

# DONA ANA COMMUNITY COLLEGE - DALR LEARNING RESOURCES BUILDING

## VOICE EVACUATION FIRE ALARM SYSTEM

### SHOP DRAWINGS

#### LIST OF DRAWINGS

SHEET #	DRAWING TITLE
1	TITLE SHEET & LIST OF DRAWINGS
2	BOM, FUNCTIONAL MATRIX AND NOTES
3	SITE PLAN
4	FLOORPLAN - 1ST AND 2ND FLOOR
5	RISER DIAGRAM AND CALCULATIONS
6	DETAILS

#### SCOPE OF WORK

INSTALL NEW VOICE EVACUATION FIRE ALARM SYSTEM.

#### BUILDING OCCUPANCY

A1 <input type="checkbox"/>	A2 <input type="checkbox"/>	A3 <input type="checkbox"/>	A4 <input type="checkbox"/>	A5 <input type="checkbox"/>
B <input checked="" type="checkbox"/>				
E <input checked="" type="checkbox"/>				
F1 <input type="checkbox"/>	F2 <input type="checkbox"/>			
H1 <input type="checkbox"/>	H2 <input type="checkbox"/>	H3 <input type="checkbox"/>	H4 <input type="checkbox"/>	H5 <input type="checkbox"/>
I1 <input type="checkbox"/>	I2 <input type="checkbox"/>	I3 <input type="checkbox"/>	I4 <input type="checkbox"/>	
M <input type="checkbox"/>				
R1 <input type="checkbox"/>	R2 <input type="checkbox"/>	R3 <input type="checkbox"/>	R4 <input type="checkbox"/>	
S1 <input type="checkbox"/>	S2 <input type="checkbox"/>			
U1 <input type="checkbox"/>				

#### OCCUPANCY LOAD

OCCUPANCY LOAD: 111 OCCUPANTS

#### CODE COMPLIANCE

2021 INTERNATIONAL BUILDING CODE  
2021 INTERNATIONAL FIRE CODE  
2019 NFPA 72

#### CABLE STYLES

<input type="checkbox"/> Conventional Hardware
<input checked="" type="checkbox"/> Addressable
<input type="checkbox"/> Class "A" SLC Circuit
<input checked="" type="checkbox"/> Class "B" SLC Circuit
<input type="checkbox"/> Class "A" NAC Circuit
<input checked="" type="checkbox"/> Class "B" NAC Circuit

#### MONITORING SYSTEMS

<input type="checkbox"/> FM-200	<input type="checkbox"/> Fire Pump
<input type="checkbox"/> Co2	<input type="checkbox"/> EMERGENCY
<input type="checkbox"/> Pre-Action	<input type="checkbox"/> Sprinkler System
<input type="checkbox"/> Inergen	<input type="checkbox"/> Ansul System
<input checked="" type="checkbox"/> DACT	<input type="checkbox"/> AMMONIA

#### MONITORING AGENCY

TBD

U.L. CERTIFICATE OF COMPLIANCE FOR THE CENTRAL MONITORING STATION SHALL BE PROVIDED AT TIME OF INSPECTION

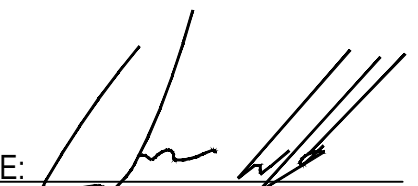
(2) DISTINCT REFERENCE NUMBERS FOR POTS LINES SHALL BE RECORDED ON CERTIFICATE OF COMPLETION

#### APPROVING AGENCY

STATE OF NEW MEXICO  
13 BATAAN BLVD  
SANTA FE, NM 87508  
EMAIL: SFMO.PLANS@STATE.NM.US AND  
BRUCE.DILE@STATE.NM.US

#### BUILDING SQUARE FT

20,557 SQ FT TOTAL

NAME: WAYNE COBB, CET  
NICET SUB FIELD: FIRE ALARM SYSTEMS  
NICET LEVEL: III  
CERTIFICATE #: #113316  
CERT. EXP. DATE: APRIL 01, 2026  
SIGNATURE: 

**COYOTE CABLING**  
VOICE • VIDEO • DATA • SALES • SERVICE

COYOTE CABLING LLC  
742 WEST PALMS  
LAS CRUCES NM 88005

CONTACT INFORMATION:  
BRETT OFF  
PHONE: 575.525.1422  
BRETT@COYOTECABLING.COM

LICENSE #: 60098

REV	DATE	DESCRIPTION
1	12.01.24	FIRE MARSHAL SUBMITTAL

VOICE EVACUATION FIRE ALARM SYSTEM  
TITLE SHEET & LIST OF DRAWINGS  
DONA ANA COMMUNITY COLLEGE  
DALR LEARNING RESOURCES BUILDING  
3400 S. ESPINA ST  
LAS CRUCES NM 88003

THIS DRAWING IS THE EXCLUSIVE PROPERTY OF COYOTE CABLING. THIS PLAN IS NOT A BIDDING DOCUMENT. THIS PLAN IS DIAGRAMMATIC ONLY. IT DOES NOT DEPICT EVERY DETAIL, AND IS ONLY FOR CONSTRUCTION BY COYOTE CABLING. THE ENGINEER'S STAMP IS ONLY FOR THE INSTALLATION BY COYOTE CABLING AND DOES NOT APPLY TO THE INSTALLATION OF THIS DESIGN BY ANYONE OTHER THAN COYOTE CABLING. COYOTE CABLING EXPRESSLY RESERVES THE COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF COYOTE CABLING.

PE STAMP:



SCALE:

NONE

DATE:

12.01.24

DRAWN BY:

GINA GRIFFIN

IMAGE:

505-379-6902

SHEET NO.:

1 OF 6

# GENERAL NOTES

- PERFORM THE ENTIRE INSTALLATION IN ACCORDANCE WITH THE CURRENT RULES OF THE NATIONAL ELECTRICAL CODE (NAC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 72 AND THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
- ELECTRICAL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE SPECIFICATIONS WHERE APPLICABLE.
- ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE SEALED. PROVIDE ADEQUATE SEALANT TO PREVENT THE PASSAGE OF SMOKE.
- ALL F/A EQUIPMENT e.g. (CABINETS, HORNS, PULL STATIONS, DETECTORS, ETC.) SHALL BE RIGIDLY AND SECURELY FASTENED TO WALLS OR CEILINGS PER MANUFACTURER'S INSTRUCTIONS.
- NO SMOKE DETECTOR SHALL BE LOCATED CLOSER THAN 36" TO ANY AIR REGISTER OR DIFFUSER.
- NO HEAT DETECTOR SHALL BE LOCATED CLOSER THAN 18" TO ANY AIR REGISTER OR DIFFUSER.
- NO HEAT DETECTOR SHALL BE LOCATED CLOSER THAN 36" TO ANY PART OF ANY HEAT GENERATING DEVICE IN MECHANICAL ROOMS SUCH AS FLUES, BOILERS, WATER HEATERS, ETC.
- INSTALL COMBINATION AUDIBLE AND VISUAL NOTIFICATION APPLIANCES WITH THE BOTTOM 80" ABOVE THE FINISHED FLOOR OR 6" BELOW CEILING, WHICHEVER IS LOWER.
- COMPLY WITH ADA ACCESSIBILITY GUIDELINES (ADAAG) FOR DEVICE MOUNTING HEIGHTS AND LOCATIONS.
- INSTALLING CONTRACTOR SHALL NOTIFY SYSTEM DESIGNER OF ANY REQUIRED CHANGES TO SYSTEM DESIGN PRIOR TO MAKING ANY CHANGES IN THE FIELD. THIS IS ESPECIALLY CRITICAL FOR NOTIFICATION APPLIANCE CIRCUIT LAYOUT.
- CABLE SYSTEM ROUTING SHOWN ON DRAWING IS DIAGRAMMATIC. INSTALLING CONTRACTOR MAY DEVIATE FROM PATH SHOWN IF REQUIRED BY EXISTING FIELD CONDITIONS. FIRE ALARM DEVICE CIRCUITING SHALL REMAIN AS SHOWN.
- FIRE ALARM SYSTEM PRIMARY POWER (120VAC) SHALL BE SUPPLIED BY A DEDICATED BRANCH CIRCUIT. CIRCUIT BREAKER OR DISCONNECT SHALL BE LABELED "FIRE ALARM", AND SHALL BE PROVIDED WITH LOCKABLE HANDLE OR COVER.
- DUCT DETECTORS SHALL BE INSTALLED IN SUPPLY AIR DUCTS ON UNITS WITH A CAPACITY GREATER THAN 2000 CFMS PER THE RECOMMENDATION OF THE MANUFACTURER. PROVIDE AIR SAMPLING TUBES, MOUNTING HARDWARE AND SMOKE DETECTOR LISTED FOR THE USE IN AIR DISTRIBUTION SYSTEMS. ALL EQUIPMENT SHALL BE INSTALLED PER APPLICABLE CODE REQUIREMENTS. OTHER SHALL PROVIDE INTERLOCK WIRING FROM THE DUCT SMOKE DETECTORS TO THE RESPECTIVE ROOFTOP HVAC HEATING/VENTILATING UNIT TO SHUT DOWN THE UNIT IN THE EVENT OF THE DETECTION OF THE PRODUCTS OF COMBUSTION IN THE RETURN AIR DUCT.
- THE DB LEVEL OF THE NOTIFICATION DEVICE SHALL BE 15DB ABOVE AMBIENT NOISE LEVEL. SEE NFPA 72 TABLE A.7.4.2 FOR AVERAGE AMBIENT SOUND LEVELS.
- BRANCH CIRCUIT BREAKERS PROVIDING POWER TO FIRE ALARM SYSTEM SHALL BE IDENTIFIED IN POWER PANELS WITH RED LABEL STATING "FIRE ALARM CIRCUIT" AS REQUIRED BY NEC 760.41(B).
- INCOMING AND OUTGOING SLC WIRES ARE TO MAINTAIN A 5'-0" SEPARATION WHERE RUNS ARE LONGER THAN 10'-0".

