



PLAN TYPE:

ARCHWAY
SYSTEMS

17020 E. 40 Hwy. Ste 1
Independence, MO 64055
Office: (816) 709-3358


8220 Melrose Dr
Lenexa, KS 66214
913-362-0000

Firehouse Subs

111 SE M291 Highway
Lee's Summit, MO 64081

NO	REVISION	DATE
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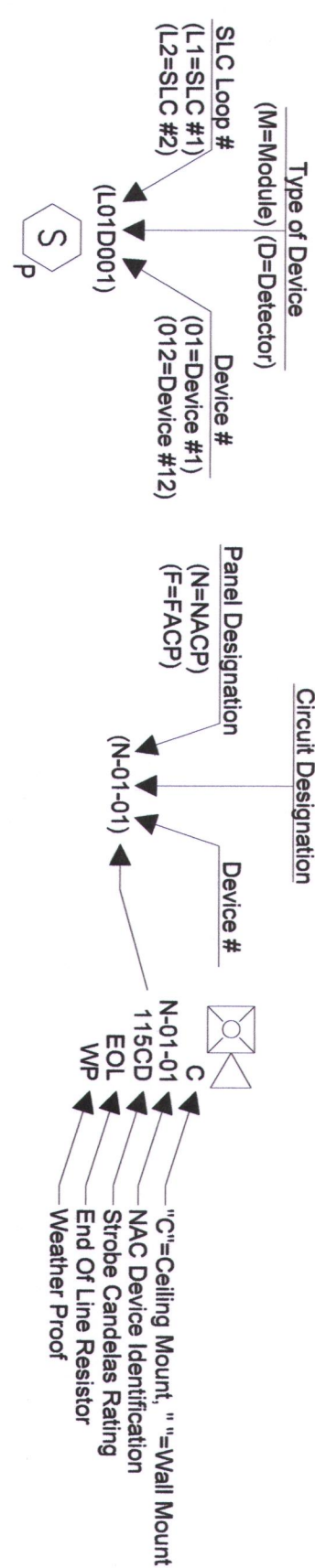
FA-1
of
FA-1

Symbol	Qty	Description	Manufacturer/Part Number	Mounting Requirements
 F1	1	Fire Alarm Control Panel	Siemens Knight Ridder	Surface mounted, enclosure provided
 F2	1	Commercial Fire Alarm Annunciator	Siemens Knight Ridder	Top 1/2" NPT ceiling to ceiling
 F3	01	Alarms bypassed	Siemens Knight Ridder	Surface mounted, enclosure provided
 D001	01	Document cabinet	Siemens Knight Ridder	Surface mounted, enclosure provided
 M01	01	Master Module	Siemens Knight Ridder	Surface mounted, enclosure provided
 M02	01	Dual Module	Siemens Knight Ridder	Surface mounted, enclosure provided
 F1	2	Manual Pull Station	Siemens Knight Ridder	Surface mounted, enclosure provided
 S01	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 S02	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 P01	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
 P02	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
 S03	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 S04	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 P03	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
 P04	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
 S05	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 S06	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 P05	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
 P06	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
 S07	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 S08	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 P07	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
 P08	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
 S09	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 S10	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 P09	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
 P10	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
 S11	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 S12	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
 P11	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P12	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S13	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S14	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P13	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P14	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S15	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S16	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P15	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P16	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S17	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S18	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P17	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P18	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S19	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S20	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P19	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P20	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S21	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S22	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P21	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P22	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S23	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S24	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P23	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P24	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S25	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S26	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P25	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P26	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S27	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S28	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P27	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P28	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S29	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S30	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P29	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P30	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S31	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S32	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P31	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P32	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S33	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S34	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P33	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P34	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S35	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S36	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P35	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P36	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S37	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S38	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P37	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P38	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S39	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S40	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P39	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P40	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S41	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S42	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P41	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P42	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S43	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S44	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P43	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P44	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S45	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S46	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P45	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P46	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S47	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S48	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P47	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P48	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S49	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S50	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P49	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P50	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S51	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S52	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P51	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P52	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S53	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S54	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P53	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P54	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S55	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S56	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P55	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P56	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S57	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S58	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P57	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P58	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S59	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S60	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P59	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P60	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S61	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S62	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P61	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P62	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S63	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S64	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P63	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P64	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S65	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S66	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P65	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P66	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S67	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S68	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P67	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P68	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S69	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S70	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P69	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P70	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S71	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S72	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P71	01	Prior Electric - Return	Siemens Knight Ridder	Surface mounted, enclosure provided
P72	01	Power Flow	Siemens Knight Ridder	Surface mounted, enclosure provided
S73	01	Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
S74	01	Dual Smoke Detector	Siemens Knight Ridder	Surface mounted, enclosure provided
P73	01			

