

## ELECTRICAL ABBREVIATIONS LIST

1P	1 POLE (P, 3P, 4P, ETC.)	DGP	DOMESTIC WATER CIRCULATING PUMP	HT	HEIGHT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	SWBD	SYMMETRICAL SYSTEM
A	AMPERE	DEPT	DEPARTMENT	HTG	HEATING	NFBS	NON-FUSED SAFETY DISCONNECT SWITCH	SYB	SYSTEM
AC	ABOVE COUNTER OR AIR CONDITIONER	DET	DETAIL	HV	HIGH VOLTAGE	NC	NOT IN CONTRACT	TEL	TELEPHONE
ACLG	ABOVE CEILING	DSC	DISCONNECT	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	ND	NOT DETECTED	TEL/DATA	TELEPHONE/DATA TERMINAL
ADO	AUTOMATIC DOOR OPENER	DN	DOWN	HWP	HYDRONIC WATER PUMP	NL	NIGHT LIGHT	TL	TWIST LOCK
AF	AMP FRAME	DPR	DAMPEN	IC	INTER interrupting CAPACITY	N/O	NORMALLY OPEN	TR	TAMPER RESISTANT THERMOSTAT
AFB	ABOVE FINISHED FLOOR	DST	SAFETY DISCONNECT SWITCH	IG	ISOLATED GROUND	NPF	NORMAL POWER FACTOR	TSTAT	TELEPHONE TERMINAL
AFS	ARC FAULT CIRCUIT INTERRUPTER	DWG	DOUBLE THROW DRAWING	IMC	INTERMEDIATE METAL CONDUIT	NTS	NOT TO SCALE	TV	TELEVISION
AHU	AIR HANDLING UNIT	EXST	EXISTING	IN	INFEED	OL	OVERHEAD OVERLOADS	TV/C	TELEVISION TERMINAL CABLE
AL	ALUMINUM	EC	ELECTRICAL CONTRACTOR	IW	INTERLOCK WITH	PA	PUBLIC ADDRESS	TYP	TYPICAL
ALT	ALTERNATE	ELEV	ELEVATOR	JBOX	JUNCTION BOX	PE	PULL BOX OR PUSHBUTTON	UC	UNDER COUNTER
AMP	AMPERE	EMT	EMERGENCY	KV	KILOVOLT	PF	PNEUMATIC ELECTRIC	UG	UNDERGROUND
ANUN	ANNUNCIATOR	EMS	ENERGY MANAGEMENT SYSTEM	KVA	KILOVOLT-AMPERE	PH	PHASE	UH	UNIT HEATER
APPROX	APPROXIMATELY	EMT	ELECTRICAL METALLIC TUBING	KWH	KILOWATT HOUR	PV	POST INDICATING VALVE	UT	UNDERGROUND TELEPHONE
ADJST	ADJUST	EP	ELECTRIC PNEUMATIC EQUIPMENT	KWH	KILOWATT HOUR	PNL	PANEL	UTL	UTILITY
ARCH	ARCHITECT, ARCHITECTURAL	EW	ELECTRIC WATER COOLER	KWH	KILOWATT HOUR	PP	POWER POLE	UV	ULTRAVIOLET
AS	AMP SWITCH	EXST	EXISTING	LOC	LOCATE OR LOCATION	PR	PRIMARY		
AT	AMP TRIP	EXP	EXPLOSION PROOF	LT	LIGHT	PROJ	PROJECTION	V	VOLT
ATS	AUTOMATIC TRANSFER SWITCH	FA	FIRE ALARM	LTG	LIGHTING	PRV	POWER ROOF VENTILATOR	VA	VOLT-AMPERES
AUTO	AUTOMATIC	FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL	LTV	LOW VOLTAGE	PT	POTENTIAL TRANSFORMER	VDT	VIDEO DISPLAY TERMINAL
AUX	AUXILIARY	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	PV	POLYVINYL CHLORIDE (CONDUIT)	VERT	VERTICAL
AV	AUDIO VISUAL	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	PWR	POWER	VOL	VOLUME
AWG	AMERICAN WIRE GAUGE	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	QUAN	QUANTITY	W	WATT
BATT	BATTERY	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	REC	RECEIPT	WG	WITH GUARD
BD	BOARD	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	REQD	REQUIRED	WH	WATER HEATER
BLDG	BUILDING	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	RM	ROOM	W/O	WITHOUT
BMS	BUILDING MANAGEMENT SYSTEM	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	RSC	RIGID STEEL CONDUIT	WP	WEATHERPROOF
C	CONDUIT	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	RTU	ROOF TOP UNIT	XFR	TRANSFORMER
CAB	CABINET	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CAT	CATALOG	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CATV	CABLE TELEVISION	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CB	CIRCUIT BREAKER	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CCTV	CLOSED CIRCUIT TELEVISION	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CKT	CIRCUIT	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CLG	CEILING	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
COMB	COMBINATION	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
COMP	COMPRESSOR	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CON	CONNECTION	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CONSTR	CONSTRUCTION	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CONT	CONTINUATION OR CONTINUOUS	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CONV	CONVECTOR	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CP	CIRCUIT BREAKER	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CTR	CENTER	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		
CU	COPPER	FAC	FIRE ALARM CONTROL PANEL	LV	LOW VOLTAGE	SEC	SECONDARY		

## ELECTRICAL SYMBOL LEGEND

HT AFF	SYMBOL	DESCRIPTION	HT AFF	SYMBOL	DESCRIPTION	HT AFF	SYMBOL	DESCRIPTION	HT AFF	SYMBOL	DESCRIPTION
AS NOTED	12"	WALL MOUNTED FLOODLIGHT (TYPE DENOTED)	18"	18"	MULTI-OUTLET ASSEMBLY (TYPE DENOTED)	90***	90***	CONDUIT CONCEALED IN WALL OR OVERHEAD	90***	90***	FIRE ALARM HORN
PER SCHED	18"	RECESSED LIGHT (TYPE DENOTED)	84"	84"	MULTI-OUTLET ASSEMBLY (TYPE DENOTED)	90***	90***	CONDUIT CONCEALED BELOW FLOOR	90***	90***	FIRE ALARM HORN W/STROBE (CANDELAS)
	84"	POLE MOUNTED LIGHT (TYPE DENOTED)			CLOCK (TYPE DENOTED)	90***	90***	CONDUIT EXPOSED	90***	90***	FIRE ALARM BELL
	18"	SURFACE LIGHT (TYPE DENOTED)			POWER POLE (OPEN OFFICE STYLE)	90***	90***	CONDUIT TRANSITION UP	90***	90***	FIRE ALARM BELL W/STROBE (CANDELAS)
	18"	SUSPENDED OR PENDANT LIGHT (TYPE DENOTED)			JUNCTION BOX	90***	90***	CONDUIT TRANSITION DOWN	90***	90***	FIRE ALARM STROBE (CANDELAS)
	18"	RECESSED LIGHT (TYPE DENOTED)			PULL BOX	90***	90***	CONDUIT STUBBED OUT	90***	90***	FIRE ALARM HORN W/STROBE (CANDELAS)
	18"	STRIP LIGHT (TYPE DENOTED)			CIRCUIT BREAKER PANEL	90***	90***	OVERHEAD ELECTRIC	90***	90***	FIRE ALARM REMOTE ANNUNCIATOR
AS NOTED	18"	TRACK AND TRACK LIGHT (TYPES DENOTED)	72***	72***	POWER OR DISTRIBUTION PANEL	90***	90***	OVERHEAD TELEPHONE	90***	90***	SMOKE DETECTOR (TYPE DENOTED)
	18"	EMERGENCY BATTERY LIGHT (TYPE DENOTED)	72***	72***	SPECIAL CABINET (TYPE DENOTED)	90***	90***	BRANCH CIRCUIT HOME RUN	90***	90***	DUCT SMOKE DETECTOR (TYPE DENOTED)
	18"	EXIT SIGN (TYPE DENOTED)	72***	72***	TRANSFORMER (TYPE DENOTED)	90***	90***	UNDERFLOOR RACEWAY SYSTEM	90***	90***	REMOTE TEST/STATUS STATION
	18"	SINGLE POLE SW.	72***	72***	MOTOR (SEE SCHEDULE)	90***	90***	CABLE TRAY (TYPE DENOTED)	90***	90***	GAS DETECTOR (TYPE DENOTED)
	18"	2 POLE SINGLE THROW SW.	72***	72***	DAMPEN MOTOR	90***	90***	CONDUIT SLEEVE (SIZE DENOTED)	90***	90***	F.A. PULLSTATION
	18"	3-WAY SW.	72***	72***	MANUAL MTR. STR. (W/OVERLOADS)	90***	90***	TELEPHONE OUTLET (TYPE DENOTED)	90***	90***	F.A. ADDRESSABLE MONITOR MODULE
	18"	4-WAY SW.	72***	72***	MAG. MOTOR STARTER OR CONTACTOR	90***	90***	WALL TELEPHONE OUTLET (TYPE DENOTED)	90***	90***	F.A. CONTROL MODULE
	18"	KEYED SW.	72***	72***	COMB. MOTOR STARTER (NON-FUSED)	90***	90***	INFORMATION OUTLET (TYPE DENOTED)	90***	90***	F.A. DOOR HOLDER
	18"	SW. W/PILOT	72***	72***	COMB. MOTOR STARTER (FUSED)	90***	90***	WIRELESS ACCESS POINT	90***	90***	F.A. DOOR CLOSER
	18"	DIMMER SWITCH	72***	72***	SAFETY DISC. SW. (NON-FUSED)	90***	90***	TELEVISION OUTLET	90***	90***	SPRINKLER VALVE TAMPER SWITCH
	18"	OCCUPANCY SENSOR SWITCH	72***	72***	SAFETY DISC. SW. (FUSED)	90***	90***	MULTIPLE SERVICE OUTLET (TYPE DENOTED)	90***	90***	SPRINKLER PRESSURE SWITCH
	18"	MOTOR HORSEPOWER RATED SWITCH	72***	72***	RELAY	90***	90***	OUTLET IN FLOOR (MICROPHONE SHOWN)	90***	90***	ELECTRIC STRIKE
	18"	LOW VOLTAGE SWITCH	72***	72***	VARIABLE FREQUENCY DRIVE	90***	90***	MULTIPLE SERVICE FLR OUTLET (TYPE DENOTED)	90***	90***	MAGNETIC LOCK
	18"	LOW VOLTAGE ON ONLY SWITCH	72***	72***	ENCLOSED CIRCUIT BREAKER	90***	90***	SPEAKER (WALL OR CEILING MT.)	90***	90***	DOOR SECURE INDICATOR LIGHT
	18"	LOW VOLTAGE DIMMER SWITCH	72***	72***	OCCUPANCY SENSOR - TYPE DENOTED	90***	90***	HORN TYPE SPEAKER	90***	90***	DOOR CONTACTS
	18"	VACANCY SENSOR DIMMER SWITCH	72***	72***	LIGHT LEVEL SENSOR - TYPE DENOTED	90***	90***	VOLUME CONTROL	90***	90***	CALL READER
	18"	VACANCY SENSOR SWITCH	72***	72***	PHOTOCELL	90***	90***	MICROPHONE OUTLET	90***	90***	REQUEST TO EXIT DEVICE
	18"	PUSH BUTTON	72***	72***	TIME CONTROL SWITCH (TIME SWITCH)	90***	90***	COURTROOM VIDEO CAMERA/RECORDING	90***	90***	DOOR ACCESS CONTROL PANEL
	18"	SINGLE RECEPT.	72***	72***	FURNITURE FEED	90***	90***	KEYED NOTE (SEE SCHEDULE)	90***	90***	KEYPAD
	18"	DUPLEX RECEPT.	72***	72***	OCCUPANCY SENSOR - TYPE DENOTED	90***	90***	DIGITAL VIDEO RECORDER	90***	90***	CCTV MONITOR
	18"	DUPLEX RECEPT. W/ COMBO TYPE A/TYPE C USB	72***	72***		90***	90***	CCTV MONITOR	90***	90***	PTZ CONTROLLER
	18"	FOURPLEX RECEPT.	72***	72***		90***	90***	CCTV CAMERA	90***	90***	CCTV CAMERA WITH PAN/TILT DRIVE
	18"	FLOOR RECEPT. (DUPLEX SHOWN)	72***	72***		90***	90***	DOOR LOCK	90***	90***	DOOR LOCK CONTROL PANEL
	18"	REMOTE GENERATOR ANNUNCIATOR	72***	72***		90***	90***	INFRARED HEARING ASSISTANCE EMITTER	90***	90***	RECORDING STATION
	18"		72***	72***		90***	90***	PA CABINET	90***	90***	MICROPHONE
	18"		72***	72***		90***	90***	SALLYPORT OH DOOR REMOTE OPENER	90***	90***	TEMPERATURE ALARM
	18"		72***	72***		90***	90***	WATER ALARM	90***	90***	BROADCAST TRUCK CONNECTION PLATE
	18"		72***	72***		90***	90***	BROADCAST TRUCK CONNECTION BOX	90***	90***	

ALL DISTANCES ARE TO CENTER OF DEVICE OR EQUIPMENT UNLESS OTHERWISE NOTED. DEVICES INDICATED AT 48" MAY NOT BE INSTALLED WITH ANY OPERABLE PART HIGHER THAN 48". DEVICES MAY BE INSTALLED IN CONCRETE MASONRY UNITS WITH THE TOP OF THE DEVICE AT 44".  
\* DISTANCE ABOVE TOP OF DOOR FRAME \*\* DISTANCE TO TOP OF EQUIPMENT OR DEVICE \*\*\* DISTANCE TO HIGHEST OPERABLE PART OF EQUIPMENT \*\*\*\* DISTANCE BELOW CEILING \*\*\*\*\* DISTANCE TO BOTTOM OF DEVICE

## ELECTRICAL SYMBOL LEGEND

SCALE: 12" = 1'-0"

## PANELBOARD IDENTIFICATION

EQUIPMENT DESIGNATION	CODE
HIGH VOLTAGE 304W, 277/480	HP4
HIGH VOLTAGE 303W, 480	HP3
LOW VOLTAGE 304W, 120/208	LP4
LOW VOLTAGE 303W, 208	LP3
LOW VOLTAGE 103W, 120/240	LP2
LOW VOLTAGE 103W, 120/208	LP1
SYSTEMS DESIGNATION	CODE
NORMAL	N
EMERGENCY	E
POWER CONDITIONED	C
ELECTRONIC GROUND	G
UNINTERRUPTIBLE POWER SOURCE/CLIPS	
SYSTEM EQUIPMENT DESIGNATION	FLOOR OF STRUCTURE PANEL NO.
LP4N-102	

## SPECIFIC CODE NOTES

- FIRE PROTECTION REQUIREMENTS**
- PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.
  - OPENINGS FOR STEEL ELECTRICAL BOXES NOT EXCEEDING 16 SQUARE INCHES ARE PERMITTED PROVIDED OPENINGS DO NOT AGGREGATE MORE THAN 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL OR PARTITION.
  - OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES.
  - LIGHT FIXTURES AND OTHER APPARATUS SUPPORTED BY THE ACOUSTICAL CEILING GRID MUST MEET THE REQUIREMENTS OF NEC SECTION 410.6, MEANS OF SUPPORT.
  - RECESSED LIGHTING FIXTURES INSTALLED IN FIRE RATED CEILING ASSEMBLIES SHALL BE FIRE RATED FIXTURES BEARING THE UL FIRE RATED LABEL. FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE UL FIRE RESISTANCE DIRECTORY, AND SHALL INCLUDE A FIRE RATED ENCLOSURE INSTALLED OVER THE FIXTURE THAT MEETS THE REQUIREMENTS OF THE UL FIRE RESISTANCE DIRECTORY.

## ELECTRICAL SYMBOL NOTES

- THE LIGHTING FIXTURE TYPE IS INDICATED BY AN UPPER CASE LETTER. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER.
- EXAMPLE 1: LIGHTING FIXTURE TYPE "X" IS CONNECTED TO CIRCUIT 12 AND CONTROLLED BY SWITCH "Y".
- EXAMPLE 2: THE FIXTURE TYPE SHOWN AS A NUMERATOR INDICATES ALL LIGHTING FIXTURES IN THE ROOM OR SPACE ARE CONNECTED TO THE SAME TYPE. THE CIRCUIT NUMBER AND SWITCH DESIGNATION SHOWN AS A DENOMINATOR INDICATES ALL LIGHTING FIXTURES IN THE ROOM OR SPACE ARE CONNECTED TO THE SAME CIRCUIT, CONTROLLED BY THE SAME SWITCHES, CENTER/OUTWARD MULTI-LEVEL SWITCHING.
- EXT LIGHTS: STEM INDICATES WALL MOUNTING. NO STEM INDICATES CEILING MOUNTING. SHADED AREA INDICATES ILLUMINATED FACE(S). ARROW INDICATES DIRECTIONAL ARROW ON ILLUMINATED FACE(S). THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. EXAMPLE: THE WALL MOUNTED EXT LIGHT TYPE "E" WITH SINGLE FACE AND DIRECTIONAL ARROW IS CONNECTED TO CIRCUIT 14.
- DEVICES: THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SPLIT DUPLEX RECEPTACLE IS CONNECTED TO CIRCUIT 16 AND ONE RECEPTACLE OUTLET IS CONTROLLED BY SWITCH "Y".
- THE CONTROL DEVICE DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SINGLE POLE SWITCH "Y" TO CONTROL LIGHTING FIXTURES INDICATED BY "X".
- WALL BOX DIMMER WITH SIZE AS INDICATED AT DEVICE. EXAMPLE: 600 WALL BOX DIMMER TO CONTROL LIGHTING FIXTURES INDICATED BY "X". SEE SPECIFICATIONS FOR WATTAGE IF NOT INDICATED.
- SPECIAL CONNECTIONS: THE EQUIPMENT IS INDICATED BY A NUMBER IN A CIRCLE. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE LOAD DESCRIPTION AND TYPE OF CONNECTION. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER(S) ADJACENT TO THE SYMBOL. EXAMPLE: EQUIPMENT NO. 1, 3 PHASE CONNECTION TO CIRCUITS 1, 3, 5.
- MOTOR CONNECTIONS: THE MOTOR IS INDICATED BY A NUMBER WITHIN OR ADJACENT TO THE MOTOR SYMBOL. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE MOTOR DESCRIPTION AND ELECTRICAL REQUIREMENTS. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER(S) ADJACENT TO THE SYMBOL. EXAMPLE: MOTOR SF-1, 3 PHASE CONNECTION TO CIRCUITS 2, 4, 6.
- ELECTRIC HEATER CONNECTIONS: THE HEATER TYPE IS INDICATED BY A NUMBER FOLLOWING THE UPPER CASE LETTER "H". SEE THE HEATER SCHEDULE FOR ELECTRICAL REQUIREMENTS. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER(S) ADJACENT TO THE HEATER. EXAMPLE: ELECTRIC BASEBOARD HEATER TYPE "H" CONNECTED TO CIRCUITS 1, 9.
- TRANSFORMERS: THE TRANSFORMER TYPE IS INDICATED BY A NUMBER FOLLOWING THE UPPER CASE LETTER "T". SEE THE TRANSFORMER SCHEDULE OR THE SINGLE LINE DIAGRAM FOR THE TRANSFORMER DESCRIPTION AND REQUIREMENTS. EXAMPLE: TRANSFORMER TYPE "T1".
- PANELBOARDS: PANELBOARD DOORS MAY BE SHOWN TO INDICATE OPENING SIDE OF RECESSED PANELBOARDS. SEE PANELBOARD IDENTIFICATION FOR DESIGNATION CODES.
- SPECIAL NOTE: SEE THE SPECIAL NOTES ON THAT SHEET FOR THE NOTE NUMBER INDICATED IN THE HEXAGON.
- CONDUIT SHOWN WITHOUT SLASH MARKS SHALL CONTAIN 2 # 12 CONDUCTORS IN 3/4" CONDUIT UNLESS SPECIFIC EQUIPMENT REQUIRES A DIFFERENT SIZE.
- CONDUIT SHOWN WITH SLASH MARKS SHALL CONTAIN 1 # 12 CONDUCTOR PER SLASH MARK IN 3/4" CONDUIT UNLESS A CONDUCTOR AND CONDUIT SIZE IS SHOWN ADJACENT TO THE SLASH MARKS. SLASH MARK INDICATORS ARE: SHORT STRAIGHT-PHASE CONDUCTOR, LONG STRAIGHT-NEUTRAL CONDUCTOR, SHORT BENT ENDED-SLASH LEGS, LONG STRAIGHT WITH A DOT-GROUND CONDUCTOR, CHEVRON-CATEGORY 6, HALF CHEVRON-CATEGORY 3, TWIST-SHELD TWISTED PAIR, CONCENTRIC CIRCLE AND DOT-COAX CABLE.
- HOME RUN TO BRANCH CIRCUIT PANELBOARD: THE PANELBOARD DESIGNATION IS SHOWN ADJACENT TO THE HOME RUN ARROW AS A NUMERATOR AND THE CIRCUIT DESIGNATION IS SHOWN AS THE DENOMINATOR. CIRCUIT BREAKER SIZES (AMP/NUMBER OF POLES) ARE SHOWN IN THE PANELBOARD SCHEDULE WITH THE CORRESPONDING PANELBOARD AND CIRCUIT DESIGNATION. EXAMPLE: HOME RUN TO PANELBOARD LPN-102, CIRCUITS 1, 3, 5.
- SYMBOL NOTATIONS: UPPER CASE LETTERS ADJACENT TO SYMBOLS INDICATE A UNIT TYPE. SEE APPROPRIATE SCHEDULE OR SPECIFICATIONS.

## ELECTRICAL DRAWINGS

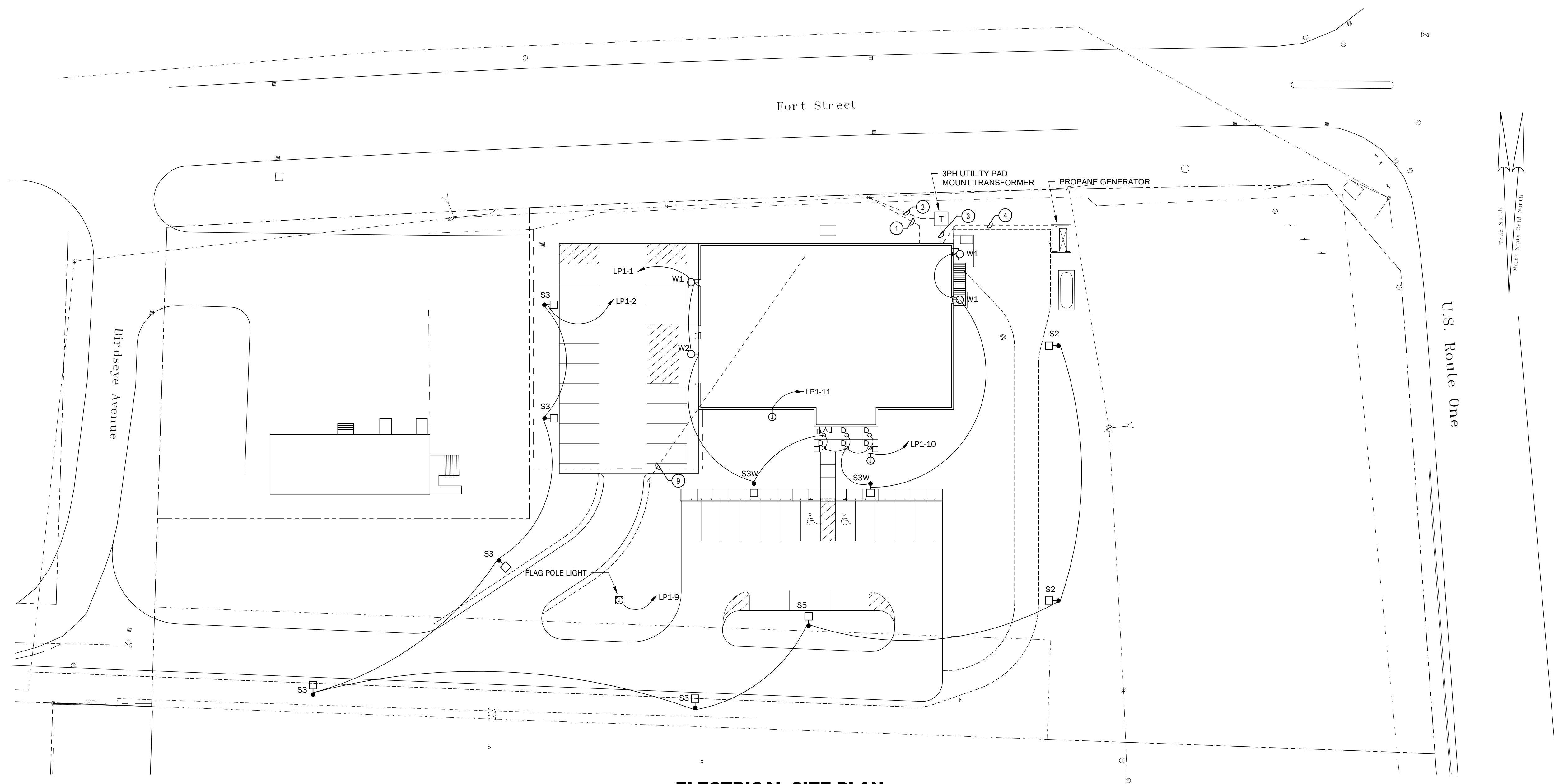
- |       |                               |
|-------|-------------------------------|
| E0.1  | LEGENDS & NOTES               |
| E0.2  | LEGENDS & NOTES               |
| ES1.1 | ELECTRICAL SITE PLAN          |
| E1.1  | FIRST FLOOR PLAN - LIGHTING   |
| E1.2  | FIRST FLOOR PLAN - LIGHTING   |
| E1.3  | FIRST FLOOR PLAN - POWER      |
| E1.4  | FIRST FLOOR PLAN - POWER      |
| E1.5  | FIRST FLOOR PLAN - SYSTEMS    |
| E1.6  | FIRST FLOOR PLAN - SYSTEMS    |
| E5.1  | ELECTRICAL RISER - POWER      |
| E5.2  | ELECTRICAL RISER - TELECOM    |
| E5.3  | ELECTRICAL RISER - FIRE ALARM |
| E5.4  | ELECTRICAL DETAILS            |
| E5.5  | ELECTRICAL DETAILS            |
| E5.6  | ELECTRICAL DETAILS            |
| E5.7  | ELECTRICAL DETAILS            |
| E6.1  | ELECTRICAL SCHEDULES          |
| E6.2  | ELECTRICAL SCHEDULES          |

