ELECTRICAL NOTES

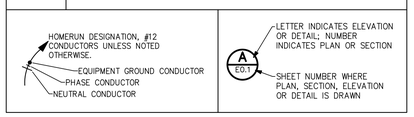
1. ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
2. PERMITS FOR ELECTRICAL WORK SHALL BE OBTAINED BY AND PAID BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PAY FOR ANY ADDITIONAL FEES FOR INSPECTIONS, TESTS, AND OTHER SERVICES AS REQUIRED FOR THE COMPLETION OF THE WORK.
3. THE ELECTRICAL CONTRACTOR AND ANY OF HIS SUBCONTRACTORS SHALL VISIT THE PROJECT SITE TO WITNESS EXISTING CONDITIONS AND BECOME FAMILIAR WITH THE SCOPE OF THE WORK REQUIRED PRIOR TO SUBMITTING PROPOSALS. WORK REQUIRED BY EXISTING JOB CONDITIONS NOT INDICATED ON DRAWINGS SHALL BE INCLUDED IN THE BID.
4. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO RESULT IN THE PRODUCTION OF A COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL MATERIAL, LABOR, EQUIPMENT, AND OTHER SERVICES AS NECESSARY TO COMPLETE THE WORK.
5. DISCREPANCIES IN THE DRAWINGS AND SPECIFICATIONS THAT WILL AFFECT THE WORK SHALL BE BROUGHT TO THE ATTENTION OF THE **ARCHITECT,** ENGINEER, AND/OR OWNER PRIOR TO SUBMITTING PROPOSALS.
6. UNLESS NOTED OTHERWISE, ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND INCLUDE A 3RD PARTY LABEL (I.E.: UL, CSA, ETL, ETC.) LISTING APPROVAL FOR ITS INSTALLED APPLICATION.
7. REVIEW PLANS OF OTHER TRADES FOR COORDINATION OF WORK AND FOR RELATED AND ADJOINING WORK.
8. REVIEW COMPLETE PLAN SET FOR CONSTRUCTION TYPE, FINISHES, HEADROOM, ROOF FINISHES, CEILINGS, ETC. REVIEW COMPLETE PLAN SET FOR PROJECT PHASING AND STAGING. REVIEW COMPLETE PLAN SET FOR WORK COVERED BY ALTERNATE BID ITEMS.
9. COORDINATE DEVICE AND EQUIPMENT MOUNTING HEIGHTS WITH OTHER DISCIPLINE DRAWINGS, CASEWORK DETAILS & SUBMITTALS, EQUIPMENT DETAILS & SUBMITTALS, ETC.
10. PENETRATIONS OF FIRE-RATED WALLS, FLOORS, CEILINGS, AND PARTITIONS SHALL BE FIRE STOPPED IN ACCORDANCE WITH REQUIREMENTS OF THE STATE BUILDING CODE. COORDINATE WORK TO INSURE THAT FIRE STOPPING IS COMPLETED.
11. PENETRATIONS OF SMOKE PARTITIONS SHALL BE SEALED IN ACCORDANCE WITH REQUIREMENTS OF THE STATE BUILDING CODE. COORDINATE WORK TO INSURE THAT SMOKE PARTITION SEALING IS COMPLETED.
12. PENETRATIONS OF EXTERIOR BUILDING WALLS, FLOORS, OR ROOFS SHALL BE SEALED WATERTIGHT. INTERIORS OF RACEWAY PENETRATIONS THROUGH EXTERIOR WALLS SHALL BE SEALED WITH NON-HARDENING ELECTRICAL PUTTY.
13. CUTTING AND PATCHING TO INSTALL DEVICES AND EQUIPMENT SHALL BE PERFORMED WITH FINISHES RESTORED TO THEIR ORIGINAL CONDITION. SUCH WORK SHALL BE COMPLETED TO A DEGREE THAT IS ACCEPTABLE TO THE **ARCHITECT,** ENGINEER, AND/OR OWNER.
14. SEE SPECIFICATIONS FOR DIVISION OF RESPONSIBILITY FOR PROVIDING DISCONNECTS, STARTERS, DRIVES, ETC. FOR EQUIPMENT SUPPLIED BY OTHER SUBCONTRACTORS.
15. COORDINATE PRECISE LOCATION OF HVAC EQUIPMENT WITH THE MECHANICAL CONTRACTOR.
16. FOR HVAC EQUIPMENT, VERIFY CIRCUIT BREAKER RATINGS, FUSE RATINGS, AND WIRE SIZES. IF RATINGS DIFFER FROM THOSE INDICATED ON THE DRAWINGS, NOTIFY THE ARCHITECT, ENGINEER, AND OWNER FOR DIRECTION. PROVIDE OVERCURRENT PROTECTION IN ACCORDANCE WITH EQUIPMENT MANUFACTURER NAMEPLATE DATA. IF THE EQUIPMENT LISTING LABEL REQUIRES FUSED PROTECTION, ENSURE THAT FUSES IN A FUSED DISCONNECT SWITCH AT THE EQUIPMENT ARE SIZED AS INDICATED ON THE EQUIPMENT LABEL.
17. VERIFY PROPER SIZING OF OVERLOAD DEVICES IN STARTERS BASED ON EQUIPMENT NAMEPLATE DATA.
18. IF HORSEPOWER OR LOAD RATINGS OF EQUIPMENT DIFFER FROM THOSE INDICATED ON THE DRAWINGS, NOTIFY THE ARCHITECT, ENGINEER, AND OWNER FOR DIRECTION.
19. PROVIDE NATIONAL ELECTRICAL CODE REQUIRED CLEARANCES FOR ALL ELECTRICAL EQUIPMENT. COORDINATE RESOLUTION OF CONFLICTS WITH OTHER TRADES.
20. RECEPTACLE, SWITCH, DATA/TELEPHONE OUTLETS SHALL BE FLUSH MOUNTED IN FINISHED SPACES UNLESS OTHERWISE NOTED.
21. WHERE INSTALLED IN PLENUM SPACES, CABLES SHALL BE PLENUM-RATED OR INSTALLED IN METAL RACEWAY.
22. PRIOR TO ORDERING LIGHT FIXTURES, CONTRACTOR SHALL VERIFY TYPE OF CEILING OR WALL BY REVIEW OF ARCHITECTURAL FINISH SCHEDULES AND PROVIDE SUITABLE TRIM AND APPURTENANCES TO MOUNT FIXTURES IN TYPE OF CEILING OR WALL INDICATED.
23. RECESSED LIGHT FIXTURES INSTALLED IN CEILINGS HAVING INSULATION INSTALLED OVER CEILING AND FIXTURES (AS INDICATED IN ARCHITECTURAL PLANS, OR FOUND AS EXISTING CONDITIONS) SHALL BE U.L. RATED FOR DIRECT CONTACT WITH INSULATION.
24. RECESSED LIGHT FIXTURES INSTALLED IN FIRE RATED CEILING SHALL BE U.L. RATED FOR USE IN FIRE RATED CEILINGS OR SHALL BE INSTALLED WITH "TENTING" IN ACCORDANCE WITH RATING REQUIREMENTS OF THE CEILING ASSEMBLY.
25. EXIT AND EMERGENCY LIGHTS SHALL BE CONNECTED TO THE NEAREST UNSWITCHED CIRCUIT THAT SERVES LIGHT FIXTURES WITHIN THE SAME SPACE.
26. NO MOUNTING HARDWARE SHALL BE ATTACHED TO ROOF DECKS. ATTACHMENTS SHALL BE MADE TO THE ROOF SUPPORTING STRUCTURE.
27. ABANDONED CIRCUITRY (RACEWAY & CONDUCTORS) SHALL BE REMOVED IN ITS ENTIRETY FROM ITS SOURCE. ABANDONED LOW VOLTAGE CABLING SHALL BE REMOVED IN ITS ENTIRETY UNLESS OTHERWISE NOTED.
28. PANEL BUS MATERIAL: COPPER.
29. SHARED NEUTRAL CONDUCTORS SHALL NOT BE USED UNLESS SPECIFICALLY INDICATED SO ON HOMERUN CIRCUITRY DESIGNATIONS.
30. PANEL BREAKER CONFIGURATIONS SHALL BE INSTALLED AS INDICATED ON THE PANEL SCHEDULES OR AS NOTED. BREAKER POSITION REVISIONS WILL NOT BE ACCEPTED UNLESS APPROVED IN WRITING BY THE ENGINEER.
31. LOAD CIRCUITS SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS. CIRCUITRY REVISIONS WILL NOT BE ACCEPTED UNLESS APPROVED IN WRITING BY THE ENGINEER.
32. INCREASE 120V, 20A RECEPTACLE BRANCH CIRCUIT HOMERUNS OVER 50' LENGTH FROM #12 TO #10.
33. CONTRACTOR TO TURN OVER FIRE ALARM SYSTEM DEMO EQUIPMENT, DEVICES, AND APPLIANCES TO NHCS MAINTENANCE DEPARTMENT.

ABBREVIATIONS

ADA	AMERICAN DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLER UNIT
AIC	AMPS INTERRUPTING CAPABILITY
BKR	BREAKER
C	CONDUIT
C/B	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CLG	CEILING
CKT	CIRCUIT
COMP	COMPRESSOR
CU	COPPER
DIA	DIAMETER
DDC	DIRECT DIGITAL CONTROL
DWG	DRAWING
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSED
EXSTG	EXISTING
FACP	FIRE ALARM CONTROL PANEL
FACU	FIRE ALARM CONTROL UNIT
G	EQUIPMENT GROUND
GEC	GROUNDING ELECTRODE CONDUCTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
HP	HEAT PUMP
HP	HORSEPOWER
IMC	INTERMEDIATE METAL CONDUIT
K	KILO (THOUSAND)
LED	LIGHT EMITTING DIODE
LTG	LIGHTING
LTS	LIGHTS
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MLO	MAIN LUG ONLY
MTG	MOUNTING
N/A	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
NHCS	NEW HANOVER COUNTY SCHOOLS
NTS	NOT TO SCALE
P	PHASE OR POLE
PH	PHASE
PNL	PANEL
PROJ	PROJECTOR
PVC	POLYVINYL CHLORIDE
REC	RECEPTACLE
RECPT	RECEPTACLE
REQ.	REQUIRED
S.S.	STAINLESS STEEL
SYS	SYSTEM
S/N	SOLID NEUTRAL
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VA	VOLT-AMPS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
W	WIRE
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER

MISC. ELECTRICAL SYMBOL LEGEND

- ENCLOSED CIRCUIT BREAKER, NEMA 1 INSIDE, NEMA 4X OUTSIDE (UNO); AMPERAGE AS INDICATED OR BASED ON SUPPLY CIRCUIT RATING.
- EQUIPMENT CONNECTION
- SAFETY SWITCH DISCONNECT, HEAVY-DUTY, NON-FUSED, NEMA 1 INSIDE, NEMA 4X OUTSIDE (UNO), AMPERAGE AS INDICATED OR BASED ON SUPPLY CIRCUIT BREAKER RATING.
- SAFETY SWITCH DISCONNECT, HEAVY-DUTY, FUSED AT NAMEPLATE RATING OF EQUIPMENT SERVED, NEMA 1 INSIDE, NEMA 4X OUTSIDE (UNO), AMPERAGE AS INDICATED OR BASED ON SUPPLY CIRCUIT BREAKER RATING.
- PANELBOARD, SEE PANEL SCHEDULE
- TRANSFORMER, DRY TYPE, RATINGS INDICATED, NEMA 1 ENCLOSURE (UNO). PROVIDE 4" CONCRETE HOUSE KEEPING PAD IF A FLOOR MOUNTED UNIT IS PROVIDED.
- GROUND ROD, 3/4" X 10' COPPER CLAD. WHERE TWO RODS ARE INDICATED, SPACE A MINIMUM OF 20' APART.



APPENDIX B, BUILDING CODE SUMMARY
ELECTRICAL SUMMARY

METHOD OF COMPLIANCE
-ENERGY CODE: ☒ PRESCRIPTIVE ☐ PERFORMANCE
-ASHRAE 90.1: ☐ PRESCRIPTIVE ☐ PERFORMANCE

LIGHTING SCHEDULE
Lamp Type Required in Fixtures
Number of Lamps in Fixtures
Ballast Types Used in Fixtures
Number of Ballasts Used in Fixtures
Total Wattage per Fixture
→ SEE LIGHT FIXTURE / LUMINAIRE SCHEDULE

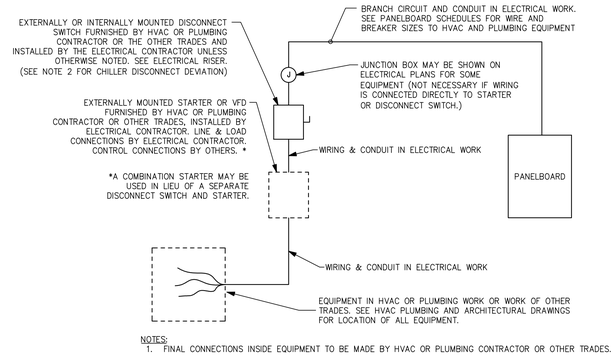
TOTAL WATTAGE SPECIFIED VERSUS ALLOWED
Interior Specified: **18,533 Watts** Exterior Specified: **472 Watts**
Interior Allowed: **28,505 Watts** Exterior Allowed: **1001 Watts**

ADDITIONAL METHOD OF COMPLIANCE:
- ☐ 506.2.1 More Efficient Mechanical Equipment
- ☒ 506.2.2 Reduced Lighting Power Density
- ☐ 506.2.3 Energy Recovery Ventilation System
- ☐ 506.2.4 Higher Efficiency Service Water Heating
- ☐ 506.2.5 On-Site Supply of Renewable Energy
- ☐ 506.2.6 Automatic Daylighting Control Systems

DESIGNER STATEMENT

To the best of my knowledge and belief, the design of this building complies with the electrical systems and equipment requirements of the North Carolina State Building Code, Section 505 of the North Carolina Energy Conservation Code.

SIGNED: Mark A. Ciarrocca
NAME: Mark A. Ciarrocca, P.E.
TITLE: Engineer



NOTES:
1. FINAL CONNECTIONS INSIDE EQUIPMENT TO BE MADE BY HVAC OR PLUMBING CONTRACTOR OR OTHER TRADES.

A E0.1 **ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT**
NO SCALE

WARNING

Maximum Available Fault Current:
22,598 Symmetrical RMS Amperes
Date: 01/17/2019
Based on :
Utility Transformer: 300 kVA (Maxiumum)
Utility Transformer: 3.5% Impedance (Minimum)
Service Feeder: #400kCMIL (5 SETS)(Maximum) Copper
Service Feeder Length: 88' (Minimum)
Motor Load: 150 kVA (Maximum)

NOTE
THE CONTRACTOR SHALL OBTAIN INSTALLED SERVICE TRANSFORMER DATA AND AVAILABLE FAULT CURRENT DATA FROM THE UTILITY COMPANY. FORWARD INFORMATION TO THE ENGINEER FOR ASSESSMENT OF REVISIONS TO THE LABEL DATA.

A E0.1 **FAULT CURRENT LABEL FOR SERVICE EQUIPMENT**
NO SCALE

LOAD SUMMARY

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	22	27.5	(125%)	CONTINUOUS	3.5	4.38	(125%)
LARGEST MOTOR	11.3	14.2	(125%)	HEATING	142	142	(100%)
OTHER MOTORS	136	136	(100%)	COOLING	53.1	0	(0%)
RECEPTACLES	52	31	(50%>10)	NONCONTINUOUS	50.2	50.2	(100%)
KITCHEN EQUIP	0	0	(N/A)	DIVERSE	38.4	38.4	(100%)
				METERED DEMAND	0	0	(125%)
				TOTAL KVA	457	443	
				BALANCED 3-PHASE AMPS		1,230	

LOAD SUMMARY
OPTIONAL CALCULATION METHOD FOR SCHOOLS

CONNECTED LOAD (KVA)	456	
SQUARE FOOTAGE (SF)	30,735	
VA / SF	14.84	
NEC 220.86-->	DEMAND FACTOR	LOAD (VA/SF)
FIRST 3 VA/SF	100%	3
OVER 3 TO 20 VA/SF	75%	8.88
OVER 20 VA/SF	25%	0.00
	TOTAL VA/SF	11.88
	TOTAL DEMAND (KVA)	365
	SERVICE VOLTAGE	208
	AMPS @ 208V =	1013

SHEET LIST

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1760 MARK A. CIARROCCA

Wrightsville Beach Elementary School Addition & Renovation

220 Coral Drive
Wrightsville Beach, NC

Construction Drawings
February 20, 2019

Revisions:

ELECTRICAL LEGEND, NOTES, SCHEDULE, DETAIL

E0.1

SWITCH LEGEND

SYMBOL	DESCRIPTION	NOTES
$ D	DIMMER SWITCH	RATED FOR VOLTAGE WHERE APPLIED, 20A; MTD 42" AFF UNO
$ OD	OCCUPANCY SENSOR WALL SWITCH, DIMMER	RATED FOR VOLTAGE WHERE APPLIED, 20A; MTD 42" AFF UNO
$ 02	OCCUPANCY SENSOR WALL SWITCH, DUAL CKT, DUAL TECHNOLOGY	RATED FOR VOLTAGE WHERE APPLIED, 20A; MTD 42" AFF UNO; CONFIGURE OUTPUT FOR DUAL LEVEL SWITCHING
$ 01	OCCUPANCY SENSOR WALL SWITCH, SINGLE CKT, DUAL TECHNOLOGY	RATED FOR VOLTAGE WHERE APPLIED, 20A; MTD 42" AFF UNO
OS	OCCUPANCY SENSOR, DUAL TECHNOLOGY; CEILING MTD	INCORPORATE POWER PACK FOR CIRCUITRY SWITCHING, SEE WIRING DIAGRAMS
PC	PHOTOCELL, EXTERIOR; MOUNT ON NORTH FACE OF BLDG, FACING NORTH	
$ ST	STACKED SWITCHES TO BE REMOVED	
$	TOGGLE SWITCH, SINGLE POLE	120/277V, 20A; MTD 42" AFF UNO

DATA & TELEPHONE OUTLET LEGEND

SYMBOL	DESCRIPTION	MOUNTING	NOTES
◀ AP	DATA OUTLET FOR WIRELESS ACCESS POINT	FIRST FLOOR: SURFACE MOUNT WHERE NO GRID. 3/4"C TO EXISTING CABLE TRAY. SECOND FLOOR: 4" SQUARE BOX MOUNTED 24" ABOVE CEILING WHERE GRID INSTALLED.	INSTALL (1) CAT 6A CABLE TO IT ROOM. MOUNT OWNER PROVIDED EQUIPMENT AT CEILING OR WALL MOUNTED IF INDICATED. PROVIDE PATCH CORD FROM OUTLET TO EQUIPMENT.
©	EXISTING CABLE TV OUTLET TO BE REMOVED		
◁ C	DATA / TELEPHONE OUTLET	WALL, MTD 6" ABOVE COUNTER HEIGHT AFF UNO; 4" SQUARE, DEEP BOX	STUB 1"C TO 6" ABOVE CEILING
◁	DATA / TELEPHONE OUTLET	WALL, 18" AFF UNO; 5" SQUARE, 2.875" DEEP BOX, 64 CUBIC INCHES, WITH CABLE MANAGEMENT POSTS. DESIGN BASIS: STEEL CITY #82181T SERIES	AREAS WITH LAY-IN CEILING: STUB 1"C TO 6" ABOVE CEILING INSTALL (2) CAT 6 CABLES TO IT ROOM AREAS WITHOUT LAY-IN CEILING: STUB 1"C TO CABLE TRAY INSTALL (2) CAT 6 CABLES TO IT ROOM.
	EQUIPMENT RACK, 19" X 7'	FLOOR	
	DATA / TELEPHONE OUTLET	FLOOR POKE-THRU, INTEGRAL TO POWER FLOOR BOX WITH DIVIDER SEPARATING POWER & COMMUNICATIONS	ROUTE (2) 1" C UNDERSLAB, TURN UP INTO WALL CAVITY, & STUB UP TO 6" ABOVE CEILING INSTALL (2) CAT 6 CABLES TO IT ROOM
◀ AD	TELEPHONE OUTLET FOR PANIC ALARM SYSTEM AUTO DIALER	WALL, 18" AFF UNO; 4" SQUARE, DEEP BOX	STUB 1"C TO CABLE TRAY IN ROOM INSTALL TELEPHONE CABLE TO TELEPHONE SYSTEM DEMARC
◀ PIM	IT OUTLET FOR WIRELESS ACCESS CONTROL DEVICE	4" SQUARE BOX	CONTRACTOR SHALL PROVIDE AND INSTALL SCHLAGE/ALLEGION #PIM400-1501 CONTROLLER. INSTALL (1) CAT 6 CABLE TO IT ROOM. PROVIDE PATCH CORD FROM OUTLET TO EQUIPMENT.
◁ T	DATA / TELEPHONE OUTLET FOR TEACHER	WALL, 18" AFF UNO; 3-GANG EXTRA DEEP BOX	SEE DETAILS A/E5.4 AND B/E5.4. PROVIDE (2) HDMI PATCH CABLES AND (1) USB-B PATCH CABLE IN EACH CLASSROOM.
◀ VE	VIDEO EQUIPMENT OUTLET	WALL; COORDINATE EXACT LOCATION AND MTG HEIGHT WITH ARCHITECT.	VIDEO EQUIPMENT PROVIDED BY OWNER. INSTALLED BY CONTRACTOR. PROVIDE (2) HDMI PATCH CABLES AND (1) USB-A PATCH CABLE IN EACH CLASSROOM. SEE DETAILS A/E5.4 AND B/E5.4.
◀ ELEV	TELEPHONE OUTLET FOR ELEVATOR COMMUNICATION	COORDINATE INSTALLATION LOCATION WITH ELEVATOR VENDOR/INSTALLER	STUB 1"C TO 6" ABOVE CEILING INSTALL CAT 6 TELEPHONE CABLE TO IT ROOM
◀ FA	COMMUNICATIONS OUTLET FOR FIRE ALARM SYSTEM	3/4"C FOR (1) TELEPHONE CABLE 3/4"C FOR (1) TELEPHONE CABLE AND (1) DATA CABLE	ROUTE CONDUITS DIRECTLY INTO FIRE ALARM SYSTEM ENCLOSURE.
◀ SEC	COMMUNICATIONS OUTLET FOR SECURITY SYSTEM	(1) TELEPHONE CABLE IN 3/4" CONDUIT FOR SECURITY COMMUNICATION. (1) DATA DROP IN 3/4" CONDUIT FOR FUTURE USE.	ROUTE CONDUITS DIRECTELY INTO SECURITY PANEL

RECEPTACLE LEGEND

SYMBOL	NEMA	VOLTS	DESCRIPTION
	5-20R	120V 1P 2W	DUPLEX, MTD 18" AFF UNO
CPR	5-20R	120V 1P 2W	DUPLEX FOR COPIER, MTD 18" AFF UNO
	5-20R	120V 1P 2W	DUPLEX, MTD 6" ABOVE COUNTER HEIGHT UNO
G	5-20R	120V 1P 2W	DUPLEX GFCI, MTD 6" ABOVE COUNTER HEIGHT UNO
EWC	5-20R	120V 1P 2W	DUPLEX ELECTRIC WATER COOLER OUTLET; SUPPLY FROM GROUND FAULT TYPE C/B; COORDINATE MTG LOCATION TO CONCEAL OUTLET WHEN COOLER IS INSTALLED
W/G	5-20R	120V 1P 2W	DUPLEX GFCI, MTD 18" AFG UNO; LISTED WEATHER-RESISTANT TYPE; PROVIDE CAST ALUMINUM WEATHERPROOF IN-USE COVER WITH CAST ALUMINUM FD WEATHERPROOF BOX
	5-20R	120V 1P 2W	DUPLEX; MTD IN POKE-THRU; SEE AUX SYS PLANS FOR SHARED BOX; PROVIDE DIVIDER FOR POWER SEPARATION FROM VOICE/DATA
G	5-20R	120V 1P 2W	DUPLEX GFCI, MTD 18" AFF UNO
HB	5-20R	120V 1P 2W	DUPLEX FOR HOT BOX HEATER; SUPPLY FROM GFEP C/B (30mA); LISTED WEATHER-RESISTANT TYPE; PROVIDE CAST ALUMINUM WEATHERPROOF IN-USE COVER WITH CAST ALUMINUM FD WEATHERPROOF BOX. COORDINATE MTG HEIGHT WITH ENCLOSURE PROVIDED.
PROJ	5-20R	120V 1P 2W	EXISTING PROJECTOR TO BE REMOVED.
R	5-20R	120V 1P 2W	DUPLEX FOR REFRIGERATOR; MOUNT 48" AFF UNO. SUPPLY FROM GFCI TYPE C/B.
SPA	5-20R	120V 1P 2W	DUPLEX POWER FOR SUMP PUMP ALARM PANEL. COORDINATE EXACT LOCATION WITH OWNER.
UCR	5-20R	120V 1P 2W	DUPLEX FOR REFRIGERATOR; SUPPLY FROM GFCI TYPE C/B; COORDINATE MOUNTING HEIGHT WITH CASEWORK DRAWINGS.
J 2WY		120V 1P 2W	POWER FOR 2-WAY COMMUNICATION MASTER CONSOLE
J DDC		120V 1P 2W	J-BOX ABOVE CLG LEVEL FOR DDC OR MECHANICAL CONTROL POWER SOURCE
J FAP		120V 1P 2W	POWER FOR FIRE ALARM CONTROL PANEL
J HT		120V 1P 2W	HEAT TRACE CONNECTION POINT. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR.
J HTC		120V 1P 2W	POWER FOR HEAT TRACE CONTROLLER. SUPPLY FROM 30mA GFEP C/B.
J SEC		120V 1P 2W	POWER FOR SECURITY SYSTEM COMPONENT; TYPICALLY INSTALLED 12" ABOVE CLG
J SHUNT		120V 1P 2W	POWER FOR SHUNT TRIP CIRCUITRY
	5-20R	120V 1P 2W	QUAD, MTD 18" AFF UNO
VE	5-20R	120V 1P 2W	QUAD FOR VIDEO EQUIPMENT LOCATED IN RECESSED OUTLET BOX (COORDINATE SPECIFIC LOCATION WITH OWNER/ARCHITECT). SEE AUXILIARY SYSTEMS PLANS FOR SHARED BOX WITH DATA OUTLET. DESIGN BASIS ARLINGTON #TVBS613 WITH COVER. SEE DETAIL A/E5.4.
SUMP	5-20R	120V 1P 2W	SIMPLEX OUTLET FOR SUMP PUMP; SUPPLIED FROM GFCI C/B; MOUNT 24" AFF/AFG.
L6-20R	L6-20R	208V 2P 2W	DATA ROOM RECEPTACLE. MOUNT TO TOP OF RACK.
L14-30R	L14-30R	208V 2P 2W	DATA ROOM RECEPTACLE. MOUNT TO TOP OF RACK.
EF		120V 1P 2W	EXHAUST FAN; SEE MECHANICAL SCHEDULE.

NOTE: PROVIDE TAMPER RESISTANT RECEPTACLES WHERE REQUIRED BY NEC 406.12

FIRE ALARM LEGEND

SYMBOL	DESCRIPTION	MOUNTING
B	BEAM DETECTOR, TRANSMITTER WITH ASSOCIATED REFLECTOR	WALL
S 15	SPEAKER/STROBE, 15 CANDELA	CEILING
S 30	SPEAKER/STROBE, 30 CANDELA	CEILING
S 75	SPEAKER/STROBE, 75 CANDELA	CEILING
S 185	SPEAKER/STROBE, 185 CANDELA	CEILING
CM	CONTROL / RELAY MODULE	
CM ST	CONTROL / RELAY MODULE FOR SHUNT TRIP ACTIVATION; SEE DETAIL S/E5.2	
CM S	CONTROL / RELAY MODULE FOR SPEAKER BYPASS SEE DETAIL Q/E5.2	
DH	DOOR HOLDER, MAGNETIC	
FACP	FIRE ALARM CONTROL PANEL	
FS	FLOW SWITCH	
H	HEAT DETECTOR	CEILING
H E	HEAT DETECTOR; FOR ELEVATOR SHUNT TRIP ACTIVATION	CEILING/WALL
H	HEAT DETECTOR	WALL
F 15	HORN/STROBE, 15 CANDELA	WALL
LOC	LOCAL OPERATOR CONSOLE	
MM SS	MONITOR MODULE FOR COOKING EXHAUST HOOD FIRE SUPPRESSION SYSTEM	
MM SS	MONITOR MODULE WITH SURGE SUPPRESSOR FOR CONNECTION OF EXTERNAL CIRCUITRY	
MM	MONITOR MODULE FOR MONITORING A DRY CONTACT CLOSURE DEVICE	
PIV	POST INDICATOR VALVE TAMPER SWITCH	
PS	PRESSURE SWITCH	
F	PULL STATION	WALL
RA	REMOTE ANNUNCIATOR	WALL
S	SMOKE DETECTOR	CEILING
S	SMOKE DETECTOR	WALL
S	SPEAKER ONLY	WALL
S 15	SPEAKER/STROBE, 15 CANDELA	WALL
S 30	SPEAKER/STROBE, 30 CANDELA	WALL
S 75	SPEAKER/STROBE, 75 CANDELA	WALL
S 115	SPEAKER/STROBE, 115 CANDELA	WALL
S 185	SPEAKER/STROBE, 185 CANDELA	WALL
S 15	STROBE, 15 CANDELA	WALL
TS	TAMPER SWITCH	

PA & SECURITY LEGEND

SYMBOL	DESCRIPTION	MOUNTING	NOTES
S CASE	CLASSROOM AUDIO SOUND ENHANCEMENT SPEAKER	CEILING	CONNECTED TO TEACHER WORKSTATION. DESIGN BASIS: BOGEN ACD2X2 CIRCUIT 24V DC WIRES ABOVE CEILING TO 120/24V TRANSFORMER LOCATED AT VIDEO EQUIPMENT OUTLET.
S	PA/INTERCOM SPEAKER	CEILING	
PA	PA SPEAKER	WALL	
2W-M	ELEVATOR EMERGENCY 2-WAY COMMUNICATION MASTER STATION	WALL	PROVIDE MANUFACTURER'S REQUIRED CABLING / CIRCUITRY BETWEEN MASTER & REMOTE STATIONS TWO-WAY COMMUNICATIONS SYSTEM REQUIRED BY 2018 NCSBC 1009.8
2W-R	ELEVATOR EMERGENCY 2-WAY COMMUNICATION REMOTE STATION	WALL	TWO-WAY COMMUNICATIONS SYSTEM REQUIRED BY 2018 NCSBC 1009.8
C	SECURITY CAMERA		4" SQUARE BOX RECESSED; STUB 3/4"C TO INDICATED LOCATION OR NEAREST ACCESSIBLE CEILING SPACE. CAMERA PROVIDE AND INSTALLED BY NHCS. WHERE SURFACE MOUNTED ON 1ST FLOOR, 3/4"C TO EXISTING CABLE TRAY.
360 C	360 DEGREE SECURITY CAMERA		4" SQUARE BOX RECESSED; STUB 3/4"C TO INDICATED LOCATION OR NEAREST ACCESSIBLE CEILING SPACE. CAMERA PROVIDE AND INSTALLED BY NHCS. WHERE SURFACE MOUNTED ON 1ST FLOOR, 3/4"C TO EXISTING CABLE TRAY.
	DOOR SWITCH / CONTACT	RECESSED	1/2" FLEXIBLE METALLIC CONDUIT CONCEALED IN DOOR FRAME HEADER TO JUNCTION BOX MTD ABOVE DOOR. 1/2"C FROM JUNCTION BOX TO EXISTING CABLE TRAY. CONFIGURE A DEDICATED ZONE PER CONTACT LOCATION.
ES	ELECTRIC STRIKE		1/2" FLEXIBLE METALLIC CONDUIT CONCEALED IN DOOR FRAME HEADER TO JUNCTION BOX MTD ABOVE DOOR. 1/2"C FROM JUNCTION BOX TO EXISTING CABLE TRAY.
IC	AIPHONE STATION FOR 2-WAY COMMUNICATION BETWEEN FRONT DOOR AND RECEPTION DESK	OUTDOOR UNIT: WALL; INDOOR UNITS: DESK	OUTDOOR UNIT: MTD 54" AFF TO TOP OF DEVICE; 4" SQUARE DEEP BOX WITH SINGLE GANG RING. PROVIDE (1) 1"C TO JUNCTION BOX LOCATED ABOVE ACCESSIBLE CEILING. MASTER INDOOR UNIT: DESK MOUNTED. ROUTE 1" RMC THROUGH FURNITURE CASEWORK, STUB UP NEAREST WALL TO FLUSH MTD 4" SQUARE BOX WITH SURFACE MTD. EXTENSION RING, ABOVE ACCESSIBLE CEILING. PROVIDE CABLE PLATE UNDER DESK. SEE DETAIL C/E5.3. SUB-MASTER INDOOR UNIT: PROVIDE RECESSED 4" SQUARE BOX WITH SINGLE GANG RING AND CABLE PLATE UNDER DESK. ROUTE (1) 1"C TO JUNCTION BOX ABOVE ACCESSIBLE CEILING. COORDINATE FINAL LOCATIONS WITH OWNER. SEE SPECIFICATIONS. CABLE PLATE DESIGN BASIS: ARLINGTON CED135
K	KEYPAD	WALL	SURFACE MOUNTED BOX MTD 42" AFF AT KEYPAD LOCATION WITH 3/4"C ABOVE CEILING TO EXISTING CABLE TRAY.
360 M	MOTION DETECTOR, 360 DEGREE COVERAGE	CEILING	PROVIDED AND INSTALLED BY CONTRACTOR. 3/4" TO EXISTING CABLE TRAY. CONFIGURE A DEDICATED ZONE PER DETECTOR.
M	MOTION DETECTOR, CORRIDOR COVERAGE	SURFACE - CEILING / WALL	3/4" TO EXISTING CABLE TRAY. CONFIGURE A DEDICATED ZONE PER DETECTOR.
SEC	SECURITY SYSTEM CONTROLLER / CONTROL PANEL		PROVIDED AND INSTALLED BY CONTRACTOR.
P	PANIC ALARM PUSHBUTTON	UNDER DESK	LISTED PANIC ALARM BUTTON WITH FALSE ALARM PREVENTION FEATURES. NEATLY ROUTE EXPOSED WIRING UNDER DESK TO SHARED DATA OUTLET BOX & CONDUIT AND CONTINUE TO JUNCTION BOX ABOVE CEILING. 3/4"C FROM JUNCTION BOX BACK TO AUTODIALER IN DATA ROOM LOCATED IN 2ND FLOOR DATA ROOM. PUSHBUTTON DESIGN BASIS: HONEYWELL 270R
DR	PUSHBUTTON FOR REMOTE DOOR RELEASE	UNDER DESK	SURFACE MTD, MOMENTARY PUSHBUTTON. CONTACTS RATED FOR REQUIRED LOAD. NEATLY ROUTE EXPOSED WIRING UNDER DESK TO SHARED DATA OUTLET BOX & CONDUIT AND CONTINUE TO JUNCTION BOX ABOVE CEILING.
S	PA SPEAKER TO BE REMOVED	CEILING	
S	PA SPEAKER	WALL	WET LOCATION LISTED WHEN SHOWN OUTSIDE