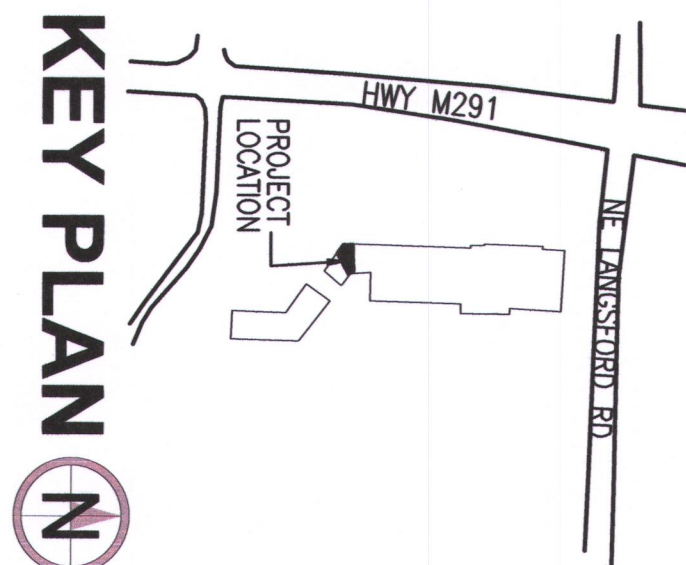
Fire Alarm Device Legend

Wire Designations	Wire Types
— SL-C — SL-C — SL-C —	Signal Line Circuit - 18/2 FPLP
— IDC — IDC — IDC —	IDC - 18/2 FPLP
— NC — NC — NC —	Notification Appliance Circuit - 14/2 FPLP
AN-C	Annunciator Circuit - 18/4 FPLP

Fire Alarm Wire Legend



Device Designation Legend



MEET PLAIN

CODE INFORMATION	
OCCUPANCY CLASS OCCUPANCY LOAD CONSTRUCTION TYPE	ASSEMBLY A2 55 OCCUPANTS IIB
CODE SUMMARY	2018 IBC/IFC, 2018 NFPA 70 (NEC), 2018 NFPA 72
SPRINKLER	FULLY SPRINKLED
SCOPE OF WORK	INSTALL NEW FIRE ALARM SYSTEM WITH NOTIFICATION IN ACCORDANCE WITH NFPA 72
CEILING HEIGHT NUMBER OF FLOORS TENANT AREA (SQ FT.)	12' - 0" 1 1,409 SQ. FT.

Standby Battery Calculations

SLENT KNIGHT 6808

Preston State
111 SE 108TH Highway
Lees Summit, MO 64081

Pert Number	Description	Quantity	Standby Alarm Current	Alarm Device Current
6808	Addressable Fire Alarm Control Panel	1	0.000000	0.136000
SK-PHOTO	Addressable Photoelectric Smoke Sensor	1	0.000000	0.258000
SK-MONITOR-2	Dual Input Monitor Module	1	0.000000	0.251000
SK-FULL-VA	Addressable Dual Full Station	1	0.012500	0.000000

Total Aux current	Maximum Amps:	2.0000	Standby	0.0125	Alarm	0.000000
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Signal Circuits

