

FILE PATH: C:\Users\jcauti\OneDrive - Johnson Controls\John Knox Villages\JKV Courtyard\JKV_Courtyards_65056595Sheet001A_001.dwg

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30" x 42" Arch E Size



JOHN KNOX VILLAGE COURTYARDS BUILDING E

FIRE ALARM SYSTEM



DISTRICT 333
11019 STRANG LINE ROAD
LENEKA, KS 66215
PHONE: 913-884-0010
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LEGENDS

FIRE ALARM SYMBOL LEGEND

SYMBOL	DESCRIPTION	BRAND	MODEL	BACKBOX	WIRE TYPE
PANELS & ANNUNCIATORS					
	4100ES ES PS MASTER CONTROLLER - ENGLISH	SIMPLEX	4100-9701	SIMPLEX CABINET	N/A
	4009 IDNET NAC EXTENDER PANEL, 120 VAC, BEIGE	SIMPLEX	4009-9201	SIMPLEX CABINET	N/A
	SERIAL LCD ANNUNCIATOR	SIMPLEX	4603-9101	6-GANG BOX 3-1/2"D	B P
INITIATING DEVICES					
	ADDRESSABLE PHOTOELECTRIC SMOKE SENSOR W/ STANDARD BASE	SIMPLEX	4098-9714 HEAD	4" OCT, 1-1/2" D	M
	ADDRESSABLE PHOTOELECTRIC SMOKE SENSOR W/ 520Hz SOUNDER BASE	SIMPLEX	4098-9714 HEAD 4098-9772 BASE	4" OCT, 1-1/2" D	M H
	ADDRESSABLE STANDARD HEAT SENSOR W/ STANDARD BASE	SIMPLEX	4098-9733 HEAD 4098-9792 BASE	4" OCT, 1-1/2" D	M
	ADDRESSABLE PHOTOELECTRIC SMOKE SENSOR W/ CO SENSOR BASE	SIMPLEX	4098-9714 HEAD 4098-9770 BASE	4" OCT, 1-1/2" D	M
	ADDRESSABLE DOUBLE ACTION MANUAL PUSH/PULL STATION	SIMPLEX	4099-9006	4" SQ. 2-1/8" D W/ 3/4" SINGLE GANG COVER EXTENSION	M
	ADDRESSABLE DUCT SMOKE DETECTOR	SIMPLEX	4098-9755	MOUNTS TO DUCTWORK	M
MODULES AND RELAYS					
	INDIVIDUAL ADDRESSABLE MODULE	SIMPLEX	4090-9001	SINGLE GANG 2-1/2" D W/COVER	M Z
	RELAY 1AM	SIMPLEX	4090-9002	4" SQ. 2-1/8" D W/ DBL. GANG COVER	M R
	DUAL RELAY 1AM	SIMPLEX	4090-9008	4" SQ. 2-1/8" D W/ DBL. GANG COVER	M R
	RELAY IDNET 2 1AM W/ SENSE	SIMPLEX	4090-9118	4" SQ. 2-1/8" D W/ DBL. GANG COVER	M R, Z
NOTIFICATION APPLIANCES ** TAP ALL SPEAKERS AT 70.7 VOLTS **					
	ADDRESSABLE STROBE, WALL MOUNT, RED, CLEAR LENS, FIRE	SIMPLEX	49VO-WRF	SINGLE GANG 1-1/2" D	A
	ADDRESSABLE MULTI-CANDELA SPEAKER/STROBE, WALL MOUNT, APPLIANCE ONLY, CLEAR LENS	SIMPLEX	49SV-APPLW	4" SQ. 2-1/8" D	A S
	APPLIANCE COVER, RED, FIRE LETTERING	SIMPLEX	49SVC-WRFIRE		
	MOUNTING PLATE, RED	SIMPLEX	49MP-SVWR		
MISCELLANEOUS DEVICES					
	REMOTE TEST STATION	SIMPLEX	2098-9806	SINGLE GANG 2"D	K
	DOOR HOLDER	RSGAAMES	DH24120FPC		D
	PARALLEL CONNECTED SURGE PROTECTIVE DEVICE	DITEK	DTK-120HW-SS	DEVICE BOX	
	WATERFLOW SWITCH	BY OTHERS	BY OTHERS		Z
	TAMPER SWITCH	BY OTHERS	BY OTHERS		Z
	FIRE/SMOKE DAMPER	BY OTHERS	BY OTHERS		
	RISER BETWEEN FLOORS	N/A	N/A		
	END-OF-LINE RESISTOR 3.3K (EOL)		4081-9002		
	END-OF-LINE RESISTOR 4.7K (EOL)		4081-9003		
	END-OF-LINE RESISTOR 6.8K (EOL)		4081-9004		
	END-OF-LINE RESISTOR 10K (EOL)		4081-9008		

APPLICABLE CODES & STANDARDS

INTERNATIONAL FIRE CODE (IFC), 2018 EDITION
INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION
NATIONAL ELECTRIC CODE (NFPA 70), 2017 EDITION

OCCUPANCY TYPE(S):

R-2 RESIDENTIAL GROUP

SPRINKLER PROTECTION:

BUILDING IS FULLY SPRINKLERED

SCOPE OF WORK

PROVIDE AND INSTALL A NEW AUTOMATIC AND MANUAL FIRE ALARM SYSTEM AS SHOWN ON DRAWINGS.

ALL WIRING TO BE CLASS B NOTIFICATION APPLIANCE CIRCUITS, INITIATING DEVICE CIRCUITS, AND SIGNALING LINE CIRCUITS.

AUTOMATIC FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION. THE SUPERVISING STATION SHALL BE LISTED AS EITHER ULFPA OR ULUS UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY THE OWNER.

DESIGN STATEMENT

THIS PROJECT'S DESIGN IS BASED ON THE ENGINEERED PLANS AND SPECIFICATIONS PREPARED BY: SFC'S INC.

ADDENDUM DATED: 3/7/2027

ABBREVIATIONS LEGEND

AC = ABOVE CEILING
AFF = ABOVE FINISHED FLOOR
AUI = AUTHORITY HAVING JURISDICTION
ALM = ALARM
ANN = ANNUNCIATOR
BMS = BUILDING MANAGEMENT SYSTEM
C = CEILING MOUNTED
CD = CANDELA RATING
DET = DETECTOR
DGP = DATA GATHERING PANEL
E = EXISTING TO REMAIN
EOL = END OF LINE
EPO = EMERGENCY POWER OFF
ER = ELEVATOR RECALL
FAA = FIRE ALARM ANNUNCIATOR
FACP = FIRE ALARM CONTROL PANEL
FATC = FIRE ALARM TERMINAL CABINET
FBD = FURNISHED BY OTHERS
FCO = FIRE COMMAND CENTER
FSD = FIRE SMOKE DAMPER
FTR = FIRE ALARM TRANSPONDER
H = HIGH HUMIDITY
HT = HEIGHT
HVAC = HEATING VENTILATION & AIR CONDITIONING
IMS = INFORMATION MANAGEMENT SYSTEM
MAX = MAXIMUM
MIN = MINIMUM
N/A = NOT APPLICABLE
NAC = NOTIFICATION APPLIANCE CIRCUIT
NDU = NETWORK DISPLAY UNIT
NEC = NATIONAL ELECTRIC CODE
NFPA = NATIONAL FIRE PROTECTION ASSOCIATION
NIC = NOT IN CONTRACT
NPU = NETWORK PROCESSING UNIT
NTS = NOT TO SCALE
PAP = PRE-ACTION PANEL
RC = EXISTING TO REMOVE AND COVER
RD = EXISTING DEVICE TO BE RELOCATED
RL = RELOCATED DEVICE
RR = REMOVE EXISTING & REPLACE WITH NEW
SCC = STATUS COMMAND CENTER
SLC = SIGNALING LINE CIRCUIT
SMK = SMOKE
SUPV = SUPERVISORY
TAC = TRUE/ALERT ADDRESSABLE CONTROLLER
TOS = TOP OF SHAFT
TRBL = TROUBLE
TS = TAMPER SWITCH
TYP = TYPICAL
UNON = UNLESS OTHERWISE NOTED
VCC = VOICE COMMAND CENTER
VT = VALVE TAMPER
W = WATTAGE
W/ = WITH
W/O = WITHOUT
WF = WATERFLOW
WG = WIRE GUARD
WP = WEATHERPROOF
XP = EXPLOSION PROOF

SYSTEM SEQUENCE OF OPERATIONS

JOHNSON CONTROLS CONTACTS

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Scheduling MIRANDA CASTLE MIRANDA.CASTLE@JCI.COM PHONE: 903-305-1842	Drawings Prepared By TIM EUBANKS TIMOTHY.EUBANKS@JCI.COM

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Engineer Of Record SFC'S INC 305 SOUTH JEFFERSON STREET ROANOKE, VIRGINIA 24011	Installer M AND S ELECTRIC LLC 3026 SW US HIGHWAY 40 BLUE SPRINGS, MO 64015

DEVICE TAG LEGEND

PANEL DESIGNATOR

- FA = FACP (NON-NETWORK)
- # = NODE NUMBER
- TR = TRANSPONDER NUMBER
- #TR = NODE TRANSPONDER NUMBER
- NE = NAC EXTENDER NUMBER

CIRCUIT DESIGNATOR

- A# = IDNAC CIRCUIT NUMBER
- DR = DOOR HOLDER CIRCUIT NUMBER
- FR = FIRE PHONE CIRCUIT
- HR = AUDIBLE (HORN) CIRCUIT NUMBER
- IR = IDNET LOOP NUMBER
- PR = POWER CIRCUIT NUMBER
- SR = SPEAKER CIRCUIT NUMBER
- VR = VISUAL CIRCUIT NUMBER
- Z# = ZONE NUMBER

DEVICE NUMBER

BRANCH / ISOLATED LOOP DESIGNATOR:

- (U#) = IDNET ISOLATED LOOP NUMBER
- (B) = IDNAC BRANCH NUMBER
- (E#) = EPR# NUMBER BRANCH NUMBER

1. IDNAC = ADDRESSABLE NOTIFICATION CIRCUIT
2. EPR = ENHANCED POWER REPEATER

GENERAL NOTES

- THESE DRAWINGS DEPICT GENERAL LOCATIONS OF LIFE SAFETY EQUIPMENT & FIELD DEVICES. EXACT ROUTING OF CONDUITS IS TO BE DETERMINED IN THE FIELD BY THE INSTALLING CONTRACTOR TO SUIT CONDITIONS. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
- SHOULD ANY CONDITIONS EXIST THAT DIFFER FROM WHAT IS INDICATED ON THESE DRAWINGS WHICH CAUSE MAJOR DEVIATIONS IN THE WORK SHOWN, THE CONTRACTOR SHALL CONTACT JOHNSON CONTROLS IN A TIMELY MANNER SO AS NOT TO IMPAIR THE CONSTRUCTION SCHEDULE.
- CONTRACTOR IS RESPONSIBLE FOR MAKING AND OBTAINING APPROVAL FOR ALL NECESSARY ADJUSTMENTS IN CIRCUITING AS REQUIRED TO ACCOMMODATE THE RELOCATION OF EQUIPMENT AND/OR DEVICES WHICH ARE AFFECTED BY ANY AUTHORIZED CHANGE. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
- A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE AT THE JOB SITE AND SHALL BE USED FOR INSTALLATION.
- THE POWER CIRCUIT TO THE FACP AND TO THE FIRE ALARM POWER SUPPLIES SHALL BE ON A DEDICATED 120V, 20A BRANCH CIRCUIT BREAKER, AND SHALL HAVE A RED MARKING, LOCK-ON PROVISION AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL." THE LOCATION OF THE CIRCUIT DISCONNECT MEANS (CIRCUIT BREAKER) SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.
- UPDATE THE AS-BUILT DRAWING SET DAILY WITH JOB PROGRESS. RETURN THE AS-BUILT DRAWING SET TO JOHNSON CONTROLS NO LATER THAN 7 DAYS AFTER FINAL TEST.
- THE CONTRACTOR WILL MAINTAIN ALL AREAS OF THE BUILDING IN A NEAT AND WORKMANLIKE MANNER.
- DO NOT APPLY POWER EXCEPT IN THE PRESENCE OF A FACTORY TRAINED JOHNSON CONTROLS TECHNICAL REPRESENTATIVE.
- ANY SMOKE DETECTOR HEAD INSTALLED BEFORE THE BUILDING IS CLEANED AND ACCEPTED SHALL BE COVERED TO PROTECT FROM DUST. ANY FALSE ALARMS DUE TO DIRT CONTAMINATED HEADS SHALL BE THE RESPONSIBILITY OF THE FIRE ALARM INSTALLER.
- THE FIRE ALARM INSTALLER WILL MAINTAIN THE FIRE RESISTANCE INTEGRITY OF ALL WALL, CEILING, AND ROOF ASSEMBLIES ANY TIME THAT WORK IS NOT ACTIVELY BEING PERFORMED.
- UPDATE THE AS-BUILT DRAWING SET DAILY WITH JOB PROGRESS. RETURN THE AS-BUILT DRAWING SET TO JOHNSON CONTROLS NO LATER THAN 7 DAYS AFTER FINAL TEST.
- INSTALLATION OF DEVICES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. POWER LIMITED AND NON-POWER LIMITED FIELD WIRING MUST BE INSTALLED WITHIN THE FACP ENCLOSURE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPLICABLE ELECTRICAL CODES. REFER TO APPLICABLE CODES & STANDARDS FOR SPECIFIC CODE REFERENCES.
- ALL WIRING SHALL BE INSTALLED ACCORDING TO APPLICABLE ELECTRICAL CODES.
- FIRE ALARM CIRCUITS SHALL BE IDENTIFIED IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES. MARK ALL FIRE ALARM WIRES IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODE SECTIONS FOR POWER LIMITED AND NON-POWER LIMITED WIRE.
- FIRE ALARM CABLE INSTALLED IN DUCTS, PLENUM, AND OTHER SPACES USED FOR ENVIRONMENTAL AIR SHALL BE TYPE FPLP.
- FIRE ALARM CABLE INSTALLED IN THE VERTICAL RUNS AND PENETRATING MORE THAN ONE FLOOR OR CABLES INSTALLED IN VERTICAL RUNS IN SHIFTS SHALL BE TYPE FPLP.
- FIRE ALARM CABLE INSTALLED IN UNDERGROUND CONDUIT OR OTHER WET LOCATIONS SHALL BE UL LISTED FOR WET LOCATIONS.
- FIRE ALARM CIRCUITS EXTENDING BEYOND ONE BUILDING AND RUN OUTDOORS SHALL BE INSTALLED IN ACCORDANCE APPLICABLE ELECTRICAL CODES, WHERE APPLICABLE.
- ALL WIRING, INCLUDING SHIELDS MUST BE DRY AND FREE OF SHORTS AND GROUNDS.
- ALL SHIELDED WIRE MUST HAVE SHIELD CONTINUITY AT FULL LENGTH OF THE WIRE.
- ONLY SYSTEM WIRING CAN BE RUN IN THE SAME CONDUIT.
- 120VAC IS NOT PERMITTED IN THE SAME CONDUIT WITH LOW VOLTAGE WIRING.
- MAINTAIN MAXIMUM CONDUIT FILL RATIO AS PER APPLICABLE ELECTRICAL CODES REQUIREMENTS.
- EXISTING CONDUITS MAY BE USED BY THE INSTALLATION CONTRACTOR AS DEEMED NECESSARY; HOWEVER, ANY EXISTING CONDUIT WILL BE USED ONLY IF CONDUITS MEET CURRENT STANDARDS AND CODES. JOHNSON CONTROLS MAKES NO STATEMENTS WRITTEN OR VERBAL AS TO THE CONDITION OF EXISTING CONDUITS.

