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SMOKE CONTROL
DETAILS AND
SCHEDULES

DATE
8/28/2015
REVISED DATE
9/22/2015
2/2/2016
7/18/2016

SHEET
SC2.1

ATRIUM SMOKE CONTROL SEQUENCE

ATRIUM AREA:

- FIRST FLOOR
 - HALL BETWEEN SMOKE DOORS AT KITCHEN AND MAIN STAIRWAY
 - MAIN DINING ROOM
 - PRIVATE DINING
 - FRONT AND BACK FOYERS
 - CENTRAL LOUNGE
 - CLOSET UNDER STAIRS
 - HALL TO MEDIA ROOM
- SECOND FLOOR
 - HALL BETWEEN SMOKE DOORS AT ELEVATOR AND AT MULTIPURPOSE ROOM
 - MULTIPURPOSE ROOM
 - READING ROOM
 - TV ROOM
 - PC ROOM
- THIRD FLOOR
 - CORRIDOR AROUND ATRIUM BETWEEN SMOKE DOORS
- FOURTH FLOOR
 - CORRIDOR AROUND ATRIUM BETWEEN SMOKE DOORS

WHEN ANY SINGLE SMOKE DETECTOR IN THE ATRIUM AREAS IS TRIPPED THE SMOKE EVACUATION SYSTEMS IS ACTIVATED AS FOLLOWS:

- A GENERAL FIRE ALARM IS ACTIVATED.
- THE TWO SETS OF SLIDING DOORS AT THE FRONT FOYER 150 OPEN TO PROVIDE MAKEUP AIR.
- TWO SETS OF DOUBLE SWINGING EXTERIOR DOORS AT REAR FOYER 156 OPEN TO PROVIDE MAKEUP AIR.
- DOUBLE SWINGING EXTERIOR DOORS NEAR THE PRIVATE DINING 170 OPEN PROVIDING MAKEUP AIR.
- SSF-1 LOCATED AT THE KITCHEN MECHANICAL WELL STARTS. A MOTORIZED DAMPER IN THE DUCTWORK FOR SSF-1 OPENS. SSF-1 PROVIDES 5,000 CFM OF MAKEUP AIR TO THE MULTIPURPOSE ROOM.
- TWO SSF-1 FANS LOCATED AT THE CUPOLA START.

ATRIUM SMOKE CONTROL OPERATING SEQUENCE

MECHANICAL CONTRACTOR:

SEE MECHANICAL EQUIPMENT SCHEDULE.

ELECTRICAL CONTRACTOR:

ITEMS LISTED UNDER EACH SUBCONTRACTOR TO BE PROVIDED & INSTALLED BY THAT CONTRACTOR. ALL LINE VOLTAGE WIRING & CIRCUITING SHOWN ON ATRIUM SMOKE CONTROL SCHEMATIC IS BY ELECTRICAL CONTRACTOR.

AUTOMATIC DOOR OPENER - AUTOMATIC OPENING DEVICE FOR DOORS AS INDICATED ON DRAWINGS. PROVIDE CONTACT AS REQUIRED FOR TIE-IN TO ATRIUM SMOKE REMOVAL SYSTEM. PROVIDE LATCHING DEVICES WHERE REQUIRED. ACTIVATE BOTH DOORS ON ALARM FROM ATRIUM FIRE DETECTION SYSTEM.

RELAYS - R-1 THRU R-8 SPST, NO. 24V COIL. 10 AMP 110V CONTACTS. HONEYWELL R4222. R-2R3 SPST, NC. 24V COIL. 10 AMP, 110V CONTACTS. HONEYWELL R4222B1082.

WHEN A SMOKE DETECTOR IN THE ATRIUM AREA ACTIVATES A SIGNAL IS SENT TO THE FIRE ALARM CONTROL PANEL (FACP).

THE (FACP) SENDS A 24v DC SIGNAL TO RELAYS, R-1 THRU R-8.

RELAYS R-1 THRU R-5 ACTIVATE THE DOOR OPENERS FOR FIVE SETS OF DOUBLE DOORS - TWO AT THE ENTRANCE FOYER, TWO AT THE REAR FOYER, AND ONE NEAR THE PRIVATE DINING ROOM.

