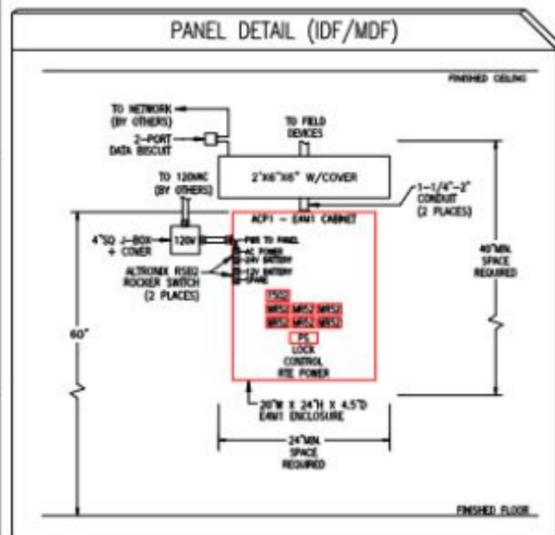
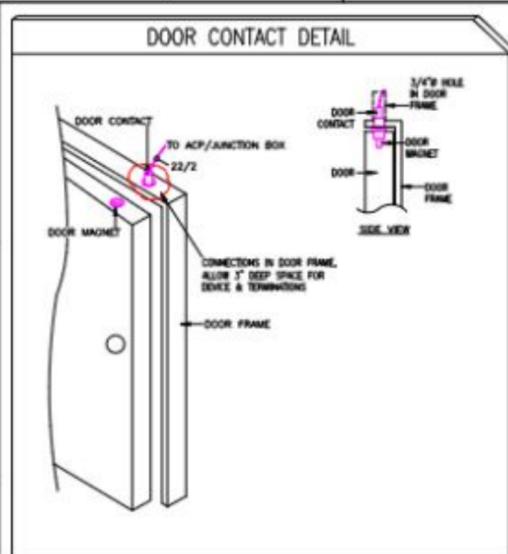


**FIRE ALARM &
SECURITY SYSTEMS
PROJECTS**

ACCESS CONTROL SYSTEM



AC CONFIGURATIONS

Door #	Location	Door Type	Panel	Card Reader	Door Contact	Electric Hardware	REX
DR.1	FIRST FLOOR SOUTH	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	1 205-12WG-W	1 9600-613	1 BY OTHERS
DR.2	FIRST FLOOR NORTHEAST	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	2 205-12WG-W	1 9600-613	1 BY OTHERS
DR.3	FIRST FLOOR SOUTHEAST	INTERIOR	ACP	0 AC-HID-READER-SIGNO-400NVS-TO-000000	2 205-12WG-W	0 9600-613	0 BY OTHERS
DR.4	FIRST FLOOR NORTHEAST	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	1 205-12WG-W	1 9600-613	1 BY OTHERS
DR.5	COMMONS SOUTH	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	0 205-12WG-W	1 9600-613	0 BY OTHERS
DR.6	GYM 1 WEST	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	0 205-12WG-W	0 9600-613	0 BY OTHERS
DR.7	GYM 1 WEST	INTERIOR	ACP	0 AC-HID-READER-SIGNO-400NVS-TO-000000	0 205-12WG-W	1 9600-613	0 BY OTHERS
DR.8	GYM 3 SOUTH	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	0 205-12WG-W	0 9600-613	0 BY OTHERS
DR.9	CTE BLDG NORTH	INTERIOR	WIRELESS	0 AC-HID-READER-SIGNO-400NVS-TO-000000	0 205-12WG-W	1 AD-400	0 BY OTHERS
DR.10	ADMIN WING SEC. ROOM	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	1 205-12WG-W	1 9600-613	1 BY OTHERS
DR.11	ADMIN WING SEC. ROOM	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	1 205-12WG-W	1 9600-613	1 BY OTHERS
DR.12	ADMIN WING VESTIBULE	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	2 205-12WG-W	1 9600-613	1 BY OTHERS
DR.13	ADMIN WING VESTIBULE	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	1 205-12WG-W	1 9600-613	1 BY OTHERS
DR.14	ADMIN WING VESTIBULE	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	2 205-12WG-W	1 9600-613	1 BY OTHERS
DR.15	MUSIC WING SOUTH	INTERIOR	ACP	1 AC-HID-READER-SIGNO-400NVS-TO-000000	2 205-12WG-W	1 9600-613	1 BY OTHERS

Additional Equipment

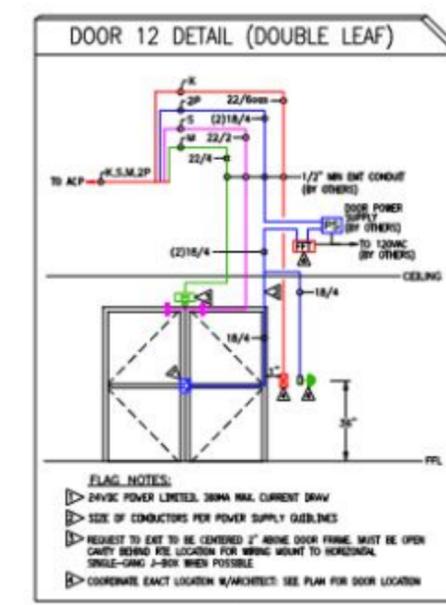
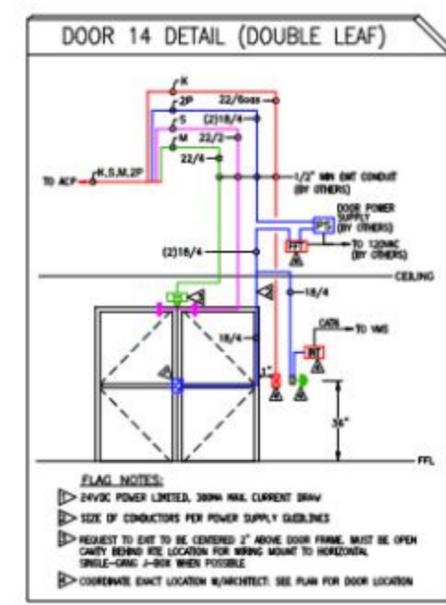
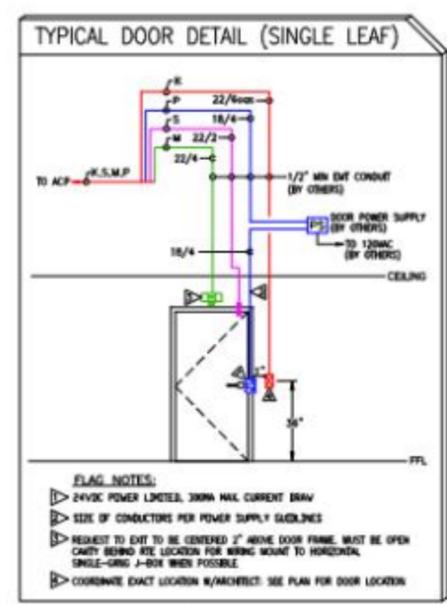
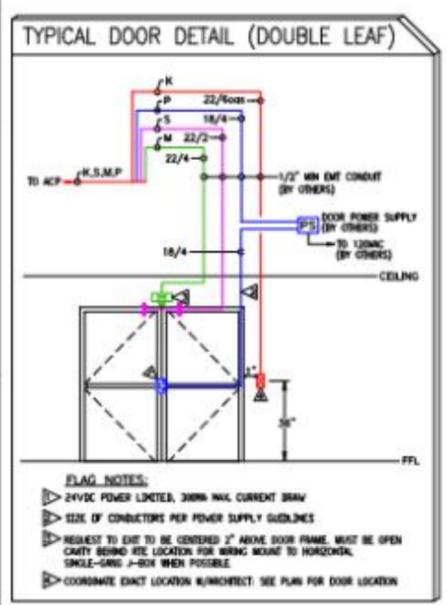
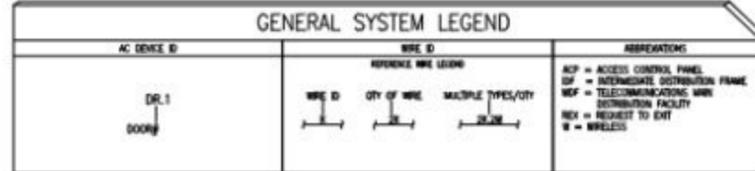
QTY	Model	Description
1	MCW-5/A	Desk Stand
1	EN4208R	Wireless Receiver - 4 zone - 5 Form C Relays
1	NORTHERN 12VDCJAMP	120VAC TO 12VDC JAMP W/rd Power Supply NOT OUTDOOR RATED
2	FN1235S	SINGLE-BUTTON BELT CLIP PENDANT TRANSMITTER
1,2	40-6-05	Signo 40/6R Reader, 0.5 Inch Spacer, Black
4	1R1800R	Field Release Kit, 36 to 48 Opening, for 90/90 and 132/95 Series Exit Device
1	AC-RE1-AC1140M400-1501-4-2	100 MHz PPM for use with the Mercury 151500 and Intelligent Controller. Requires 151501 Stand.
1	AC-RE1-50001-4-1NC	5-20W x 6-2.5W x 205mm(1) Size IP67 Enclosure Suitable for a Single 151500, 5001/11, 5001/12, 501/1 rated, NO space for Batteries.
1	AC-APP-3084-ENT-2-6	Access Control Manager Enterprise & Web-based PMS Enterprise Appliance for 10 Readers - Includes Physical Appliance Embedded
1	AC-SW-LIC-8050-6-P	Access Control Manager & Badging Application Software License (One Per Appliance)
1	AC-SW-LIC-10AP-6-P	Access Control Manager & LDAP Directory Connectivity Software License (Required for integration with Microsoft Active Directory or other)
2	NP712	Battery, 7 Ah, 12 Volt

DEVICE LEGEND

MANUFACTURER	MODEL NUMBER	DESCRIPTION	BACK BOX	SYMBOL	QUANTITY
ARLON	(1) AC-MER-COM-1P100 (5) AC-MER-COM-MS2 (1) AC-LSP-1000-MSR	13-DOOR CONTROL PANEL	LSP04	ACP	1
ARLON	AC-HID-READER-SIGNO-400NS-00-000000	SIGNO: HILL MAXIE 135MMH 4125MM: ODP/REAR: PGMAL: WIRELESS READY: BLE	SINGLE-GANG N/1040-0-05 6.5" SPACER	RD	12
BY OTHERS	BY OTHERS	REQUEST TO EXIT	BY OTHERS	REX	9
GR	733919	GR 105-12WG-W 1/2" W/4" WIRE DOOR CONTACT	RECESSED	GR	15
H E S	9600-613	ELECTRIC STRIKE, MICROSWITCH BASE, 1-3/4" x 3/4" x 8" HEIGHT, BRONZE FINISH	RECESSED	ES	11
SORLAGE	AD-400	WIRELESS DOOR HARDWARE - LEVER SET	BY OTHERS	AD	1
APRHE	JFS-2420V	HAND-FREE VIDEO INTERCOM SET WITH VISUAL READY SIGNAL, RECESSED DOOR STRIKE, VIDEO CAMERA AND POWER SUPPLY	BY OTHERS	INT	1
ALTRON	6062	FULL FUNCTION TIMER, 6-240C	BY OTHERS	PTT	2
ALARM CONTROLS	TS-2	PLUSHUTTON, 1-GANG, MOUNTING: SPOT, 12/24 VAC/DC, USE AT 24 VDC CONTACT, 1" SQUARE, STAINLESS STEEL, PLATE, GREEN	BY OTHERS	TS	2

WIRE LEGEND

DESIGNATION	DESCRIPTION	MANUFACTURER	MODEL NUMBER NON-PLENUM	MODEL NUMBER PLENUM	MODEL NUMBER BURIAL
K	22/8 OMS SECURITY WIRE, SHIELDED, READER	WHY CITY WIRE		004201	
S	22/2 SECURITY WIRE, NON-SHIELDED, CONTACT			004300	
M	22/4 SECURITY WIRE, NON-SHIELDED, WIRE			004302-0	
P	18/4 SECURITY WIRE, NON-SHIELDED, POWER, ADA			004303-0	
C	CAT6 23/8 ETHERNET, INTERCOM	BY OTHERS		BY OTHERS	



System Type
ACCESS CONTROL SYSTEM

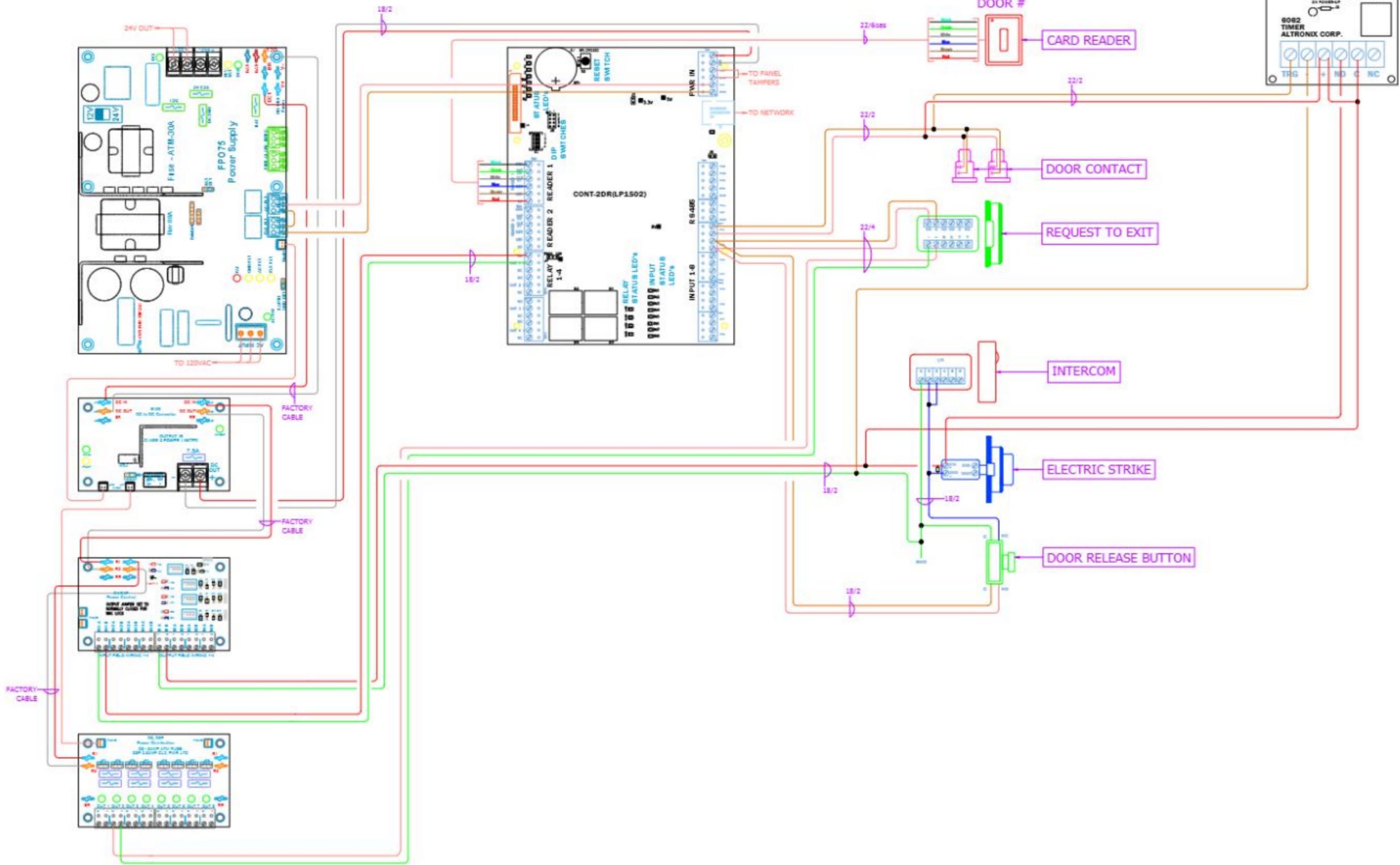
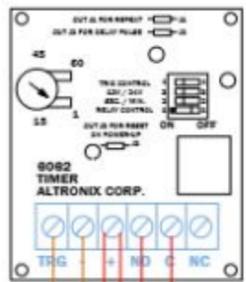
Sheet Name
LEGENDS, DETAILS, ACCESS CONTROL PLANS

Sheet Title
001

SHEET 1 OF 8

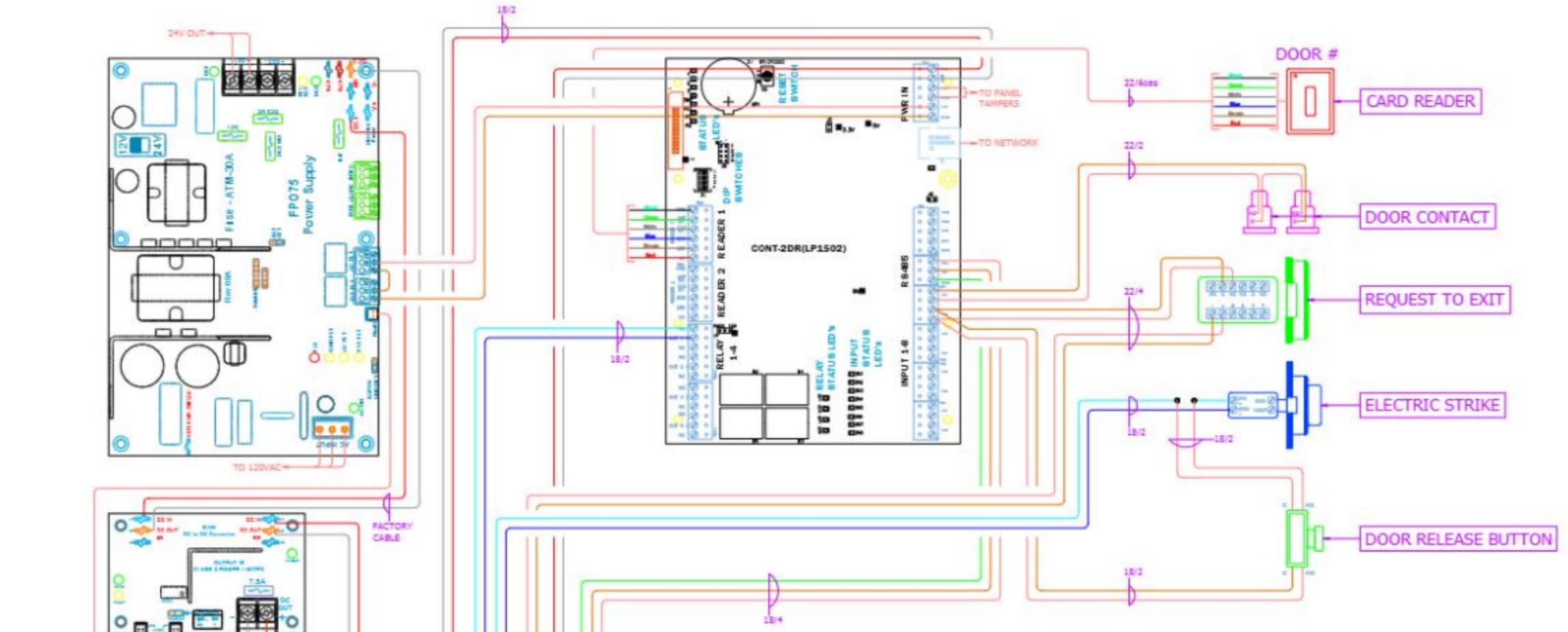
DOUBLE LEAF DOOR DETAIL

FULL FUNCTION TIMER

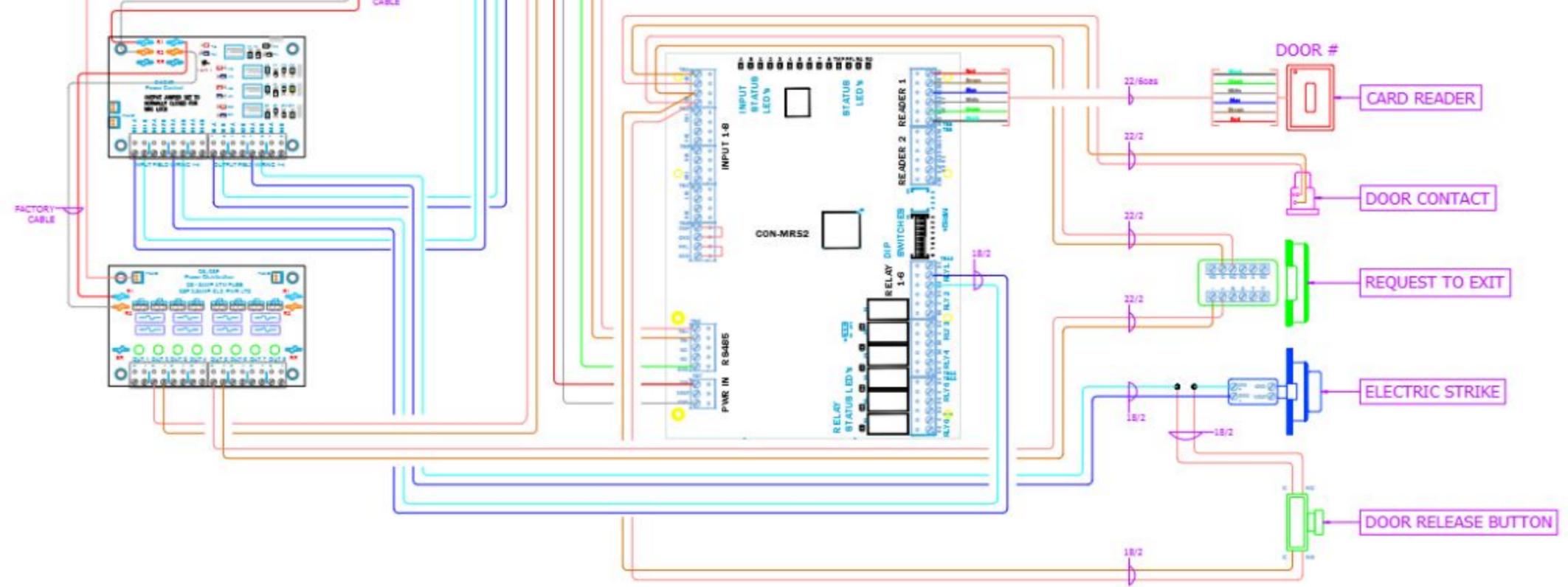


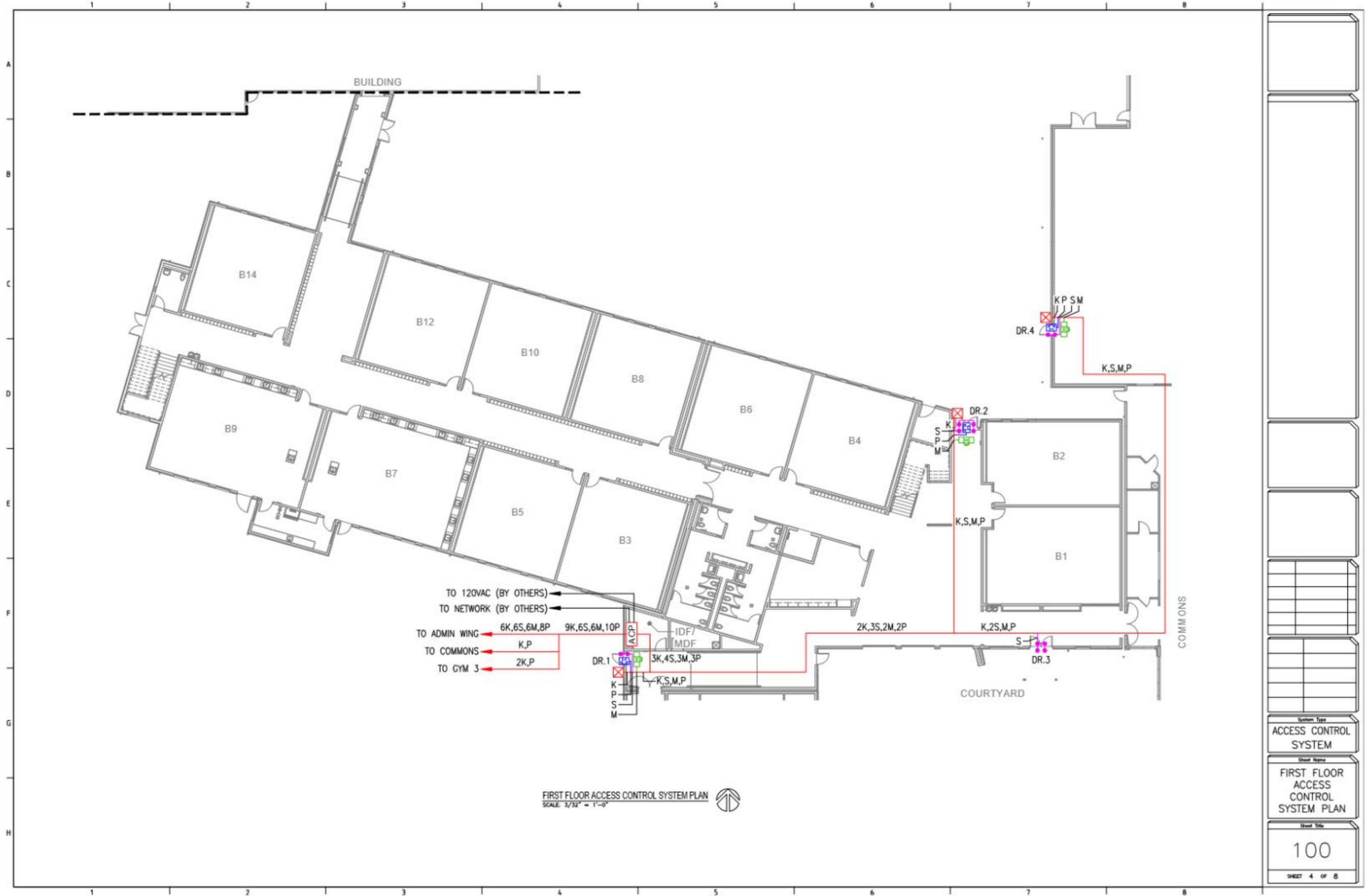
System Type	ACCESS CONTROL SYSTEM
Sheet Name	TYPICAL AC WIRING DIAGRAMS 1
Sheet Title	002
	SHEET 2 OF 8