FIRE ALARM WIRE LEGEND

CIRCUIT DESCRIPTION	CONSTRUCTION	GAUGE	CIRCUIT PROPERTIES	ACCEPTABLE CABLE TYPES				
				FPLP	FPLP	THIN WALL	THIN WALL	OUTDOOR **
A ADDRESSABLE NOTIFICATION	UTP SOLID	14 AWG	60pF/ft, MAX CAPACITANCE: 3 twists/ft, MINIMUM	X	X			
B RUI + COMMUNICATION	UTP SOLID	18 AWG	58pF/ft, MAX CAPACITANCE, 35.5 Ω TOTAL LINE RESISTANCE	X	X			
D DOOR HOLDER	2 COND. SOLID	14 AWG		X	X	X		
H AUDIBLE CIRCUIT	2 COND. SOLID	14 AWG		X	X			
K REMOTE TEST SWITCH/LED	(2) 2 COND. SOLID	18 AWG		X	X			
M IDNET	UTP SOLID	18 AWG	0.60uF MAX TOTAL LINE CAPACITANCE	X	X			
P POWER	2 COND. SOLID	14 AWG		X	X	X		
R RELAY	2 COND. SOLID	18 AWG		X	X	X		
S AUDIO - SPEAKER	UTP SOLID	18 AWG	30pF/ft MAX CAPACITANCE RECOMMENDED	X	X			
Z ZONE CIRCUIT	2 COND. SOLID	18 AWG		X	X	X		
CONDUIT SIZE	MAX CONDUCTOR AREA	CONDUIT SIZE	MAX CONDUCTOR AREA					
1/2"	0.122 SQ INCH*	1-1/2"	1.586 SQ INCH*					
3/4"	0.213 SQ INCH*	1-1/2"	0.814 SQ INCH*					
1"	0.346 SQ INCH*	2"	1.342 SQ INCH*					

*40% CONDUIT FILL PER N.E.C.
SIP = SHIELDED TWISTED PAIR

ITEMS SUCH AS CAPACITANCE BETWEEN CONDUCTORS AND WIRE GAUGE CAN BE CRITICAL TO THE CIRCUIT DESIGN OF THIS SYSTEM INSTALLATION. THE INSTALLING CONTRACTOR IS RESPONSIBLE FOR SELECTING AND INSTALLING CABLE MANUFACTURER AND MODEL THAT MEETS OR EXCEEDS THE ABOVE REQUIREMENTS. RECOMMENDED CABLE MANUFACTURERS AND MODEL NUMBERS ARE AVAILABLE UPON REQUEST.

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JOHN KNOX VILLAGE COURTYARDS BUILDING E

JOHN KNOX VILLAGE
1001 NW CHIPMAN RD
LEE'S SUMMIT, MO 64081

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DRAWN BY:	MARIANO MENDEZ
CHECKED BY:	TIM EUBANKS
ISSUE DATE:	8/10/24
JOB #:	
PROJECT #:	332-660565694
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COVER SHEET

FA-001

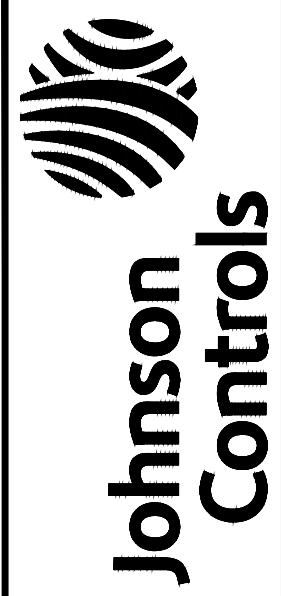


GENERAL NOTES:

1. ALL CEILINGS ARE ASSUMED TO BE 10' A.F.F. SMOOTH CONCRETE UNLESS NOTED OTHERWISE.
2. TAP ALL SPEAKERS AT 9"X9" UNLESS NOTED OTHERWISE.
3. SET ALL SPEAKER VOLUME JUMPERS TO THE 70 TV SETTING.
4. ALL NOTIFICATION APPLIANCE CANTENITY PLUGS SHALL RETAIN THEIR FACTORY SETTING OF "TAP" UNLESS OTHERWISE DIRECTED BY THE AUTHORITY HAVING JURISDICTION.
5. DO NOT CHANGE DEFAULT APPLIANCE CONFIGURATION SWITCH SETTINGS ON ADDRESSABLE A/V DEVICES (PHONIC). REFER TO DEVICE DETAILS AND INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.
6. THE DEVICE ADDRESSES INDICATED ON THESE DRAWINGS ARE AN ALPHANUMERIC DESCRIPTION OF WHICH CIRCUIT THE DEVICE IS LOCATED ON. DEVICES MAY BE ASSIGNED A DIFFERENT NUMBER WITHIN THE PANEL. PROGRAM LOGIC WITH A JUNCTION CIRCUITS TECHNICIAN BEFORE APPLYING A PHYSICAL LABEL TO ANY DEVICES.

KEYNOTES:

 FIELD TO VERIFY EXACT LOCATION.



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JOHN KNOX VILLAGE COURTYARDS BUILDING E

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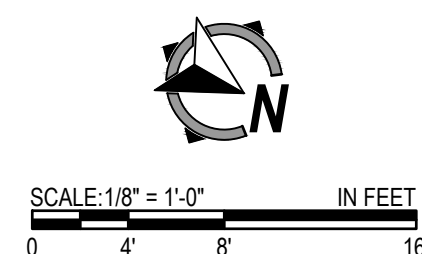
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DRAWN BY:	MARIANO MENDEZ
CHECKED BY:	TIM EUBANKS
ISSUE DATE:	6/10/24
JOB #:	
PROJECT #:	332-650560594

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
**FL1 DEVICE PLACEMENT
PLAN**

FA-101



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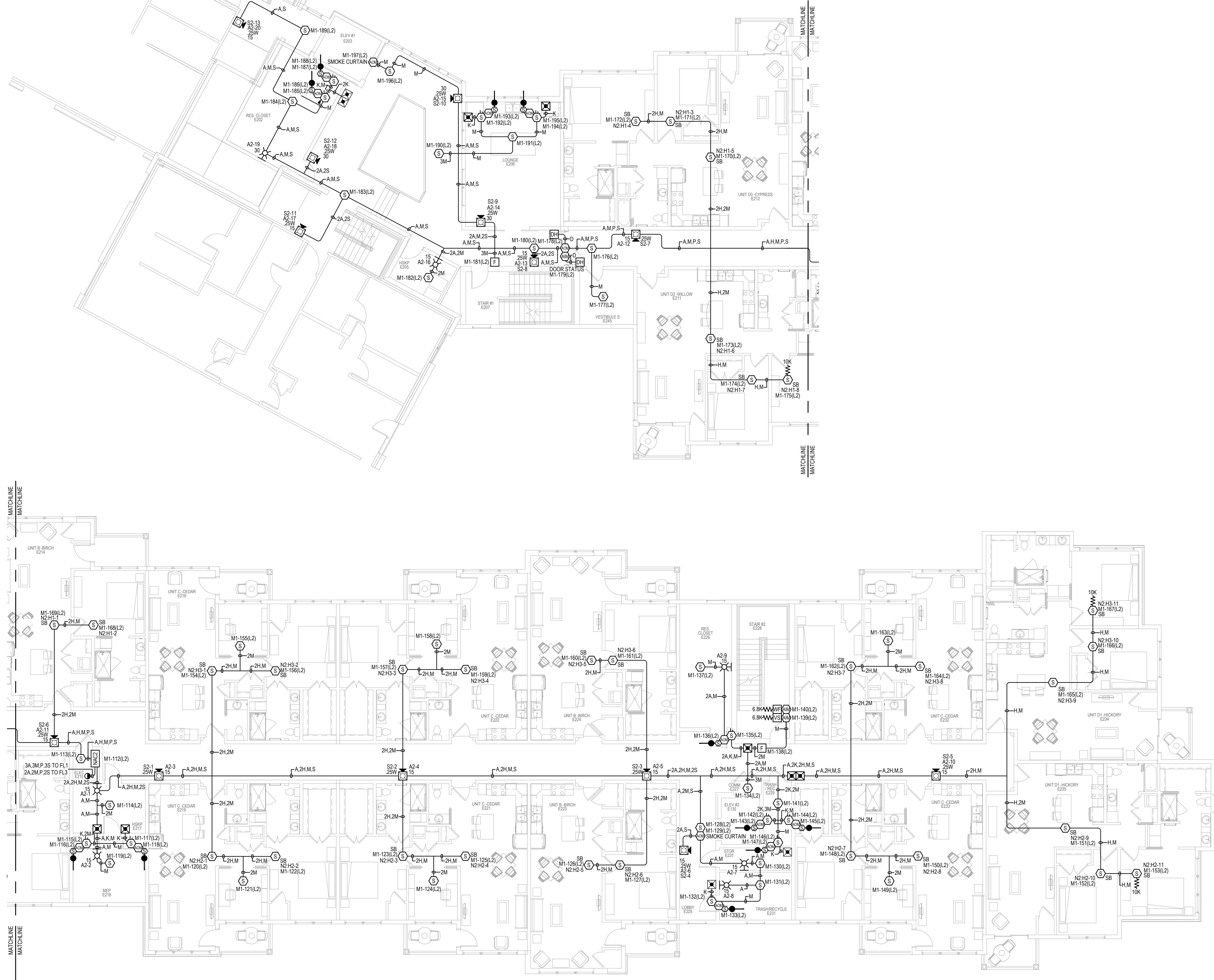
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30" x 42" - Arch E Size

FL2 DEVICE PLACEMENT PLAN

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



GENERAL NOTES:

1. ALL CEILINGS ARE ASSUMED TO BE 10' A.F.F., SMOOTH CONSTRUCTION UNLESS NOTED OTHERWISE.
2. TAP ALL SPEAKERS AT 0.5W UNLESS NOTED OTHERWISE.
3. SET ALL SPEAKER VOLTAGE JUMPERS TO THE 70.7V SETTING.
4. ALL NOTIFICATION APPLIANCE CANDELA INTENSITY PLUGS SHALL RETAIN THEIR FACTORY SETTING OF "FACP" UNLESS OTHERWISE DIRECTED BY THE AUTHORITY HAVING JURISDICTION.
5. DO NOT CHANGE DEFAULT APPLIANCE CONFIGURATION SWITCH SETTINGS ON ADDRESSABLE AV DEVICES (OFIG1). REFER TO DEVICE DETAILS AND INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.
6. THE DEVICE ADDRESSES INDICATED ON THESE DRAWINGS ARE AN ALPHANUMERIC DESCRIPTION OF WHICH CIRCUIT THE DEVICE IS LOCATED ON. DEVICES MAY BE ASSIGNED A DIFFERENT NUMBER WITHIN THE PANEL PROGRAM. CONSULT WITH A JOHNSON CONTROLS TECHNICIAN BEFORE APPLYING A PHYSICAL LABEL TO ANY DEVICES.

KEYNOTES:

- FIELD TO VERIFY EXACT LOCATION.

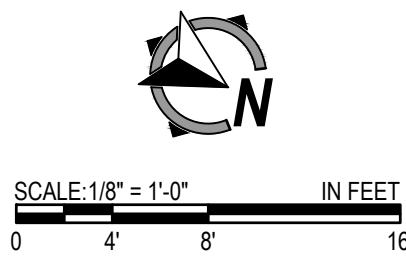
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ISSUE	DATE	BY	CHK	DESCRIPTION
1	6/10/24	JEBBANT		Revised to show with A11000

DRAWN BY:	MARIANO MENDEZ
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ISSUE DATE:	6/10/24
JOB #:	332-650505894
PROJECT #:	JOHNSON CONTROLS © 2024
SYSTEM:	FIRE ALARM SYSTEM
SHEET:	FL2 DEVICE PLACEMENT PLAN

FA-102



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JOB #:	
PROJECT #:	332-650560594
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FL3 DEVICE PLACEMENT PLAN

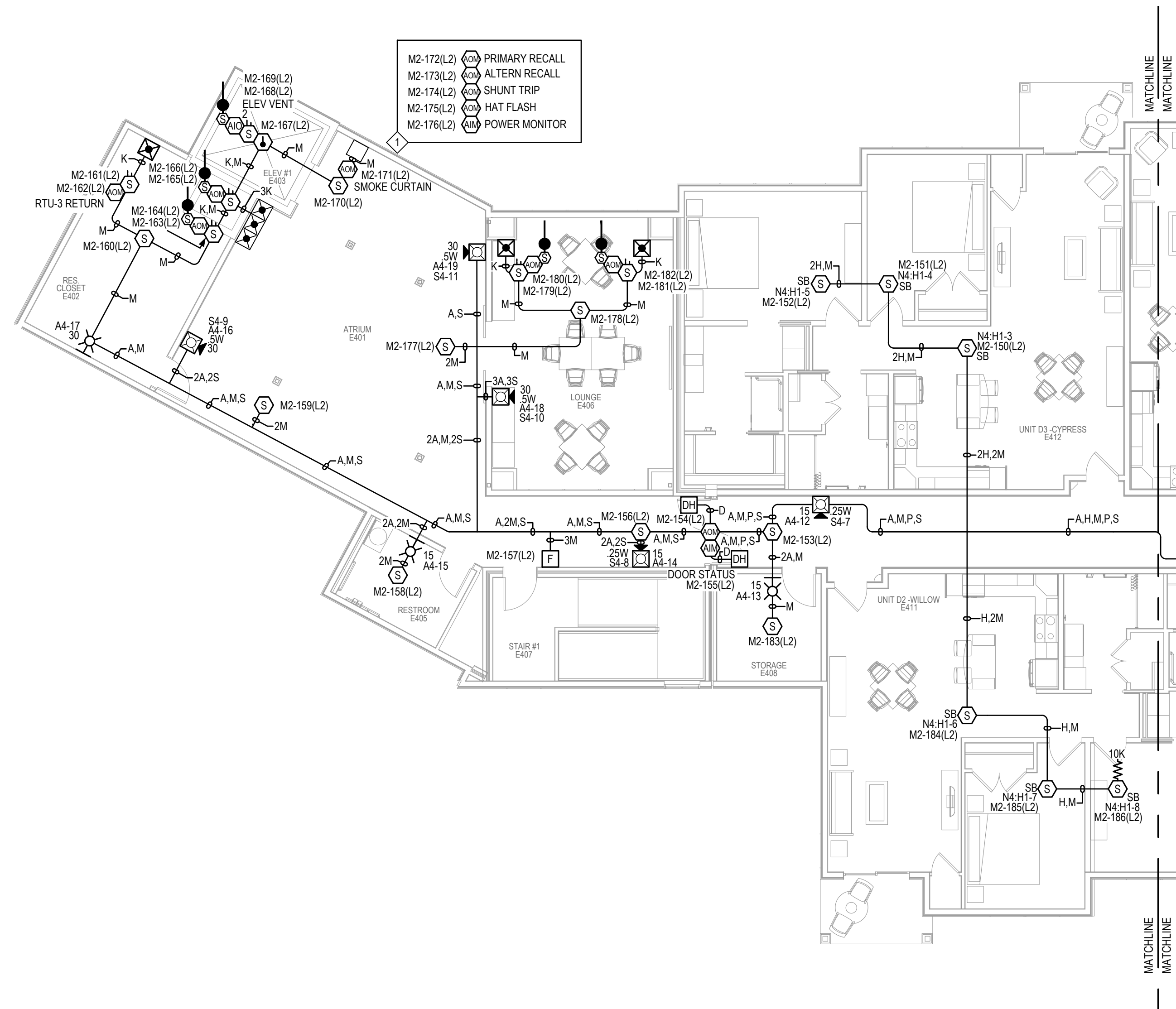
FA-103

- KEYNOTES:**
 1 FIELD TO VERIFY EXACT LOCATION.



SCALE: $1/8" = 1'-0"$ IN FEET

FL3 DEVICE PLACEMENT PLAN



1 FIELD TO VERIFY EXACT LOCATION.

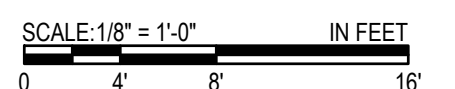


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PROJECT #:	332-650560594
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FA-104

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





SCALE:N.T.S.