RELAY R-6 OPENS SSF-1 OUTSIDE AIR DAMPER.

RELAY R-7 ACTIVATES THE ATRIUM SMOKE FANS (SSF-1). R-7 IS JUST BELOW THE SSF-1 MAGNETIC STARTER.

RELAY R-8 ACTIVATES THE TWO ATRIUM SMOKE FANS (SSF-1). R-8 IS JUST BELOW THE SSF-1 MAGNETIC STARTER.

FIRE SPRINKLER CONTRACTOR:

SPRINKLERS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13 AND 13R AS SPECIFIED ON COVER SHEET AND ALL JURISDICTIONS HAVING AUTHORITY.

FIRE ALARM CONTRACTOR:

FIRE ALARM PANEL AND DETECTORS - SEPARATE ATRIUM ZONE. PROVIDE SIGNAL TO CLOSE RELAY R-1-R-8 ON ACTUATION OF ANY ATRIUM DETECTORS. ALL DETAILS PER NFPA 72.

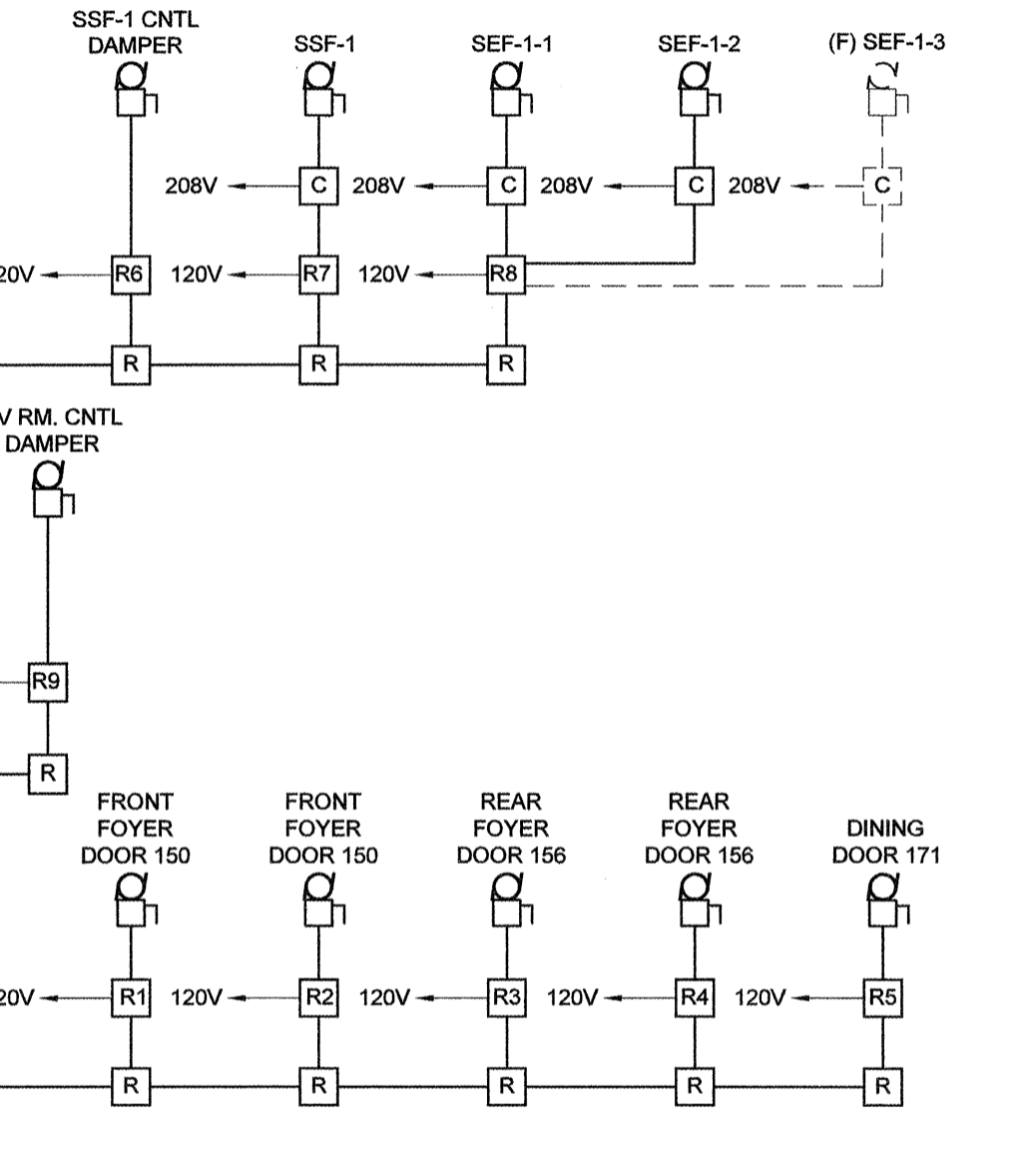
NOTE:

