BAXTER ACADEMY INTERIOR FIT-UP

FIRE ALARM SYSTEM

SITE

COMMUNITY COUNSELING
185 LANCASTER ST.
PORTLAND, MAINE 04101-2400

INSTALLER

DEBLOIS ELECTRIC
1033 SABATTUS ST PO BOX 7899
LEWISTON, ME 04243-3339

DRAWING INDEX

tyco SimplexGrinnell
Safer. Smarter. Tyco.™

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DRAWINGS PREPARED BY
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BAXTER ACADEMY INTERIOR FIT-UP

COMMUNITY COUNSELING
185 LANCASTER ST.
PORTLAND, MAINE 04101-2400

Revisions shown with △ symbol

ISSUE LOG:

MARK	DATE	CAD	CHK	DESCRIPTION

DRAWN BY:	STEPHEN HERMES
CHECKED BY:	ALAN O'NEIL
ISSUE DATE:	5/26/17
JOB #:	
PROJECT #:	147:999894901

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
COVER SHEET

FA-001

GENERAL NOTES

1. THESE DRAWINGS DEPICT GENERAL LOCATIONS OF LIFE SAFETY EQUIPMENT & FIELD DEVICES. EXACT ROUTING OF CONDUITS TO BE DETERMINED IN THE FIELD BY THE INSTALLING CONTRACTOR TO SUIT CONDITIONS. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
2. 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 SIMPLEXGRINNELL IN A TIMELY MANNER SO AS NOT TO IMPAIR THE CONSTRUCTION SCHEDULE.
3. 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.
4. A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE AT THE JOB SITE AND SHALL BE USED FOR INSTALLATION.
5. 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.
6. UPDATE THE AS-BUILT DRAWING SET DAILY WITH JOB PROGRESS. RETURN THE AS-BUILT DRAWING SET TO SIMPLEXGRINNELL NO LATER THAN 7 DAYS AFTER FINAL TEST.
7. THE CONTRACTOR WILL MAINTAIN ALL AREAS OF THE BUILDING IN A NEAT AND WORKMAN LIKE MANNER.
8. DO NOT APPLY POWER EXCEPT IN THE PRESENCE OF A FACTORY TRAINED SIMPLEXGRINNELL TECHNICAL REPRESENTATIVE.
9. 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.
10. 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.
11. 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 NEC.
12. ALL WIRING SHALL BE INSTALLED ACCORDING TO NFPA 70 (NEC).
13. FIRE ALARM CIRCUITS SHALL BE IDENTIFIED IN ACCORDANCE WITH APPROPRIATE SECTION OF NEC 760. MARK ALL FIRE ALARM WIRES IN ACCORDANCE WITH NEC 760 SECTIONS FOR POWER LIMITED AND NON-POWER LIMITED WIRE.
14 FIRE ALARM CABLE INSTALLED IN DUCTS, PLENUM, AND OTHER SPACES USED FOR ENVIRONMENTAL AIR SHALL BE TYPE FPLP.
15. FIRE ALARM CABLE INSTALLED IN THE VERTICAL RUNS AND PENETRATING MORE THAN ONE FLOOR OR CABLES INSTALLED IN VERTICAL RUNS IN SHAFTS SHALL BE TYPE FPLR.
16. FIRE ALARM CABLE INSTALLED IN UNDERGROUND CONDUIT OR OTHER WET LOCATIONS SHALL BE UL LISTED FOR WET LOCATIONS.
17. FIRE ALARM CIRCUITS EXTENDING BEYOND ONE BUILDING AND RUN OUTDOORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70 ARTICLES 760, 770, 725 AND 800 WHERE APPLICABLE.
18. ALL WIRING, INCLUDING SHIELDS MUST BE DRY AND FREE OF SHORTS AND GROUNDS.
19. ALL SHIELDED WIRE MUST HAVE SHIELD CONTINUITY AT FULL LENGTH OF THE WIRE.
20. ONLY SYSTEM WIRING CAN BE RUN IN THE SAME CONDUIT.
21. 120VAC IS NOT PERMITTED IN THE SAME CONDUIT WITH LOW VOLTAGE WIRING.
22. MAINTAIN 40 PERCENT MAXIMUM CONDUIT FILL RATIO AS PER NEC REQUIREMENTS.
23. 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. SIMPLEXGRINNELL MAKES NO STATEMENTS WRITTEN OR VERBAL AS TO THE CONDITION OF EXISTING CONDUITS.

WIRE SCHEDULE

FIRE ALARM WIRE LIST

	CIRCUIT DESCRIPTION	RISER RATED: FPLR	SINGLE CONDUCTOR(THHN,TFFN)	PLENUM RATED: FPLP
B	RUI+ COMMUNICATION 1 PAIR 18 AWG UNSHIELDED TWISTED (SUBSCRIPT "u" IF MIXED w/SHIELDED)	SG ANIX./PAIGE 454703ARE AREA=0.0204 SQ. INCH ANIXTER PART NUMBER FA-1802C-1-1N-03-BX		SG ANIX./PAIGE 740132R AREA=0.0141 SQ. INCH ANIXTER PART NUMBER FA-1802C-1-2N-03
G	GROUND WIRE (BOND WIRE) - 1 CONDUCTOR 12 AWG SOLID (GREEN)		SG ANIX./PAIGE 741223 AREA=0.0115 SQ. INCH	
H	AUDIBLE CIRCUIT - 2 CONDUCTOR 14 AWG SOLID	SG ANIX./PAIGE 454718ARE AREA=0.0380 SQ. INCH ANIXTER PART NUMBER FA-1402C-1-1N-03-BX	(2) #14 AWG AREA=0.0097 SQ. INCH (EACH)	SG ANIX./PAIGE 454719ARE AREA=0.0333 SQ. INCH ANIXTER PART NUMBER FA-1402C-1-2N-03
M	IDNET CIRCUIT - 1 PAIR 18 AWG UNSHIELDED TWISTED (SUBSCRIPT "u" IF MIXED w/SHIELDED)	SG ANIX./PAIGE 454703ARE AREA=0.0204 SQ. INCH ANIXTER PART NUMBER FA-1802C-1-1N-03-BX		SG ANIX./PAIGE 740132R AREA=0.0141 SQ. INCH ANIXTER PART NUMBER FA-1802C-1-2N-03
P	POWER CIRCUIT 2 CONDUCTOR 14 AWG SOLID (SUBSCRIPT "r" IF RESETTABLE)	SG ANIX./PAIGE 454718ARE AREA=0.0380 SQ. INCH ANIXTER PART NUMBER FA-1402C-1-1N-03-BX	(2) #14 AWG AREA=0.0097 SQ. INCH (EACH)	SG ANIX./PAIGE 454719ARE AREA=0.0333 SQ. INCH ANIXTER PART NUMBER FA-1402C-1-2N-03
V	VISUAL/SIGNAL CIRCUIT 2 CONDUCTOR 14 AWG SOLID	SG ANIX./PAIGE 454718ARE AREA=0.0380 SQ. INCH ANIXTER PART NUMBER FA-1402C-1-1N-03-BX	(2) #14 AWG AREA=0.0097 SQ. INCH (EACH)	SG ANIX./PAIGE 454719ARE AREA=0.0333 SQ. INCH ANIXTER PART NUMBER FA-1402C-1-2N-03

CONDUIT SIZE	CONDUCTOR AREA	CONDUIT SIZE	CONDUCTOR AREA
1/2"	0.12 SQ INCH *	1-1/4"	0.60 SQ INCH *
3/4"	0.21 SQ INCH *	1-1/2"	0.82 SQ INCH *
1"	0.34 SQ INCH *	2"	1.34 SQ INCH *

* 40% FILL PER N.E.C.

THE CABLES SPECIFIED HERE ARE FOR REFERENCE OF REQUIRED ELECTRICAL CHARACTERISTICS AS WELL AS CODE REQUIREMENTS. ALTERNATE SUPPLIERS MAY BE SUBSTITUTED PROVIDING EQUIVALENT CHARACTERISTICS ARE MAINTAINED. ITEMS SUCH AS CAPACITANCE BETWEEN CONDUCTORS AND WIRE GAUGE CAN BE CRUCIAL TO THE CIRCUIT DESIGN OF THIS SYSTEM INSTALLATION.

REFERENCE https://www.anixter.com/customer/tycofs FOR SG ANIXTER CABLE DATA

SYSTEM DESCRIPTION / SCOPE OF WORK

OCCUPANCY TYPE: E EDUCATIONAL GROUP

SPRINKLER PROTECTION: BUILDING IS FULLY SPRINKLED

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

ALL WIRING TO BE CLASS B. WIRING IS STYLE Y FOR NOTIFICATION APPLIANCE CIRCUITS, STYLE B FOR INITIATING DEVICE CIRCUITS, AND STYLE 4 FOR 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 UUFX OR UUJS 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.

FIRE ALARM APPLICABLE CODES & STANDARDS

FIRE PREVENTION CODE (NFPA 1), 2006 EDITION

NATIONAL ELECTRIC CODE (NFPA 70), 2011 EDITION

ELEVATOR CODE ASME A.17.1, 2013

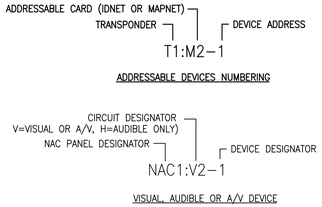
JURISDICTIONS WITHIN THE STATE MAY HAVE AMENDMENTS TO THE STATE ADOPTED CODE. CHECK WITH THE LOCAL JURISDICTION AUTHORITY FOR MORE DETAILS.

ABBREVIATIONS LEGEND

AC = ABOVE CEILING
C = CEILING MOUNTED
E = EXISTING TO REMAIN
RC = EXISTING TO REMOVE AND COVER
RD = EXISTING DEVICE TO BE RELOCATED
RL = RELOCATED DEVICE
RR = REMOVE EXISTING AND REPLACE W/NEW

WP = WEATHERPROOF
XP = EXPLOSION PROOF
H = HIGH HUMIDITY
AFF = ABOVE FINISHED FLOOR
AHJ = AUTHORITY HAVING JURISDICTION
ALM = ALARM
ANN = ANNUNCIATOR
BMS = BUILDING MANAGEMENT SYSTEM
CBC = CALIFORNIA BUILDING CODE
CD = (eg. 15CD) CANDELA
CSFM = CALIFORNIA STATE FIRE MARSHAL
DET = DETECTOR
DGP = DATA GATHERING PANEL
EOL = END OF LINE
EPO = EMERGENCY POWER OFF
FACP = FIRE ALARM CONTROL PANEL
FATC = FIRE ALARM TERMINAL CABINET
FBO = FURNISHED BY OTHERS
FCC = FIRE COMMAND CENTER
FAA = FIRE ALARM ANNUNCIATOR
FTR = FIRE ALARM TRANSPONDER
FSD = FIRE SMOKE DAMPER
HT = HEIGHT
HVAC = HEATING, VENTILATION, & AIR CONDITIONING
IMS = INFORMATION MANAGEMENT SYSTEM
MAX = MAXIMUM
MIN = MINIMUM
N/A = NOT APPLICABLE
NAC = NOTIFICATION APPLIANCE CIRCUIT EXTENDER
NDU = NETWORK DISPLAY UNIT
NEC = NATIONAL ELECTRICAL CODE
NFPA = NATIONAL FIRE PROTECTION ASSOCIATION
NIC = NOT IN CONTRACT
NPU = NETWORK PROCESSING UNIT
NTS = NOT TO SCALE
PAP = PRE-ACTION PANEL
SCC = STATUS COMMAND CENTER
SLC = SIGNALING LINE CIRCUIT
SMK = SMOKE
SUPV = SUPERVISORY
TAC = TRUEALERT ADDRESSABLE CONTROLLER
TRBL = TROUBLE
TS = TAMPER SWITCH
TYP = TYPICAL
UON = UNLESS OTHERWISE NOTED
VCC = VOICE COMMAND CENTER
VT = VALVE TAMPER
WF = WATER FLOW
W = (eg. 1/2W) WATT
W/ = WITH
W/O = WITH OUT

DEVICE ADDRESSING LEGEND



SYMBOL KEY

FIRE ALARM SYMBOLS LEGEND

SYMBOL	DESCRIPTION	MODEL#	COMMONLY USED BACKBOX, REFER TO DATA SHEET FOR OTHER OPTIONS
NAC	NAC EXTENDER PANEL # DESIGNATES THE NAC PANEL NUMBER W / 6.2AH BATTERY SET	SIMPLEX 4009-9201 SIMPLEX 2081-9272	SUPPLIED BY SIMPLEXGRINNELL
FAA	SERIAL LCD ANNUNCIATOR	SIMPLEX 4603-9101	6 GANG BOX 3 1/2" DEEP
T4	TEMPORAL CODE 4 MODULE	SIMPLEX 4905-9835	4" SQUARE BACK BOX, 2 1/8" DEEP
	SMOKE SENSOR / BASE	SIMPLEX 4098-9714 SIMPLEX 4098-9792 BASE	4" OCTAGONAL BOX 1 1/2" DEEP
CO SB	SMOKE SENSOR, WITH CO SENSOR BASE SB = INTEGRAL SOUNDER	SIMPLEX 4098-9714 SIMPLEX 4098-9771 BASE	4" OCTAGONAL BOX 1 1/2" DEEP
F	ADDRESSABLE DOUBLE ACTION MANUAL PULL STATION, PUSH	SIMPLEX 4099-9006	SINGLE GANG BOX 2 1/2" DEEP
	WALL MOUNT MULTI-CANDELA HORN/STROBE RED # =CANDELA RATING	SIMPLEX 4906-9127	4" SQUARE BOX 1 1/2" DEEP W/4905-9937 ADAPTER SKIRT WHEN SURFACE MOUNTED
	WALL MOUNT MULTI-CANDELA STROBE ONLY RED # =CANDELA RATING	SIMPLEX 4906-9101	4" SQUARE BOX 1 1/2" DEEP W/4905-9937 ADAPTER SKIRT WHEN SURFACE MOUNTED
10K	END-OF-LINE RESISTOR 3.3K (EOL) END-OF-LINE RESISTOR 4.7K (EOL) END-OF-LINE RESISTOR 6.8K (EOL) END-OF-LINE RESISTOR 10K (EOL)	SIMPLEX 4081-9002 SIMPLEX 4081-9003 SIMPLEX 4081-9004 SIMPLEX 4081-9008	

SEQUENCE OF OPERATION

SYSTEM INPUTS	SYSTEM OUTPUTS: ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE TROUBLE SIGNAL	ACTUATE APPROPRIATE LOCATION INDICATOR	ACTUATE ALL AUDIBLE EVACUATION SIGNALS	ACTUATE ALL VISIBLE EVACUATION SIGNALS	DISPLAY CHANGE OF STATUS	TRANSMIT ALARM SIGNAL TO SUPERVISING STATION	TRANSMIT SUPV. SIGNAL TO SUPERVISING STATION	TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION	SOUND LOCAL CO/ SMOKE SOUNDER BASE	REMARKS
	CONTROL UNIT ANNUNCIATION						NOTIFICATION			FIRE SAFETY CONTROL					
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	
1	SMOKE SENSOR/DETECTOR	•	•					•	•	•		•	•																							1
2	CO/ SMOKE			•	•			•				•		•		•																				2
3	MANUAL PULL STATION	•	•					•	•	•		•	•																							3
4	FIRE ALARM AC POWER FAILURE					•	•					•			•																					4
5	FIRE ALARM SYSTEM LOW BATTERY					•	•					•			•																					5
6	OPEN CIRCUIT OR GROUND FAULT					•	•					•			•																					6
7	CLASS B NOTIFICATION CIRCUIT (NAC) - SHORT					•	•					•			•																					7
8																																				8
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	

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BAXTER ACADEMY INTERIOR FIT-UP

COMMUNITY COUNSELING
185 LANCASTER ST.
PORTLAND, MAINE 04101-2400

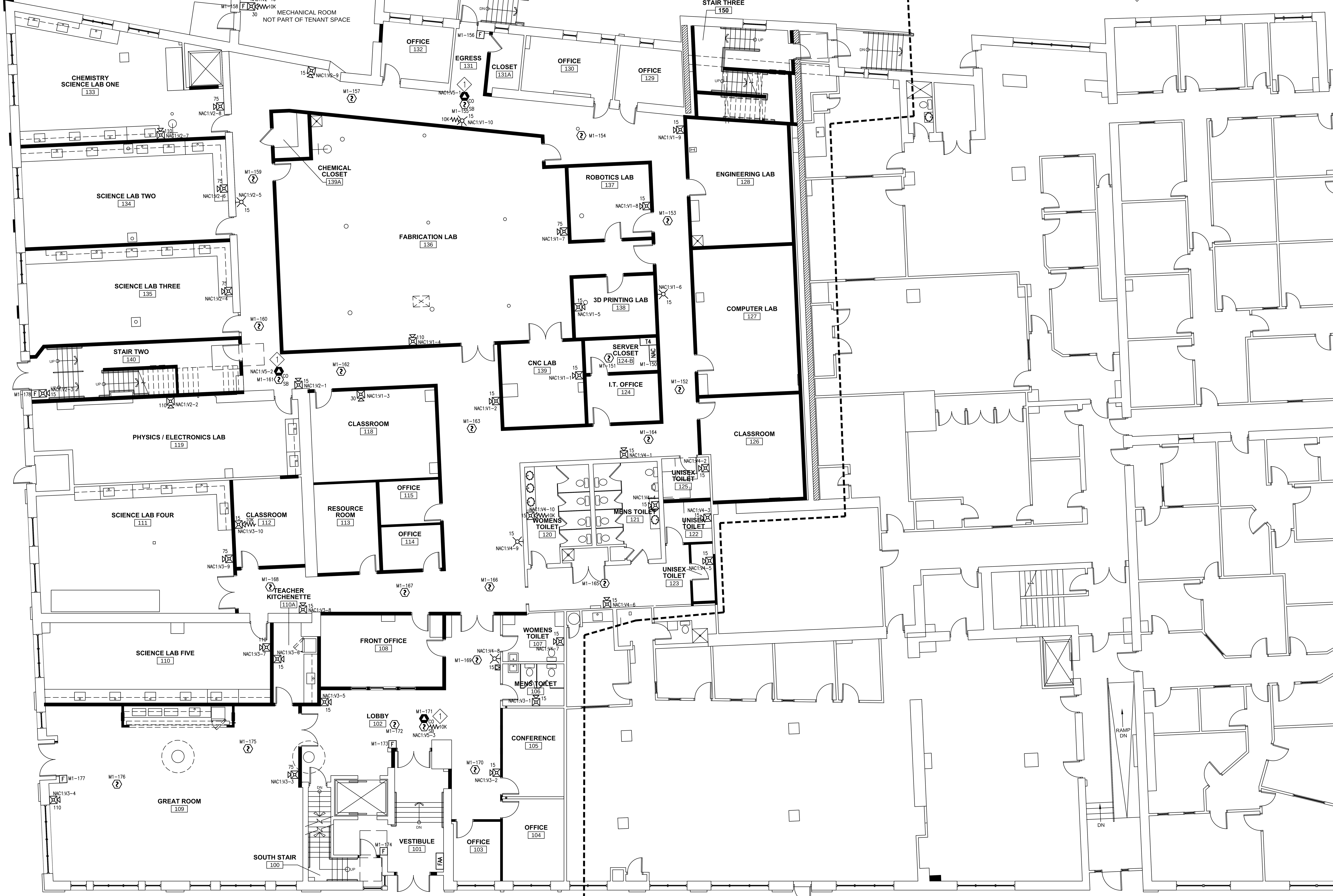
ISSUE LOG				
MARK	DATE	CAD	CHK	DESCRIPTION
				Revisions shown with △ symbol

DRAWN BY:	STEPHEN HERMES
CHECKED BY:	ALAN O'NEIL
ISSUE DATE:	5/26/17
JOB #:	
PROJECT #:	147:999894901

SYSTEM: FIRE ALARM SYSTEM

SHEET: GENERAL INFORMATION

FA-002



GENERAL NOTES:

1. ALL CEILINGS ARE ASSUMED TO BE 10' A.F.F., SMOOTH CONSTRUCTION UNLESS NOTED OTHERWISE.
2. ALL NOTIFICATION APPLIANCE CANDELA INTENSITY PLUGS SHALL RETAIN THEIR FACTORY SETTING OF "FACP" UNLESS OTHERWISE DIRECTED BY THE AUTHORITY HAVING JURISDICTION.

KEYNOTES:

(1) VERIFY LOCATION IN FIELD

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BAXTER ACADEMY INTERIOR FIT-UP

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185 LANCASTER ST.
PORTLAND, MAINE 04101-2400

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ISSUE DATE:	5/26/17
JOB #:	
PROJECT #:	147:999894901

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
FIRST FLOOR
DEVICE PLACEMENT PLAN

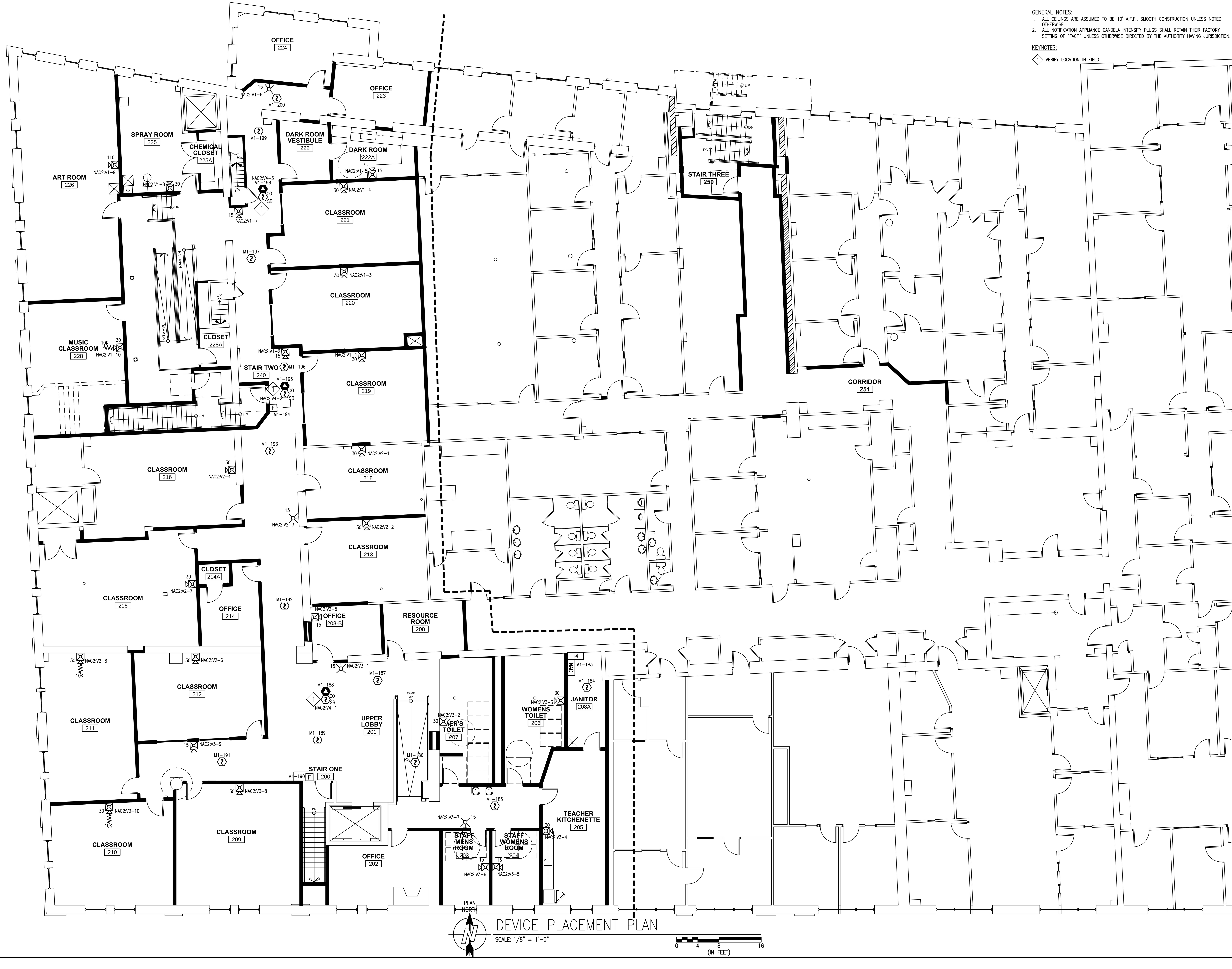
FA-101

GENERAL NOTES:

1. ALL CEILINGS ARE ASSUMED TO BE 10' A.F.F., SMOOTH CONSTRUCTION UNLESS NOTED OTHERWISE.
2. ALL NOTIFICATION APPLIANCE CANDELA INTENSITY PLUGS SHALL RETAIN THEIR FACTORY SETTING OF "FACP" UNLESS OTHERWISE DIRECTED BY THE AUTHORITY HAVING JURISDICTION.

KEYNOTES:

◇1 VERIFY LOCATION IN FIELD



DEVICE PLACEMENT PLAN

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

0 4 8 16 (IN FEET)

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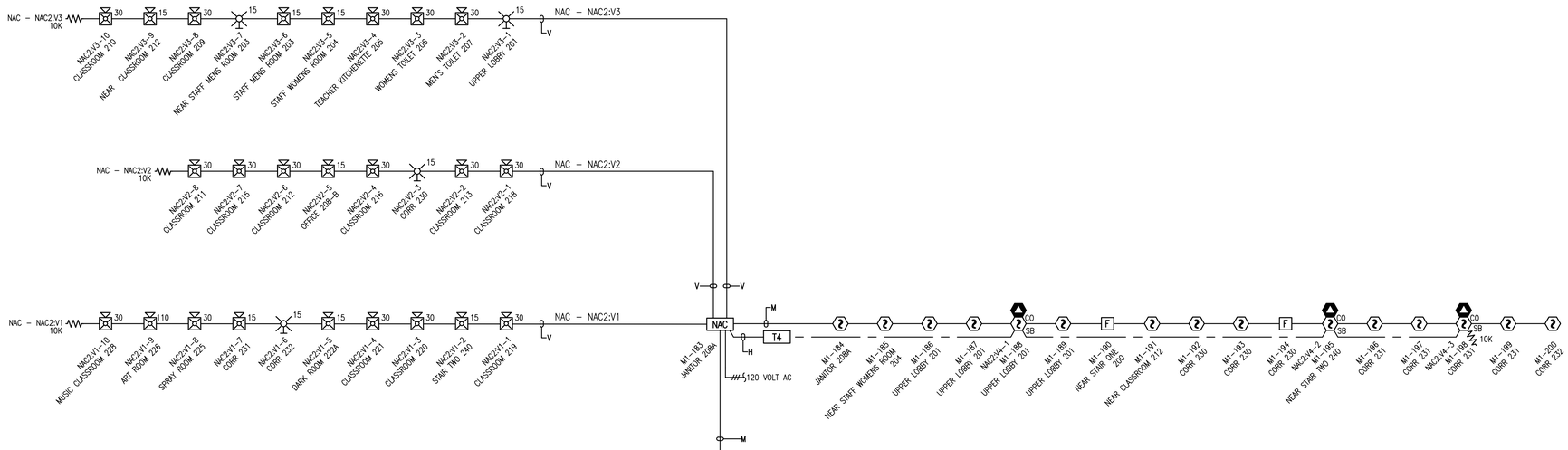
JOB #:	
PROJECT #:	147:999894901

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
SECOND FLOOR
DEVICE PLACEMENT PLAN

FA-102



RISER DIAGRAM

SCALE: NTS

FILE PATH: Z:\DISTRICT 147\BAXTER ACADEMY\ENGINEERING\FA-201.dwg
LAST SAVED BY: SHERMES
LAST PRINTED: 5/30/2017 10:43:51 AM
24" x 36" - Arch D Size

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CHECKED BY:	ALAN O'NEIL
ISSUE DATE:	5/26/17
JOB #:	
PROJECT #:	147:999894901

SYSTEM:
FIRE ALARM SYSTEM

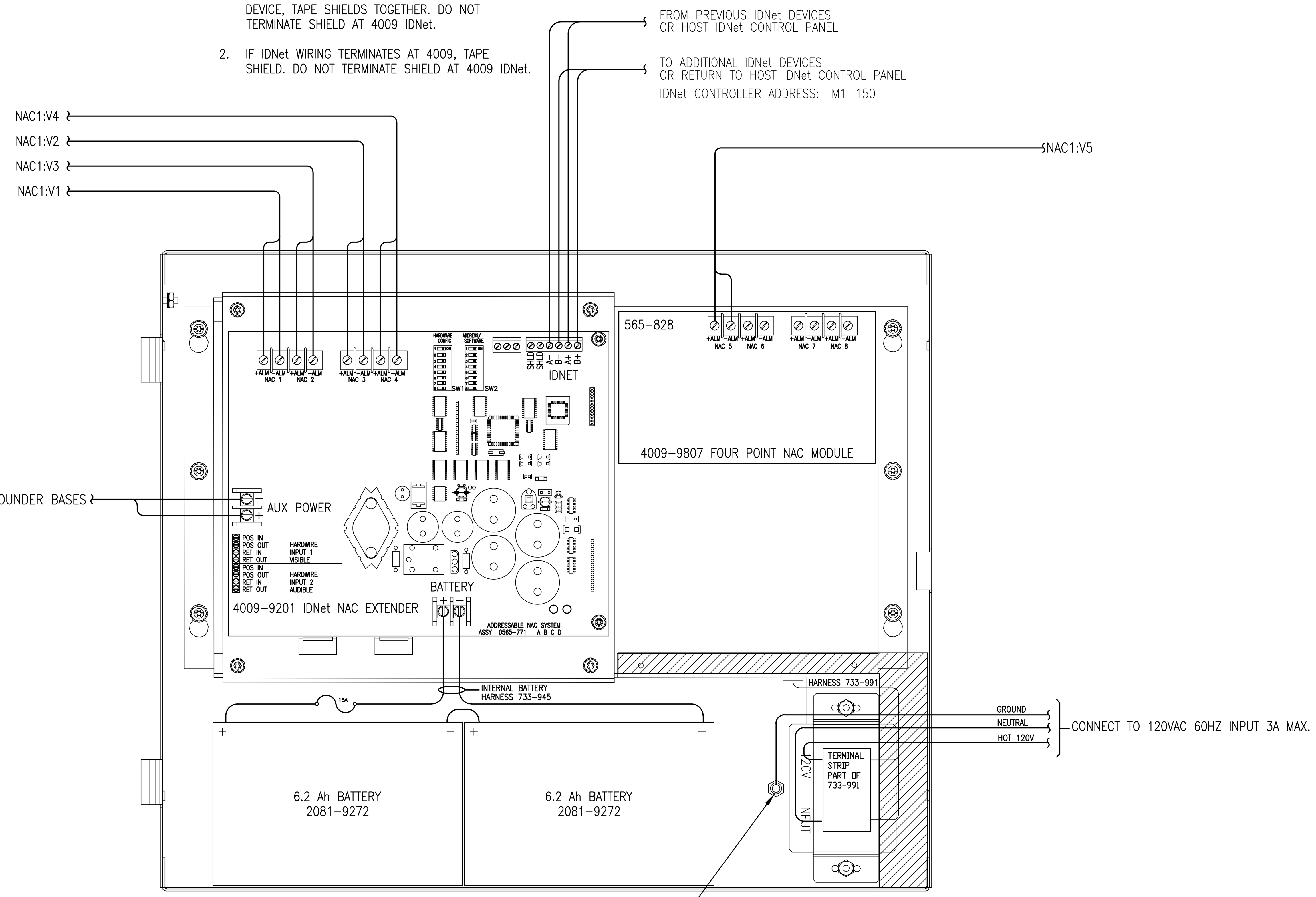
SHEET:
RISER DIAGRAM

FA-201

NAC1:V5

IF OPTIONAL SHIELDS ARE USED FOR IDNet WIRING. FOLLOW THESE PRECAUTIONS.

1. IF IDNet WIRING CONTINUES ON TO ANOTHER DEVICE, TAPE SHIELDS TOGETHER. DO NOT TERMINATE SHIELD AT 4009 IDNet.
2. IF IDNet WIRING TERMINATES AT 4009, TAPE SHIELD. DO NOT TERMINATE SHIELD AT 4009 IDNet.



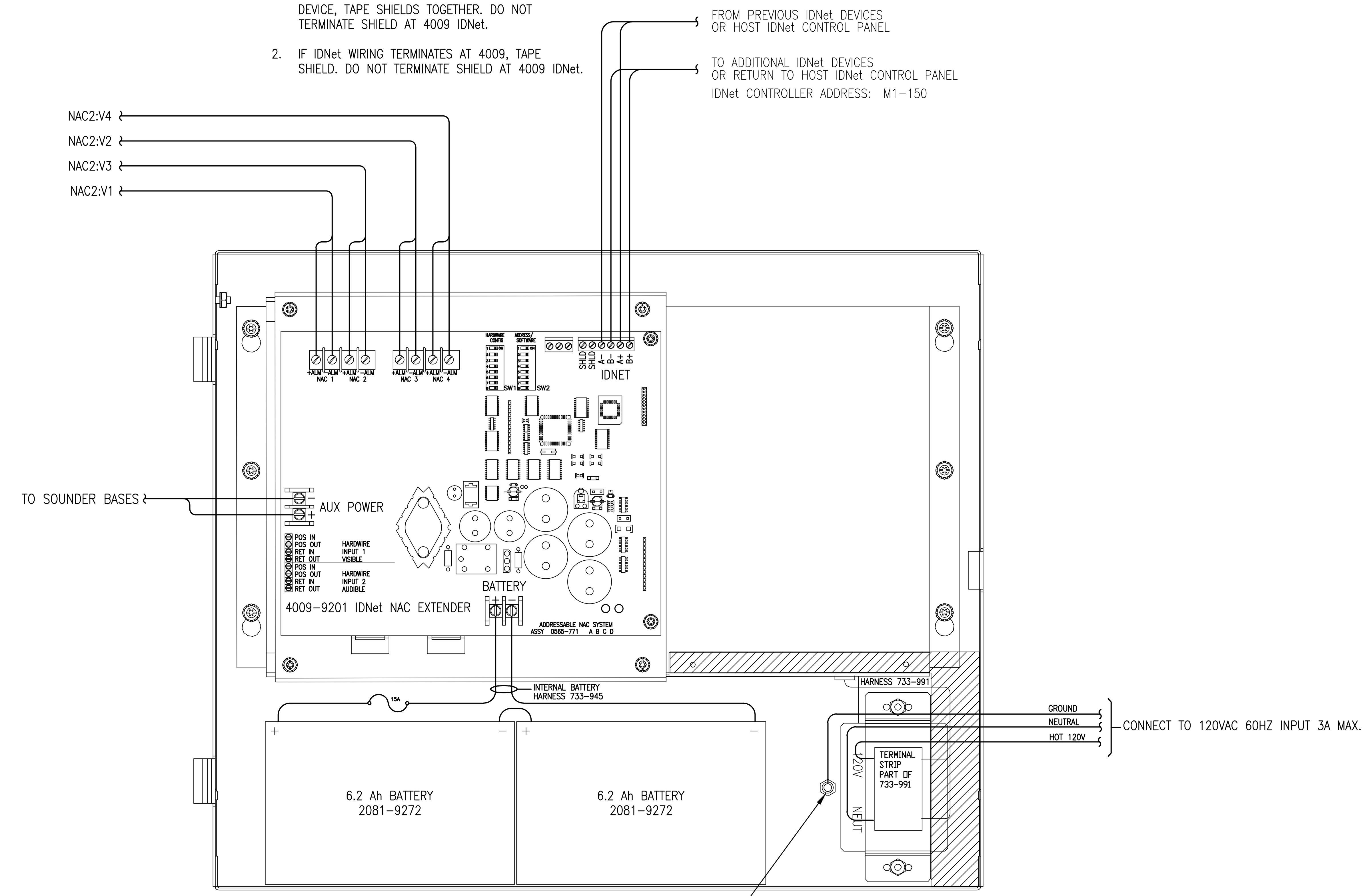
CONNECT A 12 AWG COPPER GROUND WIRE FROM SAFETY GROUND IN THE ELECTRICAL DISTRIBUTION PANEL TO THE 4009 SAFETY GROUND STUD.

FIRST FLOOR

SCALE: NTS

IF OPTIONAL SHIELDS ARE USED FOR IDNet WIRING. FOLLOW THESE PRECAUTIONS.

1. IF IDNet WIRING CONTINUES ON TO ANOTHER DEVICE, TAPE SHIELDS TOGETHER. DO NOT TERMINATE SHIELD AT 4009 IDNet.
2. IF IDNet WIRING TERMINATES AT 4009, TAPE SHIELD. DO NOT TERMINATE SHIELD AT 4009 IDNet.



CONNECT A 12 AWG COPPER GROUND WIRE FROM SAFETY GROUND IN THE ELECTRICAL DISTRIBUTION PANEL TO THE 4009 SAFETY GROUND STUD.

SECOND FLOOR

SCALE: NTS

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JOB #:	
PROJECT #:	147:999894901

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
NAC
PANEL DETAIL

FA-501

FILE PATH: Z:\DISTRICT 147\BAXTER ACADEMY\ENGINEERING\FA-501.dwg
LAST SAVED BY: SHERMES
LAST PRINTED: 5/30/2017 10:43:55 AM
24" x 36" - Arch D Size

FIRST FLOOR

SCALE: NTS

BAXTER ACADEMY INTERIOR FIT-UP 4009 NAC

Module	Qty	Description	Setting	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
Miscellaneous Peripheral Devices That Require (Additional) System Power							
4905-9835	1	TEMPORAL CODE 4 MODULE		0.0002	0.0002	0.0150	0.0150
Notification Appliances							
4098-9771	3	TRUEALARM SOUNDER BASE W/ CO MODULE	*	0.0000	0.0000	0.0170	0.0510
4906-9101	5	V/O MC NON-ADDRESS, RED, WALL	15	0.0000	0.0000	0.0600	0.3000
4906-9127	5	A/V MC NON-ADDRESS, RED, WALL	110	0.0000	0.0000	0.2850	1.4250
4906-9127	22	A/V MC NON-ADDRESS, RED, WALL	15	0.0000	0.0000	0.0750	1.6500
4906-9127	2	A/V MC NON-ADDRESS, RED, WALL	30	0.0000	0.0000	0.1160	0.2320
4906-9127	6	A/V MC NON-ADDRESS, RED, WALL	75	0.0000	0.0000	0.2210	1.3260
		Peripheral Totals			0.0002		4.9990
		Added Current for EPS Conversion of 24 to 29 Volt IDNac Devices			0.0000		0.0000
		RUI Totals	0		0.0000		0.0000
		Address Totals	0 Addresses		0.0000		0.0000
		System Totals*:		Standby	0.1252	Alarm	5.2240

Battery Set #1 (Cabinet/Charger #1)	Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:				
4009		0.1252		5.2240
Sub Total		0.1252		5.2240
Total		0.1252		5.2240

Standby Time = 24 Hrs x 0.1252 = 3.0043 Standby Ah
Alarm Time = 5 Min 0.08333 x 5.224 = 0.4353 Alarm Ah
3.4397
Additional Spare Battery Capacity = 0% + 0.0000
3.4397
Battery Discharge Factor = 20% + 0.6879
Minimum Battery Required 2081-9272 6.2AH (2x) 4.1276
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
NAC1:V1	FIRST FLOOR STROBE	SIG1	1.117A	6.19%
NAC1:V2	FIRST FLOOR STROBE	SIG2	1.634A	8.75%
NAC1:V3	FIRST FLOOR STROBE	SIG3	1.462A	9.28%
NAC1:V4	FIRST FLOOR STROBE	SIG4	0.720A	2.86%
NAC1:V5	SOUNDER BASES	SIG5	0.051A	0.25%
NAC1:V6	SPARE	SIG6	0.000A	0.00%
NAC1:V7	SPARE	SIG7	0.000A	0.00%
NAC1:V8	SPARE	SIG8	0.000A	0.00%
			4.984A	Total

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

NAC1:V1 Distributed Load Voltage Drop

Allowable % Drop: 17.9% — Wire Gauge: 14ga — Starting Voltage: 19.5vdc — Circuit Capacity 2.A
Wire Res. Per Ft. 0.003070 @ 75° Celsius — Min. Device Voltage: 16.vdc — % Voltage Drop 6.19%

Device #	PID	Setting	Distance (Feet)	Device Current (Normal Operation)	Voltage Drop	Voltage At Device
NAC1:V1-1	4906-9127	15cd	11	0.075	0.075	19.42
NAC1:V1-2	4906-9127	15cd	30	0.075	0.267	19.23
NAC1:V1-3	4906-9127	30cd	38	0.116	0.493	19.01
NAC1:V1-4	4906-9127	110cd	28	0.285	0.639	18.86
NAC1:V1-5	4906-9127	15cd	47	0.075	0.803	18.70
NAC1:V1-6	4906-9101	15cd	28	0.060	0.887	18.61
NAC1:V1-7	4906-9127	75cd	38	0.221	0.988	18.51
NAC1:V1-8	4906-9127	15cd	30	0.075	1.026	18.47
NAC1:V1-9	4906-9127	15cd	30	0.075	1.051	18.45
NAC1:V1-10	4906-9101	15cd	52	0.060	1.070	18.43
		Totals:	332 Ft.	1.117A		

NAC1:V2 Distributed Load Voltage Drop

Allowable % Drop: 17.9% — Wire Gauge: 14ga — Starting Voltage: 19.5vdc — Ckt Capacity 2.A
Wire Res. Per Ft. 0.003070 @ 75° Celsius — Min. Device Voltage: 16.vdc — % Voltage Drop 8.75%

Device #	PID	Setting	Distance (Feet)	Device Current (Normal Operation)	Voltage Drop	Voltage At Device
NAC1:V2-1	4906-9127	15cd	11	0.075	0.110	19.39
NAC1:V2-2	4906-9127	110cd	35	0.285	0.445	19.05
NAC1:V2-3	4906-9127	15cd	35	0.075	0.719	18.78
NAC1:V2-4	4906-9127	75cd	65	0.221	1.198	18.30
NAC1:V2-5	4906-9101	15cd	27	0.060	1.360	18.14
NAC1:V2-6	4906-9127	75cd	14	0.221	1.439	18.06
NAC1:V2-7	4906-9127	110cd	31	0.285	1.571	17.93
NAC1:V2-8	4906-9127	75cd	28	0.221	1.642	17.86
NAC1:V2-9	4906-9127	15cd	34	0.075	1.682	17.82
NAC1:V2-10	4906-9127	30cd	33	0.116	1.706	17.79
		Totals:	313 Ft.	1.634A		

NAC1:V3 Distributed Load Voltage Drop

Allowable % Drop: 17.9% — Wire Gauge: 14ga — Starting Voltage: 19.5vdc — Ckt Capacity 2.A
Wire Res. Per Ft. 0.003070 @ 75° Celsius — Min. Device Voltage: 16.vdc — % Voltage Drop 9.28%

Device #	PID	Setting	Distance (Feet)	Device Current (Normal Operation)	Voltage Drop	Voltage At Device
NAC1:V3-1	4906-9127	15cd	10	0.075	0.090	19.41
NAC1:V3-2	4906-9127	15cd	29	0.075	0.337	19.16
NAC1:V3-3	4906-9127	75cd	48	0.221	0.723	18.78
NAC1:V3-4	4906-9127	110cd	61	0.285	1.132	18.37
NAC1:V3-5	4906-9127	15cd	78	0.075	1.518	17.98
NAC1:V3-6	4906-9127	15cd	27	0.075	1.639	17.86
NAC1:V3-7	4906-9127	110cd	13	0.285	1.692	17.81
NAC1:V3-8	4906-9127	15cd	22	0.075	1.742	17.76
NAC1:V3-9	4906-9127	75cd	33	0.221	1.802	17.70
NAC1:V3-10	4906-9127	15cd	17	0.075	1.810	17.69
		Totals:	338 Ft.	1.462A		

NAC1:V4 Distributed Load Voltage Drop

Allowable % Drop: 17.9% — Wire Gauge: 14ga — Starting Voltage: 19.5vdc — Ckt Capacity 2.A
Wire Res. Per Ft. 0.003070 @ 75° Celsius — Min. Device Voltage: 16.vdc — % Voltage Drop 2.86%

Device #	PID	Setting	Distance (Feet)	Device Current (Normal Operation)	Voltage Drop	Voltage At Device
NAC1:V4-1	4906-9127	15cd	11	0.075	0.049	19.45
NAC1:V4-2	4906-9127	15cd	27	0.075	0.156	19.34
NAC1:V4-3	4906-9127	15cd	20	0.075	0.226	19.27
NAC1:V4-4	4906-9127	15cd	22	0.075	0.292	19.21
NAC1:V4-5	4906-9127	15cd	30	0.075	0.370	19.13
NAC1:V4-6	4906-9127	15cd	38	0.075	0.450	19.05
NAC1:V4-7	4906-9127	15cd	24	0.075	0.490	19.01
NAC1:V4-8	4906-9101	15cd	25	0.060	0.520	18.98
NAC1:V4-9	4906-9101	15cd	36	0.060	0.550	18.95
NAC1:V4-10	4906-9127	15cd	15	0.075	0.557	18.94
		Totals:	248 Ft.	0.720A		

NAC1:V5 Distributed Load Voltage Drop

Allowable % Drop: 7.7% — Wire Gauge: 14ga — Starting Voltage: 19.5vdc — Ckt Capacity 1.5A
Wire Res. Per Ft. 0.003070 @ 75° Celsius — Min. Device Voltage: 18.vdc — % Voltage Drop 0.25%

Device #	PID	Setting	Distance (Feet)	Device Current (Normal Operation)	Voltage Drop	Voltage At Device
NAC1:V5-1	4098-9771		80	0.017	0.025	19.47
NAC1:V5-2	4098-9771		70	0.017	0.040	19.46
NAC1:V5-3	4098-9771		80	0.017	0.048	19.45
		Totals:	230 Ft.	0.051A		

SECOND FLOOR

SCALE: NTS

BAXTER ACADEMY INTERIOR FIT-UP 4009 NAC

Module	Qty	Description	Setting	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
		Panel Totals			0.0850		0.1850
Miscellaneous Peripheral Devices That Require (Additional) System Power							
4905-9835	1	TEMPORAL CODE 4 MODULE		0.0002	0.0002	0.0150	0.0150
Notification Appliances							
4098-9771	3	TRUEALARM SOUNDER BASE W/ CO MODULE	*	0.0000	0.0000	0.0170	0.0510
4906-9101	4	V/O MC NON-ADDRESS, RED, WALL	15	0.0000	0.0000	0.0600	0.2400
4906-9127	1	A/V MC NON-ADDRESS, RED, WALL	110	0.0000	0.0000	0.2850	0.2850
4906-9127	7	A/V MC NON-ADDRESS, RED, WALL	15	0.0000	0.0000	0.0750	0.5250
4906-9127	16	A/V MC NON-ADDRESS, RED, WALL	30	0.0000	0.0000	0.1160	1.8560
		Peripheral Totals			0.0002		2.9720
		Added Current for EPS Conversion of 24 to 29 Volt IDNac Devices			0.0000		0.0000
		RUI Totals	0		0.0000		0.0000
		Address Totals	0 Addresses		0.0000		0.0000
		System Totals*:		Standby	0.0852	Alarm	3.1570

Battery Set #1 (Cabinet/Charger #1)	Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:				
4009		0.0852		3.1570
Sub Total		0.0852		3.1570
Total		0.0852		3.1570

Standby Time = 24 Hrs x 0.0852 = 2.0443 Standby Ah
Alarm Time = 5 Min 0.08333 x 3.157 = 0.2631 Alarm Ah
2.3074
Additional Spare Battery Capacity = 0% + 0.0000
2.3074
Battery Discharge Factor = 20% + 0.4615
Minimum Battery Required 2081-9272 6.2AH (2x) 2.7689
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
NAC2:V1	SECOND FLOOR STROBE	SIG1	1.150A	5.95%
NAC2:V2	SECOND FLOOR STROBE	SIG2	0.831A	3.26%
NAC2:V3	SECOND FLOOR STROBE	SIG3	0.925A	4.80%
NAC2:V4	SOUNDER BASES	SIG4	0.051A	0.18%
			2.957A	Total

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

NAC2:V1 Distributed Load Voltage Drop

Allowable % Drop: 17.9% — Wire Gauge: 14ga — Starting Voltage: 19.5vdc — Circuit Capacity 2.A
Wire Res. Per Ft. 0.003070 @ 75° Celsius — Min. Device Voltage: 16.vdc — % Voltage Drop 5.95%

Device #	PID	Setting	Distance (Feet)	Device Current (Normal Operation)	Voltage Drop	Voltage At Device
NAC2:V1-1	4906-9127	30cd	11	0.116	0.078	19.42
NAC2:V1-2	4906-9127	15cd	25	0.075	0.236	19.26
NAC2:V1-3	4906-9127	30cd	36	0.116	0.448	19.05
NAC2:V1-4	4906-9127	30cd	26	0.116	0.583	18.92
NAC2:V1-5	4906-9127	15cd	16	0.075	0.654	18.85
NAC2:V1-6	4906-9101	15cd	47	0.060	0.843	18.66
NAC2:V1-7	4906-9127	15cd	39	0.075	0.984	18.52
NAC2:V1-8	4906-9127	30cd	26	0.116	1.067	18.43
NAC2:V1-9	4906-9127	110cd	25	0.285	1.128	18.37
NAC2:V1-10	4906-9127	30cd	46	0.116	1.161	18.34
		Totals:	297 Ft.	1.150A		

NAC2:V2 Distributed Load Voltage Drop

Allowable % Drop: 17.9% — Wire Gauge: 14ga — Starting Voltage: 19.5vdc — Ckt Capacity 2.A
Wire Res. Per Ft. 0.003070 @ 75° Celsius — Min. Device Voltage: 16.vdc — % Voltage Drop 3.26%

Device #	PID	Setting	Distance (Feet)	Device Current (Normal Operation)	Voltage Drop	Voltage At Device
NAC2:V2-1	4906-9127	30cd	11	0.116	0.056	19.44
NAC2:V2-2	4906-9127	30cd	25	0.116	0.166	19.33
NAC2:V2-3	4906-9101	15cd	23	0.060	0.250	19.25
NAC2:V2-4	4906-9127	30cd	31	0.116	0.353	19.15
NAC2:V2-5	4906-9127	15cd	52	0.075	0.488	19.01
NAC2:V2-6	4906-9127	30cd	39	0.116	0.571	18.93
NAC2:V2-7	4906-9127	30cd	23	0.116	0.604	18.90
NAC2:V2-8	4906-9127	30cd	45	0.116	0.636	18.86
		Totals:	249 Ft.	0.831A		

NAC2:V3 Distributed Load Voltage Drop

Allowable % Drop: 17.9% — Wire Gauge: 14ga — Starting Voltage: 19.5vdc — Ckt Capacity 2.A
Wire Res. Per Ft. 0.003070 @ 75° Celsius — Min. Device Voltage: 16.vdc — % Voltage Drop 4.80%

Device #	PID	Setting	Distance (Feet)	Device Current (Normal Operation)	Voltage Drop	Voltage At Device
NAC2:V3-1	4906-9101	15cd	11	0.060	0.062	19.44
NAC2:V3-2	4906-9127	30cd	40	0.116	0.275	19.23
NAC2:V3-3	4906-9127	30cd	38	0.116	0.450	19.05
NAC2:V3-4	4906-9127	30cd	39	0.116	0.601	18.90
NAC2:V3-5	4906-9127	15cd	26	0.075	0.684	18.82
NAC2:V3-6	4906-9127	15cd	11	0.075	0.714	18.79
NAC2:V3-7	4906-9101	15cd	22	0.060	0.763	18.74
NAC2:V3-8	4906-9127	30cd	61	0.116	0.878	18.62
NAC2:V3-9	4906-9127	15cd	27	0.075	0.910	18.59
NAC2:V3-10	4906-9127	30cd	38	0.116	0.937	18.56
		Totals:	313 Ft.	0.925A		

NAC2:V4 Distributed Load Voltage Drop

Allowable % Drop: 7.7% — Wire Gauge: 14ga — Starting Voltage: 19.5vdc — Ckt Capacity 2.A
Wire Res. Per Ft. 0.003070 @ 75° Celsius — Min. Device Voltage: 18.vdc — % Voltage Drop 0.18%

Device #	PID	Setting	Distance (Feet)	Device Current (Normal Operation)	Voltage Drop	Voltage At Device
NAC2:V4-1	4098-9771		60	0.017	0.019	19.48
NAC2:V4-2	4098-9771		40	0.017	0.027	19.47
NAC2:V4-3	4098-9771		70	0.017	0.034	19.47
		Totals:	170 Ft.	0.051A		

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BAXTER ACADEMY INTERIOR FIT-UP

COMMUNITY COUNSELING
185 LANCASTER ST.
PORTLAND, MAINE 04101-2400

ISSUE LOG: MARK	DATE	CAD	CHK	DESCRIPTION

Revisions shown with △ symbol

DRAWN BY:	STEPHEN HERMES
CHECKED BY:	ALAN O'NEIL
ISSUE DATE:	5/26/17
JOB #:	
PROJECT #:	147:999894901

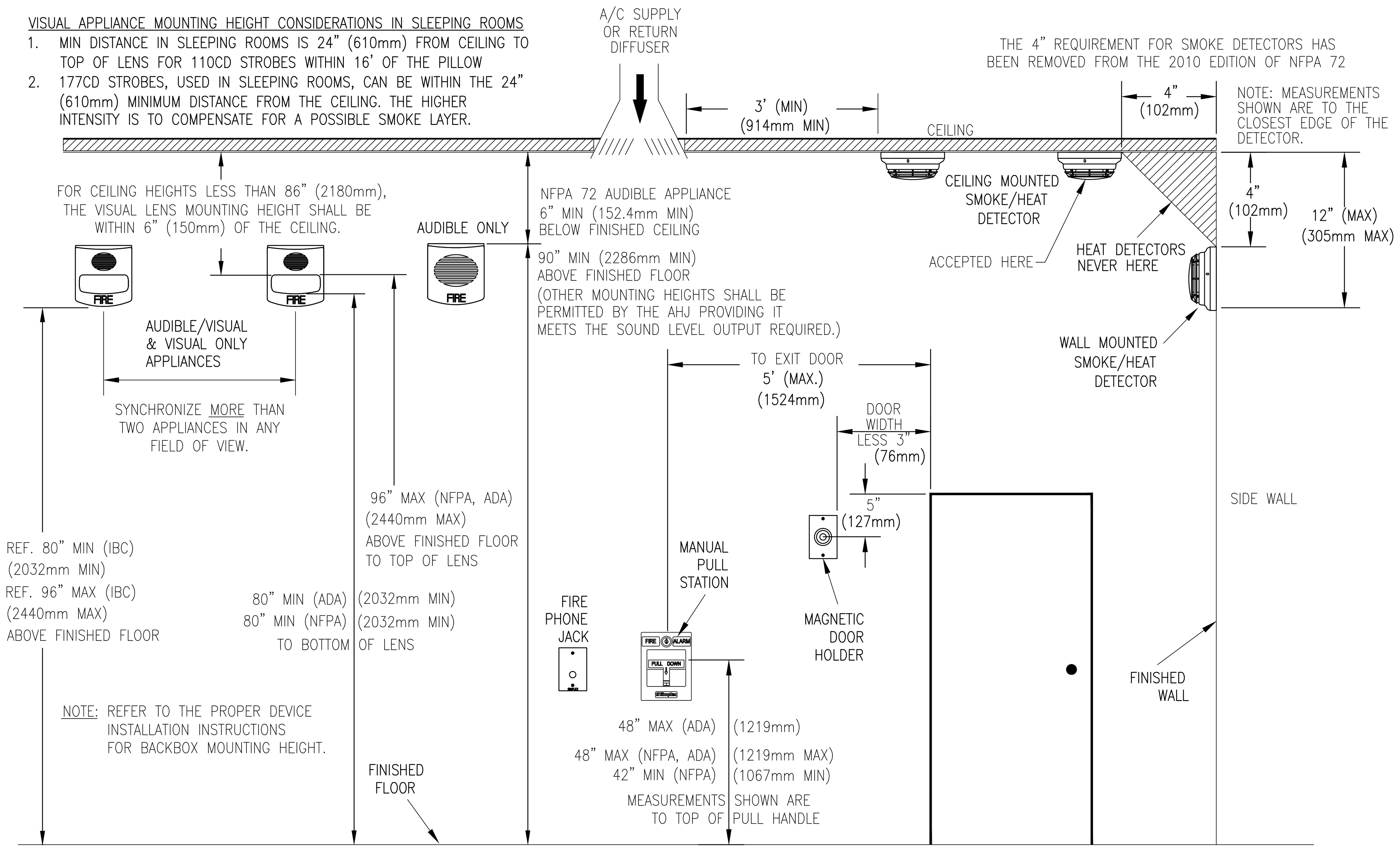
SYSTEM: FIRE ALARM SYSTEM

SHEET: CALCULATIONS AND SCHEDULES

FA-601

FILE PATH: Z:\DISTRICT 147\BAXTER ACADEMY\ENGINEERING\FA-601.dwg
LAST SAVED BY: SHERMES
LAST PRINTED: 5/30/2017 10:44:00 AM
24" x 36" - Arch D Size

DEVICE MOUNTING HEIGHT REFERENCE (PER NFPA 72)



4603-9101 REMOTE ANNUNCIATOR

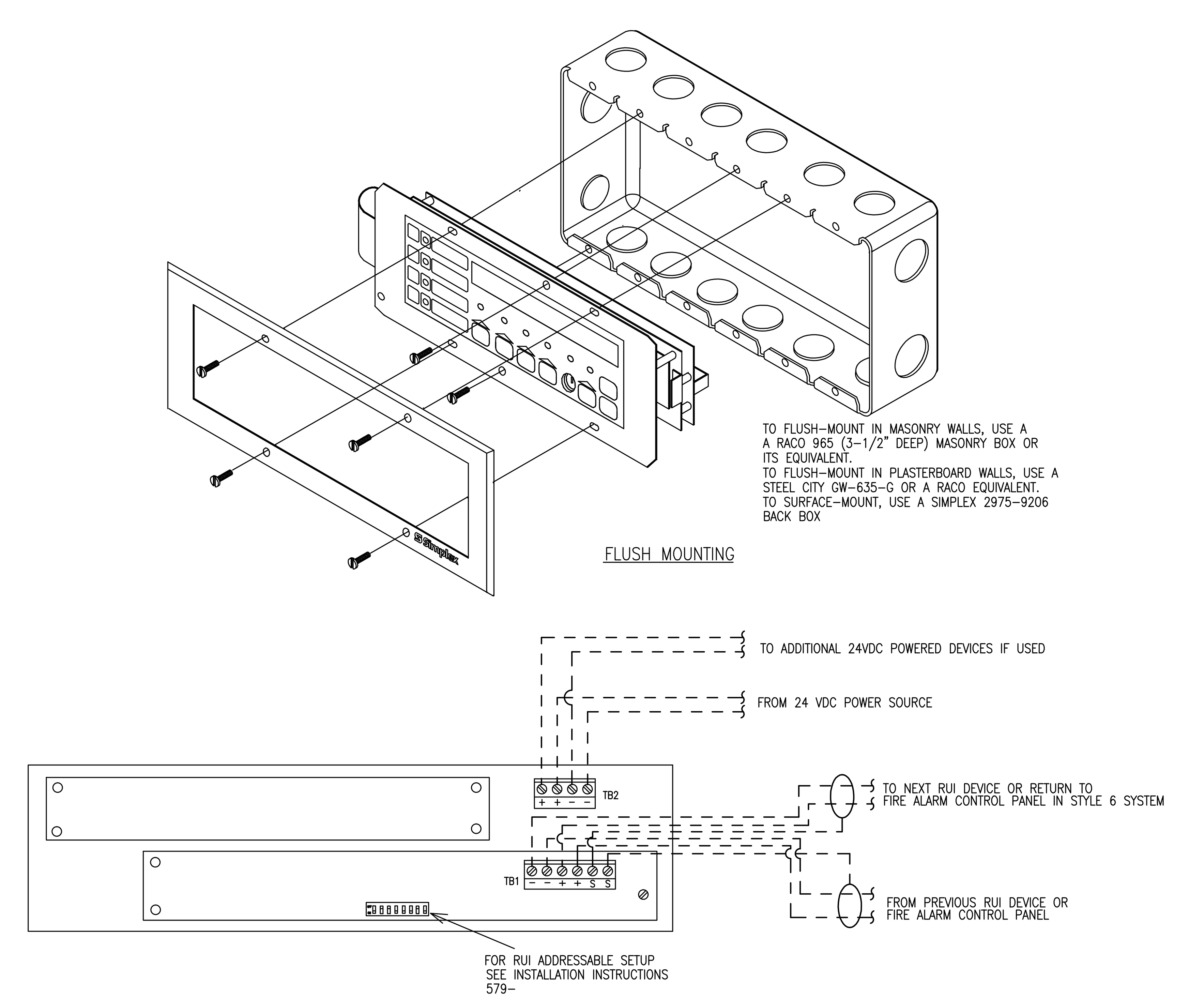
PRODUCT INFORMATION

FEATURES:
- UL LISTED
- FM APPROVED
- FLUSH MOUNT ON STANDARD ELECTRICAL BOXES

SPECIFICATIONS:
- VOLTAGE: 24VDC NOMINAL
- CURRENT: ALARM 140mA
  SUPERVISORY 65mA
- OPERATING TEMPERATURE: 32° F TO 120° F
- HUMIDITY RANGE: 10% TO 90% RH FROM 32° F TO 104° F
- STANDARD TRIM: BEIGE (SUPPLIED WITH BOTH SLOTTED AND TAMPERPROOF SCREWS)

OPTIONS
- BRUSHED ALUMINUM TRIM: 4603-9111
- SURFACE BOX: 2975-9206
- DIMENSIONS 11 31/32"L X 4 5/8" W X 2 3/4"D
- FINISH: LIGHT BROWN ENAMEL

NOTES:
1. ALL WIRING TO BE No. 18 AWG OR TO LOCAL CODE.
2. ALL WIRING SUPERVISED
3. WIRE TO BE 18 AWG TWISTED SHIELDED PAIR RECOMMENDED CONSULT SALES ENGINEERING FOR EXCEPTIONS.
   2500 FT ONE WAY MAX COMMUNICATION LINE POWER
   32 VDC MAX
   130 mA MAX
   1200 OR 9600 BAUD
4. WHEN WIRING LEAVES THE BUILDING, OVER VOLTAGE PROTECTORS ARE REQUIRED; USE 2081-9044 ONE IS INSTALLED WHERE IT LEAVE THE BUILDING AND ONE WHERE IT ENTERS THE NEXT BUILDING. TWO 2081-9044 (MAX)



4098-9792 STANDARD SENSOR BASE

PRODUCT INFORMATION

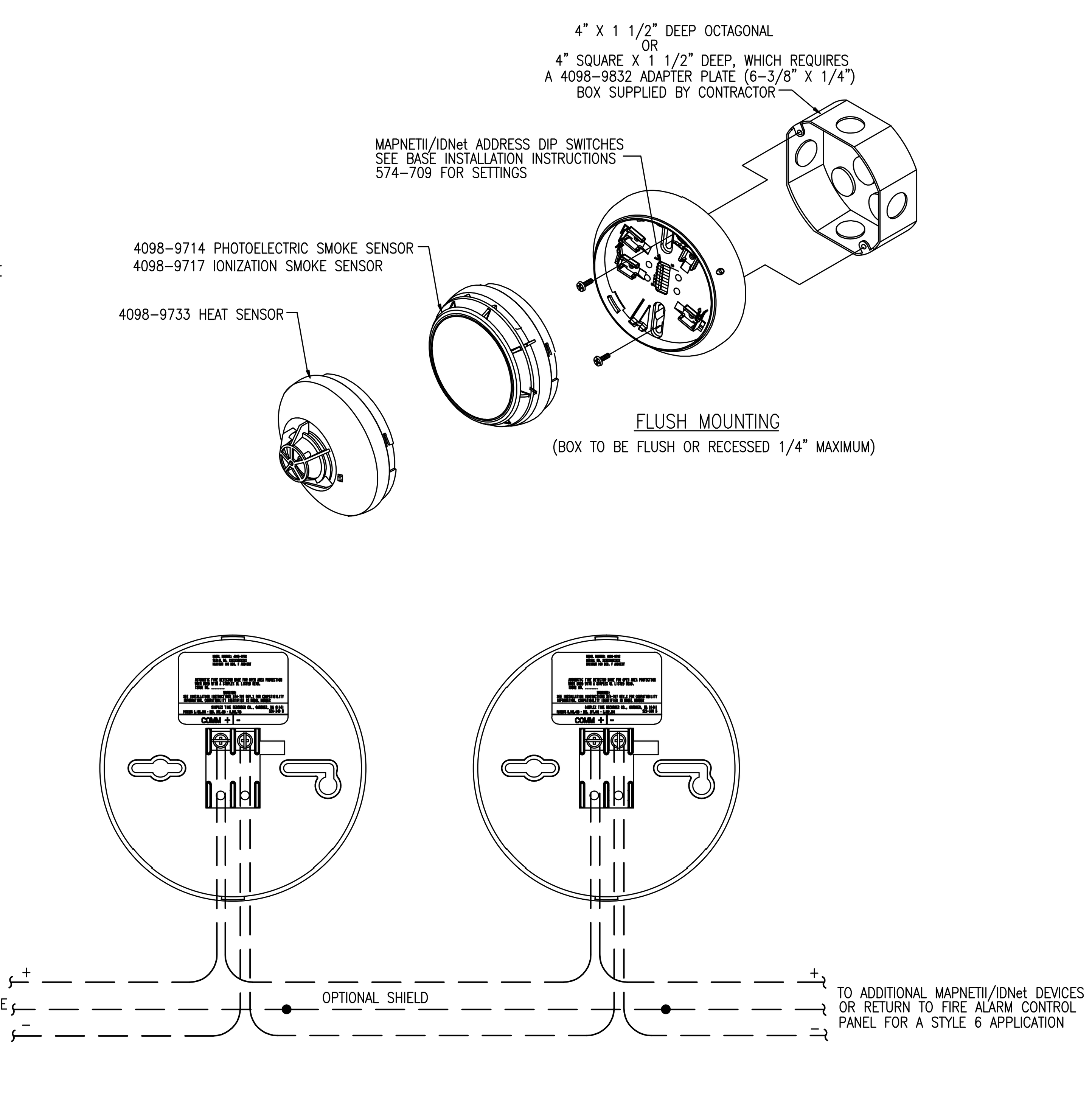
FEATURES:
- UL LISTED, FM APPROVED
- TRUEALARM ANALOG SENSING PROVIDES DIGITAL TRANSMISSION OF ANALOG SENSOR VALUES VIA MAPNETII, OR IDNet SLC TWO WIRE COMMUNICATIONS
- FIRE ALARM CONTROL PANEL PROVIDES:
  - -INDIVIDUAL SENSITIVITY SELECTION FOR EACH SENSOR
  - -PEAK VALUE LOGGING ALLOWING ACCURATE ANALYSIS FOR SENSITIVITY SELECTION
  - -AUTOMATIC ENVIRONMENTAL COMPENSATION
  - -DISPLAY OF SENSITIVITY IN PERCENT PER FOOT
  - -MULTISTAGE ALARM OPERATION
  - -ABILITY TO DISPLAY AND PRINT DETAILED SENSOR INFORMATION IN PLAIN ENGLISH LANGUAGE
- PHOTOELECTRIC SMOKE SENSOR 4098-9714:
  SEVEN LEVELS OF SENSITIVITY FROM 0.2% TO 3.7%
- IONIZATION SMOKE SENSOR 4098-9717:
  FOUR LEVELS OF SENSITIVITY FROM 0.5% TO 1.7%.
- HEAT SENSOR 4098-9733:
  - -RATE-OF-RISE TEMPERATURE DETECTION IS SELECTABLE AT THE CONTROL PANEL FOR EITHER 15°F OR 20°F PER MINUTE
  - -FIXED TEMPERATURE SENSING IS INDEPENDENT OF RATE-OF-RISE AND PROGRAMMABLE TO OPERATE AT 135°F OR 155°F
  - -TRUEALARM HEAT SENSORS CAN BE PROGRAMMED AS A UTILITY DEVICE TO MONITOR FOR TEMPERATURE EXTREMES IN THE RANGE FROM 32° F TO 120° F.
- UL STANDARD SPACING:
  - -60 FT SPACING FOR 135° F
  - -40 FT SPACING FOR 155° F
- INTEGRAL RED LED FOR POWER-ON (PULSING), OR ALARM OR TROUBLE (STEADY ON)
- BASE MOUNTED ADDRESS SELECTION:
  - -ACCESSIBLE FROM FRONT (DIP SWITCH UNDER SENSOR)
  - -ADDRESS REMAINS WITH ITS PROGRAMMED LOCATION
- FOR USE WITH SIMPLEX 4010, 4100, 4020, AND 4120 SERIES CONTROL PANELS.
- MAXIMUM QUANTITY OF DEVICES:
  - -127 FOR 4020, 4100, 4120
  - -250 FOR 4010, 4100
- MOUNTING: CEILING OR WALL
- COLOR : FROST WHITE
- BASE DIMENSIONS: 15/16" X 4-7/8"

SPECIFICATIONS:
- UL LISTED TEMPERATURE RANGE: 32°F TO 100°F
- OPERATING TEMPERATURE RANGE: 32°F TO 120°F
- HUMIDITY RANGE: 10% TO 95% RH
- PHOTOELECTRIC SENSOR AIR VELOCITY RANGE: 0-2000 FT/MIN
- IONIZATION SENSOR AIR VELOCITY RANGE: 0-300 FT/MIN
- WIRING CONNECTIONS: SCREW TERMINALS FOR IN/OUT WIRING, #18 TO #14 AWG
- COMMUNICATIONS MAPNETII/IDNet SLC: 1 ADDRESS PER BASE
  VOLTAGE (MAPNETII/IDNet SLC): 24-40VDC
  CURRENT: 400uA TYPICAL

DESCRIPTION:

TRUEALARM SENSOR BASES CONTAIN INTEGRAL ADDRESSABLE ELECTRONICS THAT CONSTANTLY MONITOR THE STATUS OF THE DETACHABLE PHOTOELECTRIC, IONIZATION, OR HEAT SENSORS. EACH SENSOR'S OUTPUT IS DIGITIZED AND TRANSMITTED TO THE SYSTEM FIRE ALARM CONTROL PANEL EVERY FOUR SECONDS. SINCE TRUEALARM SENSORS USE THE SAME BASE, DIFFERENT SENSOR TYPES CAN BE EASILY INTERCHANGED TO MEET SPECIFIC LOCATION REQUIREMENTS. THIS FEATURE ALLOWS INTENTIONAL SENSOR SUBSTITUTION DURING BUILDING CONSTRUCTION. WHEN CONDITIONS ARE TEMPORARILY DUSTY, INSTEAD OF COVERING THE SMOKE SENSORS. HEAT SENSORS MAY BE INSTALLED WITHOUT REPROGRAMMING THE CONTROL PANEL, ALTHOUGH THE CONTROL PANEL WILL INDICATE AN INCORRECT SENSOR TYPE, THE HEAT SENSOR WILL OPERATE AS A DEFAULT SENSITIVITY PROVIDING HEAT DETECTION FOR BUILDING PROTECTION AT THAT LOCATION.

WIRING:
1. ALL WIRING TO COMPLY WITH LOCAL CODE.
2. CONDUCTORS MUST TEST FREE OF ALL GROUNDS.
3. MAINTAIN CORRECT POLARITY
4. MAPNETII/IDNet SLC WIRING TO BE #18 AWG TWISTED SHIELDED PAIR
5. IF SHIELD IS PRESENT, CONNECT TO THE OUTGOING IDNet SLC SHIELD TO PROVIDE A CONTINUOUS SHIELD OVER THE LENGTH OF THE IDNet SLC CHANNEL. METHOD OF SPLICE DETERMINED BY AHJ.
6. REFER TO INSTALLATION INSTRUCTIONS (574-707)
7. REFER TO APPLICATION MANUAL (574-709)



4098-9771 CO SENSOR BASE WITH SOUNDER

PRODUCT INFORMATION

FEATURES:
- UL LISTED TO STANDARD 268, SMOKE DETECTORS FOR FIRE ALARM SIGNALING SYSTEMS AND STANDARD 2075, GAS AND VAPOR DETECTORS AND SENSORS; ALLOWING SYSTEMS TO BE LISTED TO STANDARD 2034, SINGLE AND MULTIPLE STATION CARBON MONOXIDE ALARMS.
- CO SENSOR BASES SUPPORT (AND REQUIRE) A TRUEALARM ANALOG PHOTOELECTRIC, PHOTO/HEAT, HEAT, OR IONIZATION SENSOR.
  - PHOTOELECTRIC SMOKE SENSOR 4098-9714:
    SEVEN LEVELS OF SENSITIVITY FROM 0.2% TO 3.7%
  - IONIZATION SMOKE SENSOR 4098-9717:
    FOUR LEVELS OF SENSITIVITY FROM 0.5% TO 1.7%.
  - HEAT SENSOR 4098-9733:
    - -RATE-OF-RISE TEMPERATURE DETECTION IS SELECTABLE AT THE CONTROL PANEL FOR EITHER 15°F (-9°C) OR 20°F (-6.7°C) PER MINUTE
    - -FIXED TEMPERATURE SENSING IS INDEPENDENT OF RATE-OF-RISE AND PROGRAMMABLE TO OPERATE AT 135°F (57°C) OR 155°F (68°C)
    - -TRUEALARM HEAT SENSORS CAN BE PROGRAMMED AS A UTILITY DEVICE TO MONITOR FOR TEMPERATURE EXTREMES IN THE RANGE FROM 32° F TO 155° F (0° C TO 68° C).
    - UL STANDARD SPACING: 60 FT (18.3 M) SPACING FOR 135°F (57°C)
      40 FT (12.2 M) SPACING FOR 155° F (68°C)
- CO SENSOR BASES ARE MULTI-POINT DEVICES, CONSUME ONLY ONE IDNet SLC ADDRESS, AND RECEIVE BOTH COMMUNICATIONS AND SENSOR POWER FROM THE IDNet SLC CHANNEL.
- MODULAR TRUEALARM SENSOR BASE WITH BUILT-IN ELECTRONIC ALARM SOUNDER:
  - -SOUNDER OPERATION IS UL LISTED AS AN AUDIBLE NOTIFICATION APPLIANCE TO UL STANDARD 464.
  - -SOUNDER CAN BE POWERED FROM 24 VDC OR FROM A COMPATIBLE NOTIFICATION APPLIANCE CIRCUIT (NAC)
  - -SOUNDER CAN BE SYNCHRONIZED CODED/TEMPORAL CODED BY COMMUNICATIONS, NAC OR TEMPORAL CODE 4 MODULE 4905-9835
  - -SOUNDER CAN BE MANUALLY ACTIVATED FROM THE CONTROL PANEL
- INTEGRAL RED LED FOR POWER-ON (PULSING), ALARM OR TROUBLE (STEADY ON)
- FOR USE WITH SIMPLEX 4100 SERIES CONTROL PANELS.
- MAXIMUM QUANTITY OF DEVICES: 250 FOR 4100 IDNet SLC CHANNEL
- MOUNTING: CEILING OR WALL
- BASE DIMENSIONS: 1-1/8" X 6-7/16" (2.85 CM X 16.5 CM)

SPECIFICATIONS:
- UL LISTED TEMPERATURE RANGE: 32°F TO 100°F (0°C TO 38°C)
- OPERATING TEMPERATURE RANGE: 4098-9714 = 15°F TO 122°F (-9°C TO 50°C)
  4098-9733 = 32°F TO 122°F (0°C TO 50°C)
- HUMIDITY RANGE: 10% TO 95% RH
- PHOTOELECTRIC SENSOR AIR VELOCITY RANGE: 0-2000 FT/MIN (610 M/MIN)
- IONIZATION SENSOR AIR VELOCITY RANGE: 0-200 FT/MIN (61 M/MIN)
- CO SENSOR SPECIFICATIONS

UL 2034 REQUIREMENTS REFERENCE	70 PPM CONCENTRATION	ALARM WINDOW 60 TO 240 MINUTES
	150 PPM CONCENTRATION	ALARM WINDOW 10 TO 50 MINUTES
	400 PPM CONCENTRATION	ALARM WINDOW 4 TO 15 MINUTES

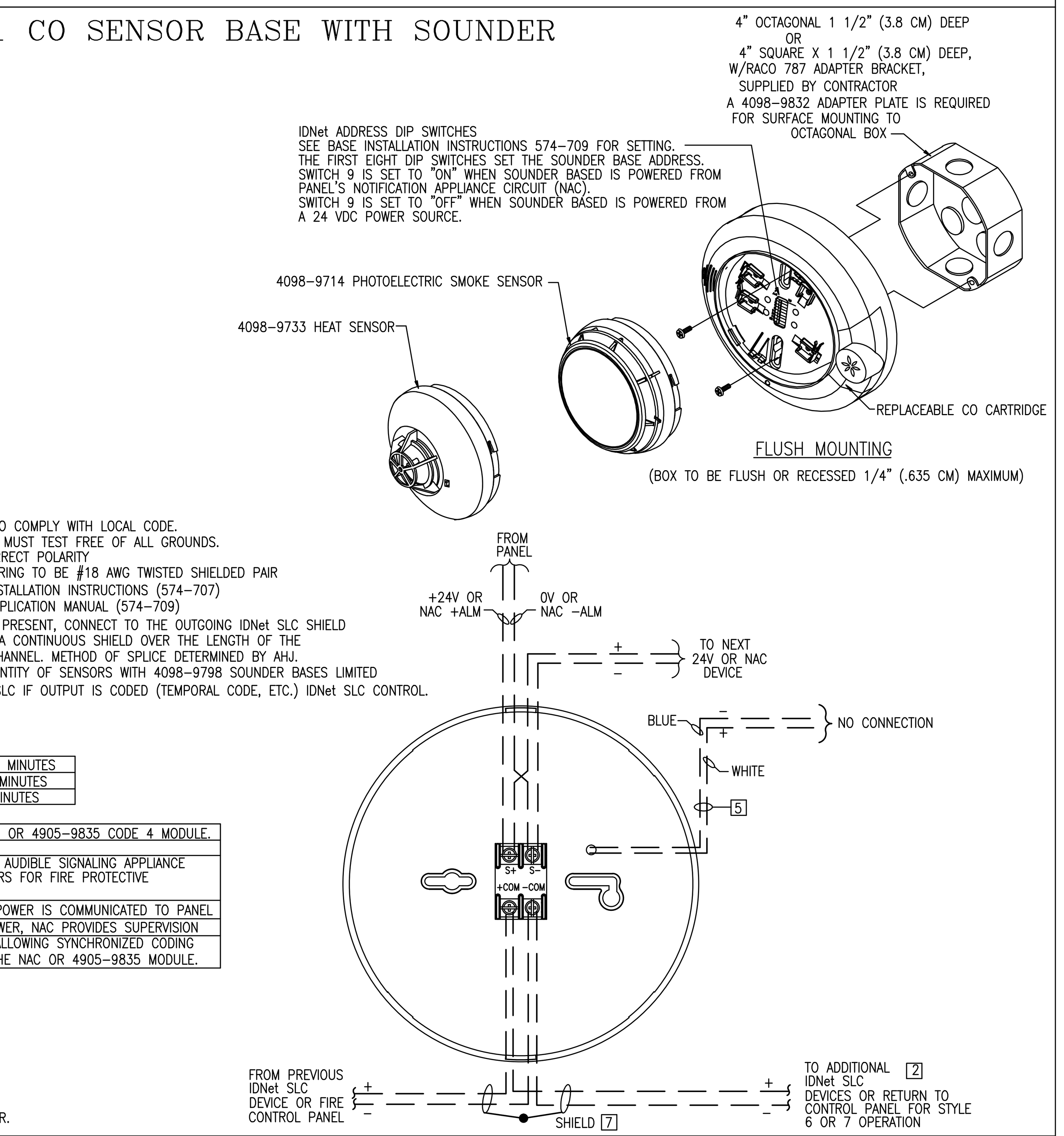
- SOUNDER OPERATING SPECIFICATIONS

SOUNDER VOLTAGE		16 TO 32 VDC FROM STEADY EXTERNAL SOURCE, NAC OR 4905-9835 CODE 4 MODULE.
ALARM CURRENT (SOUNDER ON)		17 mA @ 24 VDC, 24 mA MAXIMUM @ 32VDC
SOUNDER OUTPUT		88 dBA MINIMUM @ 10 FT. PER UL STANDARD 464, AUDIBLE SIGNALING APPLIANCE APPLIANCES AND UL STANDARD 268, SMOKE DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
SOUNDER POWER SUPERVISION (SELECTABLE)	SUPERVISED	SELECT FOR CONTINUOUS 24 VDC POWER, LOSS OF POWER IS COMMUNICATED TO PANEL
	UNSUPERVISED	SELECT WHEN CONNECTED TO NAC FOR SOUNDER POWER, NAC PROVIDES SUPERVISION
NAC POWERED OPERATION		WHEN IN ALARM, WILL SOUND WHEN NAC IN ALARM, ALLOWING SYNCHRONIZED CODING (TEMPORAL OR MARCH TIME, ETC.) CONTROLLED BY THE NAC OR 4905-9835 MODULE.

DESCRIPTION:

TRUEALARM SENSOR BASES CONTAIN INTEGRAL ADDRESSABLE ELECTRONICS THAT CONSTANTLY MONITOR THE STATUS OF THE DETACHABLE PHOTOELECTRIC, IONIZATION, OR HEAT SENSORS. EACH SENSOR'S OUTPUT IS DIGITIZED AND TRANSMITTED TO THE SYSTEM FIRE ALARM CONTROL PANEL EVERY FOUR SECONDS.
THREE TYPES OF CO INFLUENCED OPERATION ARE AVAILABLE;
UL 2034 CO ALARM DETECTION; UL 2075 CO (OSHA) LEVEL MONITORING FOR VENTILATION CONTROL;
AND MULTI-CRITERIA FIRE SENSOR ANALYSIS WITH ALGORITHMS THAT COMBINES OPTICAL AND CO GAS MONITORING INFORMATION OPERATION OF A CO SENSOR BASE WITH A PHOTOELECTRIC SENSOR.

WIRING:
1. ALL WIRING TO COMPLY WITH LOCAL CODE.
2. CONDUCTORS MUST TEST FREE OF ALL GROUNDS.
3. MAINTAIN CORRECT POLARITY
4. IDNet SLC WIRING TO BE #18 AWG TWISTED SHIELDED PAIR
5. REFER TO INSTALLATION INSTRUCTIONS (574-707)
6. REFER TO APPLICATION MANUAL (574-709)
7. IF SHIELD IS PRESENT, CONNECT TO THE OUTGOING IDNet SLC SHIELD TO PROVIDE A CONTINUOUS SHIELD OVER THE LENGTH OF THE IDNet SLC CHANNEL. METHOD OF SPLICE DETERMINED BY AHJ.
8. MAXIMUM QUANTITY OF SENSORS WITH 4098-9798 SOUNDER BASES LIMITED TO 43 PER SLC IF OUTPUT IS CODED (TEMPORAL CODE, ETC.) IDNet SLC CONTROL.



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ISSUE LOG:					
MARK	DATE	CAD	CHK	DESCRIPTION	Revisions shown with symbol

DRAWN BY:	STEPHEN HERMES
CHECKED BY:	ALAN O'NEIL
ISSUE DATE:	5/26/17
JOB #:	
PROJECT #:	147:999894901

SYSTEM: FIRE ALARM SYSTEM

SHEET: WIRING TYPICALS

FA-701

FILE PATH: Z:\DISTRICT 147\BAXTER ACADEMY\ENGINEERING\FA-701.dwg
LAST SAVED BY: SHERMES
LAST PRINTED: 5/30/2017 10:44:05 AM
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4099-9006 IDNet SLC DOUBLE ACTION PUSH MANUAL STATION

PRODUCT INFORMATION

FEATURES:

- UL LISTED
- DOUBLE ACTION (PUSH/PULL), IDNet SLC ADDRESSABLE
- PULL LEVEL PROTRUDES WHEN ALARMED
- LED INDICATOR FLASHES DURING COMMUNICATION
- TAMPER RESISTANT RESET KEY LOCK
- MOUNTING: SEMI-FLUSH, SURFACE
- OPERATING TEMPERATURE RANGE: 32 - 120° F
- OPERATING HUMIDITY RANGE: 0 - 93% RH
- ADAPTER PLATES 2099-9813 OR 2099-9814 CAN BE USE FOR RETROFIT APPLICATIONS.
- 5" HIGH X 3 3/4" WIDE X 1' DEEP
- SCREW TERMINALS FOR 18 TO 14 AWG WIRE
- ADDRESSED BY MEANS OF AN 8 POSITION DIP SWITCH
- COMPATIBLE WITH IDNet SLC/MAPNET

OPERATION:

ACTIVATION:
4099-9006 DOUBLE ACTION STATION REQUIRES A FIRM DOWNWARD PULL TO ACTIVATE THE ALARM SWITCH. COMPLETING THIS ACTION BREAKS AN INTERNAL PLASTIC BREAK-ROD THAT IS VISIBLE BELOW THE PULL LEVER (USE OF PLASTIC ROD IS OPTIONAL). THE PULL LEVEL LATCHES INTO THE ALARM POSITION AND REMAINS EXTENDED OUT OF THE HOUSING TO PROVIDE A VISIBLE INDICATION.

RESETTING
4099-9006 DOUBLE ACTION STATION REQUIRES A KEY TO RESET THE ACTIVATION LEVER AND DEACTIVATE THE ALARM SWITCH. (IF OPTIONAL PLASTIC BREAK ROD WAS USED IT MUST BE REPLACED)

CONSTRUCTION:

STATION HOUSING AND PULL LEVER ARE CONSTRUCTED OF CHIP RESISTANT AND DIRT RESISTANT, HIGH IMPACT LEXAN.
HOUSING IS RED WITH RAISED WHITE LETTERING AND PULL LEVER IS WHITE WITH RED RAISED LETTERING.
* LEXAN IS A REGISTERED TRADEMARK OF THE GENERAL ELECTRIC CO.

APPLICATION:

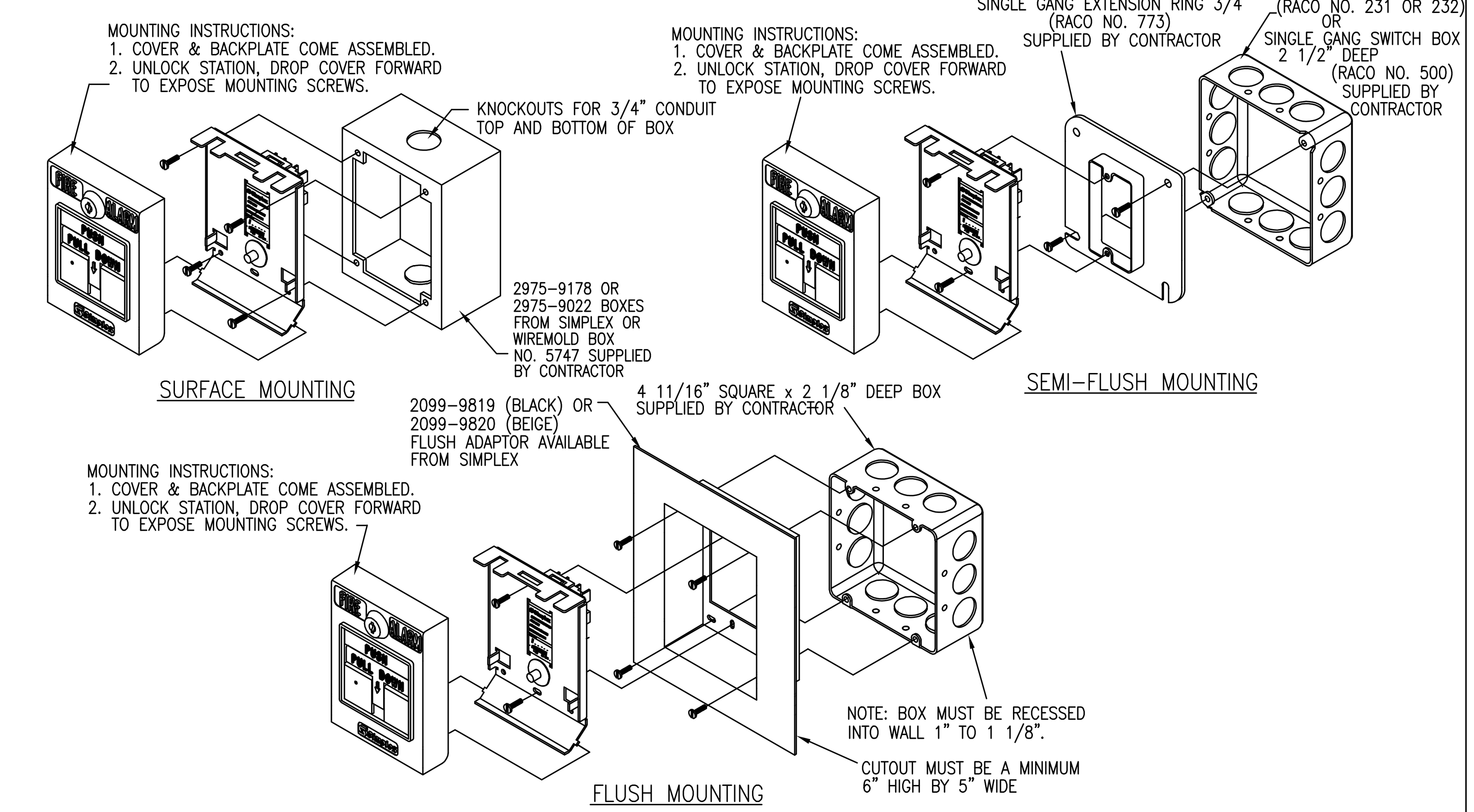
PULL STATIONS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72 AND ADA GUIDE LINES.

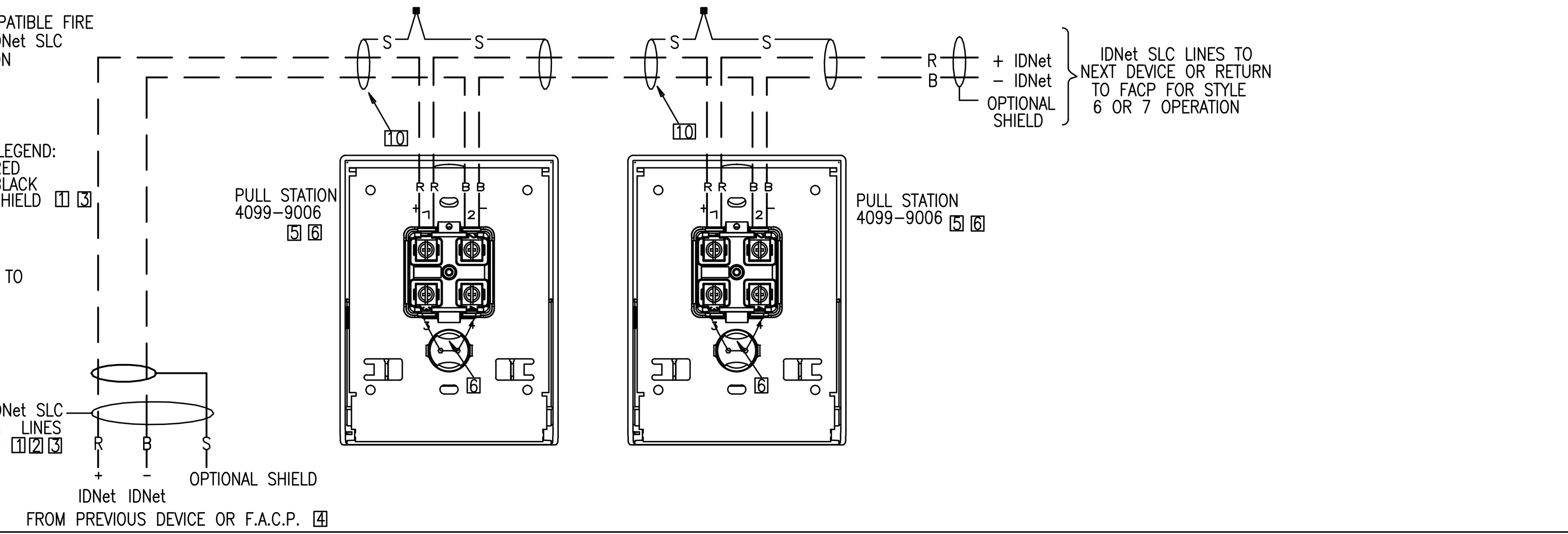
INTRODUCTION:

THE 4099-9006 ADDRESSABLE PULL STATION PROVIDES TWO-STATE STATUS INFORMATION (NORMAL AND SHORT) TO THE IDNet SLC COMPATIBLE FIRE ALARM CONTROL PANEL (FACP) VIA THE IDNet SLC CHANNEL. THE IDNet SLC CHANNEL PROVIDES THE COMMUNICATION LINK BETWEEN PULL STATION AND THE FACP AND POWERS THE ENTIRE CIRCUITRY.

WIRING:

1. ALL WIRING TO COMPLY WITH LOCAL CODE.
2. CONDUCTORS MUST TEST FREE OF ALL GROUNDS.
3. MAINTAIN CORRECT POLARITY
4. IDNet SLC LINES ARE TO BE 18 AWG TWISTED SHIELDED PAIR
5. MAXIMUM LINE RUN FROM PANEL TO FARTHEST DEVICE NOT TO EXCEED 2500 FEET.
6. MAXIMUM TOTAL WIRE (INCLUDING ALL T-TAPS) FROM PANEL NOT TO EXCEED 10,000 FEET.
7. MAXIMUM QUANTITY OF DEVICES PER CIRCUIT: 250
8. TERMINALS 1 AND 2 FOR FIELD WIRING. TERMINALS 3 AND 4 ARE FACTORY WIRING.
9. WIRE NUT, SPLICE, OR SOLDER THE SHIELD WIRES.
10. IF SHIELD IS PRESENT, IT SHOULD BE CONNECTED TO THE OUTGOING IDNet SHIELD TO PROVIDE A CONTINUOUS SHIELD OVER THE LENGTH OF THE IDNet SLC CHANNEL. SHIELD SHOULD BE INSULATED FROM THE ELECTRICAL BOX.
11. SEE INSTALLATION INSTRUCTIONS 574-332





TrueAlert™ NON-ADDRESSABLE MULTI-CANDELA AUDIBLE/VISIBLE NOTIFICATION APPLIANCE (ELECTRONIC HORN W/STROBE)

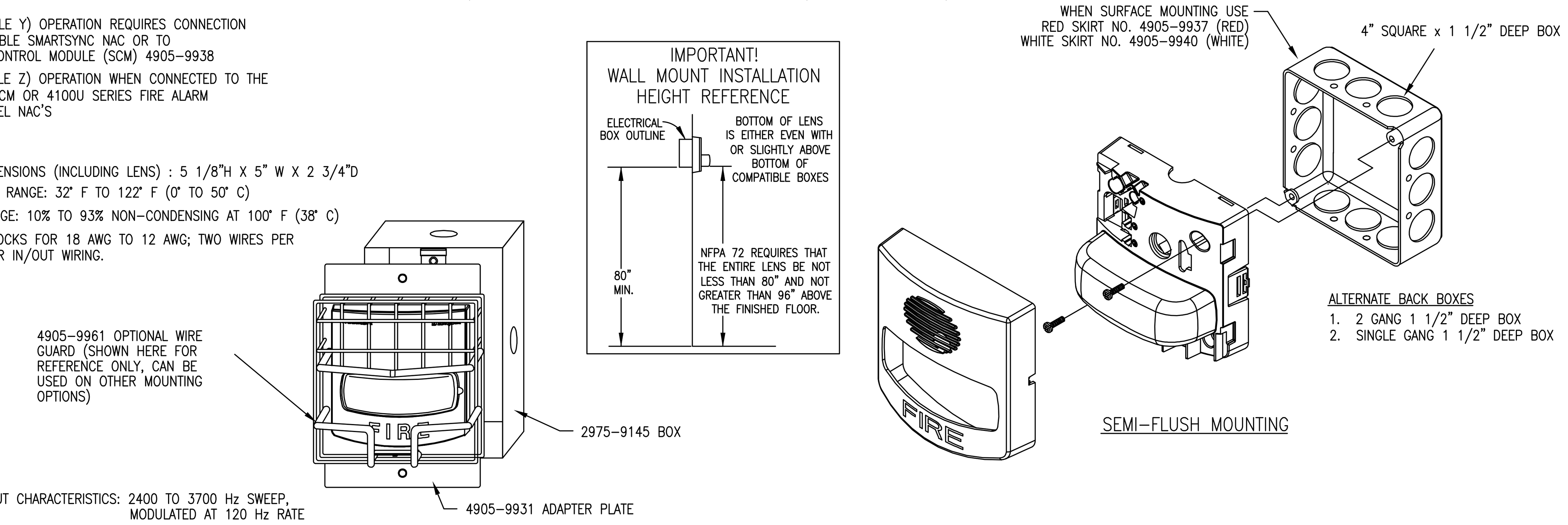
PRODUCT INFORMATION

FEATURES:

- CLASS B (STYLE Y) OPERATION REQUIRES CONNECTION TO A COMPATIBLE SMARTSYNC NAC OR TO SMARTSYNC CONTROL MODULE (SCM) 4905-9938
- CLASS A (STYLE Z) OPERATION WHEN CONNECTED TO THE 4905-9938 SCM OR 4100U SERIES FIRE ALARM CONTROL PANEL NAC'S

SPECIFICATIONS:

- HOUSING DIMENSIONS (INCLUDING LENS) : 5 1/8"H X 5" W X 2 3/4"D
- TEMPERATURE RANGE: 32° F TO 122° F (0° TO 50° C)
- HUMIDITY RANGE: 10% TO 93% NON-CONDENSING AT 100° F (38° C)
- TERMINAL BLOCKS FOR 18 AWG TO 12 AWG; TWO WIRES PER TERMINAL FOR IN/OUT WIRING.



HORN

- SOUND OUTPUT CHARACTERISTICS: 2400 TO 3700 Hz SWEEP, MODULATED AT 120 Hz RATE

HORN SOUND OUTPUT RATINGS @ 10 FT. (3m)						
VOLTAGE	16 VDC		24 VDC		33 VDC	
SOUND TYPE *	STEADY	CODED	STEADY	CODED	STEADY	CODED
REVERBERATE CHAMBER UL 464 TEST	86 dBA	82 dBA	88 dBA	84 dBA	90 dBA	86 dBA
ANECHOIC CHAMBER	92 dBA	91 dBA	94 dBA	95 dBA	96 dBA	96 dBA

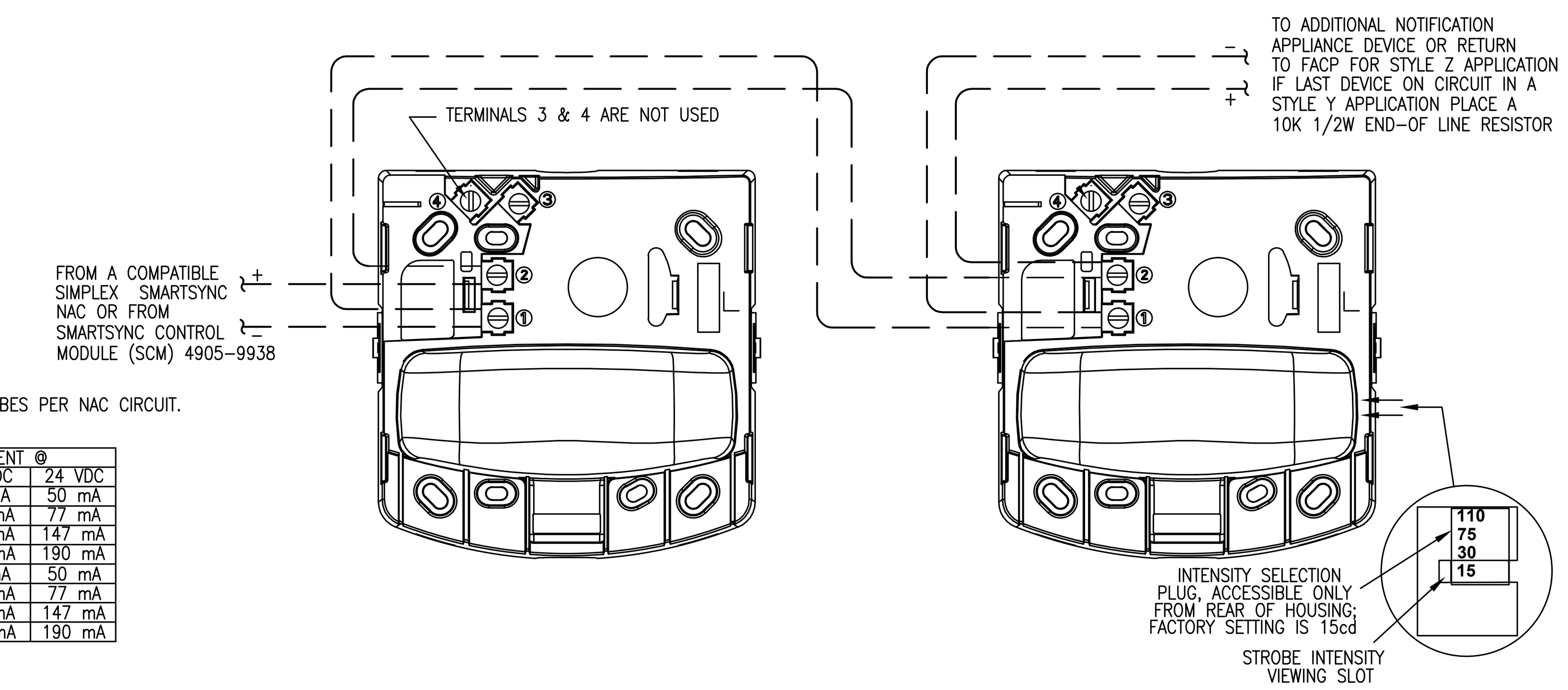
* CODED VALUES ARE TYPICAL OF THE OUTPUT MEASURED WITH A TEMPORAL CODED OR A MARCH TIME CODED PULSE AND WITH A SOUND LEVEL METER READING ON A "FAST" SETTING. UNDER THE SAME TEST CONDITIONS, CODED HORN OUTPUT "PEAK" SOUND LEVEL READINGS ARE TYPICALLY 4 dBA HIGHER.

STROBE

- RATED VOLTAGE RANGE: UL: REGULATED 24VDC PER UL 1971
  ULC: 20VDC TO 30VDC PER ULC S526-M878
- FLASH RATE: 1Hz
- SYNCHRONIZED MODE NAC LOADING: MAXIMUM OF 35 SYNCHRONIZED STROBES PER NAC CIRCUIT.

*CURRENT DRAWS REFLECT STROBE FLASHING AND HORN ON.

MODEL NUMBER	HOUSING COLOR	LETTERING COLOR	STROBE RATING	RMS CURRENT @ 16 VDC	18 VDC	24 VDC
4906-9127	RED	WHITE	15cd	75 mA	67 mA	50 mA
			30cd	116 mA	103 mA	77 mA
			75cd	221 mA	196 mA	147 mA
			110cd	285 mA	253 mA	190 mA
4906-9129	WHITE	RED	15cd	75 mA	67 mA	50 mA
			30cd	116 mA	103 mA	77 mA
			75cd	221 mA	196 mA	147 mA
			110cd	285 mA	253 mA	190 mA



TrueAlert™ NON-ADDRESSABLE MULTI-CANDELA VISIBLE NOTIFICATION APPLIANCE (WALL MOUNT)

PRODUCT INFORMATION

FEATURES:

- UL LISTED TO STANDARD 1971
- ADA COMPATIBLE

SYNCHRONIZATION FLASH RATE MODE FOR USE WITH:

- SEPARATE STROBE SYNCHRONIZATION MODULES THAT ARE AVAILABLE FOR CLASS B OR CLASS A OPERATION
- SEPARATE SMARTSYNC CONTROL MODULES (SCMs) THAT PROVIDE CLASS B OR CLASS A OUTPUT FROM CONVENTIONAL NAC INPUTS

SPECIFICATIONS:

- HOUSING DIMENSIONS: 5-1/8" H X 5" W X 2-3/4" D (130mm X 127mm X 70mm)
- TEMPERATURE RANGE: 32°F TO 122°F (0 TO 50°C)
- HUMIDITY RANGE: 10% TO 93% NON-CONDENSING AT 100°F (38°C)
- TERMINAL BLOCKS FOR 18AWG TO 12AWG; TWO WIRES PER TERMINAL FOR IN/OUT WIRING.

WIRING:

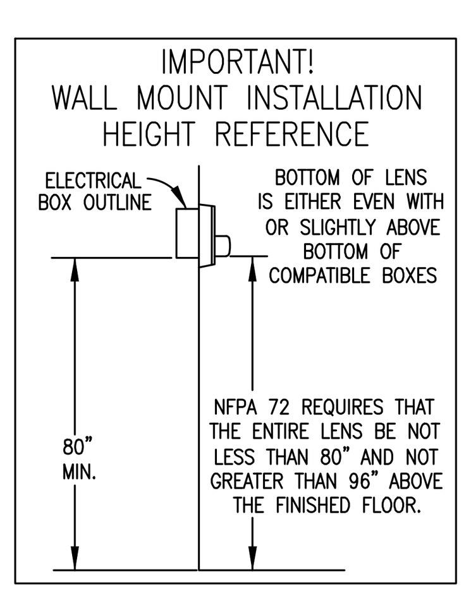
1. NOTIFICATION APPLIANCES ARE RATED PER INDIVIDUAL NAMEPLATE LABEL.
2. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS. DO NOT LOOP WIRES UNDER TERMINALS.
3. ALL NAC WIRING CONNECTIONS ARE SUPERVISED AND POWER-LIMITED.
4. SEE INSTALLATION INSTRUCTIONS (579-548) FOR ADDITIONAL INFORMATION.

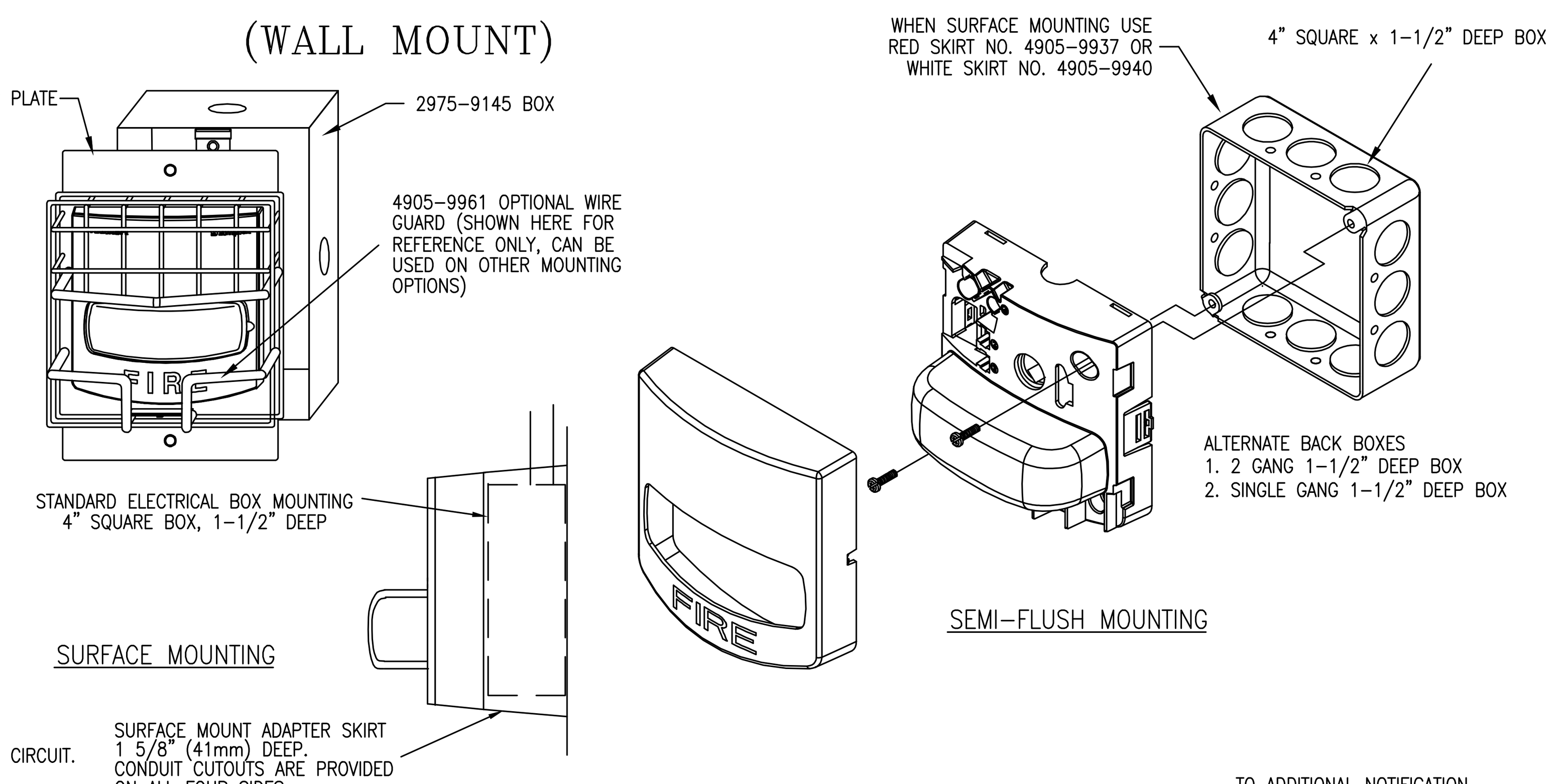
STROBE:

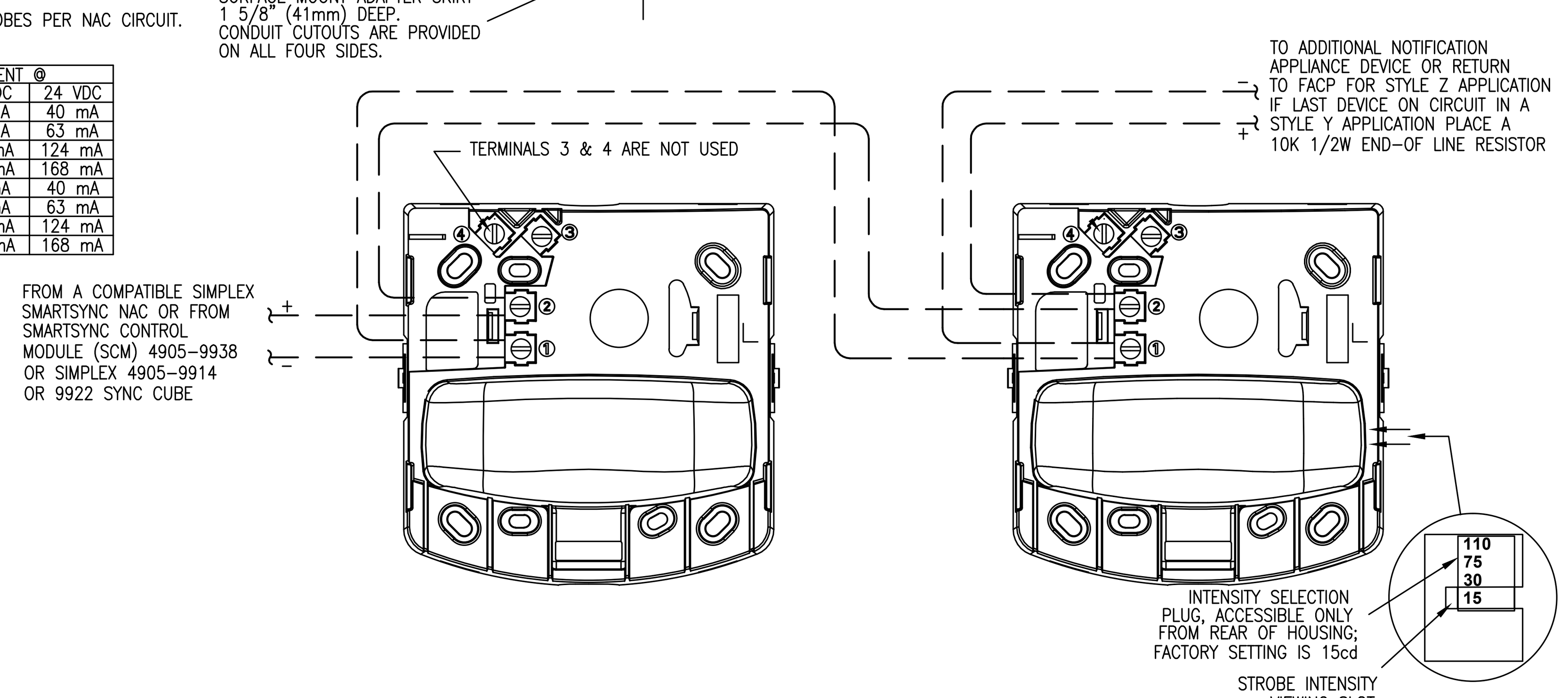
- RATED VOLTAGE RANGE: UL LISTED: 16 VDC TO 33 VDC PER UL 1971
  ULC LISTED: 20 VDC TO 30 VDC PER ULC S526-M878
- FLASH RATE: 1Hz
- SYNCHRONIZED MODE NAC LOADING: MAXIMUM OF 35 SYNCHRONIZED STROBES PER NAC CIRCUIT.

*CURRENT DRAWS REFLECT STROBE FLASHING

MODEL NUMBER	HOUSING COLOR	LETTERING COLOR	STROBE RATING	RMS CURRENT @ 16 VDC	18 VDC	24 VDC
4906-9101	RED	WHITE	15cd	60 mA	53 mA	40 mA
			30cd	94 mA	84 mA	63 mA
			75cd	186 mA	165 mA	124 mA
			110cd	252 mA	224 mA	168 mA
4906-9103	WHITE	RED	15cd	60 mA	53 mA	40 mA
			30cd	94 mA	84 mA	63 mA
			75cd	186 mA	165 mA	124 mA
			110cd	252 mA	224 mA	168 mA







4905-9835 TEMPORAL CODE 4 MODULE (TC4M) FOR CO GAS ALARM NOTIFICATION (STYLE Y)

PRODUCT INFORMATION

SPECIFICATIONS:

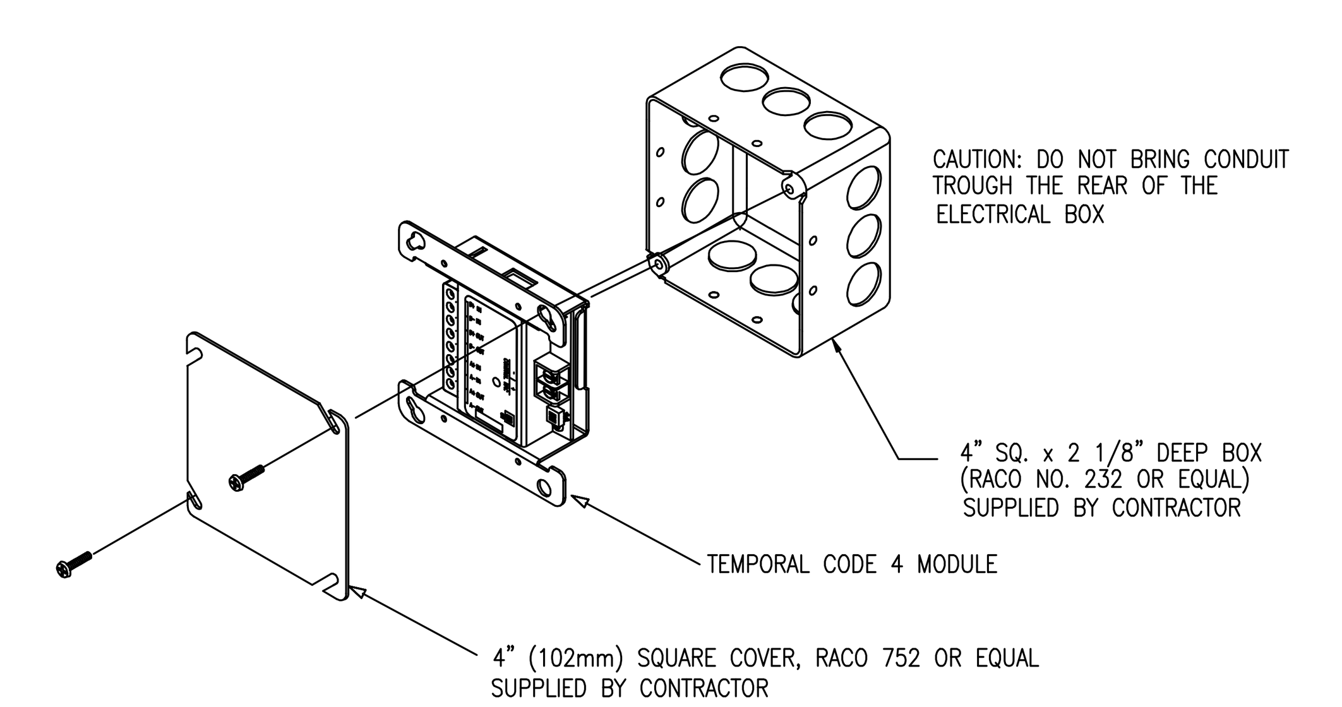
- UL LISTED STANDARD 864
- THREE SELECTABLE OPERATING MODES:
  - SYNCHRONIZED; ALLOWS A DEDICATED CONTROL NAC TO BOTH ACTIVATE AND SYNCHRONIZE THE TEMPORAL CODE 4 OUTPUT TIMING OF MULTIPLE 4905-9835 MODULES
    - THE PANEL CONTROL NAC OUTPUTS A SYNCHRONIZATION PATTERN
    - SIGNALS ARE SYNCHRONIZED BETWEEN TC4M'S
    - ONE DEDICATED CONTROL NAC IS RESERVED TO COMMAND ALL TC4MS WITHIN A SYSTEM OF A FIRE (NAC OFF) OR CO ALARM (NAC ON) WHILE SYNCHRONIZING THEM.
    - THE CONTROL NAC IS OFF DURING A FIRE ALARM, AND THEREFORE THE TC4M PASSES THROUGH ANYTHING THAT IS PLAYED ON THE SIGNAL NAC.
    - DURING A CO ALARM, THE SIGNAL NAC IS REQUIRED TO BE ON STEADILY TO SOUND THE TEMPORAL CODE 4.
  - UNSYNCHRONIZED - ALLOWS A DEDICATED CONTROL NAC TO ACTIVATE THE TEMPORAL CODE 4 OUTPUT TIMING OF MULTIPLE 4905-9835 MODULES
    - THE PANEL CONTROL NAC IS ON DURING A CO GAS ALARM.
    - SIGNALS ARE NOT SYNCHRONIZED BETWEEN TC4MS.
    - ONE DEDICATED CONTROL NAC IS RESERVED TO COMMAND ALL TC4MS WITHIN A SYSTEM OF A FIRE (NAC OFF) OR CO ALARM (NAC ON) WHILE SYNCHRONIZING THEM.
    - THE CONTROL NAC IS OFF DURING A FIRE ALARM, AND THEREFORE THE TC4M PASSES THROUGH ANYTHING THAT IS PLAYED ON THE SIGNAL NAC.
    - DURING A CO ALARM, THE SIGNAL NAC IS REQUIRED TO BE ON STEADILY TO SOUND THE TEMPORAL CODE 4.
  - STAND ALONE - ALLOWS THE INPUT NAC TO ACTIVATE TEMPORAL CODE 4 TIMING FOR NACS DEDICATED FOR CO GAS ALARM
    - ONLY THE TEMPORAL CODE 4 IS OUTPUT.
    - NO CONTROL NAC WIRE IS USED AT THE NAC OR AT THE TC4M. ALL SIGNAL NAC WIRING REMAINS THE SAME.
    - WALKTEST CANNOT BE PLAYED ON THE SIGNAL NAC TIED TO THE TC4M.
    - THE NAC IS ONLY USED FOR CO GAS ALARM (CANNOT BE USED FOR FIRE ALARM).
    - DURING A CO ALARM, THE SIGNAL NAC IS REQUIRED TO BE ON STEADILY TO SOUND THE TEMPORAL CODE 4.
- OPERATING TEMPERATURE RANGE: 32° F TO 120° F (0° C TO 49° C)
- HUMIDITY RANGE: UP TO 93% RELATIVE HUMIDITY @ 100° F (38° C)
- OUTPUT CAPACITY: FOR 24 VDC NACS, UP TO 3 A MAXIMUM, LIMIT IS PER THE INPUT NAC RATING; FOR CONTROL OF AUDIBLE NOTIFICATION APPLIANCES COMPATIBLE WITH CODE PULSE DUTY CYCLE
- SCREW TERMINALS FOR IN/OUT WIRING, 18 TO 12 AWG WIRE

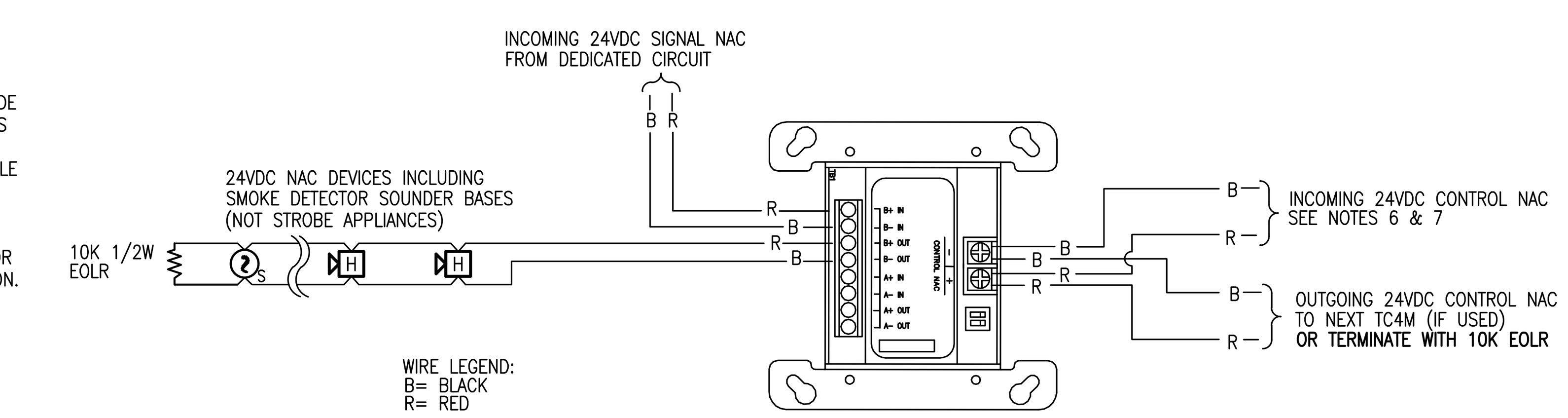
DESCRIPTION:

CO GAS ALARM WARNINGS ARE REQUIRED TO BE DIFFERENT FROM FIRE ALARM WARNINGS. IN THE EVENT OF A CO GAS ALARM, THE PRESENCE OF A TEMPORAL CODE 4 AUDIBLE SIGNAL PATTERN IDENTIFIES THE TYPE OF CONDITION TO THE RESPONDERS TO ASSIST IN DETERMINING THE PROPER ACTIONS TO BE TAKEN.
CO GAS ALARM, OR FIRE ALARM. USE OF THE 4905-9835 TEMPORAL CODE 4 MODULE ALLOWS THE NFPA 720 TEMPORAL CODE 4 SIGNAL TO BE GENERATED USING A STANDARD STEADY ON AUDIBLE APPLIANCE NAC INPUT. UNDER THE FIRE ALARM PANEL'S CONTROL, THE AUDIBLE NOTIFICATION SIGNAL CAN BE SELECTED PASS THROUGH THE CONVENTIONAL FIRE PULSE PATTERN FOR A FIRE ALARM CONDITION, OR THE TEMPORAL CODE 4 PATTERN CAN BE ACTIVATED FOR A CO GAS ALARM CONDITION.

WIRING NOTES:

1. FOR MAXIMUM VOLTAGE DROP, ETC., REFER TO SIMPLEX FIELD WIRING GUIDE.
2. MAXIMUM NO. 12 AWG WIRE FOR 24 VDC WIRING, OR TO LOCAL CODE.
3. MAXIMUM POWER OF NAC LOOP = 3 AMPS AT 24 VDC.
4. NAC CIRCUIT WIRING DISTANCES WITH MAXIMUM VOLTAGE DROP OF 3 VOLTS. WHEN COMPUTING DISTANCES ON THE TC4 MODULE OUTPUT, REMEMBER TO ACCOUNT FOR THE WIRING DISTANCE (LOSS) FROM THE CONTROL PANEL TO THE TC4 MODULE. MAXIMUM LINE DISTANCE= 2000 FEET (RESTRICTED FOR DC SUPERVISION LIMITATIONS)
5. ALL CONNECTIONS MUST TEST FREE OF GROUNDS.
6. SEE INSTALLATIONS INSTRUCTIONS 579-840.
7. WHEN OPERATING WIRING LEAVES THE BUILDING, OVERVOLTAGE PROTECTORS ARE ARE REQUIRED.





OPERATING MODE	SW 1	SW 2
SYNCHRONIZED	0=OFF	0=OFF
UNSYNCHRONIZED	1=ON	0=OFF
STAND ALONE	1=ON	1=ON
N/A	0=OFF	1=ON

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ISSUE LOG: MARK	DATE	CAD	CHK	DESCRIPTION

DRAWN BY:	STEPHEN HERMES
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ISSUE DATE:	5/26/17
JOB #:	
PROJECT #:	147:999894901

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
WIRING TYPICALS

FA-702