING AND 3/4" CONDUIT WITH PULL STRING FROM BOX TO ACCESSIBLE LOCATION ABOVE CEILING.
- ▼₂ (2) TELEPHONE VOICE JACKS IN (1) 4" SQUARE BOX WITH SINGLE GANG COVER. PROVIDE SEPARATE DEDICATED OUTSIDE PHONE LINES FOR EACH JACK. PROVIDE 3/4" CONDUIT.
- ① POINT OF CONNECTION FOR DATA SYSTEM RACEWAY TO FURNITURE. PROVIDE 4" SQUARE BOX WITH SINGLE GANG MUD RING AND 1" CONDUIT WITH PULL STRING FROM BOX TO ACCESSIBLE LOCATION ABOVE CEILING.

- AV AUDIOVISUAL ROUGH-IN OUTLET BOX FOR INSTALLATION OF AV OUTLETS BY OWNER. PROVIDE 4" SQUARE BOX WITH SINGLE GANG MUD RING MOUNTED AT 18" A.F.F. UNLESS OTHERWISE NOTED ON PLANS.
- MODULAR FIRE RATED PATHWAY. BASIS OF DESIGN HILTI CP 653 4 OR APPROVED EQUAL.
- 12"x4" LADDER TYPE CABLETRAY. MOUNT CABLETRAY AT 8'-3" A.F.F. TO CENTER OF TRAY, UNLESS NOTED OTHERWISE.
- COMM RACK WITH VERTICAL WIRE MANAGERS PROVIDED BY OWNER.
- 4"x8-3/4" FIRE RETARDANT PL/WOOD BACKBOARD.
- WAP WIRELESS ACCESS POINT PROVIDED BY OWNER.
- TV PROVIDE 4" SQUARE BOX WITH SINGLE GANG MUD RING FOR CABLE TELEVISION OUTLET BY OWNER. PROVIDE 3/4" CONDUIT WITH PULL STRING FROM BOX TO ACCESSIBLE LOCATION ABOVE CEILING.
- DATA OUTLET. VGA AND HDMI (BY OWNER). PROVIDE 4" SQUARE BOX WITH DOUBLE GANG MUD RING. PROVIDE (1) 3/4" CONDUIT WITH PULL STRING FOR DATA AND (1) 1 1/2" CONDUIT WITH STRING FOR VGA/HDMI CABLES.
- DATA OUTLETS. VGA AND HDMI (BY OWNER) INSTALLED IN FOUR COMPARTMENT FLOOR BOX, FURNISHED BY DIVISION 26 CONTRACTOR. PROVIDE 3/4" CONDUIT WITH PULL STRING FROM BOX TO ACCESSIBLE LOCATION ABOVE CEILING. REFER TO §-E504 FOR ADDITIONAL DETAIL.

- DATA OUTLETS. VGA AND HDMI (BY OWNER) INSTALLED IN POKE-THRU TYPE FLOOR BOX, FURNISHED BY DIVISION 26 CONTRACTOR. PROVIDE 3/4" CONDUIT WITH PULL STRING FROM BOX TO ACCESSIBLE LOCATION ABOVE CEILING. REFER TO §-E504 FOR ADDITIONAL DETAIL.
- DUAL SERVICE MODULAR FURNITURE POKE-THRU, FURNISHED BY DIVISION 26 CONTRACTOR. ALIGN POKE-THRU FEED HOLES WITH CENTER OF MODULAR FURNITURE. REFER TO §-E504 FOR ADDITIONAL INFORMATION.
- 2-GANG JUNCTION BOX, COORDINATE WITH AV INSTALLER AND APPROVED SHOP DRAWINGS.
- SCREEN LOW VOLTAGE INTERFACE WITH MOTOR AND INTERFACE MOUNTS ABOVE FINISHED CEILING. COORDINATE WITH AV INSTALLER AND APPROVED SHOP DRAWINGS FOR EXACT LOCATION.
- CEILING MOUNTED SPEAKER. COORDINATE WITH AV INSTALLER AND APPROVED SHOP DRAWINGS FOR EXACT LOCATION.
- PROVIDE WIRING ACCESS AND NETWORK CONNECTIVITY FOR SECURITY CAMERAS IN ACCORDANCE WITH APPROVED SHOP DRAWINGS.
- PULL AREA AT PROJECTOR LOCATION. COORDINATE EXACT LOCATION WITH APPROVED AV DRAWINGS.

CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COORDINATING DEVICE PLACEMENT WITH APPROVED AUDIO VISUAL DRAWINGS AND SUBJECT TO OWNER'S APPROVAL.

ELECTRONIC DOOR SYMBOL LEGEND

- CR CARD READER
- DC DOOR CONTACT
- EL ELECTRIC LOCK
- EH MAGNETIC HOLDER
- ES OBSTRUCTION SENSOR
- OD OVERHEAD DOOR CONTACT
- PB PANIC BAR
- PO POWER OPERATOR
- PP PUSH PAD OPERATOR
- PH POWER TRANSFER HINGE
- REX REQUEST-TO-EXIT

GENERAL NOTES THIS DRAWING

- REFER TO POWER PLANS FOR RECEPTACLE LOCATIONS. WHERE 120V RECEPTACLES ARE IN CLOSE PROXIMITY TO COMMUNICATIONS DEVICES, SUCH DEVICES SHALL BE INSTALLED AT SAME HEIGHT AS RECEPTACLES WITH NO MORE THAN 2" OF SEPARATION BETWEEN THEM.
- CONDUITS FOR DATA SHALL BE INCREASED BY ONE STANDARD TRADE SIZE FOR ALL RUNS WHICH REQUIRE MORE THAN (1) 90 DEGREE BEND.
- PROVIDE CONDUIT SLEEVES FOR DATA CABLE PENETRATIONS THROUGH FULL HEIGHT WALL. COORDINATE SIZES AND LOCATIONS WITH DATA CABLE INSTALLER. PROVIDE FIRE STOPPING WHERE NECESSARY TO MAINTAIN FIRE RATING OF WALLS.

KEYED NOTES (X)

- ALLOCATE 3'-0" OF WALL SPACE FROM FLOOR TO CEILING FOR BDA (BIDIRECTIONAL AMPLIFIER). PROVIDE 3" CONDUIT WITH NYLON PULLSTRING FROM LOCATION OF BDA TO THE DONOR ANTENNA LOCATION ON THE ROOF.
- SINGLE GANG JUNCTION BOX MOUNTED 34" A.F.F. PROVIDE 1 1/4" CONDUIT WITH PULL STRING TO AN ACCESSIBLE LOCATION ABOVE CEILING. UTILIZED FOR HDMI CABLE TO TV DISPLAY LOCATED IN AREA.
- REFER TO E-503 FOR ADDITIONAL REQUIREMENTS. COORDINATE WITH OWNERS SECURITY SYSTEM INSTALLER AND APPROVED SHOP DRAWINGS.
- PROVIDE SINGLE GANG OUTLET BOX AT 55" A.F.F. FOR AV DEVICES FURNISHED BY THE AV CONTRACTOR. PROVIDE (1) 1 1/4" CONDUIT FROM AV OUTLET BOX TO AN ACCESSIBLE LOCATION ABOVE THE CEILING. PROVIDE PULL STRING. COORDINATE WITH AV INSTALLER AND APPROVED SHOP DRAWINGS.
- FLOOR MOUNTED JUNCTION BOX. PROVIDE 1-1/4" EMPTY CONDUIT WITH PULL STRING FROM BOX TO ACCESSIBLE LOCATION ABOVE CEILING.
- SINGLE GANG BOX MOUNTED 18" A.F.F. PROVIDE 1" CONDUIT WITH PULL STRING TO AN ACCESSIBLE LOCATION ABOVE CEILING. UTILIZED FOR RADIO CABLE (1) CAT 6, (1) COAX CABLE.
- PROVIDE AN OUTLET BOX FOR TV. INSTALL WITH TOP OF BOX 6" BELOW CEILING.
- PROVIDE (2) 1 1/4" CONDUITS WITH PULL STRINGS FROM AV BOX TO ACCESSIBLE LOCATION ABOVE THE CEILING.
- SINGLE GANG BOX MOUNTED 48" A.F.F. PROVIDE 1" CONDUIT WITH PULL STRING TO ACCESSIBLE LOCATION ABOVE CEILING.
- PROVIDE (1) 2" CONDUIT WITH PULL CORD FROM FLOOR BOX TO EACH TV OUTLET LOCATED WITHIN ROOM.
- OWNER PROVIDED NETWORK CARD READER WITH INTEGRAL CAMERA AND INTERCOM. COORDINATE LOCATION AND ROUGH-IN REQUIREMENTS WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.
- CONNECT GENERATOR AND ATS TO BUILDING MANAGEMENT SYSTEM FOR OFF SITE ALARM AND MONITORING CONNECTIONS.
- CARD READER TIED INTO FIRE ALARM SYSTEM TO RELEASE WHEN ALARM SIGNALS.
- SINGLE GANG BOX MOUNTED AT 18" FOR CABLE TO CRESTON CLICK SHARE.
- DATA OUTLET MOUNTED INSIDE MILL WORK. COORDINATE WITH APPROVED SHOP DRAWINGS AND MILLWORK INSTALLER.
- PROVIDE WIRING ACCESS FOR SECURITY CAMERAS IN ACCORDANCE WITH APPROVED SHOP DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COORDINATING DEVICE PLACEMENT WITH APPROVED AUDIO VISUAL DRAWINGS AND SUBJECT TO OWNER'S APPROVAL.