PENETRATIONS OF AREA SEPARATION WALLS SHALL BE PROTECTED WITH THROUGH PENETRATION FIRE STOPS AND MEMBRANE PENETRATION FIRE STOPS.

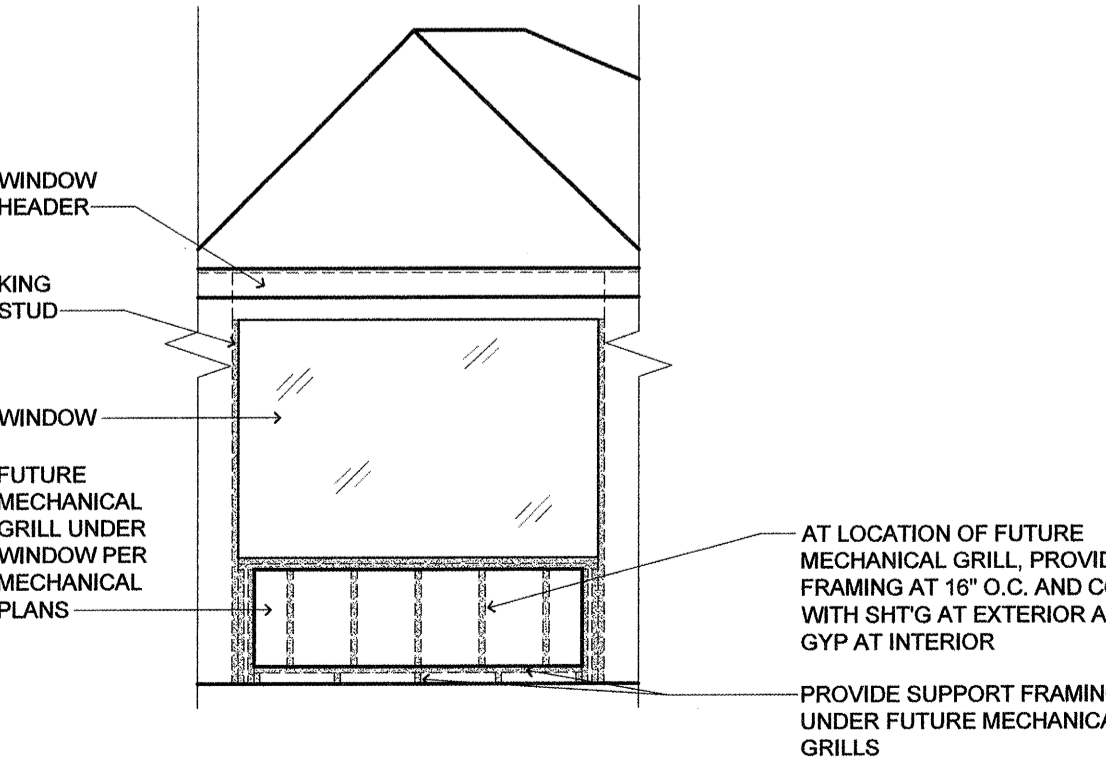
ALL WIRING REGARDLESS OF VOLTAGE SHALL BE FULLY ENCLOSED WITHIN CONTINUOUS RACEWAY.