## SYSTEM OUTPUTS

ACTUATE COMMON ALARM VISUAL AND AUDIBLE INDICATOR AT FACP	DISPLAY ALARM DEVICE ADDRESS POINT AND LOCATION DESCRIPTION	ACTUATE SUPERVISORY VISUAL AND AUDIBLE INDICATOR AT FACP	DISPLAY SUPERVISORY DEVICE ADDRESS POINT AND LOCATION DESCRIPTION	ACTUATE COMMON TROUBLE VISUAL AND AUDIBLE INDICATOR AT FACP	DISPLAY TROUBLE CONDITION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	ACTUATE BUILDING NOTIFICATION DEVICES	ACTIVATE ELEVATOR FIRE HAT	TRANSMIT TROUBLE TO CENTRAL STATION	RECALL ELEVATOR TO PRIMARY FLOOR	RECALL ELEVATOR TO ALTERNATE FLOOR	SHUT DOWN HVAC UNITS	SHUNT TRIP ELEVATOR POWER	SILENCE PANEL AND FACILITY AUDIBLES AND VISUALS	CONTROL PANEL RETURNS TO NORMAL (AUDIBLES AND VISUALS STOP)
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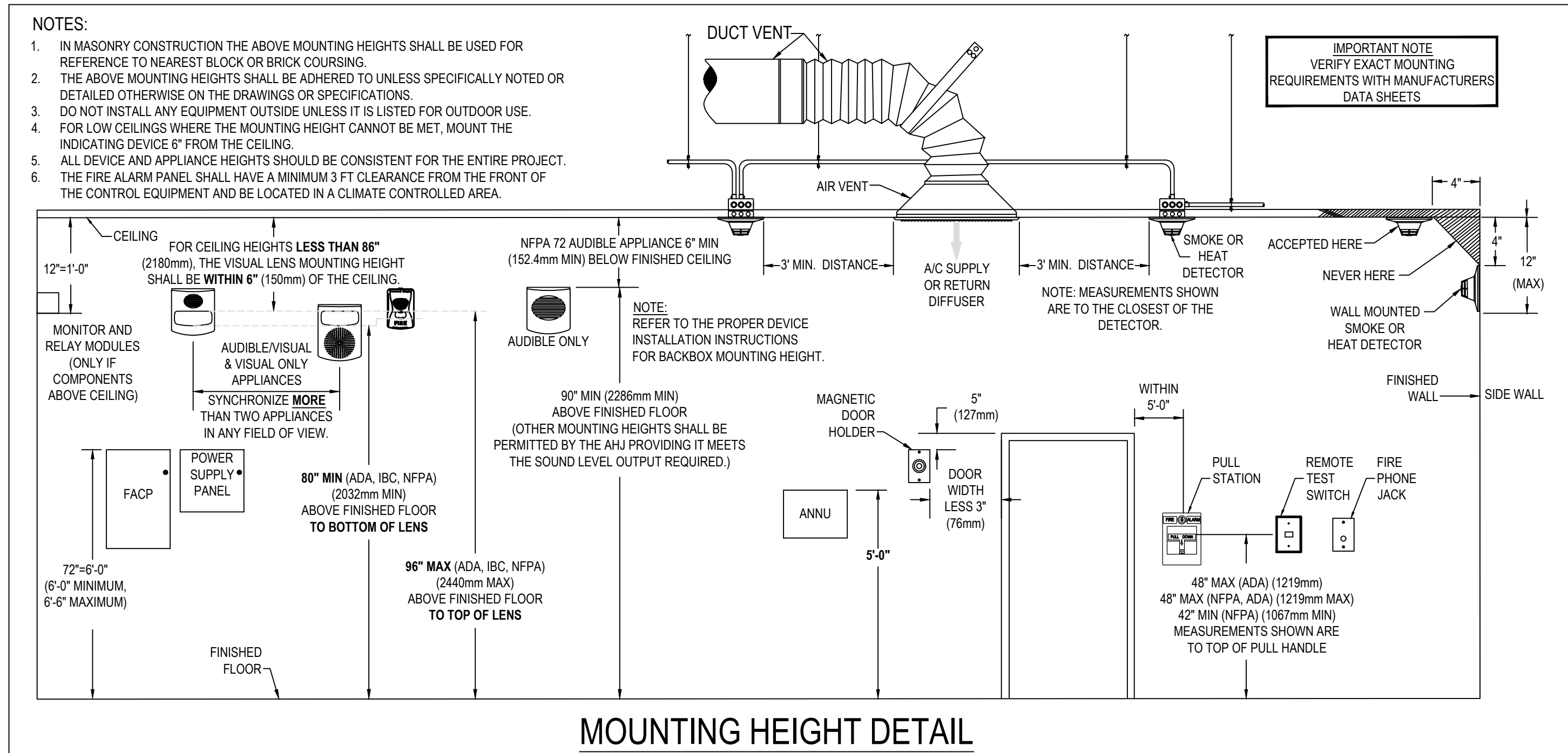
## FACP SYSTEM INPUTS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R
1	MANUAL PULL STATIONS																
2	DETECTORS																
3	DUCT DETECTORS																
4	OPEN CIRCUIT, GROUND FAULT																
5	FIRE ALARM AC POWER FAILURE																
6	FIRE ALARM SYSTEM LOW BATTERY																
7	SYSTEM SILENCE																
8	SYSTEM RESET																
9	DUCT POWER FAILURE																
10	COMM TROUBLE																
11	PHONE LINE TROUBLE																
12	PRIMARY FLOOR ELEVATOR LOBBY SMOKE DETECTOR																
13	ALTERNATE FLOOR ELEVATOR LOBBY SMOKE DETECTOR																
14	ELEVATOR HOIST WAY / ELEVATOR MACHINE RM HEAT DETECTORS																
15	ELEVATOR HOIST WAY / MACHINE ROOM SMOKE DETECTORS																
16																	

## FUNCTIONAL MATRIX

DEVICE LEGEND					
SYMBOL	QTY	MANUFACTURER	PART NO	DESCRIPTION	BACKBOX
[FACP]	1	SIEMENS	FC922-UT	252-POINT SYSTEM WITH 300W POWER SUPPLY AND STANDARD OPERATOR INTERFACE CONSISTS OF: ONE FCM2018-U3, ONE FP2012-U1, ONE FCI2016-U1	PROVIDED BY CONTRACTOR
[DOC]	1	SPACE AGE ELECTRONICS	SSU00691	SDB SYSTEM DOCUMENT BOX	
[F]	5	SIEMENS	XMS-D	MANUAL STATION - DUAL ACTION	3-1/2" DEEP SWITCH BOX
[AM]	1	SIEMENS	XTRI-S	SINGLE INPUT MONITOR MODULE WITH BUILT-IN ISOLATOR	4" SQUARE
[AD]	3	SIEMENS	XTRI-R	SINGLE INPUT MONITOR MODULE WITH RELAY WITH BUILT-IN ISOLATOR	
[SR]	2	SIEMENS	FDBZ492-HR W/OP921	DUCT HOUSING - 2 WIRE WITH RELAY FOR ADDRESSABLE SYSTEMS W/ OP921	PROVIDED BY CONTRACTOR
[X]	2	SIEMENS	FDBZ492-RTL	REMOTE TEST LAMP AND KEYSWITCH FOR MANUAL TESTING OF FDBZ492-R, FDBZ492-HR, FDBZ492-RP	SINGLE GANG SWITCH BOX
[H]	8	SIEMENS	HI921 W/DB-11 BASE	THERMAL (HEAT) DETECTOR USE WITH DB-11 DETECTOR BASE	4" SQUARE
[S]	24	SIEMENS	OP921 W/DB-11	SMOKE DETECTOR W/6" BASE	
[OC]	13	SIEMENS	OOHC941	MULTI-CRITERIA FIRE / CO DETECTOR	
[X]	1	SIEMENS	SET-S17-R-WP	ET SPKR 15/75 STROBE RED WEATHERPROOF	
[X]	6	SIEMENS	SL2SCR-F	STROBE, CEILING, CLEAR, RED, FIRE	
[X]	22	SIEMENS	SL2SPSCW-F	SPEAKER-STROBE, CEILING, CLEAR, WHITE, FIRE	4" SQUARE x 2-1/8" DEEP
[X]	9	SIEMENS	SL2SPSWR-F	SPEAKER-STROBE, WALL, CLEAR, RED, FIRE	
[P]	2	GENERIC	GENERIC	WIREFATH RISER	NA

CABLE AND WIRE LEGEND					
LABEL	PART NO	AWG	RESISTANCE (Ω/KFT)	DESCRIPTION	TOTAL LENGTH
A	18/2 FPLP/R (SLC)	18	7.77	2 COND. SOLID COPPER FPLP/R ADDRESSABLE UNSHIELDED	1421'
RTS	18/4 FPLP/R (RTS)	18	7.77	4 COND. SOLID COPPER FPLP/R ANALOG UNSHIELDED	6'
S	16/2 FPLP/R (SPEAKER)	16	4.89	2 COND. SOLID COPPER FPLP/R ANALOG SPEAKER	938'
V	14/2 FPLP/R (NAC)	14	3.07	2 COND. SOLID COPPER FPLP/R ANALOG UNSHIELDED	979'



ABBREVIATIONS			
AFF	ABOVE FINISHED FLOOR	IDC	INITIATING DEVICE CIRCUIT
AHU	AIR HANDLER UNIT	NAC	NOTIFICATION APPLIANCE CIRCUIT
C	CEILING MOUNT	OFE	OWNER FURNISHED EQUIPMENT
CLS	CLASSLAB CLS	SLC	SIGNALING LINE CIRCUIT
EOL	END OF LINE RESISTOR	TYP	TYPICAL
EX	EXISTING	UF	UNDER FLOOR
EXR	EXISTING TO BE REMOVED	WG	WIRE GUARD
HSSD	HIGH SENSITIVITY SMOKE DETECTION	WP	WEATHER PROOF

NAME: WAYNE COBB, CET  
 NICET SUB FIELD: FIRE ALARM SYSTEMS  
 NICET LEVEL: III  
 CERTIFICATE #: #113316  
 CERT. EXP. DATE: APRIL 01, 2026  
 SIGNATURE: *[Signature]*

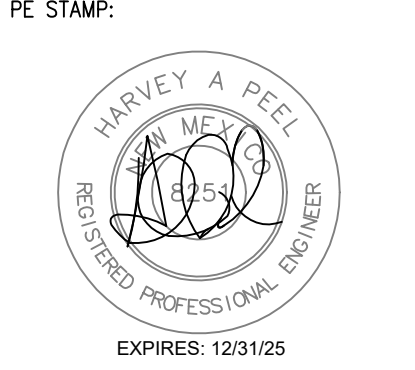


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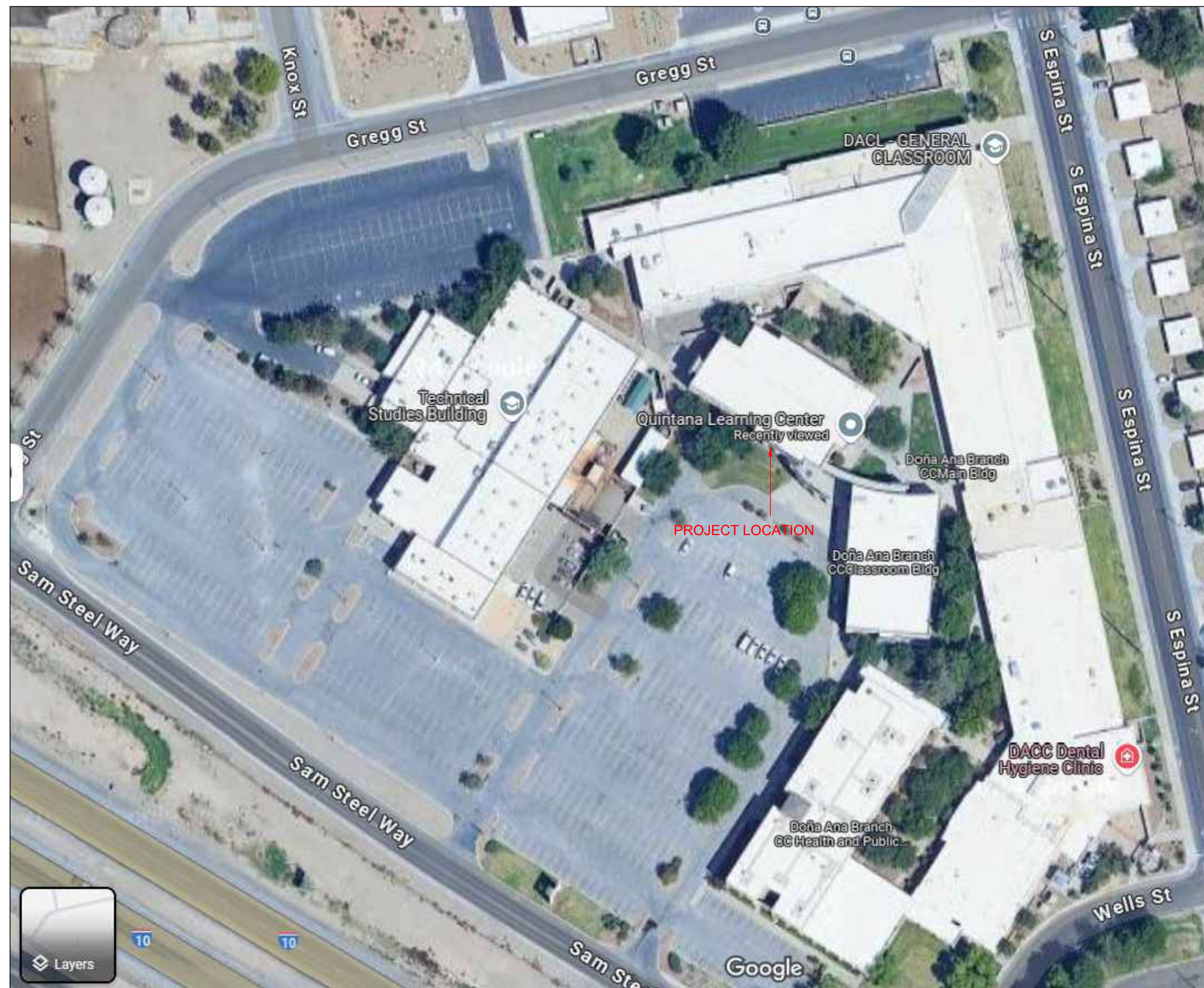
DESCRIPTION	FIRE MARSHAL SUBMITTAL
DATE	12/01/24
REV	1

VOICE EVACUATION FIRE ALARM SYSTEM  
 BOM, FUNCTIONAL MATRIX AND NOTES  
 DONA ANA COMMUNITY COLLEGE  
 DARL LEARNING RESOURCES BUILDING  
 3400 S. ESPINA ST  
 LAS CRUCES NM 88003

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SCALE: NONE  
 DATE: 12.01.24  
 DRAWN BY: GINA GRIFFIN  
 IMAGE: 505-379-6902  
 SHEET NO.: 2 OF 6



REV	DATE	DESCRIPTION
1	12/01/24	FIRE MARSHAL SUBMITTAL

VOICE EVACUATION FIRE ALARM SYSTEM  
SITE PLAN  
DONA ANA COMMUNITY COLLEGE  
DARL LEARNING RESOURCES BUILDING  
3400 S. ESPINA ST  
LAS CRUCES NM 88003

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SHEET NO.