DOUBLE LEAF DOOR DETAIL - WIRING DIAGRAM



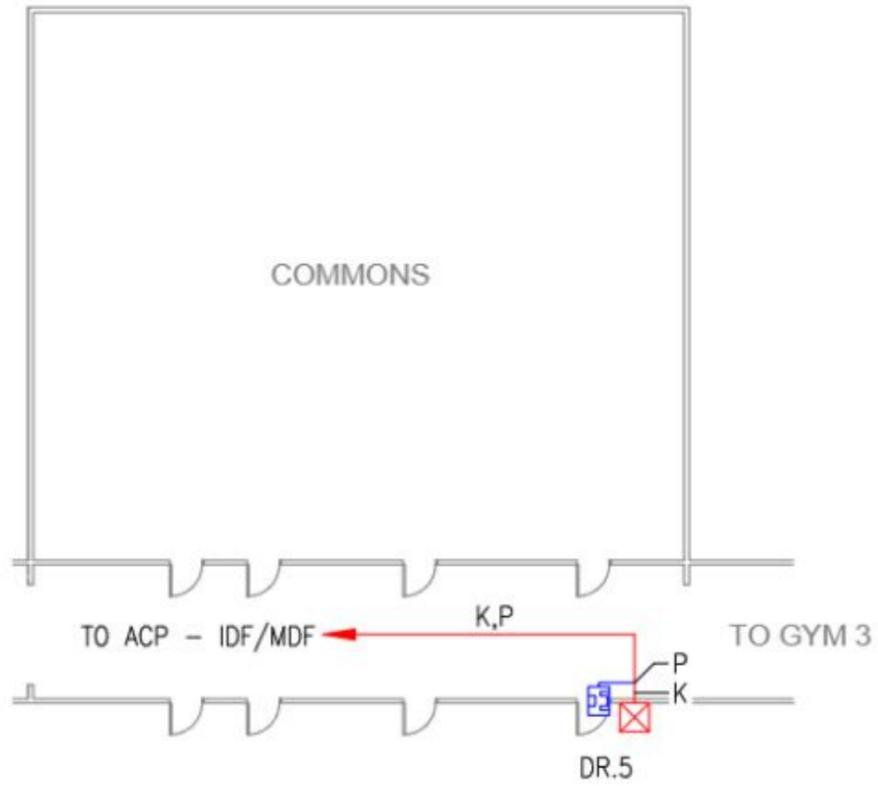
SINGLE LEAF DOOR DETAIL - WIRING DIAGRAM



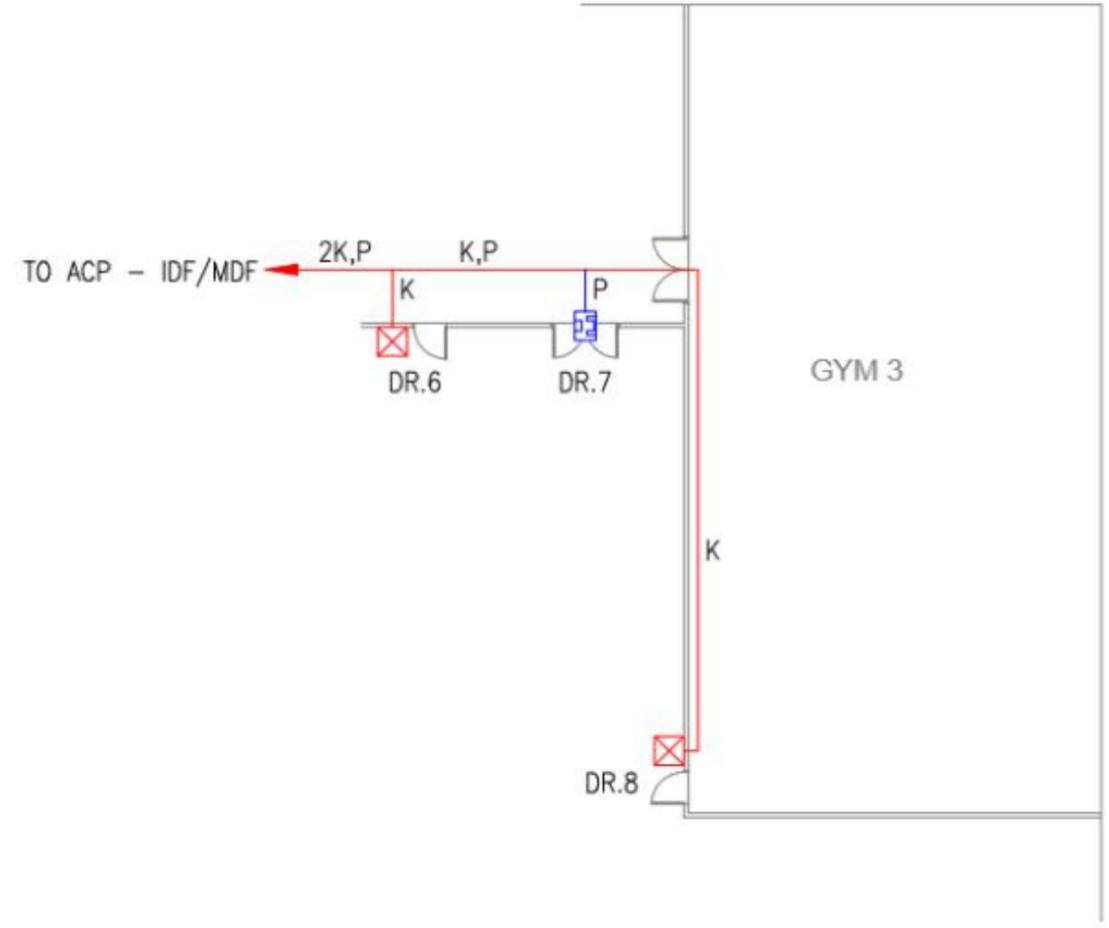


FIRST FLOOR ACCESS CONTROL SYSTEM PLAN
 SCALE: 3/32" = 1'-0"

System Type	ACCESS CONTROL SYSTEM
Sheet Name	FIRST FLOOR ACCESS CONTROL SYSTEM PLAN
Sheet Title	100
Sheet No.	SHEET 4 OF 8



COMMONS ACCESS CONTROL SYSTEM PLAN
SCALE: 1/8" = 1'-0"

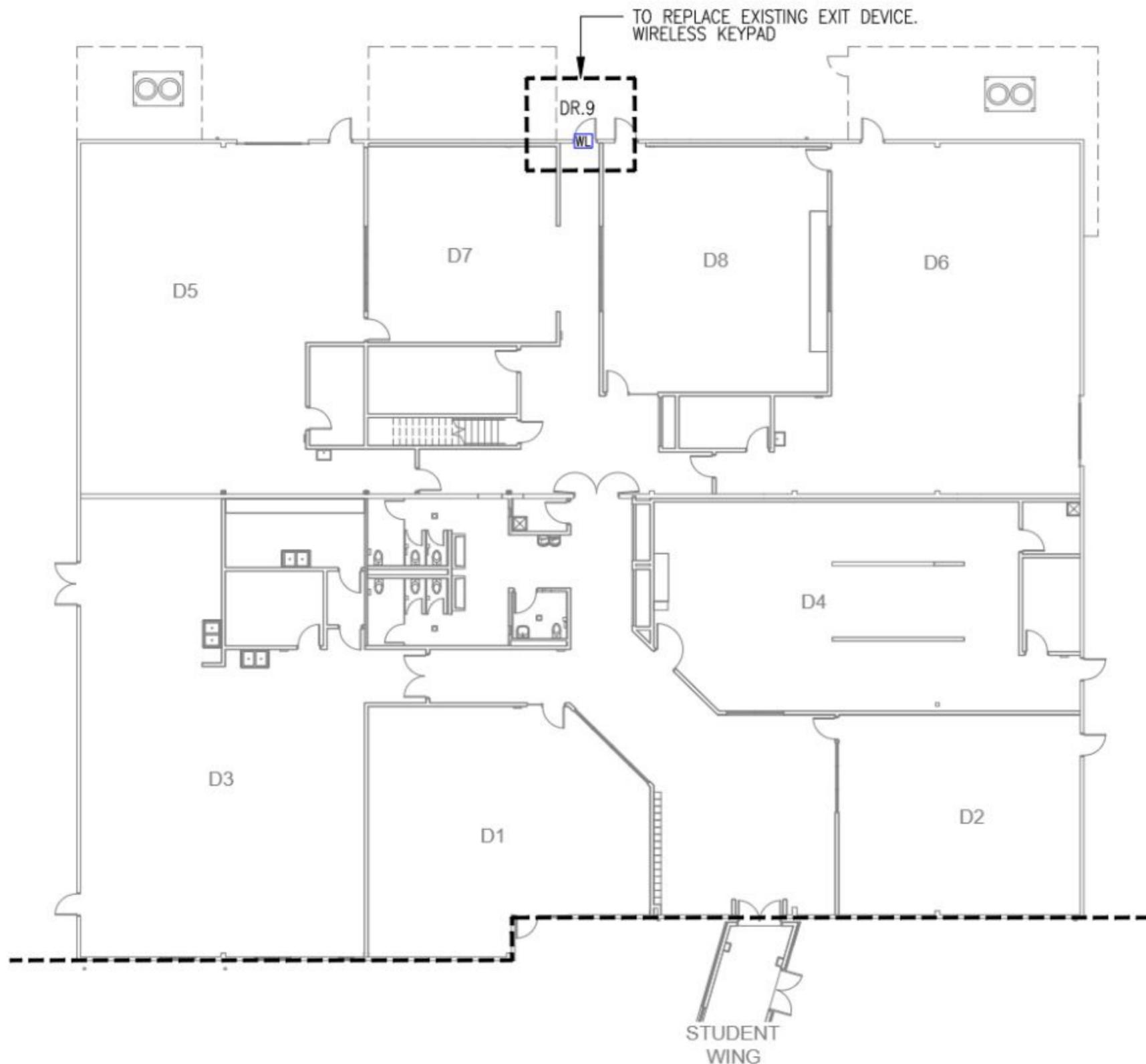


GYM 3 ACCESS CONTROL SYSTEM PLAN
SCALE: 1/8" = 1'-0"

System Type
ACCESS CONTROL SYSTEM

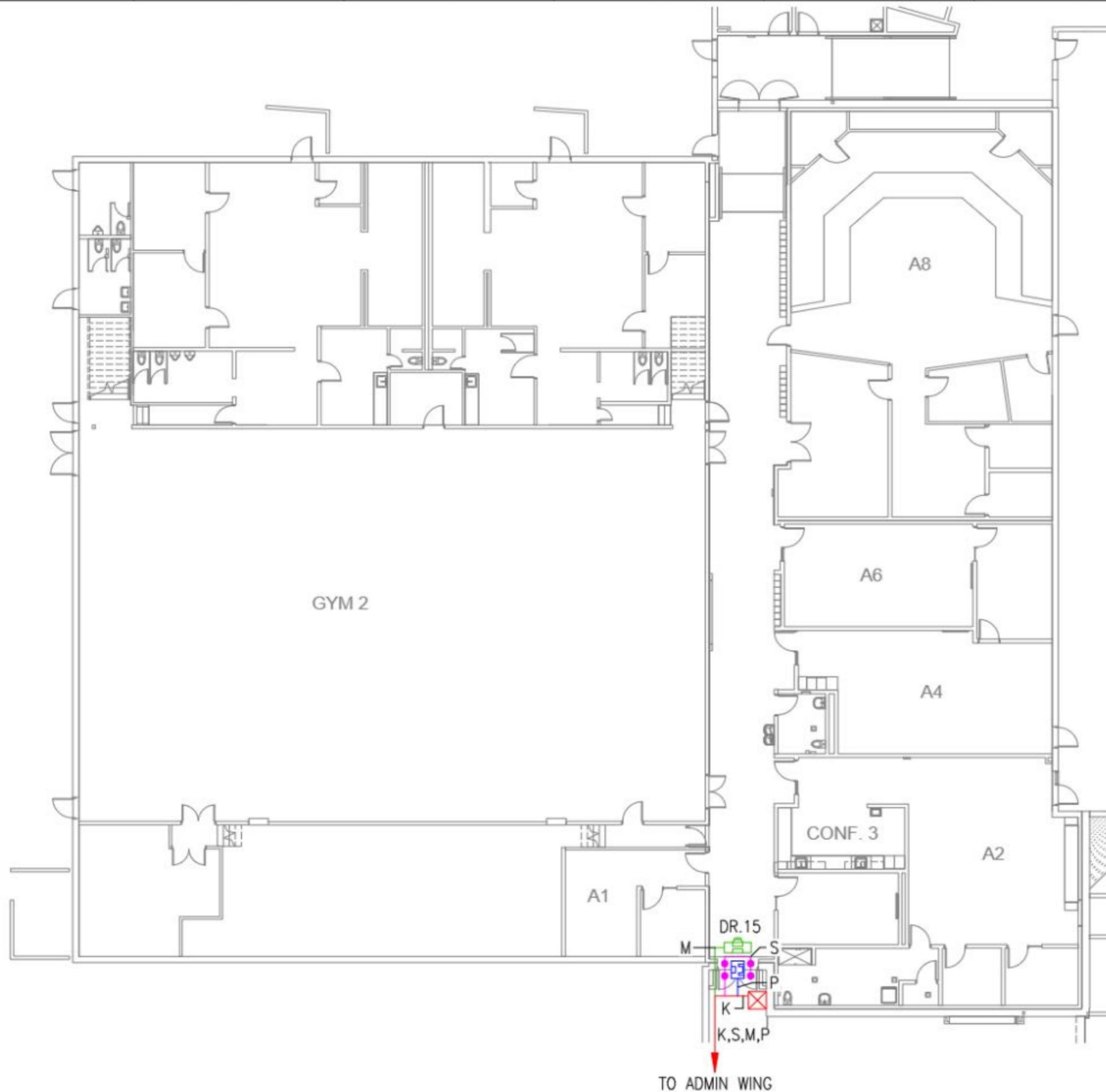
Sheet Name
COMMONS & GYM 3 ACCESS CONTROL SYSTEM PLAN

Sheet Title
101
SHEET 5 OF 8



CTE BUILDING ACCESS CONTROL SYSTEM PLAN
SCALE: 1/8" = 1'-0"

System Type	ACCESS CONTROL SYSTEM
Sheet Name	CTE BUILDING ACCESS CONTROL SYSTEM PLAN
Sheet Title	102
	SHEET 6 OF 8



MUSIC WING ACCESS CONTROL SYSTEM PLAN
SCALE: 1/8" = 1'-0"



System Type
ACCESS CONTROL SYSTEM

Sheet Name
MUSIC WING ACCESS CONTROL SYSTEM PLAN

Sheet Title
104
SHEET 8 OF 8

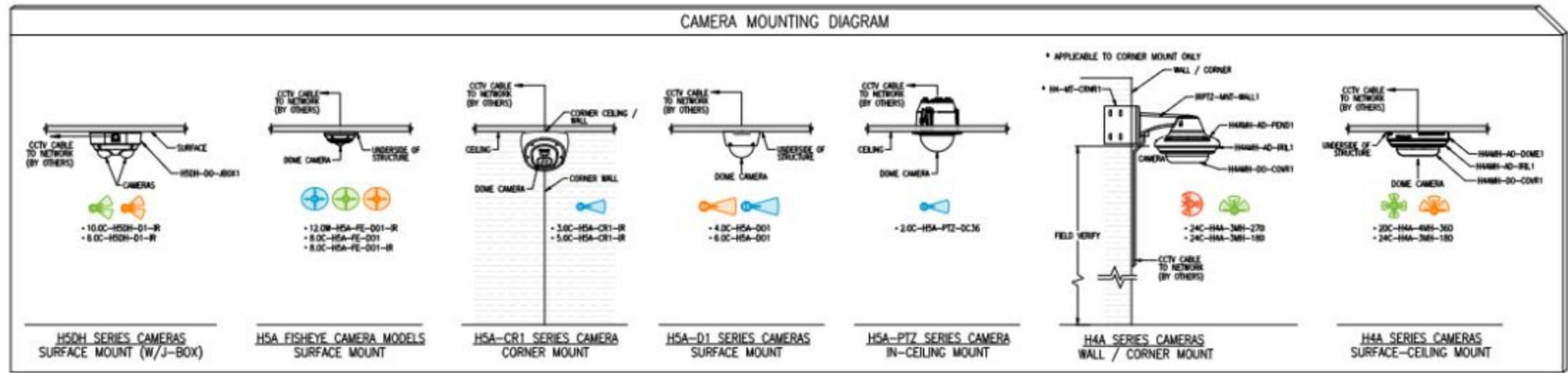
CCTV SYSTEM

DRAWING INDEX

SHEET NAME	SHEET TITLE / SHEET #
LEGENDS, DETAILS, CCTV PLANS	C201 1
CAMERA MOUNTING DIAGRAM	C202 2
CAMERA MOUNTING DETAILS 1	C203 3
CAMERA MOUNTING DETAILS 2	C204 4
AUDIO & VIDEO T/L WORKSHEET DIAGRAM	C205 5
CONTROL ROOM EQUIPMENT	C206 6
1ST FLOOR CCTV PLAN	C210 7
2ND FLOOR CCTV PLAN	C211 8
3RD FLOOR CCTV PLAN	C212 9

CCTV CONFIGURATIONS

MAC Address	S/N	IP Address	(T Server Cluster)	Patch Panel # + Port	Switch #	Switch Port #	Cam#	Level	Markup#	Short Description	MP	Model Number	Lens	Mounting type / Accessories	Qty
							C1	1st Floor	2	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C2	1st Floor	56	3MP MULTI 180	3x4C (3MP)	24C-HSA-3MH-180	5.2mm	RP12-MNT-WALL; H4MM-AD-PEND; H4MM-AD-BLL; H4MM-DO-COVR1	1
							C3	1st Floor	136	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C4	1st Floor	96	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C5	1st Floor	81	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C6	1st Floor	119	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C7	1st Floor	71	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C8	1st Floor	48	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C9	1st Floor	46	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C10	1st Floor	39	24MP MULTI 270	3x4C (3MP)	24C-HSA-3MH-270	4mm	HM-MT-CRW2; RP12-MNT-WALL; H4MM-AD-PEND; H4MM-AD-BLL; H4MM-DO-COVR1	1
							C11	1st Floor	8	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C12	1st Floor	4	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C13	1st Floor	11	3MP DUAL-HEAD	2 x 3MP	3.0C-HSDH-DO1-IR	3.35-7mm	HSDH-DO-JBOX1	1
							C14	1st Floor	3	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C15	1st Floor	22	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C16	1st Floor	124	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C17	1st Floor	23	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C18	1st Floor	24	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C19	1st Floor	60	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C20	1st Floor	99	12MP FISHEYE	12MP	12.0W-HSA-FE-DO1-IR	1.6mm	Surface	1
							C21	1st Floor	58	6MP FISHEYE	6MP	6.0C-HSA-FE-DO1-IR	1.4mm	Surface	1
							C22	1st Floor	57	6MP FISHEYE	6MP	6.0C-HSA-FE-DO1-IR	1.4mm	Surface	1
							C23	1st Floor	53	12MP FISHEYE	12MP	12.0W-HSA-FE-DO1-IR	1.6mm	Surface	1
							C24	1st Floor	52	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C25	1st Floor	51	6MP FISHEYE	6MP	6.0C-HSA-FE-DO1-IR	1.4mm	Surface	1
							C26	1st Floor	47	6MP FISHEYE	6MP	6.0C-HSA-FE-DO1-IR	1.4mm	Surface	1
							C27	1st Floor	45	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C28	1st Floor	44	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C29	1st Floor	43	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C30	1st Floor	92	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C31	1st Floor	80	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C32	1st Floor	38	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C33	1st Floor	14	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C34	1st Floor	12	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C35	1st Floor	13	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C36	1st Floor	57	6MP FISHEYE	6MP	6.0C-HSA-FE-DO1-IR	1.4mm	Surface	1
							C37	1st Floor	9	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C38	1st Floor	10	3MP DUAL-HEAD	2 x 3MP	3.0C-HSDH-DO1-IR	3.35-7mm	HSDH-DO-JBOX1	1
							C39	1st Floor	31	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C40	1st Floor	6	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C41	1st Floor	16	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C42	1st Floor	23	12MP FISHEYE	12MP	12.0W-HSA-FE-DO1-IR	1.6mm	Surface	1
							C43	1st Floor	30	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C44	1st Floor	19	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C45	1st Floor	95	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C46	1st Floor	67	12MP FISHEYE	12MP	12.0W-HSA-FE-DO1-IR	1.6mm	Surface	1
							C47	1st Floor	122	3MP PTE	3MP	3.0C-HSA-PT2-DC-IR	4.3-8mm	Surface	1
							C48	1st Floor	61	15MP MULTI 180	3x5MP	15C-HSA-3MH-180	4mm	H4MM-AD-DOBE1; H4MM-DO-COVR1	1
							C49	1st Floor	98	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C50	1st Floor	90	6MP FISHEYE	6MP	6.0C-HSA-FE-DO1-IR	1.4mm	Surface	1
							C51	1st Floor	94	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C52	1st Floor	36	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C53	1st Floor	49	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C54	1st Floor	41	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C55	1st Floor	42	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C56	1st Floor	93	3MP DUAL-HEAD	2 x 3MP	3.0C-HSDH-DO1-IR	3.35-7mm	HSDH-DO-JBOX1	1
							C57	1st Floor	37	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C58	1st Floor	38	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C59	1st Floor	27	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C60	1st Floor	96	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C61	1st Floor	7	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C62	1st Floor	17	20MP MULTI 180	5x5MP	20C-HSA-3MH-180	2.8mm	H4MM-AD-DOBE1; H4MM-DO-COVR1	1
							C63	1st Floor	18	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C64	1st Floor	25	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C65	1st Floor	26	3MP DUAL-HEAD	2 x 3MP	3.0C-HSDH-DO1-IR	3.35-7mm	HSDH-DO-JBOX1	1
							C66	1st Floor	130	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C67	1st Floor	35	3MP DUAL-HEAD	2 x 3MP	3.0C-HSDH-DO1-IR	3.35-7mm	HSDH-DO-JBOX1	1
							C68	1st Floor	94	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C69	1st Floor	35	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C70	1st Floor	32	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C71	1st Floor	29	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C72	1st Floor	30	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C73	1st Floor	32	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C74	2nd Floor	90	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C75	2nd Floor	13,11	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C76	2nd Floor	71	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C77	2nd Floor	70	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C78	2nd Floor	77	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C79	2nd Floor	72	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C80	2nd Floor	100	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C81	2nd Floor	88	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C82	2nd Floor	95	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C83	2nd Floor	90	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C84	2nd Floor	99	3MP DUAL-HEAD	2 x 3MP	3.0C-HSDH-DO1-IR	3.35-7mm	HSDH-DO-JBOX1	1
							C85	2nd Floor	81	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C86	2nd Floor	134	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C87	2nd Floor	76	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C88	2nd Floor	74	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C89	2nd Floor	113	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C90	2nd Floor	16,5	3MP DUAL-HEAD	2 x 3MP	3.0C-HSDH-DO1-IR	3.35-7mm	HSDH-DO-JBOX1	1
							C91	2nd Floor	80	6MP FISHEYE	6MP	6.0C-HSA-FE-DO1-IR	1.4mm	Surface	1
							C92	2nd Floor	75	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C93	2nd Floor	18,12	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C94	2nd Floor	111	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C95	2nd Floor	18,15	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C96	2nd Floor	79	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C97	2nd Floor	98	3MP CORNER	3.0MP	3.0C-HSA-CR3-IR	4.3-8mm	Corner Ceiling-wall	1
							C98	2nd Floor	89	3MP DUAL-HEAD	2 x 3MP	3.0C-HSDH-DO1-IR	3.35-7mm	HSDH-DO-JBOX1	1
							C99	3rd Floor	106	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C100	3rd Floor	107	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C101	3rd Floor	105	6MP DOME	6MP	6.0C-HSA-DO1	4.9-8mm	Surface	1
							C102	3rd Floor	104	3MP DUAL-HEAD	2 x 3MP	3.0C-HSDH-DO1-IR	3.35-7mm	HSDH-DO-JBOX1	1
							C103	3rd Floor	103	3MP DUAL-HEAD	2 x 3MP	3.0C-HSDH-DO1-IR	3.35-7mm	HSDH-DO-JBOX1	



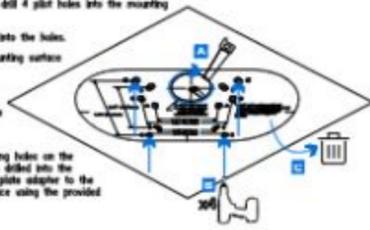
System Type	CCTV SYSTEM
Sheet Name	CAMERA MOUNTING DIAGRAM
Sheet Title	002
SHEET 2 OF 9	

H5DH SERIES MOUNTING DETAIL

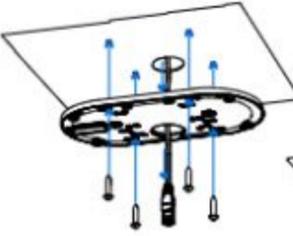
Mounting the Camera to a Ceiling or Wall

Perform the following steps if mounting the camera directly to the surface and the cables will come from inside the mounting surface. Use this procedure on surfaces that can be easily drilled into, and when the cables should be kept out of sight.

