ELECTRICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
ACC	ACCESSORY
ADO	AUTOMATIC DOOR OPERATOR
AHU	AIR HANDLING UNIT
ATS	AUTOMATIC TRANSFER SWITCH
BKR	BREAKER
BOB	BOTTOM OF BOX
BOD	BOTTOM OF DECK
BOS	BOTTOM OF STRUCTURE
BP	BREAKER PANEL
BLDG	BUILDING
CAP	CAPACITY
CIN	LIGHTING CONTROL INTENT NARRATIVE
CLG	CEILING
CKT	CIRCUIT
CB	CIRCUIT BREAKER
C	CONDUIT
COMM	COMMUNICATIONS
CONN	CONNECTION
CONST	CONSTRUCTION
CONTR	CONTRACT (OR)
CLL	CONTRACT LIMIT LINE
CT	CURRENT TRANSFORMER
E.C.	ELECTRICAL CONTRACTOR
EGC	EQUIPMENT GROUNDING CONDUCTOR
EHD	ELECTRIC HAND DRYER
ELEC	ELECTRIC (AL)
EWC	ELECTRIC WATER COOLER
EM	EMERGENCY
ENT	ENTRANCE
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE
EF	EXHAUST FAN
ETR	EXISTING TO REMAIN
EX	EXISTING
F	FLUSH
FA	FIRE ALARM
FSE	FOOD SERVICE EQUIPMENT
FP	FIRE PROOF / FIRE PROTECTION
FLR	FLOOR
FLUOR	FLUORESCENT
GEC	GROUNDING ELECTRODE CONDUCTOR
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GRD	GROUND
HORIZ	HORIZONTAL
HTR	HEATER
HTG	HEATING
HV	HEATING / VENTILATING
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HOA	HAND - OFF - AUTOMATIC
HP	HEAT PUMP
INTLK	INTERLOCK
JCT	JUNCTION
JB	JUNCTION BOX
KW	KILOWATT
KWH	KILOWATT HOUR
KO	KNOCK OUT
LBL	LABEL
LT	LIGHT
LC	LIGHTING CONTROL
LCM	LIGHTING CONTROL MODULE
LCP	LIGHTING CONTROL PANEL
LTG	LIGHTING
MAX	MAXIMUM
MBJ	MAIN BONDING JUMPER
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MTS	MANUAL TRANSFER SWITCH
NEC	NATIONAL ELECTRICAL CODE
NEG	NEGATIVE (-)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
OCPD	OVERCURRENT PROTECTIVE DEVICE
PC	PHOTOCELL / PHOTOCONTROL
POS	POSITIVE (+)
PWR	POWER
P & L	POWER & LIGHTING
S	SURFACE
SBJ	SYSTEM BONDING JUMPER
S.B.O.	SUPPLIED BY OTHERS
SP	SINGLE POLE
SPD	SURGE PROTECTION DEVICE
SPKR	SPEAKER
SPEC	SPECIFICATION
SSBJ	SUPPLY-SIDE BONDING JUMPER
SUB	SUBSTITUTE
SWBD	SWITCHBOARD
TEL	TELEPHONE
TSTAT	THERMOSTAT
XFMR	TRANSFORMER
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
WG	WIRE GUARD
WL	WET LOCATION
WP	WEATHER PROOF

MAXIMUM CONDUCTOR LENGTHS FOR TYPICAL BRANCH CIRCUITS

ONE-WAY LENGTH (FEET) BASED ON SINGLE PHASE, 20A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE	CONDUCTOR SIZE				
	#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG
120	60	100	150	245	385
208	100	170	265	425	670
277	135	230	355	565	890
480	240	400	615	980	

ONE-WAY LENGTH (FEET) BASED ON SINGLE PHASE, 30A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE	CONDUCTOR SIZE				
	#10 AWG	#8 AWG	#6 AWG	#4 AWG	
120	60	100	150	245	
208	100	170	265	425	
277	135	230	355	565	
480	240	400	615	980	

ONE-WAY LENGTH (FEET) BASED ON THREE PHASE, 20A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE	CONDUCTOR SIZE				
	#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG
208	120	200	305	490	775
480	275	460	710	1,130	

ONE-WAY LENGTH (FEET) BASED ON THREE PHASE, 30A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE	CONDUCTOR SIZE				
	#10 AWG	#8 AWG	#6 AWG	#4 AWG	
208	120	200	305	490	
480	275	460	710	1,130	

COMMUNICATIONS SYMBOL LEGEND

- COMMUNICATIONS OUTLET ROUGH-IN
- COMMUNICATIONS OUTLET, CEILING-MOUNTED
- COMMUNICATIONS OUTLET, FLOOR-MOUNTED
- CEILING-MOUNTED VIDEO PROJECTOR
- COMMUNICATIONS EQUIPMENT RACK, FLOOR-MOUNTED 2-POST
- COMMUNICATIONS EQUIPMENT RACK, FLOOR-MOUNTED 4-POST
- COMMUNICATIONS EQUIPMENT RACK, WALL-MOUNTED
- CONDUIT SLEEVE FOR COMMUNICATIONS CABLING, 2" DIA. OR EQUIV. FREE AREA TYP. UNLESS NOTED OTHERWISE. IN FIRE-RATED AND/OR SMOKE BARRIER WALLS, REFER TO SPECIFICATIONS FOR ACCEPTABLE FIRESTOP AND SMOKE SEAL PRODUCTS.
- (S1) LOUDSPEAKER, CEILING-MOUNTED, TYPE 1
- (S1) LOUDSPEAKER, WALL-MOUNTED, TYPE 1
- (CS) INTERCOM SYSTEM CALL STATION BUTTON
- (VC) VOLUME CONTROL FOR AUDIO SYSTEM, PAGING, OR INTERCOM LOUDSPEAKERS
- (C) SECONDARY CLOCK, CEILING-MOUNTED, TYPE 1
- (C) SECONDARY CLOCK, WALL-MOUNTED, TYPE 1
- SIGNALING BELL

NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED

POWER SYMBOL LEGEND

- (5) THREE PHASE MOTOR CONNECTION, 5 HORSEPOWER (EXAMPLE)
- (1/2) SINGLE PHASE MOTOR CONNECTION, 1/2 HORSEPOWER (EXAMPLE)
- (D) HVAC CONTROL DAMPER ACTUATOR CONNECTION
- (D) SD HVAC SMOKE DAMPER ACTUATOR CONNECTION
- (D) F/S HVAC COMBINATION FIRE/SMOKE DAMPER ACTUATOR CONNECTION
- SAFETY SWITCH DISCONNECTING MEANS, NOT FUSIBLE
- SAFETY SWITCH DISCONNECTING MEANS, FUSIBLE
- COMBINATION MOTOR STARTER AND FUSIBLE DISCONNECTING MEANS
- VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECTING MEANS
- MOTOR STARTER
- $_{BF}$ BOX-COVER FUSIBLE DISCONNECT SWITCH
- $_{MJ}$ MANUAL MOTOR CONTROLLER
- $ POWER SWITCH, REFER TO LIGHTING SYMBOL LEGEND FOR SIMILAR SWITCH TYPES
- DIRECT ELECTRICAL CONNECTION
- SINGLE NEMA 5-20R RECEPTACLE
- SINGLE NEMA 5-20R RECEPTACLE, CEILING-MOUNTED
- SINGLE NEMA 5-20R RECEPTACLE, FLOOR-MOUNTED
- DUPLEX NEMA 5-20R RECEPTACLE
- E "E" NOTATION: REPLACE EXISTING WIRING DEVICE USING EXISTING OUTLET BOX
- GFCI "GFCI" NOTATION: GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE
- S "S" NOTATION: SURFACE-MOUNTED
- WL "WL" NOTATION: PROVIDE WEATHER RESISTANT (WR) GFCI RECEPTACLE WITH EXTRA-DUTY WHILE-IN-USE WET LOCATION COVER
- DUPLEX NEMA 5-20R RECEPTACLE, CEILING-MOUNTED
- DUPLEX NEMA 5-20R RECEPTACLE, FLOOR-MOUNTED
- DUPLEX NEMA 5-20R RECEPTACLE, CONNECTED TO STANDBY POWER BRANCH CIRCUIT
- DUPLEX NEMA 5-20R RECEPTACLE, SPLIT-WIRED
- QUADRUPLEX (DOUBLE DUPLEX) NEMA 5-20R RECEPTACLE
- QUADRUPLEX (DOUBLE DUPLEX) NEMA 5-20R RECEPTACLE, CEILING-MOUNTED
- QUADRUPLEX (DOUBLE DUPLEX) NEMA 5-20R RECEPTACLE, FLOOR-MOUNTED
- RECEPTACLE OTHER THAN NEMA 5-20R (MAY BE MULTI-POLE OR MULTI-PHASE), SEE PLAN FOR TYPE
- RECEPTACLE OTHER THAN NEMA 5-20R (MAY BE MULTI-POLE OR MULTI-PHASE), SEE PLAN FOR TYPE, FLOOR-MOUNTED
- VERT HORIZ SURFACE RACEWAY SYSTEM
- ATS AUTOMATIC TRANSFER SWITCH
- SWITCHBOARD / SWITCHGEAR
- PANELBOARD
- T TRANSFORMER
- MOTOR CONTROL CENTER
- EMERGENCY STOP STATION, REFER TO DETAIL FOR REQUIREMENTS.
- AUTOMATIC DOOR OPERATOR PUSH BUTTON
- ON/OFF PUSH BUTTON
- THREE-FUNCTION PUSH BUTTON
- FBT FLOORBOX, TYPE 1
- J JUNCTION BOX
- M METER
- T THERMOSTAT ROUGH-IN
- R RELAY
- C ENCLOSED CONTROL CONTACTOR

NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED

LIGHTING SYMBOL LEGEND

- $ SINGLE POLE TOGGLE SWITCH
- $_2$ DOUBLE POLE TOGGLE SWITCH
- $_3$ THREE-WAY TOGGLE SWITCH
- $_4$ FOUR-WAY TOGGLE SWITCH
- $_{OS}$ SINGLE POLE SWITCH WITH INTEGRAL OCCUPANCY SENSOR
- $_{OSD}$ SINGLE POLE SWITCH WITH INTEGRAL OCCUPANCY SENSOR AND DIMMER
- $_D$ WALL-BOX DIMMER SWITCH
- $_{D3}$ THREE-WAY WALL-BOX DIMMER SWITCH
- $_T$ ELECTRONIC INTERVAL TIMER SWITCH
- $_{PP}$ LIGHT SWITCH WITH PILOT LIGHT
- $_C$ LIGHTING CONTROL SWITCH, REFER TO LIGHTING CONTROL SWITCH SCHEDULE AND SPECIFICATIONS FOR DETAILS.
- $_{DT}$ DOUBLE-THROW (MAINTAINED) LIGHT SWITCH
- $_K$ KEY-OPERATED SWITCH (SUFFIX DESIGNATION -- NONE: SINGLE POLE, 2: DOUBLE-POLE, 3: THREE-WAY, 4: FOUR-WAY)
- $_L$ LOCKING SWITCH (SUFFIX DESIGNATION -- NONE: SINGLE-POLE, 2: DOUBLE-POLE, 3: THREE-WAY, 4: FOUR-WAY)
- TP TOUCHSCREEN PANEL
- LPA-X CIRCUIT NUMBER FOR LIGHT FIXTURES WITHIN INDICATED SPACE
- A WALL-MOUNTED LIGHTING FIXTURE, TYPE 'A'
- RECESSED LIGHTING FIXTURE, TYPE 'A'
- A SURFACE-MOUNTED LIGHTING FIXTURE, TYPE 'A'
- TRACK LIGHTING
- SINGLE FACE EXIT SIGN, TYPE "X1" IN SCHEDULE UNLESS OTHERWISE NOTED, SHADING INDICATES FACE ORIENTATION
- DOUBLE FACE EXIT SIGN, TYPE "X2" IN SCHEDULE UNLESS OTHERWISE NOTED, SHADING INDICATES FACE ORIENTATION
- WALL-MOUNTED EXIT SIGN, SHADING INDICATES FACE ORIENTATION
- EMERGENCY LIGHT FIXTURE DESIGNATION
- EMERGENCY LIGHTING AUTOMATIC LOAD CONTROL RELAY
- R LIGHTING CONTROL RELAY
- C LIGHTING CONTROL ENCLOSED CONTACTOR
- TS TIME SWITCH
- LCM LIGHTING CONTROL MODULE
- LCP LIGHTING CONTROL PANEL
- INV-1 EMERGENCY LIGHTING INVERTER, TYPE 1
- WALL-MOUNTED OCCUPANCY SENSOR
- CEILING-MOUNTED OCCUPANCY SENSOR
- PC WALL-MOUNTED PHOTOCELL FOR ON/OFF CONTROL
- PC CEILING-MOUNTED PHOTOCELL FOR ON/OFF CONTROL
- PS WALL-MOUNTED PHOTOSENSOR FOR DAYLIGHT HARVESTING DIMMING CONTROL
- PS CEILING-MOUNTED PHOTOSENSOR FOR DAYLIGHT HARVESTING DIMMING CONTROL
- POLE-MOUNTED SITE/AREA FIXTURE
- SELF-CONTAINED EMERGENCY LIGHTING UNIT

NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED

FIRE DETECTION & ALARM SYMBOL LEGEND

- AN AUDIBLE NOTIFICATION APPLIANCE, WALL-MOUNTED
- VN VISUAL NOTIFICATION APPLIANCE, WALL-MOUNTED
- AVN AUDIBLE/VISUAL NOTIFICATION APPLIANCE, WALL-MOUNTED
- AN AUDIBLE NOTIFICATION APPLIANCE, CEILING-MOUNTED
- VN VISUAL NOTIFICATION APPLIANCE, CEILING-MOUNTED
- AVN AUDIBLE/VISUAL NOTIFICATION APPLIANCE, CEILING-MOUNTED
- FB FIRE PROTECTION OR ALARM BELL
- M MANUAL PULL STATION
- SD SMOKE DETECTOR
- HD HEAT DETECTOR
- DD DUCT SMOKE DETECTOR
- CD CARBON MONOXIDE DETECTOR
- $_{KTS}$ KEYED TEST SWITCH AND REMOTE INDICATOR FOR DUCT SMOKE DETECTOR
- FD FIRE PROTECTION FLOW SWITCH; PROVIDE SUPERVISED INPUT TO FIRE ALARM SYSTEM
- PD PRESSURE SWITCH; PROVIDE SUPERVISED INPUT TO FIRE ALARM SYSTEM
- TD FIRE PROTECTION TAMPER SWITCH; PROVIDE SUPERVISED INPUT TO FIRE ALARM SYSTEM
- EM ELECTROMAGNETIC DOOR HOLD-OPEN DEVICE
- R ADDRESSABLE RELAY FOR FIRE ALARM CONTROL
- NAC NOTIFICATION APPLIANCE CIRCUIT POWER SUPPLY
- FAA FIRE ALARM REMOTE ANNUNCIATOR
- FACP FIRE ALARM CONTROL PANEL
- WG/PC WHERE "WG/PC" IS NOTED, PROVIDE LISTED WIRE GUARD OR PROTECTIVE POLYCARBONATE COVER FOR DAMAGE RESISTANCE OF ASSOCIATED DEVICE
- WL WHERE "WL" IS NOTED, PROVIDE LISTED WET-LOCATION VERSION OF ASSOCIATED DEVICE, SUITABLE FOR INDOOR OR OUTDOOR USE

NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED

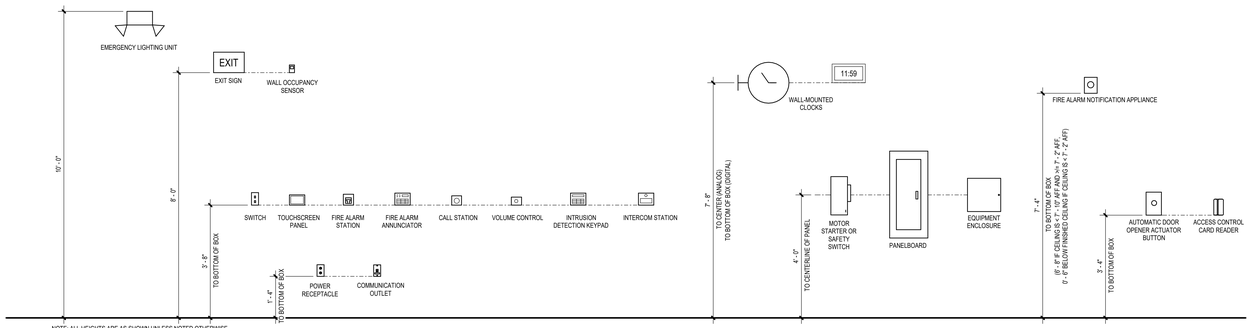
ELECTRONIC SAFETY / SECURITY SYMBOL LEGEND

- DC DOOR CONTACT
- EL ELECTRONIC LATCH
- ES ELECTRONIC STRIKE
- K INTRUSION DETECTION KEYPAD
- IC INTERCOM STATION
- WC WALL-MOUNTED SURVEILLANCE CAMERA COMMUNICATIONS ROUGH-IN
- CC CEILING-MOUNTED SURVEILLANCE CAMERA COMMUNICATIONS ROUGH IN
- WC WALL-MOUNTED SURVEILLANCE CAMERA, TYPE 1
- CC CEILING-MOUNTED SURVEILLANCE CAMERA, TYPE 1
- ID WALL-MOUNTED INFRARED MOTION DETECTOR
- ID CEILING-MOUNTED INFRARED MOTION DETECTOR
- UD WALL-MOUNTED ULTRASONIC MOTION DETECTOR
- UD CEILING-MOUNTED ULTRASONIC MOTION DETECTOR
- CR CARD READER
- $_M$ CR CARD READER, MULLION-MOUNTED
- XXXXX ACCESS CONTROL DOOR TAG, REFER TO HARDWARE SCHEDULE(S) IN SECTION 08 71 00 AND/OR SECTION 28 10 00 FOR FURTHER DETAILED REQUIREMENTS
- ACS ACCESS CONTROL SYSTEM EQUIPMENT
- IDS INTRUSION DETECTION SYSTEM EQUIPMENT
- PSU POWER SUPPLY UNIT

NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED

ELECTRICAL GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE AS AMENDED AND ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION WHERE THE WORK IS PERFORMED.
2. ALL "LOW-VOLTAGE" CONTROLS, COMMUNICATIONS, AND SAFETY/SECURITY CABLING MAY BE INSTALLED WITHOUT CONDUIT, RACEWAY, OR CABLE TRAY ONLY WHERE CONCEALED ABOVE A SUSPENDED CEILING SYSTEM AND ACCESSIBLE FOR FUTURE MAINTENANCE. OTHERWISE, ALL CABLING (INCLUDING BUT NOT LIMITED TO CABLES ASSOCIATED WITH SYSTEMS SUCH AS ARCHITECTURAL EQUIPMENT, BUILDING ENERGY MANAGEMENT, TEMPERATURE CONTROLS, LIGHTING CONTROLS, COMMUNICATIONS NETWORKS, TELEPHONE, AUDIO-VIDEO, INTERCOM, PAGING, CLOCK, SURVEILLANCE, ACCESS CONTROL, FIRE ALARM, ETC.) SHALL BE INSTALLED IN AN APPROVED CONDUIT, RACEWAY SYSTEM, AND/OR CABLE TRAY UNLESS OTHERWISE NOTED. IN EXPOSED STRUCTURE CEILING AREAS, CONCEALED INSTALLATION OF CABLES IN RACEWAYS SHALL BE REQUIRED FOR AESTHETIC REASONS. REFER TO REFLECTED CEILING PLANS FOR LOCATION(S). THIS APPLIES TO ALL TRADES AND WORK CATEGORIES. EXCEPTIONS:
   A. DEDICATED MECHANICAL AND/OR ELECTRICAL ROOMS ABOVE 8'-0" AFF
   B. DEDICATED TELECOMMUNICATIONS ROOMS
3. ALL DEVICES SHOWN TO BE INSTALLED ON EXISTING WALLS SHALL BE INSTALLED FLUSH. CUT IN BOXES AND FISH WALLS WITH FLEXIBLE CONDUIT AS REQUIRED. DOCUMENT AND COORDINATE EXCEPTIONS WITH ARCHITECT/ENGINEER IN WRITING FOR REVIEW IN FIELD. IF WALL IS PROVEN NOT ABLE TO BE FISHED, PROVIDE SURFACE RACEWAY SYSTEMS PER SECTION 26 05 33.23, SHALL BE PROVIDED BY THE CONTRACTOR. SUCH COSTS SHALL BE INCLUDED IN BID. SURFACE-MOUNTED CONDUIT IS NOT ACCEPTABLE WHERE EXPOSED TO VIEW IN SPACES OTHER THAN DEDICATED MECHANICAL/ELECTRICAL ROOMS.
4. "LOW-VOLTAGE" CONTROLS, COMMUNICATIONS, AND SAFETY/SECURITY CABLING SHALL NOT BE PAINTED. CONTRACTORS INSTALLING CABLING WHERE APPROVED FOR EXPOSED INSTALLATION SHALL INSTALL CABLES AFTER PAINTING HAS BEEN COMPLETED OR PROVIDE TEMPORARY PROTECTION OF CABLES UNTIL PAINTING HAS BEEN COMPLETED. PROVIDE TEMPORARY PROTECTION OF ANY EXISTING CABLING PRIOR TO PAINTING EXISTING AREAS. PAINTED CABLES SHALL BE REPLACED AT THE EXPENSE OF THE NEGLIGENT CONTRACTOR.
5. METAL CLAD CABLE MAY BE USED FOR FIXTURE WHIPS IN LENGTHS OF 6 FEET OR LESS ABOVE AN ACCESSIBLE SUSPENDED CEILING SYSTEM ONLY. OTHERWISE, METAL CLAD OR OTHER FLEXIBLE CABLE TYPES SHALL NOT BE USED UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER. IT IS THE INTENT OF THESE CONTRACT DOCUMENTS THAT ALL INSTALLED BRANCH CIRCUITS CONSIST OF SEPARATE RACEWAY AND CONDUCTORS ALLOWING REMOVAL AND REPLACEMENT OF WIRING AS REQUIRED FOR FUTURE UPGRADES. REFER TO SPECIFICATIONS FOR EXCEPTIONS.
6. CIRCUIT WIRING FOR ARTICLE 700 EMERGENCY SYSTEMS AND ARTICLE 708 CRITICAL OPERATIONS POWER SYSTEMS SHALL BE INSTALLED IN SEPARATE CONDUITS/RACEWAYS AND BE KEPT ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND EQUIPMENT PER NEC REQUIREMENTS.
7. ALL FEEDERS AND BRANCH CIRCUITS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR SIZED ACCORDING TO THE NEC RACEWAYS INCLUDING CONDUITS, BOXES, WIREWAYS, ETC. SHALL NOT BE CONSIDERED AN ACCEPTABLE GROUND.
8. CONDUITS AND CABLING SHALL NOT BE INSTALLED WITHIN 4" OF ROOF DECK, EXCEPT AS NECESSARY TO SERVE ROOF-MOUNTED ITEMS AND ONLY WHEN THE CONDUIT OR CABLE IS ROUTED VERTICALLY TO SUCH EQUIPMENT FROM BELOW. CLEARANCE SHALL BE PERMITTED TO BE REDUCED TO 1 1/2" WHERE SUPPLEMENTAL METAL FRAMING MEMBERS PROVIDE AN EFFECTIVE BARRIER BETWEEN THE ROOF DECK AND ANY CONDUIT/CABLING.
9. SUPPLEMENTAL METAL FRAMING SHALL BE PROVIDED FOR SUSPENSION POINTS OF ALL ITEMS LOCATED BETWEEN STRUCTURAL MEMBERS (JOISTS, TRUSSES, BEAMS, ETC.) IN OPEN/VISIBLE STRUCTURE CEILING OR SUPPORT COLUMN AREAS. METAL FRAMING SHALL SPAN ACROSS THE TOP CHORD OR FLANGE OF OVERHEAD STRUCTURAL MEMBERS FOR BOTH STRUCTURAL AND AESTHETIC PURPOSES. SPECIFIC EXCEPTIONS SHALL BE COORDINATED IN WRITING WITH THE ARCHITECT/ENGINEER.
10. CONDUIT INSTALLED WITHIN INACCESSIBLE CONSTRUCTION SHALL BE 3/4" MINIMUM SIZE.
11. FEEDERS SHOWN ON DRAWINGS ARE SCHEMATIC ONLY. CONDUIT RUNS SHALL COMPLY WITH CONDUIT SPECIFICATIONS AND CONTAIN BENDS THAT ARE NO GREATER THAN 90 DEGREES. CONDUITS INSTALLED ABOVE GRADE SHALL BE RUN PARALLEL TO, OR PERPENDICULAR WITH, BUILDING STEEL AND/OR ARCHITECTURAL LINES.
12. CONTRACTOR(S) SHALL VERIFY COLOR/FINISH OF WIRING DEVICES, DEVICE FACEPLATES, SURFACE RACEWAY SYSTEMS, AND/OR MULTI-OUTLET ASSEMBLIES WITH ARCHITECT/ENGINEER IF NOT EXPLICITLY SPECIFIED.
13. ELECTRICAL CONTRACTOR SHALL REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION REGARDING LIGHTING FIXTURE MOUNTING LOCATIONS, ARRANGEMENTS, AND CEILING FINISHES.
14. ELECTRICAL CONTRACTOR SHALL ADJUST LIGHTING FIXTURE LOCATIONS IN MECHANICAL ROOMS TO ACCOMMODATE MECHANICAL EQUIPMENT, DUCTWORK, AND RELATED FIELD CONDITIONS.
15. CONTRACTOR(S) SHALL BE RESPONSIBLE TO REVIEW INTERIOR ELEVATION SHEETS FOR PLACEMENT OF DEVICE BOXES. COORDINATE LOCATIONS SO THAT NO DEVICES ARE INSTALLED BEHIND CASEWORK, MILLWORK, VISUAL DISPLAY BOARDS, MIRRORS, CUSTOM GRAPHICS, SIGNAGE, ETC.
16. ELECTRICAL CONTRACTOR SHALL REVIEW TOILET EQUIPMENT SHOP DRAWINGS AND ARCHITECTURAL DETAILS/ELEVATIONS FOR CORRECT DEVICE BOX ROUGH-IN LOCATION OF HAND DRYERS.
17. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH PLUMBING CONTRACTOR AND THE ELECTRIC WATER COOLER / BOTTLE FILLER SHOP DRAWINGS FOR MOUNTING HEIGHT AND CONNECTION METHOD OF PLUMBING EQUIPMENT POWER CONNECTIONS. READILY ACCESSIBLE GFCI PROTECTION SHALL BE PROVIDED FOR THE BRANCH CIRCUIT(S) SUPPLYING ALL SUCH UNITS PER NEC REQUIREMENTS.
18. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR DETAILED INFORMATION REGARDING EQUIPMENT AND CONTROL. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING AND PROVIDING ITEMS AS SPECIFICALLY LISTED AND ASSIGNED ON MECHANICAL EQUIPMENT SCHEDULE SUCH AS DISCONNECT SWITCHES, VARIABLE FREQUENCY DRIVES, STARTERS, TIMERS, SWITCHES, ETC.
19. ELECTRICAL CONTRACTOR SHALL CONFIRM THE LOCATION OF THE EXHAUST FANS LISTED IN THE MECHANICAL EQUIPMENT SCHEDULES BY REFERRING TO MECHANICAL/HVAC PLANS.
20. REFER TO ROOF PLANS FOR EXACT LOCATIONS OF ROOF-TOP MECHANICAL EQUIPMENT.
21. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES, AT LEAST ONE PER OCCUPIABLE ROOM OR SPACE. INSTALL 3/4" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
22. CABINET UNIT HEATERS MAY HAVE LINE-VOLTAGE THERMOSTATS SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. REFER TO MECHANICAL EQUIPMENT SCHEDULE.
23. DIVISION 26 CONTRACTOR SHALL PROVIDE CONDUIT SLEEVES WITH APPROPRIATE BUSHINGS FOR CONTROLS AND ELECTRONIC SAFETY/SECURITY CABLING THROUGH WALLS AND FLOORS. SLEEVE SIZES SHALL BE COORDINATED WITH CABLING REQUIREMENTS.
24. SECTION 27 05 28 CONTRACTOR SHALL PROVIDE DEDICATED CONDUIT SLEEVES WITH APPROPRIATE BUSHINGS THROUGH WALLS AND FLOORS FOR DIV. 27 COMMUNICATIONS AND DIV. 28 SAFETY/SECURITY CABLING. SLEEVE SIZE SHALL BE MINIMUM 2" DIA. OR EQUIVALENT FREE AREA UNLESS NOTED OTHERWISE. SPECIFIED CABLE PATHWAY PENETRATION DEVICES SHALL BE SUBSTITUTED FOR CONDUIT SLEEVES WHERE THERE IS A REQUIRED RATING IN THE CONSTRUCTED ASSEMBLY.
25. BUILDING SYSTEMS CABLING SHALL BE SLEEVED WHERE CABLES PASS THROUGH WALLS. NO CABLING SHALL PASS THROUGH OR OVER THE TOP OF WALL CONSTRUCTION WITHOUT THE USE OF A SLEEVE. DIVISION 26 CONTRACTOR SHALL PROVIDE SLEEVES (UNLESS OTHERWISE ASSIGNED) AND COORDINATE WITH ARCHITECTURAL TRADES DURING THE WALL CONSTRUCTION PROCESS. THIS REQUIREMENT APPLIES TO EXISTING CABLING IN FOOTPRINT OF ANY NEW WALLS; PROVIDE SPLIT SLEEVES IF CABLING CANNOT BE DISCONNECTED. FIELD-VERIFY QUANTITIES AND LOCATIONS, OR COORDINATE USE OF ALLOWANCES FOR SLEEVES WITH PROJECT ADMINISTRATIVE REQUIREMENTS.
26. PROVIDE DIRECT CONNECTIONS FROM DEDICATED STANDBY POWER SYSTEM BRANCH CIRCUIT(S) TO ACCESS CONTROL SYSTEM AND DOOR HARDWARE POWER SUPPLIES WHERE REQUIRED FOR DOOR LOCK DEVICES, CONTROLLERS, ETC. REFER TO DOOR HARDWARE SCHEDULE AND ACCESS CONTROL SYSTEM SCHEDULE IN RESPECTIVE SPECIFICATIONS FOR QUANTITIES AND LOCATIONS.
27. ALL CONTROLS, COMMUNICATIONS, AND ELECTRONIC SAFETY/SECURITY CABLING SHALL BE PLENUM RATED ON THIS PROJECT.