RELAY	LOAD	CONTROL SEQUENCE
R1	FOYER 150 FRONT DOOR	DOOR OPENS
R2	FOYER 150 FRONT DOOR	DOOR OPENS
R3	FOYER 156 REAR DOOR	DOOR OPENS
R4	FOYER 156 REAR DOOR	DOOR OPENS
R5	DINING 171 DOOR	DOOR OPENS
R6	SSF-1 CNTL DAMPER	OPENS
R7	SSF-1 SUPPLY FAN	TO START/RUN
R8	SSF-1 FANS	TO START/RUN
R9	2ND FLOOR TV ROOM MAKE-UP AIR CNTL DAMPER	OPENS

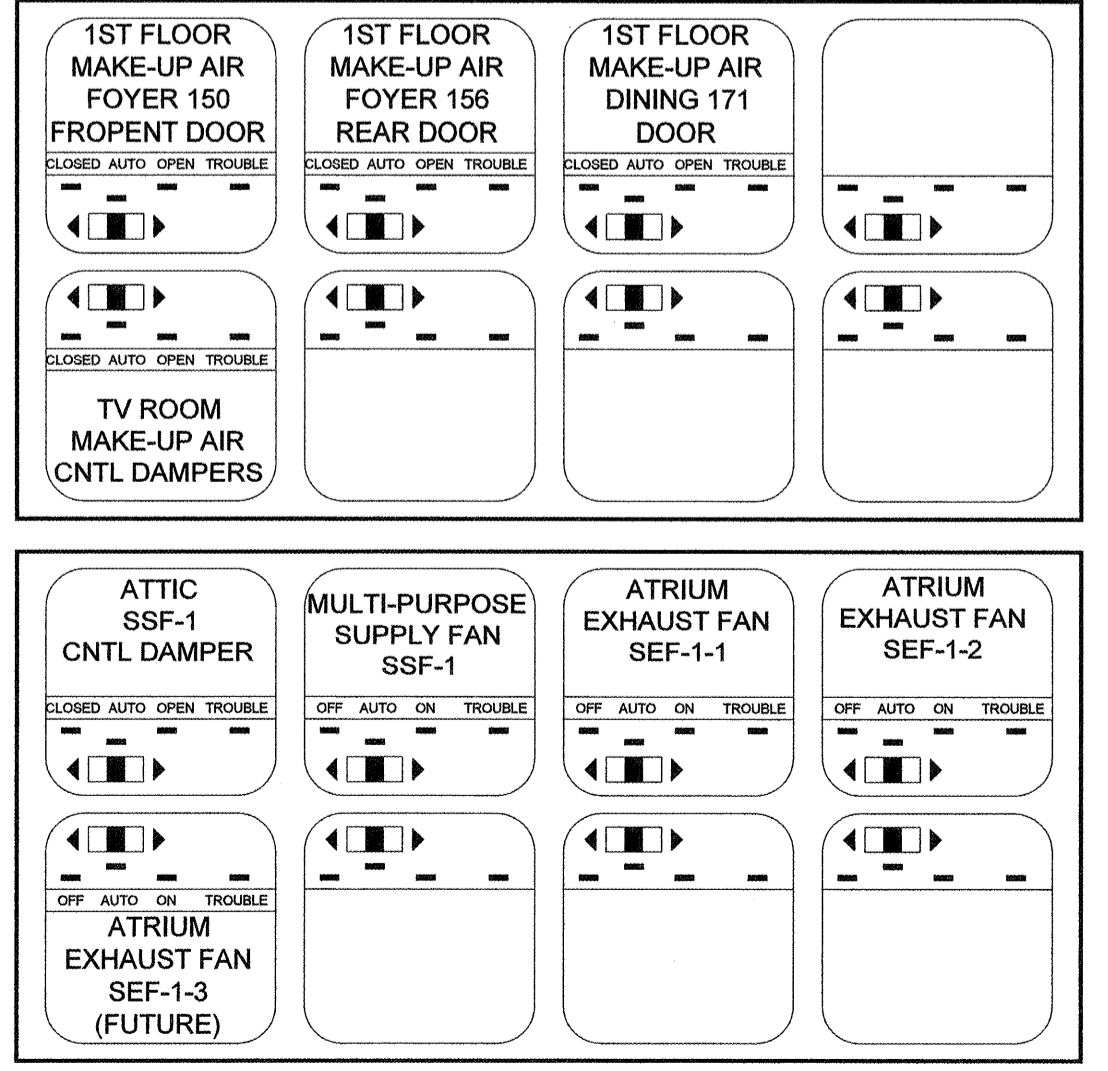
WHEN ANY SINGLE ATRIUM AREA SMOKE DETECTOR IS ACTIVATED, THE ATRIUM SMOKE CONTROL PANEL SHALL AUTOMATICALLY ACTIVATE ALL R1, R2, R3, R4, R5, R6, R7, R8 AND R9 RELAYS VIA THE ADDRESSABLE RELAY MODULES SHOWN. THE STATUS OF ALL CONTROL RELAYS FOR THE DAMPERS AND FANS SHALL BE DISPLAYED AT THE ATRIUM SMOKE CONTROL PANEL VIA THE FDX-008 FAN/DAMPER CONTROL MODULES.