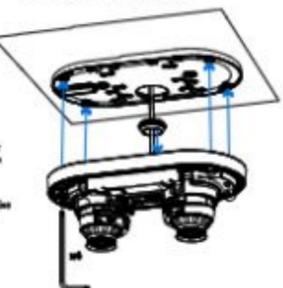
- Using the Surface Mounting Template, drill 4 pilot holes into the mounting surface for the mounting screws.
- Insert the supplied plastic anchors into the holes.
- Cut the cable entry hole into the mounting surface with a drywall saw or hole saw.
- Pull the required cables through the mounting surface and through the cable entry hole in the mounting plate adapter.
- Align the cable entry hole and mounting holes on the mounting plate adapter with the holes drilled into the mounting surface. Hold the mounting plate adapter to the mounting surface and secure it in place using the provided self-tapping screws.



- Push the rubber sealing grommet with the required cables into the cable entry hole on the camera base. The flange around the grommet should line up with the cable entry hole.
- Push the rubber sealing grommet with the required cables into the cable entry hole on the camera base. The flange around the grommet should line up with the cable entry hole. The rubber grommet should be pressed firmly into the cable entry hole to create a seal.



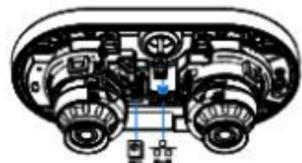
- Push the camera base into the mounting plate adapter so that the 4 captive screws in the camera base align with the mounting points on the adapter.
- Use the star-shaped screwdriver to tighten the 4 captive screws and secure the camera to the mounting plate adapter.



Connecting Cables

Refer to the diagrams in the Overview section for the location of the different connectors and status LEDs on the camera base.

- Connect a network cable to the camera's Ethernet port (RJ-45 connector). Power the camera using the network cable with Power over Ethernet (PoE) IEEE 802.3af Class 3. The status LEDs turn on when the camera receives power.

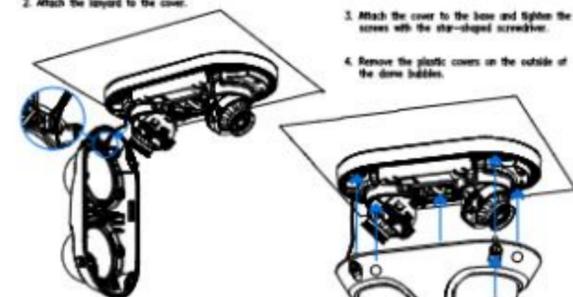


- If the camera is connected to any external devices, connect the I/O or audio cables to the I/O connector block.

Installing the Dual Head Cover

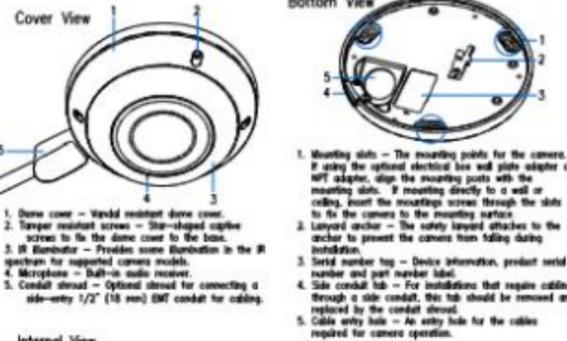
Note: Before installing the dome cover, we recommend that you first connect to the camera and adjust the aim, zoom, and focus so that the camera covers the required field of view.

- Be careful not to touch or scratch the dome bubbles. Any marks or fingerprints on the dome bubbles may cause unwanted reflections from the IR illuminators.
- Remove the plastic covers on the inside of the dome bubbles.
 - Attach the layard to the cover.



- Attach the cover to the base and tighten the screws with the star-shaped screwdriver.
- Remove the plastic covers on the outside of the dome bubbles.

H5A FISHEYE CAMERA MODELS



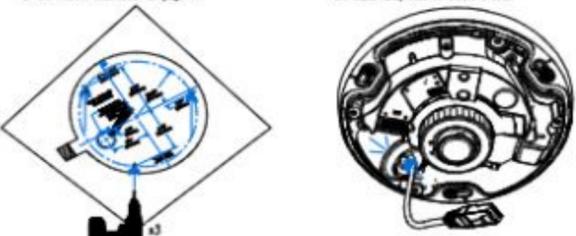
- Dome cover - Vented resistant dome cover.
- Tamper resistant screws - Star-shaped captive screws to fix the dome cover to the base.
- IR Illuminator - Provides active illumination in the IR spectrum for supported camera models.
- Microphone - Built-in audio receiver.
- Connect shield - Optional shield for connecting a side-entry 1/2" (12.7 mm) BNC coaxial for cabling.
- Power connector block - Accepts an external DC power connection when Power over Ethernet is not available.
- microSD card slots (x2) - Accepts up to two microSD cards for onboard storage. Insert microSD cards so the metal contacts are facing upward. For more information, see (Optional) Configuring Onboard Storage on page 55.
- Connection status LED indicator - Green LED provides information about device operation. For more information, see Connection Status LED Indicator on page 60.
- Link LED indicator - Amber LED indicates if there is an active connection in the Ethernet port.
- Forward reset button - Resets the camera to its factory default settings.
- Cable entry hole - An entry hole for the cables required for camera operation.
- I/O connector block - Provides connections to external input/output and audio devices. Serial number tag 11. Device information, product serial number and part number label.

Mounting the Camera to a Ceiling or Wall - Surface Mount

Perform the following steps if the required cables will be coming from inside the mounting surface and the camera will be mounted immediately over the cable hole. Use this procedure on surfaces that can be easily drilled into, and when the cables should be kept out of sight.

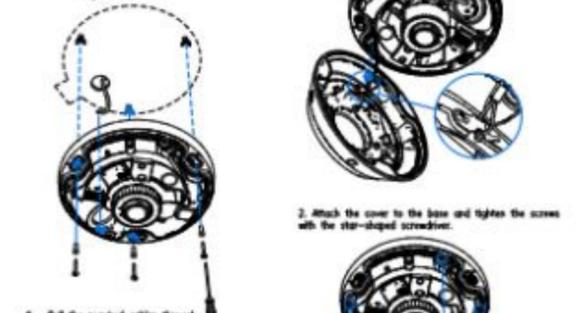
- Using the Surface Mounting Template, drill 3 pilot holes into the mounting surface for the mounting screws.
- Push the rubber sealing grommet with the required cables into the cable entry hole on the camera base. The flange around the grommet should line up with the cable entry hole.

If you are mounting the camera to a wall, make sure the up orientation arrow is at the top, or the video image will be rotated. For more information, see Mounting to the Cover Orientation on page 17.



- Insert the supplied plastic anchors into the holes.
- Drill the cable entry hole into the mounting surface.
- Pull the required cables through the mounting surface and through the cable entry hole in the camera base.

- Align the up orientation arrow on the camera base with the arrow on the mounting template. Align the mounting slots on the camera base to the drilled pilot holes and use the provided self-tapping screws to secure the camera to the mounting surface.



- Attach the cover to the base and tighten the screws with the star-shaped screwdriver.
- Remove the plastic cover on the dome bubble.

Installing the Fisheye Cover

Be careful not to touch or scratch the dome bubble. Any marks or fingerprints on the dome bubble may cause unwanted reflections from the IR illuminators.

- Attach the layard to the cover.



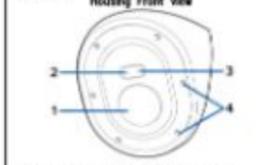
- Attach the cover to the base and tighten the screws with the star-shaped screwdriver.



- Remove the plastic cover on the dome bubble.

H5A CORNER CAMERA MOUNTING DETAIL

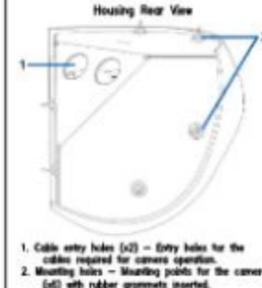
Overview



- Front cover - Vented resistant front cover.
- Recording LED - LED lamp on when the camera is streaming video to a local microSD card, NVR or another VMS system, or the camera web interface.
- Microphone - Built-in audio receiver.
- Tamper resistant screws - Tamper resistant captive screws to fix the dome cover to the base.



- Micro USB port - Accepts a micro USB to USB adapter. Only required when using the Angpon USB 4K-H Adapter.
- I/O connector block - Provides connections to external input/output devices.



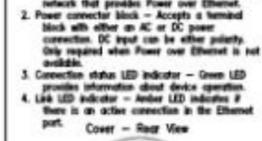
- microSD card slot - Accepts a microSD card for onboard storage. For more information, see (Optional) Configuring microSD Card Storage on page 55.
- Audio microphone cable connector - The audio microphone cable comes pre-installed to this connector.



- Ethernet port - Accepts an Ethernet connection to a network. Server communication and image data transmission occurs over this connection. Also receives power when it is connected to a network that provides Power over Ethernet.
- Power connector block - Accepts a terminal block with either an AC or DC power connection. DC input can be either polarity. Only required when Power over Ethernet is not available.
- Connection status LED indicator - Green LED provides information about device operation.
- Link LED indicator - Amber LED indicates if there is an active connection in the Ethernet port.



- Layard - Connects to the layard anchor on the camera base.
- Microphone connector - Connect the microphone audio cable to use the built-in microphone.
- LED connector - Connect the LED cable to power the camera's Recording LED and IR LED.



- Remove the base from the mounting surface. Drill the 6 mounting holes and use cable entry hole into the mounting surface.
- Remove the base from the mounting surface. Drill the 6 mounting holes and use cable entry hole into the mounting surface.
- Remove the base from the mounting surface. Drill the 6 mounting holes and use cable entry hole into the mounting surface.
- Insert the wall anchors into the mounting holes.
- Pull the required cables through the cable entry hole.
- Insert the sealing grommets with the required cables pulled through into the cable entry holes on the back of the camera base.

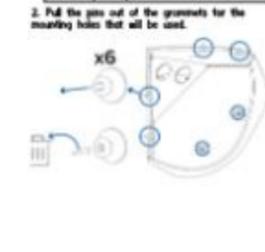
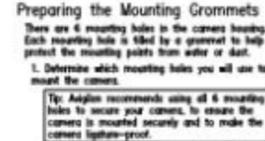
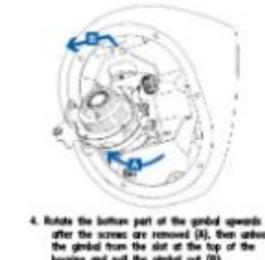
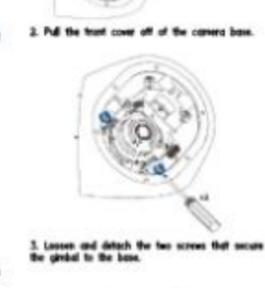
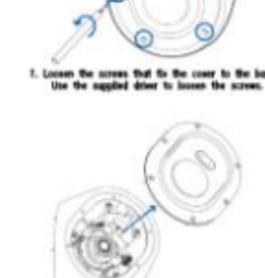
Installation and Mounting

Complete the following sections to install the device.

Removing the Front Cover and Gimbal

Before mounting the camera, you need to remove the front cover and camera gimbal from the housing.

- Loosen the screws that fix the cover to the base. Use the supplied driver to loosen the screws.
- Loosen and detach the two screws that secure the gimbal to the base.



Mounting & Aiming Video Analytics Cameras

When installing an Angpon video analytics camera, follow the listed mounting and aiming recommendations to maximize the camera's analytic capabilities:

- The camera should be installed above 2.74 m (9 feet).
- The camera should tilt downwards no more than 45 degrees.
- The camera image should be level with the horizon line.
- The camera should be mounted to a stable surface to minimize the physical movement of the camera after installation.

For more details, see designing a Site for Video Analytics. The document is available on the Angpon website.

Inserting Cables through the Sealing Grommet

To protect the camera and components from ingress of dust or moisture, you must pull the required cables through the sealing grommet(s) included with the camera for the cable entry holes.

- Push the tab on the grommet to open a hole for the Ethernet cable.
- Push an Ethernet cable through the grommet by one of the following methods:
 - If the Ethernet cable is already stripped, push the cable through the grommet.
 - If the Ethernet cable is already stripped, place the grommet peeling cap on the Ethernet connector then push the cable through the grommet.

Ensure that the orientation of the cable and grommet matches the one shown in the image.

- Push any other required cables through the second grommet.

Note: If you will pull multiple cables through the sealing grommet, apply silicone sealant to seal any gaps in the grommet.

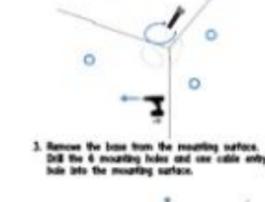
Mounting the Corner Camera Base

Perform the following steps to mount the camera base.

- Place the base into the mounting location. Make sure that the mounting grommet base has been removed.
- Use a pen or pencil to mark the spots that will be drilled into the mounting surface for the mounting screws.



Note: If you will pull multiple cables through the sealing grommet, apply silicone sealant to seal any gaps in the grommet.

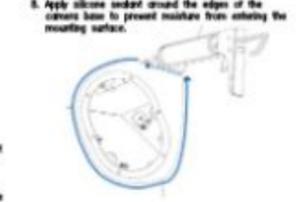


- Remove the base from the mounting surface. Drill the 6 mounting holes and use cable entry hole into the mounting surface.
- Remove the base from the mounting surface. Drill the 6 mounting holes and use cable entry hole into the mounting surface.
- Remove the base from the mounting surface. Drill the 6 mounting holes and use cable entry hole into the mounting surface.
- Insert the wall anchors into the mounting holes.
- Pull the required cables through the cable entry hole.
- Insert the sealing grommets with the required cables pulled through into the cable entry holes on the back of the camera base.

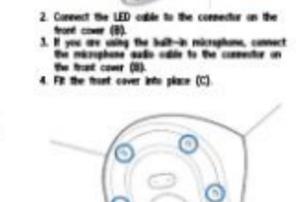
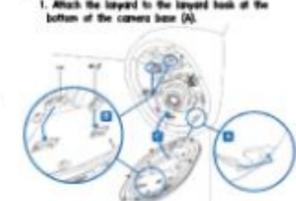
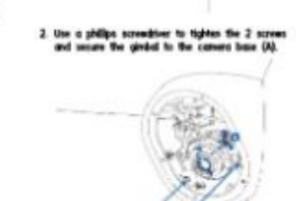
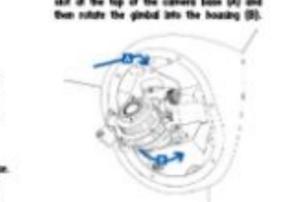
Mounting the Camera Gimbal to the Base

Once the camera base is mounted in place, install the gimbal back into the base.

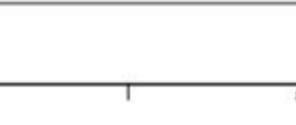
- Slide the back of the top of the gimbal into the slot at the top of the camera base (A) and then rotate the gimbal into the housing (B).



Once the camera base is mounted in place, install the gimbal back into the base.



- Attach the layard to the layard hook of the bottom of the camera base (A).
- Connect the LED cable to the connector on the front cover (B).
- If you are using the built-in microphone, connect the microphone audio cable to the connector on the front cover (B).
- Fit the front cover into place (C).
- Secure the front cover to the camera base by tightening the 6 screws with the supplied driver.



H5A SERIES MOUNTING DETAIL

Cover View

Wall Plate View

Top View

Rear View

Installing the Dome Cover

1. Dome cover: Vandal resistant dome cover. Tamper resistant screws.
2. Two captive screws to fit the dome cover to the base.
3. Side cable entry cover: Covers the side cable entry hole.

Notes:

- Be careful not to touch or scratch the dome bubble. Any marks or fingerprints on the dome bubble will cause unwanted reflections in the IR model.
- Attach the layard to the dome cover.
- Remove the plastic cover on the inside of the dome bubble.
- Attach the dome cover to the base by tightening the screws with the T20 key.
- Remove the plastic cover on the dome bubble.

Mounting the Dome Camera

Mounting the Dome Camera using the Bottom Cable Entry Hole

Perform the following steps if the required cables will be coming out of the mounting surface. Use this procedure on surfaces that can easily be cut, such as aluminum, and when the cables should be kept out of sight.

1. Use the mounting template to drill 3 mounting holes and one cable entry hole into the mounting surface.
2. Pull the cables through the cable entry hole in the mounting surface.
3. If a flush mount with the surface is preferred, remove the wall plate gasket.
4. Drive 3 screws to fasten the wall plate to the ceiling or wall. **NOTE:** It is recommended that silicone sealant be applied around the edges of the wall plate gasket to prevent moisture from entering the mounting surface.
5. Insert the sealing grommet with the required cables pulled through into the cable entry hole on the bottom of the camera. For more information, see *Connecting Cables* through the *Sealing Grommet* on the previous page.
6. Mount the camera body to the wall plate with the wall plate mounting screws.

Notes:

- 1. Camera mounts: Points for mounting the camera to the wall plate.
- 2. Cable entry hole: An entry hole for the cables required for camera operation.
- 3. Mounting holes.

Holes for mounting the wall plate to the following:

- A. UK standard single gang box
- B. Octagon gang box
- C. 4" gang box
- D. Mounting surface
- E. US standard single gang box

Bottom View - In-Ceiling

1. microSD card slots (x2) - Accepts up to two microSD cards for onboard storage. Insert microSD cards so the metal contacts are facing inward.
2. Clamps - Spring loaded locking mechanisms that secure the camera to the mounting surface.
3. Lens - The camera lens is housed behind a protective window.

Preparing the Camera for Installation

Note: Be careful not to scratch the dome bubble.

1. Place the camera on a flat surface with the dome facing up.
2. Use the T20 star key to loosen the 4 tamper resistant screws and then remove the dome cover.
3. Remove the protection foam material inside the dome cover. Remove the plastic protection film from the inside of the dome cover.
4. If you are planning to use onboard storage, insert an SD card into one of the SD card slots on the PTZ camera.
5. Use a screw driver to push each of the clamps into the dome camera until the spring is fully compressed (A), then turn the clamp into the ready position (B).

Cutting the Mounting Hole

Note: This procedure is not required if you are planning to install the camera with a metal ceiling panel.

1. Use the mounting template to cut a hole in the mounting surface.
2. Remove the mounting template and pull the required cables through the mounting hole.

Installing the Dome Cover

1. Align the notches on the base with the notch opening on the dome cover. The dome cover should be flush against the camera base.
2. Attach the dome cover to the base by tightening the screws with the star-shaped driver.
3. Remove the protective film from the dome cover.

Note: Be careful not to scratch the dome bubble.

H5A-PTZ IN-CEILING MOUNTING DETAIL

Overview

Connecting Cables

- Refer to the diagrams in the Overview section for the location of the different connectors.
- To connect the cables required for proper operation, complete the following:

Note: The in-ceiling PTZ camera does not support cables with boots and strain reliefs.

1. Remove the cable connector cover from the top of the camera.
2. If there are external input or output devices that need to be connected to the camera (for example: door contacts, relays, etc.), connect the devices to the camera I/O connector cable.
3. Connect power using one of the following methods:
 - Power over Ethernet (PoE) Power - Connect an Ethernet network cable from the camera to a PoE injector or switch.
 - External Power - Connect a 24 V DC or 24 V AC (RMS) auxiliary power source that supports up to 50 W or 75 VA.

Important: When using PoE to power the camera, you must ensure that you have selected the correct option on the PoE mode switch for the type of PoE device you are using. For more information, see *PoE Power Mode Switch*.

Mounting the PTZ Dome Camera

- After the cable connections have been made, mount the PTZ dome camera.

Notes:

- If you need to remove the RJ45 connector from the camera to check a network issue, use a small screwdriver to depress locking tab and release the RJ45 plug before pulling upwards.

Installing the Dome Cover

Note: Be careful not to scratch the dome bubble.

1. Push the PTZ dome camera into the mounting hole (A).
2. Use a screwdriver to release the 3 clamps to secure the camera into place (B).

Notes:

- 1. microSD card slots (x2) - Accepts up to two microSD cards for onboard storage. Insert microSD cards so the metal contacts are facing inward.
- 2. Clamps - Spring loaded locking mechanisms that secure the camera to the mounting surface.
- 3. Lens - The camera lens is housed behind a protective window.

Preparing the Camera for Installation

Note: Be careful not to scratch the dome bubble.

1. Place the camera on a flat surface with the dome facing up.
2. Use the T20 star key to loosen the 4 tamper resistant screws and then remove the dome cover.
3. Remove the protection foam material inside the dome cover. Remove the plastic protection film from the inside of the dome cover.
4. If you are planning to use onboard storage, insert an SD card into one of the SD card slots on the PTZ camera.
5. Use a screw driver to push each of the clamps into the dome camera until the spring is fully compressed (A), then turn the clamp into the ready position (B).

Cutting the Mounting Hole

Note: This procedure is not required if you are planning to install the camera with a metal ceiling panel.

1. Use the mounting template to cut a hole in the mounting surface.
2. Remove the mounting template and pull the required cables through the mounting hole.

Installing the Dome Cover

1. Align the notches on the base with the notch opening on the dome cover. The dome cover should be flush against the camera base.
2. Attach the dome cover to the base by tightening the screws with the star-shaped driver.
3. Remove the protective film from the dome cover.

Note: Be careful not to scratch the dome bubble.

H4A SERIES CAMERA MOUNTING DETAIL

Pendant Wall/Corner Mount

Pendant Wall/Surface Mount

Installing the Pendant Mounting Adapter

Use the following procedure to mount the pendant adapter (H4MM-40-PEND1) into a pendant wall mount (HPTZ-4MT-WALL1) or NPT mount (HPTZ-4MT-NPT1).

Connect the pendant adapter to the mount. In one motion, raise the adapter into the mount (A) and then turn clockwise to lock the adapter in place (B).

Notes:

- Use a screwdriver to tighten the 3 set screws at the top of the mount to secure the pendant adapter to the mount (C).
- (Recommended) Attach a safety layard from the pendant mount adapter to the layard anchor on the camera base to prevent the camera from falling. See *Connecting Cables* on page 21.
- Push the camera base into the pendant adapter so that the 3 set screws in the camera base align with the screw holes in the pendant adapter.
- Use a screwdriver to turn the 3 set screws clockwise by 90° and secure the camera to the pendant mount adapter.
- Align the notches on the dome cover with the release tab on the pendant mount adapter. Tighten the set screws to secure the dome cover in place.