NAME: WAYNE COBB, CET  
NICET SUB FIELD: FIRE ALARM SYSTEMS  
NICET LEVEL: III  
CERTIFICATE #: #113316  
CERT. EXP. DATE: APRIL 01, 2026  
SIGNATURE: *[Signature]*

**SITE PLAN**  
PLAN NORTH

REV	DATE	DESCRIPTION
1	12.01.24	FIRE MARSHAL SUBMITTAL

VOICE EVACUATION FIRE ALARM SYSTEM  
FLOOR PLAN - 1ST AND 2ND FLOOR  
DONA ANA COMMUNITY COLLEGE  
DARL LEARNING RESOURCES BUILDING  
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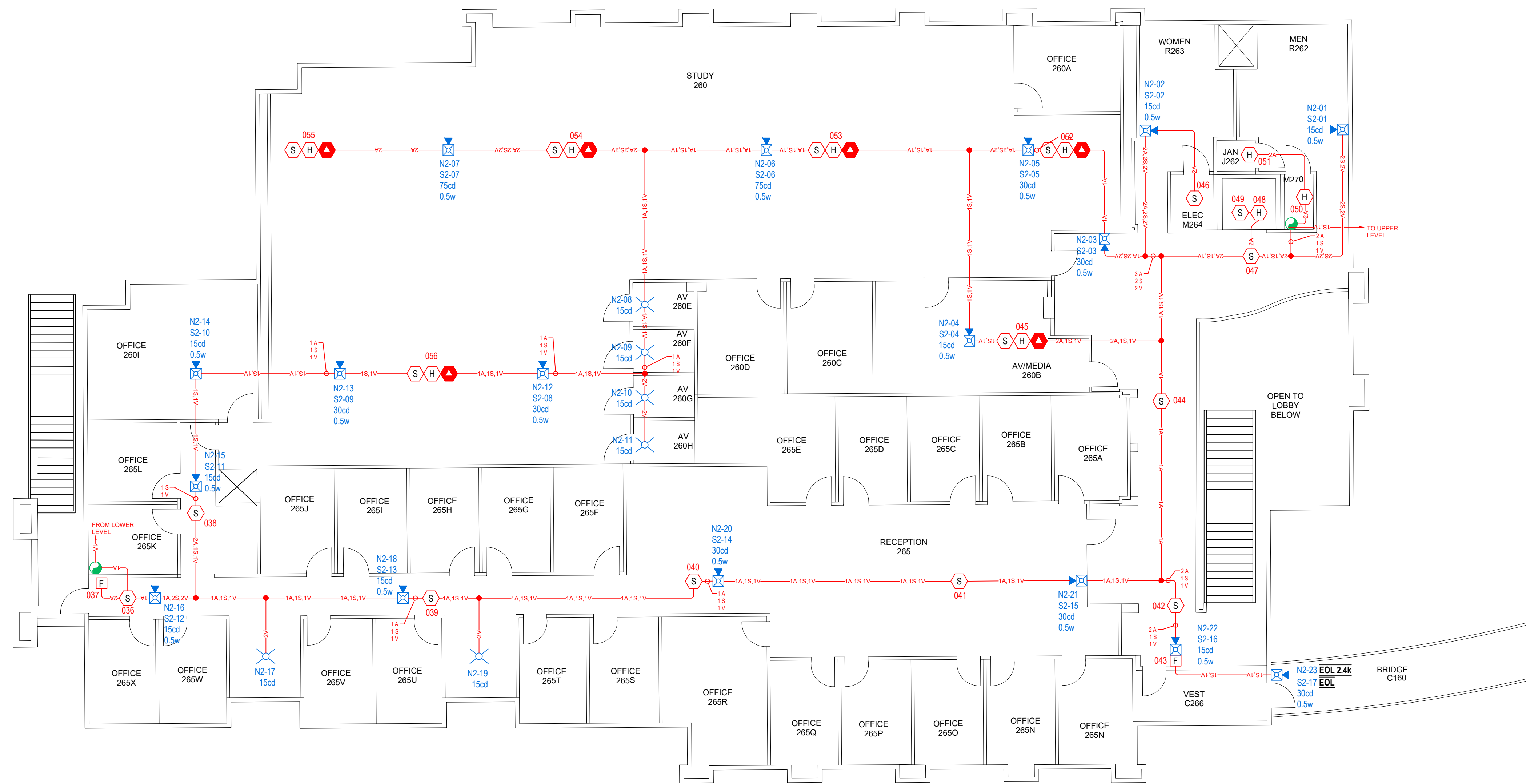
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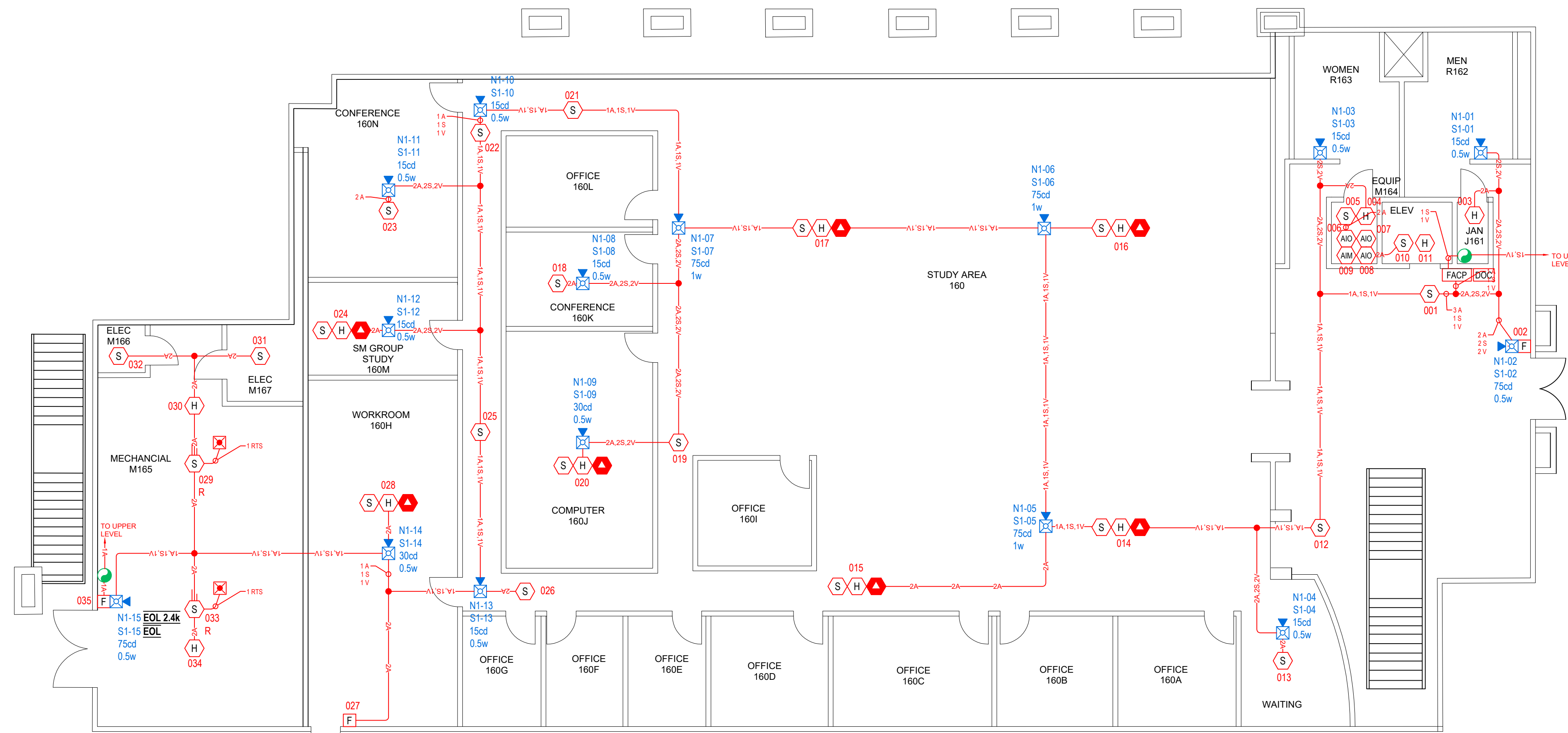
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DATE: 12.01.24

DRAWN BY: GINA GRIFFIN  
IMAGE: 505-379-6902

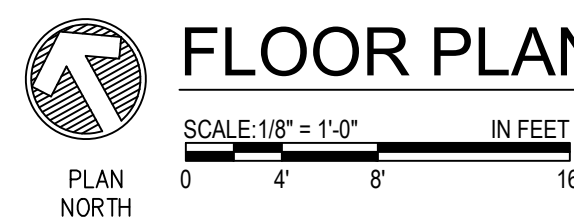
SHEET NO.