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25 FEB 2019

Wrightsville Beach Elementary School Addition & Renovation

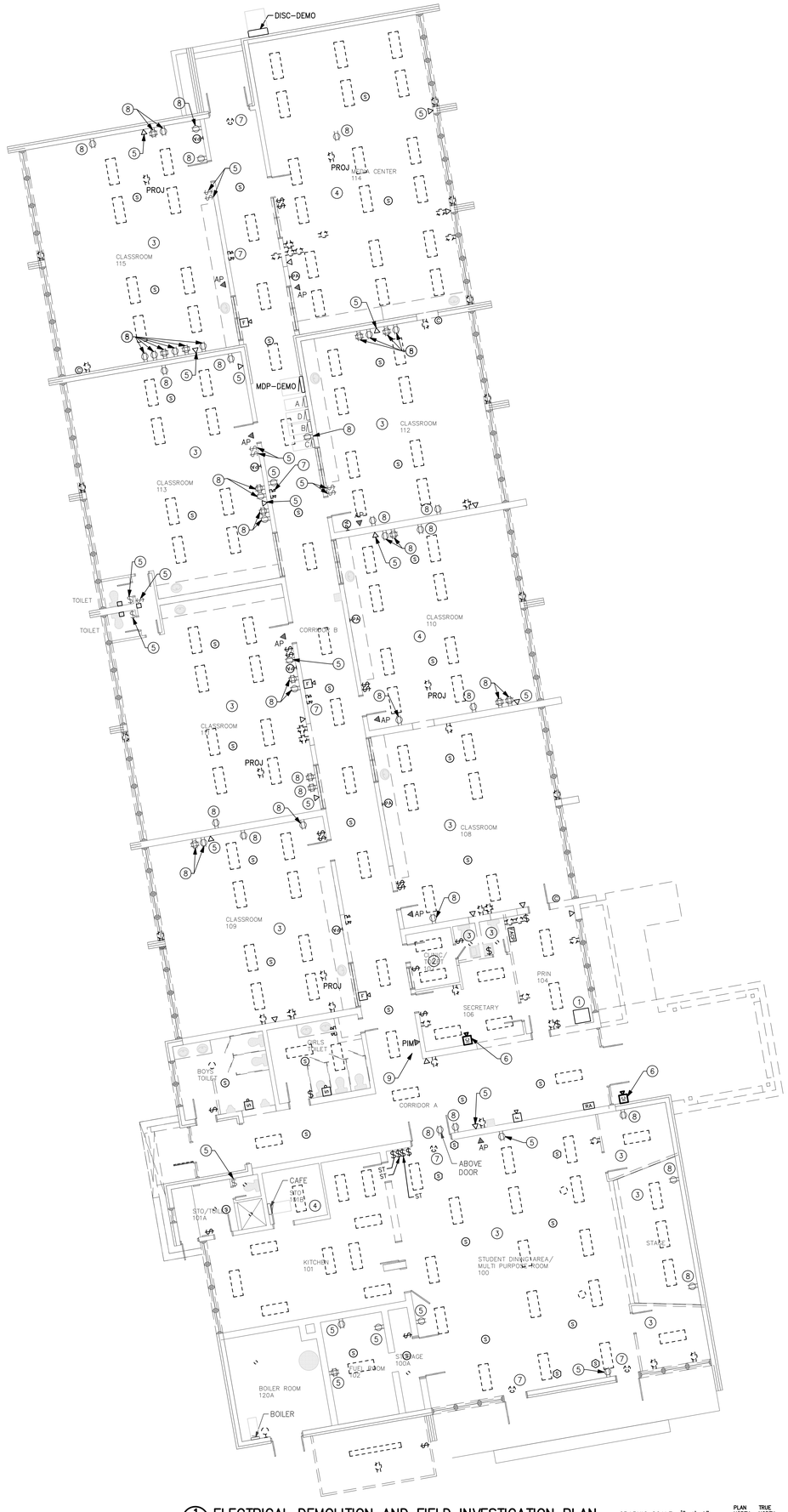
220 Coral Drive
Wrightsville Beach, NC

Construction Drawings
February 20, 2019

Revisions:

ELECTRICAL LEGENDS

E0.2



1 ED1.1 ELECTRICAL DEMOLITION AND FIELD INVESTIGATION PLAN
SCALE: 1/8" = 1'-0"

GRAPHIC SCALE: 1/8"=1'-0"
0 2 4 8 16

PLAN NORTH / TRUE NORTH

DEMOLITION NOTES:

1. ALL LIGHT FIXTURES AND ELECTRICAL DEVICES SHOWN ARE TO BE REMOVED UNLESS NOTED OTHERWISE.
2. FIELD INVESTIGATE THE EXTENT OF ELECTRICAL WORK REQUIRED TO SUPPORT THE DEMOLITION ACTIVITIES.
3. THE ELECTRICAL CONTRACTOR SHALL DE-ENERGIZE AND REMOVE EXISTING DEVICES, FIXTURES, CIRCUITRY, ETC. TO ACCOMMODATE THE DEMOLITION ACTIVITIES.
4. ABANDONED CIRCUITRY SHALL BE REMOVED BACK TO ITS SOURCE.
5. EXISTING CIRCUITRY THAT SUPPLIES DEVICES, FIXTURES, ETC. TO REMAIN SHALL BE REWORKED AND EXTENDED AS REQUIRED TO MAINTAIN OPERATION OF THOSE DEVICES AND FIXTURES.
6. ABANDONED AUXILIARY SYSTEMS CABLING SHALL BE REMOVED BACK TO ITS SOURCE.
7. FIELD INVESTIGATE EXISTING HOMERUN CIRCUITRY SUPPLYING LIGHT FIXTURES WITH THE INTENT OF REUSING HOMERUNS FOR NEW LIGHTING.
8. ALL DATA CABLES AND FACEPLATES SHALL BE REMOVED FROM EXISTING OUTLET LOCATIONS TO REMAIN. NEW DATA CABLES TO BE INSTALLED.
9. ALL FIRE ALARM DEVICES SHALL BE REMOVED AND REPLACED WITH NEW. TURN EQUIPMENT OVER TO OWNER.
10. ALL WIRELESS ACCESS POINTS AND CABLING SHALL BE REMOVED. TURN EQUIPMENT OVER TO OWNER.

KEYED NOTES:

1. EXISTING PA SYSTEM EQUIPMENT TO BE REMOVED.
2. EXISTING IT HEADEND EQUIPMENT LOCATED IN THIS ROOM TO BE REMOVED. SEE NEW WORK PLAN FOR NEW LOCATION OF HEADEND EQUIPMENT.
3. LIGHT FIXTURES IN THIS ROOM TO BE REMOVED. CIRCUITRY TO REMAIN AND SWITCHES TO REMAIN.
4. LIGHT FIXTURES IN THIS ROOM TO BE REMOVED. CIRCUITRY TO REMAIN.
5. EXISTING DEVICE TO REMAIN.
6. REMOVE EXISTING AIPHONE AND ASSOCIATED CIRCUITRY.
7. LIGHT FIXTURE TO BE REMOVED. CIRCUITRY TO REMAIN.
8. REMOVE EXISTING RECEPTACLE. REPLACE WITH NEW TAMPER RESISTANT RECEPTACLE AS REQUIRED BY NEC 406.12.
9. EXISTING PIM LOCATION. REMOVE EXISTING DATA CABLE. INSTALL CAT 6 CABLE TO NEW IT ROOM LOCATED ON 2ND FLOOR. SEE NEW WORK PLAN.

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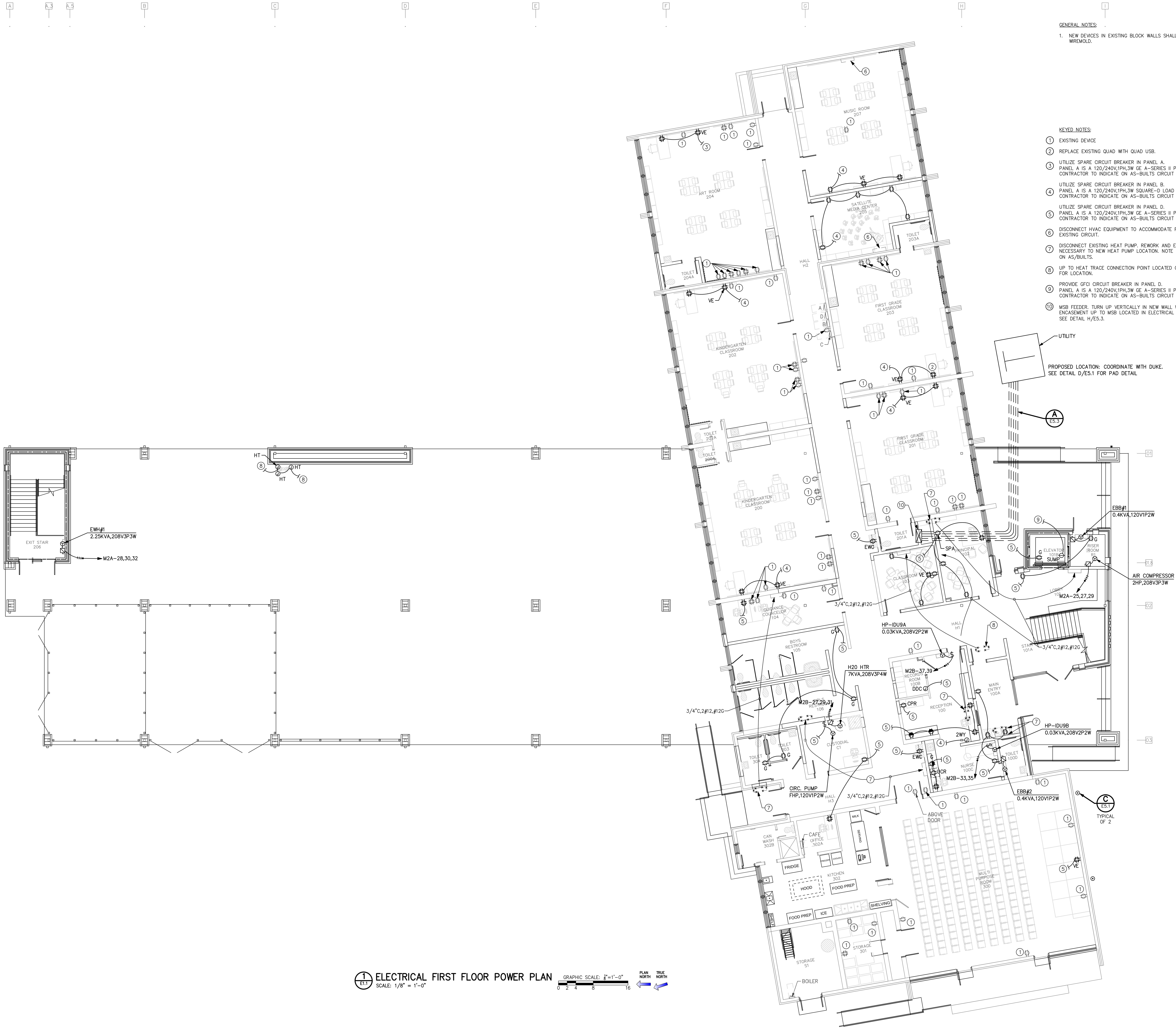
February 20, 2019

Revisions:

ELECTRICAL DEMOLITION AND FIELD INVESTIGATION PLAN

ED1.1



1 ELECTRICAL FIRST FLOOR POWER PLAN
E1.1
SCALE: 1/8" = 1'-0"

GRAPHIC SCALE: 1/8"=1'-0"
0 2 4 8 16
PLAN NORTH
TRUE NORTH

GENERAL NOTES:

1. NEW DEVICES IN EXISTING BLOCK WALLS SHALL BE SURFACE MOUNTED WITH WIREMOLD.

KEYED NOTES:

1. EXISTING DEVICE
2. REPLACE EXISTING QUAD WITH QUAD USB.
3. UTILIZE SPARE CIRCUIT BREAKER IN PANEL A. PANEL A IS A 120/240V,1PH,3W GE A-SERIES II PANELBOARD. CONTRACTOR TO INDICATE ON AS-BUILTS CIRCUIT BREAKER NUMBER.
4. UTILIZE SPARE CIRCUIT BREAKER IN PANEL B. PANEL A IS A 120/240V,1PH,3W SQUARE-D LOAD CENTER PANELBOARD. CONTRACTOR TO INDICATE ON AS-BUILTS CIRCUIT BREAKER NUMBER.
5. UTILIZE SPARE CIRCUIT BREAKER IN PANEL D. PANEL A IS A 120/240V,1PH,3W GE A-SERIES II PANELBOARD. CONTRACTOR TO INDICATE ON AS-BUILTS CIRCUIT BREAKER NUMBER.
6. DISCONNECT HVAC EQUIPMENT TO ACCOMMODATE REMOVAL. RECONNECT TO EXISTING CIRCUIT.
7. DISCONNECT EXISTING HEAT PUMP. REWORK AND EXTEND CIRCUITRY AS NECESSARY TO NEW HEAT PUMP LOCATION. NOTE PANEL CIRCUIT INFORMATION ON AS/BUILTS.
8. UP TO HEAT TRACE CONNECTION POINT LOCATED ON SECOND FLOOR. SEE E2.1 FOR LOCATION.
9. PROVIDE GFCI CIRCUIT BREAKER IN PANEL D. PANEL A IS A 120/240V,1PH,3W GE A-SERIES II PANELBOARD. CONTRACTOR TO INDICATE ON AS-BUILTS CIRCUIT BREAKER NUMBER.
10. MSB FEEDER. TURN UP VERTICALLY IN NEW WALL WITH 2" OF CONCRETE ENCASEMENT UP TO MSB LOCATED IN ELECTRICAL ROOM ON SECOND FLOOR. SEE DETAIL H/E5.3.

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25 FEB 2019
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Wrightsville Beach Elementary School Addition & Renovation

220 Coral Drive
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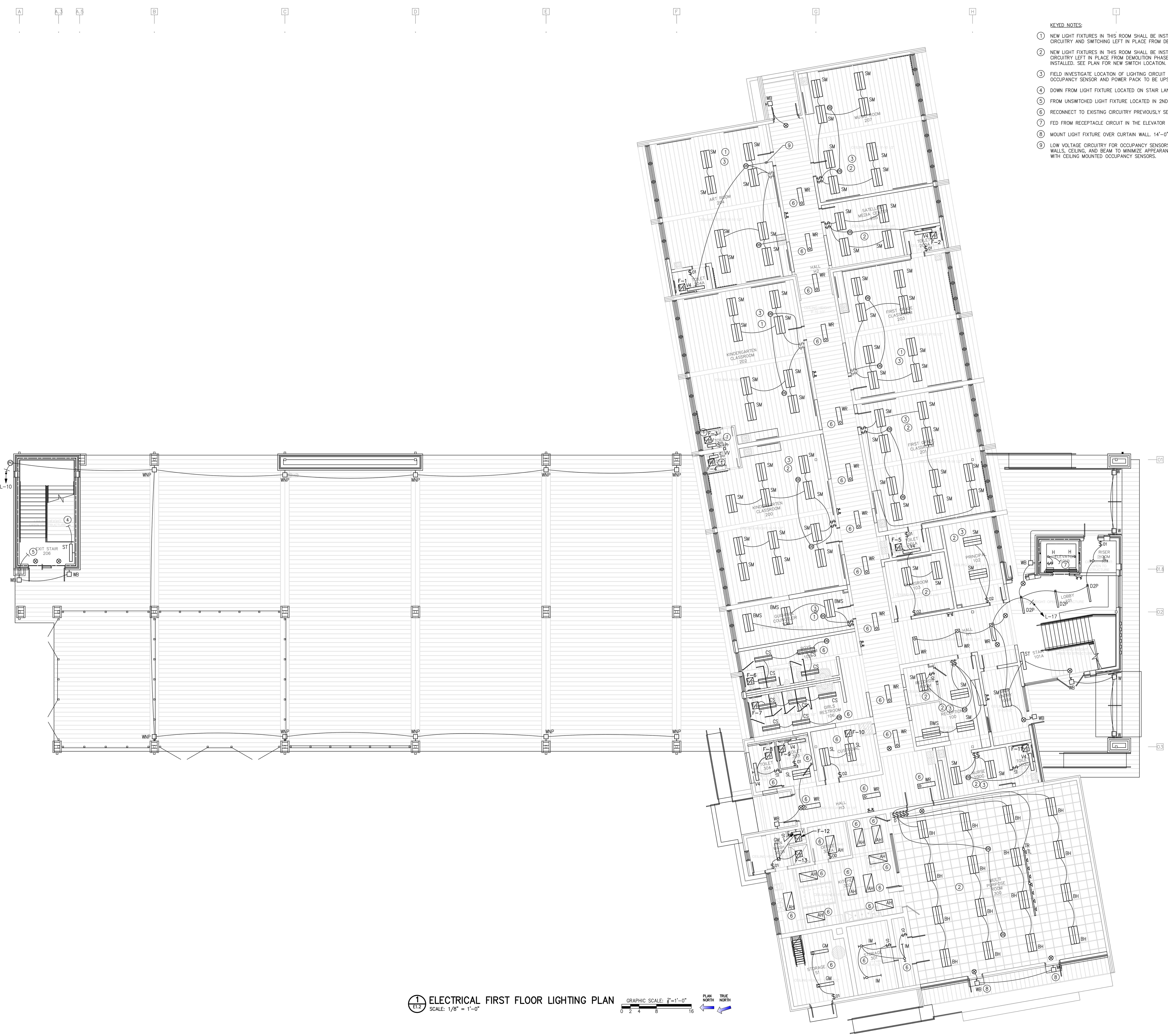
Construction Drawings
February 20, 2019

Revisions:

ELECTRICAL POWER PLAN FIRST FLOOR RENOVATION

E1.1



KEYED NOTES:

1. NEW LIGHT FIXTURES IN THIS ROOM SHALL BE INSTALLED USING EXISTING CIRCUITRY AND SWITCHING LEFT IN PLACE FROM DEMOLITION PHASE.
2. NEW LIGHT FIXTURES IN THIS ROOM SHALL BE INSTALLED USING EXISTING CIRCUITRY LEFT IN PLACE FROM DEMOLITION PHASE, WITH NEW SWITCHES INSTALLED. SEE PLAN FOR NEW SWITCH LOCATION.
3. FIELD INVESTIGATE LOCATION OF LIGHTING CIRCUIT HOMERUN. INTEGRATE NEW OCCUPANCY SENSOR AND POWER PACK TO BE UPSTREAM OF SWITCHES.
4. DOWN FROM LIGHT FIXTURE LOCATED ON STAIR LANDING.
5. FROM UNSWITCHED LIGHT FIXTURE LOCATED IN 2ND FLOOR CORRIDOR.
6. RECONNECT TO EXISTING CIRCUITRY PREVIOUSLY SERVING SPACE.
7. FED FROM RECEPTACLE CIRCUIT IN THE ELEVATOR SHAFT. SEE E1.1.
8. MOUNT LIGHT FIXTURE OVER CURTAIN WALL. 14'-0" AFG TO TOP OF FIXTURE.
9. LOW VOLTAGE CIRCUITRY FOR OCCUPANCY SENSORS SHALL BE RUN TIGHT TO WALLS, CEILING, AND BEAM TO MINIMIZE APPEARANCE. TYPICAL FOR ALL ROOMS WITH CEILING MOUNTED OCCUPANCY SENSORS.

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Construction Drawings
February 20, 2019

Revisions:

ELECTRICAL LIGHTING PLAN FIRST FLOOR RENOVATION

E1.2

1 E1.3 ELECTRICAL FIRST FLOOR AUXILIARY SYSTEMS PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. ALL EXISTING DATA LOCATIONS SHALL HAVE NEW CABLES AND FACEPLATES.
2. ALL EXISTING PA LOCATIONS TO REMAIN SHALL HAVE NEW CABLING TO NEW PA EQUIPMENT LOCATED IN 2ND FLOOR DATA ROOM.
3. ALL FIRE ALARM DEVICES LOCATED IN THE MULTIPURPOSE ROOM SHALL HAVE DEVICE GUARDS.

KEYED NOTES:

1. EXISTING DEVICE BOX AND CONDUIT. NEW CABLING, JACKS, AND DEVICE PLATES
2. EXISTING DEVICE LOCATION. NEW CAT 6 CABLE TO DATA ROOM T1 LOCATED ON 2ND FLOOR.
3. 1-1/2"C FROM EXISTING CABLE TRAY TO SECOND FLOOR DATA ROOM T1 FOR CABLING RACEWAY TO SECURITY CONTROL PANEL.

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Revisions:

ELECTRICAL AUXILIARY SYSTEMS PLAN FIRST FLOOR RENOVATION

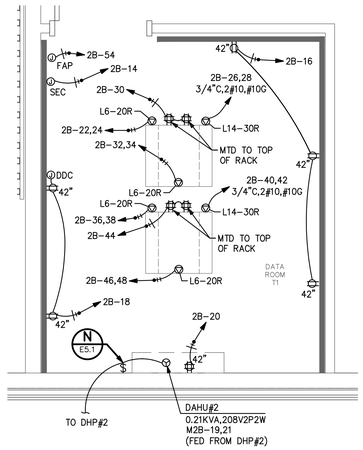
E1.3

KEYED NOTES:

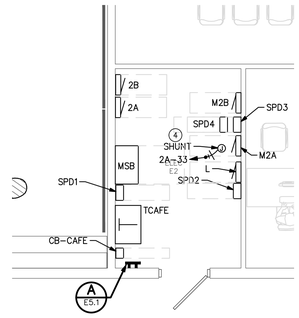
1. 12"x4" WIRE MESH TYPE CABLE TRAY FOR POWER MC CABLES; ABOVE CEILING.
2. PROVIDE (1) 2P/30A CIRCUIT BREAKER IN SPACES #22,24 FOR SPD5. EXISTING PANEL IS MANUFACTURED BY SQ-D (TYPE NQ). CONNECT SPD5 WITH 3/4"C,2#10,#1ON,#10G.
3. DOWN TO DRINKING FOUNTAIN FREEZE PROTECTION LOCATED ON FIRST FLOOR. SEE E1.1 FOR LOCATION.
4. SHUNT TRIP CIRCUIT FOR ELEVATOR EQUIPMENT.

2ND FLOOR EQUIPMENT SCHEDULE

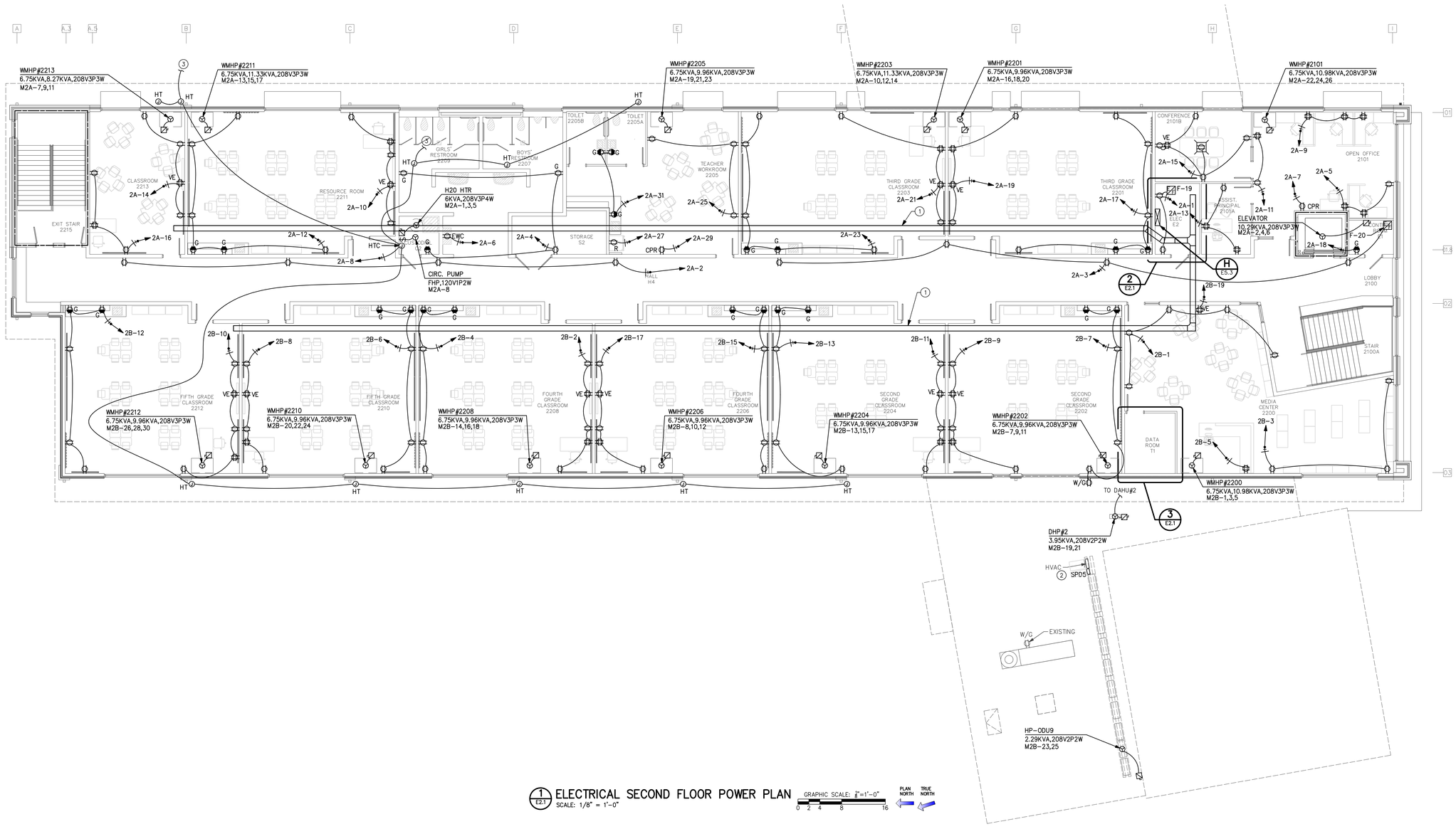
CALLOUT	VOLTS	KVA	CIRCUIT	WIRE CALLOUT
CIRC. PUMP	120V 1P 2W	0.1	M2A-8	3/4"C,1#12,#12N,#12G
DAHU#2	208V 2P 2W	0.21	M2B-19,21	3/4"C,2#12,#12G
DHP#2	208V 2P 2W	3.95	M2B-19,21	3/4"C,2#12,#12G
ELEVATOR	208V 3P 3W	10.29	M2A-2,4,6	3/4"C,3#8,#10G
H20 HTR	208V 3P 4W	6	M2A-1,3,5	3/4"C,3#12,#12N,#12G
HP-ODU9	208V 2P 2W	2.29	M2B-23,25	3/4"C,2#12,#12G
WMHP#2101	208V 3P 3W	17.73	M2A-22,24,26	1"C,3#6,#10G
WMHP#2200	208V 3P 3W	17.73	M2B-1,3,5	1"C,3#6,#10G
WMHP#2201	208V 3P 3W	16.71	M2A-16,18,20	1"C,3#6,#10G
WMHP#2202	208V 3P 3W	16.71	M2B-7,9,11	1"C,3#6,#10G
WMHP#2203	208V 3P 3W	18.08	M2A-10,12,14	1"C,3#6,#10G
WMHP#2204	208V 3P 3W	16.71	M2B-13,15,17	1"C,3#6,#10G
WMHP#2205	208V 3P 3W	16.71	M2A-19,21,23	1"C,3#6,#10G
WMHP#2206	208V 3P 3W	16.71	M2B-8,10,12	1"C,3#6,#10G
WMHP#2208	208V 3P 3W	16.71	M2B-14,16,18	1"C,3#6,#10G
WMHP#2210	208V 3P 3W	16.71	M2B-20,22,24	1"C,3#6,#10G
WMHP#2211	208V 3P 3W	18.08	M2A-13,15,17	1"C,3#6,#10G
WMHP#2212	208V 3P 3W	16.71	M2B-26,28,30	1"C,3#6,#10G
WMHP#2213	208V 3P 3W	15.02	M2A-7,9,11	1"C,3#6,#10G



3 E2.1 ELECTRICAL ENLARGED PLAN – DATA ROOM T1
SCALE: 1/2" = 1'-0"
GRAPHIC SCALE: 1/2"=1'-0" (0 1 2 4)



2 E2.1 ELECTRICAL ENLARGED PLAN – ELEC E2
SCALE: 1/4" = 1'-0"
GRAPHIC SCALE: 1/4"=1'-0" (0 1 2 4 8)



1 E2.1 ELECTRICAL SECOND FLOOR POWER PLAN
SCALE: 1/8" = 1'-0"
GRAPHIC SCALE: 1/8"=1'-0" (0 2 4 8 16)
PLAN NORTH / TRUE NORTH

