

ELECTRICAL SPECIFICATIONS CONT.

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- 3. ADDRESSABLE PULL STATIONS:
 - a. SHALL BE COMPATIBLE WITH EXISTING FACP.
 - b. U.L. LISTED.
 - c. COMMUNICATE THE STATION'S STATUS (ALARM/NORMAL) TO THE CONTROL PANEL OVER TWO WIRES WHICH ALSO PROVIDE POWER TO THE PULL STATION.
 - d. MECHANICALLY LATCH UPON OPERATION AND REMAIN SO UNTIL MANUALLY RESET BY OPENING WITH A KEY COMMON TO ALL SYSTEMS LOCKS AND CONTROL PANEL.
 - e. DOUBLE ACTION AND IDENTIFIED FOR LOCAL USE BY RAISED WHITE LOCAL LETTERING.
 - f. HINGED FRONT TO A BACKPLATE ASSEMBLY.
 - g. CAPABLE OF FIELD PROGRAMMING IT'S "ADDRESS" LOCATION ON AN ADDRESSABLE SIGNALING LINE CIRCUIT.
 - 4. SMOKE DETECTORS:
 - a. SHALL BE COMPATIBLE WITH EXISTING FACP.
 - b. SMOKE SENSORS SHALL BE SOLID STATE PHOTOELECTRIC SMOKE DETECTOR MEASURING DEVICES HAVING NO SELF-CONTAINED ALARM SET POINT (FIXED THRESHOLD) AND SHALL COMMUNICATE ACTUAL CHAMBER VALUES TO THE SYSTEM CONTROL PANEL.
 - c. SMOKE SENSORS AND BASES SHALL BE LISTED TO UL STANDARD AND DOCUMENTED COMPATIBLE WITH THE CONTROL EQUIPMENT TO WHICH THEY ARE CONNECTED, AND FOR BOTH CEILING AND WALL MOUNT APPLICATIONS.
 - d. EACH SENSOR WILL BE CAPABLE OF SENSING UP TO 10 SENSITIVITY LEVELS RANGING BETWEEN .6% AND 4.0%.
 - e. PHOTOELECTRIC SENSOR SHALL HAVE FINO MESH INSECT SCREEN.
 - f. SENSOR ELECTRONICS SHALL BE COMPLETELY ENCLOSED TO PROTECT AGAINST FALSE ALARMS FROM EMI AND RFI.
 - g. SMOKE DETECTORS SHALL NOT BE INSTALLED UNTIL FINAL ROOM FINISHES AND CARPETING HAVE BEEN COMPLETED, OR PROTECTED BY PLASTIC BAG TO PREVENT DUST ENTERING THE SMOKE DETECTOR.
 - 5. HEAT DETECTORS:
 - a. SHALL BE COMPATIBLE WITH EXISTING FACP.
 - b. SENSOR SHALL BE COMBINATION RATE OF RISE/FIXED TEMPERATURE SENSOR. U.L. LISTED AS A RATE COMPENSATED HEAT DETECTOR.
 - c. EACH SENSOR CAPABLE OF OPERATING AT A SELECTABLE RATE OF RISE OPERATION OF 15 OR 20 DEGREES FAHRENHEIT PER MINUTE AND IS SELF-RESTORABLE.
 - d. EACH SENSOR CAPABLE OF FIXED TEMPERATURE OPERATION SELECTABLE FOR EITHER 117 OR 135 DEGREES FAHRENHEIT, INDEPENDENT OF THE RATE OF RISE SETTING.
 - e. EACH SENSOR CONFIGURABLE FOR UTILITY MONITORING AND CAPABLE OF SENSING TEMPERATURE BETWEEN 32 AND 158 DEGREES FAHRENHEIT.
- SYSTEM OPERATION
- 1. PROVIDE REQUIRED PROGRAMMING. VENDOR SHALL MEET WITH THE OWNER TO DETERMINE IF THERE ARE ANY EXTRAORDINARY PROGRAMMING CIRCUMSTANCES.
 - 2. SMOKE DETECTION OPERATION:
 - a. CONTROL PANEL SHALL MAKE THE ALARM DECISION FOR EACH SENSOR.
 - b. CONTROL PANEL SHALL DETERMINE THE CONDITION OF EACH SENSOR BY COMPARING THE SENSOR VALUE TO THE STORED VALUES.
 - c. CONTROL PANEL SHALL MAINTAIN A MOVING AVERAGE OF THE SENSORS' SMOKE CHAMBER VALUE TO AUTOMATICALLY COMPENSATE (MOVE THE THRESHOLD) FOR DUST AND DIRTY CONDITIONS THAT COULD AFFECT DETECTION OPERATIONS. THE SYSTEM SHALL AUTOMATICALLY MAINTAIN A CONSTANT SMOKE OBSCURATION SENSITIVITY FOR EACH SENSOR (VIA THE FLOATING THRESHOLD) BY COMPENSATING FOR ENVIRONMENTAL FACTORS.
 - d. THE SYSTEM SHALL AUTOMATICALLY INDICATE WHEN AN INDIVIDUAL SENSOR NEEDS CLEANING. WHEN A SENSOR'S AVERAGE VALUE REACHES A PREDETERMINED VALUE, A "DIRTY SENSOR" TROUBLE CONDITION SHALL BE AUDIBLY AND VISUALLY INDICATED AT THE CONTROL PANEL. THE LED ON THE SENSOR BASE SHALL GLOW STEADY. IF A "DIRTY SENSOR" IS LEFT UNATTENDED, AND ITS AVERAGE VALUE INCREASES TO A SECOND PREDETERMINED VALUE, AN "EXCESSIVELY DIRTY SENSOR" TROUBLE CONDITION SHALL BE INDICATED AT THE CONTROL PANEL. TO PREVENT FALSE ALARMS, THESE "DIRTY" CONDITIONS SHALL IN NO WAY DECREASE THE AMOUNT OF SMOKE OBSCURATION NECESSARY FOR SYSTEM ACTIVATION.
 - e. CONTROL PANEL SHALL CONTINUOUSLY PERFORM AN AUTOMATIC SELF-TEST ROUTINE ON EACH SENSOR WHICH WILL FUNCTIONALLY CHECK SENSOR ELECTRONICS AND ENSURE THE ACCURACY OF THE VALUES BEING TRANSMITTED TO THE CONTROL PANEL. ANY SENSOR THAT FAILS THIS TEST SHALL INDICATE A "SELF TEST ABNORMAL" TROUBLE CONDITION.
 - f. THE ACTIVATION OF ANY SYSTEM SMOKE DETECTOR IN ALL PUBLIC AND COMMON AREAS SHALL INITIATE AN ALARM VERIFICATION OPERATION WHEREBY THE PANEL WILL RESET THE ACTIVATED DETECTOR AND WAIT FOR A SECOND ALARM ACTIVATION. IF, WITHIN ONE MINUTE AFTER RESETTING, A SECOND ALARM IS REPORTED FROM THE SAME OR ANY OTHER SMOKE DETECTOR, THE SYSTEM SHALL PROCESS THE ALARM AS DESCRIBED PREVIOUSLY. IF NO SECOND ALARM OCCURS WITHIN ONE MINUTE, THE SYSTEM IS TO RESUME NORMAL OPERATION. THE ALARM VERIFICATION OPERATION IS TO BE U.L. LISTED.
 - 3. ALARM ACTIVATION
 - a. ANY INITIATION OF SMOKE DETECTORS, PULL STATIONS OR FLOW SWITCHES SHALL PUT THE SYSTEM INTO GENERAL ALARM CONDITIONS.
 - b. EXTERNAL AUDIBLE / VISIBLE SIGNAL AT FIRE DEPARTMENT CONNECTION SHALL ONLY ALARM ON FLOW SWITCH INITIATION.
 - c. ALL AUDIBLE ALARM INDICATING APPLIANCES SHALL SOUND UNTIL SILENCED BY THE ALARM SILENCE SWITCH AT THE CONTROL PANEL. SIGNALS SHALL NOT BE SILENCED DURING ALARM SILENCE INHIBIT MODE.
 - d. XENON STROBES SHALL DISPLAY A CONTINUOUS PATTERN UNTIL SYSTEM IS RESET.
 - 4. RTAC SHUT DOWN (ROOFTOP AIR CONDITIONING UNIT)
 - a. NEW RTAC, RETURN AIR SMOKE DETECTOR AND INTERLOCK TO SHUTDOWN RTAC BY RTAC MANUFACTURER. PROVIDE AN ADAPTER MODULE WITH ADDRESS TO MONITOR THE DUCT TYPE SMOKE DETECTOR.
 - b. EC SHALL COORDINATE DUCT SMOKE DETECTOR INSTALLATION WITH THE HVAC CONTRACTOR. FURNISH THE APPROPRIATE MOUNTING BRACKETS, CLEARANCES AND SAMPLING TUBE LENGTH TO PROVIDE AN APPROVED INSTALLATION.
 - 5. SPRINKLER SYSTEM
 - a. EXISTING.
 - 6. MOUNTING HEIGHTS
 - a. FIRE PULL STATION, STROBES AND COMBINATION HORN/STROBE DEVICES: SEE FLOOR PLANS LEGEND FOR MOUNTING HEIGHTS.
 - 1. INTERCONNECTION OF FIRE ALARM TO OTHER SYSTEMS
 - a. THE FIRE ALARM SYSTEM SHALL BE INTERCONNECTED TO THE FOLLOWING SYSTEMS:
 - 1). ALARM DIALER FOR CONNECTION TO OFF-SITE MONITORING.
 - 2). HVAC AIR HANDLING EQUIPMENT SHUT DOWN UPON DUCT TYPE SMOKE DETECTION.
- TO ACCOMMODATE JOB SITE CHANGES, THE TYPE OF "OFF-SITE MONITORING" IS TO BE ON SITE CONFIGURABLE TO PROVIDE

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COLLABORATION

PROJECT INFORMATION

TENANT BUILD-OUT FOR:
ASPEN DENTAL
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PROFESSIONAL SEAL

SHEET DATES

ISSUE DATE	MAR. 16, 2020
REVISIONS	

JOB NUMBER

1860160

SHEET NUMBER

E0.3