RISER DIAGRAM

RISER DIAGRAM

RISER DIAGRAM

RISER DIAGRAM

FIRST FLOOR

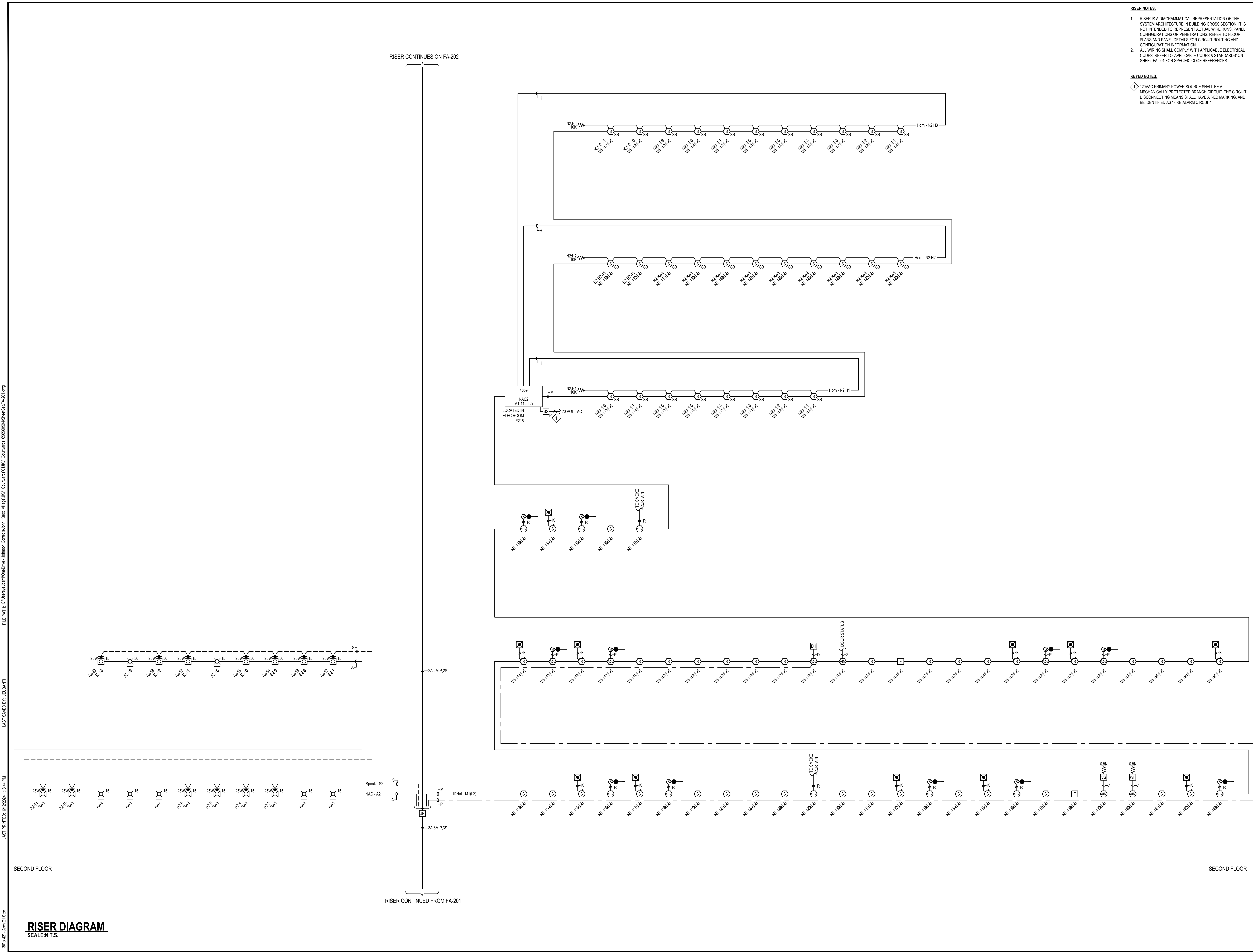
FIRST FLOOR

30" x 42" - Arch E1 Size

30" x 42" - Arch E1 Size

30" x 42" - Arch E1 Size

30" x 42" - Arch E1 Size



RISER NOTES:

1. RISER IS A DIAGRAMMATIC REPRESENTATION OF THE SYSTEM ARCHITECTURE IN BUILDING CROSS SECTION. IT IS NOT INTENDED TO REPRESENT ACTUAL WIRE RUNS, PANEL CONFIGURATIONS OR PENETRATIONS. REFER TO FLOOR PLANS AND PANEL DETAILS FOR CIRCUIT ROUTING AND CONFIGURATION INFORMATION.
2. ALL WIRING SHALL COMPLY WITH APPLICABLE ELECTRICAL CODES. REFER TO APPLICABLE CODES & STANDARDS ON SHEET FA-001 FOR SPECIFIC CODE REFERENCES.

KEYED NOTES:

① 120VAC PRIMARY POWER SOURCE SHALL BE A MECHANICALLY PROTECTED BRANCH CIRCUIT. THE CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, AND BE IDENTIFIED AS "FIRE ALARM CIRCUIT"



**Johnson
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PROJECT #:	332-650560594
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SYSTEM:	
FIRE ALARM SYSTEM	
SHEET:	
RISER DIAGRAM	
FA-202	

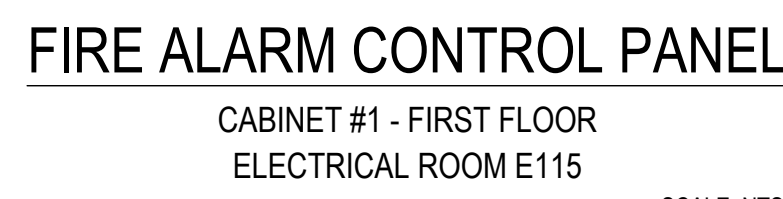
JOHN KNOX VILLAGE
1001 NW CHIPMAN RD
LEE'S SUMMIT MO 64081

DRAWN BY:	MARIANO MENDEZ
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ISSUE DATE:	6/10/24
JOB #:	
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RISER DIAGRAM

- KEYED NOTES:**
- 1 120VAC PRIMARY POWER SOURCE SHALL BE A MECHANICALLY PROTECTED BRANCH CIRCUIT. THE CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, AND BE IDENTIFIED AS "FIRE ALARM CIRCUIT"

SCALE:N.T.S



BAY 3 TERMINATIONS

TERMINATION NUMBER (H) = FERRITE BEAD

TERMINATION LABEL	CKT DESCRIPTION	WIRE
1	S1 FL1 SPEAKER CIRCUIT	S
2	S2 FL2 SPEAKER CIRCUIT	S
3	S3 FL3 SPEAKER CIRCUIT	S
4	S4 FL4 SPEAKER CIRCUIT	S

CONNECT TO
120VAC 60HZ

LOOP THE BLACK AND
WHITE AC POWER WIRES
TWICE THROUGH THE
FERRITE BEAD.

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30" x 42" Arch E Size

	Amplifier Wattage	Watts Used	Alarm	Expansion Card?	Avail. Ckts.	Used Ckts.	% Used
Amp-1	100	14.25W	3.800A	No	6	6	14.25%

4100es FACP Speaker Db Loss Calculations
*Circuit Voltage = 70vrms [Et]

SPEAKER CIRCUIT DESCRIPTION	Amp #	Plan Circuit Number	Speaker Tap .25 Watt	Speaker Tap .5 Watt	Total Spkrs per Circuit	Total Watts [P]	Wire Gauge	Est. Ckt. Length [D] in Feet	Wire Res. Per Foot [Rw]	Circuit Resistance [R=2D/Rw]	Speaker Current [I=PIE]	Speaker Resistance [R=EI]	Voltage At End [Ea=(Et-Rs) [Et=Et+Ri]]	Watts At End [Pe=(Ea) [Pa=Pi]]	Actual dB Loss [dB=Log10 [Pe/Pa]]	Max Allowable Ckt. Length [L=(0.414*Rs) [Z/Rw]]	
FL1 SPEAKER CIRCUIT	Amp-1	S1	11	2	13	3.75 Watts	18ga	700	0.0078	10.878	0.054	1306.667	69.422	3.688	- .07 db	34811 FL	
FL2 SPEAKER CIRCUIT	Amp-1	S2	13	0	13	3.25 Watts	18ga	700	0.0078	10.878	0.046	1507.692	69.499	3.204	-.06 db	40166 FL	
FL3 SPEAKER CIRCUIT	Amp-1	S3	12	2	14	4. Watts	18ga	700	0.0078	10.878	0.057	1225.000	69.384	3.930	-.08 db	32635 FL	
FL4 SPEAKER CIRCUIT	Amp-1	S4	9	2	11	3.25 Watts	18ga	700	0.0078	10.878	0.046	1507.692	69.499	3.204	-.06 db	40166 FL	

4100es FACP								
Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm		
Panel Equipment								
4100-9701	1	ES PS Master Controller - English	1	0.2770	0.2770	0.3210	0.3210	
4100-1294	1	LED/SWITCH SLIDE-IN LABEL KIT		0.0000	0.0000	0.0000	0.0000	
4100-5131	2	ES-PS Fan Module		0.0000	0.0000	0.2000	0.4000	
4100-1412	1	ES NET DIGITAL AUDIO CONTROLLER W/MICROPHONE		0.1000	0.1000	0.1000	0.1000	
4100-1255	1	3-8 CHANNEL AUDIO OPERATOR INTERFACE		0.0000	0.0000	0.0240	0.0240	
4100-1329	1	DIGITAL 100W AMP 6NAC, 120VAC, 70V		0.0850	0.0850	3.8000	3.8000	
4100-3208	1	4-POINT 10A RELAY CARD WITH FEEDBACK		0.0200	0.0200	0.1880	0.1880	
4100-1282	1	8 SW, 16RED/YEL LED MODULE		0.0000	0.0000	0.0240	0.0240	
4100-1288	1	64x64 LED/SWITCH CONTROLLER		0.0200	0.0200	0.2120	0.2120	
4100-5401	1	ES Power Supply Only		0.0690	0.0690	0.0770	0.0770	
4100-5402	1	ES-XPSP Expansion Supply		0.0690	0.0690	0.0770	0.0770	
4100-5451	2	IDNAC Card		0.1240	0.2480	0.2300	0.4600	
4100-3109	1	IDN42Z MODULE - UP TO 250 DEVICES 2 ISOLATED LOOPS	*	0.0500	0.0500	0.1000	0.1000	
Panel Totals					0.9360		5.7830	
IDNet Addressable Devices (SLC)								
4009-9201	4	4009 IDNET NAC EXTENDER, 120 VAC *						
4090-9001	26	IDNET SUPERVISED IAM *						
4090-9002	64	IDNET RELAY IAM *						
4090-9008	3	ADDRESSABLE DUAL CONTACT RELAY IAM *						
4090-9118	2	RELAY IDNET 2 IAM W/IT SENSE *						
4098-9714	217	TRUEALARM PHOTO SMOKE SENSOR						
4098-9733	2	TRUEALARM HEAT SENSOR						
4098-9755	45	TRUEALARM DUCT SMOKE SENSOR W/IO RELAY OUTPUT *						
4098-9770	1	TRUEALARM SENSOR BASE WITH CO MODULE *						
4098-9772	120	TRUEALARM 520HZ SOUNDER BASE W/ REMOTE LED *						
4098-9792	98	TRUEALARM SENSOR BASE *						
4099-9006	13	ADDRESSABLE DOUBLE ACTION MANUAL STATION, PUSH *						
Miscellaneous Peripheral Devices That Require (Additional) System Power								
4603-0101	1	SERIAL LCD ANNUNCIATOR		0.0650	0.0650	0.1400	0.1400	
IDNAC Notification Appliances								
			Setting					
49AV-WRF	2	AV WALL MT, RED, FIRE LABEL	30	0.0008	0.0016	0.0670	0.1340	
49SV-APPLW	38	S/V APPLIANCE ONLY, WALL MT	15	0.0008	0.0304	0.0470	1.7860	
49SV-APPLW	7	S/V APPLIANCE ONLY, WALL MT	30	0.0008	0.0056	0.0570	0.3990	
49SV-APPLW	4	S/V APPLIANCE ONLY, WALL MT	75	0.0008	0.0032	0.1000	0.4000	
49VO-WRF	26	VO WALL MT, RED, FIRE LABEL	15	0.0008	0.0208	0.0470	1.2220	
49VO-WRF	2	VO WALL MT, RED, FIRE LABEL	185	0.0008	0.0016	0.2080	0.4160	
49VO-WRF	5	VO WALL MT, RED, FIRE LABEL	30	0.0008	0.0040	0.0570	0.2850	
Total IDNAC Device Current:					0.0672		4.6420	
IDNAC Current Boost for 29vdc Regulated Output **							2.6465	
Peripheral Totals					0.0650		7.4285	
RUI Totals				1	0.0035		0.0035	
Address Totals				376	0.3008		0.3760	
System Totals*					1.3725	Standby	Alarm	13.5910
* Device Address current draw included below (See Additional Current Draws):								

* Device Address current draw included below (See Additional Current Draws):

IDNet cards include 40mA alarm current for 20 device LEDs in alarm in addition to base current listed on datasheet.

1. Base FACP includes current draw for all included components. See data sheet for details.

Battery Set #1 (Cabinet/Charger #1)					Standby Current	Standby Total	Alarm Current	Alarm Total		
Select ALL Power Supplies on this battery set:										
ESPS-1						0.7080		5.2380		
ESPS-2						0.2072		1.4500		
ESPS-3						0.0680		0.0770		
Amp-1						0.0850		3.8000		
Sub Total						1.0682		10.5650		
Additional Current Draws:										
IDNAC Current Boost for 29vdc Regulated Output **								2.6465		
RUI Connected Peripheral Devices					1	x 0.0035	= 0.0035	x 0.0035	= 0.0035	
MAPNET/IDNet Device Address Communication Current					376	x 0.000800	= 0.3008	x 0.001000	= 0.3760	
Sub Total						1.3725		13.5910		
Spare addressable point capacity					0%	0	x 0.0008	= 0.0000	x 0.001	= 0.0000
Total						1.3725		13.5910		
Standby Time = 24 Hrs					x 1.3725	= 32.9400	Standby Ah			
Alarm Time = 15 Min					0.25 x 13.591	= 3.3977	Alarm Ah			
Additional Spare Battery Capacity = 0%							36.3377			
							36.3377			
Battery Discharge Factor = 20%							7.2675			
Minimum Battery Required					2081-9296 50AH (2x)		43.6953			
Battery Supplied					2081-9296 50AH (2x)					

* System Totals represent total system current requirements. Those currents may be distributed between multiple battery sets or power supplies as shown above.

** IDNet Current Boost formula: [(29.5 * IDNac Alarm Current) / 92] + 20.4 = Adjusted Current
DC-DC Converter Output = 29.5vdc. Terminal Output is 29vdc due to 0.5vdc internal loss.
Converter Worst Case efficiency is 92%. 20.4vdc represents battery output in 85% depleted state

