

Exhibit E

ELM Fire Panel Single Line

ELM MG2 SERIES BESS PROJECT

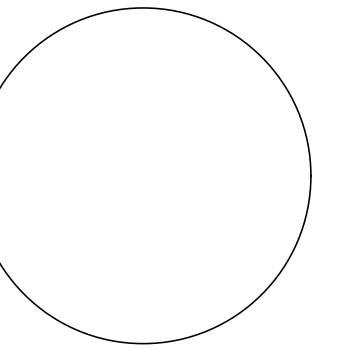
FIRE ALARM SYSTEM

FIRE ALARM DRAWING INDEX

FA-100
FA-101
FA-102

DRAWING INDEX & NOTES
INSTALLATION DETAILS & RISER DIAGRAM
PANEL WIRING, ENCLOSURE PLAN, & SEQUENCE OF OPERATION MATRIX

P.E. SEAL



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REV	DATE	DESCRIPTION	BY
0	02 OCT 2023	RELEASED FOR SUBMITTAL	JU
1	19 OCT 2023	REVISED SYSTEM TYPE	JU
2	03 MAY 2024	REVISED PER COMMENTS	JU
3	30 SEP 2024	REMOVED STAT-X	JU
4	12 NOV 2024	SWITCHED PANEL	JU

JOB TITLE
ELM MG2 SERIES BESS
PROJECT

FIRE ALARM SYSTEM

SCALE
NOT TO SCALE

DRAWN BY
JU

DESIGNED BY
JU

CHECKED BY
JC

SYSTEM TYPE
FIRE ALARM

DATE
02 OCT 2023

UFP JOB NUMBER
22259MG-08

ESS LEVEL

DRAWING INDEX & NOTES

SHEET
FA-100.00

SHEET NUMBER
1 OF 3

SCOPE OF WORK

- PROVIDE AND INSTALL ALL RELATED DETECTION AND ACTUATION EQUIPMENT FOR NEW FIRE ALARM SYSTEMS. THE FIRE ALARM CONTROL PANELS SHALL BE POTTER AFC-50.
- PROVIDE AND INSTALL POTTER SPOT SMOKE DETECTORS & HEAT DETECTORS FOR AUTOMATIC ACTIVATION OF THE FIRE ALARM SYSTEM.

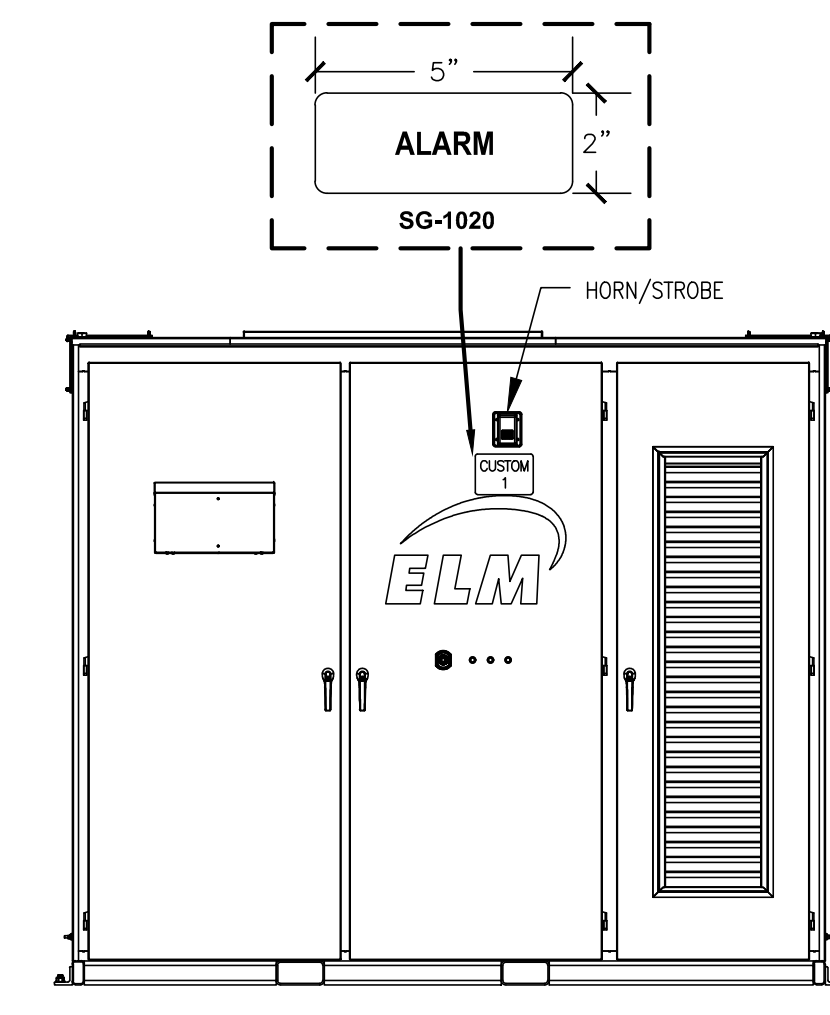
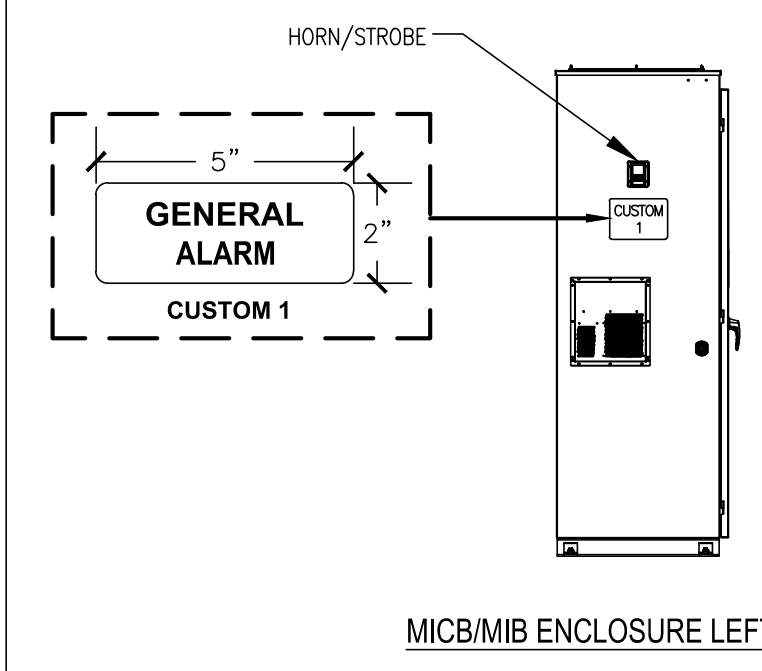
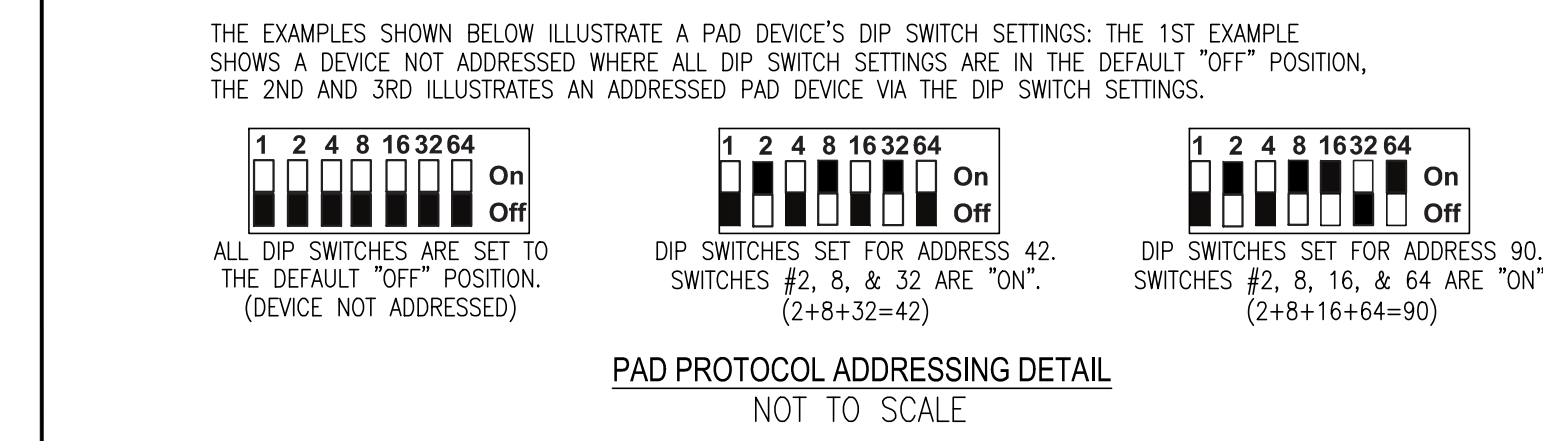
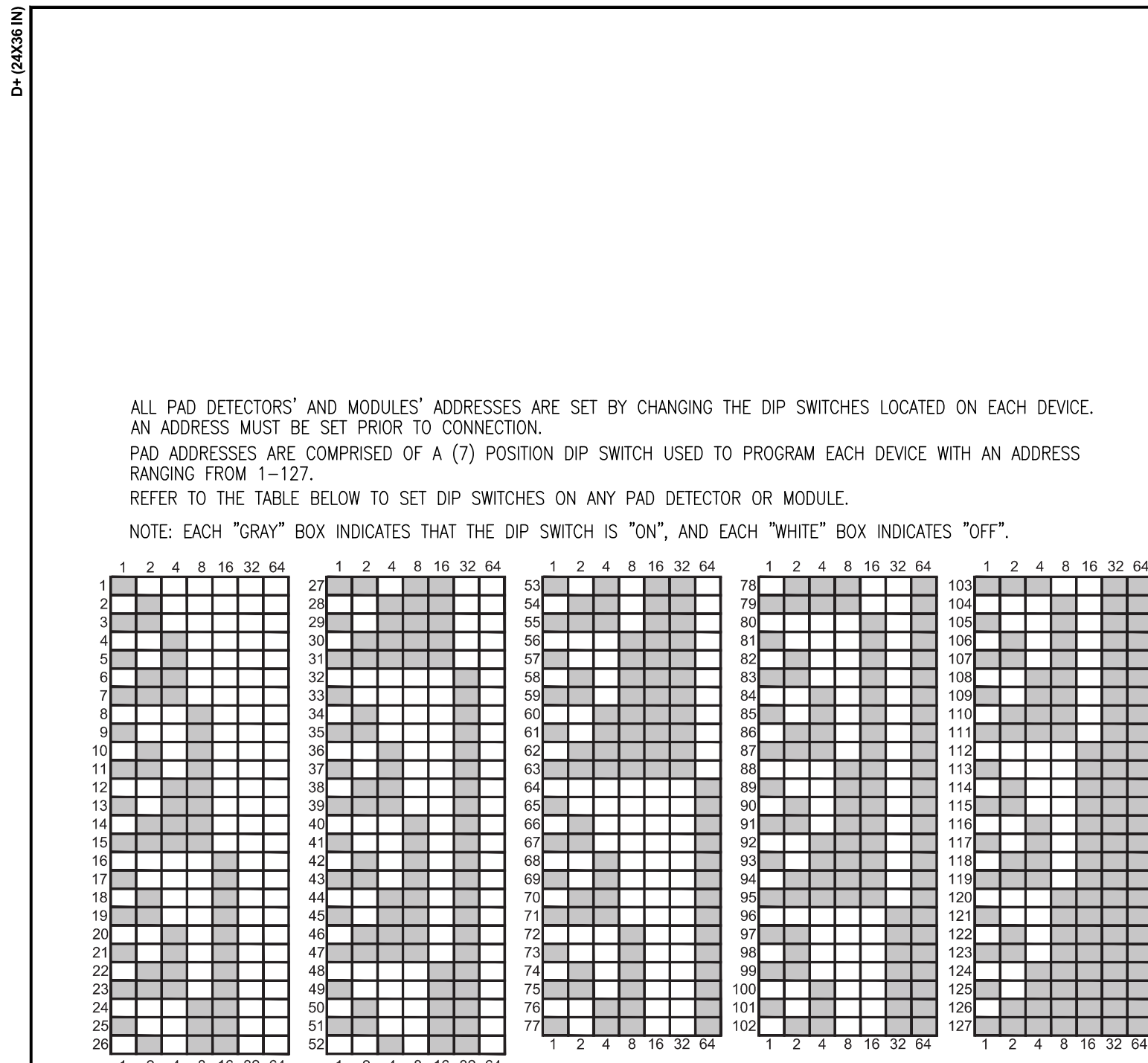
ELECTRICAL INSTALLATION NOTES:

- ALL WIRING SHALL BE IN STRICT COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE, AUTHORITIES HAVING JURISDICTION, LOCAL CODES, ELECTRICAL SPECIFICATIONS AND CONTRACT DOCUMENTS.
- WIRE SIZES SHALL BE AS FOLLOWS:
AC POWER: PER N.E.C.
DC POWER: PER SYSTEM RISER "WIRE GUIDE"
- ALL WIRING SHALL BE INSTALLED USING POWER LIMITED FIRE PROTECTIVE SIGNALING CIRCUIT CABLE. INSTALLATION METHODS SHALL CONFORM WITH LOCAL CODES AND CONTRACT SPECIFICATIONS.
- WHERE RACEWAYS ARE USED, CONDUCTORS FOR SMOKE DETECTORS, MONITOR MODULES, TEST STATIONS, MANUAL RELEASE STATIONS, SUPERVISORY DEVICES, AND INDICATING CIRCUITS (HORN-STROBES) CAN BE INSTALLED IN THE SAME RACEWAY BUT MUST BE INSTALLED IN A SEPARATE RACEWAY FROM ALL 120 VAC CIRCUITS.
- DETECTOR LOCATIONS MAY VARY A FEW FEET TO AVOID ANY LIGHT FIXTURES OR OBSTRUCTIONS. DO NOT INSTALL A DETECTOR WITHIN 3' OF A SUPPLY REGISTER. REVIEW REFLECTED CEILING PLANS. THE OPERABLE PART OF EACH MANUAL FIRE ALARM BOX SHALL BE 48" ABOVE THE FINISHED FLOOR LEVEL. WALL MOUNTED AUDIO/VISUAL APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE THE FINISHED FLOOR.
- ALL CONDUCTORS ARE TO BE PROPERLY TAGGED OR NUMBERED IN THE CONTROL PANEL AND CORRESPOND WITH CONTROL PANEL TERMINAL OR FIELD WIRE NUMBERS FOR IDENTIFICATION PURPOSES.
- WIRING CIRCUITS MUST GO TO AND FROM EACH DEVICE. BRANCH CIRCUITS ARE NOT PERMITTED. POLARITY MUST BE OBSERVED THROUGHOUT.
- EXTREME CARE MUST BE TAKEN TO AVOID GROUND FAULT CONDITIONS OF ALL CONDUCTORS.
- ALL CIRCUIT RUNS SHALL BE CONTINUOUS BETWEEN DEVICES, WITHOUT SPLICES, WHEREVER PRACTICAL. WHERE A CONTINUOUS WIRE RUN IS NOT PRACTICAL, CONNECTIONS SHALL BE MADE IN UL LISTED METAL ELECTRICAL ENCLOSURES CONFORMING TO THE REQUIREMENTS OF CHAPTER 3 OF NFPA 70.
- ENSURE ALL JUNCTION BOXES, DEVICE BACKBOXES, AND EQUIPMENT CABINETS ARE PROVIDED WITH STRAIN RELIEF FITTINGS WHERE NONMETALLIC SHEATHED CABLES ENTER WITHOUT RACEWAY.
- POWER TO CONTROL PANEL AND CONNECTION OF BATTERIES TO CONTROL PANEL TO BE MADE UNDER SUPERVISION OF UNITED FIRE PROTECTION FIELD TECHNICAL REPRESENTATIVE. DAMAGE TO CONTROL PANEL, UNWANTED SYSTEM OPERATIONS, AND PERSONAL INJURY COULD OTHERWISE RESULT.
- ELECTRICAL INSTALLER MUST PLACE DUST COVERS ON ALL DETECTORS. DUST COVERS TO BE REMOVED ONLY BY UNITED FIRE TECHNICAL PERSONNEL AT THE TIME OF FINAL CHECK-OUT.
- ALL WIRING IN SHAFTWAYS AND FIRE ALARM RISERS SHALL BE IN CONDUIT.
- PRIMARY 120 VAC POWER TO FIRE ALARM PANEL TO BE ON SEPARATE DEDICATED BRANCH CIRCUIT. CIRCUIT BREAKER TO BE EQUIPPED WITH LOCK AND IDENTIFICATION PER NFPA STANDARDS.

APPLICABLE CODES AND STANDARDS:

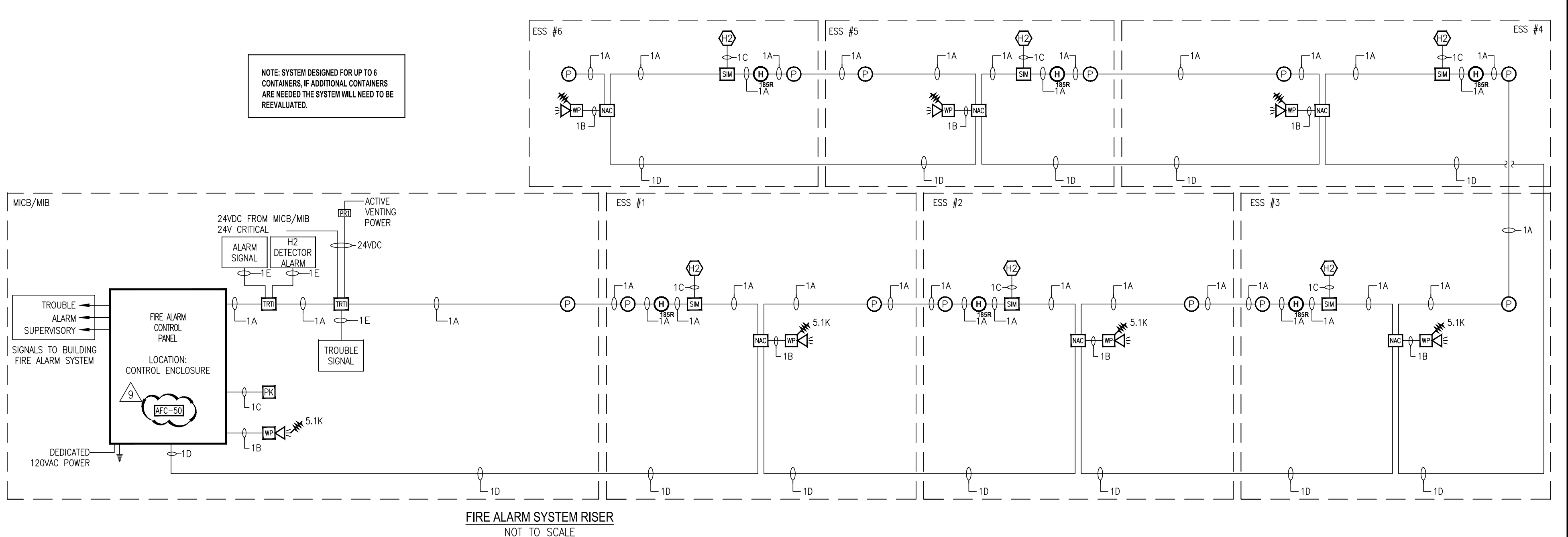
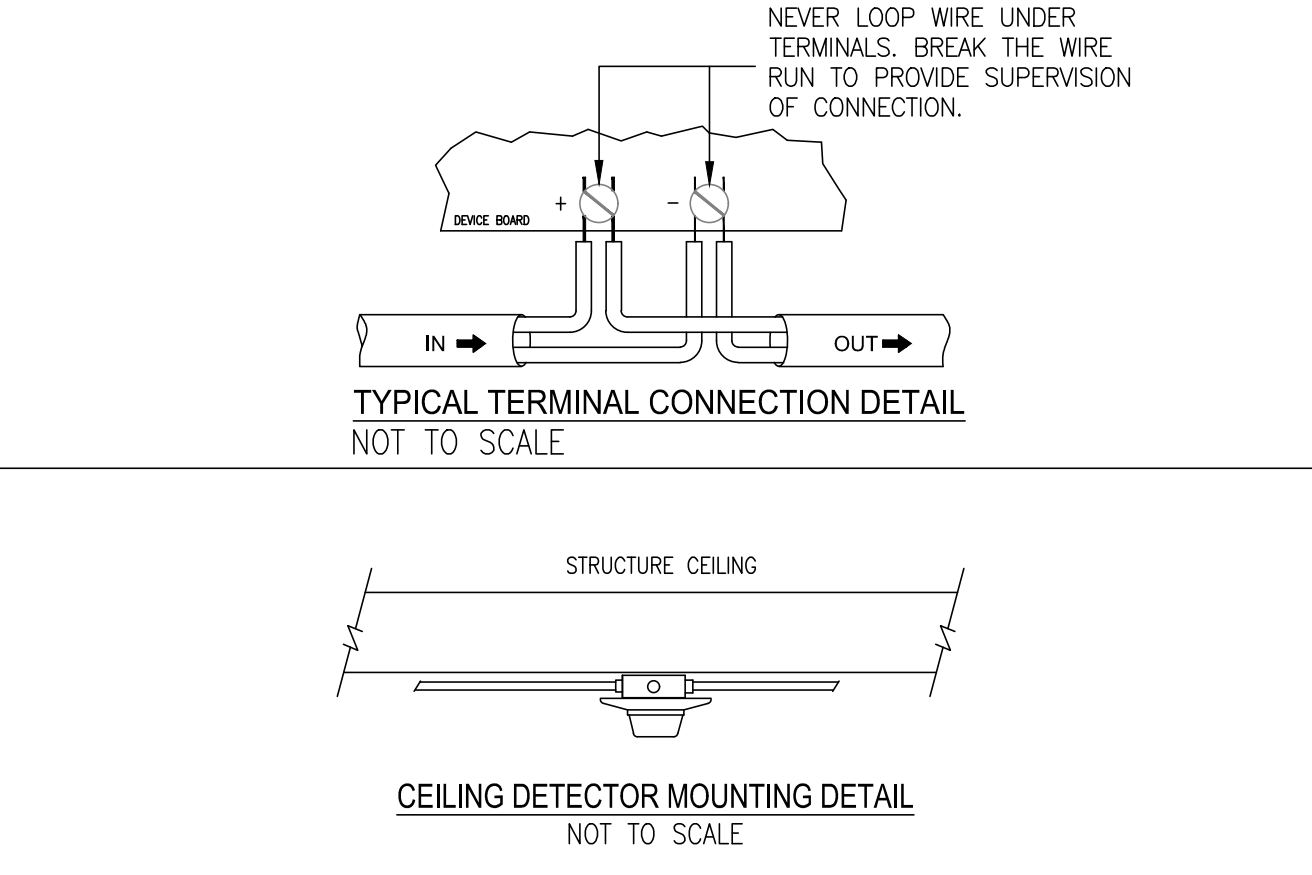
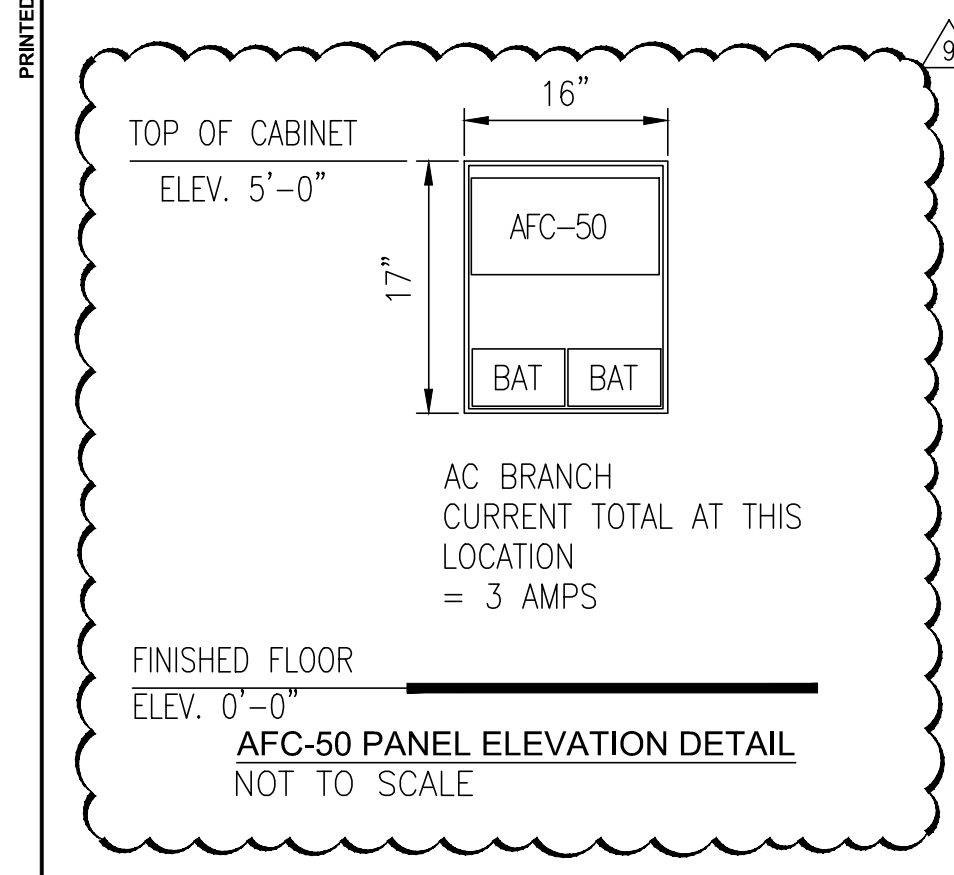
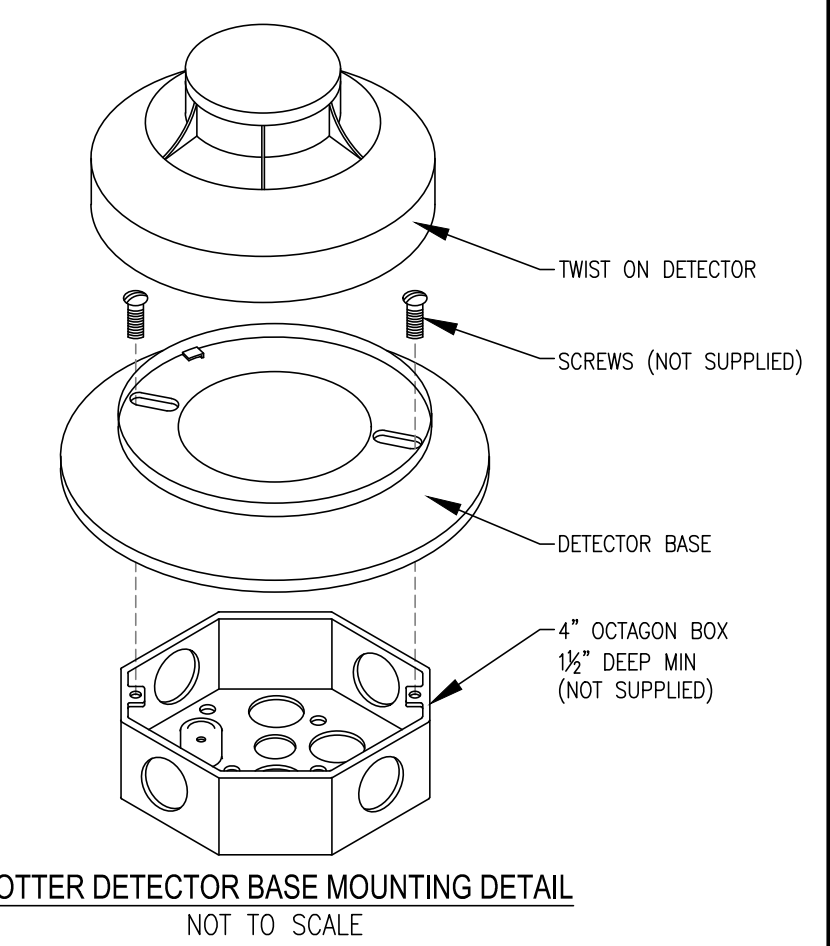
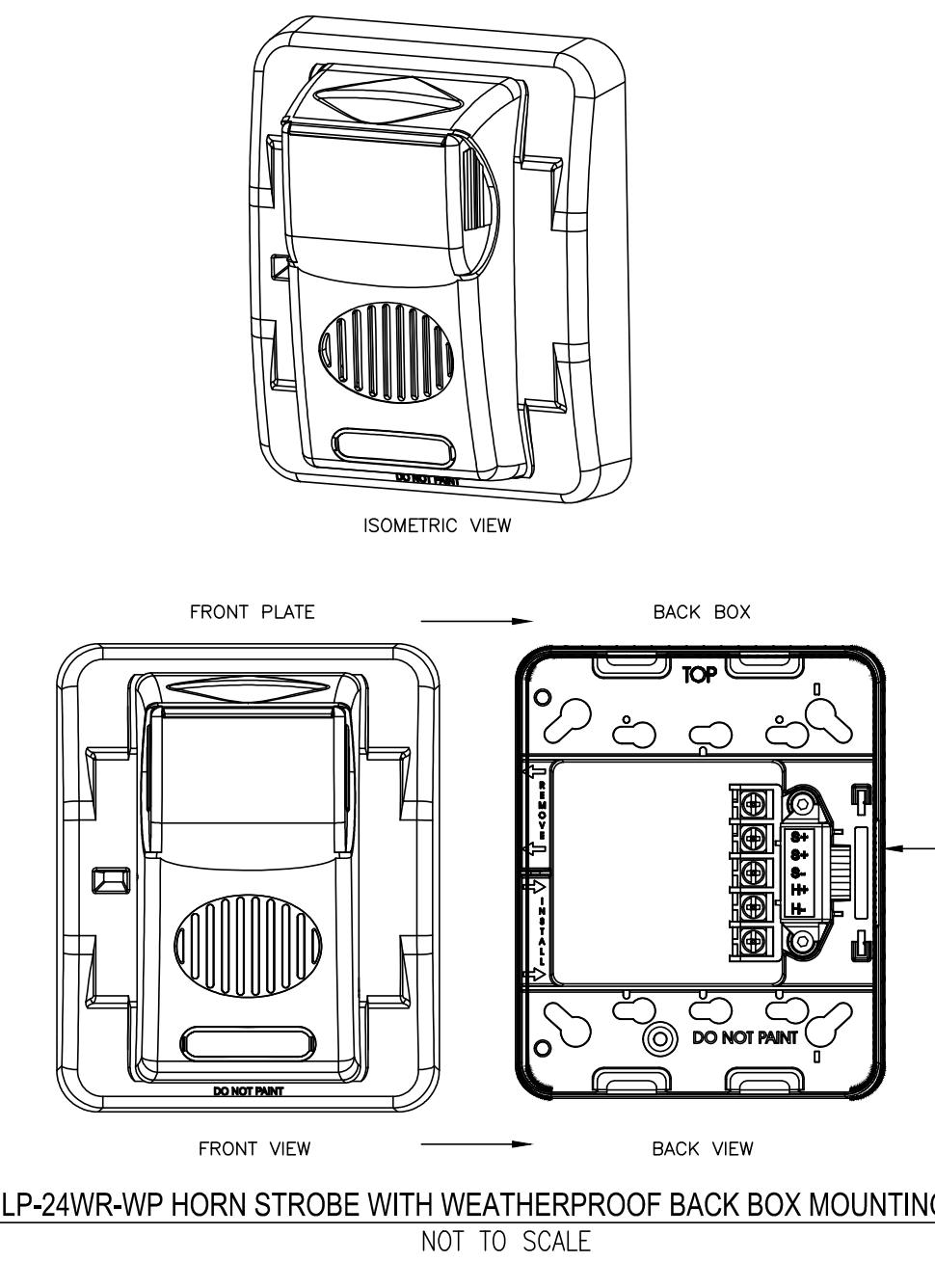
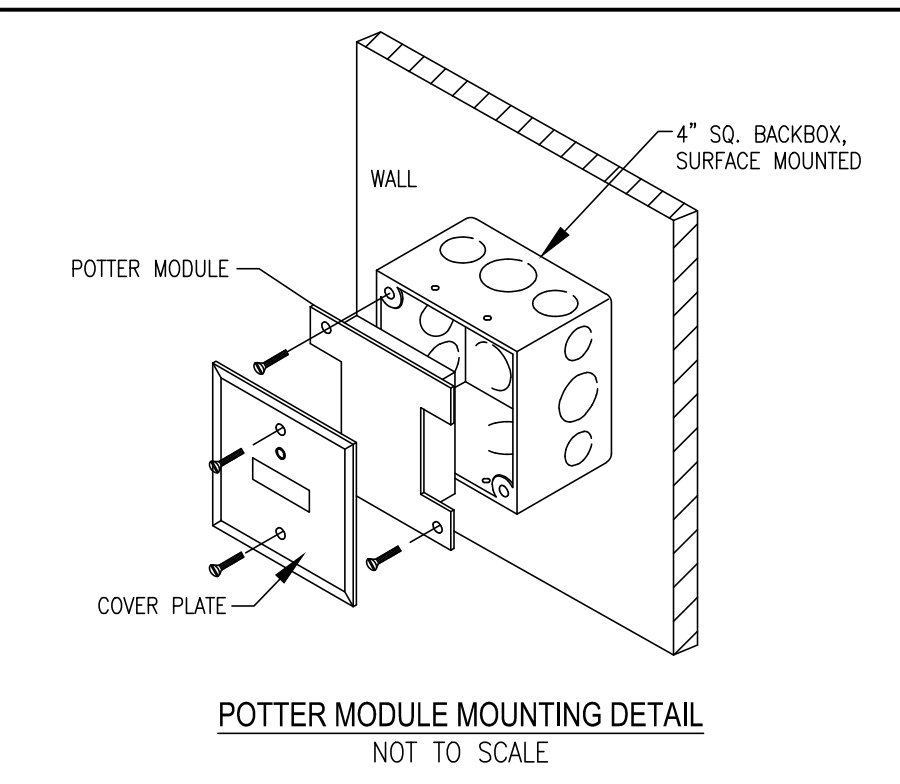
- INTERNATIONAL FIRE CODE, 2018 EDITION
- INTERNATIONAL BUILDING CODE, 2015 EDITION
- NATIONAL ELECTRIC CODE (NFPA 70), 2014 EDITION
- NFPA 72, 2013 EDITION

JURISDICTIONS WITHIN THE STATE MAY HAVE AMENDMENTS TO THE STATE ADOPTED CODE. CHECK WITH THE LOCAL JURISDICTION AUTHORITY FOR MORE DETAILS.



- NOTES DIMENSIONING TO BACKBOX IS SHOWN AS AN AID FOR INSTALLATION AND CAN VARY AS LONG AS THE FOLLOWING CONDITIONS ARE MET:
- WALL MOUNTED NOTIFICATION APPLIANCES EQUIPPED WITH STROBE SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE FINISHED FLOOR.
 - MANUAL PULL STATIONS SHALL BE MOUNTED SUCH THAT THE OPERABLE PART OF THE PULL STATION (HANDLE) IS NOT LESS THAN 42" AND NOT GREATER THAN 48" ABOVE FINISHED FLOOR.
 - WHERE DEVICES ARE SURFACE MOUNTED USE MANUFACTURER'S APPROVED BOXES.
 - MAINTAIN HEIGHT OF AUDIO/VISUAL DEVICES AND MANUAL PULL STATION THROUGHOUT INSTALLATION.

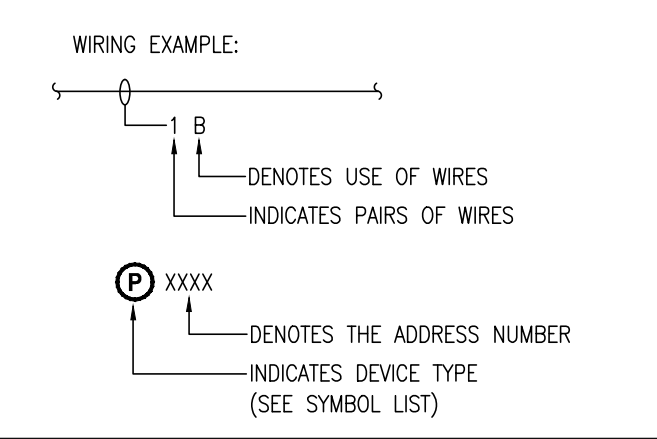
ELECTRICAL DEVICE SURFACE MOUNTING & SIGN DETAILS
NOT TO SCALE



WIRE GUIDE		
LETTER	DESCRIPTION	TYPE
A	SLC LOOP	16AWG UTP.
B	HORN-STROBE CIRCUIT	14AWG UTP.
C	CONVENTIONAL	16AWG UTP.
D	24 VDC	16AWG UTP.
E	CONTROL CIRCUIT	PER NEC

- NOTES:
- RISER DIAGRAM SHOWS NUMBER OF CIRCUITS AND WIRE SIZES.
 - REFER TO FLOOR PLANS FOR EXACT DEVICE ADDRESSES.
 - ALL WIRING TO BE APPROPRIATELY LABELED FOR EASY IDENTIFICATION.
- ABBREVIATIONS:
- STP = SHIELDED TWISTED PAIR
 - UTP = UNSHIELDED TWISTED PAIR
 - PRP = UNSHIELDED UNTWISTED PAIR
 - SLC = SIGNALING LINE CIRCUIT
 - NAC = NOTIFICATION APPLIANCE CIRCUIT
 - CKT = CIRCUIT
 - AWG = AMERICAN WIRE GAUGE
 - ETR = EXISTING WIRING TO REMAIN
 - UF = MOUNTED UNDER RAISED FLOOR
 - ROR = RATE OF RISE
 - RM = ROOM

SYMBOL LEGEND	
SYMBOL	DEVICE
	18S" HEAT DETECTOR
	ADDRESSABLE CONTROL PANEL
	HYDROGEN DETECTOR
	NAC MODULE
	PHOTO SMOKE DETECTOR
	PURGE KEY SWITCH
	RELAY
	SINGLE INPUT MODULE
	TWO RELAY TWO INPUT MODULE
	WEATHERPROOF HORN STROBE (LOW PROFILE)



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BY	JU	JU	JU	JU	JU	JU	JU
DESCRIPTION	ADDED ACTIVE VENTING & GAS DETECTION	REVISED PER COMMENTS	ADDED RELAY	REVISED MODULES/SEQUENCE	REVISED PER UL TESTING	REMOVED STAT-X	SWITCHED PANEL
DATE	10 APR 2024	03 MAY 2024	15 JUL 2024	22 JUL 2024	17 SEP 2024	30 SEP 2024	12 NOV 2024
REV	3	4	5	6	7	8	9

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ESS LEVEL
INSTALLATION DETAILS & RISER DIAGRAM

SHEET
FA-101.00

SHEET NUMBER
2 OF 3