H4A SERIES CAMERA MOUNTING DETAIL

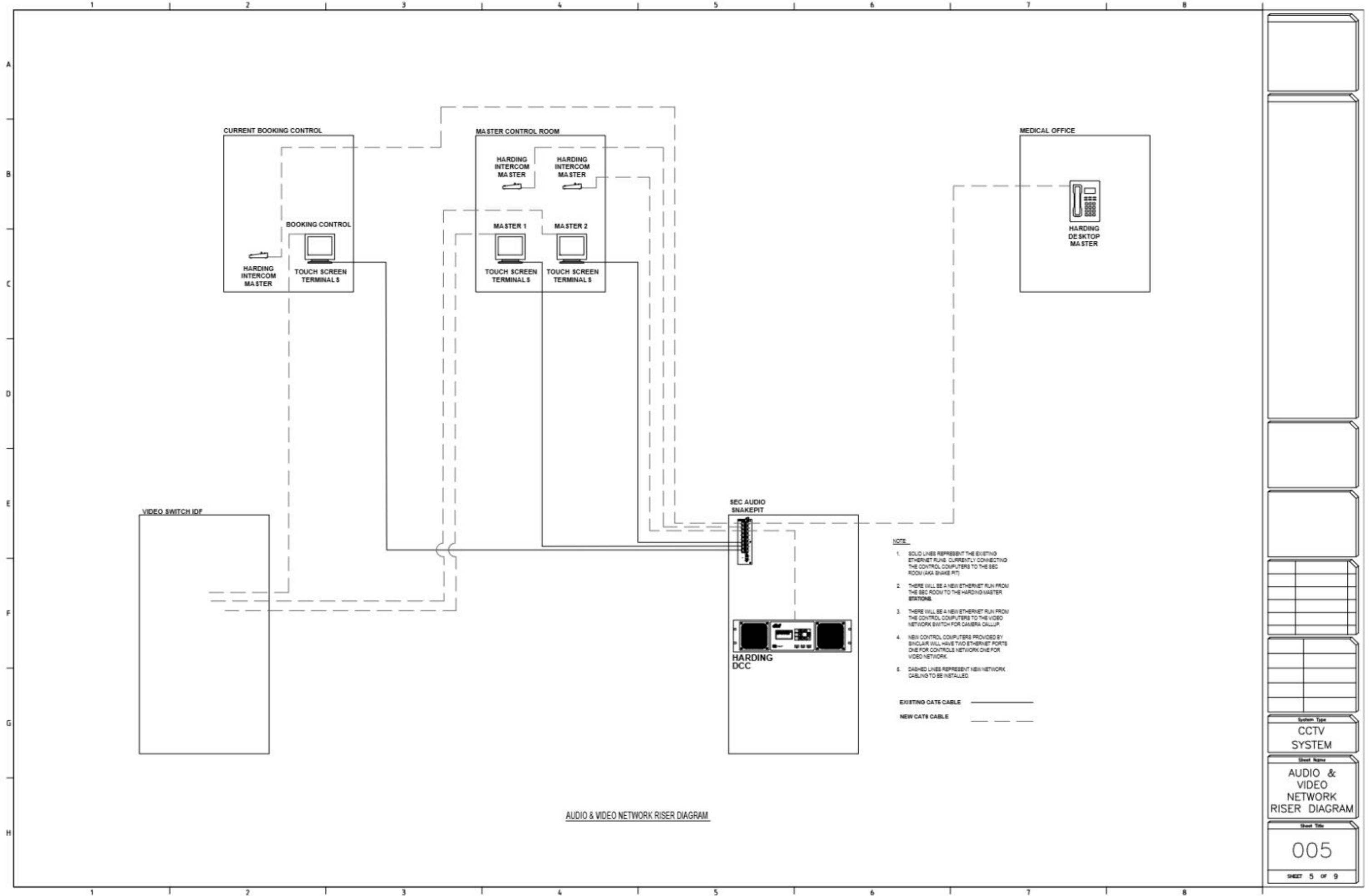
Installing the Surface Mount Adapter

Follow this procedure to route camera cables and install the surface mount adapter (H4MM-40-SOME1) to the mounting surface.

1. Use the supplied mounting template to determine the cable entry location. Drill a hole in the mounting surface and route the conduit and cables through the hole. Install the conduit and fit fitting as instructed by the manufacturer.
2. Drill 4 mounting holes as marked on the mounting template.
3. Pull the cables through the rear cable entry hole on the surface mount adapter.
4. Use a screwdriver to secure the mounting adapter to the mounting surface with the 4 mounting screws.
5. Secure the conduit to the surface mount adapter with the lock nut.
6. (Recommended) Attach a safety layard from the surface mount adapter to the layard anchor on the camera base to prevent the camera from falling. See *Connecting Cables* on page 21.
7. Push the camera base into the surface mount adapter so that the 3 set screws in the camera base align with the screw holes in the surface mount adapter.
8. Tighten the set screws to secure the dome cover in place.

Notes:

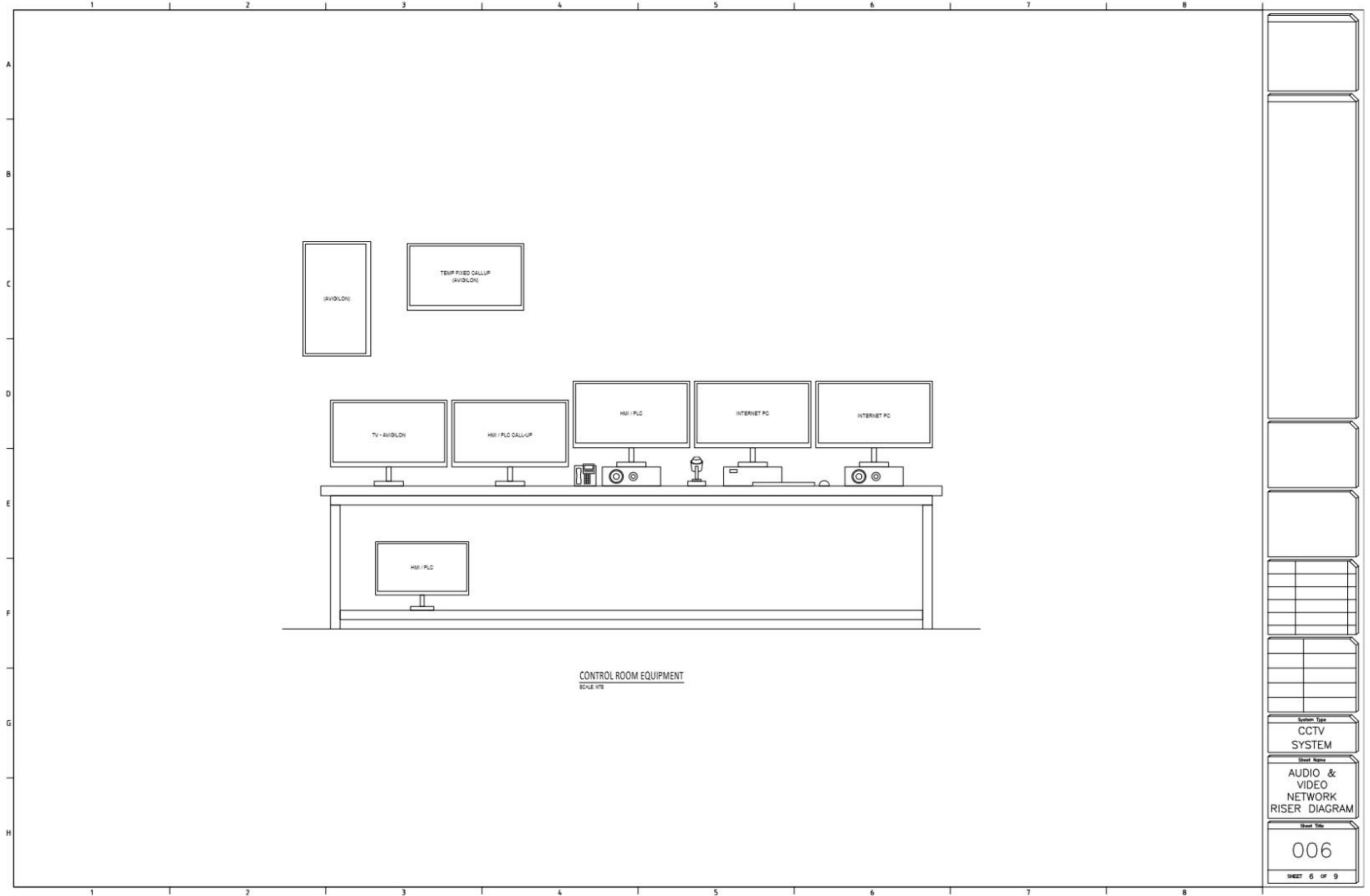
- Use a screwdriver to tighten the 3 set screws at the top of the mount to secure the pendant adapter to the mount (C).
- (Recommended) Attach a safety layard from the pendant mount adapter to the layard anchor on the camera base to prevent the camera from falling. See *Connecting Cables* on page 21.
- Push the camera base into the pendant adapter so that the 3 set screws in the camera base align with the screw holes in the pendant adapter.
- Use a screwdriver to turn the 3 set screws clockwise by 90° and secure the camera to the pendant mount adapter.
- Align the notches on the dome cover with the release tab on the pendant mount adapter. Tighten the set screws to secure the dome cover in place.



- NOTE.**
1. SOLID LINES REPRESENT THE EXISTING ETHERNET RUNS CURRENTLY CONNECTING THE CONTROL COMPUTERS TO THE SEC ROOM (AKA SNAKE PIT)
 2. THERE WILL BE A NEW ETHERNET RUN FROM THE SEC ROOM TO THE HARDING MASTER STATIONS.
 3. THERE WILL BE A NEW ETHERNET RUN FROM THE CONTROL COMPUTERS TO THE VIDEO NETWORK SWITCH FOR CAMERA CALLUP.
 4. NEW CONTROL COMPUTERS PROVIDED BY SHGLAR WILL HAVE TWO ETHERNET PORTS ONE FOR CONTROLS NETWORK ONE FOR VIDEO NETWORK.
 5. DASHED LINES REPRESENT NEW NETWORK CABLING TO BE INSTALLED.
- EXISTING CAT5 CABLE _____
- NEW CAT5 CABLE - - - - -

AUDIO & VIDEO NETWORK RISER DIAGRAM

System Type	CCTV SYSTEM
Sheet Name	AUDIO & VIDEO NETWORK RISER DIAGRAM
Sheet Title	005
SHEET 5 OF 9	



(AVIDON)

TEMP FIXED CALLUP
(AVIDON)

TV - AVIDON

HMI / PLO CALL-UP

HMI / PLO

INTERNET PC

INTERNET PC

HMI / PLO

CONTROL ROOM EQUIPMENT

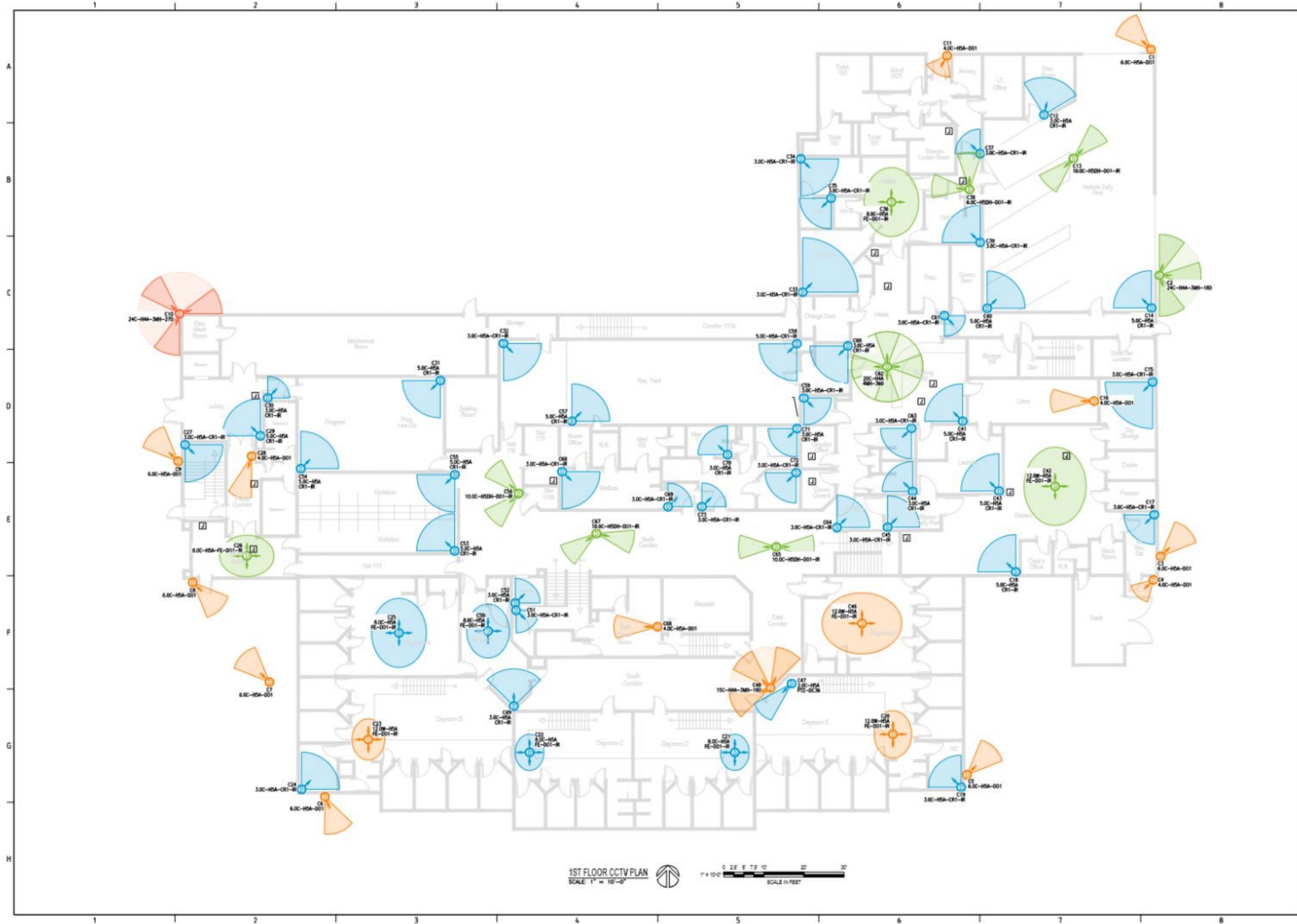
SCALE 1/8"



System Type
**CCTV
SYSTEM**

Sheet Name
**AUDIO &
VIDEO
NETWORK
RISER DIAGRAM**

Sheet Title
006



A
B
C
D
E
F
G
H

1 2 3 4 5 6 7 8

1ST FLOOR CCTV PLAN
SCALE: 1" = 10'-0"



System Type	CCTV SYSTEM
Sheet Name	1ST FLOOR CCTV PLAN
Sheet Title	101
Sheet No.	SHEET 7 OF 9



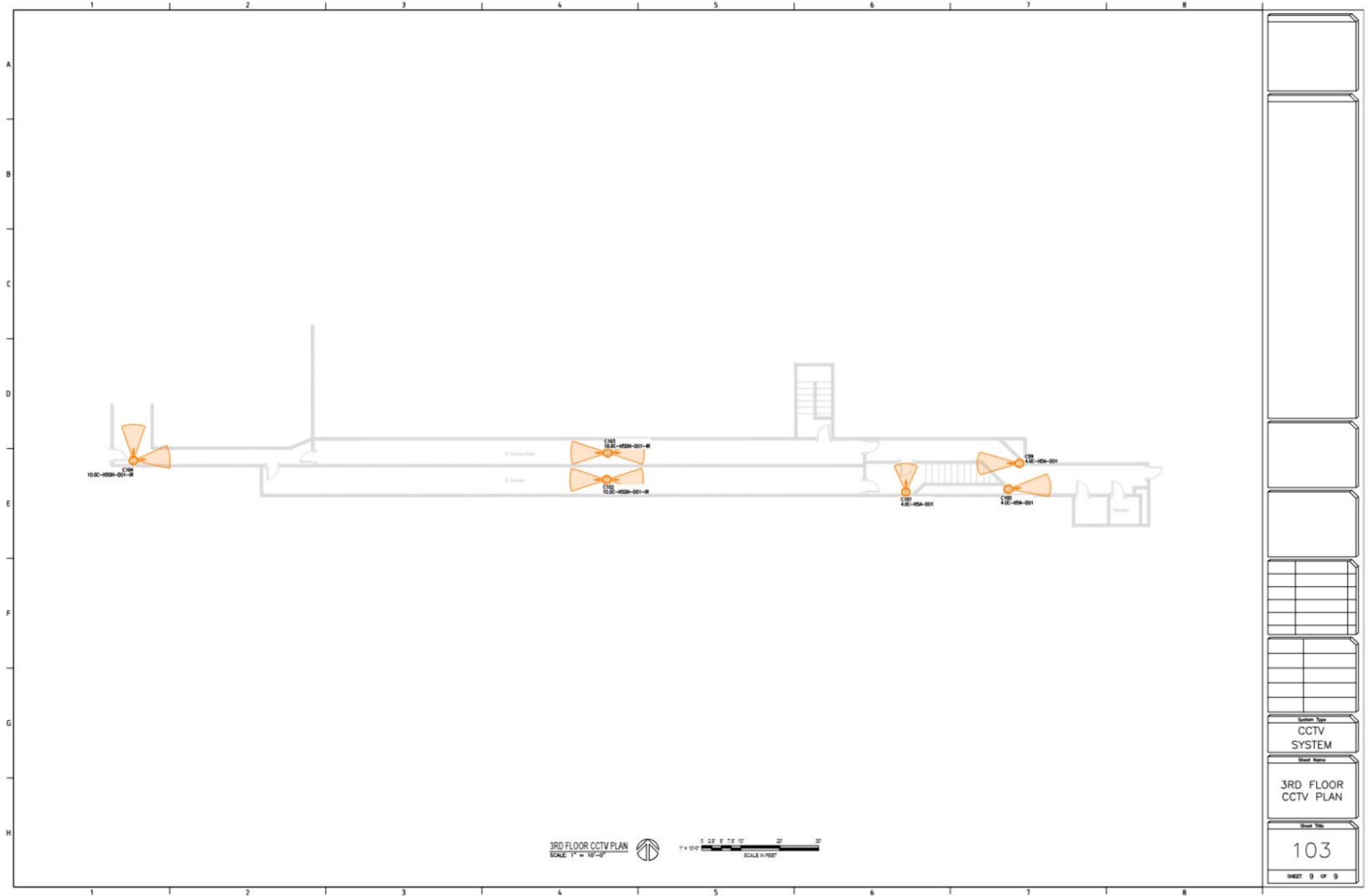
2ND FLOOR CCTV PLAN
SCALE: 1" = 10'-0"



System Type
CCTV
SYSTEM

Sheet Name
2ND FLOOR
CCTV PLAN

Sheet Title
102
SHEET 8 OF 9



3RD FLOOR CCTV PLAN
SCALE: 1" = 10'-0"

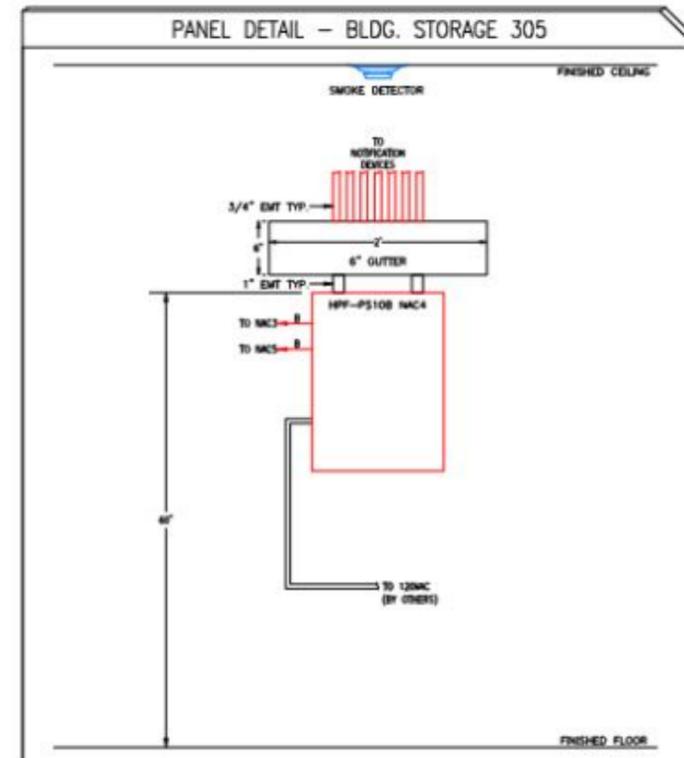
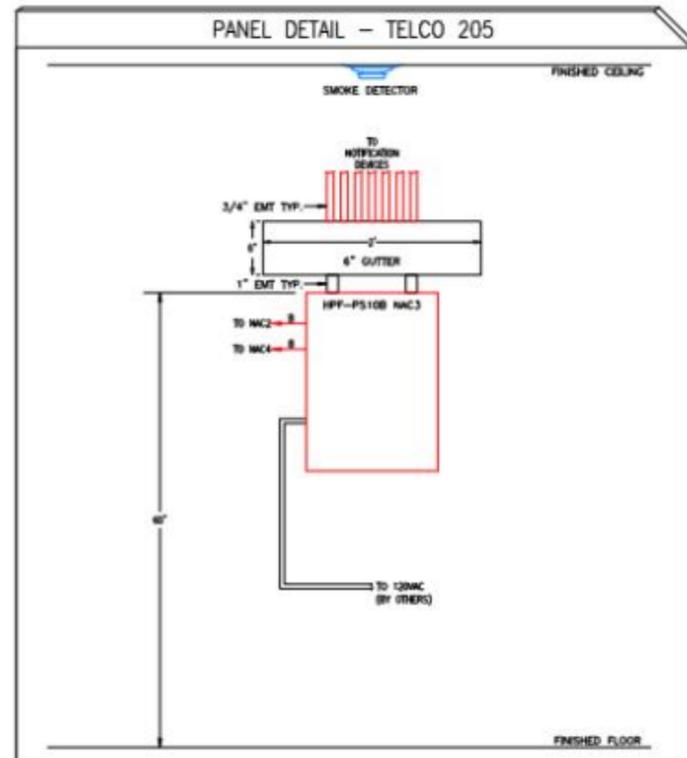
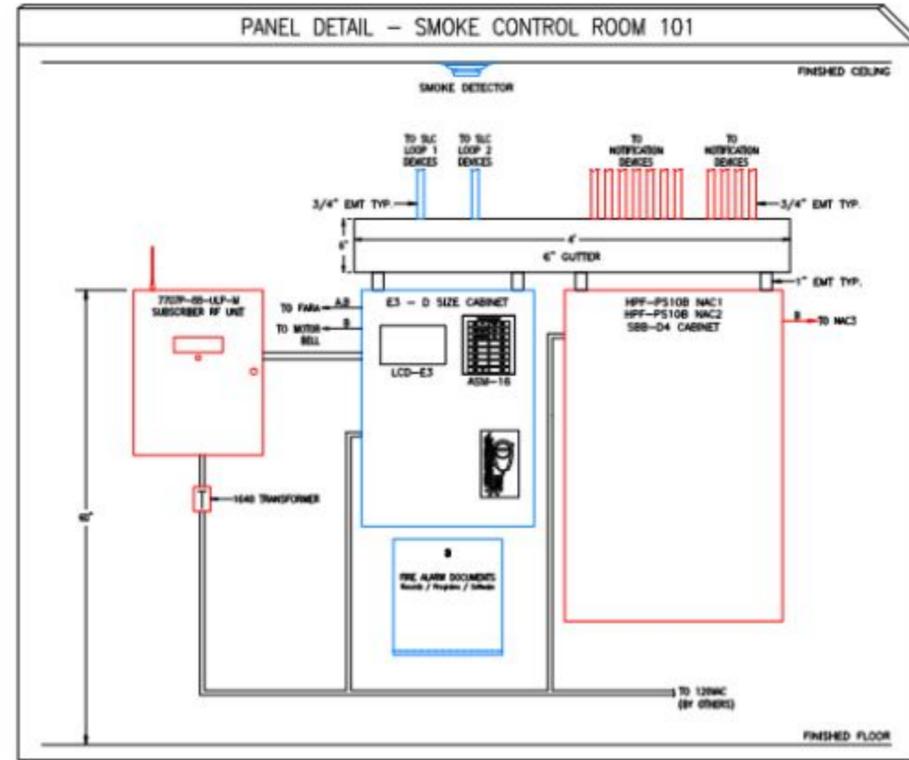