GENERAL ELECTRICAL NOTES

1. DO NOT SCALE THESE DRAWINGS. SEE ARCHITECTURAL DOCUMENTS FOR EXACT LOCATIONS AND MOUNTINGS FOR FIXTURES, DEVICES, ETC. EXCEPT AS SPECIFICALLY NOTED.
2. REFER TO DIVISION 21, 22 & 23 FOR ADDITIONAL FIRE PROTECTION/PLUMBING/HVAC EQUIPMENT AND REQUIREMENTS.
3. PROVIDE BRANCH CIRCUITING AND FINAL CONNECTION FOR ALL FIXTURES, OUTLETS AND EQUIPMENT.
4. INSTALLATION SHALL COMPLY WITH 2023 EDITION OF NEC, INCLUDING ALL STATE AND LOCAL AMENDMENTS.
5. MINIMUM CIRCUIT SIZE IS 1P-20A, 2 #12, 1 #12 GROUND MINIMUM CONDUIT SIZE IS 3/4"; UNLESS OTHERWISE NOTED. WIRING METHOD FOR ALL SYSTEMS SHALL BE IN CONDUIT OR METAL RACEWAY UNLESS OTHERWISE NOTED. MC CABLE MAY BE ALLOWED WITH PRE-APPROVAL OBTAINED FROM THE DIVISION. WHERE MC CABLE IS APPROVED FOR USE, ALL HOMERUNS SHALL BE IN CONDUIT.
6. ALL NEW WIRING SHALL BE TYPE THHN/THWN RATED 75-90°C, 600V, WET-DRY LOCATIONS. MINIMUM BRANCH CIRCUIT WIRING SHALL BE NO. 12 AWG SOLID COPPER. BRANCH CIRCUITS LONGER THAN 75-FT FOR 120V OR 175-FT FOR 277V SHALL BE AT LEAST NO. 10 AWG FROM PANEL TO LAST OUTLET.
7. PROVIDE SEPARATE GREEN GROUND WIRE (SIZE PER NEC) FOR ALL CIRCUITS INCLUDING LIGHTING.
8. HOMERUN CONDUITS SHALL CONTAIN SIX (6) UNGROUNDED PHASE CONDUCTORS MAXIMUM. VOLTAGE DROP AS PER N.E.C.
9. PROVIDE SEPARATE NEUTRAL (EACH PHASE A NEUTRAL) FOR ALL 120 VOLT LIGHTING AND RECEPTACLE CIRCUITS.
10. WHERE INDIVIDUAL BRANCH CIRCUITS AS SHOWN ON PLANS ARE COMBINED AS MULTI-WIRE BRANCH CIRCUITS, THE MULTIWIRE BRANCH CIRCUITS SHALL BE INSTALLED ACCORDING TO REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND STATE AMENDMENTS.
11. PROVIDE ROUGH-IN, FINAL CONNECTION, BRANCH CIRCUITS, PANELBOARDS, ETC. FOR ALL DEVICES AND EQUIPMENT SHOWN ON THESE DOCUMENTS.
12. CONTRACTOR SHALL VERIFY ROUGH-IN REQUIREMENTS FOR ALL EQUIPMENT (MECHANICAL, PLUMBING, FIRE PROTECTION, OWNER PROVIDED, OTHER VENDOR PROVIDED, ETC.) PRIOR TO BEGINNING ROUGH-IN. ANY DISCREPANCIES WITH THESE PLANS SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION IMMEDIATELY.
13. THE MECHANICAL AND ELECTRICAL DRAWINGS INCLUDED IN THIS SET WERE ORIGINALLY PREPARED TO THE SCALE SHOWN ON THE TITLE BLOCK OF EACH SPECIFIC DRAWING. HOWEVER, BECAUSE OF THE INACCURACIES INHERENT TO THE ELECTRONIC PLOTTING AND/OR REPROGRAPHIC PROCESSES USED TO OBTAIN FINAL PRINTS, SPECIFIC DIMENSIONS SHOULD NOT BE OBTAINED BY SCALING OF THESE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ACTUAL DIMENSIONS.
14. PERMANENT TYPE MARKING PENS SHALL BE USED TO NEATLY LABEL ALL JUNCTION BOX AND PULL BOX COVERS, WHERE BOXES ARE INSTALLED FOR THE INSTALLATION OF POWER WIRING. THE COVER SHALL INDICATE THE PANEL DESIGNATION AND CIRCUIT BREAKER NUMBER(S) ASSOCIATED WITH EACH BOX. WHERE BOXES ARE INSTALLED FOR THE THE INSTALLATION OF TELECOMMUNICATION WIRING, THE COVERS SHALL BE LABELED "TELECOMMUNICATIONS" AND INDICATE THE POINT OF THE SYSTEM DISTRIBUTION LOCATION ASSOCIATED WITH EACH BOX.
15. THE COVERS ON ALL PULL BOXES, JUNCTION BOXES AND ASSOCIATED COVERS FOR THE INSTALLATION OF THE FIRE ALARM SYSTEM SHALL BE PAINTED RED AND SHALL BE NEATLY LABELED IN ACCORDANCE WITH THE LOCAL FIRE DEPARTMENT'S REQUIREMENTS.
16. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND PROVIDE AS REQUIRED FOR ALL THE FIRE DAMPERS AND MOTORIZED DAMPERS, AS SHOWN ON THE DOCUMENTS UNDER DIVISION 23 AND 26.
17. PROVIDE ENGRAVED NAMEPLATES FOR ALL NEW PANELBOARDS, DISCONNECT SWITCHES, MANUAL MOTOR STARTERS, SERVICE SWITCHES, ETC. NAMEPLATES SHALL BE SCREWED-ON OR RIVETED TO THE EQUIPMENT. ADHESIVE TYPES WILL NOT BE ACCEPTABLE. NAMEPLATES SHALL BE LAMINATED BLACK WITH WHITE ENGRAVED TEXT. TEXT HEIGHT SHALL BE 1/4".
18. ALL PANELBOARDS SHALL BE FURNISHED WITH TYPEWRITTEN CIRCUIT DIRECTORIES AT CLOSE OF PROJECT. ALL SPARE CIRCUIT BREAKERS SHALL BE IDENTIFIED ON THE CIRCUIT DIRECTORIES AS "SPARES" AND SHALL BE LOCKED IN THE OFF POSITION. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROPERLY PHASE BALANCING LOADS ON EACH PANELBOARD.
19. COLOR OF DEVICES AND PLATES SHALL BE AS DIRECTED BY THE ARCHITECT.
20. DISCONNECT SWITCHES SHALL BE HEAVY DUTY (HD), SIDE OPERATED WITH INTERLOCKING COVER.
21. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY ALL CHARGES FOR PERMITS AND INSPECTIONS.
22. UNDER NO CIRCUMSTANCES SHALL ANY BACK BOXES OR CONDUIT BE INSTALLED SURFACE MOUNTED ON NEW CONSTRUCTION IN FINISHED AREAS, INCLUDING FINISHED AREAS WITH BLOCK WALLS. ANY BACK BOXES OR CONDUIT INSTALLED SURFACE MOUNTED ON FINISHED WALLS SHALL BE REINSTALLED BY THE ELECTRICAL CONTRACTOR TO THE SATISFACTION OF THE ARCHITECT AND WITH NO ADDITIONAL COSTS TO THE ELECTRICAL CONTRACTOR.
23. ALL DEVICE COVER PLATES SHALL BE LABELED IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS.
24. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FOR THE MAGNETIC HOLD DOOR OPENER, ELECTRONIC LOCK AND THE AUTOMATIC DOOR OPENER AS SHOWN ON OR SPECIFIED UNDER THE ARCHITECTURAL SECTIONS AS FOLLOWS:  
A) POWER AS REQUIRED. COORDINATE WITH SUPPLIER.  
B) FIRE ALARM INTERFACE INCLUDING WIRING AND FINAL CONNECTIONS FOR AN OPERATIONAL COMPLETE SYSTEM AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
25. COORDINATE WITH THE GENERAL CONTRACTOR AND ALL OTHER SUB-CONTRACTORS IN ORDER TO DETERMINE THE OVERALL PROJECT PHASING AND WORK SEQUENCING.
26. ALL 15- AND 20-AMP, 125- AND 250-VOLT NON-LOCKING TYPE RECEPTACLES SHALL BE TAMPER-RESISTANT IN ACCORDANCE WITH NEC 406.12.
27. TEMPORARY LIGHT AND POWER SHALL BE PROVIDED ON SITE BY THE ELECTRICAL CONTRACTOR. COST OF ELECTRICITY SHALL BE THE RESPONSIBILITY OF THE CONSTRUCTION MANAGER.
28. WIRING METHOD FOR ALL SYSTEMS SHALL BE IN CONDUIT OR METAL RACEWAY UNLESS OTHERWISE NOTED. MC CABLE MAY BE ALLOWED WITH PRE-APPROVAL OBTAINED FROM THE DIVISION. WHERE MC CABLE IS APPROVED FOR USE, ALL HOMERUNS SHALL BE IN CONDUIT.

GENERAL LOW VOLTAGE NOTES

- A. ALL CONDUCTORS OPERATING AT 50 VOLTS OR GREATER SHALL BE IN RACEWAY. ALL RACEWAY WITHIN THE STRUCTURE ABOVE THE FLOOR SLAB SHALL BE METAL. RACEWAY BELOW THE FLOOR SLAB AND UNDERGROUND RACEWAY OUTSIDE THE STRUCTURE SHALL BE PVC.
- B. ALL LOW VOLTAGE CABLES OR CONDUCTORS OPERATING AT LESS THAN 50 VOLTS SHALL BE IN METAL RACEWAY WHERE INSTALLED WITHIN WALLS OR INACCESSIBLE SPACES. LOW VOLTAGE CABLES MAY BE RUN IN CABLE TRAY WHERE NOTED. LOW VOLTAGE CABLES MAY BE RUN IN CABLE SUPPORT HOOKS ABOVE ACCESSIBLE CEILINGS WHERE NOTED.
- C. INSTALL CONDUIT WITH NO MORE THAN (2) 90° BENDS BETWEEN PULL BOXES, AND NO MORE THAN 100'-0" BETWEEN PULL BOXES. PULL BOXES SHALL BE INSTALLED FOR STRAIGHT THRU PULLS ONLY.
- D. ALL COMMUNICATIONS CABLES SHALL BE INSTALLED IN CABLE TRAY AS MUCH AS POSSIBLE ABOVE ACCESSIBLE CEILINGS, OR IN CONDUIT WHERE NOT ACCESSIBLE. PROVIDE BUSHINGS AT THE ENDS OF ALL CONDUIT WHERE STUBBED ABOVE ACCESSIBLE CEILINGS OR WHERE DROPPED INTO CABLE TRAY.
- E. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND DETAILS. ARCHITECTURAL ELEVATIONS AND DETAILS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON ELECTRICAL DRAWINGS.
- F. TV OUTLETS, VOLUME CONTROLS, TELE/DATA OUTLETS, SECURITY DEVICES, AND FIRE ALARM DEVICES SHALL CONSIST OF A BACK BOX WITH CONDUIT STUBBED ABOVE THE ACCESSIBLE CEILING. SEE STUB UP DETAIL. VERIFY SIZE OF BACK BOX REQUIRED WITH DEVICE TO BE INSTALLED. LOCATE BACK BOXES 6" FROM ADJACENT POWER RECEPTACLE INTENDED FOR COMPUTER USE.
- G. FURNISH AND INSTALL CONDUIT FROM BACK BOXES FOR THE FOLLOWING DEVICES INTO THE ACCESSIBLE CEILING SPACE IN THE CORRIDOR, UNLESS NOTED OTHERWISE:
- |        |                              |
|--------|------------------------------|
| 1" C   | TV OUTLETS                   |
| 3/4" C | VOLUME CONTROLS              |
| 3/4" C | SECURITY CCTV                |
| 3/4" C | SECURITY DOOR ACCESS CONTROL |
| 1" C   | TELEPHONE OUTLETS            |
| 1" C   | INFORMATION OUTLETS          |
| 3/4" C | FIRE ALARM DEVICES           |



### ELECTRICAL SITE PLAN

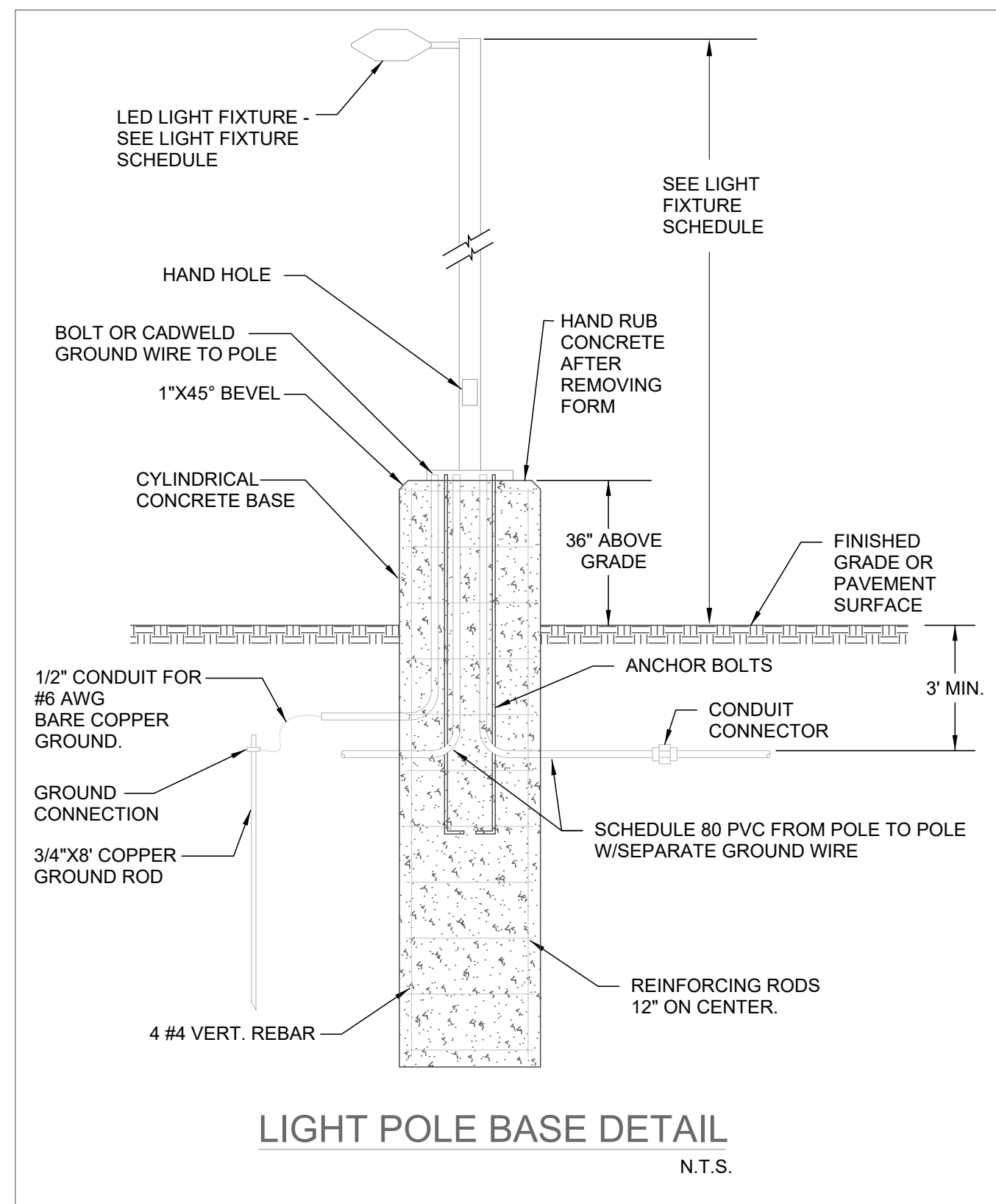
SCALE: 1" = 30'-0"

#### GENERAL SHEET NOTES

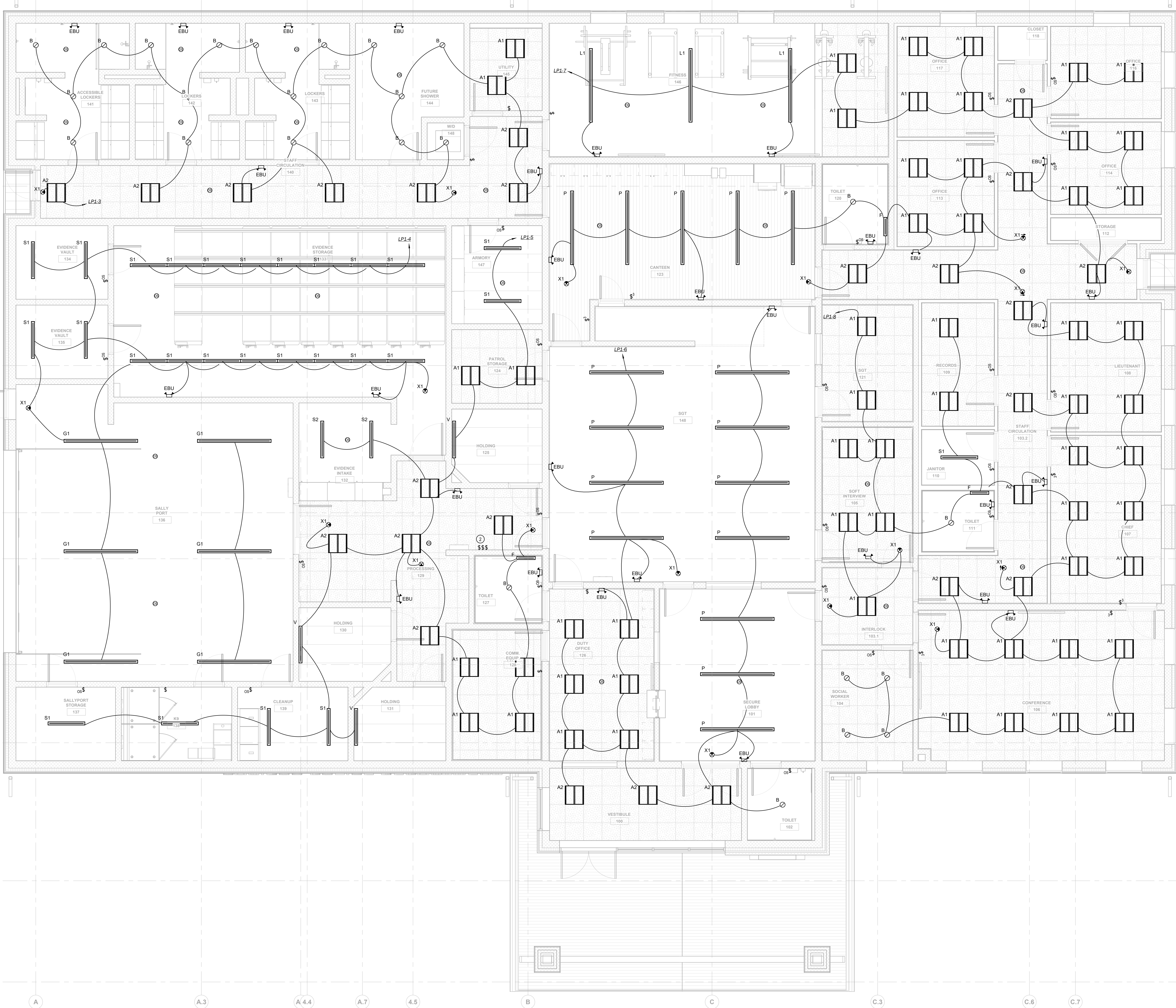
- REFER TO CIVIL DRAWINGS FOR ROUTING OF ALL UNDERGROUND CONDUIT AND COORDINATION WITH SITE UTILITIES.
- ALL UNDERGROUND SHALL BE SCHEDULE 80 PVC, MINIMUM SIZE 1" UNLESS OTHERWISE NOTED.
- ALL SITE LIGHTING BRANCH CIRCUIT WIRING SHALL BE MINIMUM #10 AWG. ROUTE ALL EXTERIOR LIGHTING BRANCH CIRCUITS VIA LIGHTING CONTROL RELAY PANEL LOCATED IN MAIN ELECTRICAL ROOM.
- PROVIDE HAND HOLE/PULL BOXES AS REQUIRED, PROPERLY SIZED PER NEC FOR SITE LIGHTING AND POWER.
- ALL LIGHTING AND POWER CONDUCTORS SHALL BE INSTALLED 36" BELOW FINISHED GRADE.
- ALL CONDUIT SWEEPS TURNED UP IN EQUIPMENT SLABS SHALL BE INSTALLED AS RIGID STEEL GALVANIZED CONDUIT. GROUND STEEL CONDUITS IN ACCORDANCE WITH APPLICABLE CODES.
- PROVIDE HAND HOLE BOXES AND EXTENSIONS TO ALLOW FOR CONDUIT BURIAL DEPTHS AND CONDUIT/BOX FILL CODE REQUIREMENTS.
- ALL EMPTY CONDUITS SHALL CONTAIN A NYLON PULL ROPE.

#### KEYED SHEET NOTES

- PROVIDE (2)4" W/ PULL WIRE FOR TELECOM. CONFIRM CONDUIT ROUTING AND REQUIREMENTS WITH TELECOM UTILITY.
- PROVIDE (2)5" W/ PULL WIRE FOR ELECTRICAL PRIMARY SERVICE. COORDINATE ROUTING IN FIELD WITH OTHER UTILITIES AND CIVIL PLANS.
- PROVIDE (2)4" W/ CONDUCTORS AND (1)4" SPARE FOR ELECTRICAL SECONDARY SERVICE. COORDINATE ROUTING IN FIELD WITH OTHER UTILITIES AND CIVIL PLANS.
- PROVIDE (2)4" W/ CONDUCTORS FOR GENERATOR STANDBY FEEDER AND (4)1" W/ W/ CONDUCTORS FOR CONTROLS. COORDINATE ROUTING IN FIELD WITH OTHER UTILITIES AND CIVIL PLANS.
- 2#10, 1#10G-1" C, UNLESS OTHERWISE NOTED.
- ELECTRIC VEHICLE CHARGING STATION - PROVIDE 1" C WITH CONDUCTORS (2 SETS OF 2#6, 1#10G) AND 1" C WITH NYLON PULL ROPE FOR DATA FOR EACH EV SPACE. CONDUITS SHALL ORIGINATE FROM THE SERVICE ELECTRIC PANEL AND BE ROUTED FROM A FLUSH IN-GRADE PULLBOX INTO THE CONCRETE BASE FOR THE EV CHARGING STATION. PROVIDE SEPARATE PULLBOX FOR POWER AND DATA. CONDUITS SHALL BE STUBBED 6" ABOVE THE THE CONCRETE BASE AND BE CAPPED AND LABELED. COORDINATE LOCATIONS WITH SITE CONTRACTOR AND THE OWNER.
- PROVIDE 6" CONCRETE FILLED GALVANIZED STEEL PROTECTIVE BOLLARD.
- PROVIDE (2)1" C WITH PULL ROPE FOR CAMERA POE SWITCH POWER AND DATA. CONDUITS SHALL RUN FROM MAIN ELEC RM AND MDF RM. PROVIDE 20A CIRCUIT (2#10, 1#10G-1" C) FOR WAP/POE SWITCH POWER. FIELD COORDINATE REQUIREMENTS AND LOCATION OF CAMERA/POE SWITCH PRIOR TO ROUGH-IN.
- PROVIDE (3) 1" CONDUITS FOR GATE POWER/CONTROL WIRING. CARD ACCESS WIRING, EXIT REQUEST WIRING AND AUDIO VIDEO INTERCOM WIRING. COORDINATE EXACT REQUIREMENTS WITH THE SYSTEM SUPPLIERS PRIOR TO ROUGHING IN. GATE POWER CONDUIT SHALL BE RUN FROM HANDHOLE TO PANELBOARD FEEDING THE GATE OPENER. AUDIO VIDEO INTERCOM CONDUIT SHALL BE RUN TO DUTY OFFICE. HANDHOLE FOR SLIDE GATE MOTOR POWER. PROVIDE COVER LOGO DESCRIPTION AS 'ELECTRIC'.