Circuit	Device	Quantity	Alarm Per Device	Current All Devices
Circuit 1	PSKX (750C)	1	0.050	0.050
			0.000	0.000
			0.000	0.000
			0.000	0.000
			0.000	0.000
Total 1		Maximum Amps:	2.5000	
			0.000	0.000
Circuit 2	PCZRL (150C) PCZRL (300C) PCZRL (150C) SPK (150C)	2 1 1 2	0.213 0.125 0.071 0.071	0.546 0.125 0.071 0.071
			0.000	0.000
			0.000	0.000
			0.000	0.000
			0.000	0.000
Total 2		Maximum Amps:	2.5000	1.942
			0.000	0.000
			0.000	0.000
			0.000	0.000
			0.000	0.000
			0.000	0.000
Circuit 3				
Total 3		Maximum Amps:	2.5000	0.000
				0.000
				0.000
				0.000
				0.000
				0.000
Circuit 4				
Total 4		Maximum Amps:	2.5000	0.000
				0.000
				0.000
				0.000
				0.000
				0.000
Total 5		Maximum Amps:	2.5000	2.574
				0.000
				0.000
				0.000
				0.000
				0.000

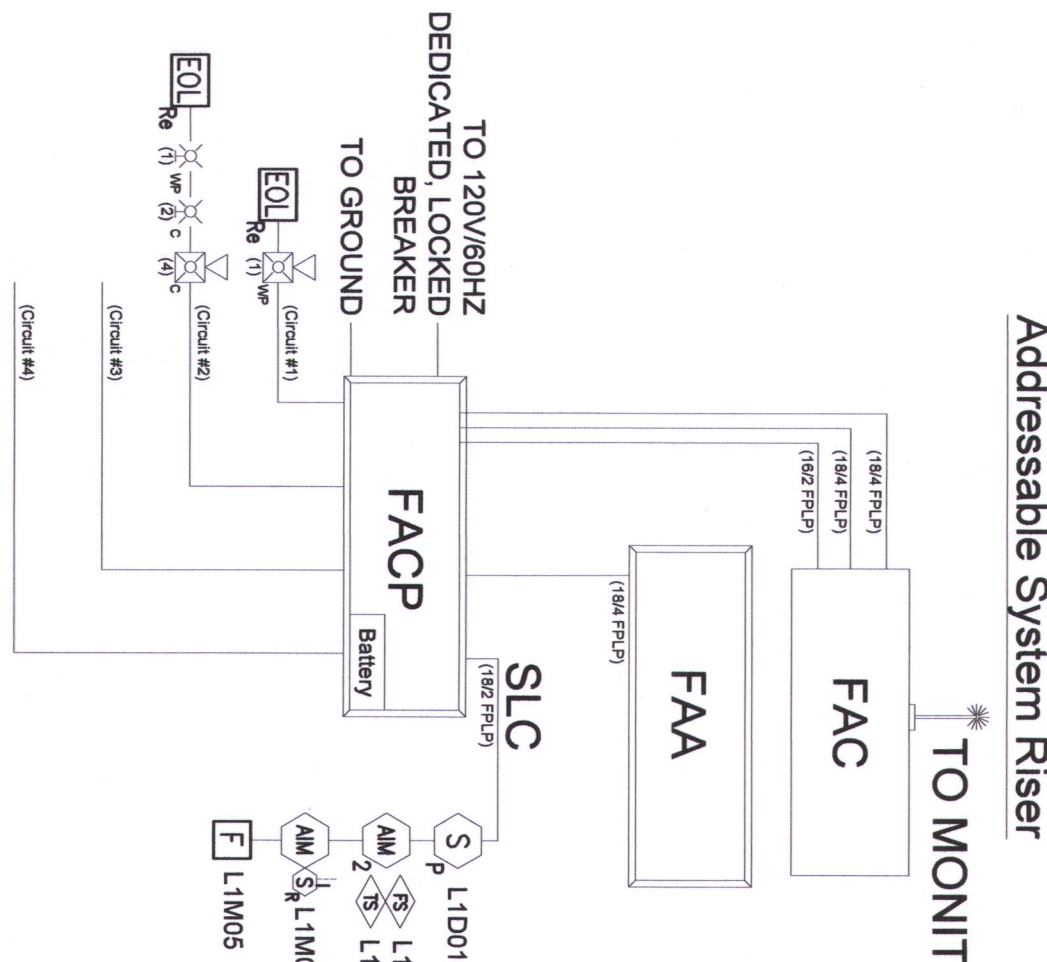
Totals	Maximum Amps:	6	Circuit 2	Circuit 3	Circuit 4	Total Alarm Amp
			7857	323	2106	10293
			0.026	0.008	0.218	0.252
Max Wire Run Distance Per AVG	14					
Voltage Drop for 14 AWG wire						
Voltage Drop per 100 ft						
Voltage Drop = 2 * Wire Run Distance * 3.07 Ohms Per 1000 Ft 14 AWG + Total Current for Circuit / 1000						