System Type
CCTV
SYSTEM

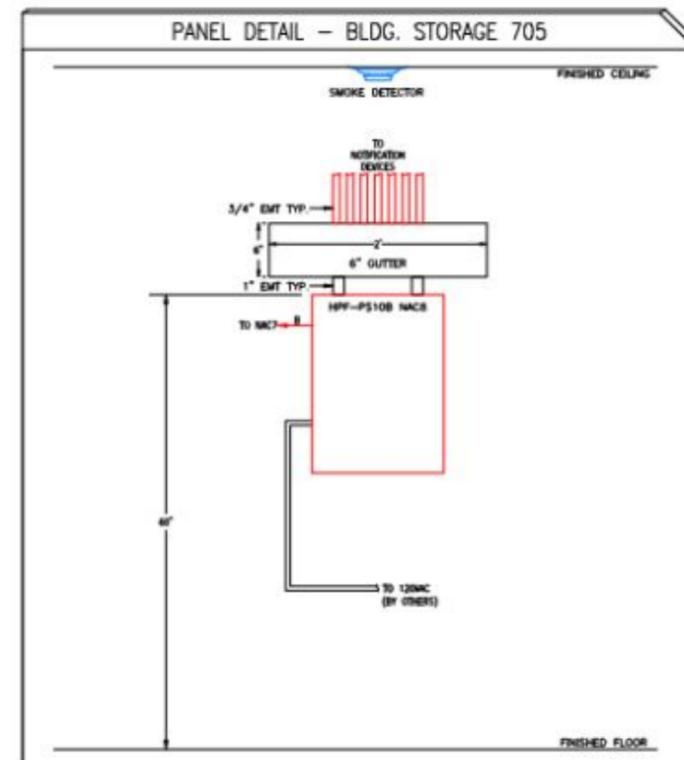
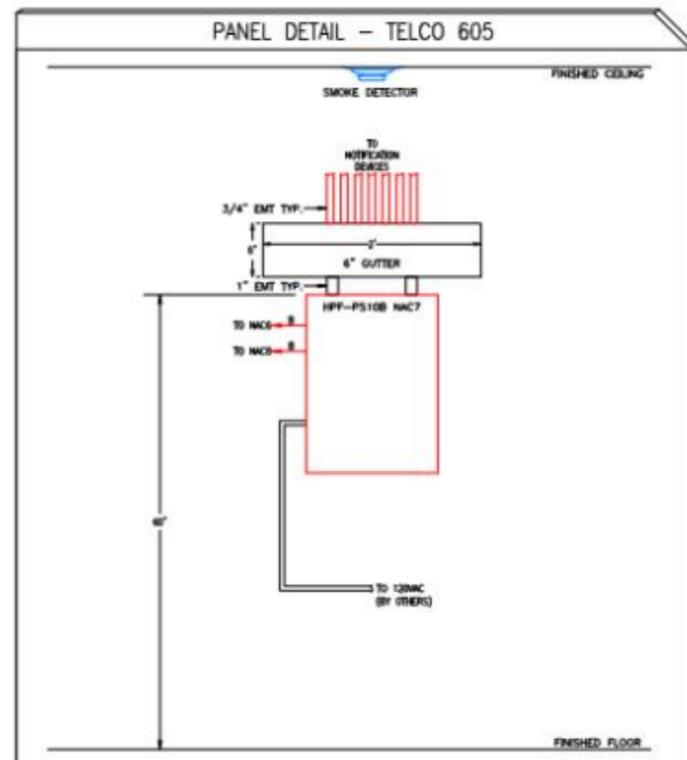
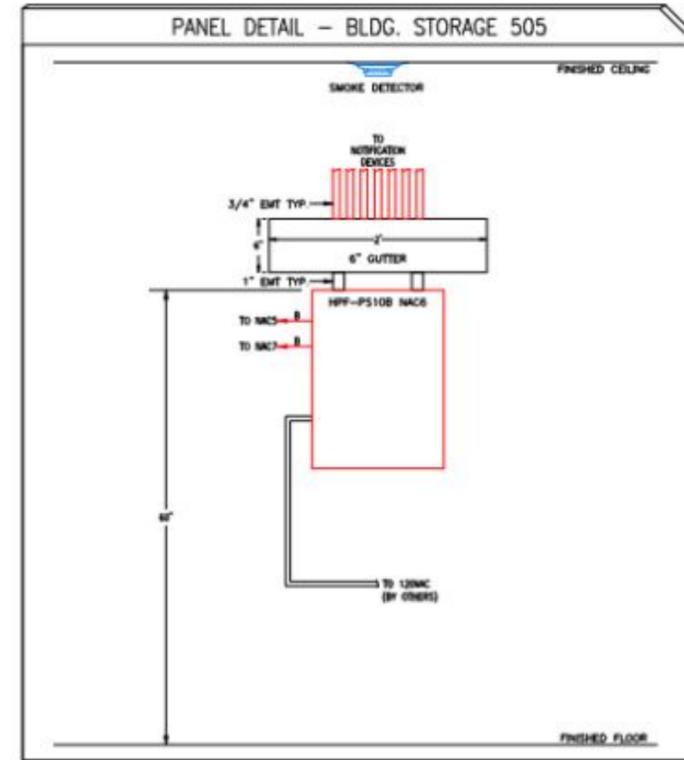
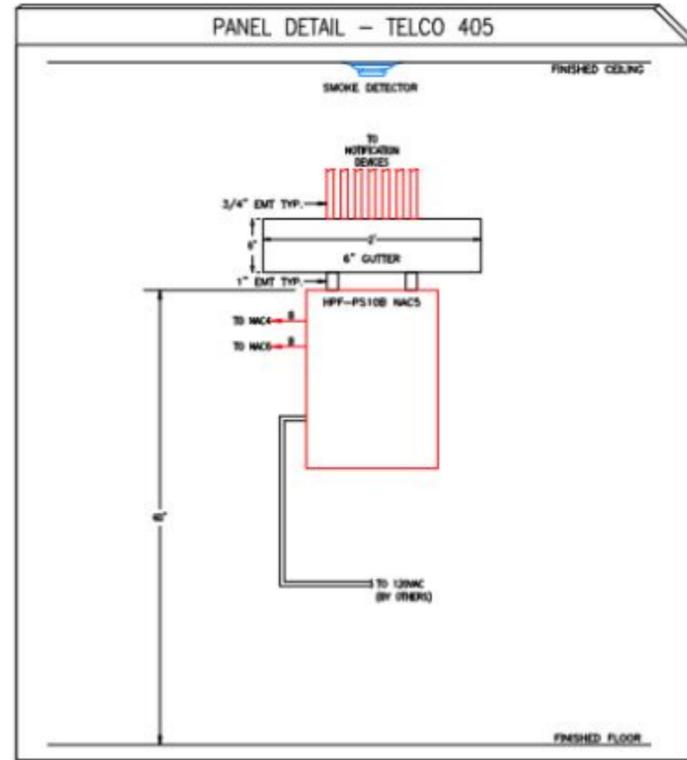
Sheet Name
3RD FLOOR
CCTV PLAN

Sheet Title
103
SHEET 9 OF 9

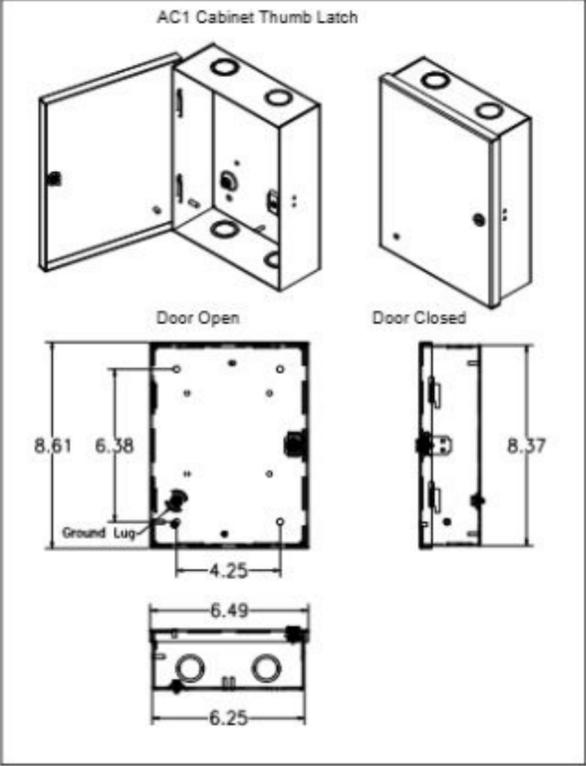
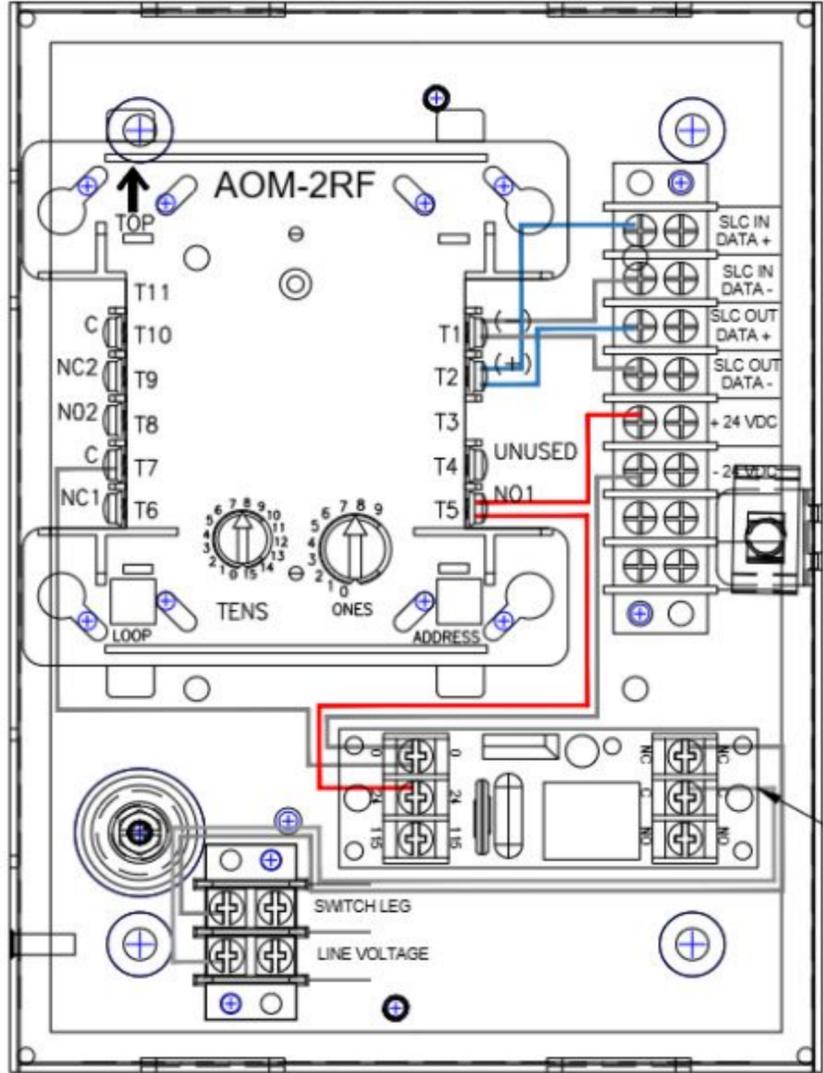
FIRE ALARM SYSTEM



System Type	FIRE ALARM SYSTEM
Sheet Name	PANEL DETAILS
Sheet Number	002
SHEET 2 OF 31	

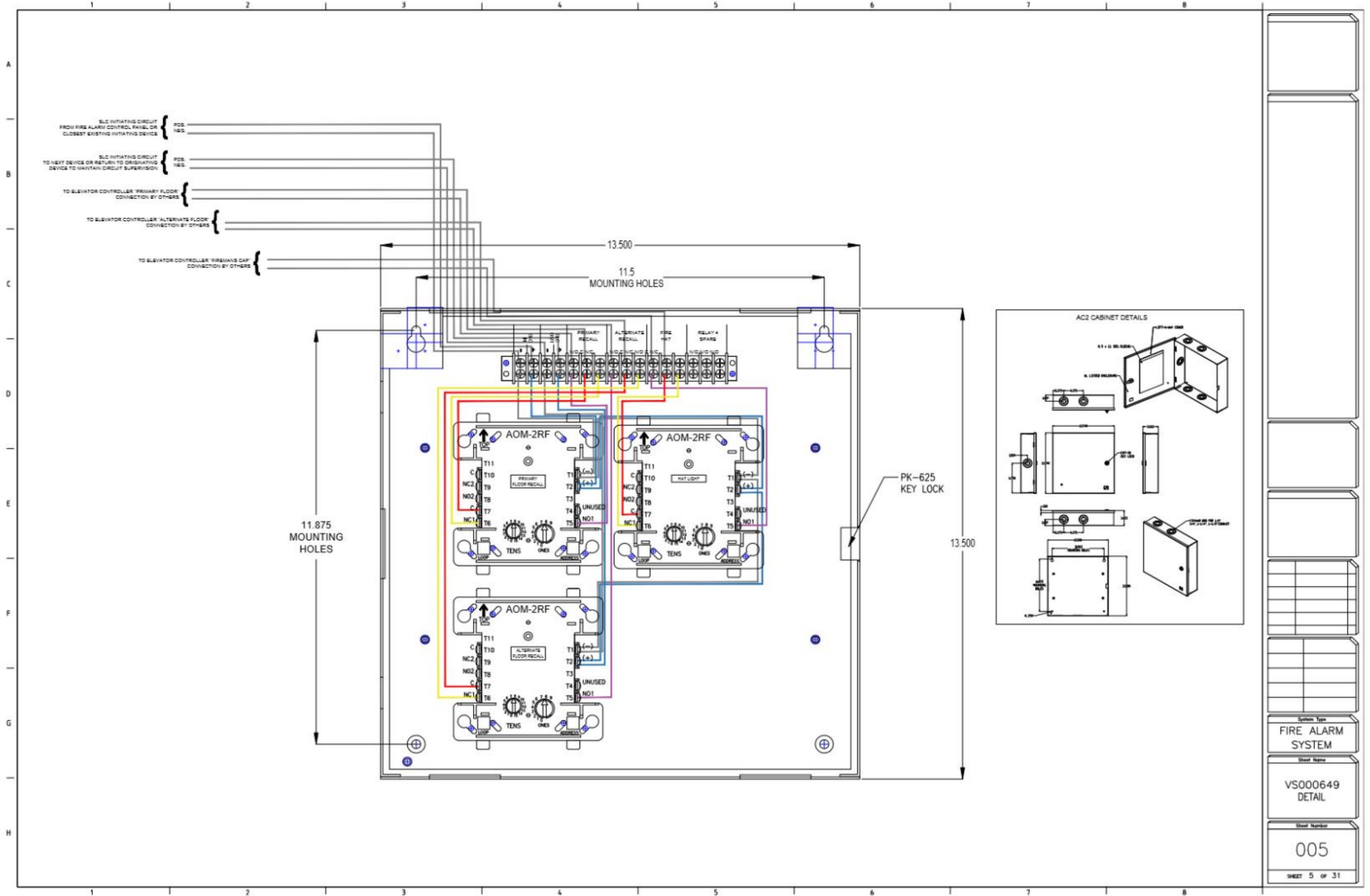


System Type	FIRE ALARM SYSTEM
Sheet Name	PANEL DETAILS
Sheet Number	003
SHEET 3 OF 31	

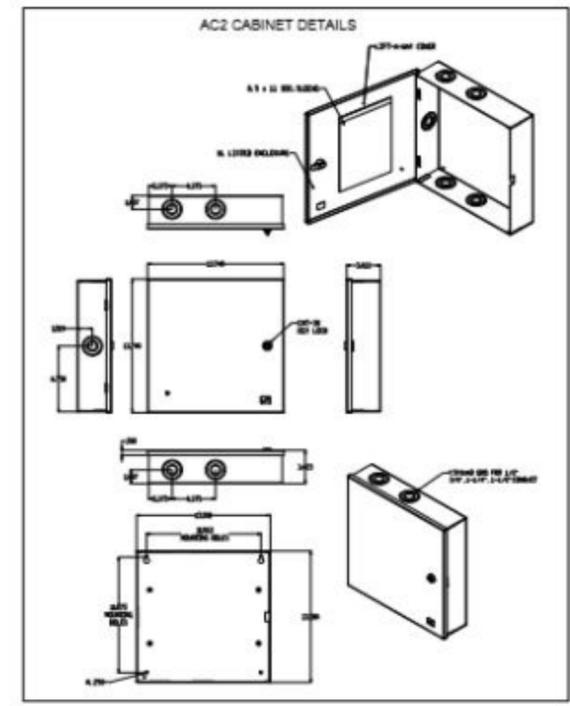


MOUNT TO BACKPLATE WITH STANDOFF

System Type	FIRE ALARM SYSTEM
Sheet Name	VS000645 DETAIL
Sheet Number	004
SHEET 4 OF 31	



SLC INITIATING CIRCUIT FROM FIRE ALARM CONTROL PANEL OR CLOSEST EXISTING INITIATING DEVICE { POS NEG
 SLC INITIATING CIRCUIT TO NEXT DEVICE OR RETURN TO ORIGINATING DEVICE TO MAINTAIN CIRCUIT SUPERVISION { POS NEG
 TO ELEVATOR CONTROLLER 'PRIMARY FLOOR' CONNECTION BY OTHERS {
 TO ELEVATOR CONTROLLER 'ALTERNATE FLOOR' CONNECTION BY OTHERS {
 TO ELEVATOR CONTROLLER 'FIREMAN'S CAP' CONNECTION BY OTHERS {



System Type	FIRE ALARM SYSTEM
Sheet Name	VS000649 DETAIL
Sheet Number	005
SHEET 5 OF 31	

NOTIFICATION CIRCUIT CALCULATIONS

PANEL TYPE - LOCATION	HPF-PS10B NAC5 - 4TH FLOOR	77	HPF-PS10B NAC6 - 5TH FLOOR	75	HPF-PS10B NAC7 - 6TH FLOOR	89	HPF-PS10B NAC8 - 7TH FLOOR	88																				
PANEL CIRCUIT INFORMATION	3.0 A max. each ckt. - 10A Total 7 ckt's available Total Amps: 0.803		3.0 A max. each ckt. - 10A Total 7 ckt's available Total Amps: 0.305		3.0 A max. each ckt. - 10A Total 7 ckt's available Total Amps: 0.999		3.0 A max. each ckt. - 10A Total 7 ckt's available Total Amps: 0.789																					
NOTIFICATION CIRCUIT #	N29	N30	N31	N32	N33	N34	N35	N36	N37	N38	N39	N40	N41	N42	N43	N44	N45	N46	N47	N48	N49	N50	N51	N52	N53	N54	N55	N56
TOTAL # OF DEVICES	11	12	12	12	12	10	10	11	12	12	12	10	9	10	11	12	12	10	8	7	9	10	11	13	10	8	7	9
CURRENT DRAW	1.151	1.222	1.065	1.726	1.043	1.253	1.151	1.222	1.065	1.726	1.043	0.835	1.253	1.151	1.222	1.065	1.080	0.827	0.719	0.935	1.043	1.077	1.108	1.080	0.827	0.719	0.935	
CIRCUIT SPARE CAPACITY	82%	59%	65%	42%	65%	65%	58%	82%	59%	65%	42%	65%	65%	58%	82%	62%	64%	72%	76%	60%	65%	64%	63%	64%	72%	76%	69%	
WIRE GAUGE	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg	14awg
VOLTAGE DROP%	6.8%	8.0%	8.4%	11.3%	10.2%	10.9%	11.3%	6.8%	8.0%	8.4%	11.3%	10.2%	9.8%	11.5%	6.8%	8.0%	8.4%	8.4%	7.0%	6.6%	6.6%	5.5%	7.0%	8.7%	8.4%	7.0%	6.8%	8.6%
VOLTAGE DROP	1.63	1.92	2.01	2.71	2.46	2.62	2.75	1.63	1.92	2.01	2.71	2.46	2.35	2.75	1.63	1.92	2.01	1.93	1.69	1.58	2.05	1.31	1.89	2.08	1.93	1.89	1.58	2.05
END OF LINE VOLTAGE	22.37	22.08	21.99	21.29	21.54	21.38	21.25	22.37	22.08	21.99	21.29	21.54	21.65	21.25	22.37	22.08	21.99	22.47	22.31	22.42	21.95	22.69	22.31	21.91	22.47	22.31	22.42	21.95
MAXIMUM WIRE LENGTH (FEET)	225	250	300	250	375	400	350	225	250	300	250	375	400	300	225	250	300	225	325	300	350	200	250	300	225	325	350	300

HPF-PS10B NAC5 BATTERY CALCULATIONS

BATTERY STANDBY REQUIREMENTS

QTY	Model #	Candela	Description	Type	Standby Current Amps	Alarm Current Amps	Standby Current Amps	Alarm Current Amps
1	HPF-PS10B		10 AMP NOTIFICATION POWER SUPPLY	PAN	0.075	0.150	0.075	0.150
1	SWL	15cd	WALL MOUNT STROBE	SWL	0.000	0.043	0.000	0.043
10	PC2WL	15cd	CEILING MOUNT HORN STROBE	SWL	0.000	0.071	0.000	0.710
1	PC2WL	30cd	CEILING MOUNT HORN STROBE	SWL	0.000	0.060	0.000	0.060
3	SCWL	75cd	CEILING MOUNT STROBE	SWL	0.000	0.111	0.000	0.333
2	P2WL-LF	15cd	WALL MOUNT SOUNDER STROBE	SWL	0.000	0.068	0.000	0.136
3	P2WL-LF	177cd	WALL MOUNT SOUNDER STROBE	SWL	0.000	0.325	0.000	0.975
3F	HWL-LF	0	LF SOUNDER	SWL	0.000	0.108	0.000	0.324
77	Total						0.075	0.803

NOTES: HPF-PS10B NAC5 - 4TH FLOOR
24v 7ah Battery Capacity

Total Standby Current: 0.075
 X standby hours needed: 24
 Total: 1.8

Total Alarm Current: 0.803
 X Derating factor: 1.2
 Total Amp-Hours Needed: 3.022
 Battery Requirement: 7ah

HPF-PS10B NAC6 BATTERY CALCULATIONS

BATTERY STANDBY REQUIREMENTS

QTY	Model #	Candela	Description	Type	Standby Current Amps	Alarm Current Amps	Standby Current Amps	Alarm Current Amps
1	HPF-PS10B		10 AMP NOTIFICATION POWER SUPPLY	PAN	0.075	0.150	0.075	0.150
1	SWL	15cd	WALL MOUNT STROBE	SWL	0.000	0.043	0.000	0.043
10	PC2WL	15cd	CEILING MOUNT HORN STROBE	SWL	0.000	0.071	0.000	0.710
1	PC2WL	30cd	CEILING MOUNT HORN STROBE	SWL	0.000	0.060	0.000	0.060
3	SCWL	75cd	CEILING MOUNT STROBE	SWL	0.000	0.111	0.000	0.333
2	P2WL-LF	15cd	WALL MOUNT SOUNDER STROBE	SWL	0.000	0.068	0.000	0.136
3	P2WL-LF	177cd	WALL MOUNT SOUNDER STROBE	SWL	0.000	0.325	0.000	0.975
3F	HWL-LF	0	LF SOUNDER	SWL	0.000	0.108	0.000	0.324
75	Total						0.075	0.545

NOTES: HPF-PS10B NAC6 - 5TH FLOOR
24v 7ah Battery Capacity

Total Standby Current: 0.075
 X standby hours needed: 24
 Total: 1.8

Total Alarm Current: 0.545
 X Derating factor: 1.2
 Total Amp-Hours Needed: 3.011
 Battery Requirement: 7ah

HPF-PS10B NAC7 BATTERY CALCULATIONS

BATTERY STANDBY REQUIREMENTS

QTY	Model #	Candela	Description	Type	Standby Current Amps	Alarm Current Amps	Standby Current Amps	Alarm Current Amps
1	HPF-PS10B		10 AMP NOTIFICATION POWER SUPPLY	PAN	0.075	0.150	0.075	0.150
1	SWL	15cd	WALL MOUNT STROBE	SWL	0.000	0.043	0.000	0.043
10	PC2WL	15cd	CEILING MOUNT HORN STROBE	SWL	0.000	0.071	0.000	0.710
1	PC2WL	30cd	CEILING MOUNT HORN STROBE	SWL	0.000	0.060	0.000	0.060
3F	HWL-LF	0	LF SOUNDER	SWL	0.000	0.108	0.000	0.324
89	Total						0.075	0.999

NOTES: HPF-PS10B NAC7 - 6TH FLOOR
24v 7ah Battery Capacity

Total Standby Current: 0.075
 X standby hours needed: 24
 Total: 1.8

Total Alarm Current: 0.999
 X Derating factor: 1.2
 Total Amp-Hours Needed: 3.872
 Battery Requirement: 7ah

HPF-PS10B NAC8 BATTERY CALCULATIONS

BATTERY STANDBY REQUIREMENTS

QTY	Model #	Candela	Description	Type	Standby Current Amps	Alarm Current Amps	Standby Current Amps	Alarm Current Amps
1	HPF-PS10B		10 AMP NOTIFICATION POWER SUPPLY	PAN	0.075	0.150	0.075	0.150
2	SWL	15cd	WALL MOUNT STROBE	SWL	0.000	0.043	0.000	0.086
11	PC2WL	15cd	CEILING MOUNT HORN STROBE	SWL	0.000	0.071	0.000	0.781
1	PC2WL	30cd	CEILING MOUNT HORN STROBE	SWL	0.000	0.060	0.000	0.060
3F	HWL-LF	0	LF SOUNDER	SWL	0.000	0.108	0.000	0.324
88	Total						0.075	0.938

NOTES: HPF-PS10B NAC8 - 7TH FLOOR
24v 7ah Battery Capacity

Total Standby Current: 0.075
 X standby hours needed: 24
 Total: 1.8

Total Alarm Current: 0.938
 X Derating factor: 1.2
 Total Amp-Hours Needed: 2.801
 Battery Requirement: 7ah

System Type
FIRE ALARM SYSTEM

Sheet Name
NOTIFICATION CIRCUIT & BATTERY CALCULATIONS

Sheet Number
007

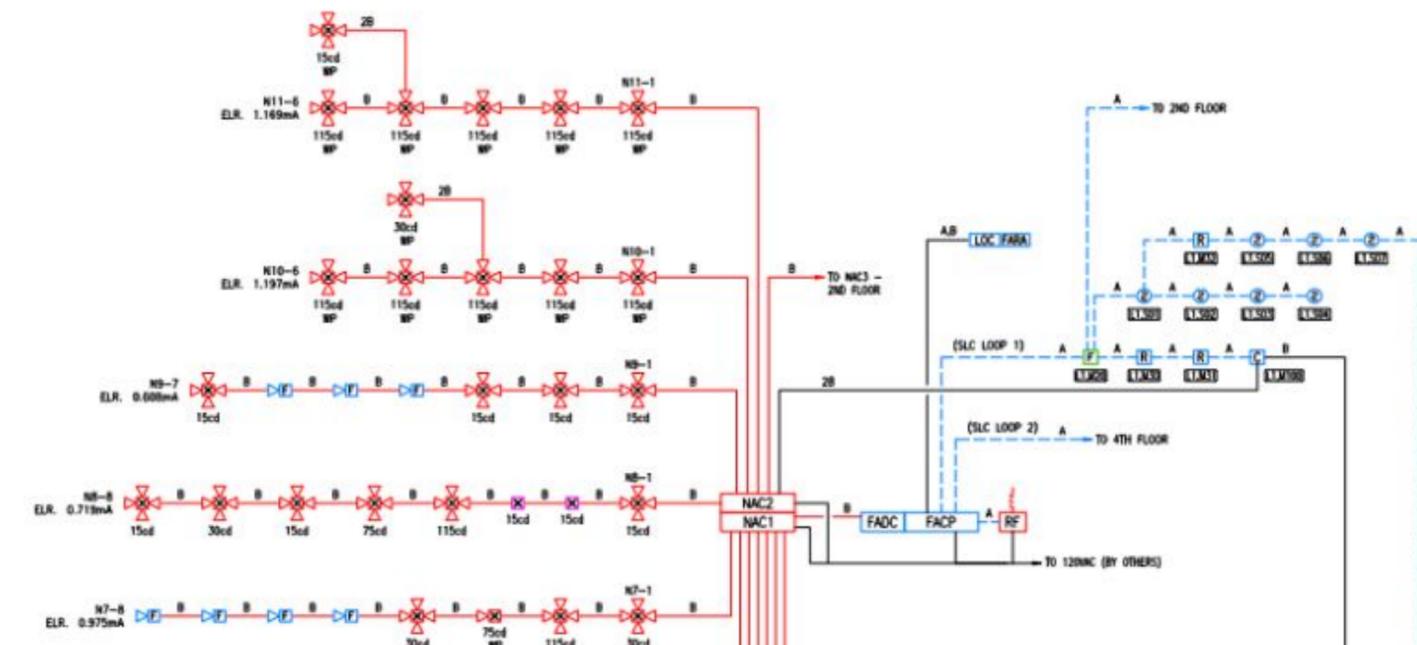
SHEET 7 of 31

FIRST FLOOR

FIRST FLOOR

FIRE ALARM NOTE:

PROTECTION OF SMOKE CONTROL EQUIPMENT, WIRING, POWER WIRING AND DUCTWORK TO BE IN ACCORDANCE WITH IBC SECTION 909.20.6.1 (2-HOUR PROTECTION). ALL WIRING ASSOCIATED WITH SMOKE CONTROL EQUIPMENT, REGARDLESS OF VOLTAGE, SHALL BE FULLY ENCLOSED IN CONTINUOUS RACETRAYS. THIS REQUIREMENT IS IN ADDITION TO ALL REQUIREMENTS OF THE NEC. IDENTIFY ALL CIRCUITS ASSOCIATED WITH MONITORING OR CONTROLLING THE SMOKE CONTROL EQUIPMENT.