FLOOR PLAN - 2ND FLOOR



FLOOR PLAN - 1ST FLOOR



NAME: WAYNE COBB, CET  
NICET SUB FIELD: FIRE ALARM SYSTEMS  
NICET LEVEL: III  
CERTIFICATE #: #113316  
CERT. EXP. DATE: APRIL 01, 2026

SIGNATURE: *[Handwritten Signature]*

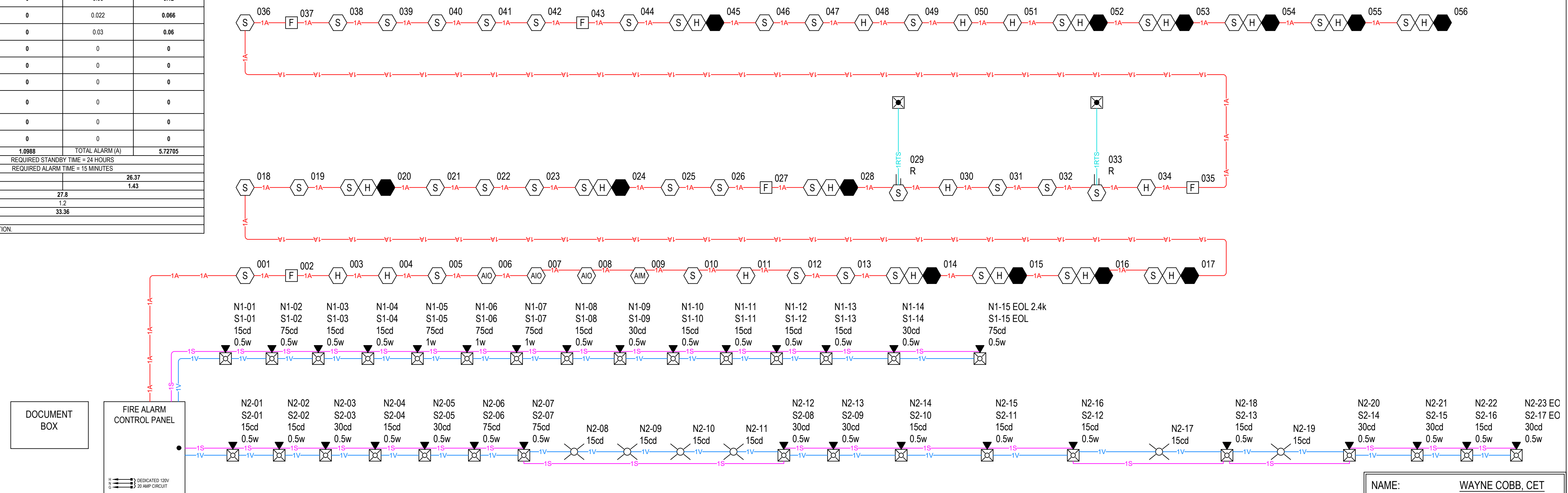
BATTERY CALCULATION (SECONDARY POWER SOURCE REQUIREMENTS)									
PANEL POWER SUPPLY MAX CURRENT = 11.5A			TOTAL USED CAPACITY (IN ALARM) = 5.27265A (9.80 %)						
		STANDBY CURRENT (AMPS)	SECONDARY ALARM CURRENT (AMPS)						
QTY	PART NO.	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)			
1	FC2015-U1	Dialer module (DACT)	0.025	0.025	0.033	0.033			
1	FC2018-U1	RS485 Class A module (RS)	0.075	0.075	0.136	0.136			
1	FC2031-A1	Correction Module (MGNet) Used for communication between an FC2019/FC2019 operating unit and either the VCC2001 Voice CPU (for two voice panels) or the FN2012 Ethernet Switch (for fire only panels). The FC2031 mounts in Position 1 on an FC2019/FC2019 operating unit.	0	0	0.1	0.1			
1	FC2011-U1	NAC module (1A2B)	0.04	0.04	0.04	0.04			
1	FC2016-U1	Periphery board (2S2 ps)	0.11	0.11	0.136	0.136			
1	FC2018-U3	Standard Operating Unit 300W power supply	0.13	0.13	0.17	0.17			
2	FP2013-U1		0	0	0	0			
1	VCC2001-A1	Voice CPU Card Voice CPU card which supervises and controls all voice modules and functions. This card gets mounted in the VCC2002 card cage (2nd slot from the left), and works with the VCC2002 Voice IO card to control the voice system.	0.2	0.2	0.21	0.21			
1	VCC2002-A1	Voice IO Card Input/Output card for the voice system. The VCC2002 gets mounted in the VCC2002 card cage (1st slot on the left), and works with the VCC2001 to control the voice system. It supports two local audio inputs (for microphones or external low-level audio signals) and one low-level audio output, with all audio signal wiring connected to the card cage.	0.151	0.151	0.156	0.156			
1	VCC2001-U1 (70.7V)	CARD, 50W VOICE AMPLIFIER CARD 70.7 VOLTS	0.33	0.33	3.2	3.2			
1	VT0001-L3	Option module (24 switches) Cerberus PRO switch module used on FV922FV924 to add manual voice control. Up to four VT0001-L3s can be supported on a single panel #50099100.	0.017	0.017	0.143	0.143			
CIRCUIT	SYMBOL	QTY	PART NO.	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)	
L1		2	FDB2492-HR w/OP21	DUCT HOUSING - 2 WIRE WITH RELAY FOR ADDRESSABLE SYSTEMS w/ OP21	0.0003	0.0006	0.0003	0.0006	
		8	H921 wDB-11 BASE	Thermal (heat) Detector use with Op-11 Detector Base	0.0003	0.0024	0.0003	0.0024	
		13	OOHC941	Multi-Criteria Fire / CO Detector	0.0004	0.0052	0.0005	0.0045	
		24	OP921 wDB-11	Smoke Detector w/OP Base	0.0003	0.0072	0.0003	0.0072	
		2	WIREFATH RISER		0	0	0	0	
		5	XMS-D	MANUAL STATION - DUAL ACTION	0.0005	0.0025	0.0005	0.0025	
		3	XTR-R	Single Input Monitor Module with Relay with Built-in Isolator	0.00075	0.00225	0.00075	0.00225	
		1	XTR-S	Single Input Monitor Module with Built-in Isolator	0.00065	0.00065	0.00065	0.00065	
	N1		6	SL2SPSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 15cd	0	0	0.022	0.132
			2	SL2SPSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 30cd	0	0	0.03	0.06
		3	SL2SPSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 75cd	0	0	0.06	0.18	
		2	SL2SPSWR-F	Speaker-Strobe, Wall, Clear, Red, Fire 15cd	0	0	0.022	0.044	
		2	SL2SPSWR-F	Speaker-Strobe, Wall, Clear, Red, Fire 75cd	0	0	0.06	0.12	
N2			1	SET-S17-R-WP	ET SPRKR 15/75 STROBE RED WEATHERPROOF 30cd	0	0	0.235	0.235
		6	SL2SCR-F	Strobe, Ceiling, Clear, Red, Fire 15cd	0	0	0.022	0.132	
		5	SL2PSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 15cd	0	0	0.022	0.11	
		4	SL2PSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 30cd	0	0	0.03	0.12	
		2	SL2PSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 75cd	0	0	0.06	0.12	
	S1		3	SL2SPSWR-F	Speaker-Strobe, Wall, Clear, Red, Fire 15cd	0	0	0.022	0.066
		2	SL2SPSWR-F	Speaker-Strobe, Wall, Clear, Red, Fire 30cd	0	0	0.03	0.06	
S2			8	SL2PSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 0.5w	0	0	0	0
			3	SL2PSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 1w	0	0	0	0
S2		4	SL2PSWR-F	Speaker-Strobe, Wall, Clear, Red, Fire 0.5w	0	0	0	0	
		1	SET-S17-R-WP	ET SPRKR 15/75 STROBE RED WEATHERPROOF 0.5w	0	0	0	0	
		11	SL2PSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 0.5w	0	0	0	0	
		5	SL2PSWR-F	Speaker-Strobe, Wall, Clear, Red, Fire 0.5w	0	0	0	0	
			TOTAL STANDBY (A)	1.0988	TOTAL ALARM (A)	5.27265			
			REQUIRED STANDBY TIME = 24 HOURS		REQUIRED ALARM TIME = 15 MINUTES				
SECONDARY STANDBY LOAD (A)			1.0988	24	26.37				
SECONDARY ALARM LOAD (A)			5.27265	0.25	1.43				
STANDBY AND ALARM SUBTOTAL (AMP HOURS)			27.8						
DERATING FACTOR			1.2						
SECONDARY LOAD REQUIREMENTS (AMP HOURS)			33.36						
PROVIDE (2) 12V 55AH BATTERIES									
*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.									

### CALCULATIONS

N1 LUMP SUM REPORT				CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:				20.4		Max. Voltage Drop:	
Min. Operational Voltage:				16		End Of Line Voltage:	
Max. Circuit Current (A):				3		Voltage Drop Percent:	
Wire Resistance (DWF):				3.07		Total Circuit Current (A):	
Total Circuit Length (Ft):				466		Spare Current (A):	
Distance measured using drawn segment lengths with 10.00 % additional length calculated:				2.86065		Spare Current (A) Percent:	
Total Circuit Resistance (Ohm):				2.86065		Total Current (A):	
						82.13 %	
Symbol	Part No.	Description	Qty.	Device Current (A)	Total Current (A)		
	SL2SPSWR-F	Speaker-Strobe, Wall, Clear, Red, Fire 15cd	2	0.022	0.044		
	SL2SPSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 15cd	6	0.022	0.132		
	SL2SPSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 30cd	2	0.03	0.06		
	SL2SPSWR-F	Speaker-Strobe, Wall, Clear, Red, Fire 75cd	2	0.06	0.12		
	SL2SPSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 75cd	3	0.06	0.18		
<b>DEVICE TOTALS</b>							
Calculation Methods:							
Total Resistance (Ohm) = Wire Resistance (DWF) x 2 x Total Circuit Length (Ft)							
Total Voltage Drop = Total Resistance (Ohm) x Total Circuit Current (A)							

N2 LUMP SUM REPORT				CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:				20.4		Max. Voltage Drop:	
Min. Operational Voltage:				16		End Of Line Voltage:	
Max. Circuit Current (A):				3		Voltage Drop Percent:	
Wire Resistance (DWF):				3.07		Total Circuit Current (A):	
Total Circuit Length (Ft):				515		Spare Current (A):	
Distance measured using drawn segment lengths with 10.00 % additional length calculated:				3.16363		Spare Current (A) Percent:	
Total Circuit Resistance (Ohm):				3.16363		Total Current (A):	
						71.96 %	
Symbol	Part No.	Description	Qty.	Device Current (A)	Total Current (A)		
	SL2SPSWR-F	Speaker-Strobe, Wall, Clear, Red, Fire 15cd	3	0.022	0.066		
	SL2SPSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 15cd	5	0.022	0.11		
	SL2SCR-F	Strobe, Ceiling, Clear, Red, Fire 15cd	6	0.022	0.132		
	SL2SPSWR-F	Speaker-Strobe, Wall, Clear, Red, Fire 30cd	2	0.03	0.06		
	SL2SPSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 30cd	4	0.03	0.12		
	SL2SPSCW-F	Speaker-Strobe, Ceiling, Clear, White, Fire 75cd	2	0.06	0.12		
	SET-S17-R-WP	RED WEATHERPROOF 30cd	1	0.235	0.235		
<b>DEVICE TOTALS</b>							
Calculation Methods:							
Total Resistance (Ohm) = Wire Resistance (DWF) x 2 x Total Circuit Length (Ft)							
Total Voltage Drop = Total Resistance (Ohm) x Total Circuit Current (A)							

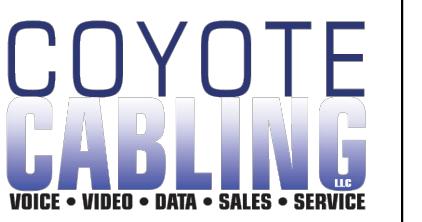
Project: DACC DALR BLDG 3 HEALTH										
Date: 12/1/2024										
Speaker Schedule Summary										
Source:										
Voltage: 0v Watts: 0										
PANEL/CIRCUIT	SET-S17-R-WP	SL2SPSCW-F	1w	WATTS	CIRCUIT LENGTH	START VOLTAGE	DECIBEL LOSS	AWG	OHMS/KFT	TOTAL RESISTANCE (OHMS)
RATING	0.5w	0.5w								
WATTS	0.5	0.5	1							
S1		8	3	9	466'	70.7v	-0.071566dB	16	4.89	2
S2		11	3	8.5	473'	70.7v	-0.0586396dB	16	4.89	2
NOTES: These calculations double the wire length indicated to account for the total wire resistance of the circuit. DC resistance at 75° C/167° F per NFPA 70 ch. 8, table 8.										
DEVICE & WIRE TOTALS	1	19	3	17.5						



### RISER DIAGRAM

NAME: WAYNE COBB, CET  
 NICET SUB FIELD: FIRE ALARM SYSTEMS  
 NICET LEVEL: III  
 CERTIFICATE #: #113316  
 CERT. EXP. DATE: APRIL 01, 2026

SIGNATURE:



COYOTE CABLING LLC  
 742 WEST PALMS  
 LAS CRUCES NM 88005

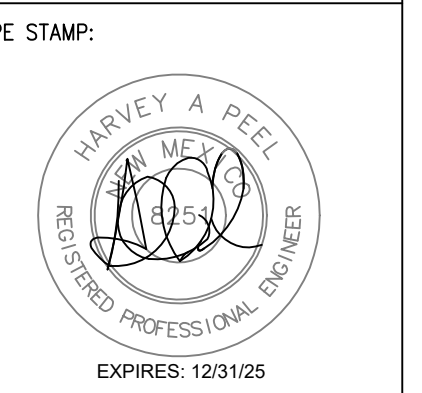
CONTACT INFORMATION:  
 BRETT OFF  
 PHONE: 575.525.1422  
 BRETT@COYOTECABLING.COM

