

MARK	REVISIONS	DATE
1	90% PRICING SET	06/18/2018
2	PERMIT SET	07/25/2018
3	COMMISSIONING COMMENTS	01/23/2019
4	CONSTRUCTION	02/28/2019

ALL DIMENSIONS AND RELATIONSHIPS MUST BE VERIFIED BY CONTRACTOR. THE ARCHITECT IS TO BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION. DO NOT SCALE FROM DRAWINGS.

PROJECT #:	140145.001
FILENAME:	WFW
DRAWN:	WFW
CHECKED:	WFW
DATE:	07/25/18

ISSUE FOR CONSTRUCTION
02-28-2019

FIRST FLOOR
PLAN-POWER &
SYSTEMS

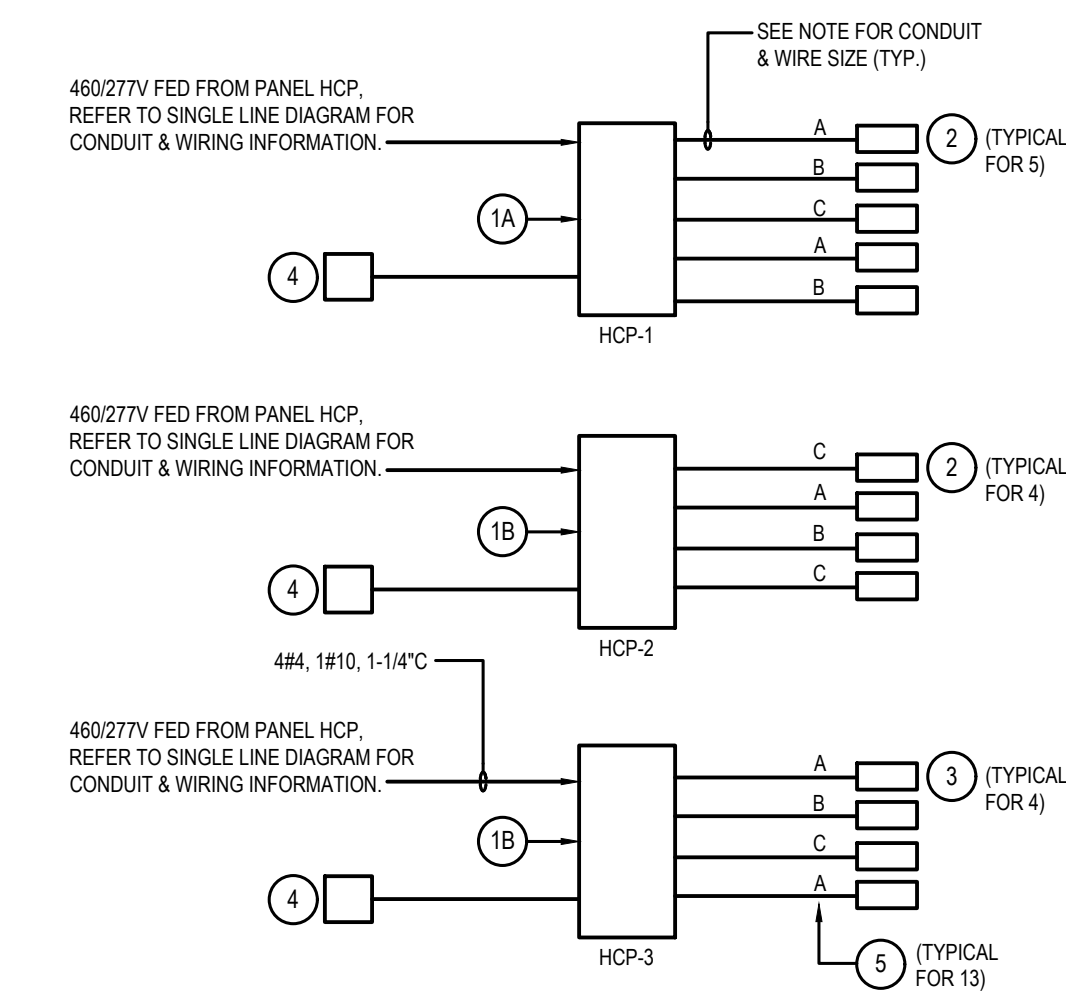
DRAWING

E-4

RADIANT HEATING SYSTEM :

CONTRACTOR SHALL PROVIDE AN ELECTRICAL RADIANT HEATING SYSTEM. BASIC OF DESIGN IS INFRATECH INFRARED HEATING SYSTEM. CONTRACTOR SHALL REFER TO MANUFACTURER'S DOCUMENTATION TO PROVIDE A COMPLETE SYSTEM.