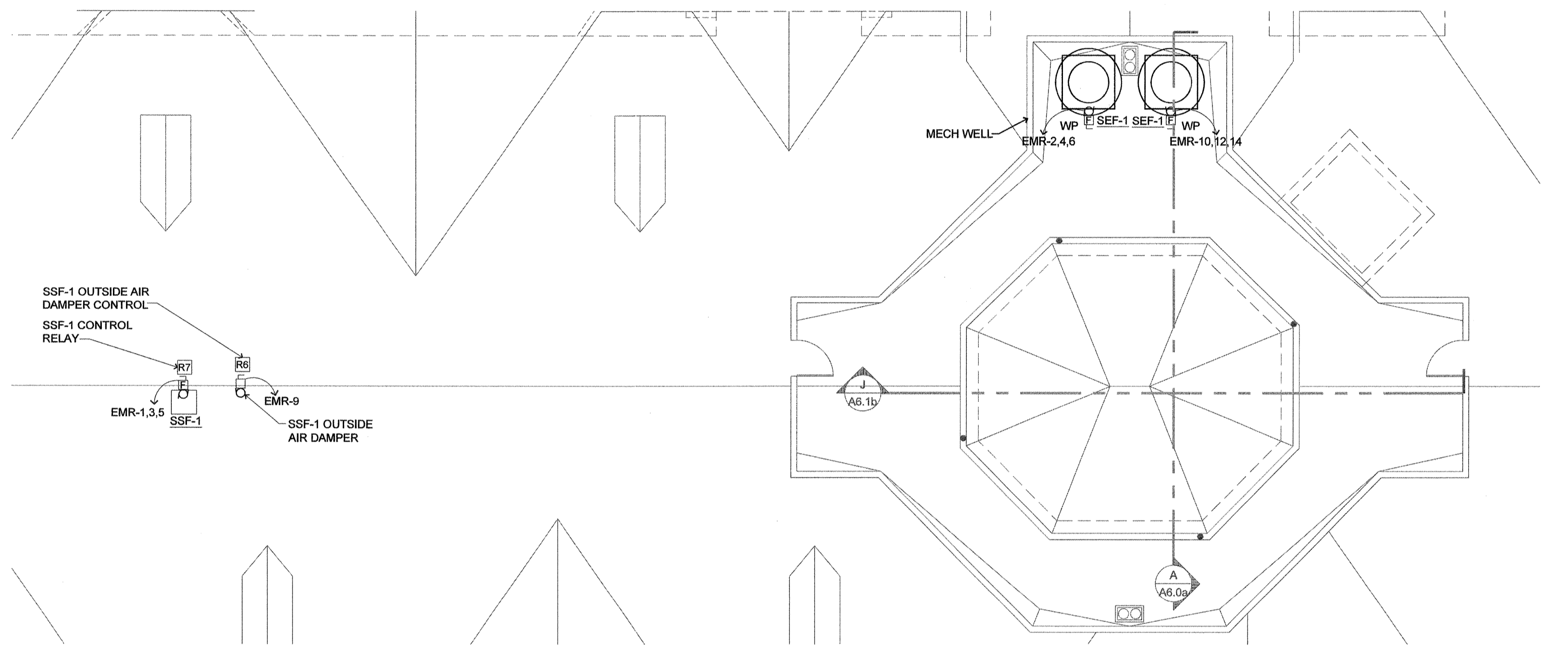
7 ATRIUM SMOKE CONTROL SCHEMATIC
SCALE: N.T.S.