LICENSE #: 60098

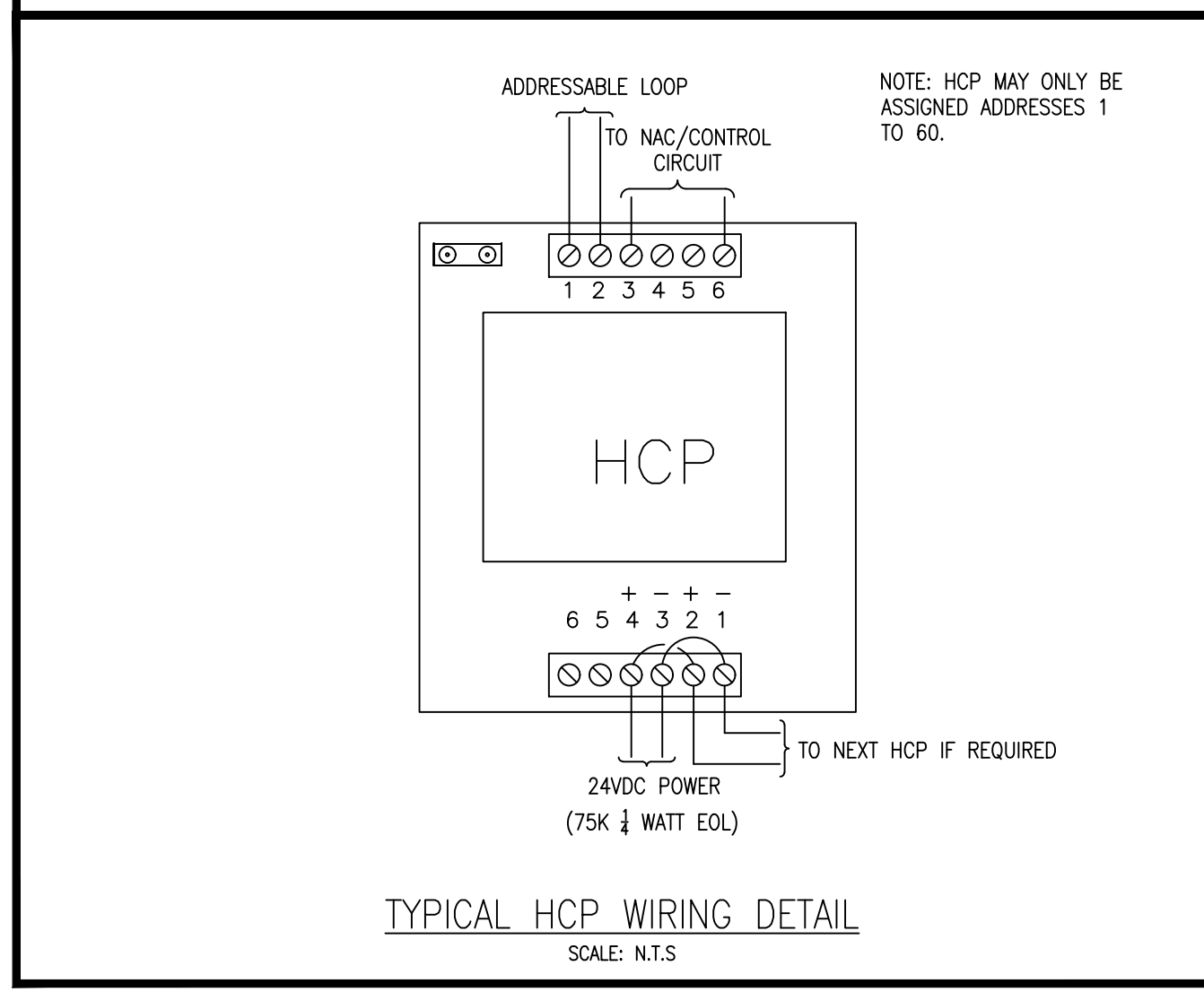
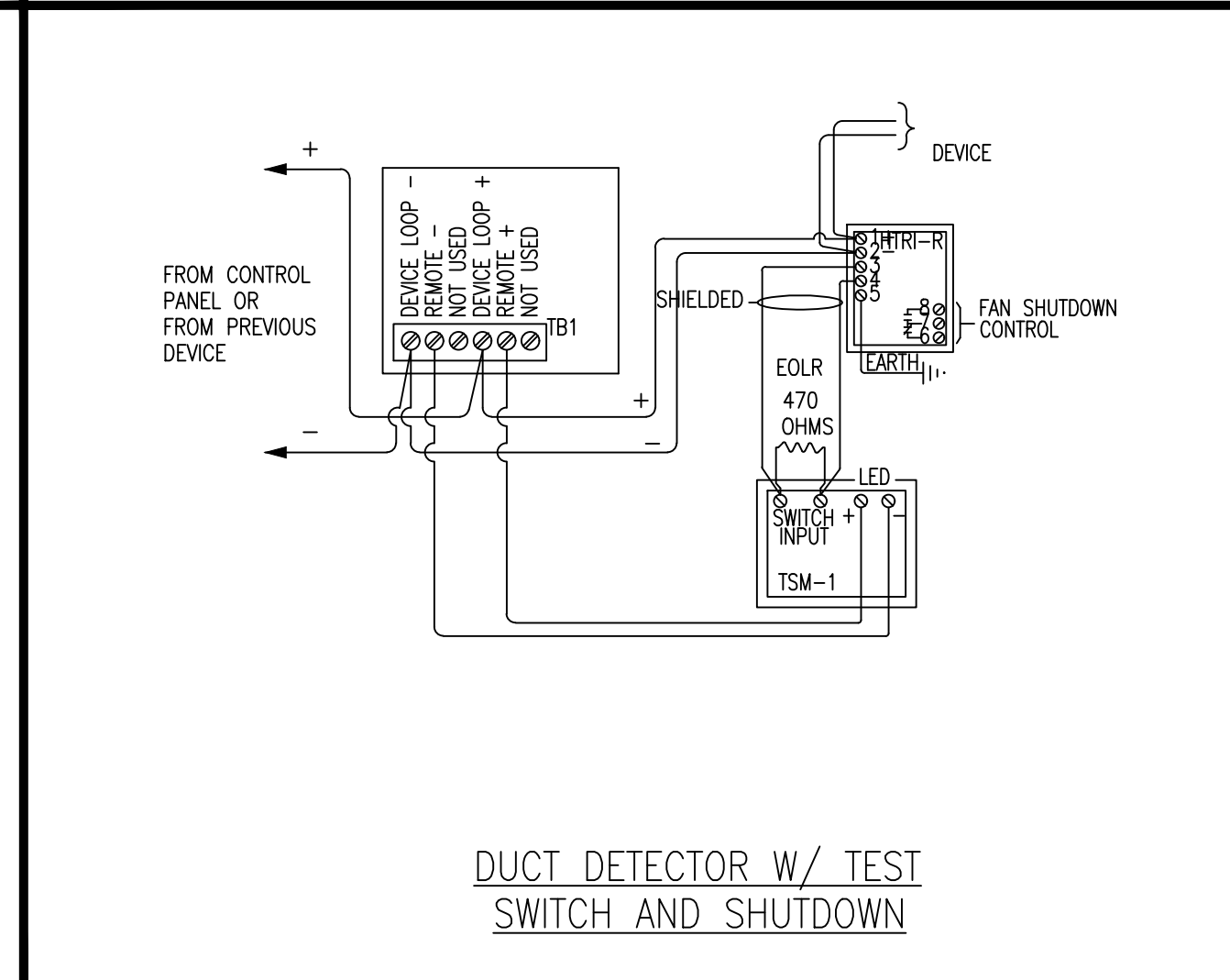
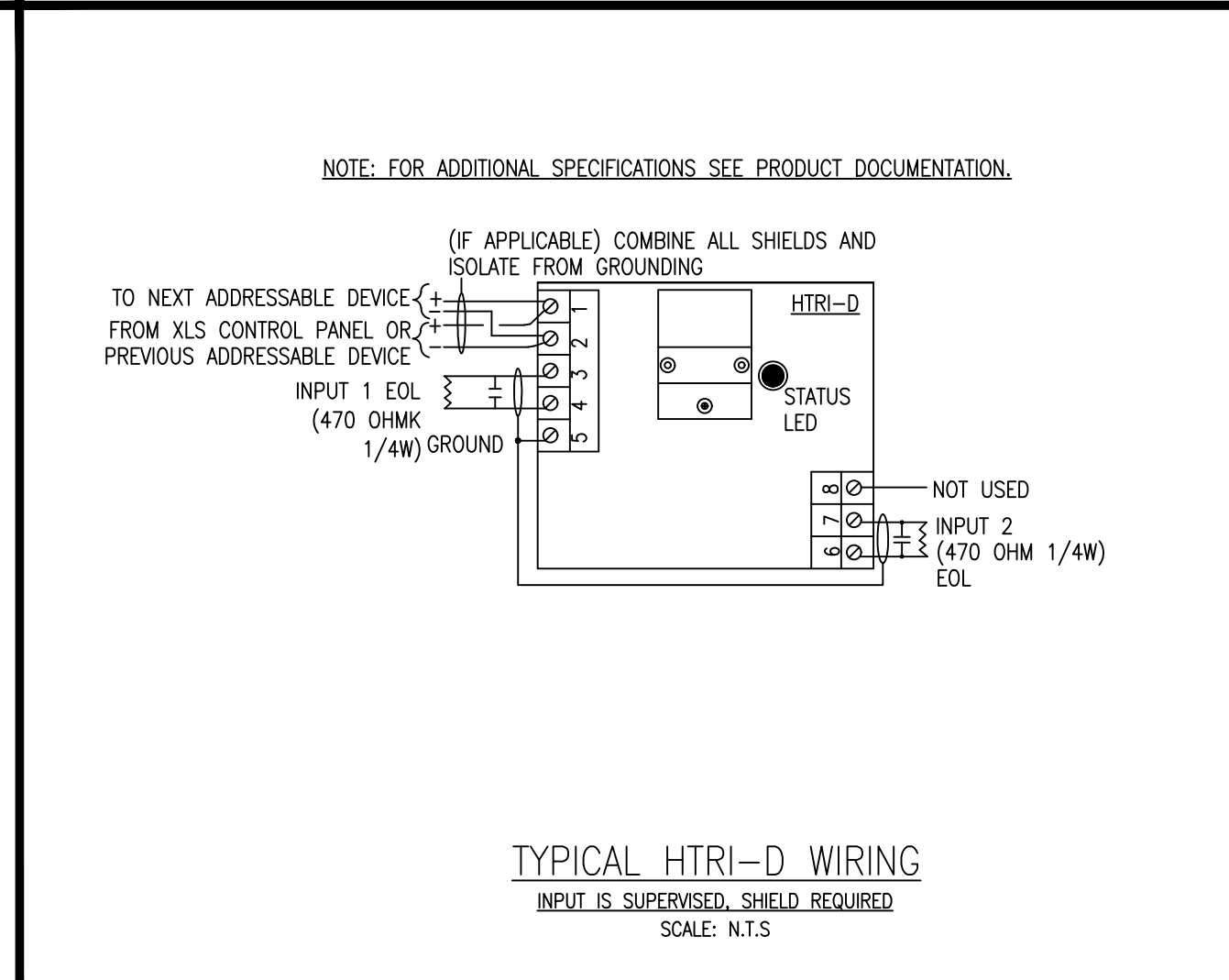
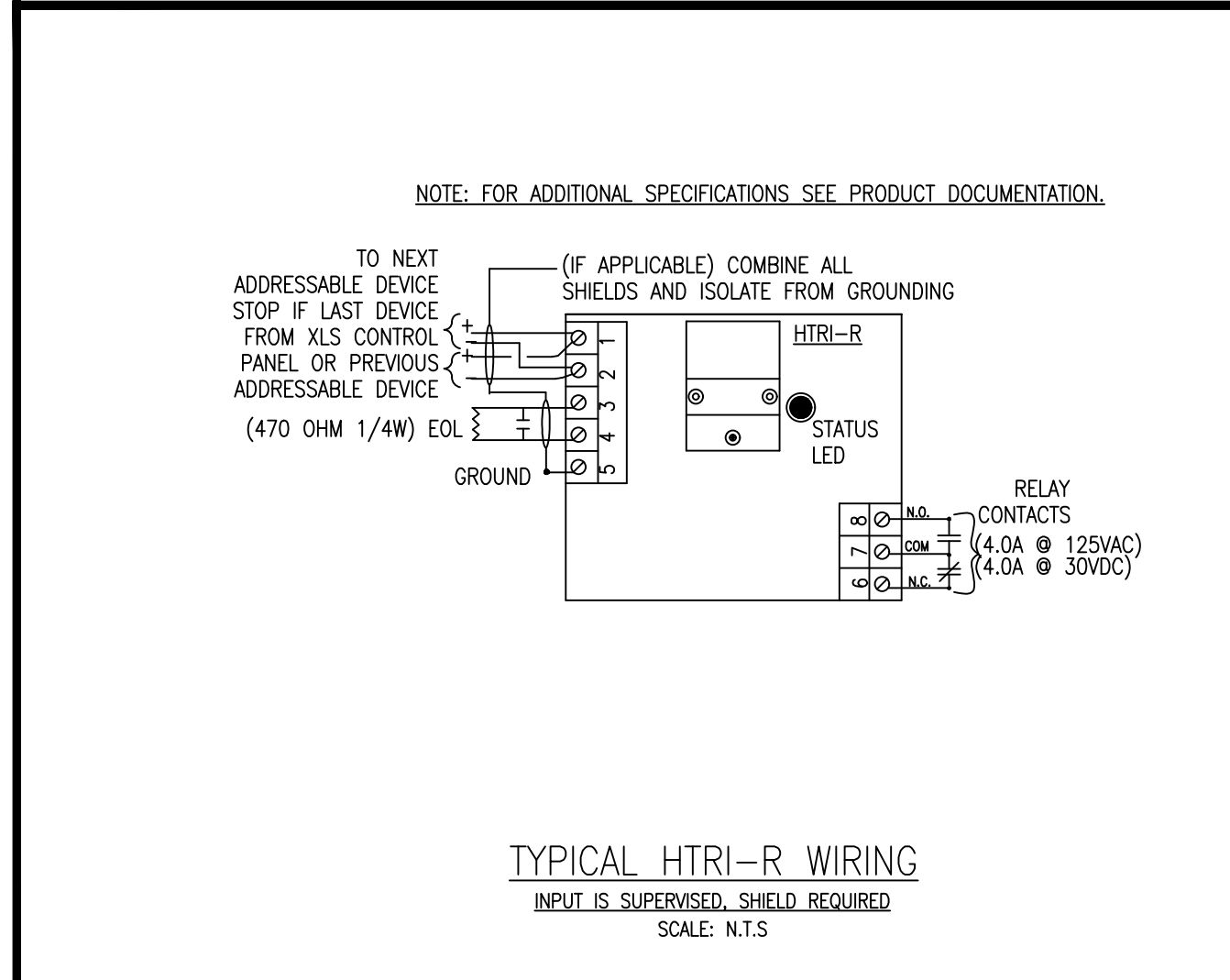