- INFRATECH SOLID STATE RELAY PANEL, 480/277V, 3-PH 4-WIRE WITH 5 RELAYS, PART# 30-4055.
- INFRATECH SOLID STATE RELAY PANEL, 480/277V, 3-PH 4-WIRE WITH 4 RELAYS, PART# 30-4054.
- INFRATECH WD-4027 DUAL ELEMENT INFRARED STAINLESS STEEL HEATER, 6KW, 277V. WIRING SHALL BE 2#10, 1#10G, 3#4C. WIRING SHALL TERMINATE AT THE HEATER CIRCUIT BREAKER TERMINALS INSIDE THE RELAY PANEL.
- INFRATECH SL-4027 SINGLE ELEMENT INFRARED STAINLESS STEEL HEATER, 4KW, 277V. WIRING SHALL BE 2#10, 1#10G, 3#4C. WIRING SHALL TERMINATE AT THE HEATER CIRCUIT BREAKER TERMINALS INSIDE THE RELAY PANEL.
- INFRATECH 30-4047 3-ZONE ANALOG CONTROLLER WITH DIGITAL TIMER. PROVIDE BACK BOX PER MANUFACTURER'S RECOMMENDATION. PROVIDE (1) CAT 5 CABLE FROM CONTROLLER TO THE CORRESPONDING RELAY PANEL. ONE TWISTED WIRE PER ZONE.
- HEATER POWER WIRING SHALL BE CONNECTED TO THE DESIGNATED ELECTRICAL PHASE AS SHOWN TO EVENLY SPREAD OUT THE LOAD.