IDNET CHANNEL M1			ADDRESSES IN USE: 187 (74.8%) SPARE ADDRESSES: 63 (25.2%)								SWITCH SETTINGS							
Address	Device Type	Point Type	Location Description								1	2	3	4	5	6	7	8
M1-1	409A8	SIGNAL	FL1 ELEC E115 NAC								M1-1	X						ON
M1-2	PHOTO	SMOKE	FL1 ELEC E115 BY FACP								M1-2	X						ON
M1-3	PHOTO	SMOKE	FL1 HSKP E117								M1-3	X						ON
M1-4	PHOTO	SMOKE	FL1 MEP E118								M1-4	X						ON
M1-5	SPHOTO	SMOKE	FL1 UNIT C -CEDAR E119 LOBBY								M1-5	X						ON
M1-6	PHOTO	SMOKE	FL1 UNIT C -CEDAR E119 DEN								M1-6	X						ON
M1-7	SPHOTO	SMOKE	FL1 UNIT C -CEDAR E119 BEDROOM								M1-7	X						ON
M1-8	SPHOTO	SMOKE	FL1 UNIT C -CEDAR E119 BEDROOM								M1-8	X						ON
M1-9	PHOTO	SMOKE	FL1 UNIT C -CEDAR E121 DEN								M1-9	X						ON
M1-10	SPHOTO	SMOKE	FL1 UNIT C -CEDAR E121 LOBBY								M1-10	X						ON
M1-11	SPHOTO	SMOKE	FL1 UNIT B -BIRCH (ADA) E123 LOBBY								M1-11	X						ON
M1-12	SPHOTO	SMOKE	FL1 UNIT B -BIRCH (ADA) E123 BEDRM								M1-12	X						ON
M1-13	IAM	SO	FL1 RES. CLOSET E126 VS 1								M1-13	X						ON
M1-14	IAM	SO	FL1 RES. CLOSET E126 VS 2								M1-14	X						ON
M1-15	PHOTO	SMOKE	FL1 RES. CLOSET E126								M1-15	X						ON
M1-16	PHOTO	SMOKE	FL1 LOBBY E125								M1-16			X				ON
M1-17	RIAM	RELAY	FL1 LOBBY E125 SMOKE CURTAIN								M1-17	X						ON
M1-18	PHOTO	LSDUCT	FL1 LOBBY E125 BY E131 DUCT								M1-18	X						ON
M1-19	RIAM	RELAY	FL1 LOBBY E125 BY E131 DUCT RELAY								M1-19	X						ON
M1-20	IAM	SO	FL1 TRASHRECYCLE E131 VS 1								M1-20			X				ON
M1-21	IAM	SO	FL1 TRASHRECYCLE E131 VS 2								M1-21	X						ON
M1-22	IAM	SO	FL1 TRASHRECYCLE E131 VS 3								M1-22	X						ON
M1-23	IAM	WATER	FL1 TRASHRECYCLE E131 WF								M1-23	X						ON
M1-24	MCOP	UTILITY	FL1 TRASHRECYCLE E131 CO								M1-24	X						ON
M1-25	PHOTO	LSDUCT	FL1 TRASHRECYCLE E131 DUCT								M1-25	X						ON
M1-26	RIAM	RELAY	FL1 TRASHRECYCLE E131 DUCT RELAY								M1-26	X						ON
M1-27	PHOTO	SMOKE	FL1 COMM E127								M1-27	X						ON
M1-28	PHOTO	LSDUCT	FL1 STAIR #2 E128								M1-28	X						ON
M1-29	RIAM	RELAY	FL1 STAIR #2 E128 DUCT RELAY								M1-29	X						ON
M1-30	ADRPUL	PULL	FL1 CORR BY STAIR #2 E128								M1-30	X						ON
M1-31	IAM	SO	FL1 STAIR #2 E128 VS								M1-31	X						ON
M1-32	IAM	WATER	FL1 STAIR #2 E128 WF								M1-32	X						ON
M1-33	ADRPUL	PULL	FL1 STAIR #2 E128 BY EXIT								M1-33	X						ON
M1-34	PHOTO	SMOKE	FL1 STOR E128								M1-34	X						ON
M1-35	IAM	WATER	FL1 STOR E128 WF								M1-35	X						ON
M1-36	IAM	SO	FL1 STOR E128 VS								M1-36	X						ON
M1-37	PHOTO	LSDUCT	FL1 STOR E128 DUCT S								M1-37	X						ON
M1-38	RIAM	RELAY	FL1 STOR E128 DUCT RELAY S								M1-38	X						ON
M1-39	PHOTO	LSDUCT	FL1 STOR E128 DUCT N								M1-39	X						ON
M1-40	RIAM	RELAY	FL1 STOR E128 DUCT RELAY N								M1-40			X				ON
M1-41	SPHOTO	SMOKE	FL1 UNIT C -CEDAR E133 BEDROOM								M1-41	X						ON
M1-42	PHOTO	SMOKE	FL1 UNIT C -CEDAR E133 DEN								M1-42	X						ON
M1-43	SPHOTO	SMOKE	FL1 UNIT C -CEDAR E133 LOBBY								M1-43	X						ON
M1-44	SPHOTO	SMOKE	FL1 UNIT D1 -HICKORY E133 LOBBY								M1-44	X						ON
M1-45	SPHOTO	SMOKE	FL1 UNIT D1 -HICKORY E133 BEDROOM								M1-45	X						ON
M1-46	SPHOTO	SMOKE	FL1 UNIT D1 -HICKORY E133 BEDRM 2								M1-46	X						ON
M1-47	SPHOTO	SMOKE	FL1 UNIT C -CEDAR E116 LOBBY								M1-47	X						ON
M1-48	PHOTO	SMOKE	FL1 UNIT C -CEDAR E116 DEN								M1-48			X				ON
M1-49	SPHOTO	SMOKE	FL1 UNIT C -CEDAR E116 BEDROOM								M1-49	X						ON
M1-50	PHOTO	SMOKE	FL1 UNIT C -CEDAR E122 BEDROOM								M1-50	X						ON
M1-51	PHOTO	SMOKE	FL1 UNIT C -CEDAR E122 DEN								M1-51	X						ON
M1-52	SPHOTO	SMOKE	FL1 UNIT C -CEDAR E122 LOBBY								M1-52	X						ON
M1-53	SPHOTO	SMOKE	FL1 UNIT B -BIRCH E124 BEDROOM								M1-53	X						ON
M1-54	SPHOTO	SMOKE	FL1 UNIT B -BIRCH E124 LOBBY								M1-54	X						ON
M1-55	SPHOTO	SMOKE	FL1 UNIT C -CEDAR E132 BEDROOM								M1-55	X						ON
M1-56	PHOTO	SMOKE	FL1 UNIT C -CEDAR E132 DEN								M1-56	X						ON
M1-57	SPHOTO	SMOKE	FL1 UNIT C -CEDAR E132 LOBBY								M1-57	X						ON
M1-58	SPHOTO	SMOKE	FL1 UNIT D1 -HICKORY E134 LOBBY								M1-58	X						ON
M1-59	SPHOTO	SMOKE	FL1 UNIT D1 -HICKORY E134 BEDRM								M1-59	X						ON
M1-60	PHOTO	SMOKE	FL1 UNIT D1 -HICKORY E134 BEDRM 1								M1-60	X						ON
M1-61	SPHOTO	SMOKE	FL1 UNIT B -BIRCH E114 LOBBY								M1-61	X						ON
M1-62	PHOTO	SMOKE	FL1 UNIT B -BIRCH E114 BEDRM								M1-62	X						ON
M1-63	SPHOTO	SMOKE	FL1 UNIT D3 -CYPRESS E112 LOBBY								M1-63	X						ON
M1-64	SPHOTO	SMOKE	FL1 UNIT D3 -CYPRESS E112 BEDRM 1								M1-64			X				ON
M1-65	SPHOTO	SMOKE	FL1 UNIT D3 -CYPRESS E112 BEDRM 2								M1-65	X						ON
M1-66	PHOTO	SMOKE	FL1 UNIT D2 -WILLOW E111 LOBBY								M1-66	X						ON
M1-67	SPHOTO	SMOKE	FL1 UNIT D2 -WILLOW E111 BEDROOM 2								M1-67	X						ON
M1-68	SPHOTO	SMOKE	FL1 UNIT D2 -WILLOW E111 BEDROOM 1								M1-68			X				ON
M1-69	ADRPUL	PULL	FL1 LOBBY E125 BY EXIT								M1-69	X						ON
M1-70	PHOTO	SMOKE	FL1 CORR BY E108								M1-70	X						ON
M1-71	RIAM	DHOLDER	FL1 CORR BY STAIR 1 E107								M1-71	X						ON
M1-72	IAM	SUPERV	FL1 CORR BY E107 DOOR STATUS								M1-72	X						ON
M1-73	ADRPUL	PULL	FL1 VESTIBULE E108								M1-73	X						ON
M1-74	PHOTO	SMOKE	FL1 CORR BY E108								M1-74	X						ON
M1-75	ADRPUL	PULL	FL1 CORR BY E107 PULL								M1-75	X						ON
M1-76	ADRPUL	PULL	FL1 STAIR #1 E107 BY EXIT								M1-76	X						ON
M1-77	PHOTO	SMOKE	FL1 RESTROOM E105								M1-77	X						ON
M1-78	IAM	SO	FL1 VS BY RESTROOM E105								M1-78	X						ON
M1-79	PHOTO	SMOKE	FL1 ATRIUM E101 SOUTH EAST								M1-79	X						ON
M1-80	PHOTO	SMOKE	FL1 RES. CLOSET E102								M1-80			X				ON
M1-81	PHOTO	LSDUCT	FL1 RES. CLOSET E102 DUCT E								M1-81	X						ON
M1-82	RIAM	RELAY	FL1 RES. CLOSET E102 DUCT RELAY E								M1-82	X						ON
M1-83	PHOTO	LSDUCT	FL1 RES. CLOSET E102 DUCT W								M1-83	X						ON
M1-84	RIAM	RELAY	FL1 RES. CLOSET E102 DUCT RELAY W								M1-84			X				ON
M1-85	PHOTO	SMOKE	FL1 CORR BY E102 W								M1-85	X						ON
M1-86	RIAM	RELAY	FL1 S STAIR DOOR CONTROLLER								M1-86	X						ON
M1-87	IAM	SO	FL1 S STAIR VS								M1-87	X						ON
M1-88	PHOTO	SMOKE	FL1 ATRIUM E101 NORTH								M1-88			X				ON
M1-89	PHOTO	SMOKE	FL1 MAIL ROOM LOUNGE E106								M1-89	X						ON
M1-90	PHOTO	LSDUCT	FL1 MAIL ROOM LOUNGE E106 DUCT S								M1-90	X						ON
M1-91	RIAM	RELAY	FL1 MAIL ROOM E106 DUCT RELAY S								M1-91	X						ON
M1-92	PHOTO	LSDUCT	FL1 MAIL ROOM LOUNGE E106 DUCT N								M1-92	X						ON
M1-93	RIAM	RELAY	FL1 MAIL ROOM E106 DUCT RELAY N								M1-93	X						ON
M1-94	ADRPUL	PULL	FL1 ATRIUM E101 BY E104								M1-94	X						ON
M1-95	PHOTO	SMOKE	FL1 ATRIUM E101 ELEV LOBBY								M1-95	X						ON
M1-96	RIAM	RELAY	FL1 BY ELEV #1 E103 SMOKE CURTAIN								M1-96			X				ON
M1-97	IAM	SO	FL1 BY ELEV #1 E103 VS								M1-97	X						ON
M1-98	IAM	WATER	FL1 BY ELEV #1 E103 WF								M1-98	X						ON
M1-99	RIAM	RELAY	FL1 VEST E104 DOOR CONTROLLER 1								M1-99	X						ON
M1-100	RIAM	RELAY	FL1 VEST E104 DOOR CONTROLLER 2								M1-100	X						ON
M1-101	RIAM	RELAY	FL1 VESTIBULE E104 SECP								M1-101	X						ON
M1-102			SPARE								M1-102			X				ON
M1-103			SPARE								M1-103			X				ON
M1-104			SPARE								M1-104			X				ON
M1-105			SPARE								M1-105	X						ON
M1-106			SPARE								M1-106	X						ON
M1-107			SPARE								M1-107	X						ON
M1-108			SPARE								M1-108	X						ON
M1-109			SPARE								M1-109	X						ON
M1-110			SPARE								M1-110	X						ON
M1-111			SPARE								M1-111	X						ON
M1-112	409A8	SIGNAL	FL2 ELEC E215 NAC								M1-112	X						ON
M1-113	PHOTO	SMOKE	FL2 ELEC E215								M1-113	X						ON
M1-114	PHOTO	SMOKE	FL2 HSKP E217								M1-114	X						ON
M1-115	PHOTO	LSDUCT	FL2 MEP E218 DUCT S								M1-115	X						ON
M1-116	RIAM	RELAY	FL2 MEP E218 DUCT RELAY S								M1-116	X						ON
M1-117	PHOTO	LSDUCT	FL2 MEP E218 DUCT N								M1-117	X						ON
M1-118	RIAM	RELAY	FL2 MEP E218 DUCT RELAY N								M1-118	X						ON
M1-119	PHOTO	SMOKE	FL2 MEP E218								M1-119	X						ON
M1-120	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E219 LOBBY								M1-120			X				ON
M1-121	PHOTO	SMOKE	FL2 UNIT C -CEDAR E219 DEN								M1-121	X						ON
M1-122	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E219 BEDROOM								M1-122	X						ON
M1-123	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E221 BEDROOM								M1-123	X						ON
M1-124	PHOTO	SMOKE	FL2 UNIT C -CEDAR E221 DEN								M1-124	X						ON
M1-125	SPHOTO	SMOKE	FL2 UNIT C -CEDAR E221 LOBBY								M1-125	X						ON

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30" x 42" - Arch E Size

- IDNAC-1 CIRCUIT SUMMARY & VOLTAGE DROP							
Circuit	Description	Alarm Current	% Drop	Unit Load	Wire Length	Spare Current	Spare VoltageDrop
A1	FL1 IDNAC CIRCUIT	1.330A	2.48%	21	707	88%	
A2	FL2 IDNAC CIRCUIT	0.980A	2.53%	20	685	87%	
A3	FL3 IDNAC CIRCUIT	1.333A	3.68%	24	803	82%	

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

ES POWER SUPPLY 1 - IDNAC CARD 1 - CIRCUIT A1						SWITCH SETTINGS							
IDNAC Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)		1	2	3	4	5	6	7	8
A1-1	VO	49VQ-WRF	15cd	FL1 HSKP E117	1-1	X							ON
A1-2	SV	49SV-APPLW	15cd	FL1 CORR BY E119	1-2	X							ON
A1-3	SV	49SV-APPLW	15cd	FL1 CORR BY E121	1-3	X	X						ON
A1-4	SV	49SV-APPLW	15cd	FL1 CORR BY E123	1-4	X							ON
A1-5	VO	49VQ-WRF	15cd	FL1 UNIT B-BIRCH (ADA) E123 RR	1-5	X		X					ON
A1-6	VO	49VQ-WRF	185cd	FL1 UNIT B-BIRCH (ADA) E123 BEDROOM	1-6	X	X						ON
A1-7	SV	49SV-APPLW	75cd	FL1 UNIT B-BIRCH (ADA) E123 LOBBY	1-7	X	X						ON
A1-8	SV	49SV-APPLW	15cd	FL1 LOBBY E125	1-8		X						ON
A1-9	VO	49VQ-WRF	15cd	FL1 TRASHRECYCLE E131	1-9	X							ON
A1-10	SV	49SV-APPLW	15cd	FL1 CORR BY E	1-10	X		X					ON
A1-11	VO	49VQ-WRF	30cd	FL1 RES. CLOSET E126	1-11	X	X						ON
A1-12	SV	49SV-APPLW	15cd	FL1 CORR BY E115	1-12	X		X					ON
A1-13	SV	49SV-APPLW	15cd	FL1 CORR BY E112	1-13	X	X	X					ON
A1-14	SV	49SV-APPLW	75cd	FL1 CORR BY E107	1-14	X	X	X					ON
A1-15	VO	49VQ-WRF	15cd	FL1 RESTROOM E105	1-15	X	X	X					ON
A1-16	SV	49SV-APPLW	75cd	FL1 ATRIUM E101 BY E105	1-16			X					ON
A1-17	SV	49SV-APPLW	15cd	FL1 SOUTH EAST STAIR	1-17	X			X				ON
A1-18	VO	49VQ-WRF	30cd	FL1 RES. CLOSET E102 EAST	1-18	X			X				ON
A1-19	SV	49SV-APPLW	15cd	FL1 ATRIUM E101 SOUTH	1-19	X	X		X				ON
A1-20	SV	49SV-APPLW	15cd	FL1 CORR BY E103	1-20	X		X	X				ON
A1-21	VO	49VQ-WRF	15cd	FL1 MEP E118	1-21	X	X	X					ON

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

ES POWER SUPPLY 1 - IDNAC CARD 1 - CIRCUIT A2						SWITCH SETTINGS							
IDNAC Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)		1	2	3	4	5	6	7	8
A2-1	VO	49VQ-WRF	15cd	FL2 HSKP E217	2-1	X							ON
A2-2	VO	49VQ-WRF	15cd	FL2 MEP E218	2-2	X							ON
A2-3	SV	49SV-APPLW	15cd	FL2 CORR BY E219	2-3	X	X						ON
A2-4	SV	49SV-APPLW	15cd	FL2 CORR BY E221	2-4	X	X						ON
A2-5	SV	49SV-APPLW	15cd	FL2 CORR BY E223	2-5	X	X						ON
A2-6	SV	49SV-APPLW	15cd	FL2 CORR BY E225	2-6	X		X					ON
A2-7	VO	49VQ-WRF	15cd	FL2 STOR E231	2-7	X	X	X					ON
A2-8	VO	49VQ-WRF	15cd	FL2 TRASHRECYCLE E231	2-8			X					ON
A2-9	VO	49VQ-WRF	15cd	FL2 RES. CLOSET E226	2-9	X		X					ON
A2-10	SV	49SV-APPLW	15cd	FL2 CORR BY E233	2-10	X		X					ON
A2-11	SV	49SV-APPLW	15cd	FL2 CORR BY E215	2-11	X	X		X				ON
A2-12	SV	49SV-APPLW	15cd	FL2 CORR BY E212	2-12	X	X	X					ON
A2-13	SV	49SV-APPLW	15cd	FL2 CORR BY E207	2-13	X	X	X					ON
A2-14	SV	49SV-APPLW	30cd	FL2 LOUNGE E206	2-14	X	X	X	X				ON
A2-15	SV	49SV-APPLW	30cd	FL2 BY E206 SOUTH WEST	2-15	X	X	X	X				ON
A2-16	VO	49VQ-WRF	15cd	FL2 HSKP E205	2-16				X				ON
A2-17	SV	49SV-APPLW	15cd	FL2 SOUTH EAST STAIR	2-17	X			X				ON
A2-18	SV	49SV-APPLW	30cd	FL2 BY RES CLOSET E202	2-18	X			X	X			ON
A2-19	VO	49VQ-WRF	30cd	FL2 RES. CLOSET E202	2-19	X	X	X	X				ON
A2-20	SV	49SV-APPLW	15cd	FL2 CORR BY SOUTH WEST STAIR	2-20		X	X	X				ON