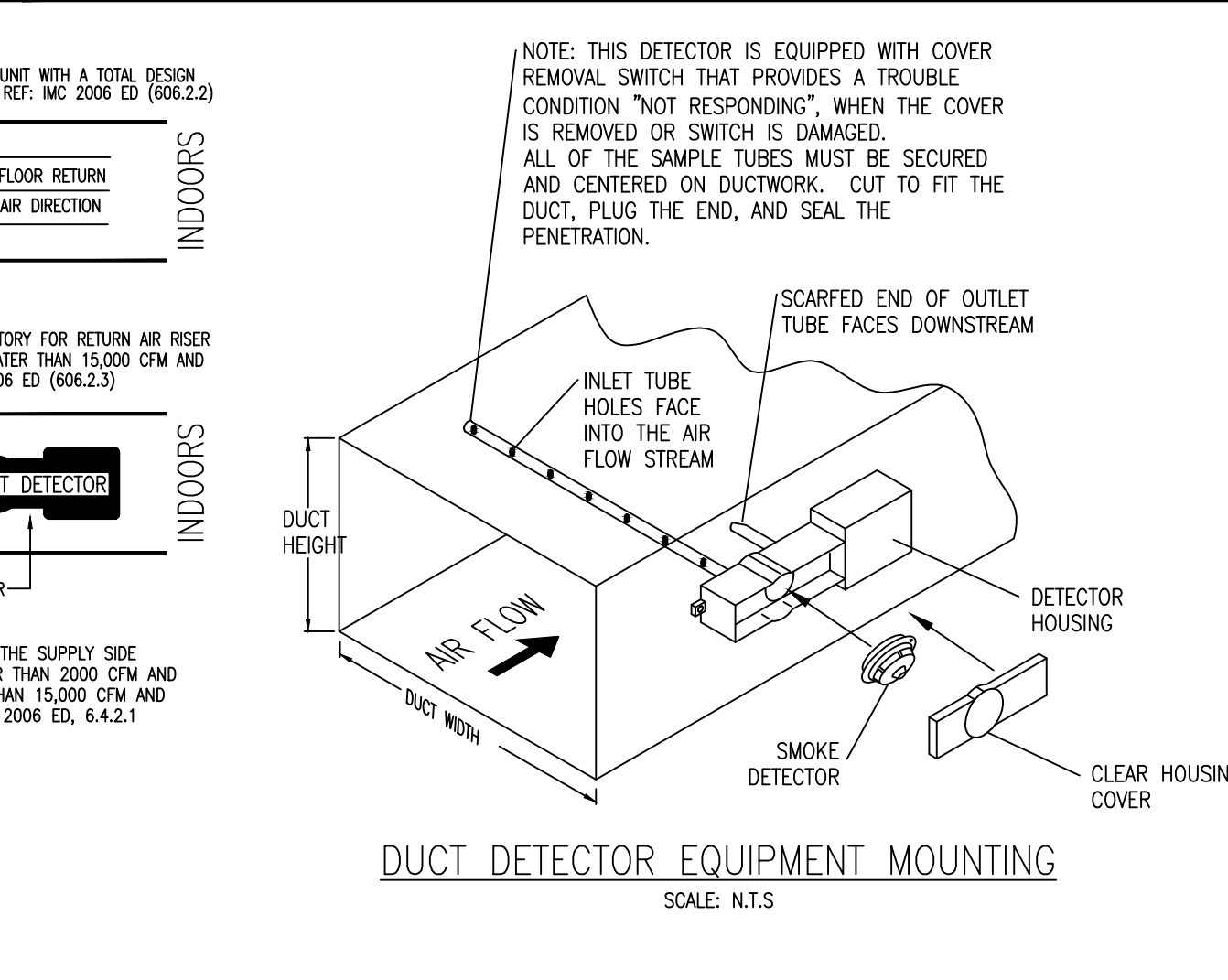
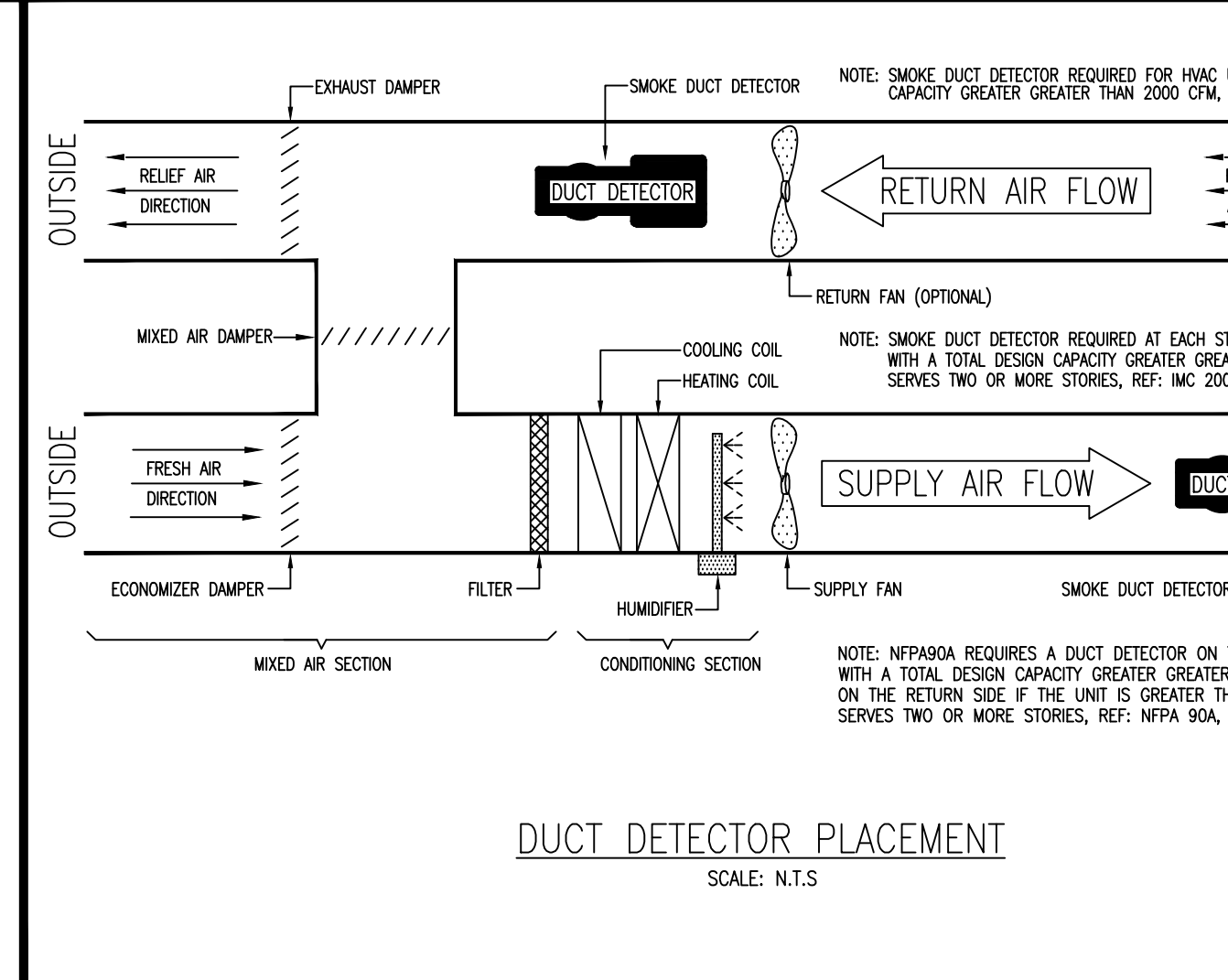
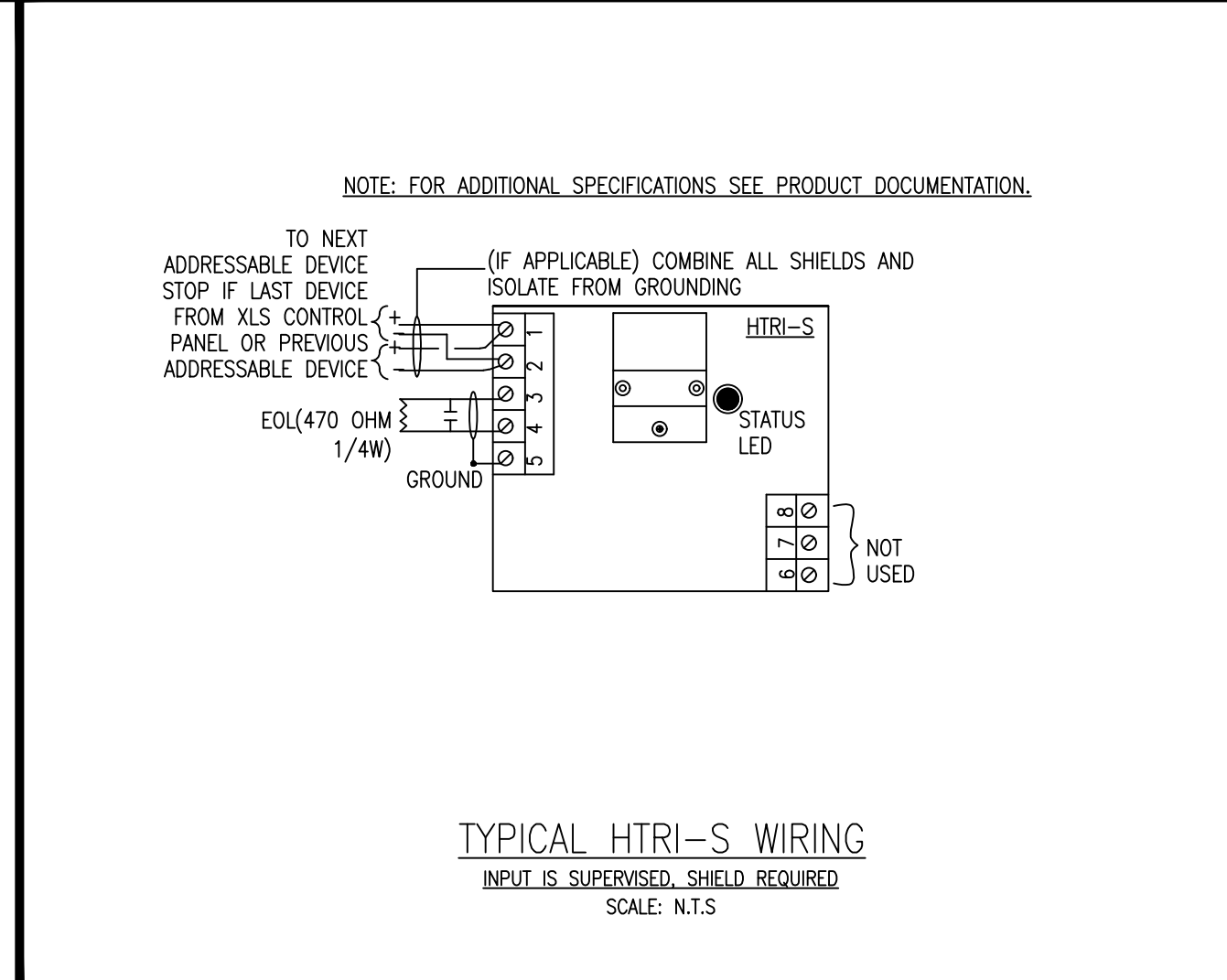
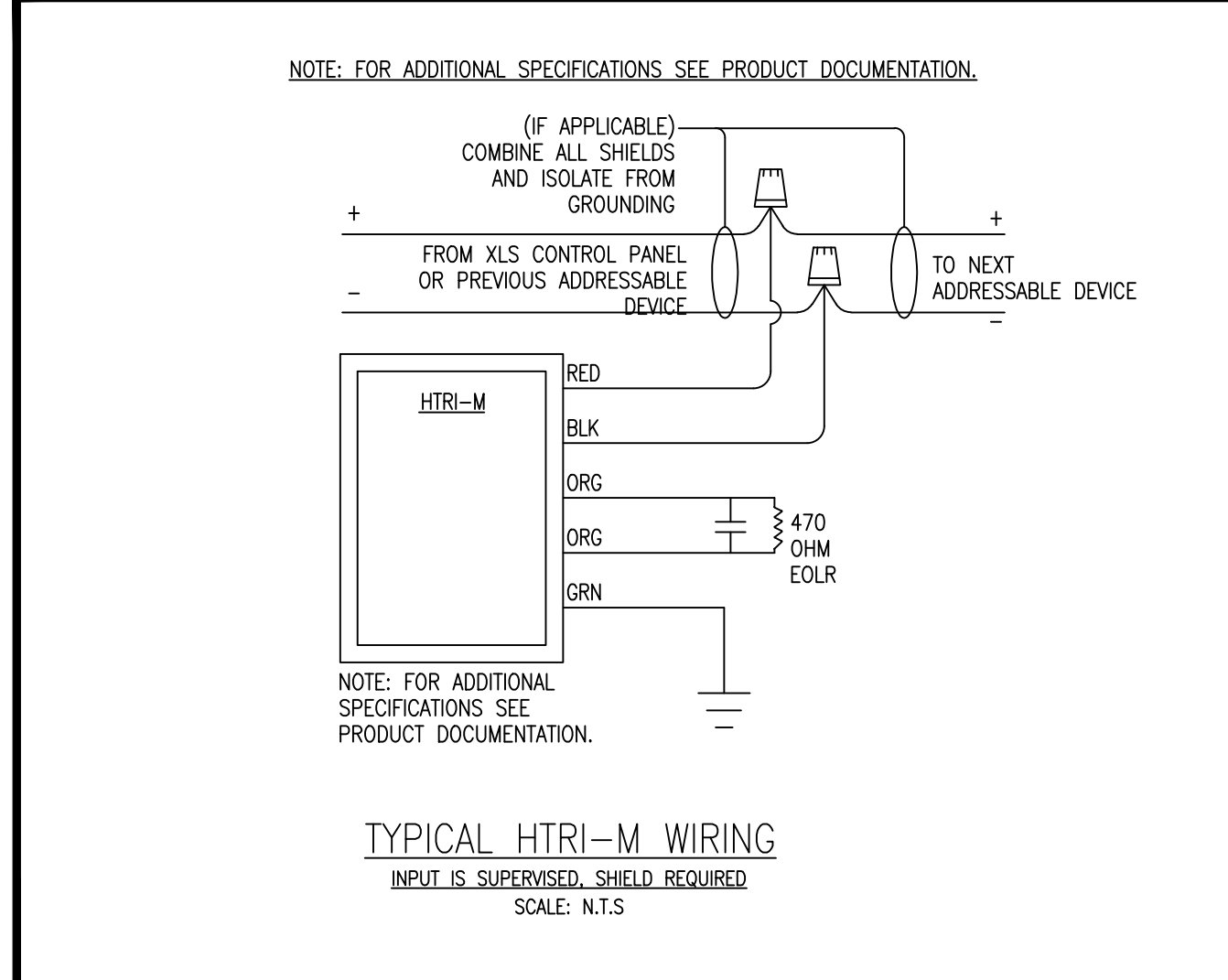
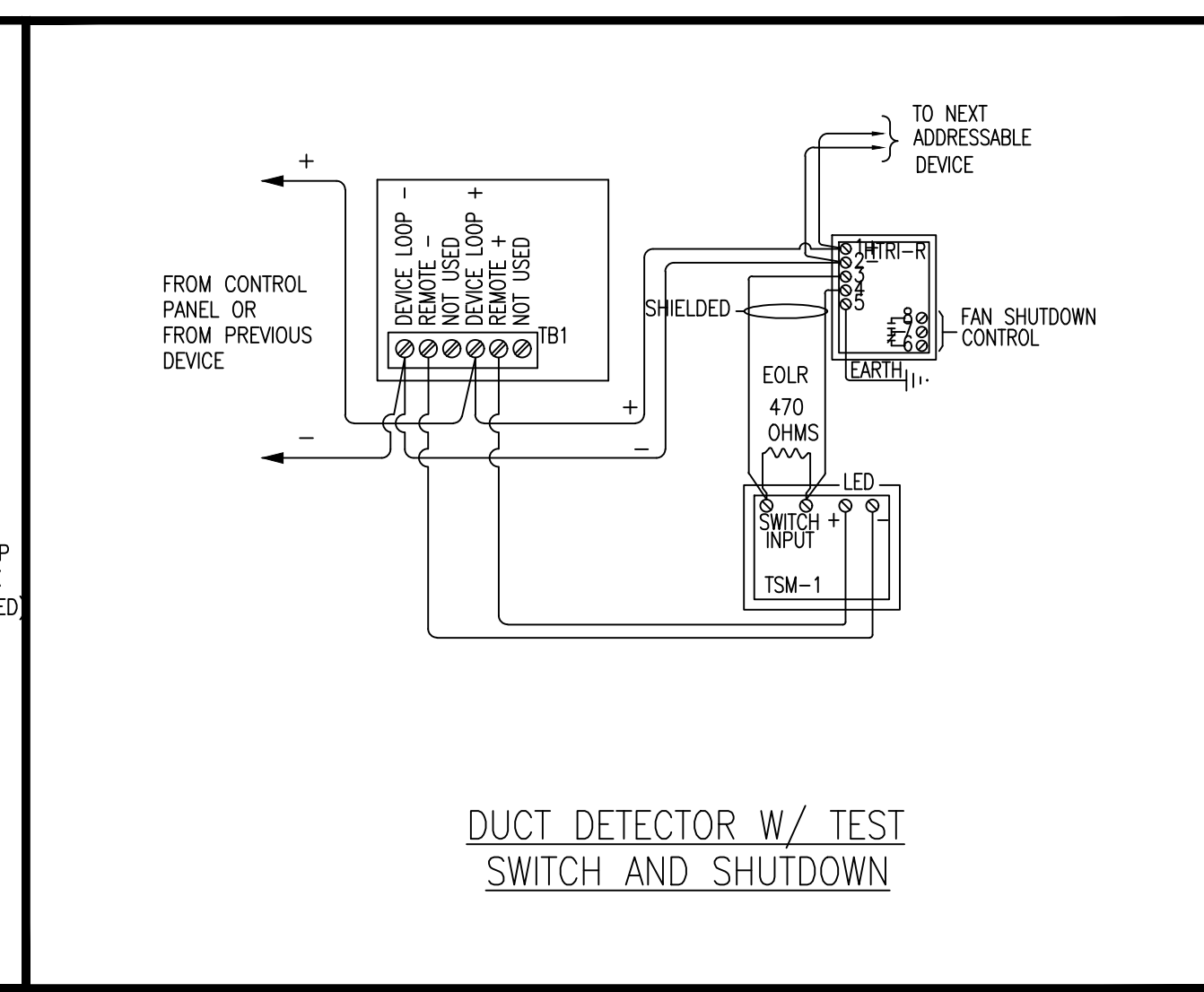