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February 20, 2019

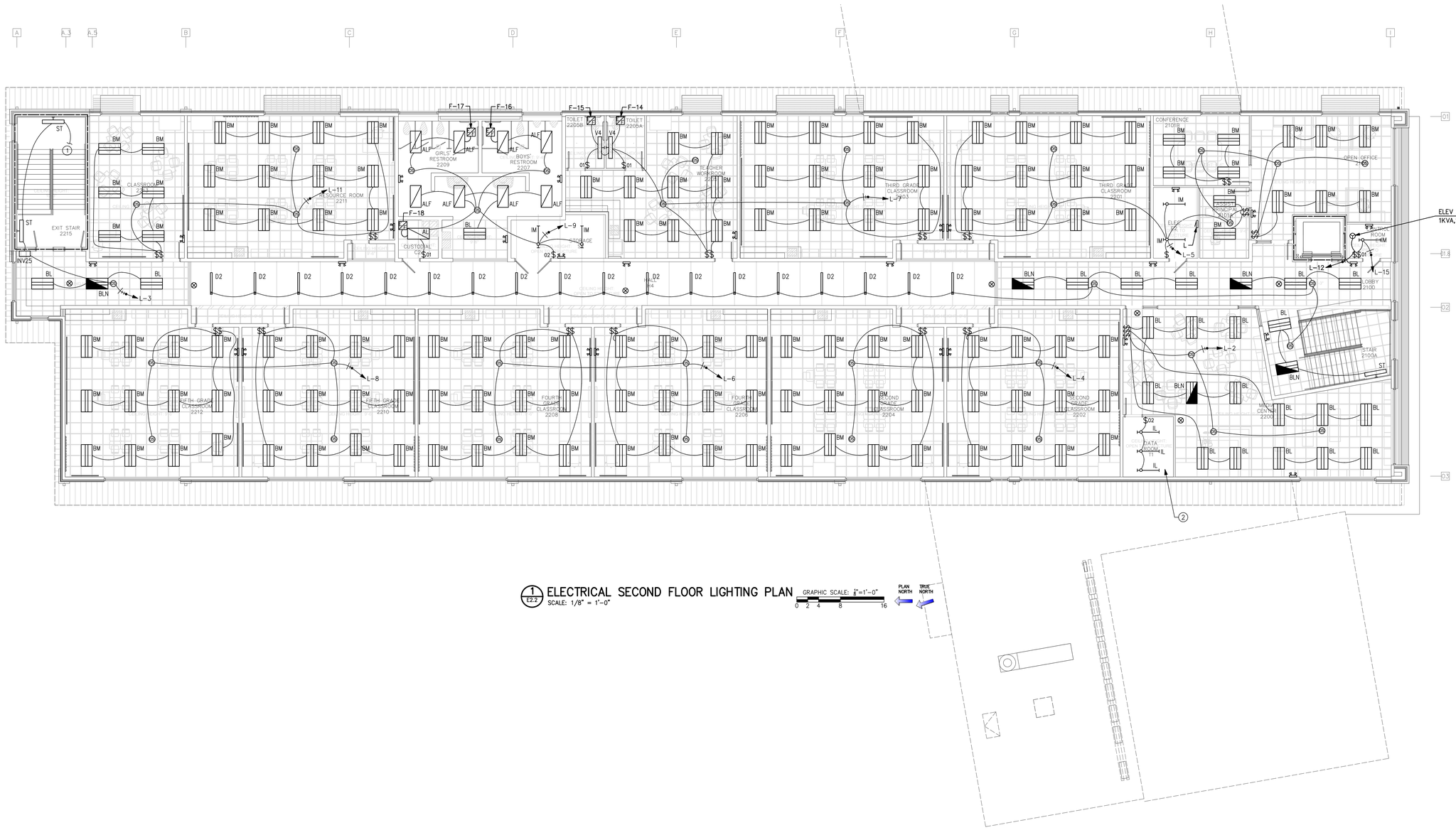
Revisions:

ELECTRICAL
POWER PLAN
SECOND FLOOR

E2.1

KEYED NOTES:

1. DOWN TO EXTERIOR EGRESS FIXTURES LOCATED OUTSIDE OF STAIR LANDING.



1 E2.2 ELECTRICAL SECOND FLOOR LIGHTING PLAN

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

GRAPHIC SCALE: 1/8"=1'-0"
0 2 4 8 16

PLAN NORTH / TRUE NORTH

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February 20, 2019

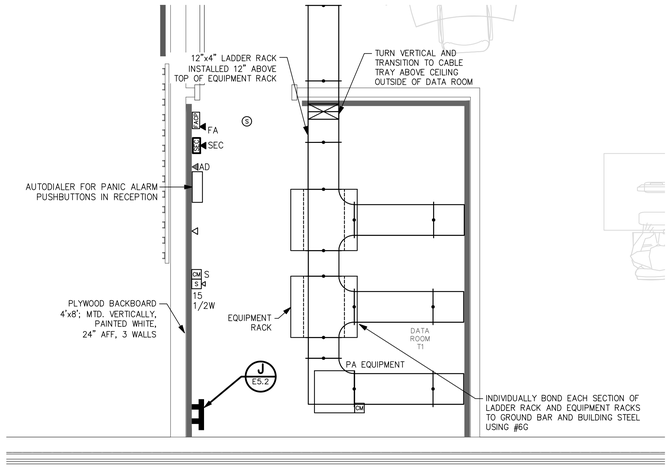
Revisions:

ELECTRICAL LIGHTING PLAN SECOND FLOOR

E2.2

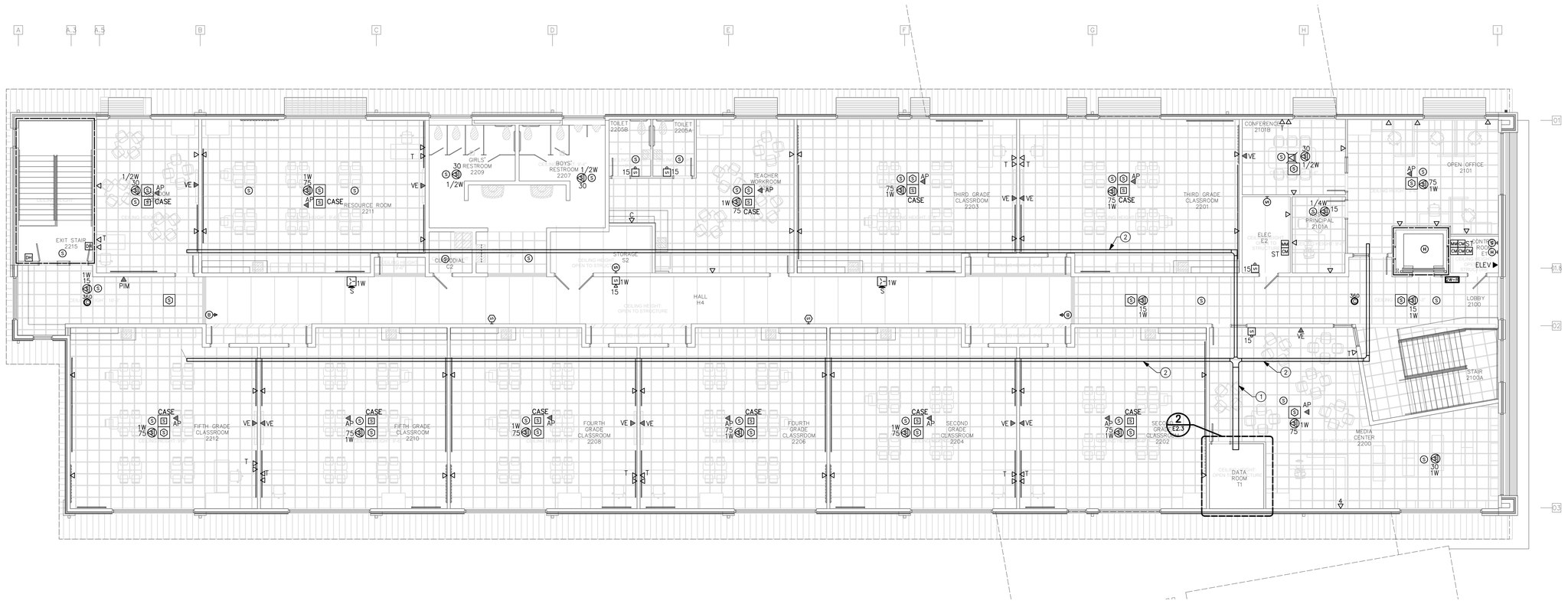
KEYED NOTES:

1. 12"x4" WIRE MESH TYPE CABLE TRAY ABOVE CEILING FOR AUXILIARY SYSTEMS CABLES. PROVIDE DIVIDER TO SEPARATE DATA FROM FIRE ALARM CIRCUITRY.
2. 6"x4" WIRE MESH TYPE CABLE TRAY ABOVE CEILING FOR AUXILIARY SYSTEMS CABLES. PROVIDE DIVIDER TO SEPARATE DATA FROM FIRE ALARM CIRCUITRY.



2 E2.3 ELECTRICAL ENLARGED AUXILIARY SYSTEMS PLAN – DATA ROOM T1
SCALE: 1/2" = 1'-0"

GRAPHIC SCALE: 1/2"=1'-0"
0 1 2 4



1 E2.3 ELECTRICAL SECOND FLOOR AUXILIARY SYSTEMS PLAN
SCALE: 1/8" = 1'-0"

GRAPHIC SCALE: 1/8"=1'-0"
0 2 4 8 16

PLAN NORTH / TRUE NORTH

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910 762-0892 s2a3.com

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Wrightsville Beach Elementary School Addition & Renovation

220 Coral Drive
Wrightsville Beach, NC

Construction Drawings
February 20, 2019

Revisions:

ELECTRICAL AUXILIARY SYSTEMS PLAN SECOND FLOOR

E2.3

GENERAL NOTES:

1. BUILDING SERVICE FEEDER SHALL BE CONCRETE ENCASED TO MDP WITH NOT LESS THAN 2" THICK CONCRETE PER NEC 230.6(2) ONCE IT ENTERS BUILDING.

KEYED NOTES:

1. REMOVE EXISTING PANEL AND REPLACE WITH NEW. BRANCH CIRCUITRY TO REMAIN AND BE RECONNECTED TO NEW PANEL. COORDINATE REMOVAL OF UTILITY METER AND SERVICE WITH DUKE. RE-FEED FROM NEW MSB LOCATED ON 2ND FLOOR.
2. TRANSITION FROM PVC CONDUIT TO RIGID METAL CONDUIT ONCE ENTERING BUILDING FOOTPRINT.
3. REMOVE EXISTING PANEL. COORDINATE REMOVAL OF UTILITY METER AND SERVICE WITH DUKE.

1 E3.1 ELECTRICAL SITE PLAN
SCALE: 1/16" = 1'-0"

GRAPHIC SCALE: 1/16"=1'-0"
0 4 8 16 32

PLAN NORTH / TRUE NORTH

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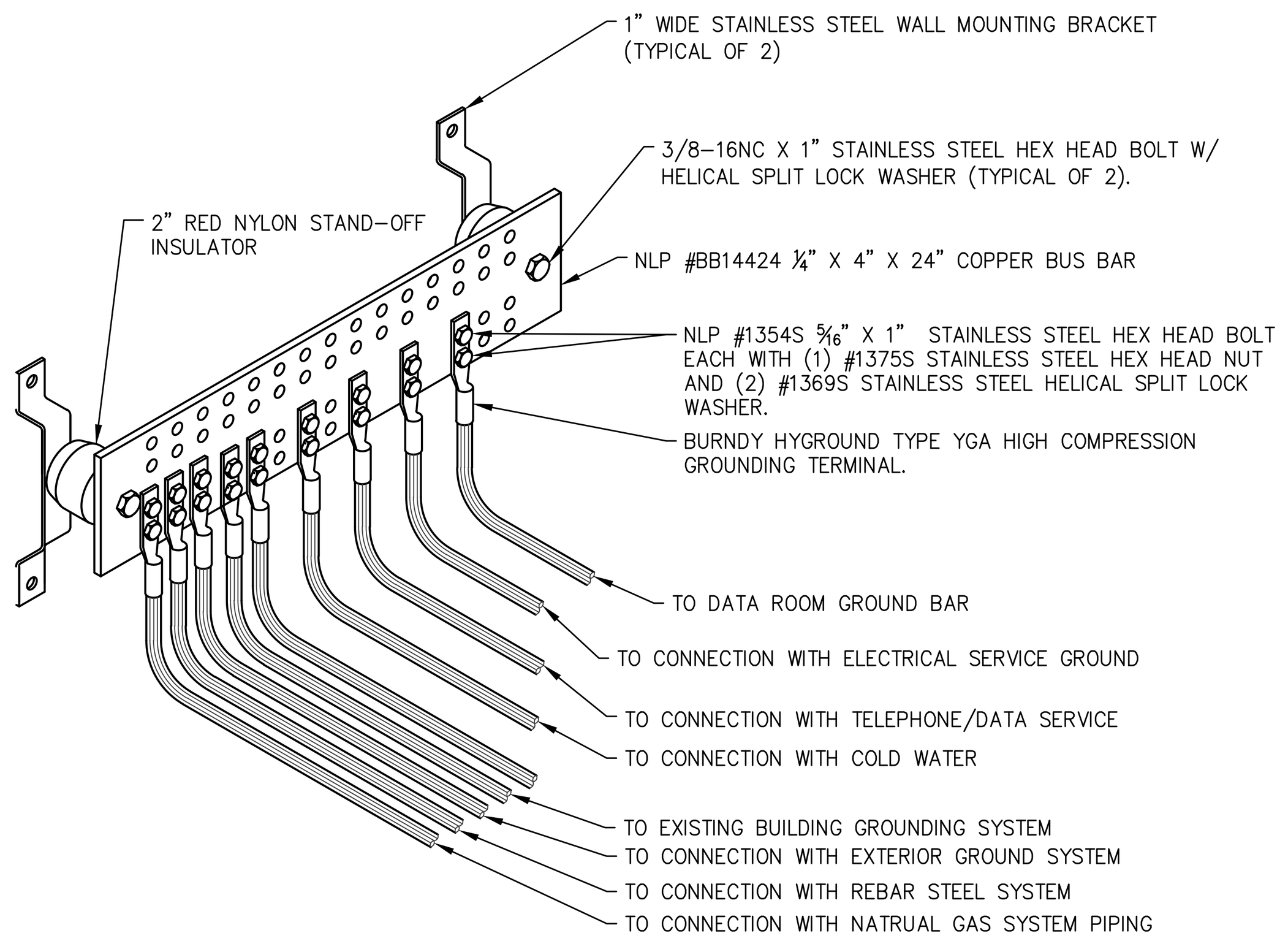
Revisions:

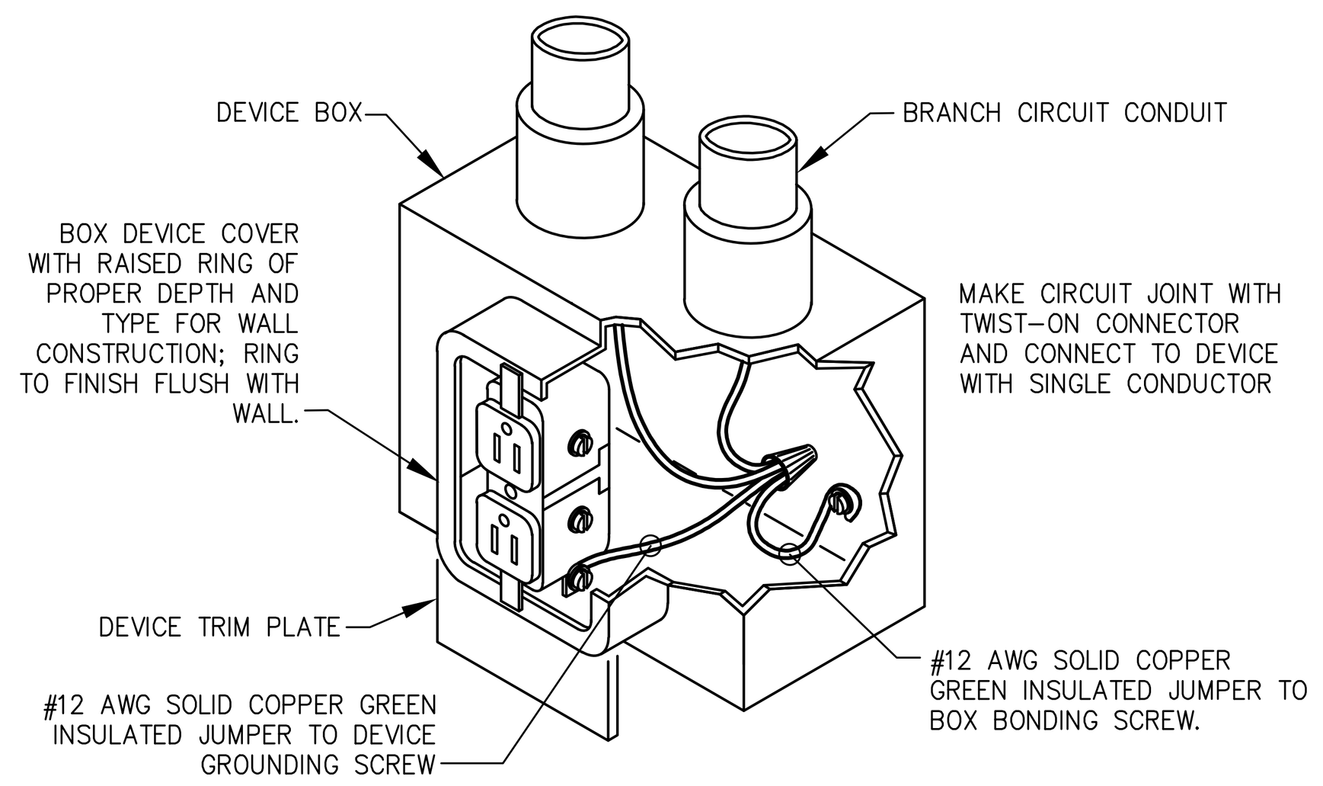
ELECTRICAL SITE PLAN

E3.1

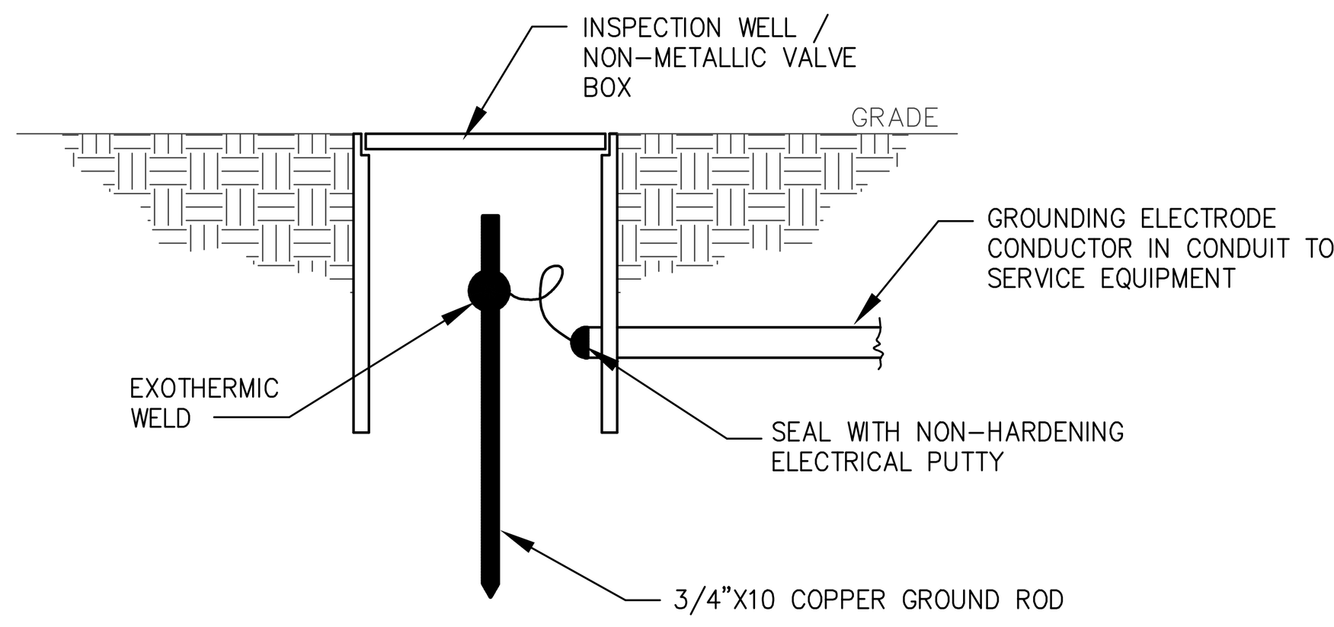


A / E5.1 MAIN GROUND BAR
NO SCALE

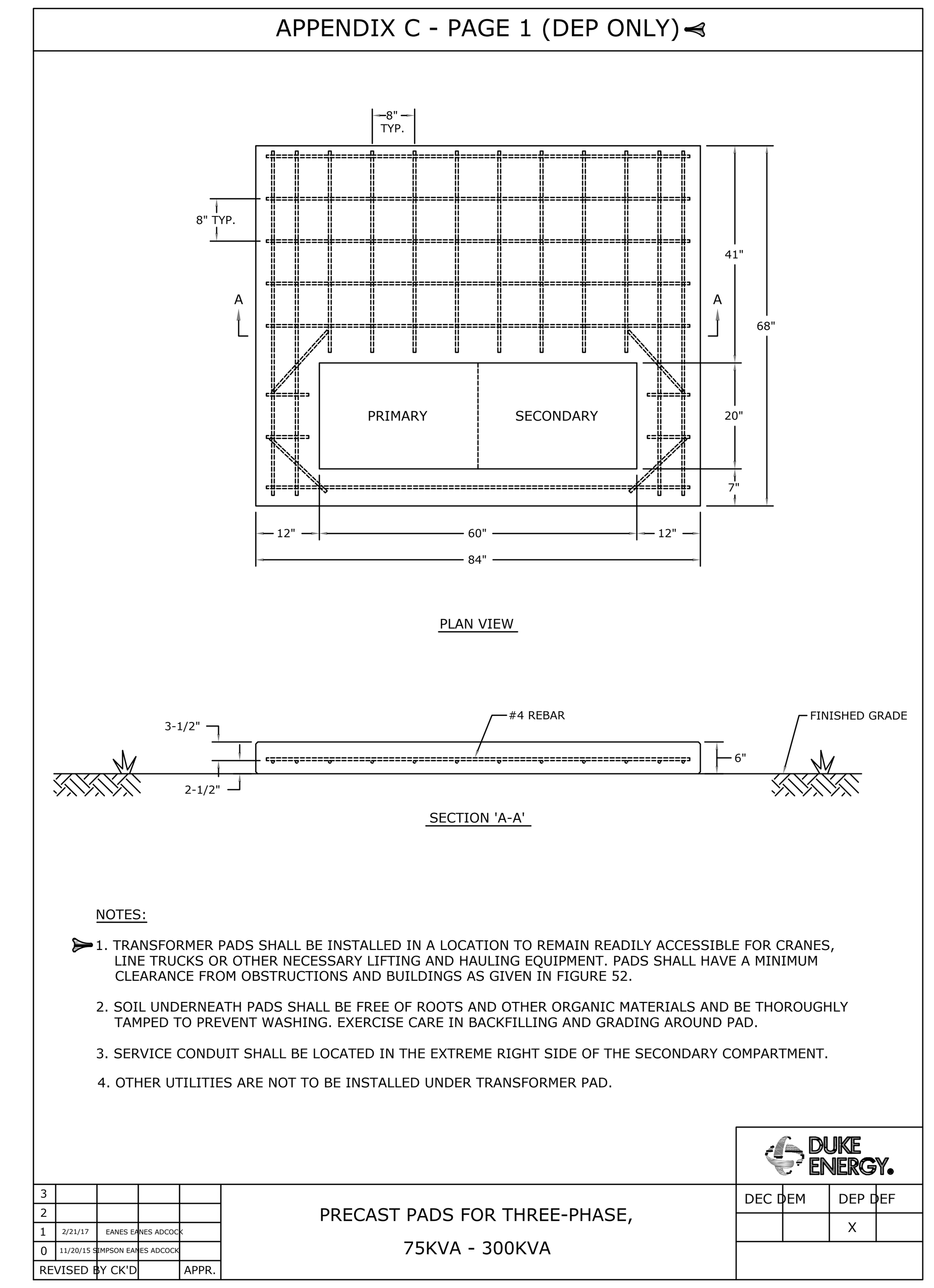
NOTE: PROVIDE LABELS FOR EACH INDIVIDUAL GROUND SYSTEM CONDUCTOR



B / E5.1 OUTLET GROUNDING DETAIL
SCALE: N/A



C / E5.1 GROUND ROD & INSPECTION WELL
NO SCALE


APPENDIX C - PAGE 1 (DEP ONLY)

PLAN VIEW

SECTION 'A-A'

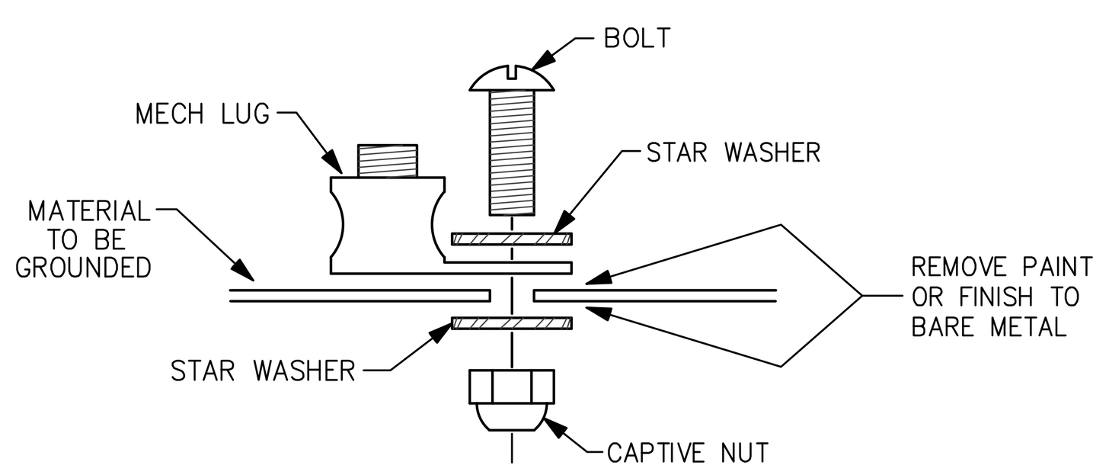
NOTES:

1. TRANSFORMER PADS SHALL BE INSTALLED IN A LOCATION TO REMAIN READILY ACCESSIBLE FOR CRANES, LINE TRUCKS OR OTHER NECESSARY LIFTING AND HAULING EQUIPMENT. PADS SHALL HAVE A MINIMUM CLEARANCE FROM OBSTRUCTIONS AND BUILDINGS AS GIVEN IN FIGURE 52.
2. SOIL UNDERNEATH PADS SHALL BE FREE OF ROOTS AND OTHER ORGANIC MATERIALS AND BE THOROUGHLY TAMPED TO PREVENT WASHING. EXERCISE CARE IN BACKFILLING AND GRADING AROUND PAD.
3. SERVICE CONDUIT SHALL BE LOCATED IN THE EXTREME RIGHT SIDE OF THE SECONDARY COMPARTMENT.
4. OTHER UTILITIES ARE NOT TO BE INSTALLED UNDER TRANSFORMER PAD.

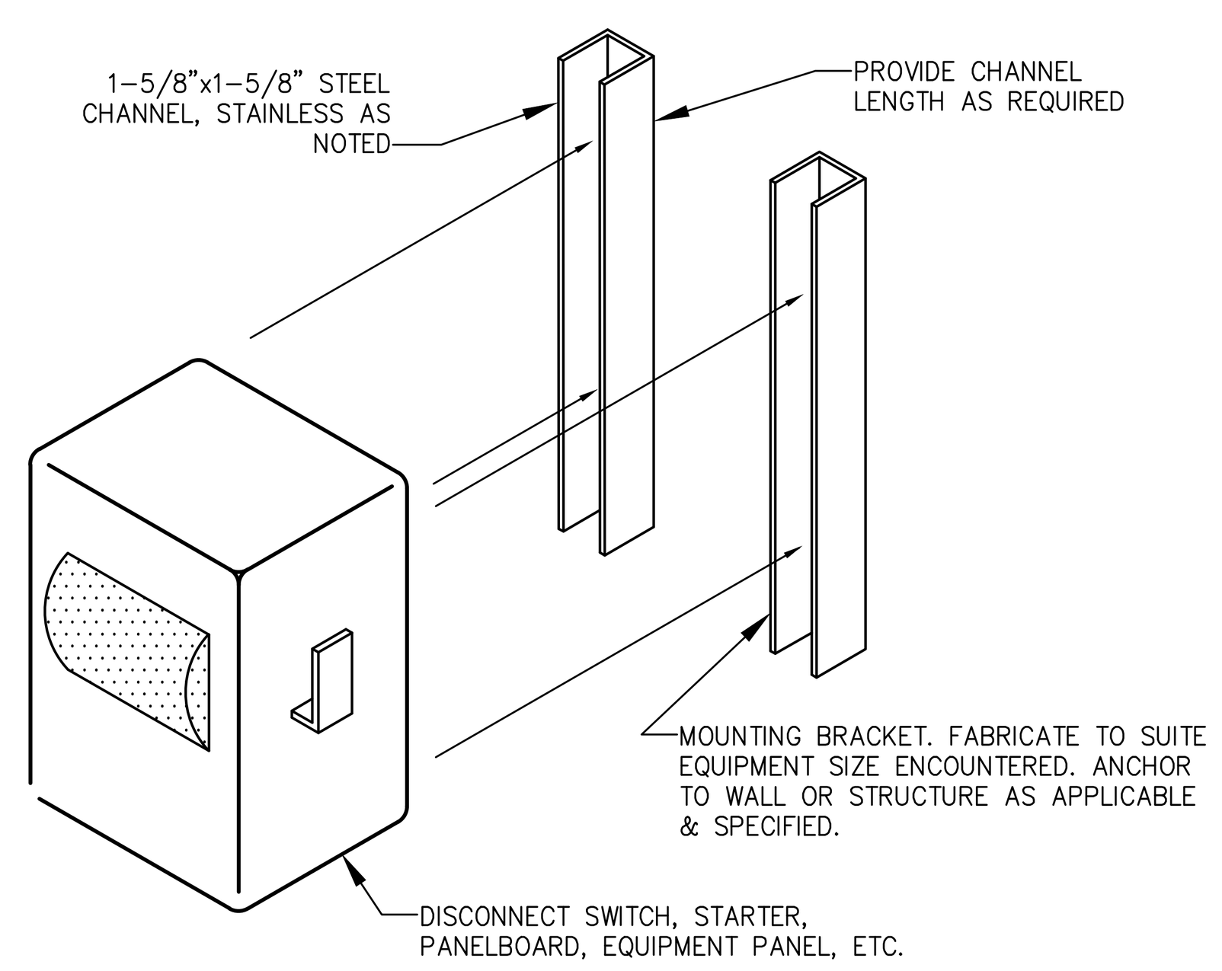
DUKE ENERGY.

					PRECAST PADS FOR THREE-PHASE, 75KVA - 300KVA	DEC	DEM	DEP	DEF
3								X	
2									
1	2/21/17	EANES	EANES	ADCOCK					
0	11/20/15	SIMPSON	EANES	ADCOCK					
REVISED	BY	CK'D		APPR.					