FIRST FLOOR PLAN - LIGHTING  
SCALE: 1/4" = 1'-0"

- GENERAL SHEET NOTES**

  - COORDINATE ALL LIGHTING FIXTURE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILINGS PLANS AND ELEVATIONS. CONFIRM SWITCHING SCHEME AND SWITCH LOCATIONS WITH ARCHITECT/OWNER PRIOR TO INSTALL.
  - PROVIDE UNSWITCHED WIRING TO EXIT SIGNS. COORDINATE EXIT SIGN LOCATIONS WITH ARCHITECTURAL EMERGENCY EGRESS PLANS.
  - ALL LIGHT FIXTURE LOCATIONS SHALL BE COORDINATED WITH HVAC DUCTWORK AND OTHER EQUIPMENT IN FIELD TO AVOID INTERFERENCE PRIOR TO INSTALL.
  - ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THIS DRAWING.
  - MC TYPE CONDUCTOR WITH INTEGRAL GROUND WIRE MAY BE UTILIZED FOR POWER AND LIGHTING CIRCUITS. MC CABLE SHALL BE UTILIZED ONLY WHERE COMPLETELY CONCEALED.
  - ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.
  - SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHTS OF EXTERIOR LIGHTING FIXTURES AND REFLECTED CEILING PLAN FOR INTERIOR LIGHTS.
  - PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
  - USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET. #8 AWG FOR 20 AMP, 120 VOLT BRANCH CIRCUITS LONGER THAN 150 FEET AND #10 AWG FOR 20 AMPERE, 277 VOLT CIRCUITS LONGER THAN 150 FEET. UNLESS SPECIFICALLY NOTED OTHERWISE, THIS INCREASED WIRE SIZE SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.
  - PROVIDE UL 924 LIGHTING RELAY CONTROL DEVICE FOR ALL EMERGENCY FIXTURES CONTROLLED BY A SEPARATE LOCAL SWITCH/SENSOR AND NOT BY THE LIGHTING CONTROL SYSTEM WHETHER OR NOT SHOWN ON PLAN.
  - PLACE YELLOW ADHESIVE DOT ON EVERY EMERGENCY LUMINAIRE OR ON THE CEILING GRID ADJACENT TO THE EMERGENCY LUMINAIRE.
  - LOCAL DIGITAL RELAY POWER PACKS SHALL BE CIRCUITED TO THE SAME CIRCUIT AS THE LIGHTS BEING CONTROLLED BY THAT RELAY/POWER PACK.
  - COORDINATE EXIT SIGN LOCATIONS WITH ARCHITECT AND EMERGENCY EGRESS PLANS.
- KEYED SHEET NOTES**

  - SWITCH BANK FOR ALL 2# ZONES AND EXTERIOR. PROVIDE (1) QSW52-5BR.
  - HOLDING CELL LIGHT SWITCH LOCATIONS

SEAL:

CITY OF CARIBOU, MAINE  
CARIBOU POLICE DEPARTMENT

PROJECT NUMBER: 2023102  
SUBMISSION  
PROGRESS SET  
ORIGINAL ISSUE  
DATE: 08/15/2025  
SHEET REVISION SCHEDULE:  
No. DATE

FIRST FLOOR PLAN - LIGHTING

SHEET  
NUMBER:

E1.1

PRELIMINARY - NOT FOR CONSTRUCTION

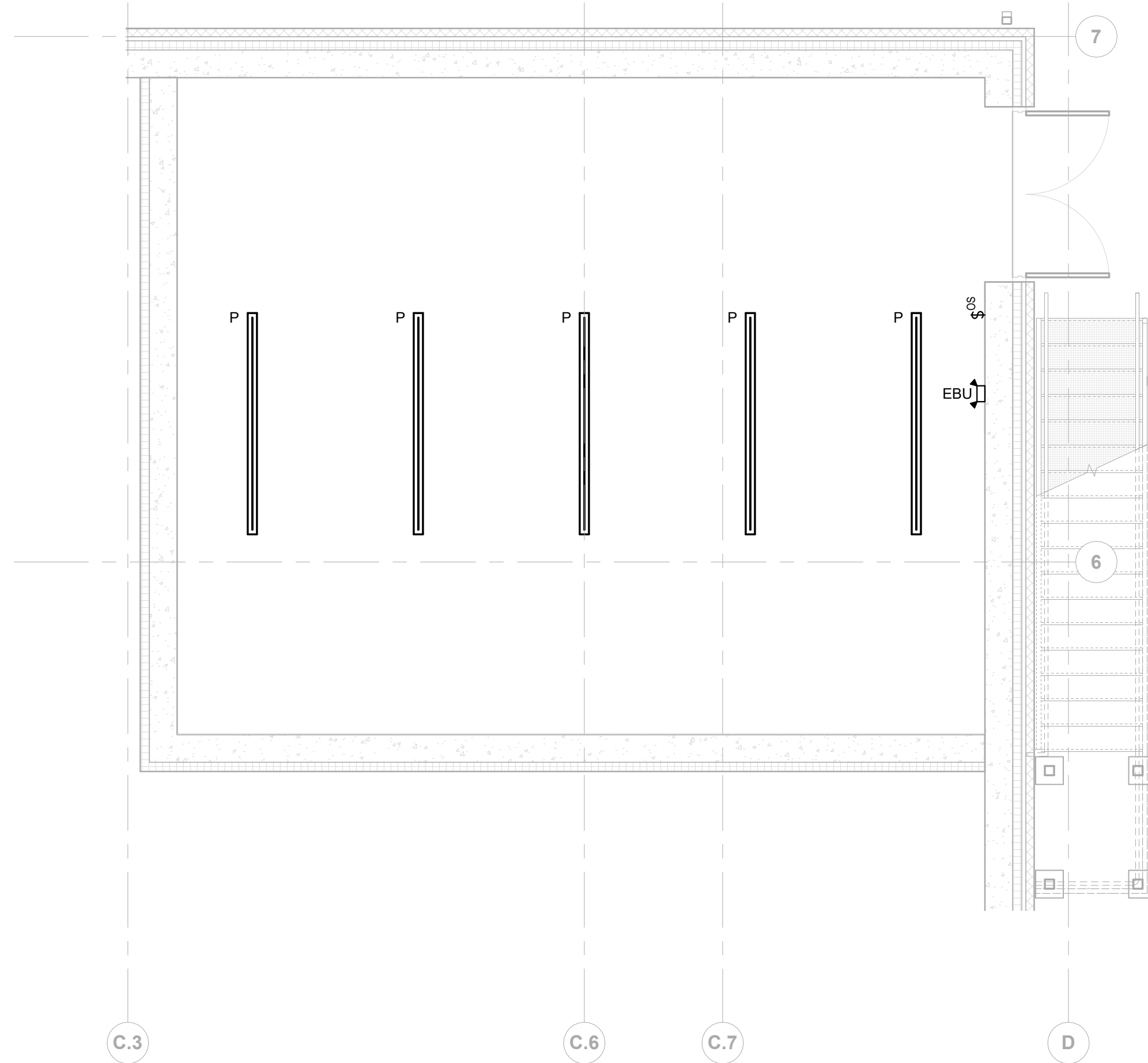


GENERAL SHEET NOTES

1. COORDINATE ALL LIGHTING FIXTURE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILINGS PLANS AND ELEVATIONS. CONFIRM SWITCHING SCHEME AND SWITCH LOCATIONS WITH ARCHITECT/OWNER PRIOR TO INSTALL.
2. PROVIDE UNSWITCHED WIRING TO EXIT SIGNS. COORDINATE EXIT SIGN LOCATIONS WITH ARCHITECTURAL EMERGENCY EGRESS PLANS.
3. ALL LIGHT FIXTURE LOCATIONS SHALL BE COORDINATED WITH HVAC DUCTWORK AND OTHER EQUIPMENT IN FIELD TO AVOID INTERFERENCE PRIOR TO INSTALL.
4. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THIS DRAWING.
5. MC TYPE CONDUCTOR WITH INTEGRAL GROUND WIRE MAY BE UTILIZED FOR POWER AND LIGHTING CIRCUITS. MC CABLE SHALL BE UTILIZED ONLY WHERE COMPLETELY CONCEALED.
6. ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.
7. SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHTS OF EXTERIOR LIGHTING FIXTURES AND REFLECTED CEILING PLAN FOR INTERIOR LIGHTS.
8. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
9. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET. #8 AWG FOR 20 AMP, 120 VOLT BRANCH CIRCUITS LONGER THAN 150 FEET AND #10 AWG FOR 20 AMPERE, 277 VOLT CIRCUITS LONGER THAN 150 FEET. UNLESS SPECIFICALLY NOTED OTHERWISE, THIS INCREASED WIRE SIZE SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.
10. PROVIDE UL 924 LIGHTING RELAY CONTROL DEVICE FOR ALL EMERGENCY FIXTURES CONTROLLED BY A SEPARATE LOCAL SWITCH/SENSOR AND NOT BY THE LIGHTING CONTROL SYSTEM WHETHER OR NOT SHOWN ON PLAN.
11. PLACE YELLOW ADHESIVE DOT ON EVERY EMERGENCY LUMINAIRE OR ON THE CEILING GRID ADJACENT TO THE EMERGENCY LUMINAIRE.
12. LOCAL DIGITAL RELAY POWER PACKS SHALL BE CIRCUITED TO THE SAME CIRCUIT AS THE LIGHTS BEING CONTROLLED BY THAT RELAY/POWER PACK.
13. COORDINATE EXIT SIGN LOCATIONS WITH ARCHITECT AND EMERGENCY EGRESS PLANS.

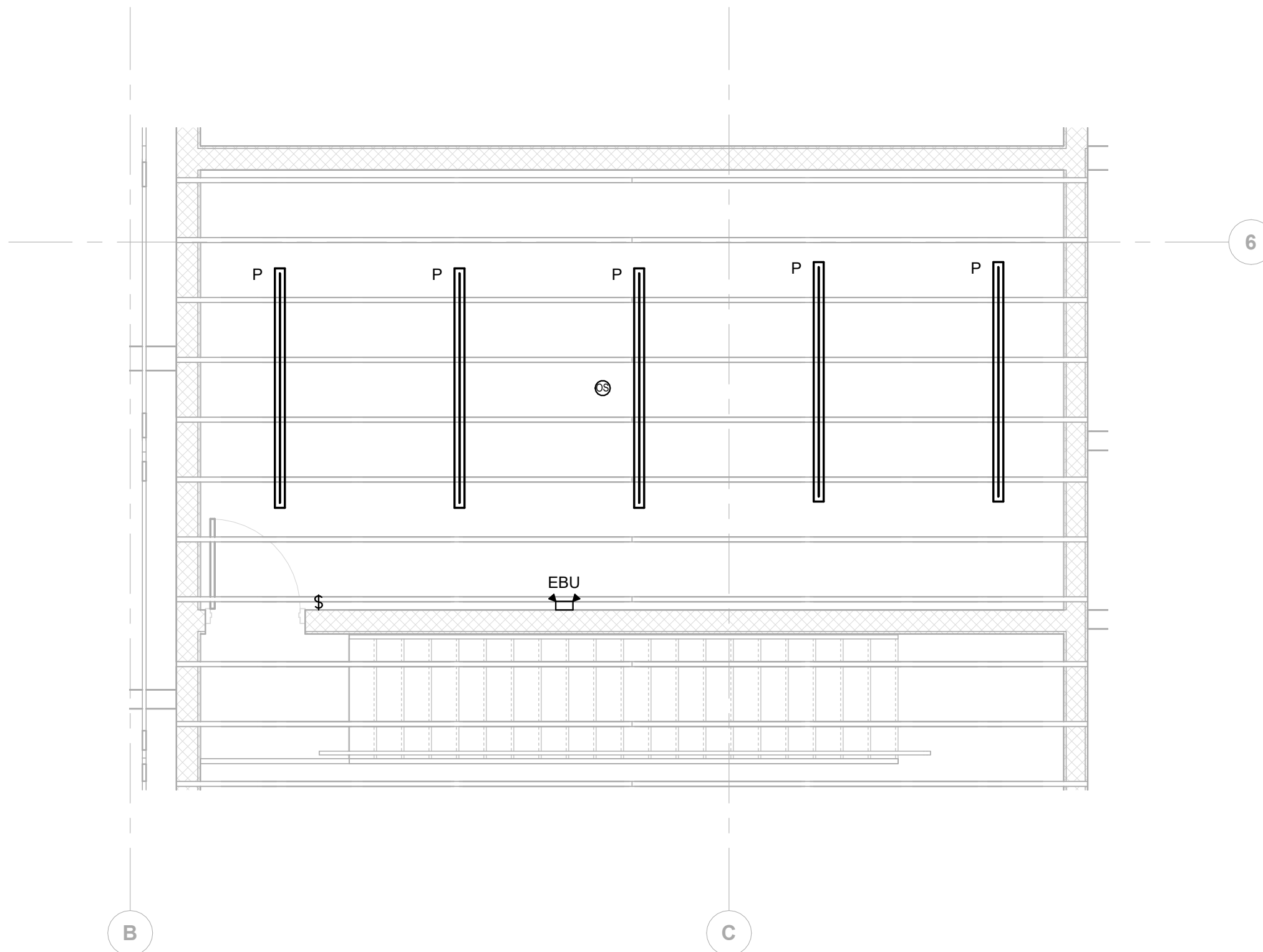
KEYED SHEET NOTES

1. SWITCH BANK FOR ALL Z# ZONES AND EXTERIOR. PROVIDE (1) QSW52-5BRL.



BASEMENT - LIGHTING

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



MEZZANINE - LIGHTING

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

PRELIMINARY - NOT FOR CONSTRUCTION



GENERAL SHEET NOTES

1. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THIS DRAWING.
2. ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH 6" LONG FLEXIBLE METAL CONDUIT.
3. ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.
4. SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHTS OF EXTERIOR LIGHTING FIXTURES.
5. CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.
6. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
7. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANEL BOARD BREAKERS (SEE PANEL BOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.
8. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET UNLESS SPECIFICALLY INDICATED OTHERWISE. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.

KEYED SHEET NOTES

1. METAL DETECTOR - PROVIDE (2) 1" IN CONCRETE SLAB FOR POWER AND DATA SECURITY WIRING FROM NEAREST WALL. COORDINATE ACTUAL REQUIREMENTS, CONDUIT ROUTING, AND TERMINATION LOCATIONS WITH MANUFACTURER PRIOR TO ROUGH-IN.
2. RECESSED 6" FIRE-RATED FLOOR BOX (HUBBELL SYSTEMONE) WITH FINISHED COVER. PROVIDE (2) DUPLEX RECEPTACLES, (1) 30A DATA JACKS, (1) HDMI AND (1) USB OUTLET. REQUIRED MODULES AND MOUNTING PROVISIONS.
3. PROVIDE 3-GANG FLUSH IN WALL BACK BOX EQUAL TO HUBBELL #NSAV62M WITH #NSAV6C METAL COVER. PROVIDE 20A, 120V WHITE DUPLEX RECEPTACLE WITH PLATE AND TWO CAT6 VOICE/DATA 2D' OUTLETS IN ENCLOSURE. COORDINATE EXACT LOCATIONS AND HEIGHTS WITH ARCHITECTURAL ELEVATIONS.
4. PROVIDE POKE-THRU FOR ELECTRIFIED FURNITURE FEEDS (POWER & DATA). COORDINATE WITH CUBICLE VENDOR FOR POWER CIRCUITING (TYP. MAX 3 WORKSTATIONS PER CIRCUIT) AND DATA CONNECTIONS. PROVIDE HANDLE-TIE FOR CIRCUIT BREAKERS SERVING MULTI-WIRE BRANCH CIRCUITS UTILIZING SHARED NEUTRALS. RECEPTACLES ARE FURNISHED WITH ELECTRIFIED CUBICLES AND PREWIRED. THE STANDARD WIRING HARNESS CONFIGURATION IS A 3-CIRCUIT, 8-WIRE (3 CIRCUIT CONDUCTORS, 3 NEUTRAL CONDUCTORS AND 2 EQUIPMENT GROUNDING CONDUCTORS). CONNECT EACH CIRCUIT TO A DIFFERENT PHASE AND BALANCE LOADS BETWEEN PHASES. FIELD VERIFY FINAL LOCATION AND MULTI-CIRCUIT WIRING REQUIREMENTS WITH ARCHITECT AND ELECTRIFIED FURNITURE INSTALLER.
5. PROVIDE 6" POKE-THRU EQUAL TO HUBBELL #DRSPTVWZBRZ WITH (1) 20A DUPLEX RECEPTACLE, (2) DATA PORTS, AND (1) MICROPHONE JACK. BRONZE PLATED TRIM COVER PLATE.
6. PROVIDE TAMPER-RESISTANT TELEDATA OUTLET EQUAL TO HUBBELL TPR1W. INCLUDE SPARE KEYS FOR ONSITE AND IT PERSONNEL.
7. PROVIDE JUNCTION BOX ABOVE ACCESSIBLE CEILING FOR 120VAC TO SUPPORT PTZ CAMERA POWER (MIDSPAN). COORDINATE ACTUAL LOCATION AND PROVIDE 1" WEATHERPROOF, WALL SLEEVE FOR POWER AND SIGNAL WIRING.
8. AUTO DOOR SLIDER - PROVIDE POWER 120VAC CONNECTION. COORDINATE ACTUAL REQUIREMENTS, CONDUIT ROUTING, AND TERMINATION LOCATIONS WITH MANUFACTURER PRIOR TO ROUGH-IN.
9. FUTURE LCD DISPLAY - PROVIDE JUNCTION BOXES ABOVE NEAREST ACCESSIBLE CEILING FOR POWER 20A, 120V AND TWO CAT6 VOICE/DATA 2D' DROPS. COORDINATE EXACT LOCATIONS WITH ARCHITECT/OWNER PRIOR TO ROUGH-IN.
10. AUTOMATIC POWER ASSIST DOOR OPENERS AND PUSHBUTTONS BY OTHERS, E.C. SHALL PROVIDE WIRING AND TERMINATIONS AS REQUIRED. E.C. SHALL COORDINATE WITH DOOR HARDWARE CONTRACTOR AND ARCHITECT FOR LOCATIONS AND REQUIREMENTS PRIOR TO ROUGH-IN.
11. RECEPTACLE TO BE MOUNTED HORIZONTALLY.

FIRST FLOOR PLAN - POWER

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

PRELIMINARY - NOT FOR CONSTRUCTION

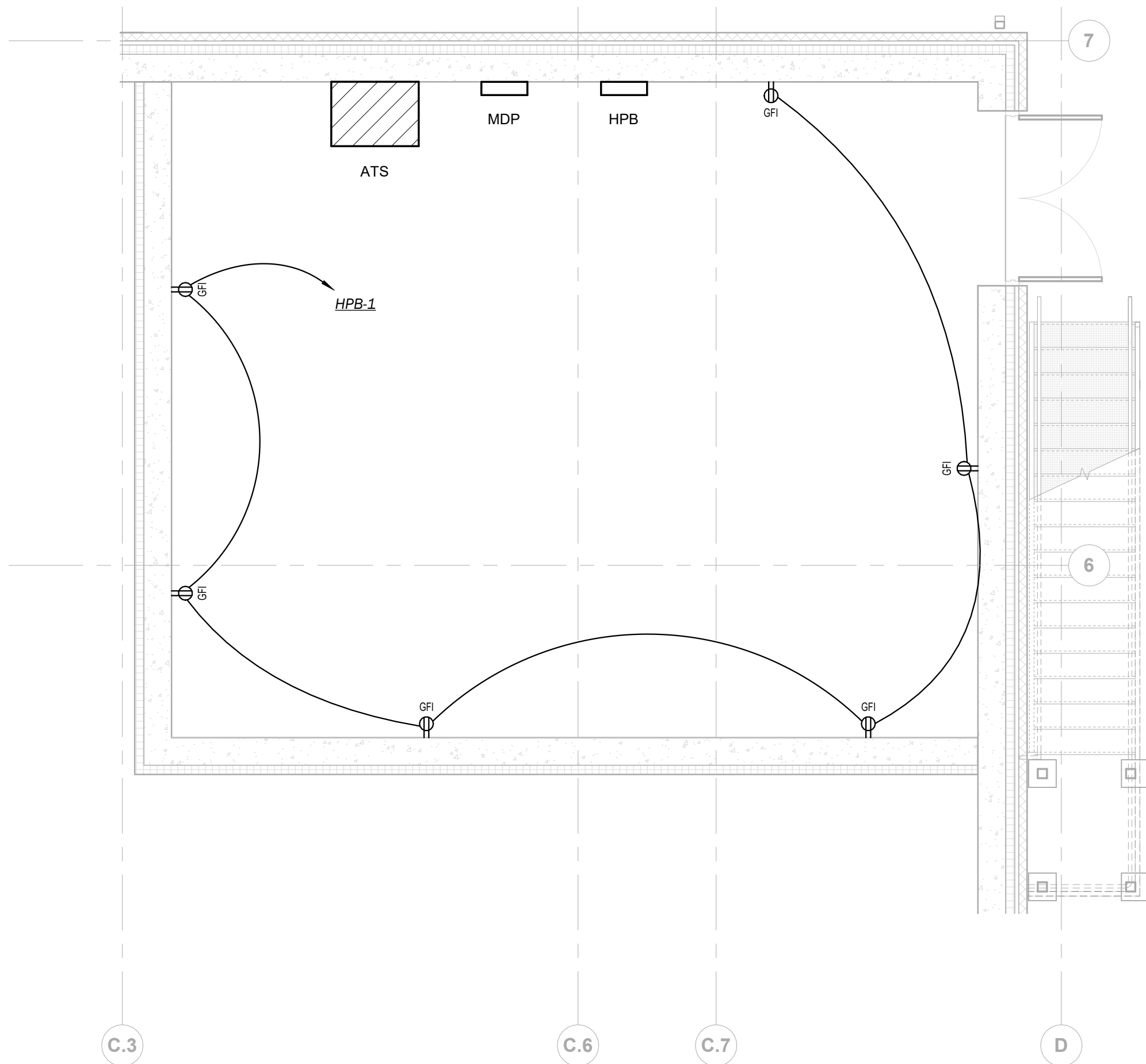


GENERAL SHEET NOTES

1. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THIS DRAWING.
2. ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH 6' LONG FLEXIBLE METAL CONDUIT.
3. ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.
4. SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHTS OF EXTERIOR LIGHTING FIXTURES.
5. CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.
6. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
7. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.
8. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET, UNLESS SPECIFICALLY INDICATED OTHERWISE. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.

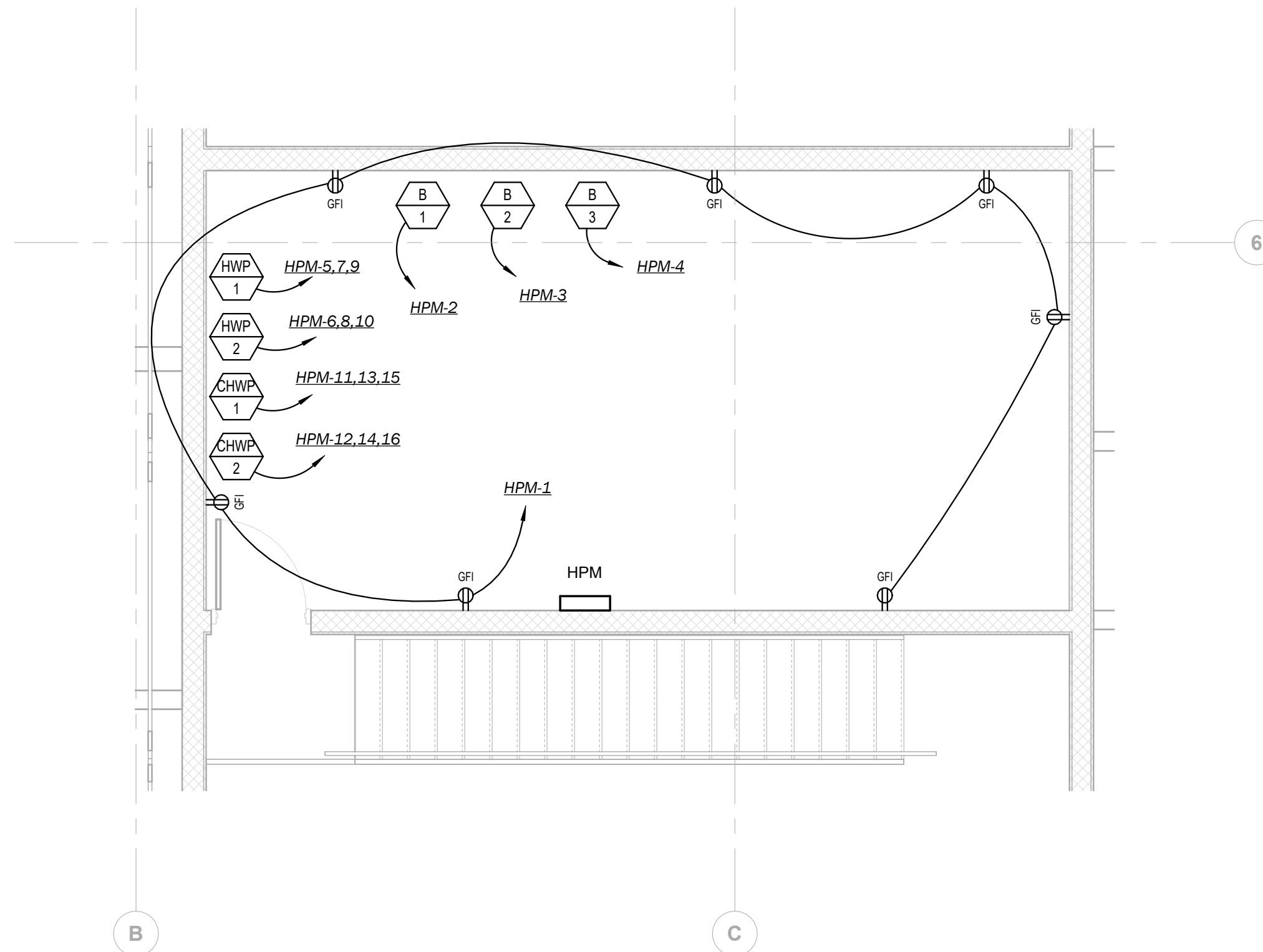
KEYED SHEET NOTES

1. METAL DETECTOR - PROVIDE (2) 1" IN CONCRETE SLAB FOR POWER AND DATA/SECURITY WIRING FROM NEAREST WALL. COORDINATE ACTUAL REQUIREMENTS, CONDUIT ROUTING, AND TERMINATION LOCATIONS WITH MANUFACTURER PRIOR TO ROUGH-IN.
2. RECESSED 6" FIRE-RATED FLOOR BOX (HUBBELL SYSTEMONE) WITH FINISHED COVER. PROVIDE (2) DUPLEX RECEPTACLES, (1V3D) DATA JACKS, (1) HDMI AND (1) USB OUTLET. REQUIRED MODULES AND MOUNTING PROVISIONS.
3. PROVIDE 3-GANG FLUSH IN WALL BACK BOX EQUAL TO HUBBELL #NSAVE2M WITH #NSAV6C METAL COVER. PROVIDE 20A, 120V WHITE DUPLEX RECEPTACLE WITH PLATE AND TWO CAT6 VOICE/DATA 2D' OUTLETS IN ENCLOSURE. COORDINATE EXACT LOCATIONS AND HEIGHTS WITH ARCHITECTURAL ELEVATIONS.
4. PROVIDE POKE-THRU FOR ELECTRIFIED FURNITURE FEEDS (POWER & DATA). COORDINATE WITH CUBICLE VENDOR FOR POWER CIRCUITING (TYP. - MAX 3 WORKSTATIONS PER CIRCUIT) AND DATA CONNECTIONS. PROVIDE HANDLE-TIE FOR CIRCUIT BREAKERS SERVING MULTI-WIRE BRANCH CIRCUITS UTILIZING SHARED NEUTRALS. RECEPTACLES ARE FURNISHED WITH ELECTRIFIED CUBICLES AND PREWIRED. THE STANDARD WIRING HARNESS CONFIGURATION IS A 3-CIRCUIT, 8-WIRE (3 CIRCUIT CONDUCTORS, 3 NEUTRAL CONDUCTORS AND 2 EQUIPMENT GROUNDING CONDUCTORS. CONNECT EACH CIRCUIT TO A DIFFERENT PHASE AND BALANCE LOADS BETWEEN PHASES. FIELD VERIFY FINAL LOCATION AND MULTI-CIRCUIT WIRING REQUIREMENTS WITH ARCHITECT AND ELECTRIFIED FURNITURE INSTALLER.
5. PROVIDE 6" POKE-THRU EQUAL TO HUBBELL #DIR6PTWZBRZ, WITH (1) 20A DUPLEX RECEPTACLE, (2) DATA PORTS, AND (1) MICROPHONE JACK. BRONZE PLATED TRIM COVER PLATE.
6. PROVIDE TAMPER-RESISTANT TELE/DATA OUTLET EQUAL TO HUBBELL TPF1W. INCLUDE SPARE KEYS FOR ONSITE AND IT PERSONNEL.
7. PROVIDE JUNCTION BOX ABOVE ACCESSIBLE CEILING FOR 120VAC TO SUPPORT PTZ CAMERA POWER (MIDSPAN). COORDINATE ACTUAL LOCATION AND PROVIDE 1" WEATHERPROOF WALL SLEEVE FOR POWER AND SIGNAL WIRING.
8. AUTO DOOR SLIDER - PROVIDE POWER 120VAC CONNECTION. COORDINATE ACTUAL REQUIREMENTS, CONDUIT ROUTING, AND TERMINATION LOCATIONS WITH MANUFACTURER PRIOR TO ROUGH-IN.
9. FUTURE LCD DISPLAY - PROVIDE JUNCTION BOXES ABOVE NEAREST ACCESSIBLE CEILING FOR POWER 20A, 120V AND TWO CAT6 VOICE/DATA 2D' DROPS. COORDINATE EXACT LOCATIONS WITH ARCHITECT/OWNER PRIOR TO ROUGH-IN.
10. AUTOMATIC POWER ASSIST DOOR OPENERS AND PUSHBUTTONS BY OTHERS. E.C. SHALL PROVIDE WIRING AND TERMINATIONS AS REQUIRED. E.C. SHALL COORDINATE WITH DOOR HARDWARE CONTRACTOR AND ARCHITECT FOR LOCATIONS AND REQUIREMENTS PRIOR TO ROUGH-IN.
11. RECEPTACLE TO BE MOUNTED HORIZONTALLY.