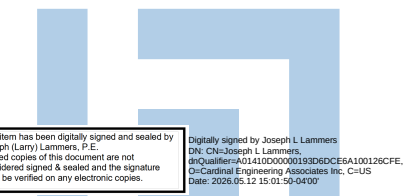
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DOCUMENTS

ISSUE DATE
02/15/2026

NO.	REASON	DATE
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DESIGNED BY
DAVID LITHGOW

PROJECT MANAGER
DAVID LITHGOW

DESIGN TEAM
CEA

COLUMBIA STORM
PROCESSING & SERVICE
CENTER - BUILDING A -
SERVICE CENTER
FLORIDA POWER & LIGHT

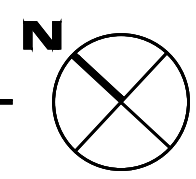
PROJECT NO.
814C632800

SHEET TITLE
SYSTEMS PLAN

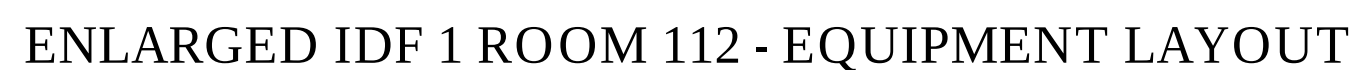
A-T101

SERVICE CENTER - SYSTEMS PLAN

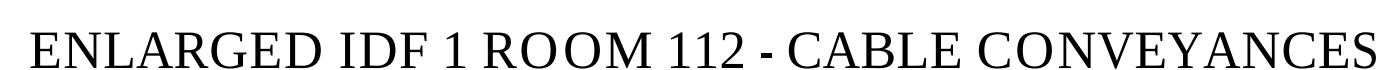
SCALE: 3/16" = 1'-0"



ALL LOW VOLTAGE SYSTEMS (WIFI, AUDIOVISUAL, SECURITY, TELECOM, ACCESS CONTROL, BDA, ETC.) SHALL BE PROVIDED BY THE OWNER'S SUBCONTRACTOR. GENERAL CONTRACTOR TO COORDINATE LOCATIONS AND INFRASTRUCTURE REQUIREMENTS (I.E. LINE VOLTAGE, CONDUIT, ETC.) COORDINATE AND PROVIDE WIRING ACCESS AND NETWORK CONNECTIVITY AS REQUIRED IN ACCORDANCE WITH APPROVED SHOP DRAWINGS.



SCALE: 1/4" = 1'-0"



SCALE: 1/4" = 1'-0"

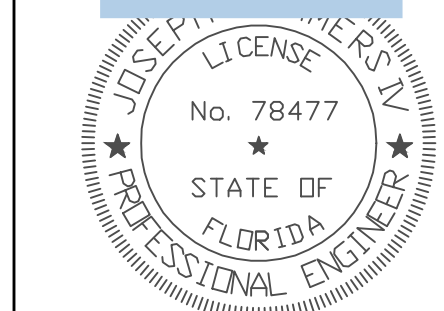
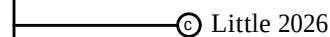