NOTE: ALL HEIGHTS ARE AS SHOWN UNLESS NOTED OTHERWISE.

TYPICAL MOUNTING HEIGHTS FOR WALL DEVICES, EQUIPMENT, & FIXTURES

NOT TO SCALE

gmb

LUTHER C. KLAGER ELEMENTARY RENOVATIONS

MANCHESTER COMMUNITY SCHOOLS

MANCHESTER, MICHIGAN

ISSUANCES

11.25.2024 BIDS & CONSTRUCTION

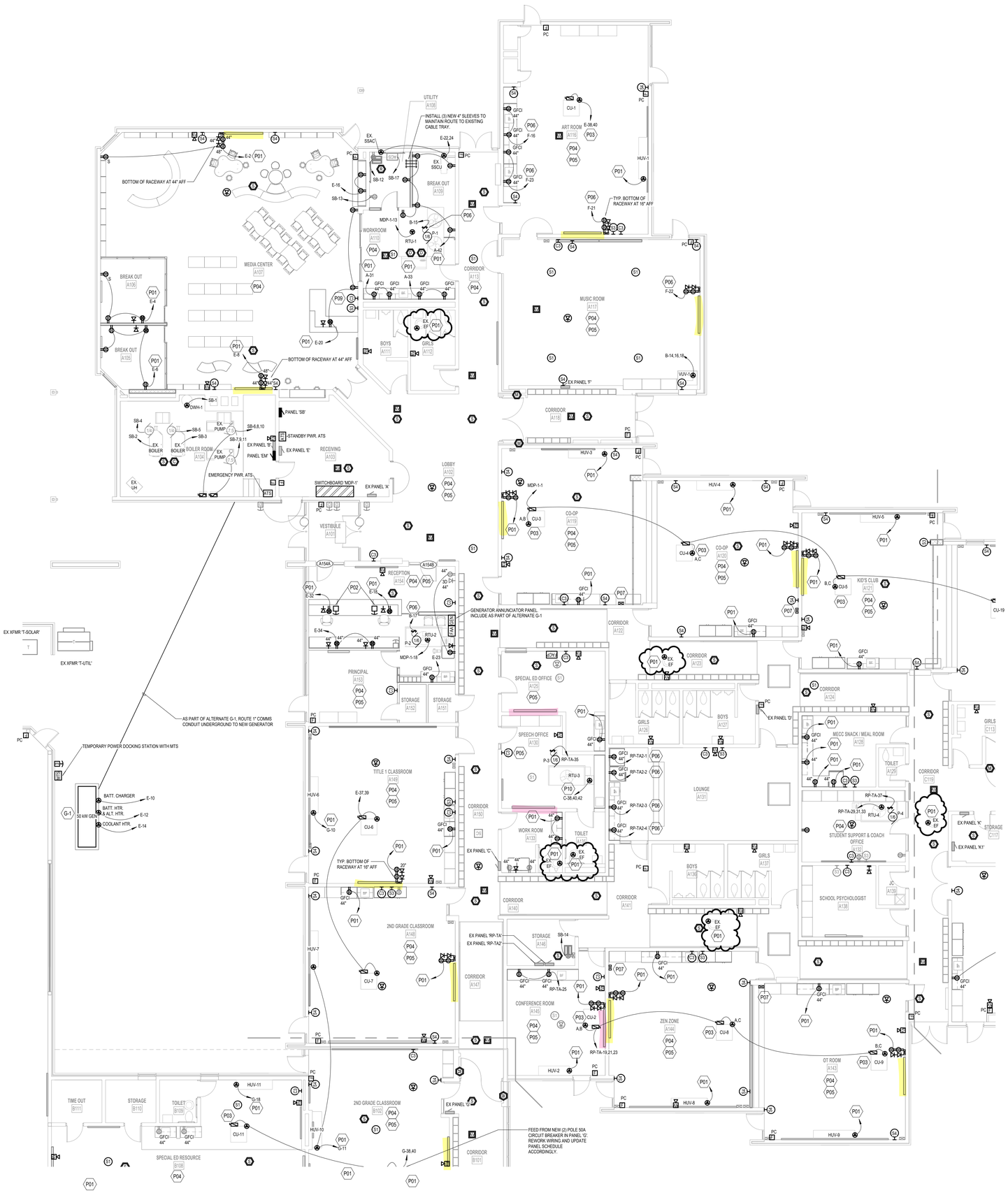
DRAWN BJF

REVIEWED JDM

PROJECT NO. 5-6370

ELECTRICAL SYMBOL LEGENDS & GENERAL NOTES

E0.01



UNIT 'A' FIRST FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"

POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. ALL GENERAL-USE 15- AND 20-AMPERE, 125- AND 250-VOLT NON-LOCKING RECEPTACLES SHALL BE TAMPER-RESISTANT TYPE; REFER TO NEC 406.12 AND SPECIFICATION SECTION 26 27 26.
4. PROVIDE 120VAC POWER FOR ALL SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS.
   A. CONNECT TO DEDICATED 20A BRANCH CIRCUIT (WITH BREAKER LOCK-ON ACCESSORY) IN LOCAL PANELBOARD FOR DAMPER(S) IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT).
   B. TERMINATE W/ BOX-COVER FUSIBLE DISCONNECT SWITCH AT EACH DAMPER.
   C. PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET).
   D. PROVIDE FIRE ALARM ADDRESSABLE RELAY(S) FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT(S) PER CODE REQUIREMENTS.
5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (DN BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
6. DESIGNATED CABLING PATHWAYS (CONDUITS, CABLE TRAYS, PENETRATION SLEEVES, ETC.) SHALL BE RESERVED FOR DIV. 27 COMMUNICATIONS CABLING AND DIV. 28 SAFETY/SECURITY CABLING ONLY. OTHER CABLING TYPES, SUCH AS DIV. 23 CONTROLS, DIV. 26 CONTROLS, AND ARCHITECTURAL EQUIPMENT CABLING SHALL BE SUPPORTED AND SLEEVED BY OTHER INDEPENDENT PATHWAYS, HANGERS, AND SUPPORTS.
7. CONSOLIDATE ALL POWER SUPPLIES REQUIRED FOR ELECTRONIC DOOR HARDWARE (REF. SECTION 08 71 00) TO CENTRAL LOCATION(S) ADJACENT TO DESIGNATED ACCESS CONTROL EQUIPMENT LOCATION(S). CONNECT ALL POWER SUPPLIES TO DEDICATED STANDBY POWER SYSTEM BRANCH CIRCUIT(S) AS DESIGNATED FOR CONTINUED OPERATION UNDER LOSS OF UTILITY POWER.
8. COORDINATE INSTALLATION OF ALL OWNER PROVIDED, OWNER INSTALLED CEILING AND WALL MOUNTED SPEAKERS, WAPS, CLOCKS, A/V, AND OTHER COMMUNICATIONS DEVICES WITH OWNER.

ELECTRICAL KEYNOTES

G-1	INCLUDE GENERATOR AND ASSOCIATED DEVICES, CIRCUITS, AND DISTRIBUTION EQUIPMENT AS PART OF ALTERNATE G-1.
P01	CONNECT TO EXISTING NEARBY CIRCUIT FROM DEMO.
P02	INSTALL MOMENTARY DOOR UNLOCK PUSHBUTTON MAINTAINED FROM DEMO. UPDATE PANEL SCHEDULES ACCORDINGLY.
P03	CONNECT TO EXISTING NEARBY CIRCUIT FROM DEMO. INSTALL FUSIBLE DISCONNECT SWITCH MAINTAINED FROM DEMO.
P04	(TYP.) SPEAKERS, WIRELESS ACCESS POINTS, PROJECTORS, AND MOUNTING HARDWARE TO BE PROVIDED AND INSTALLED BY OWNER. LOCATIONS AND AMOUNTS ARE APPROXIMATE. COORDINATE FINAL LOCATIONS AND AMOUNTS WITH OWNER PRIOR TO ROUGH-IN.
P05	(TYP.) CLOCKS TO BE PROVIDED AND INSTALLED BY OWNER. REUSE EXISTING CONDUIT AND BOXES UNLESS NOTED OTHERWISE.
P06	CONNECT CIRCUIT TO EXISTING 1 POLE 20A CIRCUIT BREAKER IN PANEL. UPDATE PANEL SCHEDULES ACCORDINGLY.
P07	INSTALL DUAL CHANNEL SURFACE RACEWAY MAINTAINED FROM DEMO. EXTEND EXISTING CIRCUIT TO NEW LOCATION.
P09	PROVIDE ROUGH-IN FOR NEW CLOCK. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALL.
P10	CONNECT CIRCUIT TO NEW 3 POLE 35A CIRCUIT BREAKER IN PANEL 'C'. UPDATE PANELBOARD SCHEDULES ACCORDINGLY.

gmb

LUTHER C. KLAGER ELEMENTARY RENOVATIONS

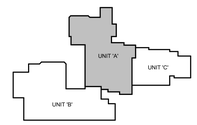
MANCHESTER COMMUNITY SCHOOLS

MANCHESTER, MICHIGAN

ISSUANCES

11.25.2024	BIDS & CONSTRUCTION
12.05.2024	ADDENDUM 001

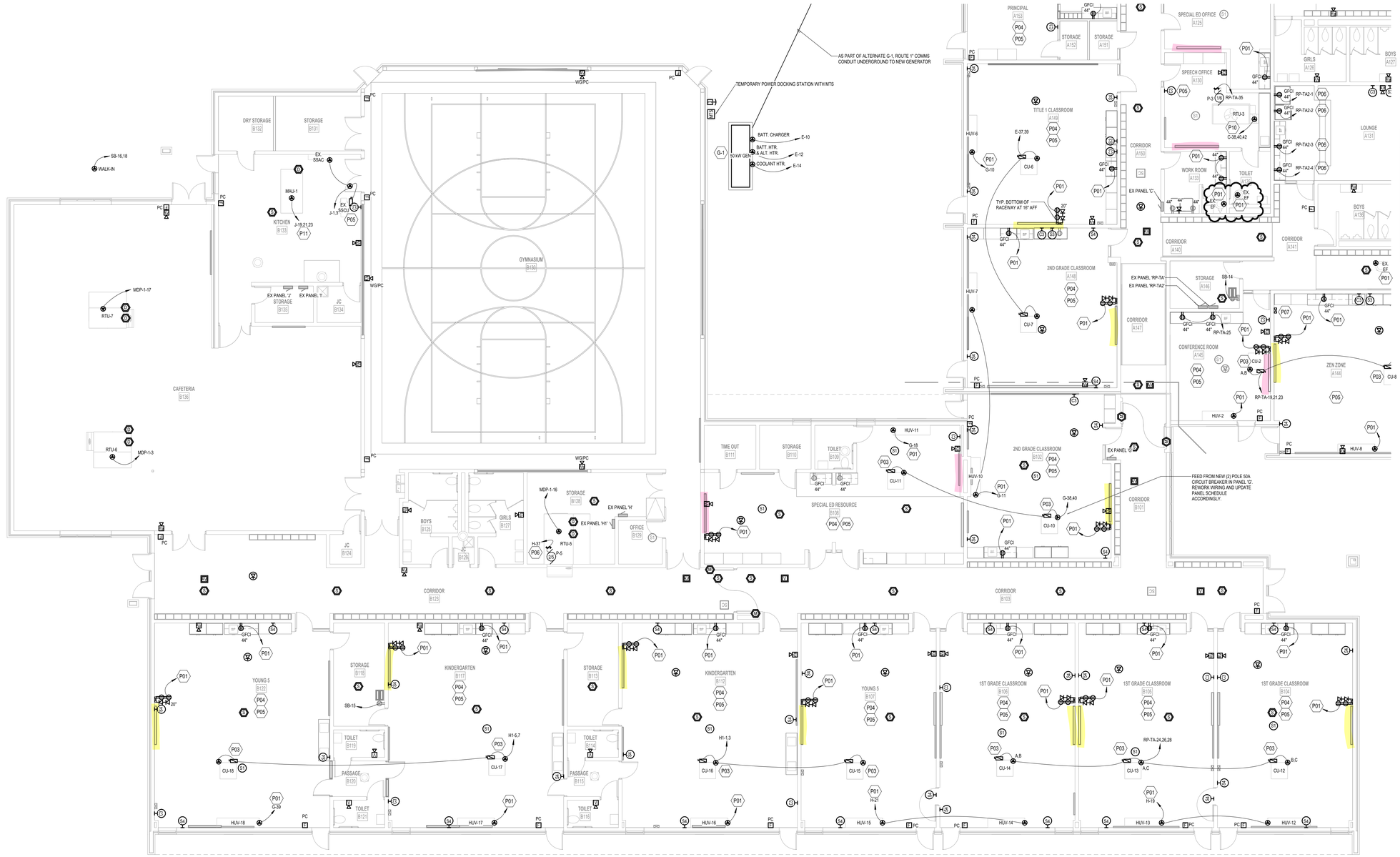
DRAWN	BJF
REVIEWED	JDM
PROJECT NO.	5-6370