Standby Totals	32
Standard Power Draw	0.012
Standby Amp hrs	0.288

Alarm Metrics	5
Alarm Current	3.728
Alarm Curreny by Minutes	0.593

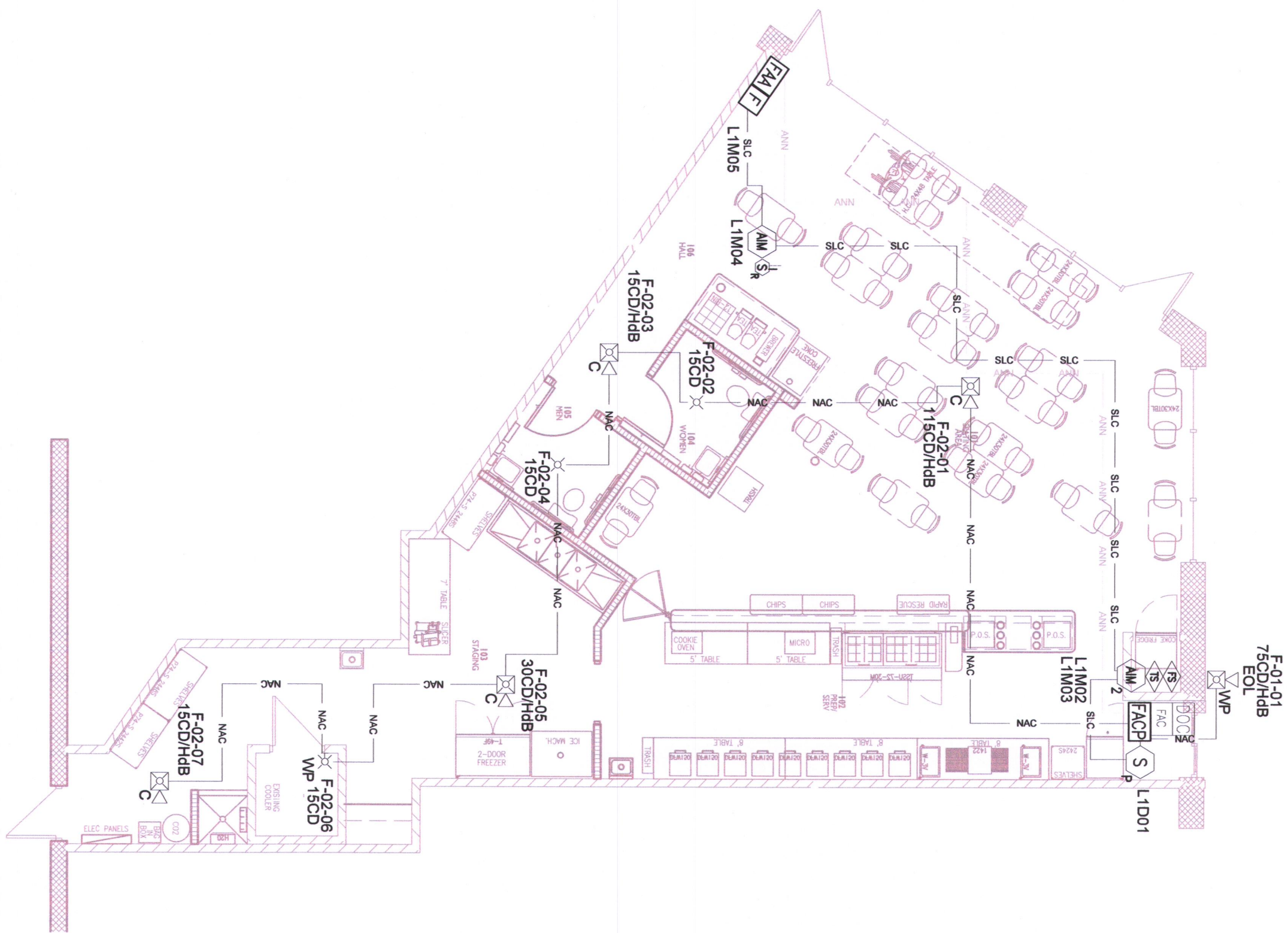