1. HORIZONTAL CABLE LENGTHS SHALL NOT EXCEED 295' FROM PATCH PANELS TO DATA OUTLETS.

- ① PROVIDE MIXTURE 4x8x3/4" THICK AC GRADE PLYWOOD BACKBOARDS WITH 2 COATS OF WHITE FIRE RETARDANT PAINT ON ALL SIDES. INSTALL WITH THE 8" DIMENSION MOUNTED VERTICALLY.
- ② INCORPORATE 4" CONDUITS FROM SITE. COORDINATE CONDUITS TO BE AS CLOSE TO WALL AS POSSIBLE PRIOR TO INSTALLATION.
- ③ COMM RACK WITH VERTICAL WIRE MANAGERS PROVIDED BY OWNER.
- ④ 12"x4" LENDER TYPE CABLE TRAY. MOUNT CABLE TRAY AT 8'-3" A.F.F. TO CABLE TO TOP, UNLESS OTHERWISE NOTED. CABLE TRAY IS PROVIDED AND WIRING BY OTHERS AND IS TO BE SHOWN FOR GRAPHICAL PURPOSES ONLY, LAYOUT IS SUBJECT TO CHANGE.
- ⑤ MODULAR FIRE RATED PATHWAY. BASIS OF DESIGN HLTI CP 653 & 4, OR APPROVED EQUAL.
- ⑥ ALLOCATE 3'-0" OF WALL SPACE FROM FLOOR TO CEILING FOR BDA (BIDIRECTIONAL AMPLIFIER), PROVIDE 3" CONDUIT WITH NYLON PULLSTRING FROM LOCATION OF BDA TO THE DONOR ANTENNA LOCATION.
- ⑦ COPPER PHONE BLOCKS AND COAX CABLE SERVICES.
- ⑧ CONTRACTOR TO INSTALL 2" CONDUIT UNDER SLAB TO EXTERIOR.
- ⑨ IT RACKS ARE TO BE GROUND BY THE ELECTRICIAN TO THE GROUNDING BAR. SEE DETAIL 6, A.E505.



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ISSUE DATE
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REVISIONS		
NO.	REASON	DATE

[illegible]

PROJECT TEAM
PRINCIPAL IN CHARGE DAVID LITHGOW
PROJECT MANAGER DAVID LITHGOW
DESIGN TEAM CEA

COLUMBIA STORM
PROCESSING & SERVICE
CENTER - BUILDING A -
SERVICE CENTER
FLORIDA POWER & LIGHT

PROJECT NO.