KEYPLAN

UNIT 'A' FIRST FLOOR POWER & COMMUNICATIONS PLAN

E2.1A



UNIT 'B' FIRST FLOOR POWER & COMMUNICATIONS PLAN

1/8" = 1'-0"

POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. ALL GENERAL-USE 15- AND 20-AMPERE, 125- AND 250-VOLT NON-LOCKING RECEPTACLES SHALL BE TAMPER-RESISTANT TYPE; REFER TO NEC 406.12 AND SPECIFICATION SECTION 26 27 26.
4. PROVIDE 120VAC POWER FOR ALL SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS.
   A. CONNECT TO DEDICATED 20A BRANCH CIRCUIT (WITH BREAKER LOCK-ON ACCESSORY) IN LOCAL PANELBOARD FOR DAMPER(S) IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT).
   B. TERMINATE W/ BOX-COVER FUSIBLE DISCONNECT SWITCH AT EACH DAMPER.
   C. PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET).
   D. PROVIDE FIRE ALARM ADDRESSABLE RELAY(S) FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT(S) PER CODE REQUIREMENTS.
5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
6. DESIGNATED CABLING PATHWAYS (CONDUITS, CABLE TRAYS, PENETRATION SLEEVES, ETC.) SHALL BE RESERVED FOR DIV. 27 COMMUNICATIONS CABLING AND/OR 28 SAFETY/SECURITY CABLING ONLY. OTHER CABLING TYPES, SUCH AS DIV. 23 CONTROLS, DIV. 26 CONTROLS, AND ARCHITECTURAL EQUIPMENT CABLING SHALL BE SUPPORTED AND SLEEVED BY OTHER INDEPENDENT PATHWAYS, HANGERS, AND SUPPORTS.
7. CONSOLIDATE ALL POWER SUPPLIES REQUIRED FOR ELECTRONIC DOOR HARDWARE (REF. SECTION 08 71 00) TO CENTRAL LOCATION(S) ADJACENT TO DESIGNATED ACCESS CONTROL EQUIPMENT LOCATION(S). CONNECT ALL POWER SUPPLIES TO DEDICATED STANDBY POWER SYSTEM BRANCH CIRCUIT(S) AS DESIGNATED FOR CONTINUED OPERATION UNDER LOSS OF UTILITY POWER.
8. COORDINATE INSTALLATION OF ALL OWNER PROVIDED, OWNER INSTALLED CEILING AND WALL MOUNTED SPEAKERS, WAPS, CLOCKS, A/V, AND OTHER COMMUNICATIONS DEVICES WITH OWNER.

ELECTRICAL KEYNOTES

G-1	INCLUDE GENERATOR AND ASSOCIATED DEVICES, CIRCUITS, AND DISTRIBUTION EQUIPMENT AS PART OF ALTERNATE G-1.
P01	CONNECT TO EXISTING NEARBY CIRCUIT FROM DEMO.
P03	CONNECT TO EXISTING NEARBY CIRCUIT FROM DEMO. INSTALL FUSIBLE DISCONNECT SWITCH MAINTAINED FROM DEMO.
P04	(TYP.) SPEAKERS, WIRELESS ACCESS POINTS, PROJECTORS, AND MOUNTING HARDWARE TO BE PROVIDED AND INSTALLED BY OWNER. LOCATIONS AND AMOUNTS ARE APPROXIMATE. COORDINATE FINAL LOCATIONS AND AMOUNTS WITH OWNER PRIOR TO ROUGH-IN.
P05	(TYP.) CLOCKS TO BE PROVIDED AND INSTALLED BY OWNER. REUSE EXISTING CONDUIT AND BOXES UNLESS NOTED OTHERWISE.
P06	CONNECT CIRCUIT TO EXISTING 1 POLE 20A CIRCUIT BREAKER IN PANEL. UPDATE PANEL SCHEDULES ACCORDINGLY.
P07	INSTALL DUAL CHANNEL SURFACE RACEWAY MAINTAINED FROM DEMO. EXTEND EXISTING CIRCUIT TO NEW LOCATION.
P10	CONNECT CIRCUIT TO NEW 3 POLE 35A CIRCUIT BREAKER IN PANEL 'C'. UPDATE PANELBOARD SCHEDULES ACCORDINGLY.
P11	CONNECT CIRCUIT TO NEW 3 POLE 15A CIRCUIT BREAKER IN PANEL 'J'. UPDATE PANELBOARD SCHEDULES ACCORDINGLY.

gmb

LUTHER C. KLAGER ELEMENTARY RENOVATIONS

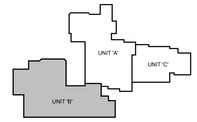
MANCHESTER COMMUNITY SCHOOLS

MANCHESTER, MICHIGAN

ISSUANCES

11.25.2024	BIDS & CONSTRUCTION
12.05.2024	ADDENDUM 001

DRAWN	BJF
REVIEWED	JDM
PROJECT NO.	5-6370



KEYPLAN

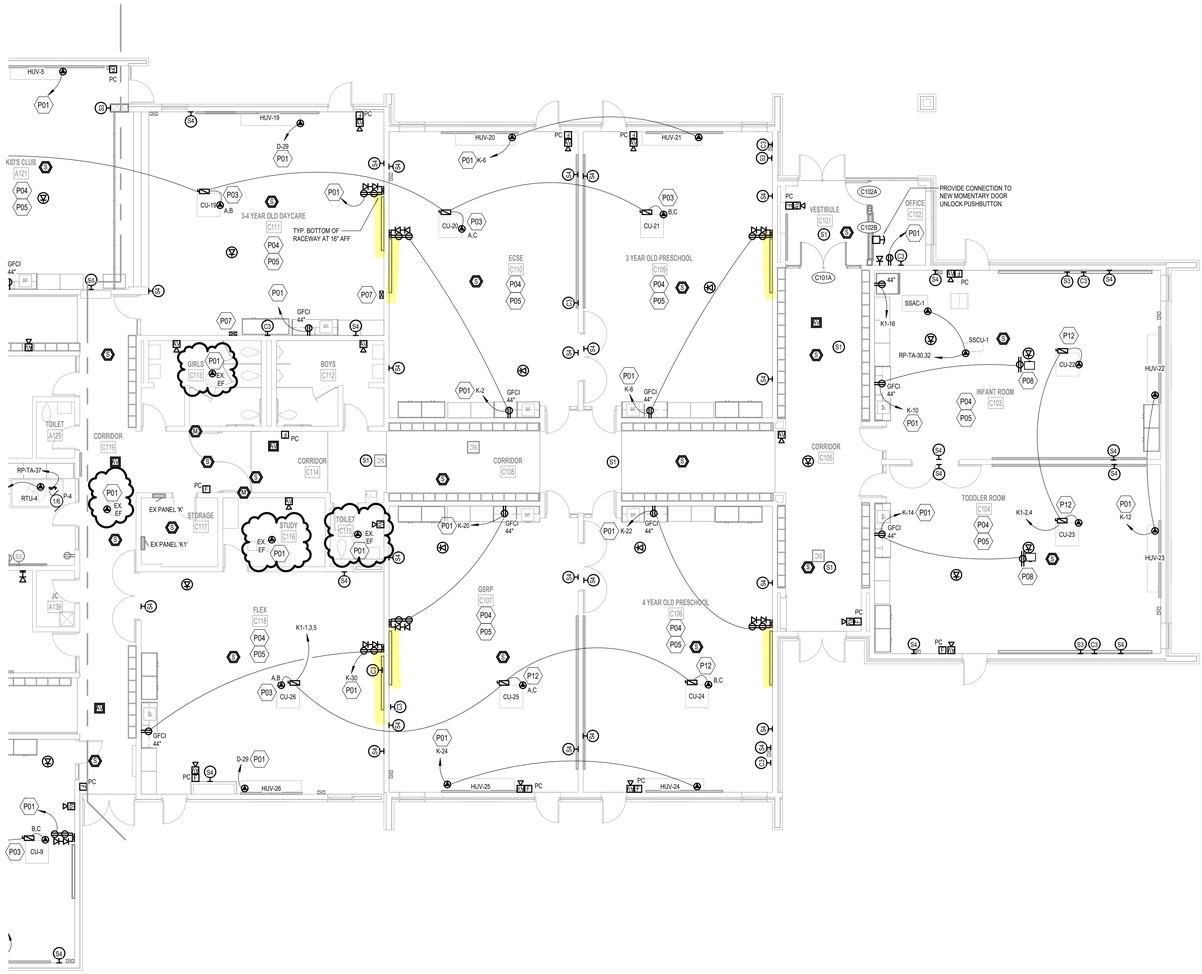
UNIT 'B' FIRST FLOOR POWER & COMMUNICATIONS PLAN

E2.1B

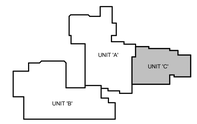
POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. ALL GENERAL-USE 15- AND 20-AMPERE, 125- AND 250-VOLT NON-LOCKING RECEPTACLES SHALL BE TAMPER-RESISTANT TYPE; REFER TO NEC 406.12 AND SPECIFICATION SECTION 26 27 26.
4. PROVIDE 120VAC POWER FOR ALL SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS.
   A. CONNECT TO DEDICATED 20A BRANCH CIRCUIT (WITH BREAKER LOCK-ON ACCESSORY) IN LOCAL PANELBOARD FOR DAMPER(S) IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT).
   B. TERMINATE W/ BOX-COVER FUSIBLE DISCONNECT SWITCH AT EACH DAMPER.
   C. PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET).
   D. PROVIDE FIRE ALARM ADDRESSABLE RELAY(S) FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT(S) PER CODE REQUIREMENTS.
5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
6. DESIGNATED CABLING PATHWAYS (CONDUITS, CABLE TRAYS, PENETRATION SLEEVES, ETC.) SHALL BE RESERVED FOR DIV. 27 COMMUNICATIONS CABLING AND DIV. 28 SAFETY/SECURITY CABLING ONLY. OTHER CABLING TYPES, SUCH AS DIV. 23 CONTROLS, DIV. 26 CONTROLS, AND ARCHITECTURAL EQUIPMENT CABLING SHALL BE SUPPORTED AND SLEEVED BY OTHER INDEPENDENT PATHWAYS, HANGERS, AND SUPPORTS.
7. CONSOLIDATE ALL POWER SUPPLIES REQUIRED FOR ELECTRONIC DOOR HARDWARE (REF. SECTION 08 71 00) TO CENTRAL LOCATION(S) ADJACENT TO DESIGNATED ACCESS CONTROL EQUIPMENT LOCATION(S). CONNECT ALL POWER SUPPLIES TO DEDICATED STANDBY POWER SYSTEM BRANCH CIRCUIT(S) AS DESIGNATED FOR CONTINUED OPERATION UNDER LOSS OF UTILITY POWER.
8. COORDINATE INSTALLATION OF ALL OWNER PROVIDED, OWNER INSTALLED CEILING AND WALL MOUNTED SPEAKERS, WAPS, CLOCKS, A/V, AND OTHER COMMUNICATIONS DEVICES WITH OWNER.

	ELECTRICAL KEYNOTES
P01	CONNECT TO EXISTING NEARBY CIRCUIT FROM DEMO.
P03	CONNECT TO EXISTING NEARBY CIRCUIT FROM DEMO. INSTALL FUSIBLE DISCONNECT SWITCH MAINTAINED FROM DEMO.
P04	(TYP.) SPEAKERS, WIRELESS ACCESS POINTS, PROJECTORS, AND MOUNTING HARDWARE TO BE PROVIDED AND INSTALLED BY OWNER. LOCATIONS AND AMOUNTS ARE APPROXIMATE. COORDINATE FINAL LOCATIONS AND AMOUNTS WITH OWNER PRIOR TO ROUGH-IN.
P05	(TYP.) CLOCKS TO BE PROVIDED AND INSTALLED BY OWNER. REUSE EXISTING CONDUIT AND BOXES UNLESS NOTED OTHERWISE.
P07	INSTALL DUAL CHANNEL SURFACE RACEWAY MAINTAINED FROM DEMO. EXTEND EXISTING CIRCUIT TO NEW LOCATION.
P08	COORDINATE FINAL LOCATION OF PROJECTOR MOUNT WITH OWNER PRIOR TO ROUGH-IN.
P12	CONNECT TO EXISTING NEARBY CIRCUIT FROM DEMO. PROVIDE AND INSTALL NEW 35A FUSIBLE DISCONNECT SWITCH AT UNIT.



UNIT 'C' FIRST FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"



KEYPLAN

gmb

LUTHER C. KLAGER ELEMENTARY RENOVATIONS
MANCHESTER COMMUNITY SCHOOLS
MANCHESTER, MICHIGAN

ISSUANCES

11.25.2024	BIDS & CONSTRUCTION
12.05.2024	ADDENDUM 001

DRAWN BJF
REVIEWED JDM

PROJECT NO. 5-6370

UNIT 'C' FIRST FLOOR POWER & COMMUNICATIONS PLAN

E2.1C