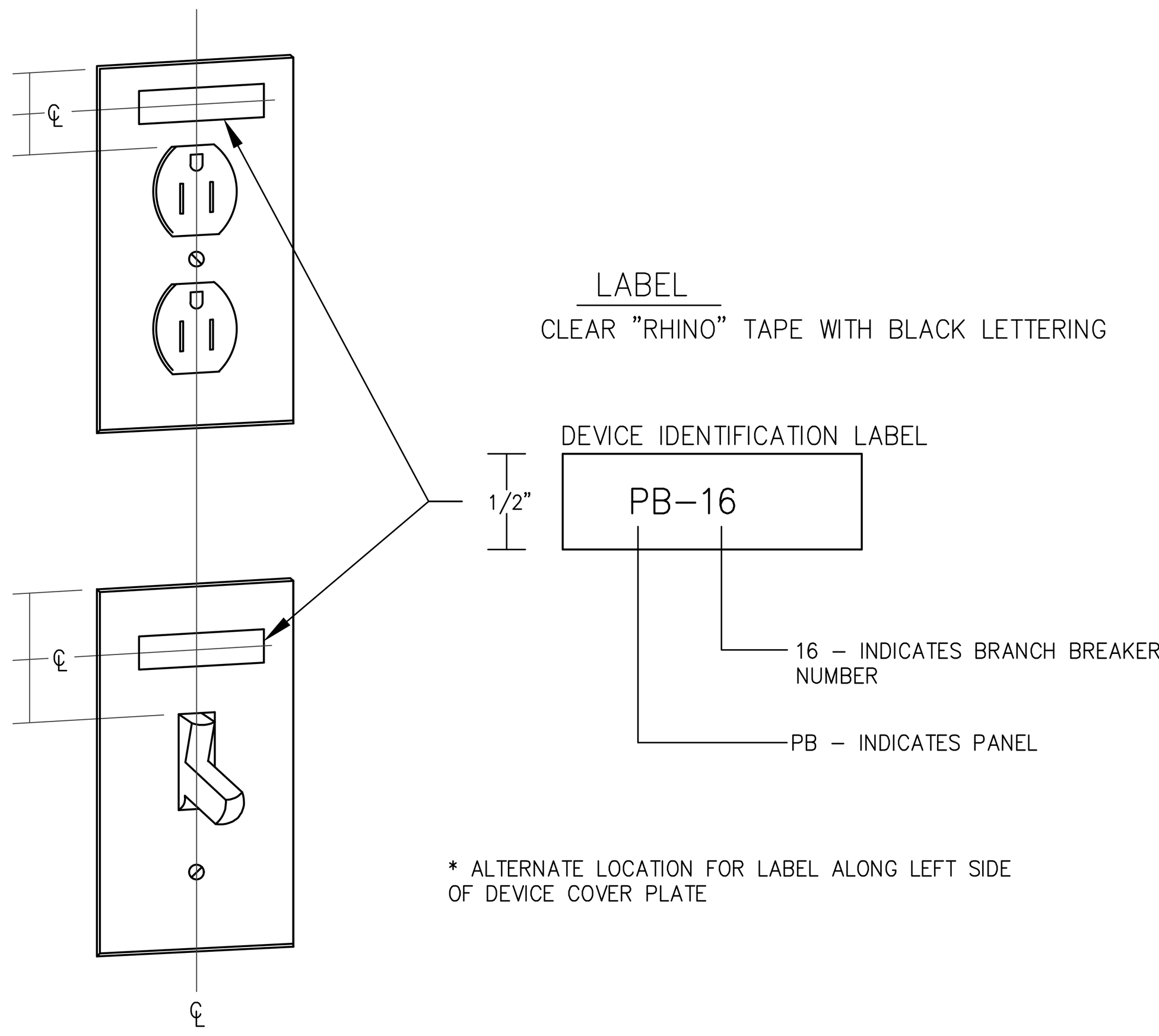
D / E5.1 UTILITY TRANSFORMER PAD DETAIL
NO SCALE



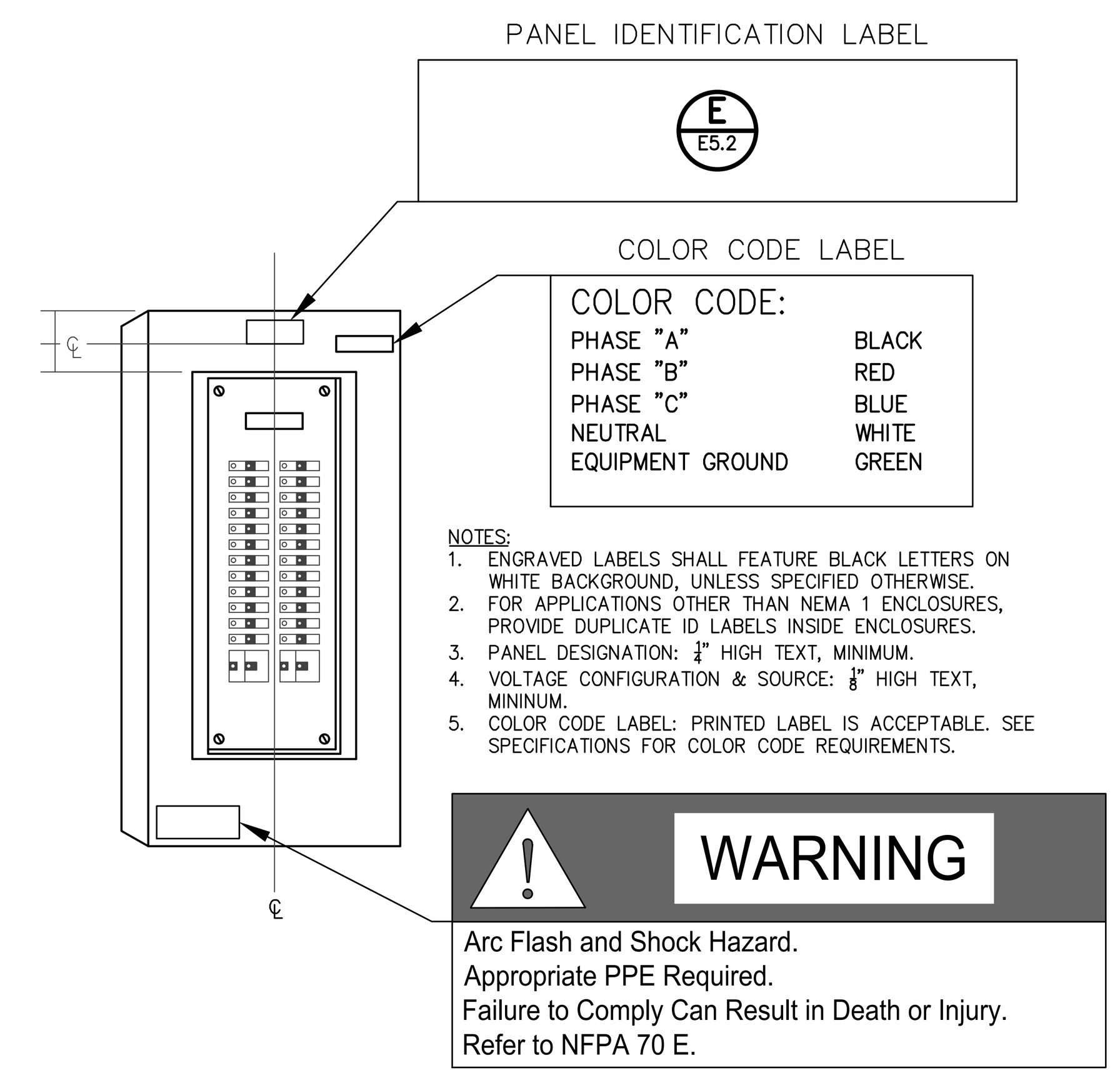
E / E5.1 GROUNDING LUG DETAIL
NO SCALE



F / E5.1 EQUIPMENT MOUNTING DETAIL
NO SCALE

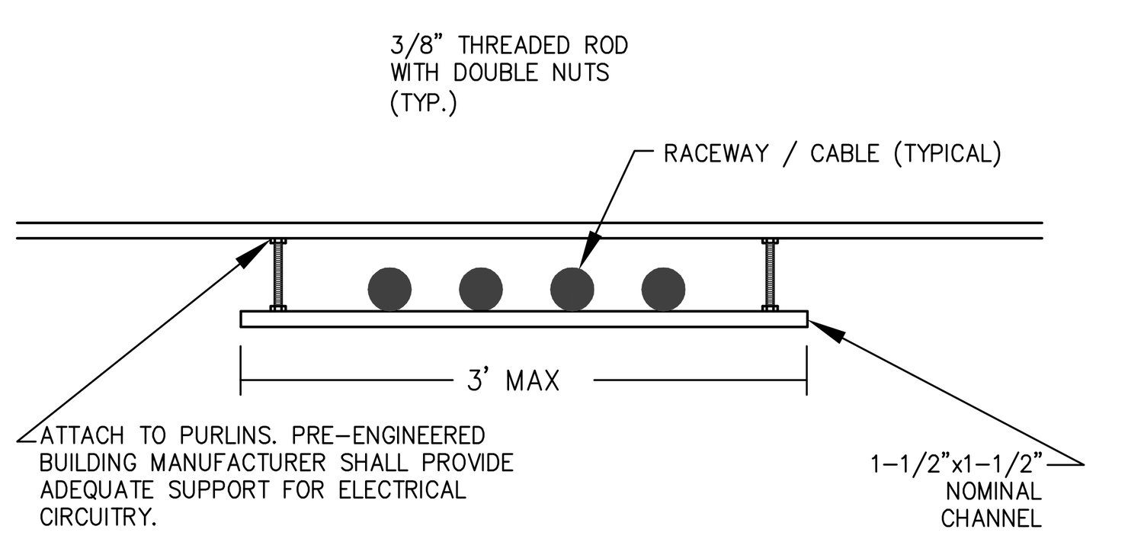


G / E5.1 WIRING DEVICE IDENTIFICATION LABEL

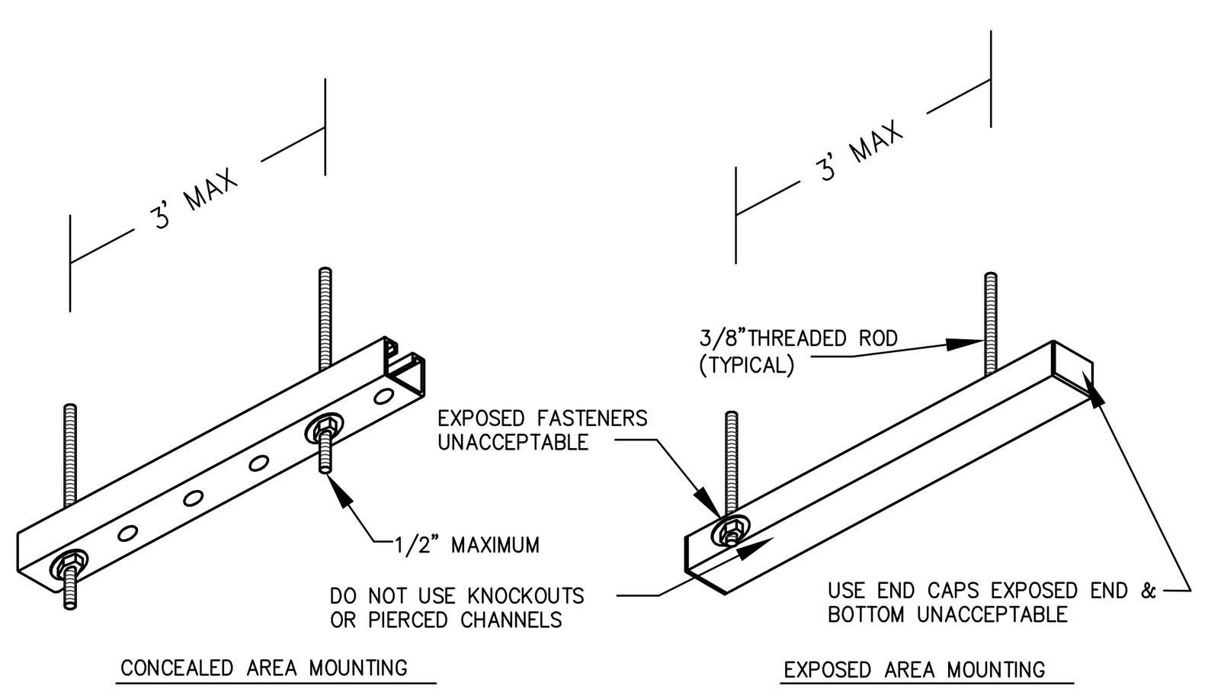


NOTES:
1. ENGRAVED LABELS SHALL FEATURE BLACK LETTERS ON WHITE BACKGROUND, UNLESS SPECIFIED OTHERWISE.
2. FOR APPLICATIONS OTHER THAN NEMA 1 ENCLOSURES, PROVIDE DUPLICATE ID LABELS INSIDE ENCLOSURES.
3. PANEL DESIGNATION: ¼" HIGH TEXT, MINIMUM.
4. VOLTAGE CONFIGURATION & SOURCE: ⅛" HIGH TEXT, MININUM.
5. COLOR CODE LABEL: PRINTED LABEL IS ACCEPTABLE. SEE SPECIFICATIONS FOR COLOR CODE REQUIREMENTS.

H / E5.1 TYPICAL PANELBOARD IDENTIFICATION
NO SCALE

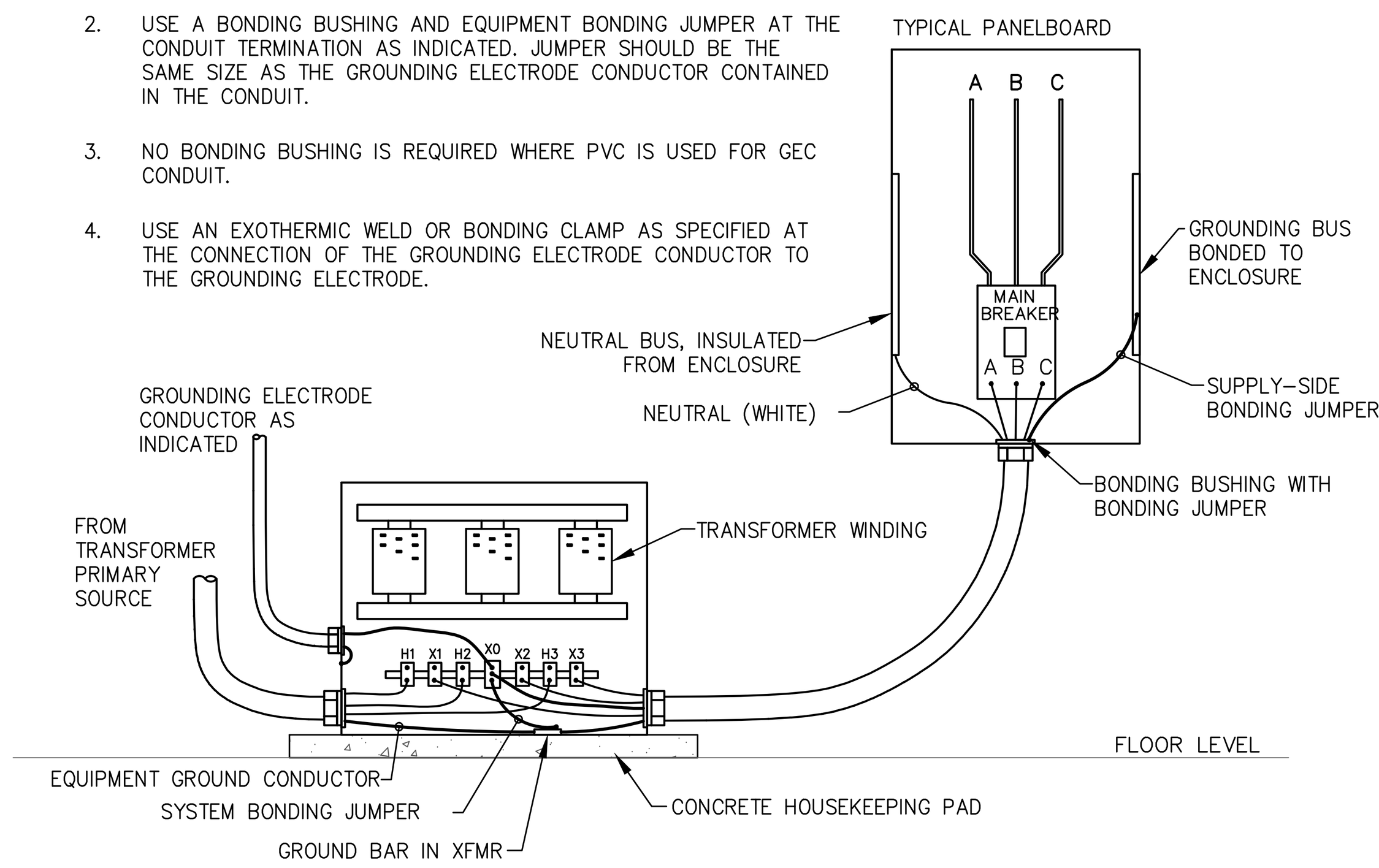


J / E5.1 CHANNEL SUPPORT DETAIL
NO SCALE

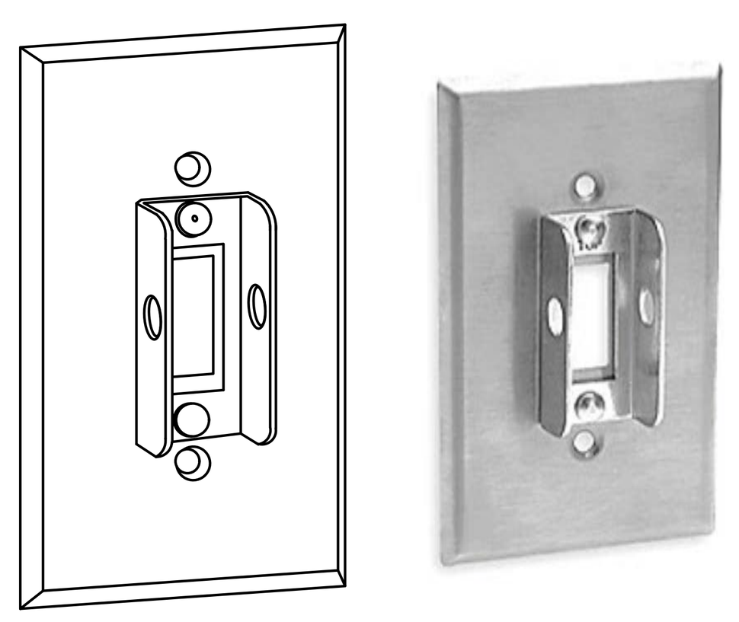


K / E5.1 CHANNEL MOUNTING DETAILS
NO SCALE

NOTES
1. IF A TRANSFORMER BONDING STRAP IS NOT PROVIDED BY THE TRANSFORMER MANUFACTURER, IT SHALL BE THE SAME SIZE AS THE SYSTEM BONDING JUMPER. SEE NEC 250.30.
2. USE A BONDING BUSHING AND EQUIPMENT BONDING JUMPER AT THE CONDUIT TERMINATION AS INDICATED. JUMPER SHOULD BE THE SAME SIZE AS THE GROUNDING ELECTRODE CONDUCTOR CONTAINED IN THE CONDUIT.
3. NO BONDING BUSHING IS REQUIRED WHERE PVC IS USED FOR GEC CONDUIT.
4. USE AN EXOTHERMIC WELD OR BONDING CLAMP AS SPECIFIED AT THE CONNECTION OF THE GROUNDING ELECTRODE CONDUCTOR TO THE GROUNDING ELECTRODE.



L / E5.1 DRY–TYPE TRANSFORMER GROUNDING DETAIL
NO SCALE



N / E5.1 LOCKABLE TOGGLE SWITCH COVER
NO SCALE

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25FEB2019

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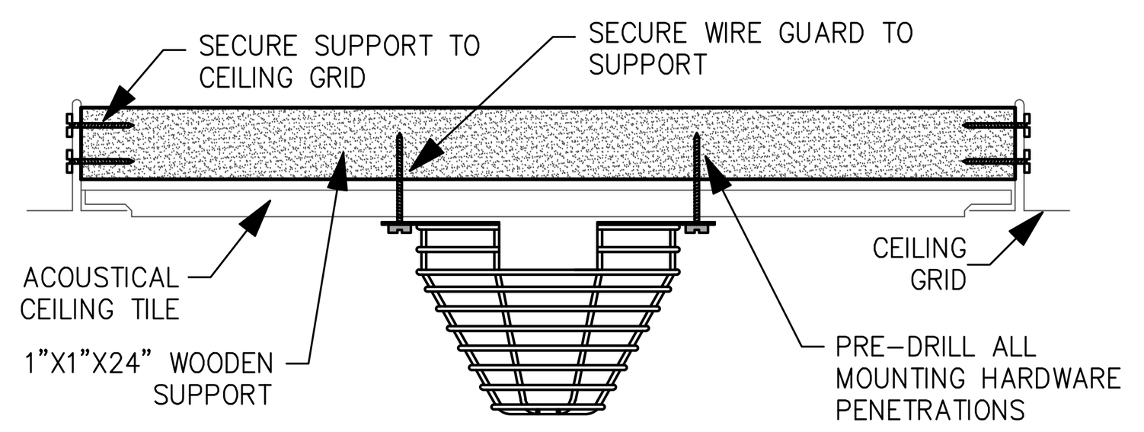
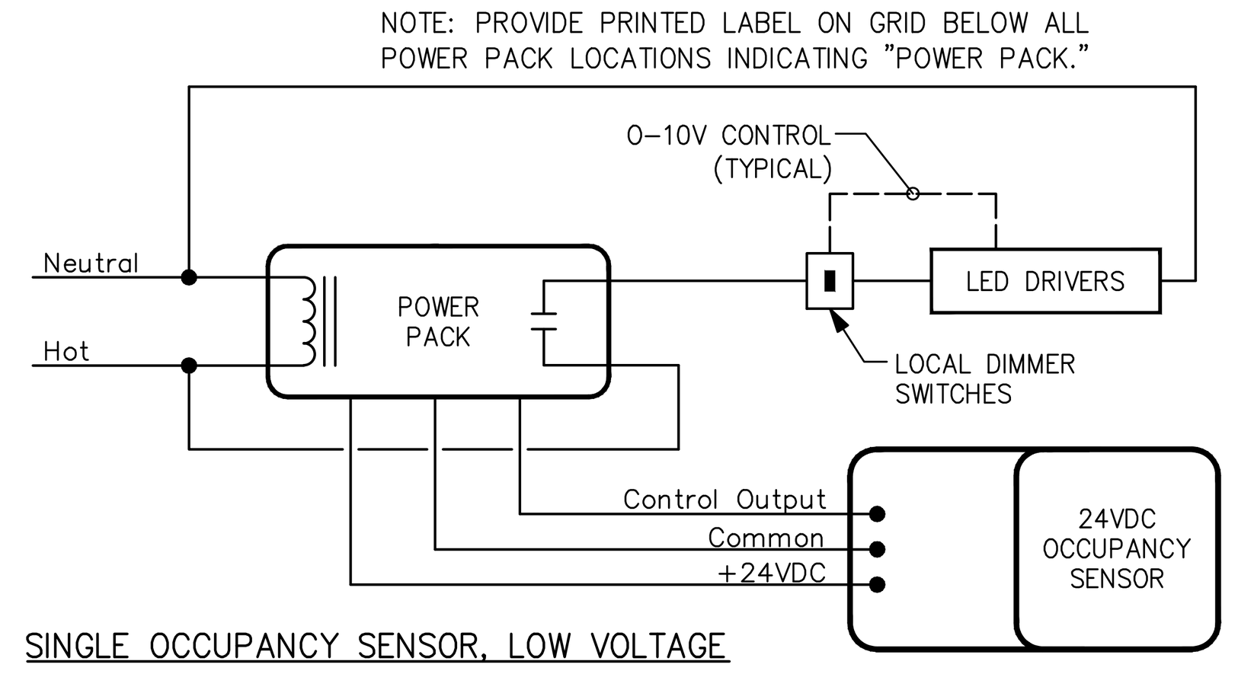
Revisions:

ELECTRICAL DETAILS

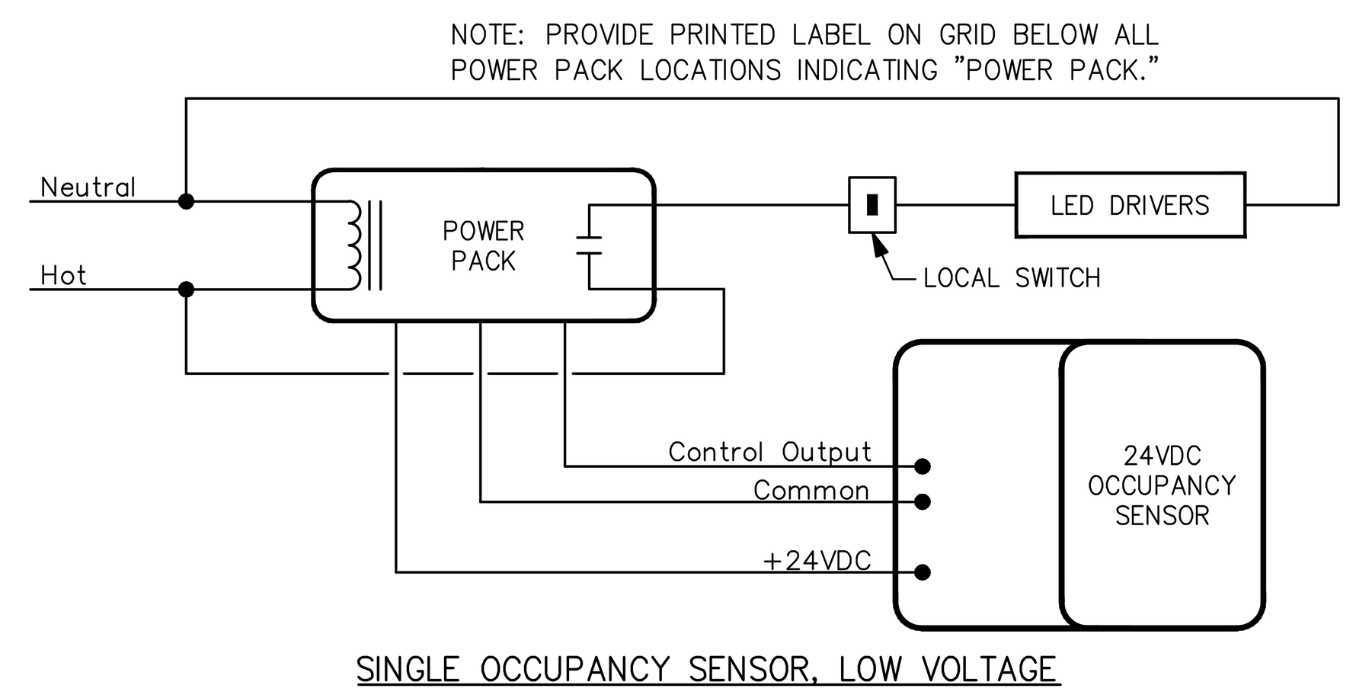
E5.1



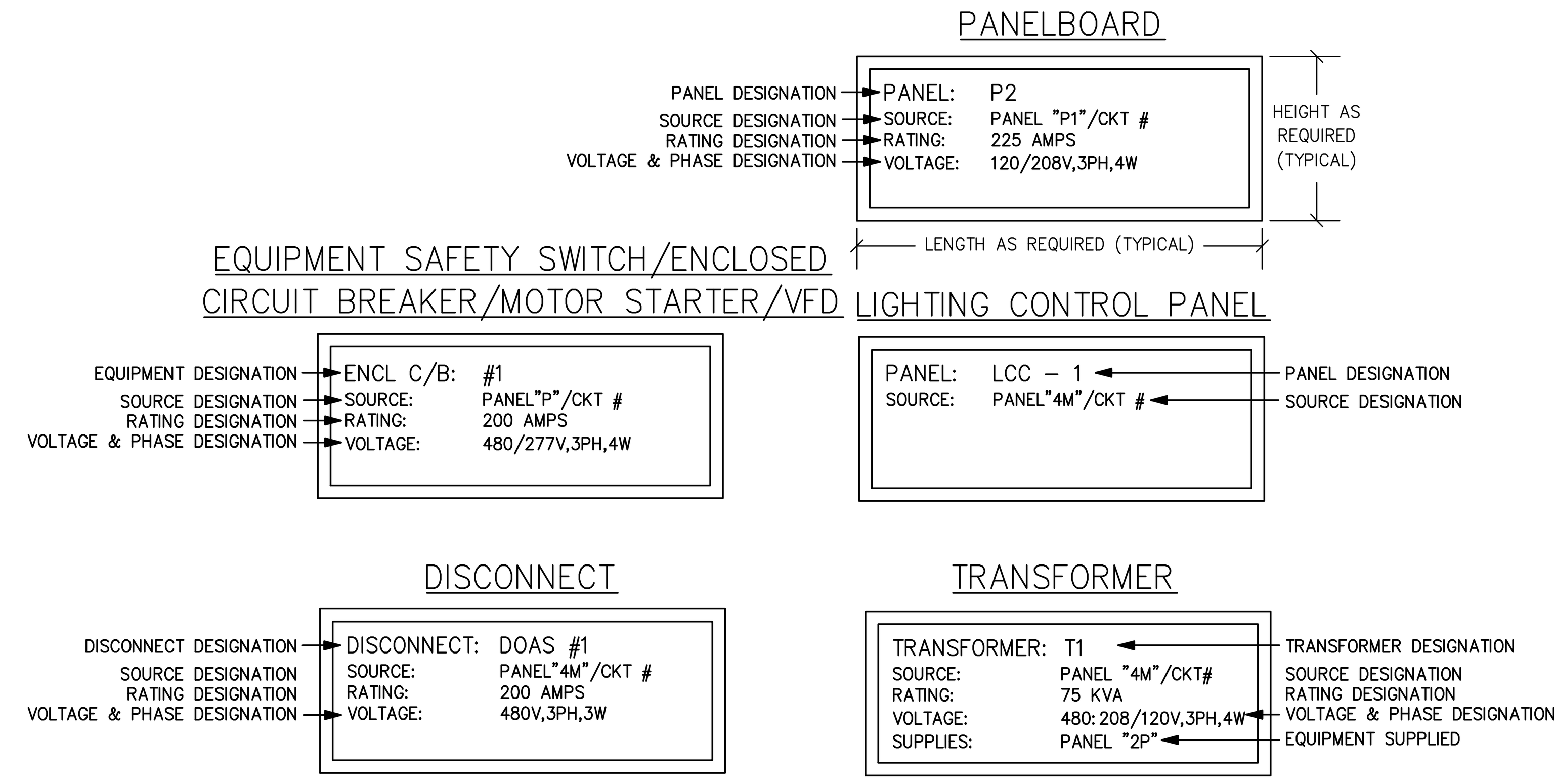
A / E5.2 CEILING MOUNTED GUARD DETAIL
NO SCALE


NOTE: PROVIDE PRINTED LABEL ON GRID BELOW ALL POWER PACK LOCATIONS INDICATING "POWER PACK."
0-10V CONTROL (TYPICAL)
Neutral
Hot
POWER PACK
LED DRIVERS
LOCAL DIMMER SWITCHES
Control Output
Common
+24VDC
24VDC OCCUPANCY SENSOR
SINGLE OCCUPANCY SENSOR, LOW VOLTAGE

C / E5.2 OCCUPANCY SENSOR WIRING FOR DIMMING LEVEL LIGHTING CONTROL
NO SCALE

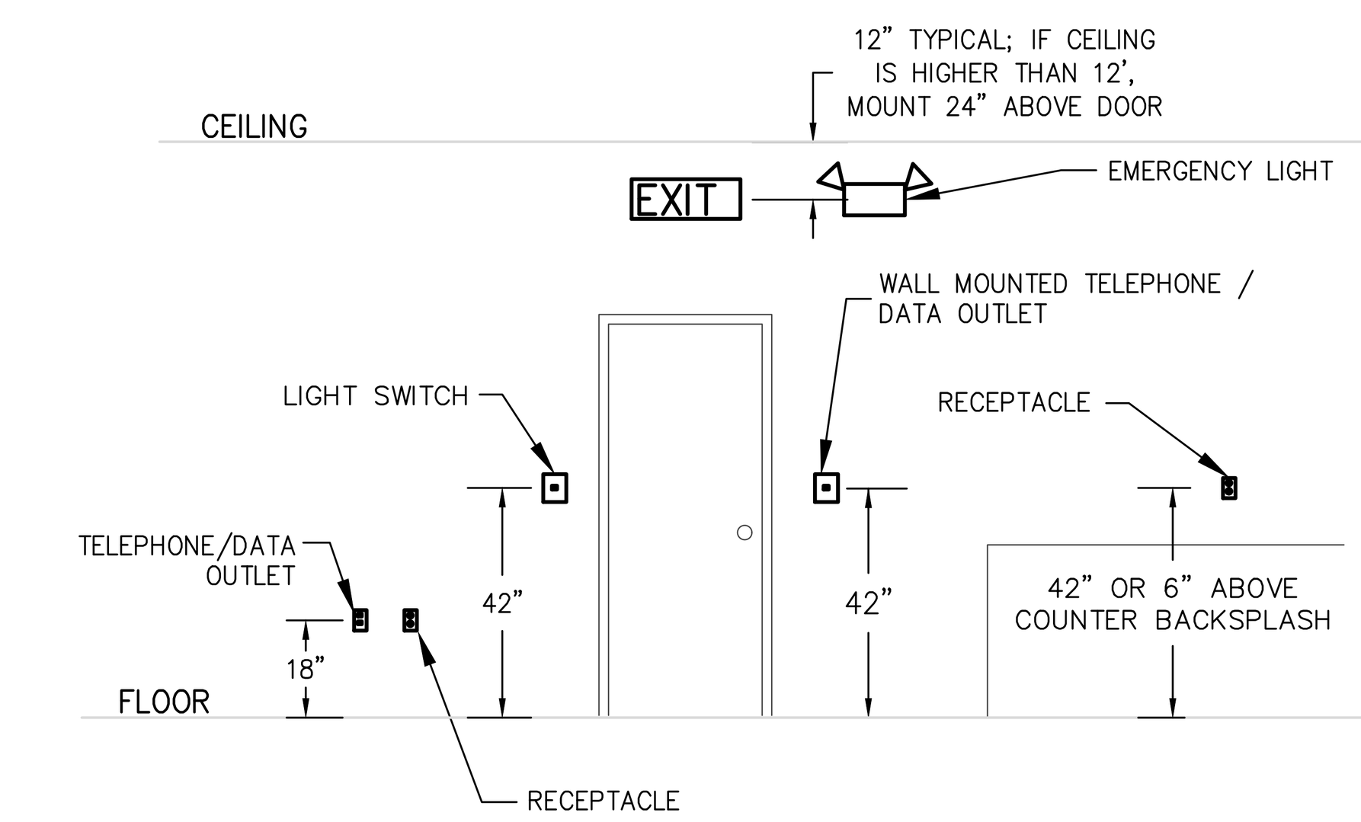


D / E5.2 OCCUPANCY SENSOR WIRING LIGHTING CONTROL
NO SCALE


PANELBOARD
PANEL DESIGNATION
SOURCE DESIGNATION
RATING DESIGNATION
VOLTAGE & PHASE DESIGNATION
PANEL: P2
SOURCE: PANEL "P1"/CKT #
RATING: 225 AMPS
VOLTAGE: 120/208V,3PH,4W
HEIGHT AS REQUIRED (TYPICAL)
LENGTH AS REQUIRED (TYPICAL)
EQUIPMENT SAFETY SWITCH/ENCLOSED CIRCUIT BREAKER/MOTOR STARTER/VFD
EQUIPMENT DESIGNATION
SOURCE DESIGNATION
RATING DESIGNATION
VOLTAGE & PHASE DESIGNATION
ENCL C/B: #1
SOURCE: PANEL"P"/CKT #
RATING: 200 AMPS
VOLTAGE: 480/277V,3PH,4W
LIGHTING CONTROL PANEL
PANEL: LCC – 1
SOURCE: PANEL"4M"/CKT #
PANEL DESIGNATION
SOURCE DESIGNATION
DISCONNECT
DISCONNECT DESIGNATION
SOURCE DESIGNATION
RATING DESIGNATION
VOLTAGE & PHASE DESIGNATION
DISCONNECT: DOAS #1
SOURCE: PANEL"4M"/CKT #
RATING: 200 AMPS
VOLTAGE: 480V,3PH,3W
TRANSFORMER
TRANSFORMER: T1
SOURCE: PANEL "4M"/CKT#
RATING: 75 KVA
VOLTAGE: 480:208/120V,3PH,4W
SUPPLIES: PANEL "2P"
TRANSFORMER DESIGNATION
SOURCE DESIGNATION
RATING DESIGNATION
VOLTAGE & PHASE DESIGNATION
EQUIPMENT SUPPLIED

NOTES:
1. ENGRAVED PLASTIC FOR NAMEPLATE.
2. HIGH PERFORMANCE, DOUBLE COATED TAPE WITH ADHESIVE TO ATTACH LABELS. DESIGN BASIS: 3M #06383 OR APPROVED EQUIVALENT.
3. 3/8" ENGRAVED LETTERS EQUIPMENT NAME DESIGNATION AND 1/4" ENGRAVED LETTERS ON ALL OTHER DESIGNATIONS.