BASEMENT - POWER

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



MEZZANINE - POWER

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



## GENERAL SHEET NOTES

1. ALL TELECOMMUNICATION/SECURITY CABLES SHALL BE INSTALLED IN CABLE TRAY AS MUCH AS POSSIBLE OR UNLESS OTHERWISE NOTED OR SHOWN ON THE DRAWINGS. CONDUIT SHALL BE UTILIZED IN AREAS WITHOUT ACCESSIBLE CEILINGS ABOVE ACCESSIBLE CEILINGS WITHOUT CABLE TRAY. PROVIDE BUSHINGS AT THE ENDS OF ALL CONDUITS WHERE DROPPED INTO LADDER OR CABLE TRAYS. FIELD COORDINATE INSTALLATION OF CABLE TRAY WITH OTHER CONTRACTORS TO AVOID DUCTWORK AND PIPING. DO NOT MOUNT CABLE TRAY DIRECTLY BELOW DUCTWORK.
2. COORDINATE EXACT REQUIREMENTS AND DEVICE LOCATIONS FOR ALL COURTROOM AUDIO AND RECORDING SYSTEM EQUIPMENT, SPEAKER/PA SYSTEM, AND SECURITY SYSTEM WITH ARCHITECT, VENDORS AND OWNER.
3. PROVIDE 3/4" AC PLYWOOD FOR TELECOM BACKBOARD FLOOR TO CEILING AROUND COMM EQUIPMENT ROOM. PAINT ALL SIDES OF PLYWOOD WITH FIRE RETARDANT PAINT, GRAY FINISH.

## KEYED SHEET NOTES

1. PROVIDE 6" X 18" WIDE PLATED STEEL WIRE BASKET CABLE TRAY SYSTEM FOR TELECOMMUNICATIONS AND SECURITY CABLING ABOVE ACCESSIBLE CEILINGS.
2. PROVIDE CONDUIT ABOVE ACCESSIBLE CEILINGS WITHOUT CABLE TRAY TO EXTEND AND MANAGE CABLES AROUND INACCESSIBLE/HARD CEILINGS. PROVIDE CONDUIT SLEEVES ABOVE HARD CEILINGS FOR INSTALLING CABLES BETWEEN TRAYS.
3. PROVIDE (3/4" C) METAL BUSHED SLEEVES ABOVE DOOR HEIGHT TO ACCESS EACH MDF/IDF LADDER TRAY. EXTEND FROM LADDER TRAY TO CABLE TRAY IN CORRIDOR. PROVIDE FIRE SEALS FOR CABLING AND AROUND CONDUIT PENETRATIONS.
4. PROVIDE INTERCONNECT WIRING WITH SALLY PORT OH DOOR REMOTE OPENER 'SPRO'.
5. PROVIDE 120VAC FOR LOCAL DOOR PROP ALARM POWER SUPPLY ABOVE DOOR. PROVIDE LOW VOLTAGE WIRING AS REQUIRED FROM POWER SUPPLY TO DOOR PROP ALARM DEVICE.
6. COORDINATE SECURITY CAMERA LOCATIONS WITH OWNER'S SECURITY VENDOR PRIOR TO ROUGH-IN.
7. COORDINATE PA SPEAKER LOCATIONS WITH ARCHITECT AND OWNER'S VENDOR PRIOR TO ROUGH-IN.
8. PROVIDE 1.5" C WITH PULLSTRING BACK TO RESPECTIVE FLOOR AV ROOM. VERIFY FINAL CONDUIT TERMINATION LOCATIONS WITH AV VENDOR PRIOR TO ROUGH-IN.
9. PROVIDE 1.5" C WITH PULLSTRING BACK TO RESPECTIVE FLOOR AV ROOM. VERIFY FINAL CONDUIT TERMINATION LOCATIONS WITH AV VENDOR PRIOR TO ROUGH-IN.
10. PROVIDE 1.5" C TO ABOVE CEILING FOR CEILING SPEAKERS WITH PULLSTRING BACK TO RESPECTIVE FLOOR AV ROOM. VERIFY FINAL CONDUIT TERMINATION LOCATIONS WITH AV VENDOR PRIOR TO ROUGH-IN.
11. PROVIDE 1.5" C TO ABOVE CEILING FOR VIDEO RECORDING CAMERAS WITH PULLSTRING BACK TO RESPECTIVE FLOOR AV ROOM. VERIFY FINAL CONDUIT TERMINATION LOCATIONS WITH AV VENDOR PRIOR TO ROUGH-IN.

## FIRST FLOOR PLAN - SYSTEMS

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

PRELIMINARY - NOT FOR CONSTRUCTION

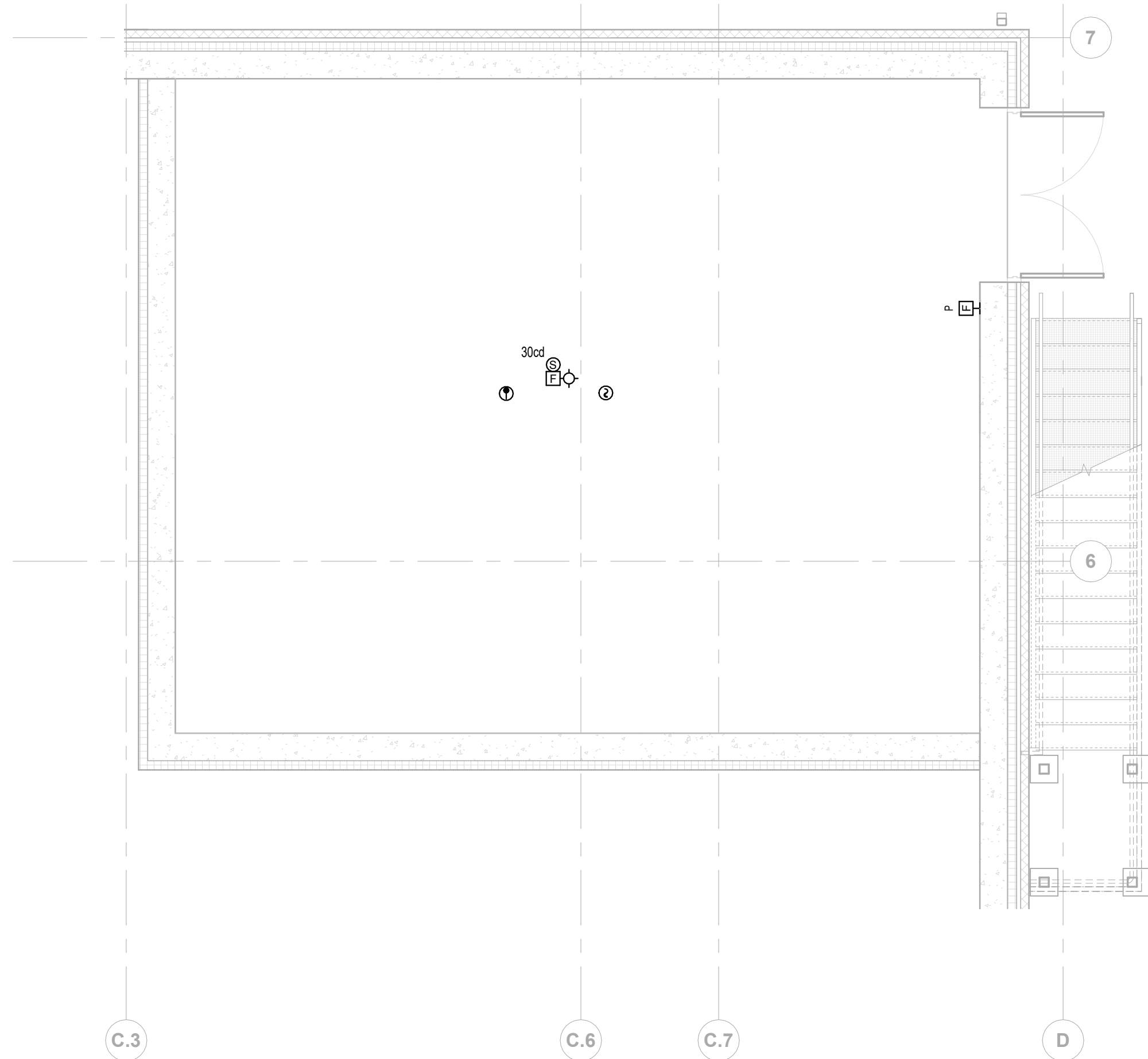


GENERAL SHEET NOTES

1. ALL TELECOMMUNICATION/SECURITY CABLES SHALL BE INSTALLED IN CABLE TRAY AS MUCH AS POSSIBLE OR UNLESS OTHERWISE NOTED OR SHOWN ON THE DRAWINGS. CONDUIT SHALL BE UTILIZED IN AREAS WITHOUT ACCESSIBLE CEILINGS ABOVE ACCESSIBLE CEILINGS WITHOUT CABLE TRAY. PROVIDE BUSHINGS AT THE ENDS OF ALL CONDUITS WHERE DROPPED INTO LADDER OR CABLE TRAYS. FIELD COORDINATE INSTALLATION OF CABLE TRAY WITH OTHER CONTRACTORS TO AVOID DUCTWORK AND PIPING. DO NOT MOUNT CABLE TRAY DIRECTLY BELOW DUCTWORK.
2. COORDINATE EXACT REQUIREMENTS AND DEVICE LOCATIONS FOR ALL COURTROOM AUDIO AND RECORDING SYSTEM EQUIPMENT, SPEAKER/PA SYSTEM, AND SECURITY SYSTEM WITH ARCHITECT, VENDORS AND OWNER.

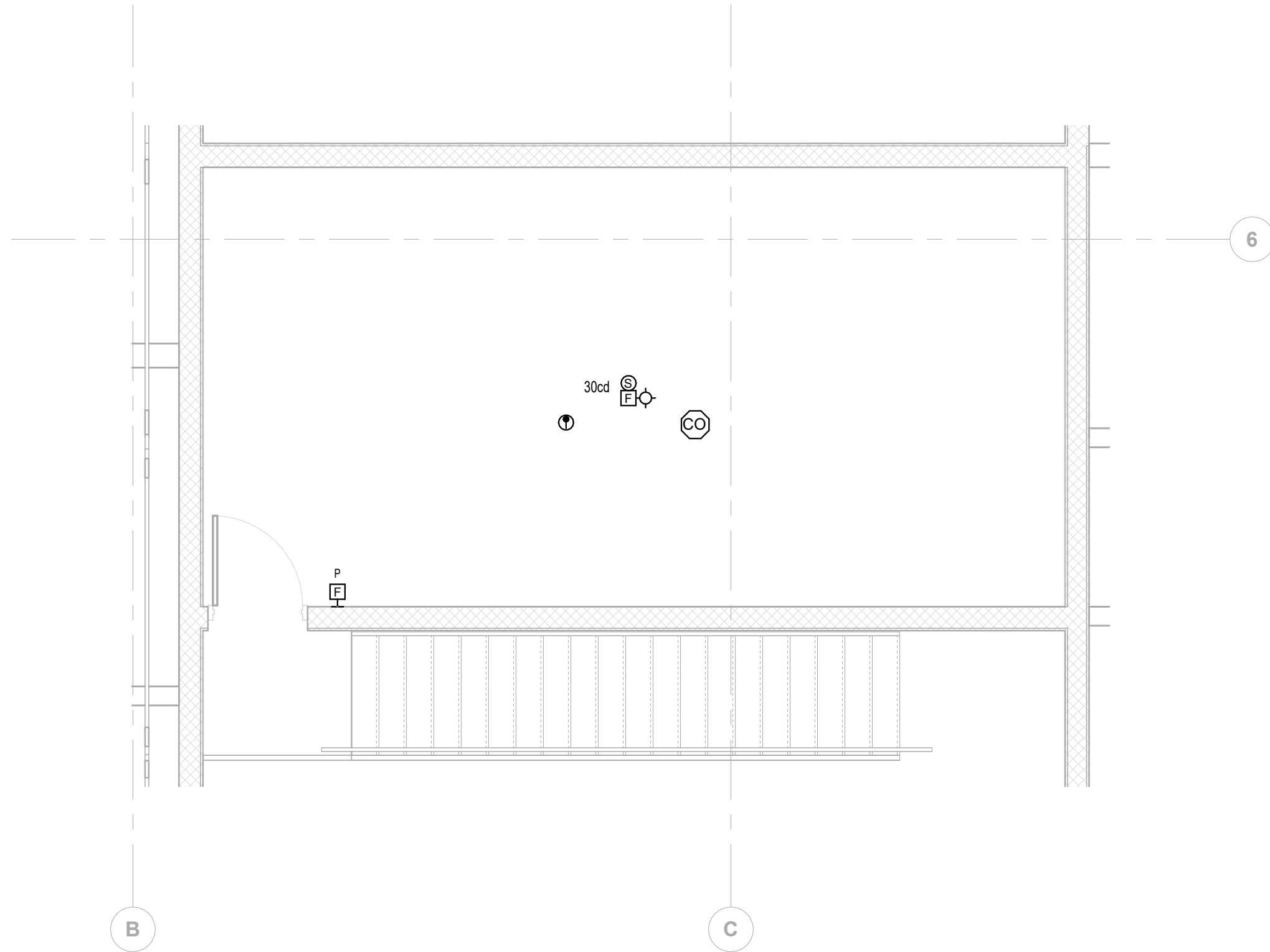
KEYED SHEET NOTES

1. PROVIDE 6" H X 18" W WIDE PLATED STEEL WIRE BASKET CABLE TRAY SYSTEM FOR TELECOMMUNICATIONS AND SECURITY CABLING ABOVE ACCESSIBLE CEILINGS.
2. PROVIDE CONDUIT ABOVE ACCESSIBLE CEILINGS WITHOUT CABLE TRAY TO EXTEND AND MANAGE CABLES AROUND INACCESSIBLE/HARD CEILINGS. PROVIDE CONDUIT SLEEVES ABOVE HARD CEILINGS FOR INSTALLING CABLES BETWEEN TRAYS.
3. PROVIDE 3/4" C METAL BUSHED SLEEVES ABOVE DOOR HEIGHT TO ACCESS EACH MDF/IDF LADDER TRAY. EXTEND FROM LADDER TRAY TO CABLE TRAY IN CORRIDOR. PROVIDE FIRE SEALS FOR CABLING AND AROUND CONDUIT PENETRATIONS.
4. PROVIDE INTERCONNECT WIRING WITH SALLY PORT OH DOOR REMOTE OPENER 'SPRO'.
5. PROVIDE 120VAC FOR LOCAL DOOR PROP ALARM POWER SUPPLY ABOVE DOOR. PROVIDE LOW VOLTAGE WIRING AS REQUIRED FROM POWER SUPPLY TO DOOR PROP ALARM DEVICE.
6. COORDINATE SECURITY CAMERA LOCATIONS WITH OWNER'S SECURITY VENDOR PRIOR TO ROUGH-IN.
7. COORDINATE PA SPEAKER LOCATIONS WITH ARCHITECT AND OWNER'S VENDOR PRIOR TO ROUGH-IN.
9. PROVIDE 1.5" C WITH PULLSTRING BACK TO RESPECTIVE FLOOR AV ROOM. VERIFY FINAL CONDUIT TERMINATION LOCATIONS WITH AV VENDOR PRIOR TO ROUGH-IN.
10. PROVIDE 1.5" C TO ABOVE CEILING FOR CEILING SPEAKERS WITH PULLSTRING BACK TO RESPECTIVE FLOOR AV ROOM. VERIFY FINAL CONDUIT TERMINATION LOCATIONS WITH AV VENDOR PRIOR TO ROUGH-IN.
11. PROVIDE 1.5" C TO ABOVE CEILING FOR VIDEO RECORDING CAMERAS WITH PULLSTRING BACK TO RESPECTIVE FLOOR AV ROOM. VERIFY FINAL CONDUIT TERMINATION LOCATIONS WITH AV VENDOR PRIOR TO ROUGH-IN.



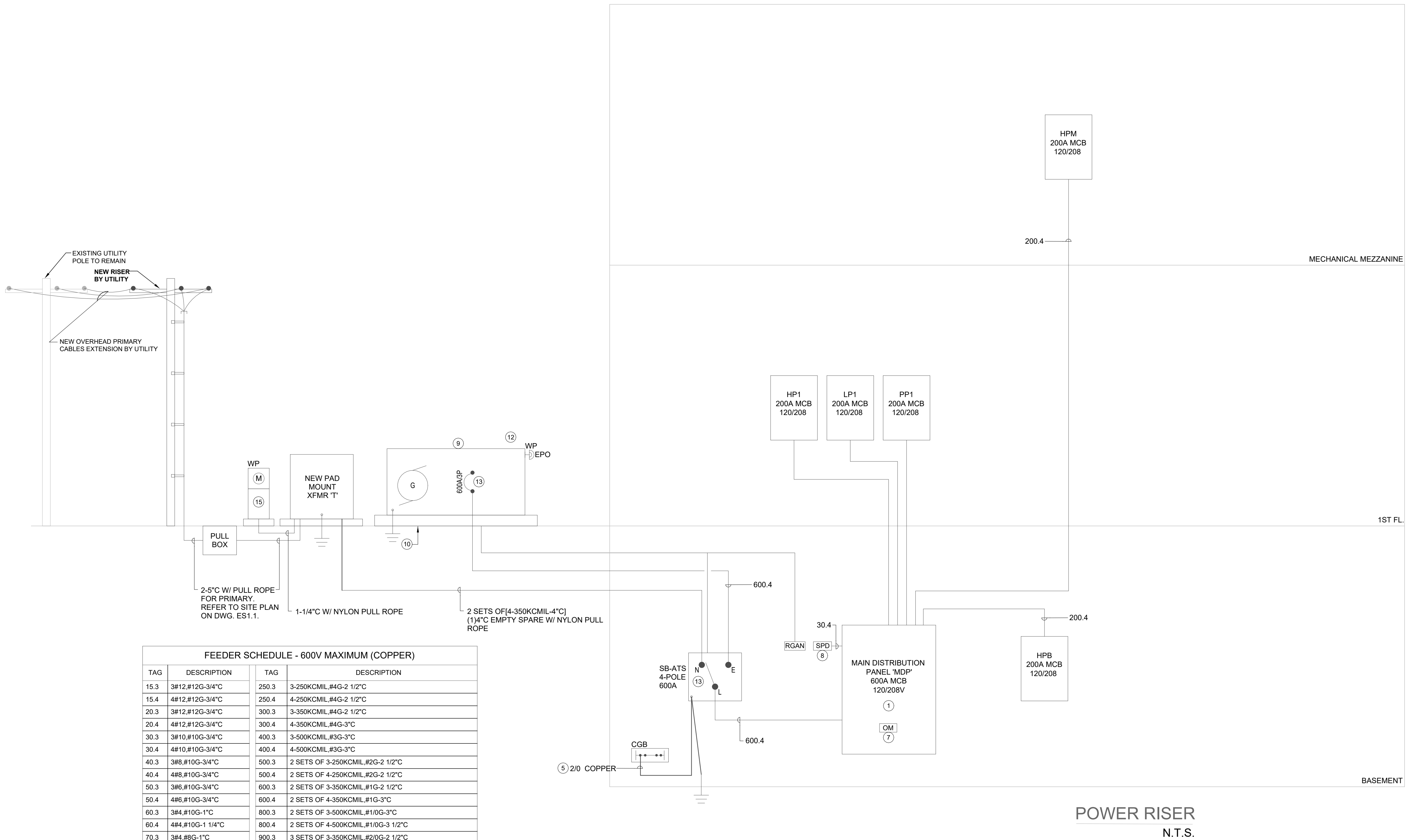
BASEMENT - SYSTEMS

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



MEZZANINE - SYSTEMS

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



#### GENERAL SHEET NOTES

- PAD MOUNTED TRANSFORMER BY UTILITY. PAD, GROUNDING, SECONDARY CONDUIT, AND SECONDARY CONDUCTORS BY ELECTRICAL CONTRACTOR. ALL FINAL CONNECTIONS AT TRANSFORMER BY UTILITY.
- PROVIDE POWER SYSTEM STUDY INCLUDING SHORT-CIRCUIT, PROTECTIVE DEVICE COORDINATION AND ARC FLASH WITH ARC FLASH HAZARD WARNING LABELS.
- COORDINATE WITH UTILITY AND OWNER FOR SCOPE OF WORK REQUIREMENTS FOR NEW SERVICE AND SHUTDOWNS. E.C. SHALL CARRY ALL ASSOCIATED COSTS FOR UTILITY BACK CHARGES.
- THE WHOLE BUILDING ELECTRICAL SYSTEM WILL BE BACKED UP ON THE GENERATOR.
- WIRING METHOD FOR ALL SYSTEMS SHALL BE IN CONDUIT OR METAL RACEWAY UNLESS OTHERWISE NOTED. MC CABLE MAY BE ALLOWED WITH PRE-APPROVAL OBTAINED FROM THE DIVISION. WHERE MC CABLE IS APPROVED FOR USE, ALL HOMERUNS SHALL BE IN CONDUIT.

#### KEYED SHEET NOTES

- PROVIDE SPARE LUGS FOR LINE SIDE TAP TO ACCOMMODATE FUTURE PV BACK FEEDING POINT OF INTERCONNECT.
- PROVIDE 2" EMPTY CONDUIT EMT WITH NYLON PULL ROPE AND CAP FOR FUTURE PHOTOVOLTAIC SYSTEM WIRING. CONFIRM CONDUIT AND PULLBOX SIZE REQUIREMENTS WITH PV INSTALLER. COORDINATE FINAL LOCATIONS ON ROOF AND EXTERNAL DISCONNECT WITH ARCHITECT PRIOR TO ROUGH-IN.
- PROVIDE POWER SYSTEM STUDY INCLUDING SHORT-CIRCUIT, PROTECTIVE DEVICE COORDINATION AND ARC FLASH WITH ARC FLASH HAZARD WARNING LABELS.
- RUN #2/0 COPPER TO GROUNDING ELECTRODE SYSTEM AS SPECIFIED IN NEC SECTIONS 250.50, 250.52 & 250.53.
- PROVIDE CUSTOMER POWER METER TO RECORD CONSUMPTION, DEMAND, AND POWER FACTOR. METER SHALL HAVE LAN OR BACNET CONNECTION TO TRANSMIT DATA TO THE BUILDING AUTOMATION SYSTEM 'BAS' FOR REMOTE MONITORING. FINAL CONNECTION TO BAS BY ATC.
- PROVIDE SURGE PROTECTION DEVICE 'SPD' WITH CIRCUIT BREAKER AS REQUIRED.
- 150KW/187.5KVA, 120/208V, 3Ø, 4W LIQUID PROPANE GENERATOR IN WEATHERPROOF SOUND ATTENUATED ENCLOSURE (LEVEL 2). PROVIDE SERVICE ENTRANCE RATED OUTPUT CIRCUIT BREAKERS AND 8-POSITION LOAD CENTER WITH GENSET. PROVIDE WITH INTERIOR CABINET UNIT HEATER (5000W) PER NFPA 110-5.3.5 TO MAINTAIN 40°F AS REQUIRED. INCLUDE MOTORIZED DAMPERS AND ENCLOSURE LED LIGHT KIT.
- PROVIDE ALL REQUIRED REINFORCEMENT AND FORMWORK FOR CONCRETE PAD. REINFORCING BARS: ASTM A 615/A 615M, GRADE 60 AND BAR SUPPORTS INCLUDING BOLSTERS, CHAIRS, SPACES AND OTHER DEVICES FOR SPACING, SUPPORTING, AND FASTENING REINFORCING BARS. CONFIRM WITH MANUFACTURER'S RECOMMENDATIONS SIZING AND STRENGTH OF PAD FOR WEIGHT OF GENERATOR.
- PROVIDE (2#12-1"C) FOR ENGINE START, (2#10.#10G-1"C) FOR ENGINE COOLANT HEATERS/VENT DAMPERS, (2#10.#10G-1"C) FOR BATTERY CHARGER, AND (UL LISTED 4 TWISTED PAIR-1"C) FOR NETWORK WIRING TO REMOTE ANNUNCIATOR. SHORE POWER AND CONTROL/SIGNAL WIRING SHALL BE COORDINATED WITH SELECTED MANUFACTURER, PROVIDED AND INSTALLED BY E.C..
- SERVICE ENTRANCE RATED 800A, 120/208V, 3PH, 4W, 4-POLE, OPEN TRANSITION AUTOMATIC TRANSFER SWITCH. INCLUDE NORMAL SIDE SERVICE ENTRANCE RATED 600A LSG MAIN IN-LINE CIRCUIT BREAKER. PROVIDE SURGE PROTECTION DEVICE. PROVIDE SPARE LUGS FOR LINE SIDE TAP TO ACCOMMODATE FUTURE PV BACK FEEDING POINT OF INTERCONNECT.
- TRANSFORMER RATED PEDESTAL METER. METER SOCKET FURNISHED BY UTILITY AND INSTALLED BY ELECTRICAL CONTRACTOR.