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

ES POWER SUPPLY 1 - IDNAC CARD 1 - CIRCUIT A3						SWITCH SETTINGS							
IDNAC Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)		1	2	3	4	5	6	7	8
A3-1	VO	49VQ-WRF	15cd	FL3 HSKP E317	3-1	X							ON
A3-2	VO	49VQ-WRF	15cd	FL3 MEP E318	3-2	X							ON
A3-3	SV	49SV-APPLW	15cd	FL3 CORR BY E319	3-3	X	X						ON
A3-4	VO	49VQ-WRF	15cd	FL3 UNIT C-CEDAR (ADA) E316 RR	3-4	X		X					ON
A3-5	VO	49VQ-WRF	185cd	FL3 UNIT C-CEDAR (ADA) E316 BEDROOM	3-5	X	X						ON
A3-6	SV	49SV-APPLW	15cd	FL3 UNIT C-CEDAR (ADA) E316 LOBBY	3-6	X	X						ON
A3-7	SV	49SV-APPLW	15cd	FL3 CORR BY E321	3-7	X	X	X					ON
A3-8	SV	49SV-APPLW	15cd	FL3 CORR BY E323	3-8	X		X					ON
A3-9	SV	49SV-APPLW	15cd	FL3 LOBBY E325	3-9	X	X	X					ON
A3-10	VO	49VQ-WRF	15cd	FL3 STORAGE E331	3-10	X		X					ON
A3-11	VO	49VQ-WRF	15cd	FL3 UNASSIGNED E336	3-11	X	X	X					ON
A3-12	VO	49VQ-WRF	15cd	FL3 RES. CLOSET E326	3-12	X		X					ON
A3-13	SV	49SV-APPLW	15cd	FL3 CORR BY E333	3-13	X	X	X					ON
A3-14	SV	49SV-APPLW	15cd	FL3 CORR BY E311	3-14	X	X	X	X				ON
A3-15	SV	49SV-APPLW	15cd	FL3 CORR BY E312	3-15	X	X	X	X				ON
A3-16	VO	49VQ-WRF	15cd	FL3 STORAGE E308	3-16			X					ON
A3-17	SV	49SV-APPLW	15cd	FL3 CORR BY E306	3-17	X		X					ON
A3-18	SV	49SV-APPLW	30cd	FL3 LOUNGE E306	3-18	X		X					ON
A3-19	AV	49AV-WRF	30cd	FL3 ATRIUM E301 WEST	3-19	X	X	X					ON
A3-20	VO	49VQ-WRF	15cd	FL3 STORAGE E305	3-20	X		X					ON
A3-21	SV	49SV-APPLW	15cd	FL3 SOUTH EAST STAIR	3-21	X	X	X	X				ON
A3-22	SV	49SV-APPLW	30cd	FL3 ATRIUM E301 EAST	3-22	X	X	X	X				ON
A3-23	VO	49VQ-WRF	15cd	FL3 RES. CLOSET E302	3-23	X		X					ON
A3-24	SV	49SV-APPLW	15cd	FL3 CORR BY E302	3-24	X	X	X	X				ON

- IDNAC-2 CIRCUIT SUMMARY & VOLTAGE DROP							
Circuit	Description	Alarm Current	% Drop	Unit Load	Wire Length	Spare Current	Spare VoltageDrop
A4	FL4 IDNAC CIRCUIT	0.943A	2.90%	19	684	69%	
A5	SPARE	0.000A	0.00%	0	0	100%	
A6	SPARE	0.000A	0.00%	0	0	100%	

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

ES POWER SUPPLY 2 - IDNAC CARD 2 - CIRCUIT A4						SWITCH SETTINGS							
IDNAC Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)		1	2	3	4	5	6	7	8
A4-1	VO	49VQ-WRF	15cd	FL4 HSKP E417	4-1	X							ON
A4-2	VO	49VQ-WRF	15cd	FL4 MEP E418	4-2	X							ON
A4-3	SV	49SV-APPLW	15cd	FL4 CORR BY E419	4-3	X	X						ON
A4-4	SV	49SV-APPLW	15cd	FL4 CORR BY E421	4-4	X	X						ON
A4-5	SV	49SV-APPLW	15cd	FL4 CORR BY E423	4-5	X	X						ON
A4-6	SV	49SV-APPLW	15cd	FL4 LOBBY E425	4-6	X	X	X					ON
A4-7	VO	49VQ-WRF	15cd	FL4 STORAGE E431	4-7	X	X	X					ON
A4-8	VO	49VQ-WRF	15cd	FL4 UNASSIGNED E436	4-8	X		X					ON
A4-9	VO	49VQ-WRF	15cd	FL4 RES. CLOSET E426	4-9	X		X					ON
A4-10	SV	49SV-APPLW	15cd	FL4 CORR BY E433	4-10	X		X					ON
A4-11	SV	49SV-APPLW	15cd	FL4 CORR BY E411	4-11	X	X	X					ON
A4-12	SV	49SV-APPLW	15cd	FL4 CORR BY E412	4-12	X		X					ON
A4-13	VO	49VQ-WRF	15cd	FL4 STORAGE E408	4-13	X		X					ON
A4-14	SV	49SV-APPLW	15cd	FL4 CORR BY STAIR E407	4-14	X	X	X					ON
A4-15	VO	49VQ-WRF	15cd	FL4 RESTROOM E405	4-15	X	X	X	X				ON
A4-16	SV	49SV-APPLW	30cd	FL4 ATRIUM E401 EAST	4-16			X					ON
A4-17	VO	49VQ-WRF	30cd	FL4 RES. CLOSET E402	4-17	X		X					ON
A4-18	SV	49SV-APPLW	30cd	FL4 LOUNGE E406	4-18	X		X	X				ON
A4-19	AV	49AV-WRF	30cd	FL4 ATRIUM E401 WEST	4-19	X	X	X	X				ON

A1			Notification SLC Distributed Load Voltage Drop										
Starting Voltage: 29vdc			Primary Wire Gauge: 14ga			Wire Res. Per Ft. 0.003070			@ 75° Celsius				
Min. Device Voltage: 23.vdc			Home Run Wire Gauge: 14ga			Wire Res. Per Ft. 0.003070			@ 75° Celsius				
Allowable % Drop: 20.7%													
Class B Calculations													% Vdrop
Branch	Device #	From	Distance (feet)	PID	Setting	Device Draw	Current at Device	Voltage Drop	Voltage at Device	Wire Length			
1	A1-1	PANEL	13	49VQ-WRF	15cd	0.0470	1.239	0.099	28.901	Branch 1: 2.48% Length: 707			
1	A1-2	A1-1	24	49SV-APPLW	15cd	0.0470	0.553	0.081	28.820				
1	A1-3	A1-2	54	49SV-APPLW	15cd	0.0470	0.506	0.168	28.652				
1	A1-4	A1-3	54	49SV-APPLW	15cd	0.0470	0.459	0.152	28.500				
1	A1-5	A1-4	24	49VQ-WRF	15cd	0.0470	0.355	0.052	28.447				
1	A1-6	A1-5	29	49VQ-WRF	185cd	0.2080	0.308	0.055	28.393				
1	A1-7	A1-6	13	49SV-APPLW	75cd	0.1000	0.100	0.008	28.385				
1	A1-8	A1-11	60	49SV-APPLW	15cd	0.0470	0.141	0.052	28.432				
1	A1-9	A1-8	62	49VQ-WRF	15cd	0.0470	0.047	0.006	28.426				
1	A1-10	A1-9	24	49SV-APPLW	15cd	0.0470	0.047	0.016	28.414				
1	A1-11	A1-4	44	49VQ-WRF	30cd	0.0570	0.057	0.015	28.444				
1	A1-12	A1-1	26	49SV-APPLW	15cd	0.0470	0.592	0.095	28.807				
1	A1-13	A1-12	53	49SV-APPLW	15cd	0.0470	0.545	0.177	28.629				
1	A1-14	A1-13	32	49SV-APPLW	75cd	0.1000	0.488	0.098	26.531				
1	A1-15	A1-14	30	49VQ-WRF	15cd	0.0470	0.398	0.073	28.468				
1	A1-16	A1-15	21	49SV-APPLW	75cd	0.1000	0.351	0.045	28.413				
1	A1-17	A1-16	40	49SV-APPLW	15cd	0.0470	0.251	0.062	28.351				
1	A1-18	A1-17	31	49VQ-WRF	30cd	0.0570	0.204	0.039	28.312				
1	A1-19	A1-18	27	49SV-APPLW	15cd	0.1000	0.147	0.024	28.288				
1	A1-20	A1-19	29	49SV-APPLW	15cd	0.0470	0.047	0.008	28.280				
1	A1-21	A1-1	20	49VQ-WRF	15cd	0.0470	0.047	0.006	28.895				

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30" x 42" - Arch 11 Size

FL1 ELECTRICAL ROOM E115 4009 NAC						
Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4009-9201	1	4009 IDNET NAC EXTENDER, 120 VAC	0.0850	0.0850	0.1850	0.1850
4009-9807	1	NAC CARD, 4PT, IDNET	0.0400	0.0400	0.0400	0.0400
Panel Totals				0.1250		0.2250
Notification Appliances						
4098-9772	30	TRUEALARM 520HZ SOUNDER BASE W/ REMOTE LED *	520 Hz	0.0000	0.0000	0.1290
Peripheral Totals				0.0000		3.8700
System Totals*: Standby				0.1250	Alarm	4.0950

Battery Set #1 (Cabinet/Charger #1)						
Select ALL Power Supplies on this battery set:				Standby Current	Standby Total	Alarm Current
4009					0.1250	4.0950
Sub Total					0.1250	4.0950
Additional Current Draws:						
RUI Connected Peripheral Devices				0	x 0.0035	= 0.0000
MAPNET/IDNet Device Address Communication Current				0	x 0.0000000	= 0.0000
Sub Total					0.1250	4.0950
Spare addressable point capacity						
0%	0	x 0			= 0.0000	x 0 = 0.0000
Total					0.1250	4.0950
Standby Time = 24 Hrs x 0.1250 = 3.0000 Standby Ah						
Alarm Time = 15 Min 0.25 x 4.095 = 1.0238 Alarm Ah						
Additional Spare Battery Capacity = 0% + 4.0238						
Battery Discharge Factor = 20% + 0.8048						
Minimum Battery Required 2081-9272 6.2AH (2x) 4.8285						
Battery Supplied 2081-9272 6.2AH (2x)						

* System Totals represent total system current requirements. Those currents may be distributed between multiple battery sets or power supplies as shown above.

VOLTAGE DROP SUMMARY				
Plan Circuit	Description	Load	% Drop	
N1-H1	FL1 NORTH EAST SUITES	SI01 1.032A	4.63%	
N1-H2	FL1 NORTH WEST SUITES	SI02 1.419A	8.74%	
N1-H3	FL1 SOUTH SUITES	SI03 1.419A	8.29%	
		3.870A	Total	

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

N1-H1 Distributed Load Voltage Drop						
Allowable % Drop: 17.9%			Wire Res. Per Ft. 0.003070		@ 75° Celsius	
Wire Gauge: 14ga			Min. Device Voltage: 16.vdc			
Starting Voltage: 19.5vdc			% Voltage Drop: 4.63%			
Circuit Capacity 2.A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
N1-H1-1	4098-9772	520 Hz	41	0.129	0.260	19.24
N1-H1-2	4098-9772	520 Hz	17	0.129	0.354	19.15
N1-H1-3	4098-9772	520 Hz	43	0.129	0.558	18.94
N1-H1-4	4098-9772	520 Hz	23	0.129	0.649	18.85
N1-H1-5	4098-9772	520 Hz	16	0.129	0.700	18.80
N1-H1-6	4098-9772	520 Hz	64	0.129	0.852	18.65
N1-H1-7	4098-9772	520 Hz	24	0.129	0.890	18.61
N1-H1-8	4098-9772	520 Hz	16	0.129	0.903	18.60
Totals:			244 Ft.	1.032A		

N1-H2 Distributed Load Voltage Drop						
Allowable % Drop: 17.9%			Wire Res. Per Ft. 0.003070		@ 75° Celsius	
Wire Gauge: 14ga			Min. Device Voltage: 16.vdc			
Starting Voltage: 19.5vdc			% Voltage Drop 8.74%			
Ckt Capacity 2.A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
N1-H2-1	4098-9772	520 Hz	50	0.129	0.436	19.06
N1-H2-2	4098-9772	520 Hz	21	0.129	0.602	18.90
N1-H2-3	4098-9772	520 Hz	33	0.129	0.837	18.66
N1-H2-4	4098-9772	520 Hz	21	0.129	0.970	18.53
N1-H2-5	4098-9772	520 Hz	38	0.129	1.181	18.32
N1-H2-6	4098-9772	520 Hz	14	0.129	1.247	18.25
N1-H2-7	4098-9772	520 Hz	59	0.129	1.481	18.02
N1-H2-8	4098-9772	520 Hz	23	0.129	1.554	17.95
N1-H2-9	4098-9772	520 Hz	42	0.129	1.654	17.85
N1-H2-10	4098-9772	520 Hz	24	0.129	1.692	17.81
N1-H2-11	4098-9772	520 Hz	16	0.129	1.705	17.80
Totals:			341 Ft.	1.419A		

N1-H3 Distributed Load Voltage Drop						
Allowable % Drop: 17.9%			Wire Res. Per Ft. 0.003070		@ 75° Celsius	
Wire Gauge: 14ga			Min. Device Voltage: 16.vdc			
Starting Voltage: 19.5vdc			% Voltage Drop 8.29%			
Ckt Capacity 2.A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
N1-H3-1	4098-9772	520 Hz	46	0.129	0.401	19.10
N1-H3-2	4098-9772	520 Hz	21	0.129	0.567	18.93
N1-H3-3	4098-9772	520 Hz	33	0.129	0.802	18.70
N1-H3-4	4098-9772	520 Hz	21	0.129	0.935	18.56
N1-H3-5	4098-9772	520 Hz	34	0.129	1.124	18.38
N1-H3-6	4098-9772	520 Hz	14	0.129	1.190	18.31
N1-H3-7	4098-9772	520 Hz	54	0.129	1.404	18.10
N1-H3-8	4098-9772	520 Hz	25	0.129	1.484	18.02
N1-H3-9	4098-9772	520 Hz	35	0.129	1.567	17.93
N1-H3-10	4098-9772	520 Hz	23	0.129	1.603	17.90
N1-H3-11	4098-9772	520 Hz	16	0.129	1.616	17.88
Totals:			322 Ft.	1.419A		

VOLTAGE DROP SUMMARY				
Plan Circuit	Description	Load	% Drop	
N3-H1	FL1 NORTH EAST SUITES	SI01 1.032A	4.63%	
N3-H2	FL1 NORTH WEST SUITES	SI02 1.419A	8.74%	
N3-H3	FL1 SOUTH SUITES	SI03 1.419A	8.29%	
		3.870A	Total	

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

N3-H1 Distributed Load Voltage Drop						
Allowable % Drop: 17.9%			Wire Res. Per Ft. 0.003070		@ 75° Celsius	
Wire Gauge: 14ga			Min. Device Voltage: 16.vdc			
Starting Voltage: 19.5vdc			% Voltage Drop 4.63%			
Circuit Capacity 2.A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
N3-H1-1	4098-9772	520 Hz	41	0.129	0.260	19.24
N3-H1-2	4098-9772	520 Hz	17	0.129	0.354	19.15
N3-H1-3	4098-9772	520 Hz	43	0.129	0.558	18.94
N3-H1-4	4098-9772	520 Hz	23	0.129	0.649	18.85
N3-H1-5	4098-9772	520 Hz	16	0.129	0.700	18.80
N3-H1-6	4098-9772	520 Hz	64	0.129	0.852	18.65
N3-H1-7	4098-9772	520 Hz	24	0.129	0.890	18.61
N3-H1-8	4098-9772	520 Hz	16	0.129	0.903	18.60
Totals:			244 Ft.	1.032A		

N3-H2 Distributed Load Voltage Drop						
Allowable % Drop: 17.9%			Wire Res. Per Ft. 0.003070		@ 75° Celsius	
Wire Gauge: 14ga			Min. Device Voltage: 16.vdc			
Starting Voltage: 19.5vdc			% Voltage Drop 8.74%			
Ckt Capacity 2.A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
N3-H2-1	4098-9772	520 Hz	50	0.129	0.436	19.06
N3-H2-2	4098-9772	520 Hz	21	0.129	0.602	18.90
N3-H2-3	4098-9772	520 Hz	33	0.129	0.837	18.66
N3-H2-4	4098-9772	520 Hz	21	0.129	0.970	18.53
N3-H2-5	4098-9772	520 Hz	38	0.129	1.181	18.32
N3-H2-6	4098-9772	520 Hz	14	0.129	1.247	18.25
N3-H2-7	4098-9772	520 Hz	59	0.129	1.481	18.02
N3-H2-8	4098-9772	520 Hz	23	0.129	1.554	17.95
N3-H2-9	4098-9772	520 Hz	42	0.129	1.654	17.85
N3-H2-10	4098-9772	520 Hz	24	0.129	1.692	17.81
N3-H2-11	4098-9772	520 Hz	16	0.129	1.705	17.80
Totals:			341 Ft.	1.419A		