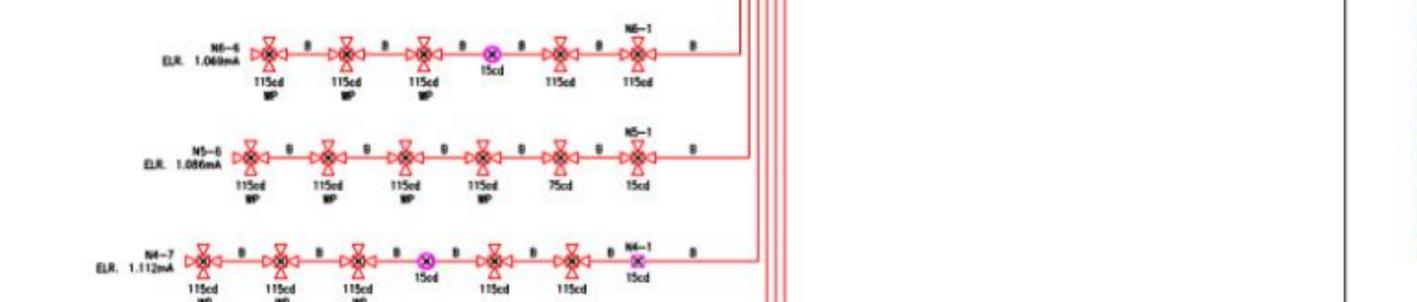


FIRST FLOOR
P1 PARKING LEVEL

FIRST FLOOR
P1 PARKING LEVEL

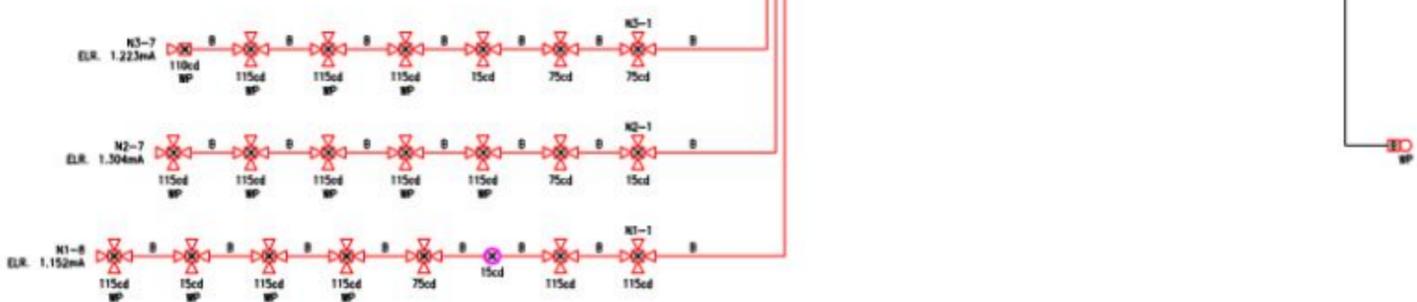
FLAG NOTES:

TO FIRE SMOKE DAMPER CONTROL AND SUPERVISORY CONNECTIONS.



P1 PARKING LEVEL
P2 PARKING LEVEL

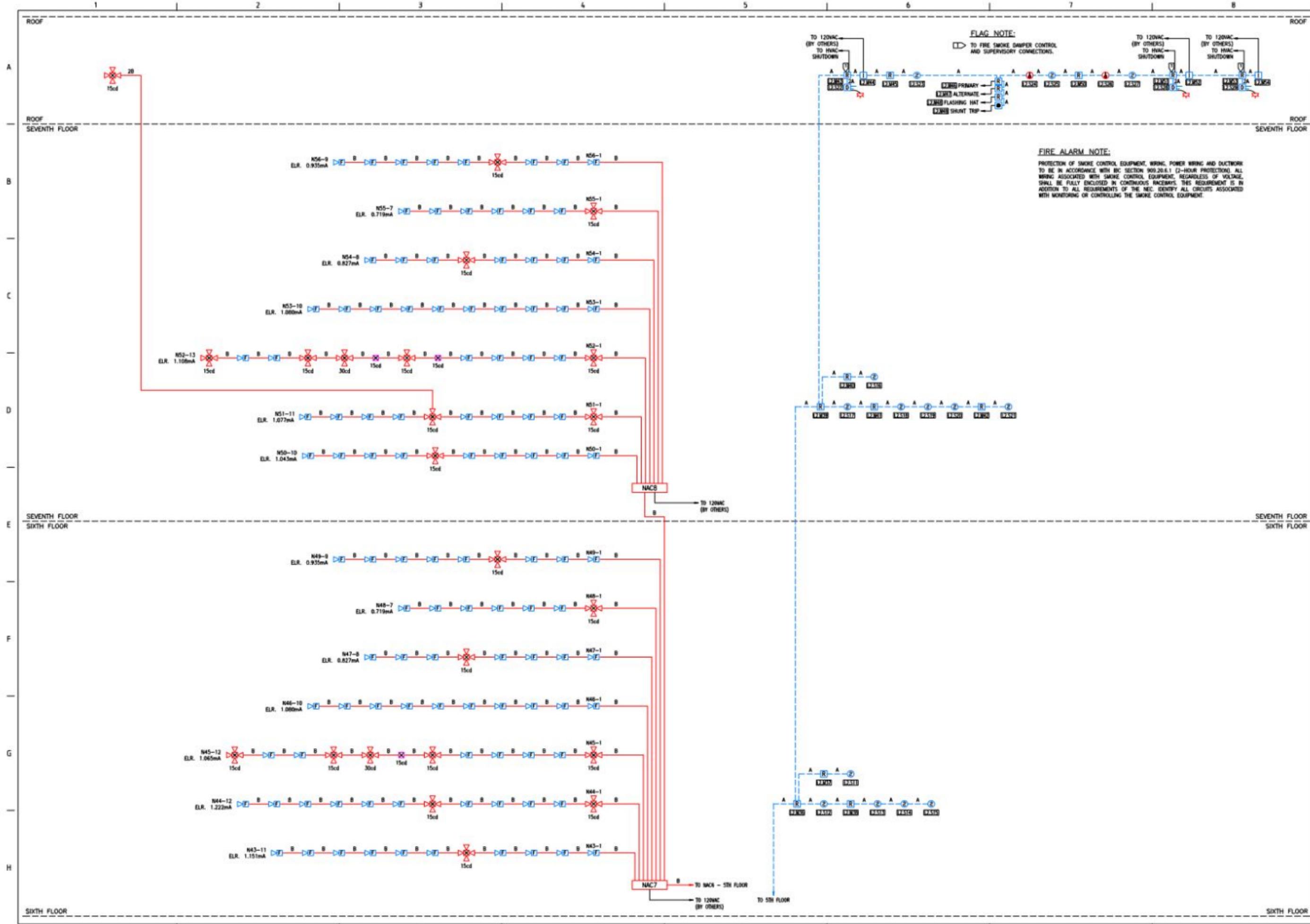
P1 PARKING LEVEL
P2 PARKING LEVEL



P2 PARKING LEVEL

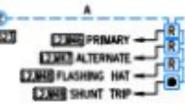
P2 PARKING LEVEL

System Type	FIRE ALARM SYSTEM
Sheet Name	P2 PARKING LEVEL P1 PARKING LEVEL FIRST FLOOR FIRE ALARM RISER
Sheet Number	008
SHEET 8 OF 31	



FLAG NOTE:

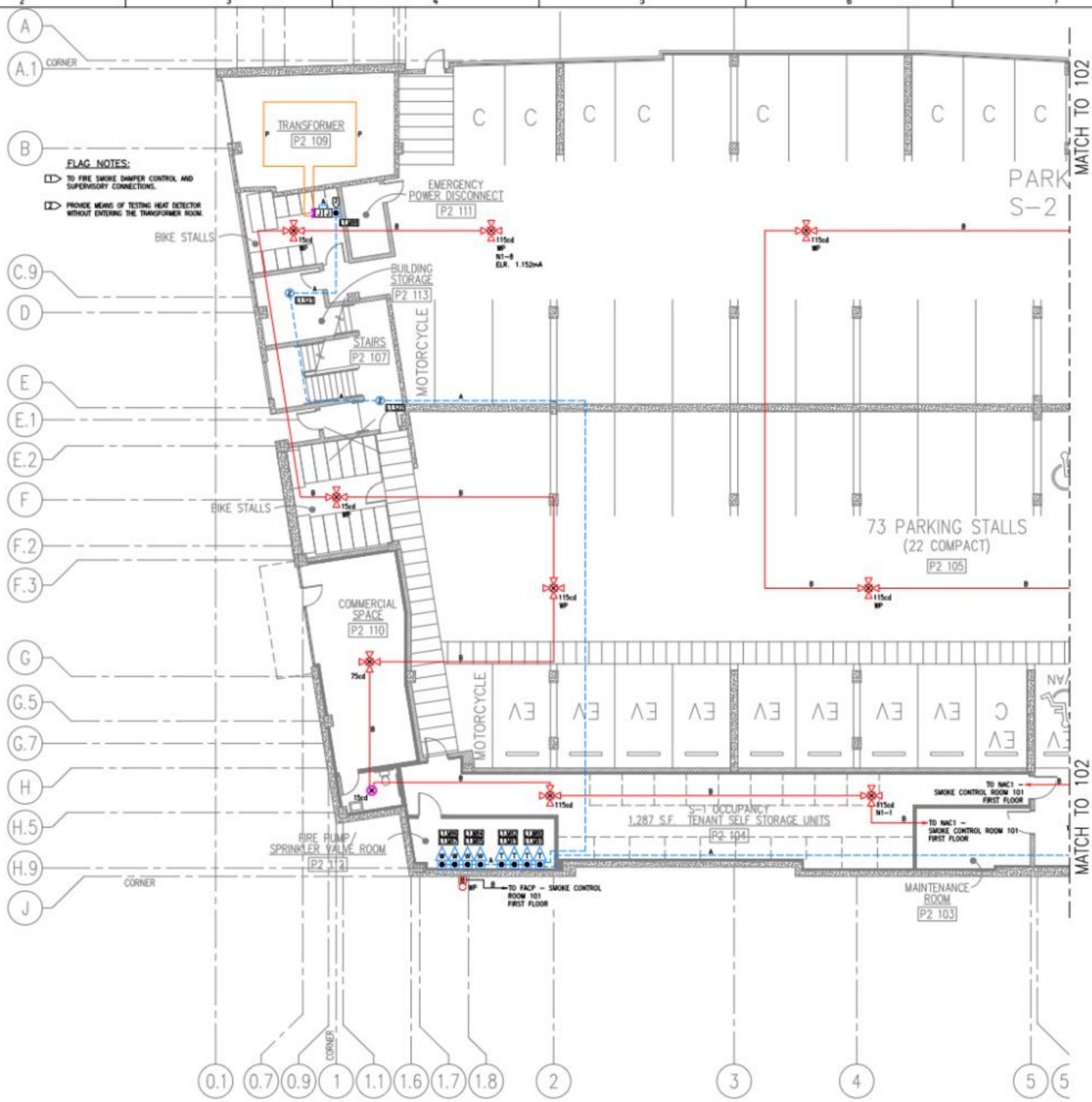
TO FIRE SMOKE DAMPER CONTROL AND SUPERVISORY CONNECTIONS.



FIRE ALARM NOTE:

PROTECTION OF SMOKE CONTROL EQUIPMENT, WIRING, POWER WIRING AND DUCTWORK TO BE IN ACCORDANCE WITH IBC SECTION 903.20.6.1 (2-HOUR PROTECTION). ALL WIRING ASSOCIATED WITH SMOKE CONTROL EQUIPMENT, REGARDLESS OF VOLTAGE, SHALL BE FULLY ENCLOSED IN CONTINUOUS RACEWAYS. THIS REQUIREMENT IS IN ADDITION TO ALL REQUIREMENTS OF THE NEC. IDENTIFY ALL CIRCUITS ASSOCIATED WITH MONITORING OR CONTROLLING THE SMOKE CONTROL EQUIPMENT.

System Type	FIRE ALARM SYSTEM
Sheet Name	SIXTH FLOOR SEVENTH FLOOR ROOF FIRE ALARM RISER
Sheet Number	011
SHEET 11 OF 31	

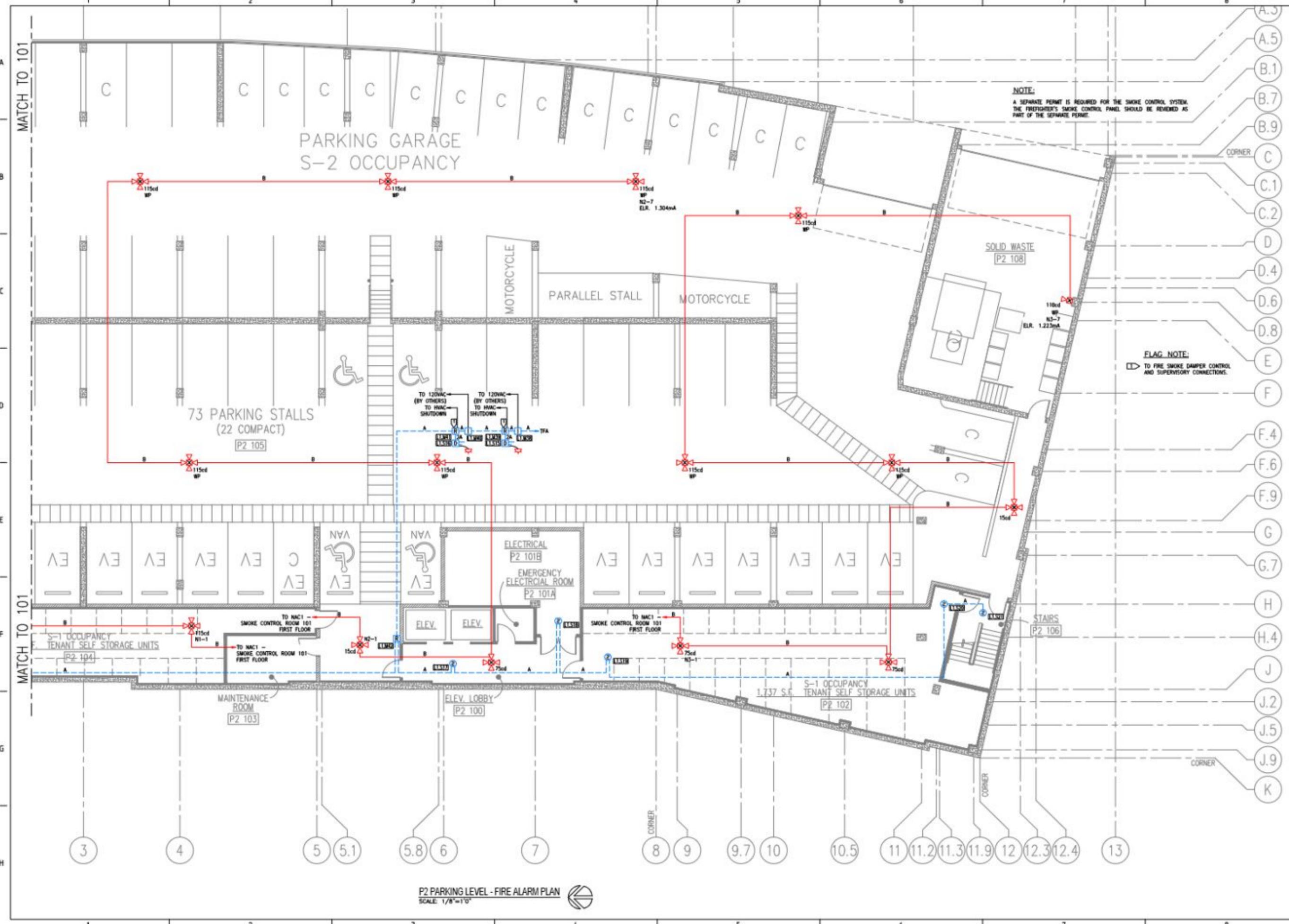


NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM. THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS PART OF THE SEPARATE PERMIT.

FLAG NOTES:
 TO FIRE SMOKE DAMPER CONTROL AND SUPERVISORY CONNECTIONS.
 PROVIDE MEANS OF TESTING HEAT DETECTOR WITHOUT ENTERING THE TRANSFORMER ROOM.

P2 PARKING LEVEL - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	P2 PARKING LEVEL FIRE ALARM PLAN
Sheet Number	101
SHEET 12 OF 31	

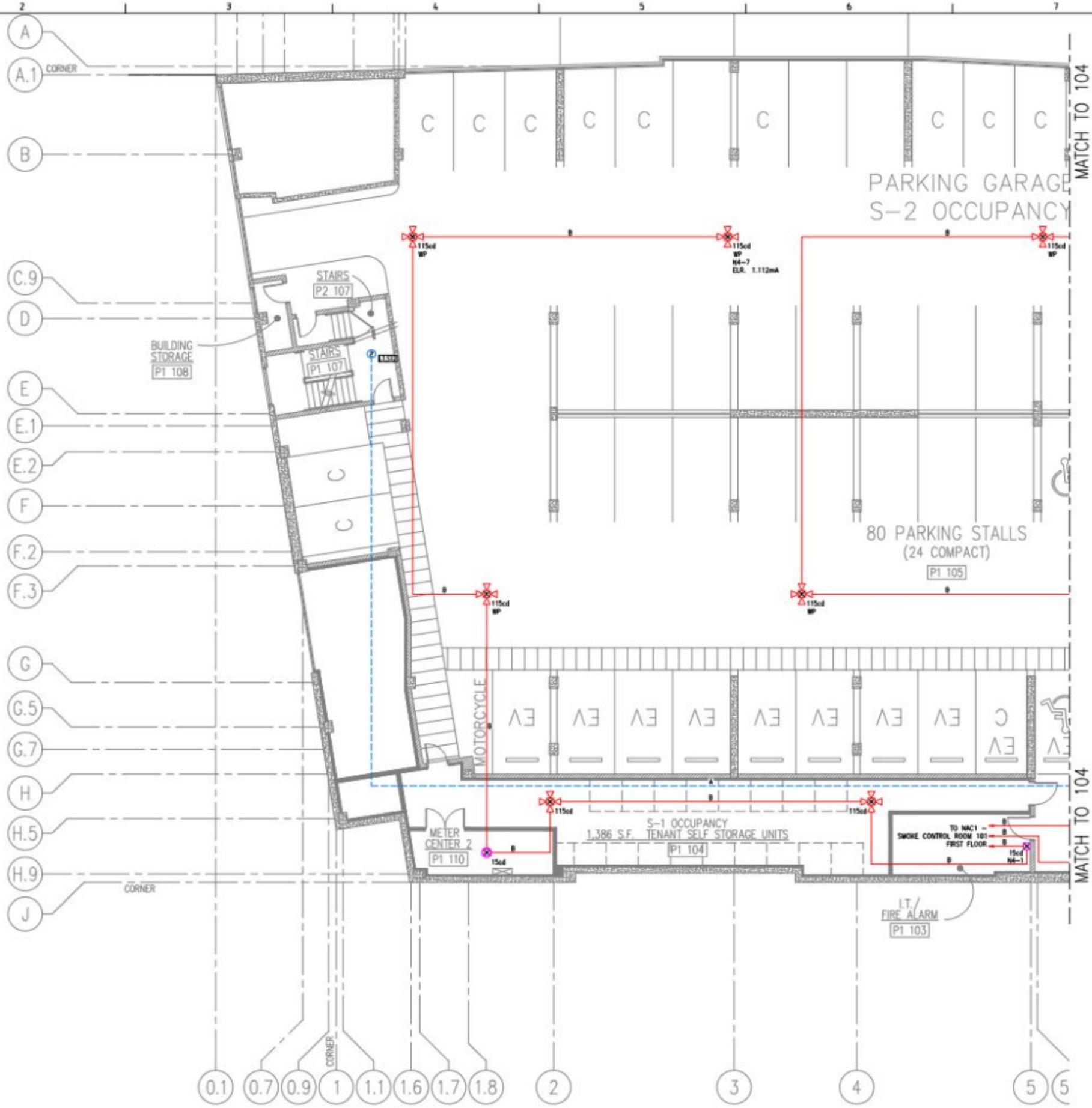


NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
 PART OF THE SEPARATE PERMIT.

FLAG NOTE:
 TO FIRE SMOKE DAMPER CONTROL
 AND SUPERVISORY CONNECTIONS.