814C632800

SHEET TITLE
ENLARGED PLANS

SHEET NUMBER

A-T102

A-T102

FIRE ALARM SYSTEM GENERAL NOTES		
1.	ALL WALL-MOUNTED VISUAL SIGNALING APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80 IN. (2.03m) AND NOT GREATER THAN 96 IN. ABOVE THE FINISHED FLOOR (A.F.F.) PER NFPA 72 2016 Ch. 18.5.5	
2.	ALL WALL-MOUNTED AUDIBLE DEVICES SHALL BE A MINIMUM OF 90" A.F.F. TO THE TOP OF DEVICE PER NFPA 72 2016 (SECTION 18.4.8.1). AREAS HAVING MORE THAN 2 STROBES IN THE FIELD OF VIEW SHALL BE SYNCHRONIZED PER NFPA 72 SECTION 18.5.4.2	
3.	SMOKE DETECTORS AND HEAT DETECTOR LOCATIONS ARE BASED ON SMOOTH CEILING WITH MAXIMUM HEIGHT OF 10 FEET UNLESS OTHERWISE NOTED.	
4.	STROBE ILLUMINATION IS BASED ON 10 FOOT CEILING HEIGHT AND ARE INSTALLED ACCORDING TO NFPA 72 REQUIREMENTS UNLESS OTHERWISE NOTED. ANY DEVICES ON CEILINGS OVER 10 FT. WILL BE DERATED PER NFPA 72.	
5.	MANUAL PULL STATIONS SHALL BE MOUNTED AT 42-48" TO PULL LEVER ABOVE FINISHED FLOOR LEVEL.	
6.	ALL EQUIPMENT SHALL BE UL LISTED.	
7.	ALL WIRING SHALL BE IN ACCORDANCE WITH N.E.C. AND AUTHORITIES HAVING JURISDICTION.	
8.	ALL JUNCTION BOXES SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C.	
9.	ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE SERVICING, TROUBLE SHOOTING, ETC.	
10.	DETECTORS SHALL NOT BE LOCATED IN A DIRECT AIR-FLOW, NOR CLOSER THAN 3 FEET (900mm) FROM AN AIR SUPPLY DIFFUSER.	
11.	ALL DUCT SMOKE DETECTORS SHALL BE MOUNTED BY THE MECHANICAL CONTRACTOR. DUCT DETECTORS EXPOSED TO THE WEATHER SHALL BE WEATHER PROTECTED BY THE MECHANICAL CONTRACTOR. ALL AIR VELOCITY TESTING SHALL BE PERFORMED BY THE MECHANICAL CONTRACTOR.	
12.	ALL 120 VAC POWER REQUIREMENTS FOR THE FIRE ALARM SYSTEM SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR AND SHALL MEET ALL REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.	
13.	ALL FIRE ALARM DEVICE BACKBOXES, FIRE ALARM TERMINAL CABINETS, GUTTERS, JUNCTION BOXES AND ASSOCIATED SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. REFER TO FIRE ALARM SYMBOL LIST AND/OR WIRING DETAILS FOR ADDITIONAL INFORMATION. SYSTEM SUPPLIER PROVIDED BACK BOXES SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.	
14.	SMOKE DETECTOR TESTING SHALL BE ACCOMPLISHED WITH SMOKE OR LISTED AEROSOL DEVICES PROVIDED BY THE MANUFACTURER PER NFPA 72 AS ACCEPTABLE BY THE A.A.	
15.	ALL WIRING SHALL BE CUT FOR IN AND OUT. WIRING SHALL NOT BE LOOPED THROUGH DEVICES.	
16.	POINT AND COMMON ANNUNCIATION AND T-TAPPING ARE PROHIBITED. (T-TAPPING IS ALLOWABLE ON ADDRESSABLE STATE 4 SLC LOOPS).	
17.	THE ALARM SYSTEM SHALL HAVE AN AUDIBILITY OF NOT LESS THAN 15dB ABOVE AMBIENT NOISE LEVELS, BUT NOT LESS THAN 75dB THROUGHOUT AREA OF ALARM. TESTING SHALL BE ACCOMPLISHED WITH A dB METER, WHERE APPLICABLE. AUDIBLE TONE WILL BE TEMPORAL PATTERN.	
18.	FIRE ALARM SIGNAL, SHALL MEET ANSI S34-1, AUDIBILITY EMERGENCY EVACUATION SIGNAL (TEMPORAL PATTERN) AND ALL CONDUITS ARE 3/4" UNLESS OTHERWISE NOTED.	
19.	ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED PER MANUFACTURERS SPECIFICATIONS. TESTING SHALL BE FURNISHED AND INSTALLED BY AN AUTHORIZED DISTRIBUTOR.	
20.	TAMPER PROOF SCREWS OR OTHER APPROVED MECHANICAL MEANS SHALL BE USED ON ALL COVERS OF EXTERIOR ELECTRICAL JUNCTION BOXES IN LIEU OF EXTERIOR SUPERVISION OF THE COVERS. PER THE 2016 NFPA 72 23.8.5.11.1.	
22.	ELECTRICAL POWER SERVICE SHALL BE ON A DEDICATED BRANCH CIRCUIT(S) AND CONNECTIONS SHALL BE MECHANICALLY PROTECTED (CIRCUIT BREAKERS SHALL BE LOCKED IN THE ON POSITION WITH AN APPROVED MECHANICAL CLIP). CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, SHALL BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT." THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.	
23.	UPON COMPLETION OF ALL INSTALLATION AND TESTING, THE CONTRACTOR SHALL PROVIDE TO THE AUTHORITY HAVING JURISDICTION AND THE BUILDING OWNER A COMPLETED AND SIGNED NFPA 72 CERTIFICATE OF COMPLETION.	
24.	SECTION 17.1.1.1.3 OF THE 2016 EDITION OF NFPA 72 STATES THAT "WHERE DETECTION IS NOT REQUIRED DURING CONSTRUCTION, DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER ALL OTHER CONSTRUCTION TRADES HAVE COMPLETED CLEANUP."	
25.	IN-BUILDING PUBLIC SAFETY RADIO SYSTEM ENHANCEMENT, IF REQUIRED, SHALL BE MONITORED BY FIRE ALARM SYSTEM.	
26.	FIRE ALARM BASIS OF DESIGN IS AN EDWARDS EST4.	
27.	PROVIDE SIGN INDICATING THE FACP LOCATION ON BOTH DOORS TO ELECTRICAL ROOM 106.	
28.	PROVIDE SIGN INDICATING FIRE DEPARTMENT CONNECTION (FDC).	
29.	CELLULAR COMMUNICATOR TO BE PROVIDED FOR CENTRAL STATION MONITORING.	
APPLICABLE CODES / STANDARDS		
PARTIAL LIST OF APPLICABLE NFPA STANDARDS		
NFPA 72-National Fire Alarm Codes (2016 Edition)		
NFPA 101-Life Safety Code (2018 Edition)		
2020 Florida Fire Prevention Code 7th Edition		
BUILDING INFORMATION		
BUILDING CONSTRUCTION TYPE: II-B	AREA OF BUILDING: 12,549 sq	
BUILDING OCCUPANCY: A-3 / B	NO. OF STORIES: 1	
OCCUPANT LOAD: 240	OWNER: John McGowan	
SPRINKLERED: YES		