N3-H3 Distributed Load Voltage Drop						
Allowable % Drop: 17.9%			Wire Res. Per Ft. 0.003070		@ 75° Celsius	
Wire Gauge: 14ga			Min. Device Voltage: 16.vdc			
Starting Voltage: 19.5vdc			% Voltage Drop 8.29%			
Ckt Capacity 2.A						
Normal Operation						
Device #	PID	Setting	Distance (Feet)	Device Current	Voltage Drop	Voltage At Device
N3-H3-1	4098-9772	520 Hz	46	0.129	0.401	19.10
N3-H3-2	4098-9772	520 Hz	21	0.129	0.567	18.93
N3-H3-3	4098-9772	520 Hz	33	0.129	0.802	18.70
N3-H3-4	4098-9772	520 Hz	21	0.129	0.935	18.56
N3-H3-5	4098-9772	520 Hz	34	0.129	1.124	18.38
N3-H3-6	4098-9772	520 Hz	14	0.129	1.190	18.31
N3-H3-7	4098-9772	520 Hz	54	0.129	1.404	18.10
N3-H3-8	4098-9772	520 Hz	25	0.129	1.484	18.02
N3-H3-9	4098-9772	520 Hz	35	0.129	1.567	17.93
N3-H3-10	4098-9772	520 Hz	23	0.129	1.603	17.90
N3-H3-11	4098-9772	520 Hz	16	0.129	1.616	17.88
Totals:			322 Ft.	1.419A		

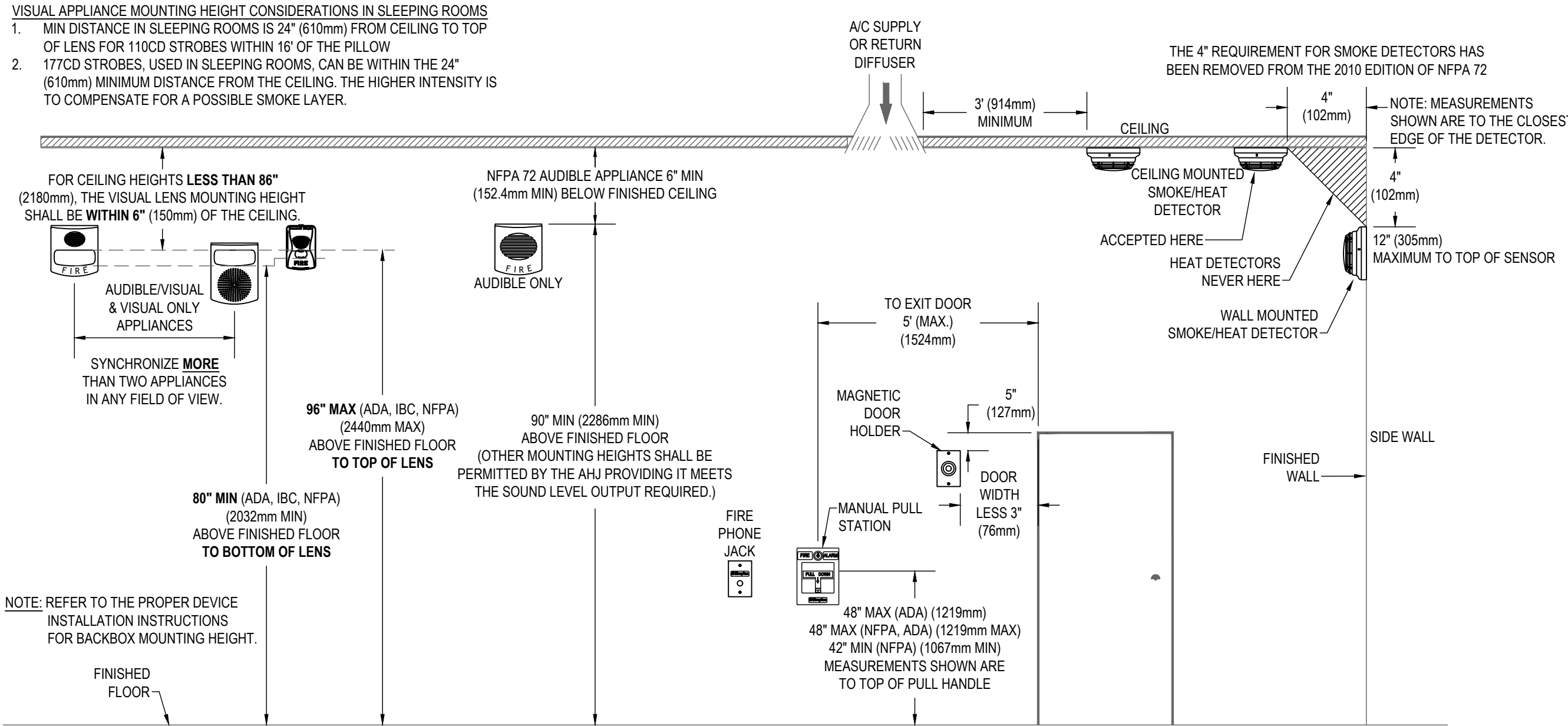
FL2 ELECTRICAL ROOM E215 4009 NAC						
Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4009-9201	1	4009 IDNET NAC EXTENDER, 120 VAC	0.0850	0.0850	0.1850	0.1850
4009-9807	1	NAC CARD, 4PT, IDNET	0.0400	0.0400	0.0400	0.0400
Panel Totals				0.1250		0.2250
Notification Appliances			Setting			
4098-9772	30	TRUEALARM 520HZ SOUNDER BASE W/ REMOTE LED *	520 Hz	0.0000	0.1250	3.8700
Peripheral Totals				0.0000		3.8700
System Totals:				0.1250	Alarm	4.9950

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LAST PRINTED: 6/22/2024 13:24 PM
30" x 42" Arch E Size

DEVICE MOUNTING HEIGHT REFERENCE

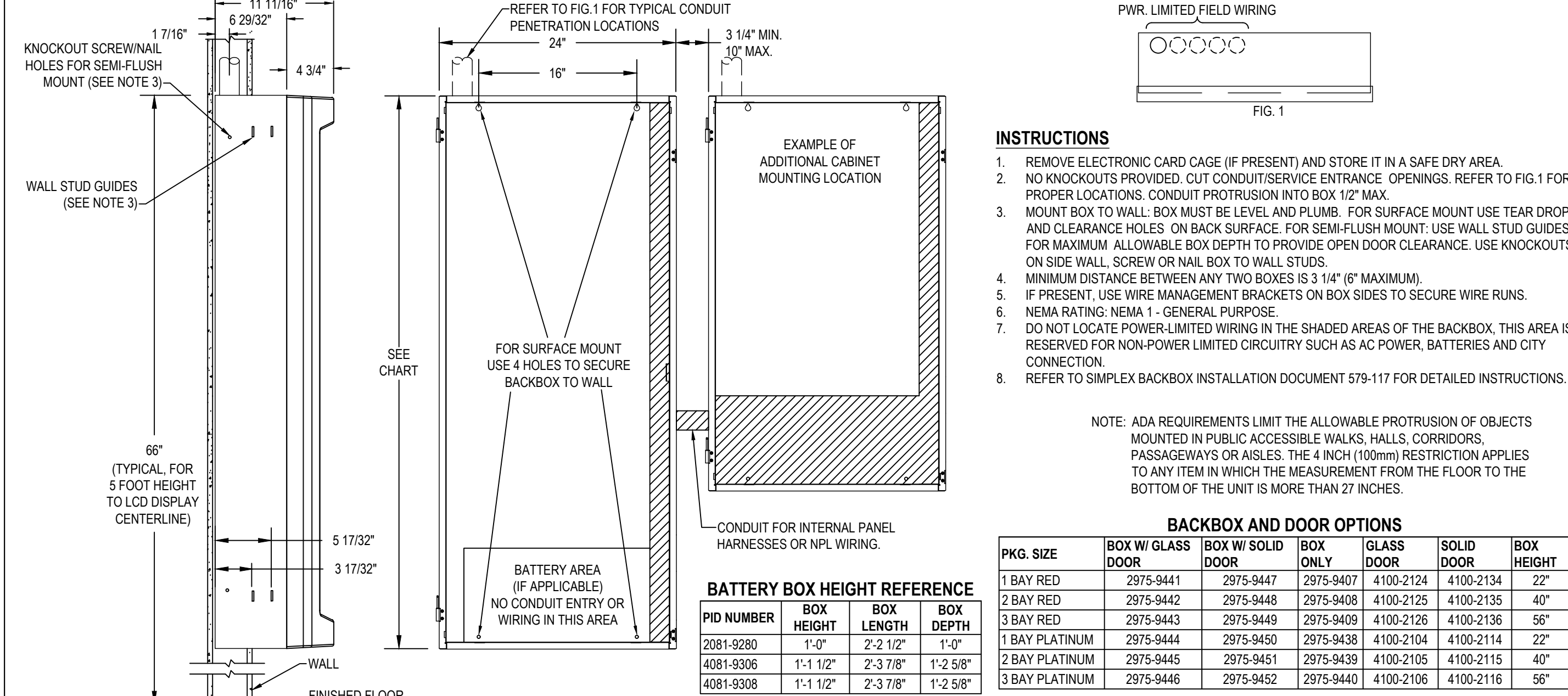
PER NFPA 72

- VISUAL APPLIANCE MOUNTING HEIGHT CONSIDERATIONS IN SLEEPING ROOMS**
- MIN DISTANCE IN SLEEPING ROOMS IS 24" (610mm) FROM CEILING TO TOP OF LENS FOR 110CD STROBES WITHIN 16' OF THE PILLOW
 - 177CD STROBES, USED IN SLEEPING ROOMS, CAN BE WITHIN THE 24" (610mm) MINIMUM DISTANCE FROM THE CEILING. THE HIGHER INTENSITY IS TO COMPENSATE FOR A POSSIBLE SMOKE LAYER.



FIRE ALARM CONTROL PANEL BACKBOX INSTALLATION

SIMPLEX 4100es SERIES

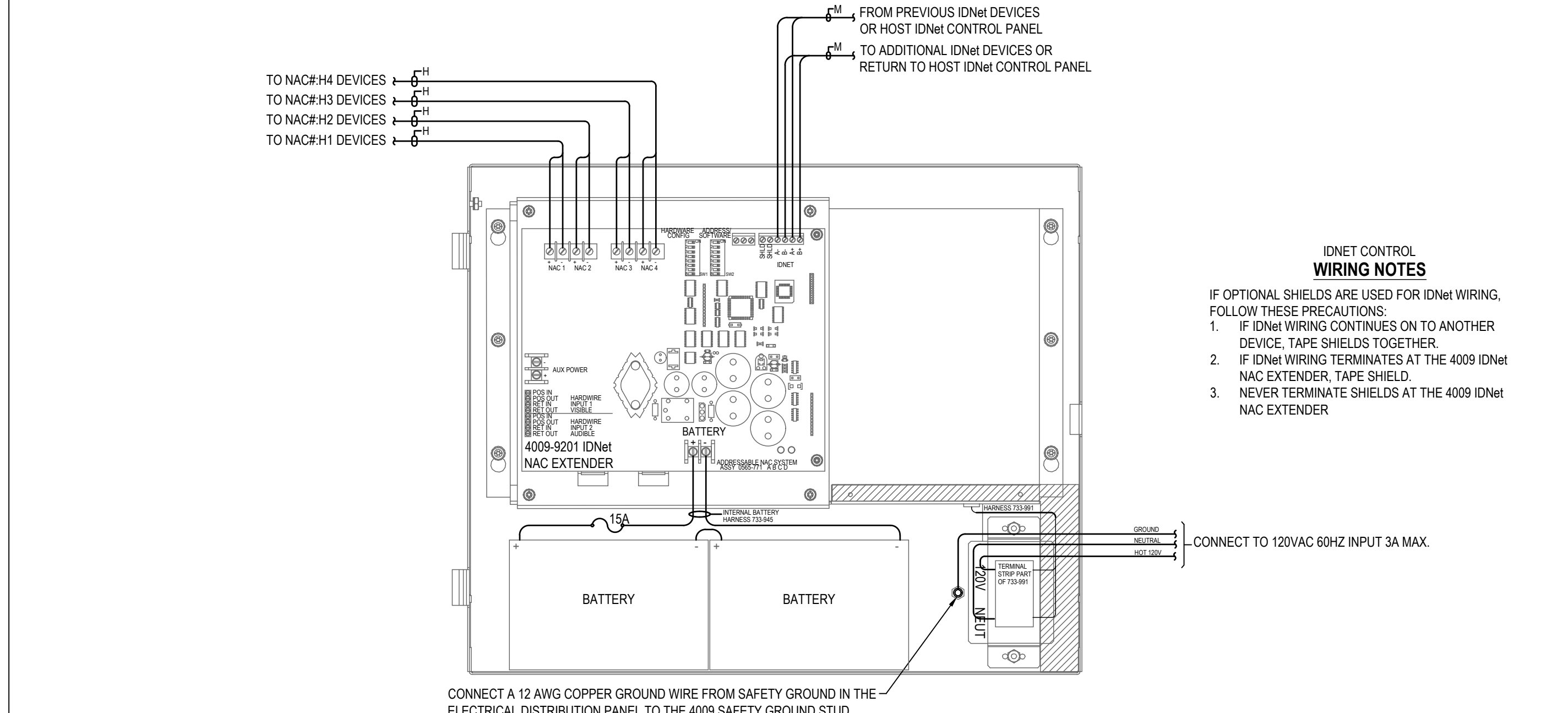


END OF LINE RESISTOR CODES

NOTE: REFER TO PANEL/MODULE AND DEVICE INSTALLATION INSTRUCTIONS FOR PROPER TERMINATIONS						
MODEL	REF. NUMBER	Ω	BAND NUMBER	WATTS	CIRCUIT TYPE	FIRE ALARM ALARM PANEL/MODULE
4081-9001	733-892	2.2K	RED RED GLD N/A	1/2	ANNUNCIATOR (4300)	4004, 4010 (TROUBLE)
4081-9002	733-893	3.3K	ORG ORG RED GLD N/A	1	N.O. INITIATING PULL, SMOKE, HEAT, WATERFLOW, TAMPER, ETC. 24 PT. I/O SWITCH SUPV. CURRENT LIMITED N.O. INIT. NOTIFICATION (DACI)	4004*, 4004R, 4005*, 4006, 4100, 4102, 4100U, 24M6, 4605-7401, 4100 SERIES, 4090 IDNET IAM (EOLR), 2980-9024
4081-9003	733-896	4.7K	YEL YT RED GLD N/A	1/2	N.O. INITIATING PULL, SMOKE, HEAT, W.FLOW, TAMPER, ETC. CURRENT LIMITED N.O. INITIATING (IN LINE)	4004, 4005, 4090-9001 IDNET IAM, 2190-9174 MAPNET II 2 PT. I/O 4-20MA 24V (TROUBLE)
4081-9004	733-886	6.8K	BLU BRN GRY RED GLD N/A	1/2	N.O. INITIATING PULL, SMOKE, HEAT, W.FLOW, TAMPER, ETC. CURRENT LIMITED N.O. INITIATING (IN LINE)	4004, 4005, 4090-9001 IDNET IAM, 2190-9174 MAPNET II 2 PT. I/O 4-20MA 24V (TROUBLE)
4081-9005	733-984	1.8K	BRN GRN YEL RED GLD N/A	1/2	N.C. INITIATING (EOLR)	4005*, 4090-9001 IDNET IAM, 4100, 4100U
4081-9006	733-890	560	GRN BLU BRN GLD N/A	1	N.C. INITIATING (EOLR)	4005
4081-9007	733-891	1.2K	BRN RED RED GLD N/A	1	N.C. INITIATING (EOLR)	4004, 4005, 4006, 4008, 4009, 4010, 4100, 4100U
4081-9008	733-894	10K	BRN BLK ORG GLD N/A	1/2	TO MR-101 RELAY COIL, N.C. INT. (ACROSS CONTACTS)	4005*, 4090-9001 IDNET IAM, 4100, 4100U
4081-9009	733-912	20	RED BLK BLK GLD N/A	1	24 PT. I/O (ACROSS CONTACTS)	4005*, 4090-9001 IDNET IAM, 4100, 4100U
4081-9010	733-973	1K	BRN BLK RED GLD N/A	1	ANNUNCIATOR (NZ)	4006, 4008, 4010
4081-9011	733-974	100	BRN BLK BRN GLD N/A	1/2	SPEAKER CIRCUIT	4003
4081-9012	733-985	22K	RED RED ORG GLD N/A	1/2	N.C. INITIATING (SECURITY MONITORING EOLR)	4090-9001 IDNET IAM
4081-9013	734-086	4.9K	YEL WHT WHT BRN BRN	1/2	CURRENT LIMITED N.O. INIT. (SECURITY MONITORING EOLR)	4090-9001 IDNET IAM
4081-9014	734-092	2.4K	RED YEL RED GLD N/A	1/2	N.C. INITIATING (SECURITY MONITORING EOLR)	4090-9001 IDNET IAM
4081-9015	734-093	1.5K	BRN GRN RED GLD N/A	1	CURRENT LIMITED N.O. INIT. (SECURITY MONITORING EOLR)	4090-9001 IDNET IAM
4081-9016	734-149	150K	BRN GRN YEL GLD N/A	1/2	70VMS CONSTANT SUPV. NAC	4100-1260
4081-9017	734-171	3.9K	ORG WHT YEL GLD N/A	1	SECURITY MONITORING (EOLR)	4100, 4100U
4081-9018	734-180	10K	BRN BLK ORG GLD N/A	1	N.O. SECURITY MON (SERIES)	4100, 4100U
378-090	8.2K	GRY RED RED GLD N/A	1/2	N.C. SECURITY MON (SERIES)	4100, 4100U	
378-096	5.6K	BRN BLU RED GLD N/A	1/2	N.C. SECURITY MON (SERIES)	4100, 4100U	
378-099	12K	BRN RED ORG GLD N/A	1/2	N.C. SECURITY MON (SERIES)	4100, 4100U	

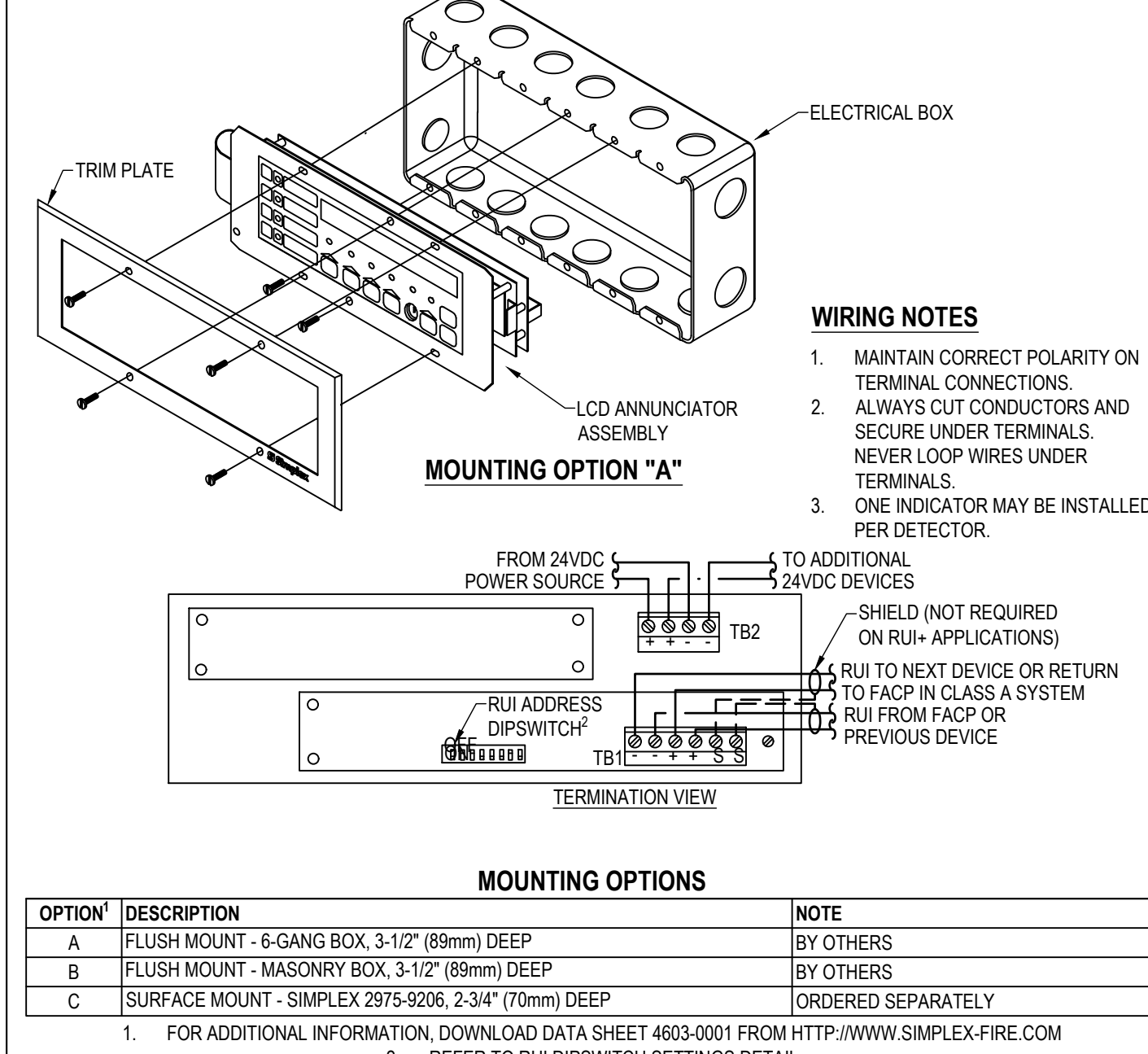
NAC EXTENDER PANEL WIRING

SIMPLEX 4009 SERIES



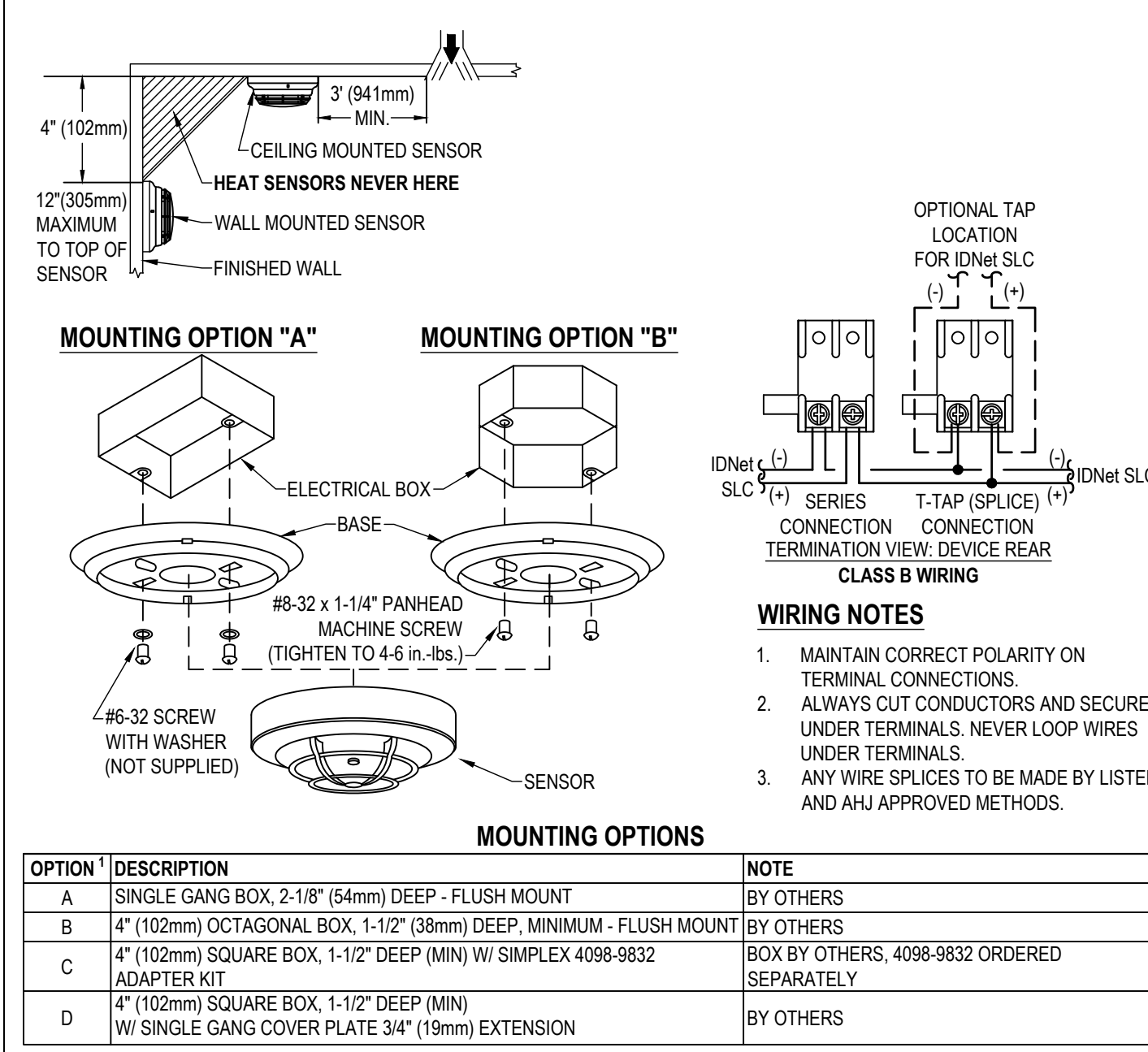
REMOTE ANNUNCIATOR

SIMPLEX 4603-9101



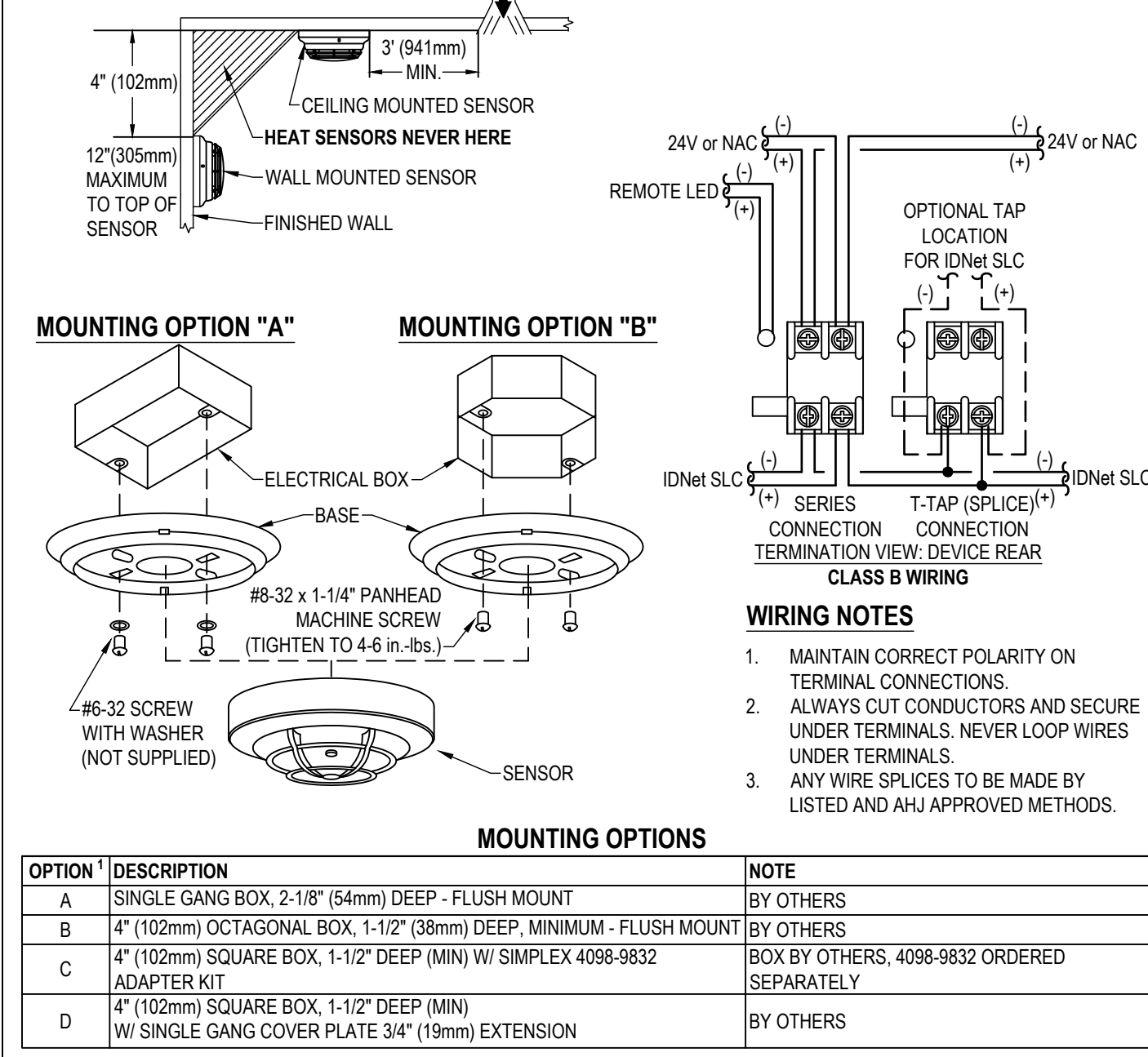
STANDARD SENSOR BASE

SIMPLEX 4098-9792



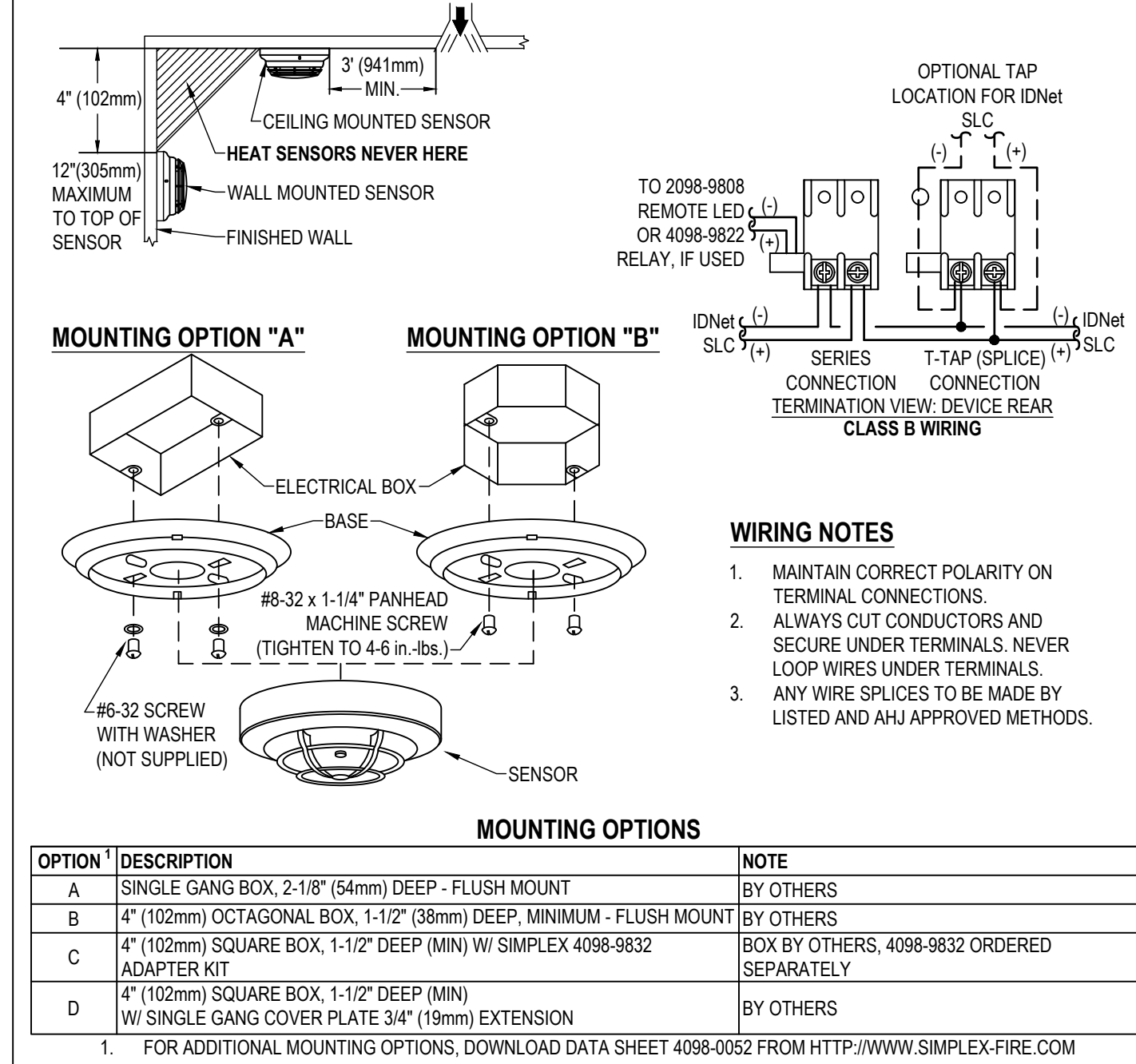
SENSOR BASE WITH 520Hz SOUNDER

SIMPLEX 4098-9772



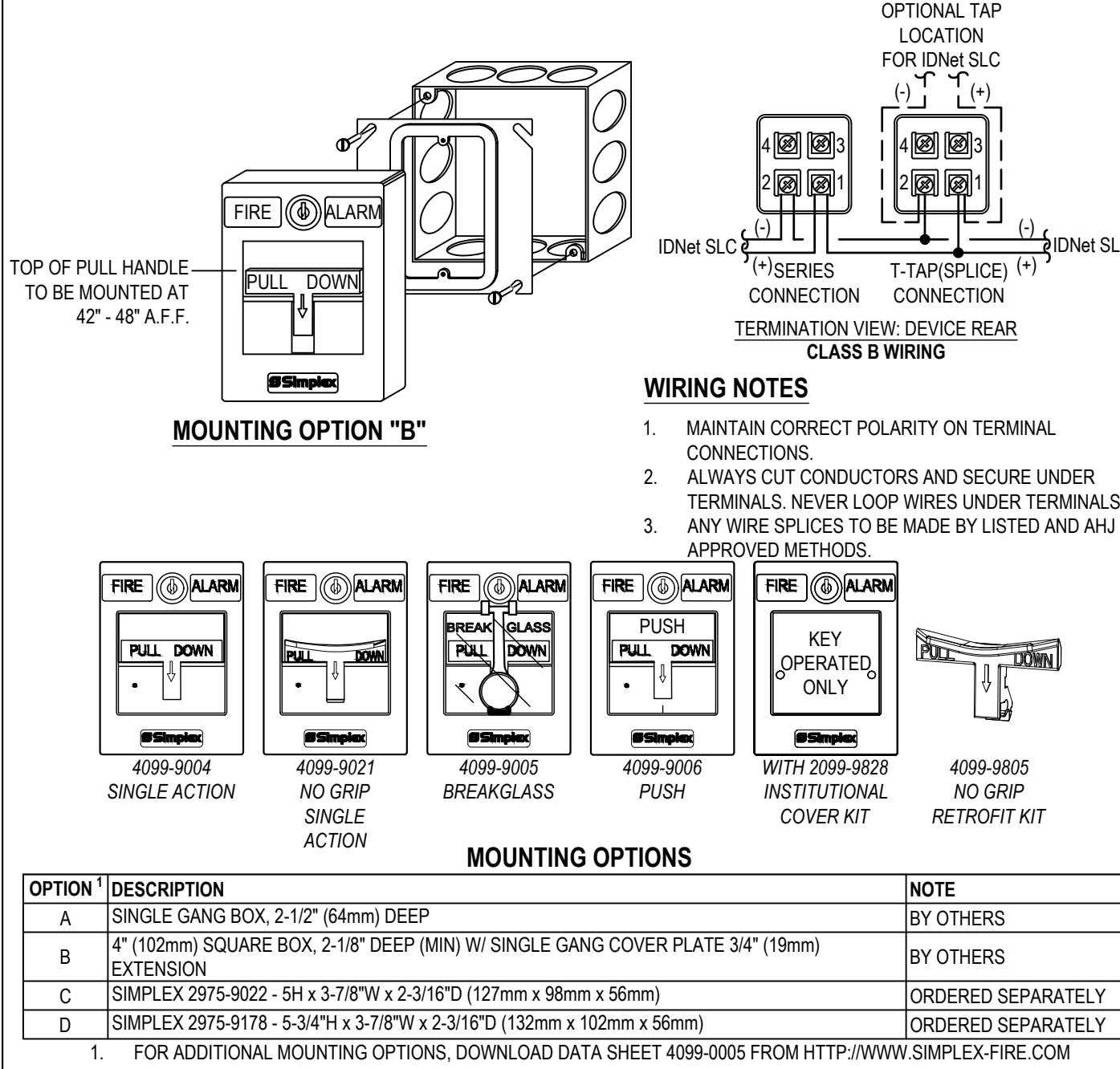
CARBON MONOXIDE SENSOR BASE

SIMPLEX 4098-9770



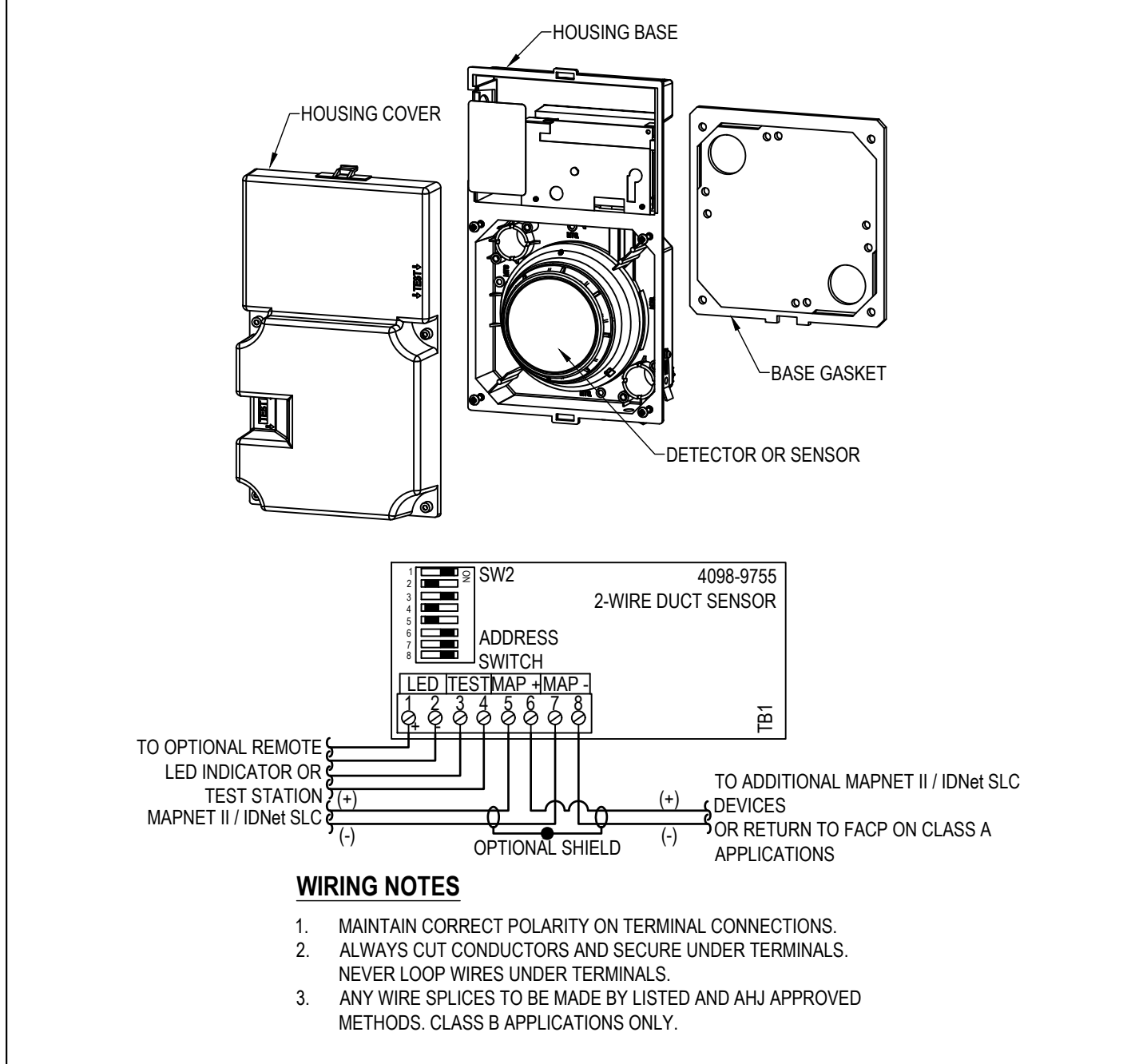
ADDRESSABLE PULL STATIONS

SIMPLEX 4099 SERIES



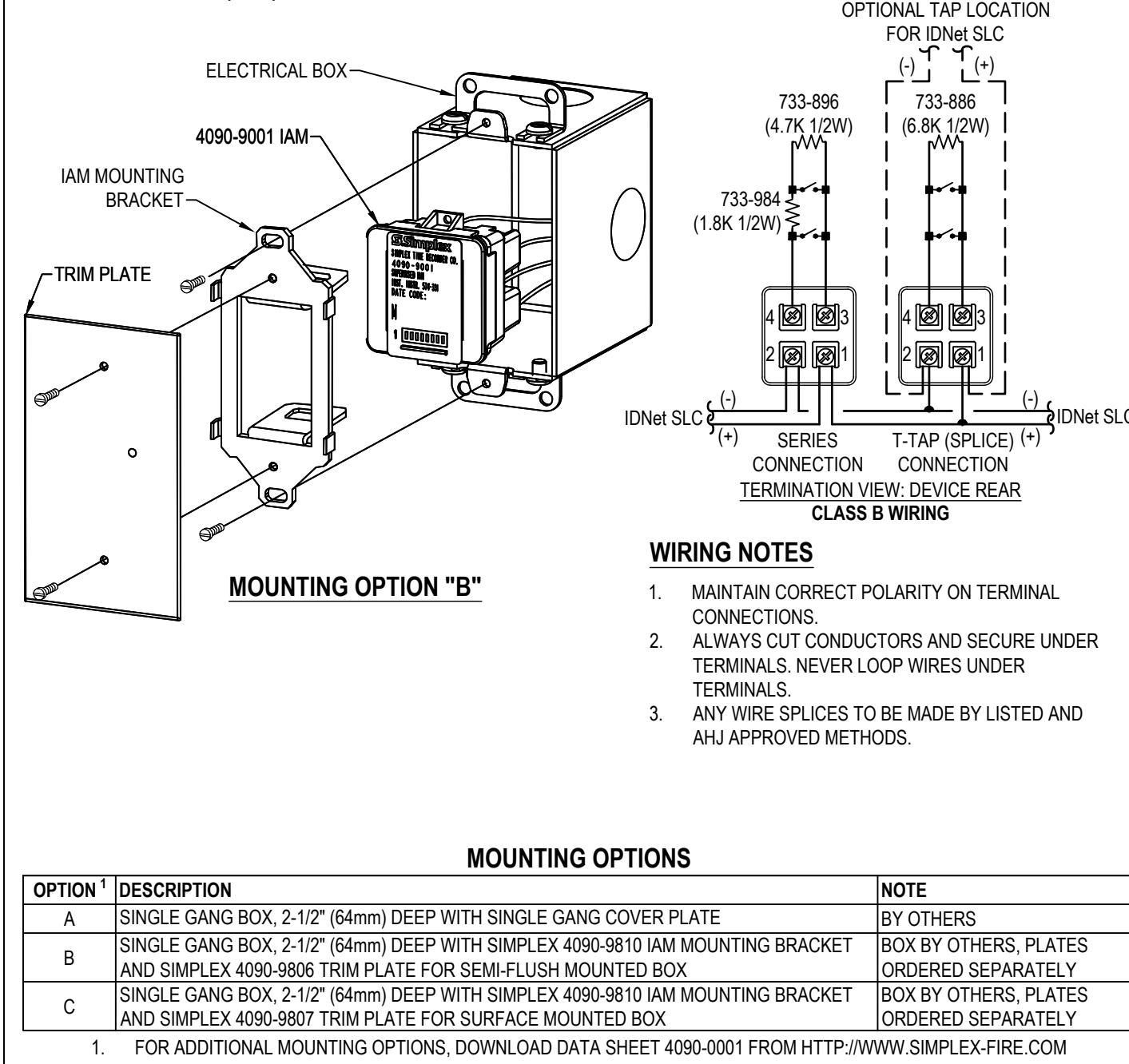
DUCT SMOKE DETECTOR

SIMPLEX 4098-9755 ANALOG 2-WIRE DUCT SENSOR



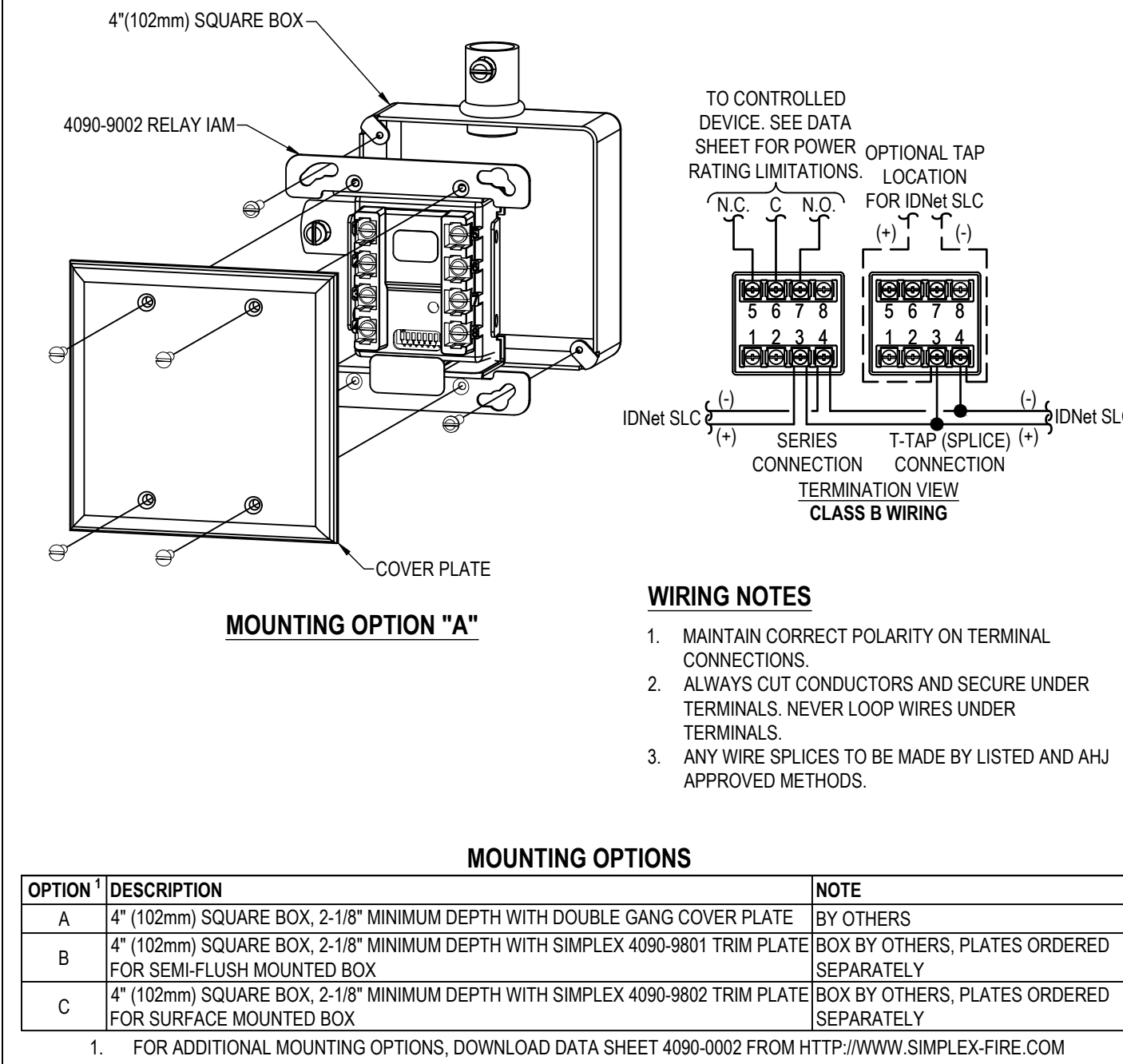
ADDRESSABLE INPUT MODULE

SIMPLEX 4090-9001 (IAM)



ADDRESSABLE RELAY MODULE

SIMPLEX 4090-9002



JOHN KNOX VILLAGE COURTYARDS BUILDING E

JOHN KNOX VILLAGE
1001 NW CHIPMAN RD
LEE'S SUMMIT, MO 64091

ISSUE NO.	MARK	DATE	CAD	CHK	DESCRIPTION

DRAWN BY: MARIANO MENDEZ

CHECKED BY: TIM EUBANKS

ISSUE DATE: 6/10/24

JOB #: 332-650569894

PROJECT #: 332-650569894

SYSTEM: FIRE ALARM SYSTEM

SHEET: WIRING TYPICALS

FA-701

JOHNSON CONTROLS © 2024

98384-0010
11015 STRAIN LINE ROAD
LEWIS & CLARK, MO 64501
PHONE: 816-584-0010
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