PRELIMINARY - NOT FOR CONSTRUCTION

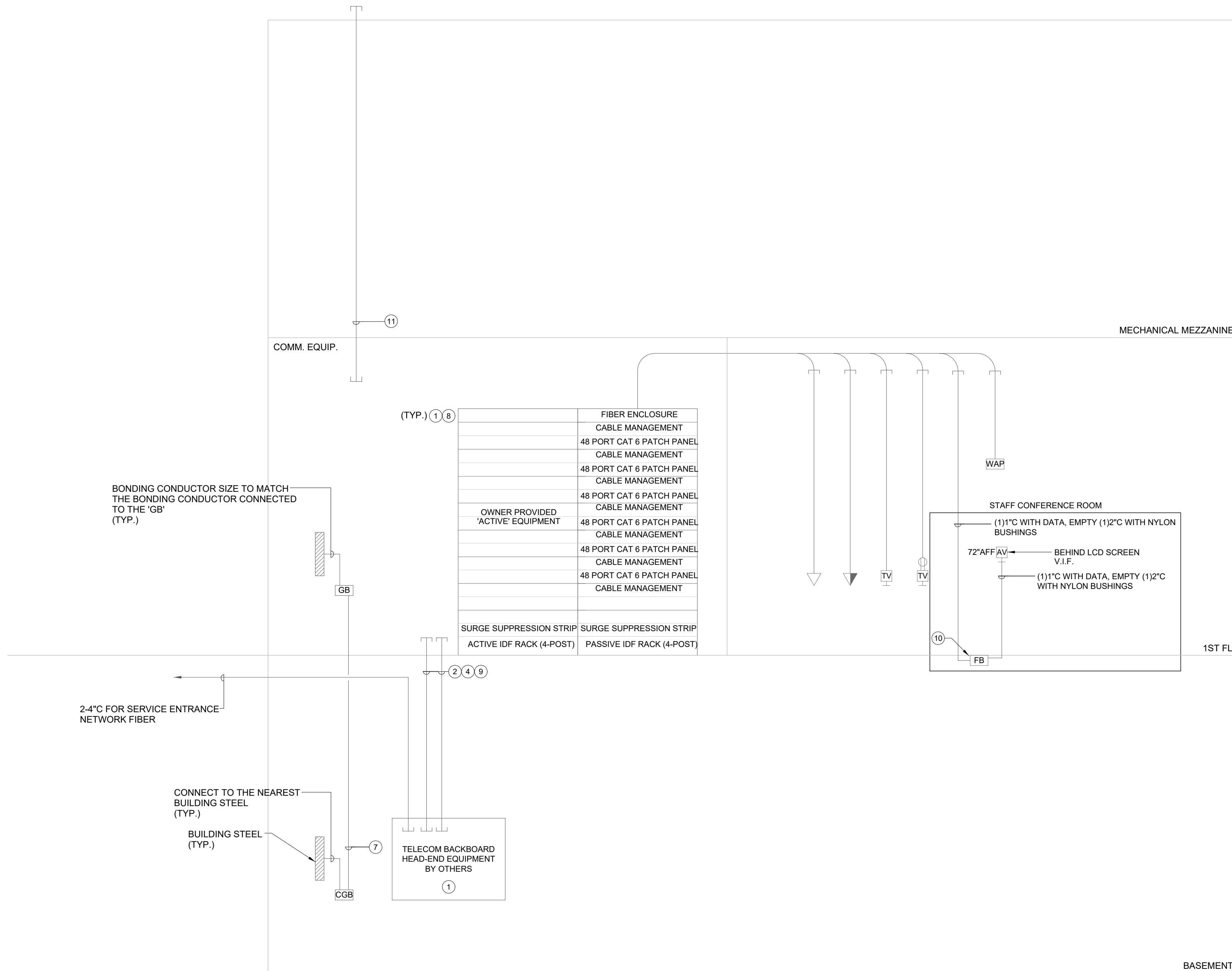


GENERAL SHEET NOTES

1. PROVIDE ALL WIRING, TERMINATIONS (UNLESS OTHERWISE NOTED) AND TEST ALL CABLES IN ACCORDANCE WITH EIA AND TIA STANDARDS. PROVIDE REPORT. TERMINATION PROTOCOL SHALL BE VERIFIED WITH OWNER FOR VOICE OVER INTERNET PROTOCOL (VOIP) PRIOR TO INSTALL.
2. ALL CABLES SHALL BE CLEARLY LABELED AT BOTH ENDS WITH DESCRIPTION OF DEVICE. COORDINATE LABELING CONVENTIONS OF JACKS AND CABLES WITH OWNER'S I.T. PERSONNEL. A 10' SERVICE LOOP SHOULD BE PROVIDED AT NETWORK CLOSET END AND A 1' SERVICE LOOP PROVIDED AT THE DEVICE END.
3. PROVIDE CABLE TRAY ABOVE ACCESSIBLE CEILINGS OR IN CONDUIT WHERE NOT ACCESSIBLE. ALL CABLING SHALL BE CONCEALED. ALL EMPTY CONDUITS SHALL HAVE NYLON PULL STRING.
4. ALL DEVICE LOCATIONS SHALL HAVE A FOUR INCH SQUARE BACK BOX AT EACH LOCATION OF A TELEPHONE/DATA/CATV OUTLET. PROVIDE 1-GANG REDUCER PLATES AS REQUIRED. RUN A ONE INCH CONDUIT AND PULL STRING FROM EACH BACK BOX TO WITHIN 6" OF CABLE TRAY ABOVE ACCESSIBLE CEILING. PROVIDE CABLE AS INDICATED FROM DEVICE TO HEAD-END (RESPECTIVE FLOOR DATA CLOSET).
5. PROVIDE INSULATED BUSHINGS ON THE ENDS OF ALL CONDUITS WITH BELL-CAP TYPE BUSHING AT TRAY END.
6. ALL CABLE SHALL BE LAID AT LEAST 18-INCHES AWAY FROM ELECTRICAL SERVICES INCLUDING POWER, LIGHTING, AC SECURITY SYSTEMS, AND OTHER SERVICES CREATING HARMONICS.

KEYED SHEET NOTES

1. PROVIDE CAT6 48-PORT UNIVERSAL RJ45/110 PATCH PANELS AS REQUIRED FOR QUANTITY OF DATA DROPS WITH 20% SPARE CAPACITY. PROVIDE ALL INFRASTRUCTURE INCLUDING NETWORK SUPPORT RACKS, CABLE LADDER TRAY, GROUNDING/BONDING, POWER RECEPTACLES AND PLYWOOD BACKBOARD AS REQUIRED. UPS UNITS ARE PROVIDED BY OTHERS. PROVIDE 3/4" FIRE RATED AC PLYWOOD PAINTED BLACK ALL AROUND DATA ROOMS. CONTRACTOR SHALL COORDINATE WITH OWNER'S I.T. PERSONNEL FOR EXACT REQUIREMENTS PRIOR TO PURCHASING AND CONSTRUCTION.
2. (4) EMPTY 4" (EMT) W/ NYLON PULL-STRING. PROVIDE INSULATED BUSHINGS AT CONDUIT ENDS. PROVIDE FIRE STOPPING SEALANT AROUND CONDUIT PENETRATIONS AS REQUIRED. CONDUIT SLEEVES SHALL BE UTILIZED FOR LOW VOLTAGE CABLES ONLY. MAINTAIN MIN. 12" SEPARATION BETWEEN LOW VOLTAGE AND LINE VOLTAGE CABLES.
3. ALL HORIZONTAL CABLING FOR DATA, FROM THE FACEPLATE JACK TO PATCH PANEL, SHALL BE FURNISHED AND INSTALLED AS RISER RATED, NON-FLENUM, SOLID CATEGORY 6 CMR CABLE. EQUAL TO HUBBELL PREMISE WIRING #C8RRB. DATA (COLORED BLUE) AND VOICE (COLORED YELLOW). ALL CONCEALED WIRING ABOVE ACCESSIBLE SHALL BE RUN IN CABLE TRAY AND WALL MOUNTED CABLE CATS. ALL OTHER CABLING SHALL BE INSTALLED IN 3/4" EMT MINIMUM. COLORED ORANGE FOR WIRELESS ACCESS POINTS FROM OUTLET TO PATCH PANEL. 20' DENOTES TWO DATA RJ45 JACKS AND TWO CATEGORY 6 UTP CABLES. WIRELESS ACCESS POINTS SHALL HAVE TWO DATA DROPS PER DEVICE LOCATION. PROVIDE BISUIT JACK FOR ACCESS POINTS.
4. ALL FIBER STRANDS SHALL BE TERMINATED WITH STANDARD CERTIFIED CONNECTORS, EQUAL TO HUBBELL PREMISE WIRING SPLICE CASSETTES #C8PLCD12M4 FOR MULTIMODE.
5. ALL HORIZONTAL CABLING SHALL BE COLLECTIVELY GROUPED TO IDENTIFY AREAS OF SERVICE. FIRE RATED WALL PENETRATIONS SHALL BE MINIMIZED, BY COLLECTIVELY INSTALLING CABLES AS DECIDED APPROPRIATE, THRU METAL WALL AND FLOOR SLEEVES. PROVIDE FIRE-STOPPING AT ALL PENETRATIONS MADE FOR CABLE INSTALLATION.
6. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL HOMERUNS FROM DEVICE TO RESPECTIVE FLOOR IDF CLOSET. CONTRACTOR SHALL TERMINATE ALL HOMERUNS AT DEVICE END AND AT PATCH PANELS WITHIN IDF CLOSET. PROVIDE SERVICE LOOPS AT BOTH PATCH PANEL AND DEVICE END. PROVIDE 10' OF EXTRA LENGTH, LOOPEL IN THE IDF CLOSET TO ALLOW FOR FUTURE ADJUSTMENT OF PATCH PANELS. CERTIFY AND TEST ALL CABLES IN ACCORDANCE WITH TIA/EIA STANDARDS. PROVIDE REPORT TO OWNER. WIRE PUNCH/TERMINATION PROTOCOL SHALL BE VERIFIED WITH OWNER FOR VOICE OVER INTERNET PROTOCOL (VOIP) PRIOR TO INSTALL. COORDINATE WITH OWNER'S I.T. PERSONNEL FOR LABELING CONVENTIONS OF JACKS AND CABLE.
7. PROVIDE BONDING CONDUCTOR SIZED IN ACCORDANCE WITH TIA-607-B, SECTION 6.3.2 & TABLE 1 - TYPICAL. PROVIDE MINIMUM #4/0 CU IN 1" PVC SCH. 40.
8. TYPICAL IT NETWORK RACKS AND ASSOCIATED WIRING SHALL CONSIST OF THE FOLLOWING:  
A. MDF - ONE EMPTY ACTIVE BAY, FOUR POST RACK, EQUAL TO A HUBBELL #SF841936.  
B. ONE PASSIVE BAY, TWO POST RACK WITH VERTICAL MANAGEMENT INCLUDING FLOOR ANCHOR & MOUNTING KITS, EQUAL TO A HUBBELL #HPW84RR19, (2)#VME614C1.  
C. IDF - ONE FIBER TERMINATION PANEL EQUAL TO A HUBBELL #FCR1U3SP. MDF - TWO FIBER TERMINATION PANELS EQUAL TO A HUBBELL #FCR1U3SP.  
D. 6 STRAND MM FIBER MODULE, LC STYLE, HUBBELL #C8SPLOD12M4.  
E. 6 STRAND SM FIBER MODULE, LC STYLE, HUBBELL #. F. ONE 1-3/4" CABLE MANAGER JUST BELOW THE FIBER ENCLOSURE, HUBBELL #HM24C.  
G. 48 PORT CAT6 PATCH PANELS WITH REAR CABLE MANAGEMENT, HUBBELL #HPJ648, QUANTITY AS INDICATED IN DETAILS.  
H. ONE 1-3/4" CABLE MANAGER JUST BELOW THE FIBER ENCLOSURE, HUBBELL #HM24C.  
I. EACH RACK SHALL BE EQUIPPED WITH A POWER STRIP AND SURGE SUPPRESSOR, HUBBELL #PH20A10S.
9. PROVIDE (2)#6-STRAND OM4 ARMORED MULTI-MODE 50/125 MICRON FIBER OPTIC CABLE AND (6) CAT6 RISER CABLES (#FCD15006P4) FOR INTERCONNECTION BETWEEN MDF AND EACH IDF CLOSET. TERMINATE ALL FO CABLE STRANDS ON SPLICE CASSETTES WITH UNKEYED DUPLEX LC TYPE CONNECTORS.
10. CONTRACTOR SHALL COORDINATE EXACT REQUIREMENTS AND CONFIGURATION OF FLOOR BOX WITH OWNER PRIOR TO ROUGH-IN AND PURCHASING OF DEVICE. PROVIDE (2) DUPLEX RECEPTACLES, (1V3D) DATA PORTS, (1) HDMI AND (1) USB PORT.
11. PROVIDE (3/4" EMT FROM COMM. EQUIP. ROOM UP TO ROOF FOR RADIO ANTENNA EQUIPMENT. COORDINATE EXACT REQUIREMENTS AND LOCATION WITH OWNER PRIOR TO ROUGH-IN.



TELECOMMUNICATIONS RISER  
N.T.S.

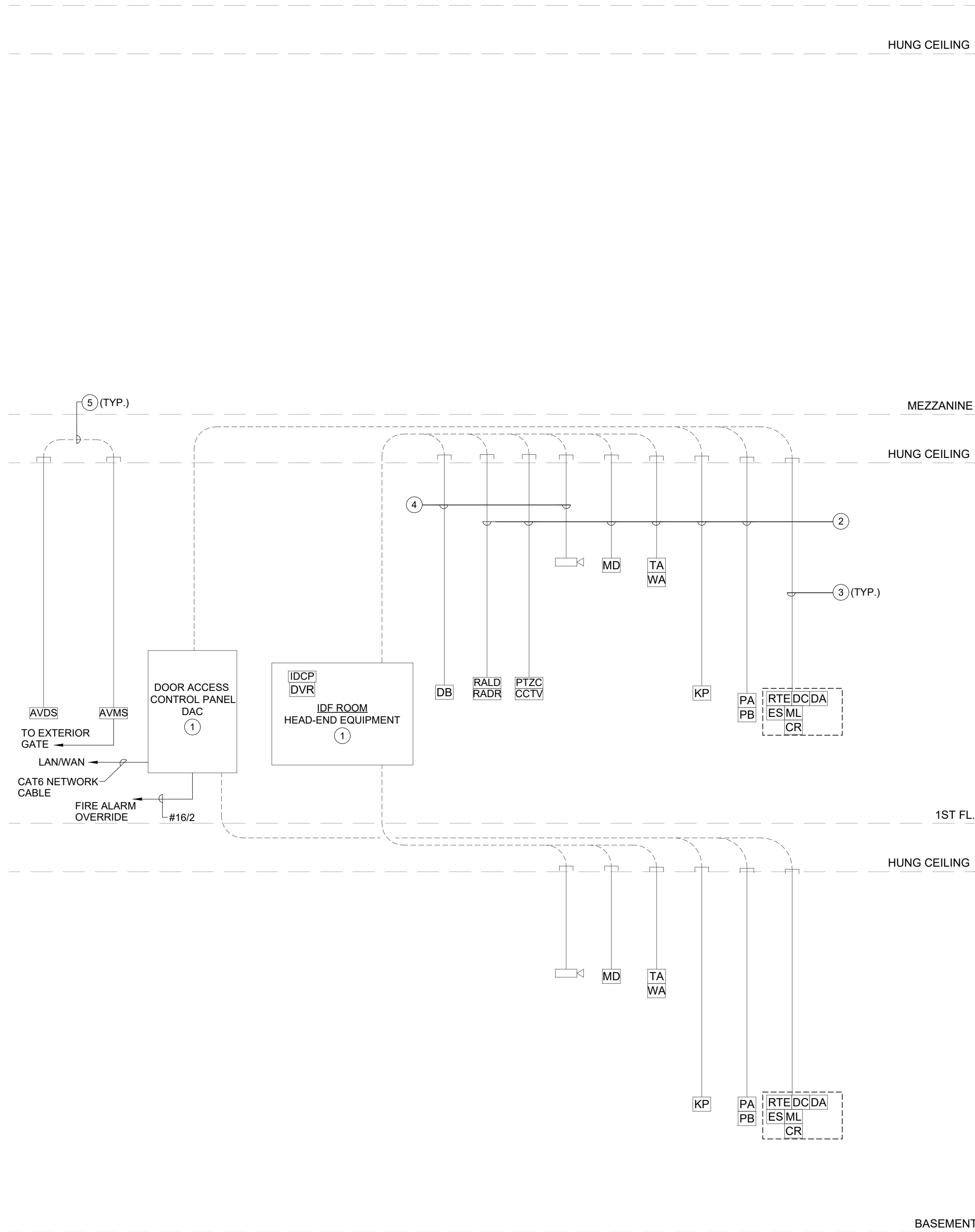
The diagram illustrates a fire alarm system architecture. At the top, a section labeled 'REQUIRE LIFE SAFETY CONTROL' and 'ELEVATOR RECALL' is shown. The main system components include:

- Fire Alarm Control Panel:** Labeled 'ADDRESSABLE FIRE ALARM CONTROL PANEL W/ DACT FACP' with terminals (23) and (24). It is connected to a 'MAIN TELEPHONE EQUIPMENT MOUNTING BOARD' and a 'PUBLIC ADDRESS SYSTEM'.
- Terminal Cabinets:** Three 'FIRE ALARM TERMINAL CABINET' units are shown, each with terminals for FS, TS, PS, MM, and SFD. They are connected to various alarm devices.
- Alarm Devices:**
  - Smoke Dampers (SFD):** Provided by HVAC contractor (TYP.).
  - Smoke Detectors (SD):** Indicated by a symbol with a circle and a dot.
  - Alarm Bells (RB):** Indicated by a symbol with a bell and a circle.
  - CO Detectors:** Indicated by a symbol with a triangle and a circle.
- Wiring and Connections:**
  - 120V 20A/1P power lines are shown entering the system.
  - Conduits are labeled with numbers (1) through (11) and (12) through (18).
  - Field coordinate locations for alarm bell and fire protection contractor are indicated.
  - Conductors are specified as 3/12-1/2" C120VOLT POWER.
- Floor Labels:** The diagram is divided into sections for 'MECHANICAL MEZZANINE', '1ST FL.', and 'BASEMENT'.

## KEYED SHEET NOTES

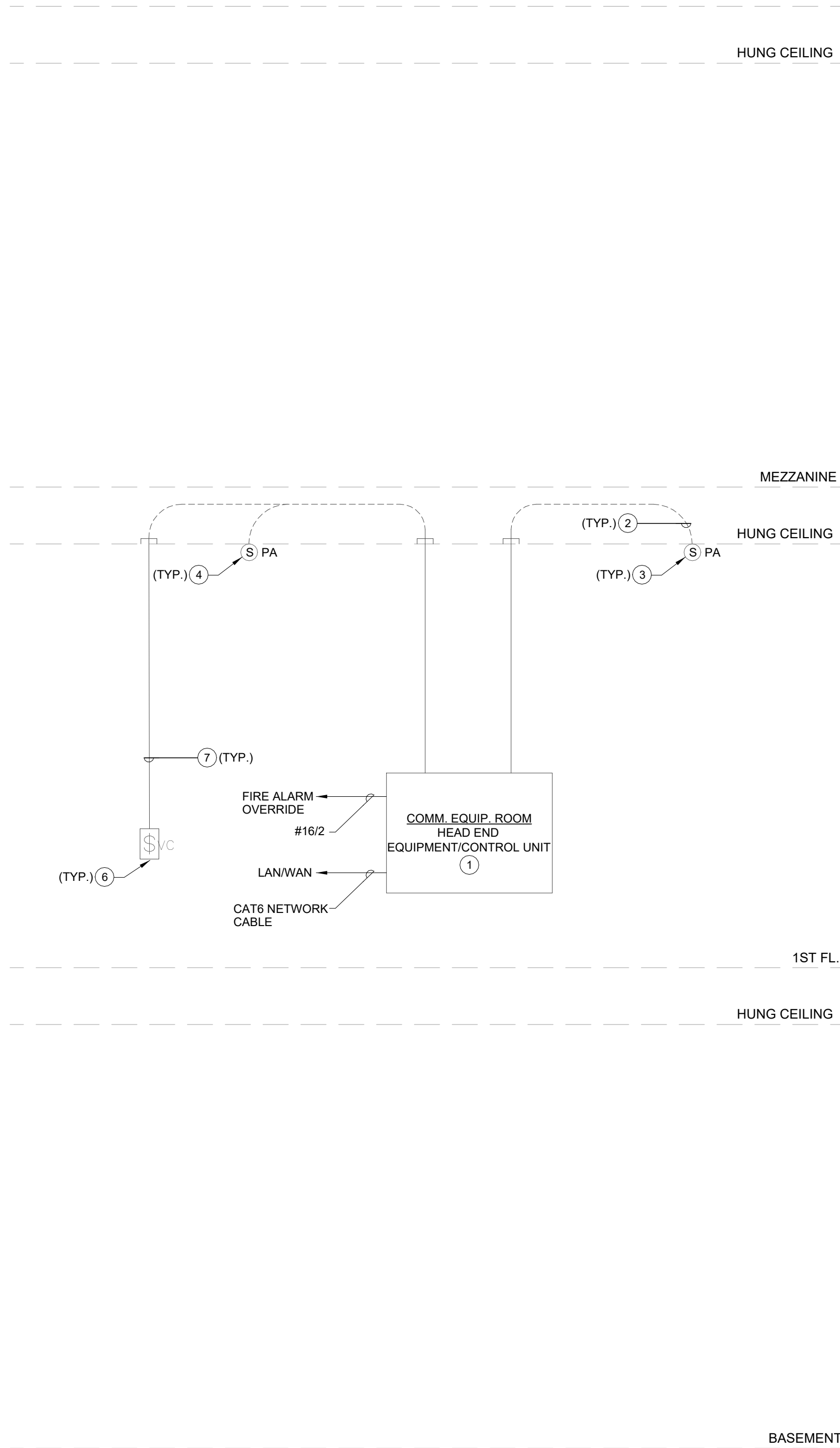
1. PROVIDE KEY BOX AT MAIN ENTRANCE. ELECTRICAL CONTRACTOR SHALL PURCHASE DIRECTLY THROUGH KNOX BOX, BUT KEY BOX MUST MEET THE FIRE DEPARTMENT REQUIREMENTS. VERIFY LOCATION WITH FIRE DEPARTMENT.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUIT BREAKER HANDLE-LOCK ON POWER CIRCUITS. HANDLE LOCK SHALL ALLOW THE CIRCUIT BREAKER TO TRIP, BUT PREVENT SWITCHING OF THE CIRCUIT BREAKER TO THE "OFF" POSITION.
3. PROVIDE SMOKE DETECTOR IN VICINITY OF FIRE ALARM CONTROL PANEL, REMOTE ANNUNCIATOR, POWER BOOSTERS, AND ALL FIRE ALARM TERMINAL BOXES. SMOKE DETECTORS IN ELEVATOR LOBBY SHALL BE PROGRAMMED AND/OR PROVIDED WITH ELEVATOR RECALL CAPABILITY.
4. MINIMUM SIZE CONDUIT SHALL BE 3/4" UNLESS NOTED OTHERWISE.
5. ALL SYSTEM WIRING SHALL BE INSTALLED IN CONDUIT OR (FIRE ALARM RATED FLR PL FLEXIBLE METALLIC CABLE TYPE MC CABLE WHERE CONCEALED) AND IN ACCORDANCE WITH EQUIPMENT SUPPLIERS APPROVED SHOP DRAWINGS AND WIRING DIAGRAMS.
6. RISER DIAGRAM DOES NOT SHOW ENTIRE SYSTEM. REFER TO FLOOR PLANS FOR EXACT QUANTITIES AND LOCATIONS OF ALL SYSTEM DEVICES.
7. TO AUXILIARY CONTACTS IN RESPECTIVE AIR-HANDLING UNIT STARTER FOR UNIT SHUTDOWN ON ALARM. DUCT SMOKE DETECTOR SHALL BE PROVIDED AND WIRED BY ELECTRICAL CONTRACTOR, INITIATED BY MECHANICAL CONTRACTOR. DUCT SMOKE DETECTORS SHALL BE INSTALLED AS IN ACCORDANCE WITH INTERNATIONAL MECHANICAL CODE.
  - DUCT SMOKE DETECTORS SHALL BE INSTALLED IN RETURN AIR SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2,000 CFM, IN THE RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS, EXHAUST AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT AND APPLIANCES.
  - WHERE RETURN AIR RISERS SERVE TWO OR MORE STORIES AND SERVE ANY PORTION OF A RETURN AIR SYSTEM HAVING A DESIGN CAPACITY GREATER THAN 15,000 CFM, SMOKE DETECTORS SHALL BE INSTALLED AT EACH STORY. SUCH SMOKE DETECTORS SHALL BE LOCATED UPSTREAM OF THE CONNECTION BETWEEN THE RETURN AIR RISER AND ANY AIR DUCTS OR PLENUMS.
  - SMOKE DETECTORS SHALL BE INSTALLED IN THE SUPPLY AIR SYSTEM FOR ALL MAKE-UP AIR UNITS WITH A DESIGN CAPACITY GREATER THAN 2,000 CFM.
8. PROVIDE SURFACE 24 VOLT DC CARBON MONOXIDE ALARM DETECTOR.
9. PROVIDE 120VOLT POWER AND CONTROL MODULE FOR CONTROL OF SMOKE DAMPER AT TOP OF ELEVATOR SHAFT. DAMPER SHALL BE PROGRAMMED TO OPEN UPON ACTIVATION OF SMOKE DETECTOR AT ELEVATOR MACHINE ROOM, OR AS DIRECTED PROVIDED CONTROL WIRING FROM DAMPER MOTOR TO FIRE ALARM TERMINAL CABINET.
10. PROVIDE REMOTE ALARM INDICATOR OVER DOOR OF EACH LOCKED ROOM THAT CONTAINS A SMOKE OR HEAT DETECTOR WHETHER OR NOT SHOWN ON THE FLOOR PLANS: SUCH AS, ELEVATOR MACHINE ROOMS, ELECTRIC ROOMS, MECHANICAL ROOMS, IT ROOMS, ETC.
11. ELECTRICAL CONTRACTOR SHALL PROVIDE 120VOLT POWER AND CONTROL WIRING TO ALL SMOKE/FIRE DAMPERS. REFER TO ELECTRICAL DRAWINGS FOR POWER WIRING. REFER TO SMOKE/FIRE DAMPER INDICATES SMOKE ZONE. PROVIDE A MONITOR MODULE, CONTROL MODULE AND RELAY MODULE FOR EACH GROUP OF SMOKE/FIRE DAMPERS. REFER TO ELECTRICAL DRAWINGS FOR QUANTITY OF SMOKE DAMPERS, AND SMOKE ZONES.
12. PROVIDE A 20AMP, 120VOLT, 1 PHASE SURGE PROTECTOR EQUAL TO MCG SURGE PROTECTION MODEL NO. 415. SURGE PROTECTOR SHALL BE INSTALLED BETWEEN THE CIRCUIT BREAKER IN THE PANEL AND THE FIRE ALARM PANEL, AND IN ACCORDANCE WITH MANUFACTURER'S WIRING RECOMMENDATIONS.
13. SECURITY/DOOR ENTRY SYSTEM SHALL BE CONNECTED TO FIRE ALARM SYSTEM VIA A CONTROL MODULE/RELAY. SELECTIVE SECURED DOORS SHALL RELEASE UPON ACTIVATION OF ALARM. COORDINATE WITH SECURITY AND DOOR HARDWARE CONTRACTORS.
14. CELLULAR/IP COMMUNICATOR- THE FACP SHALL TRANSMIT AN ALARM SIGNAL TO THE LOCAL FIRE DEPARTMENT VIA A CELLULAR/IP COMMUNICATOR THAT MEETS THE REQUIREMENTS OF THE DERRY FIRE DEPARTMENT. TWO TRANSMISSION METHODS SHALL BE EMPLOYED. COMMON METHODS ARE AS FOLLOWS:
  - DACT CELLULAR COMMUNICATOR
  - DACT VIA LOCAL INTERNET PROTOCOL AS BACK-UP.
  - DUAL PHONE LINES AS BACK-UP
15. LIGHTING CONTROL SYSTEM SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM SO THAT WHEN IN ALARM STATUS, THE FIRE ALARM SYSTEM OVERRIDES DIMMING SYSTEM AND LIGHTS ARE BROUGHT UP TO 100% OUTPUT.
16. PARSOUND/ASSISTED LISTENING/MEDIA SYSTEM SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM SO THAT WHEN IN ALARM STATUS, THE FIRE ALARM SYSTEM OVERRIDES MUSIC SYSTEM AND MUTES THE SOUND SYSTEM.