P2 PARKING LEVEL - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

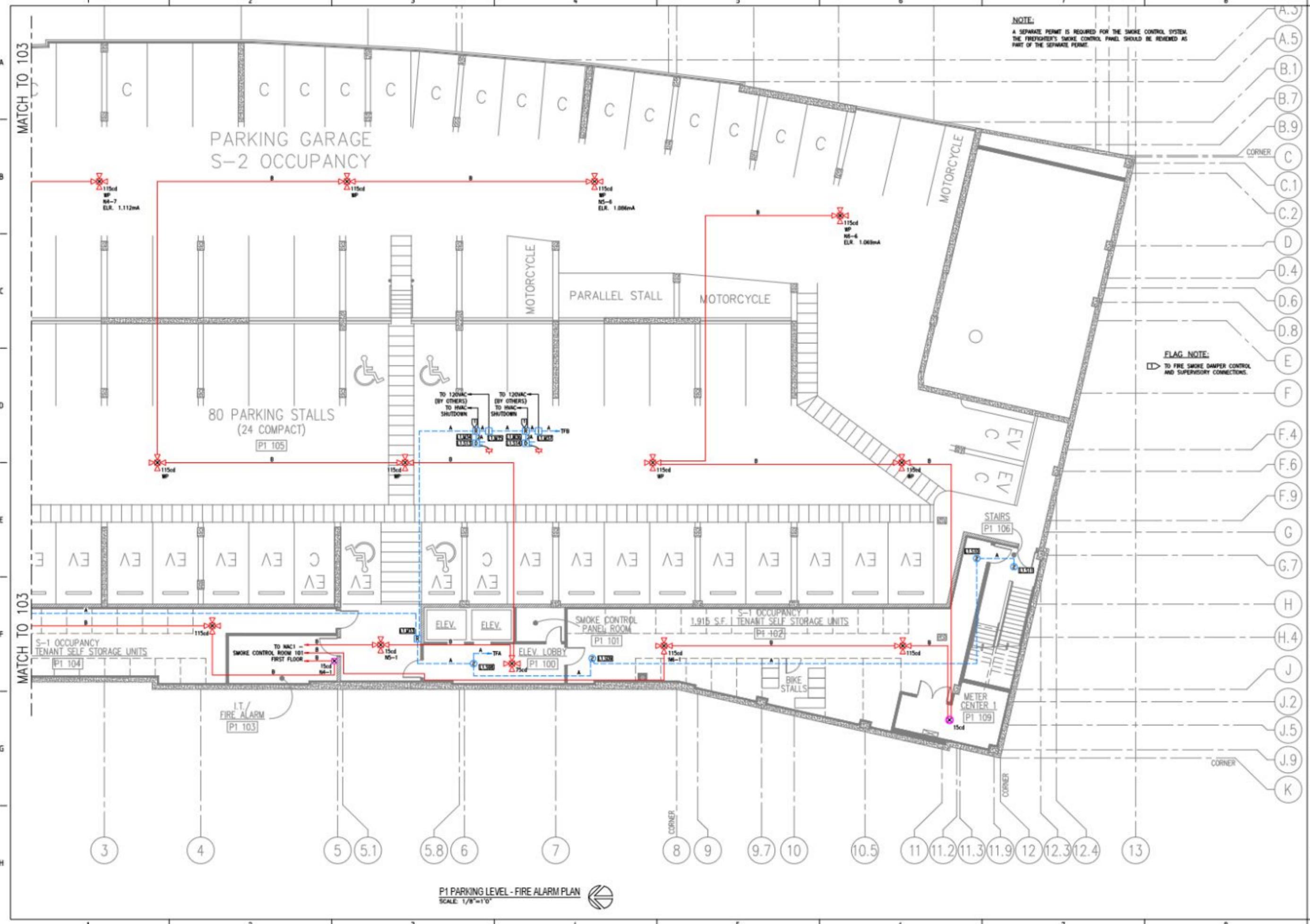
System Type	FIRE ALARM SYSTEM
Sheet Name	P2 PARKING LEVEL FIRE ALARM PLAN
Sheet Number	102
SHEET 13 OF 31	



NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
 PART OF THE SEPARATE PERMIT.

P1 PARKING LEVEL - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	P1 PARKING LEVEL FIRE ALARM PLAN
Sheet Number	103
SHEET 14 OF 31	

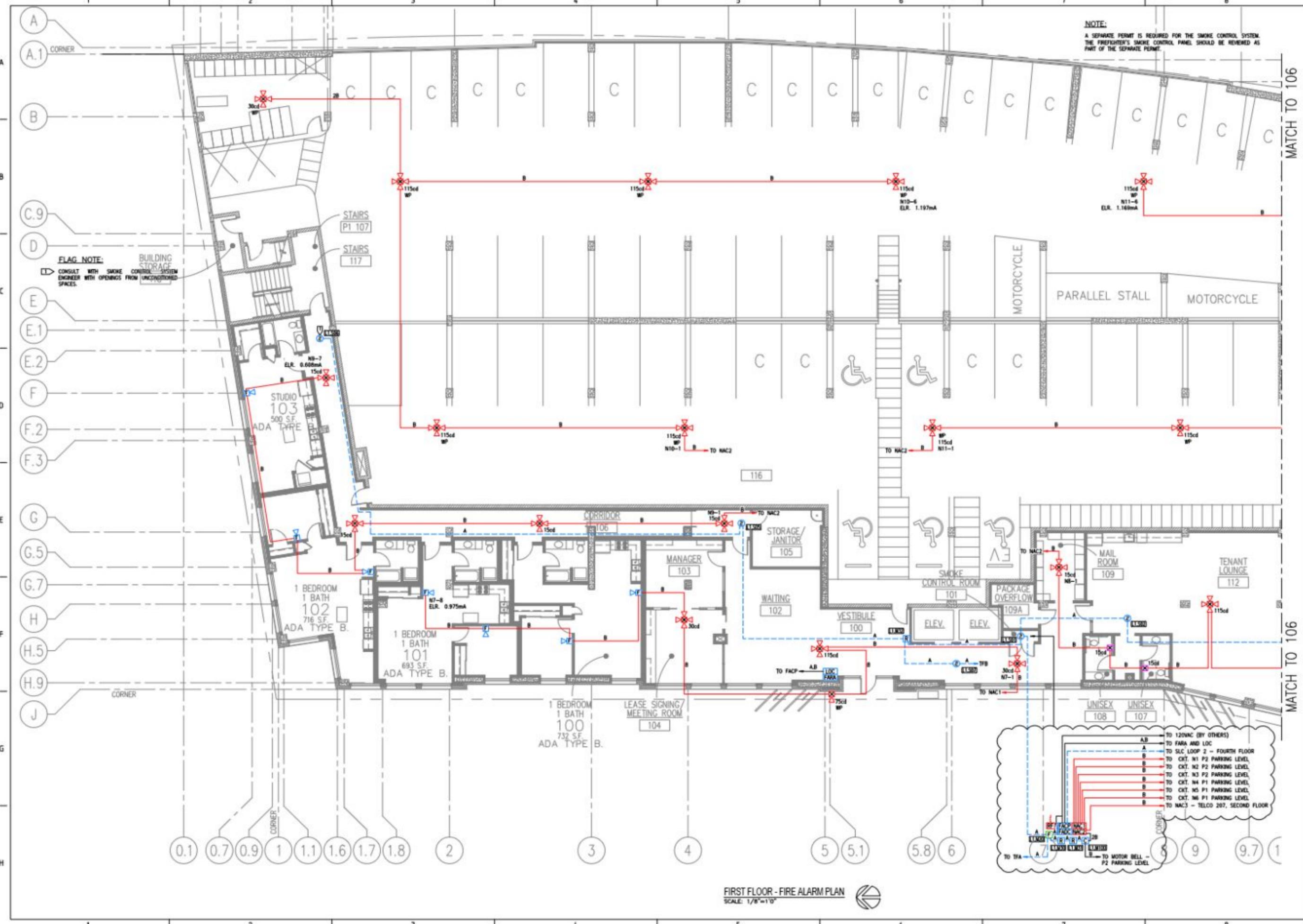


NOTE:
A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
THE FIREIGHTER'S SMOKE CONTROL PANEL SHOULD BE REMOVED AS
PART OF THE SEPARATE PERMIT.

FLAG NOTE:
TO FIRE SMOKE DAMPER CONTROL
AND SUPERVISORY CONNECTIONS.

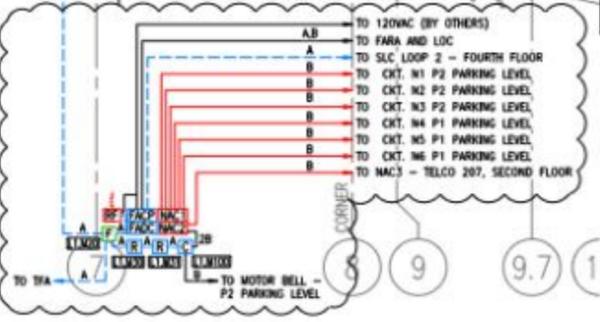
P1 PARKING LEVEL - FIRE ALARM PLAN
SCALE: 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	P1 PARKING LEVEL FIRE ALARM PLAN
Sheet Number	104
SHEET 15 OF 31	



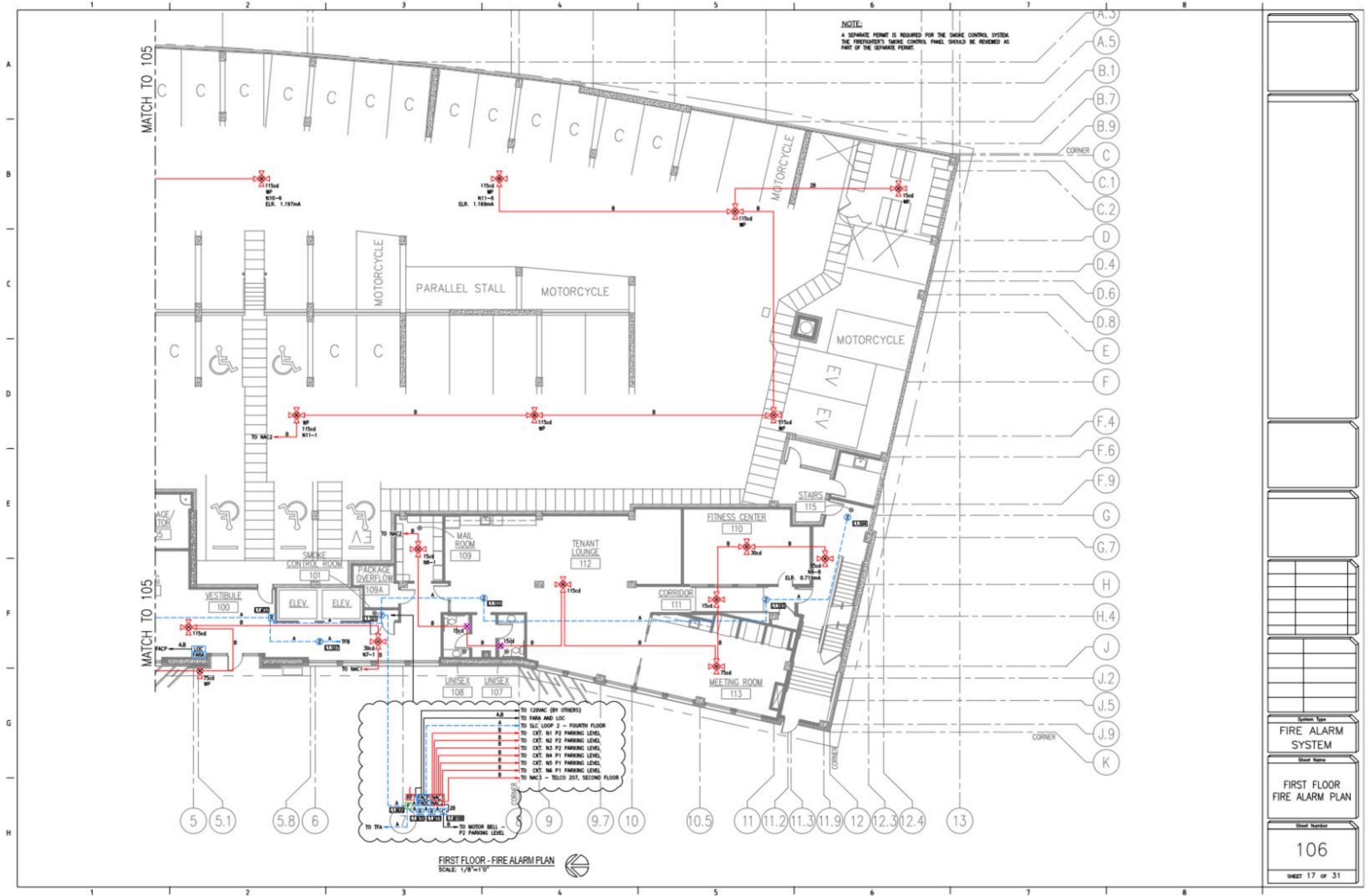
NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
 PART OF THE SEPARATE PERMIT.

FLAG NOTE:
 CONSTAT WITH SMOKE CONTROL SYSTEM
 ENGINEER WITH OPENINGS FROM UNCONDITIONED
 SPACES.



FIRST FLOOR - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	FIRST FLOOR FIRE ALARM PLAN
Sheet Number	105
SHEET 16 OF 31	

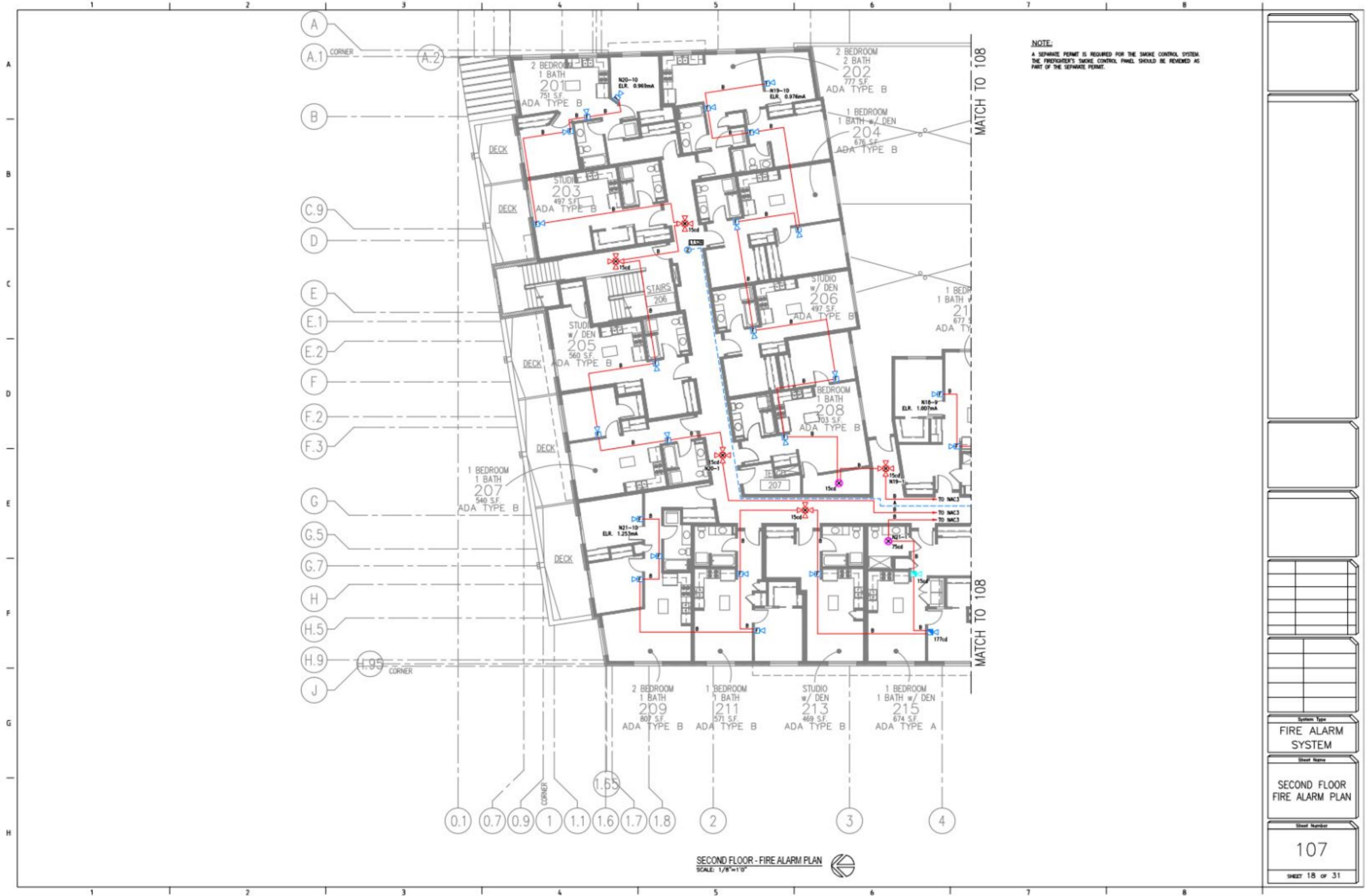


NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
 PART OF THE SEPARATE PERMIT.

- TO 120VAC (BY OTHERS)
- TO FARA AND LOC
- TO SLC LOOP 2 - FOURTH FLOOR
- TO CKT. N1 P2 PARKING LEVEL
- TO CKT. N2 P2 PARKING LEVEL
- TO CKT. N3 P2 PARKING LEVEL
- TO CKT. N4 P1 PARKING LEVEL
- TO CKT. N5 P1 PARKING LEVEL
- TO CKT. N6 P1 PARKING LEVEL
- TO NAC3 - TELCO 207, SECOND FLOOR
- TO TR4
- TO MOTOR BELL - P2 PARKING LEVEL

FIRST FLOOR - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	FIRST FLOOR FIRE ALARM PLAN
Sheet Number	106
Project Number	SHEET 17 OF 31



NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
 PART OF THE SEPARATE PERMIT.

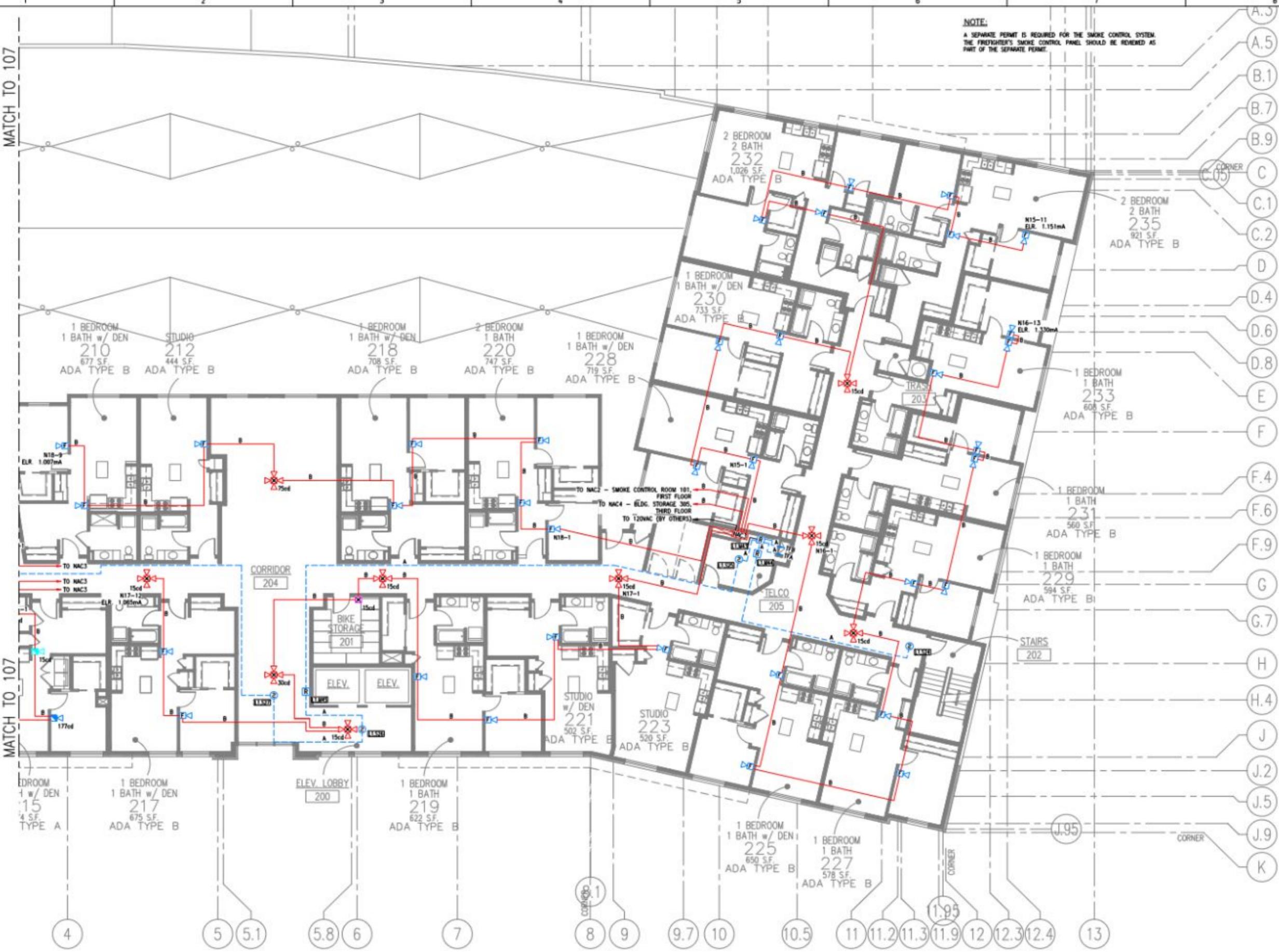
SECOND FLOOR - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	SECOND FLOOR FIRE ALARM PLAN
Sheet Number	107
SHEET 18 OF 31	

NOTE:
A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
PART OF THE SEPARATE PERMIT.

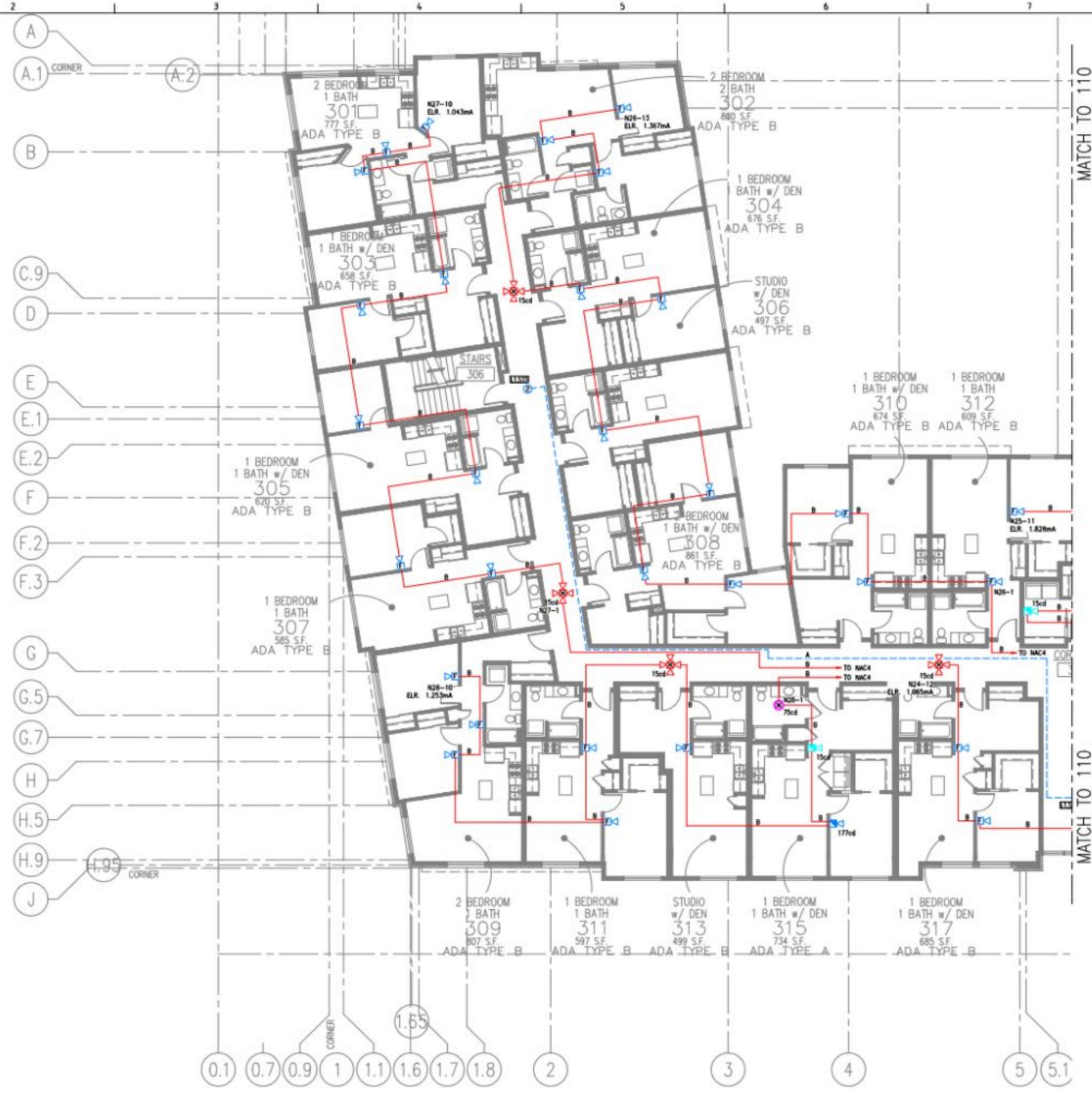
MATCH TO 107

MATCH TO 107



SECOND FLOOR - FIRE ALARM PLAN
SCALE 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	SECOND FLOOR FIRE ALARM PLAN
Sheet Number	108
	SHEET 19 OF 31



NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS PART OF THE SEPARATE PERMIT.