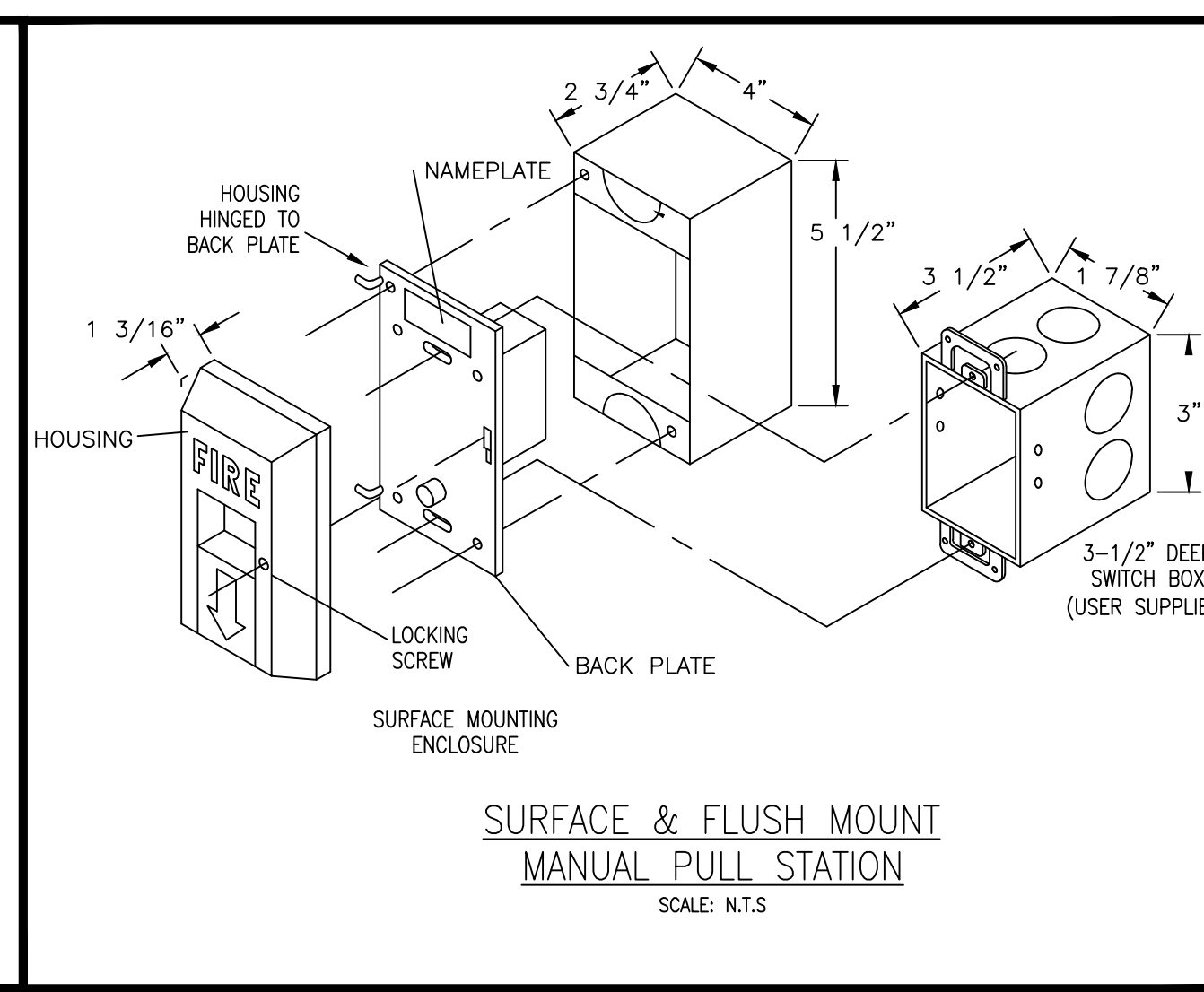
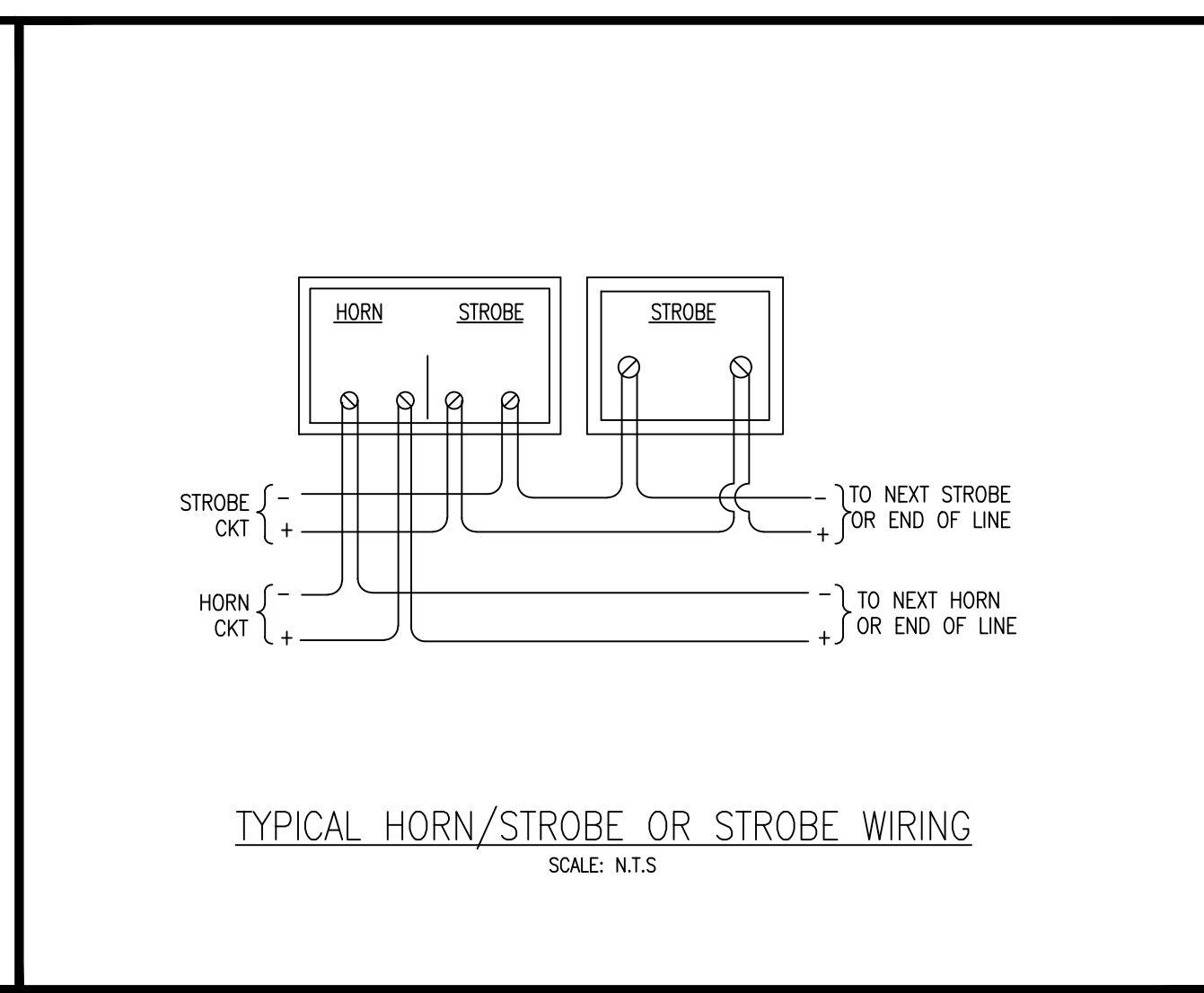
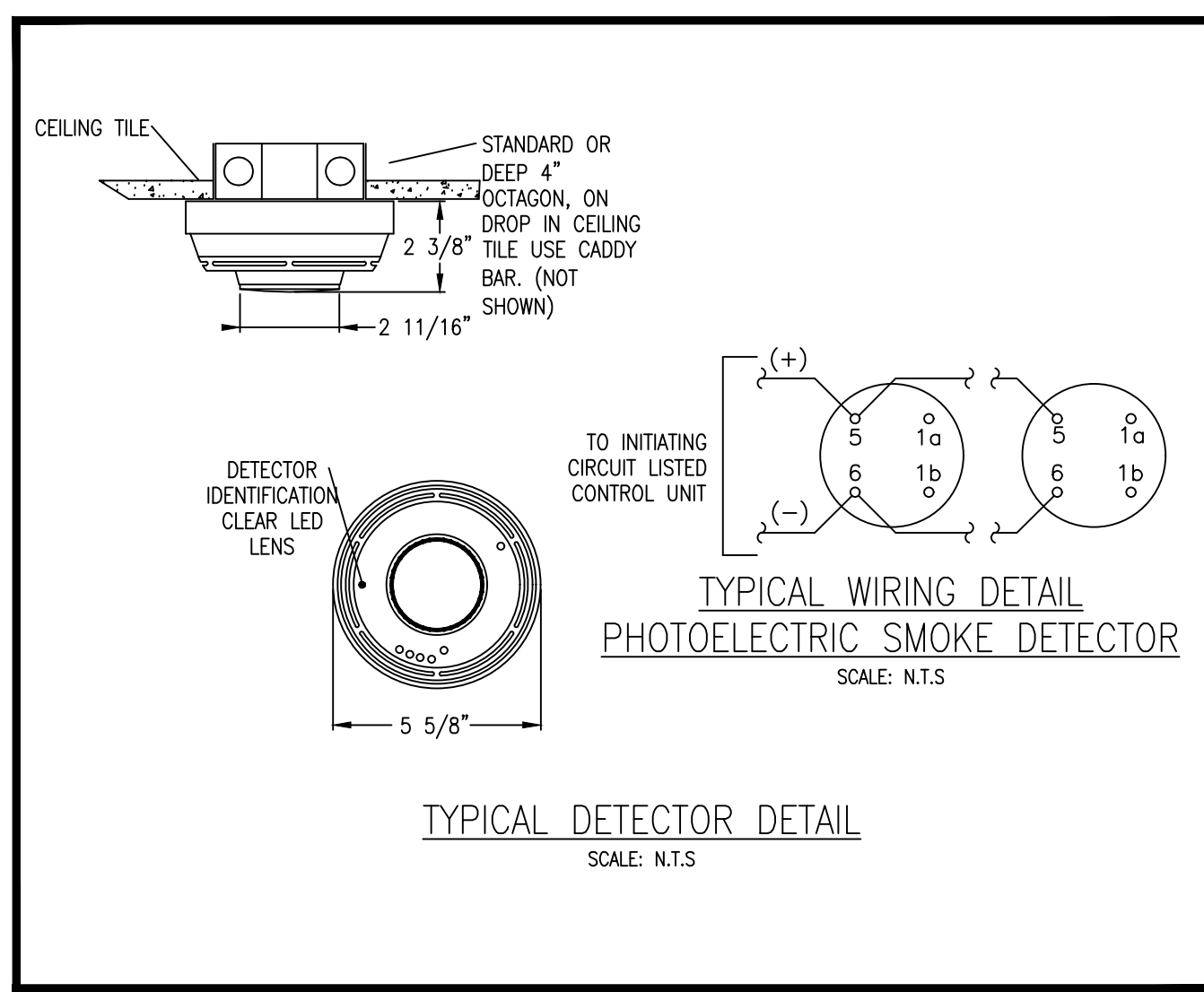
REV	DATE	DESCRIPTION
1	12/01/24	FIRE MARSHAL SUBMITTAL

