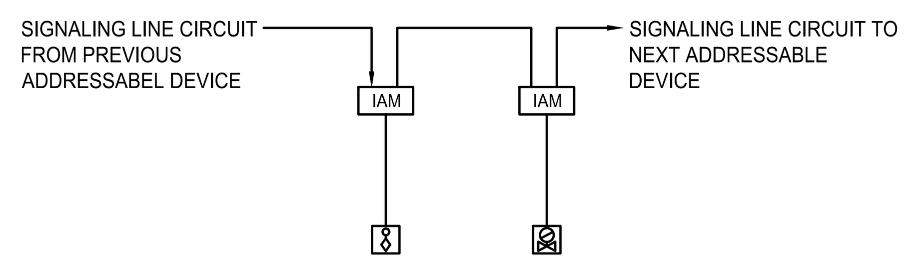
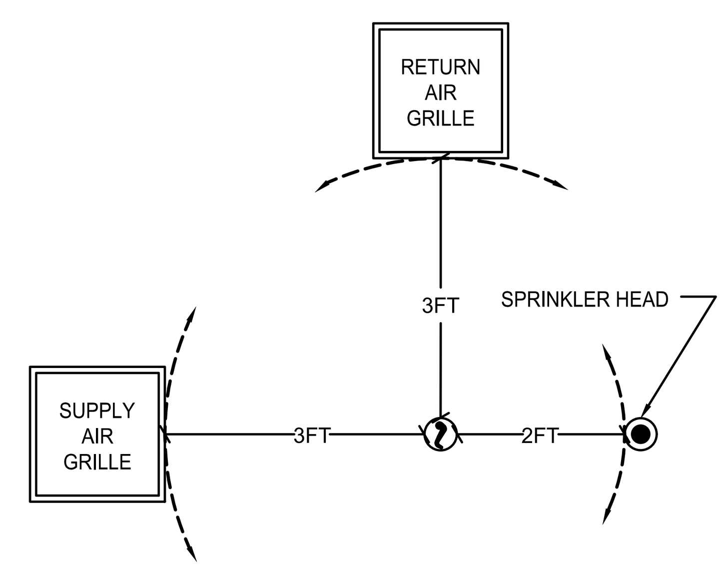


TYPICAL SPRINKLER SYSTEM INTERFACE WIRING SCHEMATIC

(2) SCALE: NONE



SMOKE DETECTOR MINIMUM CLEARANCES

(3) SCALE: NONE

FIRE ALARM SYSTEM SEQUENCE OF OPERATION INPUT/OUTPUT MATRIX

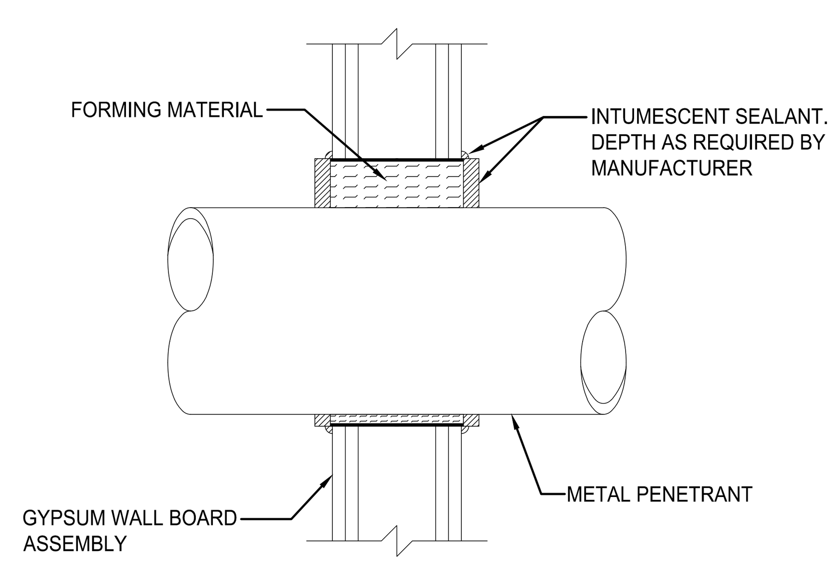
SYSTEM OUTPUTS — FACU (A–G), NOTIFICATION (H–M), REQUIRED FIRE SAFETY CONTROL (N–Y):

- A — ACTUATE COMMON ALARM SIGNAL INDICATOR
- B — ACTUATE AUDIBLE ALARM SIGNAL
- C — ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR
- D — ACTUATE AUDIBLE SUPERVISORY SIGNAL
- E — ACTUATE COMMON TROUBLE SIGNAL INDICATOR
- F — ACTUATE AUDIBLE TROUBLE SIGNAL
- G — ACTUATE ZONE OR DEVICE ADDRESS ALARM INDICATOR
- H — ACTUATE GENERAL EVACUATION SIGNAL
- I — DISPLAY CHANGE OF STATUS
- J — TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION
- K — TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION
- L — TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION
- M — ACTUATE CARBON MONOXIDE NOTIFICATION
- N — RELEASE MAGNETICALLY HELD DOORS
- O — CLOSE ALL SMOKE DAMPERS
- P — UNLOCK EXITS & CONTROL DOORS
- Q — SHUT DOWN RESPECTIVE AIR HANDLING EQUIPMENT

	SYSTEM INPUTS		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
ALARM CONDITION	MANUAL PULL STATIONS	1	●	●						●	●	●				●		●									
	AREA SMOKE DETECTORS	2	●	●						●	●	●				●	●	●									
	AREA HEAT DETECTORS	3	●	●						●	●	●				●	●	●									
		4																									
	SPRINKLER WATER FLOW SWITCH	5	●	●						●	●	●				●	●	●									
		6																									
		7																									
		8																									
SUPERVISORY CONDITION	SPRINKLER TAMPER SWITCH	9			●	●							●														
	CIRCUIT DEVICE DISABLED	10			●	●							●														
		11																									
		12																									
		13																									
		14																									
		15																									
		16																									
TROUBLE CONDITION	OPEN CIRCUIT	17					●	●						●													
	GROUND FAULT	18					●	●						●													
	NOTIFICATION APPLIANCE CIRCUIT SHORT	19					●	●						●													
	FIRE ALARM SYSTEM LOW BATTERY	20					●	●						●													
	FIRE ALARM SYSTEM AC POWER FAILURE	21					●	●						●													
	CIRCUIT DISCONNECT	22					●	●						●													
	FIELD WIRING OR SYSTEM COMPONENT FAULT	23					●	●						●													
		24																									
		25																									
		26																									
		27																									

INPUT/OUTPUT MATRIX

(1) SCALE: NONE

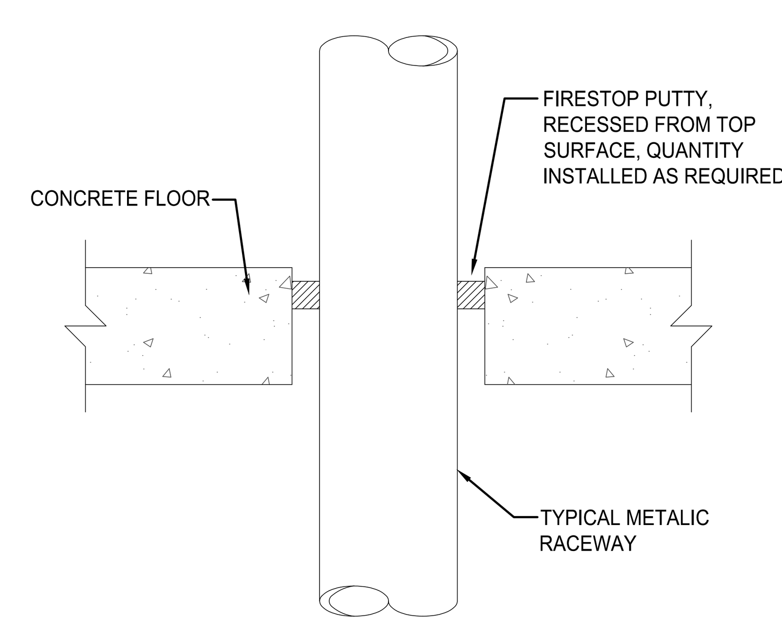


STUD WALL PENETRATION

* REFER TO UL FIRE RESISTANCE DIRECTORY FOR COMPLETE INSTALLATION REQUIREMENTS

UL SYSTEM W-L-1079*
STUD WALL PENETRATION DETAIL

(8) SCALE: NONE



CONCRETE FLOOR PENETRATION

* REFER TO UL FIRE RESISTANCE DIRECTORY FOR COMPLETE INSTALLATION REQUIREMENTS

UL SYSTEM C-AJ-1090*
CONCRETE FLOOR PENETRATION DETAIL

(9) SCALE: NONE

THROUGH PENETRATION FIRESTOP SCHEDULE

- THIS SCHEDULE IDENTIFIES REQUIREMENTS FOR ACCEPTABLE THROUGH PENETRATION FIRESTOPS FOR THIS PROJECT BASED ON BARRIER TYPE, BASIS OF BARRIER CONSTRUCTION, AND PENETRANT TYPE.
- THROUGH PENETRATION FIRESTOPS ARE NOT REQUIRED FOR FLOOR PENETRATIONS CONTAINED TOTALLY WITHIN A RATED SHAFT ENCLOSURE.
- NOMENCLATURE OF UL CLASSIFIED FIRESTOP ASSEMBLIES USED IN THE CONTRACT DOCUMENTS IS IDENTICAL TO THAT USED IN CATALOGS OF APPROVED FIRESTOP MANUFACTURERS AND IN UNDERWRITERS LABORATORIES "FIRE RESISTANCE DIRECTORY".

RATED BARRIER		FIRESTOP ASSEMBLY REQUIREMENTS		PENETRANT TYPE		
TYPE	BASIS OF CONSTRUCTION			METALLIC CONDUIT	NONMETALLIC CONDUIT	ELECTRICAL BOXES
WALL	METAL STUDS & GYPSUM WALLBOARD (U400 SERIES)	UL CLASSIFIED SERIES	SINGLE PENETRANT	UL # W-L-1079 DETAIL #8	N/A	CEYY OR CLIV
			MULTIPLE PENETRANTS			N/A
		EXCEPTIONS/ ADDED REQUIREMENTS		NOTE 1	N/A	NOTE 1 & 2
WALL	POURED CONCRETE, CONCRETE BLOCK OR MASONRY (BLOCK & U900 SERIES) (ANY THICKNESS)	UL CLASSIFIED SERIES	SINGLE PENETRANT	UL # C-AJ-1090 DETAIL #10	UL # C-AJ-2038 DETAIL #12	CEYY
			MULTIPLE PENETRANTS			N/A
		EXCEPTIONS/ ADDED REQUIREMENTS		NOTE 1	NOTE 1	NONE
FLOOR	POURED CONCRETE (ANY THICKNESS)	UL CLASSIFIED SERIES	SINGLE PENETRANT	UL # C-AJ-1090 DETAIL #9	UL # C-AJ-2038 DETAIL #11	CEYY
			MULTIPLE PENETRANTS			N/A

NOTES:
1. OPENINGS ACCOMODATING NONCOMBUSTIBLE CONDUITS THROUGH SINGLE MEMBRANES WHICH ARE PART OF A FIRE RESISTANCE RATED WALL ASSEMBLY ARE PERMITTED WHEN:
   A. AGGREGATE AREA OF THE MEMBRANE OPENINGS DO NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.
2. CLASSIFIED TPFS ASSEMBLY IS NOT REQUIRED AT ELECTRICAL BOXES WHEN ALL THE FOLLOWING CONDITIONS ARE MET:
   A. ELECTRICAL BOX IS STEEL AND UL LISTED.
   B. AREA OF INDIVIDUAL BOX DOES NOT EXCEED 16 SQUARE INCHES.
   C. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL ARE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.

THROUGH PENETRATION FIRESTOP SCHEDULE

(13) SCALE: NONE

BROWN AND CALDWELL
900 HAMMOND DRIVE, SUITE 500
ATLANTA, GA 30328

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

CONSTRUCTION DOCUMENTS

NCWSA OFFICE ADDITION

REVISIONS		
REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: RB1
DRAWN: RB1
CHECKED: JFW
CHECKED:
APPROVED:
FILENAME
BC PROJECT NUMBER 616202
CLIENT PROJECT NUMBER

ELECTRICAL

FIRE ALARM DETAILS

DRAWING NUMBER
E702