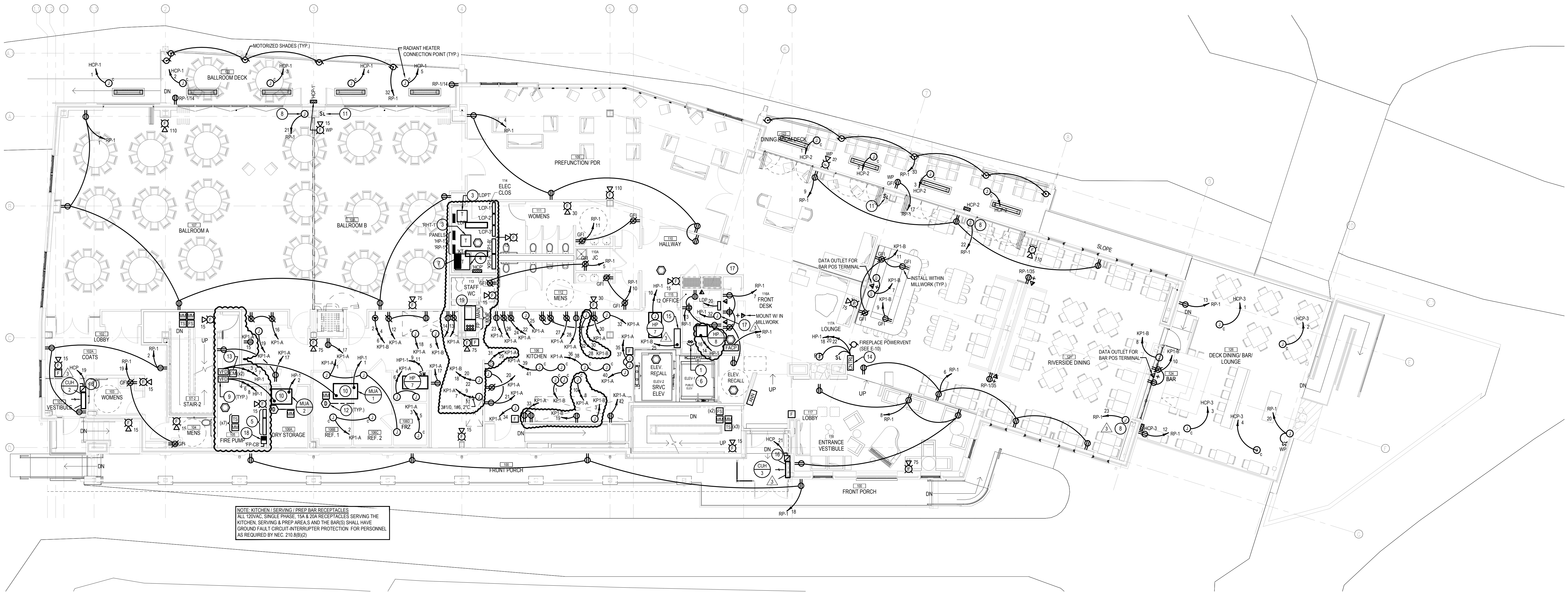


RADIANT HEATING SYSTEM SCHEMATIC WIRING DIAGRAM

SCALE : NONE

EC TO PROVIDE A 120VAC/1P CIRCUIT TO POWER SMOKE DAMPERS WITHIN DUCTWORK THAT EXTEND BETWEEN FLOORS. REFER TO MECHANICAL DRAWINGS FOR LOCATION OF DAMPERS. CIRCUIT TO NEAREST RECEPTACLE PANEL WITH 2#12, 1#10G, 3#4C. UTILIZE 20A/1P BREAKER WITHIN PANEL FOR BRANCH CIRCUIT.

EC TO PROVIDE FIRE ALARM CONTROL/RELAY MODULE AT EACH DAMPER. THE INTENT IS TO HAVE THE DAMPERS INITIATED BY THE FIRE ALARM CONTROL PANEL UPON DETECTION OF SMOKE WITHIN THE DUCT DETECTORS FOR THE AIR HANDLING EQUIPMENT SERVING THIS FACILITY. COORDINATE WITH FIRE ALARM VENDOR FOR INTERFACE OF EQUIPMENT.



NOTE: KITCHEN / SERVING / PREP BAR RECEPTACLES
ALL 120VAC, SINGLE PHASE, 15A & 20A RECEPTACLES SERVING THE KITCHEN, SERVING & PREP AREAS AND THE BARS SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION. FOR PERSONNEL AS REQUIRED BY NEC 210.8(B)(2)

FIRST FLOOR PLAN - POWER & SYSTEMS WORK

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

NOTES :

- REFER TO DRAWING MPE-1 FOR HVAC, PLUMBING/FIRE PROTECTION & ELECTRICAL GENERAL NOTES, ABBREVIATIONS, LEGENDS & DRAWING LIST.
- UNLESS OTHERWISE NOTED, ALL 120 VOLT, SINGLE PHASE CIRCUITS SHALL HAVE 2#12, 1#10G IN 3/4" AS A MINIMUM. ALL 120 VOLT, 20A SINGLE PHASE CIRCUITS OVER 70 FT. IN LENGTH SHALL BE 2#10, 1#10G IN 3/4".
- UNLESS OTHERWISE NOTED, ALL 208 VOLT, SINGLE PHASE CIRCUITS SHALL HAVE 2#12, 1#10G IN 3/4" AS A MINIMUM. ALL 208 VOLT, 20A SINGLE PHASE CIRCUITS OVER 110 FT. IN LENGTH SHALL BE 2#10, 1#10G IN 3/4".
- UNLESS OTHERWISE NOTED, ALL 30A, 277 VOLT, SINGLE PHASE CIRCUITS SHALL HAVE 2#10, 1#10G IN 3/4" AS A MINIMUM. ALL 277 VOLT, 30A SINGLE PHASE CIRCUITS OVER 175 FT. IN LENGTH SHALL BE 2#8, 1#8G IN 3/4".
- EC SHALL PROVIDE PERMANENT PHENOLIC LABEL ON ALL TRANSFORMERS PER NEC ARTICLE 450.14 TO IDENTIFY LOCATION OF LOOKABLE FEEDER BREAKER SERVING TRANSFORMER.
- COORDINATE WITH KITCHEN CONSULTANT ON FINAL DEVICE MOUNTING HEIGHTS.
- UNLESS OTHERWISE NOTED, ALL RECEPTACLES LOCATED OUTSIDE SHALL BE HOUSED IN A WEATHERPROOF (WP) IN-USE (IU) ENCLOSURE AND HAVE GROUND FAULT CIRCUIT-INTERRUPTER PROTECTION (GFI).

DRAWING NOTES :

- TWO (2) 5" FLOOR SLEEVES, EACH WITH ONE (1) 4" EMPTY CONDUIT USED TO FISH WIRE BETWEEN GARAGE AND FIRST LEVEL. SLEEVES / CONDUITS SHALL BE DEDICATED FOR TELEPHONE AND CABLE TV RISERS.
- NOT USED.
- SUPPLY TRANSFORMER FROM CEILING STRUCTURE.
- PROVIDE NEW TRANSFORMER MOUNTED ON NEW 4" CONCRETE HOUSEKEEPING PAD.
- FIRE PUMP AND JOCKEY PUMP CONTROLLER.
- PROVIDE TWO (2) 5" FLOOR SLEEVES, EACH WITH ONE (1) 4" EMPTY CONDUIT, IN DECK ABOVE TO FISH WIRE BETWEEN 1ST AND 2ND LEVELS. SLEEVES / CONDUITS SHALL BE DEDICATED FOR TELEPHONE AND CABLE TV RISERS.
- DEDICATED 14" X 32" AREA FOR CONDUIT RISERS. PROVIDE SLEEVES FOR ALL THRU-FLOOR CONDUITS IN DECK ABOVE. REFER TO FIRESTOPPING DETAILS FOR MORE INFORMATION.
- PROVIDE BACKBOX FOR RADIANT HEATING SYSTEM ZONE ANALOG CONTROL PANEL. PROVIDE 120VAC POWER AS SHOWN AND ALSO PROVIDE A 3#4C WITH ONE (1) CAT 5 CABLE BACK TO THE LOCAL RADIANT HEATER RELAY PANEL FOR CONTROL COMMUNICATION. REFER TO MANUFACTURER'S INSTRUCTIONS FOR FURTHER DETAIL.
- PROVIDE NEW VFD (480VAC, 7-12HP/30) WITH DISCONNECT SWITCH. MOUNT VFD ON WALL WITHIN CLOSET SHOWN. PROVIDE LOCKING PROVISIONS ON VFD DISCONNECT. CIRCUIT TO THE MAKE-UP AIR UNIT (MUA) INTEGRAL DISCONNECT AS SHOWN AND DISCONNECT TO PANEL INDICATED WITH 3#12, 1#10G, 3#4C.
- PROVIDE CLEAR AND VISIBLE WARNING SIGN NEXT TO INTEGRAL DISCONNECT TO READ THE FOLLOWING: "WARNING, DE-ENERGIZE UNIT AT THE VFD PRIOR TO MAINTENANCE WORK. DO NOT OPEN THE INTEGRAL DISCONNECT ON THIS UNIT WHILE THE VFD IS RUNNING."
- PROVIDE WIRELESS CONTROL SWITCH / STATION FOR REMOTE CONTROL OF OUTDOOR ROLLER SHADES. COORDINATE WITH OWNER & MANUFACTURER FOR CONTROL SETTINGS AND CHANNELS.
- VENDOR SUPPLIED INTERNAL DUCT SMOKE DETECTOR. REFER TO MECHANICAL DRAWINGS FOR DUCTWORK LAYOUT.
- CONTROL MODULE FOR FAN SHUTDOWN. MODULES MUST BE WITHIN 3' OF MUA UNIT CONTROLLERS AS SHOWN.
- FIREPLACE CONTROLLER. CIRCUIT FROM PANEL INDICATED TO CONTROLLER WITH 4#10, 1#10G, 3#4C. COORDINATE WITH VENDOR FOR EXACT LOCATION, WIRING, AND CONTROL REQUIREMENTS. REFER TO E-10 FOR POWERVENT LOCATIONS.
- KITCHEN PRIMARY CONTROL PANEL (LOCATION SHOWN FOR REFERENCE. FINAL LOCATION TBD). PANEL SERVES AS CONTROL POINT FOR ANSUL SYSTEM, HOOD EXHAUST & SUPPLY FAN CONTROL, HOOD LIGHTING, ETC. CONTRACTOR TO COORDINATE WITH KITCHEN CONTROL PANEL MANUFACTURER AND KITCHEN CONSULTANT FOR COMPLETE REQUIREMENTS INTERCONNECTING ALL KITCHEN EQUIPMENT.
- PROVIDE NEMA-1 30A/200M DISCONNECT SWITCH MOUNTED TO THE CEILING SLAB. CONVERT FROM EMT TO LIQUID-TIGHT FLEXIBLE CONDUIT FOR FINAL TERMINATION AT THE EQUIPMENT SHOWN. CIRCUIT TO PANEL INDICATED WITH 3#12, 1#10G, 3#4C.
- PROVIDE A 1-BOX WITH A 120V 20A CKT FOR ATC CONTROL.
- CONDUIT FOR FIRE PUMP FEEDER ENCASED IN CONCRETE FROM BELOW AND ENTER FIRE PUMP CIRCUIT BREAKER.
- MOUNT MDS ON 4" HEIGHT CONCRETE PAD. END CONCRETE ENCASMENT FLUSH WITH CONCRETE PAD.