Battery Size Required w/in Alarm Time Minutes and 20% Reserve	0.717
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Batteries Size Supplied	7	Amp Hours
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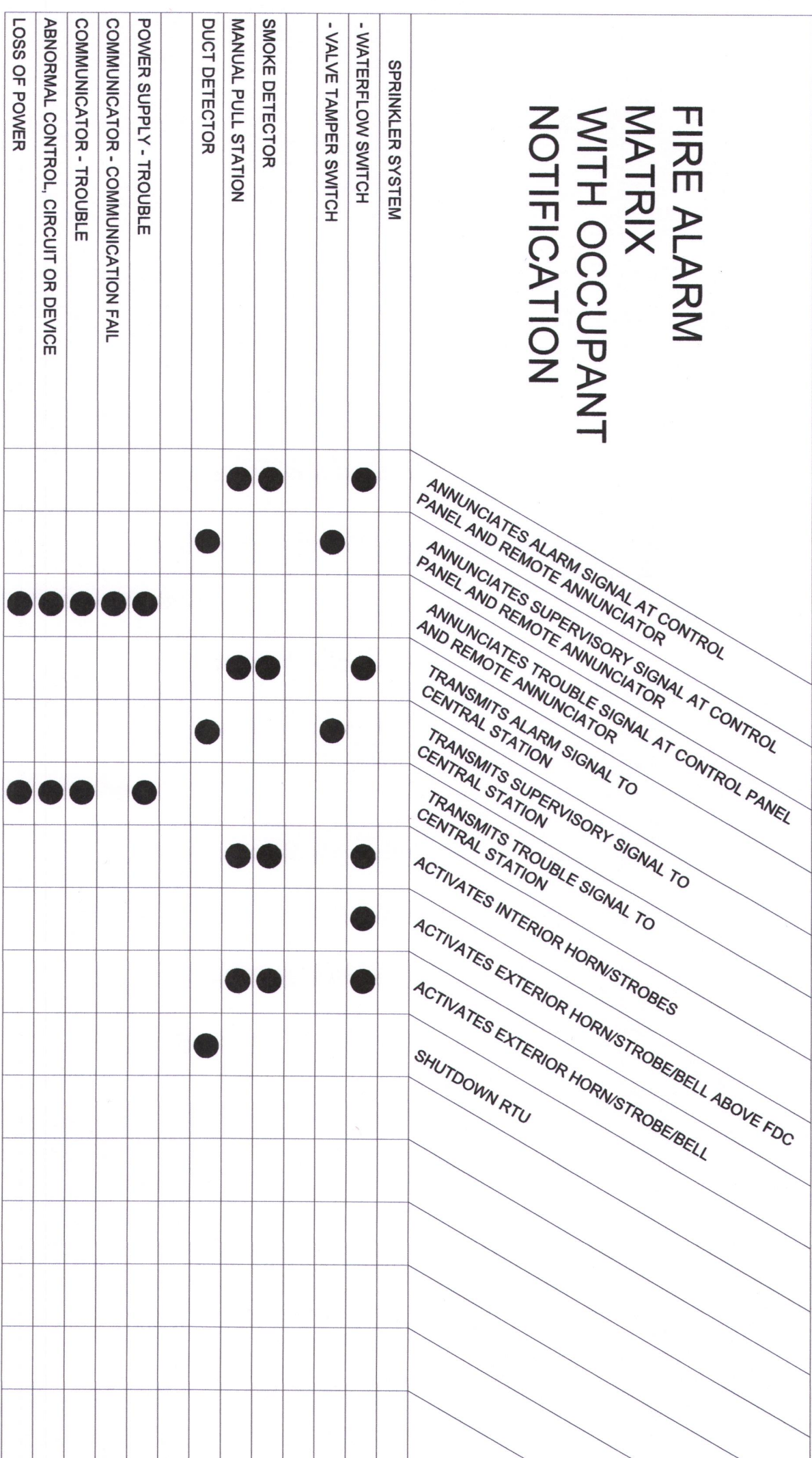
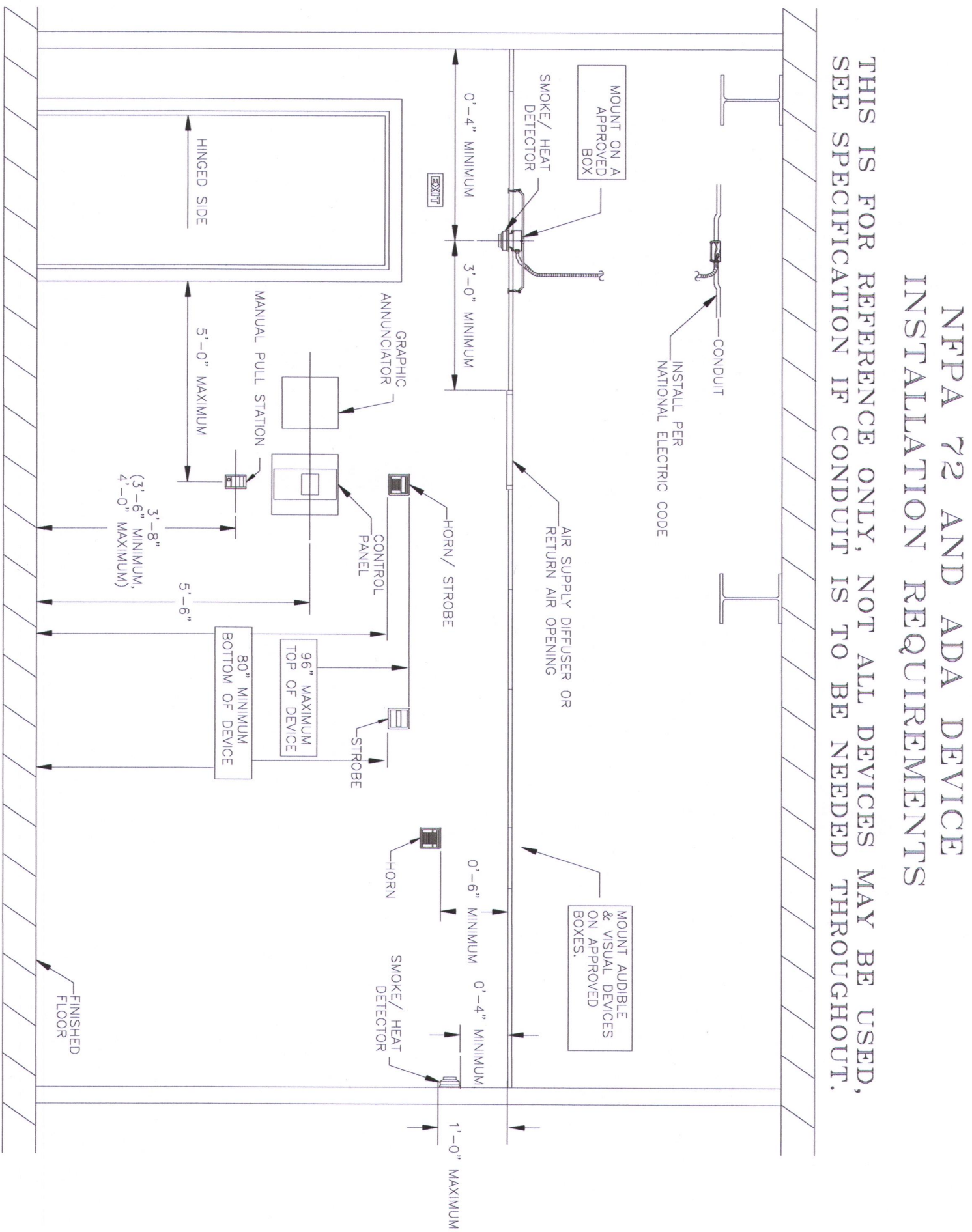
Addressable System Rise

TO MONITORING STATION



FIRE ALARM SYSTEM PLAN

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



4/5/2021