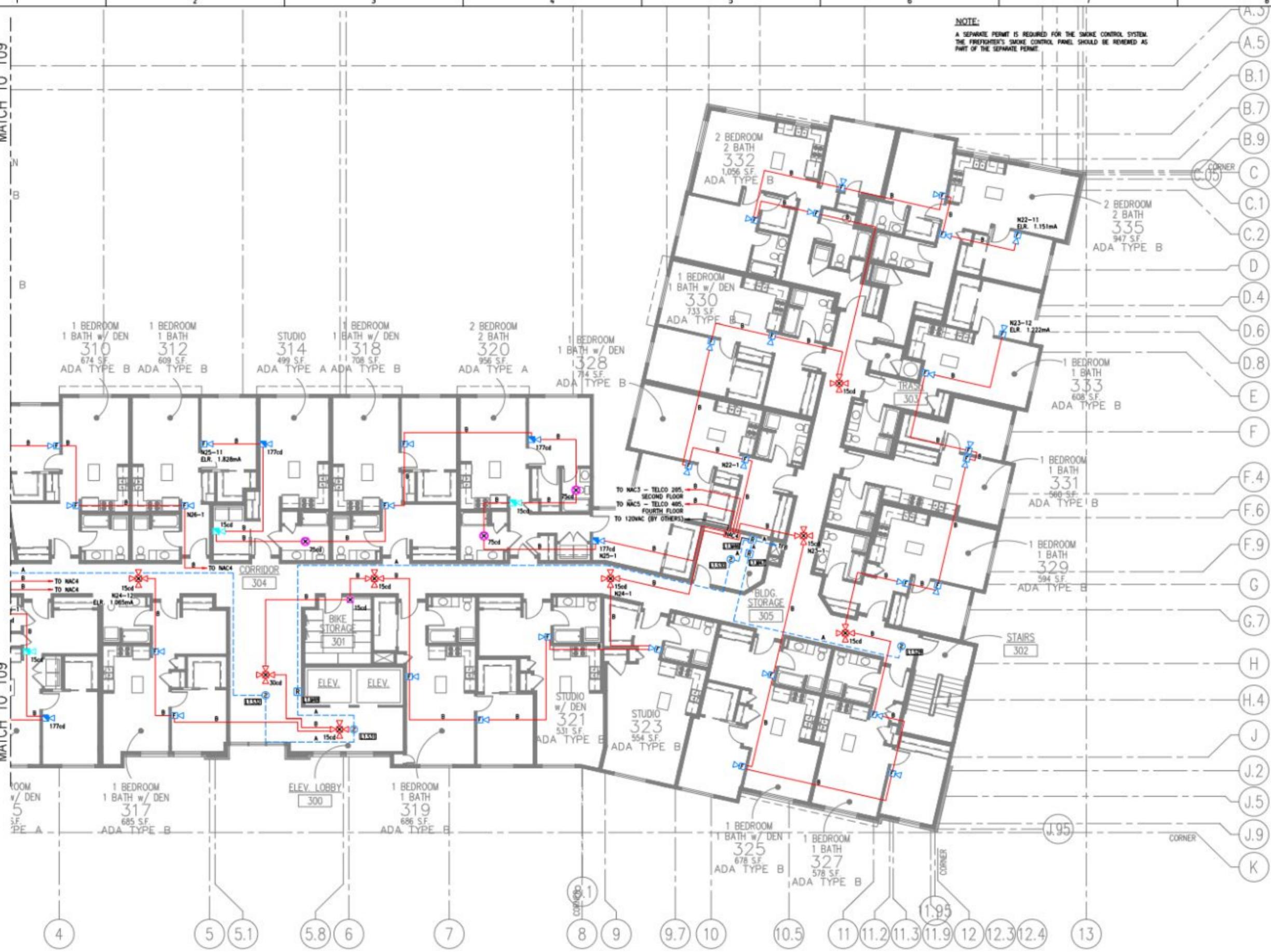
THIRD FLOOR - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	THIRD FLOOR FIRE ALARM PLAN
Sheet Number	109
SHEET 20 OF 31	

NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
 PART OF THE SEPARATE PERMIT.

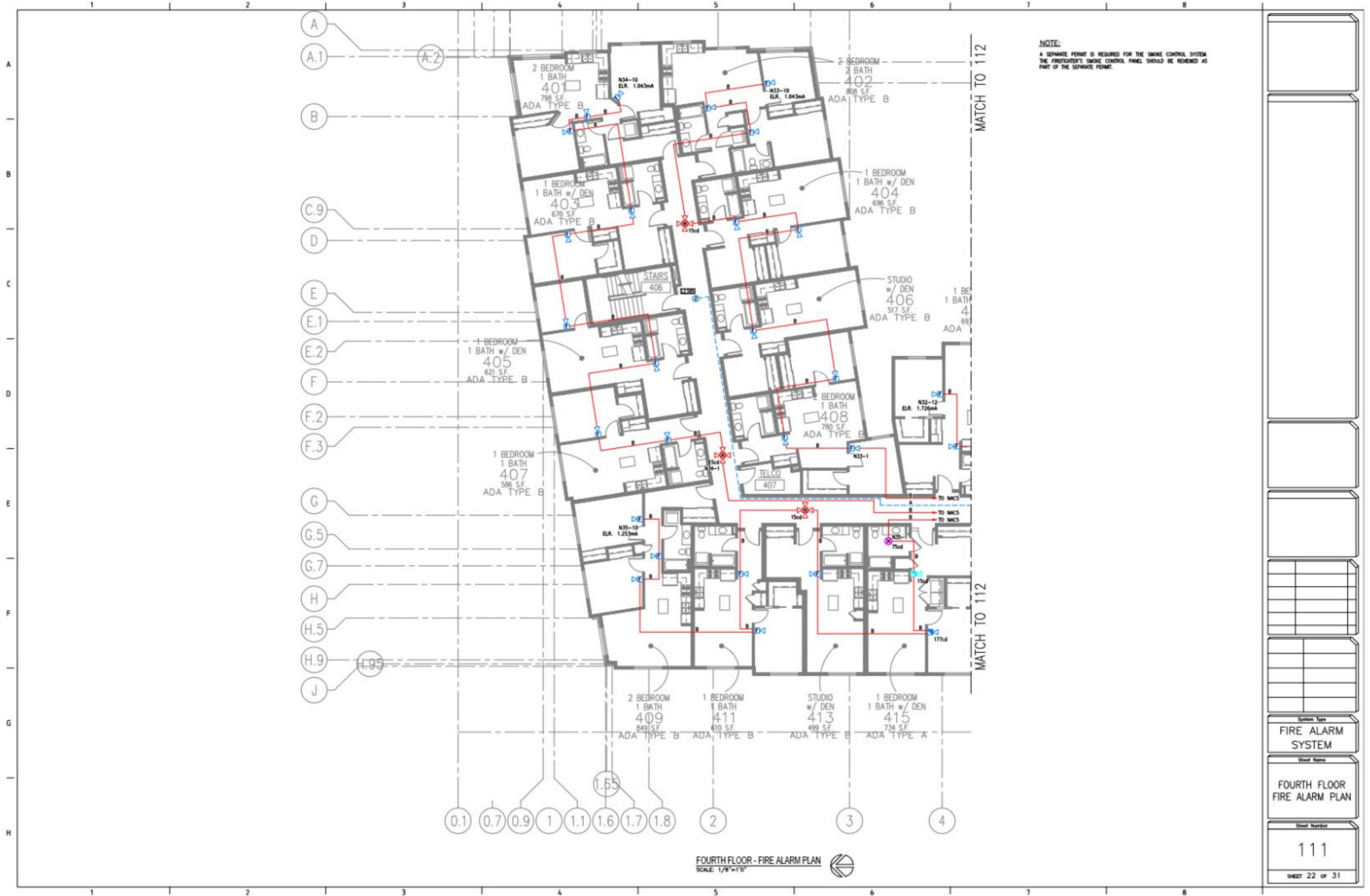
MATCH TO 109

MATCH TO 109



THIRD FLOOR - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	THIRD FLOOR FIRE ALARM PLAN
Sheet Number	110
SHEET 21 OF 31	



NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
 PART OF THE SEPARATE PERMIT.

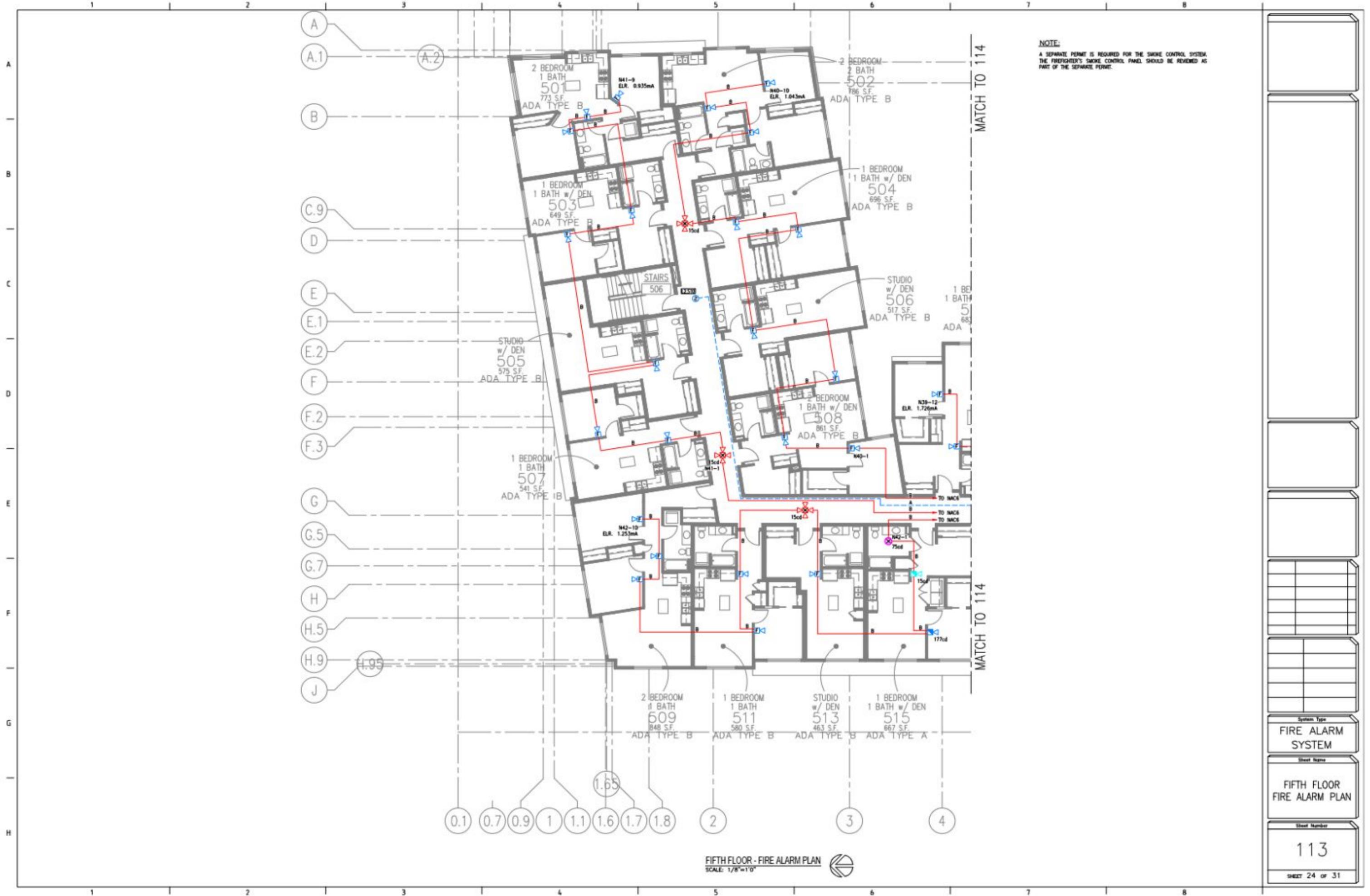
MATCH TO 112

MATCH TO 112

0.1 0.7 0.9 1 1.1 1.6 1.7 1.8 2 3 4

FOURTH FLOOR - FIRE ALARM PLAN
 SCALE: 1/8"=10'

System Type	FIRE ALARM SYSTEM
Sheet Name	FOURTH FLOOR FIRE ALARM PLAN
Sheet Number	111
SHEET 22 OF 31	



NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
 PART OF THE SEPARATE PERMIT.

FIFTH FLOOR - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	FIFTH FLOOR FIRE ALARM PLAN
Sheet Number	113
	SHEET 24 OF 31

NOTE:
A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
PART OF THE SEPARATE PERMIT.

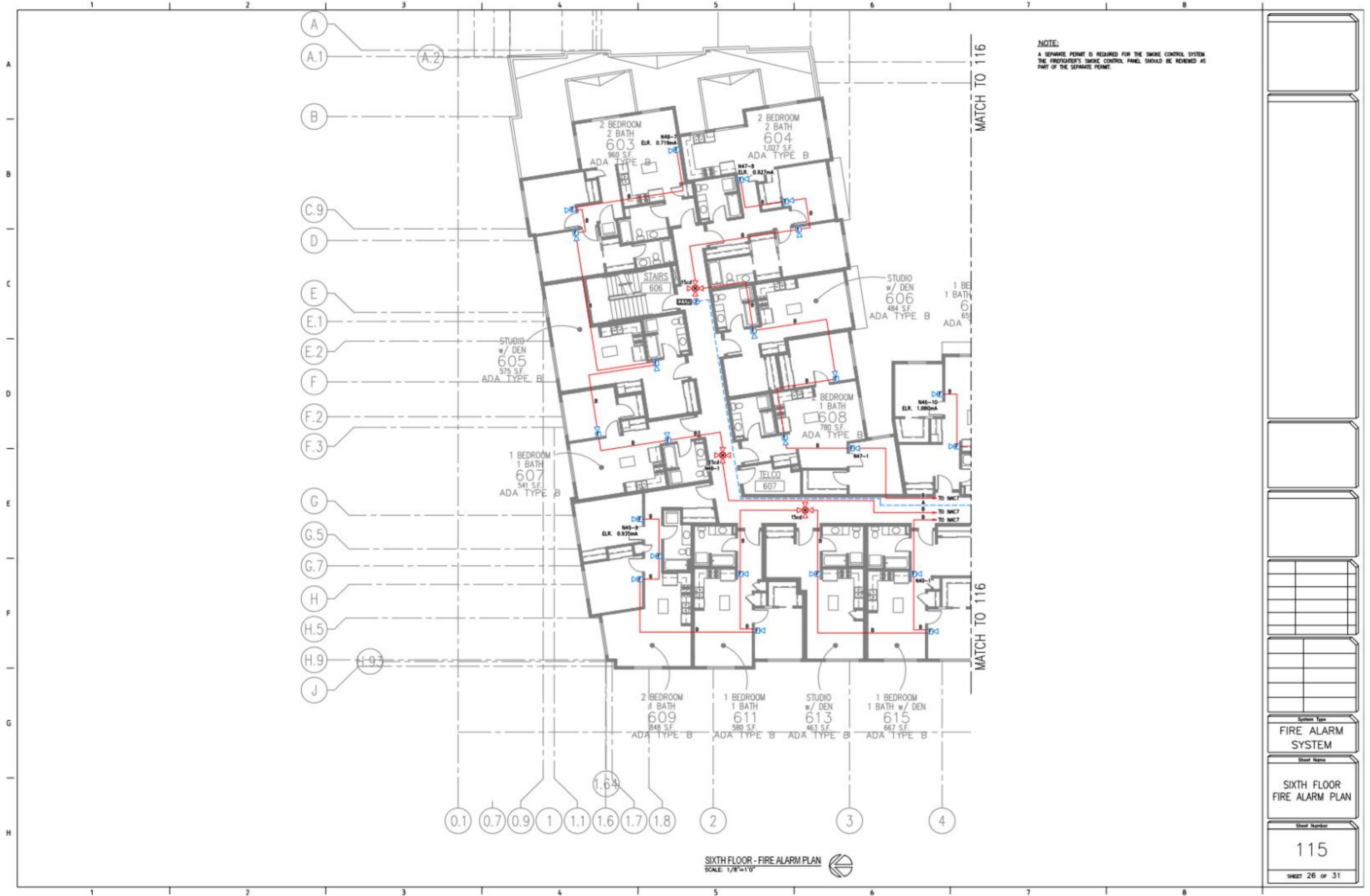
MATCH TO 113

MATCH TO 113



FIFTH FLOOR - FIRE ALARM PLAN
SCALE: 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	FIFTH FLOOR FIRE ALARM PLAN
Sheet Number	114
	SHEET 25 OF 31



NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVERSED AS
 PART OF THE SEPARATE PERMIT.

MATCH TO 116

MATCH TO 116

SIXTH FLOOR - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

System Type
FIRE ALARM SYSTEM

Sheet Name
SIXTH FLOOR FIRE ALARM PLAN

Sheet Number
115

SHEET 26 OF 31

NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
 PART OF THE SEPARATE PERMIT.

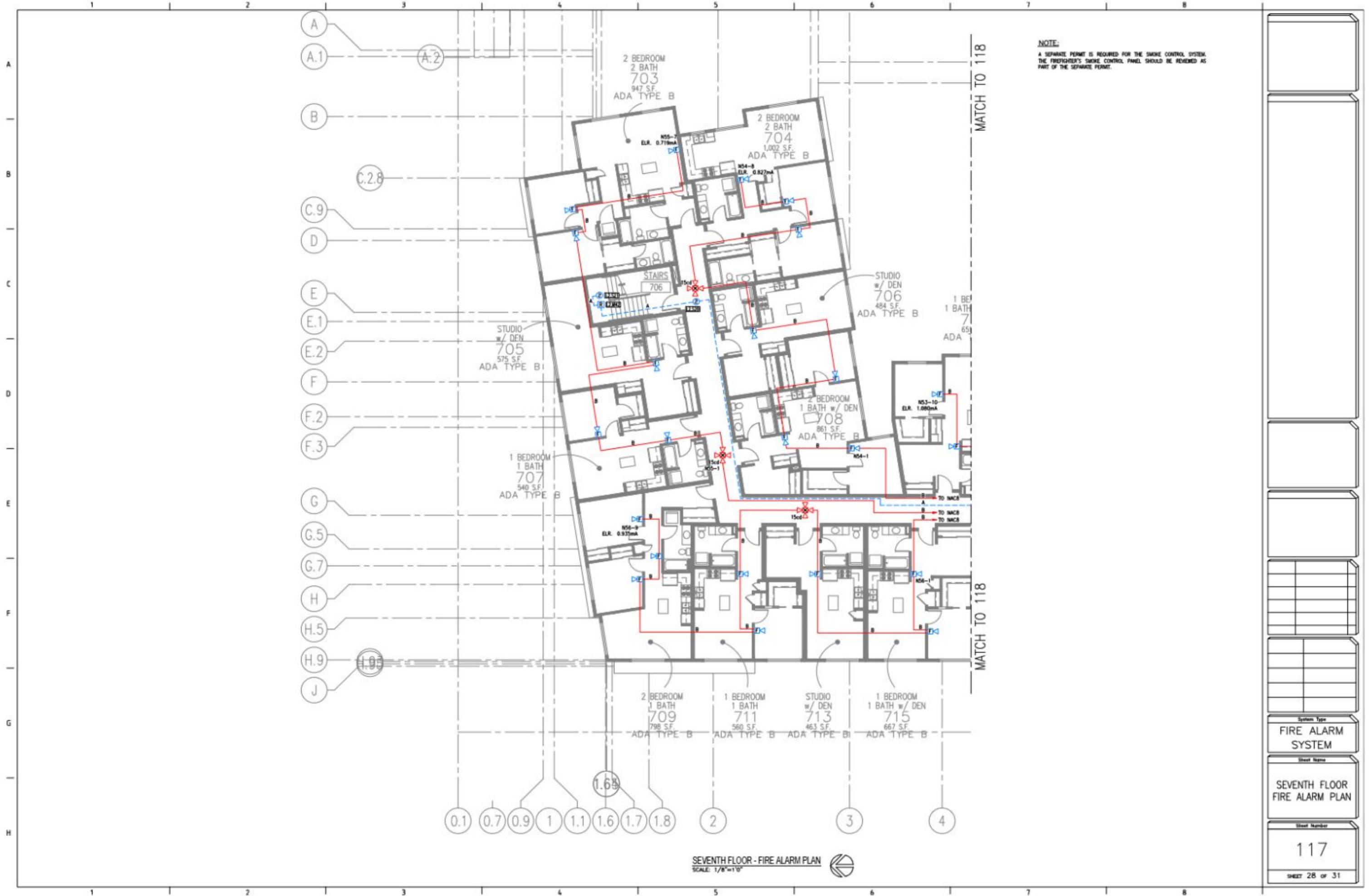
MATCH TO 115

MATCH TO 115



SIXTH FLOOR - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	SIXTH FLOOR FIRE ALARM PLAN
Sheet Number	116
SHEET 27 OF 31	



NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
 PART OF THE SEPARATE PERMIT.

MATCH TO 118

MATCH TO 118

System Type
FIRE ALARM SYSTEM

Sheet Name
SEVENTH FLOOR FIRE ALARM PLAN

Sheet Number
117
 SHEET 28 OF 31

SEVENTH FLOOR - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"



NOTE:
 A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
 THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
 PART OF THE SEPARATE PERMIT.

MATCH TO 117

MATCH TO 117



SEVENTH FLOOR - FIRE ALARM PLAN
 SCALE: 1/8"=1'-0"

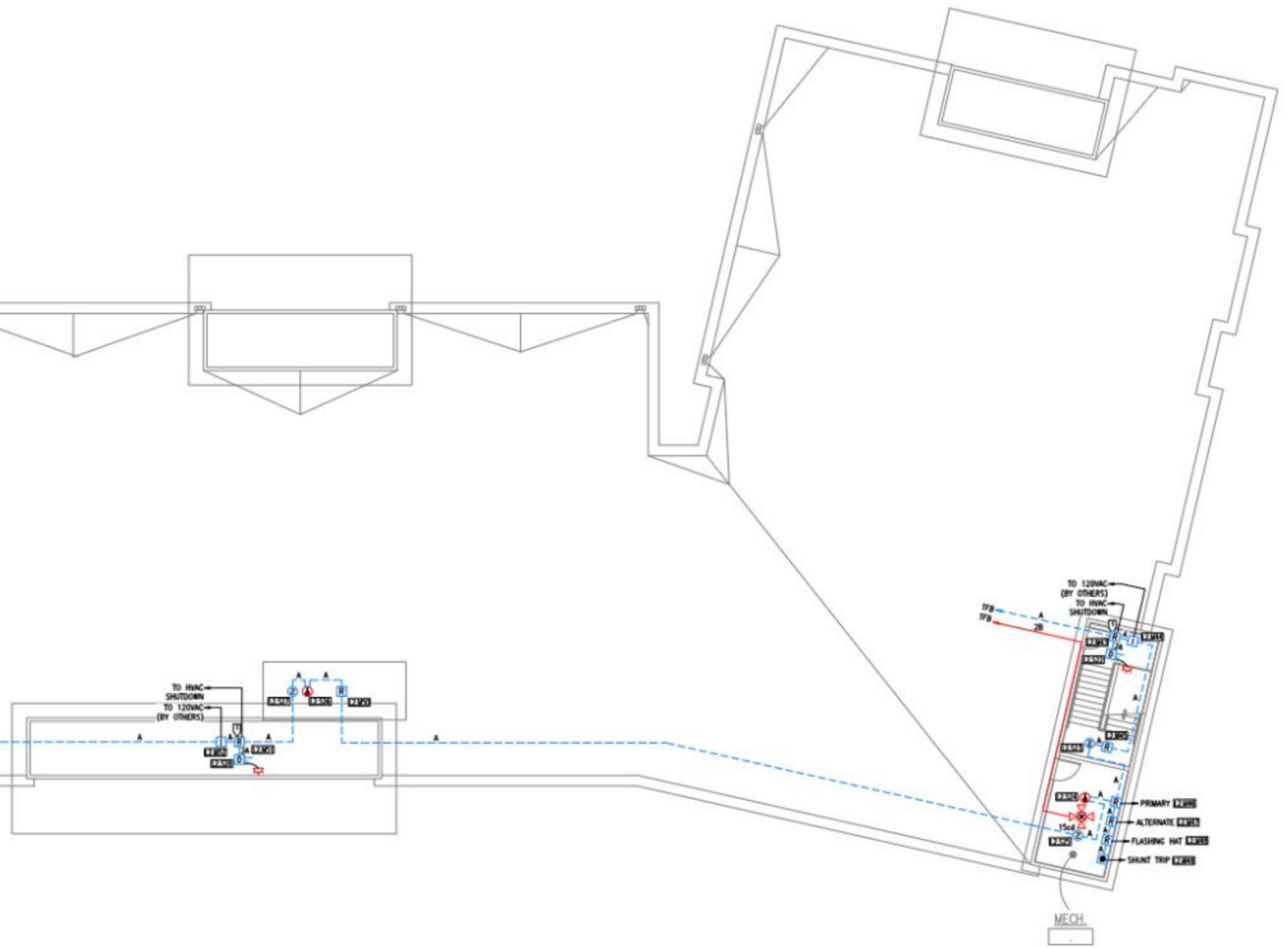
System Type	FIRE ALARM SYSTEM
Sheet Name	SEVENTH FLOOR FIRE ALARM PLAN
Sheet Number	118
	SHEET 29 OF 31

MATCH TO 119

MATCH TO 119

NOTE:
A SEPARATE PERMIT IS REQUIRED FOR THE SMOKE CONTROL SYSTEM.
THE FIREFIGHTER'S SMOKE CONTROL PANEL SHOULD BE REVIEWED AS
PART OF THE SEPARATE PERMIT.

FLAG NOTE:
TO FIRE SMOKE DAMPER CONTROL
AND SUPERVISORY CONNECTIONS.



ROOF - FIRE ALARM PLAN
SCALE 1/8"=1'-0"

System Type	FIRE ALARM SYSTEM
Sheet Name	ROOF FIRE ALARM PLAN
Sheet Number	120
	SHEET 31 OF 31