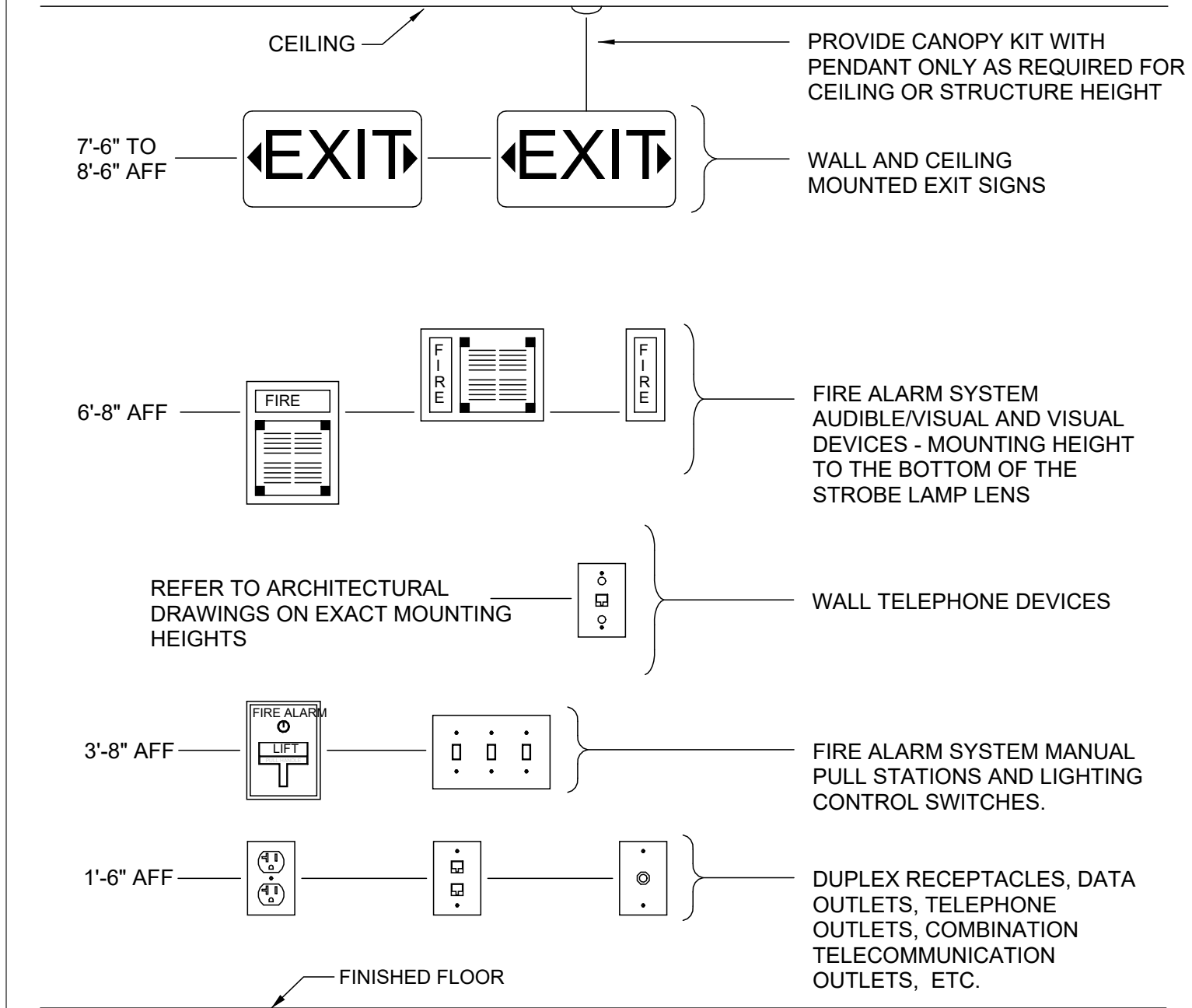
SECURITY SYSTEM RISER  
N.T.S.

KEYED SHEET NOTES
1. PROVIDE CAT6 48PORT UNIVERSAL RJ45/110 PATCH PANEL AND ASSOCIATED MOUNTING BRACKETS FOR SECURITY NETWORK RACK. PROVIDE ALL INFRASTRUCTURE INCLUDING NETWORK RACK, CABLE TRAY/J-HOOKS, GROUNDING/BONDING, POWER RECEPTACLES AND PLYWOOD BACKBOARD AS REQUIRED. E.C. SHALL COORDINATE WITH OWNER'S SECURITY CONTRACTOR FOR EXACT REQUIREMENTS AND LOCATION OF HEAD-END EQUIPMENT PRIOR TO PURCHASING AND CONSTRUCTION.
2. PROVIDE SECURITY CABLES AS REQUIRED. CCTV (COLORED WHITE) AND ACCESS CONTROL (COLORED TBD). E.C. SHALL COORDINATE WITH OWNER'S SECURITY CONTRACTOR FOR EXACT REQUIREMENTS, WIRING SPECIFICATIONS AND LOCATION OF HEAD-END EQUIPMENT PRIOR TO PURCHASING AND CONSTRUCTION.
3. 18/4 NON-SHIELDED PLENUM CABLE CMP AND COMPOSITE CABLE CMP. VERIFY CABLE REQUIREMENTS AND LOCATIONS WITH OWNER'S SECURITY VENDOR.
4. CATEGORY 6 PLENUM CABLE CMP DROP AT EACH CAMERA, DURRESS BUTTON, AND TEMPERATURE/WATER DETECTION ALARM LOCATION. LEAVE 30' OF SERVICE LOOP AT CAMERA LOCATION.
5. WIRING AS REQUIRED BY THE MANUFACTURER. INTERCOM MASTER STATION EQUAL TO AIPHONE #JP-DVF. INTERCOM SUB-MASTER STATION EQUAL TO AIPHONE #JP-4HD. AND INTERCOM DOOR STATION EQUAL TO AIPHONE #JP-DVF. PROVIDE ALL MATERIALS AND EQUIPMENT NEEDED FOR A COMPLETE AND OPERATIONAL VIDEO INTERCOM SYSTEM, WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO VIDEO MASTER STATION, VIDEO SUB-STATION, POWER SUPPLIES, DOOR RELEASE ADAPTORS, LONG DISTANCE ADAPTORS, BACK BOXES, CONDUIT, AND WIRING. ALL LOW VOLTAGE WIRING SHALL BE SIZED BY AND THE MANUFACTURER.

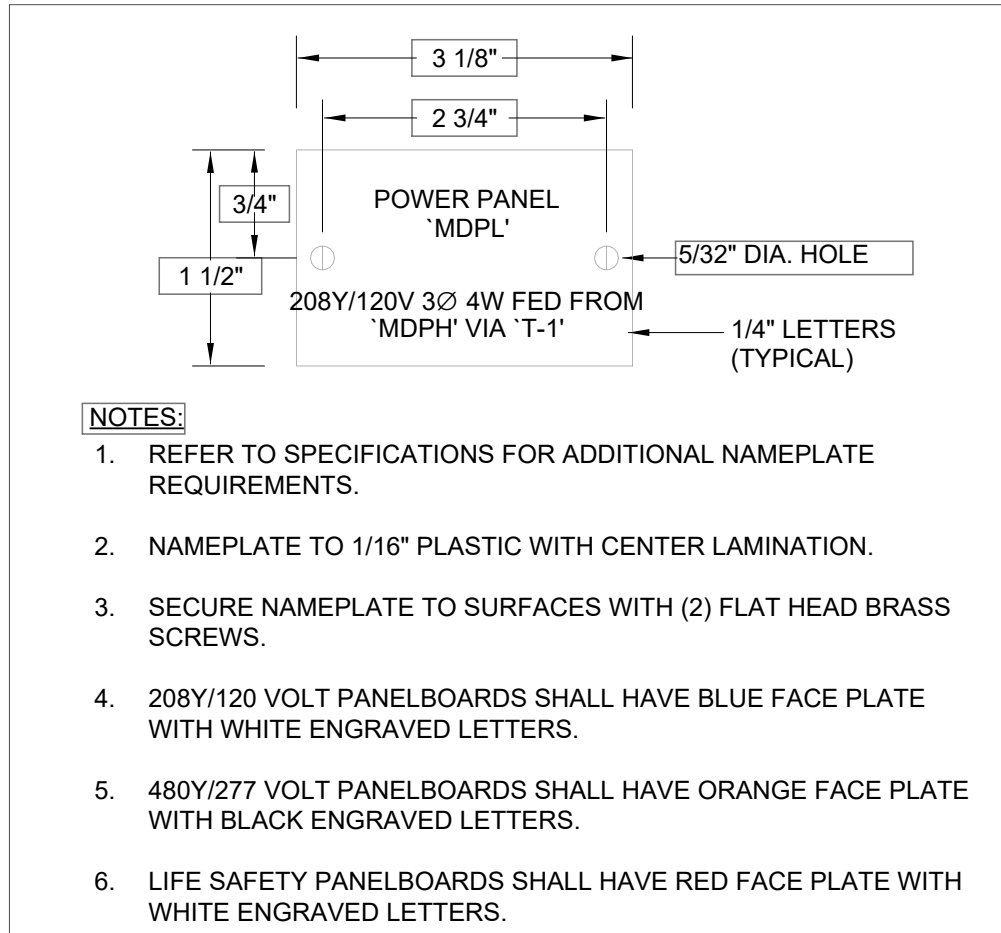


PUBLIC ADDRESS SYSTEM RISER  
N.T.S.

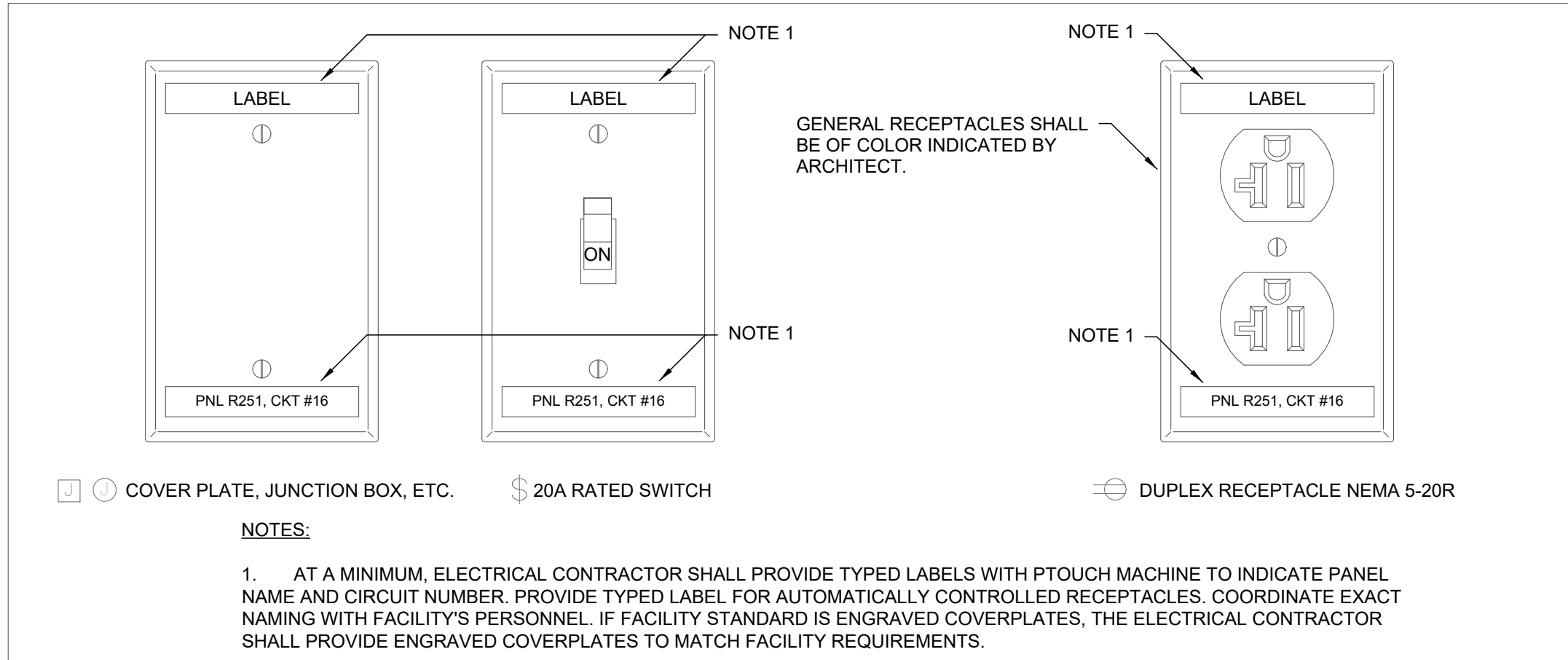
KEYED SHEET NOTES
1. PROVIDE ALL REQUIRED SYSTEM COMPONENTS AND HEAD-END EQUIPMENT FOR FULLY FUNCTIONAL PUBLIC ADDRESS SYSTEM. RISER DOES NOT SHOW ALL NECESSARY COMPONENTS AND WIRING. CONTRACTOR SHALL COORDINATE WITH OWNER'S VENDOR (TELEPHONE AND NETWORK TECHNOLOGIES - TNT) FOR ALL 120VAC POWER, LOW VOLTAGE WIRING, AND INTEGRAL COMPONENTS FOR A COMPLETE OPERATING SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
2. 18/2 PLENUM RATED SPEAKER WIRE. VERIFY WIRING REQUIREMENTS WITH OWNER'S VENDOR.
3. RECESS MOUNT 8" CEILING PAGING SPEAKERS. INCLUDE BACKBOX AND CEILING TILE MOUNTING SUPPORT AS REQUIRED.
4. RECESS MOUNT 4" CEILING PAGING SPEAKERS. INCLUDE BACKBOX AND CEILING TILE MOUNTING SUPPORT AS REQUIRED.
5. ALL CABLES SHALL BE CLEARLY LABELED WITH DESCRIPTION OF DEVICE LOCATION. PROVIDE SERVICE LOOPS AT THE HEAD-END AND DEVICE LOCATIONS. TERMINATE AND TEST ALL CABLES AT DEVICE AND HEAD-END IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE ALL REQUIRED SOFTWARE, PROGRAMMING, TRAINING, AND COMMISSIONING FOR 'PA' SPEAKER SYSTEM.
6. PROVIDE ATTENUATORS/VOLUME CONTROL STATIONS AND WIRING. LOCATE AND LABEL VOLUME CONTROL STATIONS IN RESPECTIVE FLOOR IDF CLOSET.
7. 18/2 PLENUM RATED SPEAKER WIRE. VERIFY WIRING REQUIREMENTS WITH OWNER'S VENDOR.



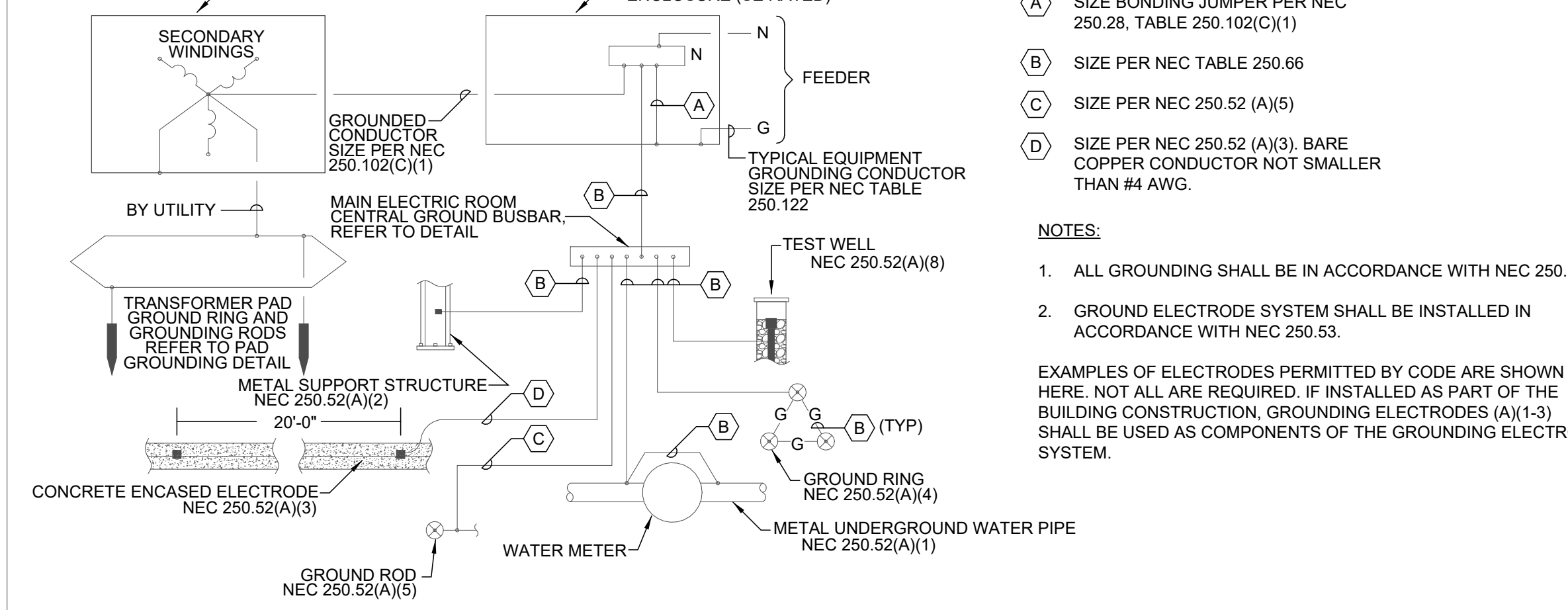
TYPICAL DEVICE MOUNTING HEIGHT DETAIL  
N.T.S.



TYPICAL NAMEPLATE DETAIL  
N.T.S.

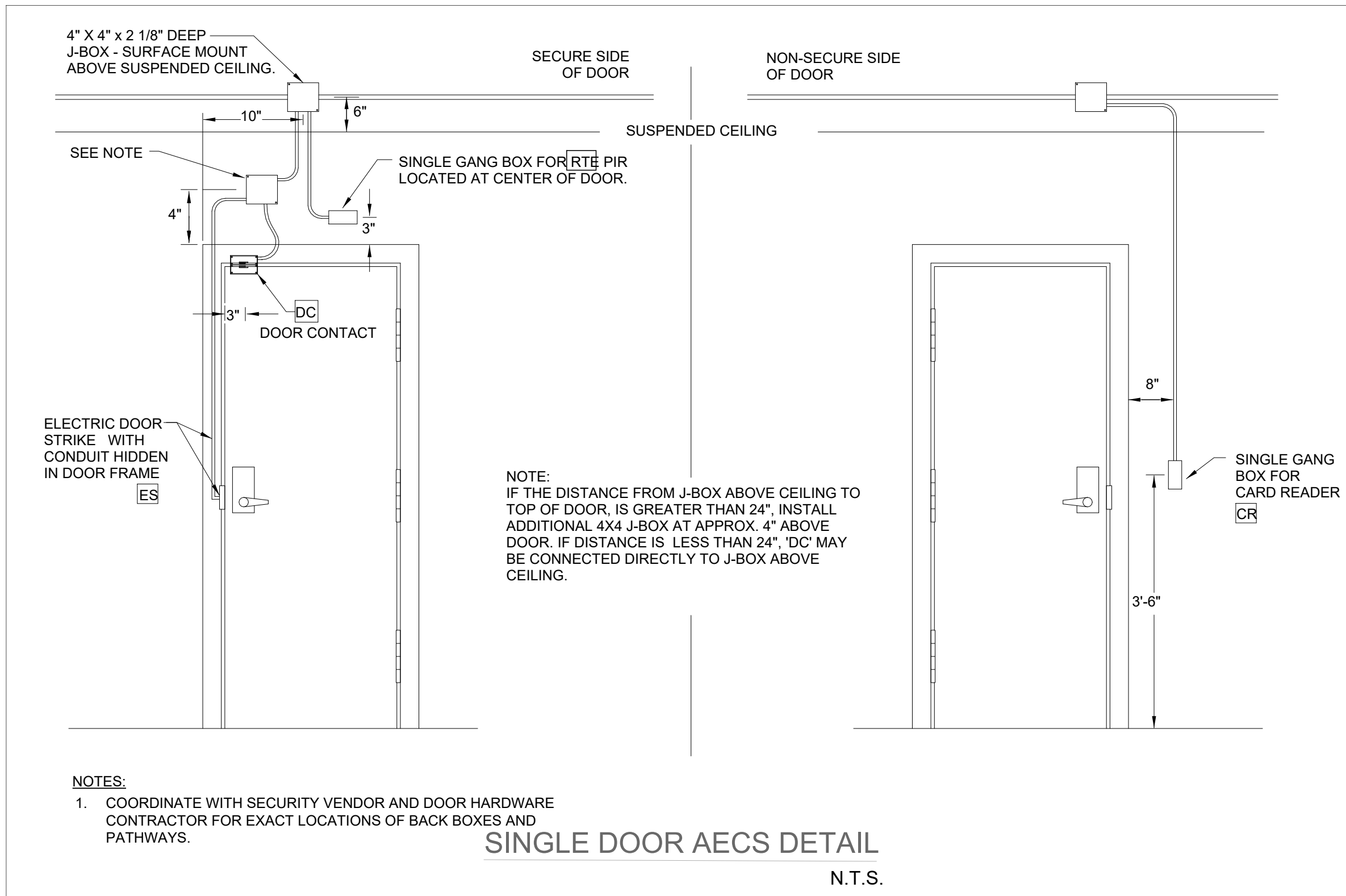


TYPICAL DEVICE COVERPLATE LABELING DETAIL  
N.T.S.



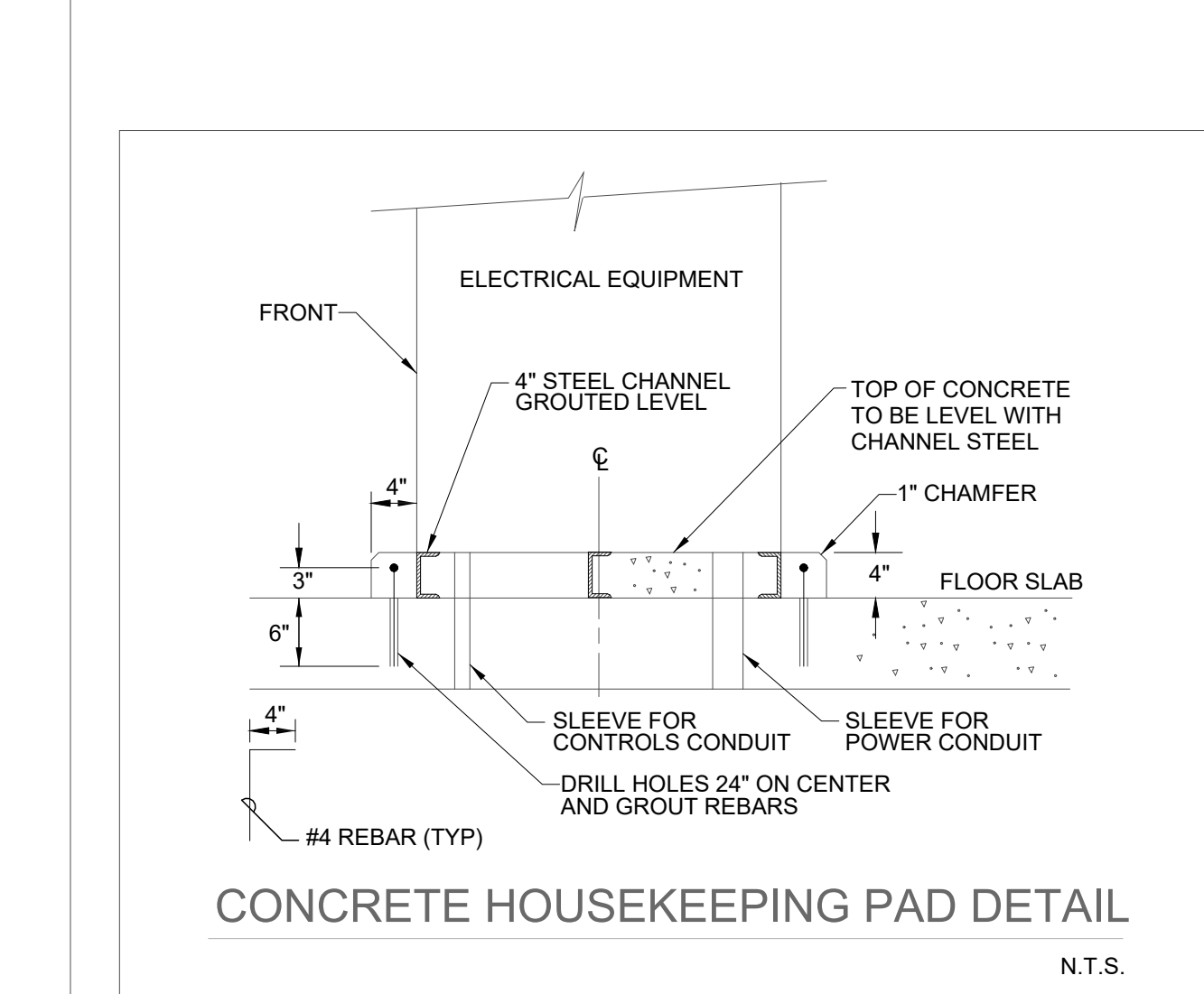
UTILITY SERVICE ENTRANCE GROUNDING DETAIL

N.T.S.