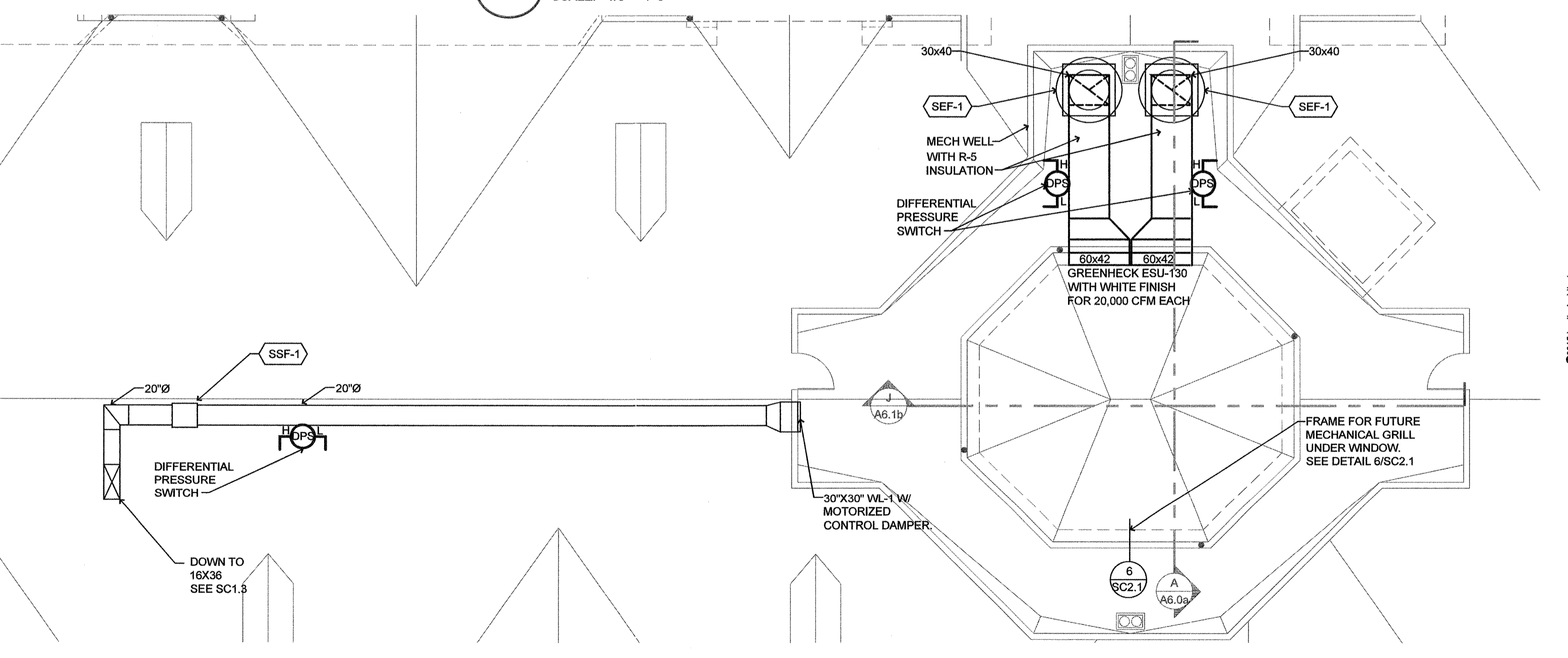
6 CUPOLA MECHANICAL WELL (WINDOW FRAMING AT FUTURE EQUIPMENT)
SCALE: 1/4" = 1'-0"



5 FAN / DAMPER PANEL CONTROL MODULES (UUKL LISTED)
SCALE: NOT TO SCALE



3 MECH. WELL PLAN (EQUIP. LOCATIONS)
SCALE: 1/8" = 1'-0"



1 MECH. WELL PLAN (EQUIP. LOCATIONS)
SCALE: 1/8" = 1'-0"