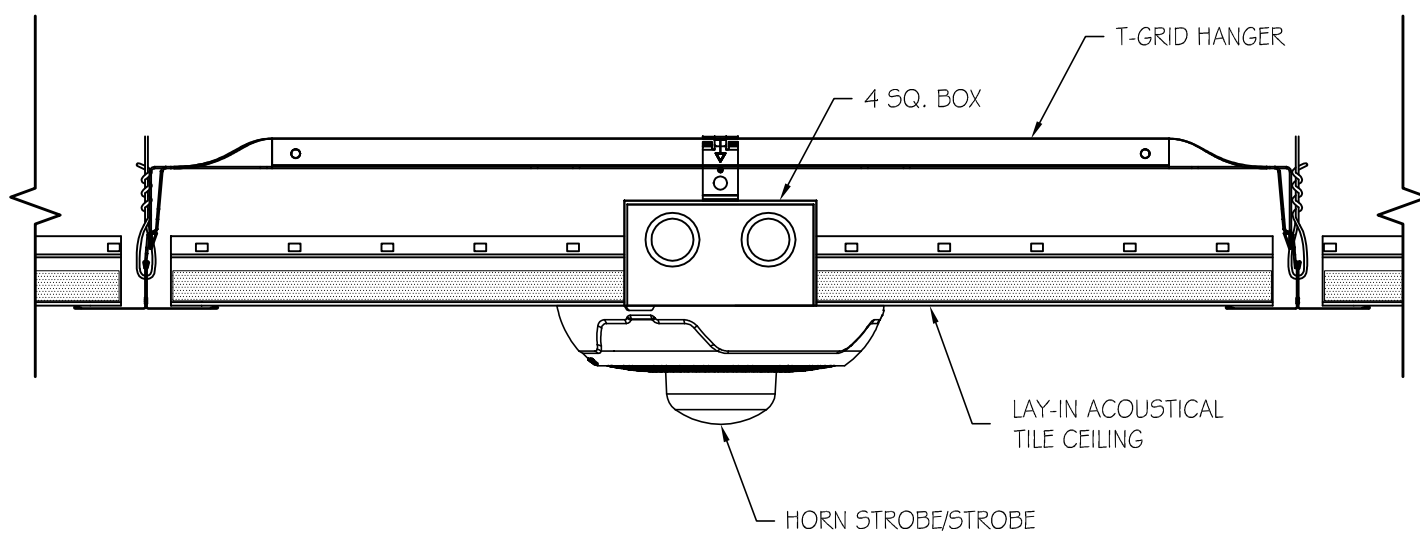
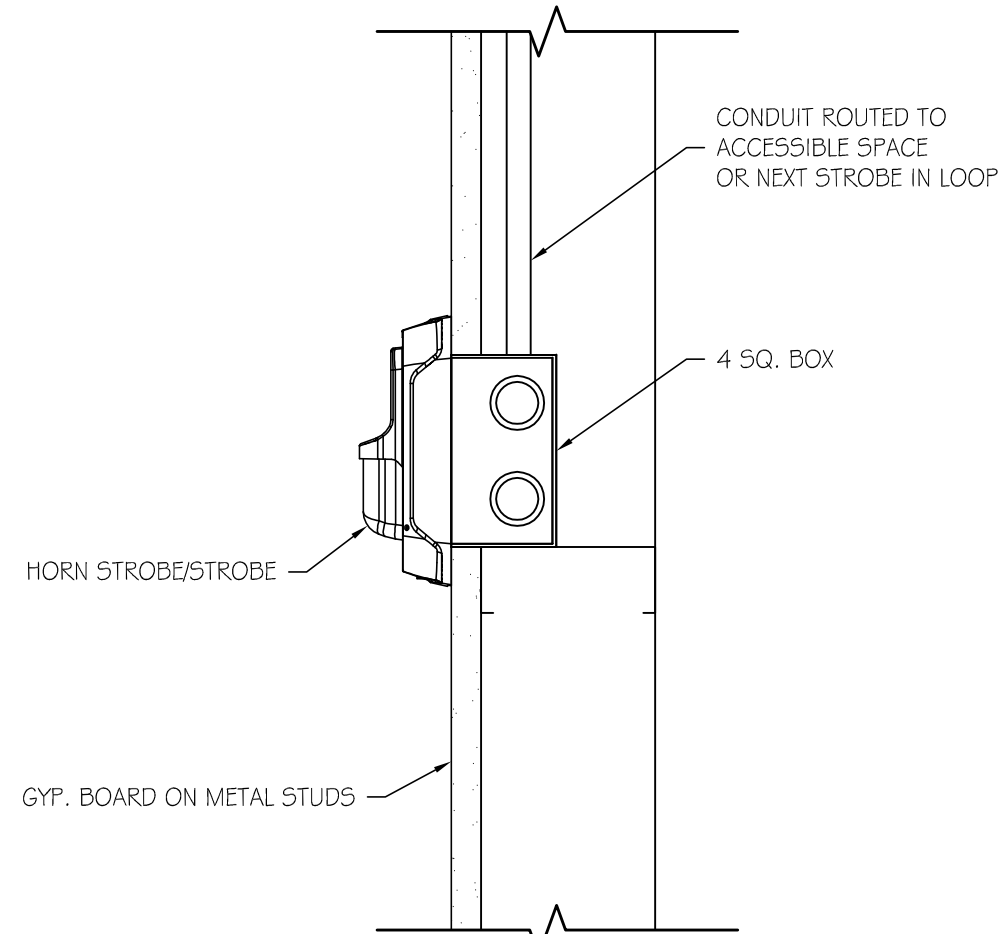


1 STROBE INSTALLATION - TO STRUCTURE
SCALE: 3" = 1'-0"

2 STROBE INSTALLATION - GYP. BD MOUNT
SCALE: 3" = 1'-0"



3 STROBE INSTALLATION - ACOUSTICAL CEILING MOUNT
SCALE: 3" = 1'-0"



4 STROBE INSTALLATION - GYP. BD WALL MOUNT
SCALE: 3" = 1'-0"

SYSTEM OUTLINE

CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE FIRE ALARM SYSTEM IN ACCORDANCE WITH NFPA 72, THE INTERNATIONAL FIRE CODE CODE, AND LOCAL AND STATE REQUIREMENTS. THE SYSTEM SHOWN INCLUDES A FIRE ALARM PANEL, REMOTE ANNUNCIATOR AND OTHER PROVISIONS FOR CONNECTION TO A NOTIFICATION SERVICE FROM THE ALARM SYSTEM. THE SYSTEM SHALL HAVE THE BUILDING DEVICES UNICELY ADDRESSABLE. THE REFERRING OF ZONES OR GROUPS ARE PRIMARILY FOR THE OWNER AND DESIGNERS BENEFIT TO ASSURE COMMUNICATION WITH THE CONTRACTOR AND AUTHORITIES HAVING JURISDICTION (AHJ) SHOULD DESIGN OR OPERATIONAL QUESTIONS ARISE. THE OWNER REQUIRES THE EQUIPMENT BE FROM A SINGLE MANUFACTURER THAT HAS LOCAL (WITHIN 50 MILE RADIUS) TECHNICAL SUPPORT AND STOCKED REPLACEMENT PARTS. MANUFACTURERS ALLOWED INCLUDE: FIRELITE 9200 ULDS, OR AS APPROVED BY OWNER. A WARRANTY OF ONE (1) YEAR PARTS AND LABOR STARTING FROM THE DATE OF THE STORE OPENING OR AS AGREED UPON WITH THE OWNER IS THE CONTRACTORS RESPONSIBILITY. CONTRACTOR SHALL ALSO PROVIDE TWO TRAINING PERIODS IN HOW TO RUN THE CONTROL PANEL: ONE FOR A DAY SHIFT AND ONE FOR A NIGHT SHIFT.

DESIGN CONSTRAINTS

THE SYSTEM SHALL HAVE THE FOLLOWING DESIGN CONSTRAINTS, FUNCTIONS, ACCESSORIES AND/OR REQUIREMENTS AS FOLLOWS:

- THE DESIGNERS SCHEMATIC REFERS TO ZONES AND/OR GROUPS TO USE IN COMMUNICATION AND FOR 'DRILLED DOWN' TO ADDRESSABLE UNITS IN THE DESIGN AS FOLLOWS:
LIFE SAFETY PULL STATIONS AND SMOKE DETECTORS
FIRE SPRINKLER TAMPERS AND FLOW SWITCHES
DUCT SMOKE DETECTORS FOR THE HVAC SYSTEM AND UNITS
FIRE HOOD PROTECTION SYSTEMS (BAKERY, CHINESE, KITCHEN)
- FIRE ALARM 'CONTROL CENTER' SHALL BE LOCATED IN THE CORRIDOR OF THE OFFICE AREA. THE REMOTE ANNUNCIATOR SHOULD BE LOCATED IN THE FRONT VESTIBULE IN AN AREA COORDINATED WITH THE AUTHORITY HAVING JURISDICTION FOR ITS FINAL PLACEMENT. A REMOTE ANNUNCIATOR SHALL BE LOCATED IN THE CORRIDOR OF THE OFFICE AREA.
- THE 'CONTROL CENTER' EITHER NEEDS TO PROVIDE FOR ELECTRIC TERMINATION AND RESTART FOR RESET OF DUCT SMOKE DETECTORS OR DESIGN MUST ACCOMMODATE DUCT SMOKE RESETS IMMEDIATELY ADJACENT TO THE 'CONTROL CENTER' PANEL.
- THIS FIRE ALARM COMMUNICATIONS PLAN INDICATES DESIGN INTENT BUT NOT NECESSARILY EXACT LAYOUT. THE FINAL DESIGN IS THE CONTRACTORS RESPONSIBILITY TO BE COORDINATED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- A DESIGN SYSTEM MUST ACCOMMODATE A MINIMUM OF 15% EXPANSION POTENTIAL FOR THE SYSTEM INITIALLY INSTALLED. EXAMPLE: IF THERE ARE 85 UNIQUE ADDRESSABLE STATIONS, THE BASE SYSTEM SHOULD ACCOMMODATE 100 ADDRESSES FOR ADDITIONAL WIRING TO EXISTING CONNECTOR POINTS AND FAIRLY SIMPLE REPROGRAMMING OF THOSE ADDITIONAL STATIONS.
- COORDINATE ALL SALES FLOOR FIRE ALARM HORN/STROBES WITH DECOR PLAN AS TO NOT INTERFERE WITH ANY SIGNAGE.

SUPERVISORY DESIGN CONSTRAINTS

FIRE ALARM CONTRACTOR WILL PROVIDE ALL PROGRAMMING, TESTING, AND COMMISSIONING TO SATISFY THE LOCAL AUTHORITY HAVING JURISDICTION OR HY-VEE REQUIREMENTS AS SET FORTH HEREIN, WHICHEVER IS MORE RESTRICTIVE. FOR ALL HVAC UNITS AND THEIR ASSOCIATED SMOKE DETECTORS, THE FIRE ALARM CONTRACTOR SHALL TEST FOR CONTROL PANEL IDENTIFICATION, ALARM, AND TROUBLE SIGNALS, AND UNIT SHUT DOWN. IF THE HVAC UNIT DOES NOT SHUT DOWN, FIRE ALARM CONTRACTOR SHALL NOTIFY GENERAL CONTRACTOR AND HVAC/SHEET METAL CONTRACTOR TO REMEDY AND RESOLVE THE UNIT SHUT DOWN REQUIREMENT. THE FIRE ALARM SYSTEM NEEDS TO RESET THE HVAC UNITS AT THE RESET LOCATION NOTED ON THE DRAWINGS. FIRE ALARM CONTRACTOR SHOULD VERIFY THAT THE REMOTE RESET UNIT TEST MODE FUNCTION OPERATES CORRECTLY PRIOR TO ANY AHJ INSPECTION. A COPY OF THE FIRE MARSHAL OR FIRE INSPECTORS SIGN OFF OF THE FIRE SYSTEM MUST BE INCLUDED IN THE GENERAL CONTRACTORS WARRANTY MANUAL.

IMPLEMENTATION

- CONTRACTOR SHALL COORDINATE SPECIFIC IMPLEMENTATION DESIGN MODIFICATIONS FOR DEVICE PLACEMENT WITH RESPECT TO ARCHITECTURAL ELEVATIONS. ANY MODIFIED PLACEMENT MUST BE DISCUSSED WITH THE OWNER PRIOR TO ANY INSTALLATION ACTIVITY TO ASSURE PLACEMENT LOCATION DOES NOT IMPIDE THE OWNERS USE OF THAT AREA.
- VERIFY WITH THE AUTHORITY HAVING JURISDICTION BEFORE PERFORMING ANY OF THE FOLLOWING FIRE ALARM WORK: IDENTIFY OWNERS DESIRED 'CONTROL CENTER' LOCATION IN OFFICE AREA. COORDINATE REMOTE ANNUNCIATOR PANEL LOCATION AT AHJ'S DIRECTION (TO BE CREDITED BACK TO THE OWNER IF NOT REQUIRED). ACKNOWLEDGMENT OF ADDRESSABLE SYSTEM HIERARCHY WITH RESPECT TO THE OWNERS ZONES/GROUPINGS SO ADDRESSABLE PROGRAMMING CAN BE AGREED UPON THAT FIRE ALARM SYSTEM CAN BE USED FOR NON-LIFE SAFETY TROUBLES LIKE REFRIGERATION OR DOOR ALARMS. SUPERVISORY ALERTS PROVIDED THE SYSTEM IS PROGRAMMED SO NO AUTHORITIES ARE NOTIFIED FOR NON-LIFE SAFETY TROUBLES.

HVAC SCOPE OF WORK

- DUCT SMOKE DETECTORS SHALL BE FURNISHED AND INSTALLED IN DUCT BY MECHANICAL CONTRACTOR. SEE SCHEDULE ON DRAWING.
- DUCT SMOKE DETECTORS THAT MUST BE FIELD MOUNTED ON CUSTOM ROOFTOP UNITS (USUALLY RTU-1 AND 2), WILL BE SUPPLIED AND INSTALLED BY THE SHEET METAL CONTRACTOR. SHEET METAL CONTRACTOR IS TO USE SYSTEM SENSOR NUMBER D4120.
- SYSTEM SENSOR MODEL NUMBER D4120 IS COMPRISED OF TWO COMPONENTS. 1) SYSTEM SENSOR MODEL NUMBER DP4120 IS A CONTROL MODULE. 2) SYSTEM SENSOR MODEL NUMBER D45 IS THE SMOKE DETECTOR.
- SHEET METAL CONTRACTOR OR ANY PARTY PERFORMING WORK FOR SHEET METAL CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECT PLACEMENT.
- RTU SMOKE DETECTION SHALL FALL INTO ONE OF THE TWO FOLLOWING SCENARIOS:
A) RTUS WHICH REQUIRE BOTH SUPPLY AND RETURN SMOKE DETECTORS (>2000 CFM) SHALL RECEIVE TWO DUCT SMOKE DETECTORS (D45) WHICH ARE APPROPRIATELY WIRED TO A CENTRAL, SEPARATE CONTROL MODULE (DP4120). THE CONTROL MODULE (DP4120) SHALL BE PLACED IN A LOCATION SUCH THAT FIRE ALARM CONTRACTOR CAN ACCESS CONTROL MODULE IN A REASONABLE MANNER.
B) RTUS WHICH REQUIRE ONLY RETURN SIDE SMOKE DETECTION (<2000 CFM) SHALL RECEIVE ONE SMOKE DETECTOR/CONTROL MODULE COMBO (D4120). IF DETECTOR PLACEMENT REQUIRES SEPARATION OF THE COMBINATION (D4120) INTO ITS TWO COMPONENTS, DP4120 (CONTROL MODULE) AND D45 (SMOKE DETECTOR), IN ORDER TO HAVE THE CONTROL MODULE BE ACCESSIBLE FOLLOWING INSTALLATION, THEN THIS SHALL BE DONE.
- FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER WIRING OF THE DUCT DETECTOR CONTROL MODULES. THIS INCLUDES ANY WIRING BETWEEN THE FIRE ALARM CONTROL PANEL AND THE DUCT DETECTOR CONTROL MODULE AND ANY WIRING BETWEEN THE DUCT DETECTOR TEST/RESET SWITCH AND THE DUCT DETECTOR CONTROL MODULE.
- CONTROL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WIRING BETWEEN DUCT DETECTOR CONTROL MODULES AND DUCT SMOKE DETECTORS.
- FIRE ALARM CONTRACTOR SHALL FURNISH, INSTALL, AND WIRE ALL REMOTE RESET STATIONS.
- CONTROL CONTRACTOR IS REQUIRED TO ASSURE THE HVAC UNIT WILL SHUT DOWN IN THE EVENT OF A SMOKE DETECTOR TRIP.

SMOKE DETECTOR COORDINATION SCHEDULE						
UNIT TAG	AREA SERVED	SUPPLY AIRFLOW (CFM)	AIR SMOKE DETECTION (YES/NO)	REQUIRED DUCT MOUNTED SMOKE DETECTOR LOCATIONS	SMOKE DETECTORS	TRADE RESPONSIBILITY
RTU-1	SOUTH SALES	17,000		RETURN	MC	SEE SCOPE OF WORK
RTU-2	NORTH SALES	17,000		RETURN	MC	SEE SCOPE OF WORK
RTU-3 (EXISTING)	DINING	3,400		RETURN	MC	SEE SCOPE OF WORK
RTU-4 (EXISTING)	EXIT VESTIBULE	3,500		RETURN	MC	SEE SCOPE OF WORK
RTU-5 (EXISTING)	ENTRY VESTIBULE	3,500		RETURN	MC	SEE SCOPE OF WORK
RTU-6	PHARMACY	1,800		NONE		
RTU-7 (EXISTING)	PHARMACY	2,640		RETURN	MC	SEE SCOPE OF WORK
RTU-8 (EXISTING)	FROZEN	2,400		RETURN	MC	SEE SCOPE OF WORK
RTU-9	KITCHEN	3,200		RETURN	MC	SEE SCOPE OF WORK
RTU-10	OFFICES	1,950		RETURN	MC	SEE SCOPE OF WORK
RTU-11	ADULT/CUSTOMER SERVICE	3,200		RETURN	MC	SEE SCOPE OF WORK
RTU-12	WINE & SPIRITS	3,200		RETURN	MC	SEE SCOPE OF WORK
CODE REQUIREMENTS:				TRADE RESPONSIBILITY LEGEND:		
1. NFPA 90.6.4.2 -SMOKE DETECTORS LISTED FOR USE IN AIR DISTRIBUTION SYSTEM SHALL BE LOCATED DOWNSTREAM OF THE AIR FILTERS AND AHEAD OF ANY BRANCH CONNECTIONS IN AIR SUPPLY SYSTEMS HAVING A CAPACITY GREATER THAN 2000 CFM.				EC = ELECTRICAL CONTRACTOR		
2. 2015 IMC 606.2.1 - SMOKE DETECTORS SHALL BE INSTALLED IN RETURN AIR SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2000 CFM, IN THE RETURN AIR DUCT OR PLenum UPSTREAM OF ANY FILTERS, OR OTHER AIR CONNECTIONS.				OV = OWNERS VENDOR		
3. NFPA 90 AND IMC EXCEPTION - SMOKE DETECTORS ARE NOT REQUIRED IN THE RETURN AIR SYSTEM WHERE ALL PORTIONS OF THE BUILDING SERVED BY THE AIR DISTRIBUTION SYSTEM ARE PROTECTED BY AREA SMOKE DETECTORS CONNECTED TO A FIRE ALARM SYSTEM.				FAC = FACTORY PROVIDED		
4. NFPA 90 AND IMC CONTROLS - WHERE AN APPROVED FIRE ALARM SYSTEM IS INSTALLED IN BUILDING, THE SMOKE DETECTORS SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM.				FC = FIRE ALARM CONTRACTOR		
5. NFPA 90 AND IMC CONTROLS - UPON ACTIVATION, THE SMOKE DETECTORS SHALL SHUT DOWN ALL OPERATIONAL CAPABILITIES OF THE AIR DISTRIBUTION SYSTEM AND SHALL ACTIVATE A VISIBLE AND AUDIBLE SIGNAL AT A CONSTANT ATTENDED OR APPROVED LOCATION.				MC = MECHANICAL CONTRACTOR		
				TRADE RESPONSIBILITY NOTES:		
				1. THIS LISTING IN NO WAY SUMMARIZES THE SCOPE OF WORK REQUIRED TO BE PERFORMED BY THE CONTRACTORS.		
				2. FOR OWNER VENDOR FURNISHED ITEMS THE INSTALLING CONTRACTOR MAY ALSO BE REQUIRED TO RECEIVE, INVENTORY, PROTECT, STORE AND ASSEMBLE THE EQUIPMENT.		
				3. SEE THE SPECIFICATIONS, DRAWINGS AND MANUFACTURERS INSTALLATION RECOMMENDATION FOR COMPLETE DETAILED INSTALLATION REQUIREMENTS.		
				4. PROVIDE MEANS TO FURNISH AND INSTALL.		
				5. LOW VOLTAGE CABLE MATERIAL IS PROVIDED BY THE CONTROLS CONTRACTOR AND INSTALLED BY EC.		