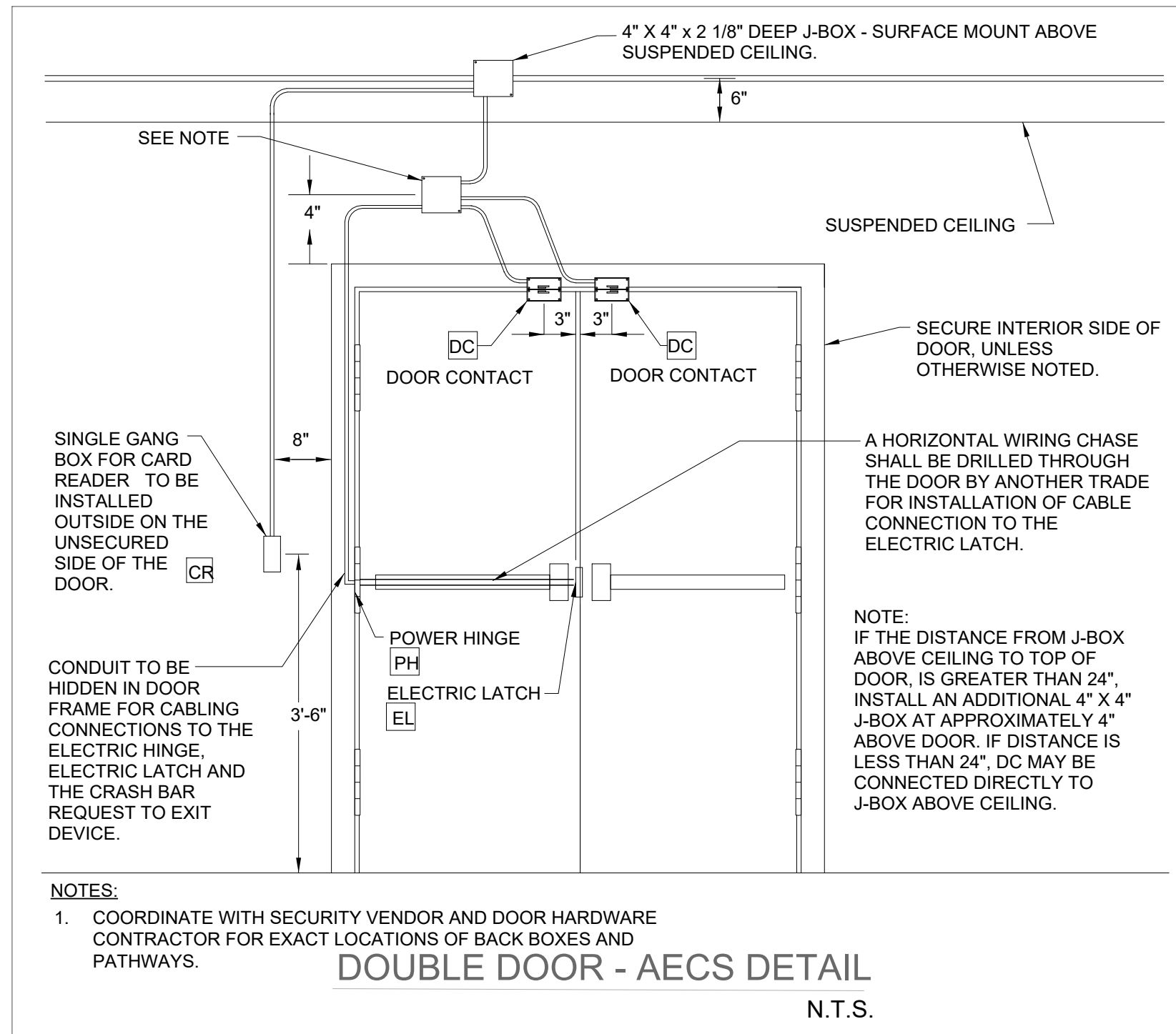
SINGLE DOOR AECS DETAIL

N.T.S.



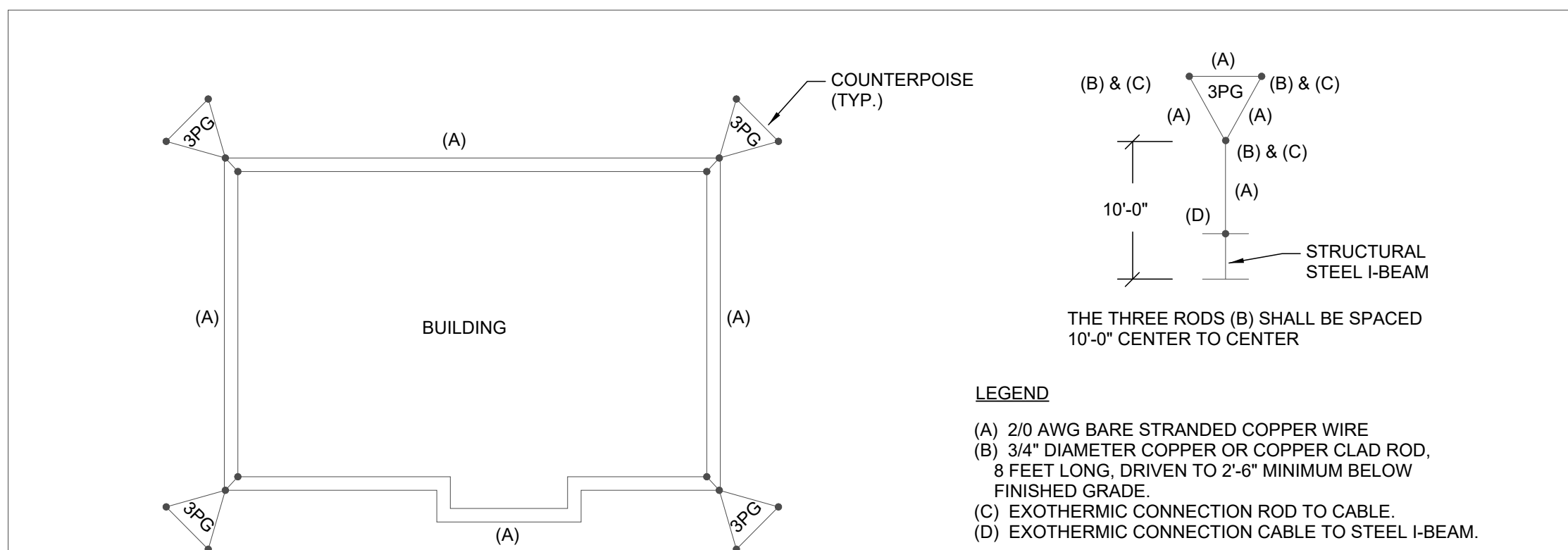
CONCRETE HOUSEKEEPING PAD DETAIL

N.T.S.



DOUBLE DOOR - AECS DETAIL

N.T.S.



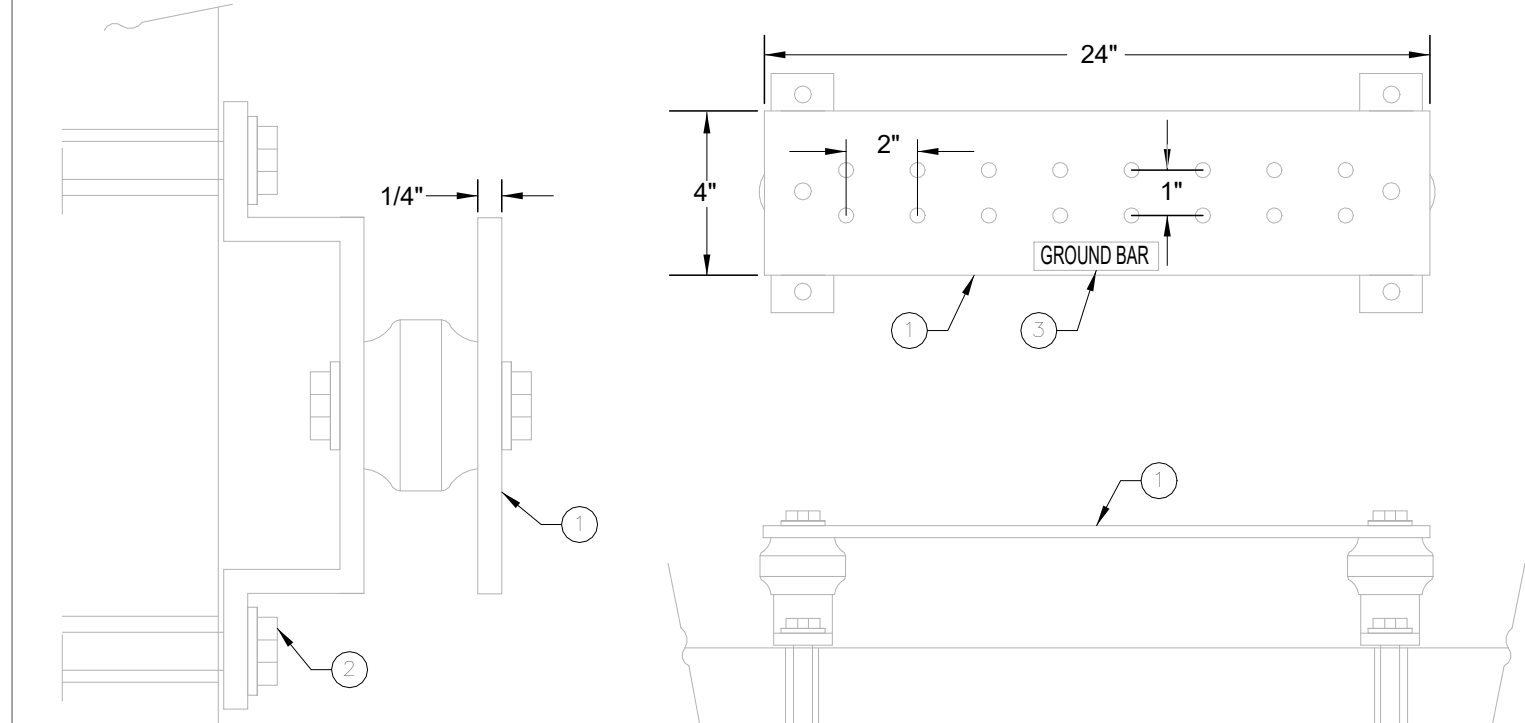
BUILDING STEEL GROUNDING PLAN

N.T.S.

3 POINT GROUNDING SYSTEM DETAIL

N.T.S.

- NOTES:
- PROVIDE MINIMUM OF TWO TEST WELLS FOR TWO OF THE COUNTERPOISE LOCATIONS. LOCATE ON OPPOSITE SIDES OF THE BUILDING FOR TESTING AND MAINTENANCE.
  - INSTALLATION SHALL PROVIDE MAXIMUM TESTED RESISTANCE OF 10 OHMS.



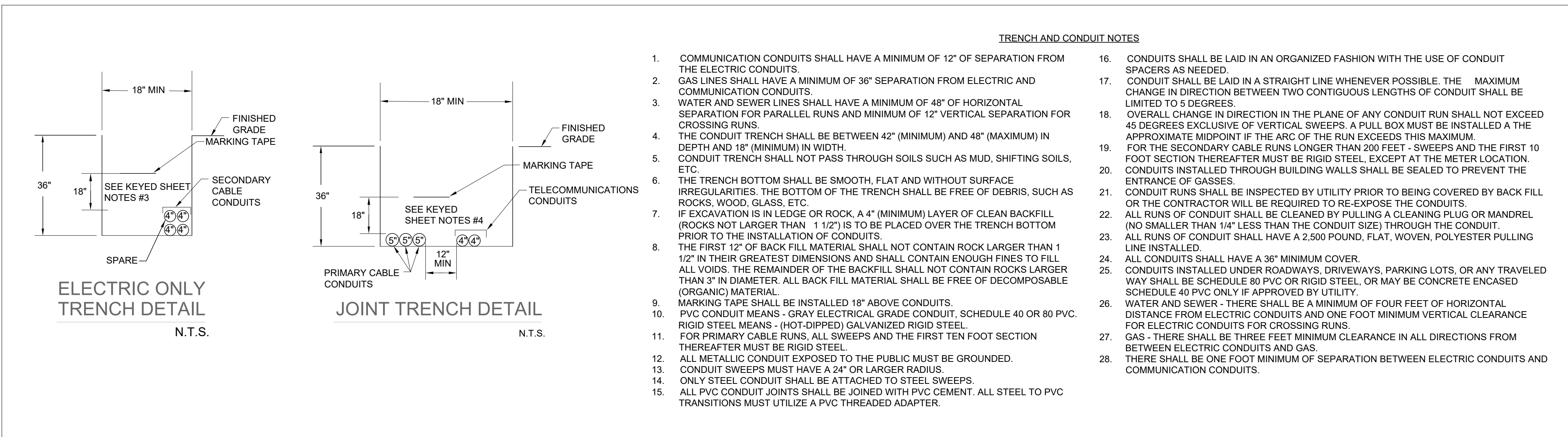
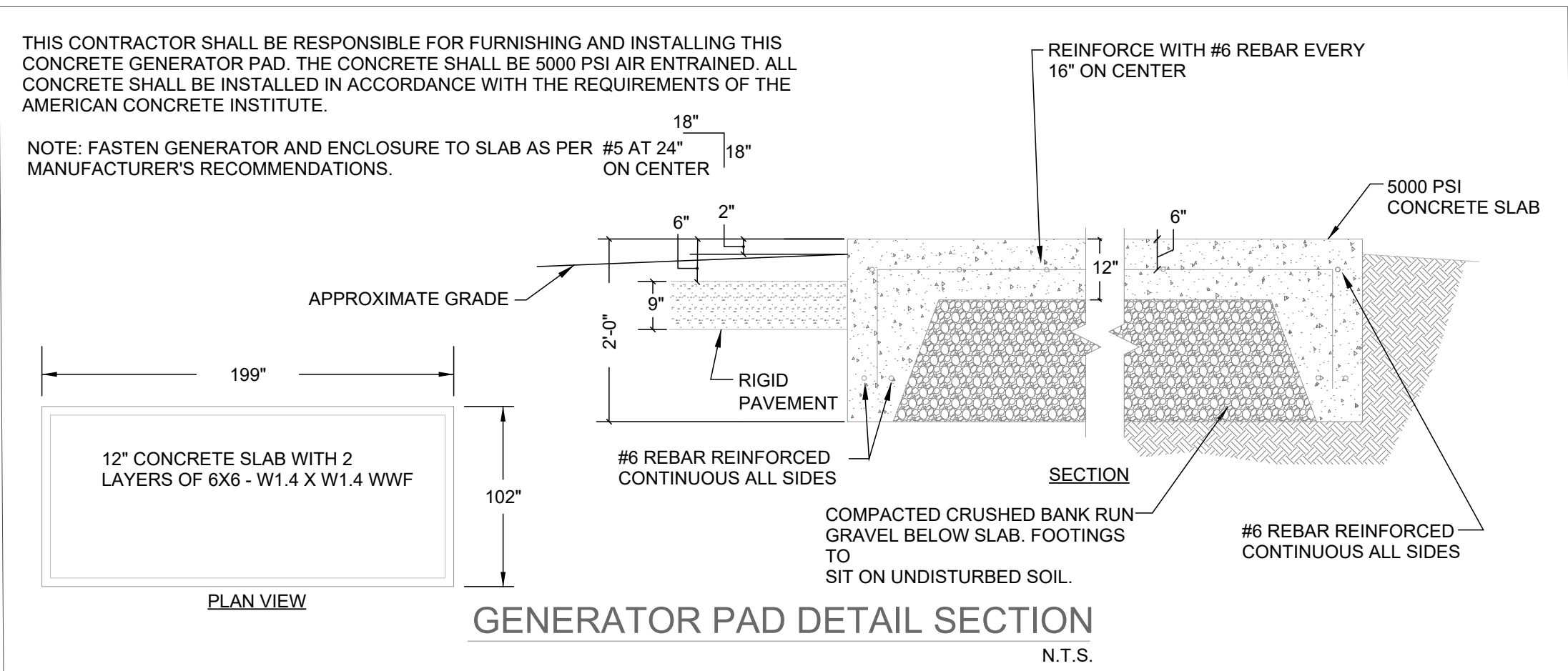
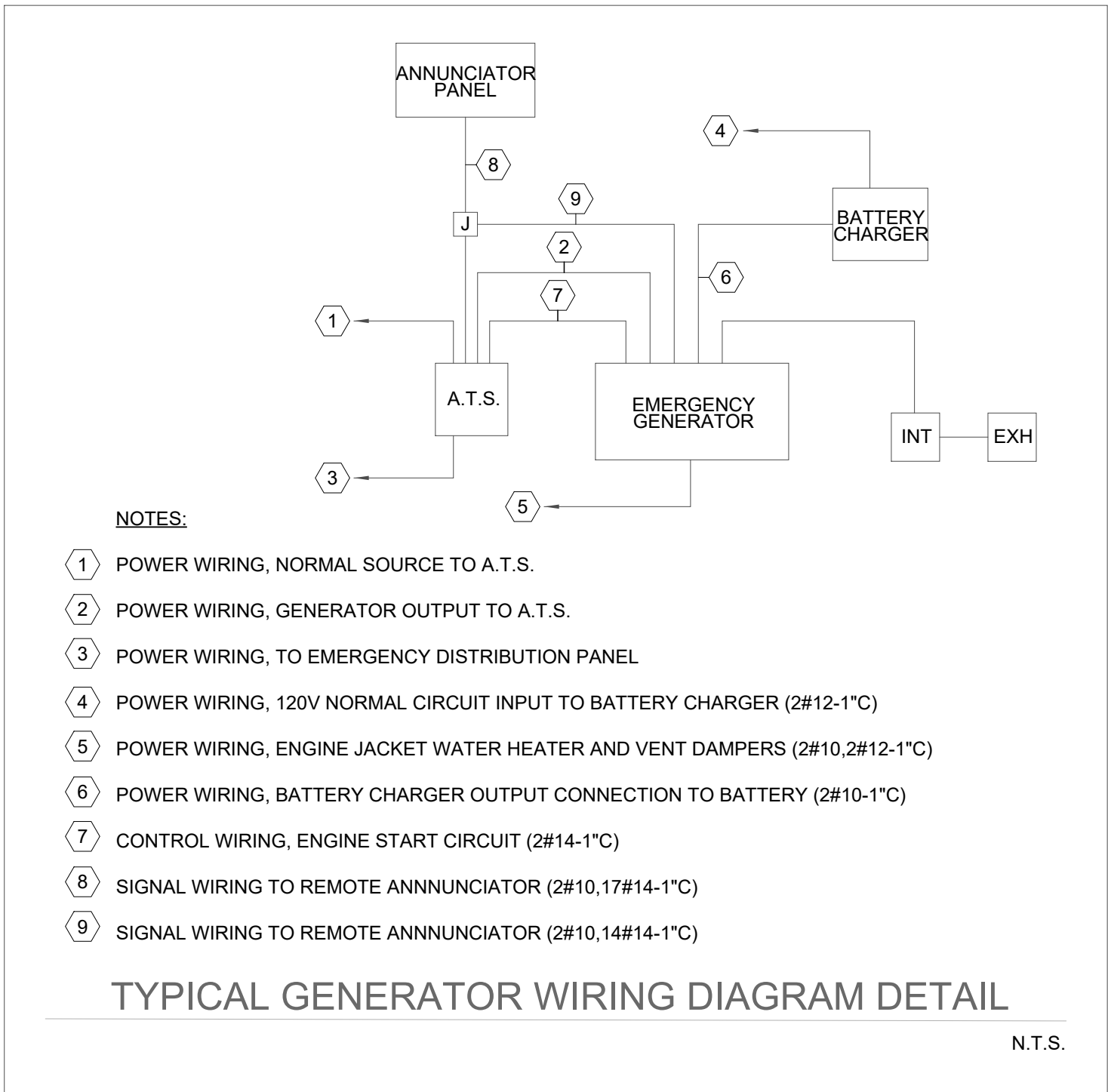
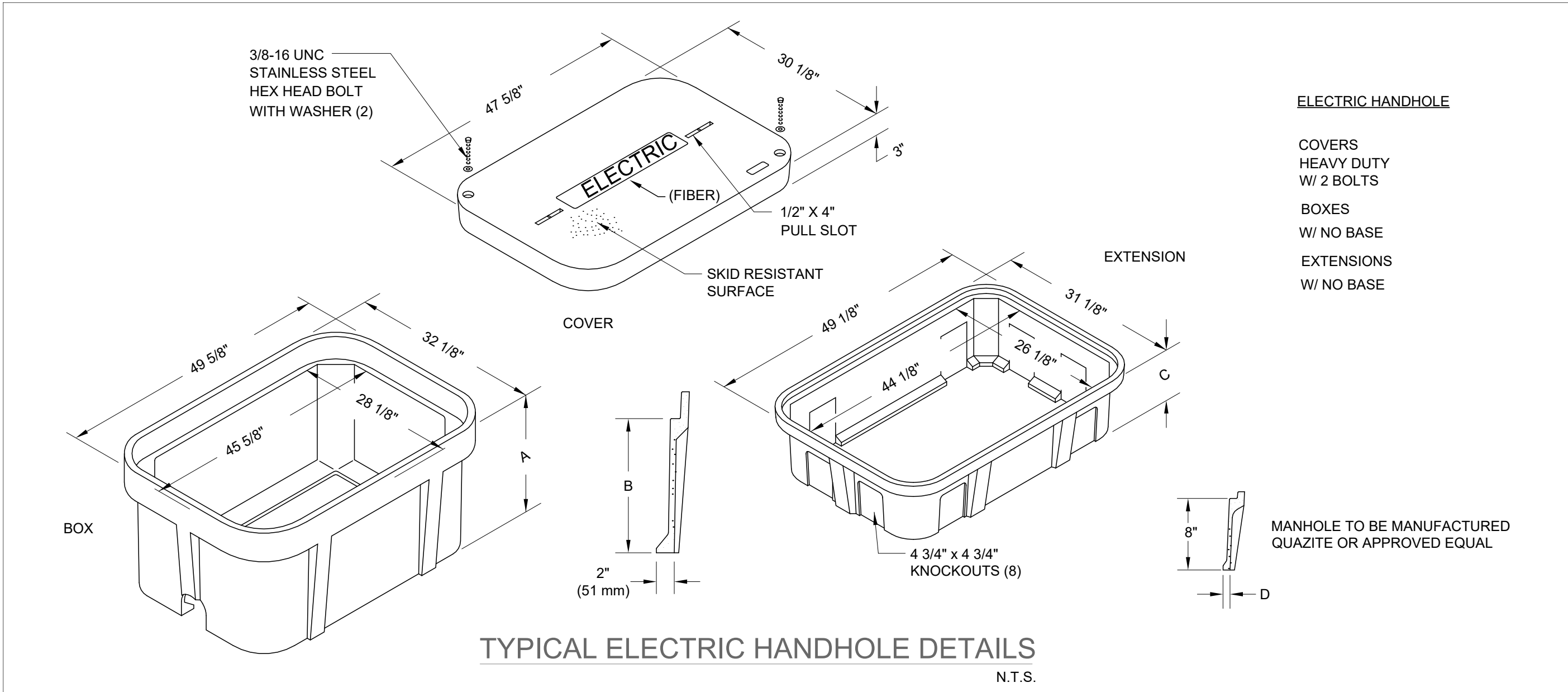
NOTES:

- GROUND BAR WITH STAINLESS STEEL MOUNTING BRACKETS AND STANDOFF INSULATORS - 1/4" X 4" X 24" COPPER GROUND BAR WITH 7/16" HOLES SPACES 1" VERTICALLY AND 2" HORIZONTALLY.
- PROVIDE WALL ANCHORS WITH MOUNTING HARDWARE APPROPRIATE TO WALL CONSTRUCTION. MINIMUM SIZE HARDWARE SHALL BE 3/8".
- NAMEPLATE CGB - GREEN WITH 3/8" LETTERS "GROUND BAR".