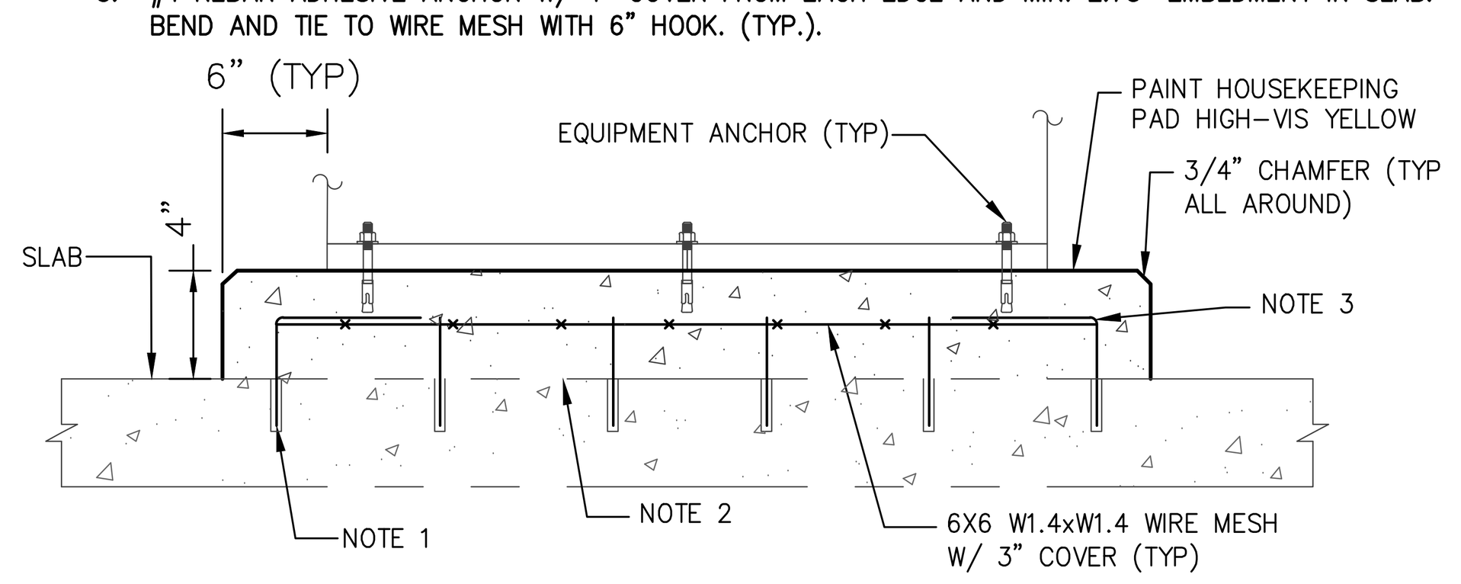
E / E5.2 TYPICAL NAMEPLATE DETAILS
NO SCALE



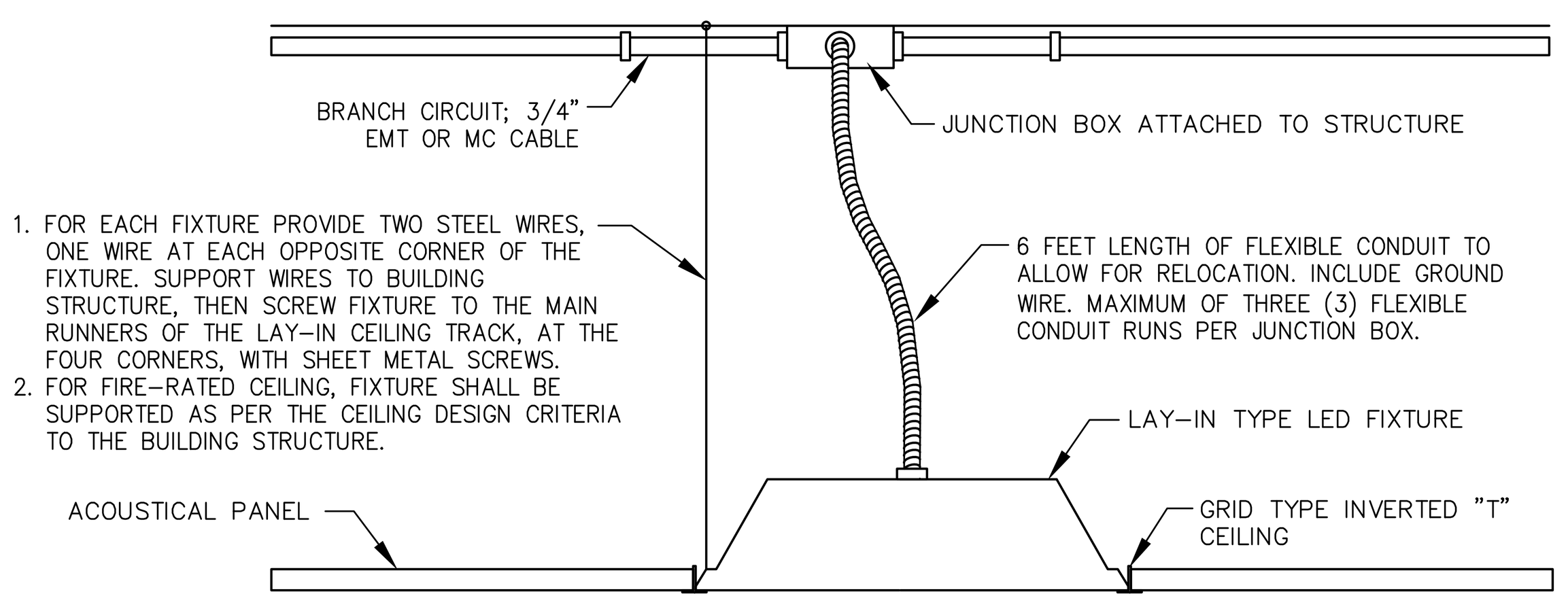
F / E5.2 MOUNTING HEIGHTS OF DEVICES
NO SCALE

NOTES:

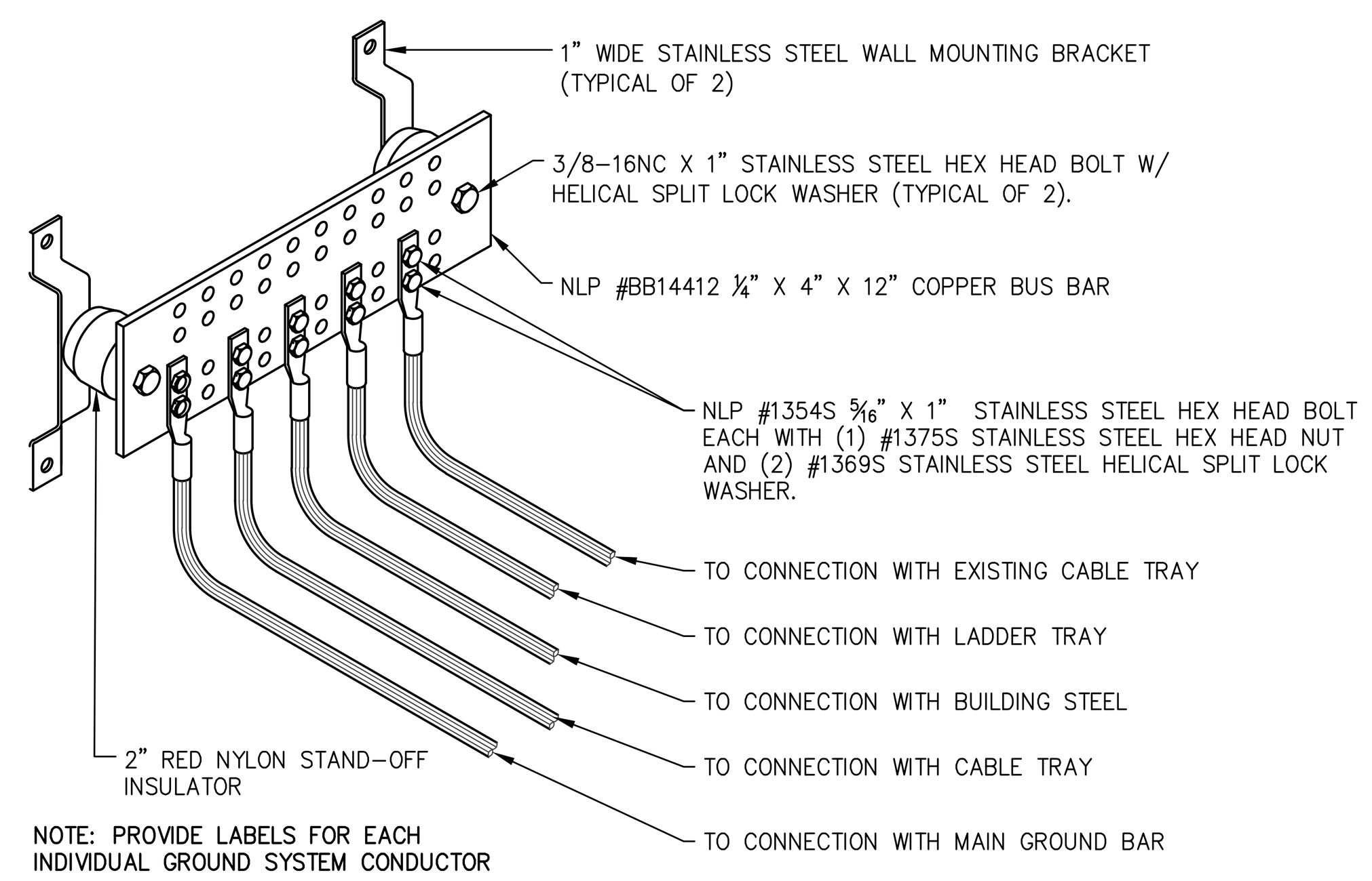
1. PLACE CORNER ANCHORS WITH SPECIFIED 4" COVER, THEN EQUALLY SPACE ANCHORS ALONG SIDES APPROXIMATELY 8" O.C. VERIFY SPACING WITH SEISMIC SUBMITTAL.
2. ROUGHEN AND CLEAN BEFORE COATING WITH BONDING AGENT PRIOR TO POURING PAD.
3. #4 REBAR ADHESIVE ANCHOR W/ 4" COVER FROM EACH EDGE AND MIN. 2.75" EMBEDMENT IN SLAB. BEND AND TIE TO WIRE MESH WITH 6" HOOK. (TYP.).



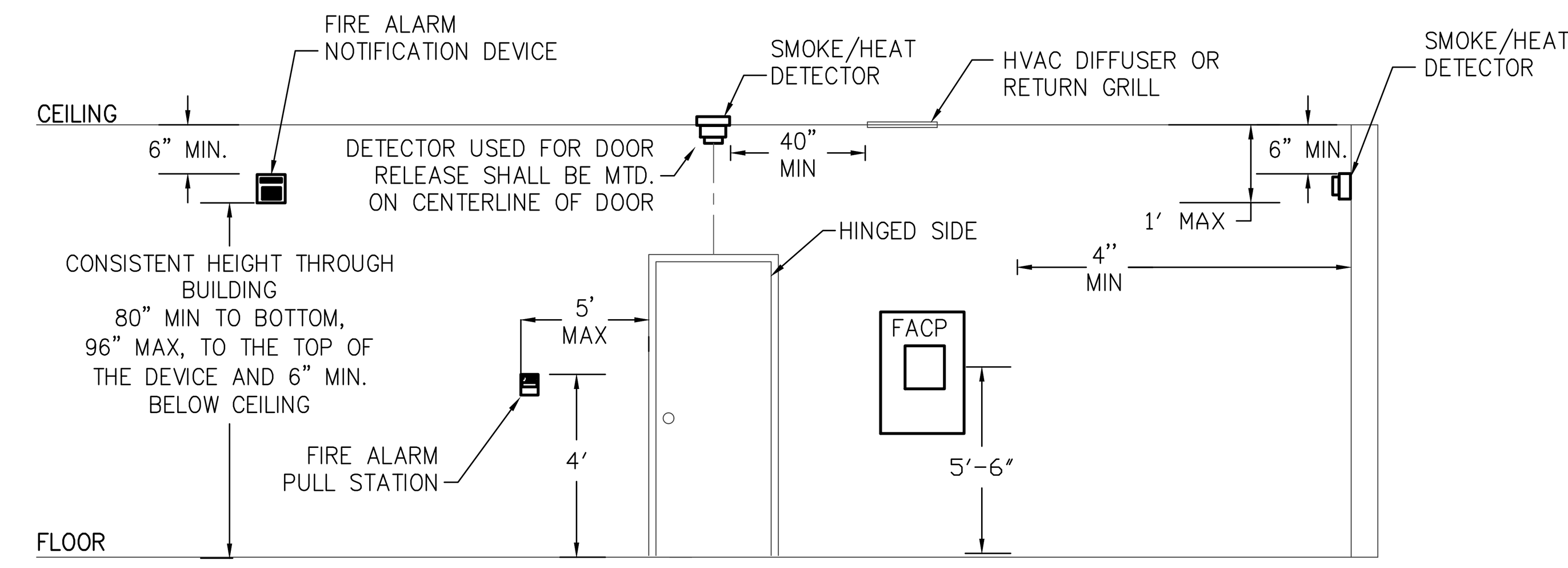
B / E5.2 TYPICAL HOUSEKEEPING PAD DETAIL
NO SCALE


BRANCH CIRCUIT; 3/4" EMT OR MC CABLE
JUNCTION BOX ATTACHED TO STRUCTURE
1. FOR EACH FIXTURE PROVIDE TWO STEEL WIRES, ONE WIRE AT EACH OPPOSITE CORNER OF THE FIXTURE. SUPPORT WIRES TO BUILDING STRUCTURE, THEN SCREW FIXTURE TO THE MAIN RUNNERS OF THE LAY-IN CEILING TRACK, AT THE FOUR CORNERS, WITH SHEET METAL SCREWS.
2. FOR FIRE-RATED CEILING, FIXTURE SHALL BE SUPPORTED AS PER THE CEILING DESIGN CRITERIA TO THE BUILDING STRUCTURE.
6 FEET LENGTH OF FLEXIBLE CONDUIT TO ALLOW FOR RELOCATION. INCLUDE GROUND WIRE. MAXIMUM OF THREE (3) FLEXIBLE CONDUIT RUNS PER JUNCTION BOX.
LAY-IN TYPE LED FIXTURE
ACOUSTICAL PANEL
GRID TYPE INVERTED "T" CEILING

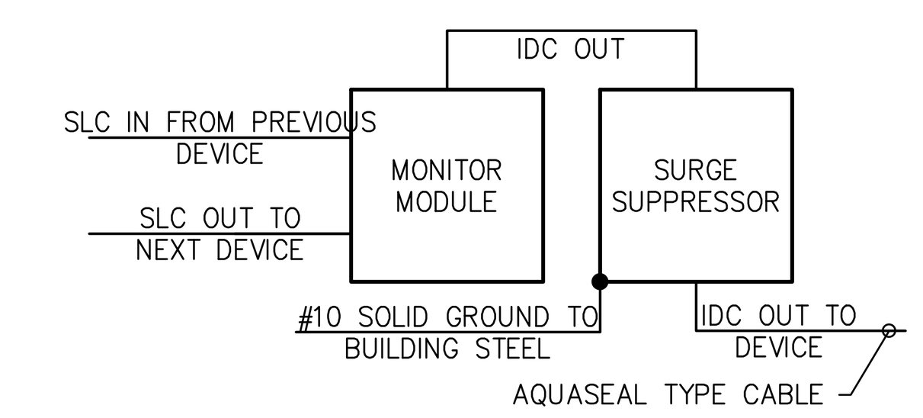
G / E5.2 LIGHT FIXTURE MOUNTING DETAIL
SCALE: N/A


1" WIDE STAINLESS STEEL WALL MOUNTING BRACKET (TYPICAL OF 2)
3/8-16NC X 1" STAINLESS STEEL HEX HEAD BOLT W/ HELICAL SPLIT LOCK WASHER (TYPICAL OF 2).
NLP #BB14412 ¼" X 4" X 12" COPPER BUS BAR
NLP #1354S 5⁄16" X 1" STAINLESS STEEL HEX HEAD BOLT EACH WITH (1) #1375S STAINLESS STEEL HEX HEAD NUT AND (2) #1369S STAINLESS STEEL HELICAL SPLIT LOCK WASHER.
TO CONNECTION WITH EXISTING CABLE TRAY
TO CONNECTION WITH LADDER TRAY
TO CONNECTION WITH BUILDING STEEL
TO CONNECTION WITH CABLE TRAY
TO CONNECTION WITH MAIN GROUND BAR
2" RED NYLON STAND-OFF INSULATOR
NOTE: PROVIDE LABELS FOR EACH INDIVIDUAL GROUND SYSTEM CONDUCTOR

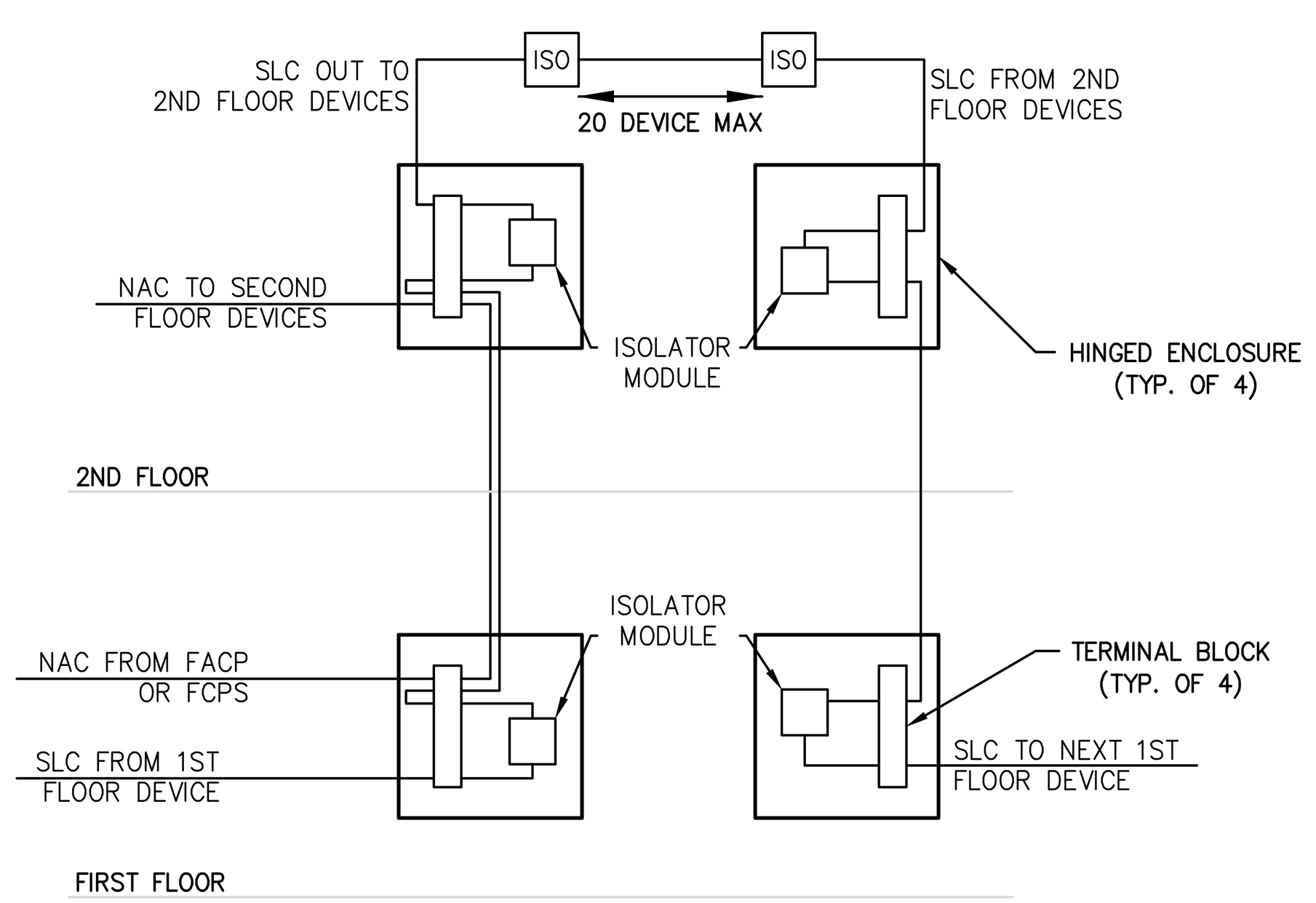
H / E5.2 DATA ROOM GROUND BAR
NO SCALE


FIRE ALARM NOTIFICATION DEVICE
SMOKE/HEAT DETECTOR
HVAC DIFFUSER OR RETURN GRILL
SMOKE/HEAT DETECTOR
CEILING
6" MIN.
DETECTOR USED FOR DOOR RELEASE SHALL BE MTD. ON CENTERLINE OF DOOR
40" MIN
6" MIN.
1' MAX
HINGED SIDE
4" MIN
CONSISTENT HEIGHT THROUGH BUILDING 80" MIN TO BOTTOM, 96" MAX, TO THE TOP OF THE DEVICE AND 6" MIN. BELOW CEILING
5' MAX
FACP
FIRE ALARM PULL STATION
4'
5'-6"
FLOOR

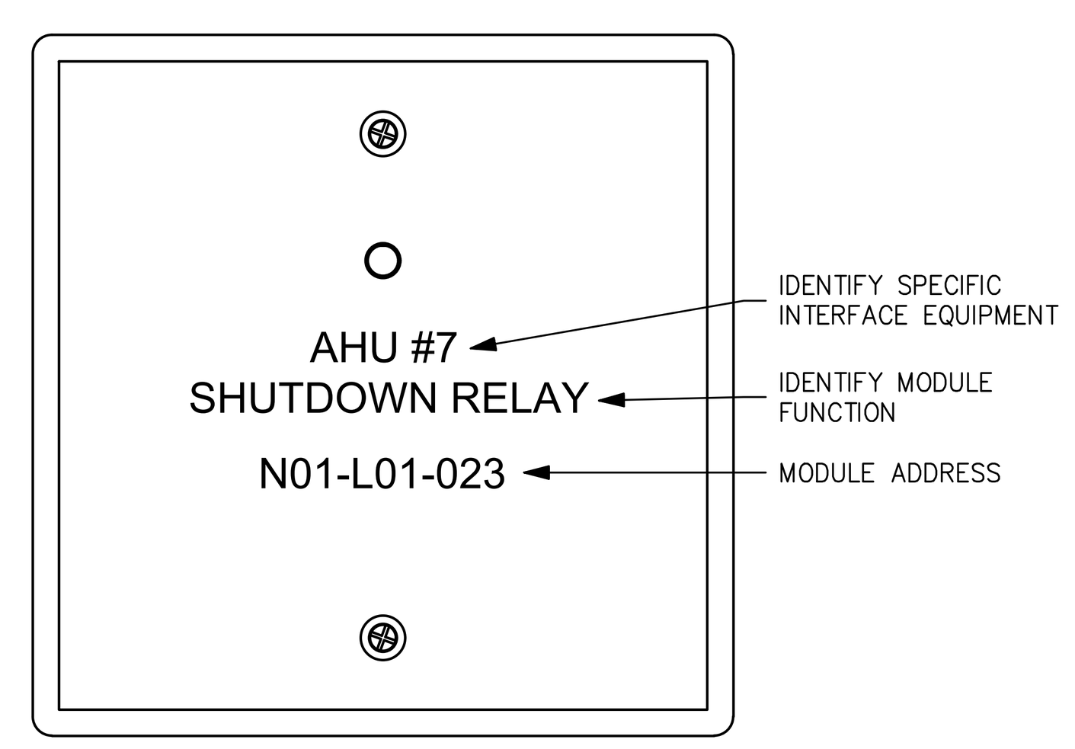
J / E5.2 MOUNTING HEIGHTS OF DEVICES DETAIL – FIRE ALARM
NO SCALE



K / E5.2 FIRE ALARM IDC SURGE SUPPRESSION DETAIL
NO SCALE

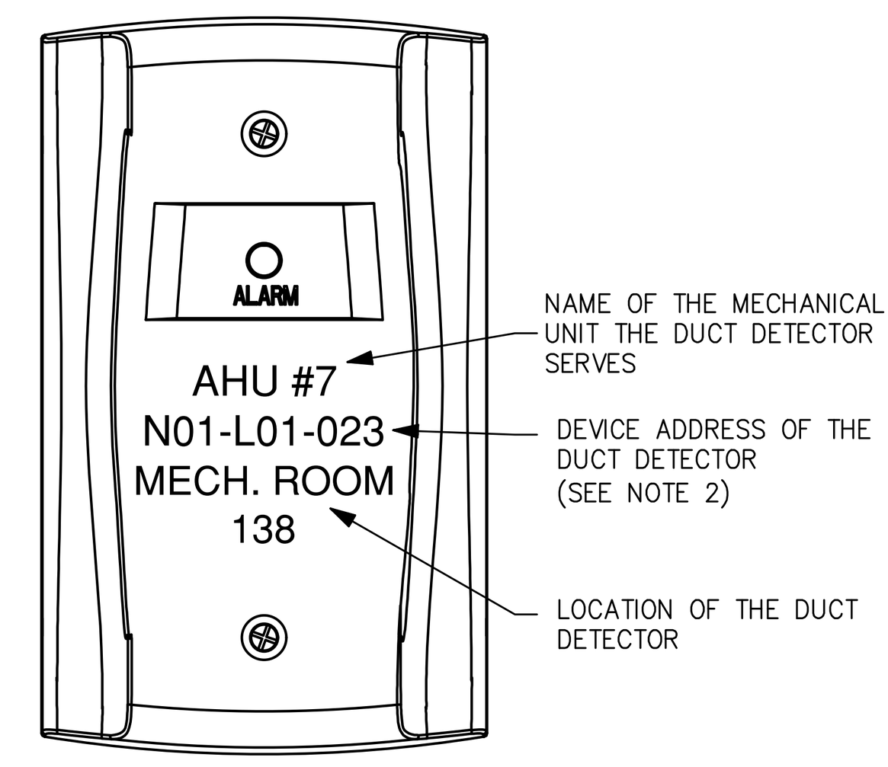

SLC OUT TO 2ND FLOOR DEVICES
ISO
ISO
20 DEVICE MAX
SLC FROM 2ND FLOOR DEVICES
NAC TO SECOND FLOOR DEVICES
ISOLATOR MODULE
HINGED ENCLOSURE (TYP. OF 4)
2ND FLOOR
ISOLATOR MODULE
NAC FROM FACP OR FCPS
TERMINAL BLOCK (TYP. OF 4)
SLC FROM 1ST FLOOR DEVICE
SLC TO NEXT 1ST FLOOR DEVICE
FIRST FLOOR

L / E5.2 SLC ISOLATION BETWEEN FLOORS DETAIL
NO SCALE



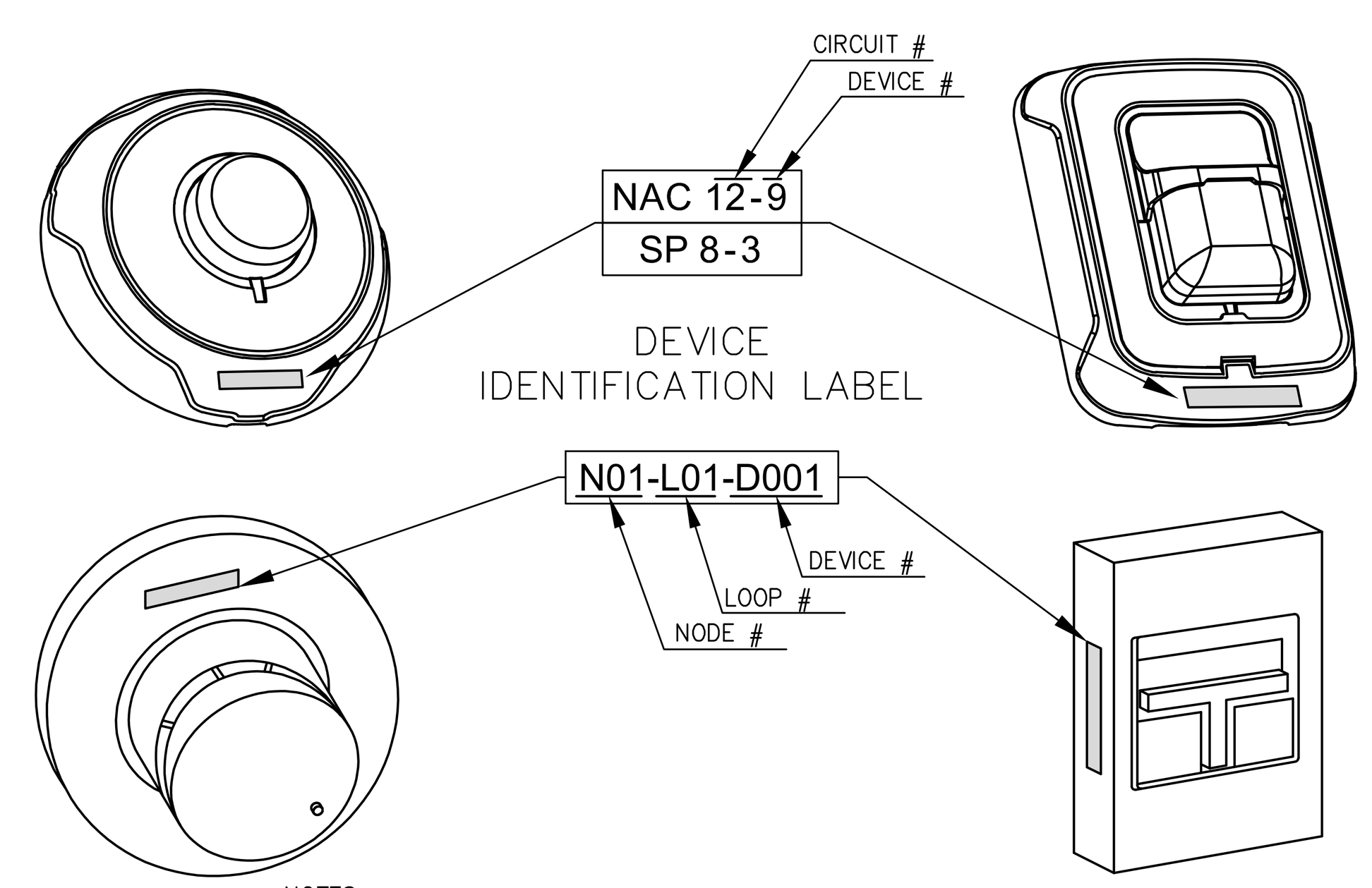
NOTES:
1. NODE DESIGNATION MAY BE OMITTED FOR SINGLE NODE APPLICATIONS
2. NAMING CONVENTION SHALL EMULATE FACP DISPLAY
3. 3/8" HIGH BLACK ON CLEAR, BOLD FONT, P-TOUCH TYPE LABELS
4. LABELS SHALL BE APPLIED STRAIGHT & LEVEL TO DEVICE ORIENTATION
5. EXCESS LABEL MATERIAL SHALL BE TRIMMED

M / E5.2 CONTROL/RELAY MODULE LABELING DETAIL
NO SCALE



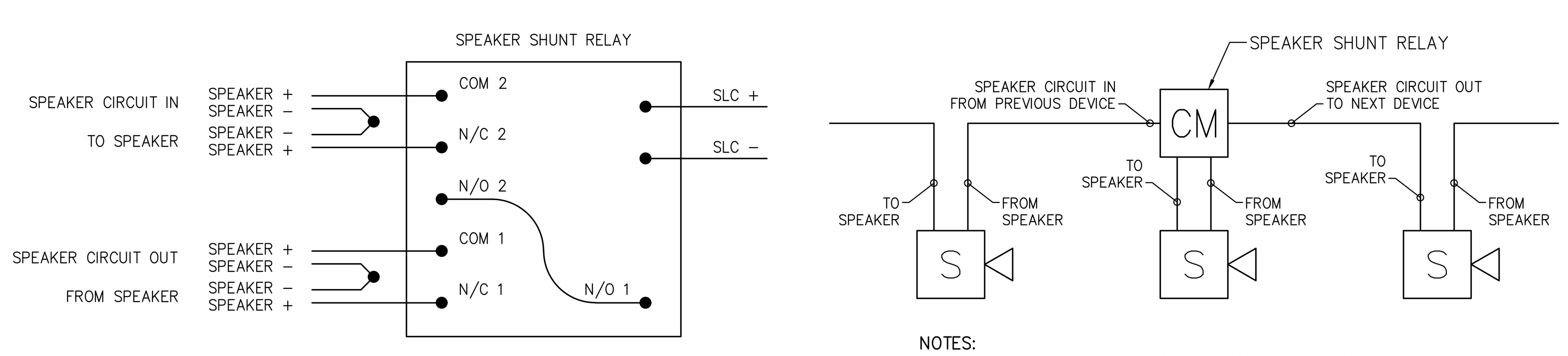
NOTES:
1. NODE DESIGNATION MAY BE OMITTED FOR SINGLE NODE APPLICATIONS
2. NAMING CONVENTION SHALL EMULATE FACP DISPLAY
3. PROVIDE PHENOLIC LABELS MOUNTED ON, ABOVE, OR BELOW EACH RAIL
4. LABELS SHALL BE APPLIED STRAIGHT & LEVEL TO DEVICE ORIENTATION
5. LABELS SHALL NOT BE MOUNTED TO CEILING TILES
6. SEE SPECIFICATION 260553 ELECTRICAL IDENTIFICATION

N / E5.2 REMOTE ALARM INDICATING LAMP LABELING DETAIL
NO SCALE



NOTES:
1. NODE DESIGNATION MAY BE OMITTED FOR SINGLE NODE APPLICATIONS.
2. ADDRESSABLE DEVICE ADDRESS NAMING CONVENTION SHALL EMULATE FACP DISPLAY.
3. NOTIFICATION DEVICE LABEL SHALL MATCH AS-BUILT DRAWING CIRCUITRY LABELS.
4. LABEL TEXT SHALL BE A SIZE WHERE EASILY READ FROM FLOOR LEVEL. (3/8" MIN)
5. BLACK ON CLEAR, BOLD FONT, P-TOUCH TYPE LABELS.
6. LABELS SHALL BE APPLIED STRAIGHT & LEVEL TO DEVICE ORIENTATION.
7. EXCESS LABEL MATERIAL SHALL BE TRIMMED.
8. MOUNT LABEL ON FLAT DEVICE BASE SURFACE.

O / E5.2 TYPICAL FIRE ALARM DEVICE IDENTIFICATION
NO SCALE

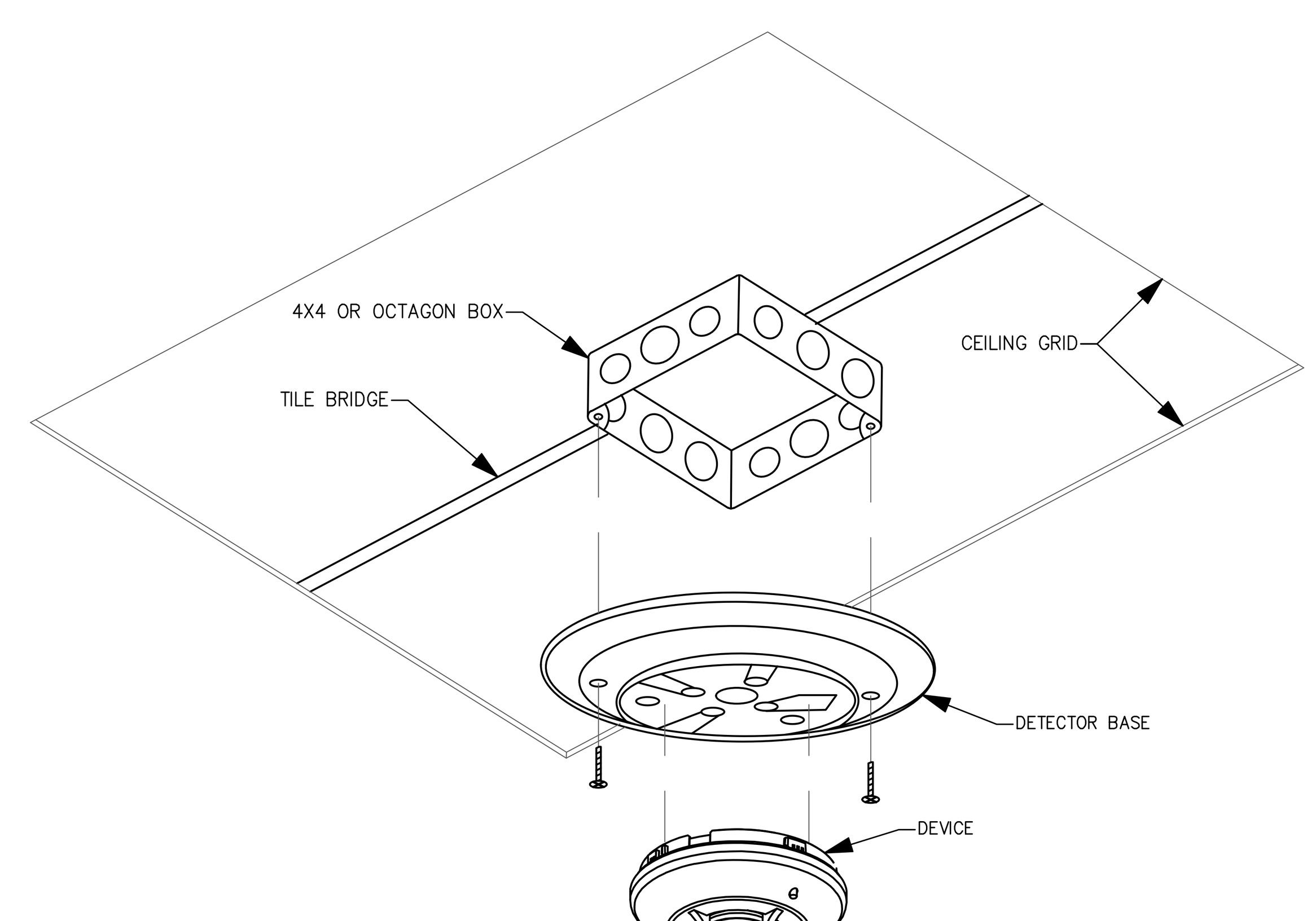

SPEAKER SHUNT RELAY
SPEAKER CIRCUIT IN
TO SPEAKER
SPEAKER +
SPEAKER –
SPEAKER –
SPEAKER +
COM 2
N/C 2
N/O 2
COM 1
N/C 1
N/O 1
SLC +
SLC –
SPEAKER CIRCUIT OUT
FROM SPEAKER
SPEAKER +
SPEAKER –
SPEAKER –
SPEAKER +
SPEAKER CIRCUIT IN FROM PREVIOUS DEVICE
CM
SPEAKER CIRCUIT OUT TO NEXT DEVICE
TO SPEAKER
FROM SPEAKER
TO SPEAKER
FROM SPEAKER
TO SPEAKER
FROM SPEAKER
S
S
S

NOTES:
1. TERMINATE ALL SHIELD CONDUCTORS TOGETHER

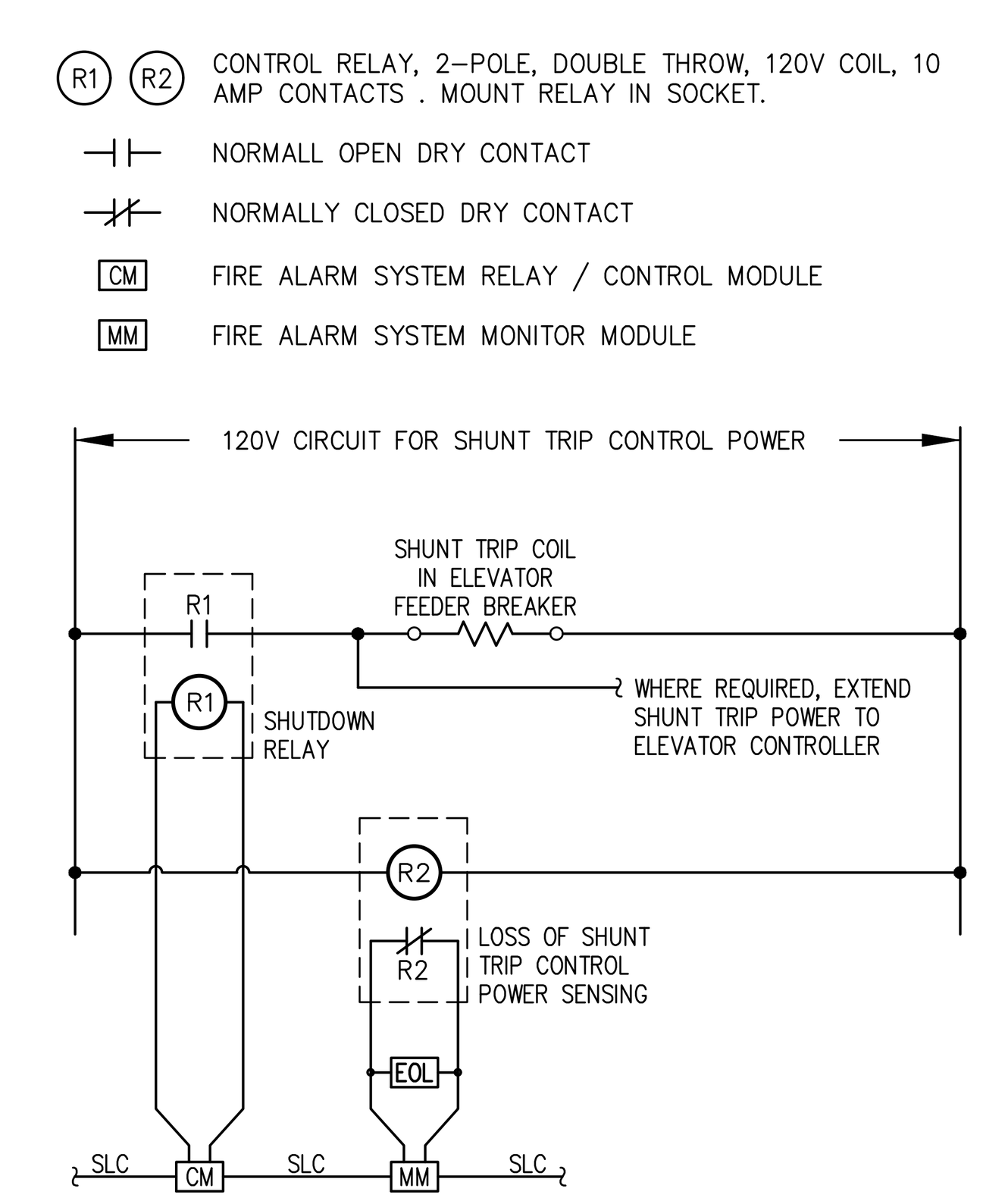
PERFORMANCE DESCRIPTION

THE INTENT OF THE SPEAKER SHUNT CIRCUITRY IS TO PREVENT AUDIO FEEDBACK ON THE VOICE SYSTEM WHEN THE LOCAL OPERATORS CONSOLE (LOC) REMOTE MICROPHONE IS UTILIZED. THIS IS ACCOMPLISHED BY REMOVING (SHUNTING) SELECT SPEAKERS IN THE VICINITY OF THE LOC FROM THE CIRCUIT.

Q / E5.2 SPEAKER SHUNT TRIP RELAY DETAIL
NO SCALE



R / E5.2 DEVICE MOUNTING DETAIL
NO SCALE


R1 R2 CONTROL RELAY, 2-POLE, DOUBLE THROW, 120V COIL, 10 AMP CONTACTS . MOUNT RELAY IN SOCKET.
NORMALL OPEN DRY CONTACT
NORMALLY CLOSED DRY CONTACT
CM FIRE ALARM SYSTEM RELAY / CONTROL MODULE
MM FIRE ALARM SYSTEM MONITOR MODULE
120V CIRCUIT FOR SHUNT TRIP CONTROL POWER
SHUNT TRIP COIL IN ELEVATOR FEEDER BREAKER
R1
R1
SHUTDOWN RELAY
WHERE REQUIRED, EXTEND SHUNT TRIP POWER TO ELEVATOR CONTROLLER
R2
R2
LOSS OF SHUNT TRIP CONTROL POWER SENSING
EOL
SLC
CM
SLC
MM
SLC

S / E5.2 ELEVATOR SHUNT TRIP / FIRE ALARM SYSTEM INTERFACE
SCALE: N/A

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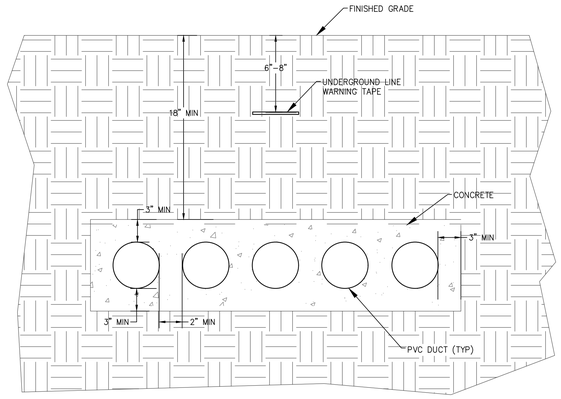
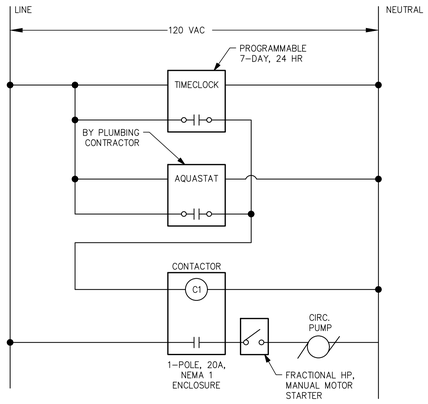
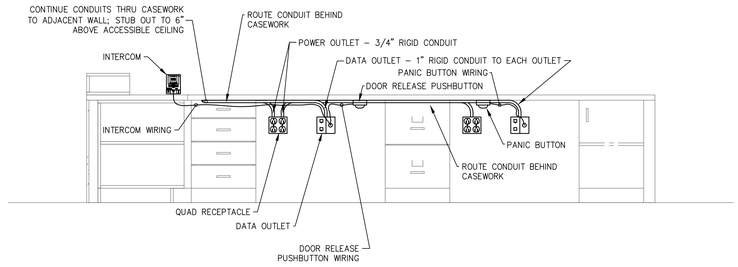
E5.2



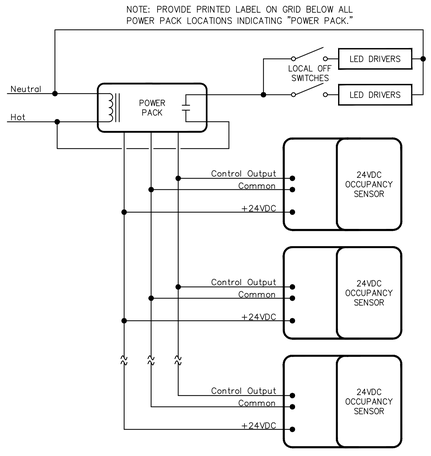
A E5.3 MSB DUCTBANK, CONCRETE ENCASED
NO SCALE



B E5.3 CIRCULATION PUMP CONTROL SCHEMATIC
NO SCALE



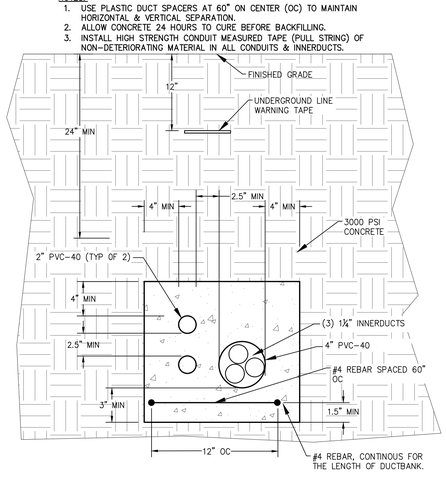
C E5.3 RECEPTION DESK ELECTRICAL DETAIL
NO SCALE



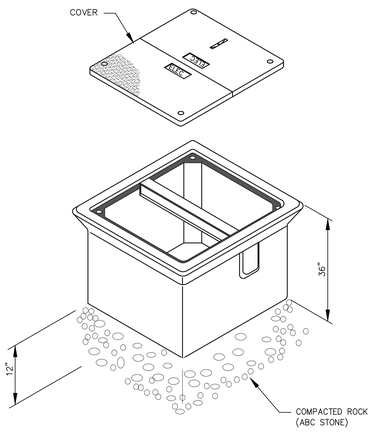
MULTIPLE OCCUPANCY SENSORS, SINGLE CIRCUIT CONTROL

G E5.3 OCCUPANCY SENSOR WIRING FOR DUAL LEVEL LIGHTING CONTROL
NO SCALE

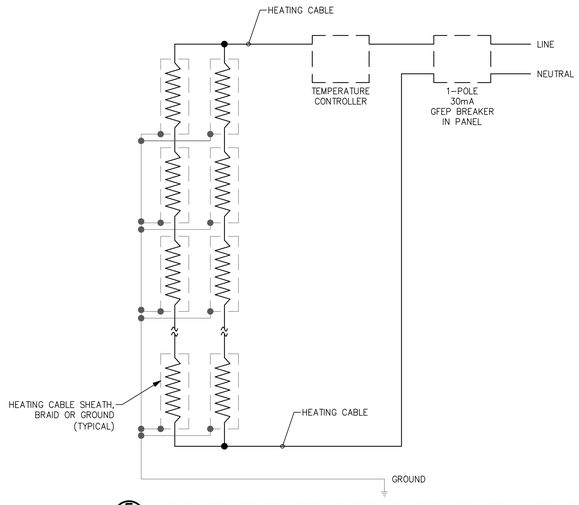
NOTES:
1. USE PLASTIC DUCT SPACERS AT 60" ON CENTER (OC) TO MAINTAIN HORIZONTAL & VERTICAL SEPARATION.
2. ALLOW CONCRETE 24 HOURS TO CURE BEFORE BACKFILLING.
3. INSTALL HIGH STRENGTH CONDUIT MEASURED TAPE (PULL STRING) OF NON-DETERIORATING MATERIAL IN ALL CONDUITS & INNERDUCTS.



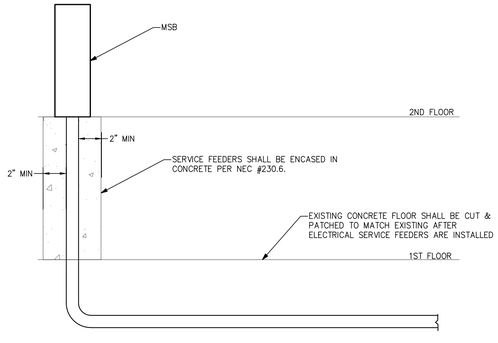
F E5.3 COMMUNICATIONS DUCTBANK, CONCRETE ENCASED
NO SCALE



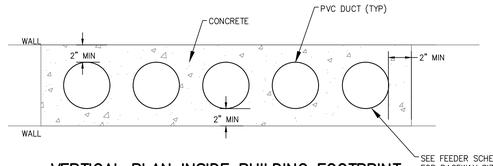
E E5.3 TYPICAL HANDHOLE DETAIL
NO SCALE
DESIGN BASIS: QUAZITE #PG3636HH00–PG3636BA36 (36"X36")



F E5.3 HEAT TRACE TEMPERATURE SENSOR CONTROL SCHEMATIC
NO SCALE

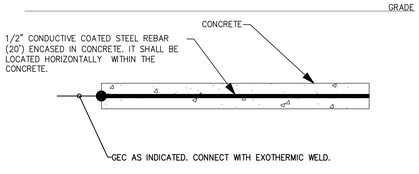


ELEVATION



VERTICAL PLAN INSIDE BUILDING FOOTPRINT

H E5.3 MSB FEEDER, CONCRETE ENCASED
NO SCALE



J E5.3 UFER GROUND SYSTEM DETAIL
NO SCALE

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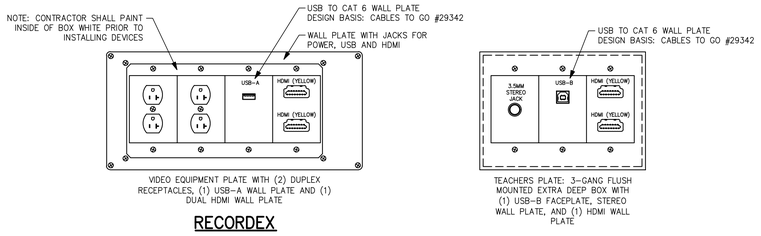
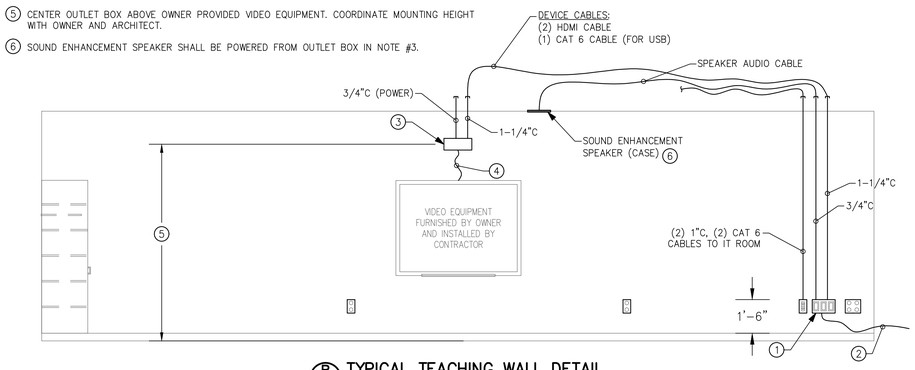


NOTE:
1. FIRST FLOOR LOCATIONS THAT ARE IN EXISTING WALLS SHALL BE SURFACE MOUNT WITH WIREMOLD SIZED TO ACCOMMODATE CABLES.
2. WIREMOLD SHALL BE DUAL CHANNEL TO SEPARATE POWER AND DATA/AV.
3. FIRST FLOOR SYSTEMS WILL NOT BE CONFIGURED WITH STEREO JACK AND SOUND ENHANCEMENT SPEAKERS.

A / E5.4 TYPICAL VIDEO EQUIPMENT WALL PLATE DETAILS
NO SCALE

KEYED NOTES:

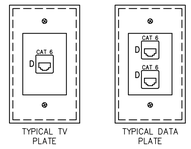
1. OUTLET BOX, 3-GANG EXTRA DEEP BOX, WALL PLATE WITH (2) HDMI FEMALE-FEMALE JACKS; USB-B TO CAT 6 WALL PLATE, AND STEREO CABLE CONNECTORS.
2. PATCH CABLES FROM TEACHER WORKSTATION SHALL BE CONTRACTOR PROVIDED.
3. OUTLET BOX FOR OWNER FURNISHED AND CONTRACTOR INSTALLED VIDEO EQUIPMENT. SEE DETAIL A/E5.4, BOX DESIGN BASIS: ARLINGTON TVBS613. WALL PLATE WITH (2) HDMI FEMALE JACKS, (2) DUPLEX RECEPTACLES, AND (1) USB-A TO CAT 6 WALL PLATE.
4. PATCH CABLES TO DEVICE SHALL BE CONTRACTOR PROVIDED.
5. CENTER OUTLET BOX ABOVE OWNER PROVIDED VIDEO EQUIPMENT. COORDINATE MOUNTING HEIGHT WITH OWNER AND ARCHITECT.
6. SOUND ENHANCEMENT SPEAKER SHALL BE POWERED FROM OUTLET BOX IN NOTE #3.



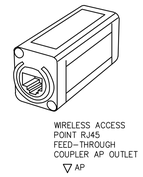
B / E5.4 TYPICAL TEACHING WALL DETAIL
NO SCALE

LEGEND
D = DATA RJ45 JACK (GREEN)

NOTE:
1. ALL OUTLET BOXES FOR STANDARD DATA OUTLETS SHALL BE 2-GANG WITH SINGLE GANG FACEPLATES TO FIX 2 GANG BOX.
2. REFER TO DIVISION 27 SPECIFICATIONS.



D / E5.4 TYPICAL DATA WALL PLATE DETAILS
NO SCALE



C / E5.4 WIRELESS ACCESS POINT COUPLER DETAIL
NO SCALE

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E5.4

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	LAMP	BALLAST	VOLTS	MOUNTING	MANUFACTURER / MODEL	NOTES	CALLOUT
AH		2x4, PRISMATIC LENS	(1) 60W LED	LED DIMMABLE DRIVER	120V 1P 2W	RECESSED	COLUMBIA #LJT SERIES DAYBRITE #2T LED SERIES METALUX #2GR LED SERIES	7200 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. 0.156" NOMINAL LENS.	AH
AL		2x4, PRISMATIC LENS	(1) 33W LED	LED DIMMABLE DRIVER	120V 1P 2W	RECESSED	COLUMBIA #LJT SERIES DAYBRITE #2T LED SERIES METALUX #2GR LED SERIES	4000 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. 0.156" NOMINAL LENS.	AL
ALF		2x4, PRISMATIC LENS, FLANGED TRIM	(1) 33W LED	LED DIMMABLE DRIVER	120V 1P 2W	RECESSED	COLUMBIA #LJT SERIES DAYBRITE #2T LED SERIES METALUX #2GR LED SERIES	4000 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. 0.156" NOMINAL LENS. FLANGED TRIM FOR RECESSED MOUNTING IN GYPBOARD CEILING.	ALF
BH		2x4, ARCHITECTURAL LENSED, INDIRECT	(1) 67W LED	LED DIMMABLE DRIVER	120V 1P 2W	RECESSED	COLUMBIA #LCAT SERIES DAYBRITE #2EV SERIES METALUX #24CZ SERIES	6800 NOMINAL LUMENS. 3500K COLOR TEMPERATURE.	BH
BL		2x4, ARCHITECTURAL LENSED, INDIRECT	(1) 40W LED	LED DIMMABLE DRIVER	120V 1P 2W	RECESSED	COLUMBIA #LCAT SERIES DAYBRITE #2EV SERIES METALUX #24CZ SERIES	4300 NOMINAL LUMENS. 3500K COLOR TEMPERATURE.	BL
BLN		2x4, ARCHITECTURAL LENSED, INDIRECT, NIGHT LIGHT	(1) 40W LED	LED DIMMABLE DRIVER	120V 1P 2W	RECESSED	COLUMBIA #LCAT SERIES DAYBRITE #2EV SERIES METALUX #24CZ SERIES	4300 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. CONNECT TO UNSWITCHED CIRCUIT.	BLN
BM		2x4, ARCHITECTURAL LENSED, INDIRECT	(1) 47W LED	LED DIMMABLE DRIVER	120V 1P 2W	RECESSED	COLUMBIA #LCAT SERIES DAYBRITE #2EV SERIES METALUX #24CZ SERIES	5300 NOMINAL LUMENS. 3500K COLOR TEMPERATURE.	BM
BMS		2x4, ARCHITECTURAL LENSED, INDIRECT, SURFACE MOUNT	(1) 47W LED	LED DIMMABLE DRIVER	120V 1P 2W	SURFACE	COLUMBIA #LCAT SERIES DAYBRITE #2EV SERIES METALUX #24CZ SERIES	5300 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. PROVIDE SURFACE MOUNT KIT.	BMS
CS		1x4, ARCHITECTURAL LENSED, INDIRECT, SURFACE MOUNT	(1) 33W LED	LED DIMMABLE DRIVER	120V 1P 2W	SURFACE	COLUMBIA #LZPT SERIES PRE-APPROVED EQUIVALENT PRE-APPROVED EQUIVALENT	3300 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. PROVIDE SURFACE MOUNT KIT.	CS
D2		4' DIRECT/INDIRECT, INTEGRAL OCCUPANCY SENSOR	(1) 44W LED	LED DIMMABLE DRIVER	120V 1P 2W	SURFACE; MTD TO BOTTOM OF BEAM	FINELITE #HP-4ID SERIES LEDALITE #TRUGROOVE SERIES NEO-RAY #DEFINE 4 SERIES	4600 NOMINAL LUMENS. 60/40 DIRECT/INDIRECT RATIO PER 4 FOOT. 3500K COLOR TEMPERATURE.	D2
D2P		4' DIRECT/INDIRECT PENDANT, INTEGRAL OCCUPANCY SENSOR	(1) 44W LED	LED DIMMABLE DRIVER	120V 1P 2W	PENDANT; MTD 9'-0" AFF	FINELITE #HP-4ID SERIES LEDALITE #TRUGROOVE SERIES NEO-RAY #DEFINE 4 SERIES	4600 NOMINAL LUMENS. 60/40 DIRECT/INDIRECT RATIO PER 4 FOOT. 3500K COLOR TEMPERATURE. COORDINATE FINAL MOUNTING HEIGHT WITH ARCHITECT.	D2P
EG		EMERGENCY EGRESS, BATTERY	(2) 6W MR16 LED	BATTERY	120V 1P 2W	SURFACE	EMERGILITE #PREMIER SERIES CHLORIDE #CM-23200 SERIES LIGHTALARMS #2GRA1 SERIES	NICAD BATTERY; CONNECT TO NEAREST UNSWITCHED LIGHT CIRCUIT IN SAME SPACE. THESE FIXTURES ARE NOT TAGGED WITH "EG" ON THE DRAWINGS; ONLY THE SYMBOL IS USED.	EG
GM		4' GASKETED	(1) 45W LED	LED DRIVER	120V 1P 2W	SURFACE	WILLIAMS #96 SERIES DAYBRITE #V2 SERIES METALUX #4VT SERIES	5300 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. STAINLESS STEEL MOUNTING HARDWARE & LENS CLAMPS.	GM
H		4' GASKETED LED, VERTICALLY MOUNTED	(1) 40W LED	LED DRIVER	120V 1P 2W	WALL; 8'-0" AFF	PARAMOUNT #CO SERIES PHILIPS EQUIVALENT FAILSAFE #HVSL2 SERIES	4000 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. STAINLESS STEEL MOUNTING HARDWARE & LENS CLAMPS. VERTICALLY MOUNTED. COORDINATE LOCATION WITH ELEVATOR INSTALLER / VENDOR.	H
IL		4' INDUSTRIAL	(1) 30W LED	LED DRIVER	120V 1P 2W	PENDANT/SURFACE	COLUMBIA #LCR SERIES DAYBRITE #FSS SERIES METALUX #SNLED SERIES	3700 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. WIRE GUARD.	IL
IM		4' INDUSTRIAL	(1) 40W LED	LED DIMMABLE DRIVER	120V 1P 2W	PENDANT/SURFACE	COLUMBIA #LCR SERIES DAYBRITE #FSS SERIES METALUX #SNLED SERIES	5300 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. WIRE GUARD.	IM
INV25		INVERTER, EGRESS LIGHTING	N/A	BATTERY	120V 1P 2W	SURFACE	EMERGI-LITE #EMIU SERIES HIGH-LITES #PCF SERIES IOTA #IIS SERIES	INVERTER FOR BATTERY BACKUP OF EGRESS LIGHTING; 250W FOR 90 MINUTES (MINIMUM). INCLUDE SELF-DIAGNOSTIC OPTION. LOCATE ABOVE CEILING - PROVIDE LABEL ON CEILING GRID BELOW INSTALLED LOCATION "LIGHTING INVERTER".	INV25
SL		2x4, ARCHITECTURAL LENSED, INDIRECT, SURFACE MOUNT	(1) 43W LED	LED DIMMABLE DRIVER	120V 1P 2W	SURFACE	COLUMBIA #LZPT SERIES PRE-APPROVED EQUIVALENT PRE-APPROVED EQUIVALENT	4400 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. PROVIDE SURFACE MOUNT KIT.	SL
SM		2x4, ARCHITECTURAL LENSED, INDIRECT, SURFACE MOUNT	(1) 48W LED	LED DIMMABLE DRIVER	120V 1P 2W	SURFACE	COLUMBIA #LZPT SERIES PRE-APPROVED EQUIVALENT PRE-APPROVED EQUIVALENT	5300 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. PROVIDE SURFACE MOUNT KIT.	SM
ST		STAIR LIGHT, ANGLED CURVED LENS, INTEGRAL BATTERY BACKUP	(1) 43W LED	BATTERY	120V 1P 2W	WALL; 8'-6" ABOVE LANDING	FINELITE #HP-WM-D SERIES LEDALITE #TRUGROOVE SERIES NEO-RAY #DEFINE 4 SERIES	4000 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. INTEGRAL OCCUPANCY SENSOR FOR 100% OUTPUT, USER SELECTABLE STANDBY OUTPUT.	ST
TL		TRACK FIXTURE	30W LED	DIMMING	120V 1P 2W	TRACK	WAC LIGHTING #WTK SERIES LIGHTOLIER #LAV SERIES HALO #L808 SERIES	1500 NOMINAL LUMENS. PROVIDE 4 SPOTS & 4 FLOODS, 3500K COLOR TEMPERATURE.	TL
TR		TRACK		DIMMING	120V 1P 2W	CEILING	WAC LIGHTING #WT SERIES LIGHTOLIER # ADVENT LYTESPAN SERIES HALO #L64 POWERTRAC SERIES	2-CIRCUIT TRACK; LENGTH AS SHOWN ON PLANS. SEE PLANS FOR MOUNTING HEIGHT. WHERE INDICATED MOUNTED TO GRID, SUPPORT WITH MANUFACTURER GRID ATTACHMENT HARDWARE. FINISH SELECTION BY ARCHITECT.	TR
V		2' VANITY FIXTURE	(1) 30W LED	LED DRIVER	120V 1P 2W	WALL	COLUMBIA #CWM-2 SERIES DAY-BRITE #FSW-2 SERIES TERON #DD24 SERIES	3200 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. FROSTED LENS. COORINATE EXACT LOCATION AND HEIGHT WITH ARCHITECT.	V
V4		4' VANITY FIXTURE	(1) 38W LED	LED DRIVER	120V 1P 2W	WAL	COLUMBIA #CWM-4 SERIES DAY-BRITE #FSW-4 SERIES TERON #DD48 SERIES	4100 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. FROSTED LENS. COORINATE EXACT LOCATION AND HEIGHT WITH ARCHITECT.	V4
VV		2' VANITY FIXTURE, VERTICALLY MOUNTED	(1) 30W LED	LED DRIVER	120V 1P 2W	WALL; OVER EXISTING J-BOX	COLUMBIA #CWM-2 SERIES DAY-BRITE #FSW-2 SERIES TERON #DD24 SERIES	3200 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. FROSTED LENS. COORDINATE EXACT LOCATION WITH ARCHITECT.	VV
W		HALF CYLINDER WALL PACK	(1) 28W LED	LED DRIVER	120V 1P 2W	WALL; 7'-0" TO BOTTOM OF FIXTURE	DECO LIGHTING #D440 SERIES GARDCO #104L SERIES RAYON #T650L SERIES	2000 NOMINAL LUMENS. 4000K COLOR TEMPERATURE. TYPE IV DISTRIBUTION. INTEGRAL PHOTOCELL. DOWNLIGHT ONLY. FINISH SELECTION BY ARCHITECT. COORDINATE MOUNTING HEIGHT WITH ARCHITECT. CONNECT TO UNSWITCHED LIGHT CIRCUIT FROM SPACE THAT IS EXITED.	W
WB		HALF CYLINDER WALL PACK, INTEGRAL BATTERY BACKUP	(1) 20W LED (1) 20W LED	LED DRIVER LED DRIVER	120V 1P 2W	6" ABOVE DOOR HEIGHT	DECO LIGHTING #D440 SERIES GARDCO #104L SERIES RAYON #T650L SERIES	3800 NOMINAL LUMENS. 4000K COLOR TEMPERATURE. TYPE IV DISTRIBUTION. INTEGRAL BATTERY BACKUP. INTEGRAL PHOTOCELL. DUAL LED DRIVERS. DUAL LED ARRAYS. DOWNLIGHT ONLY. FINISH SELECTION BY ARCHITECT. CONNECT TO UNSWITCHED LIGHT CIRCUIT FROM SPACE THAT IS EXITED.	WB
WNP		HALF CYLINDER WALL PACK	(1) 28W LED	LED DRIVER	120V 1P 2W	WALL; 7'-0" TO BOTTOM OF FIXTURE	DECO LIGHTING #D440 SERIES GARDCO #104L SERIES RAYON #T650L SERIES	2000 NOMINAL LUMENS. 4000K COLOR TEMPERATURE. TYPE IV DISTRIBUTION. FINISH SELECTION BY ARCHITECT. COORDINATE MOUNTING HEIGHT WITH ARCHITECT. DOWNLIGHT ONLY.	WNP
WR		1x4 SURFACE WRAP, INTEGRAL OCCUPANCY SENSOR	(1) 46W LED	LED DRIVER	120V 1P 2W	SURFACE	DECO LIGHTING #DACH-LED-R DAY-BRITE #FSS SERIES METALUX #SRL LED SERIES	5200 NOMINAL LUMENS. 3500K COLOR TEMPERATURE. KNOCK OUTS ON ENDS OF FIXTURE AS WELL AS ABILITY TO MOUNT TO RECESSED JUNCTION BOX.	WR
X	⊗	EXIT SIGN, BATTERY BACKUP	(2) 1W LED	BATTERY	120V 1P 2W	UNIVERSAL	DUAL-LITE #SE SERIES LIGHTALARMS #QLXN500R SURE-LITES #LPX SERIES	NICAD BATTERY; CONNECT TO NEAREST UNSWITCHED LIGHT CIRCUIT IN SAME SPACE. THESE FIXTURES ARE NOT TAGGED WITH "X" ON THE DRAWINGS; ONLY THE SYMBOL IS USED.	X

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 17593 25 FEBRUARY 2019 MARK A. CIARROCCA

Wrightsville Beach Elementary School Addition & Renovation

220 Coral Drive
Wrightsville Beach, NC

Construction Drawings
February 20, 2019

Revisions:

ELECTRICAL
LUMINAIRE
SCHEDULE

E6.1

MSB

ROOM: ELEC E2 | VOLTS: 208Y/120V 3P 4W | AIC: 25,000
MOUNTING: SURFACE | BUS AMPS: 1600 | MAIN BKR: 1600
FED FROM: UTILITY | NEUTRAL: 100% | LUGS: STANDARD
NOTE: ULSE LISTED AND LABELED. PROVIDE MULTIFUNCTION DIGITAL METER

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	70/3	SPD1	0			2	225/3	PANEL 2A	6.77		
3	|			0		4	|			8.21	
5	|				0	6	|				6.46
7	100/3	PANEL L	4.74			8	225/3	PANEL 2B	12.7		
9	|			2.87		10	|			15	
11	|				5.37	12	|				14
13	300/2	XFMR TCAFE	19.2			14	100/2	PANEL EXT	2.22		
15	|			19.2		16	|			2.04	
17	450/3	PANEL M2A			41.3	18	200/2	PANEL C			0
19	|		41.2			20	|		0		
21	|			41.2		22	225/2	PANEL D		9.86	
23	450/3	PANEL M2B			44.9	24	|				7.98
25	|		43.8			26	250/2	PANEL HVAC	19.6		
27	|			42.8		28	|			19.6	
29	225/2	PANEL A			8.56	30	60/2	PANEL BOILER			0
31	|		4.53			32	|		0		
33	200/2	PANEL B		7.41		34	−/3	SPACE ONLY		0	
35	|				5.47	36	|				0
37	−/3	SPACE ONLY	0			38	|		0		
39	|			0		40	−/1	SPACE ONLY		0	
41	|				0	42	−/1	SPACE ONLY			0
								TOTAL CONNECTED KVA BY PHASE	155	168	134
								TOTAL CONNECTED AMPS BY PHASE	1,290	1,400	1,120

	CONN KVA	CALC KVA	
LIGHTING	22	27.5	(125%)
LARGEST MOTOR	11.3	14.2	(125%)
OTHER MOTORS	136	136	(100%)
RECEPTACLES	52	31	(50%>10)
KITCHEN EQUIP	0	0	(N/A)

	CONN KVA	CALC KVA	
CONTINUOUS	3.5	4.38	(125%)
HEATING	142	142	(100%)
COOLING	53.1	0	(0%)
NONCONTINUOUS	50.2	50.2	(100%)
DIVERSE	38.4	38.4	(100%)
METERED DEMAND	0	0	(125%)
TOTAL KVA	457	443	
BALANCED 3−PHASE AMPS		1,230	

2A

ROOM: ELEC E2 | VOLTS: 208Y/120V 3P 4W | AIC: 18,000
MOUNTING: SURFACE | BUS AMPS: 225 | MAIN BKR: MLO
FED FROM: MSB | NEUTRAL: 100% | LUGS: STANDARD
NOTE:

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	FAN F−19, REC	0.51			2	20/1	REC	0.72		
3	20/1	FAN F−20, REC		0.87		4	20/1	REC, REC−GFCI		0.72	
5	20/1	REC			0.9	6	20/1	(*) REC−EWC			0.6
7	20/1	REC−COPIER	1			8	20/1	(**) HEAT TRACE CONTROLLER	0.5		
9	20/1	REC		1.08		10	20/1	REC, VIDEO EQUIP		1.3	
11	20/1	REC			0.54	12	20/1	REC			1.08
13	20/1	REC	0.9			14	20/1	REC, VIDEO EQUIP	0.94		
15	20/1	REC, REC−FLOOR, VIDEO EQUIP		1.3		16	20/1	REC		0.72	
17	20/1	REC			1.08	18	20/1	REC			0.18
19	20/1	REC, VIDEO EQUIP	1.12			20	20/1	SPARE	0		
21	20/1	REC, VIDEO EQUIP		1.12		22	20/1	SPARE		0	
23	20/1	REC			1.08	24	20/1	SPARE			0
25	20/1	REC	0.54			26	20/1	SPARE	0		
27	20/1	(*) REC−REFRIGERATOR		1		28	20/1	SPARE		0	
29	20/1	REC−COPIER			1	30	20/1	SPARE			0
31	20/1	REC	0.54			32	20/1	SPARE	0		
33	20/1	SHUNT TRIP		0.1		34	20/1	SPARE		0	
35	20/1	SPARE			0	36	20/1	SPARE			0
37	20/1	SPARE	0			38	20/1	SPARE	0		
39	20/1	SPARE		0		40	20/1	SPARE		0	
41	20/1	SPARE			0	42	20/1	SPARE			0
43	20/1	SPARE	0			44	20/1	SPARE	0		
45	20/1	SPARE		0		46	20/1	SPARE		0	
47	20/1	SPARE			0	48	20/1	SPARE			0
49	20/1	SPARE	0			50	20/1	SPARE	0		
51	20/1	SPARE		0		52	20/1	SPARE		0	
53	20/1	SPARE			0	54	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	6.77	8.21	6.46
								TOTAL CONNECTED AMPS BY PHASE	56.4	68.4	53.8

	CONN KVA	CALC KVA	
LIGHTING	0	0	(125%)
LARGEST MOTOR	0.15	0.188	(125%)
OTHER MOTORS	0.15	0.15	(100%)
RECEPTACLES	14.9	12.5	(50%>10)
KITCHEN EQUIP	0	0	(N/A)

	CONN KVA	CALC KVA	
CONTINUOUS	0.5	0.625	(125%)
HEATING	0	0	(N/A)
COOLING	0	0	(N/A)
NONCONTINUOUS	5.7	5.7	(100%)
DIVERSE	0	0	(N/A)
METERED DEMAND	0	0	(125%)
TOTAL KVA	21.4	19.1	
BALANCED 3−PHASE AMPS		53.1	

(*) PROVIDE GFCI C/B (5mA) (**) PROVIDE GFEP C/B (30mA)

2B

ROOM: ELEC E2 | VOLTS: 208Y/120V 3P 4W | AIC: 18,000
MOUNTING: SURFACE | BUS AMPS: 225 | MAIN BKR: MLO
FED FROM: MSB | NEUTRAL: 100% | LUGS: STANDARD
NOTE:

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	REC	0.9			2	20/1	REC, VIDEO EQUIP	1.3		
3	20/1	REC		0.54		4	20/1	REC		0.9	
5	20/1	REC			0.36	6	20/1	REC			0.9
7	20/1	REC, REC−EXT GFCI	1.08			8	20/1	REC, VIDEO EQUIP	1.3		
9	20/1	REC, VIDEO EQUIP		1.3		10	20/1	REC, VIDEO EQUIP		1.3	
11	20/1	REC, VIDEO EQUIP			1.3	12	20/1	REC			0.9
13	20/1	REC	0.9			14	20/1	SECURITY SYSTEM	0.2		
15	20/1	REC		0.9		16	20/1	REC		0.54	
17	20/1	REC, VIDEO EQUIP			1.3	18	20/1	DDC J−BOX, REC			0.51
19	20/1	VIDEO EQUIP	0.4			20	20/1	PA SYSTEM	0.36		
21	20/1	SPARE		0		22	20/2	REC−DATA		1.5	
23	20/1	SPARE			0	24	|				1.5
25	20/1	SPARE	0			26	25/2	REC−DATA	2.5		
27	20/1	SPARE		0		28	|			2.5	
29	20/1	SPARE			0	30	20/1	REC			0.72
31	20/1	SPARE	0			32	20/2	REC−DATA	1.5		
33	20/1	SPARE		0		34	|			1.5	
35	20/1	SPARE			0	36	20/2	REC−DATA			1.5
37	20/1	SPARE	0			38	|		1.5		
39	20/1	SPARE		0		40	25/2	REC−DATA		2.5	
41	20/1	SPARE			0	42	|				2.5
43	20/1	SPARE	0			44	20/1	REC	0.72		
45	20/1	SPARE		0		46	20/2	REC−DATA		1.5	
47	20/1	SPARE			0	48	|				1.5
49	20/1	SPARE	0			50	20/1	SPARE	0		
51	20/1	SPARE		0		52	20/1	SPARE		0	
53	20/1	SPARE			0	54	20/1	(#) FIRE ALARM PANEL			1
								TOTAL CONNECTED KVA BY PHASE	12.7	15	14
								TOTAL CONNECTED AMPS BY PHASE	106	125	118

	CONN KVA	CALC KVA	
LIGHTING	0	0	(125%)
LARGEST MOTOR	0	0	(N/A)
OTHER MOTORS	0	0	(100%)
RECEPTACLES	15.5	12.7	(50%>10)
KITCHEN EQUIP	0	0	(N/A)

	CONN KVA	CALC KVA	
CONTINUOUS	0	0	(125%)
HEATING	0	0	(N/A)
COOLING	0	0	(N/A)
NONCONTINUOUS	26.2	26.2	(100%)
DIVERSE	0	0	(N/A)
METERED DEMAND	0	0	(125%)
TOTAL KVA	41.6	38.9	
BALANCED 3−PHASE AMPS		108	

(#) BREAKER LOCK

L

ROOM: ELEC E2 | VOLTS: 208Y/120V 3P 4W | AIC: 18,000
MOUNTING: SURFACE | BUS AMPS: 100 | MAIN BKR: MLO
FED FROM: MSB | NEUTRAL: 100% | LUGS: STANDARD
NOTE:

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	EGRESS, EXIT, LTG, LTG−NL	1.36			2	20/1	EGRESS, EXIT, LTG, LTG−NL	0.704		
3	20/1	EGRESS, EXIT, INVERTER, LTG, LTG−NL, LTG−WALLPACK		0.339		4	20/1	EGRESS, LTG		1.22	
5	20/1	EGRESS, LTG			1.31	6	20/1	EGRESS, LTG			1.22
7	20/1	EGRESS, FAN F−14, FAN F−15, LIGHTING, LTG	1.45			8	20/1	EGRESS, LTG	1.22		
9	20/1	EGRESS, FAN F−16, FAN F−17, FAN F−18, LTG		0.959		10	20/1	EXTERIOR LTG		0.3	
11	20/1	EGRESS, LTG			0.92	12	20/1	ELEV CAB LTS			1
13	20/1	SPARE	0			14	20/1	SPARE	0		
15	20/1	LTG		0.047		16	20/1	SPARE		0	
17	20/1	EGRESS, ELEV SHAFT LTG, EXIT, EXTERIOR LTG, LIGHTING, LTG, LTG−WALLPACK			0.811	18	20/1	SPARE			0
19	20/1	SPARE	0			20	20/1	SPARE	0		
21	20/1	SPARE		0		22	20/1	SPARE		0	
23	20/1	SPARE			0	24	20/1	LTG CONTROL			0.1
25	20/1	SPARE	0			26	30/3	SPD2	0		
27	20/1	SPARE		0		28	|			0	
29	20/1	SPARE			0	30	|				0
								TOTAL CONNECTED KVA BY PHASE	4.74	2.87	5.37
								TOTAL CONNECTED AMPS BY PHASE	39.5	23.9	44.7

	CONN KVA	CALC KVA	
LIGHTING	12.2	15.3	(125%)
LARGEST MOTOR	0.15	0.188	(125%)
OTHER MOTORS	0.6	0.6	(100%)
RECEPTACLES	0	0	(50%>10)
KITCHEN EQUIP	0	0	(N/A)

	CONN KVA	CALC KVA	
CONTINUOUS	0	0	(125%)
HEATING	0	0	(N/A)
COOLING	0	0	(N/A)
NONCONTINUOUS	0	0	(100%)
DIVERSE	0	0	(N/A)
METERED DEMAND	0	0	(125%)
TOTAL KVA	13	16.1	
BALANCED 3−PHASE AMPS		44.6	

M2A

ROOM: ELEC E2 | VOLTS: 208Y/120V 3P 4W | AIC: 25,000
MOUNTING: SURFACE | BUS AMPS: 600 | MAIN BKR: MLO
FED FROM: MSB | NEUTRAL: 100% | LUGS: STANDARD
NOTE:

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/3	H20 HTR	2			2	40/3	(*) ELEVATOR	3.43		
3	|			2		4	|			3.43	
5	|				2	6	|				3.43
7	50/3	WMHP#2213	5.01			8	20/1	CIRC. PUMP	0.1		
9	|			5.01		10	60/3	WMHP#2203		6.03	
11	|				5.01	12	|				6.03
13	60/3	WMHP#2211	6.03			14	|		6.03		
15	|			6.03		16	50/3	WMHP#2201		5.57	
17	|				6.03	18	|				5.57
19	50/3	WMHP#2205	5.57			20	|		5.57		
21	|			5.57		22	60/3	WMHP#2101		5.91	
23	|				5.57	24	|				5.91
25	20/3	AIR COMPRESSOR	0.942			26	|		5.91		
27	|			0.942		28	20/3	EWH#1		0.75	
29	|				0.942	30	|				0.75
31	−/3	SPACE ONLY	0			32	|		0.75		
33	|			0		34	−/3	SPACE ONLY		0	
35	|				0	36	|				0
37	−/3	SPACE ONLY	0			38	|		0		
39	|			0		40	−/3	SPACE ONLY		0	
41	|				0	42	|				0
43	−/3	SPACE ONLY	0			44	|		0		
45	|			0		46	−/3	SPACE ONLY		0	
47	|				0	48	|				0
49	30/3	SPD3	0			50	|		0		
51	|			0		52	−/1	SPACE ONLY		0	
53	|				0	54	−/1	SPACE ONLY			0
								TOTAL CONNECTED KVA BY PHASE	41.3	41.2	41.2
								TOTAL CONNECTED AMPS BY PHASE	344	343	343

	CONN KVA	CALC KVA	
LIGHTING	0	0	(125%)
LARGEST MOTOR	11.3	14.2	(125%)
OTHER MOTORS	63.6	63.6	(100%)
RECEPTACLES	0	0	(50%>10)
KITCHEN EQUIP	0	0	(N/A)

	CONN KVA	CALC KVA	
CONTINUOUS	0	0	(125%)
HEATING	42.8	42.8	(100%)
COOLING	0	0	(N/A)
NONCONTINUOUS	6.1	6.1	(100%)
DIVERSE	0	0	(N/A)
METERED DEMAND	0	0	(125%)
TOTAL KVA	124	127	
BALANCED 3−PHASE AMPS		351	

(*) PROVIDE SHUNT TRIP C/B

M2B

ROOM: ELEC E2 | VOLTS: 208Y/120V 3P 4W | AIC: 25,000
MOUNTING: SURFACE | BUS AMPS: 600 | MAIN BKR: MLO
FED FROM: MSB | NEUTRAL: 100% | LUGS: STANDARD
NOTE:

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	60/3	WMHP#2200	5.91			2	30/3	SPD4	0		
3	|			5.91		4	|		0		
5	|				5.91	6	|			0	
7	50/3	WMHP#2202	5.57			8	50/3	WMHP#2206	5.57		
9	|			5.57		10	|			5.57	
11	|				5.57	12	|				5.57
13	50/3	WMHP#2204	5.57			14	50/3	WMHP#2208	5.57		
15	|			5.57		16	|			5.57	
17	|				5.57	18	|				5.57
19	25/2	DAHU#2, DHP#2	2.08			20	50/3	WMHP#2210	5.57		
21	|			2.08		22	|			5.57	
23	15/2	HP−ODU9			1.14	24	|				5.57
25	|		1.14			26	50/3	WMHP#2212	5.57		
27	20/3	H20 HTR		2.33		28	|			5.57	
29	|				2.33	30	|				5.57
31	|		2.33			32	−/3	SPACE ONLY	0		
33	20/2	HP−IDU9B		0.016		34	|			0	
35	|				0.016	36	|				0
37	20/2	HP−IDU9A	0.016			38	−/3	SPACE ONLY	0		
39	|			0.016		40	|			0	
41	−/3	SPACE ONLY			0	42	|				0
43	|		0			44	−/3	SPACE ONLY	0		
45	|			0		46	|			0	
47	−/3	SPACE ONLY			0	48	|				0
49	|		0			50	−/3	SPACE ONLY	0		
51	|			0		52	|			0	
53	−/1	SPACE ONLY			0	54	|				0
								TOTAL CONNECTED KVA BY PHASE	44.9	43.8	42.8
								TOTAL CONNECTED AMPS BY PHASE	374	365	357

	CONN KVA	CALC KVA	
LIGHTING	0	0	(125%)
LARGEST MOTOR	11	13.7	(125%)
OTHER MOTORS	60	60	(100%)
RECEPTACLES	0	0	(50%>10)
KITCHEN EQUIP	0	0	(N/A)

	CONN KVA	CALC KVA	
CONTINUOUS	0	0	(125%)
HEATING	53.6	53.6	(100%)
COOLING	6.3	0	(0%)
NONCONTINUOUS	7	7	(100%)
DIVERSE	0	0	(N/A)
METERED DEMAND	0	0	(125%)
TOTAL KVA	132	134	
BALANCED 3−PHASE AMPS		373	

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 17593 25 FEB 2019 REGISTERED MARK A. CIARAMITARO

Wrightsville Beach Elementary School Addition & Renovation

220 Coral Drive
Wrightsville Beach, NC

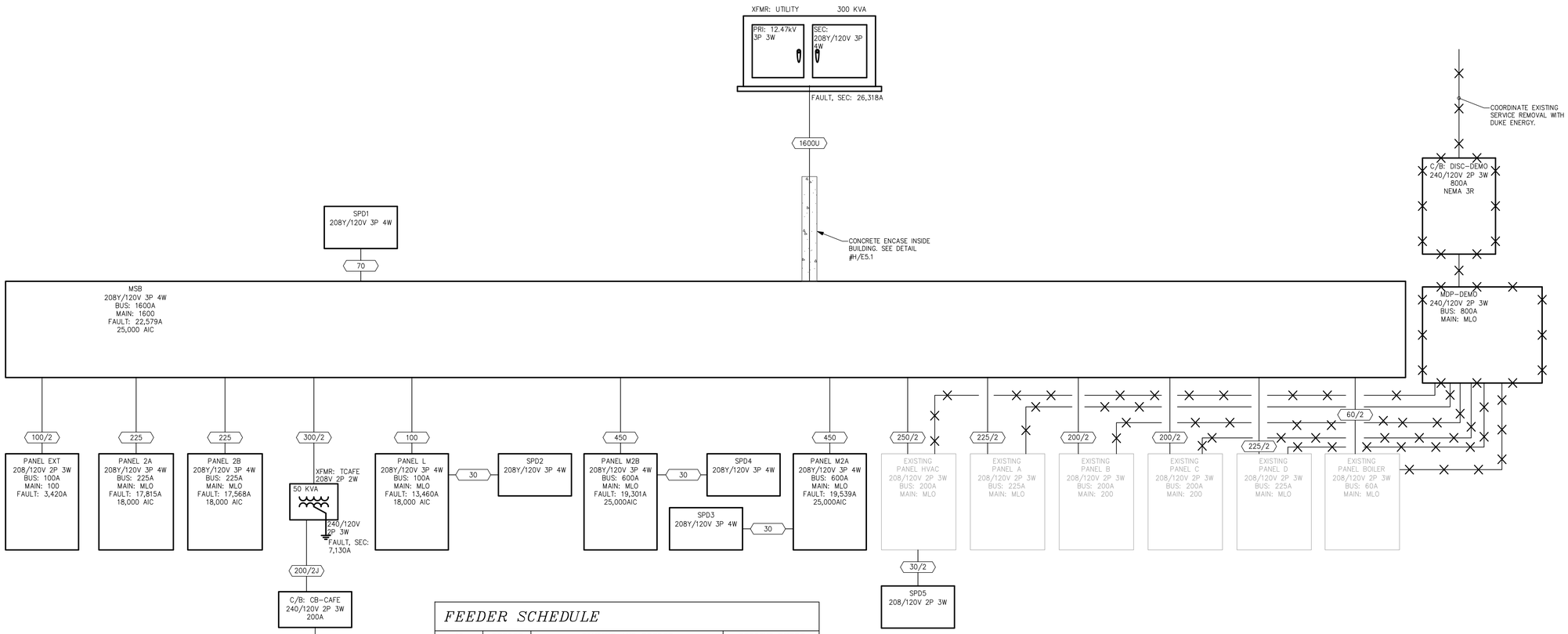
Construction Drawings
February 20, 2019

Revisions:

ELECTRICAL
PANEL SCHEDULES

E6.2

GENERAL NOTES:
1. LIGHT LINE WORK INDICATES EXISTING EQUIPMENT TO REMAIN.
2. DARK SOLID LINE WORK INDICATES NEW EQUIPMENT.
3. DARK HATCHED LINE WORK INDICATES EQUIPMENT OR CIRCUITRY TO BE REMOVED.

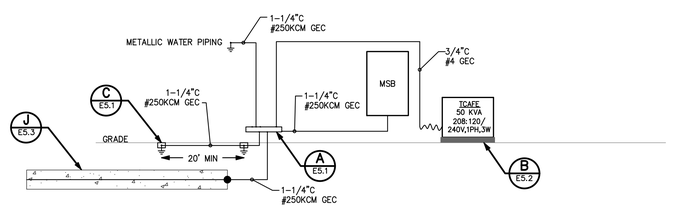


FEEDER SCHEDULE

ID	FEEDER AMPS	CONDUIT AND FEEDER	FEEDING THESE DEVICES
30	30	3/4"C,3#10,#10N,#10G	SPD2, SPD3, SPD4
30/2	30	3/4"C,2#10,#10N,#10G	SPD5
60/2	60	1"C,2#6,#6N,#10G	BOILER
70	70	1-1/4"C,3#4,#4N,#4G	SPD1
100	100	1-1/2"C,3#2,#2N,#8G	L
100/2	100	1-1/4"C,2#2,#2N,#8G	EXT
200/2	200	2"C,2#3/0,#3/0N,#6G	B, C, CAFE
200/2J	200	2"C,2#3/0,#3/0N,#4G	CB-CAFE
225	225	2-1/2"C,3#4/0,#4/0N,#4G	2A, 2B
225/2	225	2"C,2#4/0,#4/0N,#4G	A, D
250/2	250	2-1/2"C,2#250kcmil,#250kcmil N,#4G	HVAC
300/2	300	2"C,2#300kcmil,#4G	TCAFE
450	450	(2)2-1/2"C,3#4/0,#4/0N,#2G	M2A, M2B
1600U	1600	(5)3"C,3#400kcmil,#400kcmil N	MSB

SIZING METHOD: COPPER, 60°C #12 THROUGH #2, 75°C #1 AND ABOVE

A E7.1 ELECTRICAL RISER DIAGRAM
SCALE: NO SCALE



B E7.1 ELECTRICAL GROUNDING SYSTEM RISER DIAGRAM
SCALE: N/A

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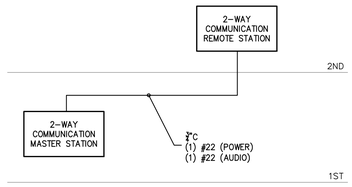
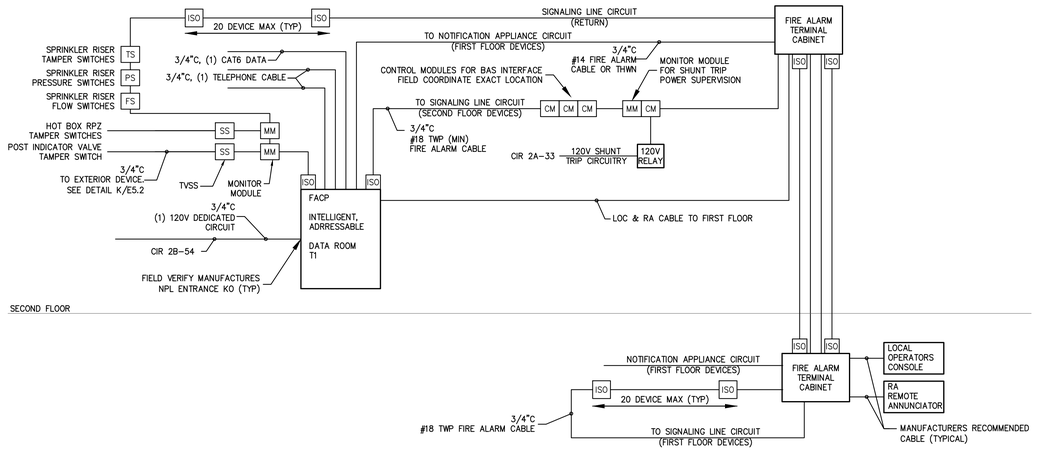


A E7.2 TWO-WAY COMMUNICATIONS RISER
SCALE: NO SCALE

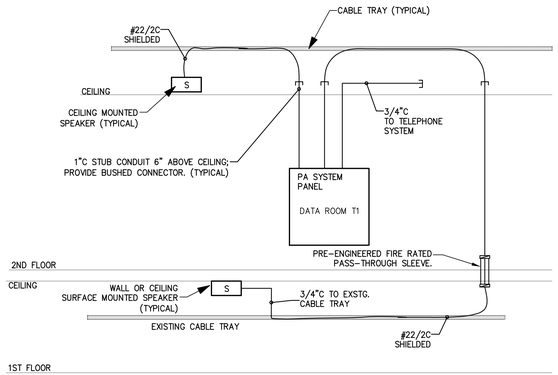
NOTES:
1. COORDINATE EXACT CABLING REQUIREMENTS WITH THE MANUFACTURER AND VENDOR.
2. TWO-WAY COMMUNICATIONS SYSTEM REQUIRED BY 2018 NCSBC 1009.8



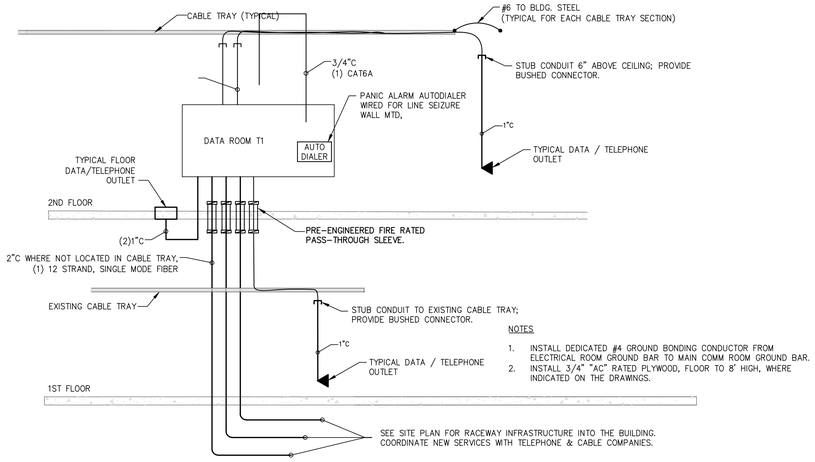
NOTE: ALL CIRCUIT BREAKERS FEEDING LIFE SAFETY SYSTEMS SHALL REQUIRE A BREAKER LOCK.

B E7.2 FIRE ALARM SYSTEM RISER DIAGRAM
NO SCALE

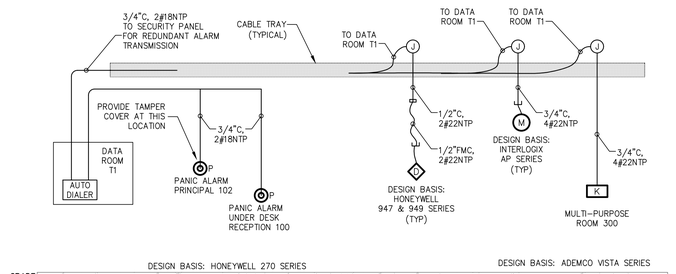
FIRE ALARM OPERATION MATRIX		CONTROL UNIT ANNUNCIATION						NOTIFICATION							CONTROL											
		A ACTIVATE COMMON ALARM SIGNAL INDICATOR	B ACTIVATE AUDIBLE ALARM SIGNAL	C ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR	D ACTIVATE AUDIBLE SUPERVISORY SIGNAL	m ACTIVATE COMMON TROUBLE SIGNAL INDICATOR	n ACTIVATE AUDIBLE COMMON TROUBLE SIGNAL	H ACTIVATE BUILDING FIRE EVACUATION SIGNALS	L TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	X TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION	T TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	M SEND GENERAL FIRE ALARM SIGNAL TO BAS	N SEND GENERAL FIRE SUPERVISORY SIGNAL TO BAS	O SEND GENERAL TROUBLE SIGNAL TO BAS	P DISPLAY / PRINT CHANGE OF STATUS	D RELEASE MAGNETICALLY HELD FIRE DOORS	R RECALL ELEVATOR TO 2ND FLOOR LOBBY	S RECALL ELEVATOR TO 1ST FLOOR LOBBY	↔ ACTIVATE ELEVATOR FLASHING HAT INDICATOR	U SHUT DOWN ALL BUILDING AIR HANDLERS	V ACTIVATE EXTERIOR SPEAKERS & STROBES	W ACTIVATE ELEVATOR POWER SHUNT	X ACTIVATE ELEVATOR CONTROLLER SHUNT	Y PA AUDIO SYSTEM AMPLIFIER POWER SHUNT	Z SHUNT ADJACENT AREA SPEAKERS
SYSTEM INPUTS																										
1	MANUAL PULL STATION	X	X					X	X			X			X					X	X				X	
2	SMOKE/HEAT DETECTORS	X	X					X	X			X			X	X				X	X				X	
3	SMOKE DETECTOR - ELEVATOR MACHINE ROOM	X	X					X	X			X			X	X			X	X	X		X	X	X	
4	HEAT DETECTOR - ELEVATOR MACHINE ROOM	X	X					X	X			X			X	X			X	X	X	X	X	X	X	
5	SMOKE DETECTOR - 1ST FLOOR ELEVATOR LOBBY	X	X					X	X			X			X	X	X			X	X				X	
6	SMOKE DETECTOR - 2ND FLOOR ELEVATOR LOBBY	X	X					X	X			X			X	X		X		X	X				X	
7	HEAT DETECTOR - ELEVATOR PIT	X	X					X	X			X			X	X	X			X	X	X			X	
8	HOOD SUPPRESSION SYS. RELEASE	X	X					X	X			X			X	X				X	X				X	
9	SPRINKLER PRESSURE SWITCH	X	X					X	X			X			X	X				X	X				X	
10	SPRINKLER CONTROL VALVE			X	X					X			X		X											
11	SHUNT TRIP BREAKER PWR. SUPERVISORY			X	X					X			X		X											
12	FIRE ALARM SYSTEM POWER FAILURE (8 HRS)					X	X					X'			X	X	X									
13	FIRE ALARM SYSTEM LOW BATTERY					X	X					X			X	X										
14	OPEN CIRCUIT					X	X					X			X	X										
15	GROUND FAULT					X	X					X			X	X										
16	NOTIFICATION APPLIANCE CIRCUIT SHORT					X	X					X			X	X										
17	AHU SHUTDOWN DEFEAT SWITCH					X	X					X			X	X										
18	LOC OR RPU MIC ACTIVATION											X														X



C E7.2 PA SYSTEM RISER DIAGRAM
SCALE: N/A

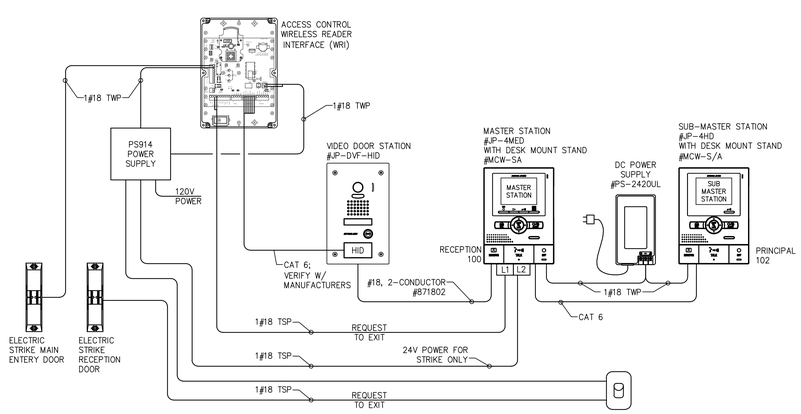


D E7.2 DATA/TELEPHONE SYSTEMS RISER DIAGRAM
NO SCALE



NOTES:
1. SEE ACCESS CONTROL RISER FOR DOOR CONTROL INTERFACE
2. PROVIDE ZONE EXPANDERS AS REQUIRED TO ACCOMMODATE EACH INTERFACE POINT ON A SEPARATE AND DISTINCT ZONE.
   2.1. EACH DOOR CONTACT SHALL BE A SEPARATE ZONE INTERFACE POINT, EVEN ON DOUBLE DOORS. COMBINING INTERFACE POINTS SHALL NOT BE ACCEPTED
   2.2. EACH MOTION DETECTOR SHALL BE A SEPARATE ZONE INTERFACE POINT. COMBINING INTERFACE POINTS SHALL NOT BE ACCEPTED
   2.3. ZONE EXPANDERS MOUNTED REMOTELY FROM THE SECURITY CONTROL PANEL SHALL BE IN A LOCKABLE ENCLOSURE; LOCK TO MATCH SECURITY CONTROL PANEL
      2.3.1. ENCLOSURES SHALL BE LABELED AS "SECURITY ZONE EXPANDER" "ZONES XX-XX"
      2.3.2. 1/2" HIGH BLACK ON WHITE, BOLD FONT, P-TOUCH TYPE LABEL, APPLIED STRAIGHT & LEVEL

E E7.2 SECURITY SYSTEMS RISER DIAGRAM
NO SCALE



F E7.2 VIDEO INTERCOM SYSTEM DETAIL
NO SCALE
DESIGN BASIS: AIPHONE JP SERIES
SEE ACCESS CONTROL RISERS ON THIS SHEET

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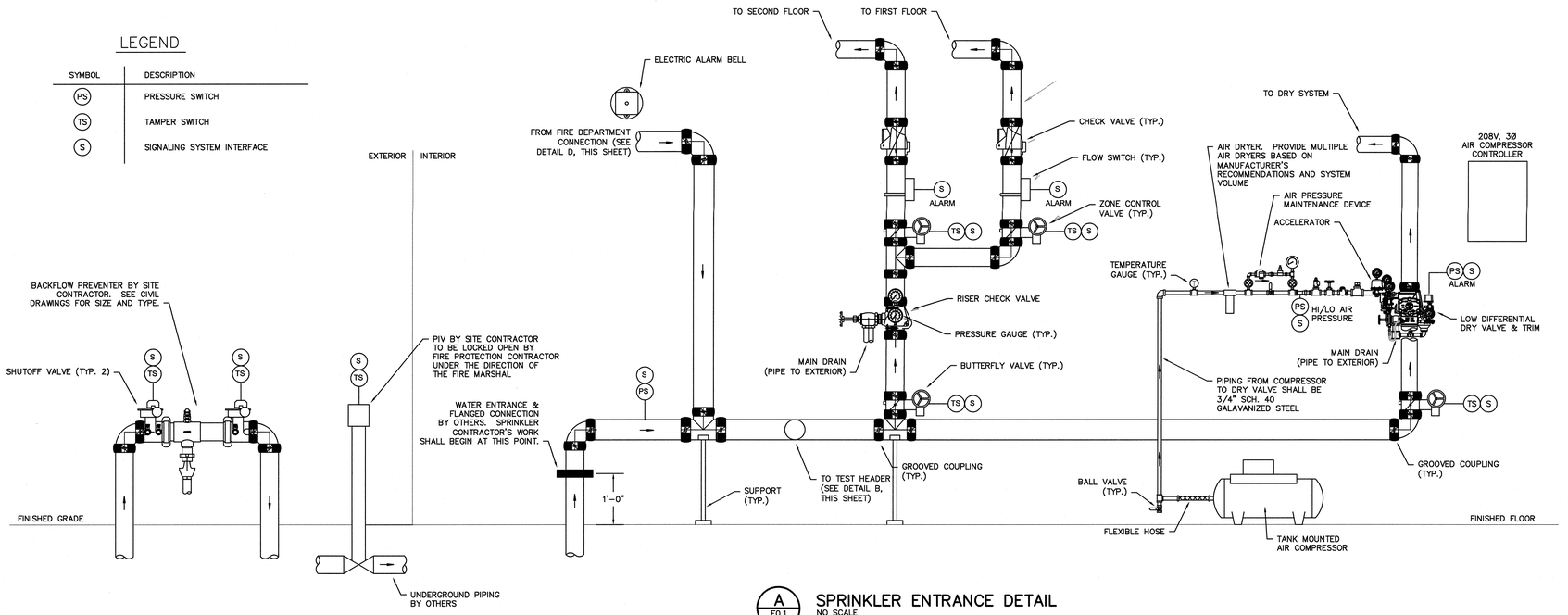
E7.2

LEGEND

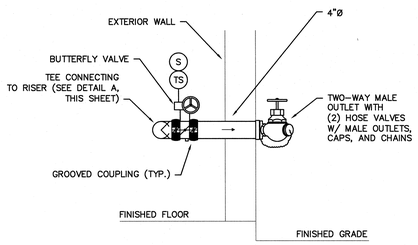
SYMBOL	DESCRIPTION
(PS)	PRESSURE SWITCH
(TS)	TAMPER SWITCH
(S)	SIGNALING SYSTEM INTERFACE



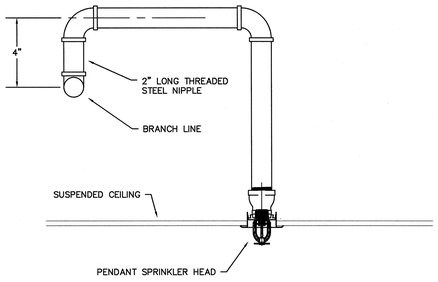
A F0.1 SPRINKLER ENTRANCE DETAIL
NO SCALE

GENERAL NOTES: (APPLIES TO ALL FIRE PROTECTION DRAWINGS)

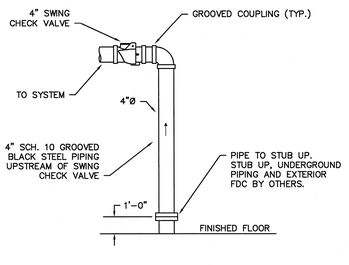
1. SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH BUILDING STRUCTURE AND SYSTEMS, AS WELL AS THE WORK OF OTHER TRADES IN ORDER TO ELIMINATE CONFLICTS.
2. SPRINKLER CONTRACTOR'S DESIGN SHALL BE PER NFPA 13 AND THE NC STATE FIRE CODE (LATEST EDITION APPROVED BY THE NC BUILDING CODE COUNCIL WITH NC AMENDMENTS).
3. PROVIDE AUXILIARY DRAINS WHEREVER WET SYSTEM PIPING IS ROUTED SUCH THAT WATER IS TRAPPED IN EXCESS OF 5 GALLONS, OR WHEREVER DRY SYSTEM PIPING IS ROUTED SUCH THAT ANY AMOUNT OF WATER IS TRAPPED.
4. SLOPE DRY SYSTEM BACK TO RISER OR AUXILIARY DRAINS. MAINS SHALL BE SLOPED AT 1/4" PER 10 FT. AND BRANCHES SHALL BE SLOPED AT 1/2" PER 10 FT. PER NFPA 13.
5. LIGHT HAZARD OCCUPANCIES: PER NFPA 13, DESIGN DENSITY SHALL BE 0.1 GPM PER SQUARE FOOT OVER THE MOST REMOTE 1,500 SQUARE FEET (WET SYSTEM) OR MOST REMOTE 1,950 SQUARE FEET (DRY SYSTEM) WITH REDUCTIONS TO SQUARE FOOTAGE DUE TO USE OF QUICK RESPONSE HEADS PER NFPA 13 AS APPLICABLE. REMOTE AREA SHALL BE INCREASED BY 30% WHERE SPRINKLER ARE LOCATED BELOW SLOPED CEILINGS OR ROOFS WITH SLOPE GREATER THAN 2:12 PER NFPA 13. HOSE ALLOWANCE FOR LIGHT HAZARD SHALL BE 100 GPM PER NFPA 13.
6. ORDINARY HAZARD I OCCUPANCIES: PER NFPA 13, DESIGN DENSITY SHALL BE 0.15 GPM PER SQUARE FOOT OVER THE MOST REMOTE 1,500 SQUARE FEET (WET SYSTEM) OR MOST REMOTE 1,950 SQUARE FEET (DRY SYSTEM) WITH REDUCTIONS TO SQUARE FOOTAGE DUE TO USE OF QUICK RESPONSE HEADS PER NFPA 13 AS APPLICABLE. REMOTE AREA SHALL BE INCREASED BY 30% WHERE SPRINKLER ARE LOCATED BELOW SLOPED CEILINGS OR ROOFS WITH SLOPE GREATER THAN 2:12 PER NFPA 13. HOSE ALLOWANCE FOR ORDINARY HAZARD I SHALL BE 250 GPM PER NFPA 13.
7. SPRINKLER CONTRACTOR SHALL PROVIDE SEISMIC BRACING. DESIGN OF SEISMIC BRACING SHALL BE BY THE SPRINKLER CONTRACTOR OR A LICENSED STRUCTURAL ENGINEER WHOM THE SPRINKLER CONTRACTOR HAS RETAINED THE SERVICES OF. DESIGN SHALL BE PER NFPA 13 AND ASCE-07 FOR SEISMIC DESIGN CATEGORY 'C'.
8. LOCATE SPRINKLER HEADS IN THE CENTER OF CEILING TILES AND IN-LINE WITH LIGHTS AND OTHER CEILING MOUNTED ITEMS.



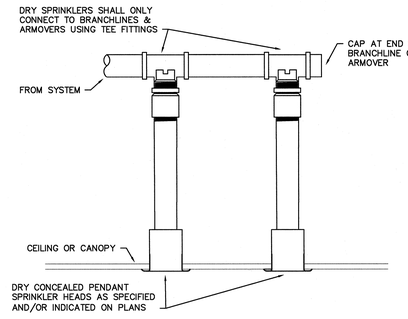
B F0.1 BACKFLOW PREVENTER TEST HEADER DETAIL
NO SCALE



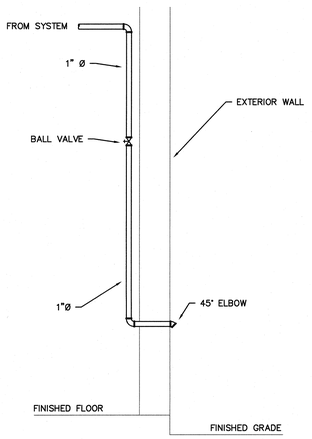
C F0.1 ARMOVER DETAIL
NO SCALE



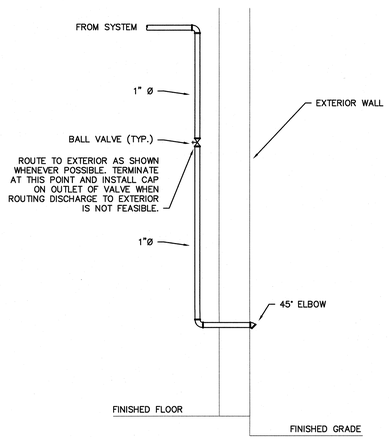
D F0.1 FIRE DEPT. CONNECTION
NO SCALE



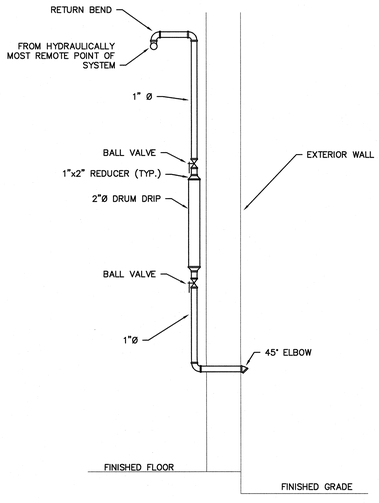
E F0.1 DRY SPRINKLER CONNECTION DETAIL
NO SCALE



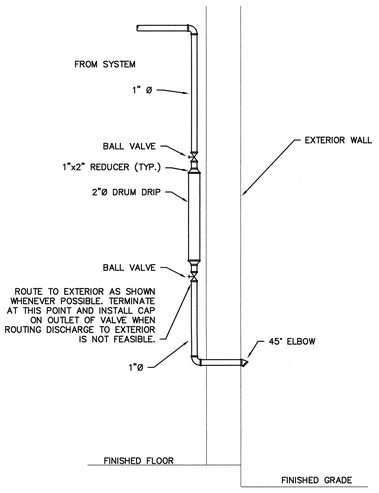
F F0.1 INSPECTOR'S TEST CONNECTION (WET)
NO SCALE



G F0.1 AUXILIARY DRAIN DETAIL (WET)
NO SCALE



H F0.1 INSPECTOR'S TEST CONNECTION (DRY)
NO SCALE



J F0.1 AUXILIARY DRAIN DETAIL (DRY)
NO SCALE

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2/25/19

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Revisions:

FIRE PROTECTION GENERAL NOTES AND DETAILS

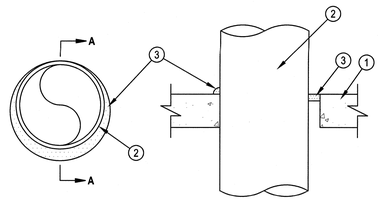
F0.1
1 of 4

CLASSIFIED C UL US

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

System No. C-AJ-1291

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
	FH Rating — 2 Hr
	FTH Rating — 0 Hr



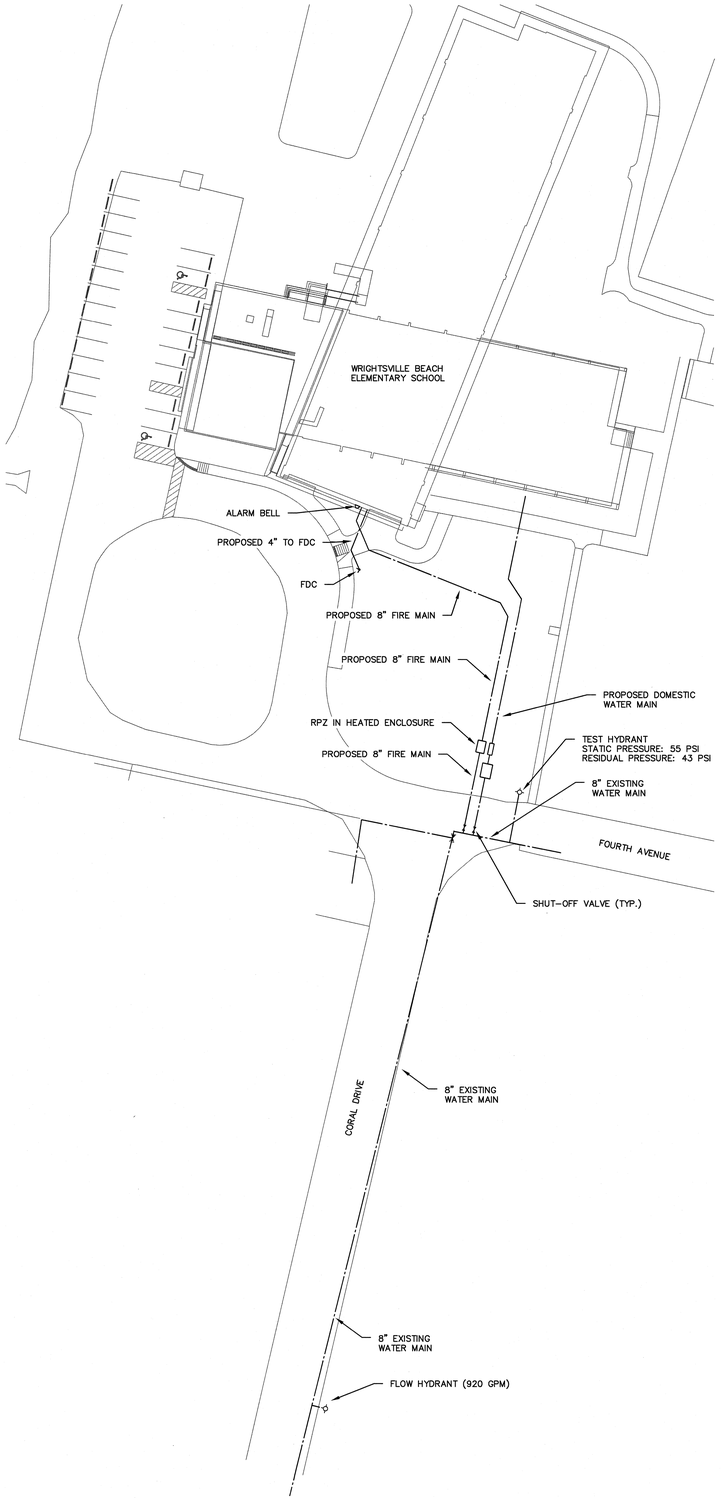
SECTION A-A

1. Floor or Wall Assembly — Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 30-7/8 in. (784 mm). See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Through-Penetrant — One metallic pipe or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe or conduit and periphery of opening shall be min 0 in. to max 7/8 in. (22 mm). Pipe or conduit to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or conduits may be used:
   A. Steel Pipe — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe — Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
   C. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
   D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
   E. Conduit — Nom 6 in. (152 mm) diam (or smaller) steel conduit.
   F. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT).
3. Fill, Void or Cavity Material* — Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall. At the point contact location between pipe and concrete, a min 1/4 in. (6 mm) diam bead of fill material shall be applied at the concrete/pipe interface on the top surface of floor and on both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

NOTE: DETAIL FOR REFERENCE ONLY. THE CONTRACTOR SHALL INSTALL FIRE PROOFING IN COMPLETE ACCORDANCE WITH ITS UL LISTING AND PENETRATION SYSTEM INSTALLATION INSTRUCTIONS.

B / F0.2 U.L. DETAIL C–AJ–1291
NO SCALE



A / F0.2 FIRE PROTECTION SITE PLAN
1" = 30'–0"
30' 15' 0 30' 60'
SCALE: 1"=30'

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FIRE PROTECTION SITE PLAN & U.L. DETAILS

F0.2

PIPING LEGEND

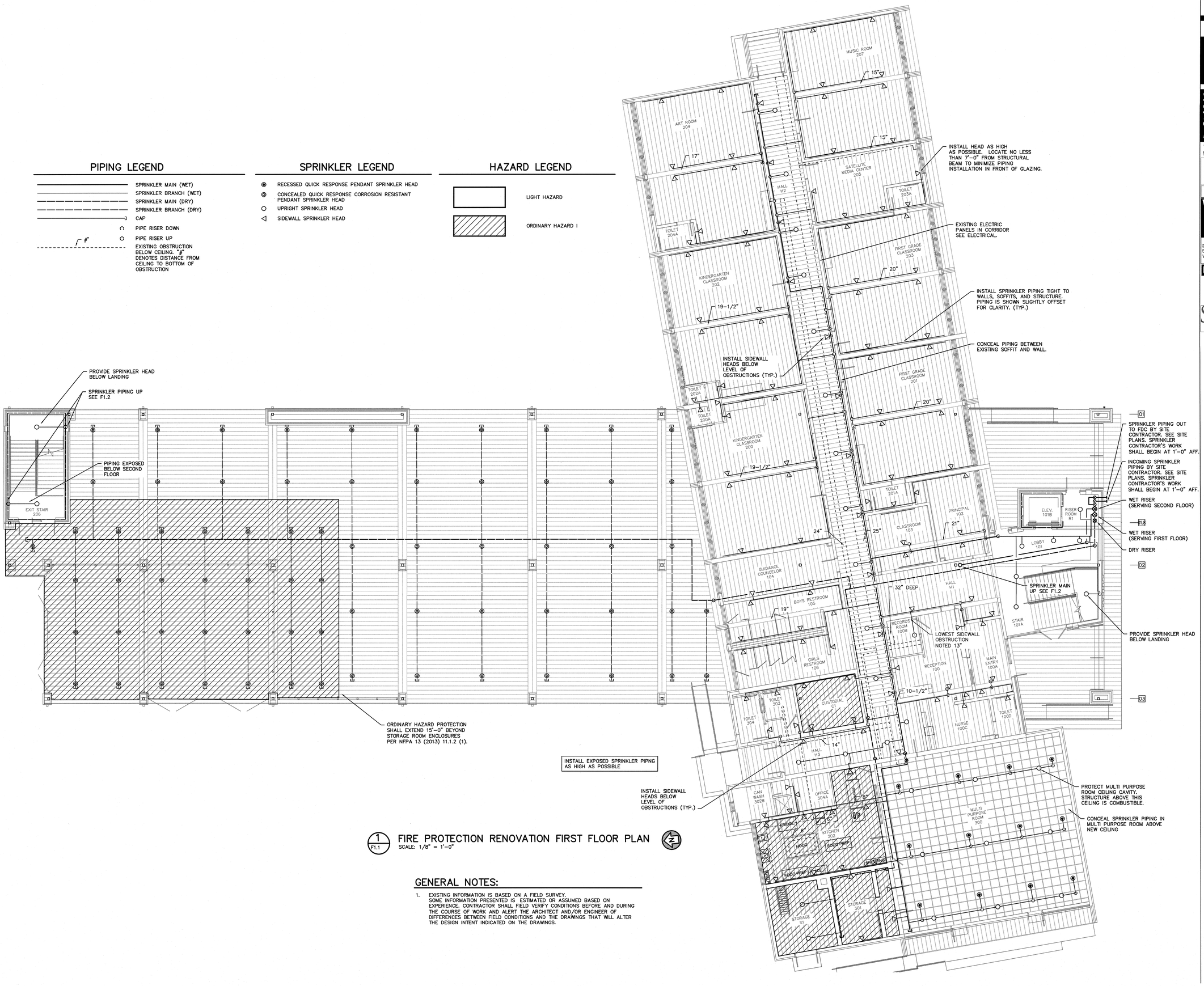
- SPRINKLER MAIN (WET)
- SPRINKLER BRANCH (WET)
- SPRINKLER MAIN (DRY)
- SPRINKLER BRANCH (DRY)
- CAP
- PIPE RISER DOWN
- PIPE RISER UP
- EXISTING OBSTRUCTION BELOW CEILING. "#" DENOTES DISTANCE FROM CEILING TO BOTTOM OF OBSTRUCTION

SPRINKLER LEGEND

- RECESSED QUICK RESPONSE PENDANT SPRINKLER HEAD
- CONCEALED QUICK RESPONSE CORROSION RESISTANT PENDANT SPRINKLER HEAD
- UPRIGHT SPRINKLER HEAD
- SIDEWALL SPRINKLER HEAD

HAZARD LEGEND

- LIGHT HAZARD
- ORDINARY HAZARD I



1 / F1.1 FIRE PROTECTION RENOVATION FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. EXISTING INFORMATION IS BASED ON A FIELD SURVEY. SOME INFORMATION PRESENTED IS ESTIMATED OR ASSUMED BASED ON EXPERIENCE. CONTRACTOR SHALL FIELD VERIFY CONDITIONS BEFORE AND DURING THE COURSE OF WORK AND ALERT THE ARCHITECT AND/OR ENGINEER OF DIFFERENCES BETWEEN FIELD CONDITIONS AND THE DRAWINGS THAT WILL ALTER THE DESIGN INTENT INDICATED ON THE DRAWINGS.

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2/25/19

Wrightsville Beach Elementary School Addition & Renovation

220 Coral Drive
Wrightsville Beach, NC

Construction Drawings
February 20, 2019

Revisions:

FIRE PROTECTION RENOVATION FIRST FLOOR PLAN

F1.1

PIPING LEGEND

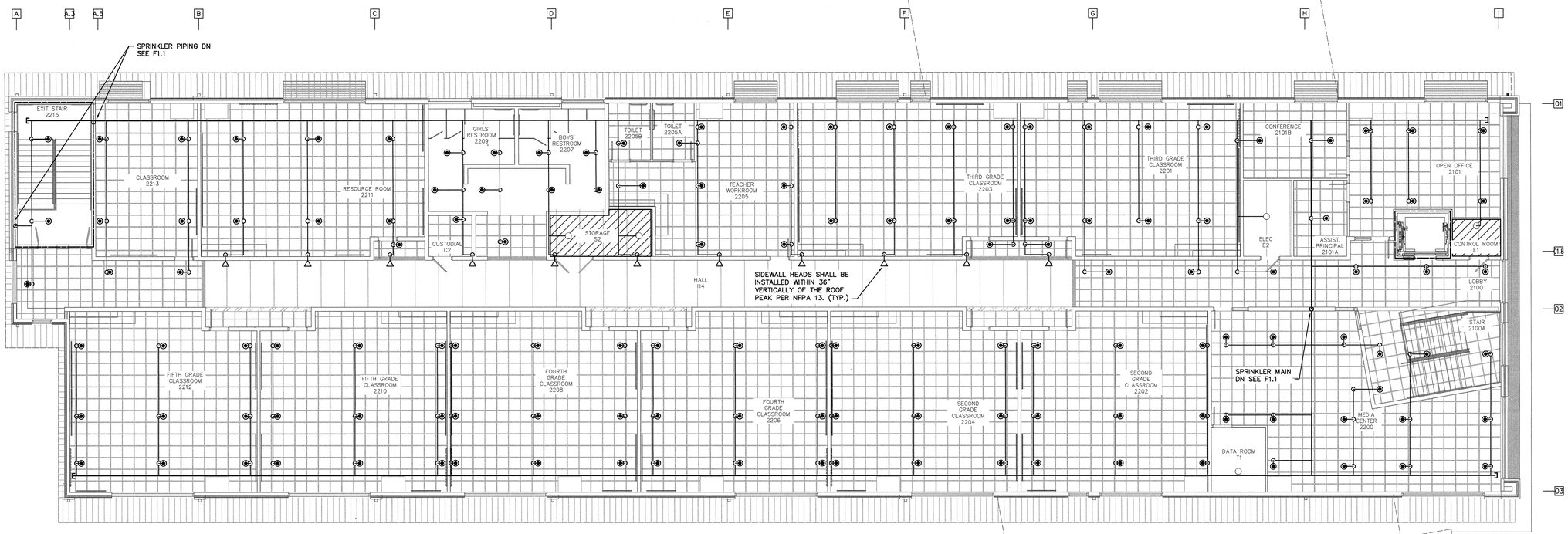
- SPRINKLER MAIN
- SPRINKLER BRANCH
- CAP
- PIPE RISER DOWN
- PIPE RISER UP

SPRINKLER LEGEND

- RECESSED QUICK RESPONSE PENDANT SPRINKLER HEAD
- CONCEALED QUICK RESPONSE CORROSION RESISTANT PENDANT SPRINKLER HEAD
- UPRIGHT SPRINKLER HEAD
- SIDEWALL SPRINKLER HEAD

HAZARD LEGEND

- LIGHT HAZARD
- ORDINARY HAZARD I



1 / F1.2 FIRE PROTECTION SECOND FLOOR PLAN

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

GENERAL NOTES:

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Revisions:

FIRE PROTECTION SECOND FLOOR PLAN

F1.2

4 of 4