VOICE EVACUATION FIRE ALARM SYSTEM  
 RISER DIAGRAM AND CALCULATIONS  
 DONA ANA COMMUNITY COLLEGE  
 DARL LEARNING RESOURCES BUILDING  
 3400 S. ESPINA ST  
 LAS CRUCES NM 88003

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SCALE: NONE  
 DATE: 12.01.24  
 DRAWN BY: GINA GRIFFIN  
 IMAGE: 505-379-6902  
 SHEET NO.: 5 OF 6

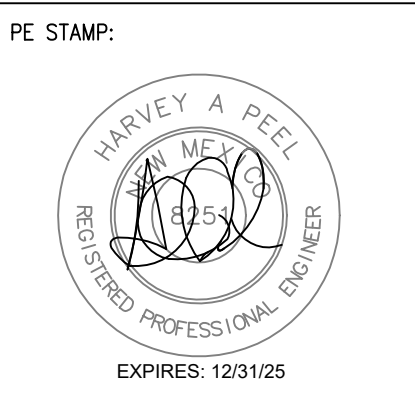


**TYPICAL DETAILS**

REV	DATE	DESCRIPTION
1	12.01.24	FIRE MARSHAL SUBMITTAL

VOICE EVACUATION FIRE ALARM SYSTEM  
TYPICAL DETAILS  
DONA ANA COMMUNITY COLLEGE  
DARL LEARNING RESOURCES BUILDING  
3400 S. ESPINA ST  
LAS CRUCES NM 88003

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NAME: WAYNE COBB, CET  
NICET SUB FIELD: FIRE ALARM SYSTEMS  
NICET LEVEL: III  
CERTIFICATE #: #113316  
CERT. EXP. DATE: APRIL 01, 2026

SIGNATURE: *[Signature]*

SCALE: NONE
DATE: 12.01.24
DRAWN BY: GINA GRIFFIN IMAGE: 505-379-6902
SHEET NO. 6 OF 6