1. VERIFY QUANTITY AND LOCATION OF WATERFLOW AND TAMPER SWITCHES WITH FIRE SPRINKLER CONTRACTOR.
2. VERIFY QUANTITY AND LOCATION OF DUCT DETECTORS AND REMOTE TEST STATIONS WITH MECHANICAL DRAWINGS.
3. FIRE ALARM BASIS OF DESIGN IS AN EDWARDS EST-i01000.
4. FIRE ALARM CONTROL PANEL SHALL BE ANALOG ADDRESSABLE TYPE.
5. INITIATING DEVICE CIRCUIT SHALL BE CLASS "B".
6. NOTIFICATION APPLIANCE CIRCUIT SHALL BE CLASS "B".



GROUND FLOOR

FIRE ALARM PLAN SYMBOL ID LEGEND

The diagram illustrates the components of a fire alarm symbol. It shows a square device symbol with a bell icon. Callouts point to various parts of the symbol and its associated information:

- DEVICE SYMBOL**: Points to the square symbol containing the bell icon.
- FACP=F**: Points to the top horizontal line of the symbol.
- CXT #**: Points to the middle horizontal line of the symbol.
- DEVICE #**: Points to the bottom horizontal line of the symbol.
- F=1-1** and **79CD**: Points to the text inside the symbol, indicating the device type and model.
- CANDELLA RATING**: Points to the text "79CD", which represents the candella rating.
- DEVICE SYMBOL** and **DEVICE ADDRESS**: Points to the octagonal symbol "SD" and the box "001" below it, representing the device type and its address.

FIRE ALARM WIRE LEGEND	
WIRE TAG	WIRE USE
A	(NAC) 14-2 FPL OR EQUIVALENT
B	(SLC DATA LOOP) 18-2 FPL OR EQUIVALENT
C	(REMOTE TEST STATION) 22-4 FPL OR EQUIVALENT
D	(ANNUNCIATOR CONNECTION) 18-4 FPL OR EQUIVALENT

ALL CONDUITS 3/4" EMT, MINIMUM UNLESS OTHERWISE NOTED.
40% FILLED MAX.

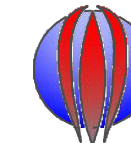
[illegible]

SEQUENCE OF OPERATION

SCALE	PROJECT NO	DATE	DOMAIN	CHECKED
1		10/2/2022	AC	GH



1st Fire & Security INC.
Life Safety Powered By Service



TER	NO	SEAL
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THESE DRAWINGS ARE NOT VALID FOR ANY PURPOSE WHICH REQUIRES THE ORIGINAL SIGNATURE AND SEAL OF THE ENGINEER. UNLESS THE ORIGINAL SIGNATURE AND SEAL ARE AFFIXED, DRAWINGS NOT SIGNED AND SEALED BY THE ENGINEER SHALL NOT BE SUBMITTED TO ANY AUTHORITY OR USED FOR ANY PURPOSE WHERE SIGNATURE AND SEALED DOCUMENTS ARE REQUIRED.

FOR 100% CONSTRUCTION DOCUMENTS

2/15/2026

REASON	DATE
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PROJECT TEAM	
DIRECTOR IN CHARGE	DAVID LITHGOW
PROJECT MANAGER	DAVID LITHGOW
DESIGN TEAM	DAVID LITHGOW
PROJECT NAME	COLUMBIA STORM PROCESSING & SERVICE CENTER - BUILDING A - SERVICE CENTER FLORIDA POWER & LIGHT

LECT NO. 4C632800

RE ALARM PLAN

T NUMBER

A-FA101



SHEET NUMBER