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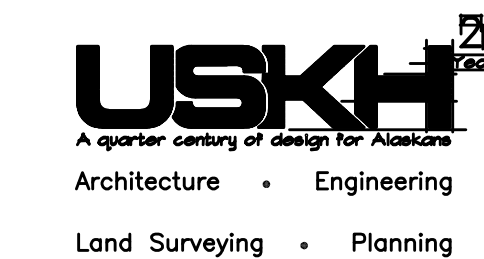
EQUIPMENT SCHEDULE

Table with columns: AREA, ITEM NO., DESCRIPTION, FURNISH & INSTALL, MECH'L. CONN. - SIZE/TYPE, ELECTRICAL CONNECTIONS - SIZE/TYPE, NOTES, AREA, ITEM NO., DESCRIPTION, FURNISH & INSTALL, MECH'L. CONN. - SIZE/TYPE, ELECTRICAL CONNECTIONS - SIZE/TYPE, NOTES. Contains equipment details for various rooms like B115, C102, D102, etc.

1. CONTRACTOR SHALL PROVIDE ALL ELECTRICAL/MECHANICAL CONNECTIONS, FOR ALL EQUIPMENT, EXCEPT AS SPECIFICALLY NOTED OTHERWISE.

- NOTES: 1. NO ELECTRICAL/MECHANICAL CONNECTION REQUIRED 2. INTER TIE W/ EXHAUST 3. MANUAL HOIST AND CARRIAGE (OFO) 4. EXTERIOR PAD MOUNTED FUEL TANK (DBC WALL) 5. START UP TESTING REQUIREMENTS 6. CONFIRM USE OF DRY AIR TYPE CLEANER 7. SIX(6) EACH, MOUNTED TO ROOF STRUCTURE 8. PROVIDE FLAMMABLE STORAGE CABINETS (FSC) WITH GROUND AT LOCATIONS SHOWN ON PLANS 9. ALL WOOD WORKING EQUIPMENT SHALL BE INTER-CONNECTED TO DUST COLLECTOR IN ROOM D112. 10. FASTEN ALL STORAGE ROCKS AND SHELVING TO FLOOR AND WALLS. 11. FASTEN TO CMU WALL. 12. MOUNT CRANES ON CMU WALL. MOUNT PULLEYS ON FRAMING. 13. PAINT ROOM EXHAUST IS AHU-6. 14. PROVIDE CLASS 1, DIVISION 1 RATED MOTOR/STARTER 15. REFERENCE 5/ES.2 FOR FLOOR BOX DETAIL. 16. PROVIDE AND INSTALL CLASS 1, DIVISION 2 RATED RECEPTACLE. 17. VERIFY EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION. 18. CONFIRM REQUIREMENTS WITH OWNER. 19. PROVIDE PREMANUFACTURED WORK STATIONS UNER A.B.1. #1 BUILT IN WORK STATIONS PROVIDED UNDER BASE BID.

OFO = OWNER FURNISHED / OWNER INSTALLED OFI = OWNER FURNISHED / CONTRACTOR INSTALLED



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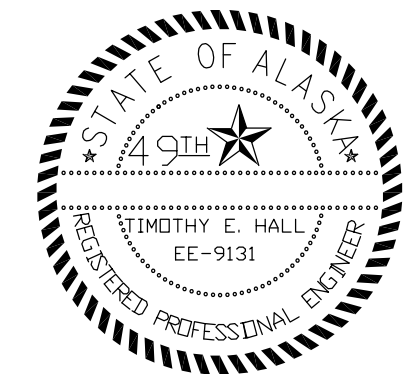
Project Mgr. K.D.M. Drawn MSW CPL Drawn MVM Checked TEH Date 7 FEB 2000

Sheet Contents: EQUIPMENT SCHEDULE

Sheet No.:

E0.1a

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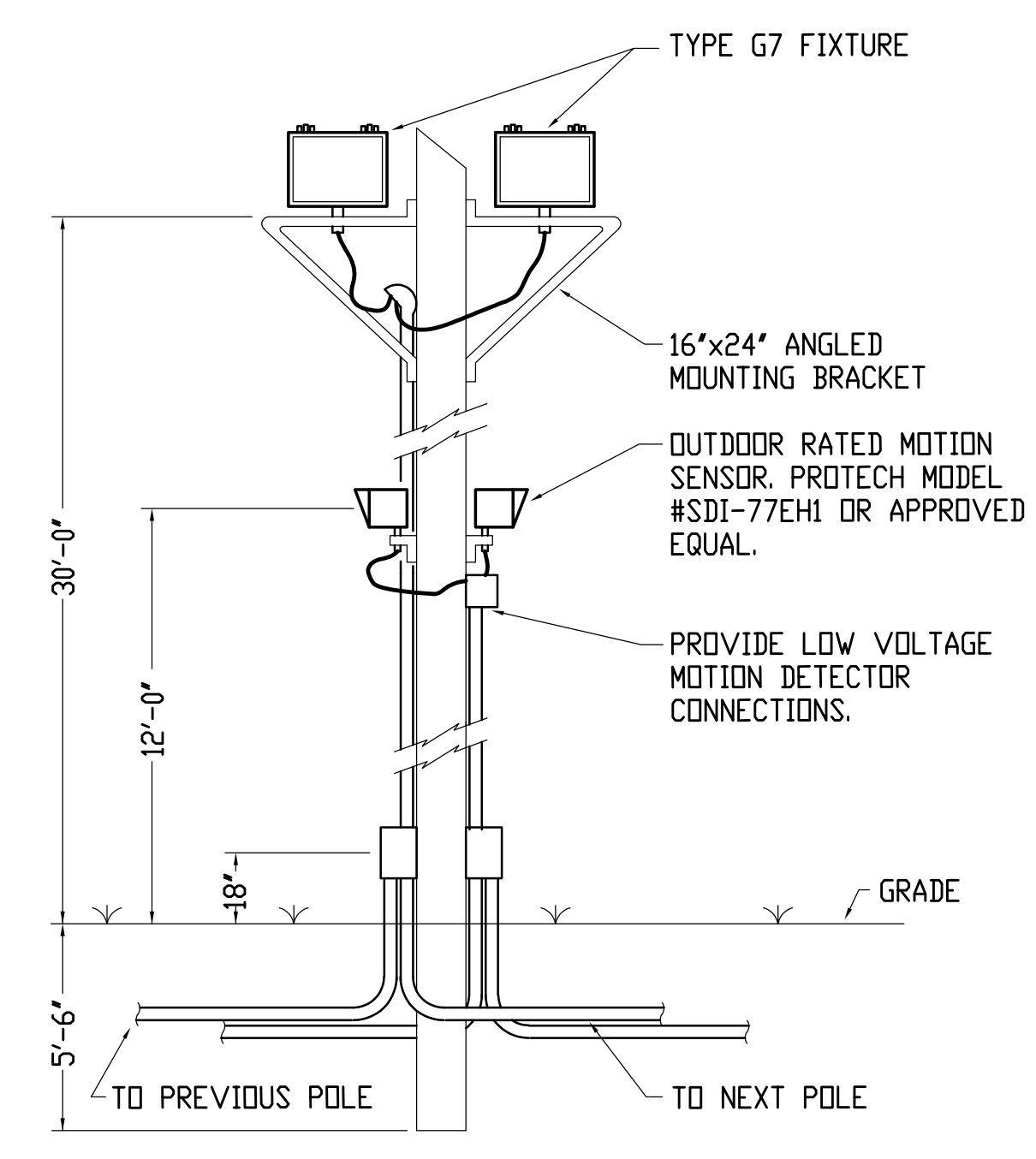
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Sheet Contents:
 ELECTRICAL SITE SECURITY AND LIGHTING PLAN

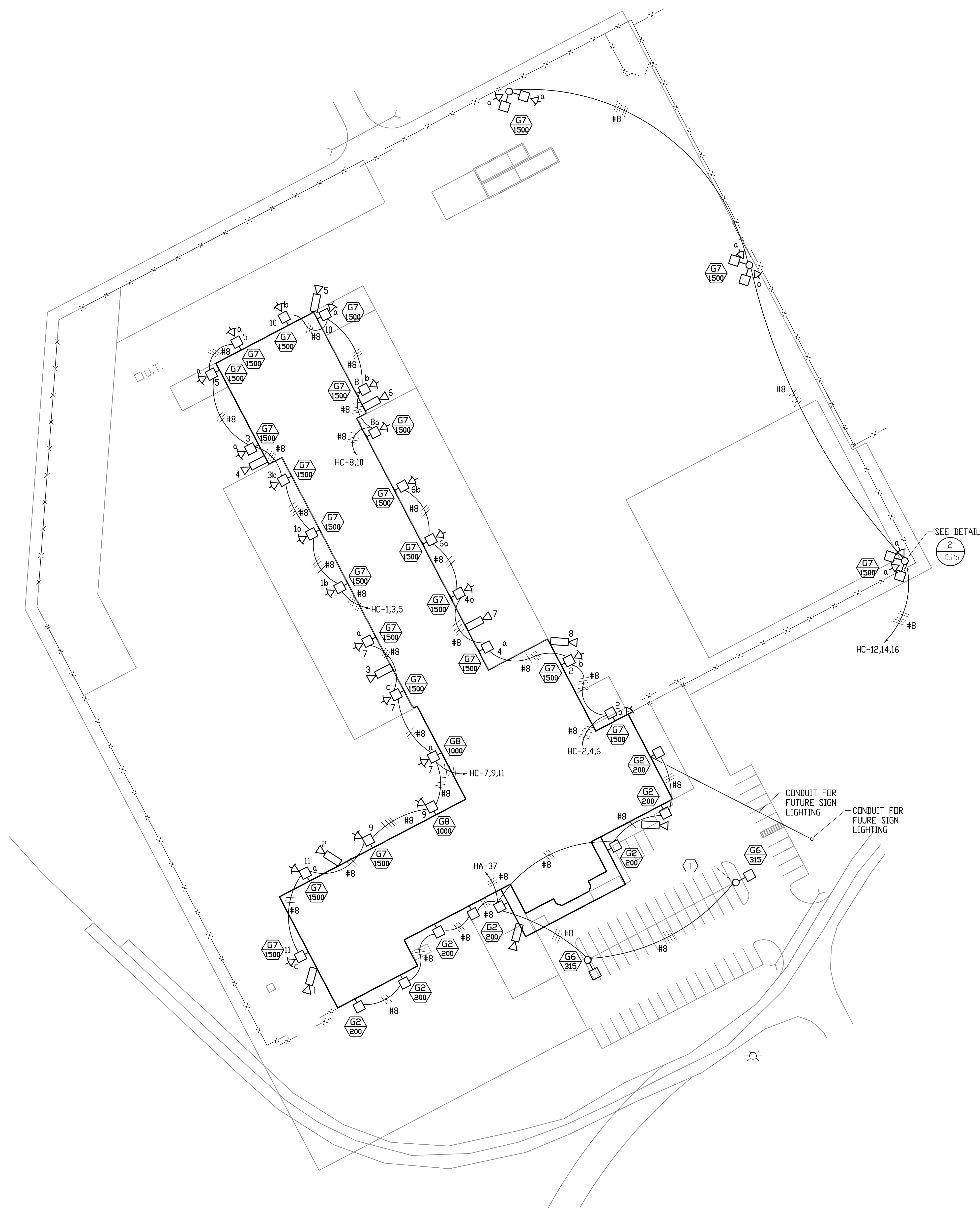
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EO.2a
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MOTION SENSOR PATTERN SCHEDULE

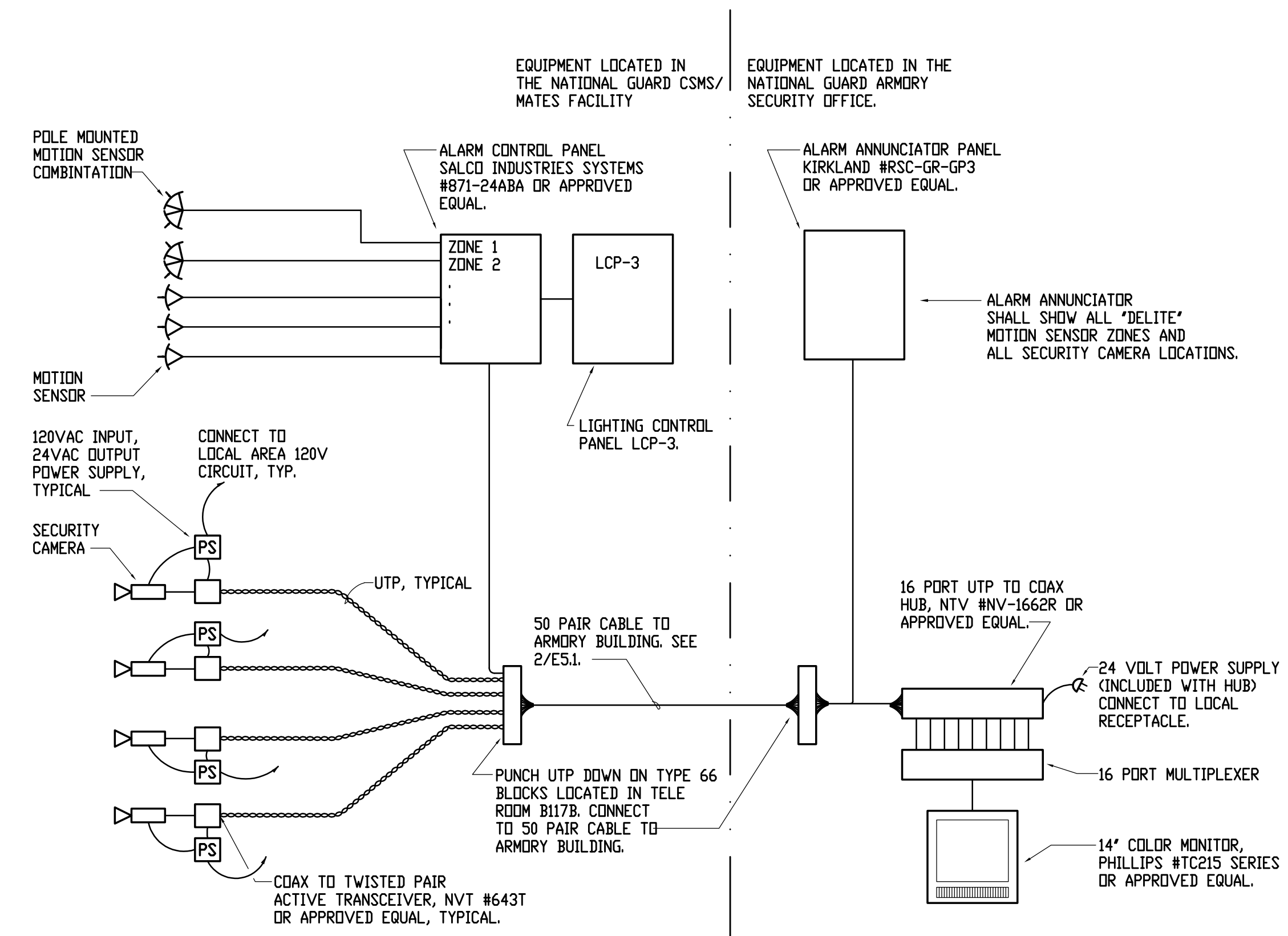
TYPE	DISTRIBUTION	MOUNTING HEIGHT
a	150' x 20'	10'-0"
b	90' x 50'	10'-0"
c	50' x 50'	10'-0"
d	100' x 35'	10'-0"



2 POLE MOUNTED DETECTOR/LIGHTING DETAIL
 NO SCALE.



1 ELECTRICAL SITE SECURITY/LIGHTING PLAN
 1" = 40'



3 SECURITY CAMERA DETAIL
 NO SCALE.

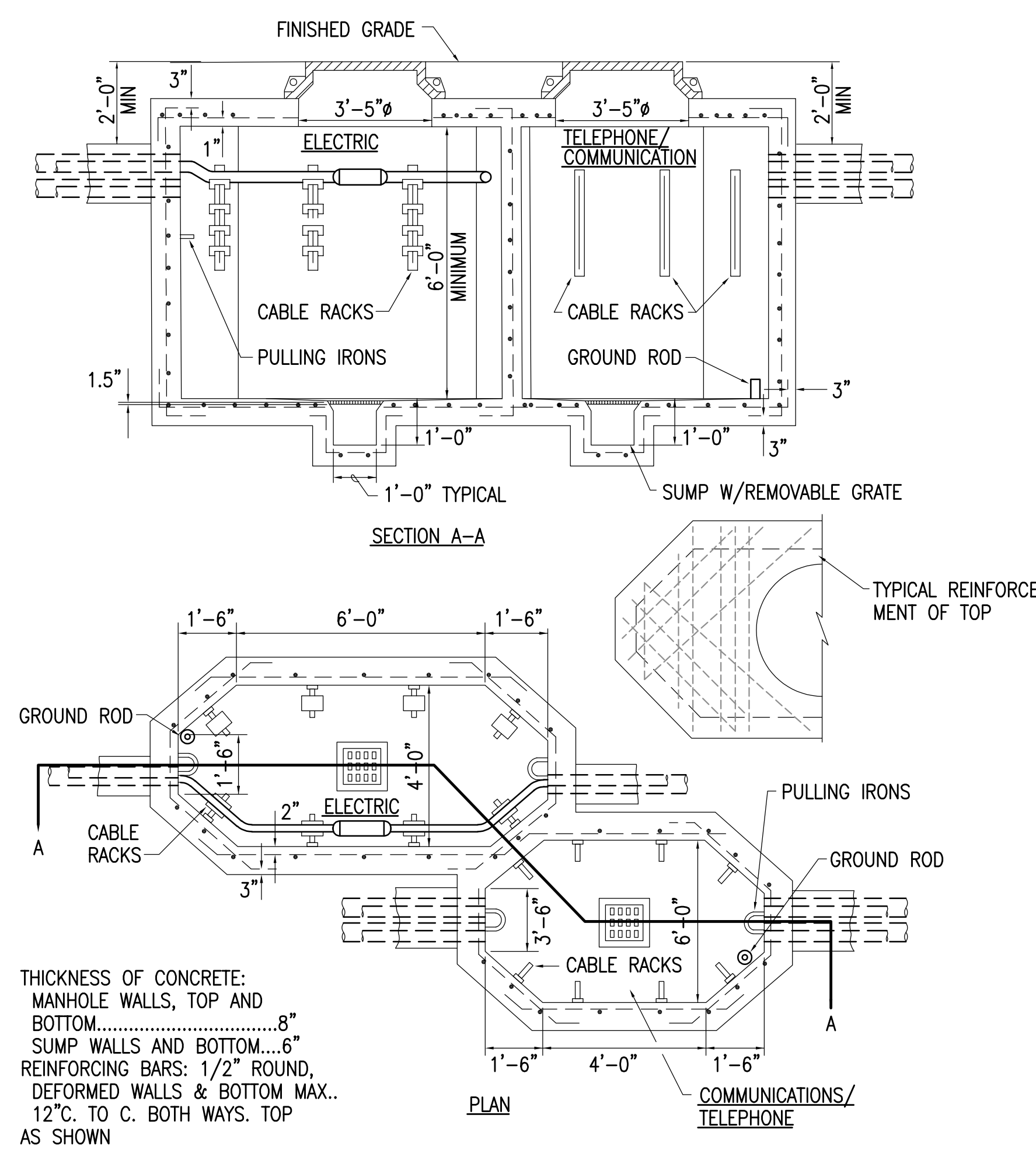


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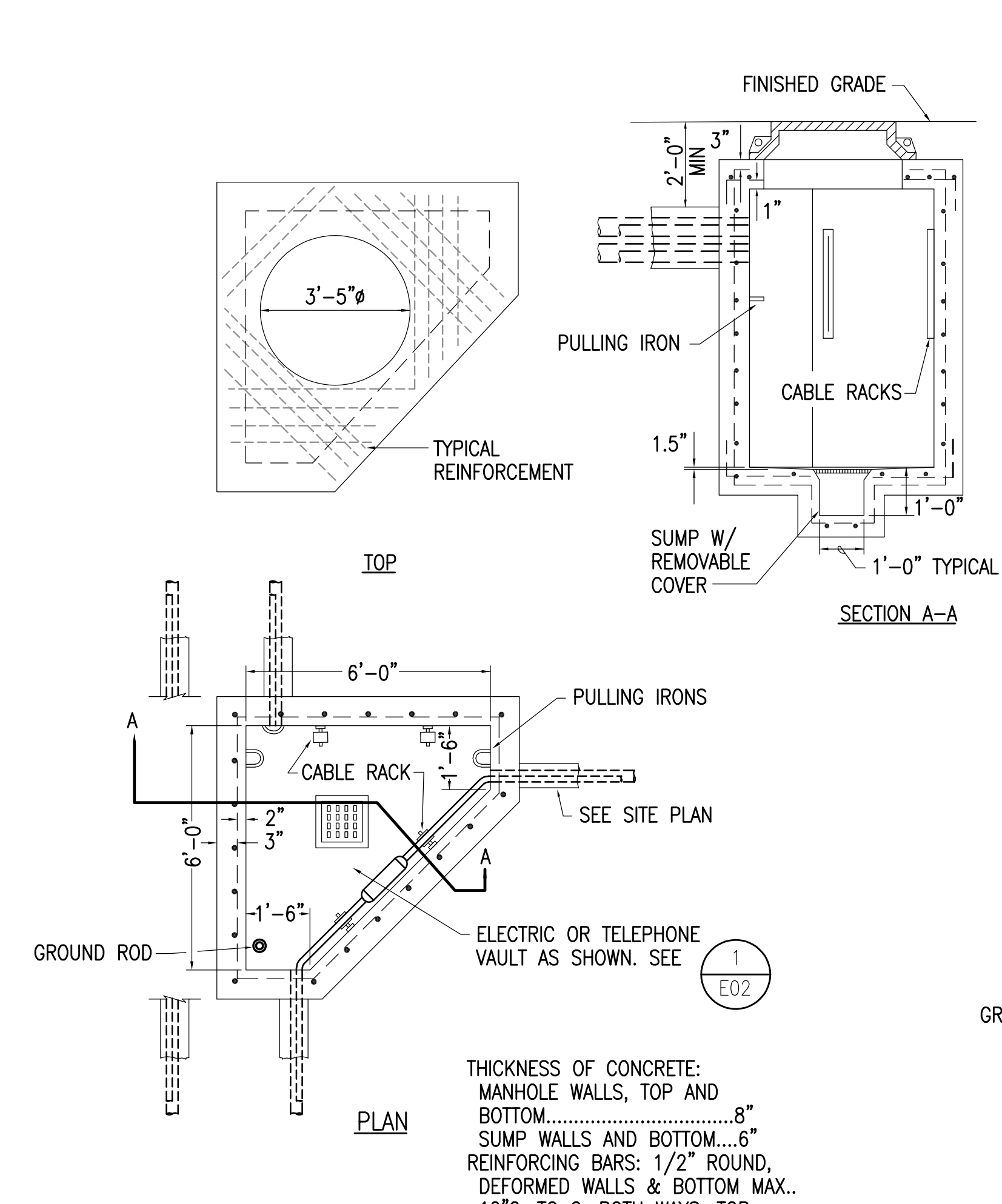
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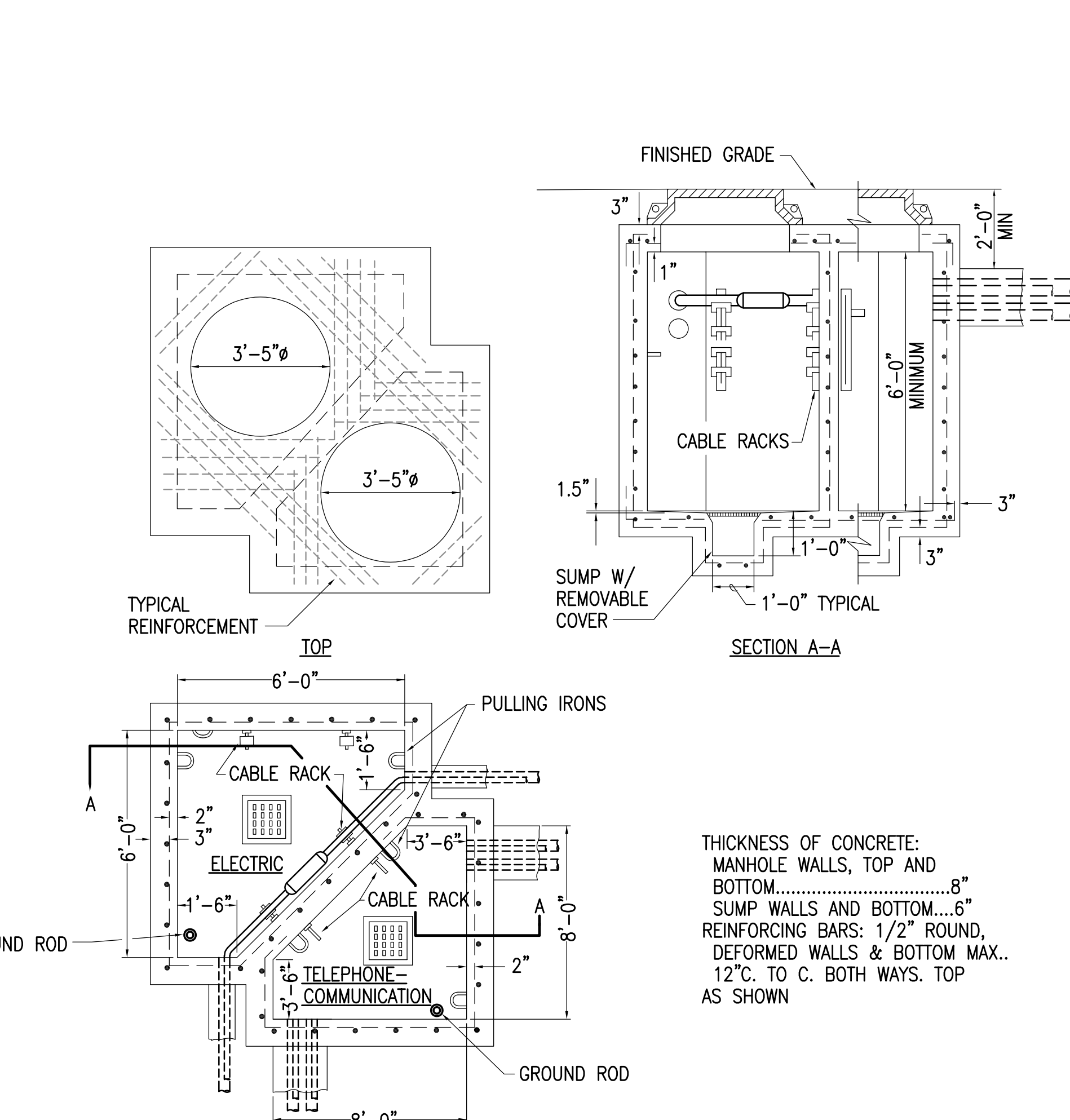
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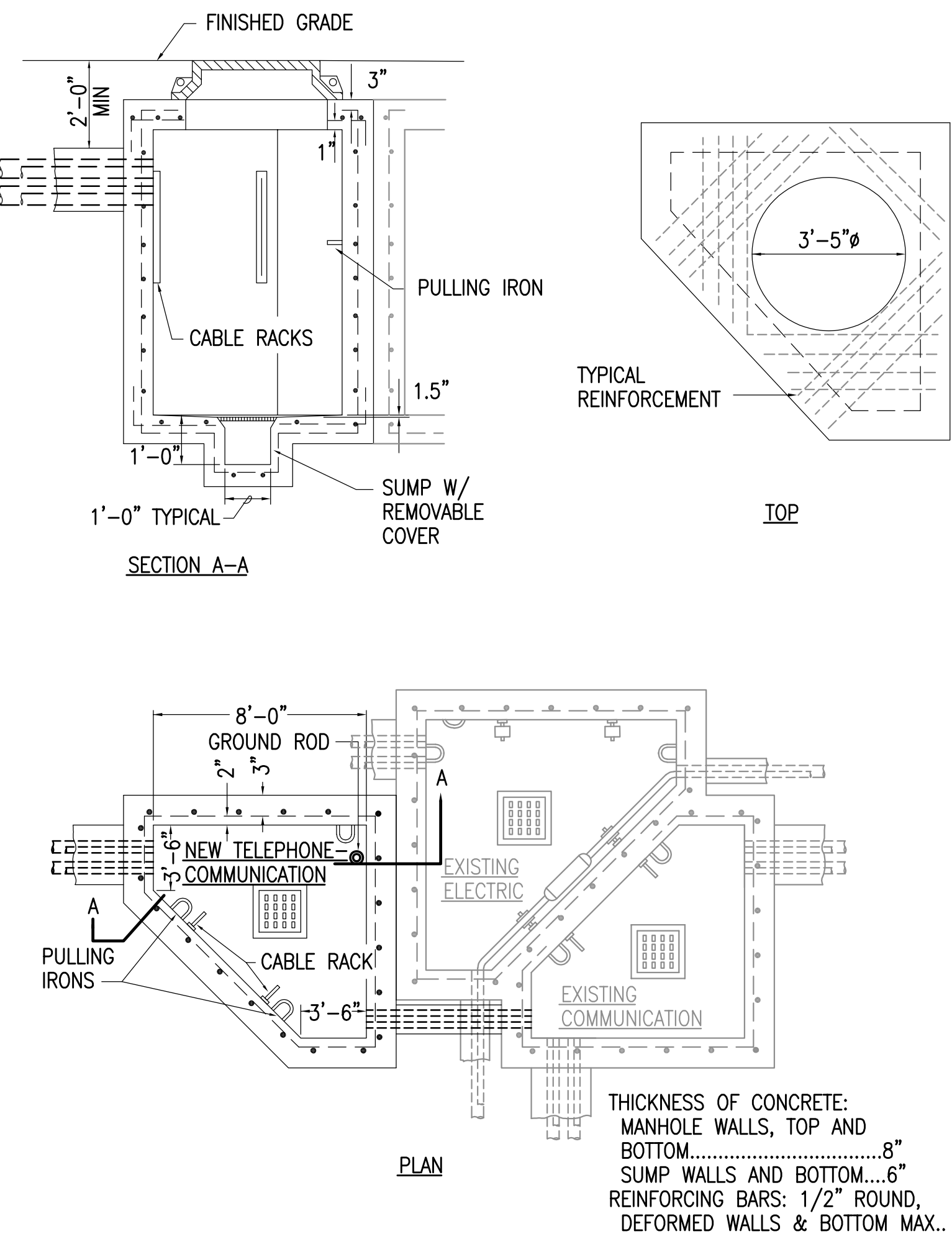
1 MANHOLE TYPE 'A' DETAIL
NTS



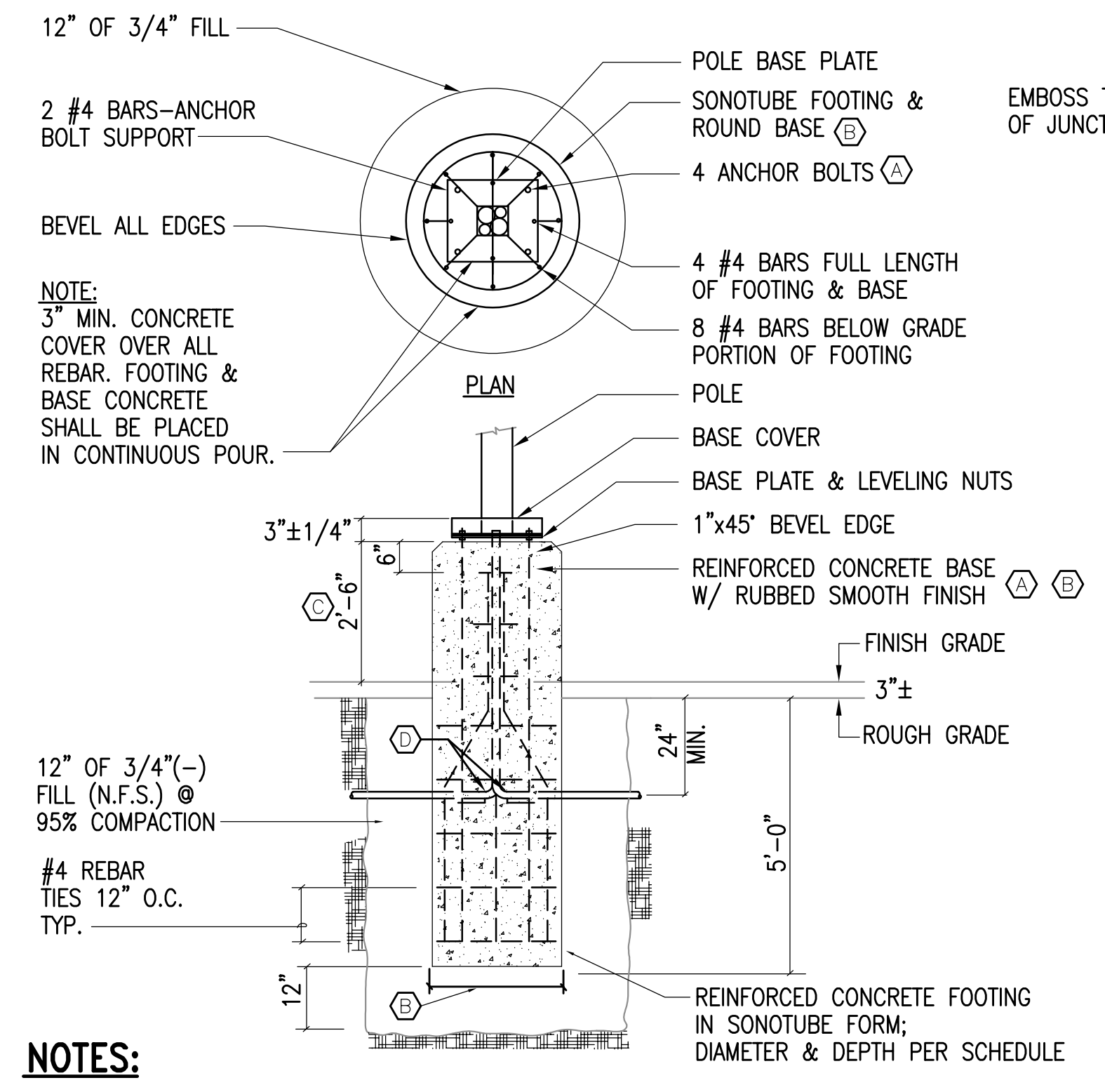
2 MANHOLE TYPE 'B' DETAIL
NTS



3 MANHOLE TYPE 'D' DETAIL
NTS

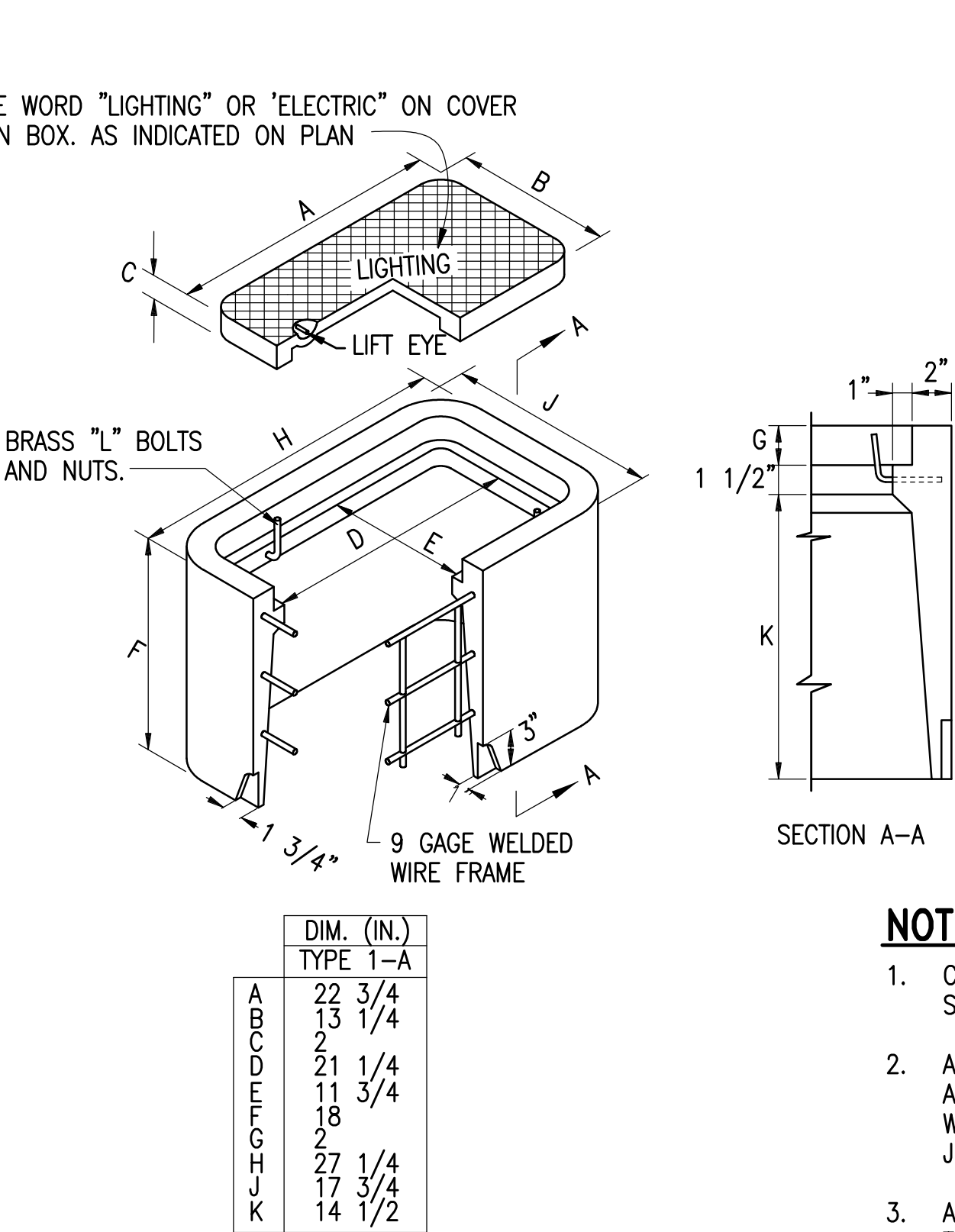


4 MANHOLE TYPE 'D1' DETAIL
NTS



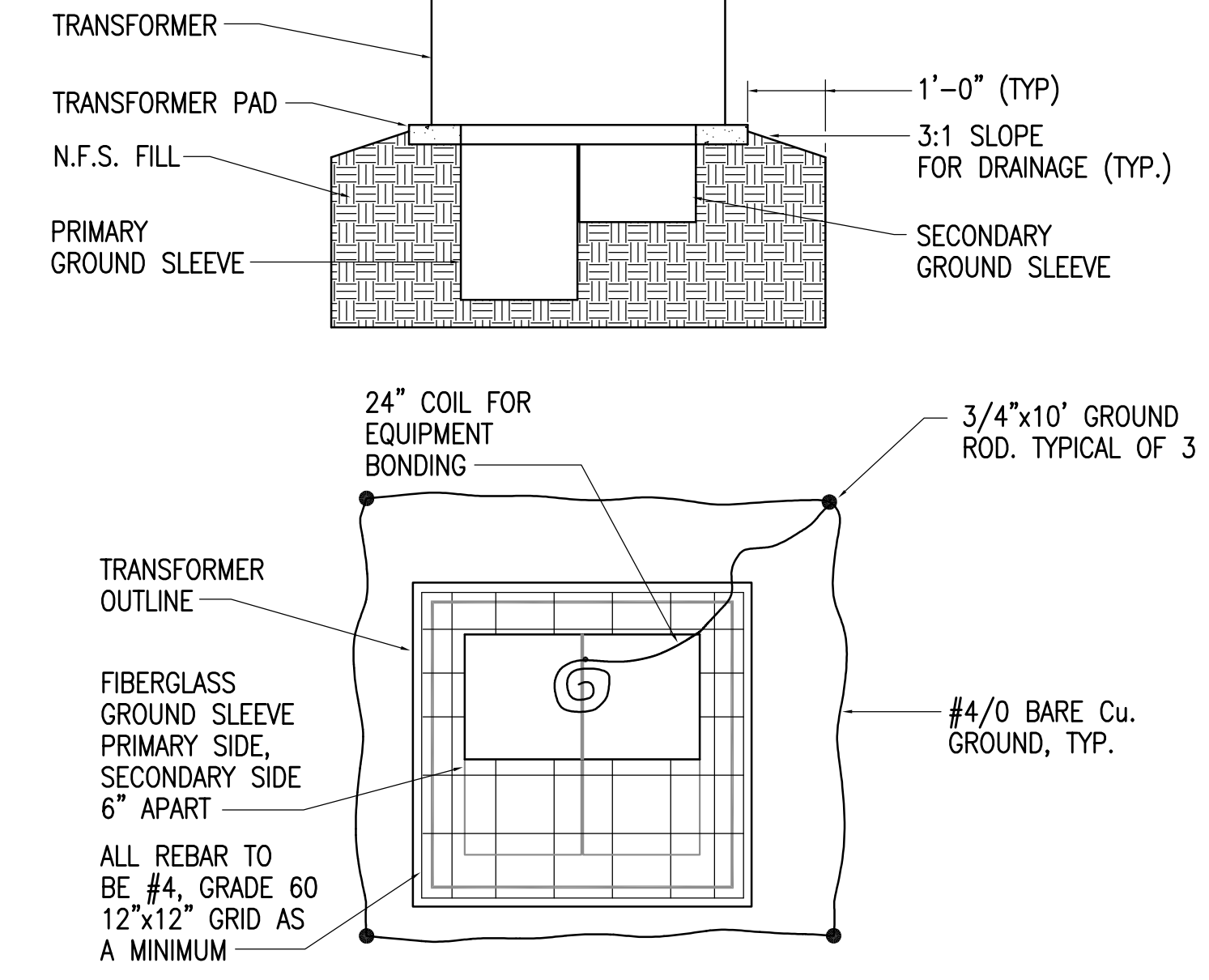
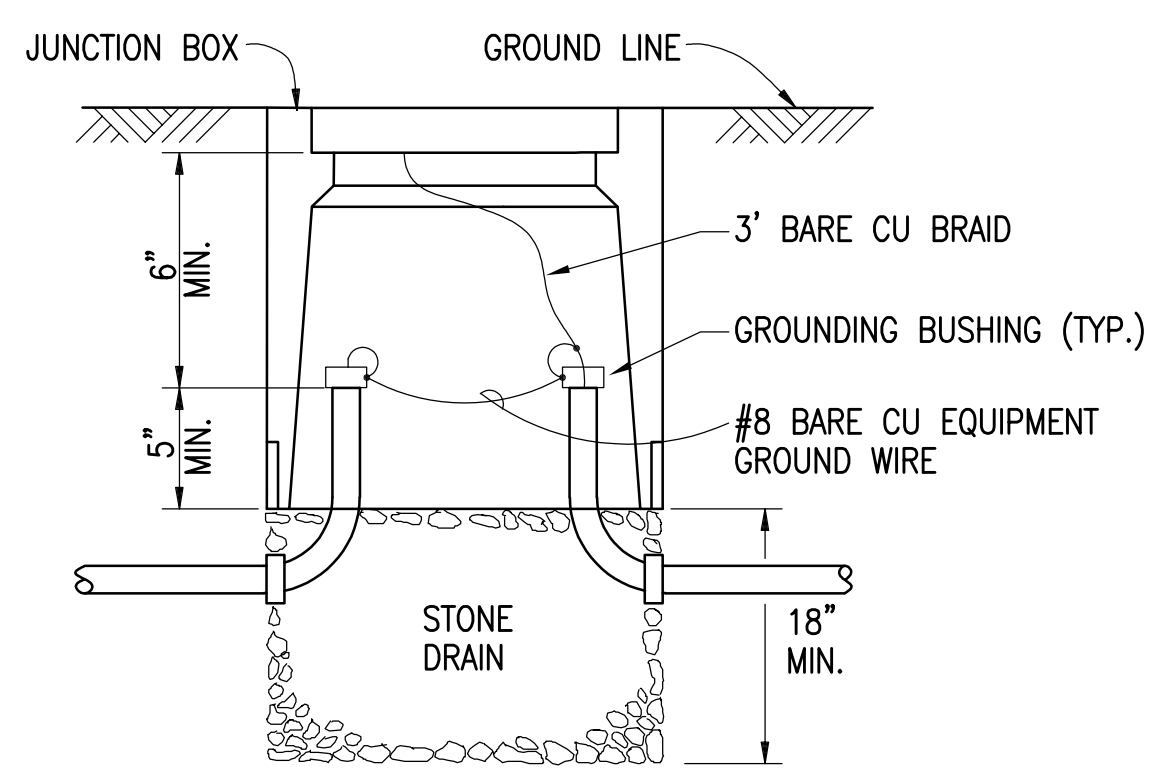
- NOTES:
- VERIFY BOLT SIZE, BOLT CIRCLE, AND FOUNDATION SIZE WITH MANUFACTURERS APPROVED SHOP DRAWINGS.
 - CONCRETE BASE/FOOTING SHALL BE 16" MIN. DIAMETER, AND 2" LARGER THAN BASE PLATE DIAGONAL DIMENSION. USE SONOTUBE FORM AS REQUIRED.
 - PROVIDE ELEVATED BASE AS SHOWN FOR TRAFFIC AREAS WHERE NOTED. FOR NON-TRAFFIC AREAS, SET TOP OF BASE FLUSH WITH FINISH GRADE.
 - PROVIDE EXTRA LENGTH ANCHOR BOLTS TO OBTAIN 18" MINIMUM PENETRATION INTO FOUNDATION BASE.

5 LUMINAIRE POLE BASE FOUNDATION
NTS



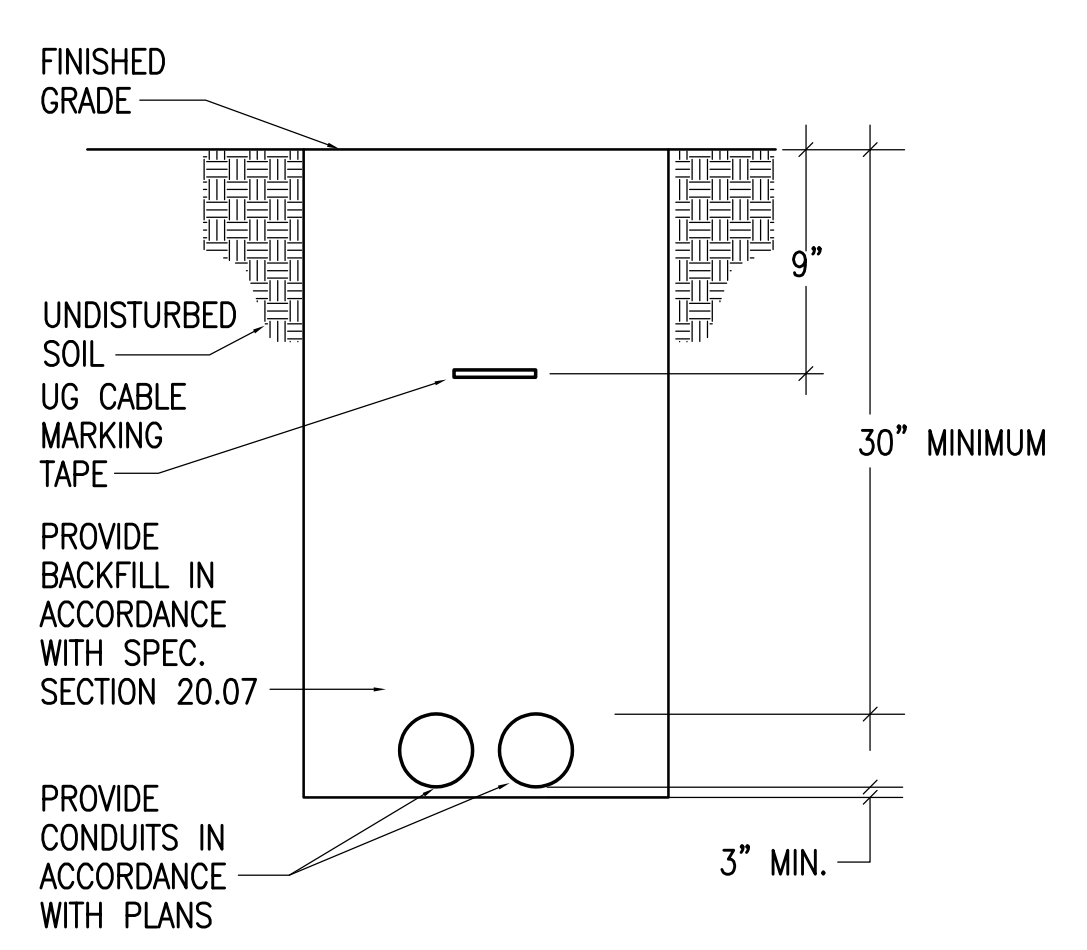
- NOTES:
- COVERS FOR TYPE 1A JUNCTION BOXES SHALL BE EITHER ALUMINUM OR CAST IRON.
 - ALL CONDUITS SHALL BE BONDED TO FORM A CONTINUOUS ELECTRICALLY SECURE SYSTEM WITH THE GROUND AT THE LOAD CENTER JUNCTION BOX.
 - ALL JUNCTION BOX COVERS SHALL BE BONDED TO GROUND WITH COPPER BRAID OF #8 AWG CROSS SECTION. THE LENGTH SHALL BE 3 FEET.
 - THE STONE DRAINS SHALL CONSIST OF COURSE AGGREGATE FOR PORTLAND CEMENT CONCRETE CONFORMING TO AASHTO M43, NUMBER 57 OR 67.

6 TYPE 1-A JUNCTION BOX
NTS



- NOTES:
- PROVIDE MINIMUM 24" COMPACTED GRAVEL PAD BELOW EQUIPMENT PAD.
 - PAD TO BE REINFORCED CONCRETE W/ 6" THICKNESS AS MIN. SIZED AND RATED FOR TRANSFORMER DIMENSIONS AND WEIGHT.
 - ALL EXPOSED EDGES OF PAD TO BE CHAMFERED 1". MINIMUM CONCRETE COVER OVER REBAR 2".
 - PAD TO EXTEND OUT FROM SIDES OF CABINET MIN. 4" ALL SIDES.

7 TRANSFORMER PAD DETAIL
NTS



8 TRENCH DETAIL
NTS

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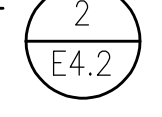
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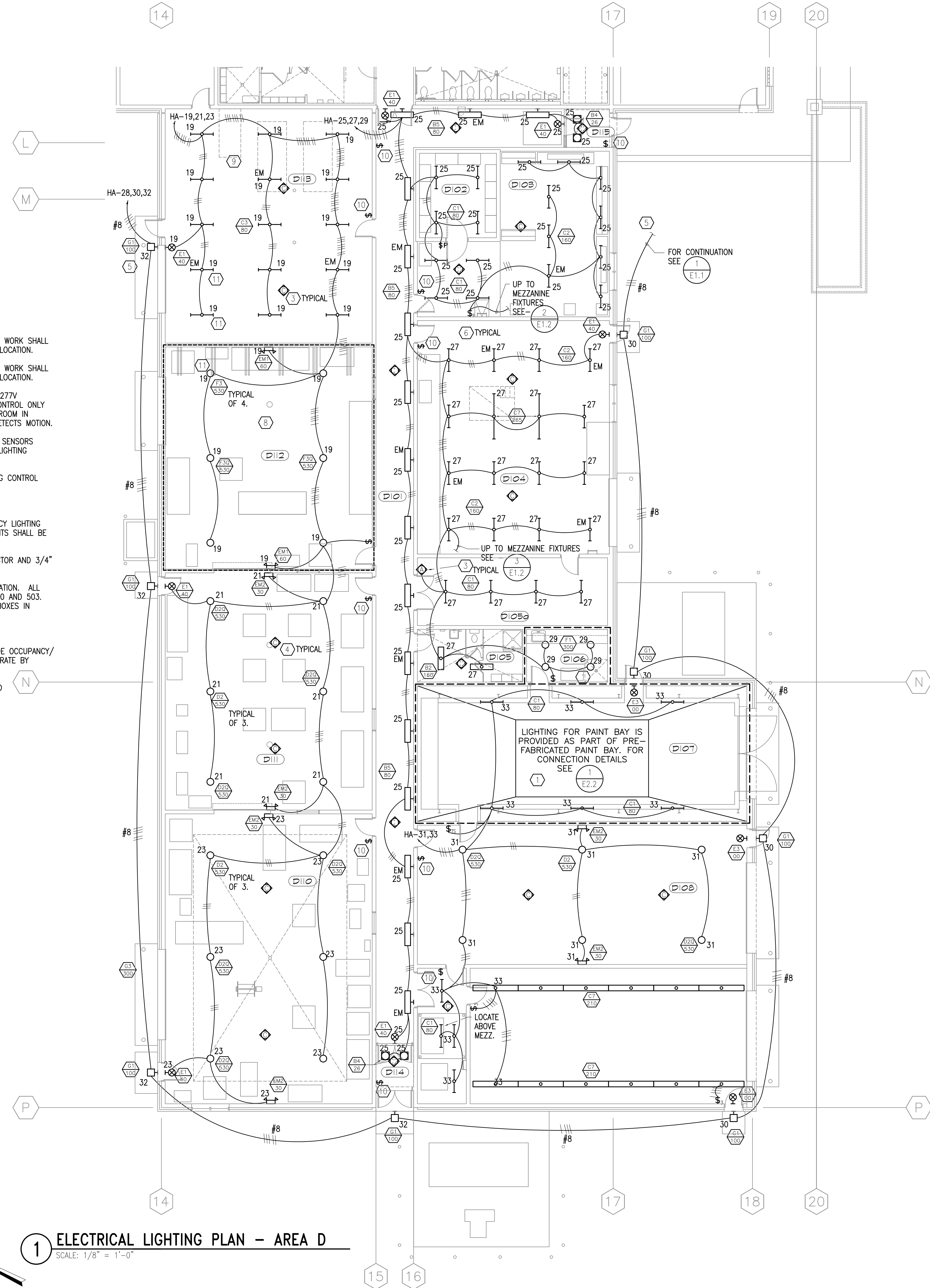
Sheet Contents:
ELECTRICAL SITE PLAN
DETAILS

Sheet No.:

EO.3

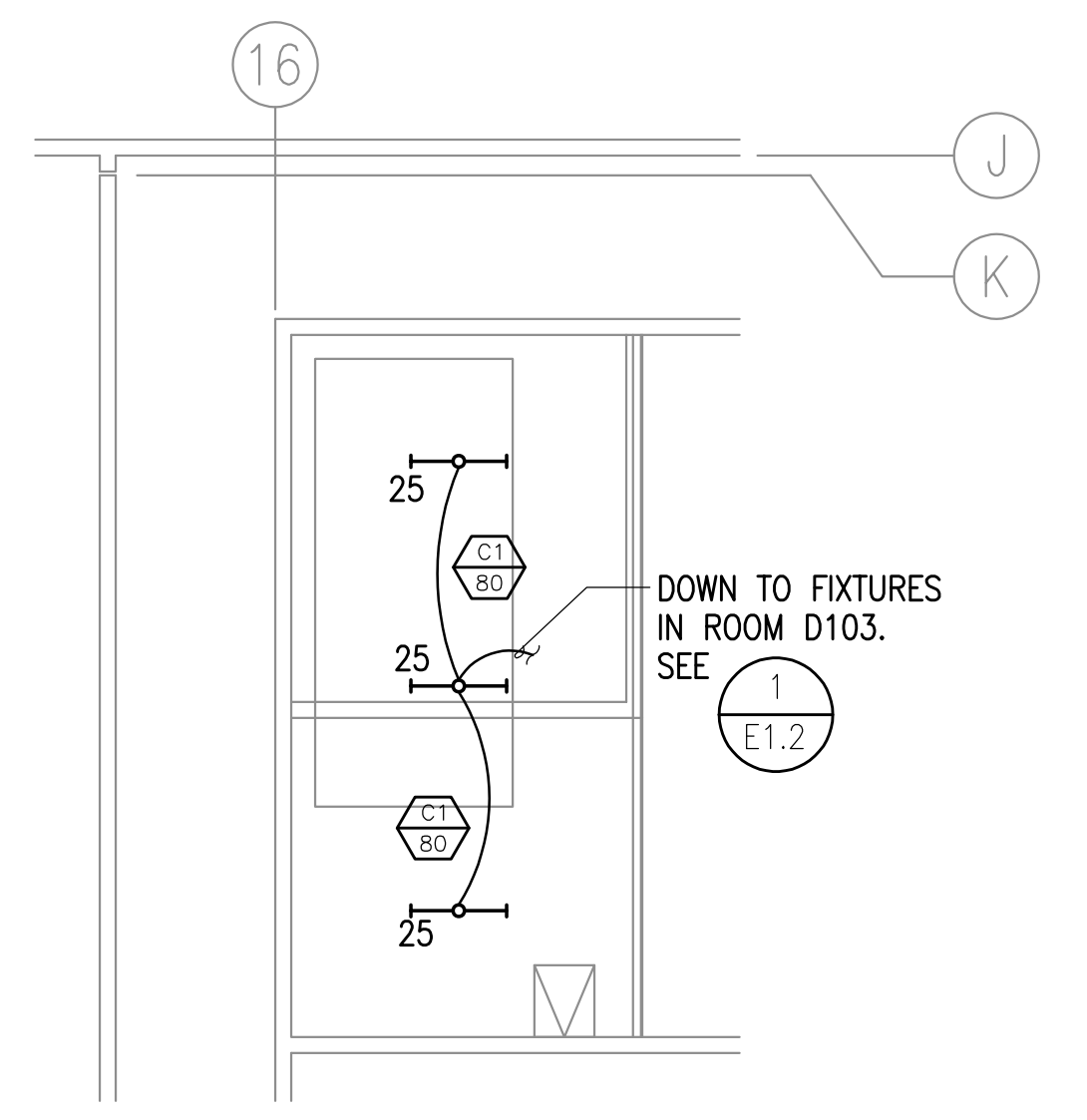
ROOM LIST	
BUILDING AREA 'D'	
D101	CIRCULATION
D102	VAULT
D103	SMALL ARMS/REPAIR
D104	CANVAS/GLASS
D105	LATRINE/LOCKER
D105A	CUSTODIAL STORAGE
D106	PAINT KITCHEN
D107	PAINT BAY
D108	PAINT PREP BAY
D109	STRIPPING BAY
D110	WELDING/BODY/RADIATOR
D111	MACHINE SHOP
D112	CARPENTER'S SHOP
D113	FUEL CELL/MECHANICAL
D114	VESTIBULE
D115	VESTIBULE

- NOTES:**
- CLASS I, DIVISION 1 HAZARDOUS LOCATION. ALL ELECTRICAL WORK SHALL COMPLY WITH THE NEC REQUIREMENTS FOR THIS TYPE OF LOCATION.
 - CLASS I, DIVISION 2 HAZARDOUS LOCATION. ALL ELECTRICAL WORK SHALL COMPLY WITH THE NEC REQUIREMENTS FOR THIS TYPE OF LOCATION.
 - FOR TYPE 'A' OCCUPANCY SENSORS PROVIDE UNSWITCHED 277V POWER UNLESS OTHERWISE NOTED. THESE DEVICES WILL CONTROL ONLY LOCAL LIGHT FIXTURES. CONNECT MULTIPLE UNITS IN ONE ROOM IN PARALLEL SO THAT LIGHTS COME ON WHEN EITHER UNIT DETECTS MOTION.
 - CONNECT LOW VOLTAGE TYPE 'C', 'C1' & 'C2' OCCUPANCY SENSORS TO CONTROL COMMON AREA AND SHOP LIGHTING ON EMS LIGHTING CONTROL ZONE SCHEDULE ON SHEET E4.1.
 - FOR EXTERIOR WALL PACK CONTROL SEE EXTERIOR LIGHTING CONTROL DETAIL  E4.2
 - CONNECT EMERGENCY AND NORMAL BALLASTS OF EMERGENCY LIGHTING FIXTURES TO UNSWITCHED POWER OF LOCAL CIRCUITS. LIGHTS SHALL BE NIGHT LIGHTS AS WELL AS EMERGENCY FIXTURES.
 - TYPICAL FOR ALL LIGHTING CIRCUITS, RUN #10 CU CONDUCTOR AND 3/4" CONDUIT UNLESS OTHERWISE NOTED.
 - AREA INDICATED IS A CLASS 3 DIVISION 1 HAZARDOUS LOCATION. ALL WORK IN THIS AREA SHALL COMPLY WITH NEC ARTICLES 500 AND 503. PROVIDE DUST TIGHT ENCLOSURES FOR ALL DEVICES AND BOXES IN THIS AREA.
 - MOUNT FIXTURES AT +13'-6" AFF IN ROOM D113.
 - CONNECT SWITCH TO LIGHTING CONTROL PANEL TO OVERRIDE OCCUPANCY/TIME CLOCK CONTROL IN OFF POSITION. LIGHT SHALL OPERATE BY OCCUPANCY/TIME CONTROL WHEN IN ON POSITION.
 - FIELD VERIFY LIGHTING FIXTURES LOCATION WITH OVER HEAD DOOR.

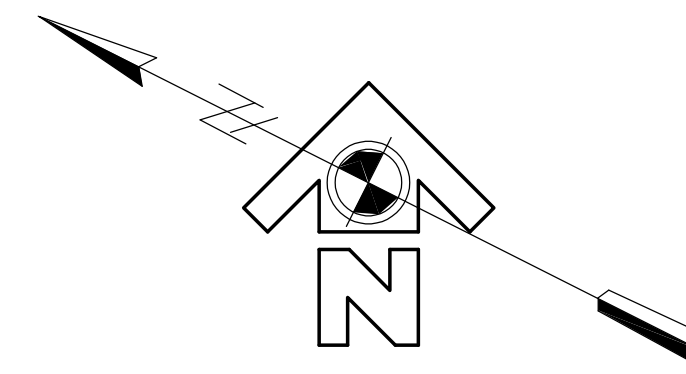
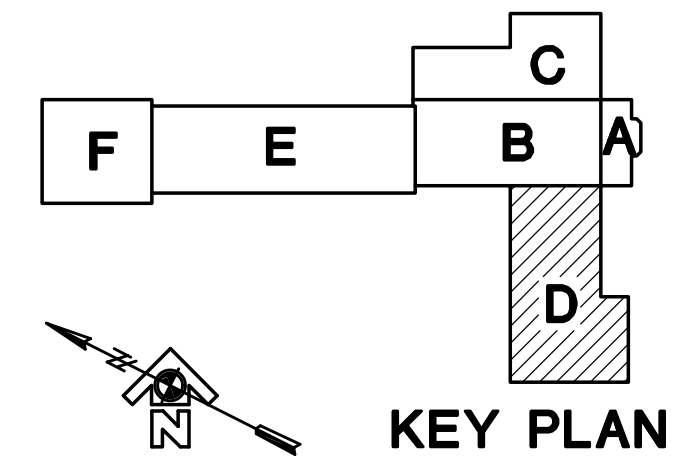
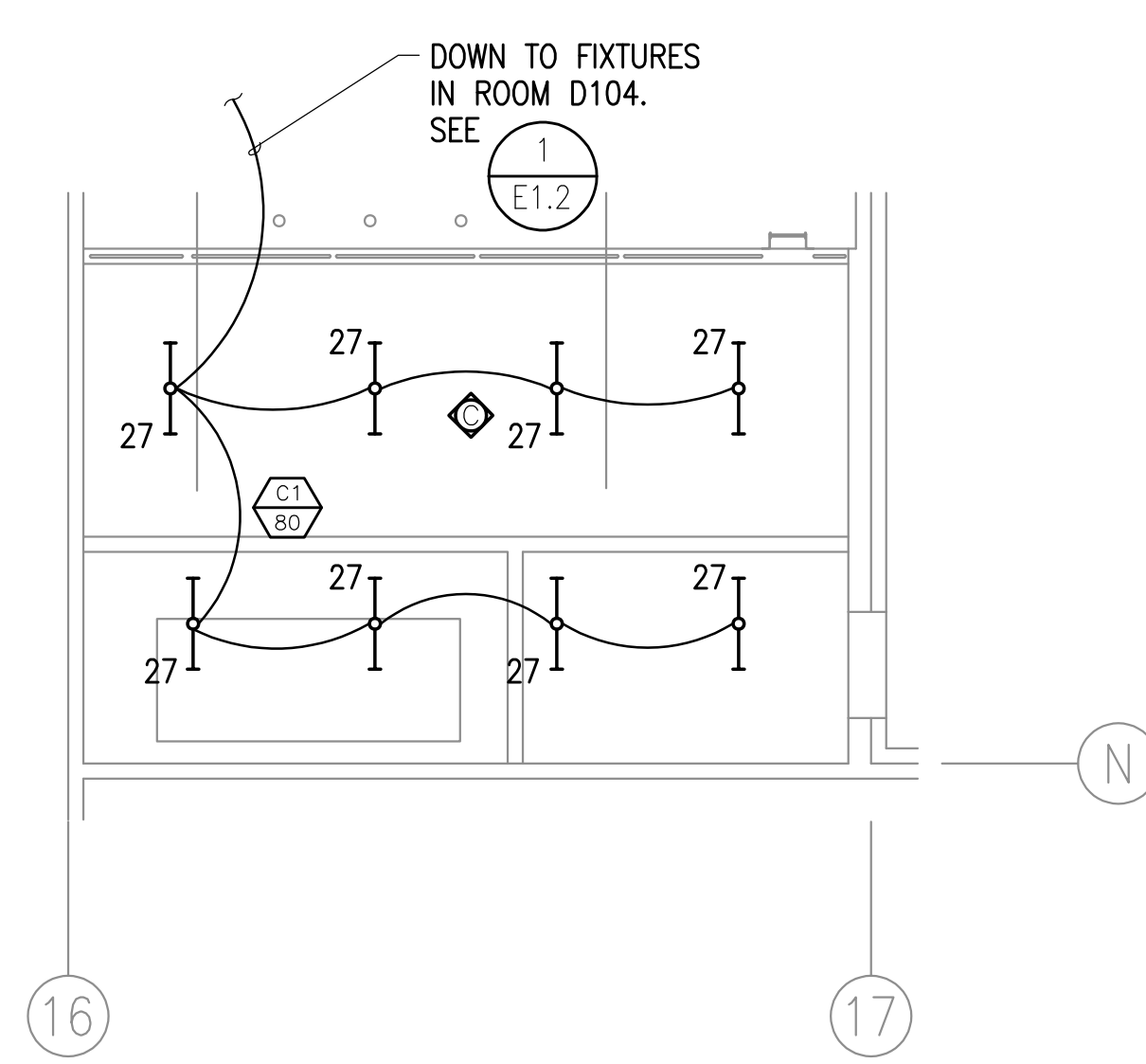


1 ELECTRICAL LIGHTING PLAN - AREA D
SCALE: 1/8" = 1'-0"

2 LIGHTING PLAN - MEZZANINE ABOVE D102, D103
SCALE: 1/8" = 1'-0"



3 LIGHTING PLAN - MEZZANINE ABOVE D105, D106
SCALE: 1/8" = 1'-0"



FILE: 8120-E12 PLOT SCALE: 1:1



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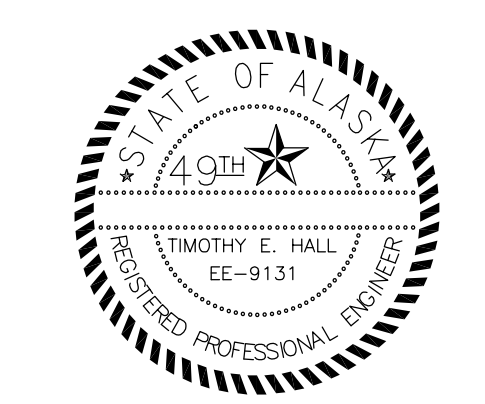
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Sheet Contents:
ELECTRICAL LIGHTING PLAN, AREA D

Sheet No.:
E1.2
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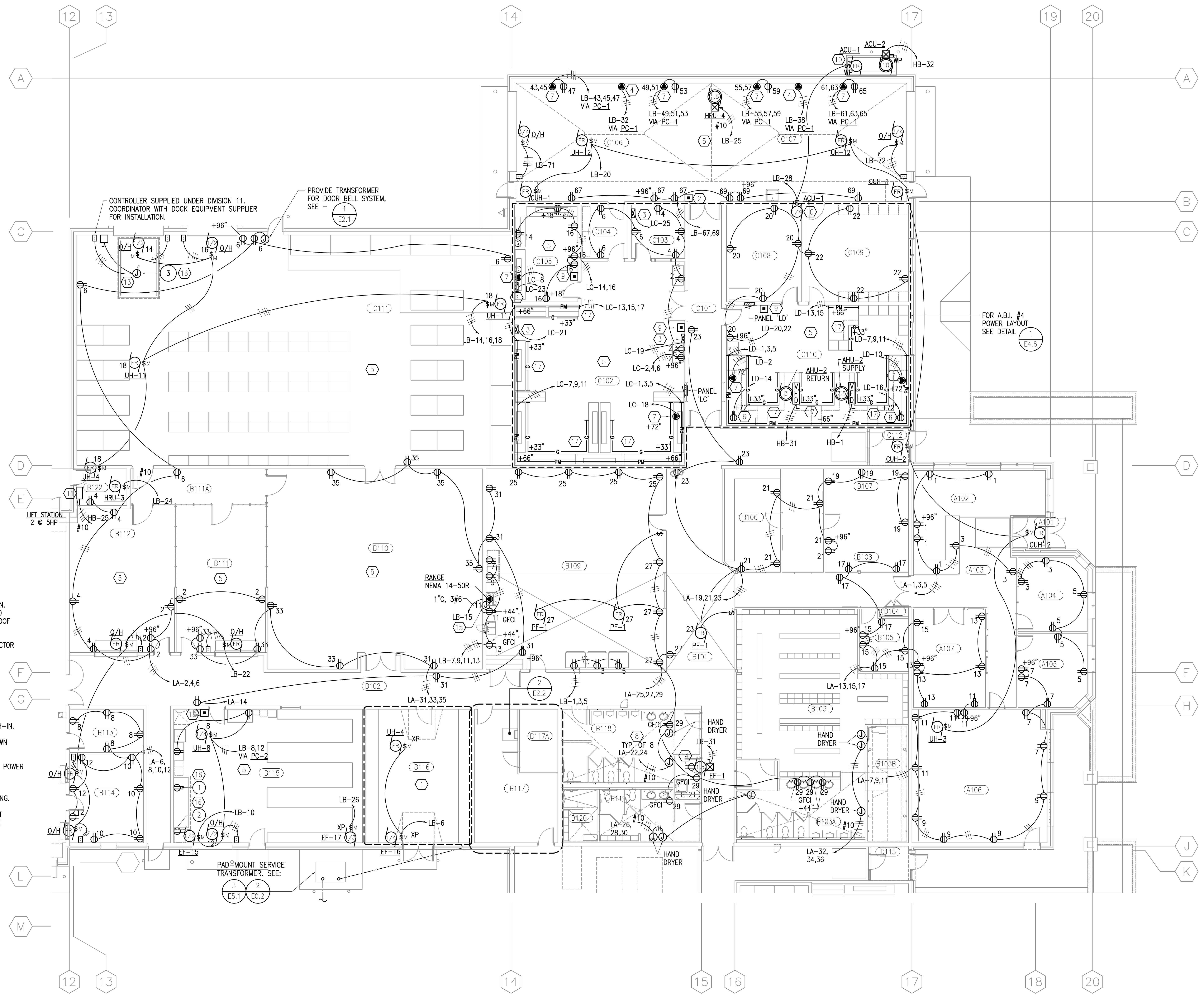
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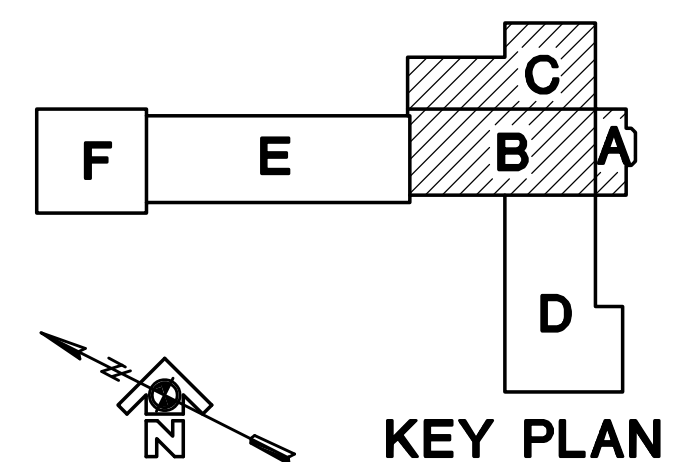
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ROOM LIST	
BUILDING AREA 'A'	
A101	VESTIBULE
A102	CLERICAL/TYPIST
A103	CIRCULATION
A104	CSMS GEN. FOREMAN
A105	MATES SUPERVISOR
A106	CUSTODIAL
A107	CLERICAL/TYPIST
BUILDING AREA 'B'	
B101	CENTRAL HALL
B102	CIRCULATION
B102A	
B103	MEN'S LOCKERS
B103A	MEN'S LATRINE
B103B	MEN'S SHOWER
B104	CUSTODIAL STORAGE
B105	INSP. SUPER. OFFICE
B106	INSP./LIBRARY
B107	OFFICE
B108	OFFICE
B109	BREAKROOM
B110	CSMS SUPPLY STORAGE
B111	CSMS TOOLS
B111A	CIRCULATION
B112	MATES SUPPLY/TOOLS
B113	MATES FOREMAN
B114	SUPERVISOR'S OFFICE
B115	BATTERY ROOM
B116	FLAMMABLE STORAGE
B117	ELECTRICAL/TELEPHONE
B117A	JANITOR
B118	MEN'S LATRINE
B119	WOMEN'S LATRINE
B120	WOMEN'S LOCKERS
B121	JANITOR
B122	LIFT STATION
B123	COAT CLOSET
BUILDING AREA 'C'	
C101	CIRCULATION
C102	CSMS/MATES COMM./ELEC.
C103	SUPERVISOR
C104	STORAGE
C105	COMSEC REPAIR
C106	ELECTRONICS BAY
C107	ELECTRONICS BAY
C108	CALIBRATION
C109	CALIBRATION STORAGE
C110	CALIB./POP VALVE/COMM. ELEC.
C111	WAREHOUSE
C112	VESTIBULE



- BASE BID- PROVIDE WIEREMOLD G3000 OR APPROVED EQUAL SURFACE RACEWAY ALONG TOP OF BUILT-UP WORKSTATIONS. PROVIDE DUPLEX OUTLETS ON 2" CENTERS. PROVIDE 1"x3/8" GROUND STRAP ALONG FRONT LENGTH OF WORKSTATION.
- PROVIDE CONNECTION FOR ELECTRIC HAND DRYERS. FIELD COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL. COORDINATE POWER REQUIREMENTS WITH SUPPLIER PRIOR TO ROUGH-IN.

1 ELECTRICAL POWER PLAN - AREA A, B, C
SCALE: 1/8" = 1'-0"



FILE: 8/20-E21

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Sheet Contents:
ELECTRICAL POWER PLAN AREA A,B,C

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DOCUMENTS UPDATED TO CONFORM WITH CHANGES INSTITUTED DURING NEGOTIATIONS.

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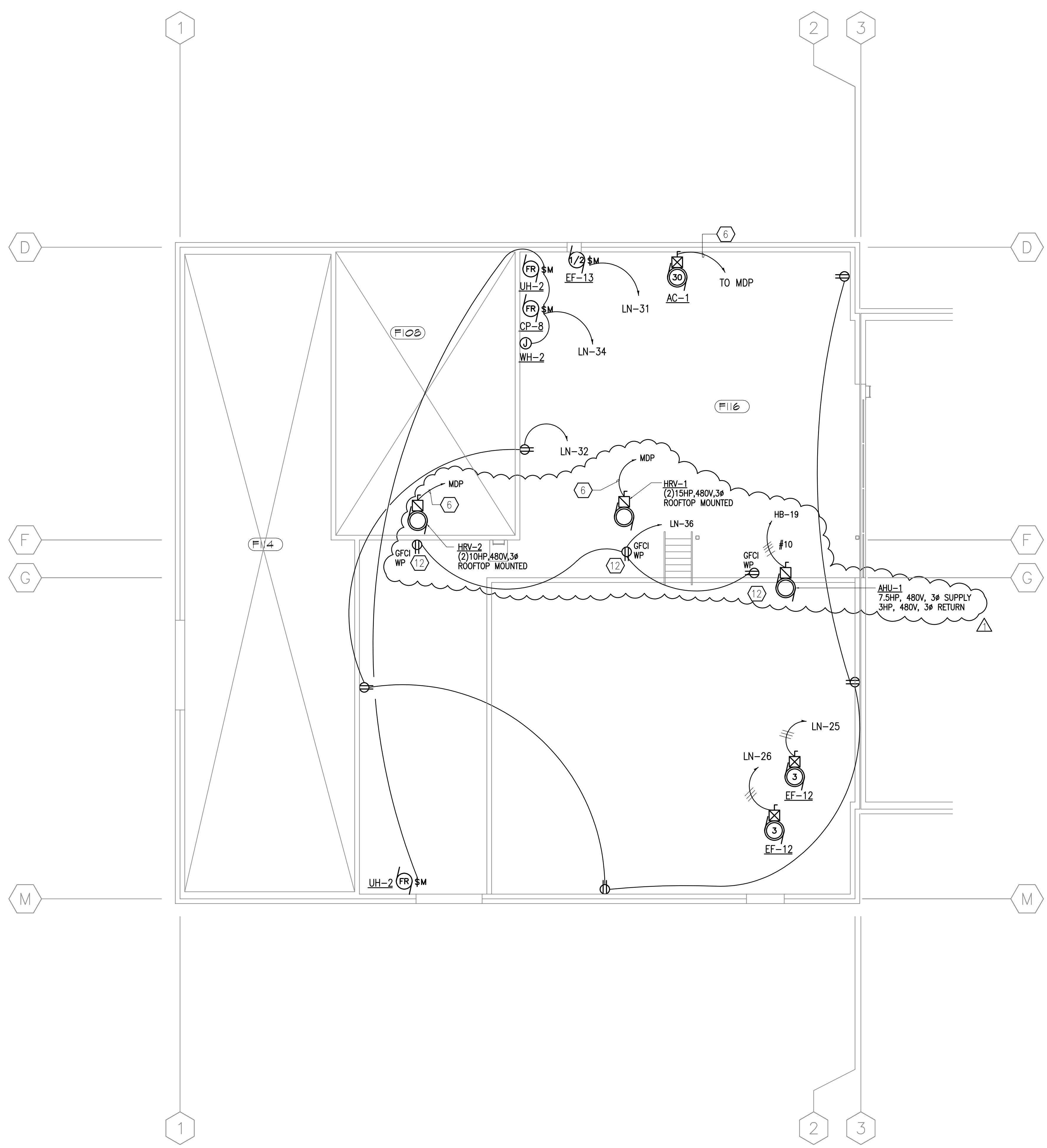
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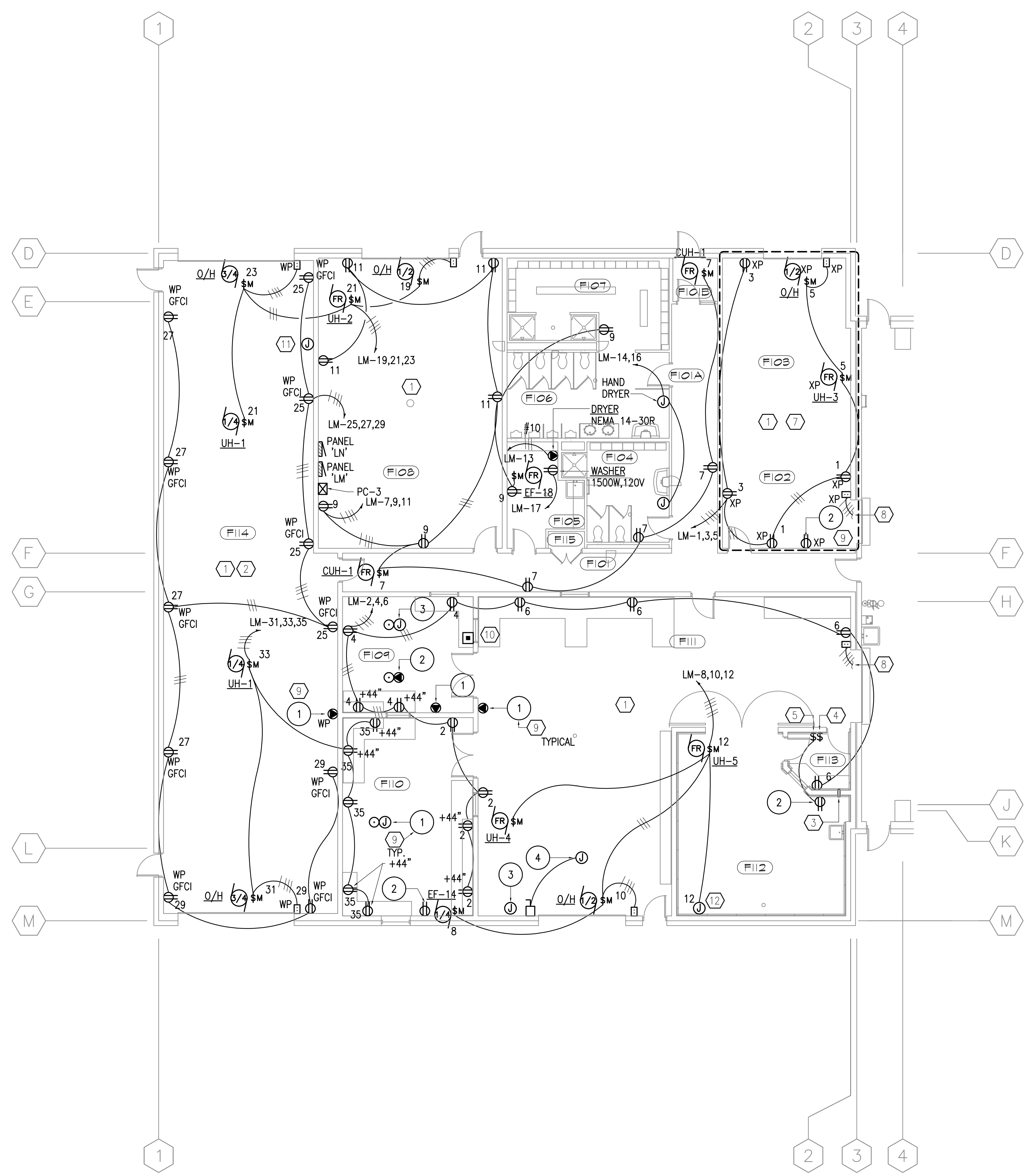
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Sheet Contents:
 ELECTRICAL POWER PLAN AREA F

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E2.4
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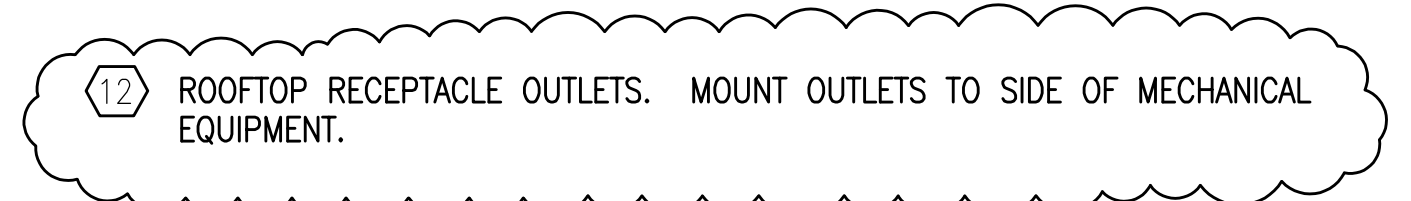
1 ELECTRICAL POWER PLAN - AREA F MEZZANINE
 SCALE: 1/8" = 1'-0"



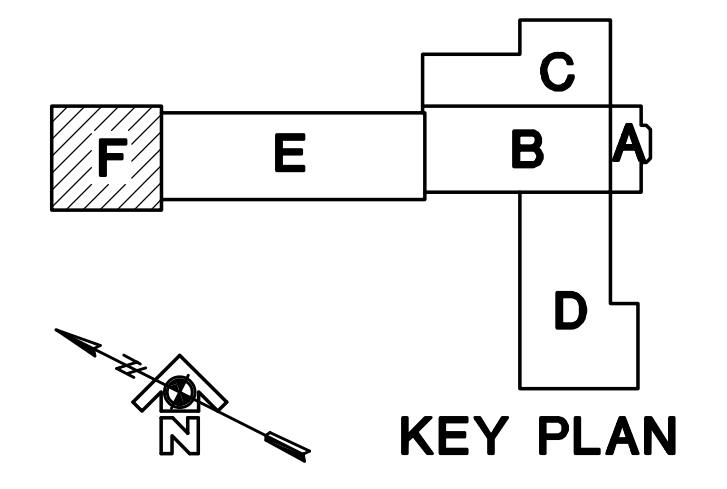
2 ELECTRICAL POWER PLAN - AREA F
 SCALE: 1/8" = 1'-0"

NOTES:

- ① MOUNT OUTLETS 48" A.F.F. IN ROOMS SHOWN UNLESS OTHERWISE NOTED.
 - ② PROVIDE HOSE WATER RATED COVERS FOR RECEPTACLES.
 - ③ PROVIDE 2" CONDUIT SLEEVE FOR DYNO CONTROL UNIT UMBILICAL CORD.
 - ④ PROVIDE SWITCH TO CONTROL EXHAUST AND VENTILATION UNITS FOR DYNO ROOM. COORDINATE WITH MECHANICAL.
 - ⑤ PROVIDE SWITCH FOR EQUIPMENT ASSOCIATED WITH DYNO CONTROL UNIT.
 - ⑥ FOR FEEDER TYPE AND SIZE, SEE DETAIL:
 - ⑦ AREA INDICATED IS A CLASS 1, DIVISION 2, HAZARDOUS LOCATION. ALL WORK IN THIS AREA SHALL COMPLY WITH ARTICLES 500 AND 501 OF THE NATIONAL ELECTRIC CODE. PROVIDE EXPLOSION-PROOF DEVICES AND CONDUIT SEALS AS REQUIRED.
 - ⑧ FOR CONTINUATION, SEE DETAIL:
 - ⑨ REFERENCE EQUIPMENT SCHEDULE ON E0.1a FOR HOMERUN DESIGNATION AND SIZE FOR EQUIPMENT CIRCUITS.
 - ⑩ PROVIDE CONNECTION TO MOTORIZED DAMPER AND OPERATOR.
 - ⑪ PROVIDE CONNECTION TO OIL WATER SEPARATOR HIGH LEVEL SENSOR.
- PROVIDE EMERGENCY PUSH BUTTON TO DISCONNECT POWER TO EQUIPMENT ROOM F109. PROVIDE CONTACTOR SIMILAR TO DETAIL:



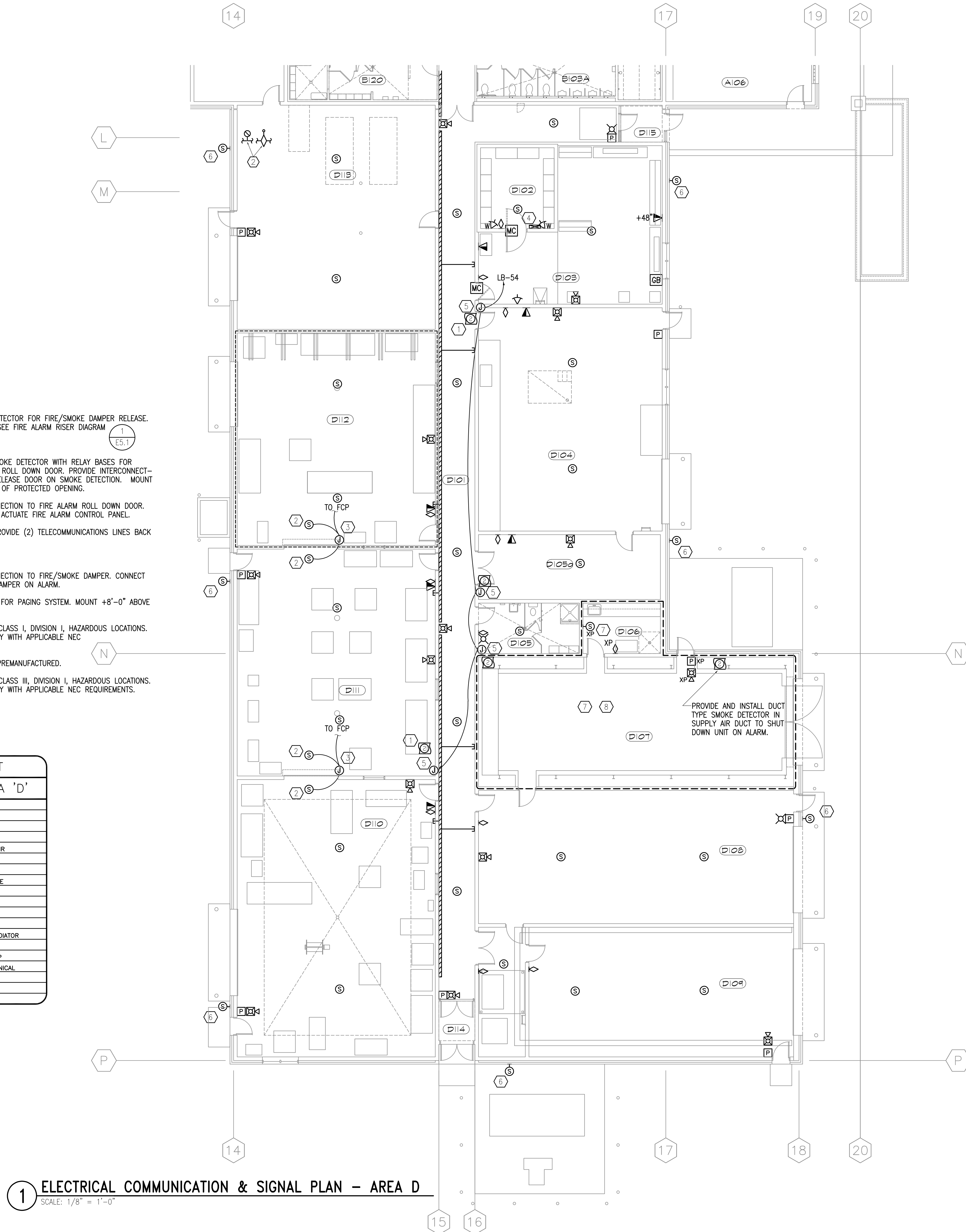
ROOM LIST	
BUILDING AREA 'F'	
F101	CIRCULATION
F102	POL
F103	MECHANICAL
F104	WOMEN'S LATRINE
F105	JANITOR
F106	MEN'S LATRINE
F107	LOCKERS
F108	CSMS WARMUP
F109	INJECTOR TEST
F110	FUEL IGNITION
F111	TRANSMISSION/POWER
F112	DYNO
F113	BOOTH
F114	WASH BAY
F115	ELECTRICAL CLOSET
F116	MEZZANINE



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FILE: 8/20-E24 PLOT SCALE: 1:1

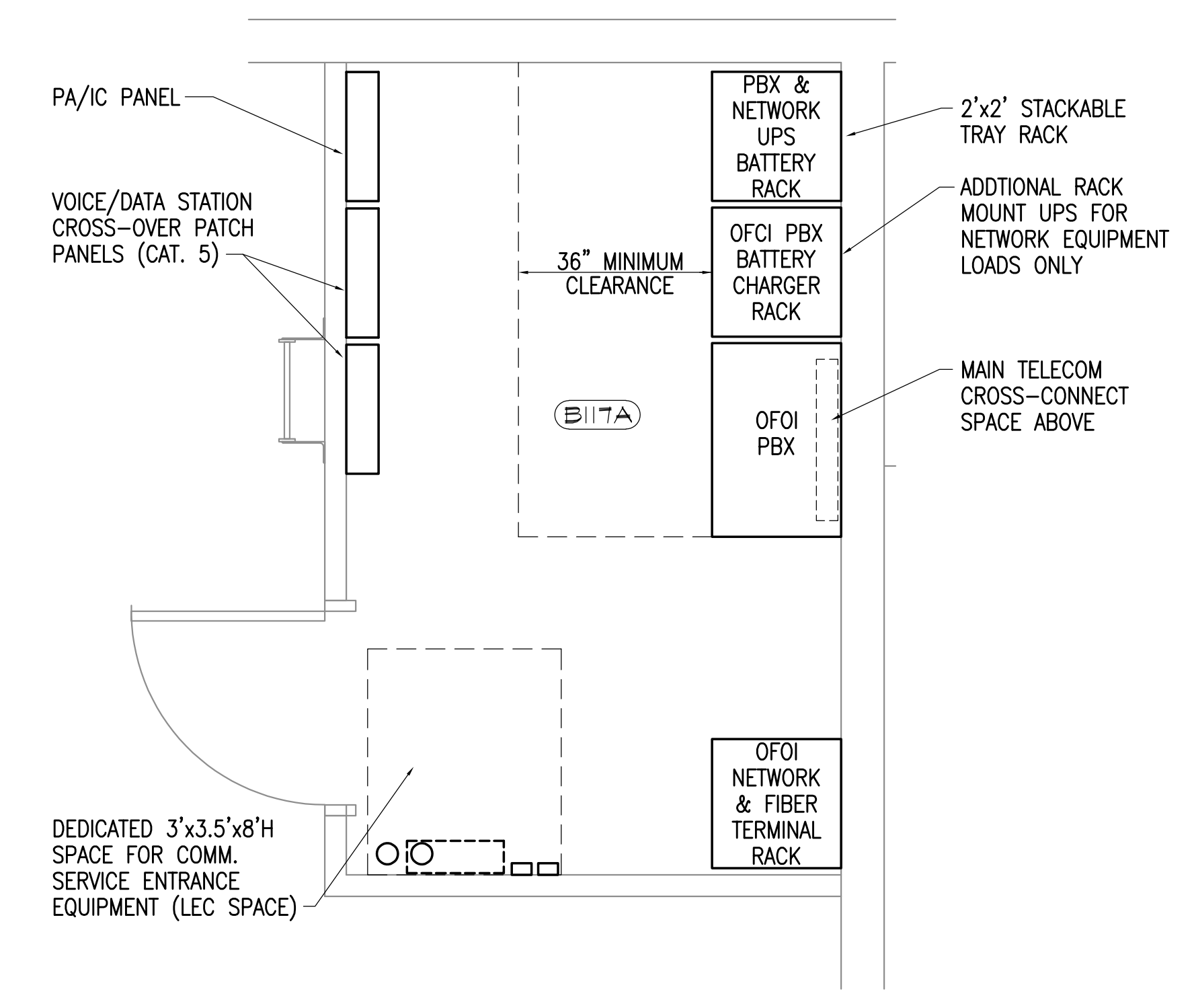
FILE: B20-E32 PLOT SCALE: 1:1



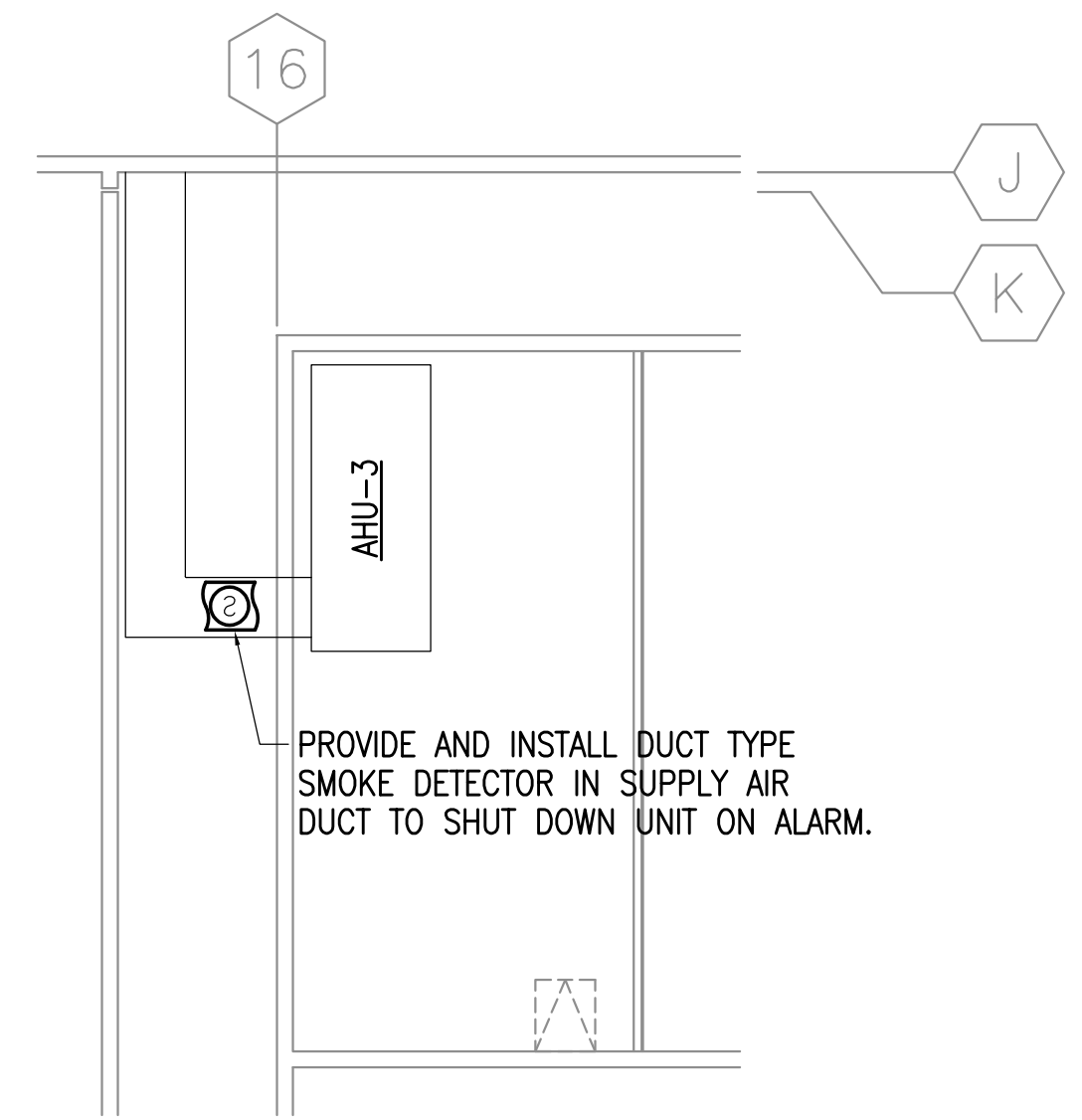
- NOTES:**
- 1 PROVIDE DUCT SMOKE DETECTOR FOR FIRE/SMOKE DAMPER RELEASE. PER NFPA 72 CRITERIA. SEE FIRE ALARM RISER DIAGRAM (E5.1)
 - 2 PROVIDE AND INSTALL SMOKE DETECTOR WITH RELAY BASES FOR CONTROL OF FIRE ALARM ROLL DOWN DOOR. PROVIDE INTERCONNECTIONS AS REQUIRED TO RELEASE DOOR ON SMOKE DETECTION. MOUNT DETECTORS WITHIN 3'-0" OF PROTECTED OPENING.
 - 3 JUNCTION BOX FOR CONNECTION TO FIRE ALARM ROLL DOWN DOOR. PROVIDE CONNECTION TO ACTUATE FIRE ALARM CONTROL PANEL.
 - 4 OFCI SECURITY PANEL. PROVIDE (2) TELECOMMUNICATIONS LINES BACK TO 117A, SEE (E5.2)
 - 5 JUNCTION BOX FOR CONNECTION TO FIRE/SMOKE DAMPER. CONNECT TO CLOSE FIRE/SMOKE DAMPER ON ALARM.
 - 6 WEATHERPROOF SPEAKER FOR PAGING SYSTEM. MOUNT +8"-0" ABOVE GRADE.
 - 7 ROOM(S) INDICATED ARE CLASS I, DIVISION I, HAZARDOUS LOCATIONS. ALL WIRING SHALL COMPLY WITH APPLICABLE NEC REQUIREMENTS.
 - 8 NEW PAINT BOOTH 1.5A PREMANUFACTURED.
 - 9 ROOM(S) INDICATED ARE CLASS III, DIVISION I, HAZARDOUS LOCATIONS. ALL WIRING SHALL COMPLY WITH APPLICABLE NEC REQUIREMENTS.

ROOM LIST	
BUILDING AREA 'D'	
D101	CIRCULATION
D102	VAULT
D103	SMALL ARMS/REPAIR
D104	CANVAS/GLASS
D105	LATRINE/LOCKER
D105A	CUSTODIAL STORAGE
D106	PAINT KITCHEN
D107	PAINT BAY
D108	PAINT PREP BAY
D109	STRIPPING BAY
D110	WELDING/BODY/RADIATOR
D111	MACHINE SHOP
D112	CARPENTER'S SHOP
D113	FUEL CELL/MECHANICAL
D114	VESTIBULE
D115	VESTIBULE

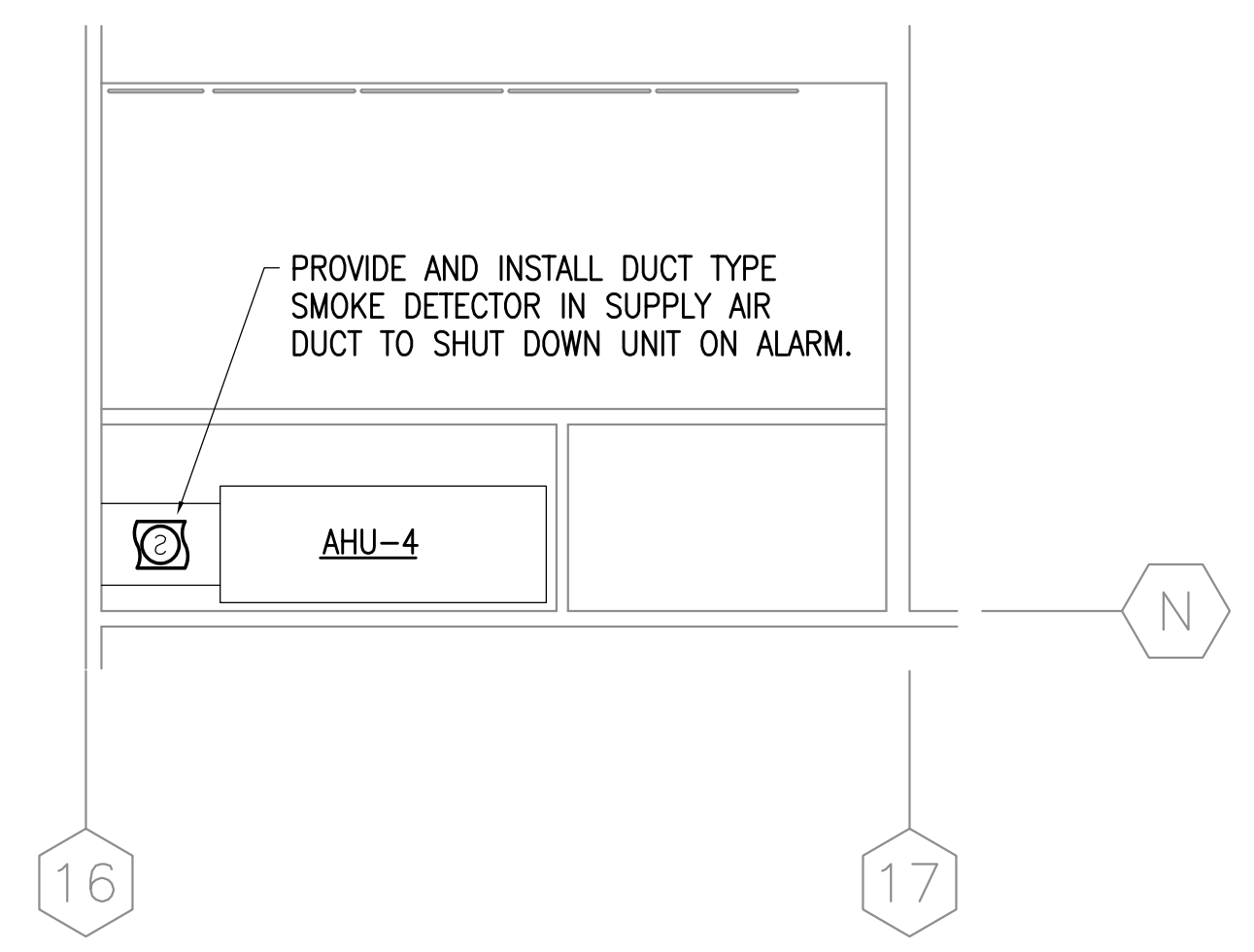
1 ELECTRICAL COMMUNICATION & SIGNAL PLAN - AREA D
SCALE: 1/8" = 1'-0"



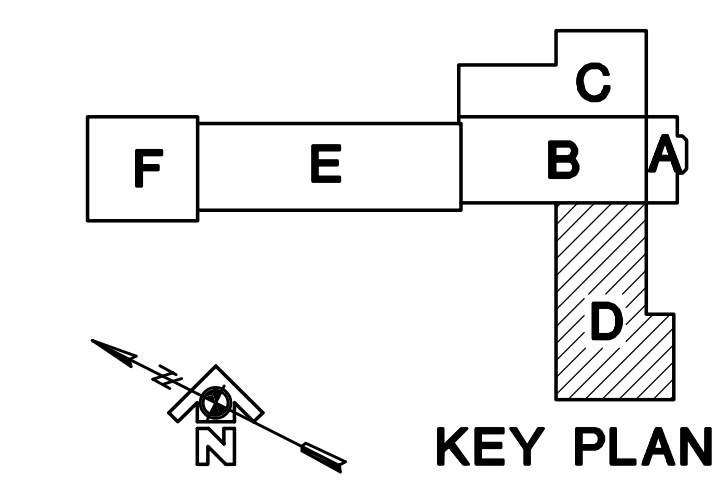
2 ENLARGED COMMUNICATION ROOM SIGNAL PLAN
SCALE: 1/2" = 1'-0"



3 MEZZANINE ABOVE D102 SIGNAL PLAN
SCALE: 1/8" = 1'-0"



4 MEZZANINE ABOVE D105, D106 SIGNAL PLAN
SCALE: 1/8" = 1'-0"



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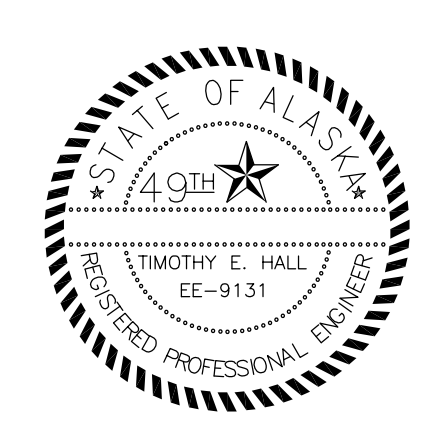
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Sheet Contents:
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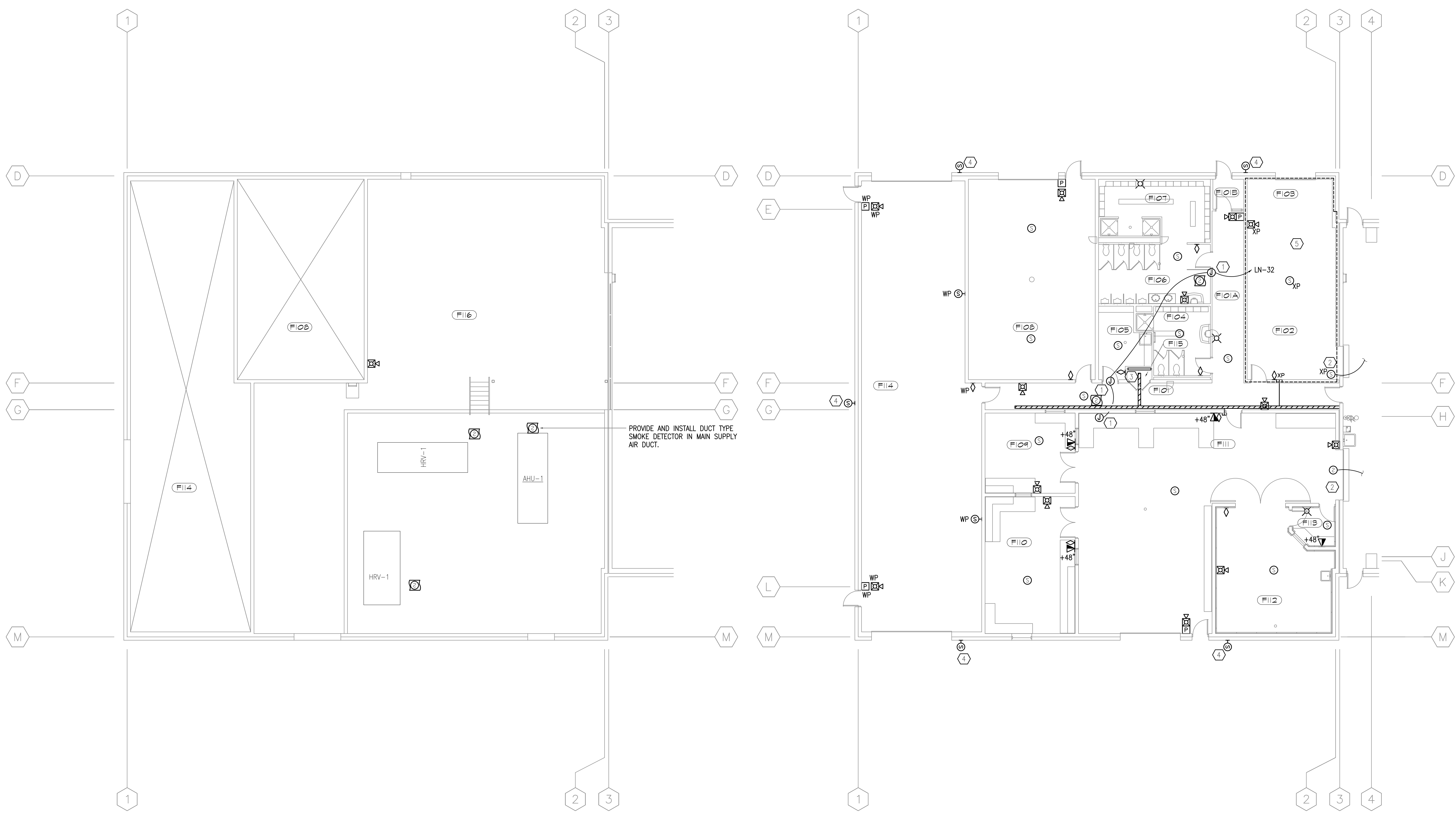
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Sheet Contents:
 ELECTRICAL COMMUNICATION & SIGNAL PLAN AREA F

Sheet No.:
E3.4
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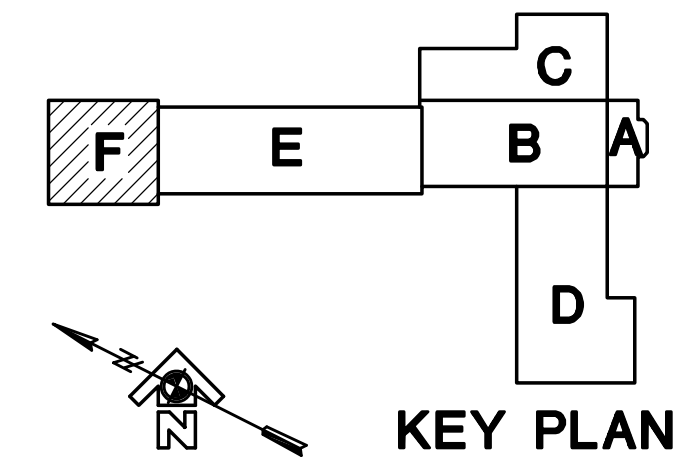


1 ELECTRICAL COMMUNICATION & SIGNAL PLAN – AREA F MEZZANINE
 SCALE: 1/8" = 1'-0"

ROOM LIST	
BUILDING AREA 'F'	
F101	CIRCULATION
F102	POL
F103	MECHANICAL
F104	WOMEN'S LATRINE
F105	JANITOR
F106	MEN'S LATRINE
F107	LOCKERS
F108	CSMS WARMUP
F109	INJECTOR TEST
F110	FUEL IGNITION
F111	TRANSMISSION/POWER
F112	DYNO
F113	BOOTH
F114	WASH BAY
F115	ELECTRICAL CLOSET
F116	MEZZANINE

2 ELECTRICAL COMMUNICATION & SIGNAL PLAN – AREA F
 SCALE: 1/8" = 1'-0"

- NOTES:**
- ① JUNCTION BOX FOR CONNECTION TO FIRE/SMOKE DAMPER. CONNECT TO CLOSE FIRE/SMOKE DAMPER ON ALARM.
 - ② FOR SMOKE DETECTOR CONNECTION FOR ROLL-UP DOOR SEE ① E3.3
 - ③ FOR TELEPHONE CLOSET EQUIPMENT LAYOUT SEE ② E5.1



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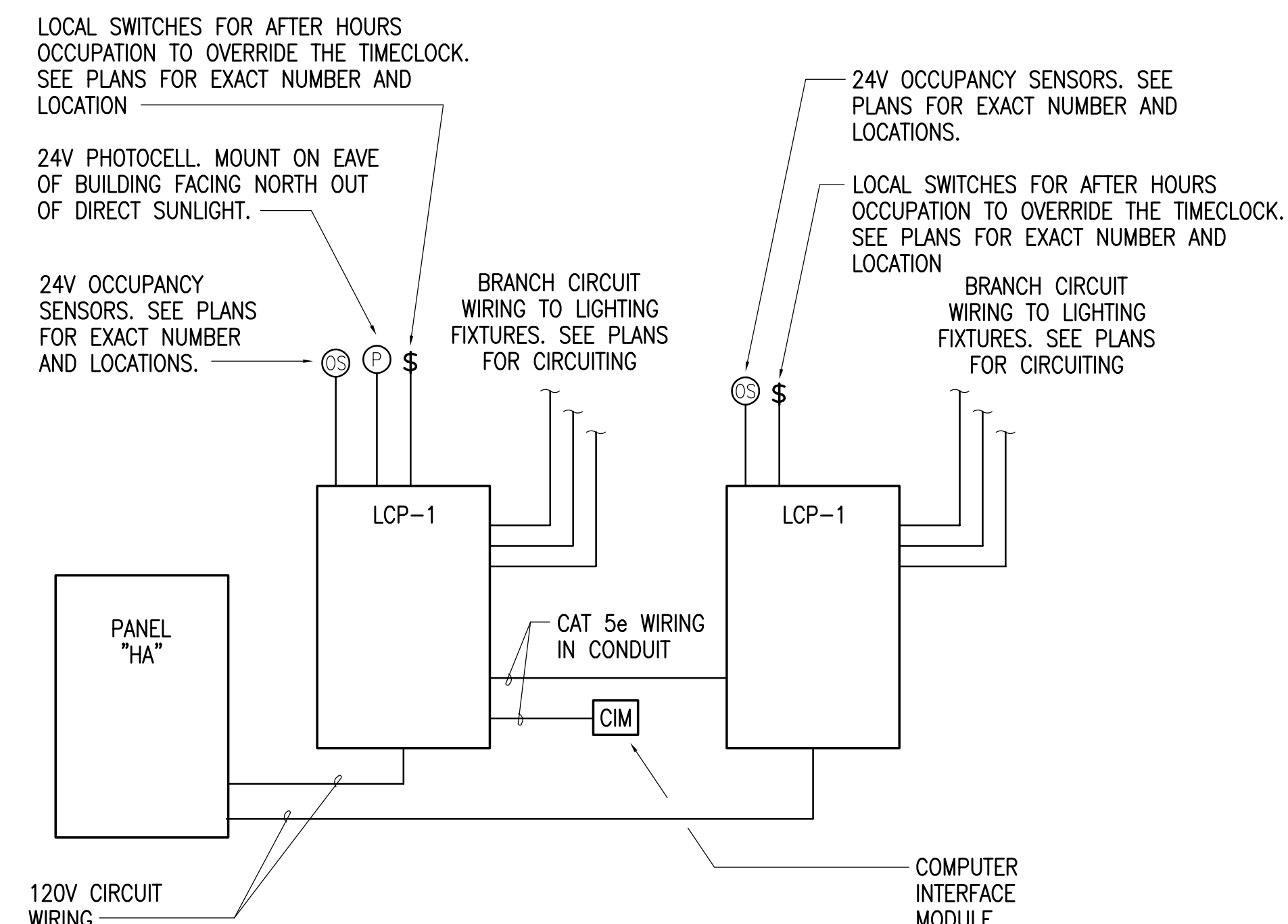
FILE: 8100-E34 PLOT SCALE: 1:1

LIGHTING FIXTURE SCHEDULE

FIXT. ID	DESCRIPTION	FIXT. VOLT	FIXT. V-A	LAMPS / FIXTURE		FIXTURE MOUNTING	MANUFACTURER	FIXT. ID	DESCRIPTION	FIXT. VOLT	FIXT. V-A	LAMPS / FIXTURE		FIXTURE MOUNTING	MANUFACTURER
				QTY	TYPE							QTY	TYPE		
A1/80	2' x 4' FLUORESCENT GRID TROFFER, WITH HEAT REMOVAL FUNCTION, GASKETED FLUSH STEEL DOOR, PRISMATIC ACRYLIC LENS AND ELECTRONIC BALLAST.	277	80	2	F32T8/SPX35/RS	RECESSED CEILING	LITHONIA #2GTX-232-A12-277-GEB OR EQUAL	E1/40	POLYCARBONATE EXIT LIGHT W/ LED LAMPS, UNIVERSAL MOUNTING	277	.92	N/A	N/A	SURFACE CEILING WALL @ 8'-0" AFF.	LITHONIA # LQM-SW-1G-120/277-EL OR EQUAL
A2/120	SIMILAR TO TYPE 'A1' EXCEPT 3-LAMP	277	120	3	F32T8/SPX35/RS	RECESSED CEILING	LITHONIA #2GTX-332-A12-277-GEB OR EQUAL	E2/40	SIMILAR TO TYPE 'E1' EXCEPT DUAL FACED	277	.92	N/A	N/A	SURFACE CEILING WALL @ 8' AFF.	LITHONIA # LQM-SW-2G-120/277-EL OR EQUAL
B1/80	1' x 4' 2-LAMP FLUORESCENT LOW PROFILE WRAPAROUND ACRYLIC PRISMATIC DIFFUSER AND ELECTRONIC BALLAST.	277	80	2	F32T8/SPX35/RS	SURFACE CEILING	LITHONIA #LB-232-277-GEB OR EQUAL	E3/00	6" LEGEND CHARACTER EXIT SIGN W/ SELF-CONTAINED LIGHT SOURCE, IMPACT RESISTANT HOUSING	N/A	N/A	N/A	N/A	SURFACE CEILING WALL @ 8' AFF.	PERMEX # P-160-G-20 OR EQUAL
B2/160	SIMILAR TO TYPE 'B1' EXCEPT 4-LAMP AND WIDE BODY.	277	160	4	F32T8/SPX35/RS	SURFACE CEILING	LITHONIA #LB-432-277-GEB OR EQUAL	EM1/60	CLASS III HZARDOUS LOCATION EMERGENCY FIXTURE WITH ALUMINUM HOUSING, MAINTENANCE FREE LEAD ACID BATTERY, AND GLASS GLOBE	277	60	3	20W MR-16	WALL @ 12' AFF.	HUBBELL #HLEB32010B3 OR EQUAL
B3/80	4' WALL BRACKET, LOW PROFILE WITH ELECTRONIC BALLAST	277	80	2	F32T8/SPX35/RS	SURFACE 8 FT AFF WALL	LITHONIA #WS-232-A12-277-GEB OR EQUAL	EM2/30	INDUSTRIAL TYPE HEAVY DUTY HOUSING EMERGENCY FIXTURE.	277	30	2	12W PAR 36	SURFACE CEILING WALL @ 12' AFF.	LITHONIA #ELU3X-277 OR EQUAL
B4/26	6" COMPACT FLUORESCENT DOWNLIGHT, DIE-CAST ALUM. HOUSING, SPECULAR CLEAR REFLECTOR, VERT. TRI-TUBE LAMP.	277	26W	1	F26TRT	RECESSED CEILING	LITHONIA #AFV-26TRT-6AR-GEB OR EQUAL	EM3/25	CLASS I, DIVISION 2 HAZARDOUS LOCATION EMERGENCY FIXTURE WITH CORROSION RESISTANT FIBERGLASS REINFORCED POLYESTER HOUSING	277	25	2	12W TUNGSTEN HALOGEN	WALL	CHLORIDE #STL120-ZE-2-TD2 OR EQUAL
B5/80	4' FLUORESCENT DIRECT/INDIRECT WALL MOUNTED FIXTURE WITH ASYMMETRIC DISTRIBUTION, STEEL HOUSING, PRISMATIC LENS, ELECTRONIC BALLAST.	277	80	2	F32T8/SPX35/RS	SURFACE 10FT AFF WALL	COLUMBIA #S866-2-42-1-277 OR EQUAL	F1/300	INCANDESCENT FIXTURE RATED FOR USE IN CLASS I AREA WITH DOME REFLECTOR.	120	300W	1	300W PS-25	SURFACE CEILING	CROUSE-HINDS #EVCX2151 OR EQUAL
B6/150	6" INCANDESCENT LOW PROFILE DOWNLIGHT WITH SELF FLANGED, SPECULAR CLEAR REFLECTOR, AND 277V TO 120V STEP DOWN TRANSFORMER	277	150	1	150W A21	RECESSED CEILING	LITHONIA #AZ-6AR-SDT OR EQUAL	F3/530	400W METAL HALIDE LIGHT FIXTURE FOR HAZARDOUS CLASS III LOCATIONS. SURFACE MOUNT WITH GUARD	277	530	1	400W MH	SURFACE UNDERSIDE OF ROOF DECK	HUBBELL #KH-40-H-6-G-C2 OR EQUAL
C1/80	4' FLUORESCENT STRIP LIGHT, HEAVY DUTY DIE-FORMED STEEL HOUSING, WIRE GUARD, ELECTRONIC BALLAST.	277	80	2	F32T8/SPX35/RS	SURFACE CEILING	LITHONIA #2M-432-A12-277-GEB-WG OR EQUAL	F30/530	SAME AS TYPE F3/530 EXCEPT HOT RESTRIKE	277	530	1	400W MH	SURFACE UNDERSIDE OF ROOF DECK	HUBBELL #KH-40-H-6-G-C2-R2 OR EQUAL
C2/160	4' FLUORESCENT HEAVY DUTY TURRET INDUSTRIAL, 10% UPLIGHT, CHAIN HANGERS, AND ELECTRONIC BALLAST.	277	160	4	F32T8/SPX35/RS	PENDANT 8' AFF	LITHONIA #AF10-432-277-GEB OR EQUAL	G/50	12"x12" CONCRETE POUR FIXTURE WITH POLYCARBONATE LENS	277	17	2	28WT FL.	RECESSED IN CONCR+ PONY WALL	FAILSAFE #QD-GC-HE-56-A-277-LL OR EQUAL
C3/80	SIMILAR TO TYPE 'C2' EXCEPT 2 LAMP.	277	80	2	F32T8/SPX35/RS	PENDANT 8' AFF	LITHONIA #AF10-232-277-GEB OR EQUAL	G1/100	70W HPS WALL-PACK AREA LIGHT, CAST ALUM. HOUSING, SEALED / GASKETED POLYCARBONATE REFRACTOR, DK. BRONZE FINISH, LO-TEMP BALLAST.	277V	100	1	70W HPS	SURFACE WALL @ 8'-6" AFF UON.	LITHONIA #TWP-70S-277-70F OR EQUAL
C4/80	4' WET LOCATION FLUORESCENT, WITH HIGH IMPACT ACRYLIC DIFFUSER AND ELECTRONIC BALLAST.	277	80	2	F32T8/SPX35/RS	SURFACE CEILING	LITHONIA #VRI-232-277-GEB OR EQUAL	G2/200	150W HPS FLOOD LIGHT, CAST ALUM. HSG, IMPACT RESIST CLEAR TEMPERED GLASS LENS, ANODIZED ALUM. REFLECTOR, YOKE MNTG, DK. BRONZE FINISH, NEMA 7 X 6 BEAM, LO-TEMP BALLAST, FULL VISOR SHIELDING.	277V	200	1	150W HPS	SURFACE WALL @ 1'-0" BELOW TOP OF PARAPET	LITHONIA #TFL-150S-TA2-277 OR EQUAL
C5/240	8' FLUORESCENT, 40% DIRECT/ 60% INDIRECT PENDANT, REINFORCED STEEL HOUSING, WHITE FINISH, 12-CELL PARABOLIC SHIELDING, STEEL AIRCRAFT CABLE SUPPORTS. ELECTRONIC BALLAST	277	240	6	F32T8/SPX35/RS	PENDANT CEILING 10'-0" AFF	NEORAY #92DIP/3T8/S50-8' OR EQUAL	G3/300	250W HPS FLOOD LIGHT, CAST ALUM. HSG, IMPACT RESIST CLEAR TEMPERED GLASS LENS, FRONT-HINGED BALLAST COMPARTMENT, ANODIZED ALUM. REFLECTOR, YOKE MNTG, DK. BRONZE FINISH, NEMA 7 X 6 BEAM, LO-TEMP BALLAST, FULL VISOR SHIELDING.	277V	300	1	250W HPS	SURFACE WALL @ 1'-0" BELOW TOP OF PARAPET	LITHONIA #TFD-250S-TA-277 OR EQUAL
C6/120	4' CLASS I, DIVISION 2 HAZARDOUS LOCATION FIXTURE	277	120	3	F32T8/SPX35/RS	PENDANT 8'-0" AFF	HUBBELL #SSHZ-4-3-402-B-4-71 OR EQUAL	G4/465	400W HPS FLOOD LIGHT, CAST ALUM. HSG, IMPACT RESIST CLEAR TEMPERED GLASS LENS, POWER-DOOR BALLAST COMPARTMENT, ANODIZED ALUM. REFLECTOR, YOKE MNTG, DK. BRONZE FINISH, NEMA 6 X 5 BEAM, LO-TEMP BALLAST, FULL VISOR SHIELDING.	277V	465	1	400W HPS	SURFACE WALL @ 1'-0" BELOW TOP OF PARAPET	LITHONIA #TFH-400S-RM2-277 OR EQUAL
C7/210	8' HIGH OUTPUT ENCLOSED GASKETED METAL FLUORESCENT FIXTURE.	277	210	2	F32T8/SPX35/RS	PENDANT 15'-0" AFF	LITHONIA #DMS-296HOT8-AR-277-GEB OR EQUAL	G5/930	SAME AS G4 EXCEPT TWO FIXTURES, TENON MOUNTED ON TWIN FLOODLIGHT BRACKET, ON 30 FT. SQUARE STEEL POLE. PROVIDE FITTINGS FOR HORIZ. & VERTICAL AIM ADJUST.	277V	465	1	400W HPS	POLE MNTD. 35' AGL	LITHONIA #TFH-400S-RM2-277 OR EQUAL
C8/40	4' UNDERCABINET FIXTURE W/ SOLID FRONT.	277	40	1	F32T8/SPX35/RS	UNDER CABINET	LITHONIA #N2S-32-277-GEB OR EQUAL	G6/315	250W HPS AREA LIGHT, WELDED ALUMINUM RECTANGULAR ARM-MNTD. HOUSING, GASKETED TEMPERED GLASS LENS, ANODIZED ALUM. REFLECTOR, TYPE 3 CUTOFF DISTRIB, REMOVABLE POWER DOOR, W/ 5 INCH SQUARE X 25 FT. STEEL POLE, DK. BRONZE FINISH.	277V	315	1	250W HPS	POLE MNTD. 28' AGL	LITHONIA #KSF2-250S-R3-277 OR EQUAL
D1/140	100W METAL HALIDE LOW BAY INDUSTRIAL, AISLE LIGHTER DIE CAST ALUMINUM HOUSING, ACRYLIC REFRACTOR, HPF CWA BALLAST.	277	140	1	MS250/BU	SURFACE CEILING	LITHONIA #TXV-100M-A121-277 OR EQUAL	G7/1500	1500W TUNGSTEN HALOGEN FLOODLIGHT WITH DIE CAST ALUMINUM HOUSING, TEMPERED GLASS DOOR, GASKETING, 1/2" KNUCKLE MOUNTING, NEMA 6x5 BEAM, AND TOP VISOR SHIELDING	277V	1500	1	1500W HALOGEN	SURFACE WALL @ 1'-0" BELOW TOP OF PARAPET	HUBBELL #QL-150S W/ #QL-15V VISOR OR EQUAL
D1Q/140	SIMILAR TO TYPE 'D1' WITH QUARTZ RESTRIKE	277	140	1	MS100/BU 100W QUARTZ	SURFACE CEILING	LITHONIA #TXV-100M-A121-277-QRSTD OR EQUAL	G8/1000	SAME AS TYPE G7 EXCEPT WITH 1000W LAMP INSTEAD.	277V	1000	1	1000W HALOGEN	SURFACE WALL @ 1'-0" BELOW TOP OF PARAPET	HUBBELL #QL-150S W/ #QL-15V VISOR OR EQUAL
D2/530	400W METAL HALIDE HIGH BAY INDUSTRIAL FIXTURE WITH DIE CAST ALUMINUM HOUSING, FULLY ENCLOSED AND GASKETED, W/ TEMPERED GLASS LENS	277	530	1	MS400/BU	SURFACE CEILING	LITHONIA #TXR-400M-PA22GLE-277-SCK-LCPP -THP OR EQUAL	H1/70	50W HPS RECESS DOWNLIGHT, 11" SQUARE, PRISMATIC TEMPERED GLASS LENS, ALUM. REGRESSED DOOR W/ GASKETED FLANGE, ANODIZED ALUM. REFLECTOR, WET LOCATION LISTED.	277V	70	1	50W HPS	SOFFIT RECESS 10' AGL	LITHONIA #LAH-50S-11RW-173-277 OR EQUAL
D2Q/530	SAME AS D2, EXCEPT W/ QUARTZ RESTRIKE	277	530	1	MS400/BU 250W QUARTZ	SURFACE CEILING	LITHONIA #TXR-400M-PA22GLE-277-SCK-LCPP -THP-QRSTD OR EQUAL								
D3/310	SIMILAR TO TYPE 'D1' EXCEPT WET LABEL	277	310	1	MS250/BU	SURFACE CEILING	LITHONIA #TXR-250M-PA22GLE-277-WL OR EQUAL								
D3Q/310	SIMILAR TO TYPE 'D3' W/ QUARTZ RESTRIKE	277	310	1	MS250/BU 100W QUARTZ	SURFACE CEILING	LITHONIA #TXL-250M-PA22GLE-277-WL-QRSTD OR EQUAL								
D4/390	175 METAL HALIDE DIRECT/INDIRECT PENDANT MOUNT FIXTURE, 100W METAL HALIDE INDIRECT, ALUMINUM HOUSING, ALZAK REFLECTORS, PRISMATIC FLAT GLASS LENS & CUSTOM 7' PENDANT.	277	390	1	MS175/BU	PENDANT	KIRLIN #WR51242-58-87(7')-88-PM OR EQUAL								

OCCUPANCY SENSOR SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER AND CATALOG NUMBER (OR APPROVED EQUAL)	REMARKS
A	AUTO ON/MANUAL ON, PASSIVE INFRARED LINE VOLTAGE AUTOMATIC WALL SWITCH	THE WATT STOPPER #WS-120/277-1 WITH #ASP-211 SINGLE GANG COVER PLATE	FLUSH WALL MOUNT +48" AFF.
B	AUTO ON, COMBINATION ULTRASONIC/PASSIVE INFRARED SENSOR WITH 1200 SQUARE FOOT COVERAGE	THE WATT STOPPER #DT-200	SURFACE WALL MOUNT AT 8' AFF UNLESS OTHERWISE NOTED.
C	AUTO ON, ULTRASONIC SENSOR WITH 2000 SQUARE FOOT COVERAGE	THE WATT STOPPER #W-2000A	CEILING MOUNT, SURFACE.
C1	AUTO ON, ULTRASONIC SENSOR WITH 90 LINEAR FEET OF COVERAGE	THE WATT STOPPER #W-2000H	CEILING MOUNT, SURFACE.
C2	AUTO ON, ULTRASONIC SENSOR WITH 1000 SQUARE FOOT COVERAGE	THE WATT STOPPER #W-1000A	CEILING MOUNT, SURFACE.



1 LIGHTING CONTROL PANEL SCHEMATIC DIAGRAM

NO SCALE



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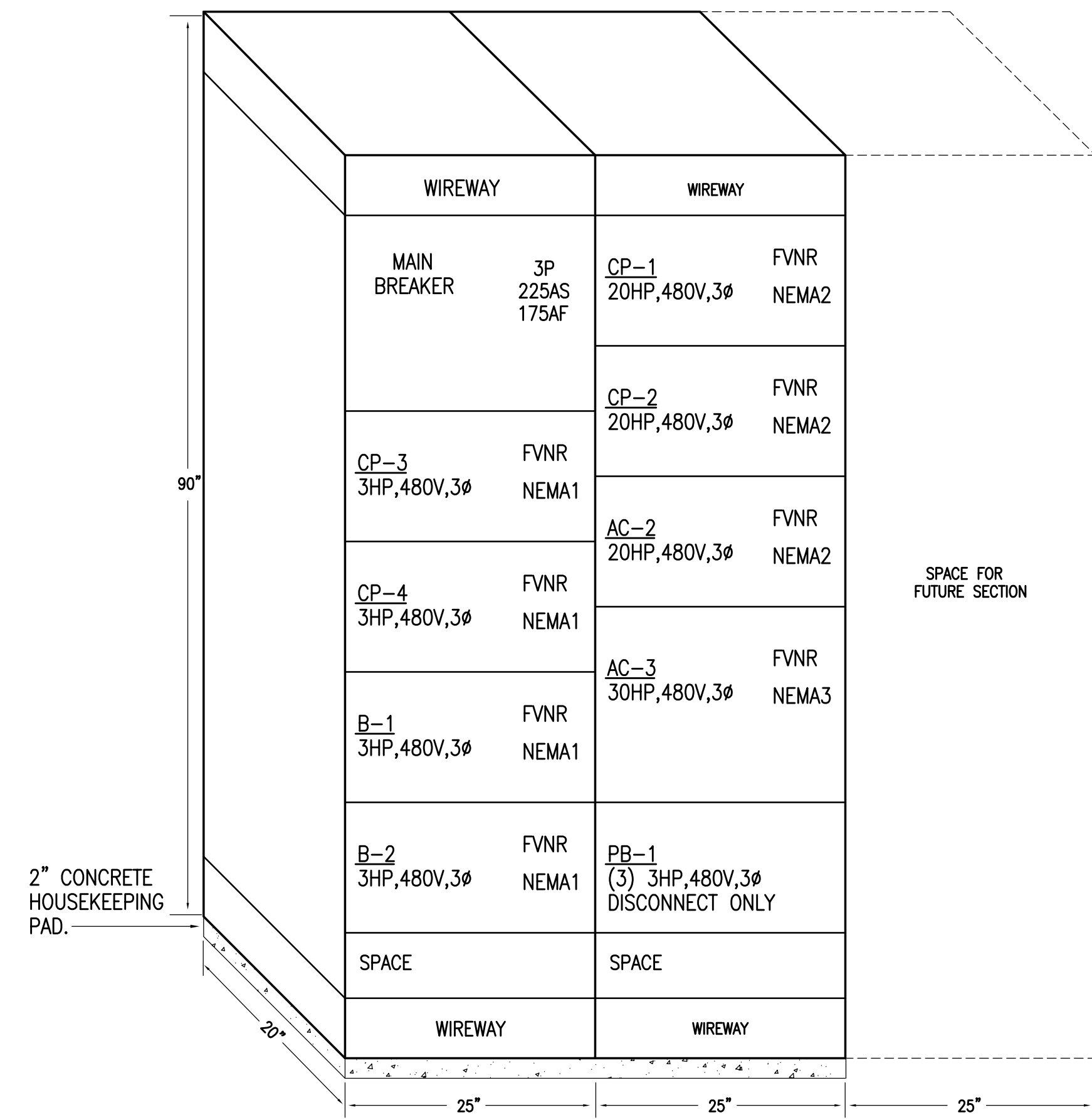
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Sheet Contents:
ELECTRICAL FIXTURE SCHEDULE & LIGHTING DETAILS

Sheet No.:
E4.1
USKH W.O. 530200



1 MOTOR CONTROL CENTER 'MCC' DETAIL
NO SCALE

LIGHTING CONTROL PANEL SCHEDULE			
NAME: LCP-1		LOCATION: B117	
PART #: ACP-NET-32-C-277		PANEL TYPE: MAIN	
CONTROL VOLTAGE: 277V		MOUNTING: SURFACE	
CONTROL CIRCUIT #:		NEMA TYPE: 1	
CIRCUIT #	SWITCH*	OPERATION ZONE	ROOM DESCRIPTION / NOTES
1 HA-1	OS	1	C106, C107
2 HA-1	OS	2	C108
3 HA-3	OS	3	C109
4 HA-3	OS	4	C110
5 HA-5	OS	5	C102
6 HA-5	OS	6	B109
7 HA-7	OS	7	A102, A103
8 HA-7	OS	8	A106
9 HA-7	OS	9	A107
10 HA-9	OS	10	CORRIDORS C109, B104
11 HA-9	OS	11	B103A, B103B, B103
12 HA-11	OS	12	B118
13 HA-11	OS	13	B119, B120
14 HA-11	OS	14	B117
15 HA-13	OS	15	B112
16 HA-15	OS	16	B110, B111A
17 HA-17	OS	17	B111
18 HA-17	OS	18	CORRIDOR B102
19 HA-19	OS	19	D112
20 HA-19	OS	20	D113
21 HA-21	OS	21	D111
22 HA-23	OS	22	D110
23 HA-25	OS	23	CORRIDOR D101
24 HA-25	OS	24	D103
25 HA-27	OS	25	D104
26 HA-27	OS	26	D105
27 HA-31	OS	27	D108
28 HA-35	OS	28	C111
29			
30			
31			
32			

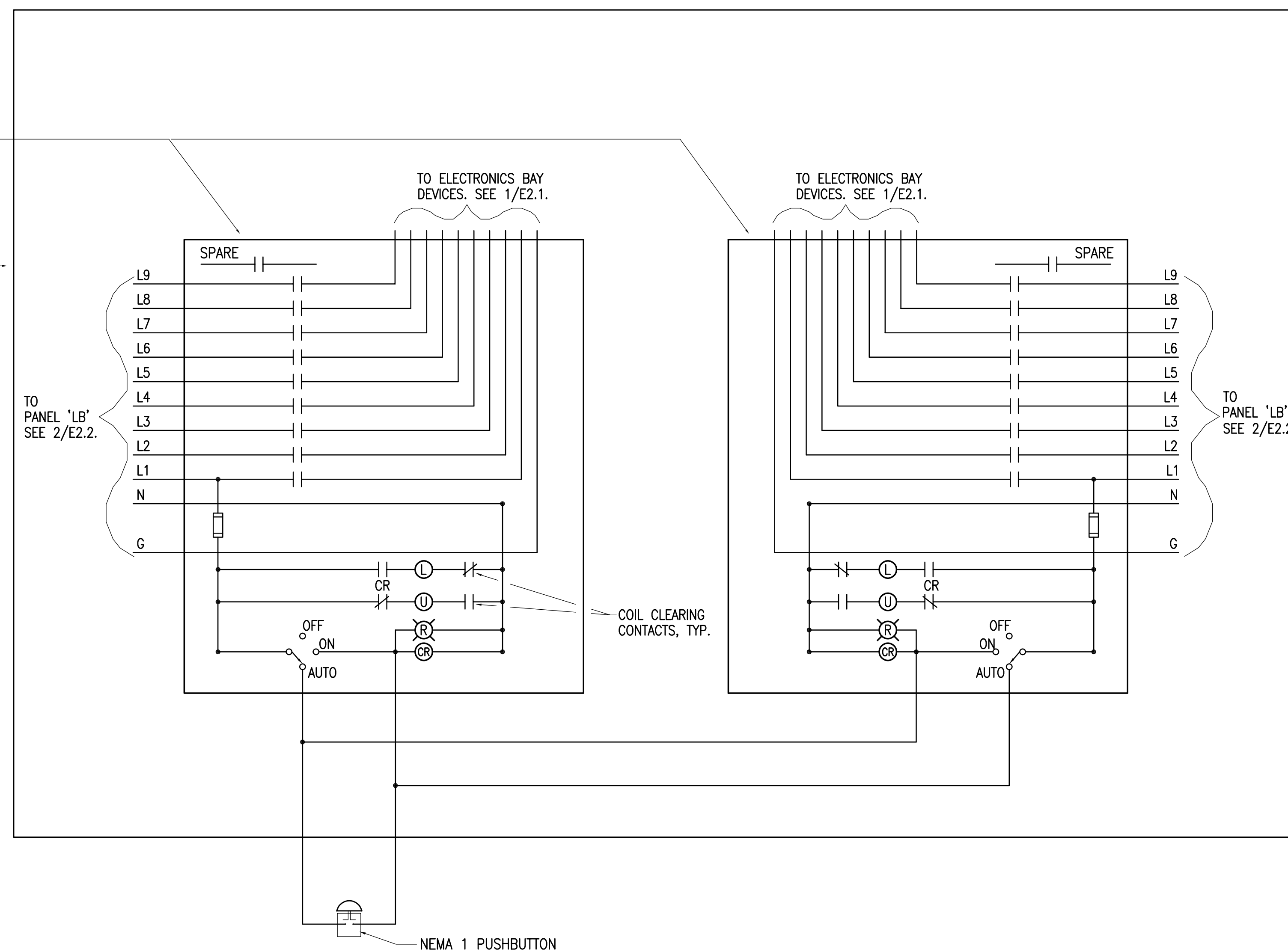
*OS = OCCUPANCY SENSOR, TC = TIME CLOCK AND PHOTOCELL

LIGHTING CONTROL PANEL SCHEDULE			
NAME: LCP-2		LOCATION: B117	
PART #: ACP-NET-32-277		PANEL TYPE: MAIN	
CONTROL VOLTAGE: 277V		MOUNTING: SURFACE	
CONTROL CIRCUIT #:		NEMA TYPE: 1	
CIRCUIT #	SWITCH*	OPERATION ZONE	ROOM DESCRIPTION / NOTES
1 HA-2	OS	29	E103
2 HA-2	OS	30	E104
3 HA-4	OS	31	E107
4 HA-4	OS	32	E108
5 HA-6	OS	33	E111
6 HA-6	OS	34	E112
7 HA-8	OS	35	E101
8 HA-10	OS	35	E101
9 HA-12	OS	36	E114
10 HA-12	OS	37	E115
11 HA-14	OS	38	F104
12 HA-14	OS	39	F106, F107
13 HA-14	OS	40	F112
14 HA-16	OS	41	F109
15 HA-16	OS	42	F110
16 HA-16	OS	43	F111
17 HA-20	OS	44	F116
18 HA-22	OS	45	F108
19 HA-26	OS	46	CORRIDORS F101, 101A, 101B
20 HA-28	TC	47	BUILDING EXTERIOR
21 HA-30	TC	47	BUILDING EXTERIOR
22 HA-32	TC	47	BUILDING EXTERIOR
23 HA-34	OS	48	E102
24 HA-34	OS	49	E105
25 HA-36	OS	50	E106
26 HA-36	OS	51	E109
27 HA-38	OS	52	E110
28 HA-38	OS	53	E113
29 HA-40	TC	47	BUILDING EXTERIOR
30 HA-42	TC	47	BUILDING EXTERIOR
31 HC-13	TC	47	BUILDING EXTERIOR
32			

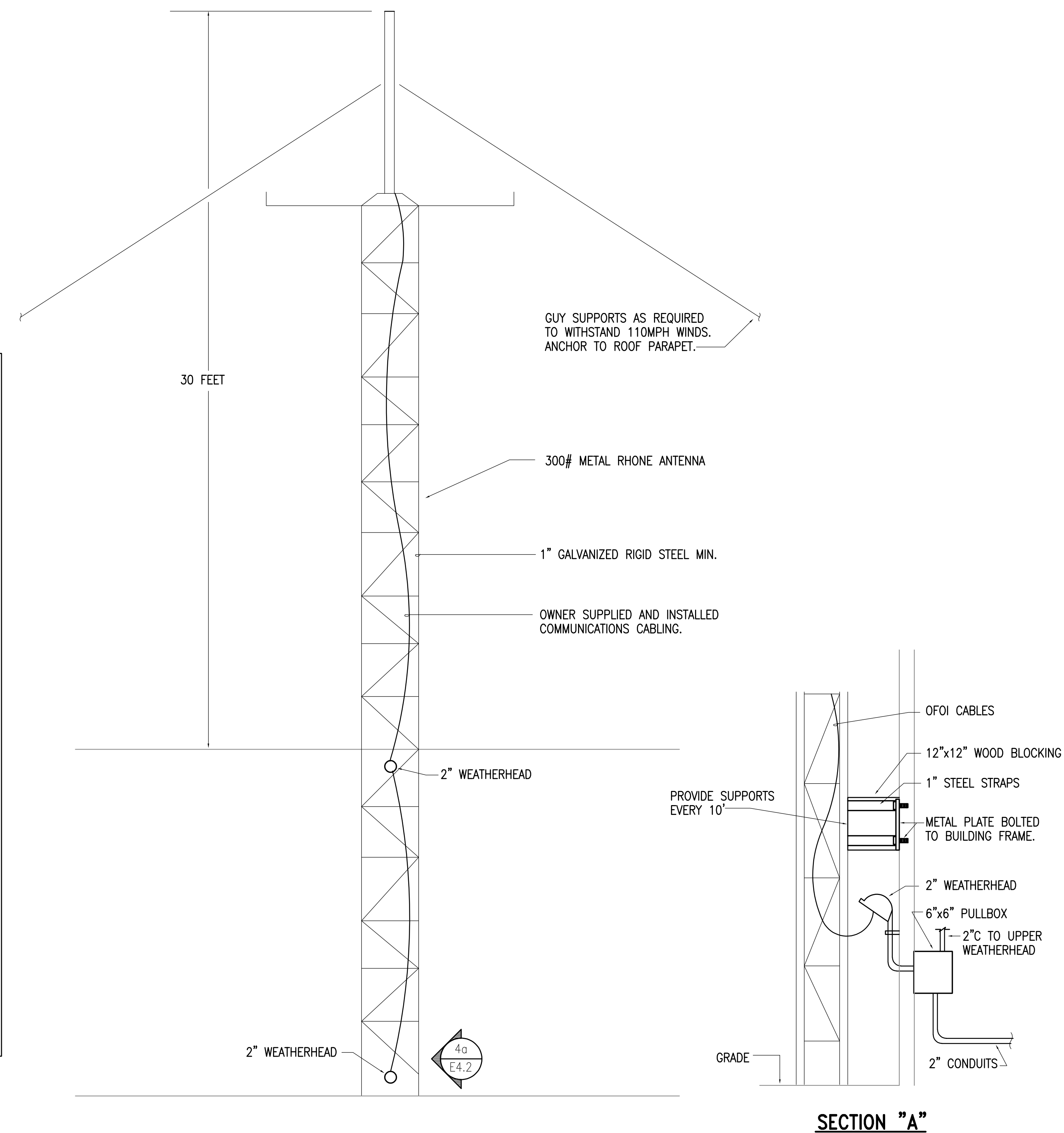
*OS = OCCUPANCY SENSOR, TC = TIME CLOCK AND PHOTOCELL

30A, 8P, MECHANICALLY HELD LIGHTING CONTACTOR WITH COIL CLEARING CONTACTS, HAND-OFF-AUTO SWITCH, 2P RELAY FOR 1P CONTROL, CONTROL CIRCUIT FUSE, AND A RED PILOT LIGHT. S.O.D #8903-LXG-100-V06-CR6-P1-F OR APPROVED EQUAL. TYPICAL OF (2). INSTALL BOTH CONTACTORS IN A COMMON NEMA 1 ENCLOSURE.

UL LISTED NEMA 1 ENCLOSURE WITH HINGED DOOR. INSTALL AN "ELECTRONICS BAY DEVICES" ID TAG ON THE COVER. MOUNT CONTACTOR IN ELECTRICAL ROOM B117. SEE 2/E2.2.



2 CONTACTOR 'PC-1' DETAIL
NO SCALE



3 RHONE ANTENNA DETAIL
NO SCALE



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Sheet Contents:
ELECTRICAL LIGHTING DETAILS

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E4.2

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Sheet Contents:
 ELECTRICAL PANEL SCHEDULES

Sheet No.:

E4.3

USKH W.O. 530200

PANEL MDP												
SQ.D.		POWR-STYLE SWITCHBOARD		277/480V,3ø,4W		SURFACE MTD.		2000A		MCB		
		VOLT-AMPS										
POLE	AMPS	SERVICE		A	B	C	SERVICE		AMPS	POLE		
225	3	PANEL 'HA'		44,185	270,578	43,670	270,878	PANEL 'LDP'		900		
						37,870	249,679					
225	3	PANEL 'HB'		32,380	7480	32,380	7480	AHU-3 (SUPPLY)		60	3	
100	3	PANEL 'HC'		12,000	5820	12,000	5820	AHU-4		40	3	
40	3	HRU-1 (SUPPLY)		5820	7480	5820	7480	AHU-5		60	3	
40	3	HRU-1 (RETURN)		5820	7480	5820	7480	AHU-6		60	3	
80	3	RM E103 - 15000 LB CRANE		15030	11080	15030	11080	AC-1		80	3	
110	3	COMPRESSOR (SAND BLASTER)		21330	38835	21330	38835	MOTOR CONTOL CENTER 'MCC'		175	3	
40	3	BLASTING MACHINE		5,820	3880	5,820	3880	HRU-2 (SUPPLY)		25	3	
90	3	DUST COLLECTOR		14400	3880	14400	3880	HRU-2 (RETURN)		25	3	
TOTAL V-A				513,298		513,083		483,084		1,509,465	VA	
TOTAL AMPS				1853		1852		1744		1816	A	
A.I.C. RATING:				65,000 A								

PANEL LDP												
SQ.D.		TYPE		120/208V,3ø,4W		SURFACE MTD.		2000A		MCB		
		VOLT-AMPS										
POLE	AMPS	SERVICE		A	B	C	SERVICE		AMPS	POLE		
100	3	PANEL 'LA'		11,540	23,785	13,880	19,795	PANEL 'LH'		225		
225	3	PANEL 'LB'		27,840	9,960	26,880	7,140	PANEL 'LI'		100	2	
100	3	PANEL 'LC'		4,700	21,075	3,880	19,385	PANEL 'LK'		100	3	
100	3	PANEL 'LD'		4,160	31,110	5,980	28,285	PANEL 'LL'		225	3	
225	3	PANEL 'LE'		16,565	10,835	16,565	9,975	PANEL 'LM'		100	3	
225	3	PANEL 'LF'		27,268	36,720	26,548	36,445	PANEL 'LN'		400	3	
600	3	PANEL 'LG'		45,520		56,620		SPARE		100	3	
TOTAL V-A				271,078		271,378		249,679		792,135	VA	
TOTAL AMPS				2259		2261		2081		2199	A	
A.I.C. RATING:				42,000								

PANEL HA												
SQ.D.		TYPE		277/480V,3ø,4W		SURFACE MTD.		225A		MLD		
		VOLT-AMPS										
CIRCUIT	POLE	AMPS	SERVICE		A	B	C	SERVICE		AMPS	POLE	
1	1	20	LTG - C103 - C10X		4160	4240		LTG - E103, E104		20	1	
3			LTG - B108, C109, C110			3600	4240	LTG - E107, E108			2	
5			LTG - C102,B106,B107,B109,B102A				3800	4240	LTG - E111, E112			6
7			LTG - A101-A107		4200	3940		LTG - E101			8	
9			LTG - B103, B104, C101			4030	3380	LTG - E101			10	
11			LTG - B116 - B121, B117A				4110	4240	LTG - E114, E115			12
13			LTG - B112, B115, B122		2840	3200		LTG - F102-F107,F112,F113,F115			14	
15			LTG - B110, B111A			4140	3940	LTG - F109, F110, F111			16	
17			LTG - B102, B111, B113, B114				3480	1600	LTG - UTILITY ISLANDS E101			18
19			LTG - D112, D113		4400	3420		LTG - F116			20	
21			LTG - D111			3180	3200	LTG - F108			22	
23			LTG - D110				3180	3140	LTG - F114			24
25			LTG - D101-D103,D108,D114,D115		3825	1120		LTG - F101, F101A, F101B			26	
27			LTG - D105, D105A, D104			4090	870	LTG - EXTERIOR (EAST)			28	
29			LTG - D106				1200	400	LTG - EXTERIOR (EAST)			30
31			LTG - D108		3790	400		LTG - EXTERIOR (SOUTH)			32	
33			LTG - D109			4300	4200	LTG - E102, E105			34	
35			LTG - C111				3640	4240	LTG - E106, E109			36
37			LTG - EXTERIOR, PARKING		2230	2420		LTG - E110, E113			38	
39			SPARE				500	LTG - EXTERIOR (SOUTH)			40	
41							600	LTG - EXTERIOR (NORTH)			42	
TOTAL V-A				44,185		43,670		37,870		125,725	VA	
TOTAL AMPS				160		158		137		151	A	
A.I.C. RATING:				35,000								

* REFER TO LIGHTING CONTROL PANEL SCHEDULE(S) ON SHEET E4.2 FOR CIRCUITS TO BE ROUTED VIA CONTACTOR.

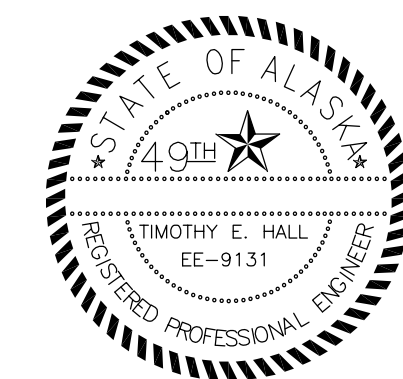
PANEL HB												
SQ.D.		TYPE		277/480V,3ø,4W		SURFACE MTD.		225A		MLD		
		VOLT-AMPS										
CIRCUIT	POLE	AMPS	SERVICE		A	B	C	SERVICE		AMPS	POLE	
1	1	20	AHU-2 (SUPPLY)		3045			SPARE		20	1	
3						3045					2	
5	3						3045				4	
7	15		MAU-1		2105			SPARE		20	3	
9						2105					8	
11	3						2105				10	
13	20		AHU-3 (RETURN)		3045	4740		RM D107 - SPRAY PAINT BOOTH		35	12	
15						3045	4740				14	
17	3						3045	4740			16	
19	20		AHU-1 (SUPPLY)		3045			SPACE			18	
21						3045					20	
23	3						3045				22	
25	35		LIFT STATION (DUPEX)		4735	5125		HRU-4		20	24	
27						4735	5125				26	
29	3						4735	5125			28	
31	30		AHU-2 (RETURN)		1330	3880		ACU-2		25	30	
33						1330	3880				32	
35	3						1330	3880	AHU-1 (RETURN)		15	34
37	1		SPACE		1330						36	
39						1330					38	
41							1330				40	
TOTAL V-A					32,380		32,380		1330		97,140	VA
TOTAL AMPS					117		117		117		117	A
A.I.C. RATING:				35,000								

PANEL HC												
SQ.D.		TYPE		277/480V,3ø,4W		SURFACE MTD.		225A		MLD		
		VOLT-AMPS										
CIRCUIT	POLE	AMPS	SERVICE		A	B	C	SERVICE		AMPS	POLE	
1	1	20	EXT. LIGHTS - WALL (W)		3000	3000		EXT. LIGHTS - WALL (SE)		20	1	
3			EXT. LIGHTS - WALL (NW)			3000	3000	EXT. LIGHTS - WALL (E)			2	
5			EXT. LIGHTS - WALL (N)				3000	3000	EXT. LIGHTS - WALL (E)			4
7			EXT. LIGHTS - WALL (W)		3000	3000		EXT. LIGHTS - WALL (NE)			6	
9			EXT. LIGHTS - WALL (SW)			3000	3000	EXT. LIGHTS - WALL (N)			8	
11			EXT. LIGHTS - WALL (SW)				3000	SPACE			10	
13			SPARE								12	
15											14	
17											16	
19											18	
21											20	
23											22	
25			SPACE								24	
27											26	
29											28	
31											30	
33											32	
35											34	
37											36	
39											38	
41											40	
TOTAL V-A					12,000		12,000		9,000		33,000	VA
TOTAL AMPS					43		43		32		40	A
A.I.C. RATING:				35,000								

PANEL 'LA' **												
SQ.D.		TYPE		120/208V,3ø,4W		SURFACE MTD.		225A		MLD		
		VOLT-AMPS										
CIRCUIT	POLE	AMPS	SERVICE		A	B	C	SERVICE		AMPS	POLE	
1	1	20	RECEPTS - A102		900	900		RECEPTS - B111,B112		20	1	
3			RECEPTS - A102,A104,A105			720	720	RECEPTS - B112,B122			2	
5			RECEPTS - A104,A105				720	900	RECEPTS - B111A,C111			4
7			RECEPTS - A105,A106		900	720		RECEPTS - B113			6	
9			RECEPTS - A106			720	720	RECEPTS - B114			8	
11			RECEPTS - A106,A107				900	540	RECEPTS - B114			10
13			RECEPTS - A105,A107		900	540		RECEPTS - B102,B115			12	
15			RECEPTS - A107,B105			900	500	SMOKE/FIRE DAMPERS			14	
17			RECEPTS - B101,B105,B108				720	500	FIRE ALARM PANEL			16
19			RECEPTS - B107		720	180		RECEPT - B117			18	
21			RECEPTS - B106,B108			1080	2100	HAND DRYER			20	
23			RECEPTS - EWC,B101,C101,PF-1				970	2100				22
25			RECEPTS - B109		720	2100					24	
27			RECEPTS - B109,B101,PF-1			820	2100				26	
29			RECEPTS - B118,B119,B121,B103				900	2100			28	
31			RECEPTS - B102		360	2100					30	
33			RECEPTS - B110,B111			900	2100				32	
35			RECEPTS - B110,C111				720	2100			34	
37			SPARE		500						36	
39						500					38	
41								INTERCOM CARD ACCESS PANEL			40	
TOTAL V-A					11,540		13,880		13,170		38,590	VA
TOTAL AMPS					96		116		110		107	A
A.I.C. RATING:				22,000								

* PROVIDE LOCK-ON TYPE BREAKER FOR CIRCUIT INDICATED.
 ** PROVIDE FEED-THRU LUGS FOR FUTURE PANEL 'LA', SECTION 2.

FILE: 820-E43 PLOT SCALE: 1:1



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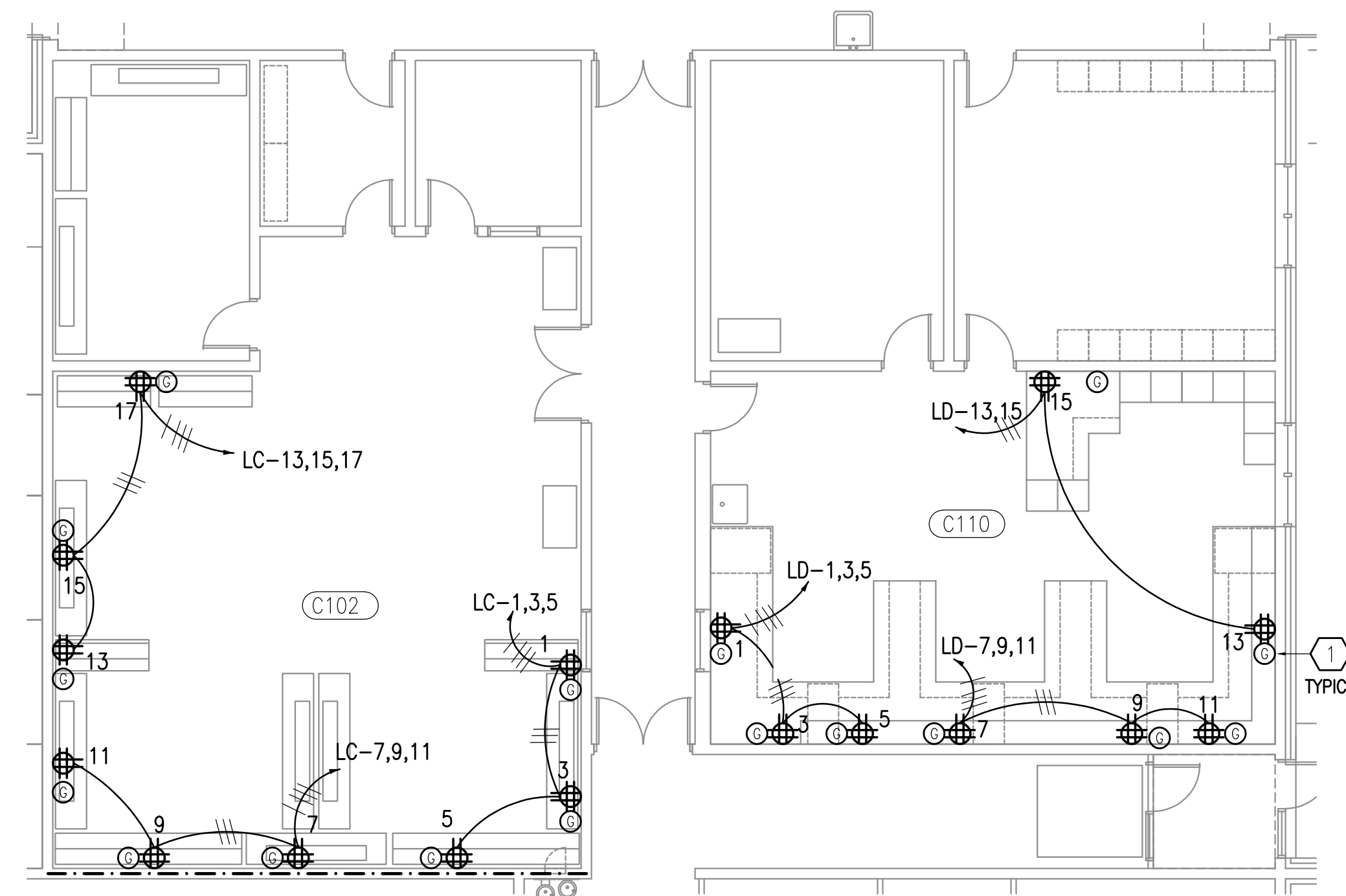
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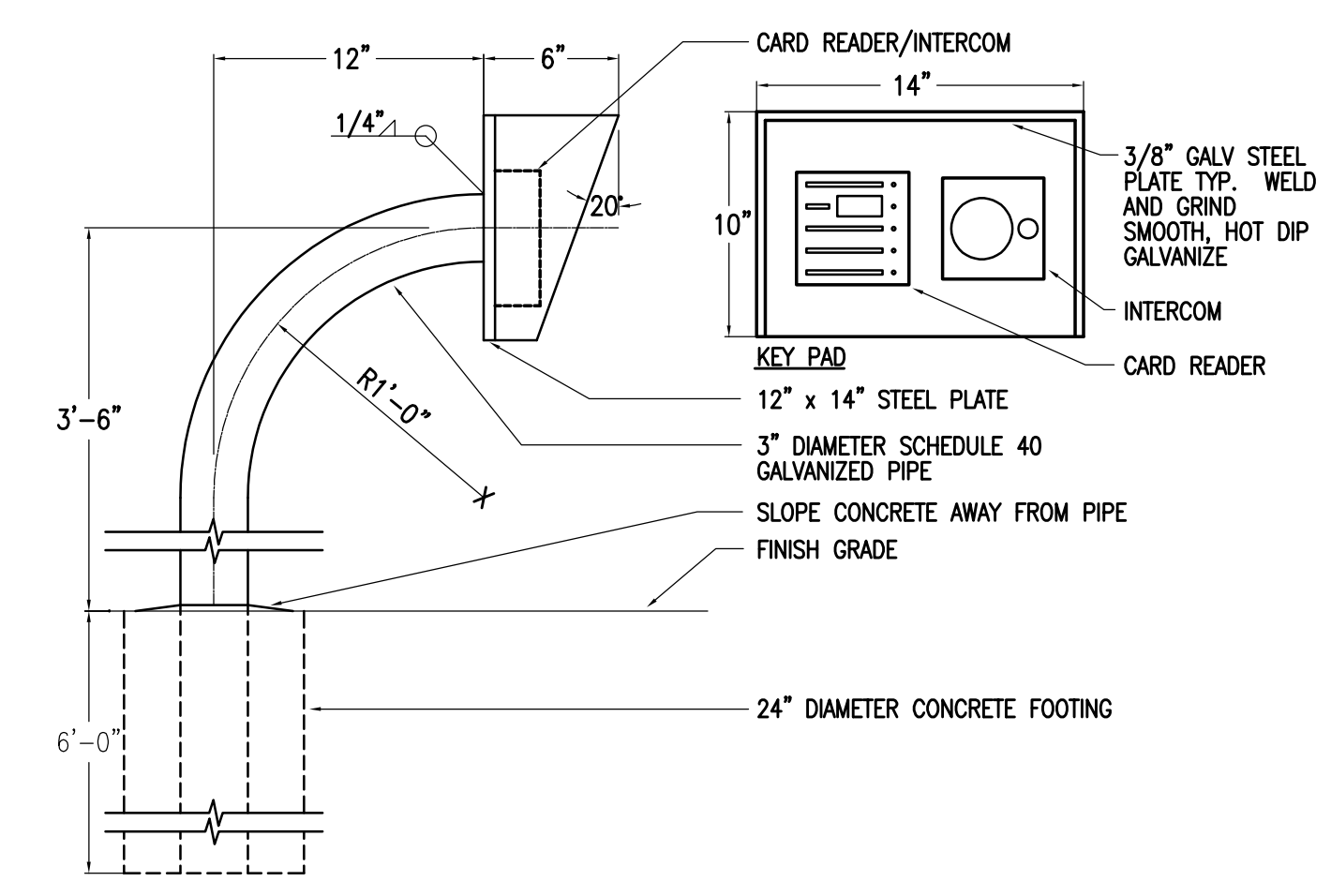
PANEL 'LL'			120/208V, 3Ø, 4W			SURFACE MTD.			400A MCB		
CIRC	POLE	AMPS	VOLT-AMPS			SERVICE	AMPS	POLE	CIRC		
			A	B	C						
1	1	20	720	4500		RECEPTS - E115 WORKBENCH	50	2	2		
3	1	20			720	RECEPTS - E115 WORKBENCH	20	1	4		
5	1	50	4500	7200		RMS. E112,E115 - UH-7	80	1	6		
7	1	50			1565	RM E115 - 208V RECEIPT			8		
9	2	20			4500	SPARE			10		
11	1	20			4500	HOSE REELS - E114, E115			12		
13	1	20	720	830		RECEPTS - E114 WORKBENCH	15	3	14		
15	1	20			720	RECEPTS - E114 WORKBENCH			16		
17	1	20			1565	RMS. E113,E114 - UH-7			18		
19	1	20	1565	830		HOSE REELS - E112, E113	15	3	20		
21	1	50			4500	RM E114 - 208V RECEIPT			22		
23	2	20			4500	SPARE			24		
25	1	20	1565	500		RMS. E108,E111 - UH-7	20	1	26		
27	1	20			720	RECEPTS - E111 WORKBENCH			28		
29	1	20			720	RECEPTS - E111 WORKBENCH			30		
31	1	20	1565	1175		RMS. E109,E110 - UH-7			32		
33	1	20			1565	HOSE REELS - E110, E111			34		
35	1	50			4500	RM E111 - 208V RECEIPT			36		
37	2	20	4500	940		JIB CRANE	15	3	38		
39	1	20			720	RECEPTS - E110 WORKBENCH			40		
41	1	20			720	RECEPTS - E110 WORKBENCH			42		
TOTAL V-A			31,110		28,285		85,505	VA			
TOTAL AMPS			259		236		237	A			
A.I.C. RATING: 10,000 A											

PANEL 'LM'			120/208V, 3Ø, 4W			SURFACE MTD.			100A MCB		
CIRC	POLE	AMPS	VOLT-AMPS			SERVICE	AMPS	POLE	CIRC		
			A	B	C						
1	1	20	360	720		RECEPTS - F102	20	1	2		
3	1	20			360	RECEPTS - F103			4		
5	1	20	900	700		RM F103 - UH-3, O/H DOOR			6		
7	1	20			900	RECEPTS - F101,F101A, CUH-1			8		
9	1	20			900	RECEPTS - F105,F107,F108,EF-18			10		
11	1	20			720	RECEPTS - F108			12		
13	1	30	2500	2100		DRYER	30	1	14		
15	2	20			2500	WASHER			16		
17	1	20			1500	RM F108 - O/H DOOR	20	1	18		
19	1	20	1175		800	RM F108 - UH-2, RM F114 - UH-1			20		
21	1	20			1660	RM F114 - O/H DOOR (NORTH)			22		
23	1	20	720			RECEPTS - F114			24		
25	1	20			720	RECEPTS - F114			26		
27	1	20			540	RECEPTS - F114			28		
29	1	20			700	RECEPTS - F114			30		
31	1	20	1660			RM 114 - O/H DOOR (SOUTH)			32		
33	1	20			900	RM 114 - UH-1 (SOUTH)			34		
35	1	20				RECEPTS - F110 WORKBENCH			36		
37	1	20				SPARE			38		
39	1	20							40		
41	1	20							42		
TOTAL V-A			10,835		9,975		28,800	VA			
TOTAL AMPS			90		83		80	A			
A.I.C. RATING: 10,000 A											

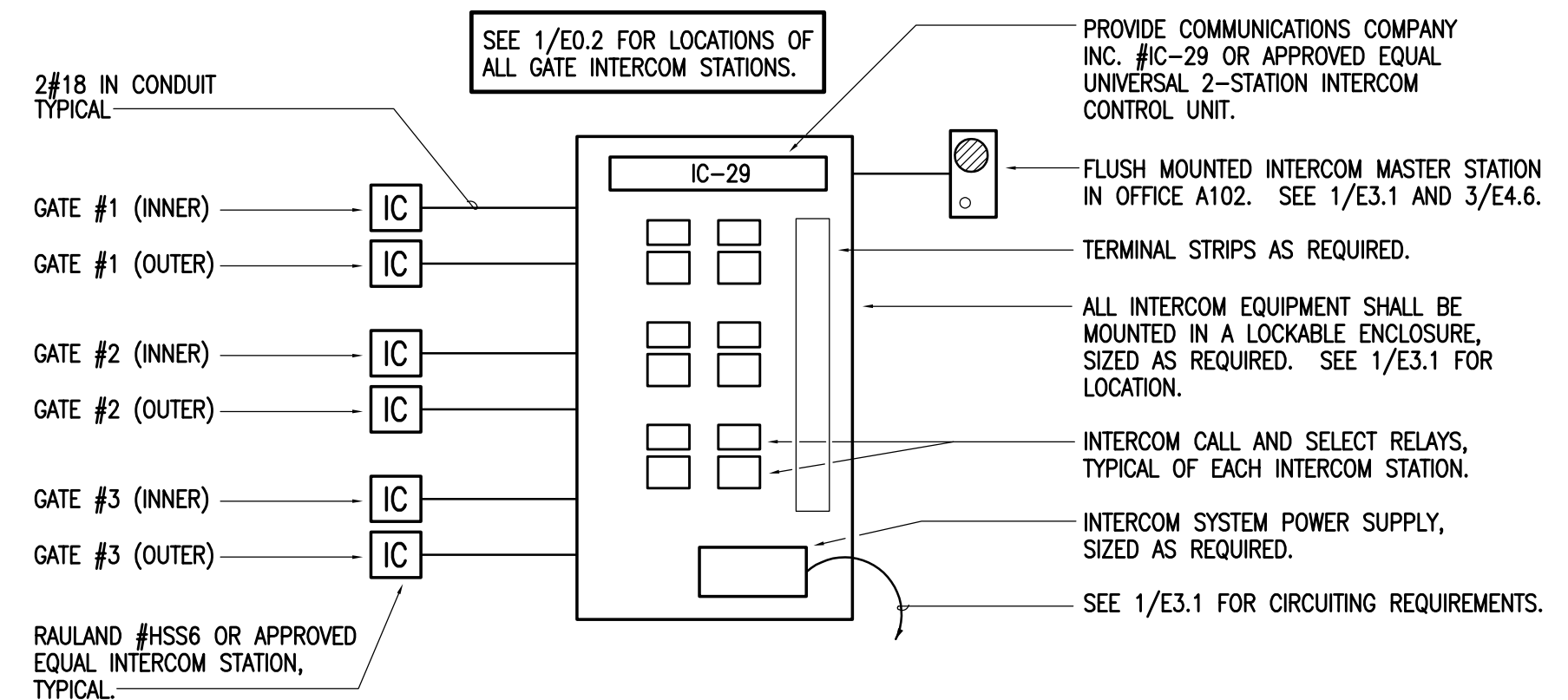
PANEL 'LN'			120/208V, 3Ø, 4W			SURFACE MTD.			400A MCB		
CIRC	POLE	AMPS	VOLT-AMPS			SERVICE	AMPS	POLE	CIRC		
			A	B	C						
1	1	100	9600	9600		GEN. TEST STAND	100	2	2		
3	1	100			9600	INJECT. PUMP CAL. STAND			4		
5	3	60	3600	2400		CHILLER	35	3	6		
7	1	60			3600	INJECTOR CALIBRATION			8		
9	1	30			3600	HOT PARTS WASHER			10		
11	1	30			3600	CHILLER			12		
13	1	50	2880	500		OIL FILTER CRUSHER	20	1	14		
15	2	20			2880	HEATER TEST STAND			16		
17	1	20			1800	CONTROL UNIT			18		
19	1	20	1320	2105		4000 LB. BRIDGECRANE	35	1	20		
21	1	20			1320	MEZZANINE - EF-12			22		
23	3	20	1320	1320		MEZZANINE - EF-12	20	3	24		
25	1	20			1320	MEZZANINE - EF-12			26		
27	1	20	1320	1320		MEZZANINE - EF-12	20	3	28		
29	3	20			1320	MEZZANINE - EF-12			30		
31	1	20	1175	900		RECEPTS - MEZZANINE	20	1	32		
33	1	20			500	CP-8, UH-2, WH-2			34		
35	1	20				SPARE			36		
37	1	20							38		
39	1	20							40		
41	1	20							42		
TOTAL V-A			36,720		34,865		108,030	VA			
TOTAL AMPS			306		304		300	A			
A.I.C. RATING: 10,000 A											



1 ROOMS C102 - C110 A.B.I. #1
1/8" = 1'-0"

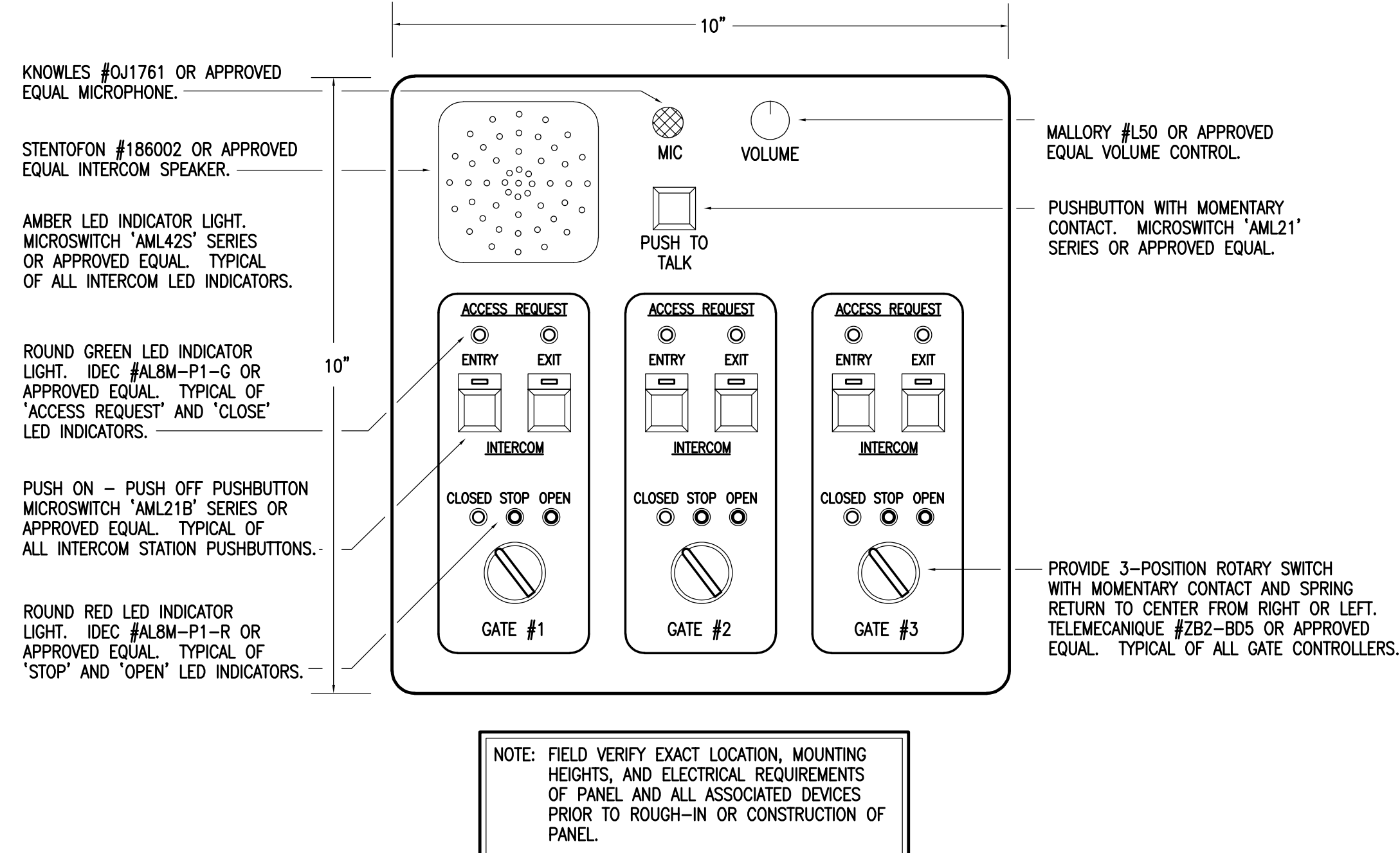


4 CARD READER/INTERCOM BOLLARD DETAIL
NO SCALE



2 INTERCOM ONE-LINE DIAGRAM
NO SCALE

NOTES:
1. PROVIDE GROUND RECEPTACLE FOR CONNECTION TO CONTRACTOR FURNISHED WORKSTATION.



3 GATE CONTROL PANEL DETAIL
NO SCALE

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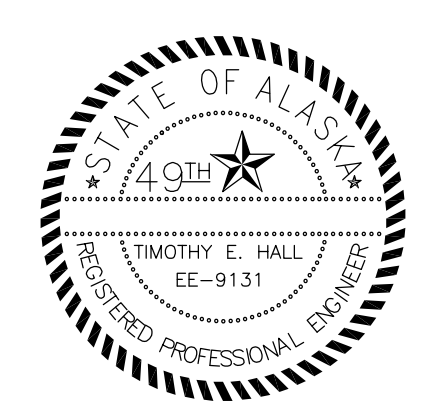
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E4.6

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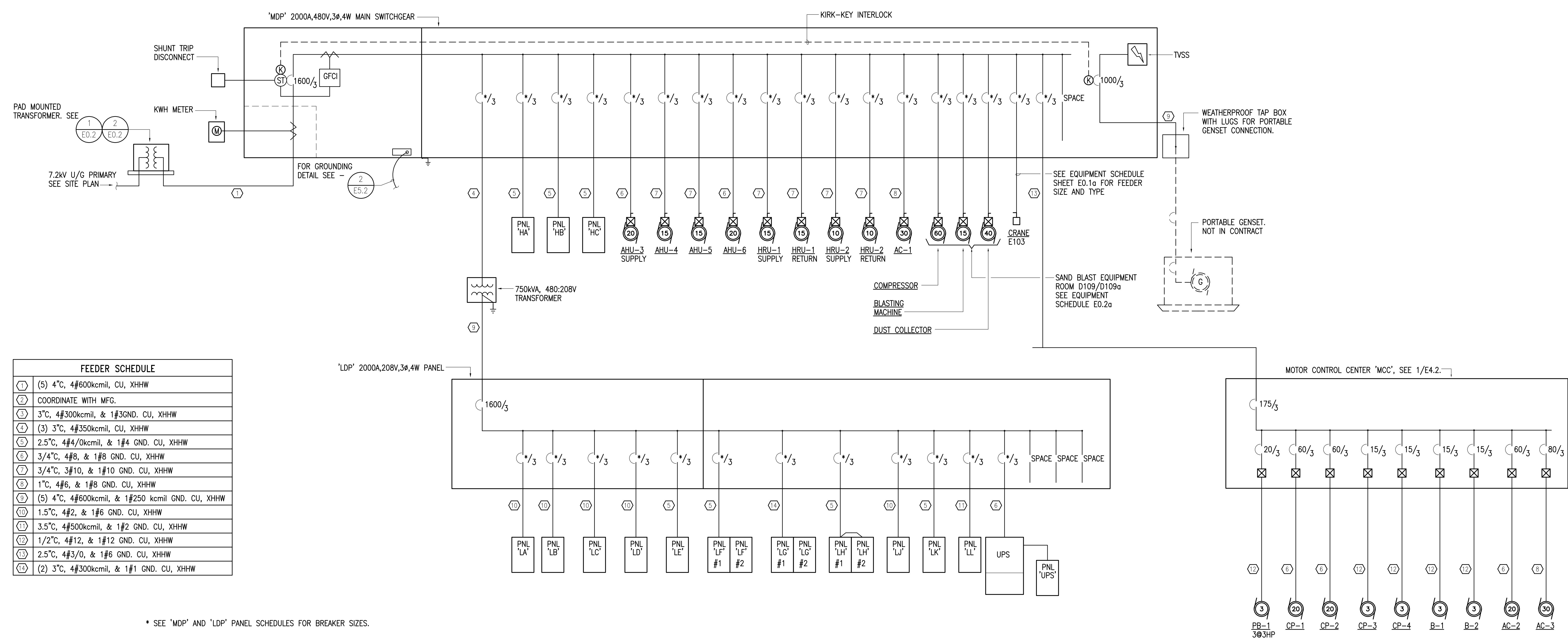


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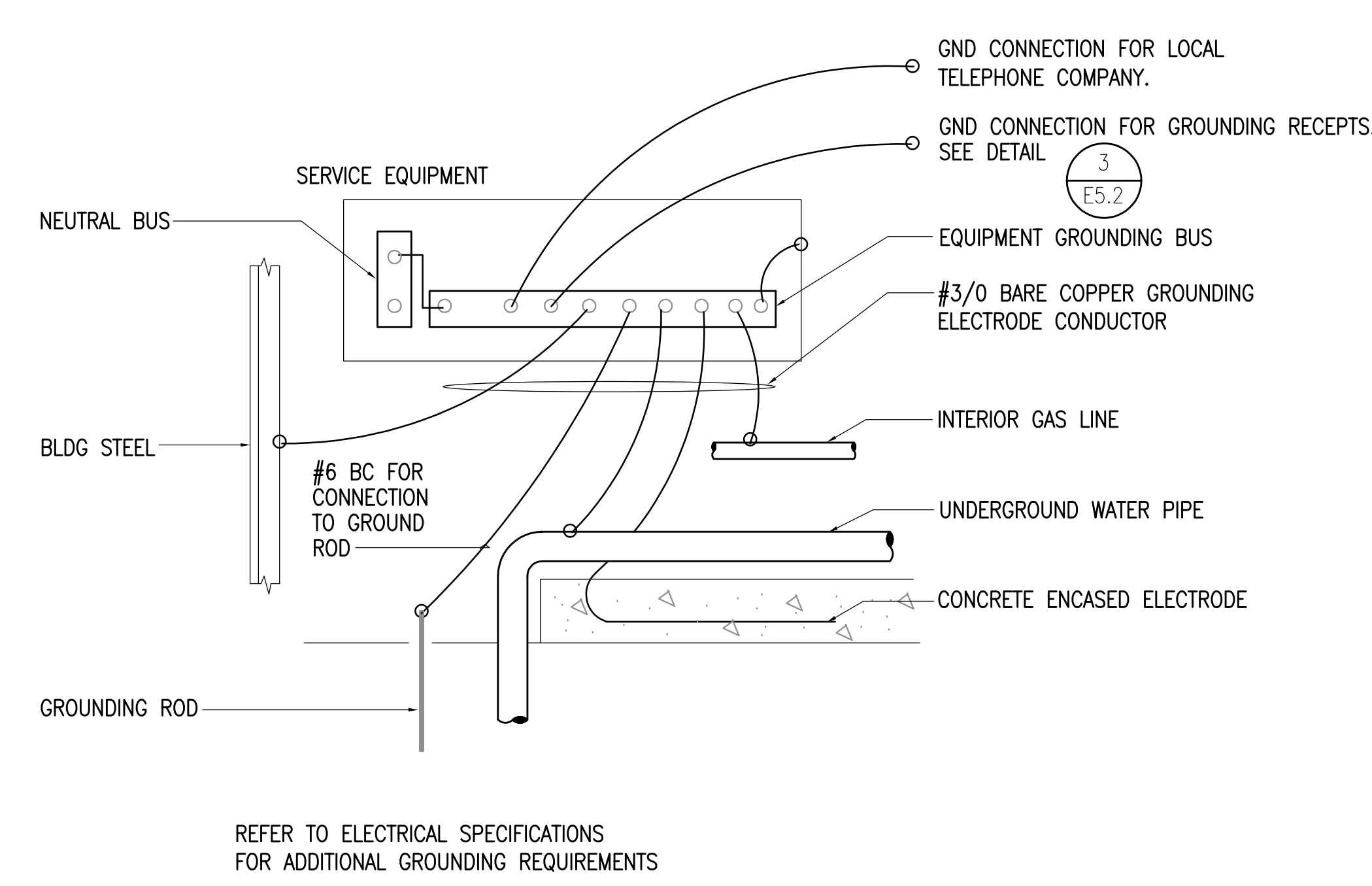
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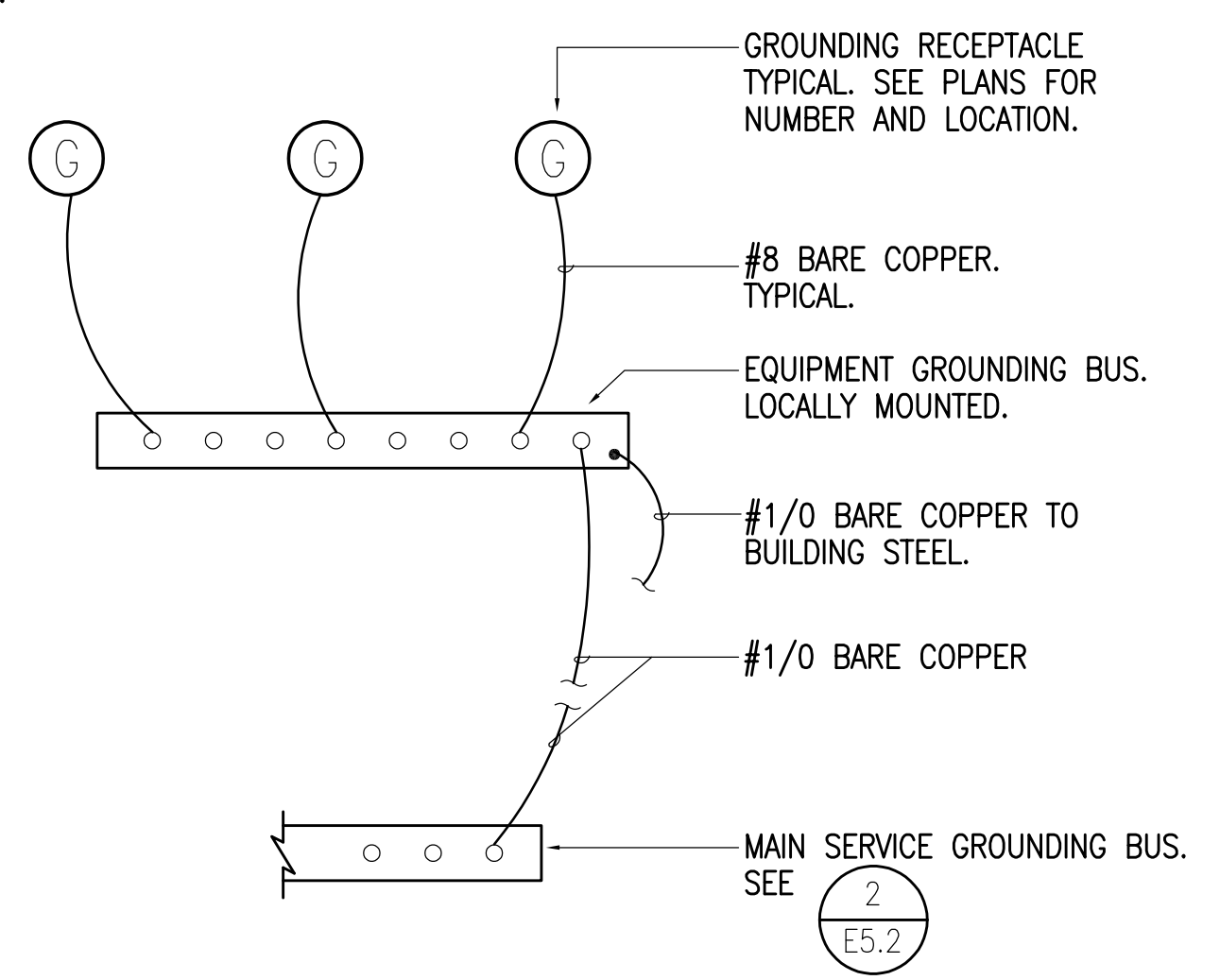


* SEE 'MDP' AND 'LDP' PANEL SCHEDULES FOR BREAKER SIZES.

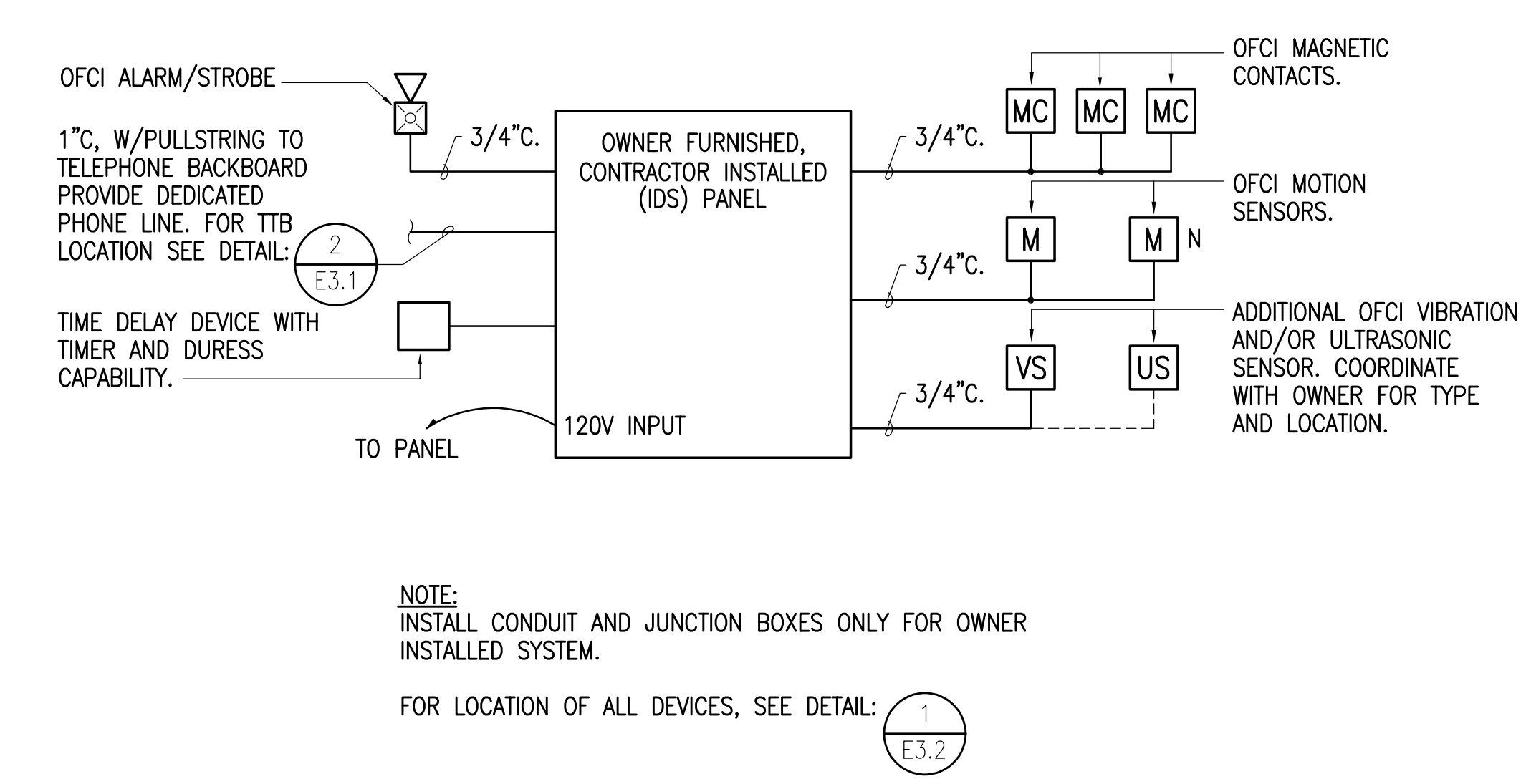
1 ELECTRICAL POWER ONE-LINE DIAGRAM
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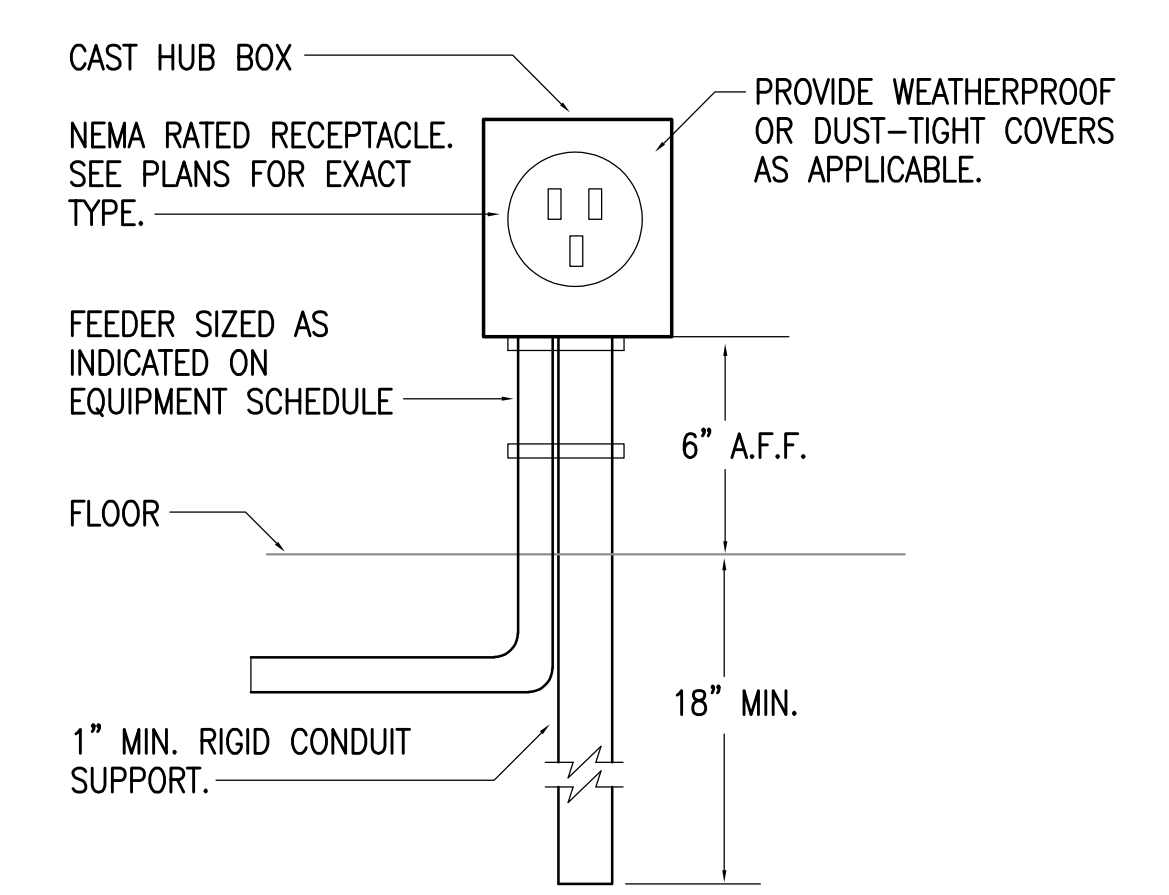
2 SERVICE GROUNDING DETAIL
NTS



3 GROUNDING RECEPTACLE DETAIL
NTS



4 JOINT SERVICES INTERIOR INTRUSION DETECTION SYSTEM (JSIIDS) ONE-LINE DIAGRAM
NTS



5 FLOOR BOX DETAIL
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(907) 452-2128

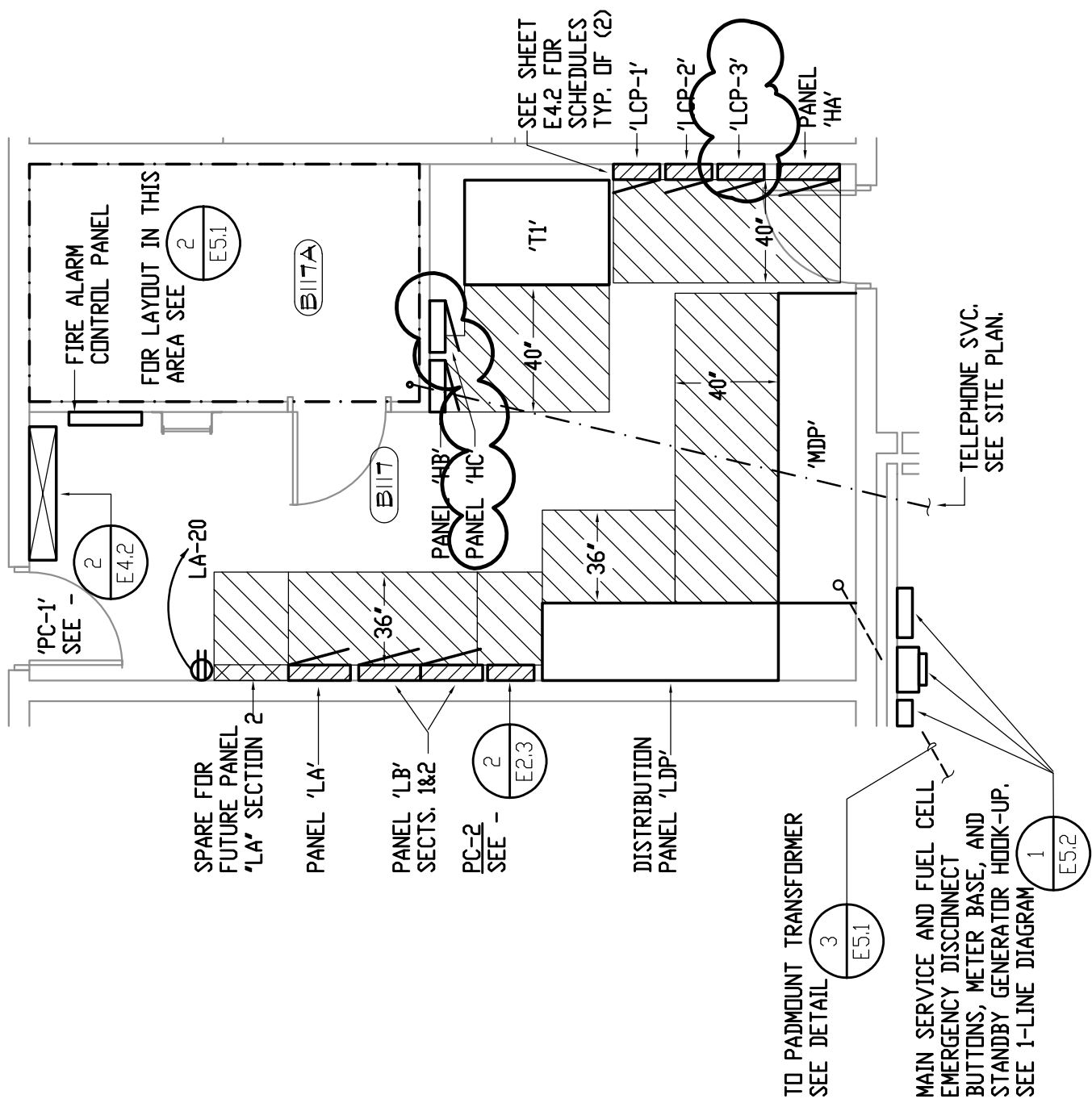
809 S. Chugach St., Ste. 1
Palmer, Alaska 99645
(907) 746-7815

Project:
ALASKA NATIONAL GUARD CSMS/MATES

Project Mgr.	K.D.M.
Drawn	CPL
Drawn	CPL
Checked	TEH
Date	7 FEB 2000

Sheet Contents:
ELEC. DIAGRAMS:
POWER ONE-LINE,

Sheet No.:
E5.2
USKH W.O. 530200



1 REVISED ELECTRICAL ROOM PLAN

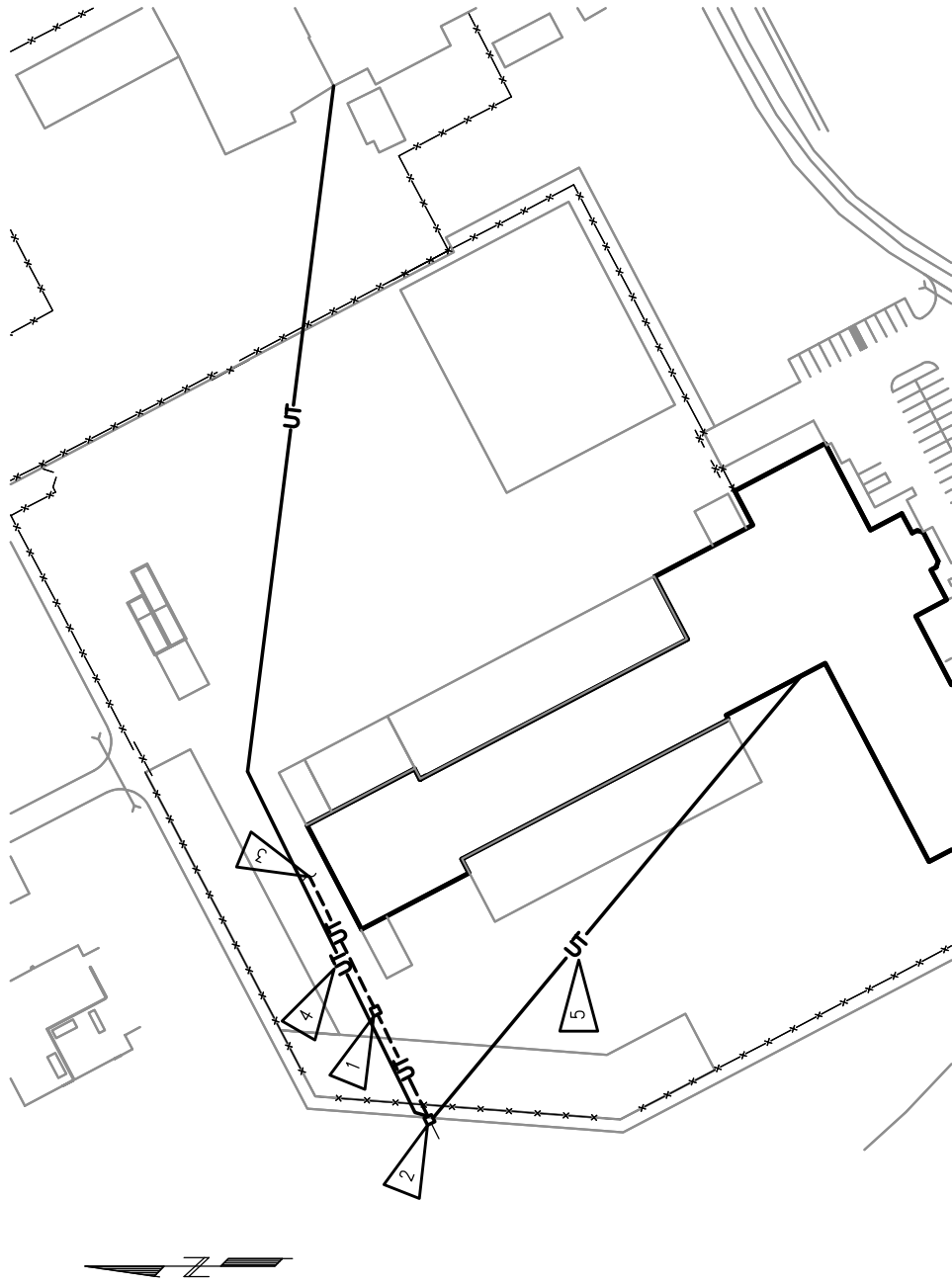
1/8" = 1'-0"

CHECKED
TEH
DATE
04/20/00

ALASKA NATIONAL GUARD
CSMS/MATES
REVISED ELECTRICAL ROOM PLAN

RSA
Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS
2522 Arctic Boulevard, Suite 200
Anchorage, AK 99505
Phone 276-0521 Fax. 276-1751

SHEET
XE1
8120-XE2



1 SITE TELECOMMUNICATIONS REVISIONS

1" = 150'

NOTES:

1. REMOVE EXISTING TELECOMMUNICATIONS PEDESTAL FROM INSIDE NEW CSMS/MATES FENCE LINE. TRACE EXISTING CABLE TO POINT OUTSIDE FENCE LINE AND EXCAVATE EXISTING LINE TO PROVIDE CONNECTION TO NEW TELECOMMUNICATION PEDESTAL.
2. APPROXIMATE LOCATION OF EXISTING NEW TELECOMMUNICATIONS PEDESTAL. THE ROUTING OF EXISTING TELECOMMUNICATIONS CABLE IS ASSUMED TO FOLLOW THE EXISTING TRAIL CONTRACTOR SHALL POSITION PEDESTAL AT THE NEAREST POINT OF THE EXISTING CABLE 30' OUTSIDE THE FENCE LINE.
3. ABANDON EXISTING TELECOMMUNICATIONS CABLING IN PLACE.
4. PROVIDE NEW 100 PAIR TELECOMMUNICATIONS TO CSMS/MATES.
5. PROVIDE NEW 200 PAIR TELECOMMUNICATIONS CABLE TO EXISTING USPFO. CONNECT TELECOMMUNICATIONS CABLE TO USPFO COMMUNICATIONS SYSTEM AT MAIN TELEPHONE BACKBOARD.
6. OWNER WILL PROVIDE ALL CABLING FOR CONTRACTOR INSTALLATION
7. CONTRACTOR SHALL COORDINATE ALL CABLE INSTALLATION WITH EXISTING UNDERGROUND FACILITIES.

CHECKED
TEH

DATE
07/31/00

ALASKA NATIONAL GUARD
CSMS/MATES
SITE TELECOMMUNICATIONS REVISIONS

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MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS
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Anchorage, AK 99503
Phone 276-0521 Fax. 276-1751

SHEET

XE2

820-XE2.DWG

SUGGESTED LOCATION
FUTURE PULL BOX.

SUGGESTED ROUTING
FOR FUTURE (2) 2.5"
CONDUITS.

CONTRACTOR SHALL
CORE DRILL MASONRY
WALLS FOR FUTURE
(2) 2.5" CONDUITS
TYPICAL.

DISTRIBUTION
PANEL LDP
DISTRIBUTION
PANEL MDP

1

1" = 20'

PROPSD. ROUTING FUTURE ELECTRONICS BAY OUTLETS

CHECKED

TEH

DATE

01/29/01

ALASKA NATIONAL GUARD

CSMS/UTES

RFP #27

RS A

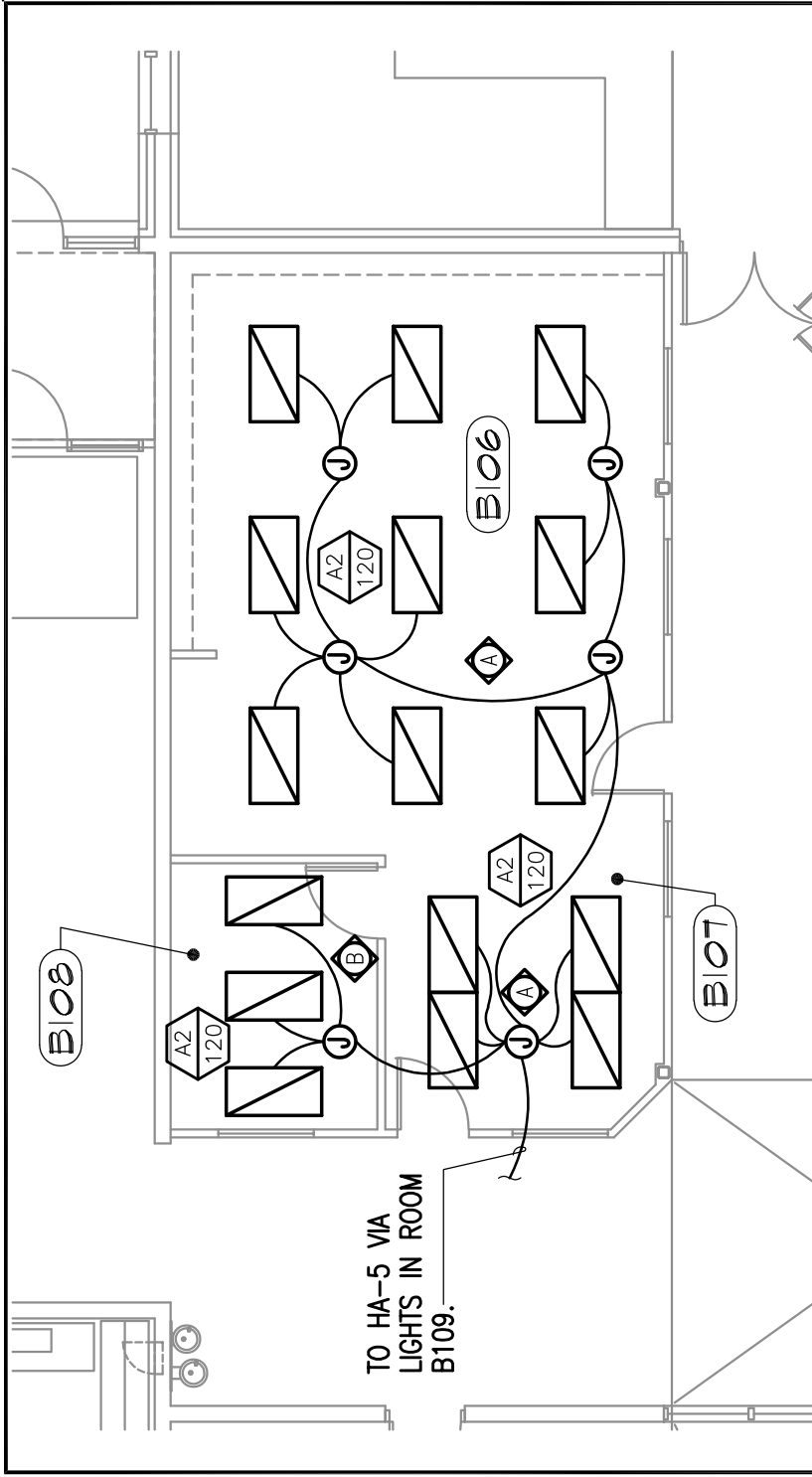
Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS

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SHEET

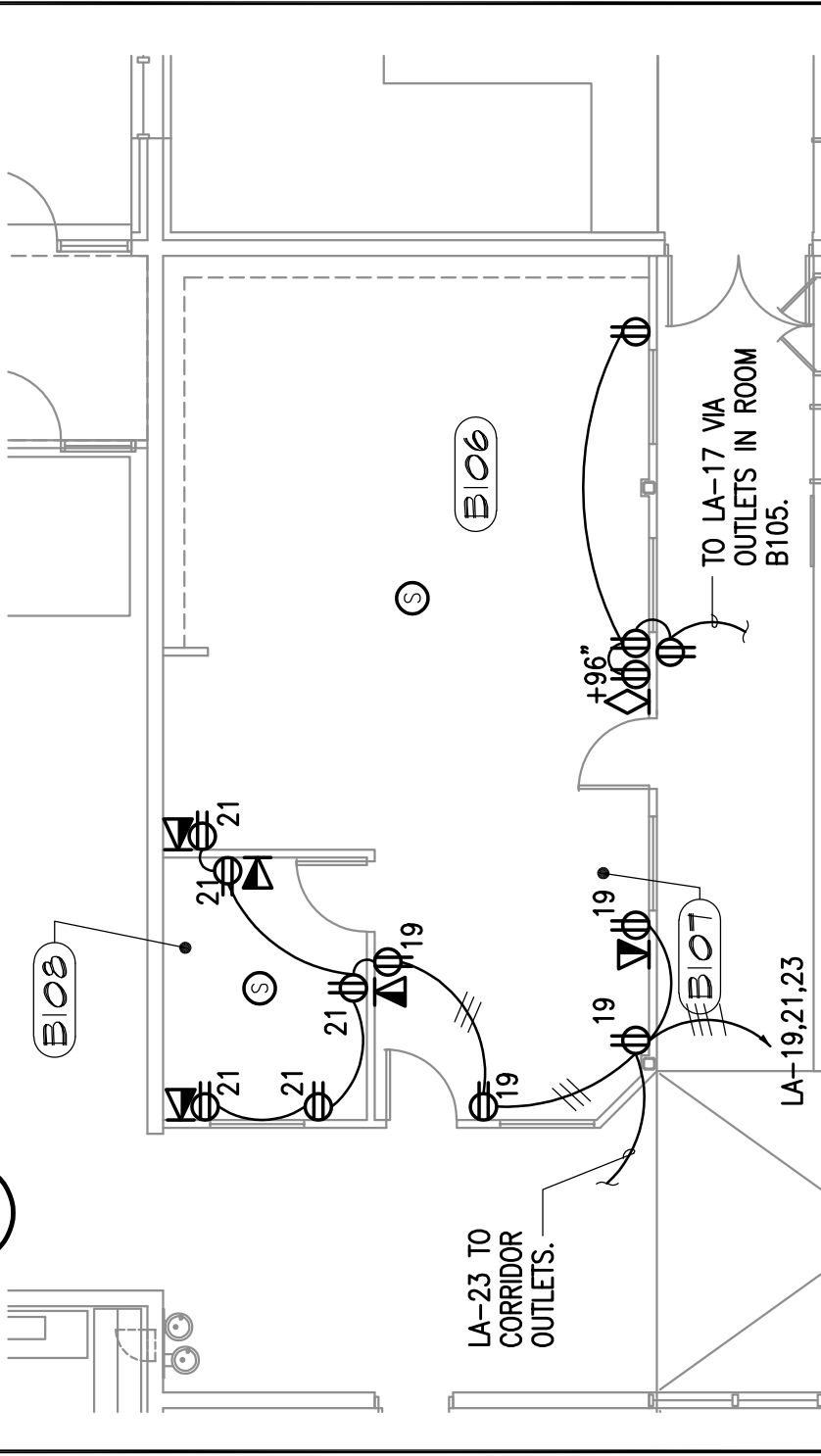
XE3

XXX-XX.DWG



1 REVISED LIGHTING PLAN - LIBRARY

1/8" = 1'-0"



2 REVISED POWER AND SIGNAL PLAN - LIBRARY

1/8" = 1'-0"

CHECKED
TEH
DATE
01/29/01

ALASKA NATIONAL GUARD
CSMS/UTES
LIBRARY CHANGES

RSA
Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS
2522 Arctic Blvd., Suite 200
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Phone 276-0521 Fax 276-1751

SHEET
XE4
8/20-XE4.DWG