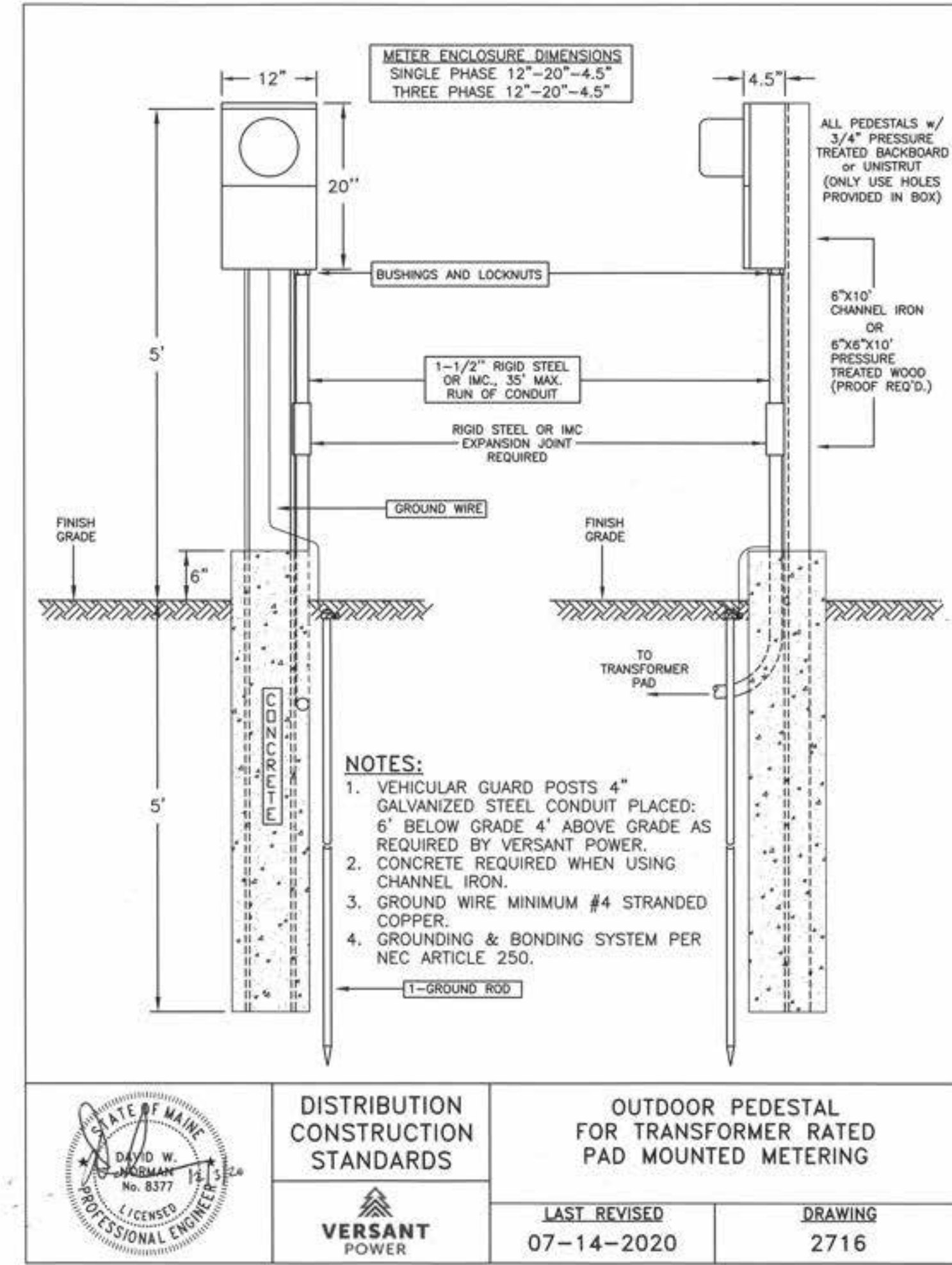
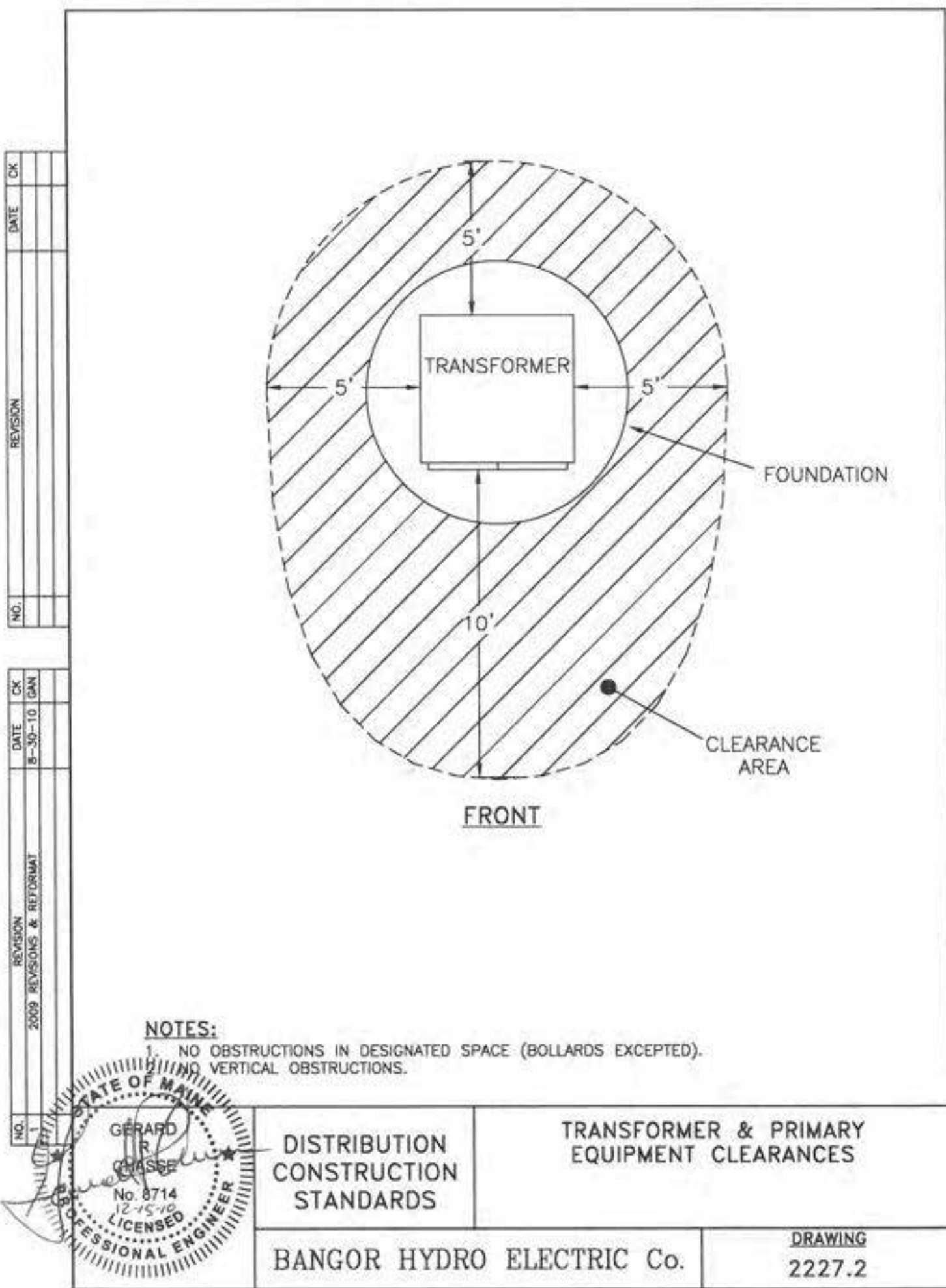
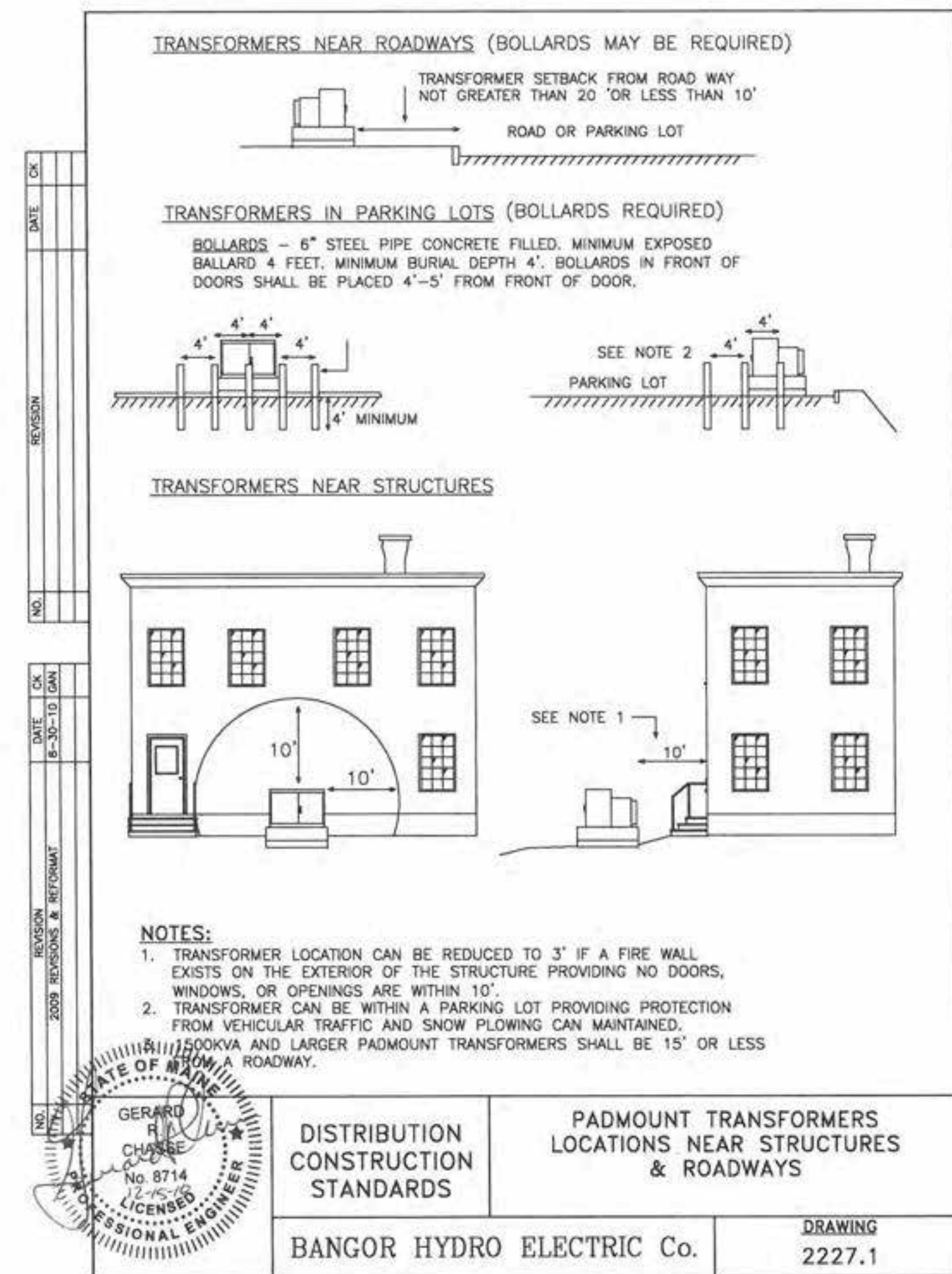
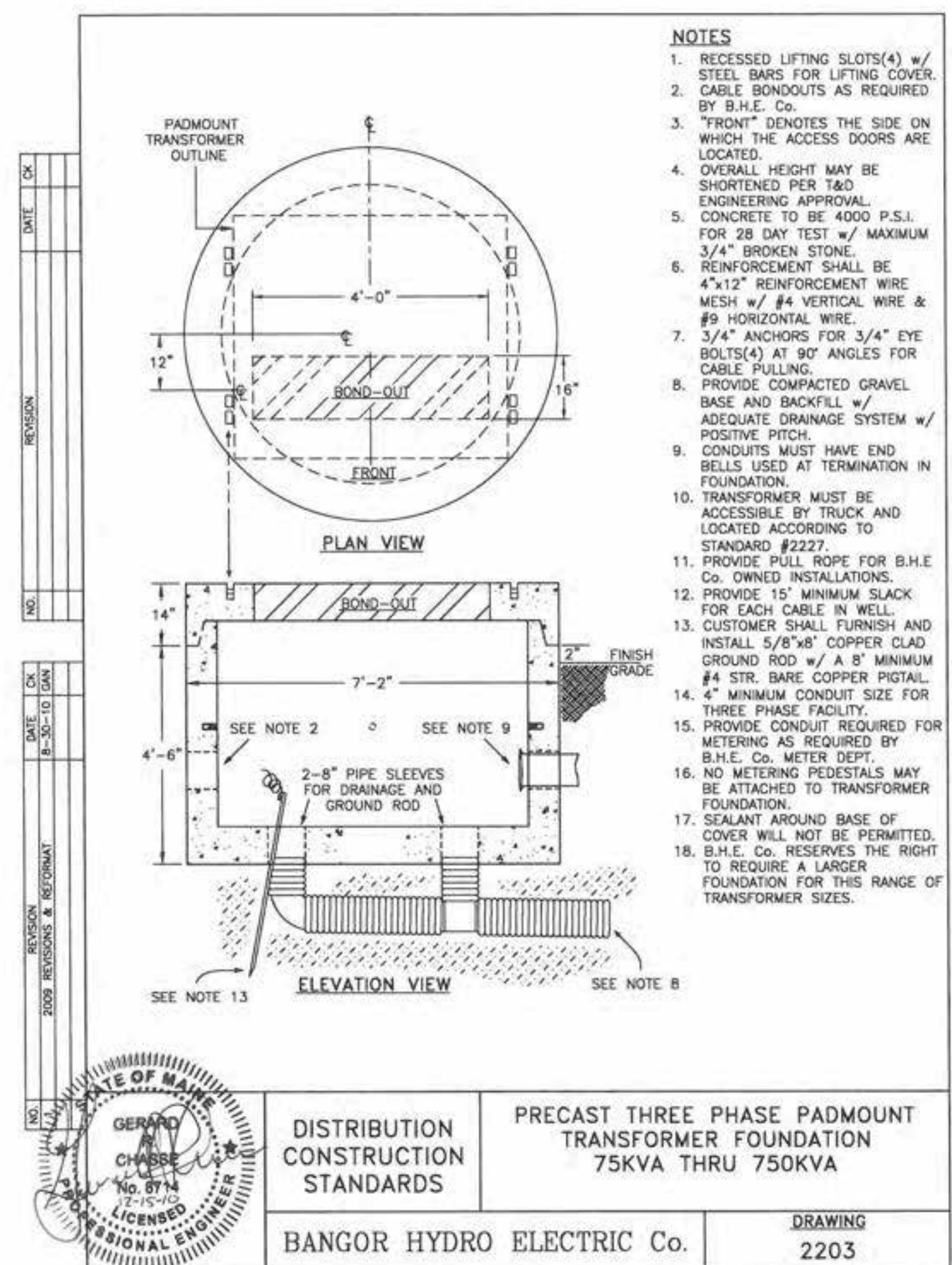
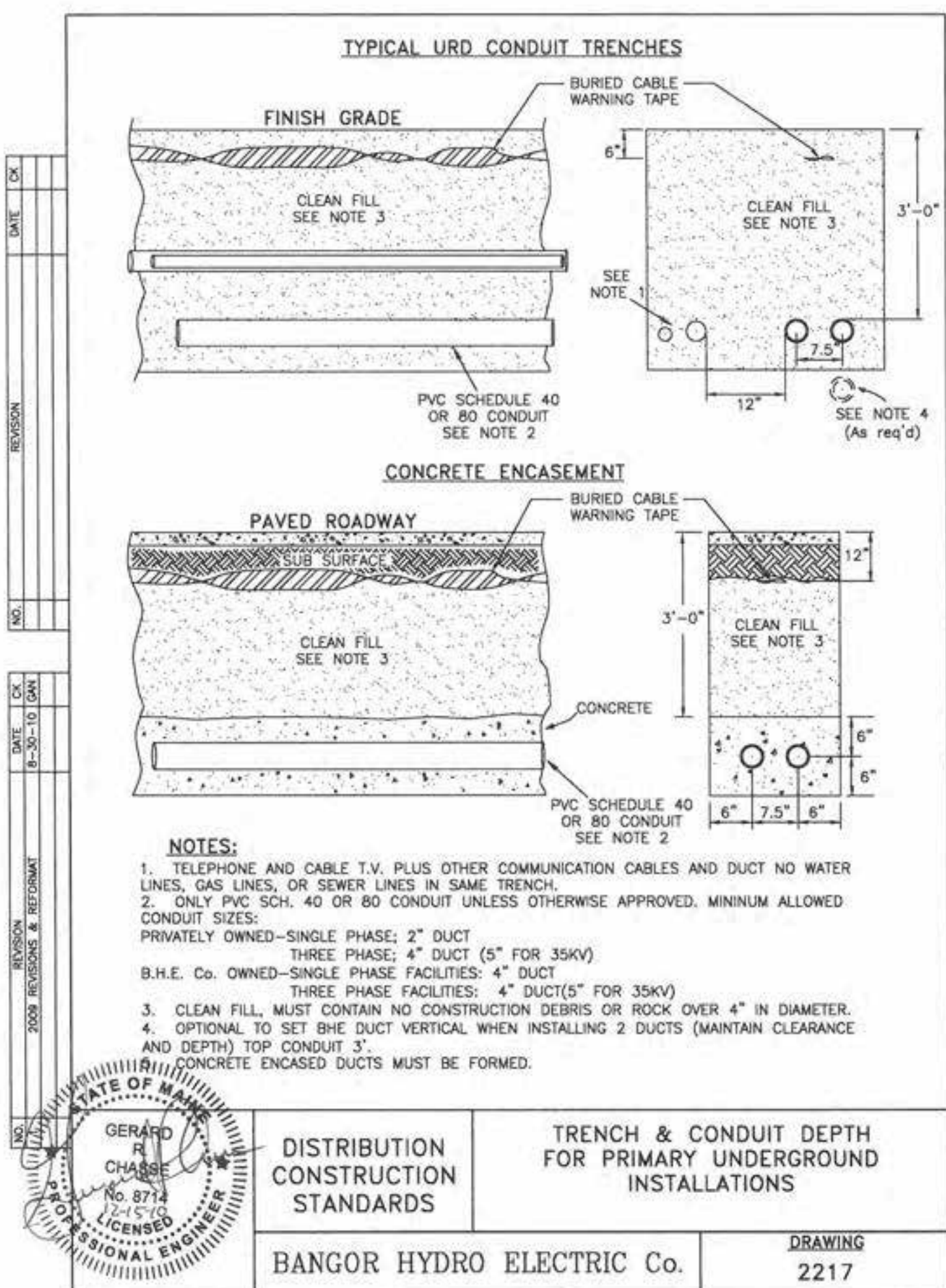
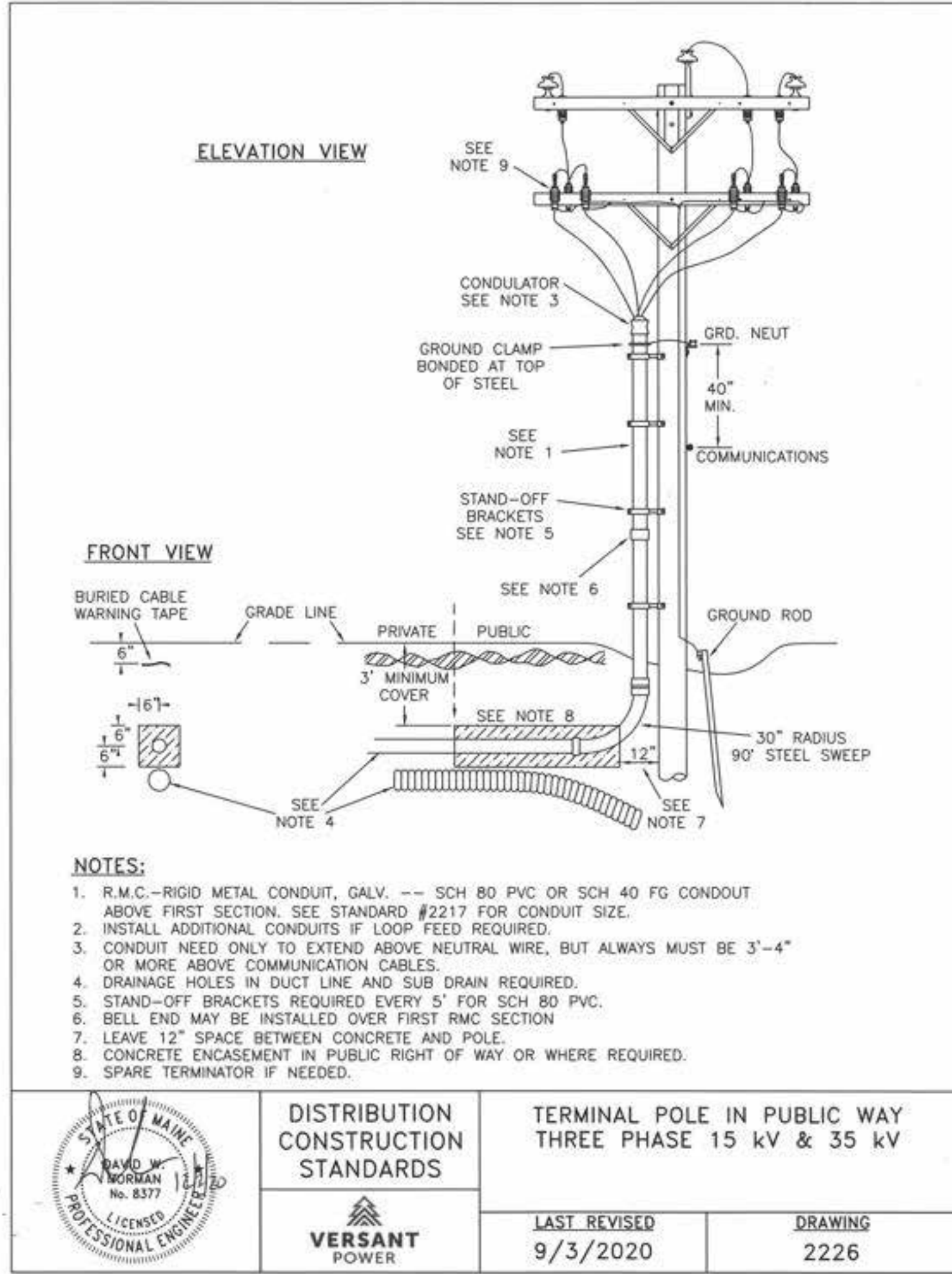
CENTRAL GROUND BAR (CGB) DETAIL

N.T.S.









SEAL:

CITY OF CARIBOU, MAINE  
CARIBOU POLICE DEPARTMENT

PROJECT NUMBER: 2023102

SUBMISSION  
PROGRESS SET

ORIGINAL ISSUE  
DATE: 08/15/2025

SHEET REVISION SCHEDULE:  
No. DATE

ELECTRICAL DETAILS

SHEET  
NUMBER:

E5.7

PRELIMINARY - NOT FOR CONSTRUCTION



EXTERIOR LIGHT FIXTURE SCHEDULE							
TYPE	MANUFACTURER	MODEL	LUMENS	TEMP (K)	WATTAGE	VOLTAGE	NOTES
D1	LITHONIA	LDN4 40/05 L04 WR	480	4000	5.74	120	
S2	LITHONIA	DSX0 LED P1 40K 80CRI T2M NLTAIR2 PIRH	4346	4000	33.21	120	
S3	LITHONIA	DSX0 LED P1 40K 80CRI BLC3 NLTAIR2 PIRH	3198	4000	33.21	120	
S3W	LITHONIA	DSX0 LED P1 40K 80CRI T4M NLTAIR2 PIRH	4462	4000	33.21	120	
S5	LITHONIA	DSX0 LED P1 40K 80CRI T5W NLTAIR2 PIRH	4665	4000	33.21	120	
W1	LITHONIA	WDGE1 LED P2 40K 80CRI VF NLTAIR2 PIRH	1978	4000	15.01	120	
W2	LITHONIA	WDGE2 LED P2 40K 80CRI TFTM NLTAIR2 PIRH	2030	4000	18.98	120	FURNISH WITH BATTERY BACKUP

INTERIOR LIGHT FIXTURE SCHEDULE							
TYPE	MANUFACTURER	MODEL	LUMENS	TEMP (K)	WATTAGE	VOLTAGE	NOTES
A1	LITHONIA	ENVX 2X2 HRGL 3300LM 80CRI 35K	3284	3500	30.06	120	
A2	LITHONIA	ENVX 2X2 HRGL 2000LM 80CRI 35K	1894	3500	17.38	120	
B	JUNO LIGHTING	JSF 13IN 18LM 35K 90CRI MVOLT ZT WH	1,843	3500	20.2	120	
D1	LITHONIA	LDN4 35/10 L04AR LD	922	3500	10.58	120	
F	BROWNLEE	5038-25-H16-35K	1,762	3500	16.61	120	
G1	ILP	WITZ8-140WLED-UNIV-40-RAFL	14,366	4000	136.72	120	
L1	MARK ARCHITECTURAL...	PLNS U4 90CRI 40K ID800LMF 70/30	2,669	4000	58.99	120	
P	TBD	TBD	TBD	TBD	TBD	120	
S1	LITHONIA	CLX L48 5000LM SEF RDL MVOLT 35K 80CRI	4,879	3500	31.82	120	
S2	LITHONIA	CLX L48 7000LM SEF RDL MVOLT 35K 80CRI	7,067	3500	46.61	120	
V	LC DOANE	SCB4-1W60-40/80-DCW-VARDM-122/32-TPKD	6,045	4000	54.8	120	

MECHANICAL & PLUMBING EQUIPMENT ELECTRICAL CONNECTION SCHEDULE											
EQUIPMENT TAG	HP	AMPS (MCA)	VOLT	PHASE	DEVICE	PANEL CIRCUIT No.	CIRCUIT BREAKER				REMARKS
							AMP	POLE	GF	ST	
HWP-1	3	-	208	3	PROVIDE DISCONNECT	HPM-5,7,9		3			3 #12, 1 #12, 3 #4°C
HWP-2	3		208	3	PROVIDE DISCONNECT	HPM-6,8,10	15	3			3 #12, 1 #12, 3 #4°C
CHWP-1	3		208	3	PROVIDE DISCONNECT	HPM-11,13,15		3			3 #12, 1 #12, 3 #4°C
CHWP-2	3		208	3	PROVIDE DISCONNECT	HPM-12,14,16	20	3			3 #12, 1 #12, 3 #4°C
DOAS-1		16.80	208	3	PROVIDE DISCONNECT		25	3			3 #12, 1 #10, 3 #4°C
B-1		4.50	120	1	PROVIDE DISCONNECT	HPM-2	15	1			2 #12, 1 #12, 3 #4°C
B-2		4.50	120	1	PROVIDE DISCONNECT	HPM-3	15	1			2 #12, 1 #12, 3 #4°C
B-3		4.50	120	1	PROVIDE DISCONNECT	HPM-4	15	1			2 #12, 1 #12, 3 #4°C
DHU-1		14.40	120	1	PROVIDE DISCONNECT	HP1-11	20	1			2 #12, 1 #12, 3 #4°C
MP-1	0.50		120	1	PROVIDE DISCONNECT	HP1-2	15	1			2 #12, 1 #12, 3 #4°C
MP-2	0.50		120	1	PROVIDE DISCONNECT	HP1-4	15	1			2 #12, 1 #12, 3 #4°C
MP-3	0.50		120	1	PROVIDE DISCONNECT	HP1-5	15	1			2 #12, 1 #12, 3 #4°C
MP-4	0.50		120	1	PROVIDE DISCONNECT	HP1-6	15	1			2 #12, 1 #12, 3 #4°C
MP-5	0.50		120	1	PROVIDE DISCONNECT	HP1-3	15	1			2 #12, 1 #12, 3 #4°C
MP-6	0.50		120	1	PROVIDE DISCONNECT	HP1-7	15	1			2 #12, 1 #12, 3 #4°C
MP-7	0.50		120	1	PROVIDE DISCONNECT	HP1-8	15	1			2 #12, 1 #12, 3 #4°C
MP-8	0.50		120	1	PROVIDE DISCONNECT	HP1-9	15	1			2 #12, 1 #12, 3 #4°C
MP-9	0.50		120	1	PROVIDE DISCONNECT	HP1-10	15	1			2 #12, 1 #12, 3 #4°C
ASHP-1		74.00	480	3	PROVIDE DISCONNECT	HP1-12,14,16	100	3			3 #3, 1 #8, 1°C

SEAL:

CITY OF CARIBOU, MAINE  
CARIBOU POLICE DEPARTMENT



**CONSULTANT:**

**DuBois  
& King inc.**

Building Services Division  
Bedford, NH  
MEP/FP Engineers  
603.444.6578  
Project #530419

CITY OF CARIBOU, MAINE  
CARIBOU POLICE DEPARTMENT

ELECTRICAL SCHEDULES

SHEET  
NUMBER:

**E6.2**

Panel: HP1

Location: UTILITY 145  
 Supply From:  
 Mounting: SURFACE  
 Enclosure: NEMA 1

Volts: 120/208 Wye  
 Phases: 3  
 Wires: 4

A.I.C. Rating: 10,000 AMPS SYMMETRICAL  
 Mains Type: MAIN CB  
 Mains Rating: 200 A

## Panel: HPB

Location: EQUIPMENT ROOM 001

Supply From:

Mounting: SURFACE

Enclosure: NEMA 1

Volts: 120/208 Wye

Phases: 3

Wires: 4

A.I.C. Rating: 10,000 AMPS SYMMETRICAL

Mains Type: MAIN CB

Mains Rating: 200 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	RCPT	20 A	1	1080 .						2
3										4
5										6
7										8
9										10
11										12
13										14
15										16
17										18
19										20
21										22
23										24
25										26
27										28
29										30
31										32
33										34
35										36
37										38
39										40
41										42
		<b>Total Load:</b>		1080 VA	0 VA	0 VA				
		<b>Total Amps:</b>		9 A	0 A	0 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
RCPT	1080 VA	100.00%	1080 VA	
				<b>Total Conn. Load:</b> 1080 VA
				<b>Total Est. Demand:</b> 1080 VA
				<b>Total Conn. Current:</b> 3 A
				<b>Total Est. Demand Current:</b> 3 A

Notes:

Panel: HPM

Location: MECHANICAL PLATFORM 200

Supply From:

Mounting: SURFACE

Enclosure: NEMA 1

Volts: 120/208 Wye

Phases: 3

Wires: 4

A.I.C. Rating: 10,000 AMPSS SYMMETRICAL

Mains Type: MAIN CB

Mains Rating: 200 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
RCPT		1		1260 VA	540 VA		1	20 A	B-1	2	
B-2		20 A	1		540 VA	540 VA	1	20 A	B-3	4	
5						792 VA	792 VA			6	
7	HWP-1	20 A	3	792 VA	792 VA					8	
9					792 VA	792 VA		3	20 A	HWP-2	10
11						792 VA	792 VA			12	
13	CHWP-1	20 A	3	792 VA	792 VA					14	
15					792 VA	792 VA		3	20 A	CHWP-2	16
17										18	
19										20	
21										22	
23										24	
25										26	
27										28	
29										30	
31										32	
33										34	
35										36	
37										38	
39										40	
41										42	
Total Load:				4872 VA	4247 VA	3167 VA					
Total Amps:				42 A	37 A	26 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Other	11120 VA	100.00%	11120 VA	
RCPT	1260 VA	100.00%	1260 VA	Total Conn. Load: 12266 VA
				Total Est. Demand: 12266 VA
				Total Conn. Current: 34 A
				Total Est. Demand Current